

QUARTERLY

Print ISSN 1815-4018
Online ISSN 2410-5422

JIIIMC

Journal of Islamic
International Medical College



ABSTRACTS
OTTAWA • ICME
March 10 - 14, 2018
Abudhabi, United Arab Emirates

March 2018, Vol.13, Supplement

Indexed in:

WHO-Index Medicus (IMEMR)

Recognized by:

Pakistan Medical & Dental Council (PMDC)

Higher Education Commission, Pakistan (HEC)

PATRON-IN-CHIEF

Mr. Hassan Muhammad Khan
Chancellor Riphah International University

PATRON

Prof. Dr. Anis Ahmed
Vice Chancellor Riphah International University

ADVISOR

Maj.Gen. (Retd.) Masood Anwar, HI (M)
Dean Faculty of Health & Medical Sciences
Riphah International University

CHIEF EDITOR

Lt. Gen. Azhar Rashid (Retd.) HI (M)
Principal Islamic International Medical College
Riphah International University

MANAGING EDITOR

Prof. Muhammad Nadim Akbar Khan

EDITORS

Prof. Ulfat Bashir
Prof. M. Ayyaz Bhatti

ASSOCIATE EDITORS

Prof. Saadia Sultana
Prof. Raheela Yasmeen
Dr. Shazia Qayyum
Dr. Owais Khalid Durrani

TYPE SETTING EDITOR

Rehan Ahsan Malik

EDITORIAL BOARD

NATIONAL

Brig. (R) Prof. M. Salim
Prof. Tariq Mufti (Peshawar)
Prof. Muhammad Umar (Rawalpindi)
Dr. Huma Qureshi T.I. (Islamabad)
Brig. (R) Prof. Ahsan Ahmad Alvi
Col. (R) Prof. Abdul Bari Khan
Prof. Rehana Rana
Maj. Gen. (R) Prof. Suhaib Ahmed
Maj. Gen. (R) Prof. Abdul khaliq Naveed
Prof. Fareesa Waqar
Prof. Sohail Iqbal Sheikh
Prof. Muhammad Tahir
Prof. Aneeq Ullah Baig Mirza
Prof. Khalid Farooq Danish

Prof. Yawar Hayat Khan
Prof. Aliya Ahmed

INTERNATIONAL

Dr. Samina Afzal, Nova Scotia, Canada
Prof. Dr. Nor Hayati Othman, Malaysia
Dr. Adil Irfan Khan, Philadelphia, USA
Dr. Samina Nur, New York, USA
Dr. Naseem Mahmood, Liverpool, UK

MAILING ADDRESS:

Chief Editor
Islamic International Medical College
274-Peshawar Road, Rawalpindi
Telephone: 111 510 510 Ext. 207
E-mail: azhar.rashid@riphah.edu.pk

All rights reserved. No part of this publication may be produced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior permission of the Editor-in-Chief JIIMC, IIMC, Al Mizan 274, Peshawar Road, Rawalpindi

Journal of Islamic International Medical College Quarterly

Print ISSN: 1815-4018
Online ISSN: 2410-5422



“Journal of Islamic International Medical College (JIIMC)” is the official journal of Islamic International Medical College Rawalpindi Pakistan. The college is affiliated with Riphah International University and located in Rawalpindi (Punjab) Pakistan.

JIIMC is a peer reviewed journal and follows the uniform requirements for manuscripts submitted to Biomedical journals, is updated on www.icmj.org. JIIMC has a large readership that includes faculty of medical colleges, other healthcare professionals and researchers. It is distributed to medical colleges, universities and libraries throughout Pakistan.

All rights are reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, (electronic, mechanical, photocopying) except for internal or personal use, without the prior permission of the publisher. The publisher and the members of the editorial board cannot be held responsible for errors or for any consequences arising from the use of the information contained in this journal.

For Online Submission Visit: Scopemed.org

Published by IIMC, Riphah International University Islamabad, Pakistan

Web Site: jiimc.riphah.edu.pk

E mail: prh.jiimc@riphah.edu.pk

Correspondence Address:

Prof Dr. Muhammad Nadeem Akbar Khan

Managing Editor

Journal of Islamic International Medical College (JIIMC)

Westridge-III, Pakistan Railways Hospital

Tel: +92-51-5481828 Ext: 220

Cell: +92-300-5190704

E mail: nadeem.akbar@riphah.edu.pk

Recognized by: Pakistan Medical & Dental Council ; Higher Education Commission (HEC) Islamabad (Category Y)

Indexed in: WHO - Index Medicus for Eastern Mediterranean Region (IMEMR) and Scopemed (ejmanager)

Registered with: International Serials Data System of France

Covered by: Pakmedinet, PASTIC inventory “Directory of Scientific Periodicals of Pakistan”- Pakistan Science Abstracts (PSA)

CONTENTS

PLENARY SESSIONS	01
Plenary Session-1	
Title: Developing and Assessing Entrustable Professional Activities as the Basis for Assessment of Patient Safety Competencies	01
Plenary Session-2	
Title: Excellence in Assessment – If It Ain't Broke, Make it Better!	01
Plenary Session-3	
Title: Learning Driving Assessment	01
Plenary Session-4	
Title: A Contemporary View of the Role of Assessment in Continuing Professional Development for Health Professionals.....	02
Plenary Session-5	
Title: Competency Achieving Medical Education - Challenges & Solutions.....	02
Plenary Session-6	
Title: Educating Tomorrow's Doctors' - Accreditation and Quality Assurance of Medical education...	02
WHAT THE EXPERTS SAY?	03
Prof. Fadil Çitaku	
Title: Using Leadership and Emotional Intelligence Competencies to reach the Excellence in Medical Education and Healthcare	03
Prof. Mathew CE Gwee	
Title: The Influence of Culture in Education Decision-Making	03
Prof. Lawrence Sherman	
Title: "When the Team Learns Together, Everyone Wins!".....	03
Dr. Mohamed M. Al-Eraky	
Title: Assessment of Personal Qualities at the 'Is' Level	04
Prof. Ronald M. Harden	
Title: The Changing Role of the Medical Teacher	04
Prof. Lubna Beg	
Title: Can Changes in Curriculum Improve Health Status of The Country?	04
Prof Dr. Rahila Yasmeen	
Title: Quality Parameters in Faculty Development Programs; A Way Forward.....	05
Prof Dr. Rehan Ahmed Khan	
Title: The Curricular Debate of aligning the curriculum with WFME Standards and Recognition of a Accreditation body.....	05
Dr. Ahsan Sethi	
Title: Educational Identity Formation of Healthcare Professionals	05
FREE PAPERS: ORAL PRESENTATIONS	06
Title: Assessing Knowledge Application in Clinical Problem Solving: The Structured Professional Reasoning Exercise	06
Title: Student-led Interactive Case based Learning Experiences [SICLE]: An attempt to introduce horizontal integration in Preclinical Phase	06
Title: Peer Assisted Learning (PAL): A pal of students for better learning	07
Title: Developing a technology driven solution for self-directed learning and assessment in a simulated learning environment	07

Title: Near peer mentoring in medical education,a novel experience from Iran	08
Title: Post Graduate Residents' Perception of the Clinical Learning Environment; Use of Postgraduate Hospital Educational Environment Measure (Pheem) In Pakistani Context	08
Title: Continuing Medical Education activities for faculty development; an organizational horizon in ecosphere of curriculum reform	09
Title: Influencing attitudes of medical students towards substance misusers	09
Title: Development and Validation of the Backwash Assessment Questionnaire (BAQ)	10
Title: Customizing standard setting for the assessment purpose: Experiences with the Cohen method for written and OSCE components of licensure screening exams	10
Title: Validity evidence for grade standards set for a high-stakes Objective Structured Clinical Examination (OSCE).....	11
Title: Comparison of the medical students' self-assessment and simulated patients evaluation of students' communication skills in Family Medicine Objective Structured Clinical Examination (OSCE)	12
Title: A Comparison of Standard Setting Methods for Assessments in Undergraduate Dental	12
Title: The association between Selection's Assessment Items and Resident's Performances in the Ophthalmology Department Faculty of Medicine, Universitas Indonesia	13
Title: Pre-Clinical Medical Students' Perceptions of their Patient Safety Skills in Primary Care at Oman Medical College.....	13
Title: Comparison of recommended sanctions for lapses of academic integrity as measured by Dundee Polyprofessionalism Inventory I: Academic Integrity from a Saudi and a UK medical school.....	14
Title: Inconsistencies in the present reward system of using bibliometrics for promotion and tenure	14
Title: Three year experience of live patient encounter and case scenario development in team-based learning	15
Title: See one, do one, grade one: teaching short note writing skills using exemplars and peer assessment	15
Title: Current practices of the verbal handover among Pediatric residents using SBAR modality in ACGME-I residency program in QATAR	16
Title: New Drama and medicine elective course, An Egyptian Armed Forces College of Medicine approach	16
Title: Self – Study of curriculum of Doctor of Physical Therapy Program based on WFME standards at Riphah International University Islamabad, Pakistan	17
Title: Assessing prescribing skills of final year medical students before entering general practice	17
Title: Development and validation of a scale for searching skills in Evidence-Based Medicine	18
Title: Lessons learnt from introducing peer observation of teaching to paediatric anaesthetists in KKH, Singapore	19
Title: Implementing high-value cost conscious care in postgraduate medical education: A discrete choice experiment on residents' preferences	19
Title: Using the 'Assessment Implementation Measure' (AIM) tool to evaluate the assessment practices in an undergraduate medical institute	20
Title: Illustration as a teaching- learning tool in Histology practical in undergraduate medical education of Bangladesh-A student and teacher perspective	20
Title: Awareness about physical therapy practice among Health care professionals	21
Title: Gender Differences in Self-Assessment in a Peer-Assisted Mock Objective Structured Clinical Examination (OSCE).....	21

Title: A Student-Initiated Peer-Assisted Objective Structured Clinical Examination (OSCE) as a Sustainable Cost-Effective Learning Experience for Undergraduate Medical Students	22
Title: Students' Perception on Teaching Performances Focusing Undergraduate Lecture Classes of the Trained Teachers in Bangladesh.....	22
Title: Early Completion of Specialty Training- A United Kingdom (UK) Physician Perspective	23
Title: Portfolio as a tool to stimulate physiotherapy students to reflect on their learning process: a systematic review	24
Title: Effect of "TEASER" on concentration, retention and effectiveness of lecture	24
Title: Understanding reasons for variations by ethnicity in general practice specialty trainees' performance in the Membership of the Royal College of General Practitioners' Applied Knowledge Test: cognitive interview study	25
Title: Level of Procrastination among Undergraduate Medical Students	25
Title: Undergraduate students' clinical reasoning construct in medicine: its development and assessment	26
Title: A Comparative Study on anxiety in written and OSCE exams among Medical Students.....	26
Title: Developing an OSCE to Differentiate between Non-Medical Expert Roles: Mission Impossible?.....	27
Title: How to Assess Mental Health: A short course on psychiatric history taking and mental status examination – Experiences from Dubai	27
Title: Peer physical examination in a diverse UK medical school	28
Title: Interprofessional simulations can significantly improve awareness of the Physician Associate role	29
Title: The potential of Diagnostic-Workplace Based assessment to enhance training	29
Title: Student's perception of teaching and supervision at teaching hospitals during clinical clerkship	30
Title: The Implementation and Evaluation of an Innovative e-Learning Module for OSCE Examiners	30
Title: Analysis of Educational Environment of Speech and Language Pathology (SLP) through DREEM Scale	31
Title: Smartphone addiction and associated hand pain among university students	31
Title: Does students' self-efficacy of competencies grow after following an integrated program of several whole-task simulations?	32
Title: Quality standards for assessment – what's missing?	32
Title: Nudging towards sustainable assessment? Supporting 'at risk' learners in Workplace Based Assessment through personalised 'nudges'	33
Title: Capabilities in Practice - A Novel Assessment Method for Postgraduate Physician Training	34
Title: Development and evaluation of a brief faculty evaluation questionnaire: A mixed methods study	34
Title: Refurbishing Self-directed Learning (SDL) Sessions in Physiology with Pre-reading Assignments and Pecha Kucha (PK) Talks: Students' Perceptions.....	35
Title: The relationship between school type and academic performance at medical school: a national, multi-cohort study	35
Title: Faculty development initiatives designed to promote educational research skills development & education scholarship in medical education: A scoping review	36
Title: Development of an assessment tool for professional identity formation of medical trainees....	36
Title: Box ticking and Olympic high jumping - Respiratory specialists' perception and acceptance of recertification	37

Title: The HIP-Mentoring Tool (“How I Perform”) – Does self-reflection leads to improvement concerning results in the German State Exams?	38
Title: Does a distance-based learning environment suit health professional education in a Middle East setting?	38
Title: The State of Physicianly Training in the United Kingdom	39
Title: Diving In Hands First – A New Approach to Training in Undergraduate Medical Education	39
Title: Simulation: A New Frontier in OB/GYN Undergraduate Medical Education	41
Title: Framing effects on medical student judgments about diagnostic testing and therapeutic decision making	41
Title: The Acceptability of Final Year Medical Students in Using Human Patient Simulators to Assess Clinical Decision Making in High-Stakes Examinations	41
Title: Assessing self-monitoring for individual students from certainty response MCQs	42
Title: An integrated OSCE to assess skills managing diverse patients	42
Title: Undergraduate Medical Students' Attitude towards Patient Safety	43
Title: Navigating the system: how assessors' beliefs and values can steer longitudinal work-based assessment systems	43
Title: A multi-method job analysis for the role of physician associates to inform selection and training	44
Title: Staying Sharp about Needlestick Safety	44
Title: Professional Support Unit (PSU) development in a large UK teaching hospital: the views of doctors in training	45
Title: Creating audio podcasts as a PACES examination revision aid for core medical trainees in Leeds, United Kingdom	46
Title: Internal Consistency Validity Evidence for Scores from a New EPA Aligned Clerkship Global Rating Form	46
Title: How good is good enough? Does the Anghoff Method set the right standard?	47
Title: Beyond 46 chromosomes: Interactive Clinical Cytogenetics Laboratory for Medical Students..	47
Title: Team based learning in first year Occupational Therapy module	48
Title: Dynamic classrooms: Transformative learning strategies for conventional curriculum	48
Title: Use of technology in education of hearing impaired children: a systematic review	49
Title: Giving Learners a Voice; Opinions of Medical Students towards educational strategies adopted in Sudanese Medical Schools. A Qualitative Study	50
Title: Incorporating early clinical context in the preclinical general microbiology course: The Mohammed Bin Rashid University experience	50
Title: Final-Year Medical Students` Perceptions of the Language Barrier at the Arabian Gulf University	51
Title: Perceptions of educational organization and experienced based learning among medical students and supervisors in a highly rated rotation-based clerkship	51
Title: Pattern of preferable reading materials among health professions students in four universities in Khartoum – Sudan 2015	52
Title: Impact of a Semester-long Course on the Knowledge, Attitude, and Practice of Communication Skills on First Year Medical Students	52
Title: Incorporating Reflective Exercises into Your Curriculum: Why and How?	53
Title: Project-based Learning in UQUMED reformed curriculum	53
Title: Community-Based Education: Challenges and suggested solutions	54
Title: Engagement in Professional Development Plans through appraisal	54

Title: iValidate: Identifying Values, Listening and Advising High Risk Patients in Acute Care. A prospective before and after interventional study for shared decision making	55
Title: "Near peer teaching": supporting eportfolio program	56
Title: Perception of students of Faculty of Medicine, Rabigh, KAU, Jeddah, about their understanding of self-directed learning and its role in their professional growth: a qualitative study	56
Title: Improving Surgical Specialty Candidate Preparedness for the the Canadian Resident Matching Service (CaRMS) Application: Defying the Odds	57
Title: How well did I do? Students' self evaluation in a problem based learning Session	57
Title: Towards National Needs Assessment – Perceived CPD Needs of Qatar Healthcare Practitioners	58
Title: Less is more: Restructuring a clinical reasoning and differential diagnosis course for 5th medical students.....	58
Title: Clinical Scenario as Anatomy Lab Tool for Teaching Human Neuroanatomy – Students Perspective	59
Title: “Impact of integrated teaching sessions for comprehensive learning & Rational Pharmacotherapeutics for medical undergraduates.”	59
Title: “Mini-CEX: Feasibility, Acceptability and Effectiveness in Learning of Post-graduate Residents”	60
Title: Comparison of the effect of two methods of teaching JIGSAW and lecture with questions and answers on the level of emergency medicine students' learning and sustainable learning	61
Title: Should physicians be in the lead in the transition to holistic healthcare delivery? - Stakeholders' perspectives	61
Title: The online certificate course on social accountability: an experience for Capacity building on social accountability of Medical Schools in the Eastern Mediterranean Region	62
Title: Social Accountability: International Medical students united in action	62
Title: Situated Competence: A sociocultural examination of resident competence	63
Title: Students' and Staff Perception and Attitudes towards the Use of Selected Social Media as an Educational Tool in Clinical Skills' Lab at Alexandria Faculty of Medicine (AFM)	63
Title: Multimodal platform delivery in immersive reality instruction for medical education	64
Title: Final year medical students' perceptions of hospital ward rounds and the implications for teaching and learning	64
Title: Teachers' Perceptions of their Learning Atmosphere in Traditional and Integrated Curriculum of two Medical Colleges	65
Title: Current practices of the verbal handover among Pediatric residents using SBAR modality in ACGME-I residency program in QATAR	66
Title: The use and impact of a mobile clinical skills and simulation facility in remote and rural Scotland – a realist synthesis and evaluation	66
Title: Standardisation of curriculum mapping and its implementation into the LOOOP network.....	
Title: Perception of Medical Education as a career amongst House Officers and Junior Faculty Members in different Medical and Dental Institutes of Karachi, Pakistan	67
Title: A qualitative study exploring decline in empathy and strategies for promoting empathetic clinical practice	68
Title: Senior doctors' perspectives on informed consent: a qualitative study	68
Title: Teaching medical professionalism to undergraduates: are students and faculty on the same page?	69

Title: Medical Ethics 101: Enhancing medical ethics curriculum in undergraduate medical education at the University of Ottawa	70
Title: How should pre-clerkship students contact their teachers - a study in a Southeast Asian medical school?	70
Title: Assessing the adhere to Professional Ethics in emergency medicine personnel	71
Title: Teaching psychosocial aspects of medicine: an extracurricular program for medical students using movies	71
Title: Mafraq Ears, Nose and Throat (ENT) - A Model to Develop Post-Graduate Training Programs Using International Standards and Training Tools Specific to the Regional Gulf Environment	72
Title: Curriculum mapping of a four year, clerkship-oriented curriculum at the Lebanese American University (LAU) – implementation of the LOOOP project	72
Title: Nurses' perception regarding Continuing Professional Development (CPD), barriers and motivators in the Royal Hospital, Oman	73
Title: Professionalism in Medical Education- Perspectives of Medical Students and Faculty	73
Title: The Effects of Teaching Professionalism in a Private Medical College of Pakistan	74
Title: Personality "to be" or "not to be" a doctor	74
Title: The predictive validity of the Biomedical Admissions Test (BMAT) – a case study of investigating assessment performance over time, across different selection cohorts	75
Title: Predictive validity of specific school grades and the scholastic aptitude test for academic Bachelor-success in medical studies –A study process analysis of four cohorts at the University of Bern, Switzerland	76
Title: Relationships between MMI performance and scores on the BioMedical Admissions Test (BMAT)	76
Title: A practical approach to using Kane's validity model for the assessment of science writing in a medical school	77
Title: Improving the validity of post-graduate medical assessments in Singapore	77
Title: Scoring in performance tests: item weighting, validity arguments and standards	78
Title: Correlation of Medical School Performance to First Year Intern Outcomes	78
Title: Does accreditation process affect dental students' awareness about accreditation and education standards? A Qualitative Study	79
Title: Impact of Accreditation on Medical Schools Processes	79
Title: Does accreditation lead medical schools to apply best practices of continuing quality improvement?	80
Title: Accreditation Preparation Transformed by Toyota Production System's Lean Principles	81
Title: Continuous Quality Improvement Framework to Achieve International Accreditation; KIMS/RCI Collaborative Approach	81
Title: Correlations between point-in-time assessments and clinical workplace performance of international medical graduates	81
Title: The added value of the Pre-Residency Program: preparing international medical graduates for their residency program in Canada	82
Title: Thinking across pathways in the assessment of international medical graduates	83
Title: Teaching Quality Improvement/Patient Safety Assessment skills in an Internal Medicine Residency Program	84
Title: Characteristics that define excellence in professionalism	84
Title: Longitudinal reflective experiences on professionalism during medical school	85
Title: Measuring Professional Identity Formation Early in Medical School: Validity Evidence	85

Title: Assessment of cross cultural competencies in medical education: tools and challenges	86
Title: An innovative approach for changing Medical Students culture regarding inter professional Collaboration (IPC) culture; A qualitative study	87
Title: The Predictive Validity of the Sudanese Secondary School Certificate for Students of Faculty of Medicine, University of Khartoum	87
Title: Who they are, how they fare, and where they go – selection process; medical student assessment; and location of junior doctor employment by regional post-graduate entry medical schools.....	88
Title: Authors: Assessing the Relationship of Personality Traits with Job Satisfaction Level of Surgeons; A Correlational Study.....	88
Title: A multi-method job analysis for the role of physician associates to inform selection and training.....	89
Title: New method to select candidates in the residency program based on the multisource feedback process	89
Title: How do we assess communication skills in medical undergraduates?	90
Title: Do We Get What We Expect? Evaluating the implementation of communication skill curriculum in undergraduate program.....	91
Title: Level of agreement between Simulated Patients and Faculty”: An evaluation of Communication skills of postgraduate trainees during objective structured clinical examination at Aga Khan University medical college Karachi	91
Title: Assessing Communication using Role Players in the RCPsych OSCE	92
Title: Evaluation of the new National Postgraduate Year 1 Framework in Singapore	92
Title: Does the mandatory postgraduate UK surgical exam predict selection into specialty training?.....	93
Title: The composite score reliability for different assessment components for family medicine specialist certification examination in Japan	93
Title: The Clinical Supervisor Report, between objectivity and hidden curriculum	94
Title: Test Design for Fostering Learning, Enhancing Instruction and Curriculum Design: The Case of the Canadian Association of General Surgeons National Exam	95
Title: The complex issue of failure: How the NLE affects students and medical schools	95
Title: Understanding candidate performance in a National pharmacy examination.....	96
Title: Developing a technology driven solution for self-directed learning and assessment in a simulated learning environment.....	96
Title: UCAN: 12 years of experience in cooperative medical assessment	97
Title: A Holistic Support Package Affords Sustained Performance Enhancement in Applied Medical Knowledge Testing to Struggling Undergraduate Medical Students.....	97
Title: “Seriously, we're making our grades?” – A preliminary study on using a liberalized assessment and grading scheme to promote engagement and accountability among health professions students in Guangdong, China	98
Title: Fostering Professionalism Using Peer Assessment	99
Title: Development & Validation of a Novel Version of the TESTA Assessment Experience Questionnaire (AEQ) for Evaluation of Students' Experience of Assessment in Pre-Clinical/Early Stages of Modular Medicine Programmes	99
Title: Digital leap project – students' perceptions of summative online assessment pilot	100
Title: Design and Evaluation of an SJT and MMI for Selection into Pre-registration Pharmacy.....	100
Title: Will contextualised admissions to the study of medicine in the UK widen access to students from lower socioeconomic backgrounds? Evidence from the UK Medical Database	101

Title: Using Situational Judgment Tests for Assessing Personal and Professional Development	101
Title: Piloting a Situational Judgment Test as a student selection tool for undergraduate medical students.....	102
Title: Online Situational Judgement Tests (CASPer): Implications and perspectives of test security	102
Title: Simulation for High-Stakes Assessment: Are We There Yet?	103
Title: How good is good enough? Does the Anghoff Method set the right standard?	103
Title: Standard Setting for the USMLE Step 2 Clinical Skills Exam: A Case Study.....	104
Title: Variation in Depression Care: Using USPs to Explore Factors Affecting Resident Physicians' Management of Depression in Primary Care	104
Title: Case base discussion as an assessment and learning tool in Fetomaternal fellowship at Aga Khan University Hospital: perspective of trainee and assessors	105
Title: A medical record peer review system for evaluating clinical competence of residents: criterion validity analysis by comparing the assessments of medical records with the assessments by program directors	106
Title: Trainees' perceptions of newer supervised learning events in assessing clinical competency and identifying doctors in difficulty.....	106
Title: Using Performance- and Simulation-Based Assessment in Certifications' Exams for Future Anesthesiologists in Saudi Arabia	107
Title: Portfolio programs in medical education: what kind of assessments should be used to objectively assess learning success?	107
Title: Portfolio and students' competence development: a good match?	108
Title: Introducing a longitudinal MD Portfolio: Challenges, Solutions & Transition.....	109
Title: Evaluating a 360-degree feedback framework using an e-Portfolio in Oral Health and Dentistry	109
Title: Quality of Feedback in Foundation Trainees – A comparison of trainee perceptions versus quality of actual feedback from Portfolio analysis	110
Title: Using item analysis to deliver targeted feedback to trainees on OSCE performance	110
Title: To ISBAR or Not to ISBAR? The power of comprehensive feedback to formative assessment to assist Year 1 medical students master the Clinical Handover skill	111
Title: Asking for less and getting more: The Impact of Broadening a Rater's Focus in Formative Assessment	111
Title: Student perspective of classroom response systems used individually and after peer discussion in diagnostic imaging	112
Title: Assessing learners after completion of virtual patient cases aimed to train against medical error	113
Title: An Analysis of the Incorporation of Resource Stewardship Curricula into the University of Manitoba Undergraduate Medical Education Program	113
Title: Impact of the Substance Abuse Research and Education Training (SARET) Program: Stimulating Medical, Dental, Nursing and Social Work Students to Pursue Careers in Substance Use Research	114
Title: Collaborative learning in clinical education	114
Title: Technology Enhanced Learning (TEL) is an important part of the undergraduate medical education: A cohort study of final year medical students using a case-based mobile learning app	115
Title: Situated Competence: The holistic assessment of competence	115

Title: Comprehensive OSCEs as Opportunities for Faculty to Make Entrustment Judgments: How are Standardized Patient Assessments of Performance Associated with Faculty Judgments of “Entrustability”?	116
Title: Self-confidence levels regarding general competencies among health science students at the end of the pre-graduate curriculum	116
Title: Identifying struggling learners in undergraduate medical education: Should we consider the decision model?	117
Title: Capturing entrustment: Using a simulated Night-onCall (NOC) experience to assess the entrustment of near-graduating medical students from multiple perspectives	118
Title: Digital Badges: an interactive logbook equivalent to facilitate student engagement and motivation in a Psychiatry Undergraduate Module	118
Title: LAP Mentor based Assessment of Laparoscopic Surgical Skills...A Validation Study	119
Title: Preliminary psychometric properties of the first computerized adaptive progress test used for both formative and summative purposes	119
Title: Detecting item bias using differential item functioning: a study of translating the progress test	120
Title: Gathering Validity Evidence for a Novel Progress Test: The Role of Confidence and Insight	121
Title: Diagnostic accuracy in Family Medicine residents using the diagnostic support system DXplain: a randomized controlled trial	121
Title: Reflecting all the time--a framework for intra-operative decision making training	122
Title: Is portfolio-based assessment at the end of a clinical year a suitable instrument to evaluate clinical reasoning?	122
Title: “Self-directed learning Readiness and Its Impact on PBL performance in undergraduate students of UCM&D”	123
Title: A snapshot of OSCE practices at Australian Medical Schools	123
Title: Enhancing Knowledge and Attitude toward Neuroscience at School	124
Title: Medical Student Perceptions of their Knowledge and Skills in Pharmacology in their First and Final Clinical Years	124
Title: English as medium of instruction at Nazarbayev University School of Medicine (Kazakhstan): Implications for Clinical Practice Training in a Russian–Kazakh Multilingual Context	125
Title: Assigning online educational modules prior to orientation is a feasible approach to increase incoming interns' level of readiness for internship	125
Title: 'Out of Hours' workshop for GP Trainees	126
Title: Does programmatic introduction of clinical reasoning during early clinical clerkship improve students ability to make decisions?	127
Title: The impact of the law limiting medical doctor trainee working time in Belgium	127
Title: Problems faced by senior faculty members in implementation of integrated curriculum	128
Title: Bridging the gap – primary and secondary care educators developing together with trainees in difficulty	128
Title: A Simulated First Night-onCall (FNOC): Establishing Community and a Culture of Patient Safety for Incoming Interns	129
Title: Practice-based resilience	129
Title: Integration of Patient Safety into Undergraduate Medical and Dental Curricula at Peshawar Medical (PMC) And Peshawar Dental College (PDC)	130

Title: Awareness Regarding World Health Organization's (WHO) Nine Patient Safety Solutions among Consultants	130
Title: Patient safety: Attitude and practice among postgraduate residents and nurses in a tertiary care hospital	131
Title: Gender Determines Themes in Medical Student Arts Based Special Study Modules	131
Title: Integration of Graphic medicine in teaching Pharmacology to Optometry students	132
Title: Factors associated with dropout thoughts among students at a Government Medical School	133
Title: The Changing Demand for Peer Mentoring at a District General Hospital.....	133
Title: Enhancing Medical Students' Comprehension and Performance in Anatomy through Engagement and Formative Assessment: Our Experience.....	134
Title: Respiratory Therapy Students' Experiences of Assessment in Clinical Simulation-Based Learning Environments	134
Title: Simulation for labor and delivery: what is the impact on undergraduates?	135
Title: Accuracy of self-evaluation in a second year course for class II cavity preparation	135
Title: Change and Challenges Regarding Communication Styles in Eastern and Western Countries: Based on Iranian (Eastern) Doctors' Perceptions by the use of high fidelity simulated video.....	136
Title: The contribution of audience response systems (ARS) towards the active learning journey of students at the Faculty of Health Sciences, University of Pretoria	137
Title: Medical Students' Lived Experiences in a Distributed Campus Model	137
Title: Active Participation in Projects as a Strategy for Engaging Medical Students in their Learning..	138
Title: Cheating in examinations: Lived experiences of undergraduate students at Torbat Heydariyeh University of Medical Science	139
Title: Trans-Atlantic Partnership Working in Developing a UK Physician Associate Programme: Reflections and Lessons Learnt,	139
Title: Electives in Undergraduate Medical Education: a successful curricular design?	139
Title: Role of Simulation-Based Education in Preparing Future Anesthesiologists in Saudi Arabia	140
Title: Developing a course that prepares dental students in Saudi Arabia to deliver treatment to individuals with disabilities.....	141
Title: Digital Pathology Ups the Ante in Early Clinical Orientation in an Integrated Medical Curriculum	141
Title: Introduction to clinical pathology: Implementation and Evaluation of A brief course of laboratory medicine teaching in the field for medical students	142
Title: Student engagement and achievement improvement using the Realize-It Adaptive Intelligence Engine platform, a blended learning environment and flipped classroom	142
Title: Integrating Science and Practice an innovative approach to bridge the theory practice gap	143
Title: Impact of One Day Intensive Workshop on Integrated Curriculum and Construction of Learning Objectives	143
Title: Value of student's engagement in curricular reforms	144
Title: Perceptions, experiences and limitations of blended learning program for health informatics workshops: A multidisciplinary faculty perspective.....	144
Title: Workplace stressors and their influence on the health of mid-career female doctors of a semi government hospital	145
Title: Effect of Communication Skills Training on outcomes in critically ill patients with life limiting illness referred for intensive care management	145

Title: Under-representation of Patient Safety Learning Objectives in Undergraduate Medical Curriculum	146
Title: How Does Blended Learning Approach Influences Students' Learning In MHPE Program? A Qualitative Analysis	147
Title: Factors affecting future specialty choice in Chinese medical students	147
Title: The Social Media Disorder in Medical Students	148
Title: Prediction score for intellectual wellness among health education leaders of Pakistan	148
Title: Appropriate Strategies to Empower Faculty Members of Medicine in Education: Viewpoints of Faculty Members of Mashhad School of Medicine	149
Title: Analyzing the teaching skills of interns to assess the quality of teaching	149
Title: Blueprinting an orientation program for international medical graduates against Entrustable Professional Activities for Canadian medical graduates	150
Title: Medical student learning resources and the scope for Virtual Reality	150
Title: Implementation of a new competency based learning objectives catalogue into a new integrated.....	151
Title: Peer Mentoring; The New Mould to Personal Development	151
Title: Using technology to facilitate small group forming and learning for Practice Based Small Group Learning (PBSGL)	152
Title: A qualitative evaluation of registrar experiences in an urban postgraduate Family Medicine training program in Cape Town, South Africa	152
Title: Intergroup relations between clinician-educators and learners: Perspective from Social Identity Approach	153
Title: The Principals' Perspective of the Learning Environment in Undergraduate Medical Colleges of a Developing Country	154
Title: Comparing DREEM of medical and nursing programs of a health sector university of Pakistan	154
Title: Using Milestones Data to Determine Optimal Timing for Remedial Intervention for Struggling Residents	155
Title: Tag, you're it! Using Residents to validate and categorize an MD program MCQ item-bank	155
Title: Stakes in the eyes of the beholder; it all seems a matter of agency - Factors influencing students' perception of assessment stakes within programmatic assessment	156
Title: Implementing integrated assessment programs in an unstructured environment– from theory to practice... ..	157
Title: GP trainee experience of the Annual Review of Competence Progression (ARCP): Is it educational?	157
Title: Rethinking students' assessment in health professions education	158
Title: Transformative Assessment: Development of a Novel System to Assess Dental Students' Performance in Managing Comprehensive Care Cases	158
Title: From theory back to reality: Does a model explain in vivo learning effects of assessment?	159
Title: Blurred lines: sexuality and power in standardised patients' negotiations of boundaries	159
Title: Education and training support network for upskilled allied health practitioners in primary care.....	160
Title: Medical Students and Faculty Perceptions towards a Case-Based Learning Intervention at an Indian Medical College	160
Title: Understanding the patient's perspective: experiential learning with older adults	161
Title: Navigating the system; physiotherapy student perceptions of performance-based assessment	162

Title: Navigating the system: how assessors' beliefs and values can steer longitudinal work-based assessment systems	162
Title: Comparing Work-based Assessment amongst South African Interns with International best practices	163
Title: Reliability of a WBA portfolio: composite reliability of WBAs in a postgraduate training program	163
Title: The evaluation of Multi-Source Feedback (MSF) at the College of Physicians and Surgeons of Ontario	164
Title: Design and assessment of an EPA based national residents training program: From theory to (best) practice	165
Title: Formal vs Informal entrustment: effects of formalizing entrustment on postgraduate medical training	165
Title: Entrustable Professional Activities (EPAs) for gastrointestinal digestive tract Training	166
Title: Development and exploration of an assessment instrument based on EPAs to capture the workplace performance of medical students in the final clerkship year.....	166
Title: Has curricular reform affected empathy erosion? Cross-sectional analysis using the Interpersonal reactivity Index (IRI)	167
Title: The assessment of empathy level of undergraduate dental students at Riphah International University: A cross-sectional Study.....	167
Title: Evaluation of workbook as an educational strategy for ethics in undergraduate medical education: a qualitative case study approach	168
Title: Development & Evaluation of A Student Version Of The 'CARE' Measure as an Assessment of Medical Students' Care and Empathy: THE CARE-S	168
Title: Factors Affecting the Empathy of Dental Students: Perceptions of the faculty	169
Title: Factors influencing students' satisfaction: a follow up study.....	170
Title: An argument-based approach to validity concerning the assessment of physicians' professional performance. A systematic review of questionnaire-based assessment tools	170
Title: Does student feedback improve the quality of teaching among the surgical clinical tutors in the Arabian Gulf University (AGU)?	171
Title: A framework to assess the development of clinical reasoning	171
Title: Post-Hoc Analysis of the Foreign Medical Graduates Neb 'Mega' Osce: The 2017 Pakistan Experience	172
Title: Scenes, symbols and social roles: raising the curtain on OSCE performances	172
Title: Building consensus and supporting consistency of physician assessors through a real-time modified Delphi training program.....	173
Title: Assessing continued competence through revalidation: perspectives from UK doctors and their appraisers.....	173
Title: The UK revalidation assessment knowledge test –data so far	174
Title: Post-hoc assessing the quality of OSCE: Reliability, OSCE metrics and passing score	174
Title: Link between Hodges' analytic global OSCE ratings and regular communication check list items	175
Title: "Shadow Examiner": modifications in the examiner's role to improve formative assessment at OSCE	176
Title: A Novel Clinical Reasoning Think Aloud Protocol to Identify Actionable Feedback for Clerkship Medical Students.....	176
Title: A novel observed structured clinical examination (OSCE) case to assess medical students' unnecessary test utilization and communication skills.	177

Title: NEJM Knowledge+ Question of the Week: A Novel Virtual Learning Community Effectively Utilizing Online Discussion Boards.....	177
Title: Beyond the rating scale: assessors' use of overarching constructs and linguistic strategies when writing narrative evaluation of communication skills during an OSCE	178
Title: Aligning CME with Quality: Perceptions and Experiences of Leaders in King Abdullah Medical City	178
Title: Structuring a bespoke training program to meet individual, organisational and regulatory needs.....	179
Title: A comparative study on the function and structure of medical education office in world's top universities.....	179
Title: Development of scholars in education: The Medical Education Scholars Program at the Tehran University of Medical Sciences	180
Title: Emerging stars in endoscopy: developing a program for future leaders	180
Title: Investigating the impact of the flipped classroom on student assessment results and evaluation of a clinical rotation	181
Title: Engineering the Educational Experience (E3): Creating a Genuine Clinical Experience for Trainee Learning and Assessment.....	182
Title: "It is more than just teaching approaches": An impact study of a faculty development programme	182
Title: The importance of educational roles from Medical faculties' point of view	183
Title: Evaluation and meta-evaluation of teaching from the socioformative focus	183
Title: Assessment Unit Intervention Improves Written Test Items	184
Title: An Assessment Management System for Multiple Choice Questions in an Integrated Medical Curriculum.....	184
Title: The use of Cohen-Schotanus method for standard setting of formative written examinations.....	185
Title: Effectiveness of integrating simulation with art-based teaching strategies on oncology fellows' performance regarding Breaking Bad News	185
Title: Development of Urdu verbal irony comprehension story task for 5-13 year old children	186
Title: Culture matters: Medical student attitudes towards discussing sensitive questions during medical history taking	186
Title: Scholarship of Teaching and Learning (SoTL): Concept Analysis	187
Title: Reflective Writing: A Written Prescription for Prevention of Resident Burnout	188
Title: Social Accountability: An international evaluation from a medical students' perspective.....	188
Title: Development of Basic Life Support Performance Score for Health Care Providers	189
Title: Competency-based medical practice	189
Title: Medical Quiz Machine: Experience from use of a supplemental online learning resource	190
Title: Chinese Physician Perceptions of Industry Funding in Continuing Medical Education	190
Title: Exploration of Students' Experience of the Problem-Based Learning Approach: Qualitative Study in the Saudi Arabia Context	191
Title: Using Virtual Patients to Train against Medical Error	191
Title: Assessing interventions for patient safety	192
Title: The impact of interprofessional education in pain management outcome	192
Title: Inter Professional Education: Merger of Medical education with Allied health education in relation to basic sciences	192
Title: Interprofessional learning: teachers and students' experiences	193

Title: 'GAME OF TRAINING' - An interactive workshop for trainers exploring triggers for support and support options within Postgraduate Medical and Dental Training	194
Title: Common and Differentiating Aspects an the Dimensions of Diversity and Educational Inclusion in Chile.....	194
Title: Safe-SCOPE Pilot Study – A standardised checklist of patient information exchange: Study protocol for a single-centre, two-armed, cluster-randomised crossover trial and first Results	195
Title: Medical Errors; Causes, Consequences, Emotional Response and Resulting Behavioral Change	195
Title: A Comparison of the effects of multimedia and lecture on learning the color recognition and esthetic course in dental students	196
Title: Efforts to promote transformative learning in Epidemiology & biostatistics among Part II residents of Saudi Board of Community Medicine (SBCM), Al Medina Centre.....	196
Title: A Renal curriculum for Advanced Internal medicine trainees on elective, enhances learning experience	197
Title: Teaching medical students in clinical years integrated with evidence based medicine at Thammasat medical school	197
Title: The Perspective of Medical Students towards Successful in Problem-Based Learning	198
Title: Faculty Development and Cost Effective Resource Utilization; The Power of Statistical Data	199
Title: Impact of Assessment tools on Learning Approaches: MCQs vs SEQs.....	199
Title: Impact of using the Modular Object-Oriented Dynamic Learning Environment (MOODLE) as a Learning Platform for the Cardiovascular System Module on students' performance	200
Title: Examining change in Family Medicine residents' intention to practice comprehensive care and practice in diverse settings after completing training program	200
Title: External Peer Review of Multiple Choice Questions: A Novel Method for Quality Assurance of Medical Examinations	201
Title: Using a web based eMedici platform to provide immediate formative feedback and end of term online summative assessment - a 7-year project	201

FREE PAPERS: POSTER PRESENTATIONS

Title: Comparison of X-ray SAQ scores for Clinical Science Comprehensive Examination between 5th-year Students of Faculty of Medicine Ramathibodi Hospital and Community-based Medical Program	203
Title: Effects of the Use of a Flip Teaching Approach on the Respiratory Therapy	203
Title: Effectiveness of Medical Education Assessment Consortium clinical knowledge mock examination (2011-2016)	204
Title: Electives in Medical Education: Student's assessment to improve quality.....	204
Title: Combination of self-study and WFME external visit: a powerful tool for improvement of Tehran University of Medical Sciences (TUMS) UME program	205
Title: Assessment of Rational Drug Use walk rally in enhancing awareness of medication use rationally among recent graduated medical students in Northern Thailand	205
Title: End of Session Mini Test & Mechanism Map: comparative view of efficacy in promoting student engagement and concept learning by medical students in preclinical phase	206
Title: Design and development of constructive approach in medical ethic and the effect of this program on moral reasoning, moral intelligence and moral sensitivity in students	206
Title: Relationship between emotional intelligence and problem-solving with empathy in nursing students	207

Title: Perception on Manuscript Writing and Publication workshops with evaluation of knowledge gain by attendees: A Mixed Method Study.....	207
Title: Board card design to assess higher levels of knowledge in medical translation - lessons learned	208
Title: Canadian medical schools and their curricula: Accreditation and the winds of change	208
Title: Learning Styles of Continuing Medical Education Participants: a Cross-Sectional Study	209
Title: Peer-to-peer assessment as a learning tool for multidisciplinary undergraduates at a peripheral nerve injuries summer school	210
Title: "Flipped Clerking": A novel way of teaching and assessing medical students	210
Title: Science Communication to Millennials– in the light of student focus group interviews and in-depth interviews with teachers	211
Title: Assessing reflective capacities in midwifery students	211
Title: Medical students who suffered from depression need someone to talk to.....	212
Title: Learning Climate in Vachira Phuket Hospital	212
Title: Dental Students' Perception of the Assessment Environment in Pakistani Context	213
Title: Trainees' Perspectives on the Educational Environment	213
Title: Perception of educational environment among undergraduate students of health disciplines in a private Iranian university.....	214
Title: Medical student's attitude and knowledge following peripheral blood smear interpretation teaching-learning in Pediatric department.	214
Title: NLP help me!	215
Title: Preliminary Assessment of Peer-Mentoring Program for Medical students in Academic difficulties	215
Title: Assessment of student learning in an interprofessional health sciences module	216
Title: Development of educational program based constrictive approach in medical ethic and the effect of this program on students' learning and self reflection	216
Title: How did medical students manage difficult patient encounters?	217
Title: Are Examinee Post Exam Surveys Biased?	217
Title: Core clinical skills competency in internists graduated from different training tracks	218
Title: Does the order of final year surgical clerkship rotation influence on student's score?.....	218
Title: Does two plus three equal three plus two? The problems of sequencing and segmentation.....	219
Title: Mini CEX as a Predictor of Clinical Reasoning in Clinical Students of Pediatric Clinical Rotation of Faculty of Medicine of Universitas Islam Indonesia.....	219
Title: 360-degree evaluation for clinical performance assessment in medical students: Does it work for all?.....	220
Title: Awarding Outcome-Based Continuing Education (CE) Credit	220
Title: Evaluation of a strategy for implementing competency based medical education in specialist training in anaesthesia in Ireland	221
Title: Usability of a generic electronic platform for workplace-based assessment - Responso.....	222
Title: Initiating CEPAER adoption for Improving System Based Practice among New Residents through TRUST-P4R	222
Title: Mini-clinical evaluation exercise (mini-CEX) for intern's assessment	223
Title: Faculty Development: DOPS as Workplace-Based Assessment	223
Title: Videofeedback recording of real consultations using problem-based interview (PBI) with medical residents – development and evaluation of the impact of training residents on communication skills in a primary care program	224
Title: The assessment of Pediatric Residents written Handover in ACGME-I program, Qatar	224

Title: Faculty development as part of a comprehensive quality assurance protocol significantly improves multiple-choice item-writing quality	225
Title: Quality assurance of multiple-choice question (MCQ)-based exams: Supporting defensible decision-making based on item statistics	226
Title: Medical Students' Multiple Choice Questions Answering Behavior during High-Stakes Examinations	226
Title: Comparative study of two summative examinations vs. a single summative examination in nursing students: Experience from Thammasat University	227
Title: Correlation of Script Concordance Test (SCT) with other assessment modalities in a graduate-entry medical course	227
Title: Do pre-clinical OSCEs predict acceptable performance of medical students in clinical placement?	228
Title: Global Rating in Objective Structured Clinical Examination, Comparing Between Medical Teachers And Simulated Patients	228
Title: Reliability Analysis of the Objective Structured Clinical Examination with Generalizability Theory	229
Title: Is gender as an interview bias in multiple mini-interviews?	229
Title: Validation of Situational Judgement Test as One of the Instrument in Student Selection in Cardiology and Vascular Medicine Study Program in Faculty of Medicine Universitas Indonesia	230
Title: Failure is success if we learn about it: the most common weaknesses in medical students' research reports	230
Title: The Contrasting Policies on Deferred Examinations for Queensland Medical Students and Post-Graduate Trainee Specialists	231
Title: Investigating the Effect of Feedback to MCQ Designers in Promoting the Quality of tests	231
Title: Has a previous formative exam influence on a summative exam?	232
Title: The clinical education assessment in Arak University of Medical Sciences: determining the part of	232
Title: Fit for the Future: Evaluating an innovative integrated community care training post	233
Title: Laparoscopic training amongst UK senior Obstetrics and Gynaecology trainees.....	233
Title: Teach fall prevention by using simulation with 'live patient'	234
Title: Perceived stress, reasons for and sources of stress among medical students at Rabigh Medical College, King Abdulaziz University, Jeddah, Saudi Arabia	234
Title: Perceived educational needs concerning relationship and boundaries in a multicultural medical environment "clinical clerks' perspectives.....	235
Title: What Does Turkish Medical Education Literature Say On Professionalism?_ A Literature Review	235
Title: An overview of the first year Undergraduate Medical Students Feedback on the Point of Care Ultrasound Curriculum	236
Title: Internet users' perspective towards Facebook use by physicians and medical students	236
Title: "We don't know what we don't know": Junior doctor's knowledge, skill and perceptions towards	237
prescribing when starting their job in New Zealand	237
Title: Knowledge of emergency management of tooth avulsion among medical students in Melaka, Malaysia	237
Title: Enhancing Knowledge and Attitude toward Neuroscience at School	238
Title: Energy drinks as the main factor of mental symptomatology in medical students	239

Title: Association between insomnia and mental disorders among medical students in México.....	239
Title: Analysis of Thyroid Lesions in Patients Using Iodised Salt	239
Title: Capacity building in Bio risk reduction through training peripheral Laboratory technicians of Guinea - 2016	240
Title: Reflection revisited: physicians' experiences with reflection in professional practice	241
Title: Student anxiety and its perceived sources during various clinico-dental situations among dental students in Melaka, Malaysia.....	241
Title: A survey on morning report Conduct in major department of Educational hospitals in Shahrekord University of Medical Science in2015 -2016.....	242
Title: Global Health Electives: Ethical Engagement in Building Global Health Capacity	242
Title: More than imparting knowledge, effecting change in clinical reasoning in medical students. What skills do clinical educators need?.....	243
Title: Simulation-based assessments of ultrasound skills: A comparison of validity evidence from three different procedures.....	243
Title: Global Health Electives: Ethical Engagement in Building Global Health Capacity.....	244
Title: Evaluate teaching outcomes for new medical school, How do we do? . Medical Education Center	245
Title: Vodcasts to support Educational Supervisors in using the ePortfolio	245
Title: The Role of Crowdsourcing in Medical and Health Care Education: A Literature Review.....	246
Title: Implementation of Formative Assessment and its Effectiveness	246
Title: Evaluation of the Evolution of a Feedback Process for Residents Rotating in the Pediatric Emergency Department	247
Title: 50 years of medical specialty training accreditation: lessons from history.....	247
Title: Joint Accreditation Leadership Summit: Education by the Team, for the Team	248
Title: Feedback on Feedback: Don't send surveys, streaming is now trending	248
Title: International use of a PACES revision resource created by core medical trainees in Leeds, United Kingdom	249
Title: Feedback as a Tool to Improve Modular Assessment: Eight Year Journey Worth Sharing	249
Title: Application of experiential theory in developing faculty assessment of medical students' portfolios in family medicine module	250
Title: Design and development of mobile based electronic portfolio	250
Title: Richness of information and its effect on inter-rater agreement on progress decisions in programmatic assessment	251
Title: Programmatic assessment in competency-based workplace learning and the efficiency of learning over time: when theory meets practice	252
Title: Feedback in work based place learning, a qualitative study.....	252
Title: 50 years of medical specialty training accreditation: lessons from history	253
Title: Joint Accreditation Leadership Summit: Education by the Team, for the Team	253
Title: Strategies for building a CPD Program in an undergraduate medical school: successes and challenges.....	254
Title: OPTIMED 2.0: Advancing Clinical Assessment Technology to Meet Evolving Educational Needs.....	254
Title: Kahoot Program and Instruction via Telemedicine Distance Learning Network for 21st Century Learner.....	255
Title: Use of the Moodle program in a Computer based Clinical Examination in Surgery in the Summative assessment of medical students	255
Title: Techology as a driver – developing an ecosystem for healthcare quality with CPD.....	256

Title: How Much Does Each Item of evaluation tool Explain Actual Performance of the Faculty Members?	256
Title: Who is a good teacher in the Asian Context?	257
Title: An assessment of Clinical Nursing Preceptor's Teaching Competencies and Educational Training Needs	257
Title: Perspectives of Simulated Patients for Teaching Medical Students in the Pre-clinical Year	258
Title: As it is told in books: When teaching strategies become cooking recipes in the training of health professionals.	258
Title: Improving the Reliability of Cardiac Surgery Residency Admissions through Evidence-Based Standardization: A Pilot Study	259
Title: 'Hot Topics' and 'Hot Tips' for safe prescribing: Utilising a short-form educational tool to enhance junior doctors' theoretical and practical knowledge of prescribing	259
Title: Learning by Doing in Cataract Lesson – The CBME study	260
Title: The Art of Being Concise: Clinical Pearls.....	260
Title: Innovate Hand Hygiene Training among pre-clinical years student at king Abdulaziz University	261
Title: A framework of participatory selection of faculty dean: The report of an experience.....	261
Title: The effect of problem solving training on decision making skill in nursing students	262
Title: Perceived Stress and its influence among Undergraduate Dental Students in Lahore	262
Title: Learning styles and educational outcome in Thai medical students.....	263
Title: The Relationship between Learning Styles and Block Examination Success Rates from the Medical Faculty Students of Abulyatama University	263
Title: Psychometric properties of Sense of Community Scale (CCS) in virtual environment	264
Title: Gamification can unlock further learning gains in undergraduate ophthalmology without additional teacher commitment	264
Title: Occupational Therapy, an emerging and innovative role in Primary Care	265
Title: Psychometric Properties of the Communication Skills Attitude Scale (CSAS) Measure in a Sample of Iranian medical students	266
Title: Hajj and Umrah Longitudinal Module as filed placements during Hajj and Umrah seasons as core curriculum	266
Title: Capacity building in Bio risk reduction through training peripheral Laboratory technicians of Guinea - 2016	267
Title: Reflection revisited: physicians' experiences with reflection in professional practice.....	267
Title: Student anxiety and its perceived sources during various clinico-dental situations among dental students in Melaka, Malaysia	268
Title: A survey on morning report Conduct in major department of Educational hospitals in Shahrekord University of Medical Science in 2015 -2016	268
Title: An Evaluation of a Modified Longitudinal Placements Pilot. Challenges and Lessons Learnt	269
Title: Assessing the validity and reliability of SPIKS questionnaires regarding breaking bad news at TUMS	270
Title: GP Self-Test.....	270
Title: Psychiatric Learning and Meditation	271
Title: What are the qualities of a successful program director? A needs assessment qualitative study.....	271
Title: A program evaluation tool for institution with limited resources	272
Title: Practical approach of clinical training in Romania: setting the frame for clinically competent physicians	272

Title: Predictive value of the Bender Gestalt II visuospatial test for performance of second year students in Class II cavity preparation on phantom head teeth	273
Title: Promotion of sensitivity and motivation of students to respond to the real needs of the community via development and implementation of an accountable and community-oriented curriculum:	274
Title: Using Mixed methods research approach to measure the Educational Needs Assessment in Medical Education	275
AUTHORS' INDEX	276
INSTRUCTIONS FOR AUTHORS	287

Journal of Islamic International Medical College Procedure for online submission of manuscript

1. **VISIT website:** <http://my.ejmanager.com/jiimc/>
2. **CLICK** Submit your Manuscript (Right Corner)
3. **For New User:**
 - **CLICK** “ Here for Registration”
 - Type your email address.
 - Get registered- Fill the form properly and click **submit**.
 - You will receive an e mail from eJManager.com
 - **CLICK** on this mail to note “ User Name and Password”
2. **Article Submission:** Submit your manuscript/article by following steps:
 - **CLICK** “Submit New Manuscript” in the right upper portion of window
 - Read the Instructions for authors carefully before submitting your manuscript



<http://my.ejmanager.com/jiimc/>>Submit your Manuscript >Journal of Islamic International Medical College>Registration>Login>Submit New Manuscript >(Follow Steps)> Save the page and continue

PLENARY SESSIONS

Plenary Session-1

Title: Developing and Assessing Entrustable Professional Activities as the Basis for Assessment of Patient Safety Competencies

Speaker: Paul Barach

ABSTRACT:

Determining when residents are independently prepared to perform clinical care tasks safely is not easy or understood. Educators have struggled to identify robust ways to evaluate trainees and their preparedness to treat patients while unsupervised. However, efforts to implement competency-based medical education have been stymied by practical challenges and assessment questions. Competency-based assessment tools, while potentially psychometrically strong, can prompt narrow focus on aspects of individual competencies and improper implementation of assessment tools with inadequate faculty training limits the information gained. Entrustable professional activities (EPAs) are a novel method of operationalizing competencies and milestones in the context of actual clinical work. An EPA reflects relevant competencies and milestones; requires skills, knowledge, and attitudes; addresses a professional task with a recognizable output; and can be observed and judged by an expert. Trust allows the trainee to experience increasing levels of participation and responsibility in the workplace in a way that builds competence for future practice. The breadth of knowledge and skills required to become a competent and safe physician, coupled with the busy workload confound this challenge. Notably, a technically proficient trainee may not have the clinical judgment to treat patients without supervision. This talk will review patient safety Milestones (discipline-specific developmental achievements toward competence), and their assessment, that ideally facilitates meaningful workplace-based assessment over time. We

will review the factors affecting why and when supervisors trust residents to proceed without supervision.

Plenary Session-2

Title: Excellence in Assessment – If It Ain't Broke, Make it Better!

Speaker: Debra Klamen

ABSTRACT:

There is an axiom that goes, "If it Ain't Broke, Don't Fix it." For a long time in medical education, that meant that we used time-worn assessment measures and didn't worry too much about it. MCQs, checklists, and 'observation' were (and still are) standard assessments. We have progressed beyond this rubric. Now the literature is full of competencies, milestones, and EPAs. However, how we measure these falls immediately back into old paradigms. What we need is a system of global judgment with some structure, a different (and better?) model of assessment. This talk will outline what that new model of assessment might look like.

Plenary Session-3

Title: Learning Driving Assessment

Speaker: Cees Van der Vleuten

ABSTRACT:

To better prepare learners for the needs of health care, education is rapidly moving towards outcomes and competencies, including an emphasis on self-directed learning as a basis for life-long learning. To be successful in making this transition, assessment strategies need to change. These changes include the assessment of behavioural skills, the focus on feedback, the use of narrative assessment information, more longitudinal assessment and monitoring, and supporting learners in their self-directed learning. Curriculum wide assessment strategies such as programmatic assessment

will gain popularity. The general intent is to make assessment more meaningful for supporting learning. The old credo of "assessment driving learning" needs replacement by "learning driving assessment".

Plenary Session-4

Title: A Contemporary View of the Role of Assessment in Continuing Professional Development for Health Professionals

Speaker: Elizabeth Farmer

ABSTRACT:

There is increased regulatory activity in revalidation and recertification worldwide. This has sharpened the focus on the role and value of continuing professional development. This plenary presentation will explore where assessment fits in contemporary thinking about how best to ensure that doctors and other health professionals remain fit to practice throughout their entire professional careers.

Plenary Session-5

Title: Competency Achieving Medical Education - Challenges & Solutions

Speaker: N. G. (Niv) Patil

ABSTRACT:

Traditional medical curriculum is based on premise that student is 'Able to achieve'. Current initiative towards 'Outcome based curriculum', though synonymous to 'Competency Based Curriculum', denotes 'Able to show' than 'Able to do/perform'. With spectacular increase in number of medical schools and students across the world, there is a perception that medical schools are in danger of producing 'fit to pass exams' graduates than 'Fit to practice'. Medical profession need to revolutionize curriculum to articulate role of medical schools by providing 'Competency Achieving Syllabus' which should clearly demonstrate practical approach in

creation of undifferentiated doctors, tomorrow's specialists with generic skills; and graduates who can perform well during internship. Author will highlight examples of competency achieving syllabus.

Plenary Session-6

Title: Educating Tomorrow's Doctors' - Accreditation and Quality Assurance of Medical education

Speaker: Stephanie Hering

ABSTRACT:

The World Federation for Medical Education (WFME) has published international standards for the quality improvement of medical education since 1997. International norms need to be adjusted to respective regional, national and institutional contexts or specific health care needs.

This contribution will present a case-study from Switzerland as a model of how to negotiate global demands and local requirements in order to educate the next generation of doctors. For the mandatory accreditation of basic and postgraduate medical education programmers quality standards and processes had to be designed. The ministries of education and public health were involved as well as many other stakeholders. The result is a set of robust standards for medical education that successfully integrate multiple dimensions.



WHAT THE EXPERTS SAY?

Prof. Fadil Çitaku

Title: Using Leadership and Emotional Intelligence Competencies to reach the Excellence in Medical Education and Healthcare

ABSTRACT:

According to experts of leadership science—an important threat facing the world today is the lack of effective leadership of our human institutions. Health organizations and medical schools—like other human institutions—need competent and effective leaders now more than ever to face the threats and challenges of the modern world. Nowadays educational leaders are under scrutiny to achieve heightened expectations for improvement to teaching and learning. They are called to be educational visionaries, instructional and curriculum leaders, assessment experts, community builders, public relations experts, budget analysts, facility managers, special programs administrators and expert overseers of legal, contractual and policy mandates and initiatives. Yet, they encounter major challenges such as commercialization of the university's and medical school's central purpose, perceived lack of accountability of higher education and heightened sensitivity of taxpayers towards ineffective and inefficient leadership in academia. Medical school leaders, in addition, are confronted with many concerns such as financial stability, curriculum development, research support and accreditation standards. The ability to meet these demands may be compromised as a result of inadequate and inefficient leadership.

Prof. Mathew CE Gwee

Title: The Influence of Culture in Education Decision-Making

ABSTRACT:

“Culture is the patterns of behavior that are

encouraged, discouraged or tolerated over time. It is what is created from the messages that are received about how people are unexpected to behave. Cultures develop in any community of people who spend time together, and who are bound together through shared goals, beliefs, routines, needs or values.” Carolyn Taylor (2015)

Most organizations (including educational institutions) have a hierarchical structure with their own value systems which often reflect the culture of the organization (the organizational culture). Academic teaching faculty in educational institutions (organizations) often need to engage in education decision making (edm), in order to undertake reforms strongly advocated in this century. However, potentially powerful forces often prevail within an organizational culture; such forces will significantly influence the outcomes of education decisions made and, ultimately, on the quality of national healthcare.

Insights on the impact of organizational culture in education decision-making will be discussed.

Prof. Lawrence Sherman

Title: “When the Team Learns Together, Everyone Wins!”

ABSTRACT:

An area of great focus and interest in the United States is interprofessional continuing education (IPCE). Healthcare professionals currently engage in interprofessional collaborative practice, and as such, team-based educational needs arise. Appropriate use of IPCE, when educational activities are developed in which two or more professions learn from, with, and about each other. The major health professions accreditors in the US, representing medicine, nursing, and pharmacy, have developed a joint accreditation program, in which educational

providers can be credentialed to provide continuing education credits for all three professions through a single, unified, application process. Outcomes from IPCE may include team-based measures as well as the more traditional assessment of changes in knowledge, competence, performance, and/or patient outcomes.

Dr. Mohamed M. Al-Eraky

Title: Assessment of Personal Qualities at the 'Is' Level

ABSTRACT:

Assessment in the post-psychometric era moved from pure objectivity to encompass a more holistic and subjective notions. New domains for assessment have emerged over the past few years (beyond individual's knowledge and competence), that proved to have a great impact on the future careers of health professionals. Assessors became more concerned to enrich their toolbox with valid methods and protocols to assess the personal qualities of their candidates, not at the Knows, Shows or Does, but at the 'Is' level. In this symposium, we don't promise to offer conclusive answers, but rather ponder the following questions:

How to assess medical professionalism beneath the shell of observable events to explore multi-layers of attitudes, attributes, personal qualities and even personality traits that fuel (un)professional behaviors?

What are the salient personal qualities (at the Is level) that can be taught/assessed or selected in medical students on admission, without being too judgmental?

How to ensure validity and advance inter-rater reliability of assessors at the 'Is' level?

How and how often these qualities should be assessed across the continuum of medical education?

How assessment of personal qualities (at the Is level) may contribute to professional identity formation (PIF) of our graduates?

Prof. Ronald M. Harden

Title: The Changing Role of the Medical Teacher

ABSTRACT:

The importance of the teacher in the education process has been recognized by the health care professions. What is less appreciated, however, is the extent to which this role is changing or should be changing. As an information provider, as well as being a conductor or transmitter of information, the teacher should be concerned with curating information for students and coaching students how to seek and evaluate information for themselves. Increasingly important is the teacher's role as a facilitator and mentor, helping students to achieve the specified learning outcomes and supporting and motivating and inspiring students. There are significant changes also in the teacher's role as a curriculum developer and implementer and as an assessor or diagnostician. The teacher as a role model continues to be important but even here it is changing. Given the complexities of medical education, the teacher's role as a manager and change agent is also attracting more attention, as is the role as a scholar and researcher. Finally, the teacher used to be a professional who assesses their own performance and keeps themselves up to date.

Prof. Lubna Beg

Title: Can Changes in Curriculum Improve Health Status of The Country?

ABSTRACT:

The responsibility of health professionals training institutions is to ensure that they are graduating competent and safe practitioners for tomorrow. The health professions teaching/training institutions have a mandate from the community and the graduates to provide quality education; to accomplish that task the curriculum must be contextual and

responsive to their needs. The community is the ultimate beneficiary of a quality curriculum that is imparted appropriately with inbuilt quality assurance mechanism. More often institutions hastily develop and implement curricula that may have worked in other parts of the world with a different context and better resources. The talk will specifically focus on the importance of a contextual curriculum which considers the resources available and the health needs of the community.

Prof Dr. Rahila Yasmeen

Title: Quality Parameters in Faculty Development Programs; A Way Forward

ABSTRACT:

Due to paradigm shift in educational strategies in medical education, faculty development has become an increasingly important component of medical education. It has a critical role to play in promoting academic excellence and is one of the mechanisms for improving the instructional competencies of faculty/medical teachers to adopt & adapt the medical education reform.

The review of literature about faculty development in medical education has shown that up till now, diverse and myriad approaches are being used by the institutions to train the faculty to demonstrate various competencies and roles i.e. a teacher, curriculum planner & evaluator, educational, administrator and scholar at all level of the educational continuum i.e. at micro, meso and macro level. To assure the quality and effectiveness of these faculty development programs, it should be plan well with respect to different approaches used in it, learning transfer of skill at workplace, evaluation and assessment of impact.

Prof Dr. Rehan Ahmed Khan

Title: The Curricular Debate of aligning the curriculum with WFME Standards and Recognition of a Accreditation body

ABSTRACT:

The year 2023 is fast approaching. Countries in which accreditation bodies that are not recognized by this deadline by WFME will have an impact in the form of their medical students not allowed to take USMLE examination in USA. It is thus a question of the hour what should be done by the accreditation agencies and medical school to meet these standards. This talk would provide an insight into this matter of importance.

Dr. Ahsan Sethi

Title: Educational Identity Formation of Healthcare Professionals

ABSTRACT:

There is a growing trend towards the professionalization of medical education with an expectation for the accreditation of medical educators by the regulatory bodies. The number of award bearing programmes in medical education is steadily increasing, but there has been limited research on their influence and effectiveness. This talk presents the research findings on the impact of postgraduate qualifications in medical education on graduates' educational identities, practices and career progression. An understanding of the complexity and nuances of educational identity formation of healthcare professionals will be presented.



FREE PAPERS: ORAL PRESENTATIONS

Title: Assessing Knowledge Application in Clinical Problem Solving: The Structured Professional Reasoning Exercise

Authors: Jorge Tricio, Mark Woolford, Michael Escudier

Institute: University of the Andes, Chile

ABSTRACT:

Background: Clinical reasoning is a fundamental and core clinical competence of healthcare professionals.

The study investigated the utility of the Structured Professional Reasoning Exercise (SPRE), a new competence assessment method designed to measure dental students' clinical reasoning in simulated scenarios, covering the clinical areas of Oral Disease, Primary Dental Care and Restorative Dentistry, Child Dental Health, and Dental Practice and Clinical Governance.

Summary of Work: A total of 313 year-5 students sat for the assessment. Students spent 45 minutes assimilating the scenarios, before rotating through four pairs of 39 trained examiners who each independently assessed a single scenario over a ten-minute period, using a structured marking sheet. After the assessment, all students and examiners were invited to complete an anonymous perception questionnaire of the exercise. These questionnaires and the examination scores were statistically analysed.

Results & Discussion: Oral Disease showed the lowest scores; Dental Practice and Governance the highest. The overall Intraclass Correlation Coefficient was 0.770. Exploratory factor analysis revealed one major factor with an eigenvalue of 2.75 (68.8% of total variance). Students' SPRE scores positively correlated with their essay marks ($r=0.476$, $p<0.0001$), and understanding ($r=0.490$, $p<0.004$) and reflective ($r=0.477$, $p<0.005$) skills. The Generalizability coefficient was consistent at 0.806. A total of 295 students and 32 examiners completed the perception questionnaire. Students' lowest examination perceptions were an "Unpleasant" and "Unenjoyable" experience, while the highest were "Interesting", "Valuable"

and "Important". The majority of students and examiners reported the assessment as acceptable, fair and valid.

Conclusions: The SPRE offers a reliable, valid and acceptable assessment method, provided it comprises at least four scenarios with two independently marking and trained assessors.

Take Home Message: The application of knowledge in clinical problem solving can be assessed through the SPRE as part of an assessment programme at the "shows how" level of Miller's pyramid.

Title: Student-led Interactive Case based Learning Experiences [SICLE]: An attempt to introduce horizontal integration in Preclinical Phase

Author: Sarmishtha Ghosh

Institute: MAHSA University, Malaysia

ABSTRACT:

Background: In the first two years of medical course students are mostly taught preclinical subjects in an organ system manner. Subsequently students face difficulty in applying basic science concepts in clinical phase. This study reports an educational intervention to overcome this and ensure integration in the first two years with clinical relevance.

Summary of Work Done: Year 1 students in the Respiratory System module were given a topic namely Allergic Rhinitis and volunteers were asked to present a role playing seminar, conceptualized by students and facilitated by subject experts. A set of slides were prepared with essential facts on the topic and uploaded onto the learning management system for all students to view and learn. A two hour session was scheduled in the timetable when the volunteers presented a doctor patient interaction followed by explanations of laboratory findings, pathophysiology of the disease, drugs used in the treatment and further management of the condition. The session was interactive interspersed with question answer session. After completion of the session, a short MCQ was conducted alongwith a structured questionnaire to elicit the students' viewpoints.

Results: 80% students commented positively about the session and wanted more sessions of the sort. The scores in the MCQ ranged from 60%-85%

with no statistical significance in the scores of presenters and audience. An elaborate analysis showed high scores in the critical thinking questions as well.

Discussion: Peer led sessions and active participation in learning improved performance by creating interest in the learning process. Subjective opinions tallied with the objective scores

Conclusion: This educational intervention may be considered to replace some of the didactic lectures to have more student engagement and active learning.

Take Home Message: Technology and human factor need to be judiciously combined to ensure active learning of basic concepts with clinical relevance.

Title: Peer Assisted Learning (PAL): A pal of students for better learning

Authors: Hassan Salman Siddiqi, Rehana Rehman, Faiza Alam

Institute: The Aga Khan University, Karachi Pakistan

ABSTRACT:

Background: "Peer assisted learning" (PAL) is a student-centric learning method in which selected students (peer leaders) assume the role of teachers after proper training to teach their fellow-mates (peer learners). This mode of teaching promotes engaged learning, better understanding of knowledge and active participation among both groups of students.

Summary of Work: Peer-learning model was introduced in lab sessions of GIT module. Ten Peer Leaders (PLs) were shortlisted and trained by workshops and pre run of experiment. Students were divided into control group (A: taught by staff) and experimental group (B: taught by PLs); knowledge was assessed by a quiz through "Kahoot".

Summary of Results: The experimental group (peer learners) performed better as compared to the control group. They found peer leaders more accessible than lab staff, showed excitement to learn what their peers were to teach and were non-hesitant to ask any type of question, thus leading to better understanding of the subject matter.

Discussion: Traditional teaching fails to incorporate

multidimensional engagement among students due to apprehension for seeking clarification from teachers. In PAL sessions, there was excitement and curiosity in place of fear or hesitance. Hence peer learners engaged in open discussions with the PLs and cleared their concepts much more effectively.

Conclusions: PAL promoted engaged learning by bilateral communication in a student-friendly non-Authoritative, informal learning environment. The model developed professional attitude and leadership qualities in PLs. It enhanced critical thinking, psychomotor skills and cognitive development of peer leaders as well as learners.

Take Home Messages: In this era of medical technology, challenges in maintaining student engagement require innovation in conventional/traditional teaching methodologies. PAL proved its worth being beneficial equally to peer leaders as well as peer learners. The use of PAL should be promoted in carefully designed academic sessions in undergraduate and postgraduate medical education.

Title: Developing a technology driven solution for self-directed learning and assessment in a simulated learning environment

Author: Rhena Delport

Institute: University of Pretoria, South Africa

ABSTRACT:

Effective and affordable student training is a challenge with increasing student numbers within a constrained learning environment. A technology-driven solution was developed to provide a platform for authentic and autonomous skills acquisition.

Work to Date: With the support of a dedicated IT team requirement specifications were set to create a dynamic learning environment with increased capacity for users, as well as an asynchronous assessment process that would improve the reliability and scope of assessment of procedural skills.

Results: The solution entails integration between the learning management system, a video management system, the access control security system and the university. The processes that are

implicated relate to creating, capturing, storing and ubiquitously accessing online learning materials, as well as well as the video material of student procedural performance.

Discussion: Capability for voluntary video-guided practice, under surveillance, as well as voluntary self/peer evaluation of proficiency will exist. Assessment is initiated by the student, and can be performed asynchronously. Scoring is performed online and detailed feedback can be provided. Diagnostic and evaluative assessment will be enabled, and the scope, validity, and reliability will improve.

Conclusion: This solution will contribute to skills mastery, despite time and space constraints, lessen the administrative and teaching load, and allow the student to take control of their learning. Student portfolios can also be created and skills retention and on demand top-up training is made possible.

Take Home Message: Clinical training and assessment in hospitals will prove to be challenging in future. Therefore the employment of simulations, embedded in a technology-supported environment may alleviate this burden. Although the solution comes at high cost, down-stream cost-saving and increased patient safety is envisaged.

Title: Near peer mentoring in medical education, a novel experience from Iran

Authors: Fatemeh Seddigh Estahbanati, Hossein Akbari Aliabad, Mohammad Hossein, Taghrir, Reza, Mahmoudi, Fatemeh Nekoi, Mehdi Panahandeh

Institute: University in Utrecht, Netherlands

ABSTRACT:

Entrance to first year of medicine learning may be like arrival in a magical maze, such secret alongside stressful. Every experienced medical student has a solution to exit successfully from the maze. When first year students are able to access to former ones, they may find exit gate better and faster without doing trial and error like formers did. Near peer mentoring (NPM) program is a short term relationship that third year medical students as mentors share their experiences with first year medical students and support them in educational and emotional aspects. In Shiraz, 14 medical students participated in this program as mentors

and 28 first year medical students were randomly assigned to mentors in a ratio of 1:2 and followed weekly for 12 months and after that 17 mentees were asked to complete a 9 items questionnaire designed based on Likert-type scale. The questionnaire was confirmed in case of validity and reliability. Fourteen mentees expressed that NPM program was effective in reducing emotional problems, more than half of them believe that NPM program was precisely useful for them to deal with educational challenges and just 3 mentees did not appreciate NPM program. The average of marks of the mentees was improved significantly (0.68 out of 20) after finishing the program. It seems that such innovative programs like NPM can play a major role to form educational and emotional supports for first year medical students. This study provides evidence that medical students can design an innovative program based on their own context and successfully implement the program.

Title: Post Graduate Residents' Perception of the Clinical Learning Environment; Use of Postgraduate Hospital Educational Environment Measure (Pheem) In Pakistani Context

Authors: Attia Bari, Ahsan Rathore, Rehan Khan

Institute: The Institute of Child Health, Lahore Pakistan

ABSTRACT:

Background: The clinical educational environment plays a vital role in postgraduate learning process. PHEEM has been used in few institutes in Pakistan; however the tool required minor modifications to be valid for the Pakistani context to evaluate perception of postgraduate residents.

Objective: To evaluate the perception of Postgraduate residents' about the clinical educational environment of The Children's Hospital Lahore, Pakistan by using PHEEM inventory and to investigate the association of their perception with different specialties and years of residency.

Methodology: Participating residents were asked to complete PHEEM questionnaire. We calculated the residents' individual perception scores and compared the means of both individual domain and global score of PHEEM by different specialties

and different levels of residency training year. The survey was anonymous. Data was analysed using SPSS version 20.

Results: A total of 160 residents completed the questionnaire, majority 114 (71.3%) being the Paediatric Medicine residents. The residents perceived their educational environment positive as the PHEEM yielded a global mean score of 88.15/160, with each subclass score; Autonomy: 29.27/56, Teaching: 34.35/60 and Social Support: 21.58/44. Autonomy and teaching were rated most highly by Paediatric Diagnostic residents (32.23 8.148) and (36.23 9.010) respectively. Social support was rated highest by Paediatric Surgery residents (24.36 4.653). Lowest rated scores of all three domains were from Paediatric Medicine residents which was the major specialty. The results showed a good environment and teachers with good clinical skills but also highlighted negative perception about poor catering facilities, work load and lack of feedback. There was no significant difference of perception between different specialties ($p=0.876$), or different years of residents (0.474).

Conclusion: The postgraduate residents considered their clinical educational environment more positive than negative. Perception of clinical educational environment does not differ significantly in different years of residency and in different specialties.

Key Words: Postgraduate resident, educational environment, autonomy, social support.

Title: Continuing Medical Education activities for faculty development; an organizational horizon in ecosphere of curriculum reform

Authors: Abdul Khaliq Naveed, Rahila Yasmeen

Institute: Riphah International University, Islamabad, Pakistan

ABSTRACT:

Background and Aim: The main purpose of this study was to examine the history of Faculty/Staff developments events organized & facilitated by Riphah Academy of Research and Education of Riphah International University Pakistan from 2006-2015, with particular emphasis on identifying the need analysis of RIPHAA faculties for their

continuous professional development (CPD), what was learned (priorities of topics / educational themes of events), number of trained faculty members, with future plans as the policy evolved and changed with development of continuing medical education (CME) program.

Methods: Documents analysis is used as a main method of data collection and analysis. In this study all the data/documents from 2006 to 2016, related to the faculty development event are analyzed.

Results: Analysis revealed that, to date RARE has trained approximately 3330 faculty members nationally and number of activities organized are 118 including workshops, seminars, symposia, courses and conferences on the following themes; basic competencies in medical teaching, curriculum, assessment, research, teaching & learning strategies, leadership, strategic vision, total quality management, event management, generic skills, medical disciplines specific. Need analysis of Riphah faculties shown that they want to be trained in curriculum development, teaching & learning strategies, Assessment, academic administration and research methodology.

Conclusion: Faculty development has become an increasingly important component that needs to be planned out and execute by a dedicated team and department in an organization. CME/CPD programmes should be based on the principle of teaching and education as a means of facilitating learning and this approach should be adopted in response to studies on how and why professional change their performance at the workplace and the role of learning in that process.

Title: Influencing attitudes of medical students towards substance misusers

Authors: Lucy Gilkes, Gary Hulse

Institute: University of Western Australia, Australia

ABSTRACT:

Background: In Addiction Medicine negative attitudes to persons with problem substance use form a well-recognised barrier to the implementation of best practice. Attitudes cannot be taught didactically and it can be difficult to influence attitudes through traditional methods such as lectures.

Summary of Work: This study uses a brief intervention of a 3 hour seminar on addiction medicine with people recovering from problem substance use volunteering to speak with students. Students were invited to complete an anonymous survey before and after the seminar designed to measure their attitude to people with problem substance use.

Results: 117 out of 206 (57%) students who attended the seminar participated in this study. For every question there was a significant ($p < 0.05$) change following the survey. For every question the change was in a favourable direction regarding changing attitudes to persons with problem substance users.

Discussion: Students will have many preconceived ideas about addiction and people who are addicted based on their personal experiences and the media. These attitudes are hard to change. There is often very little curriculum space given to addiction medicine in a medical degree.

We believe a fairly unique feature of this seminar is the degree to which the 'patients' are involved and included in all the components of the seminar including the introductory lecture, small group discussions and debriefing.

Conclusions: This study has shown that a well-designed and executed brief learning experience can favourably change attitudes of medical students.

Take Home Message: We believe this format of teaching would be worthwhile in any medical curriculum as it has been shown to change attitudes in a positive way which has, in turn, been shown to break down barriers to best practice in Addiction medicine.

Title: Development and Validation of the Backwash Assessment Questionnaire (BAQ)

Authors: Afshan Sumera, Ankur Barua

Institute: International Medical University, Malaysia

ABSTRACT:

Background: Examination backwash (also known as 'washback') is the term used to evaluate the effects of examination on teaching and learning activities.

Objective: To develop and validate a tool to investigate the effect of examination backwash on learning among undergraduate medical students.

Methods: The new tool was developed named as Backwash Assessment Questionnaire (BAQ) and validated. To assess backwash among medical students this newly developed questionnaire was used.

A preliminary version, consisting of 15-item structured, was developed based on a focused group discussion with students and experts and extensive literature reviews.

A pilot study was conducted among 81 first year medical students to assess the acceptability, time-management and reliability of this questionnaire.

Results: Based on the results from Spearman's Correlation and Cronbach's alpha after item deletion, 5-items of this preliminary version were dropped and the final BAQ questionnaire was reduced to 10 items.

A detailed cross-sectional study was conducted on 106 medical students belonging to the third, fourth and fifth semesters to evaluate the final version BAQ.

The overall internal reliability (Cronbach's alpha) of the final version of BAQ was found to be 0.874. Since none of the Cronbach's alpha values exceeded this in item deletion and the Spearman's Correlation coefficient for any of the two items never exceeded 0.80; all the ten items of BAQ were retained.

The test-retest reliability from kappa statistics was found to be high with $k=0.92$ with $p\text{-value} = 0.0001^*$.

Conclusion: BAQ is a powerful teaching-learning tool. It is a valid and a reliable instrument for assessing the backwash effects.

Title: Customizing standard setting for the assessment purpose: Experiences with the Cohen method for written and OSCE components of licensure screening exams

Authors: Debra Sibbald, Sandra Monteiro

Institute: Touchstone Institute, Canada

ABSTRACT:

Background: Standard setting should establish credible cut scores consistent with the test

purpose. Ebel vs. Cohen calculations were compared for addressing domain specificity and percentage pass marks for four licensure screening examinations: MCQ and OSCE exams (College of Nursing) and Knowledge and Competency MCQ exams (College of Dietitians).

Summary of Work: Cut scores were established in standard setting pilots using Practice Entry target groups (recent graduates) vs. students. Criterion-referenced pass marks were derived from target group performance results (Cohen method: N=27, 21). Expert panels calculated Ebel method pass marks. Percentage passes for criterion group candidates vs. students were compared.

Results: For all four exams, the Cohen method cut scores were more domain specific and discriminating. They were consequently preferred by Nursing and Dietitian regulators. Established cut scores were applied for launch and subsequent administrations. Percentage pass rates demonstrated the discriminating power of the cut score compared to pilot candidate results.

Discussion: A criterion referenced approach establishes a stable minimum score, based on the performance of a domain group. For screening exams, referencing a criterion group (recent graduates) establishes an Entry to Practice standard. This is a fair, objective and reliable approach which is customized to the needs of the profession.

Conclusions: The Cohen method (criterion group mean - 1 SD adjusted times the highest performing score) provided domain specific cut scores which discriminated better between candidates vs. the Ebel method in exams assessing readiness for licensure. The Cohen method was appropriate for both MCQ and OSCE exams.

Take Home Message: A customized Cohen approach is a criterion-referenced and economical approach yielding realistic outcomes for high stakes examinations. It can be implemented in exams with either written or OSCE components in varied health professional contexts. It is more specific and less resource intensive than a content focused, expert panel method (Ebel).

Title: Validity evidence for grade standards set for a high-stakes Objective Structured Clinical Examination (OSCE)

Authors: Ming Lee, Estebes Hernandez, Daniel Kahn

Institute: David Geffen School of Medicine at UCLA, USA

ABSTRACT:

Background: Although the Objective Structured Clinical Examination (OSCE) has been used pervasively across medical schools throughout the world, the standards used to determine the pass/fail grade of the exam vary widely. This study examined validity evidence for the standards set by a modified Angoff method for a graduation-required OSCE.

Summary of Work: Six clinician educators used the modified Angoff method to determine the cut-scores for 174 rising 4th-year medical students. The clinicians estimated the percentage of minimally competent students who would answer each checklist item correctly. Inter-rater reliability, differences in other academic performances between pass/fail groups, and educational impact were examined.

Summary of Results: The cut-scores determined for the OSCE resulted in a substantially lower failure rate (5% vs. 29% the previous year). The inter-rater reliability across domains and cases was .98 ($p < .001$). The pass/fail groups significantly differed in six of the eight measures of prior academic performances included in the study.

Discussion: The impact of the standard setting was substantial as it significantly reduced the burden of remediation for students and faculty. The very high inter-rater reliability indicates that the modified Angoff method produced reliable cut-scores. The significant differences between the pass/fail groups in other measures support external validity of the standards.

Conclusions: The study demonstrates strong evidence for internal and external validity of the cut-scores for a high-stakes OSCE. It also supports response process validity by including discussions among raters and checking previous student performances in the process. Involving multiple clinician educators experienced in medical student

teaching provides support for content validity.

Take Home Messages: The modified Angoff method supplemented by discussion and reality check can produce reliable and valid cut-scores for OSCEs. Any high-stakes exams demand careful consideration for setting criterion-based pass/fail standards.

Title: Comparison of the medical students' self-assessment and simulated patients evaluation of students' communication skills in Family Medicine Objective Structured Clinical Examination (OSCE)

Author: Firdous Jahan

Institute: Oman Medical College, Oman

ABSTRACT:

Appropriate communication is essential for establishing physician-patient relationships can positively influence patient satisfaction. The Objective Structured Clinical Examination (OSCE) is an approach to student assessment in which the clinical competence is evaluated. This study aimed comparison of the medical students 'self-assessment and the evaluation of students by simulated patients regarding students' communication skills in Family Medicine OSCE.

Summary of Work: A cross sectional study done at Oman Medical College in final MD OSCE Family Medicine. Students were asked self-assessment on communication skills. Student's performance was evaluated by a simulated patient. The Calgary Cambridge Observation Guide formed the basis for the outcome measures used in the questionnaires.

Discussion: A total 68 students appeared in OSCE, 88% (60/68) of whom responded. Students marginally over estimated in few areas as compared to simulated patients. Measures of reliability show Cronbach's Alpha from the 12 items being 0.89. New simulators only one item (q12) showed a statistically significant difference, with $t(16)=3.08, p<0.05$, with experienced simulators.

Conclusion: Medical students in the self-assessment of communication skills do not overestimate their skills; students seem very consistent in the item ratings. Students' and simulated patients' assessment has some agreements. Self-assessment is guiding the future

learning, providing reassurance, and promoting reflection which helps them to perform appropriately.

Take Home Message: Good and appropriate communication skills are essential for medical students to become an efficient member of a health care team in future. Self-assessment is guiding future learning. Introduction and integration of structured communication skills teaching in early years contributes greatly in the development of students' strengths.

Title: A Comparison of Standard Setting Methods for Assessments in Undergraduate Dental

Author: Muhammad Naveed Khalid

Institute: Cardiff University, United Kingdom

ABSTRACT:

Standard setting is an essential process in defining competency in dental education. Different standard setting methods tend to lead to different cut-off points which have direct consequences for the individual students. One commonly used method is the Angoff in which a panel of experts estimate the percentage of borderline students predicted to correctly answer each question in an examination. This method is costly, time consuming and relies on the assumption that the panel can accurately define the borderline student. Recently the Cohen method has been developed and subsequently modified, to overcome these disadvantages. We also examined the relative method; we took the mean of the score distribution for the group as a reference, and then picked a point below that mean as the passing mark. Our aim was to compare the standard set using our current method of Angoff to relative method, Cohen and modified Cohen methods, to inform future standard setting practices.

Above mentioned standard setting methods were applied to historical data for written examinations across assessments of the BDS and DHT programme at Cardiff University. Data included cohort sizes of 25-85 students per year. We had analyzed historical data for clinical examinations to determine which standard setting is more feasible and practical for various assessments.

The procedures yielded inconsistent results. The

Angoff and relative (Mean and 1SD) procedures gave similar results; however, the Cohen and Modified Cohen gave divergent results. The Angoff procedure yielded results reliable enough to use in decision making for a high-stakes examination.

The Angoff procedure provides reasonable and defensible approach to standard setting and is practical to apply in dental school. Further investigation of other procedures is needed because we have examined one year data and findings are inconclusive.

Title: The association between Selection's Assessment Items and Resident's Performances in the Ophthalmology Department Faculty of Medicine, Universitas Indonesia

Authors: Syntia Nusanti Shidik, Jusuf Anwar, Aria Kekalih

Institute: Medicine Universitas, Indonesia

ABSTRACT:

Background: The admission of residency program in the Ophthalmology Department, FKUI-RSCM is based on the accumulative score from some of the selection's assessment items. The coordinator expects the candidates who received high marks on selection process would also give excellent performance during the residency and therefore the resident would graduates as a qualified ophthalmologist. The aim of this study is to know the association between selection's assessment items and the performance during the residency program.

Methods: This was a retrospective cross-sectional study using secondary data from FKUI's ophthalmology residency program. The inclusion criteria were all ophthalmology residents with complete data information of selection, during, and at the end of the residency program from 1999 to 2006, in which results in 101 subjects. The selection data collection includes gender, age, the medical faculty origin, interview result, psychological test result, the entrance examination result, and the selection result. Data during the residency program involve the result from each end of the program's step, result of national examination, and difficulties encountered during the residency program. And lastly, data at the end

of the residency program are the GPA and the duration of the residency.

Results: There was a significant correlation between the residents' medical faculty origin and their results at the end of each step ($p=0.004$). There were also significant correlations between age ($p=0.004$), medical faculty origin ($p=0.008$), selection result ($p=0.002$) and their final GPA. Gender also have a significant correlation with difficulties encountered during the residency program ($p=0.001$). T

Conclusion: There were some significant correlations between some selection's criteria and the performance of ophthalmology residency program's participants. The medical faculty origin was found to be the strongest predictor to predict the performance of the residents.

Title: Pre-Clinical Medical Students' Perceptions of their Patient Safety Skills in Primary Care at Oman Medical College

Authors: Firdous Jahan, Maryann Radiance Aguiar

Institute: Oman Medical College, Oman

ABSTRACT:

Background: Patient safety is a new and challenging discipline in primary care. Medical students need to understand and demonstrate appropriate patient safety skills. Pre-clinical students at Oman Medical College (OMC) have clinical skills training in primary care as well as in the hospital. This study aimed to seek pre-clinical medical students' perceptions of their individual performance at a range of safety skills.

Summary of Work: A cross sectional study administrated a questionnaire to a random sample of 50 medical students at OMC in pre-clinical years. Data was analyzed using SPSS version 20.0. Most participants (88%) agreed the importance of patient safety. Self-rated general knowledge on patient safety on good level (72%) compared to (27%) for the specific knowledge issues score. In medical error management 75% willing to report medical errors, more than half willing to disclose error to patient and faculty.

Discussion: Majority of students had good general knowledge. In medical error management most frequent strategies employed by students,

disclosing to faculty and patient. Most of the participants likely to disclose the error and willing to change habits to improve patient safety. The majority agreed to support peers who make unintentional errors. Medical errors result from poorly designed systems and processes is also an important factor other than human factor.

Conclusion: Students had a favorable opinion of their own safety skills. However, specific knowledge question revealed some misconceptions. Most participants recognized the importance of patient safety topic in curriculum. Students are fair and honest to report medical errors. They considered competent physician don't make errors.

Take Home Message: To promote and enhance patient safety it is imperative to start patient safety training in undergraduate medical students. Knowledge could be acquired from a formal curriculum or from job training.

Title: Comparison of recommended sanctions for lapses of academic integrity as measured by Dundee Polyprofessionalism Inventory I: Academic Integrity from a Saudi and a UK medical school

Authors: Salman Guraya, Suzanne Roff

Institute: College of Medicine University, Sharjah UAE

ABSTRACT:

Background: There are varying perceptions about professionalism and academic integrity, both being influenced by regional, cultural, contextual and religious factors worldwide. Despite the key role of professionalism in medical field, unfortunately, medical educators have shown their concerns about the erosion of medical professionalism that is predominantly driven by lack of understanding. This study explored the existing understanding of academic integrity in a Saudi and a UK medical school.

Methods: The Dundee Polyprofessionalism Inventory I: Academic Integrity was administered online to the students and staff of a Saudi and a UK medical school.

Results: Of 1005 invitees, 411 completed the survey; response rate of 40.8%. There are variances

of understanding about professionalism among medical students across years as well as among clinical and non-clinical staff of both medical schools. Faculty of both schools was stricter than students and clinical staff was stricter than non-clinical staff. The UK students were stricter for 16 and Saudi students were stricter for 10 lapses of academic integrity. Yearly stratifications of students' recommendations identified a pattern of learning process as indicated by higher sanctions by senior students than their junior counterparts.

Conclusion: This study identified some degree of congruence as well as some significant dissimilarities in the sanctions for academic dishonesty. These data can be utilized for standard setting of professionalism that will facilitate the migration of International Medical Graduates by promoting their fitness to practice, especially probity and honesty, as defined by the General Medical Council of UK.

Take Home Message: The identification of cross-cultural variations in perceptions about lapses of academic integrity can help formulate a common framework for professionalism. Educators can utilize the data in implementing educational reforms for embedding instructional and assessment strategies within the existing curricula.

Title: Inconsistencies in the present reward system of using bibliometrics for promotion and tenure

Authors: Manoj Chakravarty, Nasir Sarwani

Institute: Arabian Gulf University, Bahrain

ABSTRACT:

Background: Institutions for higher education have been systematically applying the measurement of scholarship of research by the exclusive use of bibliometrics to measure faculty performance while selectively de-emphasizing the role of measurement of the scholarship of teaching.

Summary of Work: A systematic search for articles on limitations of bibliometrics and their use in assessing faculty performance was carried out from journals listed in SCOPUS, Medline, Social Science Citation Index (Thomson Reuters) and ERIC from the Internet. Over 110 journal articles were identified covering a period beginning from 1930 to 2017.

Summary of Result: An in-depth review of literature on the predominant use of bibliometrics for evaluation of faculty performance has been conducted, highlighting major limitations of using Citation metrics and Impact factor. Providing evidence from available literature, we question the singular use of bibliometrics to judge faculty performance.

Discussion: Institutions frequently substitute the IF of journals in which papers appear, and this creates a well-documented pervasive misuse of statistics that needs to be challenged. There is the need to assess research on its own merits rather than on the basis of where the research is published.

Conclusions: Given the substantial body of evidence of limitations related to publication inconsistencies related to publication of research, there is an urgent need to de-emphasize the exclusive use of journal-based metrics in appointment and promotion. Citation metrics are questionable, and the assumption of the "impact" as addressed, is clearly unsubstantiated.

Take Home Message: Validity of using bibliometrics as the main/sole factor in evaluating teacher performance is questionable, and hence it is incumbent upon academic fraternity to scale down the priority of applying assessment of research as the sole marker of teacher performance, and apply metrics of assessment of teacher performance more vigorously.

Title: Three year experience of live patient encounter and case scenario development in team-based learning

Authors: Harumi Gomi, Tetsuhiro Maeno

Institute: Mito Kyodo General Hospital, University of Tsukuba, Japan

ABSTRACT:

Background: Teaching clinical reasoning is essential for pre-clinical education. Since 2015, live patient encounter and case scenario development has been implemented for Year 4 undergraduate medical students at University of Tsukuba. The aim of this study is to report our innovative teaching methods to teach clinical reasoning for pre-clinical medical students.

Summary of Work: Approximately 120 Year 4

students were divided into a group of 5 to 6. There were 20 groups each year. Students were asked to do pre-class assignments for specific symptoms. Medical residents played a role of a simulated patients and students played as doctors. The rest of the students took note for case presentation and clinical reasoning.

Results: After the medical encounter, a pair of students gave a case presentation each other. Then in a group, discussion was made for differential diagnosis. Two to three voluntary groups gave plenary presentations to share their differential diagnosis. Closing sessions and wrap up lectures were provided at the end of the class.

Discussion: Students were engaged throughout the sessions of this team-based learning.

Conclusion: Live patient encounter and case scenario development were innovative methods to teach clinical reasoning.

Take Home Message: Live patient encounter and case scenario development can promote clinical reasoning among medical students.

Title: See one, do one, grade one: teaching short note writing skills using exemplars and peer assessment

Authors: Fiza Rashid-Doubell, Paul O'Farrell

Institute: RCSI, Bahrain

ABSTRACT:

Background: Transnational education is a strategy employed by higher education institutions to disseminate and improve higher education globally. Difficulty arises when admission criteria between the branch campus and home campus are different, especially in English. This limitation has led to us to develop a unique intervention to improve short-note question (SNQ) writing to enhance academic performance in summative assessment.

Summary of Work: The intervention consisted of two parts. The first part was an instructor-led small-group tutorial to discuss the characteristics of a well-written SNQ. The second part was conducted online, using the virtual learning environment. Students were given the opportunity to grade each other's questions, as well as to provide constructive feedback to fellow students.

Results: Overall, students found the intervention useful. The tutorial gave them an insight into the marking process as well as details of what constitutes a good written answer. With the online portion being voluntary in nature, we could compare SNQ performance in the summative exam between those who participated with the online part of the intervention (49%) with those who did not (51%). Participating students performed significantly better on SNQs ($p < 0.001$), scoring on average 9% higher.

Discussion: Our study is one of the first to show that a combined approach using a guided preparatory tutorial and online peer activities impacts positively on overall academic performance by assisting students to write better answers for short-note questions.

Conclusion: Students who participated on the online peer-assessment component of the intervention produced significant improvement in their short-note question writing and their overall academic performance compared to those students who did not.

Take Home Message: Using exemplars and on-line activities enhance short-note question writing in medical students which leads to improved academic performance.

Title: Current practices of the verbal handover among Pediatric residents using SBAR modality in ACGME-I residency program in QATAR

Authors: Manasik Hassan, Najla Ba Sharahil, Bassil Leghrouzfa, Ahmed El Makki, Amira Mustafa

Institute: Hamad Medical Corporation, Qatar

ABSTRACT:

Background: Patient handover is a crucial process for transfer of patients' information. Thus, its standardization enables concise relay of information across team members. Different systems of communication have been developed to achieve effective and safe handover. Our aim is to study the completion of patient information during handover using SBAR modality.

Summary of the Work: An observational study was conducted in Pediatric Department of Hamad General Hospital. The observational tool was structured to examine the contents of the oral

handover using SBAR method, which was filled by chief residents. It included the organization of the handover and 9 essential elements conveyed in SBAR format.

Summary of Results: We observed total of 26 residents' endorsements. 50% of the residents' handovers had completed 100% the 9 elements of endorsement using SBAR, while 35% covered 75% of the SBAR element in endorsement. The commonest missing elements were patients' demographics and location (23%) followed by situation awareness (19%).

Discussion: The majority of the residents' handovers were inclusive of the 9 elements of SBAR. An extra important element was observed in 12% of the endorsements, which is "read back by the receiver"; an element not part of the SBAR modality.

Conclusions: Our study has highlighted areas for improvement in SBAR content. Adding "read back by receiver" = (R) to the SBAR may ensure that crucial patients' information is well understood by the receiving team. Creating a modified handover modality in form of SBARR may greatly improve endorsement safety and quality.

Take Home Messages: Systemic organized patients' handover will greatly impact patient care and safety.

Title: New Drama and medicine elective course, An Egyptian Armed Forces College of Medicine approach

Authors: Randa Mostafa, Mohamed Gaber, Ayman Shafei

Institute: Armed Forces College of Medicine, Egypt

ABSTRACT:

Interest in the arts and medical humanities has led to heightened awareness of the role that the arts can play in medical sciences education. It helps medical students to be able to relate their studies and practices to "real people" and to their lived experiences of health, illness, disability, and suffering.

This paper describes; an innovative elective course "arts and medicine" taken by 50 second year students at Armed forces college of medicine AFCEM Egypt during fall semester.

AFCM is established 2013 in Cairo, Egypt as the first Military College of Medicine in the Middle East. It's innovative educational program meld a technically rigorous Medical education with training in military sciences and leadership. This ensures that graduates are ready to practice their unique brand of medicine anywhere in the world-from the words and clinics of teaching hospitals to a battlefield or a refugee camp.

The core objectives of the course are to develop awareness of the spiritual and humanistic components of healthcare, to encourage students' curiosity about the human condition along with skepticism about the nature of medical "truth"; and to model acceptable moral behaviors. Through their exposure to the various media of the arts to explore and discuss the many aspects of healthcare ethics.

The first evaluation of the course has demonstrated a sharpening of the students' awareness that art represents a significant reflexive source of insight into patients' and doctors' experiences within the socio-cultural. It also appeared to strengthen the consciousness of the young future healthcare professionals in military medicine that art can not only be used efficiently to distract from illness, but also, even directed as a tool to cure and heal for those in harm's way.

Title: Self – Study of curriculum of Doctor of Physical Therapy Program based on WFME standards at Riphah International University Islamabad, Pakistan

Author: Syed Shakil-Ur-Rehamn

Institute: Riphah International University, Islamabad Pakistan

ABSTRACT:

Background: RCRS is the pioneer in Pakistan started DPT degree in 2007 among 100 institutions offering this program. Objective was to conduct a self-study of curriculum of DPT Program based-on WFME standards framework at RIU for the renewal based on identified strengths, gaps in the curriculum and generate recommendations.

Summary of Work: A questionnaire was constructed based on WFME 'Should' and 'Must'

standards. It is validated by 05 experts in two rounds. It is comprised of? Items/ questions with Yes/No options. The questionnaire was filled by the DPT Faculty and Students at RCRS-RIU, Islamabad from March 01, to April 30, 2017.

Summary of Results: Weak area identified were medical jurisprudence 81%, scrutiny by external expertise 82%, reliability-validity of assessment tools 85%, external examiners 90%, feedback to students 79%, representation of students in program mission statement 88%, designing 88%, management 92%, evaluation 91% and student activities 82%. Clinical training facility 43%, types of patients 46%.

Discussion: WFME standards were developed for the global recognition of basic medical education institutions and programmes (Karle 2008) . A case report analyzed reforms at Royal college surgeons in Ireland from 2005 to 2008 and reported significant reforms (MacCarrick 2010). Another study reported that all WFME standards were embedded with the concept of social accountability (Lindgren 20011).

Conclusions: It is concluded that as per WFME standards the DPT curriculum at Riphah International University needs to improve its educational program, assessment of students, students and educational resources, although there are some standards already fulfilling including Mission and outcomes, academic staff and faculty, program evaluation, Governance ,administration and continuous renewal.

Take Home Message: Attention should be given to the assessment of DPT curricula by the higher education commission of Pakistan and its chartered universities. Secondly engagement of students must be ensured in designing, management and evaluation of DPT programme.

Title: Assessing prescribing skills of final year medical students before entering general practice

Authors: Sergey Gatsura, Oxana Gatsura, Alla Golosova, Elena Maychuk

Institute: A.I.Yevdokimov Moscow State University of Medicine and Dentistry, Russian Federation

ABSTRACT:

Background: Beginning from 2017 Russian medical

graduates legitimately start working with patients as primary care physicians without previously obligatory postgraduate intern training. In this situation final year medical students are expected to possess professional skills necessary for upcoming medical practice. Future physicians obtain their knowledge about medicines and their use at many departments before they come to final examinations, but their readiness to start prescribing in real practice remains unclear.

Aim of the Study: The study was designed to assess perceived and actual prescription skills of final year medical students needed in common clinical situations immediately before entering general practice.

Methods: 169 final year medical students of our University filled in anonymous surveys containing 8 clinical scenarios common for general practice. They were offered to indicate medicines they would prescribe in each situation as well as to assess their perceived confidence in their pharmacotherapeutic competence using 10-point scale. Respondents were also asked about their average academic scores.

Results: Calculated scores of actual pharmacotherapeutic competency displayed weak direct correlation with academic achievement and perceived confidence in the whole sample ($\rho=0.19$ and 0.24 respectively, $p\leq 0.05$). Comparison of students with average ($n=58$) and high ($n=111$) academic scores did not reveal any differences in actual competency and perceived confidence between these groups. Average score of actual pharmacotherapeutic competence was 10 out of 16 points, perceived confidence in pharmacotherapeutic competence - 6 out of 10. 73% of recommended medicines were given under their international non proprietary names.

Conclusions: Scores of actual and perceived pharmacotherapeutic competency approximately equal each other (62.5 and 60.0% respectively) and do not meaningfully relate to academic achievement of our respondents.

Our respondents realistically estimate their prescribing skills slightly above average.

Take Home Message: Academic program aimed at sharpening of real practice targeted prescribing

skills right before graduation would be most appropriate.

Title: Development and validation of a scale for searching skills in Evidence-Based Medicine

Authors: Ching-Chi, Yu-Shiun Tsai, Tien-Pei Fang

Institute: Chang Gung University, Taiwan

ABSTRACT:

Background: The ability to acquire the best evidence efficiently is important for busy healthcare professionals who have to make decisions quickly. The available assessment tools in evidence-based medicine (EBM), e.g. Berlin questionnaire and Fresno test, were not for examining evidence-searching capability. We aimed to develop a scale for measuring evidence-searching skills.

Summary of Work: Seven experts completed 2-round Delphi technique and rated a draft 33-item scale on a 5-point scale. Consensus was achieved when all items were rated ≥ 3 with an interquartile range (IQR) of ≤ 1 . Two raters assessed the searching capability of 80 examinees, and the reliability of the scale was examined.

Summary of Results: In Round 1, 11 items were removed and 10 items were merged into 5. In Round 2, 2 items were removed, leaving 15 items finally. The Cronbach's alpha was 0.903. In the formal test, the inter-rater correlation coefficient (ICC) ranged from 0.608 to 1, with a Cronbach's alpha of 0.967.

Discussion: This study is the first to develop a scale for measuring evidence-searching skills through a systematic approach. The scale is composed of 15 items that can be easily used in objective assessment of knowledge-acquiring ability.

Conclusions: The scale fills in the gap in objective assessment of knowledge-acquiring ability, and may be used in improving the training of evidence-searching skills.

Take Home Messages: EBM teachers may use the scale in improving and assessing the outcome of evidence-searching skills training.

Title: Lessons learnt from introducing peer observation of teaching to paediatric anaesthetists in KKH, Singapore

Authors: Yun June, Angela Tan, ASH Yeo, Evangeline Lim

Institute: Kk Women's and Children's Hospital, Singapore

ABSTRACT:

Background: Peer observation of teaching is recognised as an important aspect of developing medical teachers but not widely practiced, especially in Asia. Introducing this was challenging but had clear benefits for faculty. Here we share the lessons learnt from introducing it to our department.

Summary of Work: 12 faculty were individually observed teaching residents by 2 peers using a scoring system. Feedback was given by the same 2 observers, facilitated by video-recording of the teaching session. Surveys on self-evaluation of teaching and opinions on peer observation were filled by faculty before being observed and after receiving feedback.

Summary of Results: Peer observation of teaching was well received: all faculty agreed there were benefits and promoted critical reflection of teaching. It was not as stressful as expected. Faculty realised where they outperformed and underperformed in relation to their own expectations. 83% decided to make changes to their future teaching sessions.

Discussion: Individual observation and facilitated feedback, and 2 junior peer observers using an established observation tool promoted a safe but calibrated learning environment for our Asian faculty. Video recording was useful for review and feedback. Faculty benefitted from more specific feedback garnered from peers compared to learners. The observers benefitted too.

Conclusion: Peer observation of teaching is a valuable exercise for all parties and conducted in this manner was well received by our Asian faculty. Despite being time-consuming and potentially stressful, there are definite benefits not achievable by other methods. Conducted regularly, peer feedback can potentially improve the quality of faculty teaching.

Take Home Messages: 1. Peer observation of teaching promotes critical reflection of teaching in faculty observed, and observers.

2. It increases the awareness of components of a good teaching session and helps medical teachers improve their teaching skills.

3. Conducted respectfully, it can be well received by Asian faculty.

Title: Implementing high-value cost conscious care in postgraduate medical education: A discrete choice experiment on residents' preferences

Authors: Cindy Noben, Lorette Stammen, Laurens Stassen, Walther van Mook, Brigitte Essers

Institute: Maastricht University Medical Centre, Belgium

ABSTRACT:

Background: High-value cost conscious (HVCC) healthcare means a well-considered balance in costs, risks and effects within daily practice. A successful approach in postgraduate medical education is awareness-raising combined with active participation of residents by implementing pragmatic, practice-informed HVCC-projects. But how to optimize motivation among all residents to set up HVCC-initiatives?

Summary of Work: Focus groups among residents gained first insights on conditional factors for HVCC-initiatives. A subsequent discrete choice experiment (DCE) explored different choice-sets of possible HVCC-situations from which residents chose their personally preferred, most favorable situation to launch a HVCC-initiative which result in detection of the most influential weighting.

Results: The focus groups resulted several conditional factors such as 'available time' and 'material- and personal support'. After a pilot choice-experiment, four factors were included in six different DCE choice sets. Residents preferred the combination of available time and external expert advice to implement HVCC-initiatives. Staff member involvement was non-decisive.

Discussion: Training hospitals need to acknowledge the preferences and context of residents setting up HVCC-initiatives by incorporating an external expert and adjusting

residents' schedules. The relative weight of support by staff members compared to other factors was low, possibly due to a decrease of ownership in self-learning by residents.

Conclusion: By implementing HVCC-initiatives 'efficiency thinking', 'value-based healthcare' and 'competency-based' postgraduate medical education can be optimized. With the knowledge presented in this study, a larger range of residents can be motivated to launch HVCC- initiatives, which improve both medical residency education and healthcare as a whole.

Take Home Message: To increase motivation, residents' preferences are key to know. Based on DCE herein performed it is recommended to invest in those environmental factors which motivate and stimulate residents to actively set up a HVCC-initiative: the involvement of an external expert and adjustments in the schedules are paramount for success.

Title: Using the 'Assessment Implementation Measure' (AIM) tool to evaluate the assessment practices in an undergraduate medical institute

Authors: Madiha Sajjad, Rehan Ahmed Khan

Institute: Riphah International University, Islamabad Pakistan

ABSTRACT:

Background: 'Assessment Implementation Measure' (AIM) tool was developed earlier, to measure overall quality of assessment practices as perceived by undergraduate medical faculty and its quality in four sub-domains i.e. assessment policies, assessment methods, purpose of assessment and quality measures taken

Summary of Work: This cross sectional descriptive study was carried out from January to February 2017, at Riphah International University. All 64 basic and clinical teachers were included to evaluate faculty perceptions about assessment practices, using the 'AIM' tool. The overall quality perception, mean responses and percentage agreement and disagreement on each domain was computed.

Results: Faculty response rate was 77 %. Overall assessment quality was perceived by 89% as satisfactory (mean score: 66.6%). Assessment

policies were viewed as positive by 96.4% (mean: 69.3%); Assessment methods as 'Good' by 79.5% (mean: 63.4%); Purpose of assessment as 'quite clear' by 89.7% (mean: 70.5%) and the quality measures as satisfactory by 81.6% (mean: 64.7%).

Discussion: The mean score for the entire AIM as well as of the individual domains indicate a moderately favorable perception of assessment quality by most of the faculty. The subscale of 'assessment methods' had the least mean score of 63.4% suggesting relative weakness of assessment in this area. Assessment quality has previously been qualitatively evaluated in few studies; however no specific tool was used.

Conclusions: Using the AIM tool can provide a holistic view of assessment in a medical institute. It can also identify the strengths and weaknesses in various subdomains of assessment.

Take Home Message: 'AIM' tool can be used to evaluate the assessment quality in undergraduate medical institutes and to inform revisions in assessment process in view of the results obtained.

Title: Illustration as a teaching- learning tool in Histology practical in undergraduate medical education of Bangladesh-A student and teacher perspective

Author: Rukshana Ahmed

Institute: Tangail Medical College, Bangladesh

ABSTRACT:

Background: Histology is a visual discipline; Illustrations are used to explain the Histological structures of cells, tissues and organs. By gathering views of students and teachers, perception regarding the use of illustrations in Histology practical classes in undergraduate medical education in Bangladesh can be assessed.

Summary of Work: Descriptive type of cross-sectional study was carried out in ten medical colleges. A total of 824 students and 21 teachers were enrolled in a survey and in-depth interviews respectively. A semi-structured questionnaire having multiple response answers was used for students. A semi-structured interviewing guideline was used for the in-depth interviews.

Summary of Results: 70% students considered that visual impression would create more interest; 47%

realized that it would help in proper understanding. The interviewee teachers felt that illustration helps in better understanding. It was revealed that 66% students consider schematic diagram as their choice of illustration. 50% teachers also had the same view.

Discussion: Ross and Pawlina (2006) believe that illustrations are visual tool to facilitate learning. McMillan (2001) considered that by comparing the slide with illustrations of Atlas the students could easily identify labeled features. Amin (2008) observed that most of the illustrations are schematic in Histology book of Junqueira and Carneiro.

Conclusions: It can be assumed from the study that illustration helps students in building up of better conception of Histological features. So use of Histological illustration would make the Histology practical more understandable and enjoyable.

Take Home Message: Use of illustration is very important in grasping the knowledge and proper understanding about Histological structures

Emphasis should be given on more use of illustration as an important teaching-learning tool in conduction of Histology practical classes for expected learning outcome.

Regarding type of illustration schematic diagrams should be preferred more.

Title: Awareness about physical therapy practice among Health care professionals

Authors: Shakeel Ahmad, Rabia Afzal, Nida Gilani, Syed Shakil Ur Rehman

Institute: Riphah International University, Islamabad Pakistan

ABSTRACT:

Background: Physical Therapists are health care professionals, who help to improve patient's health status and optimum functioning to have better quality of life. Physical Therapist (PT) plays a vital role in health care settings, and known as dynamic provider of rehabilitation services.

Summary: A cross-sectional study was designed to determine the awareness of physical therapy practice among health care professionals. Non-probability Purposive sampling technique was used. General Physician, minimum MBBS degree

with house job completed and into active clinical practice was included and other professionals like pharmacist & nurses excluded. A questionnaire was designed and distributed among professionals

Results: Out of 357, 89.9% were having awareness of PT. 68.9% reported that PT has direct access to the patient. Referral to PT was found to be 87.1%. Basic qualification of PT were known by 64.1 % and 45.4% did not ever heard about specialization running in physical therapy degree.

Discussion: Acharya RS, et al (2011) 98.3% reported that aware and 87.8% of doctors reported that they have PT services in their hospital. Tracy J. Bury and Emma K. Stokes (2012) suggests that direct access to physical therapy was reported that 58% of the respondents, with greater prevalence in private settings

Conclusion: It is concluded that health care professionals had a good awareness about physical therapy profession, and that Physical Therapist plays an important role in health care system. So it concluded that Physical Therapist is an important member of Rehabilitation team.

Message: Awareness about Physical Therapy need to be augmented in terms of referral patients and specialized services provided by Physical Therapist. Physical therapists are health care professionals who help individuals maintain, restore, and improve movement, activity, and functioning, thereby enabling optimal performance and enhancing health, well-being, and quality of life.

Key Words: Physical therapy, Awareness, Health care professionals

Title: Gender Differences in Self-Assessment in a Peer-Assisted Mock Objective Structured Clinical Examination (OSCE)

Authors: Claire Lee, Lorenzo Madrazo, Meghan McConnell, Karima Khamisa

Institute: McGill University, Canada

ABSTRACT:

Background: Physicians find it challenging to assess their own clinical performance. One factor that may influence the accuracy of self-assessment is gender. Research has shown that females underestimate their performance compared to their male counterparts. Whether this gender

difference in self-assessment is limited to stressful high-stakes scenarios remains unclear.

Summary of Work: Third-year students participated in a formative 5-station OSCE. Trained fourth-year student examiners scored their performance on a 6-point Likert-type scale. Examinees also scored themselves using the same scale. Self-assessment scores were compared with examiner scores to determine whether gender differences in medical students' self-assessment were present in a low-stakes environment.

Results: Data of 33 (15 males, 18 females) third-year students were analyzed. Females consistently scored themselves lower compared to their examiners ($p < 0.001$), whereas there was no significant difference between self-assessment and examiner scores for male examinees ($p = 0.228$). No significant difference existed between examiner scores achieved by male versus female students ($p = 0.452$).

Discussion: This analysis demonstrates that underestimation in self-assessment among females is appreciable even in a low-stakes formative OSCE facilitated by fellow medical students. These findings have potential implications for self-efficacy among female students.

Conclusions: In this low-stakes formative OSCE, female medical students significantly underestimated their performance compared to compare to scores awarded by near-peer assessors. Male students did not consistently under- or overestimate their performance.

Take Home Message: The phenomenon of underestimating performance in females can persist even in low-stakes environments. Further research is required to elucidate whether this underestimation has a chronic impact on performance that may need to be addressed systematically.

Title: A Student-Initiated Peer-Assisted Objective Structured Clinical Examination (OSCE) as a Sustainable Cost-Effective Learning Experience for Undergraduate Medical Students

Authors: Usman Khan, Tharshika Thangarasa Claire Lee, Lorenzo Madrazo, Meghan McConnell, Karima Khamisa

Institute: McGill University, Canada

ABSTRACT:

Background: Mock OSCEs are useful to prepare for higher-stakes OSCEs but are not always feasible due to resource limitations. We trialed a student-led peer-assisted mock OSCE for third year medical students prior to their faculty-run formative OSCE for students to practice OSCE skills and gain exposure to complex station types.

Summary of Work: We conducted a five-station mock OSCE for third year students with fourth years as examiners and first/second years as standardized patients (SPs). Examiners assessed and provided feedback to examinees. Stations and scoresheets were designed by students and reviewed by a faculty supervisor. Following the mock OSCE, participants completed surveys eliciting their perceptions on this learning activity.

Results: Examinees, examiners, and SPs all perceived the mock OSCE to be a beneficial learning experience. Students commented positively on the opportunity to engage in mentorship and networking. Areas of concern mentioned included examiner and SP training, station scoresheets, and awkward interactions between examiners and examinees who were friends.

Discussion: The mock OSCE served as a unique activity that facilitated teaching and learning between students of different levels. Its student-led and peer-assisted nature rendered it a cost-effective means of providing OSCE practice to students, but also raised areas of concern that support limiting this type of activity to low-stakes scenarios.

Conclusions: This student-led peer-assisted mock OSCE was shown to be a highly accepted, feasible, and cost-effective learning activity for all students involved.

Title: Students' Perception on Teaching Performances Focusing Undergraduate Lecture Classes of the Trained Teachers in Bangladesh

Author: Shamima Parvin

Institute: Sir Salimullah Medical College, Bangladesh

ABSTRACT:

Background: Teachers training is a kind of

education that helps the faculty to understand theories of teaching-learning for escalating their knowledge and abilities to meet the learner's need. The study tried to identify the students' perception regarding teaching performances of the teachers who had completed teaching methodology training in center for medical education (CME), Bangladesh.

Summary of Work: This cross sectional study was conducted in thirteen medical colleges of Bangladesh. Opinion was sought from 1200 students by using a structured questionnaire based on five point Likert scale; included 13 separate positive statements regarding performances of the trained teachers. Statements with mean score 4 or more are considered as positive aspect but mean score 3 or less indicates deficit aspect of performance and mean score in-between 3 and 4 might be emphasized for further improvement.

Summary of Results: Study findings revealed that mean scores of all statements were in-between 3 and 4. Aggregated view showed that the teaching performances were excellent (38%), good (43%), satisfactory (16%) and unsatisfactory (3%).

Discussion: Dent & Harden (2013) mentioned that lectures are the oldest and most common method of learning in medicine but careful consideration needs to be given on how they are being delivered. Due to the usefulness and universal usages, it is important that all medical teachers should develop and refresh their expertise in lecturing.

Conclusion: Study findings provide insights for teachers who wish to enhance the effectiveness of teaching for their students' best learning. Moreover it was assumed that training of the teacher played a vital role for their good performances.

Take Home Message:

CME needs to focus on identified deficit aspect of performance.

Well-designed, updated and contextual training programme need to be adopted.

Reward and incentives to the better performers could be thought of.

Title: Early Completion of Specialty Training- A United Kingdom (UK) Physician Perspective

Author: David Black

Institute: Joint Royal Colleges of Physicians Training Board, United Kingdom

ABSTRACT:

Background and Summary: All UK physicianly curricula are competency based. In practice 4 year minimum in higher specialty training were rigidly applied or 5 years for those dual training in a Specialty and General Internal Medicine. I describe the three year outcomes of a more flexible policy that allowed accelerated completion of higher specialty training.

An accelerated training policy within the competency based curriculum was introduced in particular for 2 groups:

- a. genuinely high performers or those that had obtained widespread experience in other settings
- b. those who had already extended training time for reasons such as less than full time training, or clinical research.

Results: In the first two years of operation JRCPTB made 2039 completion of training recommendations to the UK training regulator. In the first year 19 (2.1%) early completions were recommended, for a mean of 6 months, In the second year 12 (1.6%) and the third year 21 were recommended

The main reasons for early completion were those who had already had extended training in some way such as research, other out of programme experience or prolonged less than full time training.

During the three years a much greater number (up to 11%) had their training extended for a mean of 4 months because they were not making adequate progress in their final year.

Discussion and Conclusion: Over three years we have found no evidence of a large unmet desire of doctors in training to accelerate their time spent in training. Nor did trainers feel that in general early (time) completion of training was beneficial to significant numbers of trainees. The numbers completing training both "early" and "late" might suggest the current training time is broadly correct in a UK, service heavy, context.

Title: Portfolio as a tool to stimulate physiotherapy students to reflect on their learning process: a systematic review

Author: Beatrice Buss

Institute: University of Applied Science, Switzerland

ABSTRACT:

Objective: A research portfolio is often used to test the competence of students, using a personal reflective process. Bern University of Applied Sciences has developed its portfolio system, to evaluate undergraduate Physiotherapy students, on the basis of the portfolio programs mentioned in medical education literature. Whether these portfolio programs are applicable to physiotherapy students remain open to question. Consequently the aim of this systematic review was to assess the effectiveness of portfolios on the reflection competence of physiotherapy students.

Methods: We searched for eligible studies examining the effect of portfolio programs on the reflection competence of undergraduate physiotherapy students. The following databases were searched for the period August 2016 - February 2017: PubMed, EMBASE, and OVID. The Cochrane risk of bias tool was used to assess procedural quality. The study protocol was registered to PROSPERO (2016:CRD42016043225).

Results: Six non-RCT studies were included in this systematic review. The studies had a low methodological quality. Only one study used a control group while the other five used quality standards to assess the effect of portfolios on reflection competence as an outcome measurement.

Conclusion: Based on the fact that the included studies had a low evidence level, the postulated results in the literature on portfolios may have overestimated the effectiveness of the reflection competence of physiotherapy students. For this reason, we need to be careful about drawing too strong conclusions about the effectiveness of using portfolios to assess the competence of undergraduate physiotherapy students. Future studies should be performed as Quasi-Experimental designs, so that outcomes will be comparable. This will assess the effectiveness of

portfolio programs for improving reflection competence, regarding practical skills and evidence-based practice.

Title: Effect of "TEASER" on concentration, retention and effectiveness of lecture

Authors: Imran Amjad, Faheem Afzal, Raheela Yasmin

Institute: Riphah College of Rehabilitation Sciences, Islamabad Pakistan

ABSTRACT:

Background: There are always some methods to improve concentration and retention of students in lectures. TEASER is used in entertainment industry and media to gain attention and retention of viewer ship. The object of this study was to determine effect of TEASER on concentration and retention of lecture.

Summary of Work: In this study lectures with and without methodology of TEASER were delivered to a post graduate level class. A blind researcher get feedback from class on a structure feed back Performa. In TEASER lecture teacher mention at least 3 to 4 concluding, applied concepts on one side of white board.

Results: Student give significantly high score to teaser lectures for attention seeking focused on lecture and lecture is interesting. Students give comments that these lectures are more relevant to their discipline and specialty. So TEASER lectures are more effective than other structured power point based lectures.

Discussion: TEASER increases the curiosity of student to understand the stated question, concept or mechanism. TEASER should be catchy, relevant to the topic and it implication on professional requirement. If these TEASERS are linked in logical order of lecture they help in maintain interest and focus of student in lecture.

Conclusion: lectures with TEASER are more effective in maintaining concentration and interest of the students. TEASER technique can be used in any type of teaching modality because it will help to get more attention and retention of students.

Take Home Message: Effective lecturing is always a topic of concern in medical education; it can be still help full if used planed properly.

Title: Understanding reasons for variations by ethnicity in general practice specialty trainees' performance in the Membership of the Royal College of General Practitioners' Applied Knowledge Test: cognitive interview study

Authors: Julie Pattinson, Carol Blow, Bijoy Sinha, Aloysius Niroshan Siriwardena

Institute: University of Lincoln, United Kingdom

ABSTRACT:

Background: Candidate performance differs in high stakes medical licensing examinations, between black and minority ethnic (BME) compared to white British doctors, undertaking the computerised MRCGP Applied Knowledge Test (AKT). Examiner bias, suggested as a source of differential attainment in directly observed assessments, is less plausible in a computer based test.

Summary: We investigated causes of differential attainment in the AKT by candidate ethnicity and place of training, employing a qualitative design. We used Grounded Theory, analysing data from cognitive interviews of 21 GP specialty trainees, answering 15 AKT questions, including British/Irish UKGs; BME UK trained, and overseas trained (OST) doctors.

Results: Three themes emerged: 'Cultural barriers' including language barriers and unfamiliarity of the NHS system. 'Theoretical versus real-life clinical experience'; clinical exposure enhanced learning in all candidates, theoretical learning advantaged OST candidates who had learned disease patterns by rote. 'Recency, frequency, opportunity and relevance' of training affected all candidates' performance.

Discussion: We identified some areas affecting performance in all participants but these also had greater impact on BME trainees because of cultural barriers. Other issues and curriculum topics were more problematic for OST participants such as adapting to NHS systems, clinical exposure, calculations, and learning patterns.

Conclusion: We generated insights using cognitive interviews that potentially explain candidates' difficulty answering AKT questions. Although there were barriers for all participants, these were greater in BME UK and OST compared with UK

doctors. These findings are helpful for informing changes to vocational training schemes and test construction.

Take Home Message: We have highlighted that OST participants do face additional difficulties answering AKT questions compared to UKGs. Our findings provide a basis for developing interventions to reduce differential attainment in UK specialty training for general practice. Our study will inform speciality training schemes, test developers and specialty trainees.

Title: Level of Procrastination among Undergraduate Medical Students

Authors: Muhammad Faheem Afzal, Imran Amajd, Zara Khalid

Institute: Riphah International University Islamabad, Pakistan

ABSTRACT:

Background: Procrastination is tendency toward intentionally delaying tasks due to indecisiveness. Academic procrastination among medical students is becoming a serious issue, as it can cause various adverse consequences such as poor grades, less time commitment, low self-esteem, anxiety, stress which ultimately affect the efficacy, skills and quality of work performance.

Summary of Work: A descriptive cross-sectional study was conducted on almost 700 undergraduate medical students of whom, 350 students were enrolled in annual system whereas rest of the 350 students were from semester system. Procrastination Assessment Scale for Students (PASS) was utilized for data collection. Data was analyzed using SPSS-21.

Results: Frequency of overall data revealed procrastination with high procrastination in annual system (mean= 35.23 ± 6.857) and males (mean = 37.25 ± 0.6545) as compared to semester system (mean= 34.72 ± 7.053) and females students (mean = 37.25 ± 0.6545). This difference was statistically significant (p = 0.001).

Conclusion: Statistical data analysis showed that academic procrastination is prevalent among all undergraduate medical students regardless of whether they are from annual system/semester system, but with predominance in annual system.

Procrastinating was high in male than female students. Procrastination was also found to increase with advancing age.

Discussion: Current studies provide ample evidence on academic procrastination. This tendency to procrastinate is associated with various factors such as anxiety about writing paper, lack of interest. This might lead to academic dishonesty as students, who procrastinate in studying for examinations often become involved cheating in order to acquire better grade.

Take Home Message: Time management is important factor that how you manage your time with schedule, priorities and realistic about time. Do those tasks that enhance motivation and productivity. The difficult aspect of doing anything that you would normally put off is getting started. Trick is don't think – just do it.

Title: Undergraduate students' clinical reasoning construct in medicine: its development and assessment

Authors: Azam Afzal, Syeda Kauser Ali, Saeed Hamid

Institute: Aga Khan University, Pakistan

ABSTRACT:

Background: The AKU spiral curriculum, promotes development of hypothetic- o-deductive reasoning ability through problem-based learning in years 1 and 2 and problem solving integrated learning in years 3 – 5. During year three they also start interacting with patients and through experiences with real cases, this knowledge begins to transform into cognitive structures –'illness scripts'. The clinical teaching ensures that Bowen's areas of common clinical reasoning deficiencies are addressed. Multi-method assessments are used to assess clinical reasoning ability of medical students in the medicine clerkship program at Aga Khan University (AKU). This study was conducted to obtain construct validity related evidence for assessment of clinical reasoning.

Summary of Work: The assessments scores of 167 students from two consecutive cohorts were studied. Exploratory and confirmatory factor analysis was conducted to identify underlying constructs assessed by clerkship assessments;

regression for direction of causality; and a multi-trait multi-method matrix (MTMM) for construct validity was conducted. Results were compared with similar studies from identified literature.

Summary of Results: The reliability of the assessment instruments used for assessing clinical reasoning were 0.76 - 0.94. Factor analysis isolated one of the attributes which was identified as clinical reasoning ability. Construct validity was determined by applying Campbell and Fiske's criteria to the matrix.

Conclusions: The study provides validity evidence that the assessment of clinical competence during undergraduate medical education conducted by the department of medicine at AKU predominantly assesses students' clinical reasoning ability.

Take Home Message: MTMM may be considered for evidence for internal structure and relationship with other variables to support validation research of the assessment programmes and provide meaningful insight into the evaluation of assessments.

Title: A Comparative Study on anxiety in written and OSCE exams among Medical Students

Authors: Nasser Sanjar Moussavi, Shahram Yazdani, Soleiman Ahmadi, FakhrolsadatHoseini, Hoda Ahmari

Institute: Islamic Azad University, Mashhad Iran

ABSTRACT:

Background: Along competency based curriculums, skill and performance assessment have to be considered. Sometimes Students express Anxiety of these tests more than written ones. Exam anxiety is emotional feelings when a person feels his or her performance is being evaluated. High Exam anxiety causes disruption and limitation in individual capacity.

Summary of Work: In a cross-sectional study, 81 medical students were enrolled voluntarily. To measure the latent and apparent anxiety of students, we used Persian versions of the standard STAI burger's inventory. The students completed the questionnaires, 30min before the comprehensive written exam and the OSCE exam. Data were analyzed by SPSS software.

Summary of Results: Students' mean age was

24.8±0.8 and 86.4% and 13.6% were female and male respectively. The mean scores of latent anxiety before and after the written and OSCE tests were 42±9.6 and 44±10.2, respectively. Also, the mean of apparent anxiety score in written and OSCE exams was 55.5±7.8 and 44.7±11.3, respectively.

Discussion: There was no significant difference between the scores of latent anxiety before and after the written and OSCE tests. There was a significant difference between the scores of apparent anxiety score in written and OSCE exams. There was no significant difference between mean of apparent anxiety score according gender.

Conclusions: According to the findings of this study, unlike the general impression, OSCE exams don't create anxiety in comparison to the written form, but because of direct interaction and the appropriate relationship between the student and examiner, less anxiety is experienced also.

Take-Home Messages: OSCE exam don't imposed an additional anxiety on the students so it is recommended as one of the practical methods for measuring "How does" stage.

Key words: Hidden anxiety, apparent anxiety, OSCE, clinical competency test, written test.

Title: Developing an OSCE to Differentiate between Non-Medical Expert Roles: Mission Impossible?

Authors: Meghan Mcconnell, Sheila Harms, Sandra Monteiro

Institute: University of Ottawa, Canada

ABSTRACT:

Background: Within competency-based medical education (CBME), many educators are less familiar with non-medical expert or 'intrinsic' roles (e.g., leadership, health advocacy) because of challenges with defining behaviors in objective, measurable terms. Some experts have argued that a CBME framework may not be applicable when evaluating these competencies.

Summary of Work: This study examined the process of developing a multidisciplinary postgraduate OSCE (i.e., iCanOSCE) focusing on CanMEDS Intrinsic Roles. An interdisciplinary team of medical educators developed 21 OSCE stations,

each of which were mapped onto at least 2 Intrinsic CanMEDS Roles. Blinded expert raters reviewed each station to establish construct validity.

Summary of Results: The internal consistency of alignment scores across the 6 Intrinsic CanMEDS Roles was very low (Cronbach's alpha (95% CI)=0.0(-5.82-0.53)), demonstrating a lack of consistency between rater's responses and blueprinted Roles. Intraclass correlation coefficients (ICC) revealed poor agreement across our raters, with ICC being lowest for the Leader Role (ICC (95% CI)=-0.002(-0.06-0.26)).

Discussion: Not only were the raters unable to identify the Intrinsic Roles mapped onto the development of each iCanOSCE station as intended by the research team, but there was little agreement between the experts themselves. These challenges may reflect attempts to deconstruct complex phenomena into simplistic measureable units.

Conclusion: Development of the iCanOSCE to distinguish between Intrinsic CanMEDS Roles resulted in disagreement amongst experts and poor adherence to constructs within the original research blueprint, suggesting poor internal consistency and construct validity. Important implications for pedagogy and assessment of Intrinsic CanMEDS Roles must be considered when attempting to implement CBE.

Take Home Message: Development of the iCanOSCE to evaluate CanMEDS Intrinsic Roles suggests that these skills are empirically difficult to define, isolate, and assess within clinical contexts due to role complexity and role interchange. Caution about these vulnerabilities must be considered when designing teaching and assessment materials about Intrinsic Roles.

Title: How to Assess Mental Health: A short course on psychiatric history taking and mental status examination – Experiences from Dubai

Author: Meghana Sudhir

Institute: Mohammed Bin Rashid University of Medicine and Health Sciences, UAE

ABSTRACT:

Background: Mental health is important at every stage of life, from childhood and adolescence

through adulthood. What is it? And how do we assess it?. A through Psychiatric History and Mental Status Examination (MSE) are the most important diagnostic tools to obtain information to make an accurate diagnosis.

Summary of Work: A course covering concepts of normal and abnormal behavior, psychiatric history taking and MSE was developed and administered to healthcare professionals working with mental healthcare facility. This was also offered to nursing students. The maximum number of participants for the course was set at 6. The course was conducted 5 times and with total 26 participants. The participants were asked to demonstrate psychiatric history taking and MSE from standardized patients playing roles of Obsessive Compulsive Disorder, Depressive and Schizophrenic cases.

Results: The qualitative feedback from the participants revealed that the course was beneficial and are looking forward for more courses related to mental health. Some of the feedback include:

- "I hate mental health subject; but I changed my opinion after taking this course"
- "Simulation exercises encouraged learning".
- "Taking mental health history from SPs and learning from mistakes"
- "Interacting with SPs as if they are real patients"
- "I thought it will be boring because I don't like lecture classes. But attending the course and interacting with SPs were really good and I enjoyed"

Discussion: Emphasis on thorough psychiatric history taking and mental status examination can very well be imparted through simulation.

Conclusion: As it was found that there is a lot of interest in attending courses related to mental health, a new course on 'Management of Depression' has been developed and accredited for 3.5 credit hours.

Take Home Message: Explore the vast scope of use of standardized patients in teaching psychiatry specialty

Title: Peer physical examination in a diverse UK medical school

Authors: Carley Nath, June Jones, Kirsty Shires

Institute: University of Birmingham, United Kingdom

ABSTRACT:

Background: Peer physical examination (PPE) is an educational method employed to enhance clinical skills training. The literature suggests that PPE is acceptable to most students; however published work does not necessarily reflect the views of contemporary medical students in either the UK or an international setting.

Summary: All first year MBChB students were invited to complete an Examining Fellow Students Questionnaire. Students provided information relating to their willingness to examine and be examined by peers of the same and opposite gender. Free text response boxes allowed students to provide further detail relating to their perceptions of PPE.

Results: 64% of students responded. Quantitative data was analysed using SPSSv22. Results demonstrate that our students are considerably less willing to engage in all aspects of PPE than those reported in published literature. A higher percentage of those completing the questionnaire described themselves as religious, compared to studies reported elsewhere.

Discussion: PPE of "non-intimate" body parts has previously been described as "acceptable" to most medical students (with >95% used as a determinant of acceptability). Our results challenge this statement. Emergent themes reveal that students value PPE as an educational tool but have a number of concerns, including professional behaviour of peers.

Conclusions: Our evaluation provides a clear direction for qualitative research and directly informs our teaching practice. Findings should drive medical educators to consider both the specific needs of each individual in relation to PPE, and what practical measures we can put in place to ensure parity of opportunity between all students. Medical educators have a responsibility to provide an inclusive learning environment that encourages students to respect the values of their peers. We believe that our contemporary evaluation of student attitudes to PPE may be of interest to all medical schools and that there is translatability to other healthcare courses also.

Title: Interprofessional simulations can significantly improve awareness of the Physician Associate role

Authors: Carley Nath, Sharon Buckley, Christine Hirsch

Institute: University of Birmingham, United Kingdom

ABSTRACT:

Background: Effective interprofessional (IP) working requires an understanding of the roles and responsibilities of other health professions. Interprofessional simulations have shown to be an effective way of enhancing student understanding of the role of established healthcare professions. Simulations including newly introduced roles in the UK, such as the Physician Associate (PA), are rare.

Summary: We developed and ran a series of high fidelity interprofessional simulations for sixty-six pre-registration health professionals. Participant understanding of the roles and responsibilities of other professions, together with their views of interprofessional working and learning were collected pre and post intervention using a Likert-type questionnaire.

Results: Sixty-six students responded (100%). Quantitative data was analysed using SPSSv22. Qualitative responses were thematically analysed. The intervention improved understanding of the roles and responsibilities of all professions; this was statistically significant for the roles of PA, Medicine and Nursing ($p < 0.05$). Understanding of the Physician Associate role demonstrated the largest change.

Discussion: Emergent themes from the free-text evaluation support the educational value of interprofessional simulations reported elsewhere. Quantitative and qualitative data demonstrated a degree of uncertainty amongst pre-registration healthcare professionals relating to the role of the PA in the UK context. Our simulation intervention significantly improved understanding of the PA role.

Conclusions: Our evaluation relates to the understanding of a new role within our own educational and healthcare setting and provides a pre-registration perspective. Our results demonstrate that interprofessional simulations can provide a highly effective opportunity for

improving understanding of professional roles, and are especially effective for the "new" role of Physician Associate.

Take Home Message: Healthcare roles are evolving. Interprofessional simulations can be an effective tool for improving pre-registration health professions students' understanding of the nature and responsibilities of new professional roles.

Title: The potential of Diagnostic-Workplace Based assessment to enhance training

Authors: Saad Chahine, Sarah Burm, Mark Goldszmidt

Institute: Centre for Education Research & Innovation, Schulich School of Medicine & Dentistry, Western University, Canada

ABSTRACT:

Background: Competency Based Medical Education (CBME) necessitates a robust assessment system to judge medical trainees' performance in training. The Diagnostic-workplace based assessment (D-WBA) was developed to meet these needs, allowing data to be used to inform decisions about progressive independence. In this presentation, we share our initial findings of developing a D-WBA instrument in the Internal Medicine (IM) inpatient setting.

Summary of Work: To develop the D-WBA instrument for use with senior medical resident (SMR) on-call we first needed to document the practice behaviors. We recruited 10 junior trainees, 5 IM consultants, 5 ER consultants and 5 ER nurses conducted observations of their on-call interactions with 1-7 SMRs and participate in subsequent interviews. Constructivist grounded theory guided the data collection and analysis.

Results: Participants identified six key behaviors and practices on-call SMRs enacted overnight:

1. Triageing new consults
2. Developing a comprehensive and accurate problem list, plan, and orders on new patients
3. Supporting overnight patient care on admitted patients
4. Determining need for communication with on-call IM consultant
5. Providing junior trainees with overt feedback and support
6. Preparing junior trainees for morning handover

We then designed 12 distinct profiles, each describing a trainee's developmental strengths and suggested areas for improvement. Assessors would be required to select a profile that best matches the trainees' demonstrated competencies.

Conclusion: Our study was successful in identifying many of the roles relevant to the on-call SMR. The results of this study can serve to enhance our understanding of D-WBA.

Take Home Message: High quality assessments that provide accurate judgement of trainee progress is critical for the successful implementation of CBME. This presentation outlines the process we took to develop a D-WBA focused on meeting the needs of CBME. The resulting D-WBA has the potential to reshape how we provide trainees with meaningful feedback in the clinical workplace.

Title: Student's perception of teaching and supervision at teaching hospitals during clinical clerkship

Authors: Naghma Naeem, Mohammad Al Houqani, Margaret Elzubeir

Institute: College of Medicine & Health Sciences, United Arab Emirates University, United Arab Emirates

ABSTRACT:

Background: The quality of teaching and supervision provided by the hospital teaching faculty during clinical clerkship (CC) directly impacts the training of medical students. Teaching and supervision provided during different clerkship varies by teaching faculty, specialty and clinical site. Research emphasizes on the importance of student feedback as a valid tool to not only evaluate the delivery of the clinical curriculum but as a means to enhance it.

Summary of Work: Objective: The objectives of this study are to a) explore the perception of medical students about the quality of teaching and supervision being provided by hospital teaching faculty working in SEHA Hospitals b) identify areas of strength and those needing improvement with respect to teaching and supervision c) provide suggestions based on student input to improve

quality of CC training.

Context: CC training offered at the clinical teaching sites working under SEHA (Abu Dhabi Health Services Company) at Al Ain, United Arab Emirates.

Duration: This study will be conducted from April 2017 to December 2017.

Study Design: Cross sectional, descriptive, survey study.

Participants, Site, Data Collection & Analysis: All medical students (n=143) from 13 Clerkships in 3 training sites (Tawam Hospital, Al Ain Hospital and Ambulatory Care Services/Clinics) will be invited to fill out the web-based questionnaire Clinical Clerkship Teaching and Supervision Questionnaire (CCTSQ) consisting of 41 questions through emails. The quantitative data will be explored, analyzed, and compared (trends by year, by clinical clerkship and by training site) while the open ended comments will be analyzed using thematic analysis.

Summary of Results & Significance of Study: This survey will provide valuable UAE national data which can be used for improving delivery of clinical curriculum at the teaching hospitals. It will suggest organizational and programmatic changes and identify specific areas in clerkship teaching and supervision that need to be strengthened.

Title: The Implementation and Evaluation of an Innovative e-Learning Module for OSCE Examiners

Authors: Karima Khamisa, Debra Pugh

Institute: University of Ottawa, Canada

ABSTRACT:

Background: Improving the reliability and consistency of OSCE examiner marking poses a continual challenge in medical education.

Summary of Work: The purpose of this study was to introduce an e-Learning (online) training module to OSCE (Observed Structured Clinical Examination) examiners participating in the evaluation of third year medical students. The effect of online training compared to traditional in-person (face-to-face) orientation was evaluated.

Results: A total of 90 physicians were recruited as examiners for this OSCE. A total of 60 consented to be part of the study (67.7%) and completed the online survey. Of those with prior OSCE experience

(n=18) who participated in the E-Learning (online) group, 13 (68%) reported that they preferred this format to the in-person orientation. The total average time needed to complete the online module was 15 minutes (compared with 30 minutes for a face-to-face orientation). 89 % of participants felt the module provided clarity to the examiner training process (compared with 41 % of participants in the in-person orientation).

Discussion: Our study indicates online OSCE examiner training is comparable, and in some aspects, preferable to traditional face-to-face orientation.

Conclusion: OSCE examiners can undergo online training using less time and resources and with greater flexibility than face-to-face training, with similar data completeness and outcomes.

Take Home Message: Virtual OSCE examiner training may be the best format for busy clinician examiners.

Title: Analysis of Educational Environment of Speech and Language Pathology (SLP) through DREEM Scale

Authors: Humaira Kiyani, Arshad Nawaz Malik, Aeysha Butt

Institute: Riphah International University, Islamabad Pakistan

ABSTRACT:

Background: Speech and language pathologists (SLP) are certified to practice and engage in a multitude of areas such as education, administration, research, clinical management for communication and swallowing difficulties. The sensitive nature of this field requires one to gain insight into the students' learning environment of their institute. This will aid to enhanced quality of health professions.

Summary of Work: Cros sectional survey, both male and female students of speech and language pathology programmes from Riphah International University Islamabad was recruited for study. A total of 70 postgraduate SLP students completed the DREEM scale. Data were analyzed through SPSS.

Results: The results revealed that over 70-80% percent students were satisfied with their

academic environment, 30% percent reported that various components need to be improved. The average mean score of scale was $3.07 \pm .597$.

Discussion: The DREEM questionnaire (total score: 200) was used to diagnose the strengths and weaknesses of the curriculum which is known to be a major determinant of educational environment (Demiroren M.2008). One of the studies was conducted on gradu-ate students from a dental school. The domains appraised were undergraduate curriculum, student motivation and support services (Shetty VB,2012). DREEM was administered to 70 final-year medical students all of the participants except the male interns recorded the highest scores for the subscale academic self-perceptions (Bassaw B, 2003).

Conclusions: It is concluded from the study that educational environment was satisfactory to majority of students. Some areas of concern were identified that need improvement.

Take Home Message: SLP is a new and emerging field in Pakistan and Riphah International University is pioneer in establishing the postgraduate programme. The learning environment should be targeted as it is a major area when appraising different educational programmes. The present research may be attempted to coordinate across multiple settings to observe and progress their academic environment.

Title: Smartphone addiction and associated hand pain among university students

Authors: Huma Riaz, Durre Shehwar, Samah Arshad

Institute: Riphah International University, Islamabad Pakistan

ABSTRACT:

Background: Smart phone addiction is type of behavioral addiction. Texting constantly, scrolling and swiping across larger screen phones can cause problems in hand by putting Stress on the muscles and ligament of the hand. The study objectives were to assess level of addiction among university student and association of addiction with hand pain.

Summary of Work: Young university students (n=315) using smart phones were included through

non-probability, Convenience Sampling. Analytical, correlational study design was used. Smart phone addiction scale (SAS) used, subjective hand pain and function assessment done. Analysis done on SPSS -21 software. Independent t-test, one way ANOVA applied to compare means. Chi-square test applied to test association of addiction and hand pain.

Results: Students' mean age was 21.8years \pm 1.9. Moderate addiction (Mean SAS (94.43 \pm 20.36) found in 74.30% students. Gender ($p < 0.05$) and academic year based ($p < 0.05$) difference was significant for smart phone addiction. 44% students were having various types of hand pain. Smart phone addiction is associated ($p < 0.01$) with intensity of hand pain.

Discussion: This study findings that males are more addicted ($p < 0.05$) is supported by Kim et.al (2015) whereas Kwon et.al (2014) found females most affected. Association between overuse and hand pain ($p < 0.01$) found in current study is supported by Kim, Y.L., et al(2016) and Yang et al(2017) who found overuse causing pain in the hand.

Conclusions: Moderate level of Smartphone addiction is present in students. Positive anticipation is more prevalent among other addiction factors. Addiction is mostly present in male students of 1st and 4th years. Moderate level of smart phone addiction is associated with mild to moderate intensity of hand pain.

Level of smartphone addiction is high among young university students leading to musculoskeletal problem. Such behavioural addiction should be controlled by students counseling, self motivation is the best remedy. Awareness about postural and musculoskeletal issues should be made.

Title: Does students' self-efficacy of competencies grow after following an integrated program of several whole-task simulations?

Authors: Nele R.M. Michels, Katrien Bombeke, Katelijne Baetens

Institute: University of Antwerp, Belgium

ABSTRACT:

Students feel insufficiently prepared to start their internships in a real clinical environment. To prepare them for these challenges, an integrative

case-based and learning agenda-led program for 1st (M1) and 2nd master (M2)-year medical students was introduced. In this study we investigated whether students' self-assessment on their efficacy on CanMEDS competencies ameliorated.

In this program medical students (N=264), grouped in triplets, practiced on simulated consultations. Before and after the program in M1 and M2, students filled in a self-efficacy questionnaire (M1.1;M1.2;M2.1;M2.2), based on a CanMEDS competency based inventory (CCBI), estimating their knowledge, motivation and skills. We assessed the progression of the scores in time.

For all the CanMEDS roles the trainings had a significant positive effect on the self-estimated knowledge and skills. Generally, the mean scores rose from M1.1 to M1.2, slightly lowered to M2.1, to further increase at M2.2. Global mean scores (N=671) were highest for perceived motivation and lowest for the Medical Expert role.

Results show that students grew in their self-efficacy on knowledge and skills regarding all the CanMEDS roles, no significant increase was noticed related to their motivation probably due to the high scores at the start. Clinical reasoning and treatment plans scored lowest. Interestingly, a short break in the program induces a dip in the scores of perceived efficacy.

In this study we could measure growth in students' self-efficacy of knowledge and skills by offering a program of several entire consultations in simulated settings. Next, mean scores on the particular competences should learn how students can be even better coached before, during and after the program.

Students should be prepared and coached to make the transfer to the clinical workplace. A program of several simulated whole-task consultations which integrates roles and competences is valuable to increase students' self-efficacy.

Title: Quality standards for assessment – what's missing?

Authors: Tim Wilkinson, Winnie Wade

Institute: University of Otago, Christchurch, New Zealand

ABSTRACT:

Background: Ensuring quality in assessment requires us to judge our performance according to standards. But do we have the right standards? We aimed to undertake a thematic analysis of publicly available medical assessment standards to identify areas of commonality and areas where standards may be missing.

Summary of Work: We searched the IAMRA and medical regulatory Authority websites for relevant quality standards. We compared these with standards from (1) the Ottawa 2010 consensus statement (2) WFME and (3) the American Educational Research Association, American Psychological Association, and National Council on Measurement in Education.

Summary of Results: No single set of standards covered all elements. Most sets of standards included criteria for validity, blueprinting, educational impact, reliability and standard setting. There was variability in many standards such as adjustments for impairment, appeals, quality improvement, decision making, security breaches, and feasibility/acceptability. Some standards did not relate to quality at all.

Discussion: Many standards related more to tests than to programmes of assessment. With moves towards more programmatic assessment and to reliance not just on single tests, there is a need for quality standards to be evolved. In particular standards related to decision making seem variable.

Conclusions: An overarching set of standards relevant to current good practice may be needed.

Take Home Messages: Assessment quality standards need to align more to developments in programmatic assessment.

Title: Nudging towards sustainable assessment? Supporting 'at risk' learners in Workplace Based Assessment through personalised 'nudges'

Authors: Richard Fuller, Jennifer Hallam, Rebecca Harrold, Matthew Homer

Institute: Leeds Institute of Medical Education, University of Leeds, United Kingdom

ABSTRACT:

Investigation of longitudinal relationships between

senior medical students' WBA engagement and success in high stakes OSCEs reveals differing profiles of engagement that correlate strongly with OSCE success. This highlights both 'sustainable assessment' behaviours, correlating with OSCE success ($R=0.59, p<0.001$) and those learners 'at high' risk of failure ($R=-0.6, p<0.001$).

Profiling work identified 'at risk' medical students (previous high stakes OSCE failure or patterns of predictive WBA disengagement). Within our mobile assessment for learning programme, we designed a series of personalised digital 'nudges' for these students, building on previous successful application of technology nudges in higher education (Thaler & Sunstein, 2009).

Mixed methods approaches examined WBA engagement patterns and OSCE success alongside interviews with at risk students to understand the impact of nudges. The majority of at risk students engaged well with the nudges, showing increased motivation, WBA engagement and reflection, with improvements in correlations between engagement and OSCE ($R=-0.3, p<0.001$).

Allowing programmes of assessment to focus on 'diagnosis' in addition to 'competency measurement' allows exploration of differential support for learners. Nudges potentially represent exciting opportunities for supporting at risk learners, and in this study, were associated with the growth of better self-regulated behaviours that point to more sustainable assessment behaviours. The development of an innovative and personalised assessment tool allows identified 'at risk' students to recognise their need for increased engagement, with both assessment and feedback. This has allowed us to explore the complex programme of assessment for learning in WBA to develop differential, personalised support for learners.

Using personalised, digital nudges within assessment represents a key opportunity to engage with and better understand the behaviours and needs of students at risk of failure – and is associated with increased engagement, motivation and assessment success.

Title: Capabilities in Practice - A Novel Assessment Method for Postgraduate Physician Training

Authors: Shuaib Quraishi, Winnie Wade, David Black

Institute: The Royal College of Physicians, United Kingdom

ABSTRACT:

Background: The Royal College of Physicians Education (RCP) Department and the Joint Royal Colleges of Physicians Training Board (JRCPTB) have been developing the new outcomes based Internal Medicine Curriculum which has been recommended by the General Medicine Council (GMC). A part of this work involves the development of a new assessment system.

Summary of Work: The present curricula for physician training are based on achieving a large number of individual competencies and it is felt that this is burdensome. The Proof of Concept Study explored the feasibility of using an outcome based model of assessment using 'Capabilities in Practice' (CiPs) based on 'Entrustable Professional Activities'.

Results: Positive and negative themes were identified from the analysis. Positive themes that arose were that outcomes method of assessment was more representative of the real world, more holistic and rationalises workload. A negative theme was that non-clinical CiPs were more difficult to assess.

Discussion: The Proof of Concept study has highlighted positive aspects of using an outcomes based method of assessment where it is a more holistic method of assessment. There are aspects, which we have found that need to be addressed before it can be implemented as a method of assessment.

Conclusions: Non-clinical CiPs included research, quality improvement and management. These were felt to be much more difficult to assess using entrustment levels. It was also felt that the definitions for each entrustment level of supervision was not entirely clear and these would need to more definition for both trainers and trainees.

Take Home Message: The learning from the study has enabled us to make significant changes to the

Internal Medicine curriculum. We have made changes to entrustment levels so they are easier to understand. The study has highlighted that supervisors need to be trained in how to use this form of assessment.

Title: Development and evaluation of a brief faculty evaluation questionnaire: A mixed methods study

Authors: Yong Hao Lim, Yong Hao Lim, Melissa Yong, Charmaine Krishnasamy

Institute: National Healthcare Group, Singapore

ABSTRACT:

Background: Learner-completed faculty evaluation questionnaires are important sources of information for assessment and development of clinical teaching. However, questionnaires are usually developed without considering learners' responses to questions, or how collected data will be used. We developed and evaluated a brief faculty evaluation questionnaire in a mixed methods study.

Summary of Work: The initial questionnaire was tested for comprehension in cognitive interviews (N=20) and for priority and consensus in a real time Delphi study (N=7). The revised questionnaire was then field-tested for implementation ease (N=19). Lastly, the responses from the new and existing faculty evaluation questionnaires were compared.

Summary of Results: All items in the final questionnaire were revised for contextual ambiguity, differing word meanings, double-barreled and semantic similarity. 84% of the participants in the field test indicated that the questionnaire was easy to complete. Responses to the new questionnaire had less 'not applicable' responses (0.2%-1.6% vs 1%-13.2%), more open-ended comments (23.4% vs 17%) and more variability in overall evaluation of teaching (coefficient of variation=0.17 vs 0.14) as compared to the existing questionnaire.

Discussion: Addressing learners' responses to questions and how collected data will be used resulted in a questionnaire that is easy to understand and implement. Issues to be tackled were also highlighted.

Conclusion: The next step would be to systematically investigate the reliability and validity

of the brief faculty evaluation questionnaire and how collected data can be used in assessment and development of clinical teaching.

Take Home Message: Engaging learners and faculty to look at various aspects of the development of a brief faculty evaluation questionnaire improves acceptability of the questionnaire.

Title: Refurbishing Self-directed Learning (SDL) Sessions in Physiology with Pre-reading Assignments and Pecha Kucha (PK) Talks: Students' Perceptions

Authors: Reem Abraham, Sharmila Torke, James Gonsalves, Sareesh Naduvil Narayanan, M Ganesh Kamath

Institute: Melaka Manipal Medical College (MMMC), Manipal Campus, Manipal University, Karnataka, India

ABSTRACT:

Background: Medical schools worldwide are making conscious efforts to incorporate learner-centred educational activities in undergraduate medical curriculum, aimed at improving not only knowledge, but also various life-long learning skills.

Summary of Work: During small group self-directed learning (SDL) sessions (facilitated by teachers) conducted in physiology for first year undergraduate medical students (n=120), a few students in each group individually presented learning objectives in the specified topic. The pre-reading assignments were also discussed. Students also participated in Pecha Kucha (PK) talks, wherein, one student from each group presented 20 PowerPoint slides with only images pertaining to the respective SDL topic, each slide of 20 seconds duration. Frequency analysis of students' responses to a validated questionnaire was done.

Summary of Results: Analysis revealed that about 75% of students were positive about the modified SDL sessions in improving various life-long learning skills. Students agreed that PK talks helped them to learn how to organize content (65%), present concise information (65.8%) and apply creativity (72.5%).

Discussion: The tightly packed teaching schedule which demanded extra amount of time for preparation for PK talks, pressure to pass

examinations etc could have been the reasons for students' passive response.

Conclusions: The present study revealed that even though students actively participated in the modified SDL sessions, their perceptions on satisfaction and usefulness of the same towards achievement of various skills was not encouraging.

Take Home Message: The study results imply that medical students should be oriented on relevance of active learning strategies in their future career.

Title: The relationship between school type and academic performance at medical school: a national, multi-cohort study

Authors: Jennifer Cleland, Benard Kumwenda, Kim Walker, Rachel Greatrix, Amanda Lee

Institute: University of Aberdeen, and Association for the Study of Medical Education (ASME) United Kingdom

ABSTRACT:

Background: Differential attainment in school examinations is one of the barriers to increasing student diversity in medicine. However, studies on the predictive validity of prior academic achievement and educational performance at medical school are contradictory, possibly due to single-site studies or studies which focus only on early years' performance.

Summary of Work: We examined the relationship between socio-demographic factors, including school type, and performance throughout medical school in students graduating from 33 UK medical schools between 2012 and 2013. We included candidates' demographics, pre-entry grades, pre-admission test scores, and used the UK Foundation Programme's Educational Performance Measure (EPM) as an outcome measure.

Summary of Results: Students from independent (usually fee-paying) schools had significantly higher mean pre-admissions test (UKCAT and GAMSAT) scores than students from state-funded schools. Non-significant differences were observed in indicators of school achievement. However, students from state-funded schools were almost twice as likely to finish in the highest EPM rank.

Discussion: Our findings provide modest supportive evidence that, when students from independent and state schools enter with similar

pre-entry grades, once in medical school, students from state funded schools are likely to outperform students from independent schools.

Conclusions: We suggest the need for longer-term validity studies to provide insight into the outcomes of students, in particular, those from non-traditional backgrounds, as they progress through postgraduate years and go into practice.

Take Home Messages: This is useful information for countries like the UK who select medical students disproportionately from independent (or private, selective) schools. Do these students “peak” before medical school? Is their high performance dependent on support? This evidence contributes to global discussions around increasing the medical workforce diversity while maintaining standards.

Title: Faculty development initiatives designed to promote educational research skills development & education scholarship in medical education: A scoping review

Authors: Ulemu Luhanga, Linda Lewin

Institute: Emory University, United States

ABSTRACT:

Background: Although reviews exist focused on faculty development initiatives designed to improve teaching effectiveness and leadership skills, there are no published reviews, to date, focused on programs designed to promote educational research skill development and education scholarship, and thus no recommendations regarding creation of such programs in medical education.

Summary of Work: We adopted Arksey and O'Malley's methodological framework for scoping reviews and O'Sullivan and Irby's model for faculty development research in order to answer the following question: What are key features of faculty development initiatives designed to promote educational research skills development and education scholarship in medical education?

Results: We identified 30 empirical articles, representing 27 programs. Most described scholars programs and fellowships; few were based on needs assessments. Participants were primarily clinician educators. Program facilitators were institutional leaders, faculty instructors, and

project mentors. Institutional drivers for program creation included supporting faculty development, curriculum innovation, and promoting collaboration.

Discussion: We were interested in four key components: participants, program, facilitators, and context. Majority of the studies described participants and program characteristics, including learning activities and evaluation outcomes. Authors did not, however, address the need for faculty development to be workplace based. Information about project mentors was often absent.

Conclusions: We identified common features of initiatives that promote education scholarship, but studies did not provide adequate information to define best practices. Most provide only preliminary outcomes, but show promise in increasing scholarship. Future programs should be workplace based and attend to institutional context and the needs of potential participants.

Take Home Message: In order to define best practices for building effective educational research skills development and scholarship initiatives, we must focus on more than just participants and program characteristics; we need to also identify characteristics of effective facilitators and strategies to design programs that respond to institutional contexts and local workplace communities.

Title: Development of an assessment tool for professional identity formation of medical trainees

Author: Masami Tagawa

Institute: Kagoshima University, Japan

ABSTRACT:

Background: Because developing medical trainees into medical professionals has become a major issue, medical educators focus on professional identity formation (PIF), and the values and attitudes related to PIF have been analyzed using reflective writing and interviews. This study aimed to develop a self-administrated scale to assess PIF of medical doctors.

Summary of Work: Using Kegan's conceptual framework of human development, a self-

administrated questionnaire composed of items on a seven-point scale was created. Fourth- and sixth-year medical students, residents, and medical doctors in private clinics or teaching hospitals responded to the questionnaire. Scores were analyzed for factor structure and scale reliability.

Summary of Results: One hundred forty-three respondents completed the questionnaire. Eighteen items were found to be reliable ($\alpha = 0.77$) as a scale for PIF, and five factors were revealed by exploratory factor analysis. The mean total scores and five subscale scores of medical doctors were significantly higher than other respondent groups.

Discussion: Because respondents with longer clinical experience showed higher scores, this scale might indicate the degree of PIF. A broad range of scores for participants with similar levels of experience indicated different PIF statuses among individuals exist, and residents as well as medical students were on their way towards PIF.

Conclusions: The total and subscale scores of this scale would be useful to estimate PIF among individuals and groups. Further research is required to confirm the validity and reliability of this scale and whether it would be applicable to other medical trainees undergoing different types of medical education.

Take Home Messages: PIF of medical trainees might be quantitatively estimated by a new self-administrated scale. Preliminary data suggests diversity of PIF among trainees with the same education, and evaluation of PIF might be important for promoting PIF.

Title: Box ticking and Olympic high jumping - Respiratory specialists' perception and acceptance of recertification

Authors: Carolin Sehlbach, Marjan J. B. Govaerts, Sharon Mitchell

Institute: Maastricht University, Netherlands

ABSTRACT:

Background: Recertification systems aim to periodically appraise medical specialists' competence and to ensure lifelong learning. Utility of recertification systems, however, is determined by physicians' perceptions about the system and

resulting acceptance and commitment. We therefore aimed to explore medical specialists' perceptions of different national re-accreditation systems in Europe.

Summary of Work: We conducted semi-structured interviews with respiratory specialists in the UK, Germany and Denmark, where different systems are implemented: mandatory revalidation; mandatory, credit-based continuing professional development, and recommended annual progress dialogues. We analysed interview data per country, focusing on factors influencing acceptance, including beliefs regarding assessment of and for learning.

Results: The implicit belief on whether the national system enables to ensure competence and to guide professional development, while being aligned with personal goals affects the acceptance of and engagement in the recertification system. Other factors are feeling of ownership, organisational support and feasibility. Trust in the system itself equally surfaces.

Discussion: Alignment of recertification requirements with day-to-day work and personal goals determine acceptance of recertification systems. Perceived autonomy, relevance for professional competence and organizational support affect physicians' commitment to recertification. Findings resonate with assessment research, showing that assessment culture and assessment embedment in learning and work affect assessment acceptance and outcome.

Conclusion: Acceptance levels determine any system's utility. Recertification systems need to be carefully designed and integrated into daily work in order to be effective for lifelong learning and competence assessment. Engaging physicians as key stakeholders in design of recertification systems might enhance acceptance and commitment.

Take Home Messages: Recertification systems designed to foster continuing professional development and to assess performance profit from offering multifaceted activities which the individual can integrate into daily work. This can help to enhance users' ownership and commitment, which might ultimately align

individual goals with the system's intended goal to safeguard quality of care.

Title: The HIP-Mentoring Tool ("How I Perform") – Does self-reflection leads to improvement concerning results in the German State Exams?

Authors: Johann Arias, Sonja Finsterer, Melanie Simon

Institute: RWTH Aachen University, Germany

ABSTRACT:

Background: Since 2011 the HIP-Tool is used for counseling matters. By comparison between summative and formative results students can pursue their individual performance and its development through the entire curriculum. In the third year Aachen students absolve the first State Exam, which consists of an OSPE and a MCQ Exam.

Summary of Work: Using the HIP-Tool exam results were shown in comparison to the peer group, strengths and flaws are detected and knowledge deficits were identified. After self-reflection the candidate creates an adequate study plan considering the own individual competence level and capacities. The knowledge development is verified in training sessions.

Summary of Results: Comparing student's performance in courses and the state exam in different years a high correlation in exam results is visible. 20 students had an individual study plan for the state exam. Nearly all students passed the exam in their second attempt.

Discussion: The premise of a correlation of state exam results with the results in previous courses led to students' individual consultation. Can individual problems be detected in an overall comparison of previous exam results? Is the combination of this perspective with individual flaws helpful for an integral consideration of student's performance?

Conclusions: The results of the state exam were compared with the former results in state exams and courses. An explicit improvement was achieved applying this method. In follow-up discussions self-reflection and the consultation using the HIP-Tool turned out to be profitable. Visualization of the areas of concern had an additional benefit.

Take Home Messages: Quantity and variety of

study matters are a real challenge for the students. An optimal preparation to pass the exam and to consolidate acquired knowledge is indispensable.

Title: Does a distance-based learning environment suit health professional education in a Middle East setting?

Author: Kerry Wilbur

Institute: The University of British Columbia, Canada

ABSTRACT:

Background: Distance-based education offers particular appeal for professionals in the Middle East where international qualifications are esteemed, household internet penetration is high, and societal norms may preclude individuals from easily pursuing study outside the home. Still, little is known how such pedagogies are adopted in environments outside of their "Western" origins.

Summary of Work: We conducted a three-part evaluation of blended-learning in a Middle East training program for pharmacist professionals. Structured peer-review of course design and delivery was coupled with comparison of performance for students engaged with content delivered traditionally or through blended-learning modalities. Finally, data was triangulated with student perspectives elicited through focus group discussion.

Summary of Results: We found course aspects related to communication, scheduling, and feedback could be augmented. Overall performance between student cohorts was comparable, but demonstrated problem-solving and communication in settings with standardized patients were consistently worse among blended-learning students. These pharmacists endorsed any course aspect that linked with workplace patient care responsibilities, but found it challenging to adapt to high-fidelity testing environments.

Discussion: Blended-learning integrates distance-based online course content with in-person classroom experiences. Student success is characterized by self-regulation and intrinsic motivation, student traits not typical in the Middle East where rote memorization and teaching-

centered learning styles predominate. Indeed, pharmacists confirmed on-campus sessions were key for sustaining motivation and recommitting to management of the distance-based content.

Conclusion: Our findings identified how specific course element modifications could enhance pharmacists' learning experiences. While student performance in traditional and blended-learning modalities was comparable in this Middle East context, learner attributes and preferences must be considered to support achievement of intended educational outcomes when health professional education is introduced in distinct environments. We found that instructional design and communication approaches merit some special consideration for Arab students for optimal engagement in blended learning environments.

Title: The State of Physician Training in the United Kingdom

Authors: Mumtaz Patel, Warren Lynch, Aidan Simpson

Institute: Joint Royal Colleges of Physicians Training Board, United Kingdom

ABSTRACT:

Background: Recent reports highlight concerns around the National Health Service being underfunded, under-doctored and overstretched (1). This potentially impacts on quality of training and patient safety. This report aims to objectively evaluate the current state of quality of physician training within the UK and crucially provide an evidence-based benchmark for future comparisons.

Summary of Work: Data from six key quality datasets across 29 physician specialties and three sub-specialties in the UK were analysed by specialty and region. Data from each was mapped against the GMC themes and standards for postgraduate medical education and training (2). A thematic analysis was done to identify factors affecting quality of training.

Results: Four major themes identified:

Rota gaps in acute medical specialties affecting workload.

Imbalance of service delivery of General Internal Medicine (GIM) affecting specialty training

experience.

Smaller specialties: issues with curriculum delivery and sustainability.

Single specialty: issues meeting particular curricular requirements and commissioning.

Discussion: The first two themes affect majority of acute medical specialties and have a significant negative impact on all GMC themes and have the potential of affecting patient safety. The latter two themes affect smaller number of specialties with specific issues affecting the learning environment and curriculum delivery.

Conclusion: This report has made judgements based on analysis of six key datasets. The findings provide an evidence-based benchmark for current state of quality of physician training in the UK. It supports the literature around NHS challenges and being a junior doctor in the current climate with increasing service pressures compromising quality of training.

Take Home Messages: First report to examine multiple quality datasets and map these against GMC themes for postgraduate medical education and training to provide an evidence-based benchmark.

Findings highlight increasing pressures of acute medical specialties due to rota gaps and imbalance of service-delivery of GIM affecting specialty training experience.

Title: Diving In Hands First – A New Approach to Training in Undergraduate Medical Education

Authors: Rajiv Shah, Eliane Shore, Alexandra Davidson, Michael Arnason, Anita Shah, Nicolette Caccia,

Institute: University of Toronto, Canada

ABSTRACT:

Background: Hands on simulated training has recently become regarded as superior to didactic lecture for undergraduate medical education. However, current formal teaching in OB/GYN clerkship at the University of Toronto does not offer workshop-based seminars. Regardless, students are exposed gynaecological surgery, caesarean sections, and perineal repairs (PR) without technical skills practice.

Summary of Work: We introduced a workshop on

PR into the curriculum to deliver the PR material along side suturing training. Students received a presentation on PR, one-on-one suturing instruction, and 45 minutes of individual practice using a perineal model. Knowledge and technical skill were assessed with pre-post tests and knot-tying speeds, respectively.

Results: There were statistically significant improvements in both knowledge (48%, 68%, $p < 0.05$) and technical skills (279s, 215s, $p < 0.05$), after the workshop. Most importantly, 95% of students ($n=64$) agreed or strongly agreed that this method of learning was more enjoyable than traditional methods.

Discussion: Increased need for practical skills training has led to a movement towards incorporating simulation into undergraduate medical education. Patients have also been shown to be significantly more accepting of medical students performing procedures on them if the students have previous practice with simulation.

Conclusion: These results support that hands-on practice in a simulated environment may bridge the gap between formalized teaching and clinical practice. Furthermore, this highly reproducible and inexpensive teaching model ensures that the workshop is feasible for other care providers (ie. Midwifery, family practice) to duplicate and incorporate into their teaching curricula.

Take-Home Message: Workshop-based learning environments in undergraduate medical education have the potential to improve knowledge, technical skills, and student satisfaction, which have been shown to translate into higher patient acceptance and safety. As a result, we hope to encourage medical institutions internationally to explore incorporating formal hands-on instruction into clerkship training.

Title: Simulation: A New Frontier in OB/GYN Undergraduate Medical Education

Authors: Eliane Shore, Rajiv Shah, Alexandra Davidson, Husayn Kata, Anita Shah

Institute: University of Toronto, Canada

ABSTRACT:

Background: With movement towards competency based assessment, medical education

has rapidly shifted to incorporate growing student requirements. As a result, simulation is being proposed to solve the disconnect between classroom and clinical application. Currently, the University of Toronto OB/GYN clerkship teaching format is primarily didactic lectures and informal ward teaching.

Summary of Work: We developed a pilot project to incorporate high-fidelity Post-Partum Hemorrhage (PPH) simulation into the OB/GYN clerkship curriculum. Students managed a Laerdal SimMom Mannequin™ experiencing a PPH. Student knowledge was evaluated with pre- and post-test quizzes, and non-technical skills (NTS) were assessed using pre- and post-simulation TeamSTEPPS™ Questionnaires.

Results: Statistically significant improvements in students' ($n=64$) knowledge (63%, 83%, $p < 0.05$), and NTS (88%, 92%, $p < 0.05$), specifically with communication, situation monitoring, mutual support, and teamwork, were noted following simulation. Most importantly, 95% of students agreed or strongly agreed that this method of learning was more enjoyable than traditional methods.

Discussion: Simulation in undergraduate education offers an exciting alternate means to deliver traditionally didactic information, while also incorporating essential NTS into the learning environment. Current literature suggests that these improvements can be directly translated into students having increased opportunities to participate clinically, with greater patient acceptance and improved patient safety.

Conclusion: The benefits of simulation in post-graduate medical training are well documented. However, there is a lack of simulation training programs in undergraduate education. This research demonstrates the value of simulation for undergraduate trainees. We hope to encourage incorporation of these techniques in addition to traditional teaching methods for medical students.

Take Home Message: Our pilot project demonstrates an increase in medical knowledge, non-technical skills, and student satisfaction, following high-fidelity simulation training. The success of this project highlights the importance of

introducing simulation-based learning into any formal teaching curriculum in undergraduate medical education.

Title: Framing effects on medical student judgments about diagnostic testing and therapeutic decision making

Authors: Larry Gruppen, Jennifer Stojan, Michelle Daniel, Helen Morgan, Laurie Whitman

Institute: University of Michigan, United States

ABSTRACT:

Background: Research demonstrates that the way a question is framed (e.g., in terms of the probability of death vs. the probability of life) alters the decisions that physicians make. This study examines the effect of framing bias in relationship to the impact of uncertainty on decisions about testing and treatment.

Summary of Work: 175 medical students were randomly allocated to two versions of the same patient case. Version A elicited the range of disease probabilities for which testing WOULD be needed in order to make a therapeutic decision. Version B elicited the disease probabilities at which testing would NOT be needed.

Summary of Results: Students completing Version A estimated a larger range of probabilities (20% to 73%) for which testing would be important than students completing Version B (45% to 90%; effect size $(d) = 0.48$). Students completing Version A also shifted their range of probabilities 20 points higher than Version B students ($d > 1.0$).

Discussion: Focusing student attention on the range of uncertainty (Version A) vs the range of certainty (Version B) altered how they perceived the value of diagnostic testing vs immediate treatment. This finding is consistent with prior studies. However, the 20-point shift in the range of probabilities in which testing would be considered useful is unexpected and warrants further study.

Conclusions: The framing of a decision has a large effect on how students respond to the choices. Making decisions under conditions of uncertainty is a necessary skill, so understanding the processes of estimating and interpreting uncertainty is critical for learners and educators.

Take Home Messages: Seemingly trivial changes in

wording a decision may have major impact on student performance. These results must be verified in experienced physicians in order to understand their generality and practical significance.

Title: The Acceptability of Final Year Medical Students in Using Human Patient Simulators to Assess Clinical Decision Making in High-Stakes Examinations

Authors: Jeremy (Jerry) Morse, Craig Brown

Institute: University of Aberdeen, United Kingdom

ABSTRACT:

For years low, medium and high-fidelity simulation within the various undergraduate Health Care Professional curricula has been widely utilised in the provision of clinical education. However, as the use of simulation in its various forms continues to rise in medical education, there still remains a sparsity of evidence with regards its acceptance in undergraduate degree examinations.

This presentation describes the use of a HPS in an anaphylaxis/cardiac arrest scenario for the final year medicine OSCE and the student's acceptability of including a simulation in a high-stakes final year examination.

All candidates who sat the examination were asked to complete a four questions, Likert style, and survey. Of the 203 surveyed, 72 (35%) replied, with 63 (89%) agreeing that the use of a HPS increased the fidelity of the scenario, 67 (93%) agreed that the station enabled them to demonstrate their assessment of a critically unwell patient. 61 (85%) agreed that the use of simulation facilitated demonstration in their management of a critical situation and 47 (69%) agreed the station helped examiners to understand their clinical decision making steps.

Though high-fidelity simulation has played a key role in competency assessment for other 'high-risk' industries, similar assessments have been slow to evolve in undergraduate healthcare examinations. As we strive to assess clinical-management and decision-making skills of the candidates, it seems reasonable, that HPS's be used more routinely as part of the examination process.

The use of simulation can increase the consistency

and reproducibility of the station, with the same scenario delivered over multiple OSCE sites, ensuring equality for all candidates.

Though we acknowledge the relatively low response rate for this pilot study, our results suggest that in general, students are accepting of simulation-based scenarios in high-stakes examinations.

This pilot has shown the acceptance and further larger studies are planned to provide more evidence.

Title: Assessing self-monitoring for individual students from certainty response MCQs

Authors: Mike Tweed, Gordon Purdie, Tim Wilkinson

Institute: University of Otago, New Zealand

ABSTRACT:

Background: Self-monitoring (SM), reflection in the moment, regarding clinical decisions is a crucial part of daily practice. Using response certainty, characterised by seeking assistance or resources, it is possible to explore SM using responses to MCQ assessments. Can we derive a measure of SM and follow changes for students?

Summary of Work: Medical students sit a 150 question progress test, including item level response certainty, twice per year. Results for the 737 students sitting all four tests in 2015-2016 were analysed. SM was defined as a significant trend in correctness with certainty and with high certainty, a proportion correct being not significantly lower than overall rate.

Summary of Results: Response patterns over the four tests: 70.8% demonstrated SM on all tests; 2.4% demonstrated no SM on any tests; 7.2% changed from not-SM to SM; 5.6% changed from SM to not-SM; 14.0% were random. The cohorts (Y23, Y34, Y45) had differing levels with most SM seen in Y45 (78.6%) and most developing SM in Y34 (10.5%).

Discussion: Most students demonstrated SM or the development of SM. A small but significant number demonstrated no SM at all, or the loss of SM, so may require additional learning support. The different levels of SM by cohorts may indicate SM reducing then developing again for some as SM

lags behind knowledge acquisition.

Conclusions: Students from all year cohorts demonstrate SM. Certainty responses may allow students to monitor and develop SM during and/or over several tests. Following changes for several cohorts as they progress through the entire course would add to the analysis.

Take Home Messages: Using MCQ progress testing with response certainty allows for the assessment of SM and a comparison to sufficient SM. These can be followed over time for individual students and cohorts.

Title: An integrated OSCE to assess skills managing diverse patients

Authors: Nisha Dogra, Andrew Ward, Rachel Westacott

Institute: University of Leicester, United Kingdom

ABSTRACT:

Background: It is widely acknowledged that diversity skills are difficult to assess and require multimodal methods of assessment (Dogra et al 2015). Given this complexity, assessment of diversity skills is often neglected or done in an isolated way which may render it ineffectual.

Intervention: Following the introduction of integrating diversity within other strands of the curriculum such as professionalism and communication skills, a formative objective structured clinical examination (OSCE) assessment was developed. This included the assessment of diversity through student communication with the patient. The OSCE focuses on clinical skills that are appropriate for first year medical students and ask students to give basic advice. The domains assessed are:

Opening the consultation, Consultation skills, Patient Centredness and diversity factors which specially ask, did the student:

React in non-judgemental way to sensitive revelations

Takes patient's view into account

Respectful at all times toward patient

Remains professional but is prepared to discuss and challenge patient's health beliefs when these are damaging

Explained risks of patient's behaviour in non-

critical manner

Tailored advice given to patient to incorporate patient views

This OSCE was piloted and has been recently used on approximately 200 students. Simulated patient feedback is also being sought as to whether the student was patient centred in their communication.

Findings: The data is currently being analysed in detail. However, the above framework has been able to identify students whose communication style raises concerns about their professionalism and also students who demonstrate excellent communication skills which are responsive to patient cues.

Conclusion: From the pilot we learned that we can integrate and assess diversity within "standard" OSCE stations.

Take Home Message: It is possible to integrate diversity into the curriculum and assess alongside other aspects. Need to ensure that aspects that relate to diversity have explicit criteria.

Title: Undergraduate Medical Students' Attitude towards Patient Safety

Authors: Rizwana Kamran, Mohamed M Al-Eraky

Institute: University of Lahore, Saudi Arabia

ABSTRACT:

Background: Patient safety is an emerging healthcare discipline. Integration of patient safety in the medical education is a crucial measure to teach and train the future doctors. To promote patient safety, baseline data is needed to design effective educational programs on patient safety based on students' needs.

Methods: It was a quantitative descriptive study. The study population was final year MBBS class at the University of Lahore. The study tool was voluntarily filled, using 'Attitude to Patients Safety Questionnaire-III' in which, 26 items were sorted out in nine domains of patient safety attitudes. SPSS package 20 was used for statistical analysis.

Results: Questionnaire was filled by 122 out of 150 students, with 81% response rate, including 82 (67%) females and 40 (33%) males. Almost one third of the participants had prior experience with medical errors at least once. The best score was

given for the 'team functioning', followed by 'long working hours', on the other hand professional incompetence was given the least score (2.5 points). Role of training and learning on patient safety scored 5.7 and 5.1 points. The domain regarding involvement of patient scored 5.6 points. Confidence to report medical errors scored 5.0 points. The second lowest score was 4.3 points regarding the disclosure of errors. No significant differences of perceptions were found between male and female participants, nor between those who have experienced medical error or not towards patient safety.

Conclusion: This study showed that undergraduate medical students in University of Lahore had a positive attitude towards patient safety. Most of them supported the integration of patient safety into medical curriculum. However, there were misconceptions among students regarding causes of medical errors, teaching of patient safety education and responsibility of error reporting.

Take Home Message: A well designed course or module on patient safety is urgently required in Pakistan.

Title: Navigating the system: how assessors' beliefs and values can steer longitudinal work-based assessment systems

Authors: Valerie Dory, Carlos Gomez-Garibello, Beth-Ann Cummings

Institute: McGill University, Canada

ABSTRACT:

Background: The focus of competency-based medical education on authentic tasks and trajectories of development has spurred the development of longitudinal work-based assessment systems for formative and summative purposes. While assessment tools are available, questions remain as to how – in a longitudinal context – assessors interact with them and how to combine scores.

Summary of Work: In our program, first year medical clerks must elicit 12 ratings using the Professionalism Mini-Evaluation Exercise (P-MEX) form from multiple disciplines to provide feedback on their development of the non-medical expert, or 'intrinsic', competencies. We analysed data from

the first year of implementation (1662 forms) and interviewed 21 assessors.

Summary of Results: Average scores were high (3.5-3.7/4) and relatively stable across the year. Most variance was attributable to assessors (47%) with low generalizability across forms ($E_p^2=0.18$). Assessors reported purposefully diverging from instructions; namely aggregating across multiple observations to generate scores and conveying areas for improvement primarily through verbal feedback.

Discussion: Interviews revealed how assessor beliefs impact longitudinal work-based assessment systems, helping to explain unexpected findings from our psychometric analyses. Students may not have received robust feedback for areas of improvement through formal means as intended, but assessors created alternative means to provide what they saw as 'good assessment'.

Conclusions: Literature on rater cognition has focused primarily on the granular cognitive processes at play in judgement-based assessments of performance. This study adds to this literature by exploring the influence of assessor values and beliefs regarding what constitutes 'good assessment' on their actions within the formal and informal assessment system.

Take Home Messages: Intended and enacted assessment systems may differ in unexpected ways. Assessment systems are complex systems in which assessors exercise agency and can significantly impact the outcomes. Assessment designers must therefore continuously refine assessment systems and monitor the processes at play and the overall outcomes.

Title: A multi-method job analysis for the role of physician associates to inform selection and training

Authors: Rachel Driver, Kamila Hawthorne, Fiona Patterson

Institute: Work Psychology Group, United Kingdom

ABSTRACT:

Background: Physician associates (PAs) are healthcare professionals that "work to the medical model... under supervision" in multidisciplinary teams. Despite established presence

internationally (e.g. USA), PA is an emerging profession in the UK. There is a need to conduct a job analysis to define knowledge and attributes essential for the role.

Summary of Work: Following best practice, a multi-source, multi-method role analysis was undertaken. A literature review identified research on the role. Interviews (n=16) and focus groups (n=24) with key stakeholders identified behaviours comprising effective performance. Template analysis of data informed development of an attribute framework, validated by subject matter experts using a survey.

Results: The triangulated results of the qualitative (i.e., literature review, interviews, and focus groups) and quantitative (i.e. survey) analyses informed a framework of non-academic attributes necessary for effective performance as a PA. Details of the framework will be shared upon presentation.

Discussion: To the Authors' knowledge, this study represents the first role analysis for the PA role. The framework identifies skills, attributes, and behaviours indicative of effective performance, and can be used to inform selection processes and educational interventions for prospective/trainee physician associates.

Conclusions: This framework can contribute significant value to development of evidence-based selection processes for students into PA education and training programmes, PA practitioner roles, and development of incumbent PAs. As a next step, this framework will be used to inform development of selection methods for a UK university.

Take Home Messages: Given the recent introduction of the PA role in a changing UK healthcare system and as an unregulated profession, clarifying key attributes necessary for effective performance is crucial. The results of this research support the value of role analysis in identifying requisite attributes to inform effective evidence-based selection processes.

Title: Staying Sharp about Needlestick Safety

Authors: Lindsay Shirreff, Eliane Shore, Anita Shah, Alexandra Davidson, Rajiv Shah

Institute: University of Toronto, Canada

ABSTRACT:

Background: Canadian undergraduate medical students sustain needlestick injuries, which have adverse implications, including bloodborne illnesses and personal anxiety. Our studies seek to determine students' needle handling efficacy, and examine the prevalence of formal training around needlestick safety and reporting procedures both nationally and, specifically, within the University of Toronto (UofT).

Summary of Work: A 7-question electronic survey was distributed to 116 Undergraduate Medical Education (UME) leaders practicing in high-risk rotations at 13 Canadian universities. Additionally, an 8-question survey was delivered electronically to 428 residents, fellows, and faculty in the Department of Obstetrics and Gynaecology at the University of Toronto.

Results: 34% of UME leaders and 36% from UofT responded. Of UME respondents, 53% reported their institution lacks needlestick training and 33% were unsure whether their institution provides reporting instruction. At UofT, 43% were "concerned" that students pose a risk to themselves, and 56% did not teach students reporting procedures.

Discussion: Many UME leaders reported lack of training around needlestick safety and reporting procedures, or were uncertain whether it exists. The inadequacy in formal training may justify the concern that several UofT respondents expressed around students' incompetency with needles, and the risks they, therefore, pose to themselves and patients.

Conclusions: Our findings suggest that needlestick safety training for medical students across Canadian universities is insufficient. It is concerning that students are frequently exposed to patients in high-risk and surgically intensive rotations, despite their inexperience with needles. Furthermore, non-reporting among students may prevent them from receiving early prophylaxis or treatment.

Take Home Message: There is a need for the national implementation of a standardized and formalized needlestick safety curriculum for medical student's pre-clerkship and during clerkship. Training around safe-needle handling,

suturing, and reporting procedures should be provided early in students' training to encourage reporting and allow them to develop safe habits.

Title: Professional Support Unit (PSU) development in a large UK teaching hospital: the views of doctors in training

Authors: Jon Cooper, Stuart Haines, Louise Buchanan, David White

Institute: Leeds Teaching Hospitals NHS Trust, United Kingdom

ABSTRACT:

Background: The changing demographic of doctors in training in the UK has been recognised by the General Medical Council, but the impact of working and training within a modern NHS healthcare system on this social group is less well known.

Summary: Our Trust has seen an increase in trainee doctor numbers with a range of problems which has an impact on; training; healthcare delivery; patient safety and the cost of working days lost - arguing the need for a PSU. We sought trainee views on the role of such a unit.

Results: 81 trainees participated (27% male). 51% didn't know who to turn to if experiencing difficulties. 74% responded to 'what PSU support could give'. Themes included; independent advice/support (27%); counselling/mentorship (15%); mental health/stress support (13%); managing the training environment (13%), professional examination support (5%). 5% didn't understand what a PSU was.

Discussion: Half of trainees did not know how to access support if needed, but most understood the role of the PSU and how support can benefit them. Pastoral support were the most popular theme, with fewer citing the need for dedicated help with examination and training.

Conclusion: Although half of doctors in training didn't know where to turn to if they were experiencing difficulties, most understood the potential role of a PSU and how it could benefit them. This supports the idea of such a unit being the dedicated point of contact for doctors experiencing problems.

Take Home Message: We would advocate the development of a local or regional accessible PSU

for doctors in training to provide independent advice and support for trainees with problems, but recommend local exploration of what doctors in training feel they would benefit from a PSU.

Title: Creating audio podcasts as a PACES examination revision aid for core medical trainees in Leeds, United Kingdom

Authors: Sarah Kennedy, Jo Corrado, Jon Cooper
Institute: Leeds Teaching Hospitals NHS Trust, United Kingdom

ABSTRACT:

Background: Practical Assessment of Clinical Examination Skills (PACES) is the clinical component of the Membership of the Royal Colleges of Physicians Part 2 Examination. Having identified lack of PACES revision resources and sustainable bedside teaching programme locally, core medical trainees created podcasts which were made available on SoundCloud in January 2017.

Summary of Work: Soundcloud statistics were analysed from the date of launch in January 2017. We sought to determine popularity of topics and whether usage of the podcasts peaked around examination periods and on weekdays or weekends.

Results: Since January 2017, our podcasts have had 4580 plays and 110 'likes'. Most played podcasts are Hereditary Haemorrhagic Telangiectasia (HHT) and Splenomegaly. Most 'liked' podcasts are Cushing's and HHT. Podcasts were listened to most in May and June and on weekdays rather than weekends. Podcasts were played least in April.

Discussion: Most popular podcasts related to neurology and rare/unusual diseases. High usage in May and June corresponds to the end of the UK examination period in diet 1 and the beginning of the examination period in diet 2. Low usage in April corresponds to the break between diets 1 and 2.

Conclusions: Podcasts on difficult/rare topics have been played and 'liked' the most. Peaks/troughs in plays correspond to UK examination periods. Higher weekday than weekend usage could indicate that trainees are listening to podcasts on their way to and from work without having to dedicate personal time at the weekend to revision.

Take Home Message: Podcasts are an effective

revision resource for doctors preparing for the PACES examination. They are free, easy to use and can be listened to on-the-go from a range of devices.

Title: Internal Consistency Validity Evidence for Scores from a New EPA Aligned Clerkship Global Rating Form

Authors: Jorie Colbert-getz, Danielle Roussel, Kerri Shaffer, Katie Lappe, Marlana Li

Institute: University of Utah School of Medicine, United States

ABSTRACT:

Background: As medical schools adapt their curricula to the Core Entrustable Professional Activities (EPAs) for Entering Residency they must design assessments that accurately measure the EPAs. Many US medical schools are aligning global rating forms (GRF) with EPAs for assessing clerkship students' performance in the clinical environment.

Summary of Work: In AY2015-2016 the University Of Utah School Of Medicine used the EPAs to develop a 6-item GRF. The purpose of this study was to investigate internal consistency evidence for EPA GRF scores relative to scores from an existing 19-item GRF. Both GRFs were used in a sample of seven clerkships.

Summary of Results: Raters were more likely to use the entire scale for 286 EPA GRFs compared to 286 19-item GRFs completed on 86 students. Exploratory factor analyses suggested 1 factor with high internal consistency (Cronbach's Alpha > 0.90) for both GRFs. Overlapping variance between scores from the GRFs was high (79%).

Discussion: Internal structure validity evidence was similar for both GRFs, but with only 6 items and 3 behavior descriptor options the EPA GRF was more efficient and feasible for raters to complete compared to the 19-items GRF with 5 behavioral descriptor options.

Conclusions: The EPA GRF required less cognitive load than the existing 19-item GRF. However, raters were not able to compartmentalize multiple domains of clinical performance and thus they relied on a gestalt judgment for completing the EPA aligned GRF.

Take Home Messages: The EPAs provided a

framework for developing a new clerkship GRF. However, raters may conceptualize clinical performance as one domain rather than distinct activities.

Title: How good is good enough? Does the Anghoff Method set the right standard?

Authors: Bill Isles, Pooshan Navathe

Institute: RACMA, Australia

ABSTRACT:

Australasian Medical Review Officers Association runs courses to credential medical practitioners as medical review officers within Australasia. Part of the credentialing process is an assessment of competency completed with a mixture of MCQ and EMQ type questions. Over the last seven years AMROA has used the Anghoff methodology to set the appropriate standard for the examination. Because of the need to vary the examination question sets every year, AMROA put all the questions into a database and did a Anghoff standard-setting process on each of the questions. Once a set of questions is chosen from the database the Anghoff scores become available and can be totalled to provide a pass Mark for the entire question set. In a recent examination, when results were inconsistent with in-class assessments, a review of their results indicated an average of 61% correct answers in the poorer performing group assumed to be the "minimally competent participants" against whom the Anghoff assessment is made. The standard was set at an average Anghoff score of 67%, requiring 50 marks out of a maximum possible 75. If it were 61% the pass mark would be 45 instead of 50. Discussion with the other groups indicated that after setting an appropriate standard a certain percentage is applied as an error range to allow for inadequacies in the standard-setting process. After reviewing the examination for 2017 earlier examinations were reviewed and the "fit" of the pass mark with the results was studied. It was identified that in the last two year's examinations there had been a significant variation in the rates of candidates passing the examination.. Possible reasons can include quality of candidates, quality of teaching, inconsistencies in the Anghoff process etc. The

Authors discuss possible reasons for these problems and present some options to reduce them in the future.

Title: Beyond 46 chromosomes: Interactive Clinical Cytogenetics Laboratory for Medical Students

Authors: Fabiola Quintero-Rivera, Nagesh Rao, Viktor Sigalov

Institute: David Geffen School of Medicine, University of California, Los Angeles, United States

ABSTRACT:

Background: Insufficient instructional time (3 hours) for teaching clinical cytogenetics/genomics laboratory in our 1st year basic science curriculum, overcrowded classrooms, lack of student prerequisite knowledge, and the amount and complexity of required material presented a significant challenge in creating efficient, long lasting, and clinically meaningful learning experience in the subject.

Summary of Work: Learning prerequisite knowledge was organized and tested through an interactive pre-class assignment. The classwork concentrated around 3-4 clinical cases and included small-group collaboration and the whole-class facilitated discussion. Instructional strategy focused on supporting the application of students' prerequisite knowledge, critical thinking, and integrated ethical, legal, social, and clinical judgement.

Results: Our observations, assessment of learning achievements, and students' class evaluations indicated that students developed knowledge, skills, and attitudes needed to explain the types of common chromosomal rearrangements, related phenotypic risks, and the clinical use and limitations of genetic/genomic testing tools and to appreciate the importance of genetic/genomic testing.

Discussion: Separating learning of prerequisite knowledge from classwork and organizing it as self-guided pre-class activities provides more time for small-group and whole-class case-study discussions and serves as a fertile ground for better understanding of fundamental principles of genetics/genomics and appreciation of its systemic

role in informed clinical decision.

Conclusions: In medical schools where teaching genetics/genomics is perceived as unimportant beyond the pre-clinical years, it is worth considering small but powerful changes in instructional strategies that can enhance students learning experience and improve their knowledge of genetic/genomic principles and attitudes toward the use of genetics in future medical practice.

Take Home Message: The rapid growth of knowledge in genetics/genomics necessitates fundamental changes in teaching genetics/genomics in medical schools.

Experiments in optimizing teaching/learning genetics/genomics are essential.

Prior-to-class learning (flipped classroom) combined with in-class small group case study and whole-class facilitated discussion is an effective instructional strategy for teaching genetics/genomics.

Title: Team based learning in first year Occupational Therapy module

Author: Sok Mui Lim

Institute: Singapore Institute of Technology, Singapore

ABSTRACT:

Background: Team-Based Learning (TBL) is evidence based collaborative learning teaching strategy. The lessons are taught in a three-step cycle: preparation, in-class readiness assurance testing, and application-focused exercise.

Summary of Works: In a first year module, Occupational Performance across Lifespan, TBL approach was used to create deep learning experience, ownership of learning and opportunity for group learning. Each week, students watch several short online lectures and read a book chapter before class. In class, they complete closed-book individual and group readiness assurance tests to check on their understanding of assigned topic. With immediate results of the tests, the instructor decides on just-in-time lecture or clarify difficult questions raised. Next, students go through application-focused exercises, solving clinical scenarios on differentiating between typical versus abnormal development. Surveys and

analytics were used to obtain feedback on the TBL process.

Summary of Results: From learning analytics, students were found to put in consistent effort throughout the 12 weeks. There was no correlation between amount of time spent on online content and grades. There was significant correlation between individual weekly quiz result and final test scores.

Discussion: The use of in-class readiness assurance testing as hurdle ensured commitment and consistent effort across semester. Students do experience stress and change of study method as assessment happens every week. Students reported preferences and the type of online material that support their learning.

Conclusion: TBL promoted consistent and collaborative learning effort. Students were able to go deeper into application, having prepared for class. The use of technology can enhance pre work and class discussion.

Take Home Messages: Instructor needs to take into account the different type of pre-class material to support different learning preferences. The amount of time spent on online material do not necessary reflect on online learning engagement or predict success in meeting learning outcomes.

Title: Dynamic classrooms: Transformative learning strategies for conventional curriculum

Author: Ramprasad Muthukrishnan

Institute: Gulf Medical University, United Arab Emirates

ABSTRACT:

Background: Paulo Freire postulated that learning should be mutually conversational, accessible to learning contexts, and centered on experiences of the students as well as teachers. Stringent academic and clinical schedules in final phases of conventional curriculum had provided little opportunities to learners to achieve various competencies such as evidence based clinical skills, critical analysis, cultural competence, administration, social responsibility and teamwork.

Summary of Work: By applying transformative theory to health profession curriculum and

evaluation, this study examined the effectiveness of transformative education (TE) strategies by linking classrooms with patient and community services. Group learning activities of physiotherapy students ($n = 16$) were progressed using discussions and meetings on specific epochs of TE learning themes i.e., a) neurological diseases and patient, family and community perspectives, b) clinical problem posing-solving, c) traditional versus evidences based practice (EBP) and d) institutional versus community engagements.

Results: Significant proportions of students reported that problem solving; reflective and evidence care (68.7%), In-depth knowledge (68.7%), perspectives of defining diseases (62.5%), networking and teamwork (62.5%) were better learned in TE than traditional learning ($p < 0.05$). Students reported discussions (87.5%), mind-map activity (87.5%), classroom as clinic context (81.25%), community visits (68.75%) and self-review meetings (62.5%) were helped to achieve difference perspectives.

Discussion: Facilitators assessed pre-defined TE thresholds and reported incidences of transformative learning across epochs. Modified SWOT analysis revealed problem de-codification, slow paced discussions, group work and self-evaluation meetings were areas of strength and limited learning themes and multiple TE instructional methods as weakness. Enhancing specific TE objectives, network among academic, clinical and community agencies were identified as opportunity and threat respectively.

Conclusion and Take Home Message: Engaging TE strategies provided varieties of learning opportunities to achieve TE specific learning outcomes that could support the overarching goal of the course.

Title: Use of technology in education of hearing impaired children: a systematic review

Author: Saima Safdar

Institute: Riphah International University, Islamabad, Pakistan

ABSTRACT:

Purpose: The aim of this review is to investigate the tools and techniques in education of children

having hearing impairment.

Background and Related Work: Students with hearing impairment have difficulty to learn. They lack social interaction and development of language skills which greatly reduces their capabilities to effectively interact with environment. Teachers also find difficult to educate with the same mean of education. Therefore, computer aided technology assist in educating hearing impaired children. This review explores the technological interventions for deaf children.

Material and Methods: PubMed is searched for publications and the search strategy is based on Mesh terms "hearing loss" and "education of hearing disabled" found in Mesh database of PubMed. We limited study to education deaf children. The full text of 33 pertinent articles is reviewed. Data regarding subjects is extracted along with software tools to identify the most prevalent tools. Kirkpatrick's learning evaluation model is used for evaluative outcomes.

Results and Discussion: Children were more satisfied through technology based education as depicted through the qualitative analysis for learner satisfaction. The 3 top subjects relate to reading ($n=9$), speech development ($n=6$) and writing ($n=4$), which reveals the fact that these are the basic courses which helps improve their social interactions. Visual phonics was mostly used in the studies for improving phonological skills. Cued speech is being used for speech perception and language development. Online dictionaries improved immediate recall. Web based systems (Fairview program, grammar marker and reading Ato Z) are more prevalent. Deaf student editing rubric improved writing. Moreover Word prediction, Morning message and Magpie Software have also seen writing skill improvement. IPADS and virtual reality environments are emerging in this field and helped in improving sentence and word perception.

Conclusion: Visual phonics and cued speech are most frequent tools along with prevalence of virtual environments.

Title: Giving Learners a Voice; Opinions of Medical Students towards educational strategies adopted in Sudanese Medical Schools. A Qualitative Study

Author: Alaa Dafallah

Institute: International Federation of Medical Students Association, Sudan

ABSTRACT:

Effective delivery of medical curricula is just as important as curriculum planning. Internationally, there is a successful drift from the traditional teacher-centred education to the modern student-centred & patient-centered learning. Sudanese medical schools still follow a traditional curriculum depending heavily on Lectures, with some student-centred strategies such as Tutorials & Problem based learning being recently added over the past 5years. Hence we sought to reflect the opinions of medical students on how they are taught.

The study was conducted in March, 2017 where 54 students from 10 different medical schools in Khartoum were randomly selected from a pool of applicants willing to participate in the activity. Objectives were explained to the selected students and verbal as well as written consent was taken. 5 audiotaped small focused group discussions were carried out, and later transcribed. At the end of each discussion, students were asked to do group work & write their opinions under 4 general themes, Advantages of/Disadvantages of Student Centered and Teacher centred Strategies.

Transcribed data was analysed by inductive thematic analysis, the extracted themes were compared to what was submitted by the students to ensure reliability.

The results showed that majority of the students felt their teaching was teacher-centred. Findings reflected that Student-centred approaches mainly Problem based learning are superior in benefit to passive teaching, since they build skills that are essential in becoming life long learners, and are associated with higher levels of retainment of information. However, a striking disadvantage is that its effectivity varies greatly according to student interest and facilitator skills. There was a consensus that Traditional learning strategies like lectures are paramount because they are most

effective at laying down a clear base of knowledge. In conclusion Schools need to include more student-centered learning techniques and increase the quality & effectivity of traditional learning techniques.

Title: Incorporating early clinical context in the preclinical general microbiology course: The Mohammed Bin Rashid University experience

Authors: Abiola Senok, Norbert Nowotny, Rania Nassar, Sharon Mascarenhas, Handan Celiloglu

Institute: Mohammed Bin Rashid University of Medicine and Health Sciences, United Arab Emirates

ABSTRACT:

Background: Microbiology constitutes an important basic science component in the preclinical clerkship phase of the medical curriculum. At the Mohammed Bin Rashid University of Medicine and Health Sciences (MBRU), early clinical exposure is a key ethos in the curriculum. We present our experience in incorporating this ethos into the microbiology course.

Methods: The general microbiology course is a four-credit hour course administered to year two students in the fall semester. The core topics for the general microbiology course were identified and aligned with the program learning outcomes. Components of the course which could be aligned with opportunities for clinical exposure were identified, linked to course objectives and program learning outcomes.

Results: To incorporate early clinical context in the course, team based learning (TBL) with clinical application scenarios in bacteriology, parasitology and virology were introduced. The laboratory sessions were designed around clinical scenarios to simulate infectious disease diagnosis. For the infection control component, clinical simulation sessions on hand hygiene and use of personal protective equipment were introduced. Finally, exposure to the diagnostic microbiology laboratory was integrated for an experiential application of material learnt in didactic teaching and laboratory practical sessions.

Discussion: Learning activities were designed to

give the students a stepwise application of course content material in a clinical context. In addition to traditional large group resource sessions, the educational strategy of using TBL, scenario-based laboratory practicals, clinical simulation and exposure to the diagnostic laboratory provided a contextual clinical experience to the course.

Conclusion: The design of the general microbiology course at MBRU incorporates diverse approaches to facilitate early clinical context to the teaching of microbiology.

Take Home message: Introduction of new learning modalities can facilitate early clinical exposure to the teaching of a laboratory based discipline.

Title: Final-Year Medical Students` Perceptions of the Language Barrier at the Arabian Gulf University

Authors: Yasin Tayem, Ahmad AlShammari, Nouf Albalawi, Marwa Shareef

Institute: Arabian Gulf University, Bahrain

ABSTRACT:

Objectives: Similar to regional medical schools, the language of instructions at the Arabian Gulf University (AGU) is English. This is expected to have created a language barrier for medical students whose mother-tongue is Arabic. The aim of this study is to explore final year medical students` perceptions of this barrier and its self-reported impact on their integration.

Methods: Final-year medical students (n=142) were invited to respond to a self-administered questionnaire that pursued information related to participants` socio demographic data, English language acquisition and use and the effect of the language barrier on their adaptation and academic achievement during the different phases of the medical program.

Results: The number of respondents reached 99 (69.7%, 60.2% females, 39.8% males). More than half of the participants denied feeling a language barrier during their study (58.6%). Most respondents did not agree that the language barrier made studying more difficult (64.6%), affected their participation in class discussions (79.8%) or interfered with exam performance (68.7%). Minority of the participants stated that

they know medical terms in Arabic (17.2%) but despite that many of them believed that they are confident to take medical history in Arabic (57.6%) and communicate with Arab patients about their disease or treatment in their original language (66.3%). When we asked the students about their preferable language of instructions, around half of them preferred to learn in English only but they added that they wish to learn medical terms in English and Arabic. More than one third of the students chose to learn medicine in both English and Arabic (36.6%). However, only 4% of the participants favored to learn medicine in Arabic only.

Conclusions: although most participants did not appreciate the language barrier during their study, a good proportion of them supported using Arabic in teaching medicine along with English.

Title: Perceptions of educational organization and experienced based learning among medical students and supervisors in a highly rated rotation-based clerkship

Author: Anders Sonden

Institute: Karolinska Institutet, Sweden

ABSTRACT:

Background: As a response to the fragmentation, and poor quality, of many traditional clerkships the Longitudinal Integrated Clerkships (LICs) were introduced during the last decade. Although the long rotations of LICs, by some, are considered the golden key to success they have not been tested widely and results may be contextual.

Summary of Work: Using an action research approach, we explored student and teacher perceptions of the educational organization, in a highly rated, rotation-based, 18-week clerkship in surgery at Karolinska Institutet. Surveys and focus interviews were used for assessment.

Results and Discussion: Although medical students had perceived positive effects of continuity on learning they did not believe in a change towards longer rotations. Many students wanted to change ward every week. Recurrent reasons given towards longer rotations were fear of "not spreading the risk of bad supervisors" and reduced diversity of learning without guarantees of more active

learning experiences. Students also expressed that long rotations with consecutive weeks at the same ward did not necessarily entail continuity of supervision, since supervisors often did not work at the ward consecutive weeks. Supervisors, on the other hand, considered continuity very important and promoted longer clerkship periods at their ward. They thought it was tiresome to get “new student all the time” and found it easier to delegate tasks to the students when they knew them well.

Conclusion and Take home message: Students recognize that experience-based active learning opportunities, on real patients, are crucial for their learning. Long rotations, are means to achieve such learning experiences and not a goal per se. How clerkships are best organized to optimize learning, is probably dependent on context i.e. student cohort, university, faculty, health system and culture, and strict recipes should be avoided.

Title: Pattern of preferable reading materials among health professions students in four universities in Khartoum – Sudan 2015

Authors: Hosam Eldeen Gasmalla, Mohamed Elsanousi, Asim Satti, Omer Abdalla, Alaa Ibrahim, Husam Eldin Babikr

Institute: Sudan International University, Sudan

ABSTRACT:

Handouts are meant to introduce the students to the textbooks, not to replace them, to enhance the lecture, not to remove it from the schedule, it seems that handouts are being overestimated by the students, they use the handouts as the only and ultimate source of knowledge and as a replacement for both the teacher and the lecture.

This is a cross-sectional descriptive facility-based study conducted among 428 health professions students in four faculties in Khartoum State, the aim of this study is to explore which learning material is mostly used (handouts versus textbooks) in the subjects of the basic medical sciences

As preferable study materials, students preferred handouts over textbooks in embryology, histology and neuroanatomy, they were divided to about the half in two subjects: gross anatomy and biochemistry, they remarkably preferred textbooks

over handouts in physiology. Difficulties in studying from textbooks were rated as follows: price of the textbook, understanding English language, handouts were enough to pass the exam and the least reason was the lack of enough time to study from textbook. Students generally preferred hard copy than electronic version of both handout and textbook; it goes with what Woody found

Recommendations for institutes, it is important to provide the library with updated textbooks, the teachers are also recommended to publish their own textbooks, textbooks written in English by non-English native speakers tend to be easier for the student, different methods of interactive teaching are recommended to be applied to encourage active learning and research skills, assessment should include written sections. And over all, English language extensive courses have to be applied in the first year of school.

Title: Impact of a Semester-long Course on the Knowledge, Attitude, and Practice of Communication Skills on First Year Medical Students

Authors: Amna Siddiqui, Muhammad Zafar, Nasir Ali Afsar, Akram Nurhussen, A'man Talal Inayah

Institute: Alfaisal University, Saudi Arabia

ABSTRACT:

Background: Good communication with patients is essential for effective medical practice and patient care. Medical students do not automatically acquire the art of communication. To overcome this, an approach to address communication skills at pre-clinical years is emerging. We explored the impact of innovative communication skills course on year 1 students.

Summary of Work: A 16 week communication skills course was developed for first semester medical students. The course constituted large group discussions, student presentations, simulated patients, and small-group discussions. Pre- and post-course survey were developed targeting each taught area's Knowledge, Attitude, and perceived Practice. The students were evaluated with objective structured clinical examination.

Summary of Results: Students (n=141) regarded both large (87%) and small group (97%) discussions

beneficial. Majority (75%) agreed that presentations helped to develop public speaking and teamwork skills. Assessing taught themes (Wilcoxon signed-rank test), students showed significant ($p < 0.05$) improvement in post-course knowledge and attitude domains. In OSCE, students performed very well (Mean \pm SD: 86.4 \pm 7.2).

Discussion: While first year students do not encounter patients, early introduction of communication skills can be essential to subsequent undergraduate medical training. The improvement in students' 'knowledge', 'attitude' and 'practice' in varying clinical themes of communication skills, with positive reception by the students of varying techniques, establishes successful communication skill course.

Conclusion: First-year medical students benefit from training in clinical communication skills using varying approaches.

Take Home Message: Deliver communication skills course at an early stage of medical school, utilizing interactive clinically-oriented approaches.

Title: Incorporating Reflective Exercises into Your Curriculum: Why and How?

Author: Mohammad Zaher

Institute: Brigham and Women's Hospital, Harvard Medical School, United States

ABSTRACT:

Background: Reflection is described as a way to give meaning to learners' experiences through awareness, definition, and sharing. Reflective practice is frequently cited as an essential feature of competent healthcare providers. While individuals with an intrinsic reflective ability learn more from their daily practice, reflective exercises can be utilized to help others achieve the same outcome.

Summary of Work: This is a scoping review of the literature. Following this presentation, participants should be able to: 1- Describe benefits of reflective exercises on personal and professional levels. 2- List various methods of incorporating reflective exercises into their medical education curricula. 3- Identify gaps in the literature regarding reflective exercises.

Results: Reflective exercises are well-received by participants. They increase the learners' clinical competence, decrease perceived stress, promote personal identity formation, and help achieve educational goals. Many reflective exercises are described in the literature with varying structures, recurrence, and inclusivity. There is a lack of studies examining the relationship between reflective exercises and technical skills or patient outcomes.

Discussion: Reflective exercises achieve their effects by augmenting autonomy, allowing deeper learning, and revealing action frames previously unknown to learners and educators. Reflective exercises can easily be incorporated into classroom, bedside, or asynchronous learning through guided discussions, journals, or mindfulness techniques. Cultural perceptions regarding time, usefulness, and invasion of privacy can limit the application of reflective exercises and should be addressed. More quantitative research is needed about the effects of reflective exercises, especially with regards to their effects on technical skills or patient outcomes.

Conclusions / Take-Home Messages: - Reflective exercises are an effective and versatile educational tool.

- Incorporation of reflective exercises in medical education curricula is feasible, beneficial to the learning experience, and appreciated by learners.

Title: Project-based Learning in UQUMED reformed curriculum

Author: Rania Zaini

Institute: Umm Alqura University, Saudi Arabia

ABSTRACT:

Project-based Learning is a transformative teaching method for engaging ALL students in meaningful learning and developing the 21st Century competencies of critical thinking/problem solving, collaboration, creativity and communication. In project-based learning, students will typically be assigned a project or series of projects that require them to use and develop diverse skills related to life-long learning. Umm AlQura Medical School (UQUMED) adopted Project-based Learning approaches to provide

students with opportunity to actively apply classroom knowledge and associated skills to real-world application. It consists of required task that developed by students to fulfilled specific leaning outcomes related to Vertical Modules within the Horizontal Modules. Each student must complete two leaning projects.

This study presents UQUMED experience in adopting Project-based Learning with first year students and its educational value from students prospective.

An electronic survey was developed, piloted and then administrated to all first year students between June-July 2017. About 172 (72%) first year students completed the survey. The majority of respondents were female (57%). The study showed a general agreement on the value of leaning projects in developing students' learning and interpersonal skills, such as researching, writing, collaborating, or public speaking to produce various work products. Students emphasised the experience provided opportunity to discover some personal talent such as, developing multimedia presentations or video documentaries. Teamwork and leadership skills were also developed and enhanced. The majority of students also highlighted the value of the experiences in tailoring their role as health advocate. Students also appreciated the distinguish aspect of the Project-based Learning of peer-evaluation and feedback.

Project-based Learning as self-directed learning was a successful approach that fulfils UQUMED objectives and develops students' competencies of Saudi MEDs.

Title: Community-Based Education: Challenges and suggested solutions

Authors: Doaa Kamal, Enas Gouda, Shimaa El-Araby, Nahla Hassan

Institute: Medical Education Department, Suez Canal University, Egypt

ABSTRACT:

Background: Community Based Education (CBE) is an instructional approach designed and carried out in a community context, outside the teaching hospital. It consists of learning activities that utilize the community as learning medium in which students; teachers, community members and

representatives from other sectors are involved throughout the educational experience.

Summary: A mixed quantitative and qualitative study was conducted in which students, tutors and stakeholders' satisfaction regarding CBE activities was evaluated.

The used instruments included self-administered questionnaire which was used to assess students' satisfaction regarding the current CBE activities as well as semi-structured interviews that were conducted with the stakeholders.

Results: Testing the psychometric proprieties of the used questionnaire through exploratory factor analysis revealed that it has acceptable evidence of construct validity. 57.6% of the students agreed that their experience in CBE improved their history taking skills and 51.2% agreed that participating in CBE activities prepare them for future clinical training.

Discussion: Our findings are consistent with a study conducted at the School of Shiraz University of Medical Sciences, Iran, in which the students evaluated the quality of the training as above average. Our findings also agreed with those of a study conducted at Tehran University of Medical Sciences.

Conclusions: This study helped to provide an accurate baseline of the realities or conditions that describe the current situation regarding CBE. This was performed by assessing students' satisfaction regarding the current CBE situation, and also by identifying threats and opportunities facing tutors and stakeholders during their work in the CBE process.

Take Home Message: Recently CBE is found to be facing some challenges, accordingly this research is offering a challenge model of CBE in order to assess the current situation of the institution, define the main challenges and develop an action plan to face the major challenges.

Title: Engagement in Professional Development Plans through appraisal

Author: Karen Gregory

Institute: Wessex Appraisal Service, United Kingdom

ABSTRACT:

Background: Professional Development Plans have

been part of GP continuing education since the introduction of appraisal (2006). In 2012, they became a key requirement for revalidation, despite little evidence to support a positive impact on patient care. In 2016, NHS England's medical director questioned the quality of PDPS being put forward.

Summary: A high quality PDP should result in improvements in both patient care and safety providing the doctor is fully engaged with the process. In order to learn more about how engagement might occur I conducted a small autoethnographic study looking at my own appraisal practice.

Results: Engagement is most likely to occur if, during the appraisal, high stake goals are identified along with characteristics such as persistence, enthusiasm and an attraction towards the goal. Barriers such as mismatched transactions have a detrimental effect. These elements can be linked to form Gregory's framework.

Discussion: By engaging doctors in PDP objectives appraisers can encourage them to think about putting their learning into practice. Consideration can be given to quality improvement activities ultimately improving patient care and safety. The PDP should arise from the appraisal discussion, be facilitated by the appraiser but owned by the appraisee.

Conclusions: Engagement in the PDP is essential for it to have a meaningful outcome. High quality PDPs can lead to improvements in patient care and safety if the impact on patient management is considered. Educating appraisers about engagement factors will enable them to facilitate the PDP discussion more easily.

Take Home Message: PDPs are a revalidation requirement.

To be effective the doctor must be motivated and fully engaged in their objectives. To improve quality outcomes for patients they should be focused with consideration given to patient care and safety. Further training using Gregory's Framework to educate appraisers about engagement can facilitate this process.

Title: iValidate: Identifying Values, Listening and Advising High Risk Patients in Acute Care. A prospective before and after interventional study for shared decision making

Authors: Anita Phillips, Neil Orford, Sharyn Milnes

Institute: Deakin University School of Medicine, Australia

ABSTRACT:

World class end-of-life care requires a patient centered approach, with evidence this leads to better outcomes for patients, carers and institutions. Recognition of current needs in patient centered care and the lack of direction for care of patients with life-limiting illness (LLI) led to the development of iValidate. It is a clinical program aimed at identifying those patients with LLI and translating research on shared-decision making (SDM) into a process of care.

The iValidate program has been used for 120 medical and 40 nursing staff in the acute care setting at University Hospital, Geelong. It combines ethics education, communication experiential workshops (utilising the Calgary Cambridge framework and Harvard Serious Illness Guide) and a Goals of Care (GoC) management form that explicitly documents SDM based on patient values and preferences.

Educational strategy involved evaluating patient outcomes and documentation of patient-centered discussions (PCD). Following this clinical based process of care program, patients with LLI experienced a significant reduction in MET calls, choice of critical care as a treatment goals and, in some clinical trajectories, decreased 90day readmission rates without change in ICU admission or mortality.

The evidence to date suggests patients with LLI are under recognized in the acute health care setting. Involving ICU nursing and medical staff, rather than targeting medical staff alone, led to an improvement in identification of patients with LLI, PCD and clinical outcomes.

iValidate is a unique, evidence based program focused on improving PCD for patients with LLI. A significant increase in documentation of PCD were observed following the implementation of this program in ICU.

Specific communication skills training in acute care hospitals is not routine practice. Specific educational strategies can translate research into practice.

Inter-professional education improved desired outcomes and made steps towards changing the culture of the Unit to patient-centered rather than disease focused care.

Title: "Near peer teaching": supporting eportfolio program

Authors: Anna Byszewski, Chan Chun Kong, Amy Fraser

Institute: University of Ottawa, Canada

ABSTRACT:

Background: The University of Ottawa longitudinal four year reflective ePortfolio program established in 2007 enables students to demonstrate their development of their competence in CanMEDS roles plus person.

The 2015 Program Evaluation revealed that first- and second-year medical students are often skeptical about the program goals and values, while graduating medical students overwhelmingly find the program useful.

Summary of Work: 'Near-peer' teaching (teaching done by students at a slightly higher level of training) can enhance intrinsic motivation, provide role models for junior students, and provide benefit to the participants and the organization (Medical Teacher 2007).

Results: Six residents and senior medical students participated in a semi-structured interview on their ePortfolio experience using a structured questionnaire. Two resources were created: 1) A video on how ePortfolio helped students through their medical careers, and 2) A "Tips and Tricks" document advising students how to maximize the utility of ePortfolio sessions.

Conclusion: A model of 'near-peer' teaching was used to create resources to enhance junior students' understanding and use of ePortfolio and were added to the ePortfolio website in September 2017. At conclusion of the academic year, we plan to measure how often students accessed the materials, and the impact on attitudes and ePortfolio use.

Take Home Message: Student acceptance and comfort with use of reflection may be a challenge in the early medical school curriculum. Near-peer teaching may be useful when junior students struggle to understand and internalize the aims and goals of a specific curriculum.

Title: Perception of students of Faculty of Medicine, Rabigh, KAU, Jeddah, about their understanding of self-directed learning and its role in their professional growth: a qualitative study

Authors: Muhammad Imran, Sami Anwarfathi Kalantan, Mohammed Alkobri, Muhammad Shahid Shamim

Institute: King Abdulaziz University, Jeddah, Saudi Arabia

ABSTRACT:

Background: Self-directed learning (SDL) forms the core of the principles of andragogy. It enhances the process of life-long learning, hence potential helpful for the professional growth of students. Being a new medical college, there is needed to explore students' familiarity and satisfaction with SDL, which can influence their future educational strategies.

Summary of Work: This study was conducted at Faculty of Medicine, Rabigh (FMR), KAU, Jeddah using constructivist approach with qualitative phenomenological design. Four focus group discussions (FGD), with undergraduate medical students explored students' perception about SDL. FGDs were audiotaped, transcribed, and analyzed thematically. Validation was done by member checking and external audit.

Results: Students' verbatim responses were recorded and analysed. Five major themes were generated; self-study, views, strategy, effects, and professional growth. Subthemes included guidance & personal effort; boredom with lectures, good strategy & don't prefer; books, internet & time management; deep learning & curiosity; future progress & clinical judgement.

Discussion: There is confusion regarding the understanding of SDL among students. There were mixed-opinions about SDL e.g. 'Don't prefer' and 'good strategy' were two subthemes. However,

students perceive that SDL affects their learning and future progress. Studies show different opinions about SDL and factors influencing it including learning environment & motivation.

Conclusion: SDL is considered an important educational strategy. Students of FMR need support and guidance to develop the ability for effectively using this strategy. Faculty role is crucial in this regard. There should be focus on SDL, as an essential strategy, while developing curriculum for undergraduate medical students.

Take Home Messages: SDL should be part of learning of medical students from the beginning of their educational process. There is need for defining SDL clearly for students in our context. Faculty development is required for effective implementation of SDL in curriculum.

Title: Improving Surgical Specialty Candidate Preparedness for the the Canadian Resident Matching Service (CaRMS) Application: Defying the Odds

Authors: Ada Gu, Pinkal Patel, Savannah Silva

Institute: McMaster University School of Medicine, Canada

ABSTRACT:

a. The Canadian Resident Matching Service (CaRMS) process has become increasingly competitive in recent decades, with limited literature on preparative resources. We aim to identify available resources and assess the efficacy of two novel workshops in improving student readiness for the CaRMS application and interview, focusing on surgical specialties.

b. Two workshops were developed for McMaster University medical students. The first targeted the written application, facilitated by four surgical specialty program directors (PDs); the second targeted residency interviews, attended by surgical residents. Pre- and post- surveys assessed student demographics and the perception of available resources, student preparedness, and workshop benefits.

c. 35 medical students attended the workshops, with interests in general surgery (34%), urology (23%) and other surgical specialties (43%). Only 13% of attendees believed McMaster's existing

resources were sufficient; 93% reported that information sessions from PDs were beneficial for the CaRMS application, and MMI-style interview practice beneficial for residency interviews.

d. Even for highly qualified candidates, a successful match is multi-factorial, requiring strong rotation evaluations, letters of recommendation, personal statements and often, research experience. Post-workshops students agreed that the information provided by the PDs and surgical residents was highly beneficial (97% and 83%), and that workshops should be held annually.

e. Our study contributes to the limited literature on student resources for the CaRMS application; hosting annual workshops will further elucidate student needs. Adjunct resources including workshops with guidance from PDs and surgical residents are necessary to better prepare students for the competitive surgical residency match.

f. Current preparative resources at McMaster are not sufficient for surgical specialty candidates. Based on our pilot project and preliminary data, student feedback reflects the high efficacy of annual workshops with PDs and surgical residents, and highlights the widespread need for supplementary resources for both the CaRMS written and interview sections.

Title: How well did I do? Students' self evaluation in a problem based learning Session

Author: Tayyaba Azhar

Institute: The University of Lahore, Pakistan

ABSTRACT:

Background: Problem Based Learning (PBL) is centered around real life problems which are solved by way of an inquiry process and brainstorming. Self assessment is the judgement of the quality of one's own work which helps the learner to develop understanding and judgement of the quality of the work they have.

Summary of Work: This study aims to identify if the students achieved their learning goals and initiated reasoning skills or not in a PBL session.

In this quantitative cross-sectional research, 60 BDS students were given a pre-validated questionnaire on "PBL Process Evaluation" developed by University of South California Dental

PBL Program. It had 6 items on likert scale and 2 open ended questions.

Summary of Results: Student evaluated their learning skills as good (52%), magnificent (30%), average (16%) and poor (2%). Their reasoning skills as magnificent (44%), good (32%), average (22%) and poor (2%).

Students' reported they did a good job in, discussion (53%) and leadership (18%) and could do better in teamwork (36.5%), being confident & leadership (30%).

Discussion: This study investigated self evaluation of students about their learning and reasoning skills in PBL tutorials. PBL enhances self learning skills in which students are responsible for their own learning and are expected to initiate brain storming and critically analyse information.

Conclusion: Students' self evaluation score in this study for learning and reasoning skill suggests that PBL helps them achieving their learning goals, initiates and develops reasoning skills and brainstorming among the students'.

Take Home Message: Self evaluation helps in realizing ones full potential and students cognition, motivation and attitude improves after this. It helps students in identifying and closing any gap that exists between knowledge and skills acquired.

Title: Towards National Needs Assessment – Perceived CPD Needs of Qatar Healthcare Practitioners

Authors: Samar Aboulsoud, Essam Elsayed, Muneera Ali Abdullah

Institute: Qatar Council for Healthcare Practitioners, Qatar

ABSTRACT:

Background: Since March 7 2016, ALL healthcare practitioners in the state of Qatar are mandated by Qatar Council for Healthcare Practitioners (QCHP) to participate in continuing professional development (CPD) activities to be able to renew their license of practice. This participation is regulated by the National Continuing Medical Education (CME) / continuing professional development (CPD) framework and accreditation system. National CPD needs assessment would be

of great importance to inform planning for healthcare workforce CPD and though a comprehensive National CPD needs assessment is not yet conducted, several efforts towards assessing the CPD needs of different healthcare professions in Qatar were initiated.

Summary of Work: questionnaires for assessing the CPD needs of dental and allied health professionals were developed, distributed among target healthcare practitioners, collected, analyzed and discussed in this research.

Results: The results of distributed questionnaires show national CPD needs perceived by dental and allied health professionals in terms of common gaps in practice and convenient CPD formats.

Discussion: Interprofessional and team-based education can play important to improve quality of care and patient outcomes. Online and blended CPD formats are convenient formats for provision of CPD.

Conclusions: Qatar's dental and allied health professionals have common perceived gaps in practice and convenient CPD formats that should be considered in planning for CPD activities and can present a step towards national CPD needs assessment.

Take Home Message: National needs assessments inform planning for CPD of healthcare workforce and ensure improvements in healthcare quality and patient outcomes.

Title: Less is more: Restructuring a clinical reasoning and differential diagnosis course for 5th medical students.

Authors: Philip Bintaro, Sabine Schneidewind

Institute: Hannover Medical School, Germany

ABSTRACT:

Background: Clinical reasoning and differential diagnostic thinking are essential skills for future doctors. Our 5th year students learn clinical reasoning in a class of 140 hours with ex cathedra lectures being predominant. General evaluation scores were constantly decreasing to a minimum of 6.8 out 15 points over the last years.

Summary of Work: Three main changes were made: lectures were reduced from 140 to 60 hours which gave more space for self-study. Learning

objectives were aligned according to the National competency-based catalogue of learning objectives (NKLM). Furthermore, faculty members were advised to encourage student engagement by including clinical cases and fostering interactive discussions.

Results: Attendance during the lectures increased and remained on a high level throughout the whole course. Comments of the students pointed out that overall student satisfaction rose considerably compared to the prior course concept. The new course received a total score of 9.3 points out of 15 in the general evaluation.

Discussion: Initially, faculty members were resistant to reduce and to restructure redundant lecture content. Political aspects such as defending one's teaching time as a symbol of importance had to be overcome. We argued that enhancement of student activity will rise attendance. Implementing time for self-study will foster a better learning environment.

Conclusions: Direct feedback from the students indicate that the free time gained was mainly used for preparation and refining the lessons. The students assessed that the new lecture structure was very helpful. The element of interactive discussions led to a higher understanding of the subject.

Take Home Messages: A better understanding of clinical reasoning was promoted by encouraging students' participation during the lessons. Students benefited from loosening the formerly very dense timetable so that restraints from self-directed learning were abolished. Moreover, faculty members were pleased with the actual constant high numbers of students attending the lectures.

Title: Clinical Scenario as Anatomy Lab Tool for Teaching Human Neuroanatomy – Students Perspective

Authors: Amna Siddiqui, Muhammad Faisal Ikram, Ahmed Yaqinuddin

Institute: Alfaisal University, Saudi Arabia

ABSTRACT:

Background: Due to the complexity and intellectual subject matter of neuroanatomy, many

students develop "Neurophobia". Various methods have been employed to resolve this issue but it still persists. Therefore, College of Medicine at Alfaisal University, introduced clinical scenario as anatomy lab tool to overcome this fear by improving students' learning process.

Summary of Work: An electronic survey was conducted to assess the impact of using clinical scenarios during anatomy lab to understand neurosciences. 130 second year medical students recorded their perception about the utility of this tool.

Results: Majority students, approved the use of clinical scenarios in neuroanatomy lab as it enhance their clinical concepts (81%), integration (68.4 %), and brain storming process (76%). However, 35 % were unconvinced with difficulty level and time provided and suggested to increase the duration and student number in a group.

Discussion: Interactive and instructional resources can be valuable recommended methods in teaching Neuroanatomy, as they enhance deep learning. However, it should be further studied by comparing between different teaching approaches, to assess detailed impact on students' learning process.

Conclusion: This study demonstrated that Alfaisal second year medical students perceived this activity encouraging in terms of their learning experience. Deep clinical understanding, critical thinking and interpretation skills correlates with the higher rating of this tool by the students.

Take Home Message: Teaching Neuroanatomy can be more effective if solving clinical cases is given prime importance in the curricula rather than memorizing anatomical structures

Title: "Impact of integrated teaching sessions for comprehensive learning & Rational Pharmacotherapeutics for medical undergraduates."

Author: Sneha Ambwani

Institute: All India Institute of Medical Sciences, India

ABSTRACT:

Background: Medical educationists all over the world recognize that didactic lectures, the common mode of teaching are time consuming & a major

educational reform is required in medical education. Multidisciplinary integrated teaching develops creative thinking & encourages the student to form their own opinions about issues of importance.

Summary: The present study was undertaken to compare the integrated teaching method with the didactic lecture in terms of the clinical applicability of the basic sciences for rational and effective prescribing of the undergraduate students. This was assessed through MCQ test & feedback of the students and faculty.

Results: There was no significant difference in score between integrated hypertension, didactic hypertension, and integrated diabetes group, however, the score was significantly more ($p=0.00$) in didactic diabetes as compared to other groups. Majority of the students & faculty favored integrated teaching for clinical application of basic science and learning of the skill.

Discussion: Studies published earlier found that integrated teaching has the better impact on students to acquire knowledge, judgment, & skills in comparison to didactic lecture. This study was also an attempt to improve comprehensive learning, as well as the clinical applicability of the basic sciences.

Conclusions: Though, significant improvement in knowledge acquisition between two teaching methods was not found. But as reflected by feedback from the students & faculty, integrated teaching has potential to retain the knowledge & clinical applicability of the basic sciences, which might be helpful to improve student's diagnostic/prescription skills.

Take Home Message: Integrated teaching has an impact on improving the knowledge, skills & comprehensive learning if planning & implication is done properly. Better understanding & learning of clinical application of basic sciences learned through integrated teaching might be helpful to the students to prescribe effectively & rationally during their clinical practice.

Title: "Mini-CEX: Feasibility, Acceptability and Effectiveness in Learning of Post-graduate Residents"

Authors: Saadia Sultana, Nadim Akbar Khan, Noor-Mah Khan

Institute: Riphah International University, Islamabad, Pakistan

ABSTRACT:

Background: Obstetrics/Gynecology residents have to undergo intense competency based training to gain a vast experience. Many areas of clinical skills are not observed/assessed. There is no structured method to give constructive, formative feedback at their work-places. Mini-Cex is a structured and manageable formative assessment in clinical practice.

Summary: Residents (21) and faculty members (10) participated. Amended mini-CEX tools were adapted. Residents were assessed in different competencies.

Effectiveness and acceptability were assessed by:

Scores of first and final Mini CEX

Perceptions of subjects

Feasibility Was Assessed By: Time burden (extrapolating mean time over a year)

Practical difficulties

Results: Almost all residents (18/21) and faculty members (8/10) were satisfied.

75% residents showed improvement.

Average duration for observation: 19.51 minutes.

Average duration for feedback: 13.08 minutes.

Seventeen residents indicated feedback as the strongest characteristic.

Most participants (19 residents; 8 faculty members) occasionally experienced trouble.

27% residents felt anxious being observed.

Discussion: Quantitative study with 84 sessions in 6 months exhibited mini-CEX as highly acceptable and feasible tool for workplace based assessment (WPBA). ABIM developed & evaluated mini-CEX. In Pakistan, only three published studies are unable to give a clear view about the usefulness of WPBA of Obs/Gynae residents.

Conclusions: Mini-CEX is an effective educational tool, which is acceptable both to residents & faculty.

It is also feasible for use in busy teaching hospitals.

It helps faculty to assess residents.

It provides valuable opportunity to give formative feedback to the residents on performance at workplaces.

Take Home Message: This pilot project will prove to be helpful in re-organizing post-graduate program curriculum. It will simultaneously augment and improve learning, owing to immediate formative feedback. It will be of benefit to all healthcare professionals involved in clinical teaching and assessment including undergraduate clerkships.

Title: Comparison of the effect of two methods of teaching JIGSAW and lecture with questions and answers on the level of emergency medicine students' learning and sustainable learning

Author: Sara Shahbazi

Institute: Shahrekod University of Medical Sciences, Iran

ABSTRACT:

Background: Real learning occurs when learner has a central role in the learning process, Particularly small group training can lead to an active learning environment for all students at each level of intelligence or mental ability.

Summary of Work: This experimental study was performed on students of emergency medicine (n=30), in internal emergency courses. The topics were divided into two sections based on the similarity of the degree of difficulty. The first part was taught in lecture and the second part in JIGSAW. The final exam was completed at the end of the course to examine the students' learning and 3 months later to examine sustainable learning. Information was analyzed in SPSS version 21.

Result: Comparison of the mean scores in the final stages and 3 months after the end of the course was done in 2 groups. The results showed that the impact of these two methods on student learning is not significant ($P > 0.05$) but JIGSAW method significantly increased students' sustainable learning ($P < 0.05$).

Discussion: The results of this study indicate that the method of JIGSAW was more effective than the traditional method of lecturing on students' sustainable learning. Therefore, it is recommended to use this teaching method in teaching students' lessons

Title: Should physicians be in the lead in the transition to holistic healthcare delivery? - Stakeholders' perspectives

Authors: Romana Malik, Fedde Scheele, Carina Hilders

Institute: OLVG, Netherlands

ABSTRACT:

A. The health care system becomes increasingly complex. The patients' care perspective receive a growing attention. Value-based healthcare suggests that the strategy 'physicians in the lead'(PIL) is effective to address these issues. However, it remains unclear whether this strategy aligns with the demanded healthcare delivery that asks for a more holistic approach.

B. A qualitative study was performed in a general hospital in the Netherlands at a department of gynecology. Semi-structured interviews were conducted with 14 stakeholders between April and June 2016. Advantages, disadvantages, opportunities for improvements and risks of PIL in the transition towards holistic healthcare delivery were explored.

C. The strategy of PIL in the hospital hinders holistic health care delivery. A new concept of 'team in the lead' was developed in order to better align with the demanded holistic care. In addition, a new configuration of an institute was developed to support patients in managing their care.

D. Shared leadership ideally results in improved patient care outcomes. It also increases the power of all the professions within an organizational hierarchy. Our findings of a new configuration in the Netherlands resemble models of integrated care in the literature. Still they do not provide spiritual possibilities or social functions.

E. The results showed that the strategy PIL is not in alignment with holistic health care demands. A strategy 'team in the lead' should be considered. Moreover, there is a demand for an institution that coordinates care and supports patients.

F. Although physicians can be educated to focus more on the outcome than on cure and treatment, a team in the lead should be taken into consideration to better align with a holistic approach. Organizing holistic care requires more integration and teamwork across facilities in the

care chain. Better support for patients may lead to more healthy patients in the lead.

Title: The online certificate course on social accountability: an experience for Capacity building on social accountability of Medical Schools in the Eastern Mediterranean Region

Author: Mohamed Elhassan Abdalla

Institute: College of Medicine, University of Sharjah, United Arab Emirates

ABSTRACT:

Background: The Social Accountability as a relatively new concept in medical education needs a lot of advocacy to reach a level of implementation that will satisfy the fulfilment of the ten strategic directions of the Global Consensus for Social Accountability of Medical Schools.

Capacity building in social accountability is one of the recommendations to keep common understanding of the concept and to ensure good implementation. Training on social accountability is scarce and if happened usually it is confined to one institute.

Activity: An online course on social accountability was developed and implemented with participation from the Group on Social Accountability (GOSA) within the Association of Medical Education in EMRO Region (AMEEMR) and the Education Development Center at the Faculty of Medicine University of Gezira, Sudan. With the aim to empower stakeholders in medical schools to actively participate and be engaged in the processes of transformation towards social accountability, particularly regarding medical education.

Results: An online course on social accountability was implemented, the course has four module, two weeks each), the modules are:

Module 1: Understanding Social Accountability

Module 2: Social Accountability in respect to Medical School's Mission

Module 3: Social Accountability Assessment

Module 4: Change Management

The discussion in the modules depends on readings, videos and the discussion board that follow particular discussion triggers that structured to cover the learning outcomes of the course and

based on the participants experience in their institutes. ; The course has participants from Sudan, Saudi Arabia, UAE and Pakistan. ,

Discussion: The course was a good opportunity to reach a common understanding of the concept of social accountability and to share experience and good practice among the participants.

Take Home Message: Training about social accountability is important to support the concept, using online training can spread the training and reduce the effort.

Title: Social Accountability: International Medical students united in action

Authors: Aikaterini Dima, Stijntje Dijk, Jeremy Glasner, Mohsna Bhiri, Rita Ramalho, Kaylynn Purdy

Institute: International Federation of Medical Students' Associations, Ελλάδα

ABSTRACT:

Background: Defined in 1995 by the WHO, the concept of social accountability (SA) in medical schools poses a major challenge for medical education worldwide. Together with THEnet - Training for Health Equity Network, the International Federation of Medical Students' Associations - IFMSA aims to empower medical students to take action locally and globally.

Summary of Work: The IFMSA appointed a group of 6 students from 6 different countries across 4 different regions to develop a toolkit with the aim of giving every medical student the opportunity to know more about SA, to evaluate his/her own school and to take action using some ready-to-use tools.

Summary of Results: The toolkit is an interactive online platform. It provides a comprehensive explanation, an assessment tool that helps to identify the improvement areas of a school regarding SA, as well as concrete tools including a PowerPoint presentation, a letter to the dean, a social media campaign and a training session agenda.

Discussion: The toolkit was made by students for students. Medical students from different backgrounds and study settings provided input to the to the toolkit, and therefore it can be used by

everyone. The user can very quickly acquire the knowledge and tools to make a difference in his own institution.

Conclusion: Social Accountability is not only a challenge affecting education, faculties and hospitals, but as well the future health workforce.. With an easy-to-use and widely accessible toolkit, we seek to empower an important stakeholder in SA to defend a community's needs and interests.

Take Home Message: There's an increased need for an action to ensure Social Accountability of health institutions. By developing such materials, IFMSA and THEnet strive for the empowerment of a crucial stakeholder, medical students worldwide our goal is to ensure that every medical school globally better responds to the community's needs.

Title: Situated Competence: A sociocultural examination of resident competence

Author: Marcia Docherty

Institute: Camosun College, Canada

ABSTRACT:

Background: Systems thinkers in medicine are challenging the prevailing mechanistic orientation of the healthcare organization and argue it is a complex adaptive system (CAS). Linked to this [re]orientation is advocacy for an intentional educational approach to medical education that selects learning theories aligned with this CAS perspective. Through this lens, competence does not reside solely in individuals. It also resides in our activity and cultural-historical systems.

Summary of Work: This proof of concept study determined whether competence could be identified and described using sociocultural learning theories. Ethnographic methods were used to observe dyad pairs of emergency medicine residents and their supervising physicians in the emergency room.

Results: Potential sociocultural markers of competence were identified which include setting effective thresholds for feedback, managing interruptions, using artefacts to keep on track, and learning through dialectical processes and debriefing. Mastering these markers indicated an inflection point, such as the transition from junior

to senior residency and/or readiness for practice.

Conclusions: When resident competence is examined through a framework of sociocultural learning in the complex adaptive system, the different learning agendas and competency requirements of junior and senior residents become salient. This approach could support the movement away from a time-based residency towards a true, competency-based approach.

Take Home Message: Examining competence from different lens and epistemologies can improve our educational interventions that intend to develop competence.

Title: Students' and Staff Perception and Attitudes towards the Use of Selected Social Media as an Educational Tool in Clinical Skills' Lab at Alexandria Faculty of Medicine (AFM)

Authors: Maram Hassan, Ahmed Osman, Hisham Kouzo, Mohammed Hany Kamel

Institute: Alexandria Faculty of Medicine, Egypt

ABSTRACT:

Background: The major advancements in technology had paved the road to changes in medical education. The need to provide an efficient learning environment to the increasing number of geographically dispersed students, has drawn the attention to invest in electronic-learning (E-learning) modalities to enhance the educational processes in the undergraduate curriculum.

Summary: A mixed observational descriptive survey was adopted. Self-administered questionnaires were distributed to 3rd year students and the Staff at the clinical skills' lab at AFM, and 11 Staff were interviewed. 800 questionnaires were distributed, 700 were returned with a response rate of 87.5%, of them 611 were complete.

Results: Facebook use was widespread among students and Staff, both the groups had similar current and anticipated uses. Students were receptive to incorporating Facebook into their academics because of enhanced communication, interaction, and flexibility. Most of the staff felt that Facebook was more plausible to students than the traditional online environment.

Discussion: Facebook has features that provide an

opportunity to support undergraduate medical education, despite the lack of conclusive evidence in terms of its educational effectiveness in terms of students' performance. Medical faculties should actively address both the opportunities and challenges especially those related to online professionalism.

Conclusions: It was concluded that students' and the Staff perceived Facebook as a formal and informal learning tool rather than a formal teaching one. Integration of Facebook into courses may benefit students through enhanced 'student to student' and 'student to instructor' communication, which in turn may translate to greater learning outcomes.

Take Home Message: Facebook can assist educators by creating effective learning environment if thoughtfully structured. However, there is no conclusive evidence on what extent Facebook contributes to learning outcomes with regards to high-stake exams. Controlled trials are needed to get a better picture of the educational benefit of social media tools in general.

Title: Multimodal platform delivery in immersive reality instruction for medical education

Authors: Nicolette Birbara, Alex Ong, Nicola Best, Andrew Yip, Claude Sammut, Tomasz Bednarz, Nalini Pather

Institute: UNSW Sydney, Australia

ABSTRACT:

Background: Immersive technologies such as virtual reality are gaining popularity in higher education for the development of virtual learning resources (VLRs). These allow students to become more involved in their learning experience, enhancing their engagement. The learning effectiveness of VLRs delivered in multiple platforms, however, is yet to be evaluated.

Summary of Work: This study therefore aimed to investigate the overall effectiveness of multimodal platform delivery of VLRs for medical education. A guided VLR in the form of a skull tutorial was developed using the Unity gaming platform. Participants were voluntarily recruited to assess stereoscopic and desktop delivery of the VLR (n = 52 and 40 respectively). A survey tool was

designed to gather student perceptions of the VLR for both delivery modalities.

Results: Most participants agreed that the VLR was interesting and engaging, provided an immersive experience and aided understanding of relevant concepts for both stereoscopic and desktop delivery (93% and 94% respectively). Participants reported moderate to high levels of physical comfort and low to moderate levels of mental strain, although some physical discomfort and disorientation was experienced, particularly in the stereoscopic delivery.

Discussion: Unlike most previous studies investigating immersive technologies, the current study directly compares both desktop and stereoscopic delivery modalities in immersive reality instruction. Overall perceptions of both delivery modalities were positive, although feedback provided by participants highlights the importance of design to enhance the usefulness of VLRs.

Conclusions: This study suggests that desktop may be a favourable delivery modality for virtual content, reducing the degree of physical discomfort and disorientation associated with more immersive modalities, while still providing the advantages of an immersive learning experience.

Take Home message: VLRs may provide a useful educational tool that present content from a different perspective not possible using other methods, and can be made easily accessible through desktop delivery.

Title: Final year medical students' perceptions of hospital ward rounds and the implications for teaching and learning

Authors: Ibrahim Ali, Mumtaz Patel, Mumtaz Patel
Institute: University of Manchester, United Kingdom

ABSTRACT:

Background: The hospital ward round (WR) is a potential treasure trove for learning clinical medicine. However, many factors can inhibit the educational experience. This study sought to explore final year medical students' perceptions of WRs, the factors that impact on their learning and

how the learning experience can be improved.

Summary of Work: Final year students based in a UK hospital were recruited to complete a validated questionnaire and participate in a 1-hour focus group. Qualitative data was subjected to an inductive thematic analysis. Eleven out of thirty students completed the questionnaire (37% response) whilst ten participated in the focus group.

Results: Students' preferred methods of participation included being asked questions and presenting patients on WRs. A lack of time was the most inhibitory learning factor. Three positive factors were identified: firstly, a final year student identity exists that results in a better experience compared with earlier clinical years; secondly, organisation of final year placements results in better learning opportunities; finally, and most importantly, were the doctors' ability to teach.

Discussion: Final year students perceived themselves as knowledgeable, self-directed learners compared to their younger counterparts who face liminality in the clinical environment. Final year placements provided students with increased time on WRs in smaller numbers. Both these factors allowed students to integrate within the clinical team and assume roles and responsibilities, which promoted learning.

Conclusions: WRs can be variable, subjective experiences. A differential learning experience exists for final year students compared with their earlier placements. Ultimately, however, students acknowledged the dependency of doctors' attitudes to teaching and their ability to create a positive learning environment that supports student participation.

Take Home Messages: Strategies to improve WR learning include:

1. Incentivising doctors to teach.
2. Embedding a few students within each clinical team.
3. Routinely assigning roles and responsibilities to students.

Title: Teachers' Perceptions of their Learning Atmosphere in Traditional and Integrated Curriculum of two Medical Colleges

Authors: Rehmah Sarfraz, Raheela Yasmin

Institute: Islamabad Medical & Dental College, Pakistan

ABSTRACT:

Background: The physical surroundings and the factors effecting teaching and learning activities can be grouped under the umbrella of educational environment. Teachers' perceptions of educational environment are directly proportional to the environment in which students learn. Students' perceptions about their learning environment has been the topic of many researchers whereas teachers' perceptions about it need exploration.

Summary: This research was carried out to measure and compare teachers' perceptions of their learning atmosphere in two private medical colleges having traditional and integrated curriculum using AMEET inventory. Valid and reliable AMEET inventory was used to carry out this quantitative, descriptive, cross-sectional survey. Two groups were made, Group A (n=92) for traditional curriculum and Group B (n=91) for integrated curriculum. Independent sample t-test was used to find out the difference between two groups.

Results: The scores of AMEET inventory for teachers' perceptions of their learning atmosphere showed statistically insignificant difference between the two groups having traditional and integrated curriculum.

Discussion: The basic difference in traditional and integrated curriculum is that in former, the teaching is teacher-centered whereas in latter, teaching is student-centered focusing on application of knowledge. The result of this research will give an insight to the medical educationists that the learning atmosphere when viewed from teachers' eyes is independent of type of curriculum.

Conclusion: The perceptions of teachers about their learning atmosphere is not effected by the type of curriculum.

Take Home Message: It is recommended to explore teacher's perceptions about their educational

environment by taking data from larger population having same or different curriculum so that the results can be generalized and cultural differences can be established.

Key Words: Traditional, integrated, curriculum

Title: Current practices of the verbal handover among Pediatric residents using SBAR modality in ACGME-I residency program in QATAR

Authors: Manasik Hassan, Najla Ba Sarahil, Bassil Leghrouzfa, Ahmed El Makki, Amira Mustafa

Institute: Hamad Medical Corporation, Qatar

ABSTRACT:

Background: Patient handover is a crucial process for transfer of patients' information. Thus, its standardization enables concise relay of information across team members. Different systems of communication have been developed to achieve effective and safe handover. Our aim is to study the completion of patient information during handover using SBAR modality.

Summary of the Work: An observational study was conducted in Pediatric Department of Hamad General Hospital. The observational tool was structured to examine the contents of the oral handover using SBAR method, which was filled by chief residents. It included the organization of the handover and 9 essential elements conveyed in SBAR format.

Summary of Results: We observed total of 26 residents' endorsements. 50% of the residents' handovers had completed 100% the 9 elements of endorsement using SBAR, while 35% covered 75% of the SBAR element in endorsement. The commonest missing elements were patients' demographics and location (23%) followed by situation awareness (19%).

Discussion: The majority of the residents' handovers were inclusive of the 9 elements of SBAR. An extra important element was observed in 12% of the endorsements, which is "read back by the receiver"; an element not part of the SBAR modality.

Conclusions: Our study has highlighted areas for improvement in SBAR content. Adding "read back by receiver" = (R) to the SBAR may ensure that crucial patients' information is well understood by

the receiving team. Creating a modified handover modality in form of SBARR may greatly improve endorsement safety and quality.

Take Home Messages: Systemic organized patients' handover will greatly impact patient care and safety

Title: The use and impact of a mobile clinical skills and simulation facility in remote and rural Scotland – a realist synthesis and evaluation

Authors: Susan Somerville, Stella Howden, Susie Schofield, Sean McAleer, Jean Ker

Institute: University of Dundee, United Kingdom

ABSTRACT:

Balancing service-provision, recruitment and retention, and access to education in remote and rural healthcare contexts is challenging. To improve quality and reliability in clinical skills practice and enhance patient safety, a mobile simulation facility was launched in remote and rural Scotland. The intervention was targeted at supporting the local workforce's developmental and educational needs.

Using realist research methodology this evaluation explores the mechanisms through which this intervention produces change and the conditions that trigger these mechanisms. It seeks to develop outcome-prediction patterns according to the context and mechanism triggered, thereby informing future use of mobile simulation in remote and rural healthcare educational environments.

Successfully introducing simulation-based education across differing geographical and professional contexts is highly complex. Desired outcomes are influenced by contextual variations, e.g. professional relationships, technology, demographics, economic environment, culture, location and sustainability of the intervention is challenging. Causal mechanisms such as leadership, motivation and clinical confidence result in both intended and unexpected outcomes. Realist methodology offers novel insights into understanding the complexity of interventions and outcomes. Making simulation education mobile, improves access to standardized simulation education and training opportunities.

Development of local multi-professional faculty networks, partnerships with specialist clinical educators, and strategic support for simulation to enhance healthcare education, brings success and challenges.

Complex interventions are frequently context dependent, and realist evaluation allows in-depth analysis and increased understanding of the contextual complexities surrounding mobile simulation education. Key stakeholder engagement is fundamental to develop, sustain and reliably embed desired simulation educational outcomes.

The literature on simulation advocates its role in improving patient safety. A mobile simulation facility enables multi-professional staff to deliver and access high standards of clinical skills education to enhance patient safety in remote and rural settings. A realist approach involving key stakeholders enhances in-depth evaluation asking what works, for whom and why?

Title: Standardisation of curriculum mapping and its implementation into the LOOOP network

Authors: Olaf Ahlers, Firman Sugiharto, Simon Drees, Till Rech, Matthias Seidel, Olaf Ahlers

Institute: Charité - Universitätsmedizin Berlin, Germany

ABSTRACT:

Background: Effective and comprehensive curriculum mapping mostly involves a high number of faculty members. Thus, standards need to be defined especially for the definition of learning spirals within the curriculum. Different taxonomies are available for this purpose and national frameworks help to develop curricula with similar outcomes in each country.

Summary of Work: Since 2004, the LOOOP (Learning Opportunities, Objectives, and Outcomes Platform) for online curriculum mapping is developed and utilized within a network of medical schools worldwide. This platform was expanded by tools for standardised creation of educational objective and definition of the coverage of national frameworks like Swiss PROFILES or CanMEDS.

Results: A number of standardised verbs is now

available for each medical school. An automatic online crosscheck of selected verbs and the assigned educational objective ensures alignment of both. Another LOOOP tool recommends the coverage level of national catalogues considering the selected verb. These standardised tools are currently used in 50 degree programs.

Discussion: Curriculum mapping is essential for each program evaluation, because it shows what is taught, when, where and by whom it is taught and how it is assessed. This work describes the successful worldwide implementation of online tools for curriculum mapping standardisation – a precondition for reliable data as the basis for accreditation.

Conclusions: Standardisation of curriculum mapping procedures can be successful implemented and are highly accepted and appreciated by the faculty members.

Take Home Message: Standardisation of curriculum mapping visualises the learning spiral within each curriculum and eases the definition of coverage of national catalogues.

Title: Perception of Medical Education as a career amongst House Officers and Junior Faculty Members in different Medical and Dental Institutes of Karachi, Pakistan

Author: Gul Muhammad

Institute: Riphah International University, Islamabad, Pakistan

ABSTRACT:

Background: The mushroom growth of Private Medical Colleges in Pakistan has led to the demise state of Medical Education. The number of institutes offering Post Graduate Programs in Medical Education has not even reached double digit. Majority of young graduates are unaware of the dynamic Changes in the Medical Education.

Summary of Work: A Questionnaire comprising of 15 Questions was distributed among 411 House Officers and Demonstrators. The study was conducted at three dental institutes of Karachi in six months time period. The main focus was to identify whether the participants know about the Medical Education Programs, Challenges and the Job opportunities in this field. Data was analyzed

on SPSS version 22.

Results: Fifty Six percent of young graduates did not know Medical Education as a separate subject. The institutes find difficult to run a full fledged department. Eighty Two percent see a bright career in the field and 70% want to get a degree in this field. Eighty five percent recommend continued medical education programs.

Discussion: The medical colleges in Pakistan are going through a process of restructuring in line with the recent developments in medical education worldwide. Turkey took a revolutionary step while Medical Education in India and Sri Lanka have similar issues as that of Pakistan. Professionalism and Evidence Based Practice is strongly reflected in the British Medical Schools.

Conclusions: Medical Education is a dynamic yet slowly evolving field. Efforts must be undertaken to incorporate it in the undergraduate curriculum. The recent advancements in the learning and Assessment have led to the paradigm shift in Medical Education.

Take Home Message: Medical Education, in general, is different from orthodox education. There is dearth of Qualified Medical Educationists though the department offers a prosperous career. Young graduates have to be well oriented with field. The recent advancements in the learning and Assessment have led to the paradigm shift in Medical education.

Title: A qualitative study exploring decline in empathy and strategies for promoting empathetic clinical practice

Authors: Sonia Ijaz Haider, Qamar Riaz

Institute: Aga Khan University, Pakistan

ABSTRACT:

Background: Empathy is the ability of the physician to recognize and understand a patient's perspective and experience, combined with the capacity to communicate this understanding to the patient. However a gradual decline is observed in empathetic clinical practice. The present study aims to explore attributes which foster or inhibit empathetic clinical practice.

Summary of Work: It was a cross sectional qualitative study in which a total of 10 focus group

discussion was conducted with medical students, interns, residents and medical teachers. An inductive thematic approach was used for data analysis.

Summary of Results: Empathy is an inherent trait and more of a person dependent attribute. Participants indicated the need and desire to practice empathetic clinical care however time constraints and workload are major inhibiting factors. Different strategies such as including it as a longitudinal theme, role -modeling, continuous monitoring and appreciation were suggested for fostering empathetic clinical practice.

Conclusion: Empathy is an integral part of clinical education and practice. The complexity of clinical care in conjunction with teaching makes it difficult to practice empathetic clinical care, however with continuous efforts it can be fostered and maintained.

Take Home Message: Empathetic clinical practice is a vital characteristic of the physician –patient relationship. Strategies should be taken to minimize factors inhibiting empathy and different approaches needed at students, residents and faculty level to promote empathetic clinical practice.

Title: Senior doctors' perspectives on informed consent: a qualitative study

Authors: Wayne de Beer, Samuel Anderson, Helen Clark

Institute: Waikato District Health Board, New Zealand

ABSTRACT:

Obtaining informed consent is an essential ethical requirement for medical professionals, which involves processes over and above the signing of paperwork immediately prior to a procedure. However, who should be the appropriate person responsible for the informed consent process (and at what level of procedure), is less clear.

Semi-structured interviews were conducted with a cohort of senior medical officers who worked either in the surgeries, or who conducted medical invasive procedures, in order to obtain their perspectives on first year house officers (PGY1s) obtaining informed consent from patients on

behalf of the doctors actually performing the procedures.

Four main themes emerged. These were: Senior doctor-patient communication regarding informed consent; the PGY1 as “participant” in the process of consent; the role of supervision in determining competence in taking consent; and the identification of cultural changes within the health care environment when it came to SMO practices regarding consent.

Consensus was that high risk procedures should always have the doctor performing the procedure taking informed consent. However, when it came to SMO's identifying a list of procedures that they thought PGY1s could obtain consent for; they were hesitant to do so with only ward-based, low risk procedures consistently identified.

SMOs uniformly believe consent obtaining is a collaborative approach within the medical and surgical team environment. However, 'grey areas' exist with regard to procedures deemed appropriate for PGY1s to competently obtained informed consent for.

Informed consent is a complex process that can occur more than once in the patient 'journey'. Collaboration and consistency in this process is key; however differences in perceptions amongst senior clinicians of procedures are regarded as appropriate for PGY1s to consent for, is not straightforward.

Title: Teaching medical professionalism to undergraduates: are students and faculty on the same page?

Authors: Geraldine Kershaw, Adri Prinsloo, Sami Sha'ban

Institute: College of Medicine and Health Sciences, United Arab Emirates

ABSTRACT:

Background: Studies of professionalism in medical students tend to focus on senior students' behaviour in clinical contexts. Although the basis for clinical professionalism must be built from day one, little research has explored early undergraduate medical students' understanding of professionalism and the possible mismatch between Faculty expectations and student

understanding.

Summary: At UAEU, General Medical Council duties of the medical student are introduced in year 1. Faculty had reported a range of aberrant behaviours from young students, so we developed an innovative group activity to review aspects of professionalism in year 2; it requires rating then discussing a list of student behaviours which Faculty had observed and perceived as problematic.

A refined questionnaire based on that used in class was distributed to all students and Faculty to establish changes in students' understanding of professionalism over time, and to identify mismatches between student and Faculty expectations.

Results: Preliminary analysis of Faculty (n=14) and second year students (n=65) shows Faculty rate more behaviours as totally unprofessional than students. Marked differences in rating include signing attendance for absent colleague: Faculty 100%, students 82%; checking SMS during class, 71% vs 25%; student asking for mark adjustment, 86% vs students 58%.

Discussion: Professionalism is introduced early and spirals throughout our curriculum. Our results showed a mismatch between expectations of Faculty and student understanding, and also revealed student attitudes and behaviours to be at odds with their theoretical understanding of professionalism.

Conclusion: A mismatch between Faculty and student understanding of appropriate behaviour clearly exists. Rating and subsequently discussing aberrant behaviours, as in the class activity described, facilitates exploration of professionalism with students. Evaluation of scenarios unrelated to students' educational experience is not sufficient.

Take Home Message: A range of approaches, including locally relevant materials and free discussion, is needed to inculcate professionalism in undergraduate medical students.

Title: Medical Ethics 101: Enhancing medical ethics curriculum in undergraduate medical education at the University of Ottawa

Authors: Anna Byszewski, Anastasiya Muntyanu, Jean Roy, Andre Bilodeau, Deborah Danoff, Heather Lochnan, Jeff Blackmer,
Institute: University of Ottawa, Canada

ABSTRACT:

Background: Medical ethics plays a vital role in delivering high-quality, patient-centered care. The 2015 Canadian Graduation Questionnaire demonstrated that 20.5% of University of Ottawa students found ethics teaching inadequate, compared to 7.5% national average indicating a gap in curriculum.

Summary of Work: The goal of this project was to evaluate student perspectives on ethics teaching, assess teaching approaches used, evaluate if objectives were addressed, and suggest areas in curriculum where changes can be implemented. This multidimensional approach would ensure comprehensive evaluation of the curriculum.

Summary of Results: 17% survey response rate in year 1-3 (61.4% in year 2). Importance of ethics teaching was indicated by 32% and value of developing own approach to ethically complex situations was reported by 25%. Case examples (50%) and small group sessions (22%) were found to be very effective, 52% found didactic lectures ineffective.

Discussion: The results indicate that although students find the subject very important, a gap exists in the curriculum. We proposed to introduce a longitudinal ethics course with a case evaluation tool introduced early in preclerkship and to be used in future case-based discussions. In clerkship rotations, students will write a reflection on an ethically challenging case and group discussion will be guided by a facilitator.

Conclusions: Medical ethics is an important topic for patient care but remains a difficult subject to approach in the curriculum. This innovation should increase confidence and comfort level, thus better preparing students to make difficult ethical decisions in future practice.

Take Home Messages: Students particularly enjoyed small group discussions of clinical cases

with surrounding discussions and felt that cases should be focused on typical scenarios encountered in practice (consent, capacity etc), as well as those depicted in news and lawsuits. Medical ethics needs to be addressed in a longitudinal manner, through a variety of mediums.

Title: How should pre-clerkship students contact their teachers - a study in a Southeast Asian medical school?

Authors: Siriyakorn Thanasitthichai, Chanatip Rujinam, Seedarat Suwichanarakul, Natchapat Potee, Danai Wangsaturaka

Institute: Chulalongkorn University, Thailand

ABSTRACT:

Proper manner is one of the crucial attributes expected of medical students. However, opinions seem to vary regarding the appropriateness of behaviors. Therefore, in this study, we explored the viewpoint of teachers and teacher-assistants on communication etiquette.

A mixed method study was employed. Preliminary interview was conducted on 20 subjects. Based on the result, we developed a 26-item questionnaire for either self-administering or structured interview. Our samples comprised of 90 teachers and 25 teacher-assistants from 8 pre-clerkship departments at Chulalongkorn Medical School. Data were compared using Mann-Whitney U test.

An appointed meeting was the most favored communication. Teachers and teacher-assistants had statistically different perspectives on 13 out of 22 topics, including: suitable modes, time and manner of communication. However, senior (> 50 year-old) and junior (<41 year-old) teachers had statistically different opinions on only 3 out of 22 topics.

Age was not the only factor affecting our subjects' opinions on communication etiquette. Teacher-assistants were more tolerant with inappropriate behaviors comparing to teachers. This was probably due to the difference in their expectation towards students. It should be noted that results were not homogeneous in age groups and professional roles.

In conclusion, medical students are advised to take both age and status of each individual into account

when making contact. Though junior teachers and teacher-assistants are not as strict as senior teachers, they should still be treated with respect. Improper manners may hinder effective communication.

No matter how advanced our technology has been, conventional methods, such as face-to-face appointment, are still preferred. Teachers/teacher-assistants should explicitly clarify what you expect of your students. Students should then be open-minded and receptive.

Title: Assessing the adhere to Professional Ethics in emergency medicine personnel

Author: Sara Shahbazi

Institute: Shahrekod University of Medical Sciences, Iran

ABSTRACT:

Privacy of individuals is open to emergency medicine personnel. Therefore, one of the most important technical and ethical features of a technician is righteousness, righteousness, chivalry.

Summary of Work: The present study is a descriptive-analytic study that was performed on 63 personnel of Medical Emergency Centers in Borujen/Iran. To data gathering, a researcher-made questionnaire (self-assessment of professional ethics in medical emergencies) was used. The questionnaire was designed in 13 sections based on Likert Ranking Scale in 4 levels always, often, sometimes and never completed.

Results: The results of this study showed that only 25.25% of the staff believed that they would always apply the principles of professional ethics.

37.3 percent often, 37.45 percent were sometimes bound to observe professional ethics. None of the personnel were not bound by the principles.

Conclusion: According to the results of the study, it can be seen that all employees of the Emergency Centers participating in the study do not adhere to the principles of professional ethics. It is recommended that arrangements will be made to remind, recall and train professional ethics for the personnel of emergency medical centers periodically.

Title: Teaching psychosocial aspects of medicine: an extracurricular program for medical students using movies

Authors: Mahboobeh Khabaz Mafinejad, Maliheh Kadivar, Azim Mirzazadeh, Zeinab Jannat

Institute: Tehran University of Medical Sciences (TUMS), Iran

ABSTRACT:

Background: There are rising concerns about how biopsychosocial aspects of medicine can be taught to students. The aim of the study was the use of "cinemedicine" as a tool and technique in teaching of psychosocial aspects of medicine for medical students at Tehran University of Medical Sciences (TUMS).

Methods: This was an educational study with quantitative and qualitative data analysis. Two hundred seventy medical students participated in this study. Nine sessions were held for teaching psychosocial subjects related to medicine via using movies. Each session began with an initial explanation of the program objectives. After the show, points related to medicine and addressed in the movie were discussed and analyzed by experts and students. At the end, the questionnaire was distributed to assess the students' perceptions.

Results: The results of our study show that most of the students (84%) stated that teaching these subjects via movies was a nice event comparing to the usual lecture. With regard to the application of points learned in the events in professional performance, 56.5% agree. The majority of the students (72.8%) were agree that participation in these events was useful to them as a physician and they will advise other students to attend in later sessions. Content analysis of the students' notes uncovered three categories of cinemedicine: "learning by observation", "creation of a supportive and tangible learning" and "and "motivation for learning".

Conclusion: Cinemedicine provides the opportunity for medical students to learn psychosocial subjects related to medicine via observing and reflecting on movies.

Title: Mafraq Ears, Nose and Throat (ENT) - A Model to Develop Post-Graduate Training Programs Using International Standards and Training Tools Specific to the Regional Gulf Environment

Authors: Safeena Kherani, Safeena Kherani, Ameen Al Menhali, Ashraf El Ghul, Khaled Abu Haleeqa, Mustafa Al Maini

Institute: SEHA Mafraq Hospital, Abu Dhabi, UAE

ABSTRACT:

Recognizing the increasing cost of sending patients for treatment internationally and the value of medical care in one's home environment, we endeavoured to create a model to develop ENT specialists who are prepared and able to complete international subspecialty training and to return home to serve their communities.

The Otolaryngology – Head and Neck Surgery Residency Program at Mafraq Hospital in Abu Dhabi, United Arab Emirates was established using world class medical education accreditation standards and training tools interpreted through and applied to regional standards in the Gulf.

Initial steps included stakeholder engagement from the specialty, academic affairs and hospital administration. We identified the Accreditation Council for Graduate Medical Education International (ACGME-I) as the world standard for accreditation. We identified the Arab Board of Health Specializations as the local standard that combined with our specialty's practice patterns, served as the lens through which the ACGME-I guidelines can be interpreted.

Once program guidelines were established using international accreditation standards applied to the Gulf regional setting, internationally published tools were integrated including electronic modules for evidence-based medicine through the Mayo Clinic and for quality improvement with the Institute for Healthcare Improvement (IHI). To ensure the highest quality of continuous learning, international external annual standardized in-training exams were incorporated.

We present the first recorded application of international postgraduate accreditation standards to the Gulf in ENT. Our hope is to create

specialists prepared to receive international subspecialty training and return home to provide international-level care in our patients' home environment while concurrently minimizing patient transfer costs.

Internationally-recognized specialty training programs adapted to the Gulf can be created using formal collaborative triangular relationships between the specialty, hospital academic affairs and the healthcare administration. The utilization of regional curricula and international educational tools can help drive the process. Continuous quality improvement is required to ensure longevity.

Title: Curriculum mapping of a four year, clerkship-oriented curriculum at the Lebanese American University (LAU) – implementation of the LOOOP project

Authors: Sola Aoun Bahous, Firman Sugiharto, Ara Tekian, Olaf Ahlers

Institute: Charité – Universitätsmedizin, Berlin, Germany

ABSTRACT:

Background: Over the past decade, the LOOOP (Learning Opportunities, Objectives, and Outcomes Platform) for curriculum mapping is increasingly utilized within a vast network of medical schools worldwide. However, mapping clinical clerkships has presented a number of challenges because of the complexity of the structure of a clerkship curriculum. Creative solutions have been developed for this web-based platform.

Summary of Work: LOOOP was adapted for the needs of the Lebanese American University (LAU) in Beirut. The database was implemented and concepts for mapping of all the four years were discussed and evaluated regarding respective usefulness. All 22 modules/ clerkships were uploaded in 2016 and evaluated.

Results: All phases of LAU's medical curriculum are covered by the LOOOP concepts. Since the clerkships are naturally hard to structure, because the lack of defined learning events, clustering the instructional objectives/ competencies/ assessment by symptoms was utilized instead of

learning events.

Discussion: Curriculum mapping was described in AMEE Guide No.21 in 2001. However, implementation of this concept has faced a number of challenges for various curricular models. LAU was successful in mapping complex clinical clerkships using the LOOOP thus enriching its applicability for institutions having similar curricula.

Conclusions: Mapping a four year, clerkship-oriented medical curriculum in LOOOP is feasible and greatly facilitates planning, identification, and implementation of the various curricular components assuring smooth navigation within the web-based platform. Clarity of the clerkship structure contributes to one of the requirements for accreditation standards.

Take Home Message: Curriculum mapping is essential and possible to implement at any institution, greatly facilitates the organisation and structure of any type of curriculum, and could be useful for accreditation purposes.

Title: Nurses' perception regarding Continuing Professional Development (CPD), barriers and motivators in the Royal Hospital, Oman

Authors: Khalid Al Busaidi, Linda Jones

Institute: Royal Hospital, Oman

ABSTRACT:

Aim: the purpose of this paper is to understand nurses' perception regarding Continuing Professional Development (CPD), barriers and motivators in the Royal Hospital, Oman.

Background: Continuing Professional Development became mandatory for nurses in Oman in 2006 to maintain and develop nursing competencies and knowledge. Since the application of new CPD strategies in 2006, no research or study was conducted to assess nurses' experience and perception. CPD became a requirement for revalidation of license of practice. However, there are many different barriers faced by the nurses. Understanding nurses' perception, barriers and motivators will help the stakeholders to conduct more effective CPD and utilize the available resources wisely.

Method: A qualitative, case study methodology

was used, data were collected through focus groups, one-to-one interview and document review at the Royal Hospital, Oman. A total of nineteen nurses participated from a different clinical setting, years of experience and managerial posts.

Findings: the majority of the nurses had positively perceived CPD. There were number of themes emerged as barriers and motivators. Many themes were similar to the literature, however, few were newly discovered due to cultural differences and diversity of the current workforce.

Conclusion: Different factors affect and motivate nurses to participate in CPD. Motivating factors were divided into intrinsic and extrinsic. The majority of the nurses' value and appreciate the need and importance of CPD. The results of this study are timely and locally framed and not necessarily generalizable. However, understanding motivation and barriers is important to develop effective educational and training programmes.

Title: Professionalism in Medical Education- Perspectives of Medical Students and Faculty

Authors: Munazzah Rafique, Ayesha Nuzhat, Mushira Abdulaziz Enani

Institute: King Fahad Medical City Riyadh, Saudi Arabia

ABSTRACT:

Background: Addressing professionalism in medical education is challenging. Increasing attention has been focused on developing professionalism in medical school graduates. The culture of faculty and the behaviors of medical graduates are often incongruent with professionalism.

Objective: To assess awareness of medical students and faculty about professionalism and suggest strategies for developing professionalism.

Method: Validated questionnaire about professionalism was used. Medical students (n=57) and Faculty (n=50) attending Faculty of Medicine (FOM) King Fahad Medical City Riyadh were included in study.

Results: Among personnel characteristics, the most highly ranked items were honesty (faculty: 47(94%); students: 35(61.4%) adhering to ethics

(faculty: 42(84%); students: 36(63.2%), and reliability in patient care (faculty: 42(84%); students: 35(61.4%). For the interaction with patients category, in highly ranked item was respect for patient (faculty: 44(88%); students: 38(66.7%). Regarding social responsibility, for students highly ranked items was improving access to health care (student: 31(54.4%) whereas faculty designated improving access to health care (faculty 31(62%) more important. With respect to strategies to improve professionalism, the highest ranked strategy across faculty was including in evaluation 29 (58%), while in students individual mentoring 28 (49.1%) was highly ranked strategy for developing professionalism.

Conclusion: The difference in attitudes towards professionalism among students and faculty suggests unification of vision of both. Including in evaluation is better strategy for developing professionalism.

Title: The Effects of Teaching Professionalism in a Private Medical College of Pakistan

Authors: Muhammad Nadim Akbar Khan, Saadia Sultana, Noor-Mah Khan

Institute: Islamic International Medical College, Riphah International University, Islamabad, Pakistan

ABSTRACT:

Background: In Pakistan, integrating professionalism into the curriculum is merely a discussion. A research was conducted after the introduction of a module to teach professionalism. This study was planned to gather student's response and views about the various elements of professionalism and the effective strategies used to teach professionalism.

Summary of Work: The PSCOM Professionalism Questionnaire was used to gather perceptions of MBBS students about elements of professionalism. Two Focus Group Discussions were conducted to explore their understanding of the effectiveness of various strategies used to teach professionalism. The FGDs were audio recorded, transcribed and analyzed by thematic analysis.

Results: There were significant differences in mean scores of the elements of professionalism among

four MBBS classes. The total overall Cronbach alpha value for all elements of professionalism in these classes was above 0.9. Role modelling was found to be the most effective method to inculcate professionalism.

Discussion: The study describes the significance of teaching professionalism to students in a medical school. A robust curriculum with explicit professionalism teaching can uphold the initial perceptions of medical students about professionalism. It highlights that different strategies based on role modelling should be developed to promote professionalism in medical students.

Conclusions: Students rated all attributes of professionalism as important. Mean scores calculated for the elements of professionalism was high for first year, plummeted for second and third years and improved again for class of fourth year MBBS. Techniques/methods based on role modelling should be developed to promote professionalism among medical students.

Take Home Message: It is the need of time to understand the importance of promoting professionalism among the doctors of tomorrow. Explicit teaching of professionalism has a definite role in inculcating professionalism among students in medical colleges. However, novel methods based on role modelling should be developed for effective teaching of professionalism.

Title: Personality "to be" or "not to be" a doctor

Author: Tappana Sumpatanarax

Institute: Vachira Phuket Hospital, Thailand

ABSTRACT:

A stepwise to classified accept or non-accept to be medical students was done by MCQ examination, camping and participatory activities and MMI (Multiple Mini Interviews). Medical students of Walailak University were passed the screening test to rule out an abnormal severe psychiatric disorder. A personality or characteristic style is moderately adaptation.

Scoring point was not used to calculated with the exam's result. We found out which character was a selected group by MMPI (Minnesota Multiphasic Personality Inventory) to shown our medical

students character. Preferable style of character may be shown in the test and which character is less preferable

Descriptive study is that 97 students were passed the MCQ then after camping and MMI, 47 students was acceptable. Female was more than male (40:7). The remaining is reserved (46) and rejected (4) group. Comparable was done between acceptable group and unacceptable (reserved+rejected) group.

There are some interesting differences between both groups. Acceptable group is more moderately scale than unacceptable group. Hypochondriasis, Depression*, Hysteria**, Psychopathic deviate, Masculinity-Femininity**, Paranoia, Psychasthenia*, Schizophrenia**, Hypomania* scales are studied. (* $p < 0.05$ by Pearson Chi-square, ** $p < 0.05$ by Somers'd, Kendall's tau b, Kendall's tau c, Gamma, Spearman correlation)

Examination, camping and MMI are sufficient to detect the preferable students. Psychological test (MMPI) can be reassured. Rorschach and HTP (House-Tree-Person) are another psychological tests to classified and confirmed the equivocal group which suspected to psychosis or severe personality disorder. An acceptable group was found moderately characteristic in various contexts.

Self understanding of medical students is primarily to understanding the people.

"Learning to be a doctor is learning to be a human".

Title: The predictive validity of the Biomedical Admissions Test (BMAT) – a case study of investigating assessment performance over time, across different selection cohorts

Authors: Sarah McElwee, Tom Gallacher, Molly Fyfe, Kevin Cheung

Institute: Cambridge Assessment Admissions Testing, United Kingdom

ABSTRACT:

Background: Previous research conducted in pilot years showed that BMAT predicted on-course performance. BMAT is an admissions test for biomedical schools in the UK and internationally, so analysis was repeated when scores were used for decision-making. However, investigating predictive

validity during operational use is fraught with difficulties.

Summary of Work: Six cohorts of grade data from pre-clinical phases of medical training were linked with BMAT scores for a UK university. Correlations and regressions were used to identify theorised positive relationships between BMAT Section scores and overall grades from the first and second years of medical school.

Summary of Results: Relationships were observed between BMAT and on-course performance. Although the coefficients were broadly in line with other predictive validity studies, they indicated weaker relationships than those found previously with BMAT; however, this may be due to stronger attenuating effects present when scores are used in selection, such as greater range-restriction.

Discussion: As admissions tutors gain confidence in using BMAT scores more readily to support selection decisions, relationships may be more difficult to observe. Other issues are also important to consider. Students progressing through the course non-typically were excluded. Also, module data was unavailable, so granular relationships may have been masked.

Conclusions: BMAT scores predicted early on-course performance. Although it appears that the relationships have weakened over time, it is likely that attenuation of the observed relationships varied across the different cohorts, because BMAT may have been used more heavily in the selection process than in the initial years after its introduction.

Take Home Message: BMAT continues to demonstrate predictive validity using on-course performance as a criterion variable. Using regression coefficients to compare the strength of relationships across different selection contexts, such as changes over time, is problematic, because it is difficult to account for differences in how test scores were used.

Title: Predictive validity of specific school grades and the scholastic aptitude test for academic Bachelor-success in medical studies –A study process analysis of four cohorts at the University of Bern, Switzerland

Authors: Rabea Krings, Rainer Hofer, Sören Huwendiek

Institute: Institut Für Medizinische Lehre IML, Switzerland

ABSTRACT:

Background: A valid prognosis of academic success (e.g. grades, duration of study; Hell, 2007) is crucial for the selection of qualified students, especially in fields with numerus clausus. The focus of past research was the mean of school grades (Kadmon, 2014) or MCAT (Donnon, 2007).

Summary: This study analyzes typical courses of studies in human medicine in Bern. Collected data were school grades, results of a scholastic aptitude test, grades of Bachelor exams. The goal was finding criteria that are relevant for academic success, focusing not only on mean grades, but also on specific school grades.

Results: Of 730 students, 87.4% finished their Bachelor (70.1% within the minimum of three years). Relations between specific school grades and academic success are depending on the academic year. Biology/chemistry explained additionally variance in academic success over the mean school grades in the first two years, but not in the third.

Discussion: Results extend past research by showing that not only the mean of school grades or MCAT are relevant for academic success, but also specific school grades. Regarding the study process, results show that 1/8 do not finish their Bachelor. Some withdraw because of failing, others cancel their studies.

Conclusion: There are criteria that are helpful for academic success: Having good grades in specific school subjects (e.g. biology/chemistry) is positive for academic success. It seems that students learn there relevant aspects that support their learning in medical studies. This knowledge seems also helpful finishing studies in a short time period.

Take Home Message: For selection of qualified students in medicine in Bern, specific school grades

seem relevant to make a valid prognosis of academic success at the Bachelor stage. This might not only be relevant for universities, but also for students themselves to optimize the study process and to prevent unnecessary dropouts.

Title: Relationships between MMI performance and scores on the BioMedical Admissions Test (BMAT)

Authors: Kevin yet Fong Cheung, Pat Harkin, Tom Gallacher, Molly Fyfe

Institute: Cambridge Assessment Admissions Testing, United Kingdom

ABSTRACT:

Background: BMAT Section 1 measures candidates' skills in understanding arguments, problem-solving, and data analysis. Section 2 examines ability to apply scientific knowledge and Section 3 comprises a writing task. Because some biomedical courses use BMAT to shortlist applicants, it is useful to understand how test scores relate to MMI performance.

Summary of Work: Interview data for three years of applications to a UK Medical School were obtained; for each year, eight individual station scores and overall MMI scores were linked to BMAT section scores and correlated. Regressions using overall MMI score as an outcome variable were also conducted.

Summary of Results: Relationships were hypothesised between specific MMI stations and BMAT sections. Correlations were observed between MMI and BMAT sections as predicted. A pattern repeated across the years. Regression models consistently showed that Section 3 predicted variance in overall MMI scores. Section 1 also predicted unique variance in this outcome for one year.

Discussions: There were weak, but statistically significant, positive correlations between BMAT scores and MMI stations. Relationships between BMAT Section 3 scores and overall MMI performance were observed in all three years. This is particularly interesting because the written communication section typically has weaker relationships with on-course performance than its counterparts.

Conclusions: Shortlisting candidates using BMAT may help select applicants more likely to perform well on MMIs, although the amount of shared variance is small. Also, shortlisting with BMAT did not systematically deselect those who perform well on MMIs. The strength of these correlations also indicates minimal redundancy when combining selection methods.

Take Home Messages: There is evidence that higher scores on BMAT's writing task are linked to better overall MMI performance. Individual MMI stations correlated with BMAT section scores as predicted according to theory. These findings support the validity argument for using BMAT as part of the shortlisting process.

Title: A practical approach to using Kane's validity model for the assessment of science writing in a medical school

Authors: Claire Ann Canning, Sandra Kemp, Katharine Boursicot

Institute: Lee Kong Chian School of Medicine, Singapore

ABSTRACT:

Validity is an evolving evidence based judgement about the plausibility of a given test score interpretation. Validity is never complete; rather evidence is accumulated over time and integrated into an overall validity argument. Validity is an indispensable condition of assessment, without evidence of validity; assessments in medical education have little or no intrinsic meaning. Kane's framework is used to generate a validation model for science writing in an MBBS programme.

We used Kane's model to define the argument that outlined all claims that were predicted on test scores (interpretive or use argument). A program of research that tested the warrant for those claims, or in other words a research plan that gathered evidence to support these claims, followed.

Kane distinguishes between four inferences that define validity: (1) Scoring, (2) Generalisation, (3) Extrapolation and (4) Implications. We explored how these four inferences in the validity argument can be adapted to the assessment of writing scientific reports based on experimental data collected in a medical curriculum.

Validation truly begins when the purpose of the assessment, and why the students should complete the assessment, is clear. A programme of research was developed to gather evidence to support validity arguments based on the four inferences mentioned above.

The emphasis of validity investigation has moved away from the specific instrument towards the interpretations of the instrument outcomes.

Our results confirm that our test discriminates between learners. Constructive feedback resulted in improved scores, and therefore our instrument is sensitive to that change. We also demonstrated reliability of student performance across parallel test forms. We therefore present an interpretive argument that demonstrates that provides validity evidence.

Kane's validity model, although not without challenges, can successfully be applied to scientific report writing, or adapted to other modalities of written report assessments in the context of medical education.

Title: Improving the validity of post-graduate medical assessments in Singapore

Authors: Chang Hong Woo, Lim Soon Kok, Lim Ming Hui, Albert Ty, Mabel Yap

Institute: Professional Training and Assessment Standards Division, Ministry Of Health, Singapore

ABSTRACT:

Background: Specialist assessments have evolved organically in Singapore because of traditional practice, local capabilities, and international trends. This has led to assessments of varying standards. In alignment with specialist training reforms in the past decade, improvements to the assessment systems would need to be carried out to ensure that they are valid and fit-for-purpose.

Methods: A modified validity framework based on Kane's framework was adopted by the Singapore Ministry of Health and the specialties to evaluate assessments in terms of the purpose, content, structure, process and consequence. Training in assessment principles and applications were provided to stakeholders including leaders and examiners of medical specialties.

Results: The validity framework was applied to

existing and proposed assessments. Some specialties collaborated with established assessment providers, such as the American Board of Medical Specialties-Singapore, to co-develop assessments using this framework (i.e., contextualized to local curriculum with standards set by local examiners). Stakeholders involved in the process reported that assessment outcomes were better aligned to the competencies expected from local specialists. Feedback received during training showed that assessment literacy of stakeholders was enhanced.

Discussion: The collaboration with external assessment providers has led to the development of assessments based on assessment principles ensuring validity. The process is potentially replicable to all as Singapore develops its own pool of expertise in assessment development. The training has raised interest and knowledge of assessment principles amongst the specialists. This in turn has empowered stakeholders to make more enlightened decisions concerning validity of assessments. The validity framework could be applied to all summative and formative assessments of the medical specialties.

Conclusion and Take Home Message: Validity of postgraduate assessments for some specialties was improved by the application of validity framework and collaboration with established assessment developers. Training has equipped stakeholders with the skills to design or choose valid assessments.

Title: Scoring in performance tests: item weighting, validity arguments and standards

Author: Matt Homer

Institute: University of Leeds, United Kingdom

ABSTRACT:

Background: The relative merits of item-based checklists, domain marking and global grading in performance assessments continue to be debated. As behaviours are grouped together in a 'key-features' approach, with an increased focus on higher level skills, individual 'items' have the potential to become more differentially weighted.

Summary of Work: This study compares the simple weighting of items to differentially weighted

approaches, the latter the result of the professional judgment of assessment writers. Empirical evidence and validity arguments are used to investigate differences in assessment outcomes, standards under borderline regression, and measures of quality under the two scoring approaches.

Summary of Results: Typically, measures of assessment quality show little difference between the two weighting schemas. Importantly, of the order of 5% of students have different pass/fail outcomes, a substantial proportion of the borderline group. There are higher station and exam-level pass rates under the simple approach indicating a lowering of standards.

Discussion: Under simple weighting schemes, it is likely that weak students will gather marks for lower order behaviours equivalent to those awarded for more complex tasks. This is likely to advantage such students, lower standards and is a threat to assessment validity compared to more complex marking schemes.

Conclusions: Decisions about item weighting, for example in determining which behaviours to include on a scoring instrument, are always present in the design stage. There is a strong validity argument for more complex performance tasks to receive higher weighting even though some measures of assessment quality show little apparent difference.

Take Home Messages: In maximizing the validity of an assessment, appropriate weighting of items is important. Adequate alignment between item weighting structure and that implicitly employed by assessors when making their global judgments is required. If this alignment is poor or not present, there is a substantial risk of advantaging weak students.

Title: Correlation of Medical School Performance to First Year Intern Outcomes

Authors: Monica Garcia, Robert Byard, Vijay Rajput

Institute: Ross University School of Medicine, United States

ABSTRACT:

Background: The comparison between early assessments of interns by the program directors

with overall students' performance in standardized test in medical schools have not been studied extensively. We surveyed program directors who offered residency placements to our 2016 graduates.

Summary of Work: The non-validated competency based holistic survey was disseminated to program directors after 10 months of graduates starting their residency. The survey asked to identify whether the resident received formal commendation or were placed on remediation for any reason. At the end of the survey they were asked to rate the resident's overall competencies based performance in the superior, satisfactory and unsatisfactory range in comparison to their peers at their programs. These results were compared to the graduates' medical school and USMLE performance.

Results: Two hundred five (205) out of 766 program directors responded with 27% response rate. There was a 5 point variance on USMLE Step 1 and an 8.9 point variance on Step 2 CK performance between the unsatisfactory, satisfactory and superior holistic rating scales. Residents who were identified in need of formal remediation scored 3.1 points lower on average on Step 1 and 7.2 points lower on average on Step 2 CK.

Discussion: A positive correlation exists between medical school GPA and first year intern performance. There is a strong correlation between USMLE examination performance, overall medical school performance (GPA) and first year intern outcomes in competencies.

Conclusion: There is a significant correlation between medical school performance and standardized test outcomes with early first year residents' competencies based performance. This study affirms that standardized test do predict resident outcomes in the early part of residency.

Take Home Message: USMLE Step 1, Step 2 CK, and medical school grade point averages are noteworthy factors for program directors to consider when selecting applicants for residency.

Title: Does accreditation process affect dental students' awareness about accreditation and education standards? A Qualitative Study

Author: Dalia Meisha

Institute: King Abdulaziz University, Saudi Arabia

ABSTRACT:

Background: Accreditation process not only improves school standards and outcomes, but also on its own is a teaching experience for the school administration, faculty, and students. The objective of this study was to explore dental students' awareness of accreditation standards and education terminologies using students' qualitative feedback for undergraduate dental courses.

Summary of Work: A total of six classes participated in this study evaluating 12 different courses. Students in groups were asked to provide qualitative feedback for undergraduate dental courses. Themes and terminologies related to accreditation standards were identified.

Results: Students feedback identified areas were Intended Learning Outcomes (ILOs) did not match course assessment, areas showing redundancy in content, suggested calibration between faculty in using certain rubrics when they noticed faculty disagreement, and suggested feedback mechanisms to enhance students' learning for certain assessments.

Discussion: It was interesting to see how the school's accreditation journey did develop dental students' ability to critically identify areas of strength and weakness in critiquing courses.

Conclusions: This study demonstrated that going through the school's accreditation process, dental students' awareness of legitimate teaching and assessment standards and proper use of education terminologies was reflected in their impressive qualitative feedback critiquing courses offered for undergraduate dental students.

Take Home Message: Accreditation journey makes Students' feedback even a richer resource for curriculum development

Title: Impact of Accreditation on Medical Schools Processes

Authors: Danielle Blouin, Ara Tekian, Carol Kamin,

Ilene Harris

Institute: Queen's University, Canada

ABSTRACT:

Background: Increased emphasis is being placed worldwide on accreditation of undergraduate medical education programs. The impact of accreditation has been explored using student performance on national exams or in residency; curricular reforms; and stakeholders' experiences. This study assesses accreditation impact using as markers schools' processes implemented as a result of accreditation.

Summary of Work: Interviews and focus group discussions were performed with medical education leaders (deans, undergraduate education deans, accreditation leads) at 13 of the 17 Canadian medical schools to elicit perspectives about processes influenced by accreditation; the method of constant comparative analysis associated with grounded theory was used to generate themes of processes.

Summary of Results: Nine themes representing processes reported as resulting from accreditation were identified: 1) governance, 2) data collection/analysis, 3) monitoring, 4) documentation, 5) creation/revision of policies/procedures, 6) continuous quality improvement, 7) faculty engagement, 8) academic accountability and 9) curriculum reforms. These processes, given their nature, are likely associated with medical education quality.

Discussion: Our results contribute an additional perspective to the study of the impact of accreditation on medical education programs. The perception of study participants that these processes were in place as a result of accreditation, suggests that without accreditation, these processes might not exist at several of the schools.

Conclusions: The results of this study substantiate the underlying conceptual model that accreditation drives medical schools to implement processes that support quality in medical education programs. These results add to the existing literature on the impact of accreditation and help justify the costs associated with accreditation.

Take Home Messages: Accreditation leads to the

development, implementation, and strengthening of several medical schools' processes, which, given their nature, are likely associated with medical education quality. These results add to the existing literature on the impact of accreditation and help justify the costs associated with accreditation.

Title: Does accreditation lead medical schools to apply best practices of continuing quality improvement?

Authors: Danielle Blouin, Ara Tekian, Carol Kamin, Ilene Harris

Institute: Queen's University, Canada

ABSTRACT:

Background: An often-stated purpose of the accreditation of undergraduate medical education (UME) programs is the promotion of continuous quality improvement (CQI). The conceptual model underlying this study suggests that accreditation drives programs to implement processes that support quality in medical education and align with CQI best practices. This study examines whether recognized CQI practices had been implemented in UME programs as result of accreditation.

Summary of Work: In 2015-16, leaders and teachers at 16 of the 17 Canadian medical schools were asked in interviews and focus groups whether any of the following 7 recognized CQI best practices had been implemented at their UME programs as a result of accreditation: Formal CQI processes, Dedicated CQI team, Collection/review of performance indicators, Iterative cycles, Customer satisfaction measures, Benchmarking, and Employee empowerment. One school was excluded due to ongoing accreditation activities.

Summary of Results: Thirteen of the 16 (82%) invited schools participated. Most programs used the following CQI practices: Collection/review of performance indicators, Iterative cycles, Customer satisfaction measures, and Employee empowerment. Individual UME programs used between 3 and 6 recognized CQI best practices; the implementation of these practices was perceived to be a direct result of accreditation demands.

Discussion: Accreditation is perceived to influence the implementation of several CQI practices at Canadian UME programs. A few programs had a

dedicated CQI team; no program used benchmarking.

Conclusions: Several of the processes put in place at Canadian medical schools as a result of accreditation demands align with CQI best practices. This supports the concept that accreditation contributes to ensuring the continuous quality of medical education.

Take Home Messages: Several of the processes put in place at Canadian medical schools as a result of accreditation demands align with CQI best practices. Through the implementation of these practices, accreditation contributes to ensuring the continuous quality of medical education.

Title: Accreditation Preparation Transformed by Toyota Production System's Lean Principles

Authors: Marianne Bell, Kent Stobart, Sinead McGartland, Athena McConnell

Institute: College of Medicine, University of Saskatchewan, Canada

ABSTRACT:

Background: The University of Saskatchewan's medical school has been challenged by a reactive culture. Best practices from Lean, project and change management methodologies were implemented to move to a continuous quality improvement system for the full CACMS/LCME accreditation visit in 2017.

Summary of Work: To maintain full undergraduate accreditation, two projects were developed to deliver a (i.) quality education program and (ii.) quality accreditation visit. The accreditation preparation team used a visual wall displaying 'traffic lights' to inform project status, committed to weekly "wall walks", regular team huddles, and standard progress updates.

Summary of Results: Applying Lean's strategy deployment method focused planning, enabled quick response to arising issues and opportunities and was flexible to improve the accreditation system as needed. Transparent communication of vision, challenges, successes and progress increased team accountability, as well as stakeholder engagement.

Discussion: The accreditation preparation team met three times per week to monitor progress of

work, identify and plan new tasks, review opportunities and resolve and/or escalate issues brought forward using the Plan-Do-Check-Adjust methodology. This plan encouraged broad participation with program administrators and delineated expectations amongst team members.

Conclusions: Achieving full accreditation is more than being compliant with standards; it is about demonstrating leadership, building a team, engaging stakeholders and selecting the management tools that best fit the culture to collectively solve problems and achieve success. The process was difficult, but enabled open communications, built trust and fostered relationships.

Take Home Messages: Applying best practice management approaches as the strategy provided a clear method to build leadership strength, trust and engagement in the process as well as contributed to the shift in culture to a system of continuous quality improvement. This experience changed how the medical school will execute new strategies.

Title: Continuous Quality Improvement Framework to Achieve International Accreditation; KIMS/RCI Collaborative Approach

Authors: Maitham Husain, Abdullah Ali, Marageret Kennedy, Viren Naik, Kiri Campbell, Mark Walton

Institute: Kuwait Institute for Medical Specialization, Kuwait

ABSTRACT:

Background: Kuwait Institute for Medical Specialization (KIMS) is the national organization responsible for postgraduate medical education in Kuwait. KIMS oversees internship, and specialty training programs. The organization initiated a major initiative toward excellence in postgraduate medical education via its collaboration with the Royal College of Physician and Surgeon of Canada represented by the Royal College International (RCI).

Summary of Work: In 2016, KIMS and RCI initiate quality improvement collaboration via accreditation and program consultation to improve postgraduate medical education structure. The framework included a systematic approach of

workshops to guide the organization in the internal review. This was followed by consultation visit to both the organization as well as the individual training program. Based on the consultation visit by the RCI experts, a detailed report was generated utilized by KIMS to initiate the quality improvement plan. This was followed by a progress report to KIMS/RCI accreditation committee. Readiness to apply for accreditation was determined by the committee based on evidence of compliance to the standards.

Results: During the period of Nov. 2016 to April 2017, KIMS had received a consultation visit to the organization as well as to eight of its training programs. Both the organization and the program had received detailed reports outlining the strength and areas for improvement. A QI plan was developed and monitored by the KIMS/RCI accreditation committee. In June 2017, KIMS achieved the "accredited institution" the Royal College of Physician of Canada and two programs were identified as eligible to apply for accreditation.

Conclusions & Discussion: The framework of internal review, consultation visits, expert visits and partnership using international standards of accreditation are effective tool for organization seeking quality improvement and accreditation. Such standards are universal and can be adopted in several health systems to improve postgraduate medical education and training.

Title: Correlations between point-in-time assessments and clinical workplace performance of international medical graduates

Authors: Jean Rawling, Shannon Murphy, George Pachev, Gordon Page

Institute: University of Calgary, Canada

ABSTRACT:

Background: Undergraduate medical education varies internationally, depending on a region's cultural, technological, and learner entrustability standards. To ensure suitability for postgraduate residency training in Alberta, Canada, the Alberta International Medical Graduate (AIMG) Program requires of IMGs several point-in-time assessments. To what extent these correlate with clinical proficiency, however, is unknown.

Summary of Work: Those AIMG Program applicants unsuccessful in securing residency positions were invited to participate in work-based assessment in family medicine. 44 candidates were randomly selected for two 2-week clinical placements. Trained assessors completed 4 mini-CEXs and 2 ITERs per block. Candidates' point-in-time and clinical assessment scores underwent correlation and reliability analyses.

Results: Clinical performance was most highly correlated with multiple-mini interview(MMI) score (Pearson's $r=0.328$). There was little or no correlation with MCQ or OSCE exam scores. Reliability analyses indicate that rating directly observed encounters (mini-CEX) is less prone to assessor error ($G=0.75$) than ratings on ITERs ($G=0.55$).

Discussion: This result may be due to the fact that MMIs are designed to assess interpersonal skills, professionalism and ethical judgment. These attributes contribute significantly to proficiency in a clinical environment. Further, the MMI as an assessment tool may be more difficult to 'game' than other assessments, which may explain its higher correlation with clinical performance in this study.

Conclusion: In this work, the correlation between clinical performance and MMI supports the use of MMI score, over MCQ or OSCE, for prediction of IMG ability in a Canadian clinical setting. Mini-CEXs appeared to reflect more objectively clinical performance of an IMG than did ITERs.

Take Home Message: It is difficult to estimate an IMG's clinical ability using point-in-time assessments, but this may be best done with an MMI score. Caution should be used when interpreting ITER scores, as they may be more prone to assessor bias than mini-CEX scores.

Title: The added value of the Pre-Residency Program: preparing international medical graduates for their residency program in Canada

Authors: David Rojas, Sten Ardal, Sandra Monteiro, Ryan Brydges

Institute: Touchstone Institute Canada

ABSTRACT:

The Touchstone Institute offers a Pre-Residency Program (PRP) for International Medical Graduates

(IMG) that have been matched to complete their residency in Ontario. The program has been constantly refined to account for the ever-changing needs of IMGs. We studied the PRP to better understand the impact that the current version of the program has.

We conducted a systems-informed program evaluation that consisted on document analysis, 180 hours of observations, and 30 semi-structured interviews. We conducted 5 iterations of abductive data analysis, complemented with a cross-sectional stakeholder analysis using systems engineering principles as a lens to identify the emergent elements of the program and understand the program's impact.

Results shown an alignment between the program goals and what IMGs obtain from the program. Specifically, residents consider the program is helping them to reduce the anxiety before residency, to be more comfortable an efficient with the assessment verification period, and to foster a needed sense of community among internationally-trained residents.

The processes required to refine educational programs are not clearly defined yet, which leads to outcomes that were not planned in the design/implementation stage. We argue that the systems-informed program evaluation framework can help understand a program's impact, after the refinement processes have been completed.

Our study has shown that the PRP program is delivering the content and experiences needed to ease IMGs transition into the resident programs in Ontario. Results of this work also provide guidance on the mechanisms and best practices to successfully run a transitional program for IMGs.

Refinement of educational programs is necessary to account for changes in stakeholders needs. Constant iterative program refinement can lead to unexpected outcomes. The systems-informed program evaluation framework offers the required tools to assess a program's impact. We have shown that the PRP is easing IMGs transition into residency programs.

Title: Thinking across pathways in the assessment of international medical graduates

Authors: David Prideaux, Ian Frank, Carl Matheson, Liz Farmer

Institute: Australian Medical Council, Australia

ABSTRACT:

Background: The Australian Medical Council has two main pathways for assessing International Medical Graduates. Both require the initial completion of an MCQ knowledge test. The first pathway involves a subsequent clinical examination (OSCE). It has a large number of candidates and low pass rates. The second pathway is a work-based assessment program with small candidate numbers and high pass rates.

Summary of Work: Since 2015 separate research and development groups have been established for the MCQ examination, clinical examination and work-based program. The groups have embarked on evaluation and improvement projects resulting in important proposals for change particularly for the two latter forms of assessment.

Summary of Results: Work on the clinical examination has included the introduction of more rigorous statistical analysis; changes to scoring, recommended removal of compulsory stations and reconsideration of re-test provisions. The activity of the work-based program group has been informed by research on composite reliability of instruments and has focused on how to move to a programmatic approach to assessment.

Discussion: Examples of thinking across pathways have emerged. Multisource feedback (MSF) is the most important marker of poor performance in the work-based program. This has prompted consideration of whether a similar measure could be represented in the clinical examination pathway. Similarly feedback is strength of the work-based program and is now under discussion as a component of revised re-test provisions for the clinical examination.

Conclusion: There should be further thinking across the two pathways to determine other important practices and principles that could be applied in both pathways. Cross pathway discussion about blueprinting, provision of feedback and assessing professionalism are

profitable areas for further consideration and development.

Take Home Messages: Examination and work-based pathways in high stakes assessments are not mutually exclusive. Thinking across pathways can lead to improvements in each pathway.

Title: Teaching Quality Improvement/Patient Safety Assessment skills in an Internal Medicine Residency Program

Author: Soma Wali

Institute: University Of California, Los Angeles, United States

ABSTRACT:

Background: Quality improvement has become a staple of the residency training in the United States. Many programs have sought various ways of implementing a standard curriculum. However, key to all quality improvement projects is that they must foster enduring adult learning concepts that can be continued throughout residency and beyond.

Summary of Work: Implementation of a successful and robust Quality Improvement/Patient Safety curriculum in our Residency Program has led to significant improvement in patient safety and better outcome in a busy County Academic Medical Center. Participation and completion of a QI/Patient Safety project is a mandatory requirement for graduation.

Results: Our QI/Patient Safety Curriculum has enabled us to implement numerous successful projects/programs in the hospital which has helped reduce medication errors, decrease cost of care, reduced length of stay, improved communication between nursing and physicians, improved patient flow and cycle time in clinic to name a few.

Discussion: Similar to the way that training doctors has progressed, teaching performance and quality improvement assessment skills should be tailored to individual residency programs, keeping in mind that the process is important to fostering long term involvement in future QI projects.

Conclusion: Teaching Assessment skills in performing Quality Improvement and Patient Safety projects should become part of the cornerstone of every training program. The future generation of physicians should be the leaders in

QI/Patient Safety. Our QI/Patient Safety curriculum has led to creativity and inherent drive of our housestaff to improve patient safety, physician efficiency, and promote high value care.

Take Home Message: Participants will benefit from our experience in learning how to implement a successful Quality Improvement/ Patient Safety Curriculum/Projects. This session will be helpful to clerkship/ program directors, medical educators and hospital leaders to promote the culture of patient safety in order to improve patient outcome.

Title: Characteristics that define excellence in professionalism

Authors: Anthony Ali, Megan Anakin, Mike Tweed, Tim Wilkinson

Institute: University of Otago, Christchurch, New Zealand

ABSTRACT:

Background: Because professionalism is a multidimensional concept, several tools can be used to determine if students meet pass standards for professionalism. What has not been well defined, however, are the characteristics that define excellence in professionalism.

Summary of Work: We used qualitative methods including a general inductive approach and document analysis to synthesise data that included assessment records (n = 130) of undergraduate medical students in Years 4-6 who were awarded excellence in professionalism in 2010-14, interviews with teachers (n = 5), and the School's policy about student professionalism.

Summary of Results: Findings suggest that three characteristics that, when present at a higher level, may be used to define excellence in professionalism: improvement of oneself, helping others learn, and teamwork. Some characteristics required to confirm competence in professionalism (eg. honesty, punctuality) were less useful to inform excellence decisions.

Discussion: Identifying excellence in professionalism appears to require only three major indicators once a student has demonstrated basic competence. These findings can be used by staff to more clearly articulate the expectations for achieving excellence in professionalism to their students.

Conclusions: By identifying the characteristics of excellence in professionalism demonstrated by medical students, we have been able to establish assessment criteria for staff tasked with making judgements about excellence. Additionally, staff providing students with feedback about achieving excellence in professionalism now have explicit language to do so.

Take Home Messages: For undergraduate medical students, three characteristics appear to be useful to define excellence in professionalism and they involve demonstrating additional commitment to: improving oneself, helping others learn, and teamwork. Importantly, these three characteristics are in addition to achieving competence in all other aspects of professionalism.

Title: Longitudinal reflective experiences on professionalism during medical school

Authors: Angel Centeno, Soledad Campos, Cecilia Moore, Malena Sayal, Maria Paz Grebe

Institute: Faculty of Biomedical Sciences, Austral University, Argentina

ABSTRACT:

Reflection is an essential component of professionalism. It is a meaningful activity that shows competency and helps to advance in the professional career.

Summary: We describe the reflective ability of medical students at different levels during their training. Using 115 critical incidents related to medical professionalism, each student shared reflections on three selected significant situations during their junior and senior years, with their faculty in an unstructured personal encounter. The results were then analyzed and categorized using the Reflective Ability Rubric Scale.

Results: The selected situations show longitudinal personal changes in relation with reflection and the role of the student (observant to active- caring), time identification (past or recent experiences), and context where the incidents occurred (school or hospital). The professionalism attributes identified are related to communication and humanly care, recognition of the patient as a person, and feelings such as compassion and

empathy. Reflective ability scores increased as they advanced in their career, students became more proficient at reflecting, and they acquired more complexity in their analysis, accepted different perspectives, included evidences of learning and could transfer this learning to their own actions.

Discussion: Development of reflection increased with experience. It is required a deliberate effort to improve the development of reflection as a generic competence and this is improved during these faculty-student encounters.

Conclusions: Relationship between critical significant situations, reflection and professionalism is complex. Reflection is a competence that develops even over formal curricular designs.

Take Home Messages: Students can identify significant situations related to professionalism early in their career. Reflection is a transversal competency that can be developed and improved during their career. To reflect with the teacher may help to understand previous experiences and to disclose elements of the hidden curriculum.

Title: Measuring Professional Identity Formation Early in Medical School: Validity Evidence

Authors: Adina Kalet, Tavinder K. Ark, Lynn Buckvar-Keltz, Sandra Yingling, Verna Monson, Ruth Crowe

Institute: New York University School of Medicine, United States

ABSTRACT:

Background: The Professional Identity Essay (PIE) may enable an evidence-based approach to understand medical professional identity formation (PIF). Scored by an expert it produces a constructivist-developmental stage (8 possible levels). We assessed the validity of measuring baseline PIF as part of a professionalism curriculum and hypothesized correlates with certain admissions metrics.

Summary of Work: Entering medical students completed the 1) prompted Professional Identity Essay (PIE) and 2) Defining Issues Test (DIT2), a validated measure of moral reasoning. Admissions data was obtained for consenting students. A trained expert scored PIEs (Inter-rater ICC .83, 95%

CI [.57 - .96]). Students' reflections on the exercise were content-analyzed.

Summary of Results: PIE stage (N=129) correlated with DIT2 score ($\rho=.19$ ($p<.05$)), Multiple Mini Interview (MMI) stations assessing Conflict Resolution, $\rho=.26$ ($p<.05$) and Team Work, $\rho=.22$ ($p<.05$), structural equation modeling supports these relationships. Students had mostly positive reactions to the PIF curriculum (90%) which included receiving a PIE stage and DIT score report.

Discussion: Students with mixed negative reactions (28/130, 21%) reported confusion, concern about future training, or dissatisfaction with the gap between their self-perception and the results. Students who demonstrated an analytic approach to evaluating their feedback tended not to report negative reactions, even when they were surprised by the feedback.

Conclusions: A developmental evidence grounded measure of PIF is a feasible and acceptable part of a medical professionalism curriculum for entering medical students, correlates with a validated measure of moral reasoning and is predicted by admissions MMI stations that assess relevant non-cognitive constructs.

Take Home Messages: This approach is acceptable and intriguing to our students and evidence is growing that it is a valid approach to both structuring competency-based professionalism curricula and studying the development of an ethical medical professional identity.

Title: Assessment of cross cultural competencies in medical education: tools and challenges

Author: Marwa Schumann

Institute: Alexandria Faculty of Medicine, Egypt

ABSTRACT:

Background: The fact that patients' health is influenced by socio-cultural dimensions makes it mandatory to incorporate cross-cultural curricula into the medical education; Socio-cultural differences not only influence the patient-physician communication but also health outcomes. Physicians' migration has played a significant impact on the introducing cross-cultural competencies in medical curricula.

Summary of Work: This article provides a review of

approaches for assessing cross-cultural competencies among medical students and describes frameworks for student evaluation that focus on strategies to assess knowledge, skills and attitudes.

Summary of Results: Evaluating cross-cultural competencies is one of the most challenging evaluations in the medical education curriculum. It is classified according the three domains of knowledge, skills and attitudes and assessment tools include for example videotaped/audiotaped clinical encounters, OSCE, presentation of clinical cases, structured interviewing, self-awareness assessment and presentation of clinical cases.

Discussion: Although there are many different tools to assess the three domains of cross-cultural competencies there is still no guarantee to predict the students' clinical behavior with real patients. Furthermore, there are no standard formats due to social desirability bias; students may just choose socially acceptable and safe answers without expressing their true beliefs or opinions towards the different culture.

Conclusions: Evaluating cross-cultural competencies among medical student may improve the health outcomes; it is argued however, that evaluation of knowledge and facts about a certain culture can lead to over-simplification and reduction of the richness of culture into a stereotype image where students categorize groups of people rather than appreciate their diversity and individualism.

Take Home Messages: Despite the overcrowded medical curriculum and the overwhelming life style of the busy clinical teachers it is mandatory to include cross-cultural competencies in the undergraduate as well as post graduate medical education; an absolute necessity in a globalized world with increased diversity of patients and migration of doctors.

Title: An innovative approach for changing Medical Students culture regarding inter professional Collaboration (IPC) culture; A qualitative study

Authors: Mandana Shirazi, Parvin Pasalar, Maryam Karbasi

Institute: Tehran University of Medical Sciences and Karolinska Institute, Iran

ABSTRACT:

Background: There is a worldwide concern that the way of teaching of Inter Professional Education and collaboration (IPE and IPC) to the health care providers should be changed. However, despite of the IPE education in developed countries it has a challenge for shifting a culture of health care professionals to work together with other professions. The aim of this study is exploring undergraduate students' experiences who were involved in doing research through extracurricular program in IPE fields in terms of changing their attitude and culture towards IPC.

Summary of Work: Medical Education Research Group Experiences (MERGE) Association was established at Tehran University of Medical Sciences to teach extra-curricular research in medical education by emphasizing on IPE field since 2011 based on mentoring I model. It was qualitative study. Data was gathered by the use of Focus Group Discussion.

Summary of Results: This qualitative study was conducted via 17(7 men's and 9 women's) students' mentors who participated in the study. Interviews duration was 120 minutes. Main questions were: How they experience IPC during their research activity? Could research activity in the field of IPE change students' beliefs in this regard? It was content analysis study and the conventional content analysis was done.

Discussing: Relay on the analysis of the FGD 162 codes and four themes emerged: cultural competency (concepts: Changing the existing Culture- Forming attitude), Curriculum revision (concepts: Formal Curriculum- Informal curriculum -Hidden curriculum), Patient centeredness (concepts: Shared decision making- Shared goals-patient safety- empathy), Professionalism (Interpersonal Communication-

Interdisciplinary-Communication-Role modeling).

Conclusion: The Necessity and possibility of changing culture of IPC through running extracurricular informal research activities on medical students was emphasized.

Take Home Message: Applying extracurricular research course for students in the field of IPE and IPC may change their culture in this regards

Title: The Predictive Validity of the Sudanese Secondary School Certificate for Students of Faculty of Medicine, University of Khartoum

Author: Nisreen Daffa Alla

Institute: University of Khartoum, Sudan

ABSTRACT:

Background: Selection of students to be enrolled in medical colleges is crucial to medical education. There is emphasis on identifying which methods is the most reliable and valid. Admission to medical colleges in Sudan is based on student's achievement in secondary school leaving examinations.

Summary of the Work: The study aimed to validate the current selection policy of medical students. The study included the last 2 graduated batches of faculty of medicine, University of Khartoum. Student's Sudanese secondary school certificate score and marks of subjects and students' final examinations results for each year of study were analyzed.

Results: High score of entry predicted better performance in basic medical and clinical sciences. Good performance in English, Mathematics and Chemistry predicted better performance in the faculty. Students admitted in the private section and those attempted the Sudanese secondary school leaving examinations more than once performed less.

Discussion: The study findings were going with international studies.

From results of this study and another one in Saudi Arabia point toward the need to increase efforts in teaching English to the medical students before their entry to medical college as well as at the first year in the medical college.

Conclusions: The results supported the use of measures of educational achievements in student

selection. More tutoring and mentoring is needed for students admitted in the private section and those attempted secondary school leaving examinations more than once. Intensive courses in English for students are preferable in the early years of medical education.

Take Home Messages: There is a moderate correlation between measures of educational achievement and students' performance in medical college.

Increase efforts in teaching English to the first year students

Students with certain academic profile need additional mentorship and academic support.

Other added selection methods are needed.

Title: Who they are, how they fare, and where they go – selection process; medical student assessment; and location of junior doctor employment by regional post-graduate entry medical schools

Authors: Karen D'Souza, Jessica Beattie, David Garne, Scott Kitchener

Institute: School of Medicine, Deakin University, Australia

ABSTRACT:

Background: Demand for entry into Australian medical schools is highly competitive, despite increased places to train more rural doctors (hopefully stemming the maldistribution of the Australian medical workforce). However, some argue medical school selection criteria are biased towards graduates who are more inclined to practice in metropolitan locations.

Summary of Work: We investigated whether 'who they are' (student selection results, attributes) and 'how they fare' (in-course assessment performance) has any relationship on 'where they go' (junior doctor location) by correlating GAMSAT score, GPA, interview score, sex, age, previous degree, previous occupation, rurality, financial disadvantage and 'knowledge/theory' and clinical (OSCE) assessment.

Summary of Results: 104 graduates participated. Graduates with a rural background were more likely to: practice rurally ($p=0.005$); have a lower undergraduate GPA ($p=.017$); have lower

assessment results in 3 subjects; record financial disadvantage (61% vs 39.4%) but have no significant difference in their GAMSAT or MMI results compared to metropolitan graduates.

Discussion: We found differences in 'who they are', 'how they fare' and 'where they go'. Rural origin students are more likely to live out of home and potentially have a financial disadvantage. This explains their lower GPA on medical school entry.

Conclusions: Graduates of rural origin are more likely to become rural doctors yet medical school selection processes potentially disadvantage them. Medical schools need to respond to community needs and ensure processes select students from a variety of backgrounds, and use evidence-based practices to ensure selection is not biased towards metropolitan students.

Take Home Messages: Medical students from a rural background are more likely to become rural doctors yet they may be disadvantaged by medical school selection processes due to achieving a lower undergraduate GPA than metropolitan origin students. There remains much work to do on medical school selection to address the maldistribution of "where they go".

Title: Authors: Assessing the Relationship of Personality Traits with Job Satisfaction Level of Surgeons; A Correlational Study

Author: Muhammad Wajih Uddin Butt

Institute: Riphah International University, Islamabad, Pakistan

ABSTRACT:

Background: Personality and Personality traits play an important role in academic/professional performance and job satisfaction. Choosing a career that goes against the Personality of an individual may lead to job dissatisfaction and decreased performance. Research shows a decline in the job satisfaction level of surgeons in Pakistan. There is a need to identify the personality attributes of surgeons that can predict favorable job satisfaction.

Summary of Work: A Quantitative, Correlational study was carried out among the General Surgeons and Subspecialists of 8 different hospitals of Pakistan. 132 surgeons were selected by simple

random sampling. Big five inventory and Minnesota satisfaction questionnaire were used. Data collected from 105 surgeons was analyzed on SPSS.

Results: The Mean Job Satisfaction level was $3.691/5 \pm 0.584$. The means of the Likert score for the five personality variables using the BFI were; Agreeableness 4.00, Conscientiousness 3.75, Openness 3.54, Extraversion 3.37 and Neuroticism 2.52. Our study show a positive correlation between the personality traits of Agreeableness ($r=0.32$, $p\text{-value}=0.001$), Extraversion ($r=0.05$, $p\text{-value}=0.583$) and Conscientiousness ($r=0.03$, $p\text{-value}=0.719$) and a negative correlation between personality traits of Openness ($r= -0.14$, $p\text{-value}=0.143$) and Neuroticism ($r= -0.21$, $p\text{-value}=0.027$) with the job satisfaction level.

Discussion: Agreeableness correlates strongly with job satisfaction of surgeons in Pakistan. Openness correlates negatively and so does Neuroticism. The results are different from studies carried out internationally due to the social/cultural reasons and differences in working/training environment.

Conclusion: Personality plays a significant role in the job satisfaction of surgeons in practice. The Personality traits of Agreeableness correlates positively with Job satisfaction level of surgeons in Pakistan and should be looked for in aspiring surgeons.

Take Home Message: Personality assessment should be made part of the selection process. Results for personality and job satisfaction are different in this part of the world.

Title: A multi-method job analysis for the role of physician associates to inform selection and training

Authors: Rachel Driver, Kamila Hawthorne, Fiona Patterson, Jia Doulton

Institute: Work Psychology Group, United Kingdom

ABSTRACT:

Background: Physician associates (PAs) are healthcare professionals that “work to the medical model... under supervision” in multidisciplinary teams. Despite established presence internationally (e.g. USA), PA is an emerging profession in the UK. There is a need to conduct a job analysis to define knowledge and attributes

essential for the role.

Summary of Work: Following best practice, a multi-source, multi-method role analysis was undertaken. A literature review identified research on the role. Interviews ($n=16$) and focus groups ($n=24$) with key stakeholders identified behaviours comprising effective performance. Template analysis of data informed development of an attribute framework, validated by subject matter experts using a survey.

Results: The triangulated results of the qualitative (i.e., literature review, interviews, and focus groups) and quantitative (i.e. survey) analyses informed a framework of non-academic attributes necessary for effective performance as a PA. Details of the framework will be shared upon presentation.

Discussion: To the Authorss' knowledge, this study represents the first role analysis for the PA role. The framework identifies skills, attributes, and behaviours indicative of effective performance, and can be used to inform selection processes and educational interventions for prospective/trainee physician associates.

Conclusions: This framework can contribute significant value to development of evidence-based selection processes for students into PA education and training programmes, PA practitioner roles, and development of incumbent PAs. As a next step, this framework will be used to inform development of selection methods for a UK university.

Take Home Messages: Given the recent introduction of the PA role in a changing UK healthcare system and as an unregulated profession, clarifying key attributes necessary for effective performance is crucial. The results of this research support the value of role analysis in identifying requisite attributes to inform effective evidence-based selection processes.

Title: New method to select candidates in the residency program based on the multisource feedback process

Author: Ahmed Al Ansari

Institute: Bdf, Bahrain

ABSTRACT:

Introduction: The process of residency selection can be challenging to any residency program and

organizations. Multisource feedback (MSF) is a popular tool of assessment that relies on the evaluations of different groups of people, often including both physicians and non-physicians. MSF has been proven to be useful in identifying those individuals who have relatively weaker interpersonal skills, allowing organizations to select the best candidates among the applicants.

Methods: 46 interns participated in the residency selection program based on the MSF process, giving 100% response rate for both of our cohorts. Intern knowledge was assessed through multiple choice questions (MSQs), short Answer Questions (SAQs). And a survey base was used to assess their professionalism, communication and collaboration. Each participant was rated by four individuals from the following categories: physicians, nurses and fellow students. Cronbach's coefficient was used to determine the questionnaire's internal consistency and reliability. Factor analysis was used to support the instrument validity.

Results: The response rate for our multisource feedback questionnaire was 100%, including all 46 interns in the program; both cohorts comprised a total of 29 female and 17 male interns. The mean response time to complete each questionnaire was 3.6 minutes, which illustrates the feasibility of the survey. The knowledge-based test was assessed out of a total score of 70, with a score above 35 considered successful.

Discussion This study introduces a new method to select candidates for the residency program.

To our knowledge this is the first study to explore the use of the MSF process in selecting new applicants for residency programs.

Conclusion: This study found the MSF process to be feasible, reliable and valid for the evaluation of professionalism, communication skills and collaboration amongst new applicants for residency program.

Take Home Message: MSF is reliable process to select residency for their training.

Title: How do we assess communication skills in medical undergraduates?

Authors: Teresa Pawlikowska, Angelique Timmerman, Katrien Bombeke, Paul van Royen, Paul de Cates, Michael Davies, Kathleen van Royen, Samantha Johnson

Institute: RCSI, Ireland

ABSTRACT:

Background: Competence-based education using clinical problems has become increasingly relevant in medical training. This requires an approach to assessing integrated competencies in the consultation. The quality of assessment tools is crucial. We aimed to extend the examination of psychometric characteristics of instruments to the educational context of assessment in edumetric terms.

Summary of Work: Overarching inclusion criteria for this review were that articles must involve undergraduate medical students, and that an instrument must have been applied for communication skills assessment. We assessed study and tool characteristics, psychometric and edumetric features supporting a holistic approach to optimise student learning and constructing a curricular assessment programme.

Summary of Results: 8236 articles were retrieved from the search: 134 core articles with were 55 tools. Psychometric qualities identified: Content, construct, face, criterion and, concurrent validity, internal consistency, reproducibility, interpretability, inter-rater reliability, intra-judge reliability

Edumetric qualities: Authenticity, cognitive complexity, meaningfulness, fairness, transparency, educational consequences, directness, reproducibility, comparability, costs and efficiency.

Discussion: Papers focus on tool applications, few concern validation. A number of studies identified tools but did not have psychometrics or edumetrics. Challenges: to further define the theoretical model for assessment of consultation skills, to develop the application of edumetric criteria, and define which psychometric qualities are necessary.

Conclusions: Tools are mainly generic, with some

examples of context- specificity e.g. delivering bad news, and OSCE checklists. The assessment purpose is most often formative, sometimes also selective, or aimed at curriculum reform evaluation, and most often comparison of scores at group level.

Take Home Messages:

- Use the “best” existing tool for your context
- Don't invent more tools
- Train simulators/faculty in use of specific tools
- More evidence needed on psycho-metrics and especially edu-metrics of tools
- Compare them with other tools in educational research studies
- Report pass/fail student consequences
- Report costs!

Title: Do We Get What We Expect? Evaluating the implementation of communication skill curriculum in undergraduate program

Author: Umatul Khoiriyah

Institute: Islamic University of Indonesia, Indonesia

ABSTRACT:

Background: Communication are essential skills needed in doctors-patient relationship. Faculty of Medicine Islamic University of Indonesia (FM IUI) has included communication skills in its main curriculum. This curriculum was designed spirally in which there are specific targets in each year that would be basic for the following years. The aim of the study was to evaluate the implementation of communication skill curriculum in undergraduate program FM IUI.

Summary of Works: Mix method design was applied in this study. The data was collected from fourth year students quantitatively and qualitatively. The quantitative data was students' communication skill score in OSCE station, which had been conducted at the end of their first, second and third years(n=133). The qualitative data came from students' written feedback that was analyzed thematically.

Results: The path analysis indicated that student's communication skills in first year influenced their communication performance in second year that in turn impacted significantly on their

communication performance during the third year. The achievement of these skills during first year also influenced directly to their performance in third year. Students perceived that communication skill training taught them effectively how to communicate with patient. Communication skills trained in previous year became a basic to learn the new skills in the following years. However; they suggested that the case should be more varied and the simulated patient should be trained better.

Conclusions: The implementation of communication skills training was in line with the written curriculum. This implementation also showed that the communication curriculum had been designed effectively and provided many learning benefits for students. Supporting factors such as the variation of the cases and the quality of the simulated patients should be improved.

Take Home Message: The implementation of communication skill curriculum should be appropriate with the written curriculum and optimize the supporting factors.

Title: Level of agreement between Simulated Patients and Faculty”: An evaluation of Communication skills of postgraduate trainees during objective structured clinical examination at Aga Khan University medical college Karachi

Authors: Farheen Yousuf, Naveed Yousuf, Abid Ashar

Institute: Aga Khan Medical University, Pakistan

ABSTRACT:

Background: Ensuring competence in communication skills amongst trainees is essential in health professions education. Involving faculty members for the same is a challenge in Obstetrics and Gynecology (OBGYN) due to their clinical commitments. This study compares faculty and simulated patients (SPs) scores on communication skills of postgraduate trainees during formative OSCE.

Summary of Work: All thirty-two postgraduate trainees of obstetrics and gynecology (OBGYN) gave consent. Each trainee was assessed by two faculty members and one SP on communication skills at six stations using nine-point itemized rating-scale during formative obstetrics and

gynecology OSCE. The scores of the two faculty members and SPs were compared.

Results: Preliminary analysis showed strong correlation between the two faculty members (OBGYN faculty and non-OBGYN faculty: $r = 0.84$), between OBGYN faculty and SP ($r = 0.84$), and between non-OBGYN faculty and SP ($r = 0.85$). Further analysis including intra-class correlation coefficient and t-tests is under progress. The mean scores given by non-OBGYN faculty were higher than OBGYN faculty, however SP scores are significantly higher than both of them.

Discussion: In our study SP assessed communication and counseling skills as efficiently as faculty. The correlation among them (>0.8) that was higher than given in the literature (0.53-0.69).¹ SP scored higher in comparison to faculty that is consistent with previous studies.^{2,3}

Conclusion / Take Home Message: The SPs and non-OBGYN clinical faculty can assess communication and counseling skills of the candidate as effectively as OBGYN faculty in OBGYN formative OSCE. However their use in summative assessment needs further studies.

Key Words: Simulation, assessments, standardized patients, communication and counseling skills

Title: Assessing Communication using Role Players in the RCPsych OSCE

Authors: Kiran Grewal, Fauzan Palekar, Karla Pryce, Peter Bowie

Institute: Royal College of Psychiatrists, United Kingdom

ABSTRACT:

Using Simulated patients for rating candidate performances in OSCEs has several benefits, including reducing examiners' cognitive load, alleviating any candidate perception of being penalised in clinical knowledge domains if display poor communication/language skills, emphasises the importance of doctor-patient interactions, and open's up possibility of feedback from two perspectives.

Summary of Work: The Royal College of Psychiatrists' OSCE examinations are held twice a year and are assessed by lone examiners. Pilot

studies were conducted in January and September 2017, asking role players to assess candidates on their communication skills from the patient's perspective.

Summary of Results: Role player and examiner scores in the communication domain were significantly similar. Communication scores across different stations, as assessed by different role players, were also significantly similar, and more consistent than candidates total score between stations. Role players felt confident and capable in assessing candidates in this domain.

Discussion: The results of these pilot studies are encouraging, both in terms of results elicited and the logistics of role players completing their marksheets, collection of marksheets, data inputting and impact on the role player's performance. The role players felt more involved in the role, and examiners felt it was a worthwhile exercise. The results suggest this may be a viable way of assessing candidate communication scores.

Conclusions: The Royal College of Psychiatrists are keen to explore ways in which this scoring can be incorporated in to the assessment, how it would be most useful to candidates, and how it may be used in collaboration with examiners scores.

Take Home Messages: Role players are a useful and often overlooked resource in assessing certain skills in OSCEs, such as communication skills, and should be utilized where possible.

Title: Evaluation of the new National Postgraduate Year 1 Framework in Singapore

Authors: Adrian Quanlong Tan, Mabel Yap, Albert Ty, Thomas Tan

Institute: Ministry of Health, Singapore

ABSTRACT:

The National PGY1 framework was implemented by the Ministry of Health in 2014 to ensure that all pre-registered Postgraduate Year 1 medical trainees ("PGY1s") undergo structured training to acquire the competencies to be eligible for registration and meet the evolving healthcare needs of Singaporeans. An evaluation of the framework was undertaken in 2016 to identify strengths and areas for improvement to the framework.

Separate focus group discussions (“FGDs”) were conducted with the PGY1s and faculty who had undergone the new PGY1 framework. The study involved 151 PGY1s (over a 5-week period) and 131 faculty (over a 7-week period), randomly selected from different specialties across 7 training institutions. Feedback was sought on the framework, for the following key areas (i) the desired outcomes of the framework – crafted as Entrustable Professional Activities, (ii) the assessment tools, and (iii) faculty competence in supervisory skills.

Findings from the FGDs indicated that the new PGY1 framework had improved the training and assessment outcomes of the PGY1s. The framework has established clear competency-based standards for PGY1 training, and enabled a robust assessment process. However, there are still areas of improvement, in particular the need for faculty development and the quality of assessment tools.

To address the gaps, the Ministry commissioned a workgroup to revise the assessment tools to improve its validity, reliability, and usability. A faculty development plan is developed to provide formalised training on key education skills. More emphasis is placed on faculty competency and the proper use of assessment tools when auditing the training institutions.

Faculty competency remains a crucial link in ensuring quality training and assessment. To improve this area, there are plans to implement a national faculty development framework to outline key competencies required of appointment holders. The Ministry hopes to build up a culture of continuous quality improvement over time.

Title: Does the mandatory postgraduate UK surgical exam predict selection into specialty training?

Authors: Jennifer Cleland, Duncan Scrimageour, Amanda Lee, Clare Marx, Aileen McKinlay, Peter Brennen,

Institute: University of Aberdeen and Association for the Study of Medical Education (ASME), United Kingdom

ABSTRACT:

Background: Each year, around 6 000 doctors sit

the Intercollegiate Membership of the Royal College of Surgeons (MRCS) examination each year. Yet the predictive validity of the MRCS is unknown. To address this, we scrutinized data from nearly 1500 UK medical graduates who sat the MRCS then applied for surgical training.

Summary of Work: We assessed the relationship between MRCS (Parts A and B) and national selection interview score for general and vascular surgery training in the UK. Pearson correlation coefficients were used to examine the linear relationship between each assessment, linear regression to identify potential independent predictors of national selection score.

Summary of Results: 84% (1231/1458) of candidates were matched with MRCS data. There was a significant positive correlation between Part B MRCS and national selection score ($r=0.38$, $p<0.001$). 17% of variance in national selection first attempt score was explained by Part B MRCS score and number of attempts.

Discussion: This study, the first of its kind for MRCS, supports both MRCS validity and its predictive validity. The differences in scores identified indicated that candidates requiring more than two attempts at Part B MRCS would be unlikely to be offered a UK national training number in general or vascular surgery.

Conclusion: In conclusion, Part B MRCS score and number of attempts required to pass this mandatory exam have been found to be independent predictors of national selection score for general and vascular surgery in the UK.

Take Home Messages: In keeping with the wider literature, our results suggest that candidates who require multiple attempts at a postgraduate medical examination are more likely to struggle with other medical assessment processes (in this case, assessment via a selection process). This intelligence can inform surgical selection processes and surgical careers decision making.

Title: The composite score reliability for different assessment components for family medicine specialist certification examination in Japan

Authors: Hiroataka Onishi, Yoon Soo Park, Ryo Takayanagi, Yasuki Fujinuma

Institute: The University of Tokyo, Japan

ABSTRACT:

Background: The merger of three societies in Japan formed Japan Primary Care Association in 2010, which has established family medicine specialist certification system. As a High-stake test, we have carried out specialist certification examination. The aim is to comprehensively evaluate the examination system from the viewpoint of reliability.

Summary of Work: In 2017 the examination consisted of clinical skill assessment (CSA), portfolio assessment (PF), and multiple-choice questions (MCQ). CSA for 105 candidates was assessed by two physicians and a standardized patient (SP). PF has report and viva components. Composite score was discussed by three committee members and determined for overall reliability.

Summary of Results: The reliability indices of CSA by physicians, CSA by an SP, PF report, PF viva, and MCQ were 0.65, 0.60, 0.75, 0.86, and 0.33, respectively. When the weights of those were set 20%, 15%, 30%, 30%, and 5%, the reliability of the composite score was 0.87.

Discussion: To maintain the content validity of family medicine specialist certification examination, it is essential to include the breadth of knowledge with a certain depth and clinical skills with the patient's perspective. The Composite score showed that the overall reliability satisfies the condition as a high-stake test.

Conclusions: When assessing a wide range of abilities such as family medicine specialist exams, it is important to consider the balance of evaluation tools and to use the overall reliability indicator of a composite score.

Take Home Messages Even if some assessment tools may show low reliability, verification of overall reliability by composite score is useful for guaranteeing assessment reliability as a whole.

Title: The Clinical Supervisor Report, between objectivity and hidden curriculum

Authors: Caroline Hana, Maram Hassan, Hoda Khalifa, Noha ElDesouky

Institute: Alexandria Faculty of Medicine, Egypt

ABSTRACT:

Background: Workplace-based assessment

(WPBA) of residents' performance is rapidly evolving, yet in Alexandria Main University Hospital (AMUH), is still developing. We implemented the Clinical Supervisor Report (CSR) as a WPBA tool in the ICU at AMUH. CSR evaluates performance using 19 questions under four clusters; relationship, diagnostics, management and professionalism.

Summary: PGY1 and PGY3 residents of the ICU at AMUH were evaluated by 4 different clinical supervisors using CSR. ICU department was chosen because of high contact between residents and supervisors. Written feedback was provided to each resident, including his mean grade per question and compared to the group's mean.

Results: The evaluations of 19 residents along with their gender and PG level data were collected. The mean of the relationship domain in males' group (mean=4.25) was significantly higher than females' group (mean=3.96, $p=0.027$), however, no significant difference was found in diagnostics, management and professionalism parameters. Furthermore, poor interrater reliability was detected.

Discussion: Gender difference reported could be explained by the cultural context of the Egyptian conservative society where females might feel intimidated by the hidden curriculum in male dominated specialties. The poor interrater reliability is suggested to reflect lack of defined competencies' milestones for each PG level and the inadequate raters' training.

Conclusion: Despite the ease of CSR use, predefined rubrics should be set by department's experts regarding each domain of the tool for every PG level and raters should be adequately trained on evaluation and feedback. Revealing the hidden curriculum towards female residents is needed and remedies should be proposed for improvement.

Take Home Message: The WPBA is a great tool for learning and feedback when implemented in the proper context, by trained personnel and in a safe environment with preset standards to ensure equity and objectivity.

Title: Test Design for Fostering Learning, Enhancing Instruction and Curriculum Design: The Case of the Canadian Association of General Surgeons National Exam

Authors: Carlos Gomez Garibello, Maryam Wagner, Paola Fata, Brock Vair

Institute: McGill University, Canada

ABSTRACT:

Background: Traditionally, national examinations are used to understand learners' achievement at certain periods of training. These high-stakes tests do not necessarily provide meaningful information to learners and teachers. Formative information can provide detailed descriptions of learner performance and allow teachers to tailor instruction and curriculum.

Summary of Work: Residents in surgical programs across Canada completed a written examination comprising 143 questions grouped across 13 topics. The test was purposively designed using a blueprint that mapped foundational and core surgical knowledge and skills. Exam results from 453 students were analyzed to inform the quality of the exam and identify trends related to residents' achievement.

Summary of Results: Results suggest that performance on the exam improves with years of training, and discriminated between learners at different proficiency levels. Across some topics senior residents' performance could not be distinguished. In some areas, fourth year residents' performance was unexpectedly low. Analysis of items (classic test theory contrasted with PGY level) revealed patterns aligned with the complexity of the question.

Discussion: The exam provided formative information regarding residents' foundational and core knowledge and skills offering residents a way to document their competence and informing future learning. Program directors received meaningful information regarding specific strengths and areas for improvement across a variety of surgical fields.

Conclusions: Traditional conceptualization of formative assessment focus on oral feedback after clinical encounters. This research demonstrates that a multiple-choice questionnaire may be used

as a formative assessment strategy that yields meaningful information for learners and teachers.

Take Home Messages: Formative assessment can take different forms and it is not restricted to strategies that take place exclusively in clinical settings. Learners and teachers benefit from the information of low stakes assessments as a way to document learning and to identify curricular and instructional strengths and gaps in the development of competence.

Title: The complex issue of failure: How the NLE affects students and medical schools

Author: Rachmadya Hidayah

Institute: University of Leeds, United Kingdom

ABSTRACT:

Background: National licensing examination (NLE) has been implemented to quality assure medical graduates in Indonesia since 2007. The failure rate was often a concern for stake holders in Indonesia, which prompted questions on the consequences of the NLE. However, there was limited evidence on how failing the NLE affected medical schools and students.

Summary of Work: This work was part of a wider qualitative study to understand the consequences of the NLE. Interviews and focus groups were conducted with medical schools' representatives (vice dean/ programme director), students and teachers. The sampling selected medical schools based on regions, accreditation status, and ownership (public/ private), to capture characteristics of Indonesian context.

Summary of Results: The problem concerning failed students and remediation system were revealed as unintended consequences of the NLE. Failed students posed challenges for medical schools and teachers, which affected their policy and programmes. Students revealed the impact of failing the NLE as a burden, which affected their learning and personal well-being.

Discussion: Failing the NLE for students was strongly related to the burdening costs of the NLE. In a context of developing countries such as Indonesia, there was a different value of the expected outcome of the NLE than what Cilliers (2010) described. This context affected students'

learning behaviour and response to the failure.

Conclusion: The burden of failure is strongly related to the context of the NLE, especially its consequences on students. The impact of failure, both on students and medical schools, should be considered when the NLE and its resit system are designed.

Take Home Messages: This study recognised the complex and contextual issue regarding students failing the NLE and how it affected medical schools' policy and programme. The importance of context in the discourse of the NLE needs to be explored in future studies.

Title: Understanding candidate performance in a National pharmacy examination

Author: Damian Day

Institute: General Pharmaceutical Council, United Kingdom

ABSTRACT:

Background: The education and training for a pharmacist in Great Britain takes five years: an MPharm degree, a year of pre-registration (intern) training and a national examination. Since 2010 the General Pharmaceutical Council has run the national examination, building up a picture of consistently variable candidate performance. Variability is set in the context of an expansion in the GB pharmacy university sector.

Summary of Work: The GPhC undertook an analysis of 22319 candidate sitting 2010-2016, demonstrating variation in performance by age, ethnicity, sector of pharmacy training, country of training and university school of pharmacy attended. In 2017 this was supplemented with a statistical regression analysis of 10496 candidate sittings 2014-2016. It confirmed previous conclusions.

Summary of Results: Statistically significant factors affecting candidate performance positively are age (<26 years old is positive), training in hospital rather than community pharmacy, training in Scotland and Wales (where trainees are selected and training schemes are managed) and attending certain universities.

Discussion: Performance in the GPhC's national Registration Assessment is variable and variability

has increased in recent years. Characteristics indicative of success in the Registration Assessment are attending a selecting not recruiting university and securing a pre-registration training place by competitive entry, where support and exposure to other pharmacy professionals are characteristics of the training.

Conclusions: The GPhC's analyses of candidate performance have corroborated anecdotal evidence circulating in the GB pharmacy profession about the influence of various factors on candidate performance in the Registration Assessment and their experience of pre-registration training. National surveys of the training experience commissioned by the GPhC support this conclusion.

Take Home Messages: Voluntary or involuntary choices about initial pharmacy education and training influence the likelihood someone will pass the GPhC's Registration Assessment. Competitive selection at each stage of initial education and training is a significant factor in determining examination success.

Title: Developing a technology driven solution for self-directed learning and assessment in a simulated learning environment

Author: Rhena Delpert

Institute: University of Pretoria, South Africa

ABSTRACT:

Background: Skills mastery is pivotal to the attainment of exit level outcomes for the medical curriculum. Effective and affordable student training is a challenge with increasing student numbers within a constrained learning environment. A technology-driven solution was developed to provide a platform for authentic and autonomous skills acquisition.

Work to date: With the support of a dedicated IT team requirement specifications were set to create a dynamic learning environment with increased capacity for users, as well an asynchronous assessment process that would improve the reliability and scope of assessment of procedural skills.

Results: The solution entails integration between the learning management system, a video

management system, the access control security system and the university. The processes that are implicated relate to creating, capturing, storing and ubiquitously accessing online learning materials, as well as well as the video material of student procedural performance.

Discussion: Capability for voluntary video-guided practice, under surveillance, as well as voluntary self/peer evaluation of proficiency will exist. Assessment is initiated by the student, and can be performed asynchronously. Scoring is performed online and detailed feedback can be provided. Diagnostic and evaluative assessment will be enabled, and the scope, validity, and reliability will improve.

Conclusion: This solution will contribute to skills mastery, despite time and space constraints, lessen the administrative and teaching load, and allow the student to take control of their learning. Student portfolios can also be created and skills retention and on demand top-up training is made possible.

Take Home Message: Clinical training and assessment in hospitals will prove to be challenging in future. Therefore the employment of simulations, embedded in a technology-supported environment may alleviate this burden. Although the solution comes at high cost, down-stream cost-saving and increased patient safety is envisaged.

Title: UCAN: 12 years of experience in cooperative medical assessment

Authors: Winfried Kurtz, Konstantin Brass

Institute: Insitute for Communication and Assessment Research, Germany

ABSTRACT:

Background: In order to face the current challenges in medical assessment, institutions have to cooperate more intensively. To this end, the Umbrella Consortium for Assessment Networks (UCAN) was formed 12 years ago as a platform for inter-institutional, academic and non-profit cooperation. Today, 65 schools, boards and councils from seven countries work closely together to combine and optimize their resources, to share their knowledge, to engage in collaborative research and developing new methods and standards to establish quality-assured exams. In the presentation, the work

results of UCAN will be discussed to showcase the potential of collaboration in medical assessment.

Summary of Work: 2005 we developed a platform for Authoring, sharing and reviewing items and exams. Since 2007, exams can be delivered on computers or on scanner-readable sheets, evaluated with automated test-statistics and graded with customizable algorithms. 2010, a Simulated-Patients-Database was added to administer the simulated patients programs. Since 2012, OSCEs and MCQ exams can be delivered on tablets. Since 2013, a competency-based progress test is delivered online at 13 institutions.

Summary of Results: So far, 7,800 colleagues added more than 350,000 items to the common platform. Best practice examples for reliable exams, assessment contents and workflows are collected and implemented at the partner institutions. New formats for item and exam formats are continuously developed. So far, over 6 million students were successfully assessed in 20,000 exams.

Discussion: Especially with the upcoming conceptual, logistic and developmental challenges associated with the shift from knowledge to competency-based assessment, tie-ups are highly recommendable.

Conclusions: 12 years of cooperation in a collaborative network has proven to be an efficient way to face new challenges in medical assessment.

Take Home Message: Assessment institutions should work together in order to tackle common challenges. 12 years of successful cooperation at UCAN proves this approach to be both innovative and feasible.

Title: A Holistic Support Package Affords Sustained Performance Enhancement in Applied Medical Knowledge Testing to Struggling Undergraduate Medical Students

Authors: Christian Gray, Tony Finnigan, Alice Osborne, Nick Toms

Institute: Plymouth University Peninsula School of Medicine & Dentistry, United Kingdom

ABSTRACT:

Background: Despite meeting the required high admission standards required to study undergraduate medicine, a proportion of students

struggle to perform consistently to a satisfactory standard. Our frequent assessment, rapid remediation strategy enables the early detection of struggling students with timely support interventions.

Summary of Work: Our summative medical knowledge assessments (Progress Testing) are used to identify struggling students who then enter a structured, tiered system of remediation support packages.

We have analysed the effectiveness of our holistic top-level "Level 2 Remediation" package, offered to chronically struggling Yr1-4 medical students.

Results: Level 2 Remediation involves in-depth student interviews with a clinically-trained Remediation team member, exploring student wellbeing/possible health issues, academic study and personal organisational skills. Analysis exploring pre- and post-Level 2 Remediation intervention revealed a sustained and significant positive impact of level 2 Remediation on student Progress Test performance ($p < 0.001$, $n = 356$).

Discussion: A recommended student action plan is agreed and progress monitored subsequently by the student's Academic Tutor. An example of such intervention may include the changes to a student's independent study to include short study periods, interspersed with brief rest periods and spaced opportunities for information recall and self-testing.

Conclusion: Our frequent assessment/rapid remediation curriculum model using a holistic Level 2 remediation intervention, affords a sustained benefit to struggling medical students' in medical knowledge assessments.

Take Home Message: Our Holistic remediation model affords a significant and sustained enhancement of medical knowledge assessment performances to struggling students.

Title: "Seriously, we're making our grades?" – A preliminary study on using a liberalized assessment and grading scheme to promote engagement and accountability among health professions students in Guangdong, China

Authors: Patrick Tan, Tian Huang

Institute: Shantou-Oxford Clinical Research Unit (SOCRU), Shantou University Medical College,

China

ABSTRACT:

Background: Despite of the move towards student-centered learning, many Chinese medical schools still maintain teacher-centered grading systems. To change this paradigm and promote greater student engagement, we investigated the feasibility of allowing students enrolled in Principles and Practices in Medicine to determine their assessments and final grades using a liberalized scheme.

Summary of Work: After undergoing an assessment-driven course (semester 2, AY 2016-17), the final grades of 288 year-1 medical, nursing and dentistry students were computed using percentages they gave (early in the course) to their class activities, assignments, 2 performance tasks (PT), quizzes and final exam. Each assessment was appropriated 5-25% (except quizzes, lowest = 0%). A post-course survey was done.

Summary of Results: Basing grade appropriation on perceived strengths and interests, 77.4% of students gave the Patient Encounter with Reporting (PT-1) the biggest appropriation (20-25%) in their final grades, followed by the Video Project (PT-2, 69.4%), and assignments (47.2%). 65.3% completely excluded the quizzes. Students expressed responsibility for their choices and decisions.

Discussion: Adding authentic performance tasks (as assessments) and allowing students to decide on how they will fulfill course requirements could push them to become more engaged and accountable for their learning. Students may benefit more if teachers collaboratively negotiate with them on how to assess and grade their performance.

Conclusion: To promote greater student engagement and accountability in learning, teacher-centered grading systems should be replaced by liberalized assessment and grading schemes that provide students choices on how to showcase their best performance. This move will truly lead to a fuller implementation of student-centered learning in health professions schools.

Take Home Message: The move towards student-centered learning involves changes in instructional strategies and the scheme for assessing and

grading student performance. Such a scheme should allow students to choose and decide what is best for their learning.

Title: Fostering Professionalism Using Peer Assessment

Authors: Keith Wilson, Judy Buchanan

Institute: Dalhousie University, Canada

ABSTRACT:

Background: The development and maintenance of strong learning teams is a central tenet of the small group, case-based learning experience (which is in use in the pre-clerkship programme at Dalhousie University); and the act of both giving constructive feedback to peers and in turn receiving feedback from them is one way to increase the productivity of learning teams.

Summary of Work: Peer assessment was introduced during 2016 in a Med 1 Professional Competencies unit at the New Brunswick site of Dalhousie University's Faculty of Medicine to assist learners to develop skills at objectively looking at the professional behaviours of their peers in the context of critical thinking and tutorial engagement/team-functioning.

Summary of Results: Since the pilot, all students at distributed campuses at Dalhousie University participate in peer assessment twice during their first academic year. The contributions to the peer feedback process provided by each learner were reviewed and, where relevant, suggestions were provided on how to fine-tune their feedback in future.

Discussion The peer assessment narrative provided students with valuable feedback beyond that given by tutors. The short form used in our context was rapidly completed by students and was easily collated. The quality of the feedback improved throughout the year. Students and faculty alike welcomed the feedback.

Conclusions: Peer Assessment is effective in identifying and potentially correcting issues related to professionalism in an undergraduate medical curriculum.

Title: Development & Validation of a Novel Version of the TESTA Assessment Experience Questionnaire (AEQ) for Evaluation of Students' Experience of Assessment in Pre-Clinical/Early Stages of Modular Medicine Programmes

Authors: Suzanne Donnelly, Tansy Jessop

Institute: School of Medicine, University College Dublin, Ireland

ABSTRACT:

Programme level assessment in professional degree programmes such as Medicine must meet standards of accountability to public & regulators while also promoting student learning. Programme modularization poses a challenge for design and delivery of coherent assessment strategies. It confers dual risk of summative over-assessment and formative under-assessment and may additionally promote student reliance on module specific criteria rather than progressive internalization of programme level standards. The UK's TESTA [Transforming the Experience of Students through Assessment] consortium developed the generic AEQ to 'measure' students' experience of assessment across programmes. This is a widely utilized tool of established value in educational research and quality improvement, however was not developed for professional modular degree programmes nor yet validated for use in these. Our aim was to develop a version of AEQ and establish its validity for modularized medicine programmes via a collaborative partnership between the School of Medicine, UCD Dublin & the TESTA Authors.

Summary: Based on the most recent version of the generic AEQ [v4.1], we generated 45 potential items in six domains of assessment. Items were piloted in a sample of 200 students from stages 2, 3 and 4 of the UCD undergraduate medicine programme. Inspection of item correlation matrices and internal structure reliability indices identified six items which did not 'fit well' with the overall structure of the new instrument and these were deleted. Exploratory factor analysis with Varimax rotation was used to determine the final factor structure.

Results: We present a bespoke 39 item, 8 factor (subscale) instrument, the AEQ-ModMed and

establish its validity for use in pre-clinical/ early stages of modularized medicine programmes.

Discussion: Development and validation of AEQ-ModMed provides a tool for evaluation and improvement of modularised programmatic assessment and for research.

Take Home Message: AEQ-ModMed measures 8 domains of assessment in modular medicine programmes.

Title: Digital leap project – students' perceptions of summative online assessment pilot

Authors: Sanna Siirilä, Annina Rostila, Eero Mervaala, Marc Baumann, Jussi Merenmies, Eeva Pyörälä

Institute: University Of Helsinki, Finland

ABSTRACT:

Background: The Faculty of Medicine in Helsinki has since 2013 provided the students with iPads. The survey data from the iPad project showed that students were seldom assessed online and they wished for more electronic tests and examinations. In 2017, we started a Digital leap project focusing on online assessment.

Summary of Work: The Digital leap project pilots and develops versatile summative and formative online assessment. The project started in 2017 by focusing on summative assessment. We aimed at studying 1st year students' perceptions of summative online examinations where access to the Internet was blocked and compared three platforms (Abitti, DigiExam and Inspira).

Summary of results: The research data consist of the web-based questionnaires, interviews and observations of the 1st year students in 2017. Few students had experience of online summative assessment. Students' self-efficacy beliefs and perceptions of how the electronic assessment contributed to or hindered their learning was crucial in fostering online assessment.

Discussion: As modern technology is incorporated into teaching and learning in Helsinki, assessment should not lag behind. Students' perceptions and experiences of the digital platforms piloted for online summative assessment were important, since the shift from paper-based to electronic assessment could cause the students additional

stress or hinder their learning.

Conclusion: High quality assessment is integral to students' learning. The implementation of a summative online examination requires efficient technical and pedagogical support for teachers and administration. In this study, we recognized that the students needed support and training in becoming active learners whose knowledge was tested in this type of examination.

Take Home Message: When modern technology is incorporated into teaching and learning, also assessment practices call for updating. The development of summative online assessment requires piloting and support for the teachers and administration. The students need tailored support and training for online assessment.

Title: Design and Evaluation of an SJT and MMI for Selection into Pre-registration Pharmacy

Authors: Charlotte Flaxman, Fiona Patterson, Gail Fleming

Institute: Work Psychology Group, United Kingdom

ABSTRACT:

Recent changes internationally within the pharmacy profession have impacted skills required within healthcare roles. In the UK, the role of pharmacists (including pre-registration pharmacists) has evolved, to include provision of pharmaceutical care and responsibility for the treatment outcome of patients. Selection methods need to effectively assess this.

Across the UK, recruitment of Pre-registration pharmacists has recently established a national selection process focused on non-academic attributes and values. Following a multi-method role analysis, an SJT and MMI were developed to provide effective and robust assessment of the required attributes and select and allocate training places to applicants.

Initial psychometric analysis for the SJT and MMI demonstrated good levels of reliability and validity. These results will be presented, along with descriptive statistics, and candidate and assessor feedback.

Results from the development of the SJT and MMI demonstrate a robust and effective method for selecting Pre-registration pharmacists.

Importantly, this represents the first year of a standardised national selection process. Benefits, challenges and value of this national scheme, and recommendations for future design and delivery will be discussed.

This is the first study to explore the use of SJTs and MMIs for post-graduate selection in pharmacy. Initial results support the methods as effective and reliable for use in selection. Assessment information gathered at point of selection can also be used to inform educational interventions and future curriculum design.

With the role of pharmacy evolving to play a larger role in primary care, this research shows that utilising appropriate methods to select for non-academic attributes and values can ensure that the right people are entering Pre-registration pharmacist roles, to allow the pharmacy profession to deliver effective patient care.

Title: Will contextualised admissions to the study of medicine in the UK widen access to students from lower socioeconomic backgrounds? Evidence from the UK Medical Database

Authors: Paul Lambe, Martin Roberts, Thomas Gale, David Bristow

Institute: Plymouth University (PUPSMD), United Kingdom

ABSTRACT:

Background: Applicants' contextual background characteristics including individual-level, neighbourhood-level and school level measures of relative disadvantage, are increasingly used in selection to study medicine in the UK in order to widen access to students from lower socioeconomic classes (SEC). 'Contextualised admission' situates students' academic achievements within their socioeconomic and educational background and applicants are typically 'flagged' on multiple indicators. This study aimed to inform best practice in contextualised admission.

Methods: Regression of lower SEC against students' total score (range 0-6) on six contextual indicators: Black Minority Ethnic status (BME), parental Higher Education (HE), type of secondary school attended, receipt of a bursary, and

neighbourhood-level measures of economic deprivation and young persons' rate of participation in HE. The study population comprised 36,923 UK domiciled, non-graduate entrants to Standard Entry Programmes at UK medical schools from 2008-2014.

Results: BME students from areas of most deprivation whose parents had no HE were the most likely to have missing values on SEC. Contrary to expectations 72% of students from areas of the lowest rate of HE participation, 61% from areas of the most deprivation and 52% in receipt of bursaries were in higher SEC groups. Students' score on contextual indicators was positively associated with the likelihood of lower SEC, but discriminated poorly between the two SEC groups.

Discussion: When used in combination contextual indicators return conflicting information on SEC, undermining the validity of contextualised admissions decisions and widening access generally.

Conclusion: The contextual admission indicators examined in this study, whether used singly or in combination, are unlikely to widen access to students from lower socioeconomic backgrounds.

Take Home Message: Further research is required to evaluate which of a range of individual-level, neighbourhood-level and school-level measures of relative disadvantage combine to reliably facilitate widening access to the study of medicine.

Title: Using Situational Judgment Tests for Assessing Personal and Professional Development

Authors: Deborah O'Mara, Inam Haq, Jane Bleasel, Stuart Lane

Institute: Sydney Medical School, Australia

ABSTRACT:

Background: Situational Judgement Tests (SJTs) are useful in the selection of candidates for medical and health professional courses (1). Some medical school programs use SJT's to monitor or teach professionalism and professional behaviour (2). There is limited evidence on the impact and outcomes of using SJT's within medical programs.

Summary of Work: The Sydney Medical Program (SMP) implemented a rating SJT to assess

professional development of students in years 1 and 2. The 110 item SJT was scored using concordance and cohort methods. The predictiveness of the SJT for clinical and academic assessment will be investigated using regression late in 2017.

Summary of Results: No significant differences were found between Years 1 and 2 for either scoring methodology. A survey of students provided positive feedback, indicating a high acceptability. The results will be analysed further when other assessment data become available at the end of the year with an updated abstract.

Discussion: Implementing SJTs within a medical program requires faculty development. Our results indicate that concordance panels should include at least 25 experts to be reliable not 12-15 as sometimes stated in the literature. Although the cohort scoring model is convenient, it may not be useful for monitoring development over time.

Conclusions: SJTs provide a useful non-cognitive assessment of professionalism that can inform the development of students and the curriculum. Our evidence supports the claim that they measure a state rather than a trait. Given the intensive requirements of developing SJTs, a collaborative approach amongst medical and health professionals should be investigated.

Take Home Message: By developing faculty expertise in using SJTs within the curriculum for measuring professionalism, their potential usefulness in the selection of medical students can be evaluated from an evidence based perspective.

Title: Piloting a Situational Judgment Test as a student selection tool for undergraduate medical students

Author: Diantha Soemantri

Institute: Universitas Indonesia, Indonesia

ABSTRACT:

Background: Since 2015 a Situational Judgment Test (SJT) has been developed in Faculty of Medicine Universitas Indonesia (FMUI). Its validity has been studied through expert reviews and testing it to first and second year medical students. Despite promising results, the SJT has not been validated with actual candidates applying to FMUI.

Summary of Work: 128 SJT items, spread into 30

scenarios, have been selected based on the difficulty and discrimination indexes. The items cover three main domains, namely effective communication, noble professionalism and self-awareness. The items were then tested to 308 candidates of international class program. Data from 292 students was eligible for analysis.

Summary of Results: The mean scores of SJT was 407.75 (SD=31.61) out of 466. There were no significant differences among the mean scores of each grouping category (etc. gender, origin of high school, age). The reliability of the SJT was represented by Cronbach alpha value of .862.

Discussion: The pilot study has demonstrated the validity of SJT as a non-academic attributes measurement tool with a very good Cronbach alpha value. However, the test is still too easy for the candidates and this may lessen the ability of SJT to discriminate between high and low performing candidates.

Conclusions: The SJT has the potential to be a selection method, proven by its reliability. The future study should aim to establish its predictive validity by correlating SJT results with students' actual performance in the medical school. The quality of SJT items should also be improved to increase the discriminating power.

Take Home Message: Non-academic attributes of future undergraduate medical students can be assessed through the application of a validated SJT.

Title: Online Situational Judgement Tests (CASPer): Implications and perspectives of test security

Authors: Kelly Dore, Amanda Baskwill, Harold Reiter

Institute: McMaster University, Canada

ABSTRACT:

Background: As medical education becomes increasingly reliant on measures of non-academic qualities, implications for test integrity must be examined. The online admissions measure, CASPer, is a video-based situational judgement test (SJT) assessing applicants' personal/professional characteristics. This study evaluated score differences for applicants who have taken CASPer in subsequent years.

Summary of Work: In 2015, 2110 applicants wrote

CASPer once and then subsequently in 2016 to reapply to programs. This study wanted to determine the implications of repeat test-taking on CASPer scores.

Results: Applicants, whose CASPer scores were lowest, ranked in the bottom two quartiles in the first administration, increase in their average scores (Q1-0.438 and Q2-0.153) upon test re-take one-year later. While applicants whose CASPer scores ranked in the top two quartiles in initial test-taking, decrease average raw scores (Q3-0.08 and Q4-0.371).

Discussion: Increased CASPer scores occurred for those who scored in the bottom half quartile of initial test-taking. Applicants who did poorly the first time demonstrated an improvement with repeating testing. Those who did well the first time did not benefit from re-testing a second time, having their scores decrease on average.

Conclusions: CASPer upheld reliability against repeat test takers potentially trying to enhance scores. Applicants who previously took the CASPer admissions test did not significantly gain from repeated test-taking. The minimal practice effect was outlined in participants who benefitted from retesting when their scores were ranked in the bottom two quartiles initially.

Take Home Messages: When unproctured online testing is on the rise, potential academic dishonesty is crucial to guard against. This study demonstrated CASPer's ability to withstand potential advantages from repeat test taking since there are no significant differences between scores for applicants who have written CASPer more than once

Title: Simulation for High-Stakes Assessment: Are We There Yet?

Author: Mohammad Zaher

Institute: Brigham and Women's Hospital - Harvard Medical School, United States

ABSTRACT:

Background: Simulation modalities are increasingly utilized in medical education. While simulation is frequently used for formative assessment (81% of US medical schools and teaching hospitals), it is less prevalent (18-56%) in

high-stakes assessment (e.g., summative evaluation, certification, remediation).

Summary of Work: This is a scoping review of the literature. Following this presentation, participants should be able to: 1- Describe the advantages of simulation-based high-stakes assessment. 2- List emerging modalities of simulation for high-stakes assessment 3- Identify factors that can negatively affect the psychometric properties of simulation-based high-stakes assessment.

Results: Unlike traditional testing, simulation-based assessment enabled examinees to demonstrate their technical and non-technical skills. Emerging simulation modalities (e.g., high-fidelity simulation, hybrid simulation, and virtual reality) have been piloted with success. Several aspects should be considered when utilizing simulation in high-stakes assessment: 1- Learners and skills being assessed. 2- Scenario design. 3- Assessment instruments and score interpretation. 4- Assessor characteristics.

Discussion: While traditional testing (e.g., written and oral exams) quantifies competence in information gathering and interpretation (Miller's level 1-2), Simulation allows for the demonstration of competence (Miller's level 3) in an environment similar to clinical practice. Even with novel modalities of simulation, psychometric properties adequate for high-stakes testing were achieved through rigorous design and piloting

Conclusions and Take Home Messages: - Simulation-based testing can be advantageous for high-stakes assessment of particular skills.

- Careful planning and testing of simulation-based assessments results in psychometric properties that are comparable to established testing methods.

Title: How good is good enough? Does the Anghoff Method set the right standard?

Authors: Bill Isles, Pooshan Navathe

Institute: RACMA, Australia

ABSTRACT:

Australasian Medical Review Officers Association runs courses to credential medical practitioners as medical review officers within Australasia. Part of the credentialing process is an assessment of

competency completed with a mixture of MCQ and EMQ type questions. Over the last seven years AMROA has used the Anghoff methodology to set the appropriate standard for the examination. Because of the need to vary the examination question sets every year, AMROA put all the questions into a database and did a Anghoff standard-setting process on each of the questions. Once a set of questions is chosen from the database the Anghoff scores become available and can be totalled to provide a pass Mark for the entire question set. In a recent examination, when results were inconsistent with in-class assessments, a review of their results indicated an average of 61% correct answers in the poorer performing group assumed to be the "minimally competent participants" against whom the Anghoff assessment is made. The standard was set at an average Anghoff score of 67%, requiring 50 marks out of a maximum possible 75. If it were 61% the pass mark would be 45 instead of 50. Discussion with the other groups indicated that after setting an appropriate standard a certain percentage is applied as an error range to allow for inadequacies in the standard-setting process. After reviewing the examination for 2017 earlier examinations were reviewed and the "fit" of the pass mark with the results was studied. It was identified that in the last two year's examinations there had been a significant variation in the rates of candidates passing the examination.. Possible reasons can include quality of candidates, quality of teaching, inconsistencies in the Anghoff process etc. The Authorss discuss possible reasons for these problems and present some options to reduce them in the future.

Title: Standard Setting for the USMLE Step 2 Clinical Skills Exam: A Case Study

Authors: Peter Baldwin, Ann King, Melissa Margolis, Brian Clauser, Janet Mee

Institute: National Board of Medical Examiners United States

ABSTRACT:

Much of the extant standard setting research focuses on procedures like the Angoff method that are appropriate for multiple-choice items but may

be poorly matched to more complex item formats. This case study reports on an alternative approach to standard setting used for the USMLE Step 2 Clinical Skills Examination.

The examination has three separate components, each with its own cutscore. For each component, content experts viewed sample performances and judged to what extent each met the standard of providing safe and effective patient care. Although training was undertaken in groups, consensus was not expected for the final judgments.

Minimum passing scores (cutscores) for each component were estimated using logistic regression. Participants' model-data fit varied (although for the vast majority of panelists, misfit was not grave) and, likewise, so did their resultant cutscores; however, similar variability was observed across independent replications of the standard setting activity

Considerable effort was made in the selection of sample performances so that random and systematic errors in judgments could be minimized. The overall cutscores produced by this process were in line with expectations and provided useful information to guide the governance committee reviewing the standards.

A standard setting method was tailor-designed for a complex clinical skills exam. Several design choices including the criteria and method of selecting exam performance data, the modeling of panelists' judgments, and the approach to summarizing results across panelist were made that should be of general interest to examiners and instructors.

The most widely-used standard setting methods are optimized for the most widely-used types of exams—those comprising selected-response questions. These methods do not generalize to assessments that measure clinical skills using standardized patients. This paper describes the steps necessary to design and implement a standard setting method in this context.

Title: Variation in Depression Care: Using USPs to Explore Factors Affecting Resident Physicians' Management of Depression in Primary Care

Authors: Sondra Zabar, Kathleen Hanley, Amanda

Watsula-Morley, Jenna Goldstein, Lisa Altshuler, Heather Dumorne, Andrew Wallach, Barbara Porter, Adina Kalet, Colleen Gillespie

Institute: Nyu School of Medicine, United States

ABSTRACT:

Background: All physicians need to be skilled at diagnosing, treating, and managing depression. We designed an unannounced standard patient (USP) case to assess residents' clinical skills in addressing depression in the context of primary care, and explored how those skills are associated with residents' general clinical skills.

Summary of Work: The USP was a 22-year-old male presenting as a new clinic patient complaining of fatigue; he was trained to have a positive PHQ-2/PHQ-9 and family history of depression. A post-visit USP checklist evaluated competence in core clinical skills; a systematic chart review examined treatment. Evidence-based treatment was defined as prescribing an SSRI and/or providing a psychiatric referral; otherwise, scheduling follow-up for within 2 weeks.

Results: 129 residents saw the USP case. 85 residents (63%) treated appropriately: 8% prescribed an SSRI, 19% provided a psychiatric referral, 25% did both, 13% scheduled follow-up <2 weeks, and 35% gave a combination of these treatments. 44 residents (34%) did not treat appropriately: 26 (59%) prescribed a sleep aid and follow-up >2 weeks, and 18 (41%) provided no treatment and follow-up >2 weeks. 89% of patients who received appropriate treatment were administered a PHQ-9 compared to 50% who received inappropriate treatment. Residents who treated appropriately had significantly better communication, patient centeredness, and patient activation skills.

Discussion: Although almost all residents received relevant diagnostic information, just over half diagnosed depression. Appropriate treatment of depression was associated with systematic PHQ-9 screening and residents' competence in communication, patient centeredness, and patient activation skills.

Conclusions: We detected substantial variation of care for depression in our residents' continuity clinic. Our findings support the importance of

health system screening protocols and the inclusion of skills-based workshops in resident education and training.

Take Home Message: An effective curriculum in depression treatment and management is vital to improving patient health outcomes.

Title: Case base discussion as an assessment and learning tool in Fetomaternal fellowship at Aga Khan University Hospital: perspective of trainee and assessors

Authors: Ayesha Malik, Shazia Babar, Syeda Kausar, Shama Munim

Institute: Aga Khan University, Pakistan

ABSTRACT:

Background: There is an emergent trend for application of valid and reliable methods to assess doctor's performance in workplace. Case-based discussion (CbD) is a tool that allows the assessor to draw, identify and explore trainee's thinking and clinical reasoning. There is strong evidence that CbDs provide verification for trainee progression

Summary of Work: In consultation with educational experts assessment in Fetomaternal fellowship training in OBGYN Department at Aga Khan University was reviewed and introduced CBD in 2016

The aim was to explore how CbDs are perceived as assessment and learning tool by the trainee and assessor through a structured questionnaire.

Summary of Results: Both assessors and trainees expressed high levels of satisfaction with CbDs. Trainee regarded it effective allowing the discussion of complicated cases, encouraging critical thinking and clinical reasoning. Assessors found that CbDs provided evidence of learning and is useful to assess physician's diagnostic, investigative, and treatment skills.

Discussion: Appreciation of CbDs by both trainee and assessors in this study are comparable to the other studies conducted in UK which reported trainee's satisfaction. A review also reports trainee and assessor's satisfaction but inadequate training, different interpretation of the scoring scales and skills needed to give feedback were addressed.

Conclusion: This study demonstrates that both trainees and assessors appreciate the educational

value of CbDs and found it to be more useful than other assessment tools. There is need for assessors training in planning these CbDs and in providing feedback as it is central to the educational impact of assessment.

Take Home Message: CbDs for assessment of trainees are useful for all levels, challenging the advanced learners, and identifying those experiencing difficulties. CbDs provide an opportunity to assess skills including clinical reasoning, decision making, medical knowledge, and patient care. These results would be helpful for other medical schools for implementing WPBAs.

Title: A medical record peer review system for evaluating clinical competence of residents: criterion validity analysis by comparing the assessments of medical records with the assessments by program directors

Authors: Junichi Kameoka, Tomoya Okubo, Makoto Kikukawa, Daiki Kobayashi, Seiichi Ishii, Yutaka Kagaya

Institute: Center for Medical Education Tohoku Medical and Pharmaceutical University, Japan

ABSTRACT:

We have been developing a peer-review system that uses medical records to conduct outcome evaluations of medical education and established a high inter-rater reliability (TJEM 233:189, 2014). We evaluated criterion validity by investigating the correlation between the assessments in the current system and those by the program directors of residents.

We selected 65 patients who were seen by 13 senior residents in three hospitals. Five reviewers visited the hospitals independently and evaluated the medical records based on the previously established sheet. Independently, program directors of the senior residents evaluated their clinical performance using an evaluation sheet consisting of ten items.

The correlation coefficients between the scores of the assessments of medical records and the assessments by program directors were as follows: $r=0.509$ for history taking, $r=0.132$ for physical examination, $r=0.585$ for clinical reasoning, $r=-0.089$ for attitude towards patients, and $r=0.306$ for

overall assessment.

There have been many studies investigating the reliability of medical record evaluations, but studies that investigate criterion validity are lacking. To the best of our knowledge, this is the first report on criterion validity of medical record evaluations conducted by comparing medical record assessment with assessments completed by program directors.

We have established the criterion validity of major items (history taking, clinical reasoning, and overall assessment) in our medical record peer-review system, but the results also suggest that some items such as "physical examination" and "attitude towards patients" were difficult to evaluate by reading medical records.

The present study demonstrates that the clinical competence of residents can be measured by assessing medical records, which has advantages over other methods of evaluation in that it can evaluate patient outcomes, can measure the actual effort residents are making, and can perform a longitudinal assessment of medical education.

Title: Trainees' perceptions of newer supervised learning events in assessing clinical competency and identifying doctors in difficulty

Authors: Andrew Tomkins, Mumtaz Patel

Institute: Health Education England, United Kingdom

ABSTRACT:

Background: Supervised Learning Events (SLEs) were introduced to the UK postgraduate medical training e-portfolio in 2014. SLEs were designed to help improve feedback quality and encourage trainee engagement in the educational process. Trainees' perceptions of their usefulness in identifying training difficulty and assessing competency has not yet been established.

Summary of Work: An online, anonymous questionnaire was distributed to ST3+ medical specialty trainees. Questions were based around four themes: trainees' personal experiences of SLEs, usefulness of SLEs in identifying clinical competency, trainees in difficulty and in assessing professionalism. Qualitative (free text response) and quantitative (Likert rating scale) questions

were utilised.

Summary of Results: Twenty-five participants completed the survey. Multi-source feedback, Multiple-consultant report and case-based discussions were rated as most useful in assessing clinical competency. Limitations of SLEs in identifying trainees in difficulty included trainees 'masking' knowledge gaps and being selective when choosing assessors. Suggestions for improvement included both restructuring assessment forms and timing.

Discussion: Introduction of newer SLE forms such as the Multiple-Consultant report are viewed as providing more qualitative and triangulated feedback on trainee performance. A proportion of trainees identified limitations of assessments, with trainees in difficulty being able to meet curriculum requirements through both case and assessor selection.

Conclusions: Participants identified selected SLE forms as useful tools in assessing clinical competency and assisting in the identification of trainees in difficulty. The suggestions for assessment improvement may help further refine their ability in providing timely support for trainees who need this.

Take Home Messages: Supervised Learning Events appear to have both strengths and limitations in their assessment of medical trainee competency in the workplace and may be utilised to identify trainees in difficulty at an early stage.

Title: Using Performance- and Simulation-Based Assessment in Certifications' Exams for Future Anesthesiologists in Saudi Arabia

Authors: Abdulaziz Boker, Abeer Arab, Hesham Albabtain, Nezar Al Zughaihi, Ali Habib Al-Moumen
Institute: King Abdulaziz University, Saudi Arabia

ABSTRACT:

Background: Anesthesiology is faced with increasing public demands for greater patient safety standards. The demands are compounded with extreme shortages in anesthesiology workforce in the Kingdom of Saudi Arabia (KSA). The Saudi National Board of Anesthesiology (SNBA), needed to increase program output without comprising graduates' competence.

Summary of Work: We developed a framework for

new assessment tools to meet the demands. In addition to MCQ-written, in-training and final oral exams numerous methods were developed and introduced systematically and uniformly nationwide. The Performance- & Simulation-Based methods were inclusive of formative and summative assessment tools to ensure graduates' competence on certification.

Results: The formative tools included lists of year-by-year, level-specific anesthesiology-specific workplace-based assessments format. These included specific tables form of needed Mini-Cex, DOPS and CBD forms to be done on a monthly basis. The Summative tools were Simulation-Based Objective Structured Exam as part of the Final exit certification exam. Discussion

Development and integration of the developed tools was gradual over 4 years. The progressive use of these tools SNBA has resulted in increased confidence of trainees, program administrators and health regulators. Major obstacles were the need for extensive logistical and technical support for these changes compared to traditional methods.

Conclusions: Performance- & Simulation-Based assessment methods increases face and content validity of both formative and summative exams within anesthesiology national training program and exams in Saudi Arabia. Future direction, to study the long-term predicative reliability of these method will be undertaken.

Take Home Message: Assessment of the Anesthesiology trainee performance abilities during summative and formative tests increases exam validity and confidence in the program output.

Various workplace-based assessment tools can be used in national training programs.

Simulation-based OSCE provide additional dimensions to assess and certify future Anesthesiologists.

Title: Portfolio programs in medical education: what kind of assessments should be used to objectively assess learning success?

Authors: Helena Luginbuehl, Jan Taeymans, Buss Beatrice, Evert Zinzen, Slavko Rogan

Institute: Bern University of Applied Sciences,

Switzerland

ABSTRACT:

Background: Literature suggests portfolio is a powerful tool to promote learning success of medical students over time. However, student learning processes are mostly evaluated by questionnaires or interviews. The interpretation of such rather subjective assessment tools may lead to biased conclusions. Therefore, other, more objective assessment instruments seem to be needed.

Summary of Work: To answer the question "Which assessment instruments were implemented in studies using portfolio programs to objectively evaluate learning process over time in medical students?", a systematic review was conducted in the Cinahl, Cochrane, Embase and PubMed databases. The Cochrane risk of bias tool was used to assess procedural validity.

Results: Out of 254 eligible articles, four studies (medicine=3; midwifery=1) could be included. All portfolio studies showed a high risk of bias. Assessment tools used, were written tests (standard multiple-choice questions (MCQs)) and a clinical skills test (Objective Structured Clinical Examination (OSCE)).

Discussion: MCQs and OSCEs are considered valid instruments to assess the learning process of medicine and midwifery students, in line with the learning criteria: "knows", "knows how" and "shows how" (Miller's learning pyramid). However, are these tools applicable and should they be mandatory for medical and health profession education research?

Conclusion: Valid assessment tools in portfolio are, but rarely, used. To increase the objectivity of portfolio it is suggested that MCQs and OSCEs are included in addition to questionnaires or interviews. Future high-quality studies (RCTs) are recommended to test the external validity in other health care education settings (e.g. physiotherapy).

Take Home Message: The use of valid assessment tools in portfolio studies is scarce. It is suggested that future portfolio studies should implement MCQs and OSCEs to assess learning progress in health care students. To reduce bias, future studies should be registered a priori and implemented

using a randomized controlled trial design.

Title: Portfolio and students' competence development: a good match?

Authors: Andrea Oudkerk Pool, Marjan Govaerts, Debbie Jaarsma, Erik Driessen

Institute: Maastricht University Netherlands

ABSTRACT:

The validity of portfolio as an assessment instrument for students' competence relies on the assumption that students' competence development is documented in a faithful manner. However, previous research questions this assumption. This research aims to better understand to what extent portfolio is representative for students' competence development.

Summary of Work: During their internship, twelve students biweekly recorded an audio diary on experiences and feedback that had given them insight into their competence development. Subsequently, students reflected on their audio diary and portfolio during a semi-structured interview. The interviews and audio diaries were analyzed using the principles of constructivist grounded theory.

Results: Individual and context factors made it hard for students to recognize their competence development in their portfolio. Students' varying views about the portfolio goal and what kind of experiences are valuable to document impacted their feedback seeking behavior. Also, workplace logistics and portfolio structure hindered the documentation of valuable experiences.

Discussion: The results confirm the importance of taking students' considerations into account when implementing a competency-based portfolio. Furthermore, training students on how to use the portfolio, making the portfolio structure more flexible and changes in the students' learning environment can have a beneficial influence on the portfolio representativeness.

Conclusions: The study results have broadened our understanding of students' considerations when constructing their portfolio, which factors help and hinder, and what portfolio elements are representative for their development. Teachers, assessors and educational developers can use

these results to improve portfolio and workplace-based assessment.

Take Home Message: Portfolios designed to assess student's competence can only be implemented in a successful manner if students' development is documented in a faithful way. Therefore factors influencing portfolio representativeness should be taken into account.

Title: Introducing a longitudinal MD Portfolio: Challenges, Solutions & Transition

Authors: Zarrin Siddiqui, Tony Celenza

Institute: University of Western Australia, Australia

ABSTRACT:

Portfolio is a collection of student's work representing a selection of artefacts which demonstrates that learning has occurred over time. The main effects of portfolio use are reported as being; improvement in student knowledge and understanding, greater self-awareness and encouragement to reflection, and the ability to learn independently.

In 2014, a longitudinal e-portfolio was introduced in the new Postgraduate MD Course offered at the University of Western Australia using Pebble Pad interface. The Point-based MD Portfolio was developed around six themes Professional, Leader, Advocate, Clinician, Educator and Scholar (PLACES).

There were a number of activities referred to as "assets" that students can complete to accumulate points for the Portfolio. These were divided into three categories.

Category 1: Mandatory activities to be completed by all students in the prescribed semester/phase.

Category 2: Mandatory activities with flexible options so students can pick and choose

Category 3: Student driven activities with minimal or no supervision from the Faculty

In addition, reflective summaries allowed the faculty to follow the transition of students from one phase to another in the course and provide insight into the issues faced by the students.

This presentation will present the issues we faced and how they were resolved.

E-Portfolios provide a valuable opportunity for both faculty and students to keep a track of

academic and professional development. However they are resource intensive and their use require constant monitoring and guidelines to ensure fairness and equity among students.

E-Portfolios have the potential to become the main mode of assessment in years to come.

Title: Evaluating a 360-degree feedback framework using an e-Portfolio in Oral Health and Dentistry

Authors: Sarah Down, Ron Knevel, Priscilla Trahar

Institute: La Trobe University, Australia

ABSTRACT:

Background: An e-Portfolio was implemented to strengthen the academic-clinical interface and improve transparency in monitoring oral health and dentistry students' performance in different clinical environments. The purpose of this study was to evaluate if this approach reinforced student ownership of their learning and enhanced feedback culture.

Summary of Work: A unique e-Portfolio 360-degree feedback framework was developed to position oral health therapy and dental undergraduates, at La Trobe University, Australia, as active learners in campus-based activities, clinical placement and overseas field experiences. Designed to track students in real time, the academic and clinical environments were connected more effectively and efficiently.

Summary of Results: The ability to read feedback from clinical educators, and refer back to it at any point in time, was reported as beneficial to a students learning. Through enhanced (self) monitoring of progress, both staff and students were able to identify areas of concern at an earlier stage in their clinical training.

Discussion: The design of the e-Portfolio framework increased transparency in the student's attainment of competence over time. The results of this study imply that reinforcement of the feedback loop and its value in supporting active learning needs to be visible in all activities. This is achieved through explicit inclusion in curriculum design.

Conclusion: The multi-source feedback framework improved analysis of both individual and cohort

progress, allowed earlier identification of students potentially at risk and enhanced communication between clinical educators and academic team. Aligned with the formal tracking of competencies, this increased involvement with, and acceptance of, the e-Portfolio 360-degree feedback framework.

Take Home Message: A digital multi-source feedback framework embedded in curriculum supports and encourages students to engage in active learning.

Title: Quality of Feedback in Foundation Trainees – A comparison of trainee perceptions versus quality of actual feedback from Portfolio analysis

Authors: Steven Stenhoff, Mumtaz Patel

Institute: Pennine Acute NHS Trust, United Kingdom

ABSTRACT:

a. Feedback is a crucial component of medical practice and when done well can improve performance and drive learning. Few studies have evaluated quality of feedback from workplace based assessments but no studies have looked at a direct comparison between quality of written feedback and trainee perceptions of that feedback.

b. Anonymised Electronic-portfolios of 60 Foundation Doctors (FDs) from 4 large teaching hospitals in North-West England were evaluated. A random sample of 3 supervised learning events (SLEs) and 2 Supervisor reports (SRs) per FD was selected (total 300). Quality of feedback was evaluated using an established framework with 3 domains: competence, progression and action plans.¹ Each domain was scored 0-2 (0=improvement required; 1 satisfactory; 2 excellent). Free-text comments were evaluated for key themes. Trainee perceptions were gathered using a questionnaire (60 FD) and 4 focus groups (12-14 FDs) in each hospital.

c. Overall quality of feedback was low (SR mean 1.68, SLE mean 1.52).

77.2% of SLEs and 80.8% of SRs overall scored 2 or less from maximum score of 6.

Only 32.6% of FDs felt feedback was of good quality.

Thematic Analysis of free-text comments revealed

feedback was often self-generated, lacked specificity and was not constructive.

d. There is an emerging “send me a form” culture driven by lack of time and the need to get forms done to “tick the box” which is contributing to the low-quality feedback. Overall the feedback remains generic and non-specific.

e. The quality of feedback in FDs portfolios aligns with FDs perceptions. Feedback is low quality and FDs perceive their feedback to be poor. The main perceived barrier is time and lack of supervisor engagement with the feedback process. Further education is required to improve the quality of feedback.

Title: Using item analysis to deliver targeted feedback to trainees on OSCE performance

Authors: Susanna Martin, Joshua Lloyd

Institute: University of Saskatchewan, Canada

ABSTRACT:

Background: Best practices suggest that students be provided with formative feedback on their performance on assessments, including OSCEs, yet reluctance to release station checklists remains. Recent implementation of computer analysis of student performance checklists led to a unique opportunity to offer timely and useful feedback without compromising station integrity.

Summary of Work: A framework was developed, subdividing CanMEDS competencies into smaller, usable domains, into which each OSCE checklist item could be categorized. The OSCE examination was subsequently coded; data combined across stations to develop an individual summary report for each trainee, detailing their score in each category, and comparing their performance to the overall class average. This was accompanied by a written document with suggestions of how to improve performance in each category.

Results: Student feedback on the utility of their individual reports was positive. Not all categories were present in each OSCE, and those categories with lower item numbers were less reliable. The process also highlighted areas of more generalized class performance deficits, which were fed back to instructors and students, and led to a change in the blueprinting of subsequent OSCEs.

Discussion: In addition to valuable individual student feedback, implementation across multiple OSCEs administered throughout training enabled the provision of the overall performance summaries to both current and successive course directors, aiding in evaluation of program delivery and enabling them to feed forwards implications to each subsequent cohort.

Conclusions: Coding of OSCE performance checklists provided the opportunity to provide students with individualized performance feedback. Important information regarding strengths and weaknesses of current program delivery were also highlighted, enabling ongoing modifications to individual teaching sessions and overall curriculum.

Take Home Message: Useful feedback on individual OSCE performance can be provided to trainees without compromising station information. It can further be used to inform ongoing program evaluation and curricular redesign.

Title: To ISBAR or Not to ISBAR? The power of comprehensive feedback to formative assessment to assist Year 1 medical students master the Clinical Handover skill

Authors: Liz Fitzmaurice, Mark Frances, Liz Fitzmaurice

Institute: Griffith University School of Medicine, Australia

ABSTRACT:

Background: Clinical handover is described as “the transfer of professional responsibility and accountability for some or all aspects of care for a patient (1). In Queensland, Australia, communication failure was the leading contributing factor (27%) to death or permanent harm to a patient (12). Yet, there is minimal research considering the education of clinical handover to medical students (6, 31).

Summary: A randomised controlled trial was undertaken involving first and second year MD students. Following the pre-trial written ISBAR assessment, the Intervention group, completed 4 further ISBAR-written handovers receiving comprehensive standardised, individualised

feedback each time. Five weeks later, both groups of students undertook a Post-trial written iSBAR assessment.

Results: In the pre-trial assessment all students scored an average of 48.23%. However, the intervention group showed significant improvement of 11.54% (P=0.001) in the post-trial assessment.

Additionally, significantly improved proficiency was gained by the second formative assessment after the provision of comprehensive standardised individualised feedback on the first submission.

Discussion: An improvement of 11.54% in mean ISBAR-style handover performance was observed through the use of comprehensive, standardised, individualised feedback on formative ISBAR written handovers. Additionally, for the Intervention group, it appears that a sizeable improvement in ISBAR proficiency is possible following a single attempted submission and its corresponding feedback.

Conclusion: It is crucial graduating medical students have mastered this crucial skill. Teaching of the ISBAR Clinical Handover tool can be effectively introduced into the Year 1 curriculum of a post graduate MD programme, therefore ensuring medical students embark on their clinical years with competence in performing a clinical handover.

Take Home Message: It is both possible and economically feasible to introduce the skill of clinical handover to first year medical students. One comprehensive systematic, individualised feedback on a formative assessment is sufficient to ensure improvement in this crucial skill.

Title: Asking for less and getting more: The Impact of Broadening a Rater's Focus in Formative Assessment

Authors: Walter Tavares, Alex Sadowski, Keen Eva

Institute: University of Toronto, Wilson Centre, Canada

ABSTRACT:

Background: Recent research suggests there may be unintended consequences of broadening the competencies across which health professional trainees are assessed. The current study was

conducted to determine if similar issues arise in the formative guidance assessors provide to trainees and to test whether sequential collection of competency-specific assessment can overcome the dangers inherent in simultaneous collection.

Summary of Work: A randomized between-subjects experimental design in which observers' focus was manipulated. In the Simultaneous condition, participants were asked to rate four unscripted clinical performances using a six-dimension global rating scale and to provide feedback. In the Sequential conditions, participants were asked to rate only two of the six dimensions. To mimic what would happen in real practice, participants from each of these conditions were randomly merged to create a full "score" and set of feedback statements for each candidate.

Results: Eighty-seven raters completed the study; 23 in the Simultaneous condition and 21 or 22 for each pair of dimensions in the Sequential conditions. After randomly merging participants, we were left with 21 "raters" in the Sequential condition. Compared to the Sequential condition, participants in Simultaneous condition demonstrated: reductions in the amount of unique feedback provided; increased likelihood of ignoring some dimensions of performance; lessened variety of feedback; and, reduced reliability.

Discussion and Conclusions: Sequential or distributed assessment strategies in which raters are asked to focus on less may provide more effective assessment by overcoming the unintended consequences inherent in asking raters to spread their attention thinly over many dimensions of competence.

Take Home Message: In formative assessment, to improve feedback quality, consider reducing how much raters must consider simultaneously. Having raters target some dimensions of performance and then assembling across raters until constructs are represented, may be an effective formative assessment strategy.

Title: Student perspective of classroom response systems used individually and after peer discussion in diagnostic imaging

Author: Wencke Du Plessis

Institute: Rusvm Saint Kitts and Nevis

ABSTRACT:

Background: Literature suggests many benefits of using classroom response systems (CRS), such as higher attendance, better preparation for class, increased enthusiasm, attentiveness, participation and confidence in learning. There are numerous ways to employ CRS to influence classroom achievement, one being answer design such as answering individually or after peer discussion.

Summary of work: This study investigated student perspectives regarding individual CRS usage, followed by peer discussion in a 5th semester Diagnostic Imaging class. Instructor feedback (correct answer with explanation and histogram of student responses) was given after answering the question the second time only. Use of CRS was voluntary.

Results: The majority of students rated themselves as feeling confident about their diagnostic imaging knowledge and fully agreed that usage of CRS questions were beneficial during lecture ($\geq 75\%$ versus $\leq 10\%$ strongly disagreed). The majority of students ($> 50\%$) indicated "individually, followed by peer" as their preferred format overall

Discussion: Often CRS questions are linked with attendance grades to improve attendance, however attendance and answering the clicker questions was absolutely voluntarily in this study. "Individually, followed by peer" was not only students' preferred format overall, but also concerning specific aspects, such as confidence, justification, active learning, attentiveness and problem solving.

Conclusions: One concern of using CRS in lectures is the time factor, hence particularly asking the same question twice had to be weighed up carefully. This questionnaire strongly supports that "individually, followed by peer" was regarded beneficial by the majority of the students.

Take Home Message: Innovative use of already existing technology is beneficial. Part of

assessment should not only consider answering whether students answered correctly, but also how confident students are, whether they are able to justify their answer and whether it helps them concerning problem solving.

Title: Assessing learners after completion of virtual patient cases aimed to train against medical error

Authors: Viktor Riklefs, Alma Muratova, Sholpan Kaliyeva, Gulmira Abakassova

Institute: Karaganda State Medical University, Kazakhstan

ABSTRACT:

a. Our university leads consortium for training against medical error co-funded by Erasmus+ programme. Students learn how to encounter medical errors in PBL sessions with virtual patients. The question is whether they really learn how to deal with medical error and what assessment should be used to test it.

b. We administered 6 paediatric cases to 48 students randomly assigned to 2 groups of branched and linear versions of cases. After each case, we surveyed them on perceived ability, experience and emotions. Students were also given 54 MCQs (18 case-related, 18 disease-related, 18 on different disease) half-year after exposure to cases.

c. Emotional reaction to linear cases faded out with time, in branched cases it was unpredictable. Students gained more experience with branched cases, but less ability. Retained case-related knowledge was higher for branched cases; disease-related knowledge was the same but still higher than in control group. However, skills did not show transferability to different disease.

d. In our opinion, the unpredictable results for branched cases were received due to different experience that students gain when selecting different options. For example, one group of students could have 'killed' the baby while the other made the baby well. Six cases were also not enough to develop transferrable skill.

e. When assessing students on transferrable skill after using branched virtual patients to teach content, the assessment needs to consider the

options that students selected during training and the scope of experience during training. Patient safety skills seem to transfer, but not to different disease.

f. It is possible to teach patient safety skills and medical error management through virtual patient cases. However, assessing the results may be difficult, since many factors do play the role.

Title: An Analysis of the Incorporation of Resource Stewardship Curricula into the University of Manitoba Undergraduate Medical Education Program

Authors: Ming-Ka Chan, Youn Tae Chung, Andrea Kulyk, Eric Bohm

Institute: Department of Pediatrics & Child Health, University of Manitoba, Canada

ABSTRACT:

Background: The STARS (Students and Trainees Advocating for Resource Stewardship) campaign, initiated by Choosing Wisely Canada (CWC), aims to reduce the behaviors leading to unnecessary care in Canada. As part of the local STARS initiatives, the Authors incorporated principles of resource stewardship and CWC recommendations into the Undergraduate Medical Education (UGME) pre-clerkship curriculum at the University of Manitoba and then analyzed the impact of these curricular changes on students.

Summary of Work: The Authors reviewed the UGME pre-clerkship curriculum to determine the extent of resource stewardship content, identified opportunities to enhance training, and developed appropriate learning materials that focused on the principles of resource stewardship and CWC recommendations. A pre-survey was then administered to first and second year medical students to determine their background knowledge and attitude towards resource stewardship followed by a post survey to assess the possible impact of the changes to the curriculum.

Results: Overall, 120 choosing Wisely Canada recommendations were integrated throughout the pre-clerkship curriculum. A total of 133 students responded to the pre-survey and 131 students responded to the post-survey (overall response rate 59.1% and 58.7%, respectively). There was a

46.3% increase in awareness of the CWC campaign, 5.0% increase in students feeling comfortable in discussing unnecessary testing with patients, and 16.1% increase in identifying appropriate motivations for ordering tests.

Discussion and Conclusion: This study demonstrates that enhancement of the resource stewardship training in the pre-clerkship curriculum had a positive effect on students' attitude and awareness of CWC recommendations and resource stewardship principles. Further study of the long term impact of such curricular changes on the students' knowledge, attitudes and behaviors is needed.

Take Home message: Incorporation of resource stewardship principles and CWC recommendations into the UGME pre-clerkship curriculum is one strategy to reduce the attitudes and behaviors leading to unnecessary care.

Title: Impact of the Substance Abuse Research and Education Training (SARET) Program: Stimulating Medical, Dental, Nursing and Social Work Students to Pursue Careers in Substance Use Research

Authors: Kathleen Hanley, Sewit Bereket, Ellen Tuchman, Madeline Naegle, Marc Gourevitch

Institute: NYU School of Medicine, United States

ABSTRACT:

Background: We developed and implemented the Substance Abuse Research Education and Training (SARET) program for medical, dental, nursing, and social work (SW) students to address the dearth of health professionals pursuing research and careers in substance use disorders (SUD). SARET has two main components:

- 1) A novel online curriculum addressing core SUD research topics, to reach a large number of students.
- 2) A mentored summer research experience for in-depth exposure.

Methods: Modules were integrated into the curricula of the four schools, and of five partnering health professional schools. We assessed the number of web modules completed and their impact on students' interest in SUD research. We also assessed the impact of the mentorship

experience on participants' and the impact on their attitudes and early career trajectories, including current involvement in SUD research.

Results: Since 2008, over 15,000 modules have been completed by approximately 7,000 individuals. In addition to integration of the modules into curricula at the lead institution, all five health-professional partner schools integrated at least one module and approximately 4,000 modules were completed by individuals at other institutions. From 2008-2015, 76 students have completed summer mentorships; and 8 students have completed year-long mentorships; 13 have published in SUD-related journals, 18 have presented at national conferences, and 3 are actively engaged in SUD-related research. Mentorship participants reported positive impact on their attitudes towards SUD-related clinical care, research, and inter-professional collaboration; in some cases, it led to changes in their career plans.

Conclusions: A modular curriculum that stimulates clinical and research interest in SUD can be successfully integrated, into medical, dental, nursing, and SW curricula. The SARET program of mentored research participation led to early research successes and appears to have influenced career choice among participants. Longer-term follow-up will enable us to assess the more distal career impact of the program.

Title: Collaborative learning in clinical education

Authors: Esmat Nouhi, Abbas Abbaszadeh

Institute: Kerman University of Medical Sciences, Iran

ABSTRACT:

Background: Collaborative learning promotes cooperative activities of students in clinical situations.

Purpose: The objective is to define the experiences of nursing students in collaborative learning in clinical training.

Method: During 2013, 25 nursing undergraduates from Kerman University of medical sciences participated in in-depth semi-structured interviews. Then texts of the interviews were applied exactly and data were analyzed, extracted

and classified by content analysis

Results: Based on findings, collaborative learning help students to be successful in clinical affairs. In addition to development of learning it helps students to cope with their assignments well.

The emerged themes were: 1. Support group and friendship 2. Evidence-based clinical reasoning 3. Encouragement of clinical trainers 4. Clinical tasks sharing 5. Group capabilities.

Conclusion: the key of the creation of positive clinical experiences is cooperative activities. The result shows the lack of proper training programs. So the teachers should support appropriate educational programs such as collaborative learning.

Key Words: learning, nursing, students, qualitative study

Title: Technology Enhanced Learning (TEL) is an important part of the undergraduate medical education: A cohort study of final year medical students using a case-based mobile learning app

Authors: Kaveeta Bedi, Thomas Kurka, Tim R Vincent, Juliet Wright, David C Howlett

Institute: Brighton and Sussex Medical School, United Kingdom

ABSTRACT:

a. The current generation of students was described as 'digital natives'/'net generation'. Blended learning has been shown to enhance knowledge acquisition, and improve clinical and exam competencies in undergraduate medical students. With the increase of digital learning resources in medical education, it is important to ensure its relevance and accuracy.

b. We present an evaluation of our case-based e-learning module which has been available to the final year medical students for the past 10 years and recently updated as a mobile app/website. The resource contains over 660 case-based clinical scenarios, working through over 3,500 questions in all medical/surgical/therapeutic specialties.

c. The resources used most for learning were reported: Internet (71.8%)>mobile apps (26.3%)>e-learning exam questions (24.4%)>personal notes (22.1%)>textbooks (21.8%)>lecture sides (10%)>e-books (5.3%).

98.7% improved understanding of clinical conditions using our module, and 92.8% felt better prepared for their future role as doctors. 92.8% reported e-learning to be essential for their studies.

d. Medical students expressed importance of e-learning resources for knowledge acquisition, and commercial e-learning was ranked as an essential part of their studies. The main educational resources for medical students were the Internet, mobile apps and e-learning practice exam questions. All medical schools should engage in incorporating these into their curriculum.

e. Almost all of the students found our case-based e-learning module to be a useful new platform for learning, ranking it highly in the quality of clinical teaching, exam revision and preparation for their future jobs as doctors. Over 90% preferred our module over the other commercially available exam revision resources.

f. The three main criteria of a good e-learning tool are the correct level of difficulty, broad range of topics covering all main specialties, and a high-quality feedback. Medical faculty-produced high-quality e-learning clinical resources are an essential part of the medical undergraduate education and should be available at all medical schools.

Title: Situated Competence: The holistic assessment of competence

Author: Marcia Docherty

Institute: Camosun College, Canada

ABSTRACT:

Background: Current assessment practices typically bring expert practitioners together to determine competencies required by students to enter a community of practice. Critics of this approach argue that detailed descriptions of occupational tasks can be seen as trivializing competent professional performance because they do not recognize the coordination of these tasks and the complexity of the environment. This research paper examines how practitioners make sense of competence in context.

Summary of Work: A single, embedded case study research design was used to examine competence of emergency medicine residents in an emergency

department. Data was collected across an interdisciplinary team using observations, interviews, and document review. Data was triangulated and analysed for themes.

Results: Nine themes of competence were identified. In order of frequency, the themes were basic medical skills, advanced medical skills, personal presentation, clinical teaching, managing the emergency department, independent and responsible, procedural competence, patient care skills, and manages limitations.

Discussion: Practitioner understanding of competence is consistent across the interdisciplinary team. Depending on the location of the observer, different themes became more or less salient. These themes were cross-referenced against the competency framework for emergency medicine (CanMEDS) and aligned with 73 of the 165 competency statements.

Conclusions: In practice, competency is assessed by practitioners using a contrasting organizational structure than the competency framework. The interdisciplinary team can play a role in assessing residents.

Take Home Message: Competency identification and assessment would benefit from in-the-field observation and analysis of performance.

Title: Comprehensive OSCEs as Opportunities for Faculty to Make Entrustment Judgments: How are Standardized Patient Assessments of Performance Associated with Faculty Judgments of “Entrustability”?

Authors: Colleen Gillespie, Kathleen Hanley, Jasmine Ross, Natasha Rastogi, Jennifer Adams, Sondra Zabar

Institute: New York University, School of Medicine, United States

ABSTRACT:

Background: Entrustable Professional Activities and Milestones are judgments made on the basis of many formative assessments. However, obtaining such assessments depends on having sufficient observations across residents. OSCEs provide controlled conditions for assessment, but have been generally used to give feedback on specific skills. We explore how expert faculty judge the

“entrustability” of residents based on OSCE observations and how these entrustments relate to SP assessments of skills.

Summary of Work: In an 11-case OSCE for primary care residents (n=25; PGY1-3), SPs rated performance using a behaviorally-anchored checklist (not done, partly done, well done). Summary scores were calculated as % items rated well done. In 9 cases, faculty observers judged on a 4-point scale how much supervision the resident would need in actual practice to handle the case challenges.

Results: Mean entrustment rating was 2.46 (SD .37). Associations between clinical skills assessments and mean faculty entrustment rating included both negative (communication sub-domain of relationship development $r=-.25$, $p=.16$; professionalism $r=-.21$, $p=.22$) and positive (case-specific assessment, $r=.35$, $p=.07$; physical examination $r=.30$, $p=.13$; management and treatment plan $r=.40$, $p=.04$; patient activation $r=.51$, $p=.008$). The association between patient activation skills and faculty entrustment was found in 7 of 9 cases.

Discussion: We found that entrustment judgments by faculty during OSCE observations have both positive and negative associations with SP assessments of residents' clinical skills performance. Patient activation was strongly associated with faculty entrustment ratings, and this pattern emerged in most cases.

Conclusions: Entrustment judgments appear to be capturing elements of competence related to but different from SP assessments of residents' domain-specific performance with patterns dependent upon domain and to some degree case.

Take Home Message: OSCEs can provide a valuable opportunity for faculty to make entrustment judgments based on observing the same, complete encounter across many trainees.

Title: Self-confidence levels regarding general competencies among health science students at the end of the pre-graduate curriculum

Authors: Bernard Cerutti, Katherine Blondon, Barbara Kaiser

Institute: University of Geneva, Switzerland

ABSTRACT:

Background: The use of entrustable professional activities is seen broadly as a mean of assessing graduate students starting to exercise their profession. This first inter-institutional general survey inquired about students' level of satisfaction, their level of confidence in performing professional activities, and their behaviors at the end of the undergraduate studies in Geneva.

Methods: Students of all four institutions (dentistry, medicine, pharmacy, school of allied health science, N=485) were invited by their vice-dean for education or equivalent to fill in an online self-administered questionnaire. The analysis focused here on the overall satisfaction with their education (five-point Likert scale) and their level of confidence (0% to 100%, with increments of 10%) in their current ability to perform 17 general professional activities. All these elements were replicated from the Association of American Medical Colleges (AAMC) Medical School Graduation Questionnaire.

Results: The intermediate analysis data showed a participation of 44% (n=215) with 69% of females. The mean satisfaction with education was 4.1 (± 0.8), with differences between institutions ($p < .0001$). The lowest score of confidence ($67\% \pm 20\%$) irrespective of the institution ($p = .4559$) was for the use of the principles of epidemiology to identify problems, risk factors, treatment strategies, and health promotion. The highest confidence score ($83\% \pm 17\%$) was for the capacity to demonstrate sensitivity and responsiveness to a diverse patient population. About half of the mentioned activities showed significant differences between institutions.

Discussion: While satisfaction levels were very similar to the AAMC, all self-assessed levels of confidence were 3% to 18% lower in our study. Final results will be presented.

Take Home Message: This first general survey of undergraduate students at the end of their studies at four institutions is an important milestone to ensure quality, to benchmark, and to provide a baseline to measure the impact of future changes in the curricula.

Title: Identifying struggling learners in undergraduate medical education: Should we consider the decision model?

Authors: Sola Aoun Bahous, Vanda Abi Raad, Nadia Asmar, Nazih Youssef

Institute: Lebanese American University, Lebanon

ABSTRACT:

Background: For making decisions about students' advancement, educators frequently combine information from multiple tests and formulate an overall impression. Often, the decision-making process is consolidated in a policy that involves a compensatory approach. The advancement of competency-based medical education (CBME) had implications for assessment but was not explored in promotion decisions.

Summary of Work: De-identified assessment data from 2 consecutive classes at the Lebanese American University medical school were analyzed. Three decision models were compared. The first one corresponded to the existing traditional model, while the second and third ones reflected CBME and included either numerical scores only or both numerical and narrative data.

Summary of Results: Data about 86 medical students were analyzed. Decision model 1 identified 10 struggling learners, model 2 identified 20 and model 3 identified 12. Absolute agreement was noted in 58 cases. Students who were down-classified in model 2 had lower USMLE scores and lower chances to match in first residency choice.

Discussion: The three models yielded a re-classification of students' academic status in 32.6% of cases. Decisions ensuing from the three models were supported by consequential validity evidence, but the second model, using competency-guided decisions, provided a better classification accuracy, especially in the borderline spectrum of performance.

Conclusions: Although decisions about students' advancement are often defensible, decision models differ with their ability to address the challenge of identifying struggling students. A competency-based decision model could better identify students with borderline performance by internal and external criteria, which would facilitate interventions.

Take Home Messages: While the advancement of CBME had implications for assessment, the decision-making process should be examined as well and aligned with the medical education model. Using a CBME approach to formulate decision models may yield better classification of trainees and identification of struggling learners.

Title: Capturing entrustment: Using a simulated Night-onCall (NOC) experience to assess the entrustment of near-graduating medical students from multiple perspectives

Authors: Kinga Elias, Tavinder Ark, Sondra Zabar, Grace Ng, Thomas Riles, Adina Kalet

Institute: New York University School of Medicine, United States

ABSTRACT:

A. The AAMC has identified 13 Entrustable Professional Activities (EPAs) that all entering residents should be entrusted to perform on Day 1 of residency, regardless of specialty choice. However, there is currently no consensus on how to best measure entrustment.

B. This study collected a range of entrustment measures from multiple rater perspectives in a simulated Night-onCall (NOC) aimed at assessing competence in all 13 EPAs. NOC is a 4-hour immersive simulation during which a near-graduating medical student, functioned as an intern, rotated through a series of authentic clinical coverage scenarios.

C. 73 medical students (39 women; Age 26.5 (+2.6) years) completed NOC. To test the hypothesis that NOC measures entrustment of the near-graduating medical students, a one-factor confirmatory factor analysis (CFA) was conducted with the 16 entrustment items. A one-factor CFA model fit the data ($\chi^2(96)=138.45$, $p=0.003$, CFI=0.97, TLI=0.96, RMSEA=0.08, $p>0.05$).

D. Our findings inform the measurement and tracking of entrustment decisions by providing a simulated "360-degree" assessment framework for the educational handoff from medical school to residency to ensure quality of care and patient safety. Longitudinal entrustment ratings collected during a 9-month NOC follow-up event will also be discussed.

E. As the health professions education community begins to shift its assessment framework to include trustworthiness as a core attribute of the learner (e.g., 13 EPAs proposed by the AAMC), this work provides a psychometric evaluation of entrustment, from various standardized perspectives during a simulated event, to inform this international conversation.

F. A single-factor model with 16 measures fit the entrustment framework within an ecologically valid simulated workplace, suggesting that an individual student's clinical trustworthiness is measurable across discrete work activities from multiple perspectives. Next steps include establishing validity evidence for NOC and behaviorally valid entrustment thresholds for the 13 EPAs.

Title: Digital Badges: an interactive logbook equivalent to facilitate student engagement and motivation in a Psychiatry Undergraduate Module

Author: Allys Guerandel

Institute: University College Dublin, Ireland

ABSTRACT:

Digital Badges: an interactive logbook equivalent to facilitate student engagement and motivation in a Psychiatry Undergraduate Module.

Background: Digital badges provide a novel means of recognising the attainment of knowledge, skills and competencies by staff and students in higher education. A symbol of achievement with embedded data, digital badges can be displayed, shared and verified online. They may also be used as internal milestones within educational programmes to help scaffold learning. Research suggests that, used in this way, badges can facilitate student motivation and engagement.

Aim: To pilot digital badges as an online interactive alternative to a logbook/portfolio. In line with the literature on digital badges, we aim to enhance students' engagement with the module, and enhance their motivation to complete clinical tasks set for them. We aim to facilitate learning through the structure provided by how students acquire the badges.

Method: Digital badges is part of the continuous assessment component of the module, the badges

carry 3% of that assessment. The badges are acquired on completion of specific clinical tasks, an MCQ and on uploading a Clinical Placement Attendance form. This is all done online and student progress can be monitored remotely. A student questionnaire was designed using a blend of appropriate questions from two validated questionnaires used in educational research. Data was collected using the student questionnaire at the end of the Module.

Results: 75.6% of students completed the questionnaire. 63% had no previous knowledge of badges. 66% found badges helped them to understand the content of the module. 74% reported that they helped them to achieve learning outcomes. 64% agreed that digital badges should continue to be used. Qualitative comments included "Badges helped me structure my work".

Conclusions: Digital badges have facilitated student engagement and motivation. The use of digital badges as an educational tool is promising.

Title: LAP Mentor based Assessment of Laparoscopic Surgical Skills...A Validation Study

Authors: Khalid Bhatti, Syed Moyn Aly, Lubna Baig, Kamran Ahmad Malik, Zainab Nasser Al-Balushi, Mahmoud Hatem Sherif

Institute: Royal Derby Teaching Hospital, United Kingdom

ABSTRACT:

Background: Current study aimed at defining the role of Lap Mentor as a model for assessment of laparoscopic surgical skills by providing validity evidences for laparoscopic surgical skill assessment scores obtained through performance on it. Well defined role is expected to help assessors in making informed choices while assessing the candidates' competency in laparoscopic surgery.

Summary of Work: A Cross-sectional validation study was conducted at Oman Medical Specialty Board (OMSB) skills Lab, Muscat, Oman. Twenty three (23) surgical residents, registered with OMSB, belonging to different years of residency, underwent assessment of basic laparoscopic surgical skill on Lap Mentor. Construct Validation model was used to validate the scores.

Results: As predicted 35% of the candidates, all

belonging to senior group, passed assessment. Cronbach's Alpha value was found to be 0.87 with SEM of 1.53 (95% CI). Intra class co-efficient (ICC) varied from 0.88 to 0.95 for different scales. Factor analysis revealed two underlying constructs i.e. technical skills and patient safety skills that explained competency in laparoscopy surgery. A correlation for the data revealed that Actual Residency Year (ARY) and total score achieved were significantly related ($r = 0.51$, $N = 23$, $p = 0.01$, two tails).

Discussion: Construct validation method provides good framework for validation of scores obtained through assessment. Factor analysis and angoff method if used for pass fail decisions, provide more meaningful results.

Conclusions: Assessment on LAP Mentor TM using different rating scales and construct based standard setting methods provide meaningful scores. Periodic summative assessment is acceptable to the residents.

Take Home Message: A proposed generic instrument (SQUH Tool) containing construct based checklist and two other scales can be validated by further studies and once validated should be used for assessment on Lap Mentor TM.

Title: Preliminary psychometric properties of the first computerized adaptive progress test used for both formative and summative purposes

Authors: Carlos Collares, Mascha Verheggen, Jeroen Donkers, Jean van Berlo, Dario Cecilio-Fernandes, Cees van der Vleuten

Institute: Maastricht University, Holanda

ABSTRACT:

Background: Computerized adaptive testing can optimize reliability by matching item difficulty with students' ability. Computerized adaptive progress tests (CAPTs) have been reliably used elsewhere, but with formative purposes only. The aim of this study is to describe the psychometric properties of the first CAPT used for both formative and summative purposes.

Summary of Work: An adaptive, fixed-duration, 100-item test was applied to 166 students. Calibration of items used the Rasch model. Scoring used weighted maximum likelihood estimation.

Maximum information for item selection was constrained to a content blueprint. Individual reliability/precision estimates were calculated. One-way ANOVAs of students' scores against their respective measurement moment were performed.

Results: Mean scores were -0,042 (SD = 0,809) with a mean standard error of 0,212 (SD = 0,003). Mean reliability/precision was 0,944 (SD = 0,004). The difference between mean students' scores according to measurement moment as determined by one-way ANOVA was significant ($F(5,154) = 26.024, p < 0,001, \eta^2 = 0,458$).

Discussion: The purposes of assessment tools are known to affect their psychometric properties. A stronger summative use combined with the traditional formative purpose is expected to increase reliability and demonstrate higher developmental validity for CAPTs. Subsequent applications are still needed to obtain test-retest correlations.

Conclusions: Our results demonstrate slightly superior psychometric properties for the CAPT with both summative and formative purposes in comparison to the exclusively formative CAPT experiences held so far in Brazil, Mexico and Finland. However, subsequent applications are still needed to verify if there is any difference in test-retest reliability.

Take Home Messages: CAPTs can be an alternative to paper-based progress tests with a high degree of validity and reliability. Combining a summative purpose to the traditional formative uses of progress tests are associated to superior psychometric properties not only in paper-based progress tests, but also in their computerized adaptive form.

Title: Detecting item bias using differential item functioning: a study of translating the progress test

Authors: Dario Cecilio-Fernandes, Carlos Fernando Collares, Cees Van der Vleuten, René A.Tio

Institute: University Of Groningen, University Medical Center Groningen, Netherlands

ABSTRACT:

Background: With the internationalisation of medical schools, a new challenge has been raised regarding assessment. Language and culture differences have an enormous impact on assessment. Solely translating a test may produce bias, favouring a group of students. This study investigates whether there is bias in items that are translated.

Summary of Work: The University of Groningen offers an international and national Bachelor in medicine. Students in both Bachelors take the same progress test, but the international progress test is literally translated into English. Four subsequent progress tests (of 200 items each) from both programmes were analysed. To investigate whether items were favouring a group of students a differential item functioning analysis was conducted.

Summary of Results: Items that presented differential item functioning ranged from 34% to 36% of each test. From the 800 items analyzed, 272 items were biased. Although items were favouring both groups, 146 items (54%) favoured the national programme. This indicates that national students have a higher probability of answering a question correctly than international students with the same level of knowledge.

Discussion: An unfair assessment may result in failing or approving students that did not meet the criteria. One explanation for our findings is the language since English is not always the native language of the international students. Alternatively, students from a different culture may understand the items differently.

Conclusions: Our results demonstrated that solely the translation of a test from one language to another might not assure fairness to all students. Most items with bias favoured the national track. Further research should investigate the reason for this bias.

Take Home Messages: Solely translating a test is not enough to assure fairness. Further psychometric analyses are recommended to identify possible item bias.

Title: Gathering Validity Evidence for a Novel Progress Test: The Role of Confidence and Insight

Authors: Richard Pittini, Pauline Pan, Yuxin Tu, Tamica Charles, Glendon Tait, Kulamagn Kulasegaram

Institute: University of Toronto, Canada

ABSTRACT:

Background: Progress testing (PT) is designed to assess the targeted exit competency of trainees but can also be used to support metacognitive development. The latter use is often overlooked as the benefits are often intangible for programs. We implemented a pilot PT for first year trainees at the Toronto MD program. We evaluated this pilot using a validity framework to understand the utility and benefit of the test for both competency and metacognitive growth.

Summary of Work: Two tests of 60 MCQs were offered to all first-year students. Senior students (n=83) from all years were invited to sit the test at both time points. Students could indicate 'confident' vs. 'not sufficiently confident' when answering. Students received performance scores on items and feedback on their accuracy vis a vis confidence. We examined the reliability, predictive validity of the assessment as conducted focus groups to understand the metacognitive benefit of the progress test.

Results: Students showed improvements in overall score between tests and between years of study. However, confidence only increased between years of study, not between tests. Insightfulness improved over time, but only on 'confident' questions, but not on 'not sufficiently confident' questions. Focus groups suggested trainees required specific actionable feedback to benefit from metacognitive data. The PT had reasonable internal consistency and good prediction of other assessments.

Discussion: The PT displayed adequate validity evidence for measurement of competency. While the metacognitive changes were observed in the data, students thought more active feedback was required.

Conclusions: This validity evaluation suggests that the PT had strong evidence for competency assessment but needed further changes in

feedback delivery to support metacognitive development.

Take Home Messages: While PT testing has strong evidence for measurement of knowledge competency, further work must be done to provide metacognitive benefits to learners. Post PT feedback requires further investigation.

Title: Diagnostic accuracy in Family Medicine residents using the diagnostic support system DXplain: a randomized controlled trial

Authors: Adrián Israel Martínez-Franco, Juan José Mazón-Ramírez, Isaías Hernández-Torres, Carlos Rivero-López Melchor Sanchez Mendiola, Adrián Martínez-González

Institute: UNAM Faculty of Medicine, Mexico

ABSTRACT:

Background: Clinical reasoning is an essential physician skill for accurate patient diagnosis. The goal of the study was to compare diagnostic accuracy in Family Medicine residents, with and without the use of a clinical decision support tool (DXplain <http://www.mghlcs.org/projects/dxplain>)

Summary of Work: 87 First-year Family Medicine residents, training at the National Autonomous University of Mexico (UNAM) Postgraduate Studies Division in Mexico City, participated in the study. They were randomized to a control group and an intervention group that used DXplain. Both groups solved 30 clinical diagnosis cases (internal medicine, pediatrics, ob-gyn and emergency medicine) in a multiple-choice question test that was piloted and had evidence of validity.

Summary of Results: The percent-correct score in the diagnostic accuracy test of the 44 control group residents was 74.1±9.4 (mean±SD), whereas the 43 residents in the DXplain group had a score of 82.4±8.5 (p<0.001). There were better scores in the DXplain group for the four knowledge content areas of the test.

Discussion: Diagnostic skills are fundamental to the safe practice of medicine, and clinicians should use diagnostic aid tools that are useful. Our group of family medicine residents have reasonable diagnostic accuracy, which can be improved with the use of DXplain. This could help to decrease diagnostic errors and improve patient safety and

the quality of medical practice.

Conclusions: Diagnostic accuracy in family medicine residents can improve with the use of diagnostic informatics tools. The use of diagnostic decision support systems could be useful in educational interventions and medical practice. It remains to be seen if its use can improve residents' patient outcomes in practice, with the goal of providing high quality patient-centered medical care.

Take Home Message: DXplain is a tool that can be used by medical residents, and can enhance their diagnostic accuracy.

Title: Reflecting all the time--a framework for intra-operative decision making training

Authors: Chi Chuan Yeh, Roger Kneebone, Nick Sevdalis, Tzong-Shinn Chu, Chiung-Nien Chen

Institute: Department of Medical Education and Department of Surgery, National Taiwan University Hospital, Taiwan

ABSTRACT:

Background: Intra-operative decision making (IODM), which can have profound impacts on patients' post-operative results and the complication rate, is a high cognitive skill and a harsh challenge for all surgeons. The purpose of this study was to explore how to train and evaluate surgical trainees' skill of IODM.

Summary of Work: A semi-structural interview to evaluate surgeons' perspectives of training and learning IODM and an observational study by using the approach of Cognitive Work Analysis (CWA) and a self-developed observation sheet were conducted in the UK and Taiwan. The data were analysed by Grounded theory method and thematic analysis.

Summary of Results: Eighteen surgeons from Taiwan and the UK, 9 trainees and 9 consultants, have been interviewed and 65 procedures performed in the UK and Taiwan was observed. Strategies and influencing factors for doing IODM and main strategies for learning this cognitive surgical skill were well explored.

Discussion: A framework for IODM training which combined a model of doing IODM and teaching and learning of IODM has also been created. 'Reflecting

all the time' guided all processes. The process of reflection—think and improve integrated to experienced surgeons' learning for IODM, which was lack in trainees' mind.

Conclusions: A framework for IODM training guided by 'Reflecting all the time' was established by using interview and observation approach. Stressing on the importance of reflection in surgical training explicitly may be a good strategy for teaching IODM. The framework could provide a structure for designing IODM training in the future.

Take Home Messages: Intra-operative decision making (IODM) is a high cognitive skill for all surgeons and trainees. How to train and evaluate surgical trainees' skill of IODM was explored by using interview and observation. A framework for IODM training guided by 'Reflecting all the time' could provide a structure for designing IODM training.

Title: Is portfolio-based assessment at the end of a clinical year a suitable instrument to evaluate clinical reasoning?

Authors: Angelika Hofhansl, Anahit Anvari-Pirsch, Werner Horn, Franz Kainberger, Isolde Kirnbauer, Anita Rieder, Gerit Schernthaner, Barbara Steinlechner, Gerhard Zlabinger

Institute: Medical University of Vienna, Austria

ABSTRACT:

Background: In 2014 a hospital based clinical year was implemented as a new year 6 into the undergraduate curriculum at the Medical University of Vienna. 640 students have to spend 48 weeks in the University Hospital or accredited hospitals across Austria and abroad. In order to standardize students' learning outcomes we developed a portfolio which is supervised by clinical mentors. Based on written objectives, the portfolio includes workplace based assessments and predefined clinical tasks, e.g. writing case reports.

Summary of Work: At the end of 48 weeks students are evaluated by three different assessors based on their portfolios during the so called „Return-Week“. Compulsory moduls include (1) structured presentation of a self selected clinical case, (2) two structured oral exams focusing clinical reasoning

competence with regard to their own portfolio and (3) formal check of portfolio. Each evaluation is standardized following a checklist.

Results: Evaluation data from July 2017 show that 68% of students (total N = 365) and 80% of assessors (total N = 33) find the Return-Week to be suitable for evaluating clinical reasoning. 66% of assessors in internal medicine (50% in surgery) said that the checklists are appropriate. Students criticise heterogeneity of different assessors.

Discussion: Facing the problem of discordance between documented cases in students' portfolios and what assessors actually assess, we are thinking of a more streamlined body of documents which are collected in the future portfolio.

Conclusions: The Return Week is a suitable and feasible instrument after 48 weeks of clinical education to assure and assess students' learning outcomes.

Take Home Message: In order to standardize clinical education in different learning environments, we highly recommend the use of portfolios. Oral assessment of clinical reasoning competencies is suitable based on portfolios.

Title: "Self-directed learning Readiness and Its Impact on PBL performance in undergraduate students of UCM&D"

Author: Tayyaba Azhar

Institute: The University of Lahore, Pakistan

ABSTRACT:

Background: SDL is defined as a learning methodology in which students take the initiative of identifying their own learning needs, preparing their learning outcomes, identify learning resources and choose appropriate learning strategies and evaluate the learning outcomes. SDL is an embedded component of Medical curricula that adapt problem based learning (PBL), which is an innovative educational strategy that is student centered

This study aims to identify the effect of SDL on students' performance in PBL and the students' readiness regarding SDL.

Summary of Work: It is a Quasi-experimental study the PBL scores at the beginning of the session were compared with those at the end of the session. The students were also given validated questionnaire

on "Self-Directed Learning Readiness Scale" aimed to assess three main components: self-management, desire for learning and self-control.

Summary of Results: PBL scores before and after exposure to readiness towards SDL showed significant difference (P=0.00).

According to the Self-Directed Learning Readiness Scale the mean scores for the three components was almost the same, with the highest aptitude for self-control (4±0.069) followed by self-management (3.99±0.071) and the mean score for the desire of learning was (3.997±0.068).

Discussion: Life-long learning involves the development of skills in self-directedness (SDL), critical thinking and effective group process. Incorporating SDL in the curriculum would help students in better and deeper understanding and learning of the content.

Conclusion: The present study revealed that self-directed learning significantly affected the students' performance in PBL. SDL readiness showed that the students had the ability for self-control; they were highly motivated for self-learning and had self-management skills.

Take Home Message: SDL is a skill for the students to become life-long learners. Lifelong SDL is essential to meet the growing challenges in healthcare imparted by a rapid increase in knowledge of health problems.

Title: A snapshot of OSCE practices at Australian Medical Schools

Authors: Jane Smith, Clare Heal, Karen D'Souza, Bunmi Malau-Aduli, Richard Turner

Institute: James Cook University, Australia

ABSTRACT:

Background: The Australian Collaboration for Clinical Assessment in Medicine (ACCLAIM) consortium comprises 15 out of a total of 19 medical schools in Australia. The objective of this collaboration is to provide benchmarking and quality assurance of Objective Structured Clinical Examinations (OSCEs) on a national basis.

Summary of Work: We designed and administered a semi-structured questionnaire with the objectives of 1) providing a snapshot of current OSCE practices across Australian Medical Schools and 2) Compare these practices with current gold

standard according to guidelines. Questions explored OSCE process, analysis, and administration.

Summary of Results: 18 of 19 medical schools in Australia answered the questionnaire. Total number of stations varied from 9 to 16 and total OSCE testing time from 70 to 160 minutes. There was a variation in the type of marking sheet used, with an even divide between analytic and holistic checklist scales.

Discussion: There are similarities and variations in OSCE process and content in Australian Medical Schools.

Conclusion: We hope that the results of our survey will allow participating schools to compare and reflect on their current OSCE practices in relation to other medical schools in Australia, and recommended gold standard practices.

Take Home Message: Variations in the interpretation and implementation of accepted guidelines for OSCEs is inevitable, given the need to respond to local needs and limitations. Sharing of such diversity is important in order to maintain the strength of OSCE assessment and to meet the changing needs of medical education.

Title: Enhancing Knowledge and Attitude toward Neuroscience at School

Authors: Alireza Rezaee, Mohammad Rasoul Golabchi, Zahra Abbasy, Zahra Shevidi

Institute: Kashan University of Medical Sciences , Iran

ABSTRACT:

Background: In the last decades neuroscience has been at the top most leading topics in scientific research and development. However, such development is just confined to scientific societies but not public.

Being aware of neuroscience aspects can lead to the better attitude to our daily life.

Summary of Work: We decided to design a workshop for students in order to enhance their perception and attitude toward neuroscience.

After a six-month workshop, we assessed our participants' outlook by two methods: Directed interview in groups of student and a personal questionnaire asking about their attitudes toward neuroscience and the efficacy of the program.

Summary of Results: Fifty-five students of the grades 8th to 11th participated in our program and almost all of them claimed that they have gained a distinctive development in their knowledge and attitude toward neuroscience.

Discussion: This experience has proved us that working with school-age students has a positive result in introducing neuroscience and it can enhance their view of their self-awareness; although there may be several challenges. For instance, lack of any scientific background in students along with the complexity of the topic, neuroscience.

Conclusion: We concluded that improvement of students' knowledge about neuroscience in interesting topics can enhance their attitude toward their abilities and this may leads to more accurate decision in their life.

Take Home Message: Learning about neuroscience helps people to attain a better self-awareness and the ability to apply their competencies in an appropriate way.

Title: Medical Student Perceptions of their Knowledge and Skills in Pharmacology in their First and Final Clinical Years

Authors: Shane Bullock, Anne Leversha

Institute: Monash University, Australia

ABSTRACT:

Background: Pharmacology is an important area of study for doctors because it provides the scientific foundation for safe and rational prescribing of medications. This component of medical courses has long been perceived by students and new graduates to be difficult and they feel unprepared for their impending prescribing role.

Summary of Work: This study investigates perceptions of students in their first and final clinical years, with respect to their knowledge and skills in pharmacology and therapeutics.

Summary of Results: Students rated drug action knowledge as good. Fewer students rated their adverse drug reactions, drug interactions and pharmacokinetics knowledge highly. The confidence of final year students with selected medications is not equivalent. Students were confident regarding antibiotics and antihypertensive agents, less so for disease

modifying anti-rheumatic drugs, heparin and anticonvulsants.

Discussion: Medical students highly valued their pharmacology education. First year clinical students wanted to know more about were the adverse effects, interactions and choice and dosage of antibiotics. Final year students desire more prescribing practice and they were particularly concerned about correct dosage and drug interactions.

Conclusions: Perceived gaps and strengths of the knowledge and skills in pharmacology in the first and final clinical years were provided. Students have indicated that they feel unprepared for prescribing medications upon entering their intern year. More formal teaching of pharmacology and therapeutics in the clinical years was desired.

Take Home Messages: The issues that have been identified by the clinical students as important components of medication management and patient safety, are given due consideration in curriculum review with respect to timing of delivery and content.

Title: English as medium of instruction at Nazarbayev University School of Medicine (Kazakhstan): Implications for Clinical Practice Training in a Russian–Kazakh Multilingual Context

Authors: Alessandra Clementi, Bridget Goodman, Massimo Pignatelli

Institute: Nazarbayev University School of Medicine, Kazakhstan

ABSTRACT:

Nazarbayev University School of Medicine in Kazakhstan offers a 4-year graduate entry degree in Medicine with a curriculum adapted from University of Pittsburgh School of Medicine. While clinical skills training and assessments are conducted in English, bedside clinical experiences are in Russian and Kazakh in University hospitals in Astana.

The purpose of this research survey was to measure the extent to which students have developed doctor-patient communication skills in English, Kazakh, and Russian. Students in the first two cohorts (n=32, response rate=64%) self-evaluated their doctor-patient communication

skills for the three languages, and evaluated the usefulness of teaching strategies.

Self-report data indicated that on average, students' English and Russian doctor-patient communication skills are identical. However, Kazakh doctor-patient communication skills are significantly lower, and are a function of their overall Kazakh proficiency. Most favored teaching strategies are those that involve interaction with patients (live or simulated) and feedback from instructors.

Results indicate students develop curriculum-driven doctor-patient communication skills in English, and transfer skills to the other spoken languages if they have general proficiency. However communication between doctor and healthcare team requires advanced knowledge of medical terminology, which is not fully integrated in the curriculum.

English, Russian and Kazakh languages have different derivation. In our students, proficiency in Russian is more advanced than in Kazakh. Medical terminology in Russian and Kazakh are different and our curriculum should be designed taking into account different language skills of students and implement medical terminology teaching in three languages.

Based on the above findings we will develop curriculum integration with the English-Russian-Kazakh Medical terminology and enhance simulated patients' experience in Russian and Kazakh languages. The data suggest interactional and experiential approaches to learning are most effective.

Title: Assigning online educational modules prior to orientation is a feasible approach to increase incoming interns' level of readiness for internship

Authors: Thomas Riles, Lynn Buckvar-Keltz, Sondra Zabar, Kinga Elias, Adina Kalet

Institute: New York University Langone Medical Center, United States

ABSTRACT:

Background: Transitioning to residency is stressful for trainees and faculty due to the uncertainty of whether recent graduates are prepared to assume responsibility for patient care. The feasibility of

enhancing preparedness using e-learning modules that address clinical assessment, management, and patient safety was the focus of this study.

Summary of Work: The NYU faculty created a series of 12 online modules (WISE-onCall) to address common acute presentations such as fever, chest pain, hypertension, and loss of consciousness. Prior to orientation five of these were assigned to 145 incoming interns recently matched in Internal Medicine, Surgery, Emergency Medicine, OBGYN, Neurology and Neurosurgery.

Summary of Results: Of the assigned modules (Abdominal Pain, Pain Management, Dyspnea, Hypotension, and Documentation), each was completed by 130-135 of the 145 residents. In a survey administered during a patient safety orientation event, 93% of responders (n=128) felt the modules increased their level of readiness for internship.

Discussion: Due to the unstructured character of most fourth year curricula, there is little opportunity to focus on the clinical reasoning skills, entrustable professional activities, and patient safety issues that are fundamental to successful performance as a resident. E-learning programs can help transitioning students refine their skills prior to commencing residency.

Conclusions: Careful assessment and recognition of critical situations is essential to assuring patient safety. Traditionally, management and patient safety issues are not addressed until after residency has commenced. E-learning can be a practical approach to support new physicians with preparing their clinical reasoning skills prior to commencement of residency.

Take Home Messages: Providing recent graduates with educational modules prior to their residency is an effective means of preparing residents to recognize and manage acute medical situations. At a minimum it provides an excellent review of the underlying causes of acute conditions and a framework for providing timely assessment and management.

Title: 'Out of Hours' workshop for GP Trainees

Authors: Oliver Morris, Nicola O'Shaughnessy

Institute: GP Education Unit Southampton, United

Kingdom

ABSTRACT:

Background: Feedback from GP ST3s has suggested several issues that compromised their learning in the 'out of hours' (OOHs) setting. Many felt induction was unhelpful, clinical supervision appeared variable and unstructured, and more preparation would have been beneficial. Few of their GP trainers did OOHs work and they struggled to achieve continuity in clinical supervision. We hoped a workshop might equip trainees with the confidence and knowledge to drive their own OOHs learning more effectively and address the needs identified.

Summary of Work: A workshop ran on a Saturday morning 2 months into OOHs training so that trainees would already have some experience. All our final year GP trainees were invited and 12 attended (~33%). We used a mixture of directed small group work (challenging scenarios), presentation to the wider group (effective use of clinical supervisors, available resources) and open discussion.

Results: We asked the participants to evaluate the workshop by completing a short questionnaire. The participants rated the workshop highly. They felt it had helped them to plan and direct their OOHs training more effectively and found the small group discussion of challenging OOH scenarios particularly helpful (they would have liked more time devoted to this). They also appreciated learning about resources for advice and guidance outside normal working hours and felt better equipped to use the existing framework of clinical supervision.

Discussion: Learning in OOH has been shown to be an area for educational development. The workshop was aimed to address the issues identified, and to engage trainees in their learning.

Conclusions / Take Home Messages: The workshop seems to have motivated trainees to engage more pro-actively with their OOHs training rather than simply 'complete the hours'. This year it will be extended to include other training areas and a greater focus on small group discussion of scenarios.

Title: Does programmatic introduction of clinical reasoning during early clinical clerkship improve students ability to make decisions?

Authors: Christan Warner, Manuela Hunter, Mini Singh

Institute: University of Manchester, United Kingdom

ABSTRACT:

Background: Clinical reasoning (CR) abilities are prerequisite for safe and accurate decision-making. They require clinicians to extend their consultation skills beyond information gathering. These skills cannot be acquired through observation of experts requiring explicit focus within curricula.

Summary of Work: Programmatic learning of clinical reasoning was introduced to all first year clinical clerkship students of a large UK medical school (n= 450). An integrated model of theoretical, classroom and experiential activities underpinned by CR theory were delivered across the curriculum. Students' attitudes, behaviours and implementation of clinical reasoning skills in real practice were assessed through questionnaires and clerkship audio diaries. Data was compared with the previous years' cohort (control group).

Results: Self reported questionnaires (study group, n=198, control group, n=254) demonstrated a significant shift in attitudes and behaviours that promote deliberate practice of CR in the workplace: study group participants assessed more patients during a week, focusing on the relevance of information gathered and recognised the importance of seeking the rationale for decisions ($p<0.05$). Analysis of audio diaries (n= 12) demonstrated increased discrimination, interpretation and synthesis following assessment of a patient by study group participants.

Discussion: The positive results from our curriculum implementation has provided a deeper understanding of the cognitive processes that learners engage to change their behaviour and begin to embed CR into their practice.

Conclusions: This is the first work to report a curriculum implementation in clinical reasoning and decision-making that is supporting early clerkship students to translate CR learning from

theory to real practice.

Take Home Message: An integrated curriculum model for clinical reasoning not only improves skills in the classroom but produces real change in practice in medical students

Title: The impact of the law limiting medical doctor trainee working time in Belgium

Author: Gracia Musigazi

Institute: Chr Haute Senne, Soignies, Belgium

ABSTRACT:

Background: Since 1999, time restrictions were set for medical doctor trainees. Subsequently, to comply with the European regulation, a law was voted on December 12th 2010. These rules were applied in the workload attribution and schedules and should also match the compensation policy of the hospitals. They must register the working hours of all their medical trainees, to allow an easy inspection by the federal Authorities.

Summary of Work: Through the concrete cases of two university hospitals, I analysed how the law limiting medical doctor trainee working time was implemented. I identified the "coping" strategies that were used, such as automated working time registration and a larger pool of workers. Finally, these results were compared with the literature.

Summary of Results: The database analysis for the two hospitals (from 2011 to 2014) showed that efforts were made to comply with the requirements of the law (mean working time of 48 hours over period of 13 weeks). Resident working time were grouped and compared in larger pools such as Internal Medicine (statically significant difference) and Surgery (no significant difference). Lastly, the self-perceived training quality by the medical trainees was compared to the working time: 82% of them appreciated their working place independently from their working time and schedule.

Discussion: Unlike in the US, where hospitals may lose their license and where medical residents are pressed to leave the workplace as soon as possible, in Belgium, medical doctor trainees still have the liberty to stay at the patient bedside, if needed. They can also choose to work up to 12 extra hours.

Conclusions & Take Home Messages: Certainly,

everything is not yet perfect but the weeks of 80-90 working hours, is no longer the standard for medical doctor residents and trainees. Besides, sanctions exist, if health institutions do not follow these rules.

Title: Problems faced by senior faculty members in implementation of integrated curriculum

Authors: Madeeha Rehan, Neelofer Shaheen, Raheela Yasmeen, Naushaba Sadiq

Institute: Foundation University Medical College, Pakistan

ABSTRACT:

Background: Aim of this study is to identify problems faced by senior faculty in curriculum implementation, in order to find solution to these problems and to assist these academic leaders with the critical task of maintaining their faculty's vitality because so far very scanty data is present on this issue.

Methodology: Total 56 senior faculty members (Associate Professors and Professors) from two private medical colleges were included in the study. Data was collected by using self-developed, validated questionnaire (close-ended, 20-items) based on Likert scale format of Strongly Agree (SA) = 4 points, Agree (A) = 3 points, Neutral (N) = 0, Disagree (D) = 2 points, and strongly Disagree (SD) = 1 point

Results: Descriptive analysis was done on SPSS version 21. Most common problems encountered by senior faculty members in implementation of integrated curriculum found were:

Lack of conceptual and sequential planning of integrated curriculum (66.5%), lack of CME activities for faculty (56.5%) along with lack of communication between faculty members (53.5%), lack of teamwork (42.6%) among different disciplines & deteriorating quality of students in medical colleges (48.6%).

Discussion: In a study done in Nigeria interdepartmental issues and lack of faculty training was found to be most common causes which is common to our study (Ogar & Awhen, 2015). Whereas in contrast to our study, time limitations and restrictions were the main issues faced by faculty of school of medicine, California,

while implementing the integrated curriculum ((Muller, Jain, Loeser, & Irby, 2008). Faculty resistance is one of the contentious issues in implementing any significant change in some institutions (Fatima, 2017).

Conclusion: Lack of involvement of faculty in planning of curriculum resulting in sequential problems, interdepartmental collaboration and communication and faculty development programmes are the major problems faced by senior faculty members in implementation of integrated curriculum.

Title: Bridging the gap – primary and secondary care educators developing together with trainees in difficulty

Authors: Johnny Lyon Maris, Antonia Calogeras

Institute: GPEU Southampton, New Forest and Jersey, United Kingdom

ABSTRACT:

Background: Workplace supervisors can find trainees with performance difficulties exhausting but also developmental for their educational skills. Debriefing with educator colleagues on such cases can help formalise the opportunity for reflection and development, allowing events to be discussed in order to enhance learning from peers.

Summary of Work: Health Education England (Wessex) (HEE Wessex) facilitated a series of three half-day action learning sets, over three months, bringing educational /clinical supervisors in primary and secondary care together. Attendance at all sessions was encouraged but not compulsory. All participants had supervised a trainee who was not progressing for personal, health, competence or professional reasons.

Summary of Results: Evaluation of the sessions indicated overwhelmingly positive responses from both primary and secondary care supervisors. Key themes emerged relating to: support, shared learning and management planning. The understanding gained from cross-specialty working led to development of 'tools' and resources for dealing with specific areas.

Discussion: Supervisors felt out of their depth when managing poorly performing trainees. The issues encountered were similar in both primary

and secondary care; individually they were small but cumulatively added up to a lack of development and poor trainee performance.

Conclusions: Joint, mutually supportive, learner-led protected time for hospital /community consultants and general practice trainers was valued. The ability to discuss the problems with colleagues helped the supervisor's development and assured them that they were handling the situation in the best and fairest way for the trainee.

Take Home Messages: Mutual, cross boundary primary and secondary care peer group support for supervisors can be beneficial and help to calibrate how they manage situations when dealing with their trainees who are in difficulty.

Title: A Simulated First Night-onCall (FNOC): Establishing Community and a Culture of Patient Safety for Incoming Interns

Authors: Sondra Zabar, Kinga L.Elias, Donna Phillips, Jeffrey Manko, Lynn Buckvar-Keltz, Thomas Riles

Institute: Nyu School of Medicine, United States

ABSTRACT:

Background: The transition from medical student to intern presents a major patient safety concern. To support transitioning trainees and cultivate a culture of safety in our medical center we developed an authentic, immersive First Night-onCall (FNOC) simulation to ensure new interns are ready to address common patient safety issues.

Summary of Work: Over 4-hours, new interns, in groups, are challenged to: conduct an ethical informed consent, evaluate a decompensating patient and activate a rapid response team (escalation), recognize a mislabeled blood culture bottle, conduct an effective patient handoff, recognize common patient safety hazards, and participate in patient safety rounds.

Results: While only 63% of groups actually called a rapid response team, 70% recognized and only 33% reported the label error, and 67% conducted effective consent, 94% of 145 interns from 56 schools and 7 departments reported FNOC increased comfort in escalating a situation to a supervisor and reporting a medical error.

Discussion: A large-scale, experiential patient

safety simulation is feasible and acceptable. Interns endorsed FNOC as an effective way to learn patient safety (99%), a good approach to improve readiness (96%), fun (93%), and engaging (100%). Timing this event during orientation primes learning from experiences and serves to inculcate patient safety practices.

Conclusions: Lasting impact of FNOC on patient safety practices will be evaluated through follow-up assessments including the rates and nature of rapid response team activation and patient safety incident reporting across our clinical enterprise.

Take Home Message: As a group, entering interns are not yet consistently able to demonstrate common safety practices. Engaging, motivating, immersive, simulation based group experiences like FNOC may reduce this variability and instill aspirational institutional norms generating a culture of safety and providing a framework for effective on-boarding strategies for novice health care providers.

Title: Practice-based resilience

Authors: Chantal Simon, David Peters, George Lewith

Institute: University of Bournemouth, United Kingdom

ABSTRACT:

Work-related stress is prevalent in primary care and has adverse effects on staff retention and patient safety. Resilience is the ability to bounce back from adversity. Resilience activities aim to protect the mental wellbeing of the workforce but are only effective if provider organisations are supportive of welfare or their workforce.

Summary of Work: We performed a pilot of 'practice-based' resilience. A whole practice received a teaching session about the basis of stress and self-help techniques, before participating in a workshop to explore what their practice could realistically do to make life better for those working there and resulting in a 'practice action plan'.

Summary of Results: The session received good feedback. Most found it provided useful tips to protect team members from work-related stress and burnout. All team members became more

aware of the pressures each other faced. The practice implemented useful changes to improve the working environment.

Discussion: Providing individuals with self-help resilience techniques is futile if the individual is working in a toxic environment. This project combined tried and tested resilience techniques with team-led changes to make the working environment more supportive. Better 'after-care' following the session will be implemented for future pilots.

Conclusions: 'Practice-based' resilience is an innovative new development that builds on proven resilience techniques to incorporate changes to the working environment to help workers remain happy and healthy. This first pilot showed that it is an effective way to drive positive change and was well received by the practices involved.

Take Home Messages: Primary care teams are under stress

Resilience techniques are commonly taught to protect staff from burnout and boost staff retention; this is futile if the working environment is toxic

This project piloted a combination of standard resilience training with organisational change to make practices more supportive environments to work within.

Title: Integration of Patient Safety into Undergraduate Medical and Dental Curricula at Peshawar Medical (PMC) And Peshawar Dental College (PDC)

Author: Ayesha Abdullah

Institute: Peshawar Medical College, Pakistan

ABSTRACT:

Background: Ensuring patient safety (PS) is the *raison d'être* of all medical, dental, nursing and allied health care curricula. Effective, efficient and sustainable strategy to make health care safer with minimal risk of errors is to train tomorrow's health care professionals in a manner that PS becomes their primary goal.

Summary of Work: PMC and PDC introduced PS as part of the undergraduate curriculum along the vertical theme of "life skills for the health care professional". We focused on integrating the 11

areas recommended by WHO and the 9 patient safety solutions. The conceptual framework of PS was presented in a contextual "think global- act local" landscape.

Summary of Results: The paper discusses how the curriculum was developed and implemented in an integrated, student-centered, spiral manner avoiding "patch-working" of PS into the existing curriculum with the goal to enable the students to think and act "patient safety" not just be aware of it.

Discussion: Risk of errors in health care practice can be minimized by educating graduates in a manner that safe patient care becomes the center of their health care provision. This curricular intervention has attempted to take the first step towards this goal. Ongoing evaluation and long-term follow-up of the graduates would assess the effectiveness of this curricular approach.

Take Home Message: PS should become an integral part of all health care professionals' curricula employing interactive student-centered approach to learning, assessment and evaluation.

Title: Awareness Regarding World Health Organization's (WHO) Nine Patient Safety Solutions among Consultants

Authors: Summayyah Saqib, Mariyah Saqib, Zuhra Attaullah, Amna Tahir, Ramin Rahil, Noor Dana Biland

Institute: Peshawar Medical College, Pakistan

ABSTRACT:

Background: Patient safety events have become one of the leading causes of mortality and morbidity worldwide. Keeping in mind the importance of awareness regarding PS among health care workers this study was conducted to assess the awareness of practicing consultants regarding the nine World Health Organization's Patient Safety solutions (WHO-PSS).

Summary of Work: This study is a cross-sectional study conducted in selected public and private sector hospitals of Peshawar from February – March 2017 employing non-probability purposive sampling. The participants of the study filled a structured questionnaire for evaluating the level of awareness regarding nine PS solutions prioritized

by WHO. For data entry and analysis SPSS version 20 was used.

Summary of Results: A total of 72 consultants participated in the study with 58 male and 14 female consultants. Thirty-seven (51.4%) participants were from private sector while 35(48.6%) belonged to the public sector. Majority of the consultants (n=48 [66.7%]) had never heard of the Patient Safety Solutions of WHO. Of the remaining only 11 (15.3%) could name the PS solutions. When asked to rate their awareness level about specific patient safety solutions majority of the consultants (n=49 [68.1%]) perceived to be fully aware of the “Improved hand hygiene to prevent health care associated infections”. The participants were least aware (n=25 [34.7%]) of the “control of concentrated electrolyte solutions”.

Discussion: Majority of the consultants were not aware of the 9 WHO-PSS. Those who claimed to be aware of these strategies did not have a clear idea of these solutions.

Take Home Message: In view of the impact of adverse patient safety events (APSE) in terms of high mortality, morbidity and socio-economic implications it is highly recommended to create awareness about PS and the evidence-based solutions like the WHO-PSS meant to enhance patient safety.

Title: Patient safety: Attitude and practice among postgraduate residents and nurses in a tertiary care hospital

Authors: Attia Bari, Uzma Jabeen, Iqbal Bano

Institute: The Institute of Child Health Lahore, Pakistan

ABSTRACT:

Objective: To determine the attitude and practices of patient safety among postgraduate residents and nurses in a tertiary care hospital.

Methods: This casual comparative study was conducted among the postgraduate residents and nurses working at The Children's Hospital Lahore in the month of July, August 2017. Both PGR and nurses were asked to complete APSQ-IV questionnaire about patient safety on 7 point Likert scale. Data was analyzed using SPSS version 20 and t-test was used to compare the mean score

between two group. The names of the participants were kept confidential.

Results: The total number of participant included in this study were 300 (150 PGR and 150 staff nurses). There was preponderance of female residents 90 (60%) with F:M ratio of 3:2. Most PGR respondents were between 25 and 30 years of age (n=137; 93%) with mean age of 28.191.984 and staff nurses having the mean age of 27.314.174. The scores of both postgraduate residents and nurses were similar in all domains having positively worded questions with insignificant difference in mean score (p=0.141). In the reverse coded questions the nurses showed positive perception with higher mean score as compared to postgraduate residents (p=0.004). The postgraduate residents in the early years of residency had higher mean score in positively worded question as compared to residents who were in last years of training (p=0.006). There was no difference in the mean score of nurses as regard to their years of experience (p=0.733). Medical error disclosure domain was reported lowest by both postgraduate residents and nurses.

Conclusion: Both postgraduate residents and nurses showed positive attitude with good knowledge and perception towards patient safety. Lowest rated scores were from error disclosure confidence domain. The results encourage pilot projects with the ultimate goal of establishing a feasible reporting system about medical errors.

Title: Gender Determines Themes in Medical Student Arts Based Special Study Modules

Authors: James O'Hare, Diane O'Doherty, Sarah Hyde, Aillish Hannigan, Deirdre McGrath

Institute: University of Limerick Graduate Entry Medical School, Ireland

ABSTRACT:

Background: Limited research exists on arts based SSMs focused on medicine and the humanities and the role of Graduate Entry Medical Student background degree or gender in selecting themes or media.

Summary: We analyzed themes, media and accompanying reflections of a Special Study Module (SSM, 2.5 credits) of art works by 150

Graduate Entry Medical Students focused on medicine. Four themes emerged: People -Society /Patient experiences (45%), Life of the Student or the Doctor (25%), The Body and Disease (17%) and Mental Health, (11%). 60% of Female students selected People (Society /Patient experience) themes compared to males 25%, ($P < 0.001$). 65% of students had a primary degree in Science, Technology, Engineering, or Maths (STEM) but STEM was not associated with themes or media (visual 87%, written 9%, performance 4%) compared to students with a non-STEM degree

Methods: We analyzed the SSM art works and accompanying 700 word reflections of a graduate entry class of 3rd year medical students ($n=150$) using qualitative methods. We analyzed themes and media employed and associations with gender and primary degree STEM (Science, Technology, Engineering, Maths.) or non-STEM degrees.

Results: 57% of students were female and 65% of students had a STEM degree. Arts media chosen were: visual 87%, written 9%, and performing, 4%. Neither gender nor primary degree type related to media chosen. Four clusters of themes emerged: People (Society /Patient experience) 45%, Life of the student/doctor 25%, the body and disease (17%), and mental health (11%). 60% of female students chose People themes compared to males: (25%, $P < 0.001$). Primary degree was not associated with themes or media

Discussion: Students chose visual arts predominantly and this was not related to gender or degree. However there was a striking difference in theme selection by female's students which may reflect differing gender culture and empathies.

Title: Integration of Graphic medicine in teaching Pharmacology to Optometry students

Authors: Faraz Khurshid, Babu Noushad

Institute: University of Buraimi, College Of Health Sciences, Oman

ABSTRACT:

Background: The study was undertaken to establish student perception in graphic medicine approach to the teaching and learning of pharmacology in optometry. The Graphics-oriented approach was introduced periodically to

undergraduate optometry students in semesters five and six. The methodology was accompanied by 'concept animation' to translate difficult concepts into comprehensible ideas using handmade diagrams and comic strips. A questionnaire-based survey determined student interest in this approach to teaching and learning.

Summary: Basic science courses are non-comfort zones for many allied health science students. A similar situation was observed among Optometry students studying at the College of Health Sciences, University of Buraimi, Oman. The students are taught General and Ocular Pharmacology in the semester I and II of academic year 3. The disinterest of most of the students' in the subject persuaded the teacher to initiate the concepts of Graphic medicine for the Pharmacology course to make students more accustomed to the subject requirements.

Results: A total of seventy-five students studying pharmacology across two semesters participated in the survey. Survey finding established the effectiveness of the diagrammatic approach to learning the names of drugs among 68% of the students. An overwhelming response of 85% students expressed their preference for 'concept animation' to comprehend the difficult concepts in easy ways.

Discussion: This study provided a perspective of utilizing graphic medicine to reinforce effective learning. The blending of Graphic medicine and concept animation were supportive of the idea of honing students cognitive and metacognitive skills and to nurture their interest in the subject.

Conclusion:

Graphic medicine has been acknowledged as an important pedagogical instrument for the effective teaching and learning of subjects like pharmacology to optometry students.

Take Home Message:

The sound combination of graphic medicine and concept animation can function as an effective metacognitive strategy to enhance the student learning experience.

Title: Factors associated with dropout thoughts among students at a Government Medical School

Authors: Hamza Abdulghani, Khuloud Alenzy, Raghad Alotaibi, Najlaa Al-Subeeh, Tauseef Ahmad

Institute: King Saud University, Saudi Arabia

ABSTRACT:

Background: Although, Medical Colleges have restricted and high-quality students' selection criteria, some medical students still think of dropping out. Therefore, this study was conducted to investigate the rate of and the factors associated with potential thoughts of dropping out among medical students, during the current academic year 2016-2017.

Summary of the Work: A cross-sectional study was conducted to measure the prevalence of thoughts of dropping out among medical students at King Saud University, in the Kingdom of Saudi Arabia, in 2016-2017. A validated self-administered questionnaire was distributed electronically via e-mail to all medical students.

Results: About 51.4% had to drop out thoughts. Academic problems were the most common reason for dropout (37.8%). Students whose decisions to enter medical school were influenced by the surroundings were at higher risk of dropout (OR=1.912, 95%CI1.33-2.75). Studying according to a plan and prioritizing tasks, time management were protecting factors against withdrawal.

Discussion: The found higher withdrawal thoughts compare to other studies. Academic struggling/poor performance was the main factor for withdrawal from a medical school, which was accused as a number one cause in many published studies. Well organized study plan has been found as a protecting factor as in this study.

Conclusion: A high dropout thought was found in the participants. Private school graduates were more prone to the dropout thoughts. Students' appropriate study skills could prevent them from dropping out from the medical college.

Take Home Messages: The medical education selection committee should review carefully students' desire to study medicine. Academic guidance program could be helpful to detect symptomatic students before actually dropping

out, and support them getting over their thoughts of withdrawal. A good study skills course could improve students' performance and be protective for this phenomenon.

Key Words: Dropout, medical school, medical students, Saudi Arabia

Title: The Changing Demand for Peer Mentoring at a District General Hospital

Authors: Carmen Lau, Helen Parry

Institute: South Warwickshire NHS Foundation Trust, United Kingdom

ABSTRACT:

Background: The transition from a medical student to a junior doctor is a steep learning curve. Newly-qualified doctors encounter unfamiliar situations frequently. Support guidance varies depending on their supervisors. Aim: to assess the demand for peer mentoring of Foundation Year One (FY1) doctors at a District General Hospital.

Summary of Work: Each FY1 was allocated a clinical education fellow (CEF) mentor for support during their rotation at the trust. CEFs were available to meet with their mentees at the start and throughout each rotation as needed. At the end of each rotation, anonymous feedback was taken from the FY1s.

Results: Fourteen FY1s responded in November 2016, 12 in April 2017 and 5 in July 2017. Thirty-nine per cent (12) met up with their mentors at the start of their rotation. All of those who met with their mentors felt that they received good support and the program was invaluable.

Discussion: Although feedback was good, there was a decline in FY1 engagement over the year. Initially 64% of FY1s met with their mentors in the first rotation, 25% in the second rotation and 0% in the final rotation. The reasons for poor engagement in the scheme varied throughout the year.

Conclusion: The scheme was well received, though engagement diminished throughout the year. The causes were multifactorial. Over time, FY1s began to engage in more traditional support networks e.g. clinical teams. This highlighted the importance of recognizing the changing needs of FY1s throughout their first year as doctors.

Take Home Message: The scheme in its current format has limited value to FY1s past their first rotation. This gives us an opportunity to further develop the scheme and enhance its impact by tailoring the mentoring to the changing needs of FY1s during their first year of clinical practice.

Title: Enhancing Medical Students' Comprehension and Performance in Anatomy through Engagement and Formative Assessment: Our Experience.

Authors: Ameer Raof, Avelin Malyango, Mange Manyama, Estomih Mtui

Institute: Weill Cornell Medicine - Qatar

ABSTRACT:

Background: The new integrated basic sciences curriculum was implemented at Weill Cornell Medicine-Qatar in the fall 2016. In anatomy, emphasis has been made on introducing new measures that would facilitate students' engagement. New measures included sing audience response system; offering online learning resources; and promoting students' professionalism in the lab.

Summary of Work: Measures included videotaped review sessions; online practice modules; clinical cases; audience response system; and measures to enhance professional attitude in lab, including recording dissection findings and correlating with cause of death, and cadaver care. Students' scores assessed. A survey was administered to evaluate measures and gauge satisfaction.

Results: Students' mean scores in written quizzes showed a slight improvement compared to those before the intervention. However, 95% of the class agreed that the new measures helped in understanding anatomical concepts; 86% agreed that measures helped in realizing relevance of anatomical concepts.

Discussion: This interaction with cadavers contributed to enhancing students' professionalism in addition to improving anatomy comprehension. The rationale was to create a deeper and objective appreciation of the cadaver's role in facilitating anatomy learning. Other measures, such as online modules and review videos offered students an opportunity for

formative feedback.

Conclusions: Students have overwhelmingly welcomed the new measures. The impact on performance was clear. Engaging students in lab with cadaver care and clinical relevance have positively contributed to comprehension. We hope that a more sustained and refined future application will eventually achieve a more positive impact on understanding and performance.

Take Home Message: The effectiveness of anatomy education as a foundational science could be enhanced by implementing measures that would engage students during anatomy lab sessions; and by formative feedback measures such as using audience response system in lectures and online assessment modules.

Title: Respiratory Therapy Students' Experiences of Assessment in Clinical Simulation-Based Learning Environments

Author: Andrew West

Institute: Canadian Society of Respiratory Therapists, Canada

ABSTRACT:

Background: A movement towards using clinical simulation for high stakes testing in competency-based assessment has been observed across health professions. Several social factors are known to be central to creating an effective learning environment in simulation, including: fostering a supportive environment, establishing trust amongst participants, and ensuring participants feel comfortable. This research aimed to explore the impact of changing assessment practices on social aspects of the clinical simulation environment.

Summary of Work: A qualitative case study design was adopted in order to achieve deep understanding of the social aspects of learning in the simulation-based learning environment of one Canadian entry-to-practice respiratory therapy program. Data was collected through survey technique, observation of simulation sessions, and on-on-one participant interviews. Networked learning theory provided a framework for identification those emergent environmental elements of the simulation-based learning

environment, which cannot be pre-designed.

Results: Five primary themes emerged from this analysis: comfort, ontological security, immersion, self-reflexivity, and perceived performance. For participants, social aspects of their experiences in clinical simulation were characterized by: their comfort levels, their senses of ontological security, and degrees of immersion they experienced during the simulation.

Discussion: Each of these experiential dimensions were impacted in some manner by the assessment design (graded versus non-graded), a phenomenon that was further modulated by individuals' self-reflective capacity. These phenomena appeared to coalesce to impact participants' perceptions of their own performance, which was also related to the approach to assessment built into in the instructional design.

Conclusion: These findings indicate the influence that the approach to assessment (e.g., high-stakes testing) may have on social dynamics in clinical simulation, and on learner experiences. This research also identifies the relational property that exists between the assessment elements that can be designed for and those non-designable social elements that take up potential within simulation-based learning environments.

Title: Simulation for labor and delivery: what is the impact on undergraduates?

Author: Fareesa Waqar

Institute: Riphah Islamic International Medical College, Pakistan

ABSTRACT:

Background: The aim of the study was to establish that final year students in clerkship module perform better when taught labor and delivery on simulators as compared to only taught theoretically. It was also decided as to what activities should be performed during implementation of simulations in the clerkship module

Summary of Work: Thirty four final year medical students in clerkship module were divided into two group's .Group A 14 group B 20 students had to undergo a pre-test on labor and delivery. Group A was taught labor and delivery theoretically for 60

minutes and group B underwent simulation exercise.

Results: The scores in the pretest for both group A and group B were compared and found P value which was not significant. The post test was performed at one week and 15 days interval and found to have a P value of 0.003, Significant and .06 not significant respectfully.

Discussion: Six additional questions were added to the post test on satisfaction with learning experience. . Wilcox on paired rank sum test, Wilcox on T test, and z-statistic with continuity correction were employed for statistical analysis. P value of < 0.05 was taken and found significant between the two groups.

Conclusions: Adding a simulator-based training session for medical students of final year in management of labor and delivery to the theoretical class led to a higher short-term increase in knowledge and student satisfaction than attending a self-study session. A significant difference in knowledge was not demonstrable at 12–15 days.

Take Home Message: Addition of simulations to the final year clerkship module we need to take specific steps and resources like adding a high tech skill lab.

Discussion about benefits of adding simulations in teaching program in front of the curriculum committee and the academic council is required.

Title: Accuracy of self-evaluation in a second year course for class II cavity preparation

Author: Alia Ahmed

Institute: Riphah International University, Islamabad, Pakistan

ABSTRACT:

Background: Class II cavity preparation is a challenging skill to master. Judging how to hold a rotating handpiece to prepare a specific shape of cavity is especially difficult when attempted between teeth which is inaccessible to direct vision. Feedback received should result in the ability of the learner to calibrate the quality of their own work (Boud, 2015).After the cavity is prepared, the student should ideally not have to ask the instructor about the correctness of the

cavity. In order to ensure that the competency has been achieved, the student should demonstrate an ability to evaluate his or her own preparations

Summary of Work: A 7-week pre-clinical course was conducted in which disto-occlusal class II cavity preparation was included. During the course, at two intervals, a session for self-evaluation was carried out as a learning activity so that the student could learn how to evaluate the cavity according to certain set criteria.

All 73 second year students consented to participate in the activity which included cavity preparation of phantomhead teeth. Assessments were made by a scoring sheet which was the same for the examiner and student. 11 steps were evaluated with the 12th being the total score. Paired samples t-test and Pearson's correlation was applied with SPSS version 21.

Summary of Results: Except for two steps, all others, including the total scores were significantly overestimated by the students $p = .001 - .030$. By calculating the Pearson product-moment correlation coefficient, it was found that the correlations between the marks given by instructor and students were significantly positively correlated $p = .001 - .037$, $n = 73$, $r = .244 - .579$. Two items were not significantly correlated $p = .084 - .122$, $n = 73$, $r = .183 - .204$.

Discussion: Students were given a learning environment in which they were reminded that they should judge their cavities themselves. This ensures that they know the positive and negative aspects of their work. It is also a principle of adult learning to involve the learner in the learning process and to impart a sense of responsibility in the student for this. Self-evaluation according to set guidelines is a method to achieve these outcomes and carries with it the benefit of a certain degree of transparency when examinations are conducted. Assessor variability can be a problem, however. The instructor now has a greater liability if judgements are not correct but is reinforced when judgements are accurate. Instructions on how to perform the task and how to remedy the situation can be streamlined with input from the student

Sought in the form of self-evaluation. Constant

feedback is necessary to reinforce correct practices and perceptions.

Conclusion: When practiced before during formative assessments with individualized feedback, students were able to assess their work in accordance with their instructors but still tended to overestimate their effort and this overestimation was statistically significant at a p value of .05. The correlation of scores, however, for underperforming and exceptional students was also statistically significant at a p value of .05, with varying strengths of association for each step of the procedure.

Take Home Messages: 1) Tell students that they are adult learners from day one and that they are equally responsible for recognizing what is wrong with the cavity and how to remedy it.

2) There is no substitute for practice and repetition of a skill to gain mastery. Self-evaluation cannot improve performance without practice, even if it can promote a recognition of deficiencies in performance.

Title: Change and Challenges Regarding Communication Styles in Eastern and Western Countries: Based on Iranian (Eastern) Doctors' Perceptions by the use of high fidelity simulated video

Authors: Mandana Shirazi, Firooz Nasirzadeh, Nazila Zarghi, Sari Ponzer

Institute: Tehran University of Medical Sciences and Karolinska Institutet, Iran

ABSTRACT:

Back ground: Communication styles can be considered as an importance of cultural issues in a healthcare context. The main goal of the current study is to explore the perceptions of Iranian doctors regarding doctor-patient communication styles in Swedish context (through watching simulation video of Swedish context) as well as their perceptions of consultation with Iranian and Foriner patients.

Summary of the Work: This is a qualitative content analysis study. The main question was: How does Iranian doctor perceive of Swedish doctors' communication style as well as their own communication style within Iranian context with

Iranian and foreigner patients? The number of doctors was fifteen Iranian physicians who were faculty members and had a previous experience of visiting foreign patients purposefully selected as key informants. First, they watched the video of physician-patient communication in Sweden, following that they were interviewed.

Summary of Results: Three themes were emerged; Two ways communication, One way communication and Cross and inter cultural relationship styles.

Discussion: Result showed that one way communication is a dominant theme among participants which directly related to the socio-cultural issues of them. It also could be underpin of health care policy and culture. The novelties of the study were in method section; first the use of simulated high fidelity video, consider as a new approach to solve the few of observational studies. Second, doing research by the use of multicultural group of researchers in order to increase trust worthiness.

Conclusion: However, Iranian Health care system is transition to two ways communication gradually. But there is still need to have a clear policy and communication guideline regarding encountering with foreign and Iranian patients based on two way communication.

Take Home Message: However, the dominant themes were "one way communication style" among Iranian Physician. But they are move to patient contentedness gradually.

Title: The contribution of audience response systems (ARS) towards the active learning journey of students at the Faculty of Health Sciences, University of Pretoria

Authors: Astrid Turner, Irene Lubbe, Corne Postma

Institute: University of Pretoria, South Africa

ABSTRACT:

**South Africa has 26 Higher Education Institutions with predominantly formal contact-based teaching. Due to trends and disruptions, the University of Pretoria embarked on hybridization that incorporates technology. Active learning is about "students doing things and thinking about things they are doing". Audience Response Systems

(ARS) were piloted for such learning.

**A cross-sectional quantitative study with qualitative augmentation was conducted during 2015 to determine whether ARS use had an effect on knowledge retention for Health Sciences students. Ethics approval was granted (501/2015). An online survey link was mailed 500 students. Data was analysed using ATLAS.ti and Stata.

**Over 300 students participated (67%) from several disciplines. ARS were mainly used in 1st semester (daily: 46.8%). 45% of students had improved understanding and increased peer-/lecturer-interactions; 59% felt ARS were used to measure comprehension. 1/3 thought their marks did not improve. Most participants felt ARS must not be used for attendance. Marginalization was referred to: "Clickers are costly and some of us cannot afford to buy them".

**Optimal and frequent ARS use appeared to have a positive learning impact. Students were not averse to manipulate ARS for attendance and assessment. There seemed to be a misalignment between the institutional hybrid strategy and technological learning that frustrated students. There was an unintended consequence of marginalization.

**Hybrid learning is one element of curriculum transformation. ARS were perceived as low-hanging fruit but its scale-up and realization of learning outcomes were limited. The digital literacy of staff; students' socioeconomic status and the learning environment must be addressed before or alongside the institutional strategic direction.

**"It's an extremely efficient system; helps both students and lecturers see the progress of the class, in terms of concepts" ARS can have a positive impact on the active learning experience of students but limitations in the environment must be addressed prior to implementation.

Title: Medical Students' Lived Experiences in a Distributed Campus Model

Authors: Kent Stobart, Carol Suddards, Sinead McGartland

Institute: College of Medicine, University of Saskatchewan, Canada

ABSTRACT:

The University of Saskatchewan College of Medicine offers a graduate MD Program in a distributed model. Following several significant curricular and administrative changes and in preparation for accreditation, the College initiated the qualitative "Lived Experience Project" to better understand how students were engaging with the College on its three separate campuses.

Forty-one students from four classes and three campuses participated in 60 - 90 minute confidential semi-structured interviews with an external consultant. Data from the interviews were organized by year, class and geographic campus. Cross-themes of student engagement were identified for the entire group and presented widely through the College, allowing for broad discussion.

Three broad themes were identified: continuous and often disruptive changes; continuity of relationships; and balancing campus distinctiveness with comparability. Campus specific strengths and challenges were identified. Although the identified themes and issue were not entirely new to the faculty, the issues of medical student engagement were not fully appreciated prior to the project.

The project provided insight into how medical students have engaged with the medical school academically, socially, and emotionally. The voices of the students led to fulsome discussion and in some cases immediate action. Other themes are being further investigated through focus groups, but respectful listening and responsiveness are essential next steps.

Qualitative data from medical students is a valuable addition to the other sources of quantitative data used by medical schools to improve programming. Though the methodology is resource-intensive, providing an opportunity for students to recount their experiences candidly and with anonymity has led to new insights.

These insights about student engagement are being used to plan a new longitudinal integrated clerkship, increase our regional and remote presence, and are being incorporated into our program evaluation.

Title: Active Participation in Projects as a Strategy for Engaging Medical Students in their Learning

Author: Hisham Khalil

Institute: Plymouth University, Peninsula Schools of Medicine and Dentistry, United Kingdom

ABSTRACT:

Background: The Peninsula Schools of Medicine and Dentistry promotes Engaged Student Learning through partnership with students in all aspects of their learning experience to include curriculum design, development of learning resources, interprofessional and peer-assisted learning, staff development, evaluation of the curriculum and 'hands on' projects.

Methods: BMBS students were invited to participate in 'hands on projects' including Quality improvement projects that influence patient care, clinical audit, research special study modules in which students are active researchers, evaluation of educational interventions and learning resources, health promotion and cancer awareness days.

Results: Over sixty students participated in projects between 2013-2017. Completed projects include a YouTube Channel for Patient information, a patients' outcome database, introducing telephone clinics and eleven clinical audits. Students ran three health promotion days and completed evaluations of two learning resources and an educational pilot. The feedback from students was very positive.

Discussion: This approach is underpinned by the 'experiential learning' theory and fosters a reflective approach to learning.(1) The careful selection of projects also helps with preparedness for practice after graduation.

A number of students presented their work in national and international conferences as well as publishing in peer-reviews journals. This helped enhance their education performance measure.

Conclusion: Active participation of students in projects as part of the curriculum can contribute to patient care and evaluation of educational activities. The students were given very positive feedback by patients.

Take Home Message: Achieving learning outcomes in undergraduate medical education through

active participation in projects ensures student engagement.

Title: Cheating in examinations: Lived experiences of undergraduate students at Torbat Heydariyeh University of Medical Science

Authors: Nazanin Shamaeian Razavi, Farzaneh Sadat Rezazadeh Shojaee, Hoda Ahmari Tehran

Institute: Tehran University of Medical Science, Iran

ABSTRACT:

Cheating in examinations in academic institutions is a worldwide issue. When cheating occurs in medical schools, it has serious consequences for human life, social values, and the economy. It is one of the most important cases that had deteriorated the scientific honesty, teaching quality, reliability in the assessment process, and public confidence in education.

This study was designed to identify what factors are involved in cheating in exams based on lived experiences of undergraduate students.

A qualitative research approach with descriptive phenomenology method was chosen for this study. Using snowball sampling method, 19 students were interviewed.

Four main themes emerged from the analysis of the data that can describe undergraduate students' experiences of cheating in exams. These themes were included: educational, personality, social and environmental factors. The results can be categorized in two main individual and contextual factors. Understanding the student perspective on cheating can significantly assist academics in their efforts to communicate appropriate norms. There is a need for faculty to be involved in safeguarding academic integrity and recommend creating a culture of integrity involving all university stakeholders.

Title: Trans-Atlantic Partnership Working in Developing a UK Physician Associate Programme: Reflections and Lessons Learnt,

Authors: Fiona Lawrence, Rex Hobbs, Alex Stevens, Janice St. John-Matthews

Institute: Uwe, United Kingdom

ABSTRACT:

The Physician Associate profession is an emergent role in the modern UK healthcare system. There are currently 350 PAs working in the UK in a variety of medical fields across the primary and secondary care sectors. However the profession is set to grow rapidly in the coming years with the Government pledging at least 1000 Physician Associates in primary care by 2020 (Hunt, 2015). This has meant growth in UK Physician Associate education providers from three higher education institutes in 2014 to an estimated thirty in 2017 (FPARCP, 2017).

The number of qualified UK Physician Associate practitioners contrasts the 105,000 Physician Assistants certified to practice in the US. Here the profession has existed for 50 years and there is over 170 accredited educational programmes. PAs in the US consistently report high job satisfaction and the PA Master's degree is regarded as the most valuable Master's degree in the US economy (Piemme et al, 2013).

This presentation offers a unique perspective into how partnership working between Lincoln Memorial University, Tennessee, USA and the University of the West of England, Bristol, UK has supported the pedagogical design and delivery of a new curriculum. The poster also explores how links between the two institutes have been maintained including adjunct staffing, social media links and webinars.

It offers insight into how the partnership is evolving and how the "lessons learnt" from a country which has been developing this profession for five decades has supported stakeholder engagement and the cultivation of clinical placement provision for the UWE, Bristol programme.

Title: Electives in Undergraduate Medical Education: a successful curricular design?

Authors: Ana Rita Ramalho, Pedro Vieira-Marques, Cristina Alves, Milton Severo, Maria Amélia Ferreira, Inês Falcão Pires

Institute: FMUP, Portugal

ABSTRACT:

Background: Electives are perceived by students as a valuable, highly regarded experience, with benefits in providing a better learning and

academic experience, and opposing a sometimes restrictive syllabus. However, besides their growing importance, there is not much work published concerning electives, namely on their complementary role in medical curricula.

Summary of Work: FMUP students have the opportunity to engage in electives, composing 10% of the ECTS of the curricula. Halfway through the implementation of this innovative curricular approach, the importance of electives was assessed. We aimed to identify student's perception on the opportunity to tackle contents not approached by core curricula.

Summary of Results: 55 students answered the open-ended question, revealing topics not covered by close-ended questions, namely innovative and relevant features of the content of electives, mentioned by 22 and 8 students, respectively. "With crucial components, this is an elective that should be part of the core medical curriculum" is one written response.

Discussion: Students perception acknowledged the aim of implementing elective opportunities in medical curriculum: to provide different learning experiences that allow for students to gain exposure and deepen their understanding, while pursuing their individual academic interests. Further study on the complement that electives provide to core curricula urge.

Conclusions: By increasing acquaintances in domains not covered by core curriculum, electives are one important opportunity to accomplish a significant transformative learning experience. The curriculum design implemented in FMUP, involving a wide diversity of electives and their close assessment, meets the outcomes for undergraduate medical education.

Take Home Messages: Electives hold a complementary and important role to medical curricula. Ensuring a student-centred approach in medical curricula through electives makes it possible to overcome the potential both in education and learning, and in personal and professional development of future young doctors.

Title: Role of Simulation-Based Education in Preparing Future Anesthesiologists in Saudi Arabia

Authors: Abdulaziz Boker, Abeer Arab, Hesham Albabtain, Abdulaleem Alatassi

Institute: King Abdulaziz University, Saudi Arabia

ABSTRACT:

Background: The demands for health educational programs in Gulf Countries Cooperation (GCC) is progressively increasing. This increase is felt across the domains of under and postgraduate programs. There is major deficiency in the number of trained national professionals in the field of anesthesiology.

Summary of Work: Clinical teaching was and will continue to be one of core aspects for most of these programs. Many factors exist to limit the achievement of clinical competence for future clinicians by clinical training only. We aimed to develop and integrate Simulation-Based content within national anesthesia training program.

Results: A full program of twenty-eight specifically designed simulation-based educational program was developed. These workshops cover basic, intermediate and advanced topics for anesthesiology. A progressive Road-map for development, integration and implementation was developed and launched. The national training program enrollment capacity was more than doubled, from 127 to 305 positions.

Discussion: Development of a national anesthesiology simulation-based program was a fruitful project. Starting with extensive scientific council involvement and program directors from all training centers resulted increased adaptation and ownership of the program. Later, needs assessment, centers surveys, faculty enhancement and involvement of content experts ensured optimal running of the program.

Conclusions: In conclusion the project was successful to achieve its goals. Future directions like integrating such program in assessment and contentious medical education are very promising. Educators and simulation interested trainers are invited consider to launch successful and meaningful programs with many local and regional exchange of expertise.

Take Home Message: Curriculum designers need to explore innovative alternatives for clinical teaching to increase access and efficacy of post-graduate triaging programs. Simulation-based technologies can overcome many obstacles faced today in developing countries even for high risk specialties, like anesthesiology.

Title: Developing a course that prepares dental students in Saudi Arabia to deliver treatment to individuals with disabilities

Authors: Salma Al Shehab, Bashir Hamad, Mohamud Mohamud

Institute: Princess Norah Bint Abdulrahman, Saudi Arabia

ABSTRACT:

Introduction: Patients with disabilities do present difficulties in maintaining good oral hygiene; this surely puts them at high risk to develop rampant dental disease compared to others. Generally, they require special attention and adaptations during dental appointments.

Objectives: Develop a specific course for undergraduate dental students in Saudi dental schools, to ensure adequate clinical and basic science preparation, and to provide dental care for special need patients.

Methods: The Six – Step Approach for curriculum development, and the Module Design Format developed by Hamad (1985, modified 1992) were used. The latter contains different guidelines, such as: course title, duration, prerequisite courses, intended students, rationale, educational objectives, education strategies, work plan, students' assessment, evaluation, etc.

Results: Five major course units were developed accordingly, containing a total of 71 specific learning objectives, classified into three domains "cognitive, attitude, and skills". Program implementation will take 5 steps: Identifying resources, support and administration, addressing potential barriers, introducing the course, and program evaluation. The key questions of evaluation would consider: curriculum, faculty and instructors, students, program organization, and teaching/learning methods. The continuous assessment will rely on performance in PBL, tutorials, lab, and clinical sessions through the

OSCE. The final assessment will be based on final written exam through MCQs, SAQs, and MEQs, and final case study presentation.

Conclusion: Dental schools need to provide students with the knowledge, skills and positive attitudes to meet the oral health need challenge of ignored groups within their communities. The needs of patients with disabilities can be met through delivering of educational material as part of the curriculum.

Title: Digital Pathology Ups the Ante in Early Clinical Orientation in an Integrated Medical Curriculum

Author: Ritu Lakhtakia

Institute: College of Medicine MBRU DHCC, United Arab Emirates

ABSTRACT:

Background: For a technology-enabled generation of medical students, the newly-established Mohammed Bin Rashid University of Medicine (MBRU), Dubai is ideally positioned to offer innovative delivery of medical education. The introduction of a digital pathology platform for learning mechanisms of disease with early clinical orientation, demonstrated the university's vision for prospective doctors.

Summary of Work: A comprehensive approach to the fundamentals of pathologic processes like inflammation, edema, thrombosis was focused on simple case presentations with clinical symptoms, signs and investigations forming the fulcrum. Gross and virtual microscopic appearance on whole slide imaging (WSI) illustrated disease.

Results: Medical students of the first cohort imbibed patient-focused clinical scenarios at the beginning of year two of the program. They developed connections between disease and its clinical manifestations. The platform allowed for imaginative creation and integration with imaging and across the spectrum of laboratory medicine. Macroscopic changes in organs led to the dynamic study of microscopic WSI. Tutor- and student- annotations served for joint exploratory learning journeys. Disease appearances traced back to patient symptoms/signs, disease progression or complications, unifying simulated learning.

Discussion: The foundations of clinical and critical

thinking emerged logically with students driving the links. The digital platform provided an early simulated pathway of clinical learning enabled by technology, bolstered peer education, standardized student experience and liberated students from microscope hardware. It was a use-anywhere, visit-anytime, tool enabling student users to communicate at the click of a mouse or touch of a pad. The tutor could continuously expand scanned slide inventory and case creation was boundless with experience and imagination. Student feedback has been a validation of introducing this platform.

Conclusion: Digital pathology is already at the cutting edge of pathology diagnostic practice. With its introduction at an early stage of the curriculum augmenting clinical education, the future beckons our graduates.

Title: Introduction to clinical pathology: Implementation and Evaluation of A brief course of laboratory medicine teaching in the field for medical students

Authors: Navid Omidifar, Mansoureh Shokripour, Ali Keshtkari

Institute: Shiraz University of Medical Sciences, Clinical education Research center And Department of patho Iran

ABSTRACT:

Objectives: Teaching of clinical pathology to medical students has been ignored in many countries such as Iran. We aim to introduce a practical brief course and its proper timing.

Materials and Methods: Three groups of medical students from consecutive years of entrance passed a 1.5 working day practical course on the field. Their level of knowledge was assessed by pre- and post-tests. Their idea and satisfaction were gathered by questionnaires.

Results: Knowledge of students became significantly higher after the course. Their satisfaction was high. Students in later year of education got significantly higher marks. Most of the students wished such a course should be away from basic sciences period and as near as possible to internship.

Conclusions: Due to overloaded curriculum of

general medicine in Iran, we decided to run a brief practical course of laboratory medicine education for medical students. Although the course was practical, the knowledge of students became higher. Students with more clinical experience and knowledge absorbed more. Being actively involved in the classes lit the enthusiasm of students and made them satisfied with the course. It seemed that the course should be placed in later years of clinical training to get the best uptake and results.

Title: Student engagement and achievement improvement using the Realize-It Adaptive Intelligence Engine platform, a blended learning environment and flipped classroom

Author: Chaya Prasad

Institute: Western University of Health Sciences, United States

ABSTRACT:

Background: Lecture based approach of medical education; a one-size-fits-all learning approach does not take into account differences among students' abilities, knowledge and learning styles. Professors have limited data to assess student progress. Millennials seek interactive learning styles with individual learning pace that will provide effective learning and retaining capabilities.

Summary of Work: Using Realize-It Adaptive Intelligence Engine platform we assessed if a). faculty monitoring of student progress, level of knowledge state and b). a customized learning pace would result in higher student confidence levels, engagement, long-term learning. 373 students completed 17 requisite nodes, each containing pre-requisites, learning objectives, didactic content and assessments.

Results: 84.19% students achieved mastery, and 15.81% achieved expert level. 373 students spent a total of 755 hours, of which 74 hours was utilized on review and 27 hours on practice. Knowledge state ranged from 86 % to 90 %. 85% of students liked structure, modules, customized learning paces.

Discussion: 98 % of students completed modules with 84% appreciating structure and content of modules. Combination of a high level in class summary boosted overall experience to 94 %.

Faculty were able to monitor student progress in real time. In class high level summary allowed faculty to address areas of weakness.

Conclusion: Millennial students who controlled their learning pace mastered and retained knowledge better. Real time monitoring of students' progress by faculty provides valuable information regarding weaknesses and strengths. A combination of an interactive learning platform and a high level summary achieved highest student satisfaction.

Take Home Message: Millennial students thrive on self-paced learning. They seek interactive learning platforms. As medical educators we need to address these needs, in order to promote long term retention. Realize-it platform provides not only an interactive platform but also allows faculty to monitor student progress, in real time.

Title: Integrating Science and Practice an innovative approach to bridge the theory practice gap

Authors: Marilyn Baird, Kirsten Schliephake, Heinrich Liesl, Allie Ford

Institute: Monash University, Australia

ABSTRACT:

Background

Pedagogically our innovative platform called iSAP has reconceptualised case based learning in terms of a clinical scenario; challenges which students address in their action plan; resources; an expert response released upon receipt of their plan and a comparative report in which students actively reflect upon the quality of their responses.

Summary of Work: The iSAP platform has been refined. Through a collaborative approach, innovative scenarios that realistically place students into the situation have been created. The provision of expert feedback has been enriched to make it a more immersive experience. Attention has been given to the use of rubrics when assessing student reports.

Summary of Results: Local and overseas faculty, students and clinicians agree that iSAP has improved the quality of student learning. Its pedagogic value is recognised for its ability to develop analytic and reflective skills. The use of

multimedia has led to the creation of authentic scenarios that effectively scaffold student learning.

Discussion: Universities must play an active role in bridging the theory practice gap. iSAP has great promise in teaching students how to extract meaning from their workplace experiences and use these experiences to develop an informed evidence base upon which to anchor future practice.

Conclusion: iSAP is a best practice representation of authentic learning through the use of various media tools involving videos, stills and audio. It also allows educators insights into the student's clinical reasoning abilities, reflective skills and their capacity to integrate various knowledge domains.

Take Home Message: We're taking a new approach to bridging the theory-practice gap for our students - you should join us!

Title: Impact of One Day Intensive Workshop on Integrated Curriculum and Construction of Learning Objectives

Authors: Memoona Mansoor, Rehmah Sarfraz, Ali Tayyab

Institute: Islamabad Medical and Dental College Islamabad, Pakistan

ABSTRACT:

Background:

Public sector medical colleges in Pakistan are still struggling to keep pace with the latest trends in medical education. Faculty development is the foremost requirement for implementation of curricular change. Our workshop was the first in the series planned by a public sector medical college for said purpose.

Summary of Work: This descriptive study was carried out to measure the impact of learning experience of our workshop on the background knowledge of faculty regarding integrated curriculum and learning objectives. A five item short answer Pre and post tests were administered to twenty participants. Tests were scored against the key and analyzed by applying paired t-test.

Summary of Results:

Comparison of pre and post tests scores showed a statistically significant increase in learning of the participants, p value being 0.001.

Discussion:

Our study establishes that a one day workshop can be useful in developing foundation of knowledge about philosophy of an integrated curriculum as well as construction of learning objectives of cognitive and psycho-motor domains. Motivation and enthusiastic participation of the audience plays key role in achieving the outcomes of a hands-on workshop.

Conclusion:

Administration of pre-test/post-test questionnaire supported achievement of the learning objectives with improved understanding of integrated curriculum and construction of learning objectives.

Take Home Message:

Before implementing curricular reforms a robust faculty development program is the need of hour. Training of faculty not only facilitates smooth transition toward curricular change it also gives a sense of ownership to the faculty.

Keywords: Faculty development, integrated curriculum and learning objectives.

Title: Value of student's engagement in curricular reforms

Authors: Muhammad Farooq, Usman Mahboob, Rahila Yasmeen

Institute: Riphah International Universty, Islamabad, Pakistan

ABSTRACT:

Background: In medical education there is increasing interest in student engagement and in staff working in partnership with students to deliver the education program and to facilitate change. Many benefits are often highlighted for students, such as improving student experience and achievement, and for institutions as an indicator of success, quality assurance and competitive advantage. This study explores the value given by the faculty to the student's engagement.

Aim: This is to explore the role of student's engagement in curricular reforms in a medical college.

Methods: Sampling technique adopted was purposeful sampling, and strategy was homogeneous sampling. Eight faculty and eight MBBS students, who were the members of the

curriculum planning committee of Islamic international Medical College, Rawalpindi, were selected. The study design was qualitative case study with semi structured interviews from the faculty and FGDs with the students as the data collection method. All the interviews and FGDs were audio recorded, transcribed and analyzed by importing in NVivo software version 11.

Results: By thematic analysis a total of six themes were identified. The importance of curricular reforms was acknowledged and student's engagement was valued both by the faculty and students. Some limitations in accepting these suggestions were also recognized.

Conclusions: The study has emphasized the importance of student input in curriculum to eliminate the existing problems in it and faculty has fully agreed to accept these suggestions with few limitations. This also showed the student's motivations and enhancing their trust in the curriculum and faculty of the institution.

Key Words: Student's engagement, Student's empowerment, curricular reforms, Medical institution

Title: Perceptions, experiences and limitations of blended learning program for health informatics workshops: A multidisciplinary faculty perspective

Authors: Muhammad Faisal Rahim, Muhammad Majid, Sidra Younis

Institute: National University of Medical Sciences, Pakistan

ABSTRACT:

Background: Blended learning recently is emerging as learning strategy as there is increasing use of technology in health professional education. Blended environment involves Face to Face teaching and e-activity. There is a need to explore multidisciplinary faculty attitudes, perceptions and experiences about Blended Learning programs to teach Health Informatics tools.

Summary of Work: In this study total 48 participants were registered in the blended programs in which series health informatics workshops were conducted with Multidisciplinary faculty. All participants were given access to an open source LMS Moodle. The mixed study design

was used to collect data. Using qualitative and quantitative data collection methods. To check participants' perception, attitude, experiences, a 5-point Likert scale questionnaire was designed to collect quantitative data. Data was analyzed using S.P.S.S ver. 15 to compute means, standard deviation. Moreover, for qualitative data collection one to one interviews were conducted. Codes, categories and themes were identified through one to one qualitative interviews.

Results: Most of the participants strongly agree that it encouraged them to learn independently, provides good knowledge and skills. Voice narrated lectures and presentations were also well appreciated. No problem occurred to access the online lectures and registration process of LMS (Moodle). However there were some limitation expressed in qualitative interviews on lack of subject experts and there is still work needed to improve this technology.

Conclusion: Blended learning for Health Informatics workshop experience was positive and moderately successful. As this is an emerging digital learning technology there is still work to do on its technological and educational content aspects.

Discussion: Learning environment using Blended approach has a promising future, but careful consideration is required in making it content and amount of blending may vary for different courses.

Take Home Message: Blended learning can provide an alternative and additional digital learning methodology if delivered in an organized manner.

Title: Workplace stressors and their influence on the health of mid-career female doctors of a semi government hospital

Author: Komel Zulfiqar

Institute: Mohiuddin Islamic Medical College, Pakistan

ABSTRACT:

Background: Mid career female doctors come across numerous workplace stress factors which influence not only their learning but cause harm to their health. These stressors causing more harm to health of those doctors who are in the middle of their career and majority of them are near end of their fellowship training.

Summary of Work: It was a qualitative study; twelve female doctors with more than ten years of work experience were interviewed in depth and were inquired about nature of stress factors at work and influence of these factors on their health. Nvivo software was used for thematic analysis which revealed themes.

Results: One on one in depth interviews exposed various stress factors related to department and institution like gender discrimination, long working hours, low salaries, lack of rewards and remuneration policies of institutions that had caused their working environment even more stressful which in turn had influenced their health adversely.

Discussion: Working environment imparts huge impact on individual learning. Various stress factors influence performance of female doctors at work sometime resulting in either changing their workplace or may end up in quitting their job. Non compromising colleagues, long working hours, low salaries, unpaid trainings may cause burn out, anxiety and depression in them.

Conclusion: Workplace stress factors of department and policies of certain institutes influence health and well-being of mid career female doctors by curbing their efficiency and having a negative impact on their overall quality of life by causing harm to their health.

Take Home Message: Some significant factors for lowering stress at workplace is encouragement and moral rewards, gender equality and provision of opportunities to learn. Policies should be made to address the complexities of working environment issues. Policy responses need to be multidimensional, cross cutting and inclusive. Effective context related solution need to be emphasized and implemented.

Title: Effect of Communication Skills Training on outcomes in critically ill patients with life limiting illness referred for intensive care management

Authors: Anita Phillips, Neil Orford, Sharyn Milnes

Institute: Deakin University School of Medicine, Australia

ABSTRACT:

Provision of patient-centered care for critically unwell patients with life-limiting illness is vital to

preserve dignity during the dying process. An important barrier to the delivery of this care is the inability of practitioners to communicate and practise shared decision making. Specific communication training is not routine practice in critical care services.

Prospective before-and-after cohort study in a tertiary teaching hospital in Australia. The population was adult patients with life-limiting illness referred to intensive care. The intervention was a 2-day, small group, simulated-patient communication skills course 'iValidate' aimed at improving communication skills, and process of care for patients with life-limiting illness.

Documentation of patient-centered goals of care discussion (PCD) increased, particularly in patients deceased by Day 90 (43% vs 94%). A significant decrease in critical care as treatment goal was observed (61% vs 42%). Secondary observations included decreased MET call prevalence, decrease in 90 day mortality without reduction in admission rate to ICU.

Assessing effectiveness of communication skills training via specific patient outcomes is not routine practice in acute care hospitals or critical care units. A shift towards the process of shared decision making was observed via increased PCD, increased documentation of treatment goals following PCD and reduction of treatment goal documentation if no PCD was recorded.

This study provides proof-of-concept evidence that communication training can result in improved documentation of patient-centered care and changes in treatment goals. Condition specific trajectory changes in clinical intervention and outcomes provide preliminary evidence of potential benefits of improved communication and shared decision making and justify further investigation.

Specific communication skills training in acute care hospitals can be assessed via changes in clinical interventions and outcomes.

The significant increase in documentation of treatment goals if PCD, with decreased documentation of treatment goals if no PCD suggests a shift towards shared decision making.

Title: Under-representation of Patient Safety Learning Objectives in Undergraduate Medical Curriculum

Author: Naila Siddiqui Kamal

Institute: LNWHT, United Kingdom

ABSTRACT:

Background: 'To err is human', published in 2000, landmarks the start of an era where lapses in patient safety became an issue and safety risks awareness became a priority. In the last 20 years, patient safety has become a well-established entity as a subject and regulatory scrutiny has become mandatory.

Summary of Work: The undergraduate MBBS curriculum of a reputable UK medical school was reviewed to scrutinise the learning objectives so as to identify those specifically related to knowledge and skills in context with patient safety. The Learning objectives on the curriculum software named 'Sofia' uploaded on the college VLE were reviewed.

Results: There was a dearth of learning objectives specifically targeting patient safety across all years. The LOs referring to patient safety were mostly found in first 3 years in communication domain. The clinical year's curriculum hardly covered patient safety as bespoke learning objectives. The emphasis was on drug safety alone.

Discussion: It is commonly reported that around 1 in 10 patients experience harm, with at least 50% preventability. Patient safety has many concepts and tools which need to be taught in medical school rather than expecting the newly qualified doctors to fathom their way through and learn the hard way.

Conclusions: Patient safety should be given due representation in the learning objectives in the MBBS curriculum across all years in vertical and horizontal streams. The initial years should include the basic concepts and theory of this subject while in every sub specialty, relevant LOs should be listed to ensure consistency.

Take Home Message: Patient safety is vital in the MBBS undergraduate curriculum.

It needs to be embedded in a vertical and horizontal methodical manner.

Having patient safety tutors in every specialty can

facilitate relevant coverage.
Virtual reality enhanced simulation resources should be included to teach concepts and tools.

Title: How Does Blended Learning Approach Influences Students' Learning In MHPE Program? A Qualitative Analysis

Authors: Ayesha Naveed, Rahila Yasmeen, Barik Hussain

Institute: Riphah International University, Islamabad, Pakistan

ABSTRACT:

In past few years virtual learning opportunities have enhanced the learning prospects, but they have also posed challenges to education. Key limitations included limited interactions with peer and teachers, communication problems, and insufficient sense of bonding between the teacher and student. To address these issues concept of "blended learning" was adopted. However, whenever innovative techniques are introduced it becomes essential to ensure that there is no impact on instructional integrity. Thus, the response of students who are amongst the main stakeholders is absolutely vital to confirm an effective implementation of any teaching and learning approach. The goal of this study is to provide help to the faculty who newly incorporate BLA (blended learning approach), also it provides guidance for educators and curriculum planners to effectively plan their modules while incorporating a BLA in medical education.

A qualitative study with subtype phenomenology was carried out. Data was collected through semi structured one on one interviews from 10 MHPE (postgraduate) students of three different universities of Pakistan.

After exploration many factors were identified which influenced students 'learning in blended learning approach, these were grouped under six major areas. The main factors which were appreciated in these courses were time flexibility, collaborative learning, flexible or blended course design, location convenience, role of a teacher as facilitators, and reinforced learning strategies towards learners' professional needs. The study reflects that, Students hold a positive perception of the BLA being offered in these Master's programs.

It not only enhanced student learning and understanding about the subject matter, but also imparted new learning approaches in them. Motivation was maintained throughout the course. The BLA helped them to become more self-regulated, self-directed, life long and active learners. It will help educators to discover new prospects, in order to make sure that we are in pace with other educational societies.

Title: Factors affecting future specialty choice in Chinese medical students

Authors: Angela Fan, Russell Kosik, Tan Nguyen, Lei Huang, Yuhong Gjiang, Qi Chen

Institute: National Yang-ming University, 台灣

ABSTRACT:

Background: The information of medical students towards their future work preference is important for current health care planning. Investigating their specialty preference is relevant not only to students' leaning pattern and academic performance, but to avoiding possible mismatch between health needs and specialist numbers in some region.

Summary of Work: A nationwide survey, including questions on factors affecting specialty choice, Maslach Burnout Inventory, Job Content Questionnaire, Professionalism Assessment Scale, Moral Distress Questionnaire, Jefferson Scale of Physician Empathy, General Health Questionnaire (GHQ), and other social demographic questions, was filled out by 3,387 medical students of 85 medical schools in China.

Summary of Results: The top five factors were: economic consideration, length of residency training, academic experience, my competency, and family factors, according to their ranking. Statistically significant associations were found between specialty selection and empathy, professionalism, job stress, depression, general health, humanism orientation, and social learning. All $p < 0.001$.

Discussion: Having understanding the factors and their rankings will assist mentors and directors of residency training programs to aid students and junior doctors in their decision-making, motivate students to choose specialties that are limited in certain areas, and aid workforce planners to

address gaps in medical specialty health services.

Conclusions: Financial incentives, length of residency trainings, and professional development are the top concerns while medical students and junior doctors are making their career choices. The decisions are correlated with individual's professionalism, general health, job stress and so forth, leaving rooms for improvement in our medical education and work environment.

Title: The Social Media Disorder in Medical Students

Author: Naurin Farooq Khan

Institute: Riphah International University, Islamabad, Pakistan

ABSTRACT:

Background: Social media addiction is a growing problem among young adults with different methods of measurement. Little empirical evidence that exists in literature either measures excessive use or is restricted to a particular type of social media. The impact of social media addiction is of particular concern to medical students.

Summary: This study investigates social media addiction in medical students. 9-item psychometrically sound and valid Social Media Disorder (SMD) scale with clear diagnostic cut-off point was administered to random subjects of 75 (14 male and 61 female) students enrolled at Riphah International University in Islamabad, Pakistan. Cronbach's Alpha of the scale is .743.

Results: Results revealed that 9 (12%) medical students who were addicted out of which 4 were males and 5 females. The Fisher exact test was applied to find out any association of gender with the Social Media Disorder. No relationship was found between gender and the frequency of social media addiction ($p=0.057$, fisher exact test)

Discussion: This study contributes to the literature by empirically demonstrating that the Social Media Disorder exists in medical students. Being the subset of Internet addiction and similar to gaming addiction, SMD hampers psycho-social development of students and is associated with lower academic performance.

Conclusions: The results of Social Media Disordered students in this preliminary research

indicate that a significant proportion of medical students are addicted to social media. The implications of the findings need to be addressed in terms of academic performance of the students and subsequent interventions by the academicians.

Take Home Message: Social media addiction in medical students reveals prevalence of the disorder. The educators should pay attention to over-indulgence of students in social networking and should come up with intervention strategies at early stages. Similar empirical studies should be carried out to find the effectiveness of these interventions by gauging academic performance of the students.

Title: Prediction score for intellectual wellness among health education leaders of Pakistan

Author: Mehwish Hussain

Institute: Dow University of Health Sciences, Pakistan

ABSTRACT:

Background: Educational leaders acquire healthy learning, analytic mindfulness and critical feedback to enhance their scholarly skills. There are various eliciting factors affecting intellectual wellness (IW) of a teacher. Pakistan, being a developing country, lacks many resources resisting development of IW of teachers.

Summary of Work: Data were collected from 13 different public and private health sciences institutes of Pakistan. Questionnaire was tailored from "Wellness Wheel" and responses were collected on 4 point Likert scale ranging from never, sometimes, mostly and always (coded 1-4). Reliability of the questionnaire was measured using Cronbach's alpha. Simple and multiple linear regression models were constructed for IW with 6 other wellness quadrants as predictors. Model validation was performed using bootstrap method.

Summary of Results: The composite IW of health educational leaders was nearly three-fourth of the total score. Wellness quadrants of occupational, spiritual, and financial followed by social and emotional were significantly correlated with IW. IW of public institutes teachers was not significantly affected by any of the wellness dimension.

Occupational wellness alone played significant role to enhance IW of males while spiritual wellness was highest score among females. Bootstrap methods showed minimum biasedness of prediction score.

Discussion: Health education institutes are considered as having comparative better environment. Nevertheless, our finding showed academic professionals in these institutes still need to increase intellectual wellness to better production for the society in the field of health.

Conclusions: Health education leaders of Pakistan did not fulfill complete intellectual wellness. Public institutes and female teachers had lower intellectual wellness.

Take Home Messages: Health education leaders of Pakistan need broader aspects to enhance intellectual wellness especially in public institutes and by female teachers.

Title: Appropriate Strategies to Empower Faculty Members of Medicine in Education: Viewpoints of Faculty Members of Mashhad School of Medicine

Author: Firozeh Majidi

Institute: Shahrekord University of Medical Sciences, Iran

ABSTRACT:

Background: The aim of current study was to identify the most suitable strategies for faculty development and improving educational potential of faculty members in medical sciences.

Summary of Work: The study was cross-sectional. First using literature and with the help of experts, a list of all suitable strategies for faculty development was extracted. Then the questionnaire was created based and after determination of its validity by experts and reliability using retest method (correlation coefficient=0.87) was distributed among 96 faculty members of the faculty of Medicine in the target university whom were selected using random sampling method.

Results: The strategies of workshops, observation the excellence performance, short courses and fellowships had the maximum average scores (2.59 ± 0.058 , 2.51 ± 0.056 , 2.42 ± 0.69 and 2.33 ± 0.8), and monitoring the performance of the faculty

with the average score of 1.67 ± 0.75 was determined to be the lowest average. The results showed that the effectiveness of workshops, short-term training courses and fellowships are related to age (P -Value <0.05).

Conclusion: The results showed that most suitable strategies for improving the educational performance of faculty members included workshops, short-term training courses, fellowships and observation the best performance.

Take Home Message: These results can be used for planning and policy making regarding faculty development. Also educational managers and Authorities can improve the quality of faculty development programs and consequently the quality of education system by participating faculty members in planning, implementation and evaluation of faculty development programs

Title: Analyzing the teaching skills of interns to assess the quality of teaching

Authors: Kinza Aslam, Rehan Ahmed Khan

Institute: University of Lahore, Pakistan

ABSTRACT:

Background: As the focus of teaching has now shifted from teacher to student-centered activities, the conventional method of on-the-job teacher training seems inadequate and outdated. Interns, with little or no experience and usually with no formal teacher training during the course of their undergraduate program, are often involved in teaching tasks.

Summary of Work: This cross sectional study aims to analyze how various experiences in medical education contributed to the knowledge and skill development of interns as teachers. It was conducted at University College of Dentistry, The University of Lahore from April till June 2017. 50 First Year Interns with backgrounds from different colleges were requested to fill out the Medical Education Teaching Readiness Questionnaire (METRQ). The results were analyzed statistically.

Summary of Results: 80% interns thought the acquisition of basic teaching skills such as planning what to teach was extremely important however they were not prepared well enough to teach. Most of the teaching characteristics such as

enthusiasm, competence etc. were non-satisfactory prior to internship. The same characteristics showed markedly better values after gaining some teaching experience during internship.

Discussion: It is unfair to expose the students to interns who have limited teaching experience themselves. Quality education can never be achieved without quality teaching as teaching does not refer to a simple transfer of knowledge rather it refers to a process which entails the facilitation of learning.

Conclusions: METRQ can act as an important tool to conduct needs assessment for designing faculty-development programs, which are the need of the hour, or for assessing the current status of individuals who are teaching in the health professions.

Take Home Message: In this time and age of information overload and rapidly changing curricula, it is important to design proper faculty development programs in order to train teachers who can take on the challenges being faced by medical education and can contribute towards producing competent health care professionals.

Title: Blueprinting an orientation program for international medical graduates against Entrustable Professional Activities for Canadian medical graduates

Authors: Jean Rawling, Shannon Murphy, Rabiya Jalil

Institute: University of Calgary, Canada

ABSTRACT:

Background: Undergraduate medical education varies globally. International medical graduates (IMGs) embarking upon postgraduate residency training must adapt rapidly to benchmarks expected of their host country's medical graduates. In Canada, medical graduates are entrusted to perform the Association of Faculties of Medicine of Canada's (AFMC) 12 Entrustable Professional Activities (EPAs).

Summary of Work: To facilitate IMG transition into the Canadian postgraduate medical education environment, the Alberta IMG Program blueprinted a two-week orientation curriculum against the AFMC EPAs. Based on previous needs

assessment, content focused especially on communication in difficult situations, handover in transitions of care, and general procedures expected of Canadian medical graduates.

Summary of Results: Of the 40 participants surveyed, both immediately after the orientation and 2 months into residency training, 95% found the curriculum content to be useful or extremely useful. Preliminary data indicate that residency program directors noted an improvement in preparedness for clinical work over previous years, including written and oral communication and well-woman physical exam.

Discussion: Although the AFMC EPAs are easily accessible for review in document form, these concepts were better operationalized with input from local experts. Additionally, the IMG group dynamic in the orientation sessions normalized the understandable unfamiliarity with Canadian medical educational norms, and facilitated assimilation of information.

Conclusion: The Afmc Epa Scaffold increased the rigour of the orientation offered by the AIMG Program. This enhanced IMGs' acclimation to the Canadian healthcare environment, and improved their understanding of expectations of graduates from Canadian medical schools.

Take Home Message: With the assistance of clearly performance expectations, IMGs can increase their likelihood of success in a Canadian postgraduate medical residency training program. The AIMG Program will continue to build upon its orientation sessions to further this cause.

Title: Medical student learning resources and the scope for Virtual Reality

Authors: Samuel Bennett, Leigh Townsend

Institute: Milton Keynes University Hospital, United Kingdom

ABSTRACT:

Background: With technology developing at an unprecedented rate, there is increasingly becoming a greater array of learning resources that Medical Students can utilise to enhance their learning, particularly online and digital resources.

Summary of Work: This study aims to compare the value that Medical Students place on various

learning resources, and the role that Virtual Reality may play in the future of medical education. Questionnaires assessing how often various learning resources were accessed (Likert Scales 0-10), were completed by 3rd and 5th Year Medical Students.

Results: Year 3 (n=180) and Year 5 (n=183) students placed high value in online resources (Yr3/10:Yr5/10): online Medical School resources (8.58:6.13), online official guidance (6.57:7.53), online unofficial guidance (7.17:7.06) and commercial websites (4.20:8.46). Oxford Handbooks were popular (8.46:8.02); however, traditional textbooks (4.95:3.19), phone apps (3.82:3.20) and study groups (3.87:3.78) less so.

Discussion: These results confirm the significance of online resources in the education of Medical Students. Whilst condensed resources such as Oxford Handbooks are used extensively, traditional textbooks and study groups were amongst the least used. Interest in Virtual Reality (8.07:8.12) as a learning resource matched the most popular resources currently used.

Conclusion: As medical knowledge continues to accelerate, Medical Students are increasingly seeking learning resources that contain condensed and engaging content. The scope for new technologies, such as Virtual Reality, is wide if it addresses these key issues that Medical Students are looking for within their medical education.

Take Home Messages: With knowledge expanding faster than it can be learnt or applied, students now desire condensed, high quality information, helping to explain the migration from traditional textbook learning, to Oxford Handbooks and online resources. Novel resources such as Virtual Reality could be used to facilitate a range of medical education activities.

Title: Implementation of a new competency based learning objectives catalogue into a new integrated medical curriculum – building from scratch

Authors: Joerg Goldhahn, Ursula Brack, Olaf Ahlers
Institute: ETH Zurich, Switzerland

ABSTRACT:

Background: The new national Swiss outcome catalogue ("PROFILES") is based on the CanMEDS

Framework, Entrustable professional's activities, and on generic situations which cover most of the circumstances, symptoms, and findings encountered in the clinical activity of physicians. This catalogue requires highly synchronized, integrated curriculum development to prepare students for these challenges.

Summary of Work: The ETH planning team for the new medical curriculum used a structured approach to ensure alignment between courses, lecturers, and learning objectives/assessment. A three-level approach was used: 1. Consequent synchronization of content, 2. Moderation of exchange between lecturers and faculty development and 3. Use of a web-based curriculum-mapping platform ("LOOP").

Results: The three-level approach enabled a truly integrated curriculum with good synchronization between courses, lecturers and different elements such as learning objectives and assessment. It will be further utilized to identify gaps, to optimize the learning spiral of the curriculum, and for accreditation.

Discussion: CanMEDS roles, Entrustable Professional Activities and situations as a starting point - many of these elements of the new national Swiss outcome catalogue do not correspond to traditional elements of medical curricula. Therefore, integration into new courses and adjustment via curriculum mapping is required to correspond to these challenges.

Conclusions: Central coordination and moderation using curriculum mapping is key to establish a new integrated medical curriculum.

Take Home Message: Implementation of an integrated curriculum requires curriculum mapping from the first day of curriculum development to ensure synchronization of learning objectives and increasing complexity throughout the educational program.

Title: Peer Mentoring; The New Mould to Personal Development

Authors: Mamoon Ahmed, Raheela Yasmin, Aamir Nisar, Noor us Sabah Sheikh, Saadia Sultana

Institute: Riphah, Islamic International Medical College, Pakistan

ABSTRACT:

Objective: To explore the student's perceptions about "Peer Mentoring" in shaping their personal development.

Research Question: "What is the perception of students regarding the mentoring sessions, being conducted by a senior student as a peer mentor?"

Methodology: It was a qualitative study in which semi structured interviews were conducted with the first year medical students(mentees),after their peer mentoring session with the senior 4th year medical student(Mentor).

Twenty five students were randomly selected and exposed to peer mentoring sessions. After the completion of these sessions,8 out of the 25 mentees were further selected through purposive sampling and were interviewed, audio recorded, transcribed and analyzed manually in order to identify the themes. Member checking was done.

Results: All the interviewees gave very positive response towards peer mentoring. They all believed that a better sense of direction, relevant discussion, no hesitation barrier and more openness towards the mentor all would contribute to the development of a better mentoring program. Gaining knowledge regarding what goals to set and how to achieve them will clearly help the students through their careers.

Conclusion: The themes identified while analyzing the interview transcripts guided that Peer mentoring program should be considered in the undergraduate curriculum. Furthermore, it was evident from the response that "Peer mentoring" technique was much appreciated amongst students.

Recommendations: A system in which there will be no barrier like hesitation or fear, and the mentees will come up with the topic to be discussed themselves, will be more open to the mentor about their problems, and will question more freely, such a system is the need for the enrolled students as well as for the ones who are to come in the future.

Title: Using technology to facilitate small group forming and learning for Practice Based Small Group Learning (PBSGL)

Authors: Jonathan Rial, Johnny Lyon-Maris

Institute: Southampton GP Education Unit, United

Kingdom

ABSTRACT:

Background: PBSGL is a well-established format of continuing professional development widely used in Canada and Scotland, and more recently in England. In Wessex, as an emerging PBSGL centre, we did not have the resources to match people to groups, manage subscriptions or module distribution, so we set about creating a website to facilitate this. This presentation describes how we drew on technology to address these issues.

Summary of Work: A bespoke website was created to perform these actions; The site did not require maintenance or hands on management. The development process took several months of design and testing before it went live on the internet. An 'embedding phase' provided data on its use.

Results: The website is live and is 'user-friendly' at the front end but quite complicated in its background functionality. The website performs the majority of the key functions that would normally have to be done by an administrator.

Discussion: The website helps to facilitate doctors getting together for CPD and to form small groups to do this by using a map and search function. It also allows for course booking for training sessions, paying subscriptions and organising meetings. Study modules can be viewed online by members to identify which they would like to discuss next in their groups. A helpful part of the site for members is the ability to record CPD from the sessions and view the group feedback.

Conclusion: Since going live three years ago, the website membership has continued to increase and is now in excess of 700 members.

Take Home Messages: Websites can be used as an effective method to match learners together into small groups as well as manage a whole programme and record learning.

Title: A qualitative evaluation of registrar experiences in an urban postgraduate Family Medicine training program in Cape Town, South Africa

Authors: Tasleem Ras, Derek Hellenberg

Institute: University of Cape Town, South Africa

ABSTRACT:

Background: the postgraduate Family Medicine training program of the University of Cape Town has been running since 2007. This involves three month rotations through various specialist disciplines. It is unknown what the experiences of registrars are in this learning environment, where they are exposed to multiple medical 'subcultures'.

Summary: we performed focus group discussions with supervisors using the nominal group technique. Thereafter, we performed in-depth interviews with registrars who had spent more than two years on the program. The interview data was analysed thematically, using a deductive method.

Results: the supervisors and registrars had different perceptions of the strengths and weaknesses of the program. Registrars found the program environment to be supportive and conducive to learning, but that they were not adequately prepared to work as consultants, even though they had passed all their examinations. Supervisors and registrars had different perceptions of what constitutes good role modelling.

Discussion: the use of group teaching extends to establishing 'communities of practice'. Good role modelling is recognised by students as an important part of their development, and this should form part of pedagogy. Robust discussions and critical reflection are important aspects of professional identity construction.

Conclusion: exploring the 'hidden curriculum' offers insights into how students learn and cope with the pressures of being both clinicians and students. Engaging with registrars' lived experience expands the educator's perspective of the training program. Understanding the culture of the workplace offers opportunities to strengthen good practice, and assist where students are being challenged.

Take Home Message: the learning experience of registrars is not limited to curriculum and pedagogy. The health system subculture offers unique challenges and opportunities for enhanced learning and teaching. The educator who is critically engaged with this culture expands his/her

world view; while at the same time gains a deeper understanding of their students'.

Title: Intergroup relations between clinician-educators and learners: Perspective from Social Identity Approach

Authors: Sik Yin Ong, Mary Lee, Lee Sian Lee

Institute: National Healthcare Group, Singapore

ABSTRACT:

Background: Research on learning environment has largely focused on curriculum matters and educator characteristics. Within educator characteristics, we have not considered the impact of social identity on intergroup relations, which also influences learners' learning experience. Social identity is an individual's sense of who he is, as derived from his perceived group membership.

Summary of Work: We conducted twelve semi-structured interviews and focus groups with 39 physiotherapist and occupational therapist educators to examine how they identified themselves and with their learners. Transcribed data was analysed using framework analytic approach, informed by social identity approach, which refers to two inter-related theories: social identity theory and self-categorisation theory.

Results: Generational difference was a common theme as clinician-educators described the intergroup differences between them and learners. Clinician-educators were more tolerant of students' mistakes during early phase of clinical training. However, clinician-educators expected learners to reflect and improve as they progressed through their clinical training.

Discussion: Clinician-educators held strongly to the value of clinical competence and professionalism as a clinician. They cited their past learning experiences and capacity for accepting negative feedback. Learners who were less receptive to feedback were viewed as outgroup members and deemed inferior.

Conclusions: Classifying learners into generations and identifying their preferred learning styles may be useful for clinician-educators in designing pedagogy best suited to learners' needs. However, these classifications may reinforce ingroup-

outgroup distinctions and exaggerate perception of homogeneity in outgroups.

Take Home Message: Social relationships constitute a crucial component of health professions education. It is essential to pay attention to social identities and intergroup processes in optimising learning environment for our learners. Besides being role models, clinician-educators need to be cognisant of the outgroup homogeneity effect.

Title: The Principals' Perspective of the Learning Environment in Undergraduate Medical Colleges of a Developing Country

Authors: Shahida Badsha, Amina Ahmad, Abid Ashar

Institute: College of Physicians and Surgeons Pakistan

ABSTRACT:

Background: The learning environment of medical institutions has been explored from the students' and faculty's point of view. We sought the perspective of the institutional heads in order to highlight the difficulties faced by them and obtain their recommendations for improving the educational environment.

Summary of Work: A concurrent mixed method study was conducted in the pragmatic paradigm using survey and interview techniques to collect data. Principals of seven undergraduate medical colleges in one city were included in the study. The data from the questionnaires was analyzed using SPSS 21 and the interviews were analyzed using NVivo 11. Themes obtained were studied in detail for analysis and interpretation.

Results: The study determined that while the learning environment is neither uniform nor optimal, most principals have similar opinions about major factors shaping it and face similar difficulties. Curriculum emerged as the most important factor. Lack of resources and shortage of academic staff were the main difficulties identified. Improved standards of student and faculty selection and better coordination between the colleges and the affiliated teaching hospitals were two important recommendations.

Discussion: In this study the principals identified

curriculum, students' role, faculty's role and infrastructure as the main determinants of the learning environment. Other studies reflect these and additional contributory factors and recommendations, Organizations such as AMEE, AAMC and WFME all stress the importance of relevance of the learning environment. . Financial difficulties, shortage of staff and lack of communication between students and faculty have been identified by others as detrimental factors.

Conclusion: A number of studies have emphasized the need for collective and collaborative efforts to improve the learning environment in medical colleges.

We suggest there is need for a forum where institutional heads can share their views in a systematic manner and forward their unequivocal recommendations to the Council.

Title: Comparing DREEM of medical and nursing programs of a health sector university of Pakistan

Authors: Mehwish Hussain, Rehana Rehman

Institute: Dow University of Health Sciences, Pakistan

ABSTRACT:

Background: Satisfactory educational environment (EE) brings an outstanding effect on academia stakeholders' motivation, critical thinking, knowledge and social integrity. Therefore, it is vital to identify the needs and strengths of EE to augment faculty development and student learning. This study aimed to compare perception about EE by medical and nursing students.

Summary of Work: Two cross sectional studies were carried out in medical and nursing institutes of a private health science university of Pakistan. Multistage sampling was employed to collect data from 884 students. Dundy Reading Educational Environment Measure (DREEM) scale was used to ask about EEs. Standardized scores criteria was used to compare EE statistically.

Summary of Results: Student regarded their EE with satisfaction rate of 63%±10.2%. Nursing student attributed more positive than medical students (P=0.027). Learning environment and academic self-perception was higher in nursing.

However, teaching perception scored the lowest but regarded more by medical students. These students also possessed higher social self-perception than nursing students.

Discussion: This is the first study of its kind covering both medical and nursing students of Pakistan to learn EE. The academic satisfaction of the students was positive but satisfaction with teaching style leave area to work on improving this aspect.

Conclusions: Overall medical and nursing EE was above average. Lowest score on teaching perception needs revival to establish conducive EE in Pakistan. Medical students regarded lower EE as compare to nursing students.

Take Home Messages: Strategies needs to derive for the improvement of EE in Pakistan. Issues should be discussed with teachers to establish favorable environment for both faculty and students in academia

Title: Using Milestones Data to Determine Optimal Timing for Remedial Intervention for Struggling Residents

Authors: Kenji Yamazaki, Eric Holmboe, Stanley Hamstra

Institute: Accreditation Council for Graduate Medical Education, United States

ABSTRACT:

Achievement of the graduation target on milestones at the end of residency is an indicator of a resident's readiness for practicing medicine. Biannually repeated assessments of residents allow program directors to identify struggling residents. This study empirically derives predictive indices for residents not achieving recommended graduation targets.

Using emergency medicine milestones data from 2013-2016, growth trajectories were derived for (A) residents who reached the recommended graduation target and (B) those who did not. A regression model yielded cut-off scores for calculating negative predictive values, which may be useful to Program Directors for early intervention with struggling residents.

The growth rate in milestone rating was significantly higher for group A than group B (slope x group interaction = 0.308, $p < 0.001$). The two

slopes diverged significantly at least one year prior to graduation in this 3-year program, suggesting a promising opportunity for earlier identification of difficulty and remediation.

Negative predictive values calculated from national milestone ratings indicate the end of the second year was the best estimate for optimal timing for remedial intervention in this specialty. Program directors could use this information for implementing remedial interventions, depending upon their program's unique situation (e.g., availability of resources, rotation schedules).

This study takes advantage of the longitudinal national milestone dataset and provides empirical evidence that can contribute to increased confidence for program directors in their decision-making around timing of remediation. The analytical approach used here could easily be applied to other specialties with multiple years of training.

The analytic model developed in this study could be used to: (a) provide program directors with empirical standards for detecting struggling residents before graduation, and (b) determine the best timing to provide necessary remedial interventions before it is too late.

Title: Tag, you're it! Using Residents to validate and categorize an MD program MCQ item-bank

Authors: Richard Pittini, Glendon Tait, Kulamakan (Mahan) Kulesagaram, Yuxin Tu, Tamica Charles, Katina Tzanetos

Institute: University of Toronto, Canada

ABSTRACT:

Background: Increasing automation of MCQ item-banks allows for high quality assessment, detailed analytics, and rapid cycle quality control. This requires that items are appropriately and informatively tagged or categorized to enable future analysis – a process that is resource intensive. The U of T MD program recently created a digital item-bank to support programmatic assessment and curricular innovation. We describe a resource efficient process of developing, validating, and deploying a tagging scheme to support high quality assessment.

Methods: A comprehensive categorization scheme

was developed using internal experts, reference to MCC objectives, CanMEDs roles, curriculum objectives, and pedagogical theory (cognitive science, Bloom's taxonomy). The tagging scheme was designed for detailed content and pedagogical feedback to learners and faculty. It also supports curriculum mapping, exam blueprinting and higher-quality exam assembling. Iterative stakeholder consultation and refinement was done to ensure fit with new curricular goals and pedagogical philosophy. Existing and newly created items were collated onto ExamSoft for tagging. Residents were recruited to tag items and trained with faculty and psychometric experts on the use of the tagging scheme.

Results: 2138 items were tagged by 6 residents in 92 hours. Residents reported technical and conceptual challenges in adapting the tagging scheme to existing items but overall reported the process to be time efficient. Contrary to expectations, the pedagogical tagging (Bloom's taxonomy) revealed larger number of higher-order questions than anticipated. Tagging also revealed key gaps in the item bank.

Conclusions: A categorizing scheme for MCQ items can enable quality control of item banks and make content area specific performance feedback available to students and faculty. We will report on future use of the scheme for providing feedback to learners and faculty. Using residents to tag items is a resource efficient and effective process.

Title: Stakes in the eyes of the beholder; it all seems a matter of agency - Factors influencing students' perception of assessment stakes within programmatic assessment

Authors: Suzanne Schut, Erik Driessen, Jan Van Tartwijk, Cees Van der Vleuten, Sylvia Heeneman
Institute: Maastricht University, Netherlands

ABSTRACT:

Background: With programmatic assessment the ambition is to benefit and foster students' learning. In practice, results show that students often perceive feedback or assessments, designed to be low-stake, as summative and high-stake, creating hurdles instead of learning opportunities. This international study explored how students

perceive low-stake assessments and identified factors influencing these perceptions.

Summary of Work: In five different settings of programmatic assessment, ranging from undergraduate to postgraduate medical education, students were purposefully selected and interviewed about their experiences with assessments used within their programme and their perception of involved stakes. A constructivist grounded theory approach was used to collect and analyse data and to understand underlying mechanisms.

Results: Students' sense of agency emerged from the analysis as key concept for understanding students' perception of assessment stakes. Influencing factors were identified; instructions, number and type of assessments, consequences following performances, opportunities to select evidence and room for improvement. Mechanisms to mediate students' perceptions were; the interplay between experience, confidence and orientation, and the relationship with teachers.

Discussion: The results highlighted the influence of assessment culture and the decisive role teachers play in creating a safe assessment environment. They confirmed the importance of ownership and a supportive programme structure to facilitate learning using assessment. When aiming to benefit learning using a programmatic approach to assessment, we should create an assessment environment that values and embraces improvement over performance.

Conclusion: This study identified factors that influence assessment stakes students perceive within programmatic assessment. Knowing the factors and understanding the involved mechanisms can help design effective programmes of assessment that support learning.

Take Home Message: When designing a programme to enhance the learning potential of programmatic assessment, educators should take the influence of the assessment culture into account. Students' opportunities for agency, the student-teacher relationship, and a supportive structure, are particular powerful mechanisms.

Title: Implementing integrated assessment programs in an unstructured environment– from theory to practice...

Authors: Nyoli Valentine, Lambert Schuwirth, Kaye Atkinson, Stephanie Clota, Christine Cook

Institute: ModMed, Australia

ABSTRACT:

The GP365 program, developed by ModMed in partnership with the Flinders University's Prideaux Centre, adopts a programmatic assessment for learning approach.

Gp365, designed for general practice training, has been in use in Australia since 2015. The decision to move to programmatic assessment was obvious. Challenges presented in the implementation of the program, in the translation of theory into practice. Intrinsic to the notion of programmatic assessment is a successful implementation. Therefore, issues that might facilitate or hamper a successful implementation and the sustainability of programmatic assessment beyond the implementation phase were important to consider.

The primary issues we encountered were:

- programmatic assessment is radically different
- the logistics of delivering programmatic assessment in a work based setting.

When pursuing transformations, organisations rarely realise the benefits or retain the value they anticipated. While there are many reasons for this, studies confirm that the top contributors are related to people and organisational issues.

Furthermore, even if an organisation is willing to accept the concept of programmatic assessment there is still a tendency to revert to more traditional approaches along the way.

A systematic approach to implementation was adopted to address the issues identified and ensure increased adoption, quality, safety and cost outcomes were achieved.

The framework developed was based on:
People-Process-Technology.

Critical to the success of the GP365 implementation was the development of a customised system to ensure ease of use, real time monitoring, access anytime anywhere, automation and reporting.

Critical to the adoption of GP365 was the change

management approach, designed to support the successful transition. It was imperative to incorporate the behavioural and cultural elements in a co-ordinated and transparent manner to bring about lasting change, enable continuous improvement and optimise benefit realisation. Since implementation careful guidance and continuous support has been maintained to embed the principles of programmatic assessment.

Title: GP trainee experience of the Annual Review of Competence Progression (ARCP): Is it educational?

Authors: Jonathan Rial, Samantha Scallan

Institute: Southampton GP Education Unit, United Kingdom

ABSTRACT:

Background: The ARCP is used in all specialty training programmes in the UK to monitor progression in training as per a model of programmatic assessment. The ARCP comprises a group of 'experts' who decide whether a trainee has demonstrated the competencies to progress. The aim of this enquiry was to explore whether there was a shared vision regarding its function between participants, and if the ARCP process is educational for the trainees involved.

Summary of Work: The enquiry used a qualitative methodology; the method of data collection was by interview followed by thematic analysis of the transcriptions. This method of data collection was chosen to uncover the experiences and perceptions of those involved in the process.

Results: The data indicated that there was confusion as to whether the ARCP served as an assessment and what the nature of that assessment was. There was also evidence of a mismatch in the educational experience of the ARCP by trainees. Trainees who struggle can find the ARCP educational, whereas those who are 'Satisfactory' do not.

Discussion: This is the first piece of research that sought feedback from all participants in the current GP ARCP process in this locality. The results have informed the development of the process moving forwards.

Conclusion: The conclusions of my research were

that a reasonable understanding of the ARCP process amongst trainees exists, but that it could be improved educationally for all who are involved in the process by making some small changes - for example expert panel-level feedback being given to help promote excellence.

Take Home Messages: Programmatic assessment methods can provide a robust structure but care must be taken that the formative element of the process is not lost to a 'tick box' exercise, and that implementation is consistent.

Title: Rethinking students' assessment in health professions education

Authors: Sawsan Al Kawas, Mohamed Yahya El-Kishawi

Institute: University of Sharjah United Arab Emirates

ABSTRACT:

Background: Assessment is a critical component for students' learning and performance. It can determine the pathway of a successful educational strategy. Assessment affects decisions about grades, placement, progress of learning, instructional and curriculum designs.

Summary of Work: Various reports have been discussing assessment in health professions education (HPE) in an attempt to address important issues such as; the relationship between curricular structure and students' assessment in order to create self-directed learners, current and future assessment methods, and to compare assessment of learning to assessment for learning. This review will focus on the above mentioned aspects related to assessment in literature of health professions education.

Results: Assessment of learning is the most commonly used method at many international educational institutes. The main purpose of this assessment is to determine whether a student has successfully achieved the learning outcomes. Assessment for Learning focuses on how students learn. It can create self-directed learners who continue learning throughout their lives.

Discussion: The choice of assessment method depends on the purpose of its use, whether it is for summative or formative purposes. However, a variety of assessment methods is required to

assess all domains of competency. Assessment of learning is not effective in improving the progress of learning, whereas, assessment for learning helps in refining the learning process. Authentic assessment is a new model of assessment that was developed to engage students in order to create lifelong learners.

Conclusions: Currently, there is a move to authentic performance-based assessment which encourages trainees to take responsibility for their own learning. Assessment in the future will play an important role in HP education.

Take Home Message: In the future, performance-based assessment will dominate in HPE, where trainees will be assessed as members of a multi-professional team tackling together a series of complex scenarios encountered during clinical practice.

Title: Transformative Assessment: Development of a Novel System to Assess Dental Students' Performance in Managing Comprehensive Care Cases

Authors: Ahmad Imam, Shoroog Agou

Institute: King Abdulaziz University, Saudi Arabia

ABSTRACT:

Background: While comprehensive care curricula are becoming an accreditation mandate in dentistry, its implementation remains a struggle. The huge variability in case complexity presents many challenges in case selection, allocation, and grading. This work describes the development of an objective system for evaluating dental students' performance in a comprehensive care curriculum.

Summary of Work: The degree of case complexity is calculated using a Universal Dental Unit Value (UDUV). UDUV for each dental procedure is determined based on the time and skills needed to complete procedures. The commutative UDUVs/case helps determining each case relative weight, quality grade, and amount of work completed by the student.

Results: The system has been validated and implemented for two years. Its Impact on student performance and patient care were assessed. Students' productivity improved immensely after its implementation. The UDUV system guides students to set realistic treatment goals and

provide patients with a stable, hygienic, and disease free oral environment.

Discussion: This system carries advantages for: educators as it provides objective means for evaluating and tracking students, and distributing cases fairly amongst them, students as it encourages them to maximize clinical productivity without compromising the quality of care, and for patients as it helps tracking progress on the outlined treatment plan.

Conclusion: The UDUV lays the ground for an objective method for case allocation and case grading, that encourages students to provide high quality comprehensive care for cases, within their scope of practice, despite the varying degree of complexity of these cases. Solutions to issues encountered in case completion curricula are suggested.

Take Home Message: Millennial students demand transparent, objective assessment, and explicit guidelines for evaluation. The UDUV system provides a simple, practical method to serve this purpose. The system could be easily adapted for different contexts and integrated with existing electronic health records systems.

Title: From theory back to reality: Does a model explain in vivo learning effects of assessment?

Authors: Francois Cilliers, Keeran Aries, Jay Cheon, Belene Demeke, Kelsey Isaacs, Nina Holderness-Parker

Institute: University of Cape Town, South Africa

ABSTRACT:

Background: Although assessment drives learning, using assessment to purposively direct student learning remains an elusive goal. Using a model to inform intervention design should theoretically lead to more effective interventions-if that model is valid. Model validation-a process rather than an event-involves the accumulation of evidence over time and across settings.

Summary of Work: We used a model generated and partly validated with senior medical students. Ten focus group discussions were conducted with junior medical students-eight with mainstream students and two with students in an augmented support stream. Students discussed their

responses to assessment in different courses. Deductive analysis was undertaken using the model.

Results: The assessment factors and learning effects described by students could all be related to components of the model. Furthermore, students' explanations of why they responded to assessment in the ways that they did, could be related to the mechanism factors in the model. No new factors were uncovered.

Discussion: These results illustrate for the first time that the model operates for junior medical students, adding to the accumulating evidence supporting the validity of the model. Model validation is a slow and ongoing process (Prochaska, Wright, Velicer 2008) but ultimately provides a solid basis for designing interventions.

Conclusions: There is growing evidence for the validity of the Cilliers (2010; 2012) model explaining the learning effects of assessment. The model is operational for senior and junior medical students, in classroom and clinical settings. The impact of assessment relative to other factors influencing student learning remains to be explored further.

Take Home Message: The model can be used to explain the learning behaviour of students in response to assessment in vivo. As validation continues, this model could inform evaluation and improvement of how assessment is utilised to influence learning in existing courses and also inform the design of new programmes of assessment.

Title: Blurred lines: sexuality and power in standardised patients' negotiations of boundaries

Authors: Grainne Kearney, Gerry Gormley, Diane Wilson, Jenny Johnson, Jennifer Johnston

Institute: Queen's University Belfast, United Kingdom

ABSTRACT:

Background: For some standardised patients, involvement in clinical education is mediated by a commitment to countering dehumanisation in medicine. This is particularly relevant given the degree of potential vulnerability in intimate examinations. Yet while intimate examinations are

protected by a particular degree of ceremony, other semi-intimate examinations, such as the close proximity of an eye examination or a chest examination in a female patient, may be equally intrusive. We explored SPs' perceptions of power-sharing and boundary-crossing in semi-intimate examinations within a simulated teaching context.

Summary of Work: We collected data from 22 SPs, through five focus groups. Analysis was an iterative process, informed by constructivist grounded theory principles. Data collection and reflexive analysis continued iteratively until theoretical saturation.

Results: Students and SPs construct simulated teaching consultations by negotiating the unequal distribution of power between teachers and learners. SPs became disempowered when students deviated from the negotiated terms of consent and used their own agency to resist. Strong sexual metaphors reflected the subjection of the SPs as the consultations were confronted with discourses of sexuality and gender.

Conclusion and Take Home Message: We demonstrate that power dynamics and the clinical gaze can have important consequences within simulated teaching contexts; any examination, however mundane, can be underpinned by discourses of sexuality and gendered undertones. In learning to navigate the blurred lines between sexual contact and benevolent touch, students must take account of power relations in the consultation.

Title: Education and training support network for upskilled allied health practitioners in primary care

Authors: Shu Li Tan, Samantha Scallan, Rachel Elliott

Institute: Primary Care Education Portsmouth, United Kingdom

ABSTRACT:

Background: General Practice is ever changing and one area involves 'upskilled' allied health practitioners (AHPs) who have transferred their skills to do some of the tasks that General Practitioners (GPs) have previously undertaken. There is no centralised benchmarking of the quality

of education and training received. A need to support these practitioners in their learning and training has been identified.

Summary of Work: A survey was sent out to practices in the locality. It enquired the extended roles of AHPs and the type of teaching they are receiving. It also asked if the AHPs are able to attend a learning set session every 4 to 6 weeks which will also address any unmet educational needs.

Summary of Results: Preliminary results have shown that practices which do have this type of upskilled AHPs are keen to expand the continuing professional development options available to them. Findings suggest a 'learning set' model held every 4 to 6 weeks, would balance the need for structured education and maintain practice-based service commitment.

Discussion: There are a range of training courses for the primary care workforce available provide by various organisations. These tend to be topic-based or to fulfil a compulsory requirement. A learning set model provides a flexible way of addressing continuous learning and training needs of this subset of workforce, tailored to meet their specific learning needs and locality demands.

Conclusions: Practices are keen to support upskilled AHPs in their education and training. This would benefit both the AHPs as well as primary care services. The learning set model will be able to support this.

Take Home Messages: Upskilled healthcare practitioners would benefit from education and training in a supportive environment using the 'learning set' model.

Title: Medical Students and Faculty Perceptions towards a Case-Based Learning Intervention at an Indian Medical College

Authors: Raksha Sule, Andrea Hunter, Animesh Jain, David LaPierre, Nitin Joseph

Institute: University of Toronto, Canada

ABSTRACT:

Background: Although literature promotes shifting curricula towards an active-learning model to improve learning outcomes and clinical competence, it is critical to consider contextualized

factors that may affect such a shift. This study sought to investigate student and faculty perceptions towards a case-based learning intervention at Kasturba Medical College Mangalore Campus (KMCMG).

Summary of Work: This mixed methods study employed a Likert questionnaire and semi-structured focus groups to 3rd year medical students (n=248), and semi-structured interviews to faculty (n=10). Cases were co-created with KMCMG faculty. Quantitative and qualitative data was analyzed primarily by descriptive statistics and by an inductive-iterative approach, respectively.

Results: Themes included: constructing the purpose of CBL, knowledge acquisition/application and satisfaction, the tutor's role, and small-group work influence. A significantly larger proportion of India schooled students, versus studied-abroad students, felt CBL helped acquire new information ($p=0.016$), enhanced their clinical approach ($p=0.008$), and believed the facilitator's role was important ($p=0.001$).

Discussion: CBL was found to be more valuable than the didactic approach. CBL improved all aspects of the related themes. Student preparedness and trained facilitators were found to be critical for optimal learning. Further studies on the experience of India vs. non-India schooled students should follow.

Conclusion: CBL is a meaningful medical education approach for students as future physicians. To enhance the CBL learning experience, recommendations include: modifying CBL to a resource-light version, providing robust orientations to faculty and students, and engaging students in the curriculum development process.

Take Home Message: CBL can be successfully implemented in low-resource settings if contextualized factors are considered, including limitations (e.g. faculty shortage, inability to use informational technology), strengths (e.g. faculty motivation for medical education innovation) and the greater context (e.g. institutional, regional and national goals and agendas).

Title: Understanding the patient's perspective: experiential learning with older adults

Authors: Linda Ross, Brett Williams, Cameron Gosling, Paul Jennings

Institute: Monash University, Australia

ABSTRACT:

Background: Astute interpersonal communication skills are essential for development of clinician-patient rapport, which facilitates the sharing of information, compliance with treatment and overall patient satisfaction. While educators endeavour to teach the value of interpersonal communication the links between this and patient outcomes is poorly established upon graduation.

Summary of Work: This was a single institution, controlled before-and-after trial, with parallel groups, conducted in Australia between Feb – May 2017. It was designed to compare the effectiveness of an educational intervention related to older people (intervention), versus no intervention (control), on paramedic student attitudes, knowledge and behavior/communication with older adults.

Summary of Results: Second year paramedic students (n=124), Md (IQR) age 20 (19-24) years, participated in the study. Both group had negligible change to their already poor knowledge scores and little change to their already slightly positive attitudes. The most notable improvement was in behaviour. Interpersonal communications scores improved by a significant margin; however this was consistent across both groups.

Discussion: While both groups improved the most notable change in the intervention group versus the control group was in the 'understands the patient's perspective' communication element. This indicates that visits with older adults, influenced the intervention group's perspective of older people and allowed them to communicate more effectively as a result.

Conclusions: This was the first study to observe, measure and report on the interpersonal communication skills of paramedic student's with 'real' older patients. Skills were fair - good at baseline and improved to good - very good. The 'understands the patient's perspective' improved by a greater margin in the intervention group who

had conducted one-one visits with an older person.
Take Home Messages: Experiential learning opportunities with real older patients enable students to gain a better understanding of the patient's perspective leading to better interpersonal communication, rapport development and patient-centred care.

Title: Navigating the system; physiotherapy student perceptions of performance-based assessment

Authors: Anne O'Connor, Peter Cantillon, Oliver McGarr, Arlene McCurtin

Institute: University of Limerick, Ireland

ABSTRACT:

Background: Performance-based assessment (PBA) is an integral component of health professional education and determines students' readiness for independent practice. Stakeholder input can provide valuable insight regarding its challenges and facilitators, which may further its evolution. Evidence of student opinion in this area is limited. Thus, we aimed to explore physiotherapy students' perceptions of PBA in their capacity as central stakeholders.

Summary of Work: A qualitative interpretive constructivist approach was employed using focus group interview technique. Six focus groups were completed (n=33) with physiotherapy undergraduate students. Inductive thematic analysis was used to explore the data.

Results: Two themes were identified. The first outlined perceived inconsistencies within the PBA process between supported and unsupported clinical sites and how these challenged and impacted student learning. The second described how students used their experiential knowledge to identify strategies to manage these challenges thus identifying key areas for improvement within the process.

Discussion: Inconsistencies outlined within the current physiotherapy PBA process raise pivotal questions regarding a) how this process facilitates an emphasis on grades rather than learning, and b) the significance of the educationalist role on supported clinical sites. Further, students' development of strategies to navigate practice

education raise rational concerns regarding the credibility of the current process.

Conclusion: Our findings provide an insightful and deep understanding of the PBA process through a student lens. Reported inconsistencies leading to perceived variability in grade outcomes and student dissatisfaction with the PBA process need to be reviewed and addressed. Further exploration of the role of the on-site educationalist is warranted.

Take Home Message: It is critical that physiotherapy academic and clinical communities consider these findings alongside evidence from other health professions to help improve assessment procedures and assure public confidence and patient safety. This is particularly significant when PBA ultimately decides a students' readiness for independent practice.

Title: Navigating the system: how assessors' beliefs and values can steer longitudinal work-based assessment systems

Authors: Valerie Dory, Carlos Gomez-Garibello, Beth-Ann Cummings, Sylvia Cruess, Richard Cruess, Meredith Young

Institute: McGill University, Canada

ABSTRACT:

Background: The focus of competency-based medical education on authentic tasks and trajectories of development has spurred the development of longitudinal work-based assessment systems for formative and summative purposes. While assessment tools are available, questions remain as to how – in a longitudinal context – assessors interact with them and how to combine scores.

Summary of Work: In our program, first year medical clerks must elicit 12 ratings using the Professionalism Mini-Evaluation Exercise (P-MEX) form from multiple disciplines to provide feedback on their development of the non-medical expert, or 'intrinsic', competencies. We analysed data from the first year of implementation (1662 forms) and interviewed 21 assessors.

Summary of Results: Average scores were high (3.5-3.7/4) and relatively stable across the year. Most variance was attributable to assessors (47%)

with low generalizability across forms ($E_p=0.18$). Assessors reported purposefully diverging from instructions; namely aggregating across multiple observations to generate scores and conveying areas for improvement primarily through verbal feedback.

Discussion: Interviews revealed how assessor beliefs impact longitudinal work-based assessment systems, helping to explain unexpected findings from our psychometric analyses. Students may not have received robust feedback for areas of improvement through formal means as intended, but assessors created alternative means to provide what they saw as 'good assessment'.

Conclusions: Literature on rater cognition has focused primarily on the granular cognitive processes at play in judgement-based assessments of performance. This study adds to this literature by exploring the influence of assessor values and beliefs regarding what constitutes 'good assessment' on their actions within the formal and informal assessment system.

Take Home Messages: Intended and enacted assessment systems may differ in unexpected ways. Assessment systems are complex systems in which assessors exercise agency and can significantly impact the outcomes. Assessment designers must therefore continuously refine assessment systems and monitor the processes at play and the overall outcomes.

Title: Comparing Work-based Assessment amongst South African Interns with International best practices

Authors: Kimesh Naidoo, Jacqueline M Van Wyk, Miriam Adhikari

Institute: University of Kwazulu-Natal-nelson R Mandela School of Medicine, South Africa

ABSTRACT:

Background: Resource constraints and a high disease burden impacts on the work-based assessment (WBA) of medical interns in South Africa (SA).

Aim: To compare the work based assessment of medical interns in SA with best practice and to identify gaps in comparison with international practices.

Methods: A systematic, review using a thematic analysis was performed to analyze 97 articles selected from an initial scoping of 360 sources of evidence on WBA in internship between 2000 and 2017. This process informed a synthesis of descriptive and analytic themes related to competency based assessment practices relevant to internship in SA.

Results: There was an overall dearth of studies on assessment amongst medical interns in Lower middle income countries (LMIC). The learning environment in which assessment of interns in SA occurs has many challenges related to resources, workload and supervision. Assessment amongst SA interns was largely focused on the core clinical competency and this occurred in the absence of using competency based frameworks. This was reflected in the finding that most studies in SA dealt with the assessment of core procedural skills related to acute clinical care. The assessment of non-clinical competencies and non-procedural skills was poorly addressed. Self-assessment by interns was the predominant strategy of use in the SA context. The review revealed limitations in the use of multiple assessment strategies and direct observation in the local context in contrast to practices in most high income countries.

Conclusions: A change to assess both procedural and non-procedural skills within a competency based framework is advocated for SA internship together with the use of multiple assessment tools and strategies that rely on direct observation of performance. These findings have relevance to many lower middle income countries with similar resource constraints to South Africa.

Title: Reliability of a WBA portfolio: composite reliability of WBAs in a postgraduate training program

Authors: Jennifer Weller, Damian Castanelli, Brian Jolly, Joyce Moonen-van Loon

Institute: University of Auckland, New Zealand

ABSTRACT:

Background: Competency-based training programs require robust workplace-based assessments (WBA). While most programs include different types of WBAs, reliability studies

generally focus on a single WBA type. As progression decisions are made on the trainees' whole WBA portfolio, we explored the combined reliability of all WBAs used in our training program.

Summary of Work: The Australian and New Zealand College of Anaesthetists (ANZCA) uses mini-Clinical Evaluation Exercise (mini-CEX), Direct Observation of Procedural Skills (DOPS), Case-based Discussion (CbD) and Multi-Source Feedback (MSF). We used multivariate generalisability theory to investigate the composite reliability of current and alternative numbers and combinations of WBAs used by ANZCA.

Results: We analysed 67,405 assessments. Variance attributable to the trainee for each WBA type ranged from 10% (DOPS) to 37% (MSF). The required number of assessments per six months (9-14) approached $G=0.7$. More would be required for reliability to reach 0.8 (~24) except when only CbD and MSF were included (~12).

Conclusions: Reliability is only one factor determining WBA portfolio composition. However, it is important to consider how combining assessments influences reliability, if a WBA portfolio is to serve as evidence for defensible decisions concerning trainee performance.

Take Home Messages: The type of WBA affects reliability. Manipulating combinations of WBAs could optimise reliability. However the numbers required may not be feasible. An alternative would be to utilise confidence limits around trainee scores to identify those borderline trainees requiring more WBAs for a robust decision on progression.

Title: The evaluation of Multi-Source Feedback (MSF) at the College of Physicians and Surgeons of Ontario

Authors: Wendy Yen, Kathryn Hodwitz, Niels Thakkar

Institute: College of Physicians and Surgeons of Ontario, Canada

ABSTRACT:

Background: Multi-Source Feedback (MSF) is a stakeholder survey assessment designed to provide physicians with performance data from colleagues, co-workers and patients. The College of

Physicians and Surgeons of Ontario (CPSO) incorporated MSF into its assessment programming and evaluated its impact on internal operations and physicians' practice improvement.

Summary of Work: A developmental program evaluation was utilized to support the dynamic nature of the program. Quantitative and qualitative data were collected over three years from assessed physicians and committee members who review assessment results. Observational field notes were collected to assess how MSF results contribute to committee decisions about physician performance.

Summary of Results: Assessed physicians were satisfied with MSF and indicated the assessment was useful for practice improvement. Facilitated feedback appeared to enhance the value of the assessment. Committee members supported the use of MSF for physician feedback but sometimes had difficulty directing educational interventions for issues identified through MSF (e.g., co-worker communication).

Discussion: These findings support the trend that performance data is most beneficial when accompanied by facilitation. Results also highlight that development is needed around educational interventions for intrinsic CanMEDs roles such as communication and professionalism; currently, options are limited and thresholds of poor performance for these roles are unclear.

Conclusions: MSF is an acceptable tool for stakeholders and a valuable source of practice information for assessed physicians, particularly when paired with facilitation. Future program development will focus on incorporating narrative feedback into the tools, emphasizing facilitation for more physicians, and identifying appropriate educational options for intrinsic CanMEDs roles.

Take Home Message: Our study found that MSF is a useful source of performance information for assessed physicians. Study findings are consistent with current evidence in assessment theory emphasizing the need for facilitated feedback and the value of narrative commentary to provide context for stakeholder ratings.

Title: Design and assessment of an EPA based national residents training program: From theory to (best) practice

Authors: Reinoud Gemke, Sophie Kienhorst, Hein Brackel, Matthijs de Hoog

Institute: Vumc University Medical Center, Netherlands

ABSTRACT:

Background: Although EPA's have been theoretically well described, their feasibility and effectiveness in broader post graduate training programs are largely unknown. Aiming at sustainable, patient centred care, an innovative EPA based paediatric resident training program was endorsed in the Netherlands. Simultaneously a tool for reproducible entrustment decisions was developed.

Summary of Work: The domain of paediatrics was covered by 9 generic EPA's (e.g. acute care neonatology, complex outpatient care) supported by exposure to 21 clinical presentations, signifying consultation of a paediatrician. An efficient e-portfolio based instrument was devised to enable independent assessment of each resident by multiple attending physicians that they had worked with.

Summary of Results: Residents starting from 1/1/2016 in all 8 Dutch teaching hospital regions are trained by this new program (n=122). They became more focused toward achieving EPA associated competencies and they experienced more independence following qualification for an EPA. Despite some extra preparation time, staff appreciate improved and differentiated appraisal of residents' competencies.

Discussion: Although there are substantial international differences in paediatric residency training programs, EPA's appear feasible and reliable in a national common trunk program of hospital based paediatrics. Adaptations in other countries may be mandatory, e.g. to encompass primary paediatric care. In contrast to generic EPA's, applicable to medical specialties, surgical training programs may require (disease/intervention) specific EPA's.

Conclusion: Appropriate EPA's in combination with a specific structure for appraisal of the resident's

learning curve enables robust entrustment decisions. These are highly relevant for quality and safety of patient care as well as residents' training.

Take Home Message: EPA based post graduate training is feasible and efficient, while allowing better adaptation toward individual talents and learning curves of residents. Using reproducible, independent appraisal tools, valid qualification for EPA's can be obtained, enabling state-of-the-art and safe patient care with appropriate levels of (in) dependence of supervision.

Title: Formal vs Informal entrustment: effects of formalizing entrustment on postgraduate medical training

Authors: Karsten Van Loon, Fedde Scheele, Pim Teunissen, Erik Driessen

Institute: Maastricht Umc+, Netherlands

ABSTRACT:

Background: Entrustment of residents has been formalized in many postgraduate medical competency based training programs, but the relation with informal entrustment is unclear. Moreover, the effects of formal entrustment on training practice are still unknown. Our objective was how formal entrustment relates to informal entrustment decisions.

Method: A questionnaire was sent to all Dutch Ob-Gyn residents and program directors to gather information on how entrustment of independence is granted. Faculty members were interviewed to explore the relationship between formal entrustment and informal entrustment. Interviews were analyzed with conventional content analysis.

Results: Questionnaire results (54 program directors) showed that formal entrustment was seen valuable for generating formative feedback about technical competencies. Interviewed faculty members (12) used both formal and informal entrustment, although they tended to favor informal entrustment since this can be reconsidered while formal entrustment feels like a fixed state.

Conclusion: Faculty uses a combination of formal and informal entrustment. Faculty members were unsure how to optimally use formal entrustment in practice next to their informal decisions. Therefore,

the effect of formal entrustment in training practice is limited to training purposes. Informal entrustment is key in deciding if a resident can work independently.

Take Home Messages: It is necessary for faculty to discuss how they want to use a hybrid system of formal and informal entrustment and how both forms of entrustment can be complimentary to each other in practice.

Title: Entrustable Professional Activities (EPAs) for gastrointestinal digestive tract Training

Authors: Sandra Jaramillo, Raul Cañadas, Romulo Vargas, Reinaldo Rincón

Institute: Aced, Colombia

ABSTRACT:

Summary: Learning to perform an endoscopy of gastrointestinal digestive tract (EGD) is a fundamental aspect of gastroenterology training. The current recommendation of the American Society of Gastrointestinal endoscopy and the World Federation of medical Education for the training programs, is to design a core curriculum to serve as a guide to identify the core cognitive and motor skills required to improve the teaching and performance of EGD.

Currently, there are 7 certified gastroenterology programs in Colombia with training in EGD. With the objective to improve the outcomes in the learning the Colombian Society of gastroenterology developed a core curriculum based on competences and EPAs.

The available literature does not have specific EPAs to be applied during the training of basic skills in EGD. Motivated by this fact; a team of representatives on endoscopy and medical education made a toolbox with core tasks that have been identified. Each task includes, among other things, specific behavioral objectives related to knowledge, skills and attitudes; identification of the key reporting milestones needed to achieve mastery; and suggested assessments to gauge progress.

Results: The result was six "Entrustable Professional Activities" with their respective domains, which were used for the development of the nuclear-based curriculum previously

mentioned.

Discussion: Although there exist curricula with similar characteristics like that of The American Board of surgery; it is the first work that involves the elaboration of specific EPAs within the teaching and learning of the basic skills in endoscopy. Becoming the first published work specifically in this area of knowledge.

Conclusion: This project supports the concept of toward competency-based medical education and different academic societies, which focuses on the desired outcomes of training rather than a time- or process-based curriculum that does not ensure attainment of competency.

Title: Development and exploration of an assessment instrument based on EPAs to capture the workplace performance of medical students in the final clerkship year

Authors: Harm Peters, Ylva Holzhausen, Erik Driessen, Jimmie Leppink, Asja Maaz, Anja Czeskleba

Institute: Scheffner Center for Medical Education, Charité - Universitätsmedizin Berlin Germany

ABSTRACT:

Background: While the literature on the theoretical value of entrustable professional activities (EPAs) for assessment is rapidly expanding, little experience exists with its application. Aim of this study was to develop and explore an instrument to assess the workplace performance of final year medical students based on a full set of end-of-training EPAs.

Summary of Work: The instrument was developed in a systematic iterative process yielding 5 EPA domains, 12 EPAs and 72 nested EPAs cross-mapped to a 6-point supervision level scale. It was administered to 60 final year clerkship students and 87 of their supervisors to evaluate its quality as assessment approach by an established utility index (van der Vleuten, 1996). For the purpose of this study, the ratings were not shared between students and supervisors.

Results: The results indicated that the instrument had good feasibility, acceptability and internal consistency. Students and supervisors' ratings showed variability overall and within the 72 nested

EPAs. Students' self-rating on the ability to perform a task correlated with their history in performing the task. Supervisors' ratings were overall slightly higher than the students' self-evaluation, but differed across the range of all EPAs. Supervisor assessments correlated between supervisors and did not correlate with rating by students. Approximately two thirds of students achieved the intended performance outcome for each of the EPAs based on supervisors' assessment.

Discussion: This study shows that the EPA-based instrument could be used as a formative assessment approach to capture the workplace performance of students in the final clerkship year. The findings add to the validation of end-of-undergraduate-training EPAs.

Take Home Message: A two dimensional matrix consisting of end-of-training EPAs and graded supervisions levels allows meaningful insights into the workplace performance of medical students in the final clerkship year.

Title: Has curricular reform affected empathy erosion? Cross-sectional analysis using the Interpersonal reactivity Index (IRI)

Authors: Anna Byszewski, Heather Lochnan, Philippe Rousseau, Melissa Forgie

Institute: University of Ottawa, Canada

ABSTRACT:

Background: Previous studies suggested empathy erosion with training. More recent work suggests no erosion in the pre-clinical years. Empathy has been linked to patient satisfaction, patient safety, and physician wellness. This study was designed to determine if University of Ottawa curriculum affected empathy as student's progress through the entire curriculum.

Methods: The Interpersonal Reactivity Index (IRI) was used to measure emotional and cognitive empathy. It was preferred over other measures due to high psychometric properties, use within medical fields around the world, and validation in multiple languages. Students were contacted in January 2017 by email, participation was voluntary.

Results: Pairwise comparisons were performed using Dunn's (1964) procedure with Bonferroni correction for multiple comparisons. Students enrolled in year one demonstrated lower median

scores in perspective-taking, personal distress, fantasy, and empathic concern. Students enrolled in year's two to four had a similar median for the same four subscales.

Discussion: The empathy measures of the first year students were similar to the scores of typical university students. The higher scores observed in second, third, and fourth year students would suggest that the University of Ottawa medical curriculum may foster empathy in its students.

Conclusions : The IRI responses suggest that empathy competency may improve with training as students gain clinical exposure when provided with supports and learning experiences such as wellness checks, diverse professionalism curriculum, eportfolio and with solid faculty development (as introduced at University of Ottawa).

Take Home Messages: The findings are in contrast to previous studies which showed that empathy declined during the clinical years. This may be due to the choice of measurement tool. It could also be reflective of the shift in medical education designed to foster a more positive learning environment.

Title: The assessment of empathy level of undergraduate dental students at Riphah International University: A cross-sectional Study

Author: Muhammad Qasim Javed

Institute: Riphah International University, Islamabad

ABSTRACT:

Empathy is of significant importance in the dentist-patient relationship. Previous studies have noted that dental students' empathy may decline over a period of their undergraduate dental school years. The primary purpose of the current study was to assess the level of students' empathy across the undergraduate dental school years.

The cross-sectional study was carried out at Riphah International University, Pakistan. The survey was conducted with each class as they approached near the completion of their academic year. The Jefferson Scale of Physician Empathy- Health Professions Student Version (JSE-HPS version). SPSS 24 was used to analyze the data.

212 undergraduate dental students took part in the

study. The mean empathy score of students was 101.15+13.73. The mean empathy score of the first year dental students was the highest, whereas the third year class had the lowest mean empathy score that corresponded to the first year of clinical training. The dichotomization of data showed statistically significant difference between the mean empathy scores of students studying in the preclinical and clinical years. The difference in the mean empathy scores of male and female students was found to be statistically significant. The JSE-HPS was found to be reliable with Cronbach's alpha = 0.77.

Further research is required to ascertain whether difference in the mean empathy score is a cohort effect or the depiction of actual changes taking place during under graduation. Future studies are also needed to establish the impact that clinical training might have on dental students' empathy, and if it is found to have a negative impact, whether it is possible to design the interventions that can lessen this negative impact.

Title: Evaluation of workbook as an educational strategy for ethics in undergraduate medical education: a qualitative case study approach

Authors: Muhammad Shahid Shamim, Nadeem Zubairi, Lubna Baig, Adrienne Torda, Chinthaka Balasooriya

Institute: Rabigh Medical College, King Abdulaziz University, Saudi Arabia

ABSTRACT:

Background: Ethics education is a challenging area for medical educationists. Ethics-workbook was conceptualized and implemented for undergraduate medical students in 2015 in Rabigh, KAU. The experience was appreciated by the students and the faculty of ethics course. This appreciation became the trigger for developing the workbook systematically into an effective strategy.

Summary of Work: The aim was to evaluate the workbook for its design, content, feasibility for implementation, and relevance to context.

A qualitative case-study approach was exercised using variety of data sources. Grounded theory approach was employed for content analysis of data gathered through focus-groups (students),

interviews (faculty), and critique (experts in ethics/education).

Summary of Results: The initial analysis identified four main categories: design features, content, teaching methods and assessment exercises. Within these categories, eighteen codes were generated to develop a coding framework. The emerging themes from the framework for both students and faculty had similarities. Experts, however, objectively critiqued the workbook, providing their distinct perspective.

Discussion: Study participants considered the design of workbook to be user-friendly and stimulating for critical thinking. They found the content to be appropriate in depth. Reflection, role-plays, video-clips and feedback were considered effective teaching methods. Unconventional mode of assessment through workbook was overall appreciated. Participants suggested valuable modifications in the workbook.

Conclusion: The process of qualitative case-study in this evaluation was not only a learning event but also thought-changing experience for researchers. The workbook received positive evaluation in design, teaching and assessment methods, and feasibility of implementation. The suggested modifications primarily focused contextuality and relevance of content to local needs.

Take Home Message: Ethics is considered the interface between medicine and society. Ethics education in medicine requires tailored approach according to the social context and cultural needs. The findings of this study were encouraging for the use of ethics-workbook in undergraduate ethics education

Title: Development & Evaluation of A Student Version Of The 'CARE' Measure as an Assessment of Medical Students' Care and Empathy: THE CARE-S

Authors: Suzanne Donnelly, Emily Pender, Rory Plant, David Crampton

Institute: School of Medicine University College, Dublin, Ireland

ABSTRACT:

A majority of studies with medical students use self-report instruments based on a predominantly

cognitive construct to assess empathy. The Care & Relational Empathy (CARE) measure is an internationally validated instrument for patient assessment of general practitioners' relational empathy in clinical encounters.

The aims of this study were (i) to validate the CARE measure for assessment of medical student empathy and (ii) to investigate its utility in assessing empathy in medical education.

Subjects were medical students from a single medical school in Ireland and assessors were experienced patient educators (PEs). Students completed the Jefferson Scale of Empathy and Interpersonal Reactivity Index, then undertook a series of OSCE style consultations with the aim of 'establishing the impact of disease on the patient's life'. Patient educators formally assessed students' empathy in encounters using (1) a global score and (2) CARE. Individual feedback from students and patient educators was gathered. Statistical analysis of the dataset was undertaken to validate CARE and determine its educational utility.

Results: PEs consistently identified 3 of the 10 CARE items as not applicable to medical students, generating a seven item modified instrument, the 'CARE-S'. Inter-rater reliability and range of scores reveals classic dove / hawk characteristics amongst PEs and suggests that CARE-S measured student empathy may vary with patient context. No correlation between self-reported scores on either JSE or IRI with CARE-S score was found. PEs considered both assessment task and CARE-S to be valid for assessing student empathy and unanimously preferred CARE-S. Students reported validity and educational impact of the assessment in debrief.

We conclude that CARE-S, a 7 item modification of the CARE measure is valid, acceptable and useful in formative assessment of student empathy. Further studies are required to support summative application of CARE-S.

CARE-S is a valid instrument for formative assessment of medical student empathy.

Title: Factors Affecting the Empathy of Dental Students: Perceptions of the faculty

Author: Joharia Azhar

Institute: Pnu, Riyadh, Saudi Arabia

ABSTRACT:

Back Ground: Empathy constitutes one of the core components of professionalism and is defined as the ability to perceive another person's feelings from his or her perspective and successfully communicating this understanding to the other person.

Summary of Work: This was a qualitative research project in which 14 dental faculty members having degrees in medical education in addition to their own field of specialization working in dental teaching institutes were selected via a purposeful sampling technique for in-depth, semi-structured interviews. Grounded theory methods were employed with a constructivist approach to collect and analyze the data. Constant comparative methods were utilized for a thematic content analysis using NVIVO 11 Pro software for data analysis.

Results & Discussion: Study participants reported observing a decline in the empathy levels of students as they progress from first year BDS to final year BDS. Various factors contributing towards this decline emerged which were broadly classified into three major themes, the formal curriculum, the informal curriculum and the social set up. Abstract conceptualization and theoretical analysis resulted in the generation of "Dentists web of apathy" model representing the factors that mostly go un-noticed during the academic years but are intricately associated and unsuspecting individuals can get caught in them to reach an apathic stage. Since the various factors were seen to be having a synergistic effect in reducing empathy the "Theory of factor synergism affecting empathy" was proposed, represented as a continuum with empathy on one side and apathy on the other. Various factors synergistic affect can tilt the scale towards either empathy or apathy.

Conclusion: Various factors contribute towards the decline in empathy of the dental and medical students. However fortunately empathy is now considered to be a teachable attribute and therefore the factors negatively affecting empathy can be modified and re-employed to enhance empathy.

Title: Factors influencing students' satisfaction: a follow up study

Authors: Adam Tibor Schlegl, Russell Kosik, Lei Huang, Yuhong Gjiang, Qi Chen

Institute: University of Pécs, Hungary

ABSTRACT:

Background: As a provider, it is essential for the university to have a valid teacher evaluation system, what -besides its quality assurance role- a great opportunity to map the student's expectations. The main goal of this study is a data-mining approach of the students satisfaction based on an educational inventory and to provide educational management with an adequate tool as well.

Summary of Work: An in-house 16-items inventory was created to evaluate students' satisfaction. Altogether 21338 anonym questionnaires were processed by a multi-language questionnaire at the Medical Faculty. 13 568 items were analyzed after data cleaning and balancing based on academic years and programmes. First, a statistical validity analysis was used by Confirmatory Factor Analysis. Secondly, an Item-Response Theory (IRT) and CHAID decision tree models were created.

Results: Statistically valid (77-84%) models were created. Significant differences were found between the preferences of the first-year and the second-year students. In the first year, quality of the lectures and motivation for independent thinking were the most important influencing factors compared with that of the second year students who preferred the general quality of subject. This tendency remains unchanged in the third year. In the clinical modul of education, the quality of the practices is the predominant factor.

Discussion: IRT and decision tree models whith an adequate questionnaire can be an efficient tool to explore the components influencing students' satisfaction. These factors change dynamically through the academic years.

Conclusion: Based on the results, our method is a valid predictive and descriptive tool for measuring students' satisfaction concerning education.

Take Home Message: It is feasible to develop statistical models that can help us to find optimal modifications in education to increase the students' satisfaction.

Title: An argument-based approach to validity concerning the assessment of physicians' professional performance. A systematic review of questionnaire-based assessment tools

Authors: Mirja Van Der Meullen, Alina Smirnova, Mirjam oude Egbrink, Sylvia Heeneman, Cees van der Vleuten, Kiki Lombarts

Institute: Maastricht University, Netherlands

ABSTRACT:

Background: Evaluating physician's professional performance in clinical and teaching practice is highly valued to ensure quality patient care and competent professionals. However, without trustworthy assessment data resulting feedback and/or decisions about physicians' performance will be flawed. Although studies exist that reviewed validity evidence of peer questionnaire-based assessment tools, these studies did not delve into the prioritization of evidence for the different uses of assessment. This is crucial as summative assessments require different support than formative assessments. Examining assessment tools using this argument-based validity approach is vital to support physicians' ongoing pursuit of professional development.

Methods: We conducted a systematic search for references to peer questionnaire-based assessment tools published from inception to October 2016 from PubMed, ERIC, PsycINFO and Web of Sciences. Included studies report on validity evidence of tools used for physicians' clinical and teaching performance. Using Kane's framework data extraction was done based on four inferences in the validity argument; scoring, generalization, extrapolation and implications.

Results: 47 articles about clinical performance and 116 articles about teaching performance tools provided different types of validity evidence. Studies mostly gathered generalization and extrapolation evidence, thus evidence on how well an observed score generalizes to the true score and whether observations made are linked to the real-world activity of interest. Scoring and implications evidence (what consequences or impact the assessment has on the physician, other stakeholders and society) were generally lacking.

Conclusion & Discussion: According to the

argument-based approach not all tools seem to be supportive for their intended use. Tools used for formative purposes provided sufficient evidence, yet for summative purposes gaps remain. Furthermore, evidence concerning implications of the assessment tools is lacking both for formative and summative purposes.

Take Home Message: More research is required to provide support for decisions about physicians based on peer questionnaire-based assessment tools, especially for higher-stakes decisions.

Title: Does student feedback improve the quality of teaching among the surgical clinical tutors in the Arabian Gulf University (AGU)?

Authors: Abdelhalim Deifalla, Ahmed Al Ansari

Institute: Arabian Gulf, University

ABSTRACT:

Background: The utilization of feedback in the promotion of students teaching is a well-recognized tool that has been employed across multiple educational sectors. This study investigates (i) the quality of teaching among the surgical clinical teachers in the Middle East, (ii) the impact of student feedback on the teaching effectiveness of the surgical clinical teachers, (iii) the differences in rating between different groups of students, and (iv) factors that influence the surgical clinical teachers to improve their clinical teaching.

Methods: This explanatory sequential design typically involves two phases: (1) an initial quantitative instrument phase, followed by (2) a qualitative interviews data collection phase, in which the qualitative phase builds directly on the results from the quantitative phase. A paired t-test was used subsequently to identify any difference between the data acquired from the before and after studies. In the second stage, the qualitative part, a Semi-structured individual interviews were conducted with 5 selected surgical clinical teachers.

Results: The overall mean scores of the scales assessed in part 1 of the study (4.28 ± 0.82) and part 2 (4.21 ± 0.79) were not significantly different (0.067 , $p = 0.120$). The only scale experiencing a significant statistical decrease was professional

attitude with a mean difference of 0.13 ($p = 0.004$). When viewing the individual overall means score of all the tutors, it was evident that 20% of the clinical tutors displayed an improvement of 0.30 in their overall mean score. In a result qualitative part, four categories were identified from the interview. These categories are: "Aspects of Teaching", "Attitude towards Survey", "Factors helped to improve", and "The Most Improved Area of Teaching".

Conclusion: The skills of effective teaching have transformed into a necessity doctors are encouraged to attain. The employment of feedback strategies can aid in the development of those skills.

Title: A framework to assess the development of clinical reasoning

Authors: Megan Anakin, Ralph Pinnock

Institute: University of Otago, New Zealand

ABSTRACT:

Background: When clinical reasoning is theorised using script theory then the development of clinical reasoning involves the active construction of illness scripts by medical students. Although teaching methods have been suggested to develop students' illness scripts, the evidence-base lacks examples of student experiences that substantiate the appropriateness of these methods.

Summary of Work: Qualitative methods including a general inductive approach were to examine data from ($n = 21$) interviews with students in their second, third, or sixth year of medical education. Students were audio recorded while they conducted consultations with simulated patients and reflected about their thinking about the two cases.

Summary of Results: As expected, as education increased, students' illness scripts became increasingly differentiated: in detail, organisation, and how they were used to reconcile the information students gathered. Consequently, a framework was constructed representing the main features of clinical reasoning demonstrated students in different years of their medical education.

Discussion: This framework can be used by

educators to help define the teaching, learning, and assessment of clinical reasoning in the curriculum. The usefulness of this framework is limited by the small sample of students from a single institution and missing information about the skills of fourth- and fifth-year students.

Conclusions: Students at different stages of their medical education appear to demonstrate different clinical reasoning skills. The developmental framework constructed from these findings can be used by students to set learning goals for themselves. It can also be used by teachers to offer students formative feedback or to assess their performance summatively.

Take Home Messages: We identified features in students' illness scripts that differentiated them in terms of their detail, organisation, and how they were used to analyse diagnostic information. A framework constructed from the features of students illness scripts can be used to assess the development of clinical reasoning.

Title: Post-Hoc Analysis of the Foreign Medical Graduates Neb 'Mega' Osce: The 2017 Pakistan Experience

Authors: Komal Aqeel Safdar, Aqeel Younas, Khawaja H. Mujtaba Quadri

Institute: National University of Medical Sciences (NUMS), Pakistan

ABSTRACT:

Background: The largest ever OSCE was conducted in Pakistan in 2017 by PMDC. Khan and Mahmood (2016) previously commented on a need for standardization. No in-depth analysis has previously been reported.

Summary of work: This exam was held over four days, with four sets, in ten sessions across 5 simultaneous venues requiring 40 runs and 80 examiners. Post-hoc analysis was conducted.

Summary of results: Out of 784 candidates, 96% passed. Results were analysed using SPSS (Version 21). Overall Cronbach Alpha ranged from 0.47 to 0.54 (mean 0.52) and session wise from 0.42 to 0.60. The mean total scores for each day ranged from 90.86 to 96.96 (with SEM from 0.92 to 1.64) out of 150. Across all four days, all stations had an average mean score of 5 or more (with a pass mark

of 5 out of 10), where SEM ranged from 0.14 to 0.28.

Discussion: Our pass percentage compared favorably with one previous reported experience (96% versus 98%) (Khan and Mahmood 2016). The mean station scores and overall candidate performance was comparable across all 4 days (range 90.86 to 96.96). Reliability as expected was modest owing to multiple factors such as high number of candidates, multiple examiners, multiple examination sets (four), variable training backgrounds of candidates and logistic challenges.

Conclusion: NEB Step 3 OSCE review has identified challenges and opportunities for further standardization.

Take Home Message: Similar exercises need to be routinely performed for each component of the NEB examination to establish national and globally comparable standards.

Key Words: OSCE, Reliability, Cronbach Alpha, Assessment, Medical Education

Title: Scenes, symbols and social roles: raising the curtain on OSCE performances

Authors: Gerry Gormley, Mairead Corrigan, Jennifer Johnston

Institute: Queen's University Belfast, United Kingdom

ABSTRACT:

Background: OSCEs are a ubiquitous form of assessment. As such, they are a powerful tool, engaging participants in important social work. Given their simulated nature, OSCE candidates produce a 'performance'. Here, we explored performative aspects of OSCEs within the core triad of candidate, standardised patient and examiner.

Summary: Using video observation, we recorded authentic OSCEs in an end of year summative assessment. 3 stations were recorded, giving 18 triads and 126 minutes of video. Analysis was conducted using a theoretical framework of Goffman's dramaturgy metaphor. Analysis was iterative, moving between transcripts and videos, and undertaken by a team of three researchers.

Results: Results framed OSCEs as performative not just on the part of the candidate, but also on that of the standardised patient and examiner. All three

had clear roles and tightly defined scripts which were performed within narrow parameters. Props, costumes and audiences were all identifiable. Both physical and temporal space had important symbolic implications.

Discussion: The tightly defined parameters of OSCEs are related their standardised nature. The need to convincingly play the given role can lead to undesirable test taking behaviour (shotgunning) and the patient becoming a prop, rather than an equal partner. Importantly, not just candidates, but also examiners and SPs played scripted roles.

Conclusions: OSCEs are an important context for social work and role performance. All actors in OSCEs portray particular clinical identities as a result of their involvement. Their simulated nature is not necessarily a negative but, as with other forms of simulation, their power should be recognised.

Take Home Message: Care should be taken to address issues of power and identity in writing OSCEs. Additionally, OSCEs should be recognised as important sites of learning and development in and of themselves.

Title: Building consensus and supporting consistency of physician assessors through a real-time modified Delphi training program

Authors: William Tays, Kathryn Hodwitz

Institute: College of Physicians and Surgeons of Ontario, Canada

ABSTRACT:

Background: The College of Physicians and Surgeons of Ontario (CPSO) recently implemented a re-designed peer assessment program created to provide physicians with educationally valuable feedback for quality improvement. The implementation of new specialty-specific assessment rubrics required re-training of experienced physician assessors. A consensus-building approach was utilized to support consistency in assessor judgement.

Summary of Work: Medical records were rated by individual assessors across eight domains during an in-person training session. Anonymous individual ratings for each domain were collected, summated, and displayed back to the group; where

disagreement was apparent, assessors explained their judgment, referencing the assessment rubrics. This process was iterated until consensus was achieved.

Summary of Results: In most instances, consensus was reached within three rounds of ratings and discussion for deficiencies related to either documentation or patient care issues. Physician assessors valued the opportunity to observe each other's ratings and recognized that consistency in judgement was central to appropriate and fair decision-making.

Discussion: Group training emphasizing consensus-building proved to be a valuable approach to training expert raters in the use and application of structured assessment criteria. It is recommended that assessors be given opportunities to pilot assessment tools and discuss rating strategies in simulated environments prior to the implementation of any assessment program.

Conclusions: Performance assessments rely on assessor judgement, thus the training and support of assessors is essential for valid and reliable workplace-based assessments. Consensus-based training was effective in promoting consistency among assessors and in measuring consistency prior to program implementation.

Take Home Messages: Consistent and appropriate assessor judgement requires objective evaluation criteria and consensus in how those criteria should be applied. Real-time modified Delphi training exercises offer an engaging and practical approach to training and building consensus among expert raters applying a shared assessment rubric.

Title: Assessing continued competence through revalidation: perspectives from UK doctors and their appraisers

Authors: Marie Bryce, Julian Archer

Institute: CAMERA, Plymouth University Peninsula Schools of Medicine & Dentistry, United Kingdom

ABSTRACT:

Background: Medical revalidation in the UK seeks to assess doctors' on-going fitness to practise through a continued competence system. Revalidation centres on doctors' participation in annual appraisal meetings, at which the doctor

(appraisee) reflects upon supporting information about their practice, such as patient feedback, with a colleague (appraiser).

Summary: As part of a national evaluation of the impact of the first cycle of revalidation, semi-structured interviews were conducted with 75 appraisees and 41 appraisers. Interviews sought to explore participants' experiences and perspectives of participation in appraisal. The data were thematically analysed using a template analysis approach.

Results: Experiences of appraisal for revalidation were mixed. Many doctors found appraisal meetings useful, though experiences varied according to local interpretations of requirements. There was scepticism that appraisal could effectively assess doctors' fitness to practise, centring on the self-selection of supporting information and concerns that some doctors could 'game the system'.

Discussion: Annual appraisal is mandatory for doctors wishing to revalidate. Many doctors perceive the purpose of appraisal for revalidation is to identify poor performance, and many question its ability to achieve this. This may impact on how doctors engage with appraisal processes and limit the potentially significant formative benefits of appraisal.

Conclusions: Our analysis shows that doctors are participating but that the extent of their engagement with the process is often shaped by their perceptions of its underlying purpose. A shared understanding of appraisal for revalidation's aims has yet to be achieved.

Key Messages: Many doctors find appraisal useful but experiences vary due to local interpretations of national guidance.

Where doctors perceive the aim of appraisal for revalidation to be to assess their fitness to practise, scepticism about its capacity to achieve this may be impacting on their engagement, reducing formative benefits.

Title: The UK revalidation assessment knowledge test – data so far

Authors: Alison Sturrock, Leila Mehdizadeh, Keshani Jayaweera, Paul Crampton, Maggie Baker, Karim Keshwani,

Institute: UCL Medical School, United Kingdom

ABSTRACT:

Background: Since 2012, in the UK, licensed doctors are legally required to revalidate every five years. There are small proportions of doctors without a responsible officer/suitable person who as part of their revalidation sit a single best answer knowledge test as a means to providing objective evidence about whether they remain fit to practise.

Summary of Work: Between June 16-Sept 17, 169 doctors registered to take this assessment. We studied the demographic characteristics of these doctors with particular emphasis on exploring the demographic characteristics of poorly performing doctors.

Results: 169 doctors registered to take this assessment. 66 doctors (42%) paid but did not attend this assessment. The age range of those not attending was 31-80. The age range of those taking the assessment was 29-94.

Doctors taking revalidation assessments were more likely to be men over 50 years. Younger candidates scored better than older candidates.

Discussion: Younger doctors who trained in the UK perform better in this assessment. There is a significant decrease in performance in doctors above the current UK retirement age.

There is an unexpectedly high rate of doctors who pay for but do not attend the assessment. This does appear to be related to age.

Conclusion: Older male doctors were over represented in doctors taking the revalidation assessment. Older candidates performed poorly compared to younger doctors, while those who trained outside of the UK performed worse than UK trained doctors. There was a significant decrease in performance in doctors older than 65.

Take Home Message: An unexpectedly high proportion of doctors do not attend this assessment. Male doctors who are older are more likely to take a revalidation assessment. Age and place of medical qualification relates to poorer performance in this assessment.

Title: Post-hoc assessing the quality of OSCE: Reliability, OSCE metrics and passing score

Authors: Arnuparp Lekhakula, Sukunya Pinaikul
Institute: Prince Of Songkla University, ประเทศไทย

ABSTRACT:

Background: OSCE has been used for the comprehensive examination for the final year students at our school. The aims of this study are to assess the reliability and metrics of the tests; and to compare the passing scores (PS) between Angoff method (AG) and borderline regression (BLR) method.

Summary of work: Twenty 5-minute stations OSCE with testing time of 160 minutes was administered to 196 students. They were categorized to various clinical skills. For each station, alpha coefficient, R^2 and inter-grade discrimination (IGD), failure rate are determined. PS from BLR are compared with AG.

Summary of results: Overall alpha was 0.561. Of all stations, $\alpha > 0.7$ in 25% (range 0.124 – 0.845). Of 16 performance stations, $R^2 > 0.5$ in 7 stations (43.8%), IGD ranged 8.68-21.91; and failure rate ranged 5.6-52.6%. PS with AG was either more or less than with BLR in 12 stations (75%).

Discussion: Alpha coefficients in reflected low internal consistency. They may relate with poorly designed items and checklists, teaching with different methods and consistence of simulated patients. Anyway, R^2 showed moderate correlation between total item scores and global rating for the stations. Choosing method of standard setting will generate additional quality measures.

Conclusions: Reliability and OSCE metrics will give additional information for assessment improvement. In PS setting, BLR uses the 'real' interactions between assessors and examinees, produces a variety of quality metrics and does not require borderline group students; while AG is based on pre-determined 'in vitro' judgment using expert's panel.

Take Home Message: Using a range of appropriate metrics for post-hoc reviewing of OSCE is mandatory for quality assurance process. Many factors such as item checklists, assessor variability, and allocation of students will affect metrics and should be cautious to improve the quality of OSCE. BLR will provide PS in the real tasks.

Title: Link between Hodges' analytic global OSCE ratings and regular communication check list items

Authors: Bernard Cerutti, Noëlle Junod Perron

Institute: University of Geneva, Switzerland

ABSTRACT:

Background: Checklists and global ratings are both used to assess communication skills. Our institution uses checklists while a four-dimension global rating (Hodges' analytic global rating; 1 to 5 Likert scale) is used at the end of the curriculum for the national licensing examination. The aim of the study was to assess whether the four-dimension rating was as accurate as the checklists in measuring students's communication skills performance.

Summary of Work: We investigated the distribution of Hodges' ratings, and their correlations, for the OSCE stations of Years 3 and 4. We also investigate their association with the regular checklists, and whether this association was affected by an examiner effect (gender, general practitioner or specialist, expertise in communication skills), or an examinee effect.

Results: The analysis included 210 examinees and 12 stations. All sub-scales had a median of 4 (interquartile range 4 to 5) with significant, while the overall assessment had a median of 3 (IQR 3 to 4). All subscales were moderately correlated to each other and the overall assessment (from 0.521 to 0.634; $p < .0001$). The sum of all subscales was correlated with the checklist (0.607; $p < .0001$), and there was no evidence of an examinee effect, neither of a gender or expertise in communication skills of the examiners, but global rating tended to be higher among specialists ($+0.361$; $p = .0121$).

Discussion: There was a clear but relatively moderate association between Hodges' analytic global rating and the checklists, which was independent of the examinee.

Conclusions: The current checklist may be not straightforwardly replaced by Hodges' ratings for OSCEs during pre-clinical and early clinical years, since they could assess what has been taught during the curriculum more specifically.

Take Home Message: Future communication checklists might include a combination of Hodges'

ratings with some more specific items depending on every station and the teaching contents.

Title: "Shadow Examiner": modifications in the examiner's role to improve formative assessment at OSCE

Authors: Marcelo A. V. Rodrigues, Rodrigo D. Olmos, Paulo A. Lotufo, Itamar S. Santos, Iolanda F. C. Tiberio,

Institute: University of Sao Paulo, Brazil

ABSTRACT:

Background: Feedback is a powerful learning tool. To improve opportunity for feedback provided by OSCE, an adaptation with a modification of the examiner's role, "Shadow Examiner", was created.

Summary: "Shadow Examiner" accompanies the student through each of the stations providing a structured, targeted and individualized feedback. Research to study potential assessment bias arising from this new method was realized. February 2012 - May 2014: research protocol was performed with 415 6th year students of medicine. 316 students were randomly assigned to assessment made up of "Shadow" and "Fixed Examiners". Pearson coefficient correlation, Student's t-test analysis and Bland-Altman plots were statistics methods used to compare the assessment modes. Checklist items were classified by skills and competences in order to do specific comparisons. We realized forums with students.

Results: High correlations for global scores ($r=0.87$; 95%CI: 0.85 – 0.89) and no statistically significant difference between means of "Shadow" and "Fixed Examiners" in global scores (scale: 0 - 100; mean difference, +0.6; 95%CI: -0.1 +1.2; $p=0.070$). Bland-Altman analysis for affective scores were significantly higher, but the magnitude of this difference was small (+3.0; 95%CI: +0.2 +5.8; $p=0.035$). No significant differences were found for the psychomotor, cognitive and complex competencies domains. According to questionnaires filled out to all 415 6th year students, more than 90% of students agreed that this feedback strategy was more effective than other feedback strategies in OSCE applications during medical course.

Discussion: "Shadow Examiner" provides a better feedback in student's opinion compared other

feedback strategies in their medical course. Global and domain-specific scores had good correlation. Except for affective scores, assessments provided by "Shadow" and "Fixed Examiners" were similar.

Conclusion: The modifications in the role of examiner did not lead to any important bias in students' scores.

Title: A Novel Clinical Reasoning Think Aloud Protocol to Identify Actionable Feedback for Clerkship Medical Students

Authors: Yvonne Covin, Neda Wick, Palma Longo

Institute: UT Health San Antonio, United States

ABSTRACT:

Background: We assessed the utility of a novel 'Think Aloud Protocol' assessment instrument, the Clinical Reasoning Task (CRT) checklist, to identify specific deficits among clinical medical students compared to the current validated instrument, the Clinical Data Interpretation (CDI) Test, which provides a global assessment but does not assess specific task proficiency.

Summary of Work : Six medical students on the ambulatory Internal Medicine clerkship at UT Southwestern Medical Center participated in a Think Aloud Protocol to assess justification for their assessment, differential diagnosis and plan for a patient case ($\kappa = 0.88$). We assessed correlation of CRT to CDI scores with the Pearson correlation coefficient.

Results: The mean CDI score was 44.6 (SD = 7.38). On average, each student uttered 15.83 clinical reasoning tasks [range 8 - 23] to discuss the case. Think Aloud Participant CRT and CDI scores correlated with $r = 0.768$.

Discussion: We found a strong positive correlation between CRT and CDI scores in clinical medical students.

Conclusions: Think Aloud Protocols assessed with the validated CRT provides both a global assessment of student clinical reasoning, and provides students with actionable feedback on specific deficits in clinical reasoning and problem solving.

Take Home Message: The CRT is a valuable instrument for assessing specific clinical reasoning deficits for clinical medical students.

Title: A novel observed structured clinical examination (OSCE) case to assess medical students' unnecessary test utilization and communication skills.

Authors: Pablo Joo, Sandra Oza, Felise Milan

Institute: Albert Einstein College of Medicine, United States

ABSTRACT:

Background: The Choosing Wisely initiative promotes conversations between patients and providers to decrease unnecessary medical interventions. Educators must train learners to communicate with patients about value in healthcare and assess this competency. We developed an OSCE case to assess medical students' value-based care and related communication skills.

Summary of Work: 178 third-year students at an urban US medical school participated. In this encounter, a standardized patient (SP) presents with acute low back pain and requests an MRI (not indicated). SPs used checklists to assess students' history (11 items), physical examination (9 items) and communication skills (a previously validated tool adapted for Choosing Wisely, 14 items). SPs also assessed whether the student discussed clinical practice guidelines; and risks of unnecessary testing.

Results: Mean OSCE performance was 62.2% (SD 12.2%, range 40%-92%); with good reliability, as measured using the borderline regression method ($R^2=0.65$). Twenty-four percent of students did not order an MRI; 44% discussed practice guidelines with the SP; 34% counseled the SP about risks of unnecessary testing. Discussing practice guidelines ($p<.001$) and risks of unnecessary testing ($p<0.001$) were associated with not ordering an MRI. Overall performance on the communication skills checklist was not associated with the decision to order an MRI.

Discussion: This novel OSCE case assesses competency in communicating with patients about unnecessary medical testing. Counseling patients about practice guidelines and risks of testing, rather than general communication skills, were associated with decreased utilization of unnecessary interventions.

Conclusion: Results indicate that counseling patients about guidelines and risks of performing an MRI for uncomplicated acute lumbago was associated with decreased ordering of unnecessary imaging.

Take Home Message: Assessment with OSCEs may inform curriculum development to educate learners to communicate about value and the risks of unnecessary testing with patients.

Title: NEJM Knowledge+ Question of the Week: A Novel Virtual Learning Community Effectively Utilizing Online Discussion Boards

Authors: Michael Healy, Lara Traeger, Gustaf Axelsson, Praelada Wongsirimeteekul, Matthew O'Rourke, Ole-Petter Hamnvik, Roy Phitayakorn,

Institute: The Massachusetts General Hospital, Harvard Medical School, United States

ABSTRACT:

Background: Asynchronous virtual learning communities allow learners to vicariously contribute to both their and others' learning needs. However, it is unclear about how online content and moderator influence affect the quality of online interactions. Therefore, we sought to explore these characteristics in the NEJM Knowledge+ Question of the Week (QoW) community.

Summary of Work: Out of a total of seventy-three questions reviewed from 2015 to 2016, we selected the three QoWs that had the most number of comments and unique commenters. These QoWs were analyzed for demographics of the learners, as well as content, clarity, perception of question difficulty/clinical utility, and overall learner tone.

Results: Learners were mainly from the US and physicians. One QoW had negative comments, but a long discussion on personal practice techniques. Another had positive comments and was viewed as the most useful to clinicians. The last had positive and negative comments, but sought moderator clarification to adjudicate controversies.

Discussion: The top three QoWs had different levels of agreement with the question answers, but all generated significant discussion about personal practice and beliefs. Well-designed questions can

generate an engaged learning community. Moderators may be viewed by learners as expert “referees” for questions in which the answer is not readily apparent.

Conclusions: Learners seem to have a positive experience within an online environment whether they agree or disagree with the content. Many learners freely use personal experiences instead of references to support their beliefs. The role of the moderator to shape the learning experience requires further research.

Take Home Message: Well-designed virtual learning communities can have a very positive impact on learner engagement. Future research is needed to explore the role of community moderators and best ways to encourage evidence-based instead of anecdotal support of learner beliefs.

Title: Beyond the rating scale: assessors' use of overarching constructs and linguistic strategies when writing narrative evaluation of communication skills during an OSCE

Authors: Kyle Wilby, Marjan Govaerts, Zubin Austin, Diana Dolmans

Institute: Maastricht University, Qatar

ABSTRACT:

The use of narrative evaluations for student performance is gaining credibility as a valid and reliable assessment tool yet it is unknown how assessors convey judgements using narrative for summative OSCEs. The Authors aimed to determine what constructs of communication assessors focus on when writing narrative evaluations of student communication skills during OSCEs. Secondly, Authors aimed to determine the extent to which assessor's use of linguistic strategies to formulate judgments and whether or not these differ between good and poor performers.

Eighteen assessors were recruited to write narrative evaluations of communication skills for 14 pharmacy students completing a summative OSCE in 2016 (resulting in 252 narratives). Assessors also scored overall global performance on a 5-point scale. Narrative evaluations for the top and bottom 2 performing students for each station (based on the overall global score) were analyzed

for content and usage of linguistic strategies.

Seventy-two narrative evaluations were extracted. Overarching communication themes of confidence, adaptability, patient safety, and professionalism were focused on by assessors and were coupled with assessors' performance judgments. Most comments were written as bald on record (77%) and did not make use of politeness strategies. A further 22% of comments were hedged. Hedging was used more commonly in poor performers, compared to good performers (30% vs. 15%, respectively, $p < 0.001$).

This study identified that assessor's focus on broad communication constructs, rather than specific behaviours, when making performance judgements of communication during a summative OSCE. Assessors formulate these judgements primarily without the presence of politeness.

Take Home Message: Narrative assessment may be useful for summative assessment, considering the direct and specific nature of language used during summative OSCEs.

Title: Aligning CME with Quality: Perceptions and Experiences of Leaders in King Abdullah Medical City

Authors: Wid Alsabban, Simon Kitto

Institute: King Abdullah Medical City, Saudi Arabia

ABSTRACT:

Continuing medical education, quality improvement and patient safety share the goal of improving patient care. In North America, models for integration had been explored as integrative efforts were assumed to have a greater impact. Yet applying the models without exploration of the local settings and adaptation as necessary might not prove functional. In this work, we examined the perceptions and experience of leaders in King Abdullah Medical City on current and possible collaboration between CME department (CME-D) and Quality and Performance Management Administration (QMA) in KAMC.

Using a criterion based sampling, the participants were approached and semi-structured interviews were conducted. The interviews were transcribed and a directed content analysis took place using D'Amour's structuration model for collaboration as a theoretical framework.

Our results showed that the only shared collaborative goal among the groups interviewed was the logistical support CME-D offers to QMA. Furthermore, a number of unshared collaborative goals between the groups of participants were presented. Additionally, the results showed that more work on communication, leadership and formalization aspects could move the collaboration process forward.

Results of this study could be utilized as a need assessment for further collaboration efforts. Though the definition of CME by the Saudi Commission for Health Specialties might pose limitations on the potential of CME units, yet, the findings of unshared collaborative goals further reinforce the potential for more collaborative efforts between CME-D and QMA. These unshared goals could be reflected on some integration models between CME and QI found in the literature.

In conclusion, D'Amour's structuration model for collaboration could be used to further facilitate the collaboration process in KAMC. Moreover, an exploration of current and future implications of CME as a field on a national level is needed.

Title: Structuring a bespoke training program to meet individual, organisational and regulatory needs

Author: Naila Siddiqui Kamal

Institute: LNWH, United Kingdom

ABSTRACT:

Background: The NHS UK is a leading healthcare provider seeing 1 million patients every 36 hours. There are 141,400 doctors. A significant number of overseas doctors that are appointed by hospitals directly rather than partly funded by the Deanery are supported in their educational needs through bespoke training programs.

Summary: This presentation describes a model of educational leadership and innovation used to deliver a bespoke training program for a cohort of non UK junior doctors. This includes strategic planning, induction, faculty development, curriculum implementation, assessments/ appraisals and evaluation of outcomes. The challenges include securing organisational support

and stakeholder engagement.

Results: Program evaluation of first two years have demonstrates greater engagement of these doctors in their training, meeting of organisational needs, good educational governance and greater clinical competency to avoid patient safety lapses. Locum cost was reduced. Continuity in team structure was achieved. A 2% attrition which was back filled.

Discussion: A core team of a senior clinical educationist, specialty lead and senior manager is essential. An organisational plan with time lines, delegated tasks and reporting methodology is needed. The process includes selection, rotations across 5 sub-specialties, supervisor allocation, curriculum implementation, robust appraisal and assessment system with mentorship and support.

Conclusion: Designing and delivering a bespoke training program for doctors not in formal training programs is essential for parity within the two streams for delivery of safe and effective care. This challenging task requires educational leadership, application of robust educational governance, faculty and trainee engagement and financially viable support structure.

Take Home Messages: All doctors should have appraisals or assessments as part of a CPD or a training program

Bespoke Training Programs have the advantage of meeting individual and organisational needs

Such programs should have educational leadership, organisational support, financial sustainability and dedicated faculty to deliver the goals.

Title: A comparative study on the function and structure of medical education office in world's top universities

Authors: Nooshin Kohan, Shahram Yazdani, Fakhrosadat Hoseini, Hoda Ahmari

Institute: Virtual University of Medical Sciences, Iran

ABSTRACT:

Background: It is essential to adjust the responsibilities and function of Medical Education Offices (MEO) regard to current society requirements. Therefore, it is good idea to learn

lessons from the experiences about establishment and function of these centers around the world. The aim of the present study was to carry out a comparative study to investigate the function and structure of Medical Education Offices or Centers at some of the world's top medical universities from America, Europe, and Asia.

Summary of Work: This is a comparative, descriptive study that was conducted in 2015. 11 centers around the world (in America, Europe, and Asia) were selected to study. Content and face validity of the checklist was ensured through survey of experienced professionals.

Result: All 11 centres in our study (100%) dealt with the issues of faculty development and research and scholarship activities. Only one out of 11 centres (27%) dealt with the issues of society and patient education. Five out of 11 centres (36%) dealt with the continuing medical education (CME) and continuing professional development (CPD). Consultation services are provided at seven out of 11 centres (64%).

Discussion and Conclusion: Briefly, it seems that the majority of the centres carried out activities such as faculty development, research activities and educational scholarship. There are also a significant number of programmes based on consulting and innovation in medical education. In examining the scope of activities, it was observed that all centres provided services in general medicine field and majority of the centers communicate with other national and international institute.

Take Home Message: It is useful to redesign the organizational structure and re-engineering of educational process of these centre based on best centers in the world.

Title: Development of scholars in education: The Medical Education Scholars Program at the Tehran University of Medical Sciences

Authors: Azadeh Kordestani Moghaddam, Azim Mirzazadeh

Institute: Tehran University of Medical Sciences, Iran

ABSTRACT:

Background: Medical education scholars program

(MESP) will be held at Tehran University of Medical Sciences from 2015. This program was designed for faculty members to improve their educational knowledge, in the development of education with an emphasis on educational development research projects as well as educational leadership and change management.

Summary of Work: MESP contains two sections. The first part, include a 3-day workshop on how to write an educational development proposal and a 3-day workshop on educational leadership. The second part, include project progress report, educational journal club, requested workshops, individual study and counseling with Mentor half a day in a week. Approximate time of each course is about 8 months.

Summary of Results: In the two courses of the program, 14 faculty members have participated. In the survey, they were satisfied with program. Faculty members in the program stated that the program has led to an increase their knowledge and skills on how to manage change and educational leadership and improved their views.

Discussion: MESP can enhance the faculty members' knowledge and skills regarding educational leadership and teaching activities as a teacher, and increase their accountability as an educational leader. Since the effects of the program are visible in the long-term, it seems that more accurate evaluation of the program appears in the coming years.

Conclusions: Despite the long duration of the course and the lack of facilities such as a sufficient number of mentors, it seems that MESP and similar programs to improve the quality of education and educational leadership at the university is essential.

Take Home Messages: This program can increase the knowledge and skills of the faculty members regarding educational leadership and change management by creating a proper perspective and increasing their participation in the development of education at the university.

Title: Emerging stars in endoscopy: developing a program for future leaders

Authors: Ofelia Mosteanu, Mostafa Ibrahim,

Teodora Pop, Ibrahim Mostafa

Institute: University of Medicine And Pharmacy
"Iuliu Hatieganu" Cluj-Napoca, Romania

ABSTRACT:

Background: There is a need for leaders who have participated in a variety of learning activities outside the regular classroom, in postgraduate teaching programs. As these faculty members gain experience, they will often progress to positions of curriculum design within an institution.

Summary of Work: The World Endoscopy Organization Education Committee developed a program where the next generation of leaders in the field of gastro-intestinal endoscopy may be better prepared. The program included essential aspects for a leader in endoscopy: how to teach endoscopy, how to manage teams, how to create well-functioning endoscopy units, and above all, how to explore one's potential as a leader. Once the curriculum was developed, there was a call for applications. From the onset, the format defined was that each "class" would have around 20 stars from different regions: Europe, USA, Latin America, Asia and Africa – to ensure cultural diversity and good interaction between participants. A scoring system was developed and utilized to make the selection process transparent and objective. Academic achievements, age and geographical distribution were considered.

Results: All three modules took place between 2015-2017 and included speakers covering Teaching, Communication, Social Media and Video Editing, Research & publications, Leadership, Team building, Accountability, Negotiation skills, Work-Life balance, among other elements. The course received very positive feedback from participants, in particular regarding the content and the organization. 2 of the graduates during the 1-year follow-up developed training courses in their origin countries regarding endoscopic and para-endoscopic skills.

Conclusions: This program was designed to improve leadership abilities on the knowledge, attitudes, and skills of faculty members in gastroenterology and endoscopy and on the institutions in which they work. Excelling in these leadership opportunities can have a profound

effect on the success of training programs that extends beyond the teaching and organization needed in the classroom

Title: Investigating the impact of the flipped classroom on student assessment results and evaluation of a clinical rotation

Authors: Karen Scott, Shekeeb Mohammad, Hasantha Gunasekera

Institute: The University of Sydney, Australia

ABSTRACT:

Background: The flipped classroom innovation promotes active learning. Students use elearning to prepare for interactive case-based teaching. We introduced a flipped classroom to the traditional lecture program of Sydney Medical Program's paediatric block in 2015. A review of research into flipped classroom shows more data on assessment impacts are needed.

Summary of Work: We compared final paediatric block and end of year exam assessment results, plus Sydney Medical Program evaluation findings before and after the flipped classroom implementation. We surveyed students in the implementation blocks. We performed thematic analysis on qualitative data and descriptive analysis on quantitative data in the surveys.

Summary of Results: Students' (n=852) pass rates were no different before versus after flipped classroom implementation (96.3% vs. 96.2%, 1df, p=0.90). Performance on end of year repeated questions was also the same. Students' evaluations were very positive; they reported interactive teaching sessions (92%), elearning materials (89%) and quizzes (93%) were beneficial for learning.

Discussion: Students were very positive about the flipped classroom initiative in qualitative analyses, but we could not detect a difference in assessment results in the end of block or end of year assessments. Assessment via multiple choice questions may not assess improvements in clinical reasoning gained through case-based teaching sessions.

Conclusions: The flipped approach is beneficial for engaged learning and supported by students. These benefits are complemented by logistical benefits as elearning materials are pre-recorded

and face to face teaching time is reduced, allowing increased time for learning through clinical placements. Assessment may need redevelopment to better evaluate clinical reasoning.

Take Home Messages: We need more data on the impact of flipped classroom on knowledge retention and clinical application, and assessment of clinical application.

Title: Engineering the Educational Experience (E³): Creating a Genuine Clinical Experience for Trainee Learning and Assessment

Authors: Elizabeth Wooster, Douglas Wooster, Jerry Maniate

Institute: OISE/University of Toronto, Canada

ABSTRACT:

Background:

Providing genuine clinical experiences that allow trainees to learn in a safe and secure environment is a task that continues to daunt medical educators. Creating opportunities for the assessment of the impact of these experiences for trainees and the health care team further complicates their development.

Summary of Work: Recently the opportunity to develop an outpatient, ambulatory care clinic to offer genuine experiences to a variety of trainees arose. To ensure that the experiences maximized quality and value to the trainees while allowing for opportunities for assessment in a variety of formats, we created an engineered educational experience (E³).

Summary of Results: To date, 75 medical trainees have experienced the educational opportunities offered by the E³ clinic. In addition to providing unique clinical experiences to trainees, the clinic has provided the opportunity to develop a 360-degree assessment protocol. This protocol includes feedback from trainees, patients, staff physicians and support staff.

Discussion: Implementing the E³ curriculum has led to greater clinical exposure for medical trainees. To date, feedback from those involved in the clinic has been positive. Additionally, with the move to competency based medical education, E³ has provided numerous opportunities for assessment of skills that were not previously

accessible.

Conclusions: The E³ design has been successful at our hospital. It has provided learning and assessment opportunities that were not previously available. E³ has also allowed trainees to further understand the interactions of the health care team for patient care. Moving forward the E³ design will be implemented in additional clinics.

Take Home Message: In order for trainees to have genuine learning experiences during their clinical rotations, attention must be given to the development and assessment of the curriculum. The successful implementation of the E³ curriculum design demonstrates that it is possible to create such learning and assessment experiences in ambulatory clinical settings.

Title: "It is more than just teaching approaches": An impact study of a faculty development programme

Authors: Shuh Shing Lee, Chaoyan Dong, Su Ping Yeo, Matthew CE Gwee, Dujeepa Samarasekera

Institute: National University of Singapore, Singapore

ABSTRACT:

Background: Faculty development (FD) is essential to prepare faculty members to become effective teachers to meet the challenges in medical education. Despite the growth of FD programmes, most evaluations were often conducted using short questionnaires to assess participants' satisfaction immediately after they attended a programme. Consequently, there were calls for more rigorous evaluations based on observed changes in participants' behaviours. Hence, this study aims to explore how the FD workshops run by Centre for Medical Education (CenMED) have impacted behavioural changes in the educators using case study by following up with them at least half a year after they have attended the workshops.

Summary of Work: This study employed an exploratory qualitative research design involving semi-structured interviews with the educators and focus group discussions with their students for triangulation.

Results: The emerging categories among the educators were from ignorance to awareness, from

intuition to confirmation and expansion and from individualistic to community of practice. Students' data revealed two categories which were a better teaching approach and more than just a teaching approach.

Discussion: Although FD encompasses broader components, the major impacts most educators elucidated were still on teaching and learning such as changes in teaching approaches and developing an awareness of the learning process.

Conclusions: To date, the goals of faculty development across countries and disciplines have placed much emphasis on teaching and learning, the affective components (passionate, willing to sacrifice, are open to feedback) in becoming a good educator are still lacking in our FD workshops.

Take Home Message: Subject matter knowledge has been the most common expectation of a good teacher, nevertheless, teacher-student interaction as mentioned by the students are equally important in this study.

Title: The importance of educational roles from Medical faculties' point of view

Authors: Samaneh Abolbashari, Mojtaba Mousavi Bazaz, Hossein Karimi Moonaghi

Institute: Mashhad University of Medical Sciences, Iran

ABSTRACT:

Background: A wide spectrum of opinions exist among medical school faculty members about the educational roles they need to perform. In medical education texts, many roles such as lecturer, examiner, facilitator, role model and curriculum planner have been pointed out. But it is seen that most faculty members don't perform all of the roles. We studied the importance of educational roles from the Mashhad University of Medical Sciences' faculties' point of view.

Method: We first searched the available datasets for educational roles. After gathering a complete list of roles, a questionnaire was prepared. Faculty member were asked to score the importance of each educational role from their own point of view and then score the importance of them in the university programs using a 1 to 10 scale.

Results: One hundred faculty members from 5 schools participated. Men and women consisted 62

and 38 percent respectively. Faculty members had between 1 to 32 years of work experience with a mean of 11.48 ± 8.86 . The highest score was given to "role model during clinical practice" (9.47) and the lowest score was given to "coarse organizer" (5.39). There was a weak relation between the importance of roles in university programs and the importance of roles in the faculty point of view ($r=0.265$, $p=0.008$).

Conclusion: Although faculty members scored all educational roles high but they believe that the school they work in doesn't pay enough attention to all educational roles. In order to reach the ultimate goal in education, universities should hold purposeful workshops. Considering some roles like curriculum assessment, curriculum planning and resource development which have gained lower scores in this study will help improve education.

Key Words: Educational role, role performance, faculty member, medicine

Title: Evaluation and meta-evaluation of teaching from the socioformative focus

Authors: Haydee Parra, José López

Institute: Autonomous University of Chihuahua, Mexico

ABSTRACT:

Background: The evaluation of teacher evaluation represents an ethical and scientific obligation when it comes to the well-being of others (Scriven, 1991).

Summary of Work: The objective is to show the process of meta-evaluation of teaching that is developed in medical schools through an evaluation process with mixed approach, in four stages: 1. Development of a workshop "systematization of teaching evaluation" 2. Application of a questionnaire with 40 simple variables, addressed to 379 teachers. 3 Self-assessment with teachers, students and managers through the SWOT matrix and 4. Discussion groups with educational leadership. In the workshop, he emphasized that the teachers do not know the results of the evaluation of the teaching, they are not given feedback and it is done from a quantitative approach.

The Results: The results of questionnaire showed that more than 60% of teachers agree that the current Teaching Assessment System (SED)

responds to the foundations of the institutional educational model and that the computer system is easily accessible. However, more than 23% of teachers disagreed with the instruments they use, dissemination, objectivity and use of results.

Discussion: In Latin America, the evaluation policy for teaching is rejected because it uses quantitative instruments that qualify the performance of teachers. (Tenti, 2005 in Sánchez and Corte, 2015). This coincides with the opinion of the teachers in this study, who stated that the teacher evaluation is done only through questionnaires that because of their structure does not encourage reflection.

Conclusions: The results showed that the evaluation of the teaching is done through questionnaires that do not favor the improvement of teaching practice.

Take Home Message: The proposed to create a new Integral System of Evaluation of Teaching by Competence (SIEDCO) from the socio-training, where the educational practice is analyzed from the paradigm of complexity.

Title: Assessment Unit Intervention Improves Written Test Items

Authors: Mukhtiar Baig, Waleed Alghamdi, Mohammad Farooq

Institute: King Abdulaziz University, Jeddah, Saudi Arabia

ABSTRACT:

Objective: To explore the impact of assessment unit intervention in improving the quality of written test items.

Methodology: This study was carried out in the Assessment Unit, Faculty of Medicine, Rabigh, KAU, Jeddah. We analyzed and compared the IBL modular exams' MCQs paper of years 2015 and 2016 for items cognitive levels, types of item writing flaws, discrimination, and difficulty indices. The feedback on 2015 final exam paper was provided to the coordinator and faculty members regarding the quality of the written test items and a brief written feedback was provided face to face and via email to the coordinator.

Results: The analysis of the results showed that in 2015 exam 44% and 2016 exam 60% of the questions violated item-writing guidelines ($p < .05$).

In 2015 exam 90% and 2016 exam 87% were written at low cognitive levels.

In 2015 items, 64% items had the difficulty index below .3 or higher than .8 while in 2016 items, 42% items had the difficulty index below .3 or higher than .8 ($p < .05$). In 2015 paper 36% questions had DI $< .2$ or negative while in 2016 paper 28% questions had DI $< .2$ or negative. In 2015 paper 28% questions had the problem with the both p and DI while in 2016 paper 16% questions had the problem with the both p and DI ($p < .05$). There were 35% questions repeated in the 2016 exam form 2015 paper. A total number of item writing flaws in 2015 were 49 while in 2016 it was 44.

Conclusion: These results show that the Assessment Unit intervention has a significantly positive impact on improving the quality of the written items.

Recommendation: There is a need for proper training of the faculty regarding construction of MCQs.

Title: An Assessment Management System for Multiple Choice Questions in an Integrated Medical Curriculum

Authors: Sami Shaban, Margaret Elzubeir

Institute: United Arab Emirates University, College of Medicine and Health Sciences, United Arab Emirates

ABSTRACT:

Background: Assessment management systems for integrated medical curricula must contain several key features in order to allow medical educators and assessors to develop, maintain, conduct and evaluate assessments properly. The College of Medicine and Health Sciences (CMHS) has developed an Assessment Management System (AMS) to manage and maintain its question bank as well as create, conduct and evaluate its assessments.

Summary of Work: Requirement analysis was conducted to determine key features needed to develop, maintain, conduct and evaluate assessments of the Multiple Choice Question (MCQ) variety in an integrated medical curriculum.

Results: Requirements analysis revealed that user-friendly, security, and user access control are top

priority. Key features include collecting tagged questions in a question bank, standard setting assessments, linking questions to learning outcomes, conducting assessments, collating and disseminating results including question psychometrics, giving feedback to students and question writers, and generating assessments using the question bank and examination blueprints. The AMS has been developed in-house based on this requirements analysis using a web-based, database-driven platform.

Discussion: The system has been used at CMHS for over one thousand MCQ-type assessments from 2010 to 2017. The question bank is utilized by faculty to create assessments, standard setting and mapping of questions to course outcomes is done for higher stakes examinations, and analyzing results using psychometrics is a post-assessment disseminating requirement.

Conclusion: Keeping in mind that reliable information gathering and interaction with eventual users is vital to the effective design of the system, it is possible to develop a secure online assessment management system for medical schools that is earnestly used and accepted, satisfies the needs of assessment management, and conforms to medical education and assessment principles.

Take Home Message: Tagging of questions, standard setting, linking of question to learning outcomes, and generating examinations based on blueprints are the priority in an assessment system.

Title: The use of Cohen-Schotanus method for standard setting of formative written examinations

Authors: Joel Rhee, Michael Siu Hong Wan,
Institute: University of Notre Dame Australia, Australia

ABSTRACT:

Background: The Cohen-Schotanus method is a method of calculating the standard-set pass mark (SSPM) of examinations. It relies on two assumptions: (i) marks obtained by high performing students are realistically the highest marks possible in the exam; and (ii) high performing students are a stable group. However it is unclear if these assumptions hold true in

formative exams as students may put in variable amount of effort in their preparations.

Summary of Work: Analysis of data from 2016 summative and 2017 formative MCQ papers administered to Year 1-4 medical students from the University of Notre Dame Australia School of Medicine, Sydney.

The SSPMs derived from Cohen-Schotanus method (Cohen-SSPM) and modified Angoff method (Angoff-SSPM) for formative and summative papers were analysed with respect to: (i) consistency of the SSPM; (ii) difference between the SSPM and the lowest marks; and (iii) difference between the SSPM and the highest marks.

Results: No statistically significant difference was found between formative and summative exams for Cohen-SSPM ($t(6)=-1.32$, $p=0.23$) or Angoff-SSPM ($t(5)=-0.1$, $p=0.94$). The differences between the Cohen-SSPM and the lowest marks were greater in the formative compared to summative exams ($t(6)=-5.5$, $p=0.002$). There were no significant differences between the Cohen-SSPM and the highest marks between formative and summative exams ($t(6)=-0.94$, $p=0.39$). There were no significant differences between formative and summative exams in Angoff-SSPM and the lowest ($t(5)=-1.1$, $p=0.33$) or the highest marks ($t(6)=-0.63$, $p=0.55$).

Discussions: The Cohen-Schotanus method appears to produce a similar SSPM in formative and summative exams. There appears to be greater difference between the Cohen-SSPM and the lowest marks in the formative compared to the summative exams.

Conclusion & Take Home Message: The Cohen-Schotanus method appears to be a suitable method of calculating the SSPM in formative MCQ exams.

Title: Effectiveness of integrating simulation with art-based teaching strategies on oncology fellows' performance regarding Breaking Bad News

Authors: Afsaneh Yakhforoosha, Mandana Shirazi, Seyed Amir Hossein Emami, Farhad Shahi, Saeed Shahsavari, Mohammadali Cheraghi, Rita Mojtahedzadeh, Behrooz Mahmoodi-Bakhtiari

Institute: Qazvin University of Medical Sciences,

Iran

ABSTRACT:

Introduction: The task of BBN may be improved by incorporating simulation with art-based teaching methods. The aim of the present study was to assess the effect of an integrating simulation with art-based teaching strategies, on fellows' performance regarding BBN, in Iran.

Method: The study was carried out using quasi-experimental methods, interrupted time series. The participants were selected from medical oncology fellows at two teaching hospitals of Tehran University of Medical Sciences (TUMS), Iran. Participants were trained through workshop, followed by engaging participants with different types of art-based teaching methods. In order to assess the effectiveness of integrating model, fellows' performance was rated by two independent raters (standardized patients (SPs) & faculty members) using the BBN assessment checklist. This assessment tool measured seven different domains of BBN skill. Segmented regression were used to analysis the results of study.

Results: Performance of all oncology fellows (n=19) were assessed for 228 time points during the study, with rating three time points before and three time points after the intervention by two raters. Based on SPs ratings, fellows' performance scores in post-training showed significant level changes in three domains of BBN checklist (B= 1.126, F=3.221, G= 2.241 p<0.05). Similarly, the significant level change in fellows ' score rated by faculty members in post-training was (B=1.091, F=3.273, G=1.724 p<0.05). There was no significant change in trend of fellows' performance after the intervention.

Conclusion: Our results showed that using an integrating simulation with art-based teaching strategies may help oncology fellows to improve their communication skills in different facets of BBN performance.

Title: Development of Urdu verbal irony comprehension story task for 5-13 year old children

Authors: Maria Khan, Sikander Khan

Institute: Impact by Psyche Consultants, Pakistan

ABSTRACT:

Verbal irony is a pragmatic language skill in which in-congruence between intention of speaker and his spoken words is undetectable without contextual cues. It starts developing around 5-6 years of age in children. Difficulties in social communication skills can affect children emotionally, behaviorally and academically.

This exploratory study used Delphi method and included 6 Speech therapists and 6 Urdu language experts. Sixteen short Urdu stories were written along four comprehension questions. Three phases included: suggestions about the linguistic content and administration, content validity of the revised task & the final results presentation to the panel.

Experts' suggestions included audio recording, lowering the age range, labeling the pictorial rating scale along some linguistic changes in stories. After revision, the story task had universal content validity by the panel of 9 experts with I-CVI =1.00 for all 16 stories, S-CVI/Ave = 1.00 and S-CVI/UA=1.00. Dropout was 25% due to lack of time. Development of pragmatic language varies across cultures. The content and comprehension questions in stories were developed after a thorough review of literature of studies in different languages and cultures. Experts panel evaluated the linguistic content and administration procedure, the revised stories gained universal consensus in item & scale content validity.

The final Urdu verbal irony story comprehension task for 5-13-year-old children consists of a picture stimulus book, a response card, audio CD, a booklet for instructions and response forms.

Pragmatic language competence impacts social and emotional communication. Development of culturally appropriate verbal irony comprehension story task would help in understanding its developmental norms in Pakistani children. To the best of current researcher's knowledge there is no study conducted on verbal irony comprehension on Pakistani children.

Title: Culture matters: Medical student attitudes towards discussing sensitive questions during medical history taking

Authors: Jumana Al-Baghli, John Mahoney, Michael Elnicki, Nowall Al-Sayegh

Institute: Kuwait University, Kuwait

ABSTRACT:

Background: Medical history taking collects sensitive information. Some information may be illegal, embarrassing, or taboo in particular cultures. This study compared the perception and attitudes of medical students at University of Kuwait and University of Pittsburgh towards discussing sensitive topics during medical history taking.

Summary: Students rated their comfort with asking patients about medical conditions, social history, and sexuality. This occurred prior to their first curricular experiences in history taking with actual or standardized patients. Participants: Kuwait 90/110 students, 82%; Pittsburgh 35/148 students, 24%.

Results: The subjects that students were most and least comfortable for students were notably similar. However, Pittsburgh students were significantly more comfortable than Kuwait students asking about certain subjects: sexual orientation, sex life, and recreational drug/ alcohol use (e.g.: LGBT, HIV, STD, virginity, sex, adoption, alcohol, birth control, drug use, cancer with p-values for all <0.003).

Discussion: In Middle Eastern cultures, certain topics and behaviors are considered shameful and/or private. Although these subjects may be relevant to patients' medical conditions, it remains more difficult to ask questions than in Western countries. These differences highlight how medical curricula need to align with local norms.

Conclusion: There were significant differences in interviewing comfort between schools. Longitudinal research following these students throughout their medical education may shed light on how accrued clinical experience makes these questions easier to ask and identify opportunities to promote that transition.

Take Home Message: Differences exist across cultures that make it difficult for medical students to ask sensitive questions.

Title: Scholarship of Teaching and Learning (SoTL): Concept Analysis

Authors: Fakhrosadat Mirhosseini, Shoaleh Bigdeli, Neda Mehrdad, Hooman Shahsavari, Fazlolah

Ahmadi

Institute: University of Medical Sciences & Tehran University of Medical Sciences, Iran

ABSTRACT:

Background: In 1990 for the first time Ernest Boyer presented the concept Scholarship of Teaching and his debate attracted scholars' attention to the importance of teaching which was under the shadow of research. Since then, SoTL researchers has attempted to clarify the concept in an extensive body of literature.

Summary of Work: For the purposes of the study, walker and Avant concept analysis methodology was followed. More than 6000 papers were retrieved. After exclusion of repeated and unrelated papers, final reviewed citations were 1081, mostly journal articles from disciplines of psychology, religious studies, history, medicine, and nursing. According to the inclusion criteria the total reviewed papers were 145. Finally, SoTL antecedents, defining attributes and consequences were specified.

Summary of Results: The 145 papers were analyzed and the meaning units were coded. Afterwards, codes were clustered in subcategories and categories. Finally, three categories were emerged as SoTL antecedents, nine defining attributes, and six consequences.

Discussion: Findings indicate that SoTL concept is defined. Some antecedents of the concept are identified as learning culture, interaction, and teaching. Defining attributes identified as dynamic, developmental, engaging, and learning-oriented etc. Some consequences identified as social equity, teaching quality promotion, and pedagogic knowledge production.

Conclusion: Clarification of the concept has made applicable and Measurable. In addition, defining attributes and antecedents have provided an opportunity to teach the concept.

Take Home Message: To promote teaching and learning, Scholarship of Teaching and Learning (SoTL) must be considered in teaching and learning contexts. Moreover, SoTL successful application requires consideration of its antecedents, attributes and consequences.

Title: Reflective Writing: A Written Prescription for Prevention of Resident Burnout

Authors: Heather Lochnan, Loretta Cheung, Anna Byszewski

Institute: University of Ottawa, Canada

ABSTRACT:

Background: Reported rates of resident burnout are at "epic" proportions as described in a recent Medscape report. Burnout contributes to compassion fatigue, which can lead to diminished worker engagement, performance, and poor patient outcomes. Reflective writing is an important tool that enables physicians to gather their thoughts on their clinical experiences.

Summary of Work: To determine if reflective writing improves physician wellness, empathy, and ultimately prevent burnout. A scoping review was undertaken to determine the breadth of published material that addresses the link between reflective writing and its impact on physician wellness and empathy, and risk of burnout.

Results: Our search strategy identified 10 articles that met criteria to be included in this scoping review during the last decade. Population consisted of practicing physicians and residents in various specialties. A range of interventions was used including workshops promoting mindfulness and self-reflection, reflective writing incorporated into the curriculum or faculty, and discussion groups.

Discussion: All of the studies demonstrated that reflective writing was an effective tool in promoting empathy, professional growth, and reducing burnout scores. Most results were in the form of questionnaires after the workshop on reflective writing was completed, but others were quantitative assessments using the Maslach Burnout Inventory Score, DASS-21 score, or CAMS-R score.

Conclusion: All of the studies included in this scoping review showed benefits with reflective writing in both qualitative and quantitative assessments for burnout, empathy, and professional development. Incorporating reflective writing through mindfulness workshops, training programs, discussion groups, or faculty initiatives can help in preventing burnout.

Take Home Message: Overall, these studies demonstrated the importance of reflective writing methods to help reduce signs of burnout. Support and encouragement through workshops with protected time for residents, early adoption in undergraduate programs, and access to coaches are needed to ensure long-term adoption and to avoid physician burnout.

Title: Social Accountability: An international evaluation from a medical students' perspective

Authors: Aikaterini Dima, Stijntje Dijk, Jeremy Glasner, Rita Ramalho, Mohsna Bhiri, Kaylynn Purdy

Institute: International Federation of Medical Students' Associations, Greece

ABSTRACT:

Background: Defined in 1995 by the WHO, the concept of social accountability (SA) in medical schools poses a major challenge for medical education worldwide. Together with THEnet - Training for Health Equity Network, the International Federation of Medical Students' Associations - IFMSA aims to empower medical students to take action locally and globally.

Summary of Work: The IFMSA appointed a group of 6 students from 6 different countries across 4 different regions to develop a toolkit with the aim of giving every medical student the opportunity to know more about SA, to evaluate his/her own school and to take action using some ready-to-use tools.

Summary of Results: The toolkit is an interactive online platform. It provides a comprehensive explanation, an assessment tool that helps to identify the improvement areas of a school regarding SA, as well as concrete tools including a power point presentation, a letter to the dean, a social media campaign and a training session agenda.

Discussion: The toolkit was made by students for students. Medical students from different backgrounds and study settings provided input to the toolkit, and therefore it can be used by everyone. The user can very quickly acquire the knowledge and tools to make a difference in his own institution.

Conclusion: Social Accountability is not only a challenge affecting education, faculties and hospitals, but as well the future health workforce. With an easy-to-use and widely accessible toolkit, we seek to empower an important stakeholder in SA to defend a community's needs and interests.

Take Home Message: There's an increased need for an action to ensure Social Accountability of health institutions. By developing such materials, IFMSA and THEnet strive for the empowerment of a crucial stakeholder, medical students worldwide our goal is to ensure that every medical school globally better responds to the community's needs.

Title: Development of Basic Life Support Performance Score for Health Care Providers

Authors: Jaiprapas Wongwatroj, Thanin Lokeskrawee, Jayanton Patumanond

Institute: Lampang Hospital, Thailand

ABSTRACT:

Background: High-quality CPR is the primary component in influencing survival from cardiac arrest, yet there is still lack of precision weighted scoring system for the assessment of adult single rescuer basic life support (BLS) for health care providers.

Summary of Work: We prospectively collected data from May 2016 to June 2017 during BLS course for health care providers in Lampang hospital. Participants were evaluated by three evaluators by blinding manner, one for index evaluation, and two for standard evaluation. The standard evaluators used the standard check-list based on the American Heart Association (AHA) 2015 guideline and long-recording strip report printed by the manikins (Resusci Ann®) to decide pass or fail. The index evaluator used only brief check-list and short-recording strip printed by the manikins. The contrast groups were the passed and the failed group. The components in the CPR parameters were compared by t-test or exact probability test. We performed univariable and multivariable analysis by using Generalized Estimating Equation logistic regression Analysis. The odds ratio were weighted and re-calculated into a total 1,000 points for each CPR practice. The cut point for the pass

score was finalized by using proper sensitivity and specificity.

Results: Among 500 attempts from 351 participants, there were 63.4% attempts passed (n=317), 36.6% failed (n=183). After Generalized Estimating Equation logistic regression analysis, the BLS weighted score include 4 variables for the ventilation, and compression; and 5 variables for the errors. The weighted BLS scores (0-1,000 points) were predicted "passed" when the score was more than 750 points with the AuROC of 0.92 (95% CI, 0.89-0.95)

Discussion: To-date, there is still no standard scoring system for objectively evaluating the participants.

Conclusion: The BLS score should be used in all CPR training.

Take Home Message: BLS score

Title: Competency-based medical practice

Authors: Olle Ten Cate, Vanda Abi Raad, Nadia Asmar, Nazih Youssef

Institute: University in Utrecht, Netherlands

ABSTRACT:

Educational reform worldwide. Many have reflected on its need and on the reasons why CBME has become so popular, despite reservations, also voiced in the literature. The overarching aim of the CBME movement has been the delivery of competent practitioners. But should CBME stop with the completion of training?

Education and training suggest that completion, graduation, licensing and specialty registration mark clear transitions from learning to competent practice.

Looking ahead however, we may need to question the current nature and sustainability of such transitions—at least in their absolute status. Calls for life-long learning are becoming louder, but at the same time there is little fundamental movement shaping a clear direction. That may be caused by (a) a lack of jurisdiction of schools, programs and educators to control the merge of practice and learning after diplomas, (b) an innate aversion among practitioners to spend energy on learning, and (c) the denial of practice settings to consider learning a serious, relevant and important

professional task.

This brief talk will offer a few suggestions how to move forward in a direction that may become inevitable. Competency-based medical education is a defensible aim. Competency-based medical practice however may need to become the much higher and true eventual aim of education, merging practice with learning. Educators may need to become pro-active in shaping that future

Title: Medical Quiz Machine: Experience from use of a supplemental online learning resource

Authors: George Abraham

Institute: Royal Free London NHS Trust, United Kingdom

ABSTRACT:

Background: The aim of this project was to set up an online resource for clinical medical students on a district general hospital attachment to provide interactive multimedia tools as an adjunct to the lectures and then to gain feedback on its uptake. Its conception sought to generate an online 'community of practice', whose positive effects have their basis in social theories of learning.

Summary of Work: The website itself is in the format of a blog with features including interactive Powerpoint slides, self test quizzes as well as additional lecture notes and an online forum. The students were encouraged to make use of the website following the lecture. Their recall of important facts taught in the lecture was assessed by use of multiple choice questions which students took 7 days after the lecture. The test scores of students who attended the lecture and also accessed the website was compared with students who attended the lecture and did not access the website.

Results: The website generated mostly positive feedback and showed that it was well appreciated. There were technical issues related to the website design that limited its overall impact. The test scores between those who had accessed the site compared with those who had not, showed a mean increase of 26.1 percentage points in the online group (95% CI 24.8 to 27.3, $p < 0.0001$).

Conclusions: Blog style websites can be employed to improve the learning experience of medical

students in a district general hospital attachment and can be demonstrated to improve recall of facts at 7 days compared with a traditional lecture method alone.

Take Home Message: The use of online resources should, where feasible, be considered as an adjunct to a traditional lecture course.

Title: Chinese Physician Perceptions of Industry Funding in Continuing Medical Education

Authors: Chris Stephenson, Paul Mueller, Saswati Mahapatra, Christopher Wittich

Institute: Mayo Clinic, United States

ABSTRACT:

Background: Continuing medical education (CME) is a requirement for Chinese physicians. However, CME is costly, and it is often funded by industry. Although physician perceptions of industry funding has been studied outside of China, little is known regarding physician perceptions of industry-funded CME in China, a predominantly communist country.

Summary of Work: This was a cross-sectional survey of Chinese physicians at a Nephrology CME conference. All participants received a previously published and validated industry funding survey consisting of 4 items. Survey questions were asked in English and Mandarin Chinese. Participants who returned their packets at conference completion received a free pen.

Results: 128 of 541 participants returned surveys. Most percipients were nephrologists (88%), female (67%), and ages 20-40 (62%). Participants preferred industry supported CME (66%) or had no preference (26%). Participants favored industry offsetting the expenses in CME (73%). Almost half (45%) stated that industry-funded CME was biased in support of industry.

Discussion: Chinese CME participants preferred industry-sponsored CME and were strongly in favor of industry offsetting costs. However, almost half of participants believed that industry funding created bias in CME. Concern for bias was higher in Chinese physicians compared previously published research on Western physicians using this same survey (45% vs 36%).

Conclusion: To our knowledge, this is the first study

evaluating perceptions of industry funding in Chinese CME. Despite overwhelming support for industry-funded CME, almost half of participants felt that industry-funded CME was biased in favor of supporting companies. Given participants' concerns, further study examining industry bias in Chinese CME is recommended.

Take Home Message: In a sample of Chinese Nephrologists attending a CME conference, there is strong support for industry funding in CME despite concerns for industry bias.

Title: Exploration of Students' Experience of the Problem-Based Learning Approach: Qualitative Study in the Saudi Arabia Context

Author: Abdulaziz Alothman

Institute: Sulaiman Al-rajhi Colleges, Saudi Arabia

ABSTRACT:

Background: Institutions in Saudi Arabia have been using the traditional, lecture-based style of teaching. It is possible that students play a passive role in the educational process, as teachers "feed" them the required knowledge. Recently, many medical schools in Saudi Arabia have started implementing problem-based learning (PBL) curricula.

Summary of Work: This study adopts the qualitative method of research. Through this study, 16 semi-structured interviews were conducted to gather the views of 13 students and their three tutors on different aspects of PBL.

Results: Most students had positive general experiences with PBL. They appreciate the PBL system, as it adds value for them, especially for their future practice via the development of lifelong learning skills, critical thinking skills, problem-solving skills, leadership skills and improved retentive abilities. However, they faced several challenges, such as the access to references, heavy workloads and extensive time consumption.

Discussion: Generally, PBL was found to have added value for the students who used it. The students gained skills because of the PBL learning process and this would help them in their future practice. Besides this, PBL also had its

disadvantages. It was found to be time-consuming, and students often lacked directional maps and this may affect the purpose of the PBL process.

Conclusion: This study provides valuable information about students' experience that might help educators to ensure that PBL-based curriculum fits with Saudi context in terms of developing a professional physician. Although some challenges may affect the general practice of PBL as any other 'learning and teaching' strategies.

Take Home Message: A well-structured PBL system may add value for both students and tutors.

Title: Using Virtual Patients to Train against Medical Error

Authors: Trupti Jivram, Luke Woodham, Terry Poulton, Jonathan Round

Institute: St George's University of London, United Kingdom

ABSTRACT:

Background: Medical error is an increasingly significant cause of patient harms. The TAME (Training Against Medical Error) project aims to help learners avoid preventable adverse events by using interactive PBL to practise clinical management options, make decisions, and make errors safely. Learners are then assessed using SBA assessment.

Summary of Work: Two Institutions within Kazakhstan, Ukraine and Vietnam repurposed Paediatric interactive PBL cases, developed from St George's University of London and assessed their student performance. Results from 3 student groups were compared; those who used branching versions, linear variant, or had no access to cases. Student experience was also captured.

Summary of Results: All institutions had varied results in terms of student performance. Interestingly all institutions who had past experience of using interactive PBL in their institution found that their students had a better learner experience.

Discussion: From the results captured on the use of error interactive PBL cases we found that student performance was increased marginally with those who used the branched cases. This was true especially of the institutions who had implemented

the interactive PBL previously.

Conclusion: With more experience and exposure to interactive PBL cases the students have a better learning experience. Given time student performance is envisaged to be enhanced once the interactive PBL is implemented into the curriculum and students are more familiar with the process.

Take Home Message: Using Virtual Patients, medical curricula can be modernised to provide training against medical error and provide students with a better learning experience which mimics more closely to real practice.

Title: Assessing interventions for patient safety

Author: Kamal Nathavitharana

Institute: Health Education, England, United Kingdom

ABSTRACT:

Safety is the first priority in high quality patient care. Adverse events contribute to the spiraling costs of healthcare worldwide with incalculable effects on patients, families and communities. The reputational damage to organizations and individuals is also considerable. Healthcare providers, organizations delivering undergraduate and postgraduate training programmes, regulators and the public at large, rightly demand patient safety.

Conventional approaches to patient safety are rooted in education and training. It is argued that teaching and training alone are insufficient for ensuring safe practice. This paper examines the role of leadership, culture (and behaviors), practices (including induction, safe prescribing and simulation, human factors and professional development (and support) for delivering safe patient care.

Thematic analysis, assessment and appraisal of Patient safety data will be presented drawing from UK wide experience and international approaches. Hard data on many of the themes described are scanty and the available data on teaching and training interventions are preliminary, based on perceptions of participants rather than decreases in the rates of adverse incidents. The available data is more qualitative than quantitative.

It is concluded that to be sustainable, Patient safety

requires a multi-faceted approach with attention to leadership, culture and behaviors. More quantitative studies with attention to confounding variables, assessing the wider beneficial effects of the themes explored in this paper are required. The cumulative benefits of such interventions should not be underestimated.

Title: The impact of interprofessional education in pain management outcome

Author: Summayah Fallatah

Institute: Imam Abdulrahman University, Saudi Arabia

ABSTRACT:

Background: The notion of interprofessional (IPE) has been defined by the Centre for the Advancement of Interprofessional Education (CAIPE) as 'when two or more professions learn with, from and about each other to improve collaboration and the quality of care.

IPE aims to improve care by promoting teamwork and strengthening a shared understanding of roles between professional groups.

Pain medicine, and taking care of pain patients frequently requires the collaborative work of more than one healthcare profession, thus educational preparation for pain trainee, and practicing pain physicians, might reshape the way we are handling our patients, and positively impact the pain management outcome.

Presentation Objectives:

- Highlight the role of IPE in pain medicine.
- Demonstrate how much we know about IPE in pain medicine.
- Show the impact of IPE on patient care.
- Discuss the role of instructors, and curriculum developer in incorporating IPE in pain medicine training.

Title: Inter Professional Education: Merger of Medical education with Allied health education in relation to basic sciences

Author: P.Gopalakrishnakone Pon

Institute: National University of Singapore, Singapore Institute of Technology, Singapore

ABSTRACT:

Background: After teaching Medical and Dental

student for more than 35 years I had a career change to teach allied health sciences students from Diagnostic Radiography, Physiotherapy, Occupational therapy, Radiation therapy and Nursing students (about 400). Teaching and learning materials used for the medical teaching was customized for allied health and used.

Summary: Teaching material, e-learning material, multimedia material, AR/VR/MR materials were placed on the learning management system after reconfiguration and customization to the target audience. Allied health students were mainly mature students and very receptive to on line learning and self assessment. Pedagogy included didactic lectures, interactive tutorials, on line self learning modules, anatomy hall dissections, museum demonstrations and at the end of the module the course was evaluated.

Discussion: Students enjoyed the lessons and they were well prepared for on line learning and assessment. Interactive discussion among peers was the most popular method and team based learning (TBL) was voted best method for tutorial. Flipped class room was conducted in a limited amount, although students liked it there were other limitations such as time constraint such as the available time for reviewing the on line material before the flip class.

Conclusions: Educational technologies, IT Skills, Simulation enhances the teaching and learning but the maturity of the students and their mindset to do team based learning and collaborative learning will have a significant effect on the learning process. Highly competitive medical students in comparison to the mature allied health students have different learning experience although the pedagogy may be similar.

Take Home Message: Effective teaching and learning depends on many factors, pedagogy, IT, Simulation, TBL, PBL etc. However the maturity and attitude of the learner also plays a significant part

Title: Interprofessional learning: teachers and students' experiences

Authors: Mahboobeh Khabaz Mafinejad, Soleiman Ahmady

Institute: Tehran University of Medical Sciences

(TUMS), Iran

ABSTRACT:

Background: Today, in line with developing specialized skills of different professions, particular attention has been given to the issue of promoting interprofessional abilities in training programs.

Summary of Work: A descriptive qualitative study using content thematic analysis was conducted. A sample of six faculty members and seven students were selected. A purposive sampling and semi-structured interviews were conducted to collect data. Data were obtained using individual interviews and then analyzed thematically. Data collection and analysis were concurrent.

Summary of Results: Three categories were identified: Interprofessional learning through interaction and reflection, importance of structured interprofessional learning, contrast between educational system and interprofessional learning, representing 6 subcategories. The tendency to strengthen the sense of collaboration among different professions is more felt if the high interactions between professionals occur that are mentioned as a facilitating factor in the implementation of these programs. They believed that their learning with other professionals improve through observation and reflection. Participants clearly stated that IPL should be considered in the curricula of every health professions as a purposeful and planned program. Although there are good opportunities for observing, reflecting and practicing collaboration, a number of students and faculty members noted several challenges in this setting including compression of training programs, high workload of students in clinical settings, centralization and etc.

Conclusions: The findings indicate that experiences of learning with different professionals are complex, and shape their workplace relations in the present and the future. Matching the existing educational context and structure with interprofessional learning and providing planned interaction and reflection among professionals are necessary to support interprofessional learning.

Take Home Message: Development of purposeful

and intentional shared programs is essential to conduct an effective IPL.

Title: 'GAME OF TRAINING' - An interactive workshop for trainers exploring triggers for support and support options within Postgraduate Medical and Dental Training

Authors: Leona Walsh, Jeremy Gasson

Institute: Cardiff University, United Kingdom

ABSTRACT:

a. Research shows that complex factors affect trainees'/residents' ability to complete training. Developing educators' knowledge of supporting trainees enhances positive outcomes. The Wales Deanery delivers an interactive faculty development game-workshop for improving response to concerns. Participants work through challenges affecting trainees'/residents' progression by focusing on early recognition, remediation and effective support.

b. Participants will:

Understand and recognise triggers that may affect training including ill-health.

Develop effective supervision skills for managing trainees/residents with support needs.

Construct specific, targeted and realistic educational plans enabling satisfactory progression.

Learn and develop strategies for best practice from case discussions involving facilitators and peers.

c. Evidence-informed introduction to managing trainees with support needs. The workshop generates debate around trainee/resident remediation, introduces strategies and shares evidenced-based practice to aid progression. Participants use the game to discuss resources and resolve challenges encountered. The goal is a completion of training by reducing attrition rate attributed to these factors.

d. The target audience is anyone interested in supporting trainees'/residents' progression. This includes Programme Directors, Educational/Clinical Supervisors, Specialists, Tutors, Faculty Leaders and others involved in Postgraduate Medical Education. Delegates will take ideas and shared practice back to apply to their programmes in order to minimise trainee/resident attrition.

Reproducible world-wide.

Title: Common and Differentiating Aspects on the Dimensions of Diversity and Educational Inclusion in Chile

Authors: Olga Matus, Javiera Ortega-Bastidas, Camila Espinoza-Parcet, Juan Arellano-Vega, Ivone Campos-Cerda

Institute: Universidad de Concepcion, Chile

ABSTRACT:

Background: Throughout history, a change in the socio-cultural and social identification characteristics has been observed. This has caused some people feel socially excluded when they belong to a minority. In Higher Education it is necessary to study this phenomenon, considering new policies created in pursuit of educational inclusion. Financed by FONDECYT^o1170525.

Summary of Work: Qualitative study, based on Strauss&Corbin Grounded Theory (2002). Exploratory phase, with 10 key informants who had knowledge and experiences in diversity, selected by sampling typical case, prior informed consent process. Narrative interviews were performed. Analysis plan was performed using the constant comparison method until reaching open coding level using Atlas-ti7.5.2.

Results: Diversity-Dimensions: sex/gender, ethnicity/migrants, disability, religion, social-vulnerability. Emerged 3 categories that integrate them: (A) Social-identity construction associated with minority-belonging; (B) Perceiving/feeling social-exclusion experience; (C) Deficiencies/lack of adequacy in policies/reforms for health/education. Three categories differentiate them: (A) Minorities-experience perceived in social-exclusion; (B) Social-identification with several diversity-dimensions; (C) Intra-group functioning behavior of social-minorities.

Discussion: Due to changes in socio-cultural characteristics and social-identification, it is essential that in health-area, experiences of people in situations of social-exclusion/belonging to minorities are taken into consideration. This is urgent in educational-contexts, specifically in health-programs, in which explicit training does not explicitly include acceptance of diversity and

inclusion in education.

Conclusions: The observed categories explain the socio-historical and political development that has had the acceptance and exclusion of diversity in Chile. This is related to legitimacy practices done, regarding the processes of exclusion that occur in the contexts of health and education, making it difficult to accept differences and educational inclusion.

Take Home Message: It is necessary to detect the needs of educational inclusion in health sciences Higher Education, to contribute to the generation of both public policies and social attitude.

Title: Safe-SCOPE Pilot Study – A standardised checklist of patient information exchange: Study protocol for a single-centre, two-armed, cluster-randomised crossover trial and first Results

Authors: Lina Vogt, Hanna Schroeder, Lina Stieger, Stefan Beckers Sasa Sopka

Institute: University Hospital Rwth Aachen, Germany

ABSTRACT:

Background: Communication errors and miscommunication cause clinical incidents, adverse events and serious medical errors. To ensure proper postoperative care medical handovers must be efficient and provide physicians with detailed, necessary information

Studies that comprehensively assess handover improvements and data from multicentre studies are lacking. This pilot study investigates the feasibility of a multicentre study to improve patient safety in Intensive Care Units using a standardised checklist evaluated by clinical outcomes.

Design: To assess feasibility, we will conduct a single-centre, two-armed, cluster-randomised crossover pilot study in an ICU of a German University Hospital. The clinical trial will use a three-period, two-condition (checklists) design. A total of seven ICUs will be randomised to one of two sequences (ABB or BAA). The total trial duration will be five months. Participants (physicians) signed the informed consent will use one of two checklists, the ISBAR3-checklist or the alternative VICUR- (Vaccination status, Insurance status, Contact Person, Utilisation, Rehabilitation,

Organ donor, Patient decree) checklist, twice per day for usual bedside handovers. All patients treated in the ICU will be eligible. The outcome parameters for patient safety (measured at the patient level) of this pilot study are SOFA-score, mortality, duration in the ICU, and readmission to the ICU.

Discussion: Despite the significant impact of clinical handovers, their continuous daily use in hospitals and the number of corresponding adverse events show that we lack standardised handovers. Only a few randomised controlled trials (RCTs) have implemented standardised handover checklists, and none have defined measurable outcome parameters concerning patient safety. The present single-centre pilot study will provide results from a large group of patients with a standardised clinical protocol and minimal bias. Furthermore, we will expand our knowledge regarding handovers and information flow in one of the largest German ICUs, which impacts patient safety.

Title: Medical Errors; Causes, Consequences, Emotional Response and Resulting Behavioral Change

Authors: Attia Bari, Ahsan Rathore, Rehan Khan

Institute: The Institute of Child Health, Lahore, Pakistan

ABSTRACT:

Background: "To err is human." Medical errors are inevitable and can have a disastrous effect on patient, treating doctor, nurses and the institution as well.

Objective: To determine the causes of medical errors, the emotional and behavioral response of Pediatric Medicine residents to their medical errors and their behavior change affecting their future training.

Methodology: 130 residents completed the questionnaire.

Results: Out of 130 residents, majority 128(98.5%) described some form of error. Serious errors 24(18.5%), 63(48.5%) minor, 24(18.5%) near misses, 2(1.5%) never encountered an error and 17(13%) mentioned cause and effect of error but did not specify the type of error. Only 73(57%)

residents disclosed medical errors to their senior physician. Negative emotions were significantly associated with lack of knowledge ($p=0.001$), missing warning signs ($p<0.001$), not seeking advice ($p=0.003$) and procedural complications ($p=0.001$). Medical errors had significant impact on resident's behavior in the form of becoming more careful and increased advice seeking from seniors. Residents who attribute their error due to fatigue or job overload did not show any constructive change in their behavior. Not disclosing the error to anyone was significantly associated with not having enough experience ($p=0.001$), missing warning signs ($p=0.01$) and procedural complication ($p=0.018$). Those who did not disclose their errors showed more defensive attitude with seeing fewer patients and avoiding similar patients ($p<0.001$), ordering more tests ($p=0.045$) and keeping the errors to themselves ($p=0.024$).

Conclusion: Residents encounter medical errors at all levels of training. Fatigue due to long duty hours, lack of experience, job over load and inadequate supervision by senior were major causes of these errors. Medical errors committed by residents have inadequate disclosure to senior physicians and result in negative emotions but there was positive change in their behavior, which resulted in improvement in their future training and patient care.

Title: A Comparison of the effects of multimedia and lecture on learning the color recognition and esthetic course in dental students

Authors: Yousef Jahandideh, Ideh Dadgaran, Fatemeh Moaddab

Institute: Guilan University of Medical Sciences, Iran

ABSTRACT:

Dental students today belong to a new generation. One of the most striking generational differences is that access to and use of technology are simply assumed by today's learners. This study evaluated the effects of multimedia and lecture on learning the color recognition and aesthetic course in dental students.

Materials and Methods: The present study was an experimental study which consisted of 46

undergraduate students in sixth semester at the school of dentistry of Guilan University of Medical Sciences. The sampling method was based on the total population of the study. The students were randomly selected and divided into two groups: the experimental ($n = 26$) and control groups ($n = 20$). The multimedia and lecture methods were used in the experimental and control group.

Results: There was a significant correlation between pre-test and post-test scores in both experimental and control groups ($P\leq0.001$). Independent t-test was used to compare the pre-test score between the control and experimental groups and the post-test score between these groups. There was no significant relationship between the pre-test scores as well as the post-test scores in the two groups ($P>0.05$).

Discussion: Multimedia has been used since the 1980s to teach diagnostic and therapeutic methods in dentistry. It is claimed that this method increases the level of education, comprehension and memorizing compared to traditional methods; however, the evidence is still unclear about the effectiveness of this method.

Conclusions: Changes in the educational curriculum of dentistry were introduced using e-learning method to teach the color recognition and beauty course. Using this method will increase the interaction between students and also improve their independent learning.

Take Home Message: It is suggested to use a combination of electronic methods and lectures for teaching students.

Title: Efforts to promote transformative learning in Epidemiology & biostatistics among Part II residents of Saudi Board of Community Medicine (SBCM), Al Medina Centre

Author: Farah Mansuri

Institute: Taibah University, Saudi Arabia

ABSTRACT:

Abstract:

The understanding of epidemiology and biostatistics is crucial for medical students at the very beginning of undergraduate period to relate it well with those of clinical problems. But the attitudes of students tend to improve towards

epidemiology & biostatistics learning during clinical teaching, where they are able to relate its importance and application in tackling the problems in real life scenario.⁴ Undergraduate foundation of epidemiology and biostatistics is one of the most important predictor of postgraduate performance in the field of epidemiology.⁵

The students in Saudi Board of Community Medicine program found to have gaps in deep learning regarding application of biostatistics and epidemiology. It was identified through their performance in part I exam and research proposal assessment that their cognition in terms of recall and analysis is remarkable for the core topics but majority of the students were unable to make linkages between concepts of descriptive and inferential contents of the course.

The pedagogy used in SBCM is of mixed methods through didactic lectures, tutorials, seminars, field visits, logbooks and research report. Journal club was only recently included in the study plan for all levels of trainees.

The learning among residents of part-II SBCM can be improved by incorporating following key principles and methodologies in the program:

- Students learn by constructing knowledge & by active involvement:
- Students learn to do well only what they practice
- Computers & calculator help students to visualize and explore data
- Students learn better if they receive consistent and helpful feedback on their performance

Title: A Renal curriculum for Advanced Internal medicine trainees on elective, enhances learning experience

Authors: Debajyoti Roy, Alvin Ng, Shui Boon Soh

Institute: Changi General Hospital, Singapore

ABSTRACT:

Background: Current estimates suggest that 8-16% of the world population has CKD. There is a declining interest in nephrology fellowships possibly due to lack of exposure to nephrology training both in undergraduate and Junior Residency. Care models will have to rely on Internal Medicine specialists to fill this gap. In Singapore,

Advanced Internal medicine (AIM) training is a 2-year program with an exit exam by the Specialist Accreditation Board which would result in certification as an Internal Medicine Specialist.

Summary of Work: AIM residents have often voiced that they are unsure about management of patients with Kidney disease. The Kerns six step model was used to create the curriculum. The objective being after the 1-month Renal elective, the learner would be able to:

Evaluate a patient with AKI and formulate a management plan

Evaluate a patient with CKD. Take appropriate steps in retarding rate of progression

Define the complications of CKD

Manage anemia in CKD

Evaluating a patient with diabetic kidney disease. Identifying diabetics with non diabetic renal disease.

Results: This elective has been in place since 2015 and 14 senior residents have rotated through. The evaluation and feedback assessed competencies in three domains: clinical, research and teaching with minimal standards to be achieved. Statistical analysis comparing these domains before and after were significant ($p < 0.001$).

Discussion: Given the Global burden of CKD, a health care delivery model with Internal medicine specialists, Advanced Nurse practitioners, renal pharmacists would help bridge the gap of reduced number of Nephrologists

Conclusions: Just a 1-month renal elective helped Internal Medicine trainees helps develop competence in managing patients with renal conditions and fluid electrolyte imbalance

Take Home Message: Given the increasing numbers of patients with CKD in the community, Internal medicine specialists would benefit from a Renal Rotation during their core training.

Title: Teaching medical students in clinical years integrated with evidence based medicine at Thammasat medical school

Authors: Paskorn Sritipsukho, Autchara Ngamnoun

Institute: Thammasat University, Thailand

ABSTRACT:

Background: Formal teaching evidence based

medicine (EBM) in classroom setting has not been developed in Thammasat medical school. However, some physicians have integrated EBM when teaching medical students in clinical years. The study aimed to evaluate informal use of EBM in teaching medical students among staff at Thammasat medical school.

Summary of Work: The self-administered questionnaire containing 5-point frequency scale items related to use of EBM in teaching medical student when doing teaching ward round were distributed to clinical instructors from major departments including Medicine, Pediatrics, Surgery and Obstetrics-Gynecology and from minor departments including others beyond the major departments at Thammasat medical school. Results:

There were 102 of 178 participants completing the questionnaire. There were 58 and 44 clinical instructors from the major departments and the minor departments respectively completing the questionnaires. Most of them encouraged medical students to formulate patient care question, which is the first step in EBM process.

Discussion: The response rate of 57.3% among the participants may suffer from selection bias. However, most staff informally integrated EBM when teaching ward round. The staff from major departments encouraged students to perform literature search ($p < 0.001$) and discuss sensitivity & specificity with students ($p = 0.006$) more than those in the minor departments.

Conclusion: EBM has been informally used by most clinical staff when teaching ward round. Although formal teaching EBM in steps was not designed in the curriculum, most clinical staff recognized and already integrated EBM in teaching. Those from the major departments used EBM more often than those from the minor departments.

Take Home Message: EBM should be emphasized in teaching medical students in clinical years. The future curriculum in clinical years at Thammasat medical school should contain formally teaching of EBM by staff in all departments.

Title: The Perspective of Medical Students towards Successful in Problem-Based Learning

Authors: Chinnawong Wongsathitpon, Sarawut Suksuphew

Institute: Thammasat University, Thailand

ABSTRACT:

Background: The ways to succeed in Problem based learning (PBL) have different factors which are both positive and negative factors. If we are able to know those factors, we are able to apply to use for the efficient PBL.

Summary of Work: To study factors that influence on learning by PBL of 2nd year MD students who begin learning in academic year 2015. The students have to complete questionnaire after passing training by using PBL from teacher who is responsible for train.

Result: The factors consist of student, facilitator and material domains. For the student domain is in most level are participation, making agreement and dividing duty of each member. In fair level are preparation, responsibility, and confidence of member. In least level are cutting bias, sharing knowledge and information management in group. For the facilitator domain is having knowledge and taking care, no interfering in group process. For the material domain is readiness of equipment, good learning atmosphere and suitable problems. The negative factors were found that factor of student are no intention, no confidence and no responsibilities, no preparation, no attention, no knowledge and no summary, respectively. Factors of facilitator are no knowledge, no take care and interfering in the group. Factors of material are equipment is not ready and unpleasant atmosphere.

Discussion: There are many factors that help to support PBL learning. Self-assessment about readiness of learning especially group class which needs to have responsibly, preparation and creating memorandum between members.

Conclusion: To succeed learning by using PBL has positive and negative factors. To encourage positive factor and prepare to adapt negative factor which will help to be more efficient for learning.

Take Home Message: Accomplishment of PBL uses problem to be factors which are depended on learner how they apply to use.

Title: Faculty Development and Cost Effective Resource Utilization; The Power of Statistical Data

Author: Farah Moid

Institute: University of Toronto and St. Joseph Health Centre, Canada

ABSTRACT:

Background: Frozen sections requested by surgeons during surgery consume the time of pathologists and technologists. There is wide variation in the number of frozen sections requested by surgeons, with not much variation in the outcome. Given the financial constraints and limited staffing in the department, appropriate use of frozen sections by surgeons increases efficiency and resource availability for other services.

Summary of Work: Research data included the number of frozen sections requested during thyroid surgery surgeons from 2011 to 2013. This data and the final outcome of surgery was communicated to relevant surgeons by informal discussion with a request to review it in light of standard recommendations. After achieving desirable results in thyroid surgery, similar procedure is followed for thoracic surgery.

Summary of Results: Overall, there is a 60% reduction in total number of frozen sections requested during thyroid surgery from 2014 to 2016 with no effect on the outcome. Frozen sections requested by one specific surgeon went down by 70%.

Discussion: Individual physician's professional work-style influences their environment. Professional practices need to be re-evaluated periodically in order to meet current standards and local conditions. Comparison of professional practices of different physicians can highlight the possible changes.

Conclusion: Effective management of resources is a challenge for faculty members who are managing different services. It is important for them to efficiently organize and allocate personnel as well as equipment for different services.

Take Home Message: Promoting cross disciplinary networking and peer collaboration by informal discussion is an effective tool for cost effective resource utilization. Statistical data about the differences in individuals' clinical practices and

comparison with standards can highlight the practices that need reconsideration

Title: Impact of Assessment tools on Learning Approaches: MCQs vs SEQs

Author: Mahwish Arooj

Institute: The University of Lahore, Pakistan

ABSTRACT:

Background: Students either use deep or surface learning approach. Each of these has a purpose; a student might be using deep approach to gain proper understanding of the subject or surface approach just to recall or to pass the exam.

This study aims to assess the impact of learning approach on student performance in MCQs versus SEQs.

Summary of Work: It's a quantitative cross-sectional study. A pre-validated questionnaire "The Revised Study Process questionnaire" was administered to 2nd year BDS students. Separate questionnaires were used for SEQs and MCQs.

T-test compared the learning approaches between SEQs and MCQs; Spearman's rho correlation internal reliability coefficients were also calculated.

Summary of Results: The t-test value for Deep approach in MCQs and SEQs was 0.91 and 0.70 respectively, while for Superficial approach the value for MCQs and SEQs was 0.82 and 0.716, thus shows no significant difference.

Spearman correlation ratio between MCQs and the learning approach was 0.03 and 0.113 (deep and superficial), and for SEQs it was .08 and -.154.

Internal reliability analysis revealed a value of 0.718 and 0.68 for deep and superficial approach in MCQs while for SEQs the values for deep and superficial approach were 0.57 and 0.573 respectively.

Discussion: This study shows that assessment type i.e. MCQ and SEQ has no significant correlation with learning approach. It may be due to the fact that a significant research in development of MCQs has left very little difference in the assessment of deep learning between MCQs and SEQs. Secondly due to a larger emphasis on MCQs, in order to remove bias, SEQs have now become shorter and to the point hence further reducing the gap between these assessment types.

Take Home Message: Neither of the assessment

techniques is significantly influenced by the learning approach.

Title: Impact of using the Modular Object-Oriented Dynamic Learning Environment (MOODLE) as a Learning Platform for the Cardiovascular System Module on students' performance

Authors: Nagla Abdelrahim Mohamed, Marwa Alkhangy, Gamal ElShallaly

Institute: Alzaeim Alazhari University, Sudan

ABSTRACT:

Background: MOODLE is a piece of web-based software that allows the running of all parts of a course or module online. This study aimed to assess its impact on medical students' performance in their summative exam of the cardiovascular system module during the academic year 2016-2017 in Alzaeim Alazhari University.

Summary of Work: The Study Group A (213 students) who had this module by blended learning method were matched by the exam's tools and compared by their exam marks to the Control Group B (191 students) who was taught by face-to-face teaching method in a form of quasi interventional design.

Summary of Results: Group A had better exam's scores ($P=0.016$), especially in SSEQs ($p=0.001$), CCE ($p=0.001$), and worse scores in MCQs ($p=0.000$), MEQs ($p=0.034$) than the B Group. Students' access days of Group A and hits had statistical significant correlation with their marks in all exam's tools except the MCQs.

Discussion: This significant correlation indicated that the students who used MOODLE Platform more intensively had better results in some exam tools and therefore perform well, while the contradiction with the MCQs eliminate the probability of MOODLE interference in students' bad results and hence MCQs bad performance of Group A.

Conclusion: The study concluded that the use of the MOODLE Platform positively affected the students' performance in some but not all exam's tools.

Take Home Messages: The use of MOODLE platform had influenced the way medical students

achieving better understanding and performance of the CVS module considering their total exam score, SSEQs, CCE and CA scores, while it had no weight in their MCQs performance.

Title: Examining change in Family Medicine residents' intention to practice comprehensive care and practice in diverse settings after completing training program

Authors: Deena Hamza, Shelley Ross, Ivy Oandasan

Institute: Accreditation Council for Graduate Medical Education, United States

ABSTRACT:

Background: Triple C aims to produce Family Physicians who are able and willing to provide comprehensive care. It is important to understand resident experiences and if this may influence or contribute to change in intention to practice comprehensive Family Medicine. This study is based on the Family Medicine Longitudinal Survey (FMLS).

Summary of Work: 1) determine to what extent Family Medicine residents intend to provide comprehensive care; and/or practice in diverse settings; 2) identify a) reasons why residents do not intend to provide comprehensive care, and b) factors that may contribute to the intention to practice comprehensive care.

Design: Secondary data analysis; cross-sectional and repeated measures.

Intervention (data sources): De-identified FMLS responses from one cohort at entrance (2014) and exit (2016) of residency. ($N=420$).

Outcome measures: Level of agreement with statements about practice intentions post-residency.

Results: Residents report a significant increase in learning experiences and overall intention to practice comprehensive care ($p<0.001$); however, a significant reduction in the proportion of residents intending to provide intrapartum care, provide care in emergency departments, or conduct in-hospital clinical procedures is noted ($p<0.001$). Learning experiences positively predicted resident confidence to practice ($OR\ 1.64; p=0.004$).

Discussion: Although learning experiences increased across all clinical domains, settings, and populations, Family Medicine residents may not

intend to provide specific aspects of comprehensive care. It is unclear why residents are not intending to practice intrapartum care, emergency department care, or provide in-hospital clinical procedures.

Conclusions: Further research is required to understand potential reasons why residents do not intend to practice certain aspects of comprehensive Family Medicine.

Take Home Message: Surveying residents provides insight into the proportion of trainees prepared to provide comprehensive care post-residency, while also providing insight into possible reasons why some residents may or may not intend to practice this way.

Title: External Peer Review of Multiple Choice Questions: A Novel Method for Quality Assurance of Medical Examinations

Authors: Susanne Skjervold Smeby, Rune Standal, Vidar Gynnild, Anne Vik, Børge Lillebo, Tobias Slørdahl

Institute: Norwegian University of Science and Technology, Norway

ABSTRACT:

Background: The quality of assessment depends on quality assurance procedures around item development, and in-house review of MCQs has been shown to improve psychometric characteristics. However, few studies address medical content of MCQs, focusing instead on technical aspects. Also, a limitation of in-house review can be a reluctance to criticize colleagues.

Summary of Work: We developed a novel method for double-blinded external peer review of MCQs in a six-year undergraduate medical programme with one summative examination at the end of each year. 170 junior doctors were recruited, and reviewed 1353 MCQs for content relevance and item flaws.

Results: Of 1353 MCQs reviewed, 1071 items (79.2%) passed peer-review and 53 items (3.9%) were rejected due to irrelevance or flaws. In 229 items (16.9%), the reviewer asked for a revision of either content or structure. 115 (40.8%) of items were changed by the item writer following reviewers' comments.

Discussion: Double-blinded external review ensures that review is not biased by factors such as seniority. Junior doctors with at least two years of clinical experience were chosen as reviewers because they are qualified to judge what is up to date and relevant knowledge to prepare medical students for their first years as doctors.

Conclusion: In order to increase the quality of in-house medical examinations, ensuring MCQs are both relevant and unflawed, new quality measures are necessary. External peer review resulted in many items being changed by the item writer, and is a promising method for quality assurance.

Take Home Message: Review of items prior to test administration is an important quality assurance measure. External double-blinded peer review has long been used in research, and it may be time to welcome the method in medical education and assessment.

Title: Using a web based eMedici platform to provide immediate formative feedback and end of term online summative assessment - a 7-year project

Authors: Michael Siu Hong Wan, Peter Devitt

Institute: University Of Notre Dame, Australia

ABSTRACT:

Background: Technology enhanced learning platforms have been used in medical education for many years. EMedici (www.emedici.com) is a web-based platform developed for students to go through authentic case scenarios in various disciplines and receive immediate feedback online to their answers on differential diagnoses, investigations and management options.

Summary of Work: Since 2011, we conducted 20 workshops where clinician experts reviewed cases developed by students. A total of 122 scenarios (9 modules) were developed covering major disciplines.

Clinical photographs and radiological images were incorporated into each vignette to enhance students' learning. Immediate scoring and detailed feedback was given after each step.

Summary of Results: From 2011-17, there was an average of 95 users/case. Student evaluations: 89% agreed eMedici provided excellent feedback; 86% agreed eMedici was better than other online

resources. 18 surgical end-of-term online summative assessments were also conducted (756 students) without any technical issues with immediate results given to both Faculty and students.

Discussion: Reviewed cases could be selected as additional compulsory online resources to supplement existing learning in the curriculum. This well-tested web based platform can be used to develop further modules in other areas like professionalism, prescribing and inter-professional learning. The online summative assessment modules could be expanded to other disciplines.

Conclusion: EMedici is a mature web based platform delivering discipline specific online learning, immediate formative feedback as well summative online assessment. Collaboration with other medical and health science institutions developing and sharing these modules would further enhance online learning and assessment.

Take Home Messages: Online, web-based clinical vignettes with accompanying synopsis, well-defined learning objectives encompassing the key elements of the case study are effective learning tools. Immediate and constructive feedback provides a valuable and effective educational exercise. Summative assessments could also be easily implemented online with immediate scores given to both Faculty and students.



FREE PAPERS: POSTER PRESENTATION

Title: Comparison of X-ray SAQ scores for Clinical Science Comprehensive Examination between 5th-year Students of Faculty of Medicine Ramathibodi Hospital and Community-based Medical Program

Authors: Chardpraorn Ngarmukos, Namphueng Plungpongpan, Supin Liawwanich, Thitiporn Suwatanapongched

Institute: Ramathibodi Hospital, Mahidol University, Thailand

ABSTRACT:

Background: Faculty of Medicine Ramathibodi Hospital (RA), a well-established medical school, has assisted Praboromarajchanok Institute (PI), a community-based medical program, to ensure quality of education. Because radiographic interpretation skill remains crucial, short answer questions (SAQ) of common diseases are part of our clinical science comprehensive examinations required for graduation. This study aimed to compare SAQ performances of RA students with those of PI students.

Summary of work: The numbers of RA:PI students were 165:98, 166:100 and 164:101 in year 2014, 2015 and 2016, respectively. The total scores of 30 topics in each SAQ set comprising pulmonary, cardiovascular, pediatrics, gastrointestinal, genitourinary, musculoskeletal and central nervous systems and of each system were analyzed using reliability test and independent t-test. $P < 0.05$ was considered significant.

Results: Reliability tests of each SAQ set were 0.74, 0.78, and 0.72 in 2014, 2015 and 2016, respectively. The mean percentage \pm SD of RA students' scores and PI students' scores in 2014 (60.22 ± 7.13 vs. 58.08 ± 7.74), 2015 (68.62 ± 7.23 vs. 63.27 ± 6.88) and 2016 (70.23 ± 6.49 vs. 64.09 ± 7.83) were significantly different. Scores of each system, except for pediatrics, gastrointestinal, genitourinary and central nervous systems in 2014 and cardiovascular system in 2015 and 2016 were different between the two student groups.

Discussion: The differences in the scores between

the two student groups might be attributed to the difference in learning and clinical exposure experiences. Further exploration regarding potential weakness of the students in each topic may help improve their radiographic interpretation skills.

Conclusions: There were significant differences in X-ray SAQ scores between the two student groups.

Take Home Messages: The differences in X-ray SAQ scores might be attributed to the differences in learning experiences among the two groups. Supportive co-teaching may improve quality of PI students' radiographic interpretation skills and equity of education.

Title: Effects of the Use of a Flip Teaching Approach on the Respiratory Therapy

Authors: Ya-Hui Hsu, Szu-I Yu, Hueng-Chue Fan, Wan-Yun Hsiao, Huai-Te Hsu

Institute: Tungs' Taichung Metroharbor Hospital, Taiwan

ABSTRACT:

Purpose: While in the practicing of the noninvasive ventilator, respiratory therapist students are always under pressure and full of fear because of lacking a practical respiratory therapy (RT) knowledge and technique in the operating of the machine. Flip Learning (FL) can encourage students to develop self-learning ability and to turn passive attitude into active learning. We are interested in knowing whether the use of a FL teaching approach can stimulate students' motivation in learning, upgrading their knowledge and assisting clinicians in the operating the noninvasive ventilator.

Materials and Methods: This study was conducted at a teaching hospital in the middle of Taiwan. Subjects included 12 RT students in the period from 1st Sep 2016 to 1st Sep 2017. The intervention was applying a FL approach, which included a web-film demonstrating how to set up a BiPAP ventilator and Q & A. Students were required to take a post-course test and questionnaire.

Results: This study collected 12 after-course test results and questionnaires. All students showed a high score (4.5/5) in the items of the questionnaires including "communication with clinicians", and "independently operating the

ventilator and trouble-shooting", a relatively high score (4/5) in "improving knowledge in the respiratory medicine", and a low score (3/5) in "communication with patients/family".

Conclusion: FL can encourage students in self-learning, full of confidence, and no fear of operating the ventilator, assisting clinicians in setting the ventilator and helping patients with safe and comfortable ventilation.

Title: Effectiveness of Medical Education Assessment Consortium clinical knowledge mock examination (2011-2016)

Authors: Sang Yeoup Lee, Mi Kyung Kim, Ye Li Lee

Institute: Pusan National University School of Medicine, South Korea

ABSTRACT:

Background: Good assessment is crucial to the feedback of the curriculum and to motivate students to learn.

Summary of Work: This study was conducted to perform item analysis of Medical Education Assessment Consortium clinical knowledge mock examination (MEACKME) (2011-2016), then evaluate several effects to improve item quality. Both classical test theory and item response theory were used for item analysis improve test quality. The estimated difficulty index (p) and discrimination index (D) were calculated according to each course, item type, A/T type, and grading of item quality. Also, the cut-off values used to evaluate p were: >0.8 (easy); 0.6-0.8 (moderate); <0.6 (difficult) and the cut-off values for D was 0.3.

Results & Discussion: The proportion of appropriate items was defined as those with p between 0.25-0.75 and $D \geq 0.25$. Cronbach's alpha was used to assess the reliability and compared with those of Korean Medical Licensing Examination (KMME). As results, recent mean difficulty and discrimination index was 0.62 and 0.20 for first MEACKME and 0.71 and 0.19 for second MEACKME, respectively. Higher grade item by self-checklist system had better D than lower grade item and higher grade items were gradually increased. Preview and editing process by experts revealed maintained p, decreased recall item, increased appropriate item with better D, and higher reliability.

Conclusions: Medical Education Assessment Consortium clinical knowledge mock examination (2011-2016) is deemed appropriate as an assessment to evaluate their competence and prepare a KLME in Year 4 medical students. ALSO, self-checklist system for writing good item was useful to improve item quality.

Take Home Message: Medical Education Assessment Consortium clinical knowledge mock examination is a good assessment for Year 4 medical students. Self-checklist system for writing good item is useful to improve item quality.

Title: Electives in Medical Education: Student's assessment to improve quality

Authors: Ana Rita Ramalho, Pedro Vieira-Marques, Cristina Alves, Milton Severo, Maria Amélia Ferreira, Inês Falcão Pires

Institute: FMUP, Portugal

ABSTRACT:

Background: Electives are perceived by students as a valuable, highly regarded experience, with benefits in providing a better learning and academic experience. However, besides their growing importance, there is not much work published concerning electives, namely on students' involvement and perception.

Summary of Work: FMUP students have the opportunity to engage in electives, composing 10% of the ECTS of the curricula. Halfway through the implementation of this innovative curricular approach, we assessed students' satisfaction, regarding electives quality and organization, aiming to identify where we were being effective and which challenges we should tackle.

Summary of Results: An evaluation survey handed to students evidenced that they are globally satisfied with electives provided by FMUP. The agreement with teaching and learning methodologies is the most important determinant on students' global satisfaction, while the number of students and the position in their personal preferences seemed to have minor impact.

Discussion: Considering the recent wave of curricular reorganization encouraging electives in medical education, perceive and understand the determinants of students' global satisfaction with electives is of major importance. It enables the

adjustment of contents and organization to best meet both successful learning and teaching methodologies to students' expectations.

Conclusions: The curricular organization of electives from the start of medical education provides students with the opportunity to: 1) allocate to electives according to their preferences, 2) design a diverse and broad curriculum and 3) self-develop themselves. Nevertheless, to monitor the implementation of such curriculum along with students' satisfaction is crucial.

Take Home Messages: Without proper supervision, implementation of electives may fail to provide students the opportunity to create self-adapted curricula, becoming an unfruitful burden for the Medical school carrying out such process. Thus, electives contents/organization have to be overseen and improved in order to assure that students' expectations are met.

Title: Combination of self-study and WFME external visit: a powerful tool for improvement of Tehran University of Medical Sciences (TUMS) UME program

Authors: Azim Mirzazadeh, Roghayeh Gandomkar, Amir Hossein Emami, Mohammad Jalili

Institute: Tehran University of Medical Sciences Iran

ABSTRACT:

Background: Tehran University of Medical Sciences has established an internal evaluation system for its Undergraduate Medical Education (UME) program.

Summary of Work: A standard Self-study process with the engagement of key stakeholders was followed with an external evaluation performed by WFME delegates to identify strengths and areas for improvement. In self study phase, we followed a participatory and narrative approach for judgment about TUMS UME program in comparison with WFME standards. We developed a simple worksheet for each standard and defined the best methods for data collection. The final judgment came from several task forces. Key stakeholders' views about the evaluation process and outcomes were asked by a questionnaire which has been developed based on metaevaluation standards.

Summary of Results: Despite strengths in many

areas, there are areas for improvement in student assessment, program evaluation, educational resources and clinical education. The results of the survey showed that most of stakeholders believe the process led to an accurate and, meaningful picture of UME program. They felt it was fair and feasible.

Discussion: Evaluation is an important tool for providing required information for continuous dialogue about educational change and keeping its momentum. Our experience showed it could be done in a feasible manner and with credible results. The most important limitation of this study was relying solely on survey of stakeholders for metaevaluation.

Conclusions: Self study and external evaluation have their own strengths and weaknesses. The combination of these two types of evaluation could provide a more accurate and credible picture of the subject of evaluation. It is also very important to explore the level of compliance of any evaluation compared with metaevaluation standards.

Take Home Messages: Combination of self study and external visit based on an agreed upon set of standards is a powerful tool for continuous promotion of change.

Title: Assessment of Rational Drug Use walk rally in enhancing awareness of medication use rationally among recent graduated medical students in Northern Thailand

Author: Rongtiva Muenpa

Institute: Lampang Hospital, Thailand

ABSTRACT:

Background and Purpose: The Ministry of Public Health in Thailand officially implemented the Rational Drug Use (RDU) policy in 2017 to promote medication safety. The policy provides not only RDU for hospitals but also an RDU curriculum for health professionals including medical students. Each medical school must incorporate the RDU curriculum into the course syllabus. Lampang Hospital Medical Education Center initiated an RDU class using a walking rally activity including content according to the RDU curriculum. This study aimed to assess the effectiveness of the RDU walking rally in enhancing awareness of rational medication use.

Methods: An awareness questionnaire was conducted before and after the rally in May 2017 among recently graduated medical students in Northern Thailand. These new graduates will work in the Lanna2 area, including Lampang Province, Phrae Province and Nan Province. The RDU walking rally was scheduled as part of an orientation course. The RDU walking rally consisted of 10 activities covering three aspects including the RDU policy, responsible use of antimicrobials and safe use of medication in special populations. The RDU awareness questionnaire was adapted from the national RDU awareness questionnaire for doctors. There were 23 items and each item used a 5-Likert scale where 1 means the least awareness and 5 means the most awareness.

Results: Among 53 recently graduated medical students who completed both pre- and post-questionnaires, their RDU awareness was significantly higher after finishing the RDU walking rally activity in all items except awareness in antimicrobial use for patient and social responsibly which was already high before join the activities (4.4 ± 0.6 vs. 4.5 ± 0.5 , $p=0.416$).

Conclusions: The RDU walking rally could enhance awareness of rational medication use and might be one of the learning activities included in the RDU curriculum for implementation during orientation of newly graduated medical students.

Title: End of Session Mini Test & Mechanism Map: comparative view of efficacy in promoting student engagement and concept learning by medical students in preclinical phase

Author: Sarmishtha Ghosh

Institute: MAHSA University, Malaysia

ABSTRACT:

Background: At MAHSA University, PBL is used as one the teaching learning activities. The purpose of this study was to find out if an end of session mini test and a mechanism map can promote student engagement and concept learning.

Summary of work: This retrospective study reports findings of two modules, one each from year 1 & 2. At the end of the PBL, a short MCQ Test was conducted on the basic concepts. The facilitator's scores and the mini test scores for each student in a

group and all the groups were recorded for analysis. Each group was also asked to construct a mechanism map which was assessed based on a rubric. A questionnaire was used to elicit students' feedback regarding the two processes.

Results: 70% students from year 1 & 85% from year 2 reported that the minitest was a good way of motivating them to study for the PBL topic. Average scores for year 1 ranged 40%-65% where as for year 2 it was 55% - 75%. Year 2 students showed more maturity in constructing the mechanism map and 85% reported that this made them learn concepts better.

Discussion: Students preferred to have a test at the end of the third session with a feedback of their performance. The mechanism map also helped them gain concepts. The study also pointed out that inter rater variability in scores could be taken care of and a more uniform scoring could be done towards the internal assessment which contributed to the main performance scores in the professional examination at the end of two years.

Take Home Message: An assessment at the end of PBL with a mechanism map favor student engagement and promote concept learning with clinical relevance. Hence these strategies can reduce the subjective bias in internal assessment.

Title: Design and development of constructive approach in medical ethic and the effect of this program on moral reasoning, moral intelligence and moral sensitivity in students

Authors: Leili Mosalanejad, Amir Mohammad Ebrahim, Nahid Zarifsanaiey, Mansour Darvishi Tafvizi, Lotfolah Dezhkam

Institute: Jahrom University of Medical Sciences, Iran

ABSTRACT:

Introduction: Providing health services is only possible when the graduates are able to adapt themselves to the increase ethical challenges in clinical environmental complexity.

Objective: The aim of this study was to design and develop a native model of educational program in medical ethic course and evaluation of this program on moral intelligence, moral sensitivity and moral reasoning.

Methods: This study is guise experiment study on 40 students who take a medical ethic course. The lessons are designed by integrated educational techniques: short case based study, group discussion and case based discussion in forum. This ethical reasoning was based on the native model of JUMS by three phases (law, Jurisprudence, practice caution by consecutive usage in solving ethical challenges). Data gathering was valid and reliable two questionnaires including Moral Sensitivity Questionnaire (MSQ) (Kim 1994) and Moral Intelligence Scale (kill & link, 2008). Assessment was derived from pre test–post test moral reasoning in two parts from case based assay and OSCE test.

Results: Mean level of clinical reasoning was higher than after intervention (18.30 ± 2.3 vs (18.77 ± 1.2), that was significant ($p=0.01$). Mean level of ethical sensitivity (10.12 ± 1.8) vs. (10.99 ± 1.85) was statically significant ($p=0.04$). Mean level of ethical intelligence increased (73.42 ± 7.1) vs. (74.1 ± 10.8). But, it wasn't statistically significant.

Conclusion: As results, due to cultural and moral consideration in native model, this type of teaching may be useful to readiness of students to interaction with ethical challenges.

Take Home Messege: New approach to teaching and learning needs to medical education
Due to cultural and moral consideration in native models, It is proper for teaching ethical and moral dilemma.

Title: Relationship between emotional intelligence and problem-solving with empathy in nursing students

Author: Sara Shahbazi

Institute: Shahrekod University of Medical Sciences, Iran

ABSTRACT:

Background: In terms of impact on the phenomenon of health, nurses are in a unique position of assistance because it's a helping profession and its common elements include integrity, empathy, problem solving. We should consider the fact that the importance of emotional intelligence and problem solving in nursing is evident.

Summary of Work: This present cross-sectional study was conducted on 43 fourth-year nursing student. Sampling was based on census data collection. The data was collected via personal information questionnaire, standard Bar-on test (For measuring emotional intelligence and empathy level) and problem-solving skills questionnaire. The data were analyzed by using descriptive and inferential statistics.

Results: By the results of this study a significant relationship between emotional intelligence and empathy in nursing students was observed ($P < 0.05$) but there was no relationship between problem solving and empathy level ($P > 0.05$).

Conclusion: Based on the results of this study, as students of nursing have higher amount of emotional intelligence, their power of empathy will be greater. Since this skill is an essential requirement for professional nurses, therefore it is recommended to strengthen the skill of emotional intelligence in them.

Title: Perception on Manuscript Writing and Publication workshops with evaluation of knowledge gain by attendees: A Mixed Method Study

Author: Mehwish Hussain

Institute: Dow University of Health Sciences, Pakistan

ABSTRACT:

Background: The continuing medical education on research and publication remains on high demands especially in developing countries where projection of research culture is not much advanced. We designed series of workshops to affirm and evaluate the need of such workshops in Pakistani health sciences students and faculty.

Summary of Work: Series of workshops were conducted in different HEIs of Pakistan. Contents of the workshop mainly included algorithm of writing, choice and correspondence with journals and dealing when get rejection. Participants' knowledge was evaluated by a 15 item pre and posttests. The change in the knowledge and opinion of workshop quality among different institutes were assessed by nonparametric tests.

Summary of Results: The need of such workshop was substantially demanded on qualitative

assessments of the participants. A significant improvement was observed in participants' knowledge on reader's prospect ($P=0.001$), algorithm of writing ($P<0.001$), interpretations of results ($P<0.001$) and selection quality journal for publication ($P <0.001$). The agreement with the quality of workshop based on need, knowledge and content was above average.

Discussion: Researchers from allied sciences need to augment their skills for disseminating research work worldwide. Training workshop is one of the quick interventions which can enhance writing skills and ease research publication. Our multicenter study suggested the increase in frequency of such workshops in our society.

Conclusions: The participants' response regarding the effectiveness of manuscript writing for publication workshop was overwhelmingly positive, and there was a significant impact on the knowledge of the participants.

Take Home Messages: There is need of research training that will help for better capacity building in different HEIs of Pakistan.

Title: Board card design to assess higher levels of knowledge in medical translation - lessons learned

Authors: Joerg Goldhahn, Ursula Brack, Stephanie Huber, Kathrin Studer, Severine Chardonens, Matthew Gaydos

Institute: ETH Zurich, Switzerland

ABSTRACT:

Background: Serious games may be potentially useful tools for medical education; however, assessment of game-based learning in post-graduate content remains challenging. This study explores a previously unexamined content area in games for learning medical translation. It uses a game to facilitate student understanding of the topic and to assess students' knowledge application in complex scenarios.

Summary of Work: A roll-and-move game (e.g. Monopoly) was used to illustrate the medical translational cycle. Student groups prepared positive and negative cards for covered topics (2 cards/topic) that would facilitate faster or slower player movement. Feedback was provided during

the course to a) improve student's ability to create cards and b) adjust evaluator scoring.

Results: Students improved significantly during the semester from 1.57 to 1.81 points per card (maximum 2) and evaluators increased agreement from 66% agreement during the semester to 84% at final submission. Student feedback indicated that they perceived the game design very challenging as an assessment method.

Discussion: Embedding content (e.g. the translational cycle) in a game to frame student design activities can be useful for student learning however assessing designed game cards remains challenging. The difficulty of far knowledge transfer and the lack of familiarity with the game design both could be reasons for the student feedback.

Conclusions: The serious game will be used to illustrate the translational cycle within the next courses but game design will be replaced with formative assessment while other formats will be used for summative assessment.

Take Home Message: Serious games help to improve understanding of complex medical topics such as medical translation. Game design can be a useful assessment method but remains challenging. Clear rules for design and separate teaching of gaming theory may be necessary for success.

Title: Canadian medical schools and their curricula: Accreditation and the winds of change

Authors: Shannon Venance, Donald W McKay, Danielle Blouin

Institute: Committee on Accreditation of Canadian Medical Schools, Canada

ABSTRACT:

Background: Medical school accreditation assures stakeholders that graduates are prepared for entry into any residency and that the program meets generally-accepted national standards for quality. It is unknown whether national accreditation experts agree that the required accreditation documentation related to The Committee on Accreditation of Canadian Medical Schools (CACMS) Standard 7 Curricular Content is clear, important and relevant for programs.

Summary of Work: Accreditation leads of the 17

Canadian medical schools were invited to answer 4 questions for each of CACMS Standard 7 ten Elements. Using a 5-point Likert scale, respondents rated each element for clarity, importance to the educational environment, importance to educational quality and clarity of the Data Collection Instrument (DCI). Narrative comments were encouraged. A descriptive analysis was done on quantitative and qualitative data.

Summary of Results: Fourteen surveys (82%) were returned. Averaged across ten elements, clarity of the DCI and clarity of the element scored the lowest (3.7 and 4.1, respectively). Calculated across the four questions, curricular content elements for medical ethics, communication skills and interprofessional collaborative skills averaged 4.5. Narrative comments related to DCI clarity raised concern about the origin or relevance of topic lists and uncertainties regarding language.

Conclusions: Canadian medical school accreditation experts identified quality improvement opportunities for accreditation documentation related to Standard 7. These include suggestions for schools to provide school-specific contextual definitions and interpretation of data and comment on topics relevant to a school's social accountability mandate.

Take Home Messages: Soliciting feedback from medical schools with respect to clarity and relevance of accreditation documentation may improve engagement with medical schools for accreditation. Recognizing misperceptions in interpretation provides opportunities for enhanced communication during medical school preparation for accreditation.

Title: Learning Styles of Continuing Medical Education Participants: a Cross-Sectional Study

Authors: Charles Collins, Sanjeev Nanda, Brian Palmer, Jayawant Mandrekar, Thomas Beckman, Christopher Wittich

Institute: Mayo Clinic, United States

ABSTRACT:

Background: Experiential learning styles are a potential framework for planning continuing medical education (CME). We sought to determine the preferred learning styles of participants at

traditional CME courses and explore associations between preferred learning styles and characteristics of course participants.

Summary of Work: This was a cross-sectional study of all participants (N=393) at the 2016 Mayo Clinic Updates in Internal Medicine (N=175) and Psychiatry Clinical Reviews (N=218) CME courses. Participants completed the Kolb Learning Style Inventory, which is grounded in experiential learning, and provided demographic data. Associations were determined with the Kruskal-Wallis test.

Results: 393 returned 241 surveys (61.3%). Participant learning styles were diverging (45;31.5%), assimilating (56;39.2%), converging (8;5.6%), and accommodating (34;23.8%). Associations existed between learning style and gender (P=.02). Most men were diverging (23/63;36.5%) or assimilating (30/63;47.6%); most women were diverging (22/80;27.5%), assimilating (26/80;32.5%), or accommodating (26/80;32.5%).

Discussion: This is the first study of preferred learning styles among CME course participants. Overall, most participants had diverging or assimilating styles. Males tended to have diverging or assimilating styles, while females had more variation in learning styles, including diverging, assimilating, and accommodating.

Conclusions: Understanding differences between male and female learning styles may enhance curriculum planning. Podium-based CME may promote diverging/ assimilating styles; small groups may facilitate converging/ accommodating styles. CME directors should select diverse presenters so various preferences are represented. Presenter and participant awareness of their own learning styles may optimize learning.

Take Home Messages: 1) Experiential learning styles is a framework for planning CME. 2) Most CME participants had diverging or assimilating styles. 3) There was an association between learning style and gender. 4) Differences between male and female participants' learning styles could aid curriculum planning that support diverse teaching modalities.

Title: Peer-to-peer assessment as a learning tool for multidisciplinary undergraduates at a peripheral nerve injuries summer school

Authors: Chang Park, Tom Quick

Institute: Stanmore Royal National Orthopaedic Hospital, United Kingdom

ABSTRACT:

Background: Peer-to-peer assessment not only facilitates the students' reflection of their own work but also increases student satisfaction. By reviewing their peers', students develop objective evaluation skills and greater awareness of the performance guidelines. Although the literature supports its use in both medical and nursing students there has been little work in its use across a multidisciplinary cohort.

Summary of Work: 22 students attended a three-week university summer school on the topic of peripheral nerve injuries. Peer to peer assessment of an oral presentation made up part of the formative assessment. Students were surveyed using a Likert score 0-5 (from 0 strongly disagree to 5 strongly agree) on their impression of peer-to-peer assessment as a learning and assessment tool.

Results: 14 (64%) students agreed that the peer-to-peer assessment process improved the learning process and 5 (23%) strongly agreed. 13 (59%) agreed and 9 (41%) strongly agreed that it improved the engagement with their peers' presentation. 17 (77%) either agreed or strongly agreed that it was appropriate to use as a method of formative assessment with the remainder neutral to the concept.

Discussion: The majority of students in a multidisciplinary group agree that peer-to-peer assessment improved learning and engagement and is an appropriate assessment tool. Further work on how a variation of undergraduate specialties, cultures and primary language affects the peer-to-peer assessment process is advised.

Conclusion: Peer-to-peer assessment has been proven to be an effective method for assessment and reflective learning within a homogenous group of nursing and medical students. This study demonstrates that this remains true in a multidisciplinary cohort of international undergraduates where expertise, underlying

knowledge base and learning approaches may vary.

Take Home Message: Peer-to-peer assessment has been shown to be an effective method for assessment and reflective learning in a multidisciplinary cohort of international undergraduates

Title: "Flipped Clerking": A novel way of teaching and assessing medical students

Authors: Mei L Kang, Hei Man Wong

Institute: Department of Infectious Diseases, Singapore General Hospital, Singapore

ABSTRACT:

Background: We host groups of fifth year medical students for 2-week Infectious Disease (ID) attachment 8 times a year. Students are expected to learn about diagnosis and management of 7 common infections by clerking patients, but there may not be patients with the appropriate diagnoses at appropriate times. Hence faculty provide didactic lectures on these topics repeatedly, but this is taxing logistically; and of limited efficacy educationally.

Summary of Work: We decided to "flip the clerking": Students did pre-reading, then presented; in form of clerking notes, simulated "patients" with characteristic symptoms, risk factors, signs and investigations for 7 common ID condition. They also described the published treatments and typical evolution of these infections. Faculty reviewed the work before discussing the cases in an interactive group tutorial.

Results: While all the students were able to describe typical manifestations of common infections, their work revealed misconceptions and clinical reasoning flaws; with described symptoms, signs and investigative results not tying up coherently, eg patients with streptococcal meningitis presenting with rash. Treatment plans were also vague, eg "give antibiotics"; and described response and disease evolution unrealistic eg patients with endocarditis and embolic stroke recovering after 1 week of antibiotics.

Discussion: Though "Flipped clerking" was motivated by logistical challenges, it turned out to

be very useful in assessing students' medical knowledge and patient care competencies; and also in identifying conceptual flaws and misunderstandings. These were rectified in subsequent group tutorial by faculty. Clerking real patients and recounting their history may not have revealed students' conceptual flaws; and ironically less valuable educationally.

Conclusions: "Flipped clerking" can be a practical way of augmenting clinical training of medical students when patients with certain diagnoses are limited. It even provides the added advantage of assessing students' understanding following self-study; allowing early identification and rectification of misconceptions.

Title: Science Communication to Millennials– in the light of student focus group interviews and in-depth interviews with teachers

Author: Zsófia Duga

Institute: University of Pécs Medical School, Hungary

ABSTRACT:

Communication with the young generation is successful if we know the characteristics of their communication style. The aim of our research was to observe the behavior and to learn about the decisions of young people (between 15-24 years).

The aim of the study is to demonstrate identifiable results related to science, content consumption and media (web2) usage of the Millennials members and examine the lifestyle groups among the Millennials from the point of view of their high school teachers and university lecturers.

Compiling the results of the present study we processed results of focus group interviews and depth inquiries among college students, and high school and university teachers according to pre-defined criteria.

The interest of the Millennials are wide-ranging and they have significant amounts of information. They learn things which they consider useful, relevant, fun, like the pictorial and video materials, practical tasks, experiments, interactive lessons. Their attention can't be sustained for a long time. Many of them are unmotivated and seek minimum requirements.

The learning, knowledge-seeking motivations of today's young people are different than that of the members of previous generations. Millennials requires different teaching methods. Instructors also need computing, web-based knowledge and have to be able to apply the new devices, and it is important to learn new teaching methods as well. Millennials, science, science communication, content consumption, lifestyle groups

Title: Assessing reflective capacities in midwifery students

Authors: Linda Sweet, Kristen Graham, Janice Bass, Mary Sidebotham, Jenny Fenwick

Institute: Flinders University, Australia

ABSTRACT:

The capacity to reflect underpins professional judgement and ethical awareness and is an essential part of professional midwifery life. Developing reflective capacities and subsequently assessing these capacities is therefore an important, but often overlooked component of curriculum.

A mixed-method educational design research approach was used to identify mechanisms to enhance reflective practice, as well as ways to assess the reflective writing was undertaken. For the implementation of the curricula change, students were provided with guidance and support on how to use the Bass Holistic Reflection Model to structure their written reflections. During a 12-month period students' written reflections, completed before and after the introduction of the model, were collected and evaluated using a purposely developed assessment rubric. In addition, focus group discussions were conducted across all three-year levels to explore student's perceptions of how they developed their reflective capacities and who they perceived they could or should be assessed.

Students valued the holistic reflection model as it gave guidance and structure for their reflective thinking and writing. There was a clear improvement in the quality of the reflective writing using the structured model. Overtime, some students began to adapt the model and develop their own style of reflection. The introduction of

the model made a significant improvement in written evidence of reflective capacities across all years.

The project has demonstrated that the use of a structured model of reflection guides and enables students to demonstrate their capacity to reflect on practice through their writing. The use of a rubric to assess the reflective writing was an integral component to the success.

Title: Medical students who suffered from depression need someone to talk to

Author: Kanjana Wongsiri

Institute: Maharaj Nakhon Sri Thammarat Hospital, Thailand

ABSTRACT:

Background and objectives: The prevalence of depression in medical students is higher than in general population. It varies from 9 to 19%. The depression is correlated to impairment of function. This study aims to compare the depression and associated factors among medical students who were from different types of medical training programs.

Summary of Work: 50 medical students were recruited at Maharaj Hospital. 26 medical students were from Medical Education Center (MEC) and 24 medical students were from University Hospital (UH). Thai Hamilton Rating Scale for Depression was used to assess depression. Wilcoxon rank-sum test and Fisher's exact test were used for data analysis.

Summary of Results: Female was 60%. Prevalence rate of depression was 16% (6% from UH and 10% from MEC). Mild depression was 10% (8% from UH). Moderate depression was 2% (totally from MEC). Severe depression was 4% (totally from UH).

Discussion: No statistical difference in prevalence rate of depression from MEC and UH (P -value = 0.7). Supervision by a senior doctor was significantly associated with depression (p -value 0.024). Wanting to resign was significantly associated with depression (P -value 0.03). Not impression in staff was significantly associated with depression (p -value 0.044).

Conclusions: Supervision by a senior doctor (Internship, Resident, and Fellowship) was the

most significantly associated with depression. The finding is consistent in part with the theme of 2017 world health day campaign about depression is "Let's talk". Medical students who suffered from depression they need someone to talk to.

Take Home Messages: The hospital should provide adequate consultation to medical students who seek advice. Medical students who suffered from depression need someone to talk to. Consultant doesn't need to be a professional supervisor they just only be a good listener that can help our students who suffer from depression.

Title: Learning Climate in Vachira Phuket Hospital

Author: Chalermpong Sukontapol

Institute: Vachira Phuket Hospital, Thailand

ABSTRACT:

There are two medical curricula in Thailand, university based hospital and service based hospital. Mostly teachers are graduated from university based hospital. Ours is service based hospital. Perspective views of various stakeholders may need to be explored. Learning climate objects might be differentiated and creative hierarchy rearrangement might be done.

Dundee Ready Education Environment Measure (DREEM) was used to evaluate 17 medical students. 28 learning climate objects was ranking by our stakeholders. (Administrators, Teachers, Patients with Caretakers, 4th-5th-6th year medical students, Nurses, Officers). Five persons from each group (40) are sampling. Medical student's response is no difference. ($p > 0.05$, Kruskal-Wallis test)

Learning (30.76), Course (27.06), Academic (20.71), Atmosphere (30.06), social (18.06) and Total (126.65) is our results in DREEM. Teacher, Timetable, Schedule, Examination and Ward are the Top Five items, respectively. Director, Counsellor, Friend, Patient, Ward are difference findings in various groups. ($p < 0.05$, Kruskal-Wallis test). Factor analysis (varimax) was done and divided them to ten factors.

"Teacher, Timetable, Schedule, Examination and Ward" are recognized for improving our Learning Climate. Creating Vision and Mission for our Strategy might need to be congruence with the

new rearrangement of Hierarchy. There are some difference perceptions of our stakeholders and need to seek our attention. (Director, Counsellor, Friend, Patient, Ward)

Various factors are important to learning climate. We can find the way to improving by factors grouping. Changed learning climate may be changed at first in our perspective view. Life is grown up in healthy way by the good climate. Vision and Mission creating from Learning Climate by our Strategy.

Title: Dental Students' Perception of the Assessment Environment in Pakistani Context

Author: Kinza Aslam

Institute: University of Lahore, Pakistan

ABSTRACT:

Background: Among the major aims of health system, an important target is the training of doctors who are the ultimate service providers. Due to a significant change in medical education overtime, the assessment methods have also evolved. It is important to assess how this evolution is perceived by students as it has a direct impact on their learning.

Summary of Work: The Assessment Environment Questionnaire (AEQ), a 20-item questionnaire was used to rate various aspects of assessment environment (feedback mechanism, learning and performance, information on assessment and assessment procedure) for first and second year dental students (n=100). The results were analyzed using SPSS.

Results: 50 students each from 1st and 2nd year completed the questionnaire. They perceived their assessment environment positive yielding a global mean score of 49.84/80, with each subclass score 16.42/28, 13.1/20, 12.62/20 and 7.78/12. Second year students scored higher as compared to first year students, 53.5±8.24 as compared to 46.12±11.7 (p=0.0004).

Discussion: This study evaluated the applicability of AEQ in Pakistani setup and the mean scores of individual questions in all four sub classes provided us the opportunity to look into the weaknesses, that exist in the assessment environment, and also

into the strengths of the educational environment offered to the undergraduate dentistry students.

Conclusion: AEQ inventory is a reliable and valid tool for measuring the assessment educational environment of undergraduate medical program anywhere in the world. Both 1st and 2nd year students perceived their assessment educational environment positive. The overall assessment educational environment of our medical school is more positive than negative with room for improvement in it. All four domains of assessment educational environment need close attention.

Take Home Message: AEQ can be used to identify areas of strengths and weaknesses in an assessment educational environment. The results can then be used to improve the existing assessment environment.

Title: Trainees' Perspectives on the Educational Environment

Authors: Tahra Almahmoud, Mohamed Al Ali, Jawad Hashim, Rabah Almahmoud

Institute: UAE University, United Arab Emirates

ABSTRACT:

Introduction: Ethics and professionalism are recognized as core competencies in medical practice and an integral part of many medical schools curricula worldwide. Several studies have investigated the teaching and learning methods for this subject. However, there are few reports on the students' views and experiences with professionalism in their working environment especially in the Arab world. The current study was predicated on the belief that understanding the perspectives of student about their medical environment may assist in efforts to create effective, valuable ethics education that, in turn, may foster the development of good physicians.

Methods: An anonymous paper questionnaire was distributed to a total of 134 final year clinical clerks. Standard descriptive statistics, unpaired t-test to evaluate differences between male and female groups and Pearson Correlation to determine relationships between variables were used.

Results: 114 (86%) completed the survey. Students identified during their clinical training, medical colleagues and allied healthcare workers whom

that they consider role models. (Mean=6.68±2.126 on a scale of 0 to 9; and 6.62±2.17 respectively). They observed that medical colleagues and allied healthcare workers place the needs of their patients ahead of their own self-interests 7.25±1.69 and 6.87±2.095 respectively. Minor number of students reported to be urged by medical colleagues and allied healthcare workers to copy their history and physical exam rather than gathering their own information from the patient (mean 3.26±5.14 versus 2.83±3.19) or observing medical colleagues and allied healthcare workers scheduling tests or performing procedures at times that are more convenient for themselves than for the patient (mean 3.37±2.96 and 3.32±3.043 respectively).

Conclusion: students viewed their medical education environment as positive

Title: Perception of educational environment among undergraduate students of health disciplines in a private Iranian university

Authors: Zahra Mostafavian, Arezou Farajpour, Mohamad Ali Raisolsadat

Institute: Mashhad Branch, Islamic Azad University, Mashhad, Iran

ABSTRACT:

Background: The educational environment encompasses all physical, mental, emotional conditions and socio-cultural factors that affect the development of learners in training. This paper seeks to determine the perception of Medical, Nursing and Midwifery students about their educational environment and compare their perceptions in terms of disciplines, demographic attributes and academic level.

Summary of Work: In this cross-sectional study, Medical, Nursing and Midwifery students in Islamic Azad University, Mashhad, Iran, were selected using stratified random sampling method (n=378). They completed the standard Persian version of Dundee Ready Education Environment Measure (DREEM) questionnaire. Descriptive statistics, t-test and analysis of variance (ANOVA) were used to analyze data.

Summary of Results: The mean score of DREEM was 106±24.6. The mean scores of subscales were

learning:23±8, teachers:23.4±6, scientific abilities:18±5.5, educational climate:25.5±7.7 and social conditions:15.8±4. The three disciplines were significantly different in first four subscales. There was a significant difference between mean total score and scores of two subscales with respect to gender.

Discussion: The results reveal the overall positive attitude of students so indicates positive dimensions of the educational environment outweigh its negative aspects. This study shows that IAU University, similar to other universities in the region, may utilize a traditional education method, which needs to be boosted using modern educational approaches.

Conclusions: According to these results, students tend to have a positive attitude towards their educational environment. The findings of this study are useful to identify areas in need of improvement by employing more specialized tools and planning for improvement.

Take-home Messages: In today's professional world, a transition from traditional to modern education with its student-centered approach is integral to the development of self-directed and lifelong learning.

Key Words: DREEM, educational environment, evaluation, student perception, Islamic Azad University- Mashhad branch

Title: Medical student's attitude and knowledge following peripheral blood smear interpretation teaching-learning in Pediatric department.

Author: Sumonmaln Klamchuen

Institute: Sunpasitthiprasong Hospital, Thailand

ABSTRACT:

Background: Blood smear interpretation teaching is the crucial program for learning about the disease associated hematologic problems. However, we observed that the OSCE score about blood smear interpretation had been reported of lower in the national license exam. This study aimed to examine attitude, knowledge and problems of blood smear interpretation.

Summary of Work: 29 medical students studying in 5th year medical school were evaluated by self-administered questionnaire after finished the

teaching course about blood smear devised by subgroup learning. The aspect assessment included attitude, knowledge, learning satisfactions and problems of class organization. Descriptive analysis was done in this study.

Summary of Results: All of students have good attitude for blood smear interpretation. Most of them spent at least one time per week by self learning (58.6%) and expressed the time to teaching was not enough (55.2%). The important problem was lack of consultant of senior medical student and staff to confirm (82.8%).

Discussion: This study suggest that, the most of medical student preferred to interpreted peripheral blood smear in their patients by their self, Most of them have good attitude and knowledge after teaching-learning program. The lack of consultant when they work in workplace was the major problem about confidence of practice.

Conclusion: Peripheral blood smear interpretation should be encouraged additional course for medical students carefully and well organized especially in their workplace for improve self confidence.

Take Home Messages: Hematologic problems commonly found in patients. Peripheral blood smear is essential tool for early diagnosed and rapidly solving the disease. Improvement of blood smear interpretation teaching-learning program is necessary for medical student's educations.

Title: NLP help me!

Author: Maytinee Konkaew

Institute: Vachira Phuket Hospital, Thailand

ABSTRACT:

Neuro-linguistic Programming (NLP) is an approach to communication, personal development, and psychotherapy. It is a connection between Neurological processes ("Neuro"), language ("Linguistic") and behavior ("Programming") and these changing may benefit to achieve specific goals. Medical students may have some psychosocial stressors such as study competition or problems in family discords.

NLP was applied intervention and Heart rate variability (HRV) was tested by various variables to

study an autonomic adaptability. The 5th medial students were tested by HRV measurements before and after NLP approach. Analysis was done by Sign test. Quantitative study was done by SCAT. (Steps for Coding and Theorization)

Various variables were compared between before and after NLP. Improving SDNN was found after NLP approach. [Sign test ($p < 0.05^*$)] Two students said "NLP help me to remember what is happiness that had gone for a long time for me. It is very incredible!!! I am very happy."

Adaptation may be balancing between sympathetic and parasympathetic activity. This result of NLP may be beneficial to achieve some specific goals in their life. The positive change of the adaptation to balance of SNS/PNS and the increase of SDNN from HRV after the NLP because of the training by processes of the NLP. But in someone is not positive change may be from health behaviors and relaxation.

This research was applied to medical students by NLP training in classroom. Evaluation to the next time by doing it again and compare the results by HRV test with the counseling. In the future, they will use the NLP to improve their empowerment for stress coping and heal their unhappiness.

Psychosocial stressors are harmful. Exercise, Music and Meditation are benefit to our autonomic adaptability. Also NLP is an interesting intervention.

The NLP can improve the empowerment for coping with their stressors.

Title: Preliminary Assessment of Peer-Mentoring Program for Medical students in Academic difficulties

Authors: Young Hee Lee, Choon Hak Lim, Sung-Bom Pyun, Young-Mee Lee, Hong Sik Lee

Institute: Korea University College of Medicine South Korea

ABSTRACT:

Background: Since 2016, the KUCM has launched a new Peer Mentoring Program for the 1st year medical students in academic difficulties. The purpose of this program is to match 1st students in academic difficulties with a mentor from a 3th and 4th year student.

Summary of Work: In the first semester of 2016 and 2017, 20 mentees were mentored by 14 mentors. Mentees were 1st students who applied for the mentoring program among the students whose first test score was lower 20%. Mentors were volunteers to this program among 3rd and 4th year students who were the top 20% of the grade in their first year. Mentees and mentors were randomly matched. Each mentoring was conducted on a one-to-one basis. After the mentoring, two of the Authors interviewed mentees and mentors one by one for 30 minutes to an hour and analyzed the interviews.

Results: Throughout the first semester of the first year, 1st year student mentees experienced obtaining information on various learning strategies, increased social support, reduced stress experience, improved networking by mentoring. The most frequent mentoring topics included study strategies for each subjects, usages of learning materials, and time management for the exams. Also emotionally senior mentors provided a answering to a stress management, mind control, and medical student life in general.

Discussion: Only a few students actually used peer-mentoring program among student group with low grade. Further discussion should be needed to how to increase usage of mentoring program by students who were needed social support and academic support.

Conclusion: The mentoring program at the beginning of academic year at the KUCM might have a useful function in providing academic support as well as emotional and social support to students with academic difficulties.

Take Home Message: Medical students with academic difficulties need not only academic support but also emotional and social support.

Title: Assessment of student learning in an interprofessional health sciences module

Authors: Alan Wong, Jade Soh

Institute: Singapore Institute of Technology, Singapore

ABSTRACT:

The purpose of this study is to examine the internal consistency reliability of learning instruments

employed to assess student learning in an interprofessional health sciences module. Project-based learning is adopted as an approach to foster interprofessional learning in the health sciences module Health Systems Singapore's Perspectives. This learning approach aims to enhance the learner's class involvement, self-directed learning readiness and overall learning experience. The learning variables assessed are therefore (1) class engagement and participation (6 items, 5-point Likert scale), (2) motivation to learn (31-item motivational subscale of Pintrich's Motivated Strategies for Learning Questionnaire, MSLQ, 7-point Likert scale with six different constructs), (3) cognitive learning (7-item Revised Learning Indicators Scale, RLIS, on 5-point Likert scale), and (4) self-directed learning (40-item Self-Directed Learning Readiness Scale for Nursing Education, SDLRS-NE with three subscales). Among 98 health sciences undergraduate students from the disciplines of physiotherapy, nursing, radiography and occupational therapy, the internal consistency reliability for class engagement and participation was 0.89 (Cronbach's alpha coefficient, based on baseline data) and 0.91 (based on end-of-module data); Motivation subscale for MSLQ ranged from 0.69 to 0.94 among the six constructs (baseline data) and 0.70 to 0.94 (end-of-module data); RLIS was 0.69 (baseline data) and 0.84 (end-of-module data); and SDLRS-NE ranged from 0.71 to 0.83 among the three subscales (baseline data) and 0.81 to 0.88 (end-of-module data). The internal consistency reliability was comparable to those reported by the original Authors or in the literature. These instruments could be adopted among Singaporean health sciences undergraduate students to measure variables of student learning in the higher education context.

Title: Development of educational program based constrictive approach in medical ethic and the effect of this program on students' learning and self reflection

Authors: Amir Mohammad Ebrahimi, Leili Mosalanejad, Nahid Zarifanaee, Mansur Tafvizi, Lotfolah Dezhkam

Institute: Jahrom University of Medical Sciences, Iran

ABSTRACT:

Introduction: It is necessary for the medical students to possess suitable abilities to encounter different clinical situations to solve the patients' problems particularly in vital situations.

Objective

The aim of this study was the design case based learning in forum and the effect of this program on learning and self reflection in the forum.

Methods: This study was guise experiment study on 40 students who take a medical ethic course. The lessons were designed by two educational techniques: short case based team learning integrated to peer interactive learning in forum. Data gathering was derived from a valid and reliable questionnaire from self reflection and insight scale (SRIS) and then compare of students' final score in pre test- post test.

Results: The results showed that the average of self- reflection in three subscale conclude motivation to self reflection , need to self reflection and insight in pre test- post test were significant . ($p= 0.01$, $p= 0.0001$, $p= 0.01$) respectively . Students' score in pretest- post test (16.32+- 4.23 vs 18.23+_5.2) was statistically significant ($p= 0.04$).

Conclusion: In view of the effect of constrictive method as a case based team learning and peer learning in virtual environment (forum) in students' self reflection and positive impact of this method on students' learning and self reflection , the effective use of active learning in medical education are recommended.

KeyWords: Self reflection, learning, Students, Medical ethics

Title: How did medical students manage difficult patient encounters?

Authors: Siriluk Pongchitsiri, Saraporn Matayart

Institute: Buddhasothorn Medical Education Center, Thailand

ABSTRACT:

Background: Medical students have patients that disgust or troublesomeness often described as difficult. Many researches in this area focus on patient characteristics or doctor characteristics or environment such as work overload and

relationship skills, not management or how to cope with.

Summary of Work: To describe type of difficult patient, feeling and how to manage with patient encounters. Semi-structure group interview with question included "describe the patient they least likely seeing or dislike", "Why did they perceived these type were difficulty?" and "How to manage these situation?" Data were analysed by frequency.

Results: 29 fifth year medical students, academic year 2017(July-mid September) divided into 4 group for group interview with audiotape record. They described relationship (distrust, denial) as well as patient behaviors (manipulate, anger) that they found most disgust, medical problems (alcohol addict, somatization) was fewer and no difference with student's gender. They almost feel uncomfortable with these situation and management strategies were empathy, repeated explain, time management and collaboration.

Discussion: Doctor-patient relationship and patient behaviors were difficult encounters for medical students, but empathy was favorable manners.

Conclusions: Medical students acknowledged that they have patients they found troublesomeness. Therefore, successful management composes of empathy, collaboration and set clinical administration.

Take Home Message: Teaching topic of communication with difficult patients should be perform regularly and many conditions. Medical students will assure dealing with difficult encounters in future practice.

Title: Are Examinee Post Exam Surveys Biased?

Authors: Gary Cole, Kevin Dwyer, Monica Rodriguez, Jonathan Dupre

Institute: Royal College of Physicians and Surgeons of Canada, Canada

ABSTRACT:

Background: The Royal College of Physicians and Surgeons of Canada ask candidates to complete a survey following each high stakes certification exam. However, 71% of examiners felt candidates are biased in their survey responses based on categories such as language, Canadian vs. Non-

Canadian training location, exam score, and knowledge of their exam results vs. no knowledge of exam results.

Summary of Work: In 2016 candidates from 68 specialties received a post exam survey (n=3169 for Written exams, n=2491 for Applied exams). Questions used a five point Likert scale (Strongly Agree to Strongly Disagree). Questions were analyzed for non-response and group category bias. Effect size of ≥ 0.5 and correlation ≥ 0.3 were considered of practical significance.

Results:

We had a high response rate (76.0% for the written: 71.6% for the oral) and a high R-indicator (0.89 for Written and 0.94 for Applied). For all survey questions, no effect size or correlation reached the threshold of practical significance when comparing group categories.

Discussion: The high response rate, R-indicator and a wave analysis suggested that there was no non-response bias. The lack of a practically significant difference for all questions suggests respondents answered in a similar way to the survey regardless of group. This implies that candidates were unbiased based on their categories.

Conclusions: Post exam surveys have the potential to provide useful input for improving exam validity by delivering feedback on question clarity, appropriateness of content, difficulty, time, etc. The consistency of the responses for different categories of candidates supports the use of this information to improve exam validity.

Take Home Messages: Contrary to what many may believe it is likely that categories of candidates are unbiased in their responses to post exam surveys. Integrating candidate survey results into exam review and development processes can greatly improve validity and perception of your exams.

Title: Core clinical skills competency in internists graduated from different training tracks

Author: Nawarat Aroonyadech

Institute: Sunprasitthiprasong Hospital, Thailand
Internists are expected to acquire adequate clinical skills to be able to manage common problems in practice. There are two main tracks of medical training in Thailand: a conventional medical

training and a Collaborative Project to Increase Production of Rural Doctor (CPIRD). There is little evidence to compare the clinical procedural skills in those graduated from two tracks.

Methods: 42 internists working at Sunprasitthiprasong Hospital participated in OSCE particularly aimed to assess seven core clinical competencies: ICD insertion, breech delivery, neonatal resuscitation, long arm slab, trauma, FAST and communication skills. Each skill was scored a maximum point of 100. Below 60 indicated a failed test. Total and skill-specific scores were described and compared across sex, academic year and training track (CPIRD VS Normal track) using t test and Mann-Whitney U test.

Results: The mean total score (SD) was 502(48) out of 700, with the three highest mean scores for long arm slab, FAST and communication skill. The skills that the internists failed the most included breech delivery, neonatal resuscitation and trauma (passing rates 29, 60 and 69% respectively). Total and most skill-specific scores were comparable between sexes, academic years and the two training tracks. However, the 2015 internists performed better in ICD insertion, trauma and communication skills than those in 2014 ($p < 0.05$).

Discussion: There are a few skills that need to be better prepared in internists before they enter their independent clinical practice. The internist clinical performance might be influenced by factors other than undergraduation training, such as skills acquired during internship year and changes in teaching over time.

Conclusion: Specific educational interventions and continuing evaluation of internists' clinical skills are needed.

Title: Does the order of final year surgical clerkship rotation influence on student's score?

Author: Chira Trairongchitmoh

Institute: Sanpasitthiprasong Hospital, ประเทศไทย

ABSTRACT:

Background: Final year medical students have to integrate their knowledge and clinical skill to perform during surgical clerkship. It's unclear if the order of surgical clerkship rotation influence on student's clinical ability. This study was aimed to

compare clinical assessment and knowledge score between final year (6th year) students on surgery clerkship who were in different order of rotation.

Summary of Works: In this retrospective study, the 5th year GPX, clinical assessment and examination scores of 133 medical students on surgery rotation in 2012-2014 were collected and divided into 4 groups by order of rotation. The clinical assessment and examination scores were compared across 4 groups using Kruskal-Wallis test.

Summary of Results: The students from 4 groups were comparable according to their previous academic performance, as measured by 5th year GPX ($p>0.05$). There is no difference of the clinical assessment scores among order of rotation ($p>0.05$). The same result was found in the examination scores ($p>0.05$).

Discussions: The order of rotation was not associated with their clinical performance. These data suggest that prior clinical rotations might not influence on student performance in surgery. It is possible that the similarity of score was a result of evaluation consistency.

Conclusions: The students should be convinced that the order of final year surgical clerkship rotation have no influence on their performance scores. No rotation has an advantage over the others.

Take Home Message: During clerkship, applicable cumulative competency is crucial for clinical year medical students.

Title: Does two plus three equal three plus two? The problems of sequencing and segmentation

Authors: Pooshan Navathe, Alan Sandford, Craig Margetts

Institute: RACMA, Australia

ABSTRACT:

The Royal Australian College of Medical Administrators currently runs an oral examination, which assesses medical leadership trainees in their leadership skills by assessing their responses to a scenario. Candidates are given time to prepare, and then asked to present their approach to the scenario. Once this has been done, the examiners ask questions to clarify the depth of knowledge and understanding, and to identify appropriateness of

skills and behaviours demonstrated by the candidate. With the global drive for standardisation, there is increasing scrutiny of the way these examinations are conducted, and an effort to “script” questions and segment the marks obtained so as to reduce the subjectivity of this assessment. To inform any changes to the assessment processes, an experiment was carried out where the two parts (candidate presentation and the question and answer session (Q&A) session) were independently marked – in sequence, and later by reversing the sequence, i.e. by having the Q&A session first. The outcome of this experiment was that subjectively, many of the examiners commented that it was superfluous to examine the presentation after the Q&A had been assessed. (Since the numbers were small, a repeat of the experiment is being carried out and the analysis will be presented during this session). The subjective findings, while preliminary, have implications for the design of assessments for those situations where information is incrementally received. These findings need to be considered when justifying the need to segment assessments.

Title: Mini CEx as a Predictor of Clinical Reasoning in Clinical Students of Pediatric Clinical Rotation of Faculty of Medicine of Universitas Islam Indonesia

Authors: Yeny Dyah Cahyaningrum, Umatul Khoiriyah, Tien Budi Febriani

Institute: Medical Education, Indonesia

ABSTRACT:

Background: Clinical reasoning is a doctor's ability to perform professional management in order to treat patient's health problem. Clinical reasoning should be introduced and evaluated during its learning process. In clinical phase, some assessment was done to evaluate student's clinical reasoning. Learning is hoped to improve student's clinical competence.

Summary of Work: This observational analytic study was contributed by 32 clinical students in Pediatric Rounds. The clinical reasoning ability was measured using a valid and reliable Script Accordance Test. Study was done by analyzing some variables that was performed in the Pediatric

Rounds. Data analysis was done using Logistic Regression test.

Result: The mean of SCT was 29,8, and the mean of MCQ was 60. Statistical multivariate analysis using logistic regression test showed that Mini CEX results had the most impact on SCT. ($p=0,032$; RP: 2,083; IK: 1,046-13,348).

Discussion: SCT is an assessment that can be used to assess students' clinical reasoning. Assessment that has the best impact with SCT is mini clinical evaluation exercise (Mini CEX). Other assessments that have a lower impact are things that can complement the students' assessment in clinical education.

Conclusion: Mini CEXs score has the most impact on student's clinical reasoning in clinical students of pediatric rounds during research period.

Take Home Message: Assessment of students' clinical reasoning ability in clinical education should be a direct assessment to the patient. SCT that assess diagnostic ability, investigation, and therapy are written exams that have high impact to direct assessment. Mini CEX is one of assessment that conducted in clinical education.

Title: 360-degree evaluation for clinical performance assessment in medical students: Does it work for all?

Authors: Wasana Hongkan, James Tisyakorn, Keeratiya Kanjanauthaisiri

Institute: Collaborative Project to Increase Production of Rural Doctor, Thailand

ABSTRACT:

Background: 360-degree evaluation for medical student's workplace-based assessment help to get information from different of points. But we don't know who should assess each domain of clinical performance from the different point of views? Then we designed this study to evaluate the correlation between each assessor for 360-degree evaluation.

Summary of Work: In the academic year 2016, forty fourth-year medical students at Chonburi Medical Education Center were divided each 20 students into Medicine and Pediatric ward. After 4 weeks of attending in each ward, all students have received an assessment by the longitudinal

observation in clinical setting form by Chulalongkorn University that consists of the clinical domain and generic domain assessment. The assessors for 360-degree evaluation were ward staffs, staff advisors, residents, nurses, peers, and self. Pearson correlation was used to evaluate the correlation between each assessor and statistic significance was $p<0.05$.

Results: In the Pediatric ward, there was the positive correlation in clinical domain assessment between staff advisors and peers and there was the negative correlation in generic domain assessment (time management, human relationship) between ward staffs and self. In the Medicine ward, there was the positive correlation in clinical domain assessment between ward staffs and residents and generic domain assessment (teamwork) between peers and nurses.

Discussion: Peer seems to be the effective assessor in 360-degree evaluation because they can reflect the real situation of each student's work. Self had potential to give high score. In pediatric ward, staff advisor had opportunity to feedback about clinical domain to individual students. Nurse will help to assess in some generic domain.

Conclusions: 360-degree evaluation is the effective tool for workplace-based assessment for medical students but assessors should assess suitable domains for themselves.

Take Home Messages: The limitation of assessment all domains in assessment form of each assessor should be considered.

Title: Awarding Outcome-Based Continuing Education (CE) Credit

Author: Kathy Chappell

Institute: American Nurses Credentialing Center , United States

ABSTRACT:

Background: The American Nurses Credentialing Center piloted an innovative method of awarding CE credit to nurses that incorporates performance/quality improvement expectations into learning experiences to positively impact nursing practice, patient, and/or systems outcomes. The five-level outcome-based model is independent of time, and credit is awarded when

learners demonstrate achievement of pre-determined outcome measures.

Summary: The outcome-based CE model is designed to integrate a learner/team-directed educational approach that application of knowledge and skills, demonstration of knowledge and skills in an educational setting, integration of knowledge and skills into practice, and impact on practice, patient and/or system outcomes. Professional practice gaps serve as the guide for determining desired outcomes of each learning experience.

Results: Overall, those planning educational activities were pleased with the option of awarding CE credit without time as a parameter, though some expressed an increased workload when initially developing education. Learners expressed support for the opportunity to earn credit for workplace activities that are often not incorporated into traditional CE offerings.

Discussion: Each pilot organization developed its own educational activities and collected qualitative and quantitative evaluation feedback from learners. Feedback was used to better understand how awarding outcome-based CE credit may impact the educational experience. ANCC certified nurses were able to use credit awarded towards ANCC certification renewal requirements, and as determined by individual boards of nursing and health care organizations that require documentation of continuing professional development activities.

Conclusions: The initial pilot was deemed successful and is being expanded beyond the pilot organizations. Lessons learned have been shared with health care educators in medicine and pharmacy.

Take Home Message: Outcome-based CE credit is a viable option of awarding credit to health care professions.

Title: Evaluation of a strategy for implementing competency based medical education in specialist training in anaesthesia in Ireland

Authors: Josephine Boland, Eilis Condon, Patricija Ecimovic, Camillus Power

Institute:

ABSTRACT:

Background: The College of Anaesthetists of Ireland has adopted Entrustable Professional Activities with a new set of work based assessment tools. This represents a significant change in culture and practice, requiring consultants to provide trainees with qualitative feedback in the context of EPAs, including indicating the level of supervision required.

Summary of Work: A cascade model of training was deployed, with EPA consultant tutors supporting colleagues and trainees in their hospitals. A bespoke mobile app was developed for completing Feedback Reports. Digital resources were produced to support the process. Tutors, consultants and trainees were surveyed to determine the effectiveness of different elements of the strategy.

Summary of Results: The finding revealed benefits and limitations of the model of dissemination and training. Resulting enhancements to the app improved the utility of the technology and supported data analysis. Feedback on use of the resources informed their development, to encourage more active and reflective engagement. Clinicians' interpretations of supervision levels suggested areas worthy of further research.

Discussion: In implementing EPAs and Feedback Reports we adopted a strategy which combined articulating the rationale with providing faculty development, supportive resources and enabling technology. It centred on changing traditional attitudes to the role of assessment and on the importance of trust in the decision making process in every day clinical practice.

Conclusions: EPAs provide a promising framework for developing a competency based programme and for designing a system of work based assessment. On-going monitoring and evaluation is essential. Promoting and managing change requires a multi-faceted and responsive approach that responds to the needs and motivations of diverse participants.

Take Home Messages: The adage that "culture eats strategy for breakfast" highlights the inherent challenge, but also suggests the focus which is required when implementing competency based

training within complex and demanding educational and clinical environments.

Title: Usability of a generic electronic platform for workplace-based assessment - Responso

Authors: Matthias Hepprich, Sabine Berger, Daniel Kohler, Gianmarco Balestra

Institute: University Hospital Basel Division of Endocrinology, Diabetology and Metabolism, Switzerland

ABSTRACT:

Background: Workplace-based assessments (WBPA) serve as tools for feedback-giving to optimize the attainment and quality of medical competencies and have been introduced in Switzerland on a paper-based format for postgraduate specialist-training. However, numerous limitations such as time consumption, low familiarity and guidance make the effective and efficient use of WBPA difficult.

Summary of Work: With Responso, we developed an intuitively-to-use electronic app for iOS addressing the above mentioned criticism and providing not only structure and guidance for the execution with the help of operationalized custom-made checklists and synchronization of trainer's and trainee's evaluation, but also allows for archiving, retrieval, analysis and reporting of WBPA.

Results: We evaluated the usability of the newly developed app with an online questionnaire presented to professionals in medical education and postgraduate residents. Data show a high acceptance of the app.

Discussion: The beta version of the app may be a valuable tool for evaluations of trainees by serving as an easy-to-use basis for feedback giving in postgraduate training.

Conclusion: With Responso, we expect an improved applicability and acceptance in everyday clinical practice by a simplified assessment process, reduced administrative effort, and guidance on differentiated feedback.

Take Home Message: Workplace-based assessments in postgraduate medical training may be facilitated and improved by the use of Responso.

Title: Initiating CEPAER adoption for Improving System Based Practice among New Residents through TRUST-P4R

Authors: Rachmad Sarwo Bekt, Nurrahma Wahyu Fitriani, I Wayan Arsana, Eko Arisetijono, Syaifullah Asmiragani

Institute: Brawijaya University, Indonesia

ABSTRACT:

Residency program in Indonesia were varied in admission selection, delivery and clinical teaching strategy to undergraduate medical student. This condition contributed to the difficulties for teaching hospital to expect trustful standardized care to patient. The Academic-Health-System vision of Faculty of Medicine Universitas Brawijaya (FMUB) and intensive discourse conversation among hospital stakeholder enable the adoption and adaptation of Core-Entrustable-Professional-Activity-for Entering-Resident (CEPAER) of ACGME for all entering resident to cater the problem solving strategy.

Program called TRUST-ieCoTER (Training Resident as Teacher – Intensive Competency Training for Entering Resident) has been initiated to create common base line competency among new incoming residents for all discipline as well as improving supervision ability to teach medical student. Programmatic evaluation was planned and done to the program and the results were periodically shared to the stakeholder. The data collection of achievement of resident in clinical and teaching ability, satisfactory of the doer & the user of resident were gathered in parallel with program modules and programmatic assessment & feedback sessions.

Residents felt satisfy and confident with the result of assessment on their performance. Medical students perceived program has been improving the residents' supervision skills. The resident performance in formative workplace-based assessments & OSCE in program have been satisfying the hospital Authority and raised positive assurance to the improvement of care to the patient.

Provision for Improving Patient Safety by incorporating CEPAER idea has been a thrusting strategy to improve the basic competency to

provide quality of care by resident in teaching hospital. Continuous program evaluation result communication were the key behind the successful approval of the program among all residency Authority.

Our experience of communicating the result of programmatic evaluation in new program depicted the best practice of managing new innovative strategies in improving the quality of teaching and care of resident in teaching hospital.

Title: Mini-clinical evaluation exercise (mini-CEX) for intern's assessment

Authors: Saule Maukayeva, Anargul Kuanysheva, Gulnar Nuralinova, Nazym Kudaibergenova, Allmira Akhmetova,

Institute: Semey State Medical University, Kazakhstan

ABSTRACT:

Background: In Semey State Medical University mini clinical exam is used as assessment of practical skills of interns. **Summary of Work:** This is analysis of efficiency of mini-clinical evaluation exercise. Methods are psychometric assessment of interviewing skills, physical examination, professionalism, clinical judgment, counseling, organization and efficiency, and overall competence. We analyzed feed back of interns and teachers. 60 students and 40 experts were surveyed.

Results: Interns were assessed by 4 point scale. Average rating of interviewing skills was 3, 45, physical examination – 3, 13, professionalism – 3,86, clinical judgment – 3,35, counseling – 3,75, organization and efficiency – 3,71, and overall competence – 3,54. Satisfaction of students and experts were 3, 67 and 3, 78 accordingly. Analysis of intern's answers revealed that mini-CEX helps to develop competencies as “knowledge” in 75, 0%; “practical skills” – 91, 7%; “clinical thinking” – 78,3%; “communication skills” – 83,3%, “nothing competencies” - 8,3%, “difficult to answer” – 13,3%. 88, 3% of the respondents are interested by this technology of teaching, 6, 7% are not interested, 5% - do not know. The average estimation score was 3, 53 to 4 point scale. Experts marked that mini-CEX helps to develop next

competencies: “knowledge” in 86, 7%; “practical skills” – 93, 3%; “clinical thinking” – 91, 7%; “communication skills” – 95%, “nothing competencies” – 3, 3%, “difficult to answer” – 1,7%. 91, 7% of experts liked this tool, 3,3% of teachers had difficulty in answering, 5% of respondents didn't like. Experts put the overage mark of this technology – 3, 72 to 4 point scale.

Discussion: Students received the lowest ratings in the physical examination and the highest ratings in professionalism. Students and experts were satisfied with this assessment and marked development of competencies as knowledge; practical skills; clinical thinking, communication skills.

Conclusion: Feed back allows improving of practical skills. This form of assessment is optimal for teaching of clinical disciplines

Title: Faculty Development: DOPS as Workplace-Based Assessment

Authors: Shahid Hassan, Simranjeet Judge

Institute: International Medical University, Malaysia

ABSTRACT:

Background: In order to achieve the desired performance of graduates a number of traditional evaluation exercises have been practiced to assess their competence. Many of these assessments are done in a controlled environment and mostly reflect on tests of competence than performance. Mini-CEX or DOPS are the real performance-based assessment of clinical skills.

Summary of Work: Increased opportunity for observation and just-in-time feedback from the superiors produce positive impact and provides trainees with formative assessment to monitor learning objectives. To determine acceptability and feasibility of DOPS as clinical skills a study was conducted. 25 trainees were assessed for DOPS by 8 supervisors in this 12-weeks pilot study.

Results: Faculty development and trainees orientation in DOPS were found satisfactory for its acceptance and feasible for its practice. Trainees were mostly assessed in outpatient clinical setting. Majority reported higher rating of satisfaction by assessors and trainees. Among clinical skills higher

rating was received in procedural skills performed by the senior trainees.

Discussion: Implementation of assessment strategies with DOPS needs to develop institution's clear policy for WPBA. However it needs to develop user friendly rating form, checklist, elaboration of clinical competence and its attributes and procedural guidelines for practice. A precise role of these tools in the assessment of postgraduate program must be established before practicing them to evaluate and monitor trainee's progress.

Conclusion: DOPS was found feasible for practice of formative assessment of trainees in postgraduate program in medical education. It was well accepted by the trainees to help monitor their quality of procedural skills as self-directed learning.

Take Home Message: DOPS is a satisfactory assessment tool for its acceptance, feasibility and practice in postgraduate medical education program especially in formative assessment. A faculty development program for faculty members and trainees is however necessary to practice DOPS.

Title: Videofeedback recording of real consultations using problem-based interview (PBI) with medical residents – development and evaluation of the impact of training residents on communication skills in a primary care program

Authors: Marcela Dohms, IFLCTiberio, CF Collares
Institute: UFPR, Brazil

ABSTRACT:

Background: Training program with group videofeedback sessions of real pre-recorded consultations using problem-based interview (PBI) can be an effective method to improve communication skills. However, reviews have not found ideal instruments to measure the residents' medical performance.

Summary: We conducted a pre/post study with a control group to assess how the training program influenced the medical resident's communication skills. 61 medical residents performed video-recorded clinical examinations with simulated patients, before and after intervention. Two raters blind assessed the videotapes and scored skills items in about 200 videos. The participants also

answered quantitative and qualitative questionnaires. The data analysis was conducted by using t test and ANOVA and to qualitative analysis using the Braun and Clarke framework for thematic analysis.

Results: The quantitative instruments used showed significant scores increased ($p < 0,05$ and Cohen $d > 0,3$) in the intervention group, mainly in listening, explaining, sharing decision and supporting the patient. The qualitative analysis showed important changes in the clinical practice, as improvement of non-verbal communication, more self-confidence, and the incorporation of reflective practices and devising of new communication strategies.

Discussion: The main impact of the training in the residents' medical practice was related to a better patient centered approach. The study did not find instruments that completely answered the assessment necessities about training in clinical communication.

Conclusion: The videofeedback sessions of real consultations with feedback in small groups showed positive results and it should be more disseminated in primary care programs. The quantitative assessment instruments revealed to be insufficient to measure all the changes reported by the residents in their practice in the qualitative study.

Take Home Message: The qualitative analysis disclosed more information about the communication skills impact than the quantitative analysis. It is necessary more researches about assessment tools, mainly with qualitative analysis.

Title: The assessment of Pediatric Residents written Handover in ACGME-I program, Qatar

Authors: Amira Mustafa, Ahmed El Makki, Najla Ba Sarahil, Bassil Leghrouz, Manasik Hassan

Institute: Hamad Medical Corporation, Qatar

ABSTRACT:

Background: Physicians' written handover is a framework that facilitates proper patients' handoff to the receiving team. It provides a comprehensive endorsement that aims towards reducing the potential harms on inpatients secondary to miscommunication. Our aim is to study the current

practice of written inpatient handover among Pediatric residents.

Summary of the Work: An observational study was conducted in Pediatric Department of Hamad General Hospital by chief residents. An observational tool was constructed according to 2016 AAP policy statement for standards of written handovers. It included 15 elements which were screened in the written handoffs used by Pediatric residents for patient endorsements.

Summary of Results: A total of 29 written handovers were screened. The average rate of completion of the 15 elements was 60%. None of the endorsements had included allergies, recent vital signs/ pain control, and activity level / risk of fall. Only 3% of endorsements have included the code status.

Discussion: None of the Residents' written handovers were 100% compliant to the elements described in the AAP handover policy, 7 out of the 15 elements were included in more than 95% of the handover. The remaining deficient elements can have potential implications on patient care and safety.

Conclusions: Our study have identified the deficiency gap for 15 elements of the new 2016 AAP policy for written handover in our institution. Formal training with emphasis on the missing elements will increase the efficacy of patients' endorsement and may decrease potential harms from miscommunication due to inadequate handoffs.

Take Home Messages: Standardization of patients' written handover system will promote effective communication, which will reflect on patient safety and better patient care across teams.

Title: Faculty development as part of a comprehensive quality assurance protocol significantly improves multiple-choice item-writing quality

Authors: Juan Montt, Cesar Orsini, Andrea Ormeño Jorge Tricio

Institute: University of the Andes, Chile

ABSTRACT:

Background: The quality of assessment items is important to ensure reliable decisions are taken.

However, it is generally known that assessment items written by faculty without training are lacking in quality (Naeem, van der Vleuten; 2012), and that this can affect tests' reliability and validity (Downing, 2005).

This study aimed at determining the effectiveness of a faculty development programme on MCQ item writing as part of a dental school wider quality assurance protocol. This included several workshops, a detailed item construction and blueprint guide, complemented with a personalised guidance to improve items, before and after the tests.

Summary of Work: The Education Directorate delivered several four-hour workshops during the 2015-2016 academic year on assessment principles and how to write high quality MCQ items in various guises. A number of 138 (81%) faculty attended at least one workshop.

A structured checklist (Naeem, van der Vleuten; 2012) with 21 parameters was used to assess every item quality from 54 MCQ tests from different courses, before (27 tests in 2014) and after (the same 27 test in 2016) the quality assurance protocol was introduced. The study included a total of 2955 items.

Results & Discussion: Mean item quality score (scale 1-10) in 2015 was 6.86 (sd=1.3) while in 2016 was 8.90 (sd=0.9) ($p < 0.0001$). Mean students' scores decreased slightly from 64% in 2014 to 62% in 2016. The percentage of items with a good discrimination index (≥ 0.30) rose from 30% in 2015 to 32% in 2016, while Cronbach alpha reliability increased a 23% from 2015 to 2016.

Conclusions: Combining a faculty development programme on MCQ item writing together with an item construction and blueprint guide, and a formative guidance can produce a significant improvement in MCQ item quality.

Take Home Message: Investing in faculty development programmes on MCQ item writing is worth the effort.

Title: Quality assurance of multiple-choice question (MCQ)-based exams: Supporting defensible decision-making based on item statistics

Authors: Valerie Dory, Kate Allan, Leora Birnbaum, Stuart Lubarsky, Joyce Pickering, Meredith Young
Institute: McGill University, Canada

ABSTRACT:

Background: One means of assuring the quality of multiple-choice question exams is the use of item statistics to flag problematic items and consider whether to modify exam scoring, and to revise the items for future use. The application of existing guidelines remains challenging for instructors, and is likely inconsistent.

Summary of Work: Drawing from current literature, the Student Assessment Subcommittee of the McGill undergraduate medical program developed algorithms for decision-making based on item statistics. These were provided to support decision-making regarding exam scoring, and we sought users' opinions regarding the utility of these algorithms through an anonymous survey.

Results: The algorithm for difficult questions includes: prompts to investigate the potential for miskeying, for item clarity, and targets for considering the balance of item statistics with overall test difficulty, and the need for adequate content coverage. Respondents found the algorithm useful and were confident in their decisions regarding score adjustment.

Discussion/Conclusion: This was an innovation and assessment support tool designed to empower instructors to engage in critical, defensible, and consistent use of existing 'rules-of-thumb' regarding desirable item statistics and exam characteristics.

Take Home Message: Instructional support tools such as the locally developed algorithm for interpreting and decision-making of item statistics can be useful in supporting instructor decision-making. Further, the creation of evidence-informed decision support tools enables wide-scale informed judgment to support MCQ-based test quality assurance.

Title: Medical Students' Multiple Choice Questions Answering Behavior during High-Stakes Examinations

Authors: Tahra Almahmoud, Regmi Dybesh, Margaret Elzubeir, Frank Howarth, Sami Shaban
Institute: Uae University, United Arab Emirates

ABSTRACT:

Background: The primary goal of any assessment is to provide accurate feedback about students' knowledge and/or skills. Evaluating students question answering behavior may help identify weaknesses in examination technique and perhaps lead to improvements based on evidence-based educational findings.

Summary of Work: Our approach was to use electronic assessment log files to examine students' behavior during our high-stakes Final Examination, to compare the question answering behavior for low to high performing students, determine whether further reflection regarding initial answering choice improves accuracy and to identify any areas where improvements can be made.

Methods: An Assessment Management System that generates comprehensive log files was used to analyze the results of 228 students for four high-stakes undergraduate medical degree graduating examinations. Descriptive statistics and standard deviation of answered question results as well as t-tests, ANOVA and correlation coefficients were calculated using SPSS.

Results: Male and female students spent the same amount of time on questions however, females performed significantly better. There were significant differences in average time spent on questions answered correctly versus incorrectly and in the amount of time examinees spent on questions per cognitive level. The percentage of questions that had answers changed by examinees was 13.65% of which 5.82% changed from incorrect to correct and 2.83% changed from correct to incorrect.

Discussion: This may suggest that female students can better modulate their moment by moment self-assessment and act more cautiously when in danger of making an incorrect response compared to male. Consistent with other findings, students

spend significantly more time on questions answered incorrectly. Students are twice as likely to change an answer from incorrect to correct as compared to changing it from correct to incorrect.

Conclusion: Students spent significantly more time on questions that were answered incorrectly. Reviewing and re-answering questions was beneficial to student marks.

Title: Comparative study of two summative examinations vs. a single summative examination in nursing students: Experience from Thammasat University

Authors: Panadda Rojpibulstit, Nuchanart Suealak, Kadsanee Moolpo

Institute: Thammasat University, Thailand

ABSTRACT:

Generally, the assessment of nursing students in conventional courses at the Faculty of Medicine, Thammasat University was designed around two summative examinations (a midterm exam and a final exam). In 2016, a single final summative examination was replaced the old assessment. Is this assessment appropriate for nursing students or not?

In academic year 2015, multiple choice question (MCQ) examinations were set as two summative examinations (midterm exam and final exam) in the course Basic Pharmacology for the second year nursing students. However, only one summative examination (final exam) was set in academic year 2016. Data were analyzed using unpaired t-test.

Percentage of students who were assessed using one summative examination achieved above one-half of total exam scores had higher than two summative examinations (51% vs. 54%). However, students who were assessed using one summative examination had nonsignificant lower exam scores than two summative examinations (50% vs. 52%, $p = 0.248$).

Although a simple management of one summative examination was revealed a higher number of students achieving above one-half of total summative exam scores, however, average exam scores tended to lower than two summative examinations. It is possible due to the study program of health sciences students i.e. the

nursing program.

The decrease in the number of summative examinations tends to increase the percentage of nursing students to achieving above one-half of total summative exam scores but lower average summative exam scores. Therefore, the number of assessment should be considered appropriate for nursing students.

As this research is a preliminary study, further evaluation of the assessment in the next year and also in the different study programs of health sciences students and other courses should be carried out in the future to understand why this phenomenon occurs.

Title: Correlation of Script Concordance Test (SCT) with other assessment modalities in a graduate-entry medical course

Authors: Michael Siu Hong Wan, Elina Tor, Nicky Hudson

Institute: University of Notre Dame, Australia

ABSTRACT:

Background: SCT has been used to assess clinical reasoning (CR) in medicine. A clinical scenario is presented, additional pieces of information are given and candidates are asked to decide whether this information increases or decreases the probability/appropriateness of the diagnosis/management. Its correlation with other modalities of assessment is not well studied.

Summary of Work: In 2016, a set of 40 SCT questions was incorporated into the summative examination for final year medical students. The reliability and correlation between SCT scores and scores from MCQ, short-answer questions (SAQ), objective structured clinical examination (OSCE) were analysed to investigate the evidence of criterion validity of SCT scores.

Summary of Results: The Cronbach's Alpha internal consistency reliability for the SCT scores (123 students) was 0.67. The bivariate correlation (r) between SCT scores and scores for MCQ, SAQ, OSCE (total), OSCE (non-CR) and OSCE (CR) were 0.21*, 0.09, 0.23*, 0.14 and 0.25* respectively (* $p < 0.01$).

Discussion: SCT scores are moderate and significantly correlated with MCQ, OSCE total and

OSCE CR scores. SCT seems to be assessing distinct aspects of CR, different to that assessed by MCQ/OSCE in the summative examination. Limitations include the relatively small number of SCT items and data from a single cohort.

Conclusion: SCT could be a useful and authentic modality to assess CR in medical education. It seems to be assessing a different aspect of CR compared to usual MCQ and OSCE. Further analysis of data from other cohorts' would be valuable in testing the hypothesis on criterion validity of SCT scores.

Take Home Messages: Research on all aspects of validity evidence of SCT scores is crucial for this innovative assessment modality to be more widely accepted as important part of assessment toolbox in medical education.

Title: Do pre-clinical OSCEs predict acceptable performance of medical students in clinical placement?

Authors: Seiichi Ishii, Junya Iwazaki, Yutaka Kagaya
Institute: Tohoku University Graduate School of Medicine, Japan

ABSTRACT:

Background: Pre-clinical OSCEs have been adopted by all 80 Japanese medical schools since 2005 to assess students' basic clinical skills and attitudes that are considered essential to seeing patients. However, few data have been accumulated to confirm if OSCEs predict acceptable performance of medical students in clinical placement (CP).

Summary of Work: We compared the results of pre-clinical OSCEs in Year-4 students and the results of student assessment in CPs by attending physicians in Year-5 students over the past ten years at our medical school. The OSCEs were comprised of seven short stations including history taking, physical examinations and basic procedures.

Summary of Results: Of the 1,055 Y4 students who took the OSCEs, eight (0.76%) failed the OSCEs and took it again the next year. All of them eventually moved up to 5th year and completed CPs. Of the 1,090 Y5 students, six (0.55%) were graded 'unsatisfactory' at the end of the one-year CPs.

Discussion: Failures of OSCEs obtained low scores

in the subsequent CPs, but they passed CPs. Failures of CPs had passed the OSCEs on their first attempt and obtained very low scores in CPs. They failed the CPs not by the scores but by unprofessional behavior, for example, repeated tardiness or misconduct.

Conclusions: Failing in pre-clinical OSCEs seems to be a predictor of low performance in subsequent CPs by medical students. However, failing in CPs is not an indication of low performance. Instead, it signifies unprofessional behavior which is not predictable by the results of pre-clinical OSCEs.

Take Home Messages: Pre-clinical OSCEs might predict low performance in CPs. However, they do not predict future unprofessional behavior by medical students.

Title: Global Rating in Objective Structured Clinical Examination, Comparing Between Medical Teachers And Simulated Patients

Authors: Wallee Satayasai, Boonmee Sathapathayawongs, Woraphol Wilam

Institute:

ABSTRACT:

Background: Objective structured clinical examination (OSCE) has been used for competency assessment of medical students in National Licensing Examination (NLE) in Thailand for 8 years. Assessors are medical teachers while some countries also use simulated patients (SP). We want to know reliability of SP in assessing medical students.

Summary of Work: We analyzed the data from three cycles of OSCE in the academic year 2016. The 5-point rating scale was used for global rating which was scored by medical teachers and SP in each station. Both two groups were blinded for the total scores and minimal passing level. Correlation between global rating and total score was assessed by Pearson correlation coefficient.

Results: The data obtained from 507 medical teachers and 659 SP who assessed 2,719 medical students in 37 stations of OSCE. In medical teacher group, correlation coefficients (r) between global rating and the total scores were very high ($r > .81$) in 1 station, high ($r = .61-.80$) in 20 stations, moderate ($r = .41-.60$) in 15 stations, and low ($r = .20-.41$) in 1

station. In SP, correlation coefficients between global rating and the total scores were moderate (.41-.60) in 8 station, low (.20-.41) in 17 stations, very low (<.20) in 12 stations.

Discussion: Most global rating by medical teachers had good correlation with total scores, similar to our study last year; but most global rating by SP had poor correlation with total scores. We think SP may focus only on personality and fluency of students because they do not have knowledge in medical skills.

Conclusions: Most global rating by SP are poor correlated with the total scores in OSCE, comparing with medical teachers.

Take Home Message: SP may be able to assess medical students in some categories of competency. The appropriate competencies should be selected for the assessment by SP in further study.

Title: Reliability Analysis of the Objective Structured Clinical Examination with Generalizability Theory

Authors: Marindra Firmansayah, Winny Setyonugroho

Institute: Islamic Malang University, Indonesia

ABSTRACT:

Background

The Objective Structured Clinical Examination (OSCE) is the common method to assess the clinical skills competence in undergraduate medical school in Indonesia. This study have shown evidence of validity and reliability. So far, reliability assessment of OSCE using Generalizability Theory (G-Theory) is not common in Indonesia. The aims of this study were to analyze the OSCE reliability in the end of the fourth year on medical students using G-Theory.

Methods: An observational cross-sectional study was conducted at Medical Faculty UNISMA in Indonesia. An OSCE with 79 fourth-year medical students in UNISMA was conducted in the fourth year as a summative end of career final examination. There were 12 station of examination. The examination was conducted for 7 days, with 2 sessions per day (morning and afternoon). Students were assessed in two stations

for the first day until the seventh day except in fourth day and sixth day only one station. Each station represents one topic competency. The length of the station were 15 minutes. EduG was used to run G-Theory analysis.

Results: The reliability of the OSCE is $G=0.45$.

Discussion: From the G table shows that the source of error was the interaction between the students and station. There is no source of error resulted from 'days' facet. From the school record shows that all the examiner has been trained and being rater more than once. There were no first-timer rater.

Conclusion: The reliability of this OSCE is considered low. One of the most possible sources of error is poor design of the rubrics. Using GT to analyze shows us that this method is able to pinpoint the source of error.

Take Home message

The Improvement of the assessment quality of OSCE rubrics in the future could be done in better oriented for the quality assurance.

Title: Is gender as an interview bias in multiple mini-interviews?

Author: Pairoj Boonluksuri

Institute: Hatyai Hospital, Thailand

ABSTRACT:

Background: Multiple mini interviews (MMI) is a tool to select the student for professional growth, specialty distribution, and patient care. It may affect diversity in medical student personalities. However, gender particular female may be a bias of interview. Objective: To determine the association between gender and MMI scoring

Summary of Work: All of 111 students with 70 female (63%) were reviewed in MMI during 2014-2016, which consisted of social issues (8-stations), medical issues (5-stations). Passing scores were the summation of MMI, learning skills, and prerequisite passing the entrance exam. The relation between gender, passing rate, and MMI was analyzed.

Summary of Results: Overall M: F ratio of passing rate was 0.9(82%vs88.6%, p -value=0.291) which not different in 2014-2016 except 2015 (92.8vs81.8%, 96.2vs73.7%, 76vs90%

respectively). No scoring differences between MMI and gender were found except professionalisms which male predominance. However, a female had scores higher in listening skills but male in Thai language skills with statistical significance.

Discussion: Even though female medical students increase in trend, gender is not consistently associated with MMI including aptitude tests. Rating leniency may be associated with personality and gender of interviews, but the effect is small. MMI should be used as a part of student selection and weighed as composite scores.

Conclusions: Gender is not consistently associated with MMI for selection. A variety of tests should be used including cognitive and non-cognitive domain to select highly qualified medical students.

Take Home Messages: MMI is a part of admission process providing an efficient means to discriminate applicants' performances who were all academically qualified. Gender is not an interview bias.

Title: Validation of Situational Judgement Test as One of the Instrument in Student Selection in Cardiology and Vascular Medicine Study Program in Faculty of Medicine Universitas Indonesia

Authors: Celly Anantaria, Diantha Soemantri, Amiliana Soesanto, Renan Sukmawan

Institute: Universitas Indonesia, National Cardiovascular Center Harapan Kita, Indonesia

ABSTRACT:

Background:

The non-academic attributes are important to be assessed in student selection process. Situational judgement tests (SJT) provide reliable method for measuring these issues. No previous study has explored the use of SJT in postgraduate training selection system in any medical school in Indonesia.

This study is to validate the SJTs that measure the non-academic attributes in candidates of Postgraduate Training in Cardiology and Vascular Medicine Department (CVMD), Faculty of Medicine, Universitas Indonesia (FMUI).

Methods: This cross sectional study was carried out in March-May 2017 in CVMD, FMUI. 60 SJT scenarios in the Department's item bank were

analyzed by a team of experts. The attributes targeted were professionalism, effective communication, and leadership. Items with good expert concordance were then piloted on all cardiology residents (N=90). Construct validity were analyzed.

Results: An expert review released 50 SJT scenarios out of 60 to be piloted. SJT scores were normally distributed. The difficulty index was 56-88%. The mean score on professionalism was 716.89+34.18 (maximal targeted score was 968); the mean score on effective communication was 302.24+15.41 (maximal targeted score was 408); the mean score on leadership was 644.82+30.71 (maximal targeted score was 868). Male's outperformed females on the mean SJT score (720.57+35.38 vs 711.62+32.14, $p > 0.05$). Neither residents' age nor their level of training showed significant differences on SJT scores. 17 out of 50 piloted SJT scenarios had no significant correlation, and thus considered non valid; the rest of the scenarios (66%) were valid with Cronbach's Alpha of .811.

Conclusion: 33 out of 50 SJT scenarios were produced, valid with good level of reliability. No statistically significant group differences in performance on SJT based on gender, age, and level of cardiology training indicated that SJT was a fair tool to be used in Postgraduate Training in CVMD FMUI student selection.

Title: Failure is success if we learn about it: the most common weaknesses in medical students' research reports

Authors: Annika Wallberg, Riitta Moller

Institute: Karolinska Institutet, Sweden

ABSTRACT:

Background: Numerous medical schools have introduced courses comprising authentic research to provide students with skills required for future health care. Students' independent research projects (also called scholarly projects) are often assessed via a research report. The aim of this study was to evaluate the most common weaknesses in failed students' reports.

Summary of Work: We investigated the rubric scores used in the grading of the students' research reports and analyzed the reports of those students

who failed the final assessment in 2016. The rubrics correspond to the Intended Learning Outcomes (ILO) of the project course. Totally 20 reports were scrutinized retrospectively.

Summary of Results: The majority (14 of 20) of the reports failed in six criteria for Results presentation, e.g. the running text refers to figures/tables; measurement units, number of observations and p-values are clearly stated; the headings/captions reflect the contents of tables/figures, and tables/figures can be understood independently of the main text.

Discussion: Research report writing as such is challenging for students. Writing Results section is a process in which students have to synthesize order, concentrate and present data in a logical way. This process is also an act of communication that students are usually not trained for.

Conclusions: Formal training in scientific communication, especially in presentation of data in clear and objective manner is needed. A detailed guide as well as good examples of Results presentations that students may study in advance may be helpful. We recommend feedback on this part at earlier stages during the project work.

Take Home Messages: Make the Results concise but informative!

Title: The Contrasting Policies on Deferred Examinations for Queensland Medical Students and Post-Graduate Trainee Specialists

Author: Gordon Wright

Institute: Bond University, Australia

ABSTRACT:

A web-based search for Queensland Universities and specialist post-graduate medical colleges in Australasia was carried out to review the policies relating to deferred examinations. While all Queensland universities offered deferred examinations, there was considerable variation in policies relating to granting of deferred assessments. Deferred examination policy for Queensland medical faculties is largely determined by the university. This creates considerable difficulty in the preparation, organisation, and administration of these deferred assessments, often for a very small number of students.

None of the specialist colleges, however, allowed deferred examinations. This may not provide an appropriate framework for future specialist training where timely self-directed learning in an intense work environment is followed by a non-liberal policy relating to deferred assessment.

Title: Investigating the Effect of Feedback to MCQ Designers in Promoting the Quality of tests

Authors: Elahe Mohamadi, Somayeh Akbari, Arezou Farajpour

Institute: Tehran University of Medical Sciences, Tehran, Iran

ABSTRACT:

Background: MCQ tests are the most commonly used tests in medical education. Standard tests lead to learning motivation and ensure that students achieve the desired level of knowledge and capability. The purpose of this cross-sectional study was to evaluate the quality of the questions of summative exams and the effect of feedback on improving the quality of the questions.

Summary of Work: In this Cross-sectional study the questions were presented by 40 faculty members of internal, pediatric, neurological, and pediatric departments were examined based on difficulty index and qualitative criteria's according Millman checklist, in the first stage and then feedback provided to the professors. The next test questions were also analyzed in the same way. Data were analyzed using SPSS and Excel software.

Summary of Results: The percentage of difficult, appropriate and easy questions was 15.9%, 38.9% and 45.1% respectively. There was no statistically significant difference between mean of difficulty index, work experience and gender. There was a significant difference between them and faculty's specialty. Also there was a significant difference between the two groups before and after feedback.

Conclusions: Due to the importance of quality of exams in assessing students and determining the level of learning, the professors must pay particular attention to the design principles and the difficulty of the questions. Due to the fact that after providing feedback, the questions were designed appropriately, by holding regular workshops and

regular feedback, we should design appropriate questions in terms of qualitative and quantitative criteria.

Take Home Message: Regular psychometric analysis and feedback to question designers are effective in improving the quality of the tests and empowering faculty members.

Key Words: psychometric analysis, multiple choice questions, Millman Checklist.

Title: Has a previous formative exam influence on a summative exam?

Authors: Henning Schenkat, Johann Arias

Institute: RWTH Aachen University, Germany

ABSTRACT:

Background: In the reformed curriculum of the Medical Faculty in Aachen the first state exam takes place at the end of the third year. It consists of an OSPE and MCQ-Exam. The MCQ part comprises 120 questions with five distractors. These questions are reviewed beforehand by a committee. Is there an effect, if there is a previous formative exam a few weeks before the summative exam?

Summary of Work: Two to three weeks before the summative exam we offered the students the possibility to absolve a formative exam and an evaluation. We compared the performance of 200 students in the voluntary formative exam and 240 students in the summative exam with an evaluation afterwards.

Summary of Results: The comparison between the exams showed no significant differences in the performance of the students. The observed differences can be explained by the timing of the exam, the quality of the questions or the tension of the students.

Discussion: Which factors of influence have the most impact of the summative performance of the students? Can a formative exam adequately simulate a state exam? Can the use of a tablet instead of paper influence the results? Had the prior formative exam an influence on the results and student's contentment?

Conclusions: In the evaluation the students confirmed, that the formative exam was helpful for the preparation of the state exam in different

categories. The qualitative questionnaires showed up new subjects that are worth to be examined in the next state exams.

Take Home Message: Think about implementing more formative exams continuously in the curriculum.

Title: The clinical education assessment in Arak University of Medical Sciences: determining the part of challenges and solutions in Medical School

Author: Zohreh Anbari

Institute: Arak University of Medical Sciences, Arak, Iran

ABSTRACT:

Background: Clinical education is considered as a critical stage of medical education that could be played an important role in clinical competency if it implements and evaluates effectively. The purpose of this study was determining challenges and providing effective solutions of clinical education in Arak medical school, Iran.

Materials and Methods: This study assessed the viewpoints of clinical educators and medical students of clinical education. The challenges were collected through the structured interview and questionnaire, including educational content, settings, facilities, faculty attributes and also methods of teaching and clinical assessment. Effective solutions were validated through the Delphi technique.

Results: Overall, students weren't satisfied of their clinical settings, facilities and formative assessment (1.4 ± 0.6). There was a significant difference between the viewpoints of the interns and the residents about methods of teaching and learning ($P < 0.05$). Structural, processes and outcomes strategies were proposed to promotion of clinical education.

Discussion: Researches has shown that there are common challenges of clinical education, including lack of variety in clinical settings, lack of physical and financial resources, lack of access to clinical educators and little opportunity for study and research on patients. Some researchers focused on teaching management skills as an effective solution.

Conclusion: This study emphasizes on the

determination of students' learning experiences based on educational goals with aspect of the future work conditions of graduates, constructive and regular feedback to students, enhancement of the motivation students and clinical educators and the use of standard patient in assessment of skills.

Key Words: Clinical Education, Medical School, Challenges, Solutions

Title: Fit for the Future: Evaluating an innovative integrated community care training post

Authors: Laura Sheldrake, Olivia Jagger, Johnny Lyon-Maris, Samantha Scallan

Institute: GP Education Unit, United Kingdom

ABSTRACT:

Background: ITPs (Integrated or Innovative Training Programmes) have been recognised as a distinct type of training post for general practice. Previous research has found them to provide an enhanced training experience. This work describes and evaluates a 'new generation' ITP post which was piloted in the New Forest, UK.

Summary of Work: The post comprised a mix of 2 days a week in GP and 3 days in community healthcare posts. The posts were evaluated using a focus group of trainees and trainers and survey, and the evaluation was conducted by two current GP trainees.

Summary of Results: The evaluation aimed to determine if the integrated structure provided a positive educational experience and if it prepared trainees for a career in general practice. Participating trainees and trainers reported that the post was helpful in developing skills and competencies related to community care, but identified some challenges.

Discussion: Three key themes were identified:

1. Perceptions of improved quality of training;
2. Feeling better prepared for a career in GP.
3. Better awareness of primary /secondary care system and interface.

Conclusions: ICCs mark a welcome return of ITPs to GP training and can offer a positive experience to trainees in developing their care knowledge and skills. The trainees undertaking this evaluation gained insight into evaluation research.

Take Home Messages: There continues to be a role

for integrated training posts in training, especially with the increasing care complexity. ITPs can add a different dimension to experience in training

Title: Laparoscopic training amongst UK senior Obstetrics and Gynaecology trainees

Authors: Zoe Rekesius, Jenan Younis

Institute: Royal Surrey County Hospital, United Kingdom

ABSTRACT:

Background: Diagnostic laparoscopy is a common procedure in Obstetrics and Gynaecology. It is a necessary competency within the specialty and a skill higher trainees ought to be able to perform independently.

Summary of Work: A telephone survey was carried out amongst higher level Obstetrics and Gynaecology trainees from the London and Kent, Surrey and Sussex deaneries. Questions included levels of confidence in performing independent diagnostic laparoscopy unassisted by a senior colleague, and access to appropriate training opportunities.

Results: The survey was open to higher Obstetrics and Gynaecology trainees. 65% of trainees reported a lack of confidence in performing diagnostic laparoscopy independently. The main reason cited for this lack of confidence was difficulty in accessing appropriate training opportunities within the workplace, commitments to service provision, and greater focus on obstetric rather than surgical competencies.

Discussion: These results highlight the need to examine the delivery of laparoscopic training within the specialty. A national survey to establish whether the issue is widespread would be of use. Looking at the methods used to teach laparoscopy within general surgery may be of benefit and extrapolated to gynaecology training.

Conclusion: A lack of confidence in performing diagnostic laparoscopy independently exists amongst higher level Obstetrics and Gynaecology trainees in the London and Kent, Surrey and Sussex deaneries.

Take Home Message: It is important that Obstetrics and Gynaecology trainees approaching the end of their training feel confident in undertaking

diagnostic laparoscopy independently and safely. Scrutinising current training methods and incorporating those used elsewhere within other specialties may be of benefit.

Title: Teach fall prevention by using simulation with 'live patient'

Authors: Siew Chen Ong, Bte Asmawi Ashirdahwani, Bin Mohd Othman Taufiq, Bin Bin Zhou, Pick Fong Chee

Institute: Tan Tock Seng Hospital, Singapore

ABSTRACT:

a. Patient fall is a preventable adverse event and always a top concern in patient safety management to meet the demand of growing complexity of today's health care. Nurse educators are challenged to design a structured learning experience that allows students to apply knowledge and skills to prevent falls while students learn.

b. The workshop employs 'live patient'-standardized patient (SP) to create a real patient-nurse interaction. It incorporates clinical scenario that similar to real clinical environment that challenge students to interact with high fall risk (HFR) patient. In a safe environment, students learn work as a team. The main learning objectives are to apply effective communication, assertiveness and confidence to provide care for HFR patient.

c. A pre-post workshop self-evaluation survey was conducted to 82 students. After the workshop, students evaluated that their learning objectives for fall prevention are being met (23%-agree, 77%-strongly agree). The survey also reported significant positive results, students agreed that they are more confident, assertive and apply effective communication to the HFR patient.

d. Being first time participating in the simulation with SP, students' awareness and confidence was enhanced. It's emphasized the application of effective communication, be assertive and escalate for help to minimize patient risk. Students also self-reported they have to think critically and engage reasoning skills during simulation and debriefing process.

e. Through active and dynamic interaction with

"live patient", students strengthen the safety awareness and develop strategies to minimize errors and learn from near misses to enhance patient safety. It provides opportunities to make sound clinical reasoning to prevent fall.

f. Simulation with standardized patient can promote patient safety that strengthen students' knowledge, skills, confidence and effective communication to reduce the potential risk and harm. Using standardized patient can challenge students to think critically and learn fall prevention in a realistic high risk situation.

Title: Perceived stress, reasons for and sources of stress among medical students at Rabigh Medical College, King Abdulaziz University, Jeddah, Saudi Arabia

Authors: Zuhair Gazzaz, Mukhtair Baig, Bader Al Alhendi

Institute: King Abdulaziz University, Jeddah, Saudi Arabia

ABSTRACT:

Background: To investigate the perceived stress level as well as the reasons for and sources of stress among medical students at Rabigh Medical College, KAU, Jeddah, Saudi Arabia.

Methods: The present study was carried out at Rabigh Medical College, KAU, Jeddah, and completed in 2015. The data was collected by an anonymous self-administered questionnaire that has three components: a list of 33 items of probable stressors, perceived stress scale, and demographic information and academics.

Results:

The response rate in our study was 86% (152/176), the mean age was 20.35 ± 1.09 , 77 (51%) were from preclinical years and 75 (49%) from clinical years. The mean PSS score among our participants was 28.5 ± 3.8 with a median of 28.0 (IQR 26.0 – 31.0) and 59.2% of participants were stressed. Similarly, the mean PSS score (32.0 ± 3.4) of students with often/always occurrence of psychosocial stressors was higher as compared to the mean PSS score (28.3 ± 3.7) of those students with less than a frequent occurrence of stressors. Moreover, those students that were more stressed had lower marks in the last exam (<80%) as compared to students

with less stress who had higher marks ($\geq 80\%$) ($P < .05$).

Performance in practicals, examinations frequency, disappointment with the class lectures, lack of personal interest in medicine, lengthy academic curriculum/syllabus, worries about the future and periodic examinations performance were rated as severe.

The logistic regression analysis showed that stress cases were linked with last exam marks [OR 1.26, 95% CI 0.64 – 2.48], number of siblings [OR 2.27, 95% CI 0.97 – 5.27], and academic stressor [OR 2.02, 95% CI 0.61 – 6.66] but no significant relationship was found.

Conclusion: There were high-stress levels among the participants of this study, and the main stressors were academic-related.

Title: Perceived educational needs concerning relationship and boundaries in a multicultural medical environment “clinical clerks' perspectives

Authors: Tahra Almahmoud, M. Jawad Hashim, Munira AlMahmoud, Margaret Elzubeir, Frank Branicki

Institute: Uae University, United Arab Emirates

ABSTRACT:

Background: The fundamentally relational nature of medical practice requires a skillful balance of professionalism issues including boundary recognition, empathy, mindful objectivity and recognition of cultural norms and values influencing acceptable professional conduct. Hence, medical professionalism is the ability to meet relationship-centered expectations required to practice medicine competently.

Summary of Work: The aim of the study was to explore the student's perceived need for education regarding professional boundaries in medical education environments.

Methods: An anonymous paper questionnaire was distributed to a total of 130 final year clinical clerks. Standard descriptive statistics were used.

Results: 84% completed the survey. Students identified the need for more curricular attention for all of topics during training and practice pertaining to boundaries and relationships (mean=6.61 \pm 1.32 on a scale of 0 to 9; and

6.66 \pm 1.27 respectively). Topics with a high ranking interest considered for additional attention comprised: mistreatment of medical students (mean7.22 \pm 1.96), coping with mistakes in clinical care (mean7.25 \pm 1.63), reporting of medical mistakes (mean7.58 \pm 1.36), and gender bias in clinical care (mean7.10 \pm 1.82). Women perceived a greater need for academic attention for all topics compared with men. Most differences between the females and males concerned the following items: responding to an impaired colleague ($p=0.000$), and a physician's social and political responsibilities ($p=0.001$).

Discussion: This work is predicated on the belief that an understanding of the perspectives of medical students with regard to professionalism and ethics education will help with development and refinement of effective ethics curricula that may foster good medical practice in better doctors.

Conclusion: Students indicated the need for education regarding relationship boundaries in the undergraduate medical ethics curriculum.

Take Home Message: it is imperative that medical trainees become sensitive to not only ethical issues relevant to patient care but also demonstrate a capacity for ethical reasoning and practice regarding physician-physician, physician-self and physician-healthcare system relationships.

Title: What Does Turkish Medical Education Literature Say On Professionalism?_ A Literature Review

Authors: Büşra Sandıklı, Perihan Torun, Ceyda Acar

Institute: Bezmialem Vakıf Üniversitesi, Türkiye

ABSTRACT:

Background: Lack of professionalism in doctors has implications for patient satisfaction and could be one of the contributing reasons to violence against doctors, which is high on the agenda in Turkey.

This study aimed to assess the medical education literature of Turkey to identify any issues in terms of professionalism education.

Summary of Work: Pubmed” ve “DergiPark” databases were searched using “medical education” as the search term in Turkish and English languages for the publications written in both languages and published in the last ten years.

Result: The search identified 137 publications on medical education, of which six were on professionalism although only four reported results from studies on awareness, involvement and perceptions of medical students in professionalism and unprofessional behaviours. Normalisation of unprofessional behaviors in medical students as a result of hidden curriculum was observed.

Discussion: In Turkey, professionalism seems to be a neglected topic in research, even though the number of publications in medical education has been increasing. The limited literature indicate problems in students and further problems should be identified and addressed. Any improvement might have positive impact on violence against doctors.

Conclusions: Paucity of publications on professionalism, especially in an environment where professionalism is needed most, is likely to be a reflection of perceived importance of the topic. The causes of this disinterest need to be revealed through both quantitative and qualitative studies.

Take Home Message: Although robust measures and policies are required to tackle the issue of violence in health care, professionalism should also receive attention. Research into awareness, perceptions and competency in professionalism of doctors and medical students should be promoted.

Title: An overview of the first year Undergraduate Medical Students Feedback on the Point of Care Ultrasound Curriculum

Authors: Vian Mohialdin, Ari Shali

Institute: McMaster University, Canada

ABSTRACT:

Background: With the technological progress of portable Ultrasound machines, there is growing demand by all health care providers to perform bedside Ultrasonography. Also known as point of care Ultrasound (POCUS), this technique is becoming extremely useful as a part of Clinical Skills/Anatomy teaching in the Undergraduate Medical field Curriculum.

Summary of Work: Undergraduate Medical school is a 3-year program. We introduced three (POCUS) sessions in the first year curriculum. Each tutorial

group has 18 students, one ultrasound machine, will spend 90 minutes with their tutor. Students will have the chance to scan their peers at least one time during the session. A questionnaire was handed to be completed by the students.

Results: Students valued their experience seeing and /or scanning each other. Students agreed that this experience had increased their basic ultrasound and scanning knowledge and believed it is appropriate to integrate and complement their Anatomy/Clinical Skills learning.

Discussion: Incorporating bedside ultrasound into undergraduate Medical education Curriculum can complement their physical examination findings, adds more safety measurement to every diagnostic/therapeutic procedure done under ultrasound guide. This leads to a reduced hospital stay, better improvement in the patient's outcome. And will

definitely change the future of the medical setting.

Conclusions: POCUS has shown to be an extremely important diagnostic and/ or therapeutic tool for different Medical specialities. The learning environment has become more interactive because students are able to practice scanning their peers as part of their experience.

Take Home Message: Interpreting ultrasound images can be a very challenging task. The introduction of bedside ultrasound training into the first year of undergraduate Medical School curriculum at McMaster University has been very successful. Students were strongly engaged and it has significantly impacted their sonogram and probe orientation knowledge.

Title: Internet users' perspective towards Facebook use by physicians and medical students

Authors: Tiyyarat Kayankit, Pornjira Pariwatcharakul

Institute: Buddhachinaraj Hospital, Thailand

ABSTRACT:

Background: Despite many studies among doctors, medical students and educators on attitudes and perception of their social media use, little is known about the public point of view.

Objective: This study aims to understand the internet users' perspectives towards doctors' and medical students' Facebook use.

Methods: This is a cross-sectional online survey

among internet users conducted from December 2015 to March 2016 to understand their perspectives towards doctors' and medical students' Facebook use. The Authors-constructed questionnaires were in Thai and included the participants' online activities, their witness to inappropriate Facebook posts by doctors or medical students in the past month, and 39 mock public Facebook post screenshots. The participants were asked to rate the appropriateness of each mock post on a 5-point-Likert scale.

Results: Among all participants (n=1,200), 63.4% had searched through Facebook profiles of physicians or medical students before and 53.7% had seen or heard of inappropriate contents. The characteristics of doctors' and medical students' Facebook posts which were rated as inappropriate or less appropriate by most participants are related to patients' privacy, including de-identified patients' data, substance use behaviours, negative criticism on patients, colleagues, hospitals or universities, and advertisement of their own private practice.

Conclusion: Doctors and medical students should be aware of the public view towards their social media posts and be mindful of what they post and the potential negative consequences because they can impact the public image of medical professions. Considering professionalism guidelines and public's perspectives may obviate the potential negative consequences of social media use.

Key Words: social media; online professionalism; medical ethics; medical student; medical professionalism

Title: "We don't know what we don't know": Junior doctor's knowledge, skill and perceptions towards prescribing when starting their job in New Zealand

Authors: Helen Clark, Yolinda Bullians, Wayne de Beer, Jules Schofield, Carol Stevenson

Institute: Waikato District Health Board, New Zealand

ABSTRACT:

Patient safety is at high risk of medication prescribing errors when new doctors start their first placement, and with every rotation. The root

cause is a lack of knowledge about practical, safe prescribing and unfamiliarity with prescribing resources that aid selection of drug doses and adjustments, impacting pharmacists and nurses.

This study utilised a mixed-methods approach. Focus groups were initially conducted with two cohorts (PGY1, PGY2), in order to gather their perceptions around their prescribing knowledge at three timepoints (medical school, first week on job, present-day). Surveys were subsequently conducted with items reflecting the themes elicited from the focus groups.

Virtually all participants indicated lack of confidence in prescribing at job start. Drug doses, interactions, and insulin prescribing was insufficiently taught in NZ universities. Medical charting was missing from the curriculum of surveyed overseas doctors. Present-day concerns included lack of specialty-specific prescribing training, dose adjustments, and special Authority for funding.

The universal consensus was that prescribing education at medical school was insufficient. This was reflected in consistent reports of apprehension about prescribing in the first weeks of employment. PGY2s felt that more experience in their role exposed their lack of knowledge more acutely; however PGY1s did not share that opinion. The Trainee Intern (TI) period at medical school is a potential area to implement formal prescribing education as part of the university curriculum. This includes practical prescribing of high risk drugs, legal requirements and formal assessments to equip junior doctors with essential employment skills as a doctor.

Junior doctors are expected to be 'work-ready' in their first days of employment. However, these doctors report an overwhelming lack of confidence in their ability to prescribe safely due to a lack of practical prescribing training, not knowing 'how to' and inability to use prescribing reference sources effectively.

Title: Knowledge of emergency management of tooth avulsion among medical students in Melaka, Malaysia

Authors: Eby Varghese, Renu Sarah Samson

Institute: Melaka-Manipal Medical College,

Malaysia

ABSTRACT:

Background: Tooth avulsion among the victims of head injury and facial trauma is quite common. Soon after the accident, most victims seek help from medical professionals. The knowledge of medical students in the emergency management of tooth avulsion is therefore very important to prevent unnecessary loss of permanent teeth. This aspect has not been studied among medical students in Malaysia.

Summary of Work: This study was designed to evaluate the knowledge, attitude and practice of emergency management of avulsed teeth among medical students in Melaka, Malaysia and the need to include dental trauma emergency management as a part of their undergraduate training. Self-administered questionnaires were distributed among medical students to gather data on their socio-demographic profile and self-assessed perceived knowledge of dental avulsion and its emergency management.

Results: Majority of the medical students (98.4%) had low knowledge and only 1.6% had moderate level of knowledge on emergency management of tooth avulsion.

Discussion: The students were familiar with the medical management of dento-facial trauma such as ruling out aspiration of teeth, control of bleeding etc. but they did not know how to handle an avulsed tooth primarily due to lack of information and training.

Conclusion: Medical students in Melaka have low knowledge regarding dental avulsion and its emergency management. Therefore, dental trauma emergency management can be recommended as a part of their undergraduate training.

Take Home Message: Introducing dental trauma emergency management as a part of their curriculum can help educate and train the students to be competent future medical professionals with sound knowledge on first-aid management of avulsed teeth. They would be able to act efficiently and effectively thereby reducing the extra-alveolar time and hence, contribute to the better prognosis of such teeth and prevent unnecessary loss of an otherwise healthy tooth.

Title: Enhancing Knowledge and Attitude toward Neuroscience at School

Authors: Alireza Rezaee, Mohammad Rasoul Golabchi, Zahra Abbasy, Zahra Shevidi

Institute: Kashan University of Medical Sciences, Iran

ABSTRACT:

Background: In the last decades neuroscience has been at the top most leading topics in scientific research and development. However, such development is just confined to scientific societies but not public.

Being aware of neuroscience aspects can lead to the better attitude to our daily life.

Summary of Work: We decided to design a workshop for students in order to enhance their perception and attitude toward neuroscience.

After a six-month workshop, we assessed our participants' outlook by two methods: Directed interview in groups of student and a personal questionnaire asking about their attitudes toward neuroscience and the efficacy of the program.

Summary of Results: Fifty-five students of the grades 8th to 11th participated in our program and almost all of them claimed that they have gained a distinctive development in their knowledge and attitude toward neuroscience.

Discussion: This experience has proved us that working with school-age students has a positive result in introducing neuroscience and it can enhance their view of their self-awareness; although there may be several challenges. For instance, lack of any scientific background in students along with the complexity of the topic, neuroscience.

Conclusion: We concluded that improvement of students' knowledge about neuroscience in interesting topics can enhance their attitude toward their abilities and this may leads to more accurate decision in their life.

Take Home Message: Learning about neuroscience helps people to attain a better self-awareness and the ability to apply their competencies in an appropriate way.

Title: Energy drinks as the main factor of mental symptomatology in medical students

Authors: Jorge Alonso Garay Ortega, Jesús Eduardo Meléndez Márquez, Haydeé Parra-Acosta, Zyanya Baylón Omaña, Andrei Alonso Ramos Acosta

Institute: University of Chihuahua, Mexico

ABSTRACT:

Background: Caffeine is one of the most widely consumed alkaloids worldwide, and its high doses can cause an abnormal stimulation of the nervous system

Summary of Work: Objective: To demonstrate the prevalence of mental symptomatology and its relation with the use of energy drinks and noxious substances in medical students in Mexico. Method: A survey was conducted evaluating the frequency of use of energy drinks, as well as a questionnaire estimating the symptoms of mental disorders.

Results: A total sample of 401 respondents was obtained, of which 42.89% consumed energy drinks, being exclusively surpassed by alcohol consumption (43.64%); also we found a positive correlation between the ingestion of the first one and 22 symptoms of 7 mental disorders.

Discussion: There is a positive correlation between the use of energy drinks and psychiatric symptoms in 7 of 9 studied disorders (mainly depression and attention deficit hyperactivity).

Conclusions: Students of the medical school were highly exposed to the intake of substances that offer a temporary improvement in the alert and concentration state, without the consideration of the possible adverse effects that these could cause.

Take Home Message: Compared with the cardiovascular and gastrointestinal effects there is less information regarding the possible psychiatric consequences of the use of energizing drinks. Longitudinal studies would allow us to know the short and long term effects of these substances.

Title: Association between insomnia and mental disorders among medical students in México

Authors: Diego Armando Mendoza, Andrei Alonso Ramos Sosa, Jesús Eduardo Meléndez Márquez, Haydeé Parra Acosta, Zyanya Baylón Omaña

Institute: Autonomous University of Chihuahua, México

ABSTRACT:

Background: Symptoms of insomnia may also be an independent risk factor for suicide attempts and depression. Neuropsychological tests reveal deficits in cognitive processes, including working memory and attention switching, which are not simply related to a deteriorated state of alert.

Summary of Work: This is a transversal study where a survey was conducted in medical students belonging to the International Federation of Medical Student Associations in Mexico (IFMSA). The presence of symptoms related to insomnia and mental disorders were evaluated. The instrument was validated with a standardized Cronbach Alpha of 0.929880.

Results: A population of 401 students were obtained by simple randomization of 48 medical schools. In the simple correlation analysis between insomnia and mental disorders, the most significant were generalized anxiety disorder ($p < 0.001$), ADHD ($p < 0.004903$) and social phobia ($p < 0.001731$) ($R = 0.16$)

Discussion: A significant association was found between insomnia with ADHD and social phobia, which were the most statistically significant disorders. In addition, frequency analysis shows that most students show high indexes of symptoms related to insomnia.

Conclusions: It is observed that the tendency to present mental disorders such as depression, generalized anxiety, ADHD and social phobia among med students is increasing.

Take Home Message: Symptoms of insomnia may also be an independent risk factor for suicide attempts and depression. Most students show high indexes of symptoms related to insomnia. The tendency to present mental disorders among med students is increasing. Actions are required to assess this problem.

Title: Analysis of Thyroid Lesions in Patients Using Iodised Salt

Authors: Suganya S, Premalatha S, Rohini Priya S, Ravi S

Institute: Chengalpattu Medical College, India

ABSTRACT:

Thyroid disorders increases with age and plenty of morphological and physiological changes of the

thyroid gland during ageing are well-known. Iodine deficiency also causes thyroid lesions. As a cure to this, the government of India has made all edible salt available as iodised salt. Iodine content ≥ 15 ppm was considered as adequately iodised salt. Iodine content ≤ 7 ppm was considered as inadequately iodised salt.

Summary: Even when most of the people are using iodised salt, people are getting thyroid lesions. Colloid nodular goiter and papillary carcinoma were the common type of lesions in the beginning when most of the people were using non-iodised salt, now though papillary carcinoma is the second common lesion; its percentage of incidence has been increased.

Result: No prominent change in the incidence of benign and malignant lesions. There is female preponderance irrespective of salt iodisation.

Discussion: Initially thyroid lesions were more common in the middle aged group. After using iodised salt, there is delay in the onset of lesions. The most common type of lesion after iodisation of salt is colloid nodular goiter. The second most common type of lesion is papillary carcinoma of thyroid which is malignant while its percentage has increased when compared to the results obtained when using non iodised salt.

Conclusion:

There is delay in the onset of lesions after using iodised salt.

The incidence of papillary carcinoma of thyroid is increased after using iodised salt.

The incidence of Hashimoto thyroiditis is also increased after using iodised salt.

Females are more prone to thyroid lesions irrespective of salt iodisation.

There is a slight increase in number of malignant cases after using iodised salt.

Take Home Message: We must take care that we consume only sufficient amount of iodine and not extra iodine.

Title: Capacity building in Bio risk reduction through training peripheral Laboratory technicians of Guinea - 2016

Author: Alpha Mahmoud Barry

Institute: University Conakry Guinea, Guinea

ABSTRACT:

Context: The West African countries of Guinea, Liberia, and Sierra Leone have been most severely affected, with 99.9% of recorded EVD cases.

Santé plus Organization with the support of the National Institute of Public Health (INSP), CRDF GLOBAL and EMPHNET organized seven (7) training sessions to contribute to the reduction of infectious risks and to improve the skills of peripheral laboratory agents in Bio risk.

Objectives: Organize a training workshop in each of the 7 health regions of Guinea including Conakry
Increase the skills of 120 participants in Bio risk,
Contribute to Guinea laboratories' system performance on bio threat and bio risk reduction.

Methodology: Santé Plus Organization held meetings with stakeholders to get them involved in the training sessions

During each session, the facilitators used the andragogy method

The modules covered the following major topics
Roles and responsibilities of the Laboratory system for a better control of an Epidemic

The 10 major epidemic diseases under surveillance
Bio risk and biobank management, (Standard operating procedures).

Management of Infectious waste and Hazard and risk communication in the laboratoire

Biologie and toxin weapon convention

Results: After 6 months of training sessions

More than 122 lab technicians accomplished (certification) their training

Skills (knowledge and practice) of regional lab technicians were improved

Average of participants' knowledge increased up to 60%

Conclusion: At the end of the training sessions, participants and stakeholders noticed:

Full implication of administrative and health Authorities

The great interest and satisfaction of participants to the topics covered

The interesting training techniques used (including the pedagogic tools in line with the modules)

The professional quality of the training session process

Recommendations: Develop and implement

Awareness Project targeting high risk groups (on biological agents risk reduction in Guinea
Create a Bio security Association and Join the African bio security organization

Title: Reflection revisited: physicians' experiences with reflection in professional practice

Authors: Elisa Bindels, Christel Verberg, Albert Scherpbier, Sylvia Heeneman, Kiki Lombarts
Institute: Maastricht University, Netherlands

ABSTRACT:

Background: With the introduction of competency-based education, physicians are expected to reflect on competencies that extend beyond medical knowledge and skills, such as management, team building, professionalism and interpersonal communication. Following this shift in attention, reflective practices need to be revisited and adjusted. In light of this new context, we explored how physicians experience reflection.

Methods: We conducted a qualitative study using semi-structured interviews with 14 hospital-based physicians from various specialties and institutions. During the interviews, we explored physicians' associations with reflection and delved into underlying reflection experiences. The interviews were transcribed verbatim and were analyzed iteratively.

Results: Reflection was considered to be at the heart of safeguarding and continuing optimal professional performance. It was experienced as a tool for adjusting medical knowledge and skills on the one hand, and for handling the relational aspects of daily practice on the other hand. Participants felt that reflection was both an individual 'dialogue' with oneself as well as a collective dialogue in the form of consultations or group discussions with colleagues as a way to reflect collaboratively and link reflection to action. It appeared difficult to explicate how these dialogues evolved; this difficulty applied more to the context of management and organization than to the context of actual medical performance. Within the context of management and organization, reflection was more often linked to action outside one's own sphere of influence. This was where factors as group dynamics and power

issues came into play. Participants felt it was a challenge to strike a balance between self-interest and group interest.

Conclusion and Discussion: This study underlines the importance of reflection on 'relational' competencies such as communication, collaboration and organization. Future research must provide insight into actual reflection processes and power issues within health care teams as an influencing factor herein.

Title: Student anxiety and its perceived sources during various clinico-dental situations among dental students in Melaka, Malaysia

Authors: Renu Sarah Samson, Eby Varghese
Institute: Melaka-Manipal Medical College, Malaysia

ABSTRACT:

Background: Learning various clinical skills causes students to experience anxiety. Excessive anxiety among students can impair their drive, aspiration, academic performance and learning as well as affect health and relationships. Previous studies among dental students in Malaysia focused on general causes of anxiety but not particularly on anxiety provoking clinical situations.

Summary of Work: A cross-sectional study was carried out to determine the prevalence of anxiety and its perceived sources during various clinico-dental situations among dental students in Melaka using Modified Moss and McManus questionnaire. The questionnaire covered dental-specific perceived sources of anxiety that were assessed using a 4-point Likert scale.

Results: Overall mean anxiety score was 91.48. Mean anxiety score of females and males was 92.44 and 89.35 respectively. Among various ethnicities, Indians (96.18) exhibited highest mean anxiety score. Mean anxiety scores of third, fourth and fifth year students was 101.07, 92.06 and 85.12 respectively. Deficiencies and errors in treatment was rated as the highest anxiety provoking clinical situation.

Discussion: Avoidance of risk-taking situations among females results in a tendency to scrutinize details to avoid clinical errors adding to the anxiety level. Sudden transition from pre-clinical to clinical

atmosphere could have caused higher anxiety levels among third year students. Errors and deficiencies in treatment can generate anxiety due to its medico-legal consequences.

Conclusion: Within the limitations of this study, it can be noted that dental students in Melaka had moderate levels of anxiety and that gender, ethnicity and year of study may have an association with the levels of anxiety.

Take Home Message: Minimal levels of anxiety may aid in improving alertness and response to emergency situations. However, considering the detrimental effect of extreme anxiety, it is imperative to identify its sources and plan interventional programmes for stress management and to build teacher-student interpersonal relationships.

Title: A survey on morning report Conduct in major department of Educational hospitals in Shahrekord University of Medical Science in 2015 - 2016

Author: Firozeh Majidi

Institute: Shahrekord University of Medical Sciences, Iran

ABSTRACT:

In this study, we evaluated morning reports in main wards of our teaching hospital according to national standards. We performed this study to clarify the weaknesses and strengths of morning report sessions to help increasing the quality of this important training method.

Method: It was a cross-sectional study and at first we gathered national standard of morning report by health ministry. Then we prepared an assessment list according to these standards. Our assessment list was evaluated and confirmed by 3 clinical professors. The assessment list was filled by direct during morning report.

We gathered data of 22 morning report, and spss version 18 was used for data analysis.

Result: The mean duration of each morning report was 49.36 ± 13.6 minutes (max: 60 minutes and min 25 minutes). In 20 of 22 sessions, the professors conducted morning reports. In most cases (63.6%) one patient was. The patients were introduced mainly by intern (54.5%) and residents

and interns together (45.5%). The mean duration of introducing each patient was 38.9 minutes. The duration of 45.5% of morning reports was lesser than standard. The 50% of morning reports complicated cases were introduced and in 13.6% common diseases were discussed.

In 50% of sessions oral feedbacks were given to interns or residents. In none of morning reports written evaluation and feedback were not accomplished.

Conclusion: This study showed that there were no specific role for residents and interns. Also medical students did not involve in morning reports. Another weakness was limited number of patients introduced in each session.

Take Home Message: Our study found that although there are some deficiencies in morning reports, our department are committed to this educational program. Increasing knowledge about morning report standards and educational program for increasing its quality could be offered

Title: Global Health Electives: Ethical Engagement in Building Global Health Capacity

Authors: Adriana De Visser, Gwendolyn Hollaar, Jeremiah Seni, Josephine Najjuma, Wilfred Arubaku

Institute: University of Calgary, Canada

ABSTRACT:

Background: Increasingly, medical trainees are seeking global health electives as part of their medical education. However, little is known about the impact these medical trainees have on host institutions, staff, local trainees, patients or communities and what benefits or burdens result.

Summary of Work: The goal of our qualitative study is to explore the relationship dynamics in regards to visiting medical trainee global health electives as perceived by stakeholders in Mwanza, Tanzania and Mbarara, Uganda where the Cumming School of Medicine (CSM) at the University of Calgary, Canada has long-standing institutional collaborations. We will use focus groups and semi-structured interviews to explore perspectives and an interpretive phenomenological analysis framework to guide the study and analyze the data.

Results: Our data will comprise the spoken perspectives of physician preceptors, health facility administrators, medical officers, nurses, local trainees, patients, and community leaders at the two host sites in Uganda and Tanzania. We will spend six weeks at each host site from September until November 2017. Results will be available by March 2018.

Discussion: The study results will inform further development of the CSM global health elective program, specifically within Mwanza, Tanzania and Mbarara, Uganda to make global health electives at these sites a more accountable and reciprocal process.

Conclusion: The qualitative nature of this study with the involvement of multiple stakeholders should allow for an in-depth understanding of global health electives inadequately published in the literature to date.

Take Home Message: Given the number of medical trainees involved in the University of Calgary global health elective program, seeking the perspectives of partner institutions on global health electives is an important ethical and socially accountable process that our academic institution needs to attend to.

Title: More than imparting knowledge, effecting change in clinical reasoning in medical students. What skills do clinical educators need?

Authors: Emma Willert, Kathryn Wood, Minna Singh

Institute: University of Manchester, United Kingdom

ABSTRACT:

Background: Competence in clinical reasoning (CR) is essential for safe and accurate decision-making. Clinician educators acknowledge the importance of learning clinical reasoning during undergraduate medical education, but struggle to teach those skills. The effectiveness of faculty development programmes is unknown.

Summary of Work: Clinician educators from two settings: the classroom and the workplace were interviewed to explore their understanding, teaching methods and personal medical practice of clinical reasoning (n=20). Classroom educators underwent training in clinical reasoning teaching,

workplace educators did not. Five classroom educators were observed to explore behaviours during authentic teaching sessions. Qualitative data were analysed using the clinical reasoning cycle framework.

Results: Trained educators (classroom) were able to verbalise concepts of clinical reasoning and describe their teaching methods better than educators from the workplace. However there was considerable variation irrespective of prior training. Educators who were less able described little application of clinical reasoning within their medical practice.

Though classroom educators reported confidence in their abilities to teach, observation of sessions revealed incongruity. Facilitation of lower order tasks (information gathering and processing cues) was more frequent than metacognitive tasks (summarising information, justifying decisions, evaluating outcomes of hypotheses).

Discussion: This study reveals dissonance between clinician educators perceived and true ability to teach clinical reasoning despite prior training. In particular they are less able to guide metacognitive development in learners. Their own practice influences this.

Conclusion: Faculty development in clinical reasoning focuses on clinical reasoning theory and various approaches to teaching it, but not on the clinician educator's understanding and application of clinical reasoning in their personal practice.

Take Home Message: Faculty development programmes on clinical reasoning should include a focus on educators' own application of clinical reasoning. This may lead to improvement in facilitation of metacognitive skills in learners.

Title: Simulation-based assessments of ultrasound skills: A comparison of validity evidence from three different procedures

Authors: Liv Dyre, Jesper Krørup Jensen, Mette Elkjær, Martin Tolsgaard

Institute: Copenhagen Academy for Medical Education and Simulation, Denmark

ABSTRACT:

Aim: To compare validity evidence supporting simulation-based assessments of ultrasound skills across different types of procedures (i.e.

gynecological and obstetric ultrasound and Focused Assessment with Sonography for Trauma (FAST)).

Methods: Validity evidence was gathered on the assessment of gynecological and obstetric ultrasound, and FAST using the same type of simulator (Scantrainer, Medaphor, Cardiff, UK). The assessments included automated simulator metrics that were either passed or failed.

For each of the procedures validity evidence was gathered according to Messick's framework: 1) Content

Evidence: identification of modules with relevance to the ultrasound procedure (e.g. content selected by experts/researchers or with a pre-test), 2) Response process: participants interaction with the simulator (e.g. introduction to the equipment), 3) Relations to other variables: metrics' ability to discriminate between expert and novice trainees, 4) Internal structure: reliability of the final simulator test and the performers' variance in test scores 5) Consequences: comparing expert performance levels and metrics that processed validity evidence in the studies.

Results: In terms of relations to other variables, 31.4% of transvaginal, 31.7% of obstetric, and 61.8% of FAST metrics were supported by validity evidence. Image optimization was represented most frequently (41.7%, 47.5%, and 59% for gynecological, obstetric and FAST modules) compared to metrics that evaluated the systematic approach (35.4%, 25%, and 23% for gynecological, obstetric, and FAST modules) or correct measurements or appropriate time (22.9%, 27.5%, and 18% for gynecological, obstetric, and FAST modules).

Conclusion: We found validity evidence to support the use of simulation-based assessment in ultrasound performance. However, we also found the metrics with validity evidence to be unequally distributed between the different aspects of performance. Consequently, certain critical aspects of the ultrasound procedure may be missed when relying on automated simulator metrics alone, which questions whether they alone can be used for evaluating mastery learning in the simulated setting.

Title: Global Health Electives: Ethical Engagement in Building Global Health Capacity

Authors: Adriena De Visser, Gwendolyn Hollaar, Jeremiah Seni, Josephine Najjuma, Wilfred Arubaku

Institute: University of Calgary, Canada

ABSTRACT:

Background: Increasingly, medical trainees are seeking global health electives as part of their medical education. However, little is known about the impact these medical trainees have on host institutions, staff, local trainees, patients or communities and what benefits or burdens result.

Summary of Work: The goal of our qualitative study is to explore the relationship dynamics in regards to visiting medical trainee global health electives as perceived by stakeholders in Mwanza, Tanzania and Mbarara, Uganda where the Cumming School of Medicine (CSM) at the University of Calgary, Canada has long-standing institutional collaborations. We will use focus groups and semi-structured interviews to explore perspectives and an interpretive phenomenological analysis framework to guide the study and analyze the data.

Results: Our data will comprise the spoken perspectives of physician preceptors, health facility administrators, medical officers, nurses, local trainees, patients, and community leaders at the two host sites in Uganda and Tanzania. We will spend six weeks at each host site from September until November 2017. Results will be available by March 2018.

Discussion: The study results will inform further development of the CSM global health elective program, specifically within Mwanza, Tanzania and Mbarara, Uganda to make global health electives at these sites a more accountable and reciprocal process.

Conclusion: The qualitative nature of this study with the involvement of multiple stakeholders should allow for an in-depth understanding of global health electives inadequately published in the literature to date.

Take Home Message: Given the number of medical trainees involved in the University of Calgary global health elective program, seeking the perspectives

of partner institutions on global health electives is an important ethical and socially accountable process that our academic institution needs to attend too.

Title: Evaluate teaching outcomes for new medical school, How do we do? . Medical Education Center (MEC) Songkhla hospital, Princess Narathivas University (PNU), Songkhla Thailand

Author: Pongsatorn Asanasak

Institute: Sonkhla Hospital, Thailand

ABSTRACT:

Background: MEC Songkhla hospital is a small size and recently established. We have to standardize our teaching processes and outcomes. Percentages of graduated student who passed National license test represents quality and effectiveness. But how to precisely assess teaching processes? Benchmarking with high ranked medical school is one of the options.

Summary of Work: We commit students who completed the medical course to take comprehensive test performed by high ranked medical school. GPAX of a group of students who passed comprehensive test were compared with a group of students who failed by unpaired t test.

Summary of Results: After three years, we schedule 61 students to take comprehensive test. 46 students passed, 15 students failed. GPAX of students who passed comprehensive test [mean 3.15] statistically significant difference from GPAX of students who failed comprehensive test [mean 2.93] (95% confidence P value = 0.0129)

Discussion: GPAX of students who passed comprehensive test that significant higher than GPAX of students

Who failed, tell us that teaching processes were effective. But so high mean GPAX score in failure students tell us that to graduate at MEC (GPAX > 2.00) is easily than in high ranked medical school.

Conclusion: In addition to percentages of graduated student who pass National license test, Benchmarking with high ranked medical school is the option to evaluate teaching processes. Student of MEC. Who want to pass high ranked medical school comprehensive test had to get GPAX > 3.15

Take Home Messages: Analysis GPAX and results

of high ranked medical school comprehensive test is an option to assess teaching process.

Title: Vodcasts to support Educational Supervisors in using the ePortfolio

Authors: Nicola O'Shaughnessy, Johnny Lyon-Maris, Samantha Scallan

Institute: GP Education Unit, United Kingdom

ABSTRACT:

Background: Educational Supervisors (ESs) are required to validate online evidence presented by trainees in their ePortfolio over the duration of the training programme. There is no formal, hands-on teaching for supervisors on how to use the ePortfolio, save for a 45 page manual. We aimed to develop more user-friendly, interactive support.

Summary of Work: A suite of short video tutorials ('vodcasts') were created. They concern accessing the ePortfolio and performing the various supervisor management and validation tasks. The vodcasts use a live supervisor's account for authenticity and are recorded in real time. Users can search for specific tutorials without having to watch long clips for segments.

Summary of Results: Feedback from users has been positive, and includes usage statistics. On YouTube the vodcasts have 370 views and counting, plus 4 subscribers. On Twitter there have been 25 retweets and 21 likes.

Discussion: The use of video tutorials gives supervisors a more interactive source of information on how to use the eportfolio; users can work at their own pace, pause and rewind as needed and they can follow the steps in completing a task on screen in real time.

Conclusions: This vodcast pilot has broadened the educational support tools for supervisors, and as it has been positively received, with opportunities for future development. We are extending the suite of videos and are currently designing ones for trainees.

Take Home Messages: Vodcasts can be a useful additional tool for educational supervisors in developing their supervisory practice

Title: The Role of Crowdsourcing in Medical and Health Care Education: A Literature Review

Authors: Janice St. John-Mathews, Phil Newton, Andrew Grant, Leslie Robinson

Institute: University of the West of England, Bristol, United Kingdom

ABSTRACT:

Background: First described by Howe in 2006 crowdsourcing works through an institution outsourcing a function normally performed by an employee or group of individuals. Within a crowdsource users, known as the crowd, form a community who voluntarily undertake a task which typically involves the pooling of knowledge resources.

Summary of Work: The purpose of this research was to conduct a literature review to ascertain how the tool is currently used in medical and health care education.

Results: Academic databases Pub-Med, ASSIS, CINAHL and Medline were searched using pre-defined search terms, limits and inclusion criteria. A total of 16 articles were identified and reviewed. All returns came from the field of medical education with zero returns for nursing, midwifery and professions allied to health.

Discussion: Of the papers identified the applications of crowd-sourcing in medical education could be categorised into three themes: lesson planning, teaching content and assessment. No literature focused on the role of crowdsourcing in curriculum design. There are articles outside of the medical and health education fields which address this, in particular the role of public involvement in curriculum design.

Conclusions: Crowdsourcing is associated with innovative activities through collective solution seeking by a large network of potential users. It is increasingly being used in medical and health education in particular the field of assessment.

Take Home Message: Crowdsourcing is an emerging innovative tool that is being used in a number of areas within the field of education. There is a trend in medical education to adopt most of these applications.

Title: Implementation of Formative Assessment and its Effectiveness

Authors: Sateesh Babu Arja, Yogesh Acharya, Sabah Alezaireg, Vishnupriyan Ilavarasan, Samprith Ala, Sireesha Bala Arja

Institute: Avalon University School of Medicine, United States

ABSTRACT:

Background: Formative assessment is a type of evaluation that aims to build skills through timely and effective feedback, in contrast to summative assessment which uses objective measures to assess performance. However, there is a dearth of knowledge regarding its association with objective measures such as grade point average (GPA). It was hypothesized that GPA would be higher following a semester with formative assessment in comparison to a semester without formative assessment.

Summary of the Work: Participants were 67 medical students at Avalon University School of Medicine who were followed for duration of 9 months. Nine participants were excluded from analyses because they had withdrawn from their course or there was missing data. Student's GPA's were examined over two sequential semesters, the first with no formative assessment and the second with formative assessment. Participants were also given a questionnaire regarding their attitudes toward formative assessment following the second semester

Results: Results revealed that the vast majority of students (74.1%) experienced increases in their GPA in the semester which included formative assessment. A t-test analysis indicated that GPA was significantly higher in the semester with formative assessment in comparison to the semester without formative assessment. Consistent with the GPA analyses, a significant majority of students indicated that formative assessment was helpful, and resulted in them studying more.

Discussion: Formative assessment was associated with higher academic achievement and students found it helpful. The fact that students studied more during learning with formative assessment indicates that this method may produce a deeper

understanding of the material.

Conclusion: Implementing formative assessment in Avalon University School of Medicine has shown a significant improvement in the student's academic performance and students also report it is a useful method of learning.

Take Home Message: Formative assessments showed the improved students performance in summative assessments.

Title: Evaluation of the Evolution of a Feedback Process for Residents Rotating in the Pediatric Emergency Department

Author: Taryn Taylor

Institute: Emory University School of Medicine, United States

ABSTRACT:

Background: Previous studies have documented the necessity of improved faculty feedback to learners. Our institution implemented a novel approach by instituting a financial incentive. The primary aim of this study was to determine if incentivizing faculty members to complete written evaluations improved the quantity and quality of feedback they deliver.

Summary: A retrospective review of faculty evaluations of residents prior to and after incentive implementation was conducted. Numerical data were analyzed and written comments coded to explore valence, focus of feedback, and presence of actionable information. Faculty and resident focus groups were conducted to explore attitudes and practices regarding feedback.

Results: The number of evaluations increased 24% after implementation of the incentive-based system. Only 27% of submitted evaluations (n=309) included actionable items and 5% included an improvement strategy. Focus group findings indicate this incentive system is perceived as an extra burden, but may lead to long term practice changes.

Discussion: Results suggest that an incentive-based resident evaluation system can encourage increased faculty participation. The quality of feedback, while improved, remains a significant challenge. Themes from the focus group suggest that faculty would benefit from additional coaching

on techniques for providing quality feedback.

Conclusion: Providing timely, constructive feedback to learners is critical. Many barriers exist to providing formative assessments, and various strategies have been suggested. This study not only describes the results of implementing an incentive-based strategy, but also identifies the patterns of utilization and faculty opinion once this approach was instituted.

Take Home Message: Initial findings suggest that an incentive-based feedback system for faculty improves the quantity but to a much lesser degree, the quality of learner feedback. It will be important to collect longitudinal data to determine if improvements can be sustained.

Title: 50 years of medical specialty training accreditation: lessons from history

Authors: Nesibe Akdemir, Kiki Lombarts, Emma Paternotte, Bas Schreuder, Fedde Scheele

Institute: OLVG Hospital and VU Medical Center, Netherlands

ABSTRACT:

Background: Evaluating the quality of medical specialty training through accreditation is common practice worldwide. An appropriate accreditation system is important, since accreditation may have substantial consequences. This study aims to map out how changing views on educational quality and quality management have impacted the design of the Dutch accreditation system.

Summary of Work: To chart the historical development of the Dutch accreditation system for medical specialty training we conducted a document analysis of accreditation documents spanning the past fifty years and a vision document outlining the future system. Template analysis technique was used to identify the main elements of the accreditation system.

Summary of Results: Four themes in the Dutch accreditation system were identified: (1) Objectives of accreditation, (2) Quality domains, (3) Quality management approach, and (4) Actors' responsibilities. The major shifts have taken place in decentralization of actors' responsibilities, self-evaluation, and quality improvement. Formal documents of the past fifty years expanded, which

led to increased bureaucracy.

Discussion: There was an increasing number of standards as a result of specifying the initially more general expressed standards. However research showed that the higher the number of standards is, the less likely all standards are audited. Moreover, an outsized number of standards may limit discretion and raise distrust.

Conclusion: The four themes could enhance international comparison and exchange of ideas for the design of accreditation systems. There is an urgent need for international perspectives and evidence about the effectiveness of the distinct elements of accreditation.

Take Home Message: The steps between trust and discretion on the one hand, and distrust, enforcement and deterrence on the other hand are a great leap. In the past fifty years the accreditors searched for the right balance between these two polarized ends. Their choices will be reflected on the accreditation strategy.

Title: Joint Accreditation Leadership Summit: Education by the Team, for the Team

Authors: Kate Regnier, Dimitra Travlos, Kathy Chappell

Institute: Accreditation Council for Continuing Medical Education, United States

ABSTRACT:

In June 2017, the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) convened a Leadership Summit for Jointly Accredited Organizations. This summit follows a similar gathering of leaders engaged in interprofessional continuing education (IPCE) held in 2016, and focused on one of the challenges identified by the group – the dissemination of research and best practices in IPCE.

Identifying the challenges, opportunities and strategies for success will allow organizations to more effectively meet the needs of healthcare teams and patients through interprofessional continuing education. Advances in team performance and improvements in patient care have been achieved as a result of IPCE initiatives.

Research and dissemination strategies are needed to advance the field of IPCE and connect the practice setting with the efforts around interprofessional education at the pre-professional level.

This poster will describe the recommendations from these two Leadership Summits – as the committed group of Jointly Accredited organizations works to advance planning, delivery and assessment of education by the healthcare team, for the healthcare team.

Title: Feedback on Feedback: Don't send surveys, streaming is now trending

Authors: Joanna Corrado, Sarah Kennedy, Amna Shah, Tom Craven, Jon Cooper

Institute: Leeds Teaching Hospitals NHS Trust, United Kingdom

ABSTRACT:

Background: Obtaining feedback is essential in assessing teaching efficacy. Traditionally, survey feedback is used to assess response but many recipients fail to respond. A recent online teaching project in Leeds (UK) found a more reliable marker of efficacy of online educational tools was the number of plays and 'likes'.

Summary: Leeds doctors created clinical audio podcasts for trainees revising for the MRCPUK PACES exam. To gauge project success, online surveys were sent. The response rate was <1%. When the podcasts subsequently moved to SoundCloud streaming platform we used number of plays and 'likes' as a more accurate marker of utility.

Results: Data from Leeds' SoundCloud account found 4530 podcast plays and 110 'likes' within 6 months. 2.4% of podcasts played were 'liked'. Using number of plays we determined most popular specialties and topics. Neurology was the most accessed specialty (1004 plays) and Hereditary Haemorrhagic Telangiectasia most 'popular' topic (149 plays).

Discussion: Streaming platforms such as SoundCloud provide invaluable information regarding uptake and therefore success of online education. Our data reflected 'real-time' podcast use and arguably a more accurate representation

of what current trainees found helpful. We responded to this by improving less-accessed podcasts and providing more topics for popular specialties.

Conclusion: This regional education project demonstrated that traditional methods of obtaining feedback by questionnaire surveys are inadequate. However using the SoundCloud streaming website to host the clinical audio podcasts provided invaluable data on number of plays and 'likes' over time.

Take Home Message: In a digital age educational resources are more frequently provided online. To respond to this trend we need more up-to-date methods of obtaining feedback than sending surveys. Online streaming sites have inbuilt advantages for obtaining data as uptake can be monitored remotely providing more reliable information regarding project success.

Title: International use of a PACES revision resource created by core medical trainees in Leeds, United Kingdom

Authors: Sarah Kennedy, Jo Corrado, Jon Cooper
Institute: Leeds Teaching Hospitals NHS Trust, United Kingdom

ABSTRACT:

Background: Traditional bedside teaching for Practical Assessment of Clinical Examination Skills (PACES) is difficult to sustain and faculty intensive. Core medical trainees in Leeds (UK) created audio PACES revision podcasts that could be accessed any time any place on SoundCloud. The PACES exam can be taken in UK and international centres.

Summary of Work: SoundCloud statistics were analysed from January 2017. Of particular interest, was the breakdown of UK and non-UK countries and cities listening to and 'liking' podcasts. We sought to determine whether different topics were popular across the globe and whether non-UK spikes in usage corresponded to examination periods in other countries.

Results: Non-UK countries contributed 21% of plays (US 8%, Middle East 10%, other 3%) and 83% of 'likes' (US 33%, Middle East 39%, other 11%). 14 non-UK cities ranked top 50 and contributed 18% of plays. Saudi Arabia exceeded UK plays during

Middle Eastern examination period. Topic popularity did not differ.

Discussion: International use of the podcasts is an unexpected, interesting discovery. On only 3 weeks since January 2017 was Leeds, where the podcasts were created, the top listening city. United States and the Middle East contribute most non-UK plays and 'likes'. Peaks/troughs in plays correspond to examination periods in different countries.

Conclusion: This project has demonstrated that there is international utility in a home grown education programme which initially set out to solve a local problem. Online platforms such as SoundCloud enable revision resources to be shared internationally allowing trainees from all over the world access to revision materials.

Take Home Message: Our locally created PACES revision podcasts are listened to and 'liked' internationally. Audio platforms such as SoundCloud, which share audio content with a global audience, provide trainees from all over the world easy access to revision resources.

Title: Feedback as a Tool to Improve Modular Assessment: Eight Year Journey Worth Sharing

Author: Ayesha Junaid

Institute: Shifa College of Medicine Islamabad, Pakistan

ABSTRACT:

We started teaching Hematology, in a modular pattern from year 2008, to strength of 300 medical students at 1st, 3rd & fourth year MBBS level. At the same time, the assessment was modified to MCQ & SAQ based pattern. Previous learning was lecture-based, with annual evaluation in the form of long essay questions.

The module was built along four clinical themes (pallor, fever, bleed /clot and basics of transfusion medicine). We developed learning objectives based on curricular level. Table of specification based on content weight age was followed for paper setting and a 70:30 ratio was followed for MCQ & SAQ.

Securing 50% marks in each component was set as passing score. Paper vetting from the department of medical education to endorse TOS & quality was mandatory. Posthoc analysis by examination cell on

item & test analysis was utilized by the course director to modify assessment every year. Our assessment reliability average is above 0.75 MCQ component was reviewed for the complexity of questions based on difficulty & discrimination indices. For short essay questions, modifications were incorporated based on TOS & faculty feedback taken at mid & end module level. IPE standardization was done, balancing out counseling & skill stations based on subject & theme specifications

Assessment feedback from the medical education, university examination department, online student & faculty feedback were the tools which helped us improve our assessment every year. Especially Reliability & Validity indices from examination cell were the guidelines to improve modular assessment and make it more reflective of true learning.

Assessment driven curricula precisely link learning objectives to actual learning and make it most meaningful, unbiased and progressive. Content, face & construct validity together with reliability evaluation of each assessment build confidence in students about relevance and fairness in their competency evaluation.

Title: Application of experiential theory in developing faculty assessment of medical students' portfolios in family medicine module

Author: Mohammed Almansour

Institute: Majmaah University, Saudi Arabia

ABSTRACT:

Background: Assessment Portfolios were primarily introduced to assess performance in authentic contexts. Its Assessment is challenging especially when they are used for summative rather than formative assessment, the psychometric qualities must meet stringent reliability.

Objectives: To engage tutors in experiential cycle to improve their portfolio assessment.

Summary of Work: Concrete experience

The portfolio assessment is part of continuous "summative" assessment of the module, according to 2 categories

Completion of minimum numbers (quantitative) of skills and procedures.

Portfolio discussion with the tutor at the end of the module.

Reflective observation

To assure this step the faculty members should be: convinced about the importance of reflection on their experience and secure time for it. prepare a reflection sheet to be completed.

Abstract conceptualization

sharing the reflection with each others

asking for a learning conclusion from each one handed with the grades

keep them updated about portfolio assessments' literature

Active experimentation

Could be done individually or as a group by:

1) Writing an action plan for the next portfolio assessment involving the steps to use SWOT analysis Results

2) Keep the Cycle dynamic

incorporate those steps as part of module evaluation components so it will be maintained and reviewed by module team and high Authority.

Discussion: Strengths:

providing reliable and creditable tool of assessment.

- Keep the process in a dynamic context
- Weaknesses
- Multiple resources and time needed to implement
- needs experience in qualitative measures usage
- Opportunities
- approaching other professions or institute using portfolio
- the urge of Saudi MED'S application for testing the tool and get it funded Threats
- varieties of portfolio structures
- restricted time to application because university roles of releasing students' grades in limited time after the module's end

Title: Design and development of mobile based electronic portfolio

Authors: Saeed Abdollahfard, Leili Mosalanejad

Institute: Shiraz University of Medical Science, Iran

ABSTRACT:

Background: The present study aims to design and development of mobile-based electronic

portfolio (mobile portfolio) and evaluate the efficiency of portfolio base mobile for assessing the performance of nursing students during clinical ward.

Summary of Work: Clinical portfolio was recommended to graduate nursing students of Jahrom University of Medical Sciences, so that they could quickly record their clinical experiences in text, audio and video forms in various media.

Mobile e-portfolios were developed in order to synchronize wirelessly with the user's personal webpage from any place where mobile phone or wireless (Wi-Fi) signal is received.

Clinical functions of students are recorded and documented on the ward's site. Teacher's assessments were both qualitative and quantitative.

Each student was given a PDA or clinical software to use for three weeks during a psychology course, and also 1 to 2 hours of basic training on using these tools. Over these three weeks, they prepared a report on the use of PDA or clinical software.

The quantitative questionnaire contained 20 items in a 3-point Likert scale, and the qualitative part was rated good, moderate, and poor, with a total score of 60.

Results: Application of mobile-based portfolio showed that it is a user-friendly, accessible, and attractive method for objective assessment of students, which provides the context for more careful assessment of students through student participation in self-assessment. This tool satisfied 70% of students.

Discussion: Smartphone-based e-portfolios can display the results of their performance and learning efficiency.

Conclusion: Wireless PDA network can help prevent knowledge isolation, and encourage students to report their clinical activities on time.

Take Home Massage: Electronic portfolio is the effective use of technology in student assessment Using smartphone and related application could be usfull tools for students'assessment by user friendly, accessability, aplicability and easy to use.

Title: Richness of information and its effect on inter-rater agreement on progress decisions in programmatic assessment

Authors: Lubberta De Jong, Harold Bok, Wim Kremer, Cees van der Vleuten

Institute: Utrecht University, Netherlands

ABSTRACT:

Background: In programmatic assessment, the progress decision relies, amongst others, on the richness of information provided in the portfolio. It is hypothesized that sufficient information should enable assessors to create a fuller picture of the student based on the information provided, leading to more consistency across assessors in their decision. However, no study has confirmed this principle in practice. Therefore, in this exploratory study we aim to take the first steps in investigating the effect of richness of information on the inter-rater agreement in programmatic assessment.

Summary of Work: In this study we used the portfolios of veterinary students at the Faculty of Veterinary Medicine Utrecht University in their final years. We included n=391 portfolios in which each portfolio is independently assessed by two assessors. As a measure of richness of information we used the volume of Mini-CEXs each student collected from supervisor with regard to the minimum requirements. First, in analyzing the data, the overall inter-rater agreement of the two independent assessors was measured using the unweighted Cohen's kappa and additionally, descriptive analyses were performed. Furthermore, a binary logistic regression model was built including the inter-rater agreement as a binary variable (consensus or no consensus between assessors).

Results: The preliminary results showed that the overall agreement is high (Kappa=0.811). In further evaluating the effect of increased richness on the inter-rater agreement, the statistical model provided more insights.

Discussion: The results contribute to the overarching question: are we able to make holistic and reliable process decisions in programmatic assessment?

Title: Programmatic assessment in competency-based workplace learning and the efficiency of learning over time: when theory meets practice

Authors: Harold G.J. Bok, Lubberta H. de Jong, Thomas O'Neill, Connor Massey, Kent Hecker

Institute: Utrecht University, Netherlands

ABSTRACT:

Background: In competency-based veterinary education emphasis has shifted towards outcomes, capabilities, and learner-centeredness. Together with emphasis on sustained evidence of professional competence this calls for new methods of teaching and assessment. A model for programmatic assessment has been proposed that simultaneously optimizes assessment for learning and high-stakes decision making.

Summary of Work: Scores from three assessment methods were combined to assess the same and different competencies to provide a holistic overview for both formative and summative purposes. We performed a retrospective quantitative analysis using hierarchical linear modeling of individual assessment data points collected by 962 learners to assess variation in scores due to repeated measures, competency, assessment method and student.

Results: The results showed a sigmoidal learning curve when mean scores over time were collapsed for learner, method and competency domain. A multilevel random effects model showed that variance due to student was high and assessment method variance was low suggesting that the same competency measured using different methods was not scored differently based on method.

Discussion: The results indicate that students start at different competency levels (scores) and scores increase over time as students advance through their clinical rotations. This finding provides supporting evidence for the program of assessment working effectively -as it is designed- where students increase at the same pace.

Conclusions: The three-year competency-based curriculum with a programmatic approach to assessment as designed by the Faculty of Veterinary Medicine, Utrecht University, the Netherlands, provide evidence to assess different traits and visualize competence development,

through learning analytics, within and across time and contexts using multiple assessment methods and multiple independent assessors.

Take Home Message: We provide preliminary validation evidence from both descriptive and modeling analyses to support the explicit development and implementation of a program of assessment meant for both student learning and summative decision purposes.

Title: Feedback in work based place learning, a qualitative study

Author: Mehrnaz Germanmayeh

Institute: Tehran University of Medical Sciences , Iran

ABSTRACT:

Background: Feedback consists of notable information about person's performance of a task with the aim of his/her behavior improvement. Because of the special nature of clinical education, which is about learning a mixture of cognitive, affective and psycho- motor skills, feedback in clinical education is of prime importance.

Summary of Work: Our study was done, via a qualitative method, in Tehran university of Medical sciences. Participants were selected purposefully which ensured the inclusion of 10 internal residents, and 9 attending physicians. Semi structured interviews conducted as data synthesis strategy. Using content analysis, codes and categories were derived through an inductive process.

Summary of Results: Data analysis revealed two main category (Giving feedback to students : from ignorance to specification and Feedback consequences) and four subcategories (Decision making for giving feedback, Delivering feedback, Support to give feedback, giving feedback to support) in giving feedback to residents by their clinical teachers.

Discussion: With regard to feedback, we have a vast range of ignoring to giving it explicitly. Most important causes of ignoring feedback are short time clinical rotations and overcrowded of patients. Vanishing feedback is common, too. Professionalism, patient's treatment and residents' uniforms were most things to be considered for

giving feedback.

Conclusions: Our study showed that most of the clinical educators give feedback only in case of existence of long term relationship between them and their residents. In that case, they pay attention to residents' clinical performance and give them. For miscellaneous mistakes or in fear of giving negative feedback, they don't give it.

Take Home Messages: Performing structural changes in curriculum, which leads to long-term student's placements for more feedback and having opportunity about learning feedback for both residents and their clinical educators are essential.

Title: 50 years of medical specialty training accreditation: lessons from history

Authors: Nesibe Akdemir, Kiki Lombarts, Emma Paternotte, Bas Schreuder, Fedde Scheele

Institute: OLVG Hospital and VU Medical Center, Netherlands

ABSTRACT:

Background: Evaluating the quality of medical specialty training through accreditation is common practice worldwide. An appropriate accreditation system is important, since accreditation may have substantial consequences. This study aims to map out how changing views on educational quality and quality management have impacted the design of the Dutch accreditation system.

Summary of Work: To chart the historical development of the Dutch accreditation system for medical specialty training we conducted a document analysis of accreditation documents spanning the past fifty years and a vision document outlining the future system. Template analysis technique was used to identify the main elements of the accreditation system.

Summary of Results: Four themes in the Dutch accreditation system were identified: (1) Objectives of accreditation, (2) Quality domains, (3) Quality management approach, and (4) Actors' responsibilities. The major shifts have taken place in decentralization of actors' responsibilities, self-evaluation, and quality improvement. Formal documents of the past fifty years expanded, which led to increased bureaucracy.

Discussion: There were an increasing number of standards as a result of specifying the initially more general expressed standards. However research showed that the higher the number of standards is, the less likely all standards are audited. Moreover, an outsized number of standards may limit discretion and raise distrust.

Conclusion: The four themes could enhance international comparison and exchange of ideas for the design of accreditation systems. There is an urgent need for international perspectives and evidence about the effectiveness of the distinct elements of accreditation.

Take Home Message: The steps between trust and discretion on the one hand, and distrust, enforcement and deterrence on the other hand are a great leap. In the past fifty years the accreditors searched for the right balance between these two polarized ends. Their choices will be reflected on the accreditation strategy.

Title: Joint Accreditation Leadership Summit: Education by the Team, for the Team

Authors: Kate Regnier, Dimitra Travlos, Kathy Chappell

Institute: Accreditation Council for Continuing Medical Education, United States

ABSTRACT:

In June 2017, the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) convened a Leadership Summit for Jointly Accredited Organizations. This summit follows a similar gathering of leaders engaged in interprofessional continuing education (IPCE) held in 2016, and focused on one of the challenges identified by the group – the dissemination of research and best practices in IPCE.

Identifying the challenges, opportunities and strategies for success will allow organizations to more effectively meet the needs of healthcare teams and patients through interprofessional continuing education. Advances in team performance and improvements in patient care have been achieved as a result of IPCE initiatives. Research and dissemination strategies are needed

to advance the field of IPCE and connect the practice setting with the efforts around interprofessional education at the pre-professional level.

This poster will describe the recommendations from these two Leadership Summits – as the committed group of Jointly Accredited organizations works to advance planning, delivery and assessment of education by the healthcare team, for the healthcare team.

Title: Strategies for building a CPD Program in an undergraduate medical school: successes and challenges

Authors: Deema Al-Sheikhly, Dora Stadler, Laudy Mattar, Thurayya Arayssi

Institute: Weill Cornell Medicine, Qatar

ABSTRACT:

Background: Weill Cornell Medicine-Qatar, established in 2001, is the overseas branch campus of a US medical school and an important component of the local healthcare community. As continuing professional development (CPD) opportunities are paramount to build and maintain a knowledgeable healthcare workforce, we identified a need to provide accredited activities.

Summary of Work: We proposed the establishment of a CPD program at WCM-Q and expanded the mission and vision to include the promotion of educational endeavors extending beyond the undergraduate program. We obtained leadership support, identified the needs, developed goals/objectives, estimated resources, established a timeline, and defined outcomes and outcome indicators.

Summary of Results: We received local and international accreditation. We instituted several activities such as multi-disciplinary grand rounds and a law and medicine series. Since 2013, the number of credit hours offered increased from 5.5 to over 200 and attendees from 100 to more than 3000 physicians and other healthcare practitioners.

Discussion: Our CPD program has broadened the mission of our college and filled local and regional needs. Our strategic approach in building the infrastructure helped us attain recognition as an

accredited provider locally by the Qatar Council for Healthcare Practitioners (QCHP) and internationally by the Accreditation Council for Continuing Medical Education (ACCME).

Conclusion: Our program has been successful in developing activities to improve the knowledge, competence and/or performance of physicians and other healthcare practitioners and is recognized for meeting local and International accreditation requirements.

Take Home Messages: A CPD program can be successfully established in an undergraduate medical school.

Title: OPTIMED 2.0: Advancing Clinical Assessment Technology to Meet Evolving Educational Needs

Authors: Isabelle Halle, Jeff Habert

Institute: Medplan Communications Inc, Canada

ABSTRACT:

In the current environment, there is a demand for continuing medical education that is increasingly focussed, individualized and practical. Time constraints also make easily accessible education and knowledge transfer at the point of care more attractive options. In Canada, these trends are underscored not only by clinicians' own preferences, but by the increasing importance placed on clinical assessment activities by regulatory bodies such as the Royal College of Physicians and Surgeons of Canada (RCPSA).

The OPTIMED platform is a web-based clinical assessment tool that has demonstrated its acceptability and utility across over 100 initiatives completed by over 10,000 physicians world-wide. Built on the backbone of this platform, OPTIMED 2.0 is a next-generation tool designed to facilitate the performance of clinical assessments and provide point-of-care educational interventions tailored to individual learning needs. It incorporates novel functionalities, such as the ability to obtain immediate feedback and integrate videos and additional learning resources for knowledge transfer at the moment when it matters most (i.e. when the physician is deciding on the best course of action). In addition, OPTIMED 2.0's design parallels the steps outlined by the RCPSA for

the performance of clinical assessment activities:

- Step 1: Define the focus of the clinical audit
- Step 2: Select the measures, quality indicators or professional standards
- Step 3: Access and collect performance data
- Step 4: Summarize and compare performance against the selected measures
- Step 5: Obtain feedback
- Step 6: Coming to conclusions

Clinical assessment activities are currently being developed using the OPTIMED 2.0 platform in the fields of gynecology, precision oncology, dermatology and gastroenterology. Field trials in fall 2017 are expected to provide insight into the utility of this tool's novel features, including mechanisms for immediate feedback and knowledge transfer, and the measurement of its impact on the ability of participants to integrate learning into practice.

Title: Kahoot Program and Instruction via Telemedicine Distance Learning Network for 21st Century Learner

Author: Rujapa Pechjarden

Institute: Somdejphrajaotaksinmaharaj Hospital Medical Education Center, Thailand

ABSTRACT:

Background: According to the limitations of learning and teaching for medical students in clinical years in the network of Faculty of Medicine, Naresuan University, it is necessary to employ teaching method via Telemedicine distance teaching network. However, the problems are the limitation of time while lots of lessons to lecture. Then, the instructors prefer to use traditional teaching method. As a result, medical students feel sleepy or tend to do other activities while listening to the lecturer. Therefore, in order to resolve these issues, the researcher applies the game online technique called Kahoot Program to implement in instruction process.

Summary of Work: Researcher use Rehabilitation in arthritis lesson to create the quiz for pretest and posttest by using Kahoot Program. After that, the test via Kahoot Program have been used in classroom for 44 students who were 4th year medical student from three different Medical

Education Center which are Somdejphrajaotaksinmaharaj, Phrae and Phichit Hospital via Telemedicine distance learning network. The data collection tool was online questionnaires which using Likert scale for critical analysis.

Result: The overall results of the two criteria were at the highest level (mean = 4.42) includes the benefits of the Kahoot Program (mean= 4.47) and student's satisfaction (mean= 4.37)

Discussion: It is found that medical students have enjoyed the lesson and more interaction among instructor and learners. Then the using Kahoot Program as part of instruction process via Telemedicine distance learning network is one of effective method because it can eliminate students' boredom by encouraging satisfied atmosphere of medical students' studying.

Conclusions: Kahoot Program can be one of the effective tools when lecturing via Telemedicine distance learning network. Also, it has potential to adapt with other subjects.

Take Home Message: The instructor would be develop the 21st century skill for the 21st century learner.

Title: Use of the Moodle program in a Computer based Clinical Examination in Surgery in the Summative assessment of medical students

Author: Gamal Eldin Shallaly

Institute: Alzaiem Alazhari University, Sudan

ABSTRACT:

The aim was to improve the computer based clinical examination (CCE), which we used for a number of years in the assessment of medical students in surgery. Both the answers and corrections were made manually. The correction was, therefore, time consuming especially with the increasing numbers of students each year.

Summary of Work: The Moodle computer program was employed in the CCE. The exam consisted of photographs of patients, investigations, and scenarios of surgical situations. The format of the questions was multiple choice questions (MCQs) of a single best answer (SBA) type. Evaluation forms were filled by the students and the result of the exam evaluated using SPSS.

Results: Fifty eight students were examined. The examination results showed a normal distribution curve with a mean of 11.55 out of 20. The result of each student correlated well with their final result. Students' acceptability was high and most of them recommend this type of exam in all medical disciplines. More importantly is the immediate appearance of the result following the final submission of the answers.

Discussion: The CCE is used to assess higher knowledge including problem solving. It is used as non- interaction stations, while we commit interactive skills stations to the OSCE. The use of the Moodle program as a platform for the CCE has saved valuable time and allowed wider cover of curriculum than OSCE alone.

Conclusion: Using the Moodle program in CCE saves precious time and is a valid and efficient way of examination. It is popular with the students.

Take Home Message: Computers are increasingly being used in the assessment of medical students. The Moodle program is a useful platform to use in CCE.

Title: Technology as a driver – developing an ecosystem for healthcare quality with CPD

Author: Kristiina Patja

Institute: Pro Medico, Finland

ABSTRACT:

Background: Healthcare produces a large amount of versatile data currently named as Big Data. However, data on skills of professional and development competencies is yet missing. Learning is core of improvement and change, so far but investments are not visible and educational systems are separate from healthcare quality systems.

Summary: Pro Medico has initiated an ecosystem for professional development that can utilize all kinds of data sources that exist in 2012. Over the years existing data sources have been interfaced into a single mobile tool annually. Commitment of medical associations in sharing rather than excluding data sets has been a key.

Discussion: Quality improvement and safety are bound with patient data and CPD. When developing technological systems for either of

these, we need to include them all to support physicians in their way to excellency. Technology provides the tool, but we need will, vision and strategic leadership in uniting these together. Finnish example is given.

Take Home Message: CPD is a part of healthcare development and in the future technological solutions need to support this rather than formulate isolated systems. Big data is a driver for change, but physicians need to be involved.

Title: How Much Does Each Item of evaluation tool Explain Actual Performance of the Faculty Members?

Authors: Farahnaz Kamali, Nikoo Yamani, Tahereh Changiz, Azita Tavakoli

Institute: Isfahan University of Medical Sciences, Iran

ABSTRACT:

Background: Real improvement of faculty members' performance requires quality measurement. Faculty members are evaluated by students through online system by special forms for Theoretical or practical or clinical courses. The aim of this study is that it gives weight to each items of faculty evaluation questionnaire.

Summary of Work: This was a descriptive survey in Isfahan University of Medical Sciences. With The cluster sampling method were selected 464 of undergraduate students. The questionnaire was the faculty evaluation questionnaire with Likert scale, 1 to 6 (1Not at all to 6Extremely important). Data was analyzed by factor analysis using SPSS 21.

Results: The items "A profound mastery for demonstrating practical skills" (0.845), "Mastering scientific concepts and lessons" (0.830), "a close relationship between theoretical and practical lessons" (0.809), were the most important item. The items "student attendance in class" (0.075), and" the duration of the class" (0.380), were the least important items.

Discussion: Mastery is requiring because Transfer of scientific and practical content is the main goal of any instruction. Relationship between theoretical and practical skills needs to skill training. They don't like Force to attend in class, because they believed the classroom should be attractive and qualified.

Conclusion: This study showed that the students

are less concerned with the timely presence in classroom (teacher and students) but they are more concerned for teaching quality. For this reason, it is necessary to respect their comments and evaluate their professors with more important items.

Take Home Message: Considering the importance of the faculty evaluation questionnaire items, we can assign a specific weight to each item in questionnaire. This weighting can help to evaluate more effectively and correctly.

Title: Who is a good teacher in the Asian Context?

Authors: Ismail Burud, Siew kheong Lum

Institute: International Medical University, Malaysia

ABSTRACT:

Objective: To determine the relative importance of the twelve roles of a teacher in defining a good medical teacher in the Asian context from the students and faculty's perspective

Summary: This is a cross sectional, descriptive study using the questionnaire validated by Harden and Crosby. The 470 subjects comprise 369 preclinical and clinical medical students and 101 faculty members of the International Medical University, Malaysia. They were asked to choose, in order of importance, the three most important roles of a medical teacher from the twelve roles identified by Harden and Crosby. Their responses were rated on a Likert scale of 1-5 points and the data analyzed using SPSS version 21.0 using the Mann Whitney U-test.

Results: The teacher as an information provider was rated the first choice by 49.5% of faculty and 68.0 % of students, as a role model was rated the second choice by 39.7% of faculty and 12.2% of students. These two roles accounted for 82.2% of the preference of faculty and students. Other roles of the teacher as facilitator, assessor, planner and resource developer had low scores by faculty (10.9%) and student (19.6%). Both faculty (36.6%) and students (34.1%) rated their clinical teachers highly.

Conclusion: In an Asian society, the teacher is still highly valued as an information provider and a role model. Clinical teachers who are knowledgeable

and good role models are highly rated by both faculty and students. Universities would be prudent to attract and retain such teachers with incentives.

Take Home Message: Our study used the 12 roles of a teacher in an attempt to define the characteristics of a good medical teacher in the Asian setting. The teacher as an information provider, role model and facilitator were highly rated by both faculty and students in our study.

Title: An assessment of Clinical Nursing Preceptor's Teaching Competencies and Educational Training Needs

Authors: Chih-Ying Tu, Sheng-Hong Lin

Institute: Tri-Service General Hospital, Taipei, Taiwan

ABSTRACT:

Background: Clinical nursing preceptors play an important role in the clinical training of new staffs. Most of them claimed that their in-service training courses failed to adequately prepare themselves as good clinical preceptors. The requirements of clinical preceptors' need to be clarified.

Summary of Work: The purpose of this study is to investigate the training needs of clinical nursing preceptors.

A self-administered questionnaire was used to evaluate clinical nursing preceptors in a center in Taiwan. A total of 527 effective questionnaires were collected. The Data analyses were processed by descriptive statistics, independent samples t-test and ANOVA, by employing SPSS statistical software.

Results: As the results, the mean of self-rating score for the sample was 92.1 points. Two of the lowest scoring items were the communicating skills and the abilities to inspire learning interest and teaching with a various methods.

Discussion: The survey of the questionnaire in our study is the adequate and effective tool to evaluate the preceptor's ability for teaching. It also provides an access to find out the needs of clinical nursing preceptors, then improves the preceptor's teaching competence. The questionnaire also provides the rule to develop the better clinical nursing educating programs.

Conclusions: The traditional " teacher-centered " instruction model is still common in nursing education. However, this model does not provide a good two-way communication between the new staffs and preceptors. It neither inspires a critical thinking nor fosters a self-learning competence of the nursing students.

Take Home Message: To make sure what the clinical preceptors' needs and to establish the systemic training program for clinical preceptors based on the clinical nursing preceptor's teaching competence scoring can improve the education system of nursing training.

Title: Perspectives of Simulated Patients for Teaching Medical Students in the Pre-clinical Year

Authors: Sarawut Suksuphew, Autchara Ngamnoun

Institute: Institute Of Medicine, Suranaree University of Technology, Thailand

ABSTRACT:

Background: The teaching method with the simulated patients (SPs) in Suranaree University of Technology (SUT) started in 2013. The goal of SPs program is to provide the medical students to have similar experiences to that of actual patients. The program benefits the medical students by promoting the key competencies including their background knowledge, practical skills, and attitudes.

Summary of Work: To study the observations and opinions of SPs as assessor in the SP training program in 2017 at the Institute of Medicine in SUT. The data acquired by the study was gathered from questionnaires and pre-training interviews.

Results: There were thirty-one participants of SPs and in the age range of 15-65 year. The 80.6% of the SPs had previous experience of being SPs and 19.4% naive. The opinions of the SPs suggested that they could assess the medical students in the cognitive, skill and attitude domains were in the highest level of 67.7%, 61.3% and 81.8%, respectively. The competencies of the SPs need to be developed were understanding the role of illness (22%), the feedback medical students (19%), communication skill (17%) and emotional expression (17%).

Discussion: The SPs can reflect on attitude domain in professionalism of the medical students. The suggestions from SPs to medical students were eager to study hard and to respect the SPs as their teacher.

Conclusion: Preparing the SPs program as assessor systematically can perpetuate the medical student practice because SPs are vital to teaching program for medical students in the pre-clinical year. It has developed the medical students in background knowledge, practical skills, and attitude before going to clinical class and practice with actual patients.

Take Home Message: To be an assessor must be seriously trained especially in medical schools.

Title: As it is told in books: When teaching strategies become cooking recipes in the training of health professionals.

Authors: Cristhian Perez Villalobos, Giulietta Vaccarezza-Garrido, Olga Matus-Betancourt, Javiera Ortega-Bastidas, Cesar Aguilar-Aguilar, Horacio Salgado-Fernandez, Nancy Bastias-Vega, Ivone Campos-Cerda

Institute: Universidad de Concepcion, Chile

ABSTRACT:

Background: Pedagogical training for teachers has become a central concern in universities and the number of medical education units and educational training programs have increased. These are usually organized around teaching and evaluation methodologies that represent alternatives to traditional teaching, with a superficial concern for theoretical principles that support them.

Objective: To analyze the role of teaching strategies training in the pedagogical practices of health degrees teachers in Chile.

Method: Qualitative and relational research, according to Grounded Theory guidelines. Funded by the CONICYT FONDECYT 1161541 grant. Twenty-two teachers of health careers from traditional and private universities in Chile were interviewed, prior informed consent. Axial coding was used for analysis. The Ethics Committee of the Universidad de Concepcion and CONICYT endorsed this study.

Results: Axial coding showed that when a teacher is

learning a new teaching strategy that represents an alternative to traditional teaching and it is different from experienced pedagogical models, this teacher usually assumes it as an unmodifiable recipe. It is because health sciences teachers usually have not a theoretical understanding of this strategies. Induction in teaching, postgraduate's degrees in education and teaching experience with constructive pedagogical models facilitate a more comprehensive view of the purpose and the scope of the learned strategy, as well as its adaptation to the needs of each academic context.

Discussion: To learn teaching strategies as an applied rigid prescriptions is an efficient mechanism to improve training in health careers, due in this disciplines teachers often come from professions without pedagogical preparation.

Conclusion: A long-term lack of a deep theoretical understanding of educational action limits the scope of these strategies and impoverishes the teaching work.

Take Home Message: To learn teaching strategies helps you to improve your pedagogical practice, but it is not enough.

Title: Improving the Reliability of Cardiac Surgery Residency Admissions through Evidence-Based Standardization: A Pilot Study

Authors: Aaron Spooner, Andrew Maitland

Institute: Alberta Health Services, Canada

ABSTRACT:

Background: There have been many changes to the residency curriculum and training processes within cardiac surgery over the past number of years, especially with the drive towards competency-based education. These changes are reflected throughout the entire length residency training and affect learners of all PGME levels. One area which has remained relatively stagnant throughout Canada, however, is the undergraduate medicine to residency admissions process. Traditionally the process begins with the medical student submitting an application portfolio consisting of a personal letter, CV, letters of reference, and a letter of good standing from their medical school. If the portfolio is deemed to be acceptable an offer of invitation is sent to the medical student to

interview for the residency position. The interview process throughout Canada is nearly universally a panel interview consisting of multiple staff surgeons as well as a resident representative.

Methods: During the 2017 application cycle we have performed a pilot study at the University of Calgary to improve the application process by involving evidence-based practices, notably by the addition of multiple mini interviews and situational judgment testing. Our research goal is to determine if standardizing the cardiac surgery interview process can lead to a more reproducible selection of applicants with the program-desired individual traits. In addition, we have explored the aspect of medical student satisfaction and confidence in the new interview process.

Results: Applicant overwhelmingly favour the novel application process and feel it more adequately allows the interview panel to make more comprehensive ranking decisions. The time commitment for the interviewing surgeons was less than that of a traditional panel interview format. The addition of both situational judgment tests and multiple mini interviews allow more variables to assess applicants in an evidence-based fashion, allowing for surgeons to discriminate between applicants to a higher degree.

Title: 'Hot Topics' and 'Hot Tips' for safe prescribing: Utilising a short-form educational tool to enhance junior doctors' theoretical and practical knowledge of prescribing

Authors: Helen Clark, Yolinda Bullians, Wayne de Beer, Jules Schofield, Carol Stevenson

Institute: Waikato District Health Board, New Zealand

ABSTRACT:

Doctors are typically subjected to large amounts of information in their medical training intern years, yet lack practical prescribing knowledge and safe prescribing practice to ensure patient safety. Utilising national prescribing safety alerts and actual prescribing errors presented as 'Hot Topics' we offer 'Hot Tips for safe prescribing'.

Weekly formal education sessions are held for PGY1 and PGY2 doctors. We introduced 'Hot Tips for safe prescribing': 2-5 minute, one-slide

PowerPoint presentations at the start of these sessions. In order to determine information quality, educational value and impact on future prescribing habits, anonymised feedback was sought following each session.

Following the 'Hot Topic' introduction, decreases in common prescription-error-related phone calls from pharmacists and follow-up meetings regarding errors are evident. Interns indicated that the format was easy to follow, enhanced drug knowledge and prescribing ability. Facilitators voiced positive feedback, valued the information with future specialty-specific topics suggested by some.

Utilising a novel format, which breaks down a large and important field in medicine into short, manageable and relevant portions, has been well received and shows positive outcomes in reducing prescribing errors. Exposure to the wider clinical audience (e.g. Hospital Grand Round sessions and electronic notifications) is the next step.

Junior doctors have reported lack of confidence in prescribing knowledge. Large amounts of complex information, including some prescribing information is provided at orientation and first weeks of employment. This combination is not ideal for effective knowledge integration. 'Hot Topics' is a novel approach as an effective addition to enhance learning.

Information overload is a challenging issue for our junior doctors. Educators should be willing to explore more non-traditional methods of education in terms of presenting vital knowledge and competencies, particularly around areas of risk such as prescribing.

Title: Learning by Doing in Cataract Lesson – The CBME study

Author: Anant Bhornmata

Institute: Chumphon Khet Udomsakdi Hospital, Thailand

ABSTRACT:

Background: Teaching others is the highest average retention rates in the learning pyramid. To gain the knowledge and service mind in the community, cataract lesson was created in the community based medical education (CBME) study. The aim of

cataract lesson is to compare pre and post education of cataract knowledge in nursing home.

Summary of Work: Fifth year medical students were brain stormed to design the cataract lesson. Total 28 elders were participated in the study. A research utilized the questionnaire administered as pre-test (step 1), cataract education by using the poster and acting of the cataract story (step 2). And last post-test (step 3) was done and analyzed by dependent t-test.

Summary of Result: undred percent of elders are more than 60 years old. The result showed 89.29% (25 elders) have improved their knowledge (\bar{X}_{pre} , S.D.pre = 6.85, 1.84 and \bar{X}_{post} , S.D.post = 8.89, 1.40) with $p < 0.001$ and 7.14% (2 elders) have no difference in pre and post-test. Only 3.57% (1 elder) had failed in post-test.

Discussion: Almost elders were gained their cataract knowledge. This reflex to the CBME study that has high potential to teach medical students. Medical students have to learn the process to search and analyze know-how of cataract disease before teaching to the others.

Conclusions: The CBME model is the powerful technique to use as the tool for medical learning. All of medical students are agree with the CBME study. Therefore, this model has proposed to use in any block of medical learning and lead to improve their service mind.

Take Home Message: Learning with patients is not restricted only in the hospital. Community based learning is the one technique to initiate a good relationship between medical students and people in the community. Finally, medical students have more learning experience with CBME study

Title: The Art of Being Concise: Clinical Pearls

Authors: Laura Sheldrake, Jonathan Rial, Samantha Scallan, Johnny Lyon-Maris

Institute: Southampton GP Education Unit, United Kingdom

ABSTRACT:

Background: GP training can be challenging, covering summative assessments, honing consultation skills and looking ahead to independent practice. Teaching on clinical topics is limited, so the GP educator's trialled an approach

called 'Clinical Pearls'. This comprised presentations on hot topics. Evaluated as valued, the approach was challenging - to remain succinct, relevant and focused.

Summary of Work: A review of the 'pearls' led the educators to change approach and 1. adopt a tighter presentation style using PechaKucha (20 slides, for 20 seconds) and 2. to engage the trainees in presenting topics drawn on their 'hot' clinical practice. Early feedback from a pilot was used to refine the approach and plan next steps.

Results: The presentation format was well received by the trainees, who felt that the style was concise and easy to follow, and it suited the hot topic presentation requirements. It has led to the development of guidance on presenting a PechaKucha style 'Clinical Pearl' and how to make the process interactive.

Discussion: A busy curriculum requires educators to be creative in how they plan learning and engage learners. This proactive development of the curriculum will allow the 'Clinical Pearls' to remain structured, focused, and meet the wish of trainees for clinical input. As part of a second stage pilot, trainees will resource and present the 'Clinical Pearls' using PechaKucha. Further evaluation will be ongoing on a monthly basis.

Conclusions: This innovative approach to clinical teaching within the day release programme will allow a twinning of clinical knowledge within a tight presentation process, to highlight learning of practical relevance for the trainees.

Take Home Messages: Innovative use of learning technology and engagement by trainees allows them the opportunity to develop their skills in the challenging 'art of being concise' as well as sharing their 'clinical pearls.'

Title: Innovate Hand Hygiene Training among pre-clinical years student at king Abdulaziz University

Authors: Sarah Shaikhoon, Lama Rayyis, Anfal Nawawi, Baha Shaikhoon, Rahaf Alghamdi, Sabo Yusuf, Abeer Arab

Institute: Health Care - King Abdulaziz University Hospital Jeddah – Ksa, Saudi Arabia

ABSTRACT:

Introduction: Hand hygiene is one of the leading measures in preventing cross-transmission of

microorganisms². Compliance to Hand hygiene decreases the incidence of hospital-acquired infection⁴. Encouraging undergraduate medical students to realize the importance of hand hygiene and to correctly perform it will ensure strong emphasis on infection control, as it should become an educational priority⁵.

Our Aim: Exploring the effect of simulation-based workshop on belief, attitude and knowledge of pre-clinical year's medical students at King Abdulaziz University (KAU) in regards to safe hand hygiene

Methods: A pilot of 18 pre-clinical years medical student were randomly selected to voluntarily participate in a hand-hygiene simulation workshop, done at the clinical skills and simulation center of KAU by trained group of medical interns. A pre and post-workshop test was used to capture their hand hygiene related belief, attitude and knowledge.

Results: Regarding the pre-workshop knowledge test 30% of students had wrong answers. That number ratio decreased in the post-workshop knowledge test to 15% only. Student were asked to rate the importance of Hand hygiene as an infection control measure in the healthcare setting on a scale of 1-10 (where 1 least important and 10 most important) to measure the attitude. In the pre-workshop test only half of the students graded the importance of 9-10. While in the post-workshop test over 70% rated that high.

Discussion: Although the pilot sample may not drive statistical significance, the college has taken in consideration the importance of establishing hand hygiene education early before clinical years. The free comments of the students were positive regarding the early introduction of safety measure education and the experience of learning from almost-peer interns.

Conclusion and Take Home Message: There is insufficiency of Infection Control Implementation in the Curriculum for pre-clinical medical students that may affect patient's safety and need an urgent modification.

Title: A framework of participatory selection of faculty dean: The report of an experience

Authors: Ali Jafarian, Akbar Fotohi, Mohammad Jalili, Azim Mirzazadeh, Nooshin Kohan

Institute: Virtual University of Medical Sciences, Iran

ABSTRACT:

Background: Selection of the managers is a major concern of leading organizations. The present study reports the experience of Tehran University of Medical Sciences (TUMS) with regard to designing the framework for selection of faculty deans.

Summary of Work: A task force was performed in TUMS and supervised the project in a participatory way based on the following stages. In the first stage, related literature was reviewed for faculty dean selection frameworks, procedures, guidelines and protocols. In the second stage, three group discussion sessions were conducted with the 8-12 participants who had expertise in academic management and experience in administrative of the university. Thematic analysis technique was used to analyze data. According to the views of the experts and the results obtained from the review of literature, the selection framework for the faculty deans of Tehran University of Medical Sciences was designed with three phases of preparation, selection and appointment.

Results: Preparation phase includes organizational needs analysis, designing the selection strategy and determining of eligibility of candidate. In selection phase various methods and tools proposed to select the qualified people among the candidates and appointment phase includes formal appointing by the university dean and notifying the institution

Discussion: Due to the fact that in nowadays changing world, managing of any organization is considered as the most important and determining factor so, the present study suggest that selection systems are needed that will help ensure that managers are selected based on the competencies that are required to be effective managers

Conclusions: To more effectively select top managers in educational organization, human resource managers must tries to use a definitive framework.

Take Home Message: This paper develops a planning format which identifies policy, strategic and tactical dimensions which can be used in the

selection of top managers in educational organization.

Title: The effect of problem solving training on decision making skill in nursing students

Author: Sara Shahbazi

Institute: Shahrekod University of Medical Sciences, Iran

ABSTRACT:

Background : Nurses are going to decision making and decisions are complex and constantly every choice 's sensitivity is very high, so having the skills of decision making and problem solving skills, in them, is essential. Therefore the aim of this study was to determine the effect of problem solving training on decision-making skills in nursing students.

Summary of work: This study is a experimental study that performed in 30 nursing students in 2 groups of experimental (15) and control (15). Then, a short problem solving course based on 8 sessions of two hours during the term, was performed for the experimental group. To determine the decision making skill the self appraisal decision making questionnaire was used.

Results: The finding revealed that decision making score in nursing students is low and problem solving course, positively affected the students' decision making skill after the program ($P < 0.05$).

Discussion: In general, the finding of this study indicated the improvement of the students ' decision making skill. Therefore this kind of education on problem solving in various domains such as: education, research and management, is recommended.

Title: Perceived Stress and its influence among Undergraduate Dental Students in Lahore

Authors: Muhammad Jamal, Hussain Zain Gulzar, Ayyaz Ali Khan

Institute: Institute of Advanced Dental Sciences and Research (IADSR), Pakistan

ABSTRACT:

Background: In recent years, stress among dental students has appeared as a major concern among dental educators. This phenomenon has been reported in different curricula since the

1970s. Therefore, it is recommended to determine the sources of stress amongst dental students to avoid resultant detrimental effects on their physical and mental health.

Summary of Work: The study included 316 students studying BDS in 6 dental colleges of Lahore. The study, data entry and analysis were completed in a period of one year. Stress was measured using a modified Dental Environment Stress (DES) questionnaire which consisted of 38 questions that are applicable to undergraduate dental students.

Summary of Results: The primary sources of stress in the present study are five factors; assigned workload, self-efficiency belief, and faculty and administration matters, patient's treatment followed by their clinical performance pressure. These findings are almost universal phenomena in different countries with different education systems and curricula.

Discussion: The results of this study support the existing evidence in the previous literature, indicating that dental students are subject to numerous work-related and academic stressors that may adversely affect their health. This is consistent with findings of other studies.

Conclusion: It is difficult to eradicate all stressful problems in a dental education program. To become a responsible dental professional, students have to reach high levels of knowledge and professional skill, as well as developing good attitudes towards patient care: all within a short period of time.

Take Home Message: Student should be exposed to the nature of the profession and the study environment prior to applying. Entrance interview should be conducted to evaluate the candidate interest and suitability for the course. There is a need for the establishment of student advisors and counsellors combined with a faculty advising system.

Title: Learning styles and educational outcome in Thai medical students

Author: Pornpimon Kasemsook

Institute: Buddhachinaraj Phitsanulok Hospital Medical Education Center, ประเทศไทย

ABSTRACT:

Background: According to the Fleming VARK learning styles, there are 4 types which categorize the learners as visual (V), aural (A), read (R) and kinesthetic (K). This study aimed to explore learning styles among medical students and the associations between learning styles and achievement in national licensing examination step I (NLE1).

Summary of Work: A descriptive cross-sectional study was done by using questionnaires to collect the NLE1 results and Thai version VARK learning styles questionnaires which consist of 16 MCQ. Each question has 4 possible responses, of which the students were instructed to select one or more than one.

Results: The questionnaires were completed by 102 medical students. The most learning style types of medical students were multimodal (27.5%), reading (24.5%) and aural (21.6%) respectively. Most students who passed the NLE1 had a visual style (100%).

Discussion: We expected the students who had better outcomes in NLE1 were aural or read styles because the pre-clinical education tends to be lecture-driven. In contrast, most students who passed the examination had a visual and kinesthetic style respectively. There might be other factors have influenced the learning.

Conclusions: Most medical students have the multimodal learning style and visual type prefer better outcomes in NLE1.

Take Home Messages: There is variation in learning styles among the medical students. The way to help them to achieve the examination is let them know their styles. This information is useful for helping them to develop ability in less dominant styles while improving ones that they use well.

Title: The Relationship between Learning Styles and Block Examination Success Rates from the Medical Faculty Students of Abulyatama University

Authors: Ade Kiki Riezky, Rauza Akmalia

Institute: University of Abulyatama, Indonesia

ABSTRACT:

Everyone has different learning styles and each

learning style has its advantages and disadvantages. Only when students are able to understand their learning style, then the student learning process will be more effective and efficient. The most commonly known and easy learning styles to use are the Visual, Audio, Read, and kinesthetic (VARK) which were first introduced by Neil Fleming. The aim of this study is to know the relationship between learning style and examination success rates from the medical student. The method of study used was an observational analytic with a cross-sectional design. The research was conducted in January 2016 and the population used were students of the Faculty of Medicine Abulyatama. The sampling technique is random sampling (200 samples) and questionnaires along with block exam results were utilized for data collection. The data was then analyzed using chi square analysis with SPSS Program. The results show that 68 students (34%) from the Faculty of Medicine of Abulyatama University Unaya dominantly has audio learning style, 64 students (32%) with a dominantly visual learning style, 61 students (30,5%) with a dominantly kinesthetic learning style, and only 7 students (3,5%) are dominantly with the read learning style. Meanwhile, the statistical analysis (Chi-Square Test) value obtained α of 0.870 ($\alpha > 0.05$). The result shows there is no relationship between learning style and the level of success in the block examination.

Title: Psychometric properties of Sense of Community Scale (CCS) in virtual environment

Authors: Nooshin Kohan, Mascha Verheggen, Jeroen Donkers, Jean van Berlo, Dario Cecilio-Fernandes, Cees van der Vleuten

Institute: Virtual University of Medical Sciences, Iran

ABSTRACT:

Background: Fostering a Sense of Classroom Community is considered to be associated with the reduction of student's dropout rate in an online environment. Many scales have been developed to measure sense of community in online and traditional learning, and Rovai's Classroom Community Scale has been widely used. This study

was designed to examine the psychometric properties and the theoretical structure of the Classroom Community Scale.

Summary of Work: A total of 215 postgraduate virtual students responded to the Classroom Community Scale. A measurement model was evaluated using confirmatory factor analysis to determine the adequacy of goodness-of-fit to sample data.

Results: The confirmatory factor analysis provided valid data that the Classroom Community Scale with a two- factor structure is a valid scale with adequate model fit. The two subscales of connectedness and learning were also valid and reliable.

Discussion: the results supported the high reliability, face and content validity of all items of the scale.

Conclusion: The 20 item Classroom Community Scale provides a valid and reliable scale to measure sense of community among postgraduate medical education students.

Take Home Message: The Persian version of Classroom Community Scale is a psychometrically sound scale to measure sense of community in virtual environment; it is a valuable assessment tool that can be used for various purposes: (1) to measure sense of community in online learning; (2) to measure the efficacy of courses designed to promote online classroom community; (3) to reduce feelings of isolation experienced in online learning, (4) to create classroom and school environments that promote community learning, and (5) to enhance student satisfaction, learning, and persistence in virtual environments.

Title: Gamification can unlock further learning gains in undergraduate ophthalmology without additional teacher commitment

Authors: Ben Charmer, Jeffry Hogg, Richard Frearson, Gordon Lau

Institute: Newcastle University, UK

ABSTRACT:

Background: Gamification is an instructional design approach with proven efficacy as an educational adjunct outside of healthcare. It maximises student engagement by enhancing the

intrinsic motivational value of tasks. Adjuvant gamification in undergraduate ophthalmology teaching may help prevent the cognitive overload and disengagement which often result from teaching time restrictions.

Summary of Work: During study leave 52 final year students volunteered to solve a curriculum based ophthalmology puzzle in 13 unsupervised teams. Student entry knowledge was assessed by MCQ tests completed beforehand. Each student completed a semi-quantitative questionnaire regarding their experience consisting of Likert scores of agreement out of 10 following puzzle completion.

Results: Learners enjoyed the puzzle (mean 8.8/10, SD 0.28), and felt it was an efficient use of time (7.5/10, 1.3). Students reported learning from teammates (7.5/10, 1.3) more than they taught them (5.1/10, 2.1). Mean group test score was positively correlated to learning from ($p=0.006$) and teaching teammates ($p=0.031$).

Discussion: Prior to attending the session learners felt motivated to complete preparatory work (6.7/10, 1.5). They felt comfortable answering incorrectly (7.8/10, 1.3) demonstrating confidence which is a core contributor to motivation. Adjuvant gamification offers efficiency for teachers as time expenditure in puzzle design was offset by the peer-led nature of teaching.

Conclusions: Gamification in undergraduate ophthalmology can complement traditional teaching methods by engaging students in structured team based learning. Students report effective learning despite low confidence in their ability to impart knowledge to one another and the absence of a teacher during the task.

Take Home Message: Adjunctive gamification engages students in effective, team based learning in ophthalmology, a specialty where students often report low confidence.

Gamification should be considered in undergraduate medical teaching as a means of enhancing educational yield when capacity for teacher led learning is restricted.

Title: Occupational Therapy, an emerging and innovative role in Primary Care

Authors: Emily Chamberlain, Juliette Truman, Amanda Pike, Samantha Scallan, Johnny Lyon-Maris

Institute: GP Education Unit - Southampton, New Forest and Jersey, UK United Kingdom

ABSTRACT:

A. GPs in the UK are under significant pressure, providing 60 million more consultations than five years ago. This crisis in the delivery of primary care has highlighted the need for workforce development.

Occupational Therapists (OTs) are highly skilled practitioners working across health and social care sectors. Educated at pre-registration level to work with physical and mental health issues, OTs can potentially provide valuable support to GPs. To date OTs are not routinely utilised within the Primary Care workforce.

B. For over ten years the University of Southampton OT Department has developed placements in a range of innovative settings for students, but never previously in primary care. We identified three challenging areas where OTs could provide significant value: Frailty, Mental Health and Learning Disabilities.

Following discussions with the University and four local Primary Care services, role-based placements for OT students were developed across Hampshire. These placements consist of ten-week clinical attachments in primary care working within multi-professional teams.

C. Early analysis of the data suggests OT skills can be utilised in General Practice in a number of ways: potentially saving face-to-face consultations with GPs. Further data collection aims to gather in-depth qualitative data through semi-structured interviews with the students, service providers and patients.

D. Through these placements, we hope to enhance knowledge of the potential for OTs working in primary care and helping address the workforce crisis.

E. OTs are an under-utilised profession in frontline primary care. The scheme exposes students to the primary care setting early in their career, in order to

promote recruitment to the future workforce.
F. The role of OT has not been well researched as a 'first point of contact' healthcare professional in primary care. OTs' broad training in mental health, physical frailty and learning disabilities are potentially valuable to service delivery in General Practice.

Title: Psychometric Properties of the Communication Skills Attitude Scale (CSAS) Measure in a Sample of Iranian medical students

Authors: Afsaneh Yakhforoosha, Mandana Shirazi
Institute: Qazvin University of Medical Sciences, Iran

ABSTRACT:

Background: Communication skill (CS) has been regarded as one of the fundamental competency for medical and other health care professionals. Student's attitude toward learning CS is a key factor of designing educational interventions. The aim of this study was to assess the psychometric characteristic of the Communication Skills Attitude Scale (CSAS), in an Iranian context.

Summary of Work: Psychometric characteristic of the CSAS was assessed by using a cross-sectional design. The face and Content validity of scale was estimated through expert consensus. Two methods were used to assess the reliability of the CSAS. Chronbach's alpha coefficient and the intraclass correlation coefficient (ICC). Validity determined via exploratory factor analysis, Convergent and discriminant validity.

Results: Intraclass correlation coefficient for each item was 0.7-1, The Cronbach's alpha value of global CSAS was 0.84 which demonstrates excellent reliability of the questionnaire. The CVI and CVR scores of items were CVR=0.74 and CVI =0.97. Result of PCA revealed four factors structure and these factors could explain %43 of the total variance.

Discussion: Results have shown that administration of CSAS in Iranian context reflected a good internal consistency (0.84). Content and face validity of the instrument was approved through group of experts. Regarding construct validity, principal component analysis (PCA) revealed a four-component structure named as

below

Important in medical context, Excuse, Learning and Overconfidence.

Conclusion: The Persian version of CSAS to assess attitudes regard communication skill is a valid and reliable instrument in the Iranian context.

Key Words: communication skills, attitude, Psychometric Properties

Title: Hajj and Umrah Longitudinal Module as filed placements during Hajj and Umrah seasons as core curriculum

Author: Rania Zaini

Institute: Umm Alqura University, Saudi Arabia

ABSTRACT:

Hajj and Umrah in Makkah is considered priority health concerns of the community of Makkah and the Faculty of Medicine, Umm AlQura University (UQU). The Faculty's social accountability emphasise its role toward Pilgrims' welfare. The Faculty reformed' curriculum lunched in 2016. A distinctive feature of the reformed curriculum is Hajj and Umrah longitudinal module, which lasts for the five-year MBBS. Students are required to complete two-structural placements during Hajj or Umrah seasons before internship as a program request.

This study explored students of the reformed curriculum experiences during their first structural placement program during Hajj and Ramadan seasons 2017. Three aspects of students' experiences were investigated; the importance of Hajj and Umrah longitudinal module, the educational and clinical value of the filed placement program, and students readiness to the experience.

About 120 (50%) first year medical students participated in the first structural placement during Hajj and Ramadan seasons 2017. 75% (90) of them completed an electronic survey. The majority of respondents were male (55%). There was a general agreement about the importance of Hajj and Umrah Module in the reformed MBBS program and its value in developing students' competencies and their role as health advocate. Respondents presented agreement of the educational value of Hajj and Umrah filed placement program;

developing clinical skills and knowledge, professionalism, communication skills, and patient-centre practice. Students were prepared academically, psychosocially, and professionally to their role in field placement.

Hajj and Umrah Longitudinal module and the field placement during Hajj and Umrah seasons were considered rich experiences by students. It enables students to develop many educational outcomes and emphasised Saudi MEDs competences. Moreover, It also developed students' responsibility toward Makkah and Muslim communities, and fulfil the social accountability of UQU Faculty of Medicine.

Title: Capacity building in Bio risk reduction through training peripheral Laboratory technicians of Guinea - 2016

Author: Alpha Mahmoud Barry

Institute: University Conakry Guinea, Guinea

ABSTRACT:

Context: The West African countries of Guinea, Liberia, and Sierra Leone have been most severely affected, with 99.9% of recorded EVD cases.

Santé plus Organization with the support of the National Institute of Public Health (INSP), CRDF GLOBAL and EMPHNET organized seven (7) training sessions to contribute to the reduction of infectious risks and to improve the skills of peripheral laboratory agents in Bio risk.

Objectives: Organize a training workshop in each of the 7 health regions of Guinea including Conakry Increase the skills of 120 participants in Bio risk,

Contribute to Guinea laboratories' system performance on bio threat and bio risk reduction.

Methodology: Santé Plus Organization held meetings with stakeholders to get them involved in the training sessions

During each session, the facilitators used the andragogy method

The modules covered the following major topics Roles and responsibilities of the Laboratory system for a better control of an Epidemic

The 10 major epidemic diseases under surveillance Bio risk and biobank management, (Standard operating procedures).

Management of Infectious waste and Hazard and

risk communication in the laboratoire

Biologie and toxin weapon convention

Results: After 6 months of training sessions

More than 122 lab technicians accomplished (certification) their training

Skills (knowledge and practice) of regional lab technicians were improved

Average of participants' knowledge increased up to 60%

Conclusion: At the end of the training sessions, participants and stakeholders noticed:

Full implication of administrative and health Authorities

The great interest and satisfaction of participants to the topics covered

The interesting training techniques used (including the pedagogic tools in line with the modules)

The professional quality of the training session process

Recommendations: Develop and implement Awareness Project targeting high risk groups (on biological agents risk reduction in Guinea Create a Bio security Association and Join the African bio security organization

Title: Reflection revisited: physicians' experiences with reflection in professional practice

Authors: Elisa Bindels, Christel Verberg, Albert Scherpbier, Sylvia Heeneman, Kiki Lombarts

Institute: Maastricht University, Netherlands

ABSTRACT:

Background: With the introduction of competency-based education, physicians are expected to reflect on competencies that extend beyond medical knowledge and skills, such as management, team building, professionalism and interpersonal communication. Following this shift in attention, reflective practices need to be revisited and adjusted. In light of this new context, we explored how physicians experience reflection.

Methods: We conducted a qualitative study using semi-structured interviews with 14 hospital-based physicians from various specialties and institutions. During the interviews, we explored physicians' associations with reflection and delved into underlying reflection experiences. The interviews were transcribed verbatim and were

analyzed iteratively.

Results: Reflection was considered to be at the heart of safeguarding and continuing optimal professional performance. It was experienced as a tool for adjusting medical knowledge and skills on the one hand, and for handling the relational aspects of daily practice on the other hand. Participants felt that reflection was both an individual 'dialogue' with oneself as well as a collective dialogue in the form of consultations or group discussions with colleagues as a way to reflect collaboratively and link reflection to action. It appeared difficult to explicate how these dialogues evolved; this difficulty applied more to the context of management and organization than to the context of actual medical performance. Within the context of management and organization, reflection was more often linked to action outside one's own sphere of influence. This was where factors as group dynamics and power issues came into play. Participants felt it was a challenge to strike a balance between self-interest and group interest.

Conclusion and Discussion: This study underlines the importance of reflection on 'relational' competencies such as communication, collaboration and organization. Future research must provide insight into actual reflection processes and power issues within health care teams as an influencing factor herein.

Title: Student anxiety and its perceived sources during various clinico-dental situations among dental students in Melaka, Malaysia

Authors: Renu Sarah Samson, Eby Varghese

Institute: Melaka-Manipal Medical College, Malaysia

ABSTRACT:

Background: Learning various clinical skills causes students to experience anxiety. Excessive anxiety among students can impair their drive, aspiration, academic performance and learning as well as affect health and relationships. Previous studies among dental students in Malaysia focused on general causes of anxiety but not particularly on anxiety provoking clinical situations.

Summary of Work: A cross-sectional study was carried out to determine the prevalence of anxiety

and its perceived sources during various clinico-dental situations among dental students in Melaka using Modified Moss and McManus questionnaire. The questionnaire covered dental-specific perceived sources of anxiety that were assessed using a 4-point Likert scale.

Results: Overall mean anxiety score was 91.48. Mean anxiety score of females and males was 92.44 and 89.35 respectively. Among various ethnicities, Indians (96.18) exhibited highest mean anxiety score. Mean anxiety scores of third, fourth and fifth year students was 101.07, 92.06 and 85.12 respectively. Deficiencies and errors in treatment was rated as the highest anxiety provoking clinical situation.

Discussion: Avoidance of risk-taking situations among females results in a tendency to scrutinize details to avoid clinical errors adding to the anxiety level. Sudden transition from pre-clinical to clinical atmosphere could have caused higher anxiety levels among third year students. Errors and deficiencies in treatment can generate anxiety due to its medico-legal consequences.

Conclusion: Within the limitations of this study, it can be noted that dental students in Melaka had moderate levels of anxiety and that gender, ethnicity and year of study may have an association with the levels of anxiety.

Take Home Message: Minimal levels of anxiety may aid in improving alertness and response to emergency situations. However, considering the detrimental effect of extreme anxiety, it is imperative to identify its sources and plan interventional programmes for stress management and to build teacher-student interpersonal relationships.

Title: A survey on morning report Conduct in major department of Educational hospitals in Shahrekord University of Medical Science in 2015 -2016

Author: Firozeh Majidi

Institute: Shahrekord University of Medical Sciences, Iran

ABSTRACT:

In this study, we evaluated morning reports in main wards of our teaching hospital according to national standards. we performed this study to

clarify the weaknesses and strengths of morning report sessions to help increasing the quality of this important training method.

Method: It was a cross-sectional study and at first we gathered national standard of morning report by health ministry. Then we prepared an assessment list according to these standards. Our assessment list was evaluated and confirmed by 3 clinical professors. The assessment list was filled by direct during morning report.

we gathered data of 22 morning report, and spss version 18 was used for data analysis.

Result: The mean duration of each morning report was 49.36 + 13.6 minutes (max: 60 minutes and min 25 minutes). In 20 of 22 sessions, the professors conducted morning reports. In most cases (63.6%) one patient was introduced. The patients were introduced mainly by intern (54.5%) and residents and interns together (45.5%). The mean duration of introducing each patient was 38.9 minutes. The duration of 45.5% of morning reports was lesser than standard. The 50% of morning reports complicated cases were introduced and in 13.6% common diseases were discussed.

In 50% of sessions oral feedbacks were given to interns or residents. In none of morning reports written evaluation and feedback were not accomplished.

Conclusion: This study showed that there were no specific role for residents and interns. Also medical students did not involve in morning reports. Another weakness was limited number of patients introduced in each session.

Take Home Message: Our study found that although there are some deficiencies in morning reports, our department are committed to this educational program. Increasing knowledge about morning report standards and educational program for increasing its quality could be offered

Title: An Evaluation of a Modified Longitudinal Placements Pilot. Challenges and Lessons Learnt

Authors: Guy Mollet, Hisham Khalil

Institute: Plymouth University Peninsula Schools of Medicine and Dentistry, United Kingdom

ABSTRACT:

Background: A modified longitudinal placement

(LP) was piloted for third year medical students in 2014-2015. This was for 10 weeks for half a day each week. Participants spent time in the same clinical area. This included hospital wards and operating theatres, GP practices and Specialty clinics. Students followed patients through their care pathways.

Methods: An evaluation of the LP pilot took place using a survey monkey questionnaire for participating students and clinical providers. This was followed by a focus group of 8 participating students, feedback from the administrators implementing the pilot and assessment of 500 words reports submitted by students on their LP experience.

Results: Twelve students out of 26 responded to the questionnaire (46.15%). Only 2 students (16.67%) rated the overall experience positively. 11 students (91.67%) would not recommend the implementation of the pilot. The focus group areas of dissatisfaction included similarity to existing placements, challenges with organisation and encroachment on self-directed learning time. Four out of 7 providers recommended implementation with organisational issues and student engagement a concern.

Discussion: The students' feedback was somewhat different to that of providers. Organisational issues were a common area of concern for students, providers and administrators with the current model of LP. Students felt very strongly that using their self-directed learning time for LP had an adverse effect on their studies.

Conclusions: A number of factors influence students' perception of longitudinal placement models. A model that doesn't replicate experiences in conventional clinical placements, is easy to manage/organize and doesn't encroach on self-directed learning time should result in better student engagement and acceptance.

Take Home Messages: Logistic consideration may pose a barrier to implementation of a modified Longitudinal Placement pilot

Title: Assessing the validity and reliability of SPIKS questionnaires regarding breaking bad news at TUMS

Authors: Mandana Shirazi, Firooz Nasirzadeh
Institute: Tehran University of Medical Sciences and Karolinska Institute, Iran

ABSTRACT:

Background: Considering this fact that in necessary conditions physicians should breaking bad NEWS to their patients and families, they have to obtain essential behavioral skills during their educations. Main aim is to assess psychometric properties of SPIKE in Iranian context.

Summary of Work: This is a descriptive analytic study which has been conducted in Iran to standardize the validity and reliability of Spike questionnaire about breaking bad NEWS to the patients. In first step, the questionnaire was translated from English to Persian and also back translate and contextualized.

Summary of Results: To evaluate its structural validity it was distributed among 100 medical residents and finally the data was analyzed with statistical software. The results were discussed by expert professions. Its reliability was also assessed by Cronbach's Alpha and also Test - retest methods by considering the results, the final questionnaire on this issue was designed.

Due to our results, validity and reliability of the questionnaire was confirmed. Cronbach's Alpha test showed its internal solidarity more than 0.7 and ICC was measured as .903 that all confirmed the questionnaire reliability.

Discussion: Spike questionnaire can be a valid and reliable method to evaluate the awareness of physicians in breaking bad NEWS to the patients and their family members

Conclusion: Breaking bad news is very important issue for health care and patients and family. Based on the results SPIKE is valid and reliable in Iranian context however, not many studies have evaluated it in their own context.

Take Home Message: Those issues seems to be necessary to add in national curriculum in Iran as well as other parts of the word.

Title: GP Self-Test

Authors: Chantal Simon, Kofo Jegede
Institute: University of Bournemouth, United Kingdom

ABSTRACT:

The UK Royal College of GPs produces multiple choice questions to support its educational provision. SelfTest aims to bring these together to provide an educational resource that GPs can use for examination preparation, educational needs assessment and as an educational tool to revise knowledge in any area of the GP curriculum.

Summary of Work: Questions were collected from all educational resources produced by the RCGP and placed into a single database. A user interface was developed to allow GPs to select the type of questions they would like: mock examination papers (timed/untimed); across curriculum learning needs assessment; or questions on a particular curriculum topic.

Summary of Results: SelfTest gained more than 1000 subscribers in the first month after launch. Users are provided with a summary of their performance with space to add their reflections. Future developments will enable whole organisation educational needs assessment and clinical skills assessment.

Discussion: As well as providing examination practice, SelfTest is the only tool that provides cross curriculum learning needs assessment for trained doctors. This is useful for individual GPs to establish educational priorities but can also be applied more widely looking at organisational or regional educational needs to enable targeted educational provision.

Conclusions: SelfTest makes better use of existing RCGP resources. It is already a popular individual educational resource, and could be used to assess whole organisation or regional educational needs thus enabling better targeting of educational resources. Future planned developments include interactive clinical case scenarios and special interest topics.

Take Home Messages: SelfTest is a popular new resource that collects together questions produced by the Royal College of GPs from all its other educational products

- SelfTest can currently be used for education needs assessment, personal learning and examination preparation
- Future plans include Clinical Skills Assessment practice and organisation-wide education needs assessment

Title: Psychiatric Learning and Meditation

Author: Kanoknan Intabtim,

Institute: Buddhachinaraj Hospital, Thailand

ABSTRACT:

Background: Many psychologists agree that meditation has a role to improve learning, absorb and understand new information, adapt to any situation and become more emotionally mature. Our Psychiatric department was interested in the result of meditation, so we have session for students to meditate in classroom before Psychiatric learning about 30 minutes from Monday to Friday. When they finished our Psychiatric course we examined student's satisfaction in meditation and compared student's satisfaction according to gender.

Method: This research is a cross sectional descriptive study. The subjects are the 4th year of medical students in academic year 2016 who attended in Psychiatric department totally 46 students. Five-level Likert scale questionnaire including 7 aspects was administered according to student's satisfaction. Then data were analyzed using frequency, percentage, mean and we compared student's satisfaction according to gender by Mann-Whitney U test

Result: Factors which affect student's satisfaction are shown in mean score as following, place of meditation (mean 3.91), number of meditating days (5 days per week) (mean 3.93), duration of meditation (30 minutes daily)(mean 3.91), emotional benefits of meditation (mean 3.74), increase concentration while studying (mean 3.83), understand new information (mean 3.70), impression in meditation (mean 3.80) and adapt to any situation (mean 3.74).

Discussion: The factor which affect the student's satisfaction the most is number of meditating days (mean = 3.93) while the least is help to understand new information (mean 3.70). There is no

significant different among male and female on each aspect.

Conclusion: All aspects of student's satisfaction are average in scale 3.41-4.20. The other recommendations from students are meditate in a calm place such as natural place with comfortable seat, turn on the classic song during meditation.

Take Home Message: The 4th years of medical students are increased concentrated and understood new information by meditation.

Title: What are the qualities of a successful program director? A needs assessment qualitative study

Authors: Nazih Youssef, Vanda Abi Raad, Nadia Asmar, Sola Bahous

Institute: Lebanese American University, Lebanon

ABSTRACT:

Background: Multi-source feedback is regularly used to assess the performance of program directors and to guide their improvement. Faculty development programs targeting educational leaders try to fill a gap between what is expected from a position and the perceived performance. Although desirable attributes were examined, residents' opinion was not previously explored.

Summary of Work: To explore the perspective of residents about the qualities of successful program directors at the Lebanese American University medical school, we administered an online survey. Responses were analyzed inductively using the grounded theory. To secure trustworthiness and triangulation, we verified our analysis with residents and program directors using focus groups.

Summary of Results: We obtained 50 responses (response rate 57%). Analysis revealed 3 themes and 13 subthemes after the focus group discussion. The 3 identified themes were the following: Professional Attributes (leader, manager, teacher, clinician, and medical educator), Personal Attributes (supportive, fair, professional, and dedicated), and Interpersonal Attributes (available, flexible, communicator, connected).

Discussion: Professional attributes, more specifically expertise in medical education, were the most frequently cited theme and sub-theme,

followed by interpersonal attributes, especially availability and flexibility. The availability of program directors is consistent with the frequently expressed needs of residents to communicate their concerns. Interestingly, personal attributes were the less frequently cited.

Conclusions: Residents have similar perception of successful program directors by comparison to other stakeholders despite having different needs. However, they prioritized these attributes differently and seemed to value more interpersonal traits over personal qualities. Interestingly, they noticed the impact that expertise in medical education has on the success of the program.

Take Home Messages: Faculty development programs and the appointment/reappointment of program directors should consider the needs of residents and their perception of a successful program director. This enforces context specificity. Additionally, faculty development programs should aim at developing expertise in medical education.

Title: A program evaluation tool for institution with limited resources

Authors: Sharifah Sulaiha Syed Aznal, Vishnadevi Nadarajah

Institute: Internatinal Medical University, Malaysia

ABSTRACT:

Background: Programme evaluation is vital in ensuring quality but exorbitant cost may hinder its sustainability in an institution with limited resources. A simple tool using "Moodle quiz" and 'google spreadsheet' is used to evaluate Medical students' perception on their achievement of predetermined clinical competencies.

Summary of Work: The institution has set its own set of Clinical Competencies (CC) based on the expert opinion on clinical faculties, National and International Standards. It is used as part of our training and assessment of 9 areas of clinical skill. A quiz or self- assessment of the CC with a rating scale of 1-4, reflecting the Miller's pyramid is made available on 'Moodle'.

Summary of Results: We analyzed responses from 392 final year students of 4 cohorts from 2013 to 2015. The feedback from the quiz was

automatically generated using color-codes to determine level of achievement of competencies (Red- underachieved, Yellow- achieved and Green - overachieved. An individual color-coded data is shared with respective mentors for immediate feedback and analysed by programme coordinator for evaluation of CC programme on a 'google spreadsheet'.

Discussion: Students and faculties found the colour - coding system makes feedback process easier and more focus. The programme coordinator was able to identify areas of CC that need to be revisited based on the consistency of red highlights that appear in different cohorts.

Conclusion: A simple technology using an inexpensive method could assist any academic programme to enhance its feedback provision in competency based training and for quality enhancement.

Take Home Message: As we attempt to meet the global needs for highly competent health professionals, institution must be innovative with methods that make learning meaningful and valuable within its constraint of resources.

Title: Practical approach of clinical training in Romania: setting the frame for clinically competent physicians

Authors: Teodora Atena Pop, Ofelia Mosteanu, Lucian Mocan, Teodora Mocan, Soimita Suci, Anca Dana Buzoianu

Institute: University Of Medicine And Pharmacy "Iuliu Hatieganu" Cluj- napoca Romania

ABSTRACT:

Background: A smooth transition from undergraduate to graduate physician depends on skills and competency development during undergraduate programs. This study examined if previous exposure to real-life and simulated immediate care specialty- specific scenarios makes a difference when medical students enter the residency training within hospitals.

Summary of Work: 65 Romanian gastroenterology residents were asked to complete a survey regarding factors influencing satisfaction of residents after 2 subsequent years of training program. 34 of them were required to pursue

previously, as medical students from preclinical and clinical years, theoretical gastroenterology training, training in patient management for gastroenterology various medical and surgical specific scenarios, hands-on endoscopy and ultrasound simulator sessions, followed by an examination to validate all technical aptitudes.

Summary of Results: The main complain was that most learning prospects depend on the available patients at a certain moment due to the fact that the clinical training programs are not structured. The majority of the residents were involved in the management of cases, yet 24% of 1st year residents were not engaging in patient management. Thus not all residents are participating at the expected level. The residents previously exposed as students to the gastroenterology training felt less a theory-practice gap. 95% of the residents expressed the need for additive skill practice during undergraduated clinical years.

Discussion: Skill practice during clinical training years is not just conditioned by the frequency and diversity of cases. The resident's level of involvement also plays an integral part of whether skills are rehearsed. Supplying students with skills to use, making use of deliberate practice and giving feedback is particularly important in the clinical internship.

Conclusions: Teaching in a multidisciplinary approach seems to be important factors for ensuring practical relevance. Universities should also track students after graduation in order to adjust to the needs of the working market.

Title: Predictive value of the Bender Gestalt II visuospatial test for performance of second year students in Class II cavity preparation on phantom head teeth

Authors: Alia Ahmed, Syeda Razia Bukhari

Institute: Riphah International University, Islamabad, Pakistan

ABSTRACT:

Background: Psychometric tests are used to measure a specific aptitude and to predict educational achievement. Where the achievement in question, namely accurate cavity preparation, is in the psychomotor domain, the test should also be

targeted at this ability, rather than the conventional entry test which only evaluates knowledge. One such test is the Bender Gestalt II test. The aim of this study was to see if better performance on this test had any association with the accuracy of disto-occlusal cavity preparation

Summary of Work: Students of second year BDS were taught cavity preparation of various types on phantomhead teeth during second year. Both formative and summative evaluations were recorded. Out of a class of 75, 61 consented to participate in the study. The test was administered with each item to be drawn within one minute.

Second year students prepared one occluso-distal cavity (Class II according to Black's cavity classification). The results were marked on a checklist. Data analysis was carried out on SPSS version 21 using the Pearson's Correlation test.

Summary of Results: For the Bender Gestalt Test, total raw scores ranged from 14 to 38. The visual motor index ranged from 72 to 112. Percentile ranks ranged from 3 to 79. Scores obtained for the cavity preparation ranged from 1.65 to 4.35 out of 6.

By calculating the Pearson product-moment correlation coefficient, it was found that the BGII test was not significantly correlated with cavity preparation scores ($r=0.2$, $n=61$, $p\text{ value} = .125$).

Discussion: The Bender Gestalt II test evaluates perceptual/visual motor integration. It is also used to determine if there are neurological deficits which reduce motor coordination. It has also been used to predict academic performance in school children. We used this test to see if it could predict effective learning of the motor skills required for cavity preparation. No other study could be found with which to directly compare results. However, the DAT used in Canada which incorporates two and three dimensional problems and a carving dexterity exercise reports a good correlation in pre-clinical achievement, but not for clinical performance. Other tests used were the tweezer dexterity test and mazes. Manual dexterity alone was not significantly correlated with performance, in fact it tends to improve with practice. Mazes, however significantly predicted performance in performing an anastomosis on fresh porcine

jejunum.

Conclusion: The Bender Gestalt II test of perceptual motor function are is not sufficient to predict performance in cavity preparation for disto-occlusal cavities in lower first molar teeth.

Take Home Messages:

- 1) More research needs to be done to determine which tests are predictive of performance in cavity preparation.
- 2) Assessment of a greater sample size may lead to significant results.

Title: Promotion of sensitivity and motivation of students to respond to the real needs of the community via development and implementation of an accountable and community-oriented curriculum:

Authors: Firozeh Majidi, Massomeh Moezzi, Firzoe Majidi, Mehrdad Saberzadeh

Institute: Shahrekord University of Medical Sciences, Iran

ABSTRACT:

Background and Aim: Social accountability and delivery of health services based on priorities are health needs of the community, and medical universities hold responsibility of delivering services using an accountable approach. We sought to use students' presence, delivering services, and participating in activities accountable for the community health, as one of the strategies for promoting social accountability in medical curricula.

Methods: In this work, considering situation, strengths and weaknesses, study phase, experience with different projects, based on the community's needs, students were enrolled.

Results: From most participants' perspectives, they were highly or very highly familiar with the health realities and needs of the community through attending various community-oriented projects, and these activities were effective in sensitizing them and increasing their motivation. Conducting these activities caused highly and very highly promotion of their accountability for the community's needs, and service receivers reported to be satisfied with this relationship.

Conclusion and Recommendations: This project

was very useful to increase students' sensitivity and motivation to respond and pay attention to the community's needs. It is recommended to integrate scientific-applied activities and students cooperation in this project and include it as an optional course for students to realize accountable and justice-oriented educational

Title: Using Mixed methods research approach to measure the Educational Needs Assessment in Medical Education

Author: Mansour Alfadhel

Institute: King Fahad Medical City, Saudi Arabia

ABSTRACT:

The maintenance of professional education, competency and practice usually have been dependent on some form of continuing professional development, and the healthcare provider who has completed training and are thought qualified to practice, are expected to maintain consequently spending a considerable amount of time engaged in continuing medical education. Studies have shown that change in healthcare practitioner behavior is more likely to occur when a meaningful assessment of health professionals' learning needs serves as the basis for determining the content of continuing medical education. Adult's value learning that is relevant, practical and applicable to their situation (1). Conducting an assessment is a way to collect information that can be used to decide what type of educational information that the learners will see it as relevant and useful for them.

The objectives of this paper are to share the experience of King Fahad Medical City in conducting an educational needs assessment and to using the following topics to answer the questions of Why, Who, How, What, When, that related to education needs assessment:

Why is an educational needs assessment necessary in Medical Education?

- Needs versus wants in continuing medical education.
- Theoretical Framework of needs assessment.
- Learning needs Vs educational needs.
- Perceived needs assessment "I know what I don't know".

- Unperceived needs assessment. “I don't know what I don't know”.
- Strategies for the Need Assessment.
- Method and scope of a needs assessment.
- How do I measure and analyze these types of needs assessments?
- Steps of Needs Assessment.
- Sample Needs Assessment Survey



AUTHORS' INDEX

A

A'man Talal Inayah
Aamir Nisar
Aaron Spooner
Abbas Abbaszadeh
Abdelhalim Deifalla
Abdul Khaliq Naveed
Abdulaziz Boker
Abdullah Ali
Abeer Ahmad
Abid Ashar
Abiola Senok
Ada Gu
Adam Tibor Schlegl
Ade Kiki Riezky
Adina Kalet
Adri Prinsloo
Adrián Israel Martínez-Franco
Adrian QuanlongTan
Adriena De Visser
Adrienne Torda
Afsaneh Yakhforoosha
Afshan Sumera
Ahmad Imam
Ahmad AlShammari
Ahmed Al Ansari
Ahmed El Makki
Ahmed Yaqinuddin
Ahsan Sethi
Ahsan Rathore
Aikaterini Dima
Akbar Fotohi
Akram Nurhussen
Alan Wong
Albert Scherpbier
Albert Ty
Alessandra Clementi
Alex Sadowski
Alex Stevens
Alexandra Davidson
Ali Jafarian
Ali Keshtkari
Ali Tayyab
Alia Ahmed
Alice Osborne
Alina Smirnova
Alireza Rezaee
Alison Sturrock
Allie Ford
Alma Muratova
Aloysius Niroshan Siriwardena
Alvin Ng
Amanda Baskwill
Amanda Pike
Amanda Lee
Ameed Raooof
Ameen Al Menhali
Amiliana Soesanto
Amina Ahmad
Amir Hossein
Amir Mohammad Ebrahimi
Amira Mustafa
Amna Siddiqui
Amna Tahir
Amy Fraser
Ana Rita Ramalho
Anahit Anvari-Pirsch
Anargul Kuanysheva
Anastasiya Muntyanu
Andrea Hunter
Andrea Ormeño Jorge Tricio
Andrea Oudkerk Pool
Andrea Kulyk
Andre Bilodeau
Andrei
Alonso Ramos Sosa
Andrew Grant
Andrew Maitland
Andrew Tomkins
Andrew Ward
Angel Centeno
Angela Fan
Angelika Hofhansl
Angelique Timmerman
Animesh Jain
Anita Phillips
Anita Shah
Anja Czeskleba
Ankur Barua
Anna Byszewski

Anne Leversha
Anne O'Connor
Annika Wallberg
Annina Rostila
Ann King
Anthony Ali
Antonia Calogeras
Aqeel Younas
Ara Tekian
Arezou Farajpour
Ari ShaliAria Kekalih
Arnuparp Lekhakula
Arshad Nawaz
ASH Yeo
Ashraf El GhulAsim Satti
Asja Maaz
Astrid Turner
Athena McConnell
Attia Bari
Autchara Ngamnoun
Avelin Malyango
Ayesha Malik
Ayesha Naveed
Ayesha Nuzhat
Ayman Shafei
Ayyaz Ali Khan
Azadeh Kordestani Moghaddam
Azam Afzal

B

Babu Noushad
Bader Al Alhend
iBarbara Kaiser
Bas Schreuder
Bashir Hamad
Bassil Leghrouzfa
Belene Demeke
Ben Charmer
Benard Kumwenda
Bernard Cerutti
Beth-Ann Cummings
Bijoy Sinha
Bill Isles
Bin Bin Zhou
Bin Mohd Othman Taufiq
Boonmee Sathapathayawongs
Brett Williams

Brian Jolly
Brian Clauser
Bridget Goodman
Brigitte Essers
Bte Asmawi Ashirdahwani
Bunmi Malau-Aduli
Büşra Sandıklı

C

Cameron Gosling
Camila Espinoza-Parcet
Carley Nath
Carlos Collares
Carmen Lau
Carol Blow
Carol Stevenson
Carol Suddards
Carolin Sehlbach
Caroline Hana
Carol Kamin
Cecilia Moore
Cees Van der Vleuten
Celly Anantaria
Cesar Orsini
Chan Chun Kong
Chanatip Rujinam
Chang Hong Woo
Chang Park
Chantal Simon
Chaoyan Dong
Chardpraorn Ngarmukos
Charles Collins
Charlotte Flaxman
Charmaine
Chi Chuan Yeh
Chih-Ying Tu
Ching-Chi
Chinnawong Wongsathitpon
Chinthaka Balasooriya
Chiung-Nien
Choon Hak Lim
Chris Stephenson
Christan Warner
Christel Verberg
Christian Gray
Christine Hirsch
Cindy Noben

Claire Ann Canning
Claire Lee
Clare Heal
Colleen Gillespie
Connor Massey
Corne Postma
Craig Brown
Cristhian Perez Villalobos
Cristina Alves

D

Daiki Kobayashi
Damian Castanelli
Daniel Kahn
Daniel Kohler
Danielle Blouin
Danielle Roussel
Dario Cecilio-Fernandes
David Black
David Bristow
David Crampton
David Garne
David LaPierre
David Peters
David Prideaux
David Rojas
David White
Debaj yoti Roy
Debbie Jaarsma
Deborah O'Mara
Deborah Danoff
Debra Klamen
Debra Sibbald
Deema Al-Sheikhly
Deena Hamza
Derek Hellenberg
Diana Dolmans
Diane O'Doherty
Diane Wilson
Diantha Soemantri
Diego Armando Mendoza
Dimitra Travlos
Doaa Kamal
Donald W McKay
Donna Phillips
Dora Stadler
Douglas Wooster

Duncan Scrimageour
Durre Shehwar

E

Eby Varghese
Eero Mervaala
Eeva Pyörälä
Eilis Condon
Eko Arisetijono
Elahe Mohamadi
Eliane Shore
Elina Tor
Elisa Bindels
Elizabeth Farmer
Elizabeth Wooster
Emily Chamberlain
Emily Pender
Emma Paternotte
Emma Willert
Enas Gouda
Eric Bohm
Eric Holmboe
Erik Driessen
Esmat Nouhi
Estebes Hernandez
Estomih Mtui
Evangeline Lim

F

Fabiola Quintero-Rivera
Fadil Çitaku
Faheem Afzal
Fakhrosadat Hoseini
Fakhrosadat Mirhosseini
Farahnaz Kamali
Faraz Khurshid
Farheen Yousuf
Farzaneh Sadat Rezazadeh Shojaaee
Fatemeh Neko
Fatemeh Seddigh Estahbanati
Fauzan Palekar
Fazlolah Ahmadi
Fedde Scheele
Felise Milan
Fiona Lawrence
Fiona Patterson
Firdous Jahan

Firman Sugiharto
Firooz Nasirzadeh
Firozeh Majidi
Fiza Rashid-Doubell
Francois Cilliers
Frank Howarth
Franz Kainberger

G

Gail Fleming
Gamal El Shallaly
Gary Cole
Garay Ortega
Gary Hulse
George Abraham
George Lewith
George Pachev
Geraldine Kershaw
Gerry Gormley
Gianmarco Balestra
Giulietta Vaccarezza-Garrido
Glendon
Gordon Lau
Gordon Purdie
Gordon Page
Grace Ng
Grainne Kearney
Gulnar Nuralinova
Gustaf Axelsson
Guy Mollet
Gwendolyn Hollaar

H

Hamza Abdulghani
Hanna Schroeder
Harm Peters
Harold Bok
Harold G.J. Bok
Harold Reiter
Harumi Gomi
Hassan Salman Siddiqi
Haydee Parra
Heather Lochnan
HeatherLochnan
Hei Man Wong
Hein Brackel
Heinrich Liesl

Helen Clark
Helen Parry
Helena Luginbuehl
Henning Schenkat
Hirotaka Onishi
Hisham Khalil
Hoda Ahmari
Hoda Khalifa
Hong Sik Lee
Hooman Shahsavari
Hosam Eldeen Gasmalla
Hossein Akbari Aliabad
Hueng-Chue Fan
Huma Riaz
Humaira Kiyani
Hussain Zain Gulzar

I

I F L C Tiberio
I Wayan Arsana
Ian Frank
Ibrahim Ali
Ilene Harris
Imran Amjad
Inam Haq
Iolanda F C Tiberio
Iqbal Bano
Irene Lubbe
Isabelle Halle
Isaías Hernández-Torres
Ismail Burud
Isolde Kirnbauer
Itamar S. Santos
Ivone Campos-Cerda
Ivy Oandasan

J

Jacqueline M
Jade Soh
Jaiprapas Wongwatroj
James O'Hare
James Tisyakorn
Jan Van Tartwijk
Jane Smith
Janet Mee
Janice Bass
Janice St. John-Mathews

Jasmine Ross
Javiera Ortega-Bastidas
Jawad Hashim
Jay Cheon
Jean Rawling
Jean van Berlo
Jean Roy
Jeff Blackmer
Jeff Habert
Jeffrey Manko
Jeffry Hogg
Jenan Younis
Jennifer Hallam
Jennifer Adams
Jennifer Cleland
Jennifer Johnston
Jennifer Weller
Jenny Johnson
Jeremy (Jerry) Morse
Jeremy Gasson
Jeremy Glasner
Jeroen Donkers
Jerry Maniate
Jesper Krørup Jensen
Jessica Beattie
Jesús Eduardo
Jia Doulton
Jimmie Leppink
Jo Corrado
Joanna Corrado
Joel Rhee
Joerg Goldhahn
JohannArias
Johnny Lyon Maris
Jon Cooper
Jonathan Dupre
Jonathan Rial
Jorge Alonso
Jorge Tricio
Jorie Colbert-getzJosé López
Josephine Boland
JoshuaLloyd
Joyce Moonen-van Loon
Juan Arellano-Vega
Juan José Mazón-Ramírez
Juan Montt
Judy Buchanan

Jules Schofield
Julian Archer
Julie Pattinson
Juliette Truman
Jumana Al-Baghli
June Jones
Junichi Kameoka
Junya Iwazaki
JussiMerenmies
Jusuf Anwar

K

Kadsanee Moolpo
Kamila Hawthorne
Kamran Ahmad Malik
Karen D'SouzaKaren Scott
Karima Khamisa
Karla Pryce
Karsten Van Loon
Kate Allan
Kate Regnier
Katelijne Baetens
Katharine Boursicot
Katherine Blondon
Kathleen van Royen
Kathleen Hanley
Kathryn Hodwitz
Kathy Chappel
IKatie Lappe
Katrien Bombeke
Kaveeta Bedi
Kaye Atkinson
Keen Eva
Keeran Aries
Keeratiya
Keith Wilson
Kelly Dore
Kelsey Isaacs
Kenji Yamazaki
Kent Stobart
Kerri Shaffer
Keshani Jayaweera
Kevin Cheung
Kevin Dwyer
Kevin yet Fong
Khaled Abu Haleeqa
Khalid Al Busaidi

Khalid Bhatti
Khawaja H. Mujtaba
Khuloud Alenzy
Kiki Lombarts
Kimesh Naidoo
KimWalker
Kinga L.Eliasz
Kinza Aslam
Kiran Grewal
Kiri Campbell
Komal Zulfiqar
Kirsten Schliephake
Kirsty Shires
Kofo Jegede
Komal Aqeel Safdar
Konstantin Brass
Kristen Graham
Kyle Wilby

L

Lambert Schuwirth
Lara Traeger
Larry Gruppen
LaudyMattar
Laura Sheldrake
LaurentsStassen
Lawrence Sherman
Lee Sian
Lei Huang
Leigh Townsend
Leila Mehdizadeh
Leona Walsh
Leora Birnbaum
Leslie Robinson
Lim Ming Hui
Lim Soon Kok
Lina Stieger
Lina Vogt
Linda Lewin
Linda Jones
Linda Ross
Linda Sweet
Lindsay Shirreff
Liv DyreLiz Fitzmaurice
Lorenzo Madraza
Loretta Cheung
Lorette Stammen

Lotfolah Dezhkam
LouiseBuchanan
Lubberta De Jong
Lubberta H. de Jong
Lubna Baig
Lubna Beg
Lucy Gilkes
Luke Woodham
Lynn Buckvar-Keltz

M

M. Jawad
Mabel Yap
Madeeha Rehan
Madiha Sajjad
Maggie Baker
Mahboobeh Khabaz Mafinejad
Mahmoudi
Mahsa Shakour
MaireadCorrigan
Maitham Husain
Makoto Kikukawa
Malena Sayal
Maliheh Kadivar
Mamoon Ahmed
Manasik Hassan
Mandana Shirazi
Mange Manyama
Manoj Chakravarty
Mansour Darvishi Tafvizi
Mansoureh Shokripour
Mansur Tafvizi
Manuela Hunter
Marageret Kennedy
Maram Hassan
Marc Baumann
MarcelaDohms
Marcelo A. V. Rodrigues
Margaret Elzubeir
Maria Khan
Maria PazGrebe
Marianne Bell
Marie Bryce
Marilyn Baird
Marindra Firmansayah
Mariyah Saqib
Meléndez Márquez

Marjan Govaerts
Marjan J. B. Govaerts
Mark Frances
Mark Goldszmidt
Mark Woolford
Mark Walton
Martin Roberts
Martin Tolsgaard
Marwa Alkhangji
Marwa Shareef
Mary Lee
Maryam Karbasi
Maryann Radiance Aguiar
Mascha Verheggen
Massimo Pignatelli
Mathew CE Gwee
Matthias Hepprich
Matt Homer
Megan Anakin
Meghan Mcconnell
Mehdi Panahandeh
Mehwish Hussain
Mei L Kang
Melanie Simon
Melissa Yong
Melissa Margolis
Memoona Mansoor
Mette Elkjær
Mi Kyung Kim
Michael Arnason
Michael Healy
Michael Siu Hong Wan
Mike Tweed
Mike Tweed
Milton Severo
Ming Lee
Ming-Ka Chan
Mini Singh
Mirja Van Der Meullen
Mirjam oude Egbrink
Mohamad Ali Raisolsadat
Mohamed Al Ali
Mohamed Al- Eraky
Mohamed Elsanousi
Mohamed Gaber
Mohamed Yahya El-Kishawi
Mohammad Al Houqani

Mohammad Hossein
Mohammad Rasoul Golabchi
Mohammed Alkobri
Mohamud Mohamud
Mohsna Bhiri
Mojtaba Mousavi Bazaz
Molly Fyfe
Monica Garcia
Monica Rodriguez
Muhammad Faheem Afzal
Muhammad Faisal Ikram
Muhammad Faisal Rahim
Muhammad Farooq
Muhammad Imran
Muhammad Jamal
Muhammad Nadim Akbar Khan
Muhammad Shahid Shamim
Muhammad Zafar
Mukhtair Baig
Mumtaz Patel
Munazzah Rafique
Mushira Abdulaziz Enani
Mustafa Al Maini

N

N. G. (Niv) Patil
Nadeem Zubairi
Nadia Asmar
Naghma Naeem
Najla Abdelrahim Mohamed
Nahid Zarifsanaee
Nahla Hassan
Najla Ba Sharahil
Najlaa Al-Subeeh
Namphueng
Nasir Ali Afsar
Nasir Sarwani
Nasser Sanjar Moussavi
Natasha Rastogi
Naveed Yousuf
Navid Omidifar
Nazanin Shamaeian Razavi
Nazih Youssef
Nazila Zarghi
Neda Wick
Neda Mehrdad
Neelofer Shaheen

Neil Orford
Nele R.M. Michels
Nesibe Akdemir
Nick Sevdalis
Nick Toms
Nicky Hudson
Nicola O'Shaughnessy
Nicolette Caccia
Nicolette Birbara
Nina Holderness-Parker
Nisha Dogra
Nitin Joseph
Noëlle
Noha El Desouky
Noor us Sabah
Nooshin Kohan
Norbert
Nouf Albalawi
Nuchanart Suealak
Nurrahma Wahyu Fitriani
Nyoli Valentine

O

Ofelia Mosteanu
Olaf Ahlers
Olga Matus-Betancourt
Oliver McGarr
Oliver Morris
Olivia Jagger
Olle Ten Cate
Omer Abdalla
Oxana Gatsura

P

Pablo Joo
Palma Longo
Panadda Rojpibulstit
Parvin Pasalar
Paskorn Sritipsukho
Patrick Tan
Paul Barach
Paul Crampton
Paul Jennings
Paul Lambe
Paul O'Farrell
Pauline Pan
Paulo A. Lotufo
Pedro Vieira-Marques

Perihan Torun
Peter Baldwin
Peter Cantillon
Peter Devitt
Peter Bowie
Phil Newton
Philip Bintaro
Philippe Rousseau
Pick Fong Chee
Pim Teunissen
Pinkal Patel
Pooshan Navathe
Pornjira Pariwatcharakul
Praelada Wongsirimeteekul
Premalatha S
Priscilla Trahar

Q

Qamar Riaz
Qi Chen

R

Rabah Almahmoud
Rabea Krings
Rachel Driver
Rachel Elliott
Rachel Greatrix
Rachel Westacott
Rachmad Sarwo Bekti
Raghad Alotaibi
Raheela Yasmin
Rainer Hofer
Rajiv Shah
Raksha Sule
Ralph Pinnock
Ramin Rahil
Randa Mostafa
Rauza Akmalia
Reem Abraham
Regmi Dybesh
Rehan Ahmed Khan
Rehana Rehman
Rehan Khan
Rehmah Sarfraz
Reinoud Gemke
Renan Sukmawan
Renu Sarah Samson

Rex Hobbs
Reza
Richard Frearson
Richard Fuller
Richard Pittini
Richard Turner
Riitta Moller
Rizwana Kamran
Robert Byard
Rodrigo D. Olmos
Roger Kneebone
Romana Malik
Ron Knevel
Ronald M. Harden
Rory Plant
Rune Standal
Russell Kosik
Ryo Takayanagi

S

Saad Chahine
Saadia Sultana
Sabah Alezaireg
Sabine Berger
Sabine Schneidewind
Saeed Abdollahfard
Saeed Hamid
Safeena Kherani
Salma Al Shehab
Salman Guraya
Samah Arshad
Samaneh Abolbashari
Samantha Scallan
Sami Anwarfathi Kalantan
Sami Shaban
Samprith Ala
Samuel Anderson
Samuel Bennett
Sandra Jaramillo
Sandra Kemp
Sandra Monteiro
Sandra Oza
Sandra Monteiro
Sandra Yingling
Sang Yeoup Lee
Sanjeev Nanda
Sanna Siirilä

Sarah Burm
Sarah Down
Sarah Kennedy
Sarah McElwee
Sarah Shaikhoon
Saraporn Matayart
Sarawut Suksuphew
Sari Ponzer
Sateesh Babu Arja
Saule Maukayeva
Sawsan Al Kawas
Scott Kitchener
Seedarat Suwichanarakul
Seiichi Ishii
Sergey Gatsura
Sewit Bereket
Seyed Amir Hossein
Shahid Hassan
Shahida Badsha
Shahram Yazdani
Shakeel Ahmad
Shama Munim
Shane Bullock
Shannon Murphy
Shannon Venance
Sharifah Sulaiha Syed Aznal
Sharmila Torke
Sharon Buckley
Sharyn Milnes
Shazia Babar
Sheila Harms
Shekeeb Mohammad
Shelley Ross
Sheng-Hong Lin
Shimaa El-Araby
Shoaleh Bigdeli
Sholpan Kaliyeva
Shu Li Tan
Shuaib Quraishi
Shuh Shing Lee
Shui BoonSoh
Siew Chen Ong
Siew kheong Lum
Sik Yin Ong
Sikander Khan
Simon Drees
Simon Kitto

Simranjeet Judge
Sinead McGartland
Siriluk Pongchitsiri
Siriya Korn Thanasitthichai
Sola Aoun Bahous
Soledad Campos
Sasa Sopka
Soleiman Ahmady
Somayeh Akbari
Sondra Zabar
Sonia Ijaz Haider
Sonja Finsterer
Sophie Kienhorst
SörenHuwendiek
Stanley Hamstra
Stefan Beckers
Stella Howden
Sten Ardal
Stephanie Clota
Stephanie Hering
Steven Stenhoff
Stijntje Dijk
Stuart Haines
Su Ping
Suganya S
Sukunya Pinaikul
Summayyah Saqib
Sung-Bom Pyun
Susan Somerville
Susanna Martin
Susanne Skjervold Smeby
Susie Schofield
Suzanne Donnelly
Suzanne Roff
Suzanne Schut
Syed Moyn Aly
Syeda Kauser Ali
Syeda Razia Bukhari
Sylvia Heeneman
Syntia Nusanti Shidik
Szu-I Yu

T

Taghrir
Tahra Almahmoud
Tan Nguyen
Tansy Jessop

Tasleem Ras
Tauseef Ahmad
Tavinder K. Ark
Teodora Atena
Teresa Pawlikowska
Terry Poulton
Tetsuhiro Maeno
Thanin Lokeskrawee
Thomas Gale
Thomas O'Neill
Thomas Riles
Thomas Tan
Thurayya Arayssi
Tian Huang
Tien Budi
Tien-PeiFang
Tim Wilkinson
Tiyarat Kayankit
Tom Gallacher
Tom Quick
Tomoya Okubo
Tony Celenza
Tony Finnigan
Trupti Jivram
Tzong-Shinn Chu

U

Ulemu Luhanga
Umatul Khoiriyah
Ursula
Usman Mahboob
Uzma Jabeen

V

Valerie Dory
Vanda Abi Raad
Verna
Vian Mohialdin
Viktor RiklefsViren Naik
Vishnadevi
Vishnupriyan Ilavarasan

W

Waleed Alghamdi
Wallee Satayasai

Walter Tavares
Walthervan Mook
Wan-Yun
Warren Lynch
Wasana Hongkan
Wayne de Beer
Wendy Yen
Werner Horn
Wid Alsabban
William Tays
Wim Kremer
Winfried Kurtz
Winnie Wade
Winnie Setyonugroho
Woraphol Wilam

Zuhair Gazzaz
Zuhra Attaullah
Zyanya Baylón Omaña



Y

Ya-Hui Hsu
Yasin Tayem
Yasuki Fujinuma
Ye Li Lee
Yeny Dyah Cahyaningrum
Ylva Holzhausen
Yogesh Acharya
Yolinda Bullians
Yong Hao Lim
Yoon Soo Park
Youn Tae Chung
Young Hee Lee
Yousef
Yuhong Gjiang
Yun June
Yu-Shiun Tsai
Yutaka Kagaya
Yvonne Covin

Z

Zahra Abbasy
Zahra Mostafavian
Zahra Shevidi
Zainab Nasser Al-Balushi
Zara Khalid
Zarrin Siddiqui
Zeinab Jannat
Zoe Rekesius
Zubin Austin

INSTRUCTIONS FOR AUTHORS

The 'JIIIMC' agrees to accept manuscripts prepared in accordance with the "Uniform Requirements submitted to the Biomedical Journals" published in the British Medical Journal 1991; 302: 334-41.

INSTRUCTION FOR AUTHORS

All material submitted for publication should be sent exclusively to the Journal of Islamic International Medical College, Pakistan. Work that has already been reported in a published paper or is described in a paper sent or accepted elsewhere for publication of a preliminary report, usually in the form of an abstract, or a paper that has been presented at a scientific meeting, if not published in a full proceedings or similar publication, may be submitted. Press reports of meeting will not be considered as breach of this rule but such reports should not be amplified by additional data or copies of tales and illustrations. In case of doubt, a copy of the published material should be included with a manuscript to help the editors decide how to deal with the matter.

ETHICAL CONSIDERATIONS

If tables, illustrations or photographs, which have been already published, are included, a letter of permission for republication should be obtained from author(s) as well as the editor of the journal where it was previously printed. Written permission to reproduce photographs of patients whose identity is not disguised should be sent with the manuscript; otherwise the eyes will be blackened out.

MATERIAL FOR PUBLICATION

The material submitted for publication may be in the form of an Original Research, a Review Article, a Case Report, Recent Advances, New Techniques, Debates, Book/CDs Review on Clinical/Medical Education, Adverse Drug Reports or a Letter to the Editor. Original articles should normally report original research of relevance to clinical medicine and may appear either as papers or as short communications. The papers should be of about 2000 words, with no more than six tables or illustrations; short communications should be about 600 words, with one table or illustration and not more than five references. Clinical Case Report

and brief or negative research findings may appear in this section. Review article should consist of structured overview of relatively narrow topic providing background and recent development with reference of original literature. An author can write a review article only if he/she has written minimum of three original research articles and some case reports on the same topic. Letters should normally not exceed 400 words, have no more than 05 references and be signed by all the authors; preference is given to those that take up points made in contributions published in the journal. Obituaries should be of about 250 words. Editorials are written by invitation. Authors should keep one copy of their manuscript for reference, and send three copies (laser copies or inkjet, photocopies are not accepted) to the Managing Editor, Journal of Islamic International Medical College, Pakistan. The author should also submit an electronic copy of the manuscript typed in MS Word. Any illustrations or photographs should also be sent in duplicate. People from outside Pakistan can also email their manuscript. Each manuscript should include a title page (containing email address, fax and phone numbers of the corresponding author), abstract, text, acknowledgements (if any), references, tables and legends. Each component should begin on a new page, in the following sequence: title page; abstract and at least three key words; text; acknowledgements; references; tables (each table, complete with title and footnotes, should be merged in the manuscript); and legends for illustrations. The manuscript should be typed in double spacing on 8 ½" x 11" white bond paper with one inch margin on both sides. It should not exceed 20 pages, excluding tables and references. There should be no more than 40 references in an Original Article and no more than 60 in a Review Article. If prepared on a word processor / computer, the diskette properly protected, or CDs

should be sent with the manuscript.

DISSERTATION/THESIS BASED ARTICLE

An article based on dissertation submitted as part of the requirement for a Fellowship can be sent for publication after it has been approved by the Research and Training Monitoring Cell (RTMC). The main difference between an article and dissertation is the length of the manuscript. Dissertation based article should be re-written in accordance with the instructions to author

TABLE AND ILLUSTRATIONS

Tables and illustrations should be merged within the text of the paper, and legends to illustrations should be typed on the same sheet. Table should be simple, and should supplement rather than duplicate information in the text; tables repeating information will be omitted. Each table should have a title and be typed in double space without horizontal and vertical lines on an 8 ½" x 11" paper. Tables should be numbered consecutively with Roman numeral in the order they are mentioned in the text. Page number should be in the upper right corner. If abbreviations are used, they should be explained in foot notes and when they first appear in text. When graphs, scattergrams, or histogram are submitted, the numerical data on which they are based should be supplied. All graphs should be made with MS Excel and be sent as a separate Excel file even if merged in the manuscript. For scanned photographs highest resolution should be used.

SI UNITS

System International (SI) Unit measurements should be used. All drugs must be mentioned in their generic form. The commercial name may however be mentioned within brackets, if necessary.

FIGURES AND PHOTOGRAPHS

Figures and Photographs should only be sent when data cannot be expressed in any other form. They must be unmounted, glossy prints in sharp focus, 5"x7" in size. These may be in black & white or in colour. Negatives, transparencies and X Ray films should not be submitted. The number of figure, the name of the author(s) should be printed on the back of each figure/photograph. The top of the

figure must be identified by the author. These figures and photographs must be cited in the text in consecutive order. Legends must be typed on the same paper. Legends for photomicrographs should indicate the magnifications, internal scale and method of staining. Photographs in published articles will not be returned.

REFERENCES

References should be numbered in the order in which they are cited in the text. At the end of the article, the full list of references should give the names and initials of all authors (unless there are more than six when only the first six should be given followed by et al). The author's names are followed by the title of the article; title of the journal abbreviated according to the style of the Index Medicus (see "List of Journals Indexed", printed yearly in the January issue of Index Medicus); year volum and page number; e.g. Hall, RR. The healing of tissues by CO₂ laser. Br J. Surg: 1970; 58:222-225. References to books should give the names of editors, place of publication, publisher and year. The author must verify the references against the original documents before the article.

ABSTRACT

Abstracts of original article should be in structured format with following sub-headings: i. Objective, ii. Design, iii. Place & Duration of study iv. Materials & Methods, v. Result, vi. Conclusion. Four elements should be addressed: why did you start, why did you do, what did you find and what does it mean. Why did you start in the objective. What did you do constitutes the methodology and could include design, setting, patients or other participants, interventions, and outcome measures. What did you find is the results, and what does it mean would constitute; our conclusions. Please label each section clearly with the appropriate sub-headings. Structured abstract for an original article, should not be more than 250 words. Review article, case report and other requires a short, unstructured abstract. Commentaries do not required abstract.

INTRODUCTION

This should include the purpose of the article. The

rationale for the study or observation should be summarized; only strictly pertinent references should be cited; the subject should not be extensively reviewed. Data or conclusions from the work being reported should not be presented.

MATERIALS AND METHODS

Study design and sampling methods should be mentioned. Obsolete terms such as retrospective studies should not be used. The selection of the observational or experimental subjects (patients or experimental animals, including controls) should be described clearly. The methods and the apparatus used should be identified (with the manufacturer's name and address in parentheses), and procedures described in sufficient detail to allow other workers to reproduce the results. References to established methods should be given, including statistical methods; references and brief descriptions for methods that have been published but are not well known should be provided; new or substantially modified methods should be described, giving reasons for using them, and evaluating their limitations all drugs and chemicals used should be identified precisely, including generic names(s), dose(s) and route(s) of administration.

RESULTS

These should be presented in logical sequence in the text, tables and illustrations. All the data in the tables or illustrations should not be repeated in the text; only important observations should be emphasized or summarized.

DISCUSSION

The author's comment on the results supported with contemporary references, including arguments and analysis of identical work done by other workers. A summary is not required Brief acknowledgement may be made at the end.

CONCLUSION

Conclusion should be provided under separate heading and highlight new aspects arising from the study. It should be in accordance with the objectives.

PEER REVIEW

Every paper will be read by at least two staff editors or the editorial board. The papers selected

will then be sent to one or more external reviewers. If statistical analysis is included, further examination by a statistician will be carried out.

PLAGIARISM POLICY

JIIIMC follows the guidelines of ICMJE, PMDC and HEC for any kind of plagiarism. These guidelines can be accessed at www.icmje.org, www.pmdc.gov.pk and www.Hec.gov.pk Author is advised to go through these guidelines before submitting their manuscript with JIIIMC. The cases of plagiarism will be dealt according to rules and regulations/recommendation of the ICMJE, PMDC and HEC. The disciplinary committee of JIIIMC comprises of the staff, Managing editors and Editor in Chief to deal with cases of plagiarism. Furthermore, authors are advised to submit a similarity index report generated by anti plagiarism software "TURNITIN". Articles with similarity index more than 19% will not be accepted for processing.

ETHICAL CONSIDERATIONS

Author of the manuscript is required to submit the certificate of approval by the Institutional Review Committee (IRC)/Ethical Review Board (ERB). Manuscripts comprising of the reports of experiments on human subjects should explicitly indicate that the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation and with the Helsinki Declaration of 1975, revised in 1983. When reporting experiments on animals, indicate whether the institution or a national research council's guidelines for or any national law on the care and use of laboratory animals were followed.

CONFLICT OF INTEREST

Any funding source for the research work must be informed at the time of submitting the manuscript for publication in JIIIMC. Any associations that might be construed as a conflict of interest (stock ownership, consultancies, etc.) shall be disclosed accordingly.

COPYRIGHT

Material printed in this journal is the copyright of the JIIIMC and may not be reproduced without the permission of the editors or publishers. Instructions to authors appear on the last page of each issue. Prospective authors should consult them before writing their articles and other material for publication. The JIIIMC accepts only

original material for publication with the understanding that except for abstracts, no part of the data has been published or will be submitted for publication elsewhere before appearing in this journal. The Editorial Board makes every effort to ensure that accuracy and authenticity of material printed in the journal. However, conclusions and statements expressed are views of the authors and do not necessarily reflect the opinions of the Editorial Board of the JIIIMC.



