Check for updates   JNP

Objective Structured Clinical Examination From Virtually Anywhere!

Allen V. Prettyman, PhD, FNP, Elizabeth P. Knight, PhD, FNP, and
Theresa E. Allison, DNP, FNP

ABSTRACT

The Objective Structured Clinical Examination (OSCE) is used in nurse practitioner (NP) education programs to evaluate students' clinical competency. The OSCE was developed to be done with students on campus in a simulation laboratory, but for online NP programs, an on-campus environment is a barrier to the use of OSCEs. The virtual OSCE eliminates this barrier and provides an effective method of implementing OSCEs and evaluating student competencies in online NP education.

Keywords: clinical teaching, objective structured clinical examinations, online NP education, OSCE, standardized patients

The demand for nurse practitioner (NP) education has steadily increased in recent years to meet the growing need for health care. In 2010, the Institute of Medicine recommended that "nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression."[1] There is a particular need to educate future NPs for practice in rural and medically underserved areas, where lack of access to health care has been well documented.[2] To meet this need, NP programs must recruit students and faculty who live and work in these communities to teach them skills relevant to practice in underserved areas. Increasingly, online programs remove barriers to educating the advanced-practice nursing workforce by reaching students in outlying locations and allowing clinical placement and faculty practice in underserved areas. Online programs are also well-suited to teaching technology-related skills, such as the use of telehealth, which are critical to rural practice. This article describes the development of a virtual Objective Structured Clinical Examination (OSCE) for an online NP program. The virtual OSCE uses videoconferencing technology with standardized patients (SPs) to allow faculty to assess students' clinical skills and competencies while simultaneously providing a simulated telehealth experience.

BACKGROUND

OSCE in NP Education

Many NP programs struggling with assessment of students' clinical competencies have adopted the OSCE as a method of formative and summative evaluation.[3,4] The OSCE, originally developed for medical education, is now widely used in education across many health professions.[5] The process involves the use of SPs, who are trained actors, in simulated clinical scenarios. Faculty evaluators observe each student's performance in the standard scenarios and can thus assess specific knowledge, skill performance, and clinical reasoning using standardized rubrics. The use of standardized cases and rubrics allows for objective evaluation of student competencies, which is generally not possible in real-life clinical scenarios. The process may also include debriefing with the student, SP, and faculty, thus providing an opportunity for reflection and ongoing learning.[3]

OSCE in Online NP Education

There are few opportunities for face-to-face assessment of students' clinical competencies when students or faculty, or both, are geographically remote from the campus. Although requiring periodic travel to the campus allows for in-person assessment, this solution is cumbersome, costly, and may interrupt students' clinical experiences. Traditionally, the OSCE has required students, SPs, and faculty to be in

the same physical location. Several online NP programs have reported using video technology to address this challenge by creating prerecorded simulated SP encounters that students view and respond to.[6,7] The interactivity in these encounters is limited, however. To our knowledge, no programs have yet described a real-time, direct interaction among SPs, faculty, and students mediated by videoconferencing technology.

DEVELOPING A VIRTUAL OSCE PROGRAM
Collaboration Between Colleges
NP faculty developed the virtual OSCE program using a collaborative framework between the University of Arizona College of Nursing and the College of Medicine. The College of Nursing educational program is primarily online and does not dedicate space and resources for a campus OSCE laboratory. However, the College of Medicine educational program is campus-based and does support an OSCE training laboratory for medical students. This OSCE laboratory simulates a large primary care office environment with multiple examination rooms, hires and trains the SPs, and provides scheduling support for OSCE training. The College of Nursing developed a collaborative agreement with the College of Medicine to use the OSCE laboratory when not being used for medical student education, which made efficient use of existing resources. The collaboration created a new revenue stream for the College of Medicine without

affecting its educational schedules and programs. The College of Nursing access to the OSCE laboratory resources allows the operation of a virtual OSCE program with minimal financial impact.

Technical Support
Implementation of the virtual OSCE program also required collaboration with the information technology (IT) department within the College of Nursing. The IT department supports the computer hardware, software, and cloud-based telehealth systems required for the virtual OSCE. Support includes the purchase, maintenance, updating, and beta testing of these technologies. A critical collaborative element is the development of faculty and student training modules on the use of the virtual OSCE technology. The collaboration ensured that the expectations of faculty coordinating the virtual OSCE program and the IT department staff aligned to support the implementation of the virtual OSCE program.

Building From Strength
The College of Nursing developed the virtual OSCE based on the College of Medicine's campus-based model. The components of the campus OSCE model and corresponding elements in the virtual OSCE are outlined in Table 1.

This approach used existing resources and required minimal changes to established procedures for the OSCE laboratory staff and SPs while allowing for assessments of student competencies. The only

Table 1. Objective Structured Clinical Examination Components in an On-Campus and Virtual Model

Variable	Campus OSCE	Virtual OSCE
Setting	Simulated primary care examination room	Simulated primary care examination room
Standardized patient	Physically present in room	Physically present in room
Student	Physically present in examination room	Virtually present in examination room
Patient interaction	Face to face	Via telehealth
Laboratory staff	Physically present in laboratory	Physically present in laboratory
IT staff	None	Physically present in laboratory
Faculty	Physically present in monitoring room	Virtually monitoring
Recording	Via examination room cameras	Via telehealth software
Debriefing	After OSCE in laboratory	After OCSE by telehealth

IT = information technology; OSCE = Objective Structured Clinical Examination.