Case Study

UNSW – online OSCE stations – developed by Clinical Learning and Assessment Committee members, led by Associate Professor Silas Taylor

This case study focuses on providing insights into the follow key questions about innovation in assessment:

1. **Context:** Provide a brief background about your institution, your learners and assessors.

UNSW Medicine and Health. 1600 medical students across three two-year Phases, each with an end-of-Phase (EOP) barrier clinical assessment. Each clinical examination involved 250-280 students. Assessors are Faculty staff but also a majority of conjoint and other clinical doctors in metropolitan and rural Clinical Schools throughout Sydney and NSW.

2. **Purpose:** Explain the rationale for your innovation in assessment – what problems or challenges were you attempting to address through your approach?

Innovation was required to meet the critical threat that the impact of COVID-19 restrictions posed in terms of running clinical examinations that would allow progression of students. Progression notably included graduation for final year students, which was rightly considered a paramount concern, but the impact of progression problems throughout the program was also an issue we sought to avoid.

3. **Design:** What are some smart design principles you used to maximise the success of your assessment innovation? (Consider any international guidelines i.e. AMC standards)

OSCE stations were designed to be 'COVID-proof' meaning that we ensured that real or simulated patients were not required to be physically present, but were joined 'online' to the students being examined. There was minimal mixing of administration staff, examiners and students who all joined online, whether they were physically co-located or not.

Some of the OSCE stations utilised mixed approaches, whereby students, examiners and administrative staff were co-located, with e.g. simulated patients online providing a history, or the examiner also playing the role of patient. Other stations were adapted such that patient information was provided by utilising other resources e.g. videos or images of patient presentations, patient investigation results, mannikins and models for the demonstration of procedural skills etc.

One examination required all stations to be converted to online only, due to a significant cohort of students being internationally located. This examination, for our most junior students, required assessment focus solely only communication skills (and did not include physical examination skills). Stations were modified to three-way Teams interactions involving examiner – student – SP.

4. **Implementation:** What challenges did you face in implementing the new approach? How did you maximise a smooth transition and take up of the new approach?

Academic challenges were primarily twofold:

A. Concern over ability to assess effectively the relevant skills in students within the constraints required,

B. Significant concern regarding the logistics of using the Teams platform to greater or lesser degrees

A smooth transition to the new approach was ensured by weekly meetings of all stakeholders as stations and processes were developed. Discipline leads were involved to ensure that stations assessed knowledge/skills as in previous years. Only 'in person' physical examination was not possible using this format.

In tandem, pilot examinations were designed and run in another (smaller scale) program affiliated with UNSW Medicine and Health. Several pilots were run, with recurrent issue detection and solution finding. Once finalised, comprehensive documentation of the entire process was created, with role specific versions e.g. for students, examiners and SPs.

Academic leads worked with discipline leads to create station scenarios and requirements suitable for the relevant variety of (partially or fully) online format.

5. **Evaluation:** How did you evaluate the success of your assessment innovation? On reflection, what if anything would you do differently if you knew what you now know?

The evaluation of the online OSCE took place in two phases.

1. During the planning and implementation stages, up until after the OSCE was completed, weekly meetings were held with all stakeholders (academics, clinicians, education support & IT staff and students) to receive advice and feedback on the plans to allow refinement of the online OSCE to minimise any potential risks.

2.

   a. Examination Results

   Post OSCE statistical analysis of the results was undertaken which compared student performance of 2020 with 2019 cohort. The comparison looked at performance across stations/disciplines (e.g. Medicine, Paediatrics etc) and across domains (Communication, Medical Knowledge, Diagnosis & Management etc). No meaningful difference in student marks was found with the exception of higher marks in 2020 vs. 2019 in Emergency Medicine and Physical Examination.

   b. Feedback on the process

   Feedback from students throughout the preparation and implementation was supportive. Some staff expressed concerns regarding the increased workload.

6. **Future focus:** What are your next steps and what are you working on now to further improve your system of assessment?

Our data shows that online stations were effective in facilitating assessment of all domains of clinical skills except for physical examination. Consequently, we are exploring the use of online OSCEs for the remaining skills, whether at the end-of-placement or continuing with end-of-Phase.

At the same time, we are working with discipline leads to explore bolstering and improving workplace-based assessment of physical examination skills which are currently used during placements for both formative and summative assessment of students. We are also looking at the use of a digital platform which will enable students to showcase how they have achieved the various competencies required of our medical program.

In combination, these approaches may ultimately lead us to abandon high-stakes barrier 'end-of-Phase' clinical assessments, via the incorporation of workplace-based assessment of students' skills happening at the discipline/placement level with expected improvements in flexibility, reflective learning and student wellbeing.