

**Title:** Integrating mini-clinical evaluation exercise into medical internship assessment

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**What problem was addressed:** Lack of assessment based on observing trainees perform specific tasks and providing feedback is a recognised deficiency in medical education. In Nigeria, formal assessment of medical interns is retrospective and at exit with no opportunity for feedback during pre-licensing internship. There are growing general concerns by the public and professionals about falling quality of medical care among young practitioners. Mini-clinical evaluation exercise (mCEX) assesses competencies required in day-to-day doctor-patient encounters, and has been shown to improve performance. We determined the feasibility of utilizing mCEX for assessment of interns' workplace performance.

**What was tried:** As a first phase, we organized an institution-sponsored faculty development workshop on mCEX for the clinical faculty of our multi-specialty hospital in Sokoto, Nigeria utilizing short interactive lectures, local video, simulator-based hands-on experience, and reflective feedback. The attendance rate was 93.3% and 90.9% of attendees rated the workshop as very useful.

In the second phase, interns' competencies in core clinical domains (history taking, physical examination, and diagnosis); communication; professionalism; organization; and overall care were assessed monthly over three months using a validated mCEX 9-point rating scale (unsatisfactory 1-3, borderline 4, satisfactory 5-6, and superior 7-9; total=63).

In the final phase, interns and assessors were evaluated on the usefulness of mCEX as an instrument of learning and training using 5-point Likert scale anonymous questionnaires.

**What lessons were learned:** Twenty-nine interns (males 16, females 13) aged  $27.6 \pm 2.2$  years from 15 medical schools had 50 mCEX encounters conducted by 24 assessors in emergency (40%), inpatient (32%), outpatient (26%), and other (2%) settings coordinated by heads of clinical departments. Patients were mostly new (82%) with a wide range of diagnoses covering four major clinical specialties. Duration of mCEX ranged from 15-80 mins (mean,  $40.78 \pm 16.90$  mins) comprising period of observation ( $27.42 \pm 12.57$  mins) and feedback ( $13.36 \pm 6.62$  mins).

Only 18% and 48% of interns had satisfactory performance in communication skills and professionalism, respectively. In contrast, the proportions of interns who had satisfactory/superior performances in core clinical domains were: history (82%), physical examination (78%), and diagnosis (76%). Mean score was  $33.20 \pm 6.41$  (range, 7-43) and was significantly higher in clinical ( $15.96 \pm 3.63$ ) compared to communication and professionalism domains ( $7.56 \pm 1.55$ ;  $p < 0.0001$ ).

The settings and duration of mCEX were rated adequate by 95.1% and 51.8% of interns, respectively. Overall, 96.6%-100% of interns rated mCEX as useful in improving their skills in all domains, while all assessors rated it as very useful in training interns. Both assessors (100%) and interns (89.7%) reported improved trainee-trainer relationship. Though interns' poor communication skills were remedied through feedback, undergraduate curricular changes are

recommended. Faculty time was a major constraint (95%) but mCEX duration could reduce as faculty expertise increases over time.

This project demonstrated the feasibility of utilizing mCEX for interns' assessment. Having been brought to the awareness of national internship regulatory body, it will be scaled up as a multi-center project with the aim of integrating it into national internship training.

**Reference:**

Andrea C. Lorwald, Felicitas-Maria Lahner, Zineb M. Nouns, Christoph Berendonk, John Norcini, Robert Greif, et al. The educational impact of Mini-CEX and DOPS and its association with implementation: A systematic review and meta-analysis. PLoS ONE 2018; 13(6): 1-16

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