**7CC  POSTERS: Assessment 4: OSCE**

**Location:** South Hall, Level 0, MiCo

**7CC1 (19963)**

**A Near-Peer Led Mock-OSCE Objectively Improves Summative OSCE Performance in Medical Students**

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**Background:** The Mock-objective structured clinical examination (OSCE) is a teaching-OSCE, aimed at improving candidates’ clinical skills via personalised feedback, which closely replicates the institution’s summative OSCE. While there is some subjective evidence for Mock-OSCE benefit, there is little objective evidence. Further, OSCEs generally put pressure on faculty resources, therefore institutions have begun to explore the role of peer-assessors, showing good reliability. The current study objectively demonstrates benefit from a near-peer written and assessed Mock-OSCE on summative OSCE performance in medical students.

**Summary of Work:** A Mock-OSCE was offered on a first come, first serve basis to 4th year medical students 11 weeks before the summative OSCE, 2013. The assessors were senior medical students and junior doctors. The candidates were given personalised written feedback and marking schemes as reflection tools. Quantitative analysis was performed by comparing Mock-OSCE and non-Mock-OSCE group ranking in both 3rd and 4th year summative OSCE exams. Students who undertook a BMSc were analysed separately.

**Summary of Results:** 70 students sat the Mock-OSCE, 82 did not. Students who undertook the Mock-OSCE had a similar mean ranking to those who did not in their 3rd year OSCE, but a significantly higher mean ranking to those who did not in the subsequent 4th year OSCE (0.576 vs 0.443 respectively, p= .003). This improvement was present in both BMSc and non-BMSc groups.

**Discussion and Conclusions:** A near-peer written and assessed Mock-OSCE objectively improves performance in students undertaking medical school OSCE final.

**Take-home messages:** • The Mock-OSCE objectively improves students’ OSCE-assessed clinical skill.
• There is a role for near-peers in effective Mock-OSCE design and assessment.

**7CC2 (20323)**

**The study of correlation between score of radiology in the fourth-year and Objective Structured Clinical Examination (OSCE) in the sixth-year of medical studies**

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**Background:** Radiographic interpretation is one of the competencies which is required in the fourth-year medical curriculum and tested after finishing the rotation from radiology department. It is also assessed in the form of Objective Structured Clinical Examination (OSCE) during studying in the sixth-year curriculum. The correlation of those scores is, however, questionable.

**Summary of Work:** In 2013 academic year, OSCE score in part of radiographic interpretation in sixth-year of medical students were recorded. Those scores were compared with their own scores in the same part when they were assessed during radiology rotation in the fourth year of 2011 academic year. Additionally, Cumulative Grade Point Average (CGPA) from first to fifth year of each student was also considered for analyzing with those correlations.

**Summary of Results:** Mean age of 77 sixth-year medical students who were examined for OSCE was 24.3 ± 0.9 years. There were 49.4% of male and 50.6% of female. Mean CGPA from first to fifth year was 3.1 ± 0.3. The correlation coefficient (r) between score of radiology in the fourth-year and OSCE in the sixth-year was 0.22 (p=0.06). When CGPA was analyzed, the correlation of that with score of radiology and OSCE were 0.73 (p<0.001) and 0.41 (p<0.001), respectively.

**Discussion and Conclusions:** The correlation score between radiology in the fourth-year and OSCE in the sixth-year was not good, while CGPA has good association with score of radiology and OSCE.

**Take-home messages:** Teachings about radiographic interpretation from other departments besides radiology department at the fourth-year have affected on score of radiology part in OSCE for the sixth-year medical students.
Split rest periods (SRP) during OSCE can reduce stress and improve performance of medical students

**Background**: The stress of medical students in clinical years might affect learning and impede the performance potential during examination. For stress reduction, we determine the effectiveness of presenting split rest period in each OSCE station compared with the conventional rest station as part of a regular session during OSCE examination.

**Summary of Work**: 24 of 5th year medical students were enrolled in OSCE during study in department of medicine and were randomized into 2 groups (n=12). Control group had 6 OSCE stations and 1 resting station, 5 minutes each. Intervention, Split Resting Period (SRP) group split rest period into 50 second per station. The self rating anxiety stress score (SRAS) was measured at the beginning and the end of each OSCE station and the OSCE scores were recorded. Two sets of OSCE exams were validated for equal level of difficulty.

**Summary of Results**: Baseline students were similar. SRAS was significantly lower in SRP group both before OSCE station (55.2 vs 93.0, p= 0.004) and after station (62.9 vs 98.1, p = 0.003). The OSCE scores were not significantly different in both groups (54.0 vs 54.1 p= 0.971).

**Discussion and Conclusions**: Split rest period for each OSCE station significantly reduced stress and anxiety during examination and sustained this effect both before and after OSCE station. However, the OSCE score between 2 groups were not significantly different.

**Take-home messages**: Resting period during examination is the important factor to reduce stress and anxiety during examination. Additionally, the more frequent rest period leads to more effective results.
7CC5 (22426)
Final year summative clinical skills assessment as preparation for clerkship and national licensure

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Background: National OSCE was established since 2013 as an exit exam for medical students in Indonesia. It demands students’ ability to perform minimal competences for primary care based on Standard of Competence for Medical Doctor in Indonesia. While skills are trained in the undergraduate program, students may not be aware of the expected competences and their challenge for clerkship.

Summary of Work: An 8-station OSCE was held at the end of year 4, assessing integrated clinical skills. Skills and cases assessed were based on Standard of Competence for Medical Doctor in Indonesia. Evaluation using 4-point Likert scale and open questionnaire was conducted to understand students’ perspectives.

Summary of Results: The questionnaire achieved 81% response rate from 373 students. It was revealed that less than 60% students were aware of the national licensure and competence standard. Meanwhile, the OSCE purpose as a preparation for clerkship was perceived useful as more than 80% students agreed and prepared for the OSCE. The skills and cases assessed were perceived in line with undergraduate curriculum. The integrative skills station stimulated them to practice their skills and integrate it with their knowledge. More than 85% students thought their performance made them confident to enrol in clerkship.

Discussion and Conclusions: The final year summative clinical skills assessment using OSCE was useful to prepare the clerkship and project students’ achievement to prepare for national licensure.

Take-home messages: A final year OSCE could be proposed as preparation for clerkship and further as preparation for national licensure. How to design the OSCE to comply with the purposes is a key point for its success.

7CC6 (22071)
The Objective Structured Clinical Examination in integrated regimen

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Background: Achievement of skill in graduate practical training and providing for patient safety is an important priority in modern education. Continuous improvement of the OSCE using simulation technologies allows the increase of graduate competence assessment reliability.

Summary of Work: For reaching the graduate competencies complex assessment by internal medicine, the OSCE is carried out in integration with different disciplines. For high reliability using the 10 stations with time limitation for each task performance is used 7 minutes. Total assessment of each station task performance is defined in 10 points. The task structure in the 6 stations is devoted to assessment of skills by internal medicine and 4 stations by related subjects. Thus in two-three stations the tasks have the integrated character that allows estimation of interprofessional interaction skills.

Summary of Results: When carrying out the OSCE, hi-tech simulators – the cardiopulmonary patient Harvey, Sim-man, the patient actor, the patient hybrid, computer technologies are used. In each station there are examiners of different specialties according to task structure.

Discussion and Conclusions: Carrying out the OSCE with integration of different interfacing specialties allows estimation of interprofessional interaction and communication skills. Including the simulation technologies allows increasing assessment reliability of the end result achievement extent.

Take-home messages: Different specialties integration in the OSCE and using of the hi-tech simulators, actor patients, the hybrid-patients, computer technologies allow authentically estimating of the graduate’s competences.
**7CC7 (22050)**

**Can Early Years OSCEs Predict Final OSCE Results?**

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**Background:** Students at our School of Medicine are examined in 5 OSCEs (Objective Structured Clinical Examination), 2 in the first year, 2 in the second year and one final OSCE at the end of third year. Data from one cohort of 139 students (graduating 2013) were used in this study. The aim of this study was to identify if final OSCE results can be predicted from the early years.

**Summary of Work:** Analysed data included gender plus OSCE global rating (pass / fail) and OSCE score (percent) for five exams. Pearson correlation analysis was carried out to examine the association between scores in all of the exams and score in the final OSCE. T-tests were carried out to examine if scores in the final OSCE varied with gender, or global rating of any of the previous OSCEs. Finally linear regression analysis (stepwise) was carried out to determine whether scores or global rating on previous OSCEs predicted the scores achieved in the final OSCE.

**Summary of Results:** There was a significant, medium strength (P = .001) positive association between OSCE scores in all examinations. Independent t-tests revealed a significant effect of gender on the scores for the final OSCE.

**Discussion and Conclusions:** Results of the regression show that the OSCE scores at the end of first year and the middle of the second year significantly predicted 56% of the variation in the final OSCE score. In this model gender was no longer significant.

**Take-home messages:** Early years OSCEs can predict final OSCE results.

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**7CC8 (21735)**

**OSCE Lived Experience : The Story of Medical Students**

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**Background:** To train competent medical students is one of the major goals of medical schools; in this regard, in internship and clerkship programs, medical students gain clinical and medical competencies via attending in-patient and out-patient departments. In these contexts, an inclusive assessment tool such as OSCE is an instrument to help assess clinical competence of students. Moreover, in OSCE application, students' views about OSCE play a crucial role. Therefore, this study is an attempt to explore lived experiences of a group of medical students of OSCE, its reflective role as an assessment tool, and its strengths and weaknesses.

**Summary of Work:** In this study, phenomenological methodology was used to explore medical students’ lived experiences of OSCE. The study population was clerkship students. Purposeful sampling continued till data saturation. An informed consent was secured from each participant before the study. Three Focus Group Discussions (FGDs) with five participants were arranged for data gathering. The group discussions started with open questions and continued with probes. Total time for each FGD session was an hour, and the recorded transcribed data were read and re-read by the researchers several times and their major and minor themes were extracted (content analysis).

**Summary of Results:** Four major themes were extracted from the gathered data: awareness, learning, attribution, satisfaction, reflective thinking and feeling.

**Discussion and Conclusions:** Medical students expressed diverse feelings toward OSCE, ranging from positive to negative that might be due to specific structure of OSCE and its multiple facets that affect grading systems. Therefore, to enhance medical students’ clinical competence, medical educators need to pay specific attention to this factor and consider it in educational settings.

**Take-home messages:** Medical students expressed diverse feelings toward OSCE, ranging from positive to negative.
7CC9 (21495)

** Does the number of skill practice and previous background experiences of medical students affect counseling communication OSCE score or not?

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**Background:** Good communication skills can be achieved by repeated practice and previous background experiences. Therefore, counseling skills may be related to student experiences during clinical practice or students’ own experiences with their relatives to the breaking bad news situations or end of life care. Our study is to determine the relationship between the number of skill practice and previous background experiences and counseling performance.

**Summary of Work:** Twenty-three sixth year medical students were enrolled in this study. Using questionnaire about background counseling experiences in their real life and in clinical practice and previous counseling situations. The “breaking bad news” counseling OSCE scores were recorded.

**Summary of Results:** The average number of previous breaking bad news experience of medical students in clinical practice was 5.8 ± 2.45, in their real life was 0.5 ± 0.95, respectively. The mean OSCE scores in counseling station were 62.6 ± 15.63. Surprisingly, both previous clinical and real life experiences were not significantly correlated with OSCE score by chi-square test (p=0.36, p= 0.48).

**Discussion and Conclusion:** The number of counseling experiences did not correlate with performing an excellent OSCE score. This might be caused by inadequate supervision and feedback during skill practice.

**Take-home messages:** The quantity of experience could not relate with better performance in counseling OSCE. The solid background experiences may be further evaluated for correlation.

7CC10 (20944)

** What Happened in Traditional Chinese Medicine After the OSCE Practice?**

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**Background:** The Department of Traditional Chinese Medicine (TCM), Chang Gung Memorial Hospital held the first formal and summative TCM OSCE on March 24th, 2012 in Taiwan. Forty-one undergraduate students of the TCM at Chang Gung University completed this test at the end of their eight-year training. The test had six topics with five facets, and included fourteen standardized patients whom had received training one week earlier.

**Summary of Work:** Results showed that if some sub-items were deleted, the reliability of all tests could approach almost 0.7 except for test 4. The internal consistency reliability was 0.317.

**Summary of Results:** The reliability of almost all tests reached the acceptable level, but the internal consistency reliability was not good enough. These results suggest that the evaluators and the standardized patients should be trained more thoroughly in the TCM method. Furthermore, the tests and checklists should be designed with the combination of classical and modern TCM knowledge.

**Discussion and Conclusions:** Our study revealed that the difficulty of four of the six tests were hard, especially the tests 2 and 6, concerning physical examination. Both the discrimination level of “History taking” in test 1 and “Communication” in test 3 were poor. The “Inquiry” in four examinations was similar with history taking, which focused on the details and completeness of patients’ background and problems relative to their illness. Since outpatient clinics are the main service of TCM, history taking and communication are the basic skills that can be learned well from practitioners through adequate training programs. However, for examination purposes, more concrete assessment items should be developed.

**Take-home messages:** How to evaluate the effect of teachers’ teaching after the OSCE for the TCM intern Dr practiced? We design the questionnaire to obtain the initial results.
**7CC11 (211430)**

Educational impact of Objective Structured Clinical Examination (OSCE) as a formative assessment on undergraduate medical students

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**Background**: The benefits of the Objective Structured Clinical Examination (OSCE) have been proposed on both formative and summative assessment. In our institute, the formative OSCE has been recently implemented as a formative assessment. This study aims to review an educational impact of OSCE, as a formative assessment, on National licence examination in the aspect of clinical skills of undergraduate medical students at Rangsit University.

**Summary of Work**: Documents and statistical data have been reviewed. An educational impact was reflected by a percentage of passing students on clinical skills examination as a part of the National licence examination. The data was analysed comparing among five years of implementation the OSCE as a formative assessment. The formative OSCE was used as a preparedness strategy at the first year. The duration of formative OSCE increased over five years. Nowadays, the formative OSCE is organised continuously for a whole year to three clinical year of medical students.

**Summary of Results**: The National licence examination on clinical skills was implemented for 6th year medical students. The OSCE examination was used as a comprehensive summative assessment. After an implementation of OSCE as a formative assessment, the percentage of passing students on the National clinical skills examination increased from 63.16% to 97.27% in five years. The significant increase correlated with the duration of opportunity to practise with the formative OSCE.

**Discussion and Conclusions**: The OSCE has educational impact which is reflected from significant increase of passing students on clinical skills exam. The continuous formative OSCE assessment is a significant influencing factor on educational impact.

**Take-home messages**: The formative OSCE has significant impact on educational outcome of undergraduate medical students. Continuously organised formative assessment influences an effective outcome.

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**7CC12 (19998)**

A new twist to an innovative OSCE: In-situ OSCE

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**Background**: Traditionally, the OSCE was held in clinic skill centers. Resident doctors in Taiwan work mostly in the ward. We design the OSCE which reflects their jobs in real life and assesses their clinic competency. We assess the advanced level of competency for resident doctors. Patient safety and communication are key issues for PGY1.

**Summary of Work**: We host an OSCE setting in the real ward. The PGY1 will contact with our SP by the bedside. The PGY will get the chart with mission instruction for each station at nurse station. The mission of the PGY1 are as following: 1) History taking with an inpatient successful business man, 2) Identifying the patient and performing PE with a patient who is in too much pain to cooperate, 3) History taking from a dumb mother, 4) History taking from an old patient who only can speak dialect, 5) Inserting a Foley and calming down the patient, 6) Suturing a drunk patient. We also have debriefing in this formative assessment.

**Summary of Results**: In our study, the students agree that 1) it relates to their daily jobs, 2) It improved their competency and confidence, and 3) They learned substantially from it.

**Discussion and Conclusions**: We should have different levels of learning objectives for learners with different level skills. The faculty should overcome the existing limitations and conduct a useful and objective-oriented assessment.

**Take-home messages**: 1. In-situ OSCE is an efficient and objective-oriented assessment
2. Faculty should design the different level scenarios for each level student.
3. Hybrid simulation is an excellent solution for OSCE.
7CC13 (22509)
OSCE Curriculum Design and Implementation: A Faculty Development Program

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Background: As a result of a shift to a competency-based education, there was a need identified for assessment of residents’ communication skills. An OSCE program with standardized patients (SP) was developed and has been running for the last two years. Expansion of this program created the current need for additional faculty training thus we developed an OSCE curriculum design and implementation course.

Summary of Work: We used a systematic six-step approach to develop this curriculum. The curricular components ranged from creating a blueprint to training the SPs and piloting the OSCE cases. We identified the goals and objectives of the program. We incorporated multiple educational strategies to engage learners in active and self-directed learning. The evaluation design and methodology was carefully aligned with the objectives of the curriculum. The program development component included identifying the delivery format, the stakeholders, and availability of funding and resources.

Summary of Results: We developed a 5-week longitudinal program in the development of an OSCE/SP for the formative assessment of residents’ communication skills. The program was successfully implemented and piloted with 12 Internal Medicine faculty.

Discussion and Conclusions: This curriculum was developed in a structured and systematic way using the six-steps approach. Although it was based on the needs of the Internal Medicine department, it can be applied to different disciplines locally, regionally and internationally.

Take-home messages: Using the six-step approach was an efficient way to develop the OSCE/SP program, which was effective for training faculty.

7CC14 (21317)
Scoring Objective Structured Clinical Examinations by Direct Observation or Using Video Monitors

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Background: Opinions on the interaction between the examiners and the examinees are controversial. Our study aimed to compare 2 different scoring methods for objective structured clinical examinations (OSCEs), including direct observation or using video monitors.

Summary of Work: Total 68 undergraduate medical students underwent a 12-station OSCE in a tertiary medical center in Taiwan. In each station, one examiner rated the student by direct observation, and another examiner rated the same student by using video monitor in another room. After 6 stations, all the examiners exchanged their position.

Summary of Results: In the 12-station OSCE, there were total 150 checklist items, including 54 items of history taking, 18 items of physical examination, 29 items of communication skills, 16 items of problem solving, and 33 items of clinical skills. Overall, the reliability (Cronbach’s reliability) was 0.757. Comparing the scores by two methods, there were no difference in the scores of history taking (P=0.792), physical examination (P=0.116), problem solving (P=0.374), and clinical skills (P=0.419). However, the scores of communication skills by direct observation were higher than using video monitor (P=0.037).

Discussion and Conclusions: Scoring using video monitor was a considerable method for evaluation of history taking, physical examination, problem solving and clinical skills in OSCE. However, scoring using video monitor did affect the scores of undergraduate medical students in communication skills assessment.

Take-home messages: Scoring using video monitor was a considerable method for evaluation of history taking, physical examination, problem solving and clinical skills in OSCE. However, it was not appropriate for evaluation of communication skills in undergraduate medical students.