

Introduction to the OSCE process

The advanced nursing OSCE examination

The advanced nursing objective structured clinical examination (OSCE) is a structured assessment of specific clearly defined clinical skills. In this exam students complete a sequence of practical examinations designed to assess separate components of a consultation requiring the use of advanced clinical practice skills, such as history taking and physical examination.

The OSCE was first developed as a method of assessment to objectively measure the clinical competence of medical students in the late 1970s.¹ Their development was in response to a recognition that the more traditional methods of assessment, such as written examinations and essays, whilst reflecting academic attainment, did not always test clinical competence. Consequently it was recognised that a formal assessment of clinical skills that moved beyond informally testing clinical skills at the bedside was required. While the OSCE is now an established method of clinical assessment for medical education, it has taken rather longer to be adopted for assessing clinical skills in nursing. However, it has recently gained in popularity and is now widely used to assess advanced clinical competence in students such as registered nurses preparing to become either nurse practitioners or nurse independent prescribers. The OSCE can be a valuable educational tool when used alongside other traditional methods of assessment, such as essays or exams, bringing together both clinical and academic strands of the educational development of advanced nursing students.

The advanced nursing OSCE is a practical assessment of advanced clinical skills. In this students complete a set of individual OSCE stations (individual

OSCEs are normally called ‘stations’) that are designed to test a range of clinical skills used in patient consultations, with an examiner using a previously determined, objective scoring scheme. A group of collated OSCE stations to be used in actual student examinations is called an OSCE ‘session’. The students are not normally aware of the actual planned station topic content of an OSCE session, as OSCEs, in line with traditional written examinations, are normally attempted as unseen examinations, to mirror the uncertainty of everyday clinical practice.

History of OSCE usage in advanced nursing

Building on the success of OSCEs in undergraduate medical education, the Royal College of Nursing Institute nurse practitioner programme first pioneered the use of the OSCE in advanced nursing, beginning in the early 1990s. This innovative, but often controversial, programme pushed the boundaries of nursing from the traditional ‘handmaiden’, task-orientated approach into a more modern one; integrating critical questioning and clinical problem solving in a clearly defined curriculum of advanced clinical skills. While developing this programme, it became clear that an objective practical assessment strategy was needed to assess the clinical competence of the student nurse practitioners who were developing the advanced clinical skills of history taking, physical examination and clinical reasoning; skills that were previously solely within the remit of the medical profession.

The OSCE was adapted from the original medical student model in order to assess the clinical competence of the nurse practitioner students at the Royal College of Nursing Institute. This original nurse practitioner OSCE was developed as a session of 10 stations, each of 10 minutes duration, which included two written stations and eight simulated patient scenarios. These stations were initially developed to reflect the advanced clinical skills taught in the classroom and then developed in clinical practice. This 10-station model proved successful and a variant of it is still used today by the former Royal College of Nursing Institute nurse practitioner team, which was transferred to the RCN Development Centre at South Bank University in 2000, and laterally to London South Bank University in 2003.

Now other universities across the UK, in common with the Royal College of Nursing Institute and London South Bank University, also train registered nurses wanting to practise nursing at an advanced level using structured programmes of post-registration advanced nursing education. These programmes usually comprise units pertaining to advanced clinical practice, such as physiology, clinical examination, consultation communication skills, clinical

diagnosis, pharmacology, prescribing and patient management. All these clinically focused units are assessed from a traditional academic perspective.

However, it is not sufficient to assess students' attainment in these clinical units solely on an academic basis, as these units are specifically designed to help students develop practically orientated advanced nursing skills, which are required for competent clinical practice as a nurse practitioner. Consequently, other universities have also started to use OSCE-based practical assessments of students' acquisition of advanced clinical practice skills, and their subsequent development of advanced practice competence. Different OSCE models have been adapted over the years to meet the challenges faced by advanced nurse educators for the most appropriate way to assess clinical competence in advanced nursing students. While the format of advanced nursing OSCEs varies across universities, they all share the principle of seeking to objectively assess a student's proficiency in common advanced clinical practice skills such as history taking and physical examinations.

The OSCE process is now also widely used in pre-registration nursing to assess fundamental clinical skills, such as recording and interpreting vital signs. In contrast, advanced nursing OSCEs assess the clinical performance of post-registration nurses, as opposed to novice pre-registration nurses, and therefore do not include assessments of basic clinical skills such as recording vital signs, because pre-validated attainment of these skills is implicit in a nurse practitioner student's professional registration as a qualified nurse. Instead, assessment of the combined experiential, practical and theoretical clinical skills at the competent or proficient level of advanced nursing practice is required.² As such, advanced nursing OSCEs assess a level of clinical complexity beyond that required of an initial registrant in nursing, and therefore carefully planned, consistent, and sustained OSCE preparation is required throughout a nurse practitioner degree programme on the parts of both students and academic staff. Student and lecturer OSCE preparation is discussed in more detail in chapters 2 and 3 respectively.

Do OSCEs assess clinical safety or role competence?

Whether OSCEs assess clinical safety or role competence is an area of debate. If we strictly adhere to inflexible parameters for safe practice, a student could potentially, in the name of safety, refer every patient they see to either a medical practitioner or a specialist nurse for a second opinion. While this may be a safe practice, it does not conform to the everyday level of independent practice realistically required from an advanced nurse practitioner to assess, plan, deliver and evaluate patient care. Therefore, there is a baseline at which

we expect an advanced nurse to operate. Students need to demonstrate their ability to work bounded by the limits of their advanced role competence within an overall safe approach. Accordingly, students need to be able to identify potentially serious clinical signs and symptoms in their OSCE stations, and conversely OSCE stations need to be designed to give students an opportunity to identify serious clinical signs and symptoms. In response to our question advanced nursing OSCEs should seek to assess both clinical safety and role competence.

Validity of the OSCE process

The term ‘validity’ refers to the extent to which a measurement actually measures what it is intended to (i.e., does the OSCE do what it says it does?). The validity of the OSCE as an examination process is necessary, as universities are obliged to produce advanced nursing graduates capable of working in the role for which they are being assessed, whether this is an advanced nurse practitioner, or a nurse independent prescriber.

OSCEs comprise two types of validity: content validity and face validity. The *content validity*, in relation to the OSCE, is judged by a panel of experts about the range which the content of the examination appears to coherently examine, and includes the characteristics and domains that it is designed to appraise and assess.³ Content validity is addressed by regularly reviewing the process through which OSCE stations are developed and their content is updated. The content of the OSCE must reflect the curricular content taught on the programme for which the OSCE forms the practical clinical assessment. An OSCE specification table, which explicitly indicates where the core clinical practice skills are assessed in each OSCE station helps to ensure validity, via cross-referenced demonstration of programme learning outcomes.

Face validity addresses the question of whether the marking criteria actually measure what they are intended to measure. For example, if the marking criteria requirements of a station are too difficult for the students to answer successfully, or cannot be completed in the allocated time for the station, then its inclusion needs to be reviewed.

Reliability of the OSCE process

The test score obtained is reliable if it gives a reasonable indication of a student’s performance in that particular test (i.e., are the OSCE scores consistently related to students’ performances?). The criterion of reliability implies that the OSCE is a stable, predictable and dependable method of assessment. Several

factors may influence the reliability of the OSCE: the demeanour of students and examiners and their subsequent interactions; subjective interpretations on the part of the examiners; and environmental factors, such as the examination room, noise levels, light and temperature.

The issue of examiner subjectivity can be addressed through the use of an independent OSCE examiner who observes the conduct of the examiner at each station to monitor the fairness and consistency of the examiners' decisions. One key factor influencing the reliability of the OSCE is its length. As the number of items being assessed is increased, the chance factors influencing the score are reduced, thus giving a better estimate of the true score the student is likely to achieve, which in turn, increases the reliability of the OSCE.⁴

Range of advanced nursing skills typically assessed in an OSCE session

Most advanced nurse practitioner OSCEs are specially designed to test the range of competencies specific to advanced clinical practice, as described in the domains and competencies for advanced nurse practitioner practice developed by the Royal College of Nursing from those originally published in the USA by the National Organisation of Nurse Practitioner Faculties.⁵ Accordingly, the ranges of advanced clinical practice skills typically assessed by OSCEs are:

- interpersonal and communication skills
- history-taking skills
- physical examination of specific body systems
- mental health assessment
- clinical decision making, including the formation of differential diagnosis
- clinical problem-solving skills
- interpretation of clinical findings and investigations
- management of a clinical situation, including treatment and referral
- patient education
- health promotion
- acting safely and appropriately in an urgent clinical situation.

At London South Bank University we test our final-year undergraduate nurse practitioner student attainment in these ranges of advanced clinical practice skills by using a 10-station OSCE session which comprises three physical examination stations; three history-taking stations; three stations that cover communication skills, conveying information, and treatment and management; and, finally, one question and answer station, usually looking at the students' responses to an urgent clinical situation. These station areas are

chosen to test the scope of advanced clinical knowledge and skills that may be applied across the age range in primary healthcare settings. For our postgraduate nurse practitioner students, we use a two-station long case OSCE-style session, which examines in the more detail the students' depth of advanced clinical knowledge, as opposed to their breadth of knowledge, such as is tested in the 10-station OSCE session. However, these OSCE session examples are drawn solely from London South Bank University, and there is a wide variance in the amount and type of OSCE stations used in OSCE sessions in other universities across the UK. One OSCE session format is not necessarily more correct than another, as all advanced nursing OSCEs should have the ultimate goal of testing students' attainment of the domains and competencies for advanced nurse practitioner practice.

References

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- 3 Bowling A. *Research Methods in Health: investigating health and health services.* Buckingham: Open University Press; 2002.
- 4 Burns R. *Introduction to Research Methods.* London: Sage; 2000.
- 5 Royal College of Nursing. *Advanced Nurse Practitioners: an RCN guide to the advanced nurse practitioner role, competencies and programme accreditation.* London: Royal College of Nursing; 2008.

Further reading

- Rushforth H. Objective structured clinical examination (OSCE): review of literature and implications for nursing education. *Nurse Educ Today.* 2007; 27: 481–90.
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