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Introduction

There is growing recognition of a global shortage of healthcare professionals in all disciplines. Governments and the health services sector have developed initiatives to address this health human resource shortage, including the encouragement of health professionals to immigrate to Canada. This strategy, to attract internationally trained healthcare professionals including internationally educated nurses (IENs), has proven to be successful. The number of IENs who are joining the ranks of nurses in Canada has been growing over the last several years (Lowe et al., 2012; Tregunno, Campbell, Allen, & de Sousa, 2007). The Canadian Institute for Health Information (2012) reported that in 2010 the number of registered nurses, who graduated from an international nursing program, employed in Canada was 8.6%, with Ontario’s concentration of internationally trained graduates being 12.1%.

Internationally educated nurses have workforce profiles that differ from one another and also from Ontario educated nurses because they come from countries with diverse cultures and nursing traditions (Baumann & Blythe, 2008). To integrate IENs into the nursing workforce, both socially and professionally, without jeopardizing the integrity of the profession or patient safety, many IENs require varying degrees of bridging education.

Like nurses educated in Canada, IENs must submit an application and supporting documents to the College of Nurses of Ontario (CNO) for assessment. If the CNO determines that the IEN program does not meet the nursing knowledge, skill and judgement equal to that of a recent graduate of an Ontario baccalaureate nursing program, the CNO will issue a Letter of Direction to indicate additional education that must be undertaken before they are eligible to write the registered nurse examinations. Bridging/upgrading programs are available through colleges and universities in a variety of formats, including daytime and evening classes and distance education to facilitate transition-to-work.

This guideline is one of many in a series that describes a resource strategy to help IENs to bridge gaps in education and experience for the national registration examination.

What is an Objective Structured Clinical Examination?

An Objective Structured Clinical Examination (OSCE) is an assessment instrument used to examine a Candidate’s clinical skills and knowledge competencies. An OSCE involves a set of timed activity stations where a nurse Candidate must perform simulated professional tasks with a Standardized Patient in the presence of an Examiner.
The features of an OSCE include:
- There are many stations
- The time at each station is short
- The stations are highly focused and have very specific Candidate instructions
- The stations are geared to examine skills, knowledge and judgment
- Each station has a predetermined, structured marking scheme
- The activities at each station have adequate psychometric qualities.

**Strengths and Challenges of an OSCE**

The strengths of an OSCE include:
- **ensures equity**, as all Candidates are presented with the same examination containing an objective specification of content
- measures clinical competence cross-sectionally using standardized means
- focuses on observable behaviours using a wide sample of activities
- allows the assessment of complex competencies without endangering the client by mapping to the College of Nurses of Ontario’s National Competencies in the Context of Entry-Level Registered Nurse Practice (College of Nurses of Ontario, 2008)
- ensures an adequate sampling of activities from across many subject areas
- permits feedback by using structured interaction between the Examiner and the Candidate.

The administrative challenges of an OSCE include:
- difficult to develop and administer
- labour intensive
- costly
- requires a trained Standardized Patient¹ and Examiner
- requires that Candidates are oriented to the OSCE format.

**When is an OSCE used?**

An IEN must apply to register as an RN with the CNO. The CNO assesses the application to determine if the applicant’s education background meets program requirements (nursing knowledge, skill and judgment equal to that of a recent graduate of an Ontario baccalaureate nursing program). If the College has determined that the IEN program does not meet the program requirements, the College will instruct the applicant to undergo an OSCE evaluation. The (OSCE) results will determine whether the applicant has demonstrated entry-to-practice competencies in order to meet the program requirement (College of Nurses, 2013).

Particular to this Toolkit, an OSCE is used to objectively assess whether an IEN has the skill, knowledge, and judgment equal to that of a recent graduate of an Ontario baccalaureate nursing program.

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¹ Although most of the OSCE Stations that are included on the CD involve a “Standardized Patient”, some OSCE Stations require an Interprofessional team member, or a family member. For the purposes of this toolkit, the term “Standardized Patient” is used within, but could be replaced by other interprofessional health care professional roles or family member roles depending on the OSCE Station and scenario.
Purpose of this Toolkit and Guide

The purpose of this Toolkit and Guide is to help inform administrators and program managers offering OSCEs to IENs.

The toolkit was prepared and reviewed by members representing several Ontario colleges who have experience in various educational roles and in working with IENs.

The toolkit is divided into two parts. The first part is comprised of five chapters and offers an introduction, a look at the literature related to the evolution and current use of OSCEs, a summary of the development process, a glossary of terms, and a list of references.

The second part of this toolkit contains three appendices geared to providing guidance to the Examiner, the Standardized Patient, and the Candidate. There you will find sample resource materials such as forms, marking sheets and surveys.

The toolkit also includes a Resource CD, which contains 23 Sample OSCE Station Packages. The files are provided in MS Word (.docx) format so that the files can be adapted to best suit the needs of the end-user or institution. There are also several photos available on the CD that are used as ‘props’ for some OSCE Stations. The OSCE Station Packages clearly list these additional station resources and when to use them.
“Nurses and other health care professionals are under increased scrutiny to provide safe, effective care” (Fowler Durham & Alden, 2008, p. 1). Each year many IENs arrive in Ontario. However, their “workforce profiles differ from one another and from Ontario educated nurses” (Blythe & Baumann, 2008, p. 9). Although most IENs have work experience prior to migrating, the College of Nurses of Ontario (CNO, 2013) evaluates all international nurse applicants to determine if their knowledge, skill and judgment is equal to that of a recent graduate of an Ontario baccalaureate nursing program. An IEN who does not meet the program requirements will be asked to complete an OSCE before the College can proceed with his/her application.

The Objective Structured Clinical Examination was initially pioneered by Harden, Stevenson, Wilson Downie and Wilson (1975) to assess the basic clinical skills of medical students. Historically, the assessment of clinical skills involved direct observation by experts of trainees. The model was based on the traditional apprenticeship model where knowledge and skills were passed down from the master to the apprentice (Boursicot et al., 2011). In 1979, Harden and Gleeson (as cited in Bartfay, Rombough, Howse, & LeBlanc, 2004) proposed structured multi-station examinations to objectively assess students. Harden (as cited in Nulty, Mitchell, Jeffrey, Henderson, & Groves, 2011, p. 145) defined OSCEs as “an approach to the assessment of clinical competence in which the components of competence are assessed in a well-planned or structured way with attention being paid to objectivity”. The OSCE is a performance-based assessment and an established assessment tool to evaluate what a person actually does in clinical practice (Boursicot et al., 2011; Eldarir et al., 2010; Walsh, Hill Bailey, & Koren, 2009) or shows how on Miller’s pyramid of clinical competency (Miller, 1990).
Assessments of performance can be divided into two categories: 1) assessment of performance ‘in vitro’, where the simulated assessment takes place in a training ward at a tertiary educational institution; and 2) assessment of performance ‘in vivo’, where the assessment takes place in real conditions in a hospital ward (Mårtensson & Löfmark, 2013, Feb 7). The assessment can be formative or summative, where formative assessment is a process for learning and summative assessment is a process of learning. “Formative assessment identifies deficiencies and motivates remediation, while summative assessment pinpoints outstanding or sub-optimal ability in particular areas” (Casey et al., 2009, p. 31). Summative assessments are examinations that participants must pass, in order to progress in their career.

OSCEs have acceptable psychometric properties, including: good inter-rater reliability, good generalizability, strong content, as well as construct validity and concurrent validity. It should be noted that there is a positive correlation between the number of OSCE Stations and reliability and content validity: as the number of stations increase so does the reliability and content validity. In addition to the psychometric properties, OSCEs reduce Examiner bias and improve parity of the assessment process for all students (Bartfay et al., 2004; Rushforth, 2007).

OSCEs are now an established part of clinical assessment in nursing.
Given that OSCEs are now an established part of clinical assessment in nursing, what makes a ‘good’ OSCE?

- **Blueprinting**: the test content is mapped across the *National Competencies in the Context of Entry-Level Registered Nurse Practice* (College of Nurses of Ontario, 2008).

- **Station development and validation**: the stations are developed and validated based on the Blueprint.

- **Examiner training**: the Examiners are prepared for their role and responsibilities to ensure consistency, reduce bias and improve reliability.

- **Standardized Patient training**: scripts are developed and roles are described to ensure consistent performance.

- **Organization/Administration**: detailed plans and guides are developed for Candidates, Standardized Patients, and Examiners.
Delivering Objective Structured Clinical Examinations involve the participation of Candidates, Examiners and Standardized Patients, each having a particular role and set of responsibilities. A standard OSCE requires a nurse Candidate to rotate through a specified number of time-limited stations of simulated professional tasks. An Examiner is present at each station to observe and evaluate each Candidate’s performance. A structured marking scheme is determined in advance, which usually includes checklists and/or rating scales and a global rating to be completed by an Examiner.

There are three key phases that occur from the time the OSCE Station is blueprinted to the time a station is put into use. Figure 1 illustrates the sequential OSCE development phases.

**Figure 1: Phases of OSCE Station Development**

- **Phase 1**: Station Blueprinting
- **Phase 2**: Content Development and Validation
- **Phase 3**: Implementation

An OSCE involves the participation of Candidates, Examiners and Standardized Patients, each having a particular role and set of responsibilities.
Blueprinting

Blueprinting is a process by which the skills and knowledge competencies to be examined within the stations that make up an OSCE are mapped to the National Competencies in the Context of Entry-Level Registered Nurse Practice (College of Nurses of Ontario, 2008). The blueprint is frequently developed by a “panel of experts” as it is a critical step in ensuring the validity of the content of the OSCE. The blueprint is the template that guides the development of the OSCE Stations to confirm that the tasks are relevant to the nursing practice. An iterative and consensual approach is used to identify the core competencies to be assessed.

OSCE Station Development and Validation

The focus of an OSCE Station is on the Scenario, however, first the purpose of the station must be defined. The purpose statement guides the development of the Scenario description and the Assessment Methods.

Secondly, the Scenario and Instructions for the Candidate, Examiner and Standardized Patient need to be developed (See appendices A, B and C). The instructions to the Candidate should be specific while those developed for the Standardized Patient must be detailed enough so that he/she can role play the patient by answering the nurse’s questions, and simulating the responses required of the scenario. Since Examiners play a vital role in the OSCE process, their instructions must be clear and specific to ensure a clear and reliable assessment process.

The third step is to develop the assessment methods such as the Checklist with Red Flag criteria and a Global Rating. (Refer to the “OSCE Evaluation Process” found in Appendix A for a description of these assessment methods and several examples). A red flag criterion is an action or omission by the Candidate which could have a serious or life-threatening consequence for the patient (College of Registered Nurses of British Columbia, 2013). The literature on assessment in OSCEs suggests that an OSCE is successful when both Checklists and Global Rating methods have been used successfully.
A “Development Team” comprised of subject matter experts usually develops the individual stations. The stations are then reviewed and refined by the “Development Team” and “Clinical Experts Team” who have teaching and clinical expertise. Once the OSCE Station and its content and evaluation instruments are developed, the OSCE is pilot tested. Revisions are made based on piloting outcomes, and then the OSCE Station(s) are finalized.

Figure 2 illustrates the steps in the OSCE development and validation process.

Great care must be taken during the planning, development and administrative phases to ensure that the OSCE Stations have a reasonable level of validity, reliability and objectivity.

Figure 2: OSCE Development and Validation Process
Grading

“Standardization” is the process of reaching consensus on the marking criteria. Numerous Likert-type scales are being used for both the Checklists and Global Rating. The Development Team of this OSCE Toolkit reached consensus to use the following rating designations in these assessment methods: the Candidate ‘Meets Expectations’, ‘Partially Meets Expectations’ and ‘Does Not Meet Expectations’. Figure 3 describes the characteristics of a ‘Partially Meets Expectations’ applicant.

Figure 3: Characteristics of a ‘Partially Meets Expectations’ Candidate

<table>
<thead>
<tr>
<th>Characteristics</th>
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<tbody>
<tr>
<td>- Has limited attention to detail</td>
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<tr>
<td>- Uses a disorganized approach</td>
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<tr>
<td>- Lacks awareness of findings</td>
</tr>
<tr>
<td>- Poorly articulates when required to provide information</td>
</tr>
<tr>
<td>- Demonstrates limited engagement and reception of cues</td>
</tr>
<tr>
<td>- Demonstrates reduced professional presentation</td>
</tr>
<tr>
<td>- Main emphasis is on performing skill with some concern for patient</td>
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Development of ‘Performance Reports’ for Candidates not meeting expectations

An important component of formative assessment is to provide feedback to the Candidate. The reports assist the Candidates who do not meet expectations to recognize and address their weaknesses. The results of the structured clinical examination should be based on the Candidate's overall performance across all OSCE Stations as well as on the ratings achieved at individual stations.

Refer to Appendix A for the “Sample 1: End of Day OSCE Feedback Report”.

12 OSCE Station Development Process
Examiner Training

The assessment of clinical competence is a critical task that requires the Examiner to objectively assess the performance of the nursing Candidates. Although the structured Examiner marking sheets enable consistency in marking, the careful preparation of all Examiners is crucial. Adherence to Examiner guidelines is essential to ensure that the Examiner’s own values and beliefs do not influence marking. Guidelines provide instructions about the process of examining and the behaviour of Examiners during the OSCE. Examiner training workshops are recommended as a way to introduce future Examiners to the complex nature of assessment exploring the ‘why’, ‘who’, ‘what’, ‘where’ and ‘how’ aspects of competency assessment using OSCEs. For more details about Examiner Training, refer to Appendix A: Guide & Tools for Examiners.

Standardized Patient Training

Standardized Patients are healthy individuals who are trained to simulate real patients in a realistic and reliable manner. They are carefully selected to match the characteristics of the patient (The University of British Columbia - Faculty of Medicine, n.d.). Guidelines provide Standardized Patients with the instructions and processes to be adhered to during the OSCE. For more details about Standardized Patient Training, refer to Appendix B: Guide & Tools for Standardized Patients.

Standardized Patients are healthy individuals who are thoroughly trained to simulate real patients in a realistic and reliable manner.
## Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Blueprinting</td>
<td>A process by which the skills and knowledge to be examined within the stations are mapped to competencies of the <em>National Competencies in the Context of Entry-Level Registered Nurse Practice</em> (College of Nurses of Ontario, 2008).</td>
</tr>
<tr>
<td>Competence</td>
<td>A measure of what nurses can do in a controlled environment representing a sample of nursing practice.</td>
</tr>
<tr>
<td>Examiners</td>
<td>Clinical experts who observe and score the performance of the Candidates.</td>
</tr>
<tr>
<td>Feasibility</td>
<td>A consideration for number of participants to be assessed, the number of staff, and the availability of Standardized Patients; space, time and budget.</td>
</tr>
<tr>
<td>Generalizability</td>
<td>The ability to generalize from sample to population.</td>
</tr>
<tr>
<td>Objectivity</td>
<td>A reliance on the standardization of the task and the assessment instruments; the extent that two or more independent Examiners arrive at similar judgments or conclusions.</td>
</tr>
<tr>
<td>Performance</td>
<td>A measure of what nurses can do in their workplace.</td>
</tr>
<tr>
<td>Standardized Patient (SP)</td>
<td>Actors who have been specially trained to portray patients with specific medical conditions or drug-related problems.</td>
</tr>
<tr>
<td>Validity</td>
<td>The degree to which an instrument measures what it is intended to measure.</td>
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<tr>
<td>Reliability</td>
<td>The degree to which scores obtained on one administration of the assessment instrument would be consistent with those obtained on a second administration, using the same or similar group.</td>
</tr>
<tr>
<td>Content validity</td>
<td>The degree to which the OSCE covers the area of competence in question.</td>
</tr>
<tr>
<td>Construct validity</td>
<td>The degree to which an assessment instrument measures the construct under investigation.</td>
</tr>
<tr>
<td>Concurrent validity</td>
<td>The evaluation of performance of a task by the OSCE as compared to the evaluation of the same task by the best existing external criterion that is available.</td>
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References


Other Useful Resources


