

INSTRUCTIONAL DESIGN AND ASSESSMENT

Development and Validation Processes for an Objective Structured Clinical Examination (OSCE) for Entry-to-Practice Certification in Pharmacy: The Canadian Experience

Zubin Austin, PhD,^{1,2} Carol O'Byrne, MEd,² John Pugsley, PharmD,² and Lila Quero Munoz, PhD¹

¹Leslie Dan Faculty of Pharmacy, University of Toronto, Canada

²Pharmacy Examining Board of Canada

Objectives. An objective structured clinical examination (OSCE) was developed and validated as an addition to the entry-to-practice examination for pharmacists that previously consisted of both a multiple-choice, case-based written test of clinical knowledge and a performance assessment.

Methods. Designing the OSCE for entry-to-practice certification of pharmacists in Canada required extensive consultation with stakeholders, development of an examination blueprint outlining competencies to be assessed, careful development and validation of multiple OSCE stations with tasks linked to the blueprint, development of assessment instruments, field testing of stations, development and validation of standard-setting procedures, and protocols for data collection and analysis.

Results. The examination was field tested, finalized, and first delivered in May 2001. Preliminary analysis of results indicated the development and validation processes were successful in producing an OSCE model that is reliable with valid outcomes, defensible, and feasible.

Conclusion. The Pharmacy Examining Board of Canada's Qualifying Examination (Part II – OSCE) represents the first time that a multi-site national licensing exam for entry-level practitioners in pharmacy has incorporated an objective structured clinical examination component. Together, the written and OSCE exams provide a broad assessment of competency, to ensure entry-level practitioners meet standards of practice for the protection of the public.

Keywords: Examination, Certification, Clinical Assessment, OSCE, Pharmacy Education, Test Format, Testing

INTRODUCTION

Objective structured clinical examinations (OSCEs) have been described extensively in the medical literature.¹⁻⁵ An OSCE is comprised of a series of stations through which all candidates rotate on a timed basis. In each station, the candidate is faced with a simulated task or problem; the candidate is required to perform specific functions to complete the task or address the problem. OSCE stations may be interactive or non-interactive. Interactive stations will typically involve use of "standardized patients" (actors who have been specially trained to portray patients with

specific medical conditions or drug-related problems), or "standardized clients" (actors or other health professionals who have been specially trained to portray allied health professionals in an interdisciplinary health care context). A candidate in an interactive station is observed and assessed by a trained examiner using a standardized marking key. Non-interactive (or quiet) stations typically are written responses to tasks or problems and involve no direct observation and assessment.

As a performance-based tool, OSCEs have advantages over other forms of assessment, such as multiple-choice tests or oral examinations.³⁻⁵ Communication and interpersonal skills, ethical and professional judgment, and complex ethical problem identification and resolution skills may be assessed more effectively and efficiently through a well-designed OSCE than through other testing methods.^{6,7} Experiences in other health professions have established the reliability and validity of a well-constructed and implemented OSCE.⁸⁻¹⁰ The use of

Corresponding Author: Zubin Austin, PhD. Mailing Address: Leslie Dan Faculty of Pharmacy, University of Toronto, 19 Russell Street, Toronto, ON M5S 1A1 CANADA. Tel: 416-978-0186. Fax: 416-978-8511. E-mail: zubin.austin@utoronto.ca.

OSCEs in high-stakes settings (such as certification examinations and maintenance of competency reviews) has demonstrated their value in assessing clinical competency. For example, the Medical Council of Canada has used an OSCE in its entry-to-practice examinations since 1994. Other health professions, such as chiropractic and chiropody, have also introduced OSCEs in both undergraduate education and professional certification.

Within pharmacy education and certification, OSCEs have not been used as extensively, in part due to the high costs and difficulties associated with developing and administering this form of assessment.⁹⁻¹¹ Since the 1970s, the College of Pharmacists of British Columbia (CPBC, the regulatory body for pharmacy practice in Canada's third largest province, responsible for licensing of pharmacists) began using standardized practice problems and patient simulations in an OSCE format as a method of evaluating entry-to-practice and continuing competency of its pharmacist members.¹¹ In 1996, the Ontario College of Pharmacists (the regulatory/licensing body for pharmacy practice in Canada's largest province) instituted an OSCE as part of its compulsory Quality Assurance and Practice Review program for all practicing pharmacists in Canada's largest province.

Within the profession, there was a realization that traditional examination formats may not adequately measure some important entry-to-practice competencies. Recognizing that well designed OSCEs had established reliability and validity in pharmacy and other health professions, momentum grew for a national entry-to-practice OSCE for pharmacy. The Pharmacy Examining Board of Canada works on behalf of participating provincial regulatory authorities in Canada to assess the qualifications of candidates seeking entry to pharmacy practice nationwide, and to ensure that successful candidates have achieved at least minimally defined levels of competency. As part of its mandate, Pharmacy Examining Board of Canada administers a Qualifying Examination twice annually in major cities across Canada; successful completion of the Qualifying Examination is a pre-registration requirement in all Canadian provinces (except Quebec). Traditionally, this exam has consisted of a multiple choice examination, which was established as a reliable, valid, and efficient method of testing knowledge, applied knowledge, and problem-solving skills. In the early 1990s, Pharmacy Examining Board of Canada recognized that performance-based testing ought to be a component of entry-to-practice competency assessment, and began work

on the development of a national OSCE for pharmacy. In 1995, a task force was appointed to explore the feasibility (from a logistics and cost-effectiveness perspective) of adding a performance-based assessment component to the existing multiple choice, case-based written test of clinical knowledge.

Development Process

The College of Pharmacists of British Columbia (CPBC) was among the first pharmacy organizations in North America to use OSCEs in a systematic manner to assess competencies at the time of entry into practice. In 1997, CPBC and Pharmacy Examining Board of Canada jointly established a pilot project to develop and prepare a practice-oriented pharmacy examination to complement the knowledge-based Qualifying Examination already in place. A critical success factor for this project was the development of assessment instruments that would effectively identify entry-to-practice candidates who did not meet minimum competencies defined by the National Association of Pharmacy Regulatory Authorities (NAPRA, the umbrella organization representing participating pharmacy regulatory authorities from across Canada). The reliability of these assessments and the validity of the decisions made as a result of the process were of significant importance.

Recognizing the high stakes nature of this work, a detailed development process was outlined, including the following steps:

- develop a blueprint for the OSCE pilot
- conduct station development workshops with practicing pharmacists from a variety of practice settings
 - conduct station review workshops with practicing pharmacists from a variety of practice settings
 - develop assessment instruments (including answer sheets, scoring rubrics and methodologies, and feedback reports for candidates)
- field test the OSCE
- undertake standard-setting workshops
- collate and analyze data from the OSCE

Development of a Blueprint for the OSCE Pilot

In June 1997, a steering committee was convened to develop the OSCE blueprint. Blueprinting a performance-based examination is a critical step in ensuring the content validity of a test and its items; the blueprint is a template that is used to guide development of OSCE stations to ensure the tasks and problems depicted in simulations are relevant to practice and capture impor-

tant elements of patient care. The steering committee consisted of members representing various constituencies of pharmacy practice, as well as academic experts in psychometrics and competency-based assessment. Since the blueprint would eventually form the skeleton upon which OSCE stations would be developed, it was vital that representation from the profession be broad. Stakeholders were encouraged to provide input in an effort to ensure the development process was fair, transparent, and representative of the profession at large.

To identify the competencies and skills required for entry-level candidates, three documents were reviewed by the steering committee: the National Association of Pharmacy Regulatory Authorities' (NAPRA) *Professional Competencies for Canadian Pharmacists at Entry-to-Practice*, the College of Pharmacists of British Columbia's *Framework of Professional Practice*, and the Pharmacy Examining Board of Canada's *Initial Analysis of Potential OSCE Content Items*. All three documents reflected general agreement from pharmacy stakeholders regarding expectations for entry-level pharmacists.

The process of identifying core competencies to be tested through the OSCE was iterative and consensual. Each committee member identified 5 competencies/functions from the 3 documents reviewed, and added any new or unique competencies not previously identified. Discussion and debate regarding these functions ensued, followed by further refinement of specific activities associated with each function. The final blueprint (achieved by consensus) resulted in 5 main competency statements with associated relevant activities. Though a time consuming process, this was essential to ensure consensus regarding the construction of the OSCE. Alternative, more time-efficient approaches (such as a top-down decision-making approach, statistical sampling methods, or simple majority votes on competencies to be tested) were not selected. Since the blueprint needed to reflect the profession's expectations (not simply those of academics, regulatory, or advocacy groups), the time and effort required to build consensus and agreement was seen as an investment in the integrity of the process.

Given the high-stakes nature of the OSCE and the need to securely guard its content, it is not possible to present details regarding the blueprint itself. As a result of the deliberation process, a blueprint emerged that outlined the number of stations in the OSCE (20, including rest stations), and the testing time (200 minutes). Five key functions or competencies of entry-level pharmacists were identified, based on the

documents reviewed above. These are as follows: Function 1: Gather, assess, and interpret information; Function 2: Select and recommend appropriate therapeutic options; Function 3: Communicate and educate effectively; Function 4: Prepare and distribute drug products; Function 5: Apply professional judgments and ethics.

By the end of 1997, the steering committee had achieved consensus on the OSCE blueprint. The blueprint prescribed the number and nature of individual stations that needed to be developed in order to test entry-level competencies in a reliable and valid manner.

Alignment of the Pharmacy Examining Board Of Canada Qualifying Examination Blueprint and Stations with NAPRA Competencies

In 1999, a national practice review survey based on the NAPRA *Professional Competencies for Canadian Pharmacists at Entry-to-Practice*¹²

Criticality and frequency rating analyses (performed by the Pharmacy Examining Board Of Canada's psychometrician) were used to determine the relative importance of the NAPRA competency elements for developing the Qualifying Examination blueprint.¹⁹ Competencies that could not be tested effectively in the written multiple choice question format were identified by the Panel of Examiners for Part I (written component) of the Qualifying Examination. This Panel then reviewed the data and developed the Qualifying Examination Part I blueprint. Using the same methodology, the blueprint competency area weightings for Part II (OSCE) Qualifying Examination were also determined by the OSCE Implementation Steering Committee. In addition to weighting the competencies for the OSCE blueprint, the OSCE Implementation Steering Committee also approved the station classification and sampling parameters (competencies, disease states, client types, patient populations, pharmaceutical modalities, drug related problems, station complexity, station formats, etc).

Refining the Blueprint and Developing and Reviewing OSCE Stations

The task of developing individual stations fell to practitioners with subject matter expertise from across the country. The College of Pharmacists of British Columbia had already developed templates and training materials for OSCE station developers to help guide the process of writing a case and developing an appropriate assessment instrument corresponding to the case. To facilitate this process, a 4-day OSCE station development and revision workshop was held. Writers worked in pairs to develop cases defined by the blueprint. Based

on previous experience, the length of each station was defined to be 7 min; consequently, case writers had to develop scenarios that would allow entry-level candidates to adequately perform the specified tasks within this time period.

Stations were reviewed by groups of 3, representing pharmacy practice in a variety of contexts (eg, community, ambulatory care, tertiary care, institutional, etc). Reviewers ensured that station objectives were clear, that required information was provided, that the assessment checklist developed to complement the station was complete (and included potentially risk- or harm-causing responses). Questions or comments were referred back to the writers, so further revisions could be made. This process of station writing and revision was essential in ensuring the validity of station content and providing the profession with the assurance that cases were reflective of entry-to-practice competencies and not simply academic exercises.

The blueprint had defined core competencies/functions to be tested. Subsequently, content specifications such as disease states, type of therapy (prescription/nonprescription/non-drug), type of client (patient or another health care professional), patient population parameter (adult, pediatric, geriatric, or "special needs" [such as pregnant/lactating]), and complexity were added over time by station developers and reviewers.

To minimize confusion for candidates, each OSCE station is designed in a similar manner. For each station, the candidate first is provided an opportunity (2 min) to read a prompt affixed to the outside of the door of the examination room. This prompt provides introductory or background information about the case. Following the sounding of a buzzer, the candidate is allowed to enter the examination room. A pharmacist-assessor in the room greets the candidate and affixes a bar-code label to the assessment form. Following the sounding of another buzzer, the standardized patient enters the room, and the interaction begins. Candidates are permitted to make notes in a small notebook that is returned to the examiner at the conclusion of the examination. Five minutes into the interaction, a warning buzzer sounds, indicating the candidate has 2 min to complete the station. If the candidate completes the interview prior to that point, they are required to remain silently in the examination room until the next buzzer sounds at the 7-min point, indicating the interview time has now expired. Following the 7-min buzzer, the candidate must leave the room and proceed to the next adjacent

room for the next station. For the pilot project, stations were neither audiotaped nor videotaped due to cost and logistics constraints.

Developing Assessment Instruments

Given the high-stakes nature of this OSCE, significant attention was paid to the development of assessment instruments and grading practices policies. The literature on assessment in OSCEs has suggested that both analytical and global rating scales have been used successfully, and that there are limitations when either global rating scales or analytical checklists are used in isolation.¹³⁻¹⁶ The former may not adequately capture a candidate's level of clinical knowledge, while the latter may not adequately capture important communication and interpersonal skills. Experience with pharmacy OSCEs in British Columbia¹¹ and Ontario, supports the notion that optimal reliability is obtained when both global assessment and analytical checklists are combined.

The analytical checklist consisted of a series of performance-based observations. Case writers and reviewers are required to identify specific, observable, and measurable tasks necessary for successfully addressing the objective(s) of the case. Such tasks may include asking a specific question related to allergies, or providing specific information to the patient regarding side effects of a medication. These tasks are formatted into a checklist, with a brief description of the action or performance that is to be observed. Candidates are given credit for performing these specific tasks only. The decision to give the candidate credit for performance is binary; candidates are either observed performing the specific task ("yes"), or they are not observed performing it ("no"). The description of each task is designed to be specific, clear, and unambiguous, avoiding conjunctions that may confuse assessors and impinge on the reliability of assessment.

In contrast, the global (also known as holistic) assessment attempts to capture the candidate's performance in important skills such as communication and integrative problem solving (Figure 1). Three global rating scales were developed, for Communication, Outcome, and Performance. Four unique anchors were developed for each scale, each describing a level of proficiency. The global assessment also included a record of any dangerous behavior that may have compromised patient care (Risk) and erroneous information provided, whether or not this information compromised patient care (Misinformation). Thus, in total, 5 different areas are assessed using global rating, with 3 areas using a 4-point anchored scale, and 2 areas using binary descriptors with space for assessor's comments. For each case,

Communications	Outcome	Performance
4 = Acceptable	4 = Problem Solved	4 = Acceptable
3 = Acceptable/Marginal	3 = Solved/Marginal	3 = Acceptable/Marginal
2 = Unacceptable/Marginal	2 = Uncertain	2 = Unacceptable/Marginal
1 = Unacceptable	1 = Unsolved	1 = Unacceptable
Misinformation: YES or NO		
Risk to Patient: YES or NO		

Figure 1: Rating scales from the global assessment conducted as part of the Pharmacy Examining Board of Canada’s Qualifying Examination.

specific behavioral descriptors and situational examples are provided to assessors to assist them in differentiating between the various points of the scale.

Global ratings are argued to be too subjective and inferential to be defensible and reliable.¹⁶ The literature in medical OSCEs¹⁸ and anecdotal information from pharmacy OSCEs does not support this position. Instead, global assessment, particularly when informed by and supported with analytical checklists, actually improves the overall reliability and validity of assessment, and in addition, improves the generalizability of results.¹⁸

The Communication and Outcome scales were designed to be independent judgments by assessors of a candidate’s overall behavior during the station. The Risk and Misinformation assessments are binary; assessors are required to make “yes/no” decisions based on their observations. While these assessments do not directly form the basis for a pass/fail judgment on the station, they are important intermediary stages in determining final performance assessment. The Performance scale (see Figure 1) was conceptualized as a summary of the candidate’s entire performance that included all analytical and global components of the assessment.

Performance Reports for Failing Candidates

An important part of the assessment in this OSCE is the feedback that is to be provided to candidates. Generally, candidates who successfully pass an OSCE are less anxious to know the details of their overall score than those candidates who did not pass. Consequently, candidate feedback must take into account the needs of the individual for self-reflection and improvement and the importance of maintaining confidentiality and security of examination materials. Based on these competing demands, feedback to candidates is provided (within 8 to 12 weeks) along the

following dimensions, with a detailed guide to assist with interpretation (Figure 2):

- candidate’s mean scores by each of the global scales, and by competency/function (competency)
- candidate’s frequency of Risk and Misinformation incidences
- cohort mean scores and frequencies
- candidate’s pass/fail decision

Field Testing the OSCE

Despite extensive use of pharmacists in the development and review of each OSCE station, and a blueprint that had been crafted through the consensus of multiple pharmacy stakeholders, the high-stakes nature of the OSCE required field-testing to ensure it was feasible and operational. Out of the original 4-day station development and review workshop, 52 cases were developed and revised. In order to dry run these stations and test their appropriateness, 48 practicing pharmacists (including recent graduates) participated in a field test of 51 stations. One case from the original pool of 52 was discarded as its complexity rendered it inappropriate for entry-to-practice candidates. Quantitative and qualitative data were gathered from each station. Since it was unclear at this point what weighting would be given to the analytical vs. global components of the assessment, the field test provided an important opportunity not only to dry run the stations, but also to experiment with different weighting schemes and analyze their outcomes.

Based on the field test, it was possible to develop 2 balanced forms of the OSCE. Each form consisted of 20 stations and was assembled according to blueprint specifications for functions/competencies, client/non-client interactions, type of client, patient population, disease states, therapies, and complexity. These forms were pilot tested with 127 participants and statistical analysis

Table 1, column 1, is a profile of your average ratings in Communications, Outcome and overall Performance on this assessment. Column 2 outlines the meaning of each rating and column 3 indicates the number of stations in which you were given a rating of 4, 3, 2, or 1.

Communication	Rating	# of Stations (of 12)
Your average 2.83	4=Acceptable	4
Group average 3.67	3=Marginally acceptable	3
	2=Marginally unacceptable	4
	1=Unacceptable	1

Table 3 shows your competency scores and the group average, providing a relative indication of your performance of these competencies in this examination.

Competency	Your Score	Group Average 1
Practise pharmaceutical care	43 %	60 %
2 Assume ethical, legal and professional responsibilities	50 %	70 %

Figure 2. Excerpts from a performance report from the Pharmacy Examining Board of Canada's Qualifying Examination.

performed. Traditional analyses of reliability (Cronbach's alpha) and generalizability were conducted to determine threats to consistency, validity and generalizability of passing scores. Generalizability and dependability studies were used to determine the number of stations and the number and type of assessors (ie, pharmacist-assessors and/or standardized patients) to be used to improve future scoring and standard setting procedures and pass/fail decisions. Generalizability and dependability coefficients are reliability indices using one or more independent sources of error and are typically interpreted in the same manner as reliability coefficients.²⁰

Major sources of holistic and analytical score variance were studied and included: candidates, stations, raters (including pharmacists and standardized patients, all of whom were trained in performance-based assessment, using standardized video-taped portrayals and interactive case-based discussions). Based on these analyses, the following conclusions were drawn regarding the following questions of interest:

Who should assess candidates' performances — standardized patients and/or pharmacist-assessors?

1. Correlation analyses (Pearson r correlation coefficient) conducted between scores given by two different pharmacist-assessors for the same candidate's performance were very high (ranging from r=0.97 to

r=0.99) for analytical and holistic grading. Reliability (generalizability) was also high, ranging from 0.72 (with 15 stations) to 0.89 (with 26 stations). Consequently, one assessor per station would be sufficient to evaluate a candidate's performance.

2. Correlation analyses conducted between scores given by one assessor and one standardized patient for the same candidate's performance were lower and highly variable, ranging from r=0.61 to r=0.98. Consequently, standardized patient assessors are not able to replace pharmacist-assessors at this time. Given the summative nature of this assessment process (ie, for entry-to-practice certification purposes), use of standardized patients to provide formative feedback to candidates was deemed inappropriate and more properly belonging in an educational (rather than certification) context.

Which scores should be used for making pass-fail decisions?

3. Correlations between holistic and analytical scores were relatively low (ranging from r=0.39 to r=0.43). Holistic scores, developed to be inclusive of skills such as communications, accuracy of interpretation and application of information from several sources, and minimizing risk to the patient, were deemed to encompass more of the competencies tested. Analytical checklist key points (ie, critically significant items necessary to successfully complete the task) were used to determine overall performance score.

4. Stations contributed significantly to individual candidates' score variance on the analytical checklists, whereas holistic scores were more stable across tasks. Holistic scores were less dependent than analytical scores on the specific nature of the tasks. Further research is required to confirm and elaborate upon these findings.

How many 7-minute stations are needed to produce defensible results?

5. There were no statistically significant differences in dependability and generalizability coefficients between the 15-station form of the exam and the 20-station form. Thus, the cost-optimal form of an OSCE would incorporate 15 stations (carefully selected to reflect the full blueprint), to ensure reliability, generalizability, and dependability.

Does the OSCE, as designed, add to the validity of Pharmacy Examining Board of Canada certification?

6. Assessment of knowledge through written tests and assessment of skills through performance assessment correlate significantly, but modestly ($r=0.52$). This suggests these different testing methods complement (but do not replace) one another, and are useful for measuring different domains of competency. In essence, candidates who may pass one component (ie, the written examination) may not necessarily pass another component (eg, the OSCE), and vice versa, suggesting a more robust assessment system.

7. Overall, reliability (Cronbach's alpha) of 0.84 was high for a 15-station OSCE with one pharmacist-assessor using holistic scoring, making this instrument an appropriate addition to the model for entry-to-practice certification of pharmacists.

8. When scored using holistic scales by 15 different pharmacist assessors (one per station), the 15-station Pharmacy Examining Board of Canada OSCE is a suitable tool for discerning competency among entry-level pharmacists.

These findings from the pilot study suggested that the OSCE was a reliable, valid, and generalizable form of assessment of entry-to-practice competency for pharmacists, and was also logistically feasible. Based on these results, NAPRA accepted the recommendations of the Pharmacy Examining Board of Canada to introduce an OSCE component to the Qualifying Examination for entry-level practitioners effective May 2001, complementing the written examination already in place.

Introducing the OSCE to the Pharmacy Community

While the process of developing and piloting the OSCE relied heavily upon practicing pharmacists, it was also necessary to ensure acceptance of the process by the broader pharmacy community. Working closely with provincial regulatory authorities and the faculties of pharmacy across the country, Pharmacy Examining Board of Canada developed a plan for informing pharmacists and students of changes to the licensing examination. Recognizing the desirability of introducing an OSCE component to complement the written examination to ensure entry-to-practice competency, various professional organizations were involved to ensure stakeholders were apprised of the new process. Various channels of communication (including print materials, presentations, and web-based resources) were used.

Several key groups were identified as requiring special support. Students from the 9 faculties of pharmacy in Canada who were graduating in 2001 would be the first group to undertake this new exam, to be held on May 27 2001. In addition, foreign-trained pharmacists (including those from the United States) who were seeking licensure in 2001 would also be subject to the OSCE. In an effort to educate these groups and to allay concerns regarding the fairness of such a major change, universities, regulatory authorities, and Pharmacy Examining Board of Canada worked together to provide information, workshops and support. Descriptive information regarding the competencies and skills to be assessed was provided, as was a sample case. Despite substantial anxiety from some pre-registrants, most understood the need for the OSCE, and accepted its importance in the licensing process. The importance of open, consistent communication with pre-registrants during this process cannot be overstated.

Once developed, the implementation of the OSCE at local sites across the country became a major logistical challenge. OSCE test sites were established throughout the country, in 8 cities where schools of pharmacy already existed. A major advantage of this model was the availability of standardized patient programs affiliated with medical schools located in these cities. Chief administrators and chief examiners were appointed in each city to oversee the logistics of the exam, and the training of standardized patients and assessors, respectively. Each chief administrator was responsible for assembling a team to manage the site and to recruit and train assessors. Collaboration with regulatory authorities, some professional organizations, and universities helped facilitate this potentially difficult task.

To accommodate the OSCE for 717 candidates (both Canadian and non-Canadian pharmacy graduates),

a total of 647 site personnel across the 8 centers would be needed on the day of the examination itself. Across the country, a total of 309 pharmacists were required (as station assessors, quiet-station markers, track coordinators, and chief examiners), 222 standardized patients were required (including back-up personnel), and 116 administrative staff were needed (to facilitate set-up, technical support, on-site coordination, etc).

To ensure uniformity, central training sessions were held for site staff in January 2001. A total of 8 sites across the country (representing 6 different time zones) administered the examination in May. Follow-up to ensure standardization of OSCE delivery occurred through video training, e-mail, and conference calls. Each site varied substantially in size and character, from a small 19-candidate bilingual (French and English) site in Montreal, to a large 200-candidate site in Toronto. Managing the complexity of such an intensive examination process is critical for successful implementation.

CONCLUSION

The Pharmacy Examining Board of Canada's Qualifying Examination (Part II – OSCE) represents the first time that a multi-site national licensing exam for entry-level practitioners in pharmacy has incorporated an objective structured clinical examination component. This OSCE measures pharmacy practice skills and competencies with depth and breadth, in a consistent, valid manner. Rigorous piloting and psychometric examination of results informed the final design of the exam. These data confirm that the OSCE can be used for competency assessment that is valid, defensible, feasible, and reliable. The OSCE complements, but does not replace, the traditional written licensing exam used to assess clinical knowledge. Together, the written and OSCE exams provide a broad assessment of competency, to ensure entry-level practitioners meet standards of practice for the protection of the public.

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