Developing an Objective Structured Clinical Examination

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Introduction:

Objective structured clinical examination (OSCE) is a common teaching and assessment tool that is frequently used in numerous disciplines of education in healthcare. Developing and implementing OSCE in the assessment of the clinical competence of the learners becomes a routine task in most simulation centers. However, very few educators and assessors can attest to and ensure the "true" quality and defensibility of this assessment tool. This workshop provides opportunities for the participants to explore, analyze, evaluate, and create a practical process according to available facilities and resources by utilizing a step-by-step template together with the easy-to-understand statistical analysis and standard setting to ensure the defensible passe score as well as the reliability and validity of the OSCE.

Method:

OSCE, as an effective assessment tool to measure and evaluate clinical competence, particularly for high-stakes examination, should fulfill the following essential questions: 1) Is it valid? 2) Is it reliable? 3) Is it practical? and 4) Is it evidence of the desired outcome?

In order to fulfill all questions, the development of OSCE requires collaboration of multiple personnel, teams, committees and/or offices such as simulation center, clinical competency committee(CCC), subject matter experts (SME), office of testing and evaluation, office of faculty development to organize and coordinate several activities including but not limited to: 1) Setting examination schedules; 2)Setting blueprinting, number of OSCE stations, and examination length; 3) Select topics for stations; 4) Select station writers; 5) Select station template; 6) Develop training and guidance for global rating, template of checklist scoring, content validity index (CVI) and content validity ratio (CVR); 7) Peer review workshops, select standard setting method(s) and determine pass score; 8) Running pilot test to identify issues; 9) Psychometric analysis of Cronbach's alpha, coefficient of determination $R^{2,}$, inter-grade discrimination, number of failure, between-

group variation, and standardized patient ratings; and 10) Post assessment Quality Assurance and remedial action.

Conclusion:

Developing OSCE to be an effective assessment tool for clinical competence requires the collaboration of multiple personnel and teamwork to design, administer, conduct psychometric analysis, and interpret data to ensure validity, reliability, practicality, fairness, and defensibility.