A REVIEW OF THE CLINICAL COMPONENT OF THE PHYSIOTHERAPY COMPETENCY EXAM

Report and recommendations on the use of the PCE clinical component for Physiotherapy licensure in Saskatchewan

Submitted by the
Physiotherapy Competency Exam
SCPT AD HOC Working Group

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Background

The Saskatchewan College of Physical Therapists (SCPT) was presented with information by the membership at the Annual General meeting of 2019, regarding the first attempt success rate of University of Saskatchewan (USask) School of Rehabilitation Science (SRS) graduates on the clinical component of the Physiotherapy Competency Examination (PCE - CC). The PCE - CC is administered by the Canadian Alliance of Physiotherapy Regulators (CAPR). The information presented identified that USask graduates had a noticeably lower success rate on the first attempt of the clinical component of the PCE – CC compared to previous rates and nationally. The analysis completed by the SRS indicated a downward trend of passing rate on the first attempt for Saskatchewan graduates from 1998 – 2019.

The presentation brought forth concerns that the student candidates that were unsuccessful at the PCE – CC, thus deemed not demonstrating the knowledge, skills, and abilities of an entry level physiotherapist, had been deemed competent throughout the educational program. Being unable to pass the PCE – CC on the first attempt increased financial burden on the student – as they would have to repeat the examination process, increased stress on the student while waiting for the next examination sitting, and ultimately left the profession for a period of time without a fully licensed physical therapist, who by all other evaluations to that point, had been deemed competent.

Following the presentation, a motion was passed that directed the SCPT Council to review the PCE – CC for evaluation of fairness, reliability, and validity. The SCPT Council addressed this motion by forming an Ad Hoc Committee made up of representation from Council, the general membership, and the public.

Process

The SCPT Council meet to develop guidelines for the mandate and recruitment of the committee.

Expressions of interest were requested from the membership. Public representation was obtained through discussion of potential candidates and approaching those identified. The committee make up attempted to include members that had examiner experience, an understanding of the School of Rehabilitation Science educational programming, a relatively new graduate with experience of the PCE process, and public representation.

The guidelines of the committee were derived from the motion presented to the Council and consideration of changes that would be required if the current licensing process changed. During the time that the committee was working, the COVID 19 pandemic occurred. The PCE – CC was cancelled for multiple settings. The SCPT Council requested from the committee, to add to the mandate, options for licensing process in the absence of the PCE – CC component.

The committee, once formed, went through the following process to produce this report:

1. Review of the public literature available on reliability and validity of Objective Standardized Clinical Examination (OSCE) type examinations.
2. Review of the publicly available information on the process of implementation of OSCE exams from other health professions using an examination process.
3. Review of the licensing requirements of other health care professions.
4. An environmental scan of International Network of Physical Therapy Regulatory Authorities (INPTRA) with respect to their licensing processes.
5. Discussion with the University of Saskatchewan – School of Rehabilitation Sciences.
6. Discussion with the Canadian Alliance of Physiotherapy Regulators.
7. Report writing and presentation to SCPT Council.

Committee Members

The committee members included:

1. Celeste Boucher
2. Christel Gee – Public Representation
3. Bronwyn Lasair
4. Betsy Mawdsley – retired from committee
5. John Marshall
6. Dale Pitura

Member backgrounds are outlined in Appendix A.

Committee Guidelines

The original motion from the Annual General Meeting was:

Convene a working group task force to explore this issue in more depth.
Discussion to consider one or more of the following:
1) removing the requirement for passing both the written and practical component of the PCE;
2) advocating and support from SCPT for more transparent reporting of reasons for failures;
3) thorough and transparent review of the practical exam process, marking criteria and site/ examiner variability

The committee began work with the following guidelines:

At the June 2019 meeting, SCPT Council made the motion to convene a working group to review the clinical component of the PCE in SCPT licensure requirements.

The suggested role of this working group was to

1. *Complete a thorough and transparent review of the exam process, marking criteria and site/examiner variability to ensure that it has been based on best practices and that it creates a fair and equal opportunity to all candidates (including both Canadian and International Educated)*
2. *Review the validity and reliability of the clinical component of the PCE as compared to other reputable licensing competency measures of a similar scope. Review information from environmental scan of what is currently being used for licensure exams/competency measures for entry to practice in other professions within Saskatchewan and throughout Canada*
3. *If deemed necessary, given the information gathered above, investigate the potential impact of changes to licensure requirements in terms of both public protection and labour mobility.*

Once the above information has been gathered, the working group will present their report to Council in order to assist Council in their licensure requirement decisions.

As noted above, the SCPT Council requested the committee consider options for licensure in the absence of the PCE – CC process.

Historical Context

This information was compiled from a review of various Canadian physical therapy organization websites, relevant articles, and conversations with past Canadian Physiotherapy Association (CPA) & SCPT council members, and university staff.

Competency assessment & Objective Structured Clinical Examinations (OSCEs)

According to Turner[1], advancement in educational theory outside of medicine and the introduction of Miller's pyramid of competency assessment and Bloom's cognitive taxonomy, were catalysts for a period of tremendous innovation in medical education from 1965-1995. There was an increased focus on skill acquisition[1] and the desire for competency-based evaluation[2]. In 1975, the first description of the OSCE appeared in the medical literature.[2] The exam was proposed as a means to assess clinical competency while avoiding the disadvantages and biases of traditional clinical examinations.[2] In the 1990s there seems to be significant "uptake" and increased interest in the use of OSCEs. The Medical Council of Canada (MCC) held its first formal iteration of an OSCE in October 1992 following a pilot test in February 1991.[3] Following this first iteration, there was considerable description of station content validation and methods used to improve reliability scores from the pilot examination. Although "other important aspect of validity, such as criterion validity and construct validity, have not been specifically addressed at this time",[3] the MCC still planned to require the examination for licensure in nine provinces by 1994.

The first reference we found to the OSCE as a gold standard, appeared in 1995 when Sloan *et al* published their article in the Annals of Surgery, "The Objective Structured Clinical Examination: The New Gold Standard for Evaluating Postgraduate Clinical Performance." [4] This group created an OSCE to test an entire residency population (residents at multiple levels of training), as part of their postgraduate education program. This OSCE had excellent reliability (0.91), "exceeding both the accepted benchmark reliability standard of 0.8 and all other reported reliabilities."[4] They found that because the OSCE results were more objective, they allowed for much more accurate feedback to residents. *Sloan et al* concluded that "because the OSCE provides a unique insight into the progression of residents' clinical competence, we believe that it should become a standard part of resident evaluation."[4] Although this article declared that OSCEs should be the new gold standard in the specific context of providing formative feedback to residents, the designation of 'gold standard' has subsequently been applied more broadly.

By the mid-2000s, we started to find more critiques of the OSCE. The conclusion of Barman's 2005 article, *Critiques on the Objective Structured Clinical Examination*, is that "for a comprehensive assessment of clinical competence, other methods should be used in conjunction with the OSCE."[5] Norman (2005) challenges the idea that the OSCE provides better assessment than other traditional methods.[6] Turner's *Critical Review*

(2008), comments that “the *de facto* value of high-fidelity performance assessment with OSCEs has been long assumed but has yet to be concretely proven.”[1]

Research is ongoing, predominately in educational/training contexts, identifying both pros and cons of OSCE exams. Reported reliability and validity remain variable; methods to improve the psychometric properties are frequently discussed. The degree to which low-moderate reliability or validity are tolerable depends on the application of the exam and what is at stake for the candidate.[1]

PCE (mid-1990s)

The Canadian Alliance of Physiotherapy Regulators (CAPR) was formed in the early 1990s by Canadian physiotherapy regulators. “Their initial goal was to standardize the assessment of entry-to-practice qualifications across all jurisdictions. They achieved this with the establishment of the Physiotherapy Competency Exam for all candidates and the creation of a credential-assessment service for internationally-educated physiotherapists entering Canada.”[1] The PCE was finalized in 1993 and introduced as a national standard in 1994, first adopted by Ontario. By 2004 passing the exam became a requirement for licensure in all provinces but Quebec. (The Ordre in Quebec established its own exam.) Saskatchewan was the last province to adopt the PCE as a licensure requirement. Saskatchewan adopted the PCE as a requirement for licensure in 2004.

Competency Profile (1998, 2009, 2017)

In 1998, the first *Competency Profile for the Entry-Level Physiotherapist in Canada* was completed by the National Physiotherapy Competency Initiative. This was a collaboration between three organizations, representing the physiotherapy profession (CPA), regulatory (CAPR), and educational areas (Canadian University Physical Therapy Academic Council). It was the first project completed in a “collaborative multi-stage initiative, aimed at defining and comparing entry-level competency requirements along the physiotherapy service delivery continuum (physiotherapy support personnel, entry- level physiotherapists, advanced practice physiotherapists).”[8]

In 2009, the National Physiotherapy Advisory Group (NPAG), partnered with the Accreditation Council for Canadian Physiotherapy Academic Programs (ACCPAP), CAPR, CPA, and the Canadian Council of Physiotherapy University Programs (CCPUP), to update the competency profile: *Essential Competency Profile for Physiotherapists in Canada 2009*.[9]

Again in 2017, NPAG collaborated with Physiotherapy Education Accreditation Canada (PEAC), CAPR, CPA, and CCPUP to update *The Competency Profile for Physiotherapists in Canada (with entry-to-practice milestones)*.[9]

National Curriculum (2009, 2011, 2019)

The CPA was incorporated in 1920. One of its initial major functions was "the formulation of a basic professional syllabus, which all physiotherapy training establishments must adopt if they are to receive CPA accreditation."[10] This basic professional syllabus was in place in the early 1960s when the USask physiotherapy program began.

The first national curriculum guidelines to be harmonized with the Competency Profile was the *Entry-to-Practice Physiotherapy Curriculum: Content Guidelines for Canadian University Programs*, released in 2009 by the Canadian Council of Physiotherapy University Programs (CCPUP).[11]

Guidelines for clinical education were released in 2011: *Entry-to-Practice Physiotherapy Curriculum: A Companion Document – Clinical Education Guidelines for Canadian University Programs.* This was the result of a consensus from all physiotherapy professional bodies including the CCPUP, National Association for Clinical Education in Physiotherapy (NACEP), Accreditation Council for Canadian Physiotherapy Academic Programs (ACCPAP), CPA, and CAPR, that national guidelines for clinical education should also be developed. These guidelines incorporate concepts from the 2009 Essential Competency Profile for Physiotherapists in Canada and standards set by CAPR and the Accreditation Council.[11]

In 2019, the CCPUP released the updated *National Physiotherapy Entry-to-Practice Curriculum Guidelines*. The Essential Competency Profile was seen as foundational for the curriculum guidelines. Consequently, work on the curriculum guidelines was delayed until the Competency Profile had been refreshed in 2017. Additionally, these curriculum guidelines incorporated the clinical education experiences component previously contained in the companion document. The process "included representation from several Canadian entry-to-practice physiotherapy programs (both English and French) and the National Association for Clinical Education in Physiotherapy (NACEP). Members from PEAC, CAPR, and CPA were also invited to participate during key activities."[12]

Clinical Education (2015 - Canadian evaluation tool; 2011 & 2019 – national curriculum for clinical education)

Prior to 1997, it was common for universities to use their own "in house" clinical education assessment tools. The American Physical Therapy Association (APTA) was concerned by this practice and wanted to develop a consistent clinical education evaluation instrument to measure student performance outcomes. They created the Physical Therapist Clinical Performance Instrument (PT-CPI) and made it available in 1997.[13] In Canada, most PT education programs used the PT-CPI (1997 version) to assess clinical performance during the period 1997-2015. However, there were concerns that the tool did not always apply to Canadian practice settings and had an American bias. The Canadian based National Association for Clinical Education in

Physiotherapy (NACEP) undertook a project to develop a clinical education assessment tool more appropriate to the Canadian context and based on the Essential Competency Profile. The result was the *Canadian Physiotherapy Assessment of Clinical Performance (ACP)*, a single national online assessment tool, published in 2015.[14] This tool has been utilized by all PT education program in Canada (except one in Sherbrooke) since 2015. Work is now underway to update the ACP to reflect the most recent 2019 competency profile.

Accreditation[15](1994, 1999, 2006)

In the 1980s, accreditation was overseen by the CPA. Its accreditation standards were revised in 1988, and all physiotherapy education programs were accredited by these standards in 1994.

In 1995, the Accreditation Council of Canadian Physiotherapy Academic Programs (ACCPAP) was created to implement and oversee a new accreditation process. This process was conducted in collaboration with the Commission on Accreditation in Physical Therapy Education (CAPTE) in the United States. As of May 1999, all thirteen of the Canadian physiotherapy education programs had completed this process.

After December 31, 2001, CAPTE accredited only Master entry-to-practice physiotherapy education programs. As a result, in 1999, ACCPAP began the development of a Canadian accreditation program. The accreditation process was expanded to include representation from regulators, physical therapy programs, CPA, students, external reps, etc.

By 2006 all Canadian programs held accreditation status with ACCPAP. In 2010, ACCPAP rebranded under the name Physiotherapy Education Accreditation Canada (PEAC).

Canadian University Programs (2014)

In the late 1990s and early 2000s, there was a move to transition entry-to-practice physical therapy education from Bachelor to Master level programs. The first program to complete the transition was McMaster University in 2002. USask completed the transition in 2009. The University of Manitoba was the last physical therapy program to complete the transition in 2014.

Literature Review

Process

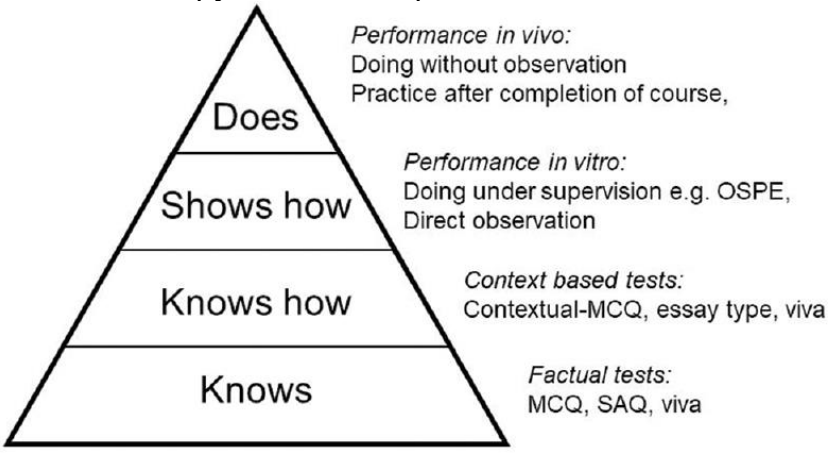
This review was intended to give committee members an understanding of key themes and concerns with regards to competency assessment, with a specific focus on OSCEs in a physical therapy context. It is not a full systematic review but rather a "focused review" designed to provide enough familiarity with the topic to enable the committee to generate pointed questions. There are several review articles included that helped to provide a broad coverage of the literature available.

Two different literature searches were completed by the Saskatchewan Health Authority Library Service. The first literature search involved the use of OSCEs to evaluate competency in a variety of professions (results limited to the last 10 years). Another literature search was regarding the use of OSCEs to assess competency in the physical therapy profession specifically (without publication date limits). A total of 38 articles were identified. Based on the abstracts, we determined that 21 of these articles were relevant to our topic and these were reviewed in detail. Furthermore, we reviewed the references listed by these articles and identified a handful of additional articles which presented new or different perspectives. We also accessed some general information about clinical assessment (specifically, Miller's pyramid of competence)[16] and definitions of measures of reliability/validity.[17, 18]

The articles in our literature search were related to the following healthcare professions: nursing, midwifery, medicine, psychiatry, and physical therapy/occupational therapy. The OSCE literature has historically included far more information related to medical training than it has for other healthcare professions. For the articles that were reviewed, the use of OSCEs was targeted mostly as educational tools or used to enhance post-graduate practice.

Review

OSCEs were developed in the mid-1970s as a way to evaluate performance at the "shows how" level of Millar's pyramid of competence[1].



This ‘shows how’ level is assumed to be better than ‘traditional methods’ (multiple choice, oral exam, etc.) that evaluate ‘knows’ or ‘knows how’ level of competence. Even in the context of clinical placements (where ‘shows how’ or ‘shows’ levels are being demonstrated), there are biases and limitations that reduce the objectivity of the evaluation. Some of the concerns include biases like the halo effect, gender bias, undue focus on rare or atypical cases, inadequate volume of cases, lack of direct observation of the learner, wide variety of patient presentations, inconsistent examiner ratings, examiners not agreeing on what is being examined, etc. [16, 19, 20] O’Donoghue,[48] specifically probed causes of student overestimation of competence. Using student focus groups, they identified gaps in the clinical education program including variability between clinical sites, conflicting teaching, not being directly observed by supervisor, work not being checked by supervisor, not being given timely feedback on performance in the clinical setting. The OSCE strives to address these limitations by using: an exam blueprint to ensure adequate sampling, standardized clients (SC), trained examiners, set questions, and clear checklists to ensure a standard, systematic, objective assessment at the ‘shows how’ level of competence. The OSCE was largely developed in educational contexts, to be one tool among many, used to assess and guide learners (formative evaluation). OSCEs are now being used by some healthcare professions as a summative evaluation to assist with determining entry-level competence for licensing or acceptance to clinical placements/ internships. While the evidence we gathered in our literature review supports use of OSCEs as formative tools, the appropriateness of using OSCEs as summative evaluations or as standalone gatekeepers in high-stakes decision-making was not universally accepted.

Much of the literature we reviewed tended to explore whether an OSCE could be used by a specific profession in their particular (usually educational) context. The benefit of the OSCE exam is that it is versatile (stations can vary in length, number, and content depending upon the assessor’s needs, include checklist & Likert global ratings), and it is able to assess a variety of domains of competency.[21-23] Questions of economic/ logistical feasibility were discussed at length and most authors conclude that the exams were feasible in the (relatively small scale) context being explored within individual studies.[22-27] OSCE are shown to be a helpful teaching tool especially when access to real clinical settings are limited.[21]

Reliability refers to the consistency of a measure.[17] For an OSCE this refers to consistency of scores over time (test-retest, between test administrations), across items (internal consistency), and across different examiners (inter-rater). A common measure of internal consistency and inter-rater reliability is Cronbach’s alpha.

Many of the studies we reviewed focused their efforts on establishing the reliability (specifically, inter-rater reliability and internal consistency) of their specific OSCE. Most studies demonstrated that ‘reasonable’ reliability scores are possible as far as internal consistency of items within stations as well as reliability between stations. [25, 28, 29, 30] However, there is debate as to what constitutes a reasonable reliability score. Nayer[20] and Sloan[4] report that reliability of over 0.8 (Cronbach’s alpha) has been suggested for professional certification examinations. This level of reliability is difficult to achieve.

Brannick[28] looked at alpha values from 39 different studies involving OSCEs and found that the overall alpha across stations was 0.66 and within stations across items was 0.78. When commenting on the reliability score of 0.64 from the Educational Commission for Foreign Clinical Skills Assessment's administration of the Clinical Skills Assessment (the longest standing high-stakes OSCE), Turner[1] noted that "although there is disagreement and some consider these reliability findings adequate, many consider them below acceptable threshold for high-stakes testing." Although the reliability scores reported [31, 32] for the PCE-CC are typical of scores reported in the literature for this type of exam, they rarely exceed 0.70. It is not clear that reliability scores below 0.80 are sufficient for a high-stakes licensing exam.

Enhanced examiner and standardized client (SC) training can improve reliability. Exam reliability can also be improved by increasing the number of stations or number of examiners. Brannick[28] found that OSCEs with more stations tended to show higher reliability. Exams with >10 stations had better (but not guaranteed) reliability. A second rater also substantially improved reliability. However, some authors suggest that adding additional stations is a better use of resources than adding examiners.[28] The introduction of an additional examiner does provide an opportunity to better evaluate inter-rater reliability.

Turner[1] and Nayer [20] report that reliability is influenced by test length. Depending upon the skill being tested, test lengths of 3-4 hours, 6 hours, 8 hours, or even 12 hours may be required to obtain a reasonable reliability coefficient. [1, 20, 33] Of course, as the length of the exam increases, other threats to reliability emerge. Namely, increased candidate fatigue[33], candidate anxiety[34], examiner fatigue[35], etc. The cost of the exam also increases. A fine balance must be struck between ensuring enough stations for adequate reliability while not exhausting participants and resources. Mock exams have been suggested as a way to decrease candidate anxiety.[44]

Related to this discussion, Swift, et at[35] studied the effect of examiner fatigue on their ability to concentrate during OSCEs. They described "differential rater function over time (DRIFT) as a term to classify rater effects that explain a rater's performance over a given period of time." For example, diminished rater concentration or increasing fatigue can result in raters being either more lenient or more critical over time.[35] It should also be noted that Swift identified differences in fatigue/concentration levels that varied according to examiner format (real-time vs off-line review), and method of scoring (paper vs electronic forms).[35]

Validity refers to whether a test actually measures what it intends to measure which is often referred to as face validity. Face validity is considered the weakest form of validity, as it is often assessed informally, and it is based on intuition or first impressions.[24]

OSCEs as scheduled tests, subject to a practice effect, may not reflect how an individual will perform in an actual clinical situation. One of the prominent difficulties in achieving high validity in the OSCE has been linked to the artificial nature of the

examination and the standardized client versus real client scenario."[36, 37] OSCE test developers feel that good SC training contributes to a valid exam process. Another concern noted is that OSCEs test competency in fragments[33] that often do not represent a full patient interaction. Goch *et al,* used a standardized observational tool to assess communication skills demonstrated during real patient interactions. The results of the 'direct observational tool' were significantly different (lower) than those achieved for an OSCE.[39] Several authors commented on the fact that students can learn to manage without translating that learning to an actual patient encounter[16, 38, 39] For this reason, some authors have suggested that "workplace assessments are more likely to indicate functional competency."[39]

This literature review identified several additional facets of validity to be considered: content validity, concurrent validity, and predictive validity.

Content validity asks whether a test represents/includes all relevant aspects of the construct (i.e., for the PCE-CC all dimensions of physical therapy entry-level competence). This aspect of content validity is characteristically assessed by expert opinion.[18] National practice reviews, exam blueprinting, and using established dimensions of competence are key to establishing content validity for OSCE test formats.

In our literature review, a number of studies examined content validity as it related to technical skill competence and professional behaviours. [21-23] Using a combination of checklists (for skills) and global ratings (for behaviours) enhanced the OSCEs ability to assess these domains. Barry *et al* [21] recognized that midwifery student performance in OSCEs did not reflect actual clinical practice when technical skill competence was considered in isolation. Students gained consent, examined the abdomen, and used technical language in ways that were done only for exam purposes and "would not be the approach taken in practice."[21]

The assessment of clinical or technical skills described in studies that focused on training of physiotherapists (usually an academic setting), included a narrower focus of clinical skills [29, 25-27, 30] than the breadth of physiotherapy practice assessed by the PCE-CC. The development of the OSCE format used for assessment of knee and shoulder examination in a musculoskeletal OSCE [29] or neuromuscular-specific OSCE assessment [30] appeared to demonstrate adequate content validity for use of the OSCE in these educational contexts. In this academic environment, the instructors or standardized clients served in the role of the patient.

Another concern related to content validity is the scoring of OSCEs. Checklist development is difficult; "the potential for omitting important items and including unimportant ones is great."[16] Over time, content experts develop detailed checklists to ensure objectivity, but this can lead to 'trivialization'. The clinical task is fragmented into too many small parts, not all of which are clinically relevant.[33] Even without trivialization, checklists can penalize a skilled practitioner who easily recognizes clinical patterns without exploring every checklist item or who takes indicated actions that were not

listed. Likewise, checklists can reward examinees who are practicing by rote or who are unjustifiably thorough.[16, 33]

For high-stakes exams, the question of scoring must also be considered since criterion-referenced scoring is preferable to norm-referenced scoring. It has been noted in the literature reviewed examinees should pass a standardized OSCE because they have met and demonstrated a minimum standard of competency, not because their performance was better or worse relative to the aggregate group.[16, 20, 33]

Concurrent and predictive validity:

Consideration of concurrent validity involving the OSCE refers to its "ability to vary directly with a measure of the same construct or indirectly with a measure of an opposite construct. It allows you to show that your test is valid by comparing it with an already valid test."[18] It should be noted that there was wide variation in the strength of the relationship between OSCE scores and clinical performance, general grade point average (GPA), course work, and/or clinical assessment tools and other tests of student performance. When the test correlates with a measure taken in the future, this is reflective of predictive validity.[18]

OSCE scores evaluated in a neuromuscular educational setting for physiotherapy students were highly correlated with final grade in the neuromuscular course.[30] This finding would tend to confirm preliminary evidence for the concurrent validity of the OSCE in formative evaluation of students in neuromuscular physiotherapy education. In contrast, an earlier study assessing the relationship between physiotherapy student performance on musculoskeletal OSCE stations and their future performance in a clinical placement correlated poorly ($r<0.30$) [34]. Wessel and colleagues[34] noted that the limited number of test stations used (n=8) may have influenced the predictive ability of the OSCE in predicting Clinical Performance Instrument scores on the clinical placements. A few studies involving different healthcare professionals have commented on the concurrent or predictive relationship (ranging from poor to moderate) between performance on OSCEs and internships/clinical assessments [1,19, 33, 34, 40, 41] but none of the studies examined the predictive value of OSCEs when moving from a student role to a fully autonomous role as is the case with our PCE.

In support of the predictive ability of the OSCE, recently published Canadian studies have provided evidence that physiotherapists in Ontario and Alberta, who are the subject of an investigation by the provincial regulatory college over the past twenty years, are more likely to have failed the PCE-CC on their first attempt and had lower first-time exam scores. [42, 43] However, the interconnectedness of risk factors could contribute to this finding. It has previously been noted that internationally educated physiotherapists (IEPTs) and males are more likely to fail the PCE-CC on their first attempt, as compared to Canadian graduates and women. Males and IEPTs registered with the Alberta College of Physiotherapy have also demonstrated a greater likelihood of having a professional conduct history involving either a complaint or discipline.[42]

It has been assumed that successful performance on an expert-created checklist for an OSCE will predict successful clinical performance. However, there is evidence that OSCE checklists used to assess 'communication' skills did not correspond with patient perceptions of effective communication.[1]

For many authors, this lack of strong predictive validity of OSCEs is a primary concern. In a 2017 review, Terry and her colleagues[41] express concern that an individual mode of summative assessment should not be the gatekeeper to the clinical practice environment. Gupta *et al,* went so far as to say, "For a summative assessment, OSCE should not constitute more than one-third of the total evaluation scheme." [33]

Conclusions:

The prevalence of standardized OSCEs being used in formative assessment and educational training of healthcare practitioners has stemmed from a desire to reduce assessment bias in determining clinical competence. Considerable emphasis has been placed on establishing the reliability and validity of this assessment tool specific to medical education.

However, according to this literature review, the reliability of the OSCE has not been uniformly established as adequate for a "high stakes" summative assessment for entry to clinical practice in physiotherapy.

In general, the content validity of the OSCE has been well established across a variety of educational contexts and formats that reflect its flexibility. Variable concurrent validity of the OSCE in relation to other measures of physiotherapy clinical performance (GPA, course work, clinical placement, etc.) has been observed in studies with very limited physical therapy scope. Finally, the only evidence that exists related to the predictive validity of the PCE-CC is the correlation between first-time PCE-CC failure/scores and the likelihood of future regulatory complaints to the provincial physiotherapy regulator. However, this correlation is diminished by many potential confounding variables. There is limited evidence to support that OSCE performance predicts future clinical performance or competency.

References listed in Appendix B.

Saskatchewan Self-Regulated Health Professions - Licensure Requirements

A review of the licensure requirements and characteristics of OSCEs used for licensure for the self-regulated health professions within Saskatchewan was completed. The information reviewed was available on the public web sites of these professions.

On review of the information regarding licensure requirements specific to the use of practicums/internship and OSCEs, the breakdown is as follows:

Requiring OSCE/Practical Exam:	8/27	30%
Requiring written exam either national or provincial	25/27	93%
Requiring OSCE for foreign trained but not Canadian	1/27	4%
Requiring internship post-graduation	4/27	15%

For profession-specific details of licensure requirements see Appendix C.

OSCE/Practical exam make-up was quite variable. The length of time to complete the examination process varied from 3 to 6 hours. Station make-up varied as well with length of stations between 5 to 25 minutes per station. Number of stations per exam ranged from 8 – 30.

For a comparison of OSCE formats see Appendix D.

In summary, although only 30% of Saskatchewan health professions require an OSCE for licensure, the examination process for the PCE – CC is not significantly different from the OSCE/ practical exams of those other professions.

See Appendix E for a Case Study that outlines in detail the process for Saskatchewan licensure in psychology (including internship) and examination timing for nursing.

Global Scan of Physical Therapy Licensure Requirements

The SCPT was asked to provide the committee with a review of how physical therapists in other nations are licensed. The main source was the International Network of Physical Therapy Regulatory Authorities (INPTRA) webpage's online listing[45] of countries where PT is regulated. Additionally, nation-specific regulatory authority websites were accessed if clarification of regulation/examination process was required. Although India is not listed by INPTRA it was included because it is one of the top source countries for IEPTs. In total, 20 different countries were reviewed.

See Appendix F for a summary table of all nation-specific details.

Appendix F gives a snapshot of the findings with respect to regulatory model, licensure requirements for domestic trained PTs, and licensure requirements for IEPTs. Numerous approaches for licensing physical therapists in different jurisdictions were revealed. It should be noted that physical therapy practice around the world varies with respect to amount of regulation and degree of autonomy enjoyed by the clinician. These variations are not recorded in this summary.

Regulatory model: In the majority of countries surveyed (75%), physical therapists are regulated nationally. Generally speaking, a national body is responsible for creating the legislative/organizational framework that establishes criteria for registration (licensure), maintaining a register, setting education/accreditation standards & curriculum, approving programs of study (domestic and equivalency for IEPTs), setting exams (if they exist), and managing ongoing competency and complaints. The exact details of all these functions were not clear for all nations surveyed. Furthermore, not all countries control all of these functions. Generally, in countries with a national model, physical therapists can practice anywhere within that country.

Only Switzerland had a mixed national/regional model where licensing criteria and education are set nationally but licenses are granted at a regional level.

Germany, Canada, and the USA were legislated exclusively at the state/regional level. German federal level delegates responsibility to regional authorities. In the USA, PT is legislated by each state and therapists can only practice in the state where they hold a license. However, the USA does have some level of national collaboration in the form of the written exam (national physical therapy licensing exam) that is required in all states.

Canada is also regulated exclusively at the regional (provincial) level. Provincial legislation assigns responsibility for licensure, continuing competency, and discipline to provincial colleges. However, there is a high degree of national collaboration in that national bodies have been created to:

1) accredit Canadian physiotherapy education programs,
2) set national curriculum & clinical education guidelines,

3) set entry-to-practice competency profiles,
4) determine IEPT equivalency,
5) set a national written and practical exam.

Although the Canadian model differs from the majority, we did not find any reason to believe that it does not provide adequate educational, examination, and/or regulatory standards. It does require collaboration on behalf of the colleges to agree upon national standards, done in part to facilitate licensure between provinces.

Requirements for licensure of domestic trained PTs: Without exception, where a regulator exists, physical therapists must hold a degree from an educational program approved by the regulating body. Following the completion of a recognized degree, 50% of the countries surveyed require licensure candidates to pass a written exam. These written exams are set at a national level, with the exception of Germany where physical therapy is taught in technical schools and exams are set by each state.

Although many (if not all) of the accepted education programs include practice hours or internships, 20% of nations surveyed required candidates to complete an additional internship *after graduating* from a physical therapy program. The length of post-degree practical training varied from 6 months (2 cases) to 1 year (2 cases).

Although we did not formally assess the trend, it was noted that different approaches are taken to the timing of clinical hours within education programs. Some programs take an integrated approach, while others require the majority of clinical hours to be completed after course work is finished. For example, Canada uses the integrated approach. Placements are interspersed within the program to facilitate learning but not all of these hours will be completed with entry-level expectations. On the other hand, some nations require students to complete an ‘internship’ after coursework is completed in order to graduate. India, for example, requires a 6-month pre-graduation internship. This 'block’ method may result in evaluating a larger number of clinical hours at the entry-level.

Canada was the only country with a practical exam (OSCE) for domestic trained PTs.

Requirements for IEPTs: For the countries where information was readily available, the vast majority review the IEPTs education to determine if it is equivalent to the accepted standard set by that country. In some situations, for example nations within the European Union or Australia-New Zealand, there are mechanisms in place to facilitate this process between member countries. Many nations require proof of practice hours. Language requirements/tests are common. In countries with an exam for domestic trained PTs, IEPTs are required to pass the same exam. The only exception was Australia, which has a written and practical exam for some IEPTs only (Australian/ New Zealand trained graduates do not need to sit any exam for entry-level practice). The process used by different nations for addressing deficiencies was not always clear although some nations note that a variety of strategies will be used (course work, practice hours, exams) as determined on a case-by-case basis.

Discussion with University of Saskatchewan School of Rehabilitation Science

A case example of a Canadian accredited Master of Physical Therapy education program

Canadian physical therapy education programs are clearly key participants in preparing new graduates for entry-level practice. One of the questions facing the committee is whether a licensure OSCE is truly necessary for graduates of accredited Canadian physical therapy programs, who have presumably demonstrated entry-level competence in a Canadian context in order to graduate.

To help explore this question we sought to better understand the Canadian education program and clinical placement process, academic standards, and accreditation requirements of Canadian physical therapy schools. We also wanted to understand the SRS's perspective and concerns regarding the PCE-CC. To these ends, the committee contacted the University of Saskatchewan (USask) School of Rehabilitation Science. The summary below provides a synopsis of the key points and themes discussed.

The SCPT grants licensure to physical therapists who graduate from many different Canadian schools of PT, so the information gained from USask is presented as a case example. However, because of the high degree of consensus and standardization with respect to national curriculum guidelines, competency profiles, and accreditation standards, it seems reasonable to assume that the information gathered from USask SRS is representative of similar processes and standards at other accredited Canadian universities.

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The stated primary purpose of the SRS's Master Physical Therapy program (MPT) is to prepare students for safe and effective entry-level physical therapy practice as generalists.

Curriculum and entry-level practice:

The process for setting, overseeing, and evaluating curriculum is rigorous, with significant input from national and local sources.

The USask MPT curriculum incorporates principles and content from key national documents:

- National Competency for Entry-to-Practice Physiotherapists created by NPAG (2017)
- National Curriculum and Clinical Education Guidelines for Canadian University Programs created by CCPUP (approved 2019).

These documents are approved by partner organizations: Canadian Physiotherapy Association (CPA), Canadian Alliance of Physiotherapy Regulators (CAPR), Physiotherapy Education Accreditation Canada (PEAC), and Canadian Council of Physiotherapy University Programs (CCPUP). Although these documents clearly identify the competencies expected of entry-to-practice physiotherapist, the specifics of curriculum objectives, content, and method of delivery are left to each educational program to develop and apply. It is recognized that programs will have some differences in focus and content owing to regional variations in practice and different demographic demands, as well as varying faculty expertise and interpretation of evidence. SRS strives to establish curriculum that prepares students for the provincial practices commonly expected in the health care settings where they will be learning/practicing, as well as preparing graduates for entry level practice as generalist PTs anywhere in Canada or beyond.

To this end, in addition to the national guidelines above, the SRS has an Executive Curriculum Committee (ECC) with eight content sub-committees (i.e., neurology, musculoskeletal, cardiorespiratory/exercise physiology, foundations, lifespan, etc.), each of which has a chair and three to five invited members, generally PT clinicians in Saskatchewan with relevant experience, background knowledge, and credentials specific to that area of practice. The ECC regularly reviews student course evaluations and employer, graduate, and exit surveys to help evaluate the MPT curriculum. Every 3-5 years, a Curriculum Advisory Committee consisting of a broad range of stakeholders including community PTs, faculty from other colleges, other health care professionals, policy makers, students, and senior leadership meets to provide assessment of and feedback about curriculum. The MPT program also refers to the PCE-CC examination blueprint (2009) to assist in setting curriculum.

Clinical placements:

The SRS MPT program contains 30 weeks of full-time clinical experience. Assuming a week is 37.5 hours (minimum) and allowing for a limited number of days off (i.e., statutory holidays and sick/bereavement time), every student will complete the program with a **minimum of 1050 hours** of full-time clinical practice. Most students finish the program with greater than 1125 hours because many clinical sites require students to put in 40-hour work weeks. CAPR requires all PT candidates to have completed a minimum of 1025 total clinical hours to be eligible to sit the PCE.

To prepare students for safe and competent entry-level practice, the USask clinical education program promotes gradually decreasing levels of supervision, increasing independence, and increasingly complex clinical situations as students progress through six different clinical placements. Across the placements, students must acquire adequate experience in the three essential areas of practice: cardiovascular & respiratory conditions; neurological conditions; and musculoskeletal conditions. In addition, students must gain a variety of clinical experiences in different settings (acute care, ambulatory care, rehabilitation, etc.) with patients with complex (multi-system) conditions, and with patients of varying ages across the lifespan. To ensure adequate

tracking and monitoring of different areas, practice setting, and conditions, each student must keep a record of conditions and skills observed. Additionally, Clinical Instructors (CIs) must record demographic information (area of practice: Musculoskeletal/ neurology/ cardiorespiratory, setting, age of clients) for each clinical placement. Final placements are assigned to intentionally and purposefully address any gaps in students' clinical experience to date. By the time students reach their final clinical placement, the expectation and clinical performance benchmark is entry-level competence.

To promote quality clinical instruction, ongoing support is provided to each CI through the provision of placement packages detailing MPT program and course information, placement performance expectations, links to resources on the SRS website, CI orientation workshops / individual sessions, and offerings of advanced clinical education workshops. The USask MPT program does not have 'mandatory' CI training but asks CIs to read the information provided and seek additional information/training as needed. Questions from CIs are considered high priority and are quickly responded to by a Clinical Education Unit (CEU) team member with commitment to offering support and assistance. Results from mid-placement student performance evaluations (which are mandatory and are submitted electronically) are reviewed promptly by the CEU team; CIs and students are contacted by CEU if the evaluation results/comments suggest the student may not be meeting performance expectations.

Over the 2 years and 6 weeks of the MPT program, students are mentored by at least six (6) CIs, often more. Students are scored on the Canadian Physiotherapy Assessment of Clinical Performance (ACP) tool which is based on the NPAG Essential Competency Profile for Physiotherapists in Canada (2009). The MPT program has established clear pass/fail criteria for each clinical placement course. Ultimately the decision regarding whether a student passes a placement rests with the SRS Clinical Practice Courses Sub-Committee who review information from the ACP, the CI, the student, and others in order to conduct a complete assessment of the situation. This process helps to balance the potential for negative biases (i.e., CI rating consistently low or high, gender effects, etc.) and spares the CI the stress of being solely responsible for failing a student.

Evaluation of students:

The USask MPT program believes that best practice pedagogy for training health care professionals requires the use of a range and broad scope of evaluations as each has its limitations. Faculty hired by SRS must regularly engage in teaching effectiveness courses and workshops to develop teaching skills including evaluation methods and best practice for measuring outcomes. During the two-years plus MPT program, there are close to 150 evaluation checkpoints within 32 courses. Evaluation methods used include OSCEs, oral exams focused on critical thinking ability, practical exams, cultural competency and sensitivity practice, competency exams with clear criteria for pass to ensure safety to perform certain higher risk skills (i.e., suctioning), peer-evaluations, self-reflection projects, and interprofessional team-based evaluations. Exams are set not only by faculty, but also by sessional and guest lecturers who are practicing

clinicians with expertise in the field. Clinicians also participate as examiners for the program's practical exams and OSCEs. This variety of examiners increases confidence in exam results. The SRS also receives support from the University to complete statistical metrics for the reliability and validity of (primarily written) exams.

The MPT program's admission policies[46] are demanding to ensure that high-caliber candidates are admitted to the program. Applicants must have successfully completed a 4-year baccalaureate degree and necessary prerequisite courses. A GPA of 75% is required to apply but higher grades are required to be successful. For example, in 2020, 216 applications were received. The mean GPA of the top 100 applicants was 89%, the minimum GPA was 83%. The top 100 admissions are asked to complete a non-academic assessment which includes a personal characteristics assessment and submission of a personal statement. (For most of the MPT program, the non-academic assessment used was the multiple mini-interview MMI, but this was changed as of 2020). A combined score for the academic and non-academic assessments is used to select 40 students for the program.

Because of this rigorous admission process, most candidates accepted have the skills and abilities required to successfully meet the demands of the MPT program. However, the program continually monitors student performance to ensure expectations are being met. Per the program advancement policy,[47] when a student fails a mandatory component of a course (i.e. practical exam, midterm) or fails a course/placement, they are granted one supplemental opportunity to successfully complete that failed component (i.e., a make-up exam or repetition of the course/placement). Upon a second failure of any mandatory component within the program, students are recommended to discontinue the program or re-start the program and repeat multiple courses. A review of attrition rates for the USask MPT program revealed that in 7 of 13 years, one or two students from that year's graduating cohort were required to withdraw or were held back.

MPT program evaluation:

The MPT program is regularly reviewed and evaluated to ensure it reflects best practice and is meeting its goals. These evaluation processes include input from internal and external sources.

Some of the main sources of program review/feedback that occur regularly are:

- University of Saskatchewan Systematic Program Review (internal) - Graduate Program Review on a 4-5 year cycle
- Integrated planning (strategic plan reviewing internal and external/environmental needs) on a 4 year cycle
- Student evaluations of courses and clinical placement ongoing at all times
- Exit Survey (administered annually to students in the final term of study)

Additionally, the following sources of feedback are discussed in detail below:

i. Accreditation by Physiotherapy Education Accreditation Canada (PEAC) on a 5 to 7 year cycle
ii. Employer Survey (administered every 3 years)
iii. Graduate Survey (administered to all graduates 1 year following graduation)
iv. PCE results

i. *Accreditation by Physiotherapy Education Accreditation Canada (PEAC)*[15]:

Accreditation is both a process and a condition. The process involves an integrated system of continuous assessment, evaluation, and improvement for an education program to demonstrate compliance with specified standards. The condition or state of being accredited provides a credential to the public and regulators, assuring that an education program has accepted and is fulfilling its commitment to educational quality.

The main components of the accreditation process are:

1) The Self Study Report (SSR) which is due four months prior to the site review. Most education programs report that they require approximately a year to compile and format the information required for submission.

The main purpose of the SSR is to provide an opportunity for the education program to:

- provide evidence about the program's compliance with accreditation standards
- systematically review the program and assess its outcomes
- identify areas of strength
- identify areas where strategies may need to be developed to improve or maintain program quality

2) A Peer Review Team (PRT) will review the SRS and conduct an on-site evaluation. Each PRT is comprised of four members; two members are physiotherapists with experience in education and accreditation, one member has experience in physiotherapy regulation, and one member has experience in accreditation in a profession other than physiotherapy. The team will:

- review the SSR and provide a preliminary report to the program outlining any additional requests for evidence
- verify and supplement evidence provided by the education program in the SSR
- assess the program within the context of its environment
- conduct site interviews with:
  - faculty, staff, students, and graduates of the education program
  - university administrators and other faculty involved in teaching physiotherapy
  - students
  - members of various committees involved in the development/evaluation of the program
  - preceptors who supervise clinical education placements
  - employers of graduates

- prepare and submit a report to the Accreditation Committee regarding the program's level of compliance with each of the accreditation criteria

3) The program is given an opportunity to respond to the PRT's final report.

4) PEAC staff prepare the confidential accreditation dossier for review. It includes the SSR, the preliminary report, the PRT report, the Program Response, and all additional evidence provided following the preliminary review and during the site review.

5) The Accreditation Committee awards accreditation status.

The Accreditation Committee consists of nine to twelve members from the following groups or organizations:

- Canadian Physiotherapy Association (1)
- Program Director from a Canadian physiotherapy academic program (1)
- Faculty members from Canadian physiotherapy academic programs (2)
- The Canadian Alliance of Physiotherapy Regulators (1)
- National Association for Clinical Education in Physiotherapy (1)
- Entry-to-practice graduate physiotherapist (1)
- The public (1-2)
- The Association of Accrediting Agencies in Canada or a member of an agency conducting accreditation of professional education programs (1)
- Additional members appointed by the Board depending on needs of the committee (2)

Schools are evaluated on six standards, with multiple criteria per standard. The standards are:

1. Program governance and resources:
   The program has adequate resources and works closely with the university and practice community to identify changing health needs and prepare a workforce that can respond to and meet community assets and needs.

2. Program development and evaluation:
   The program maintains an effective process of continuous self-assessment, planning, and improvement.

3. Faculty:
   The program has sufficient qualified faculty (academic and clinical) for effective program design and instruction, and provides appropriate, ongoing faculty development and evaluation.

4. Students:
   The program supports and prepares students with the competencies relevant to physiotherapy practice and regularly assesses their competencies and achievements.

This standard includes the requirements that a) students will attain a minimum of 1025 hours of clinical education experience that encompass essential areas of practice and settings as defined by the program and by the profession and b) students are evaluated in a variety of ways, given timely feedback, and given appropriate opportunities for remediation.

5. Accountability:
Accreditation documentation must explicitly describe and include evidence that the program accurately represents itself publicly and provides sufficient information to ensure accountability and consumer choice.

6. Physiotherapy competencies:
Accreditation documentation must explicitly describe and include evidence that the program facilitates student achievement of the competencies required for entry-level physiotherapy practice.

This standard requires the program to provide proof of curriculum mapping to objectives and national competency guidelines.

USask MPT Program accreditation status:

To be awarded Fully Compliant accreditation status, a program must demonstrate evidence of compliance with 100% of the accreditation criteria. Progress reports are required if any criteria are partially met and until all criteria are fully met.

The USask B.Sc. (PT) program was fully compliant with accreditation standards and criteria in 2008. Because of the transition to the MPT program not all accreditation criteria can be met (i.e., no program graduates or employers to interview, etc.) so PEAC awarded the program Partially Compliant status from May 2009 to April 2012, when the MPT program was awarded Fully Compliant status with no progress reports required. The SRS MPT program has maintained this Fully Compliant status ever since.

ii. *Employer survey*:

The MPT program conducts employer surveys every 3 years. The questionnaires specifically ask for "front-line supervisor" feedback. The SRS's goal is that a minimum of 90% of responding surveyed employers agree USask MPT graduates were prepared for entry-to-practice in physical therapy. This goal was met in both the 2013-2015 (91.2% agreement) and 2016-2018 (92.3% agreement) employer cohorts.

iii. *Graduate survey*:

The graduate surveys are delivered one-year post-graduation; in 2015 and 2016, they had reasonable response rates (65 % and 54% respectively). In 2015, 92% and in 2016, 100% of respondents agreed that the "MPT program prepared me for entry-to-practice".

iv. *PCE results*:

Student performance on the PCE is listed by the SRS as an external evaluation process. The School set a benchmark that a minimum of 90% of MPT graduates would pass the PCE (both written and clinical components) on first attempt. USask MPT graduates have never dropped below this benchmark for the written component. Regarding the PCE-CC, USask candidates have performed below that benchmark every year since 2014 and 73% of the time since 2009. Additionally, some of these failures have been for students with grades in the top 25th percentile of the graduating class, or who have received awards for outstanding clinical performance. When all other indicators (accreditation, surveys, clinical placement results, etc.) suggest the MPT program is on track, the School is clearly perplexed by these PCE-CC results. (Incidentally, this trend of decreasing pass rates on the PCE-CC for Canadian trained first-time exam candidates since 2009 is observed nationally, although to a lesser degree than the USask results.) **See Appendix G**.

The SRS has completed significant data analysis, attempting to ascertain the relationship between student performance in the MPT program versus PCE-CC results. From this analysis, there is relatively consistent significant correlation between PCE-CC total scores and academic performance (Grade Point Average on entry, Foundations 1, and select courses from module 5 - a practical skills focused intermediate module with MSK, neuro, and CR content). There are low to moderate correlation values of individual course marks (CR, MSK, neuro) to scores on the corresponding sub-specialty PCE stations. No association between student performance in clinical placements and performance on the PCE was found, although this analysis is difficult to complete as clinical placements are pass/fail. Despite these analyses, the confidential and ever-changing content of the PCE stations, makes it difficult for the School to determine where the problem lies and what actions might be taken. CAPR agreed to work with the School, including conducting a deeper “data dive” in 2017-2018, in an attempt to ascertain reasons why USask MPT pass rates have decreased, with no significant results. Furthermore, since 2018, the PCE results provided to the programs are anonymous which prevents SRS’s further exploration of student-specific correlations between program data and PCE performance outcomes.

Over the past number of years, the USask MPT program has made changes within the curriculum to attempt to assist the students in being better prepared to sit the clinical component of the PCE. This includes increasing the number of OSCE examinations throughout the program and working with Continuing Education in Rehabilitation Science (CERS) to bring PCE preparation courses to the province. These courses focus mainly on providing students with an opportunity to practice multiple stations with the “buzzer-beater” timing pressures of a large OSCE. They help students gain more experience in presenting their performance in ways that will meet the practice standardization and checklist approach used for evaluation in an OSCE.

The USask MPT program does not currently have a summative practical exam as some PT education programs do. (For example, the University of Alberta MPT program requires successful completion of a final, summative OSCE in order to graduate.)

USask had planned to introduce a final course in 2020 that would require completion of a summary OSCE, provide formative feedback based on the exam results, and provide students with opportunity to further practice skills and competencies requiring improvement. However, these plans were disrupted by the COVID-19 pandemic.

Licensing Internationally Educated Physical Therapists in Saskatchewan

Discussion occurred with the Executive Director/ Registrar (EDR) of Saskatchewan College of Physical Therapist (SCPT) to determine the process for licensing internationally trained physical therapists in Saskatchewan.

Ultimately the requirements are the same as to license a Canadian trained physical therapist. The applicant is required to have graduated from a recognized university program and pass both portions of the PCE examination process – the written component and the clinical component. The CAPR is the organization that informs the SCPT if the applicant has graduated from an acceptable educational program. IEPTs must provide proof of 1025 hours of clinical practice either from clinical placements as a student and/or working as a physical therapist in another country. In some cases, the National Association for Clinical Education in Physiotherapy, arranges Canadian placements for IEPTs. IEPTs are required to complete a course about Canadian health care. An English or French language proficiency exam is also required.

The current process of review from CAPR is to establish that the international educational program is “not significantly different” from a Canadian physical therapy educational program. The review does not look at whether the program is the same; a course-by-course comparison is not completed. When the evaluation determines the program is “significantly different”, recommendations will be made to fill the gaps that have been identified. In some cases, this requires the IEPT to complete a bridging program by a Canadian university. The candidate is required to pay a fee for the review of the educational program they have graduate from.

Once graduation from a “not significantly different” program is established, the applicant is required to pass the written component of the PCE examination process. The international applicant would sit the WC at one of the scheduled examination dates. On passing the WC the candidate would be eligible for a restricted license with Saskatchewan. As with Canadian educated candidates the IEPT would be eligible to work with a supervisory therapist at this time and attempt the PCE-CC when scheduling allows. On passing the CC the IEPT would become a fully licensed physical therapists within Saskatchewan.

The statistical information provided by the CAPR indicates that IEPT tend to have more difficulty passing both portions of the PCE and ultimately have a higher fail rate on all three attempts (82.5% IEPT vs >99% CEPT).

Discussion with Canadian Alliance of Physiotherapy Regulators

To obtain an understanding of the process of the current Physiotherapy Competency Examination, communication occurred with Canadian Alliance of Physiotherapy Regulators (CAPR). CAPR is the organization that is responsible for administration and delivery of the PCE. The examination is two parts – the Written Component (WC) and the Clinical Component (CC). CAPR uses *Standards for Educational and Psychological Testing (American Educational Research Association - AERA, American Psychological Association - APA & National Council on Measurement in Education - NCME)* and *Standards for the Accreditation of Certification Programs (National Commission for Certifying Agencies - NCCA)* to ensure the examination meets best practices in regulatory and certification testing. The CC is the component currently being reviewed by this committee.

Communication with CAPR focused on two components – creation/ implementation of the exam across the country and statistical evaluation of the examination. The CAPR web site indicates:

> For both Canadian and internationally-educated physiotherapist's, we administer the Physiotherapy Competency Examination (PCE) to determine a candidate's readiness for safe, effective and independent physiotherapy practice.
>
> The purpose of the PCE is to protect the public by ensuring that individuals who pass the exam have acquired the requisite knowledge, skills, and judgement to practice completely and without risk to their clients.

The CAPR was presented with a list of written questions which they responded to. A secondary request for review of certain resources CAPR listed on the website was made and fulfilled. Finally, CAPR made a presentation to the committee and answered any remaining questions.

Examination:

The committee requested information on the examination process and outcomes across the country. This information related to items such as location candidates take the exam, difference in outcomes from different locations, difference in outcomes from time-of-day candidates take the exam, opportunity to take exam in home location.

CAPR indicates they have undertaken research to ensure that the administration of the exam is equal and fair to all candidates. The location candidates take the exam is first come first serve. There is no preference given to any candidates as to the location they take the exam. The candidates are able to make 1st, 2nd, 3rd choices for the location to challenge the exam. Saskatchewan candidates tend to take the examination in Saskatchewan (see table below).

Clinical exam Yea[redacted]	Total # of candidates from US[redacted]	# of USK candidates* who sat the exam in provinc[redacted]
Nov15CC	39	39
Nov16CC	33	33
Nov17CC	38	37
Nov18CC	36	35
Nov19CC	30	30

* Candidates are those who chose the province of Saskatchewan as their first choice.

CAPR indicated there was no difference in the location candidates take the exam in respect to the passing rates, there was no difference in the pass rate dependant on the time of day the candidates took the exam and there was no difference in the examiners marking dependant on the time of day the exam took place.

Review of potential inequality of the examination process due to regional differences in physiotherapy practices was investigated. The examination questions/ stations are determined by Clinical Item Generation Team (CIGT). These are small teams of 3-5 physiotherapists that are geographically located across the country. Each year, eight CIGTs (totaling approximately 30-40 item writers per exam) are involved in generating and reviewing questions for the PCE. All content created by the CIGTs is reviewed by the Clinical Test Development Groups (CTDG). The CTDG are committees of nine members: the chair from each CIGT plus one member who serves as the national chair. Members of the CTDG represent different practice settings, specialty areas and geographic regions; they meet twice per year (spring and fall) and are responsible for reviewing and approving all content generated by the CIGTs. In addition to this, the CTDG is responsible for reviewing and approving each CC exam form prior to its administration.

The committee asked what the overall pass rate was for Canadian and IEPT trained graduates.

> *Over the past 10 administrations, a total of 14 Canadian-educated candidates (out of 3640 who took the CC between June 2015 and November 2019) have failed all three attempts; in other words, the overall success rate on the PCE for Canadian-educated candidates is greater than 99%.*
>
> *From 2015-2019, 82.5% of IEPT passed by their third attempt.*

The review of the information related to the exam trends indicates fair administration of the examination process to candidates.

Statistical:

The communication with CAPR reviewed the statistical performance of the examination process. One of the main requests related to developing this paper involved the validity and reliability of the examination process. CAPR provide the following information related to the statistical performance of the examination.

> *Evidence of exam reliability is collected after each administration of the PCE. For the CC, reliability is estimated at the station-level and exam-level through item-total correlation and Cronbach's alpha coefficients. Item-total correlation coefficients show how well candidates' scores on a station correlate with their overall exam scores. These coefficients provide 'discrimination' information by indicating how well each station differentiates between strong and weak candidates. Item-total correlation values above 0.2 indicate that the station is discriminating well. Historically, item-total correlation coefficients are between 0.3 and 0.6, with an average coefficient of 0.43 over the past 10 administrations.*
>
> *Internal consistency (the extent to which each station independently measures the same construct) estimated with Cronbach's alpha coefficients. An exam's internal consistency is affected by several factors, including the number of candidates, number of items/stations, and amount of variance in candidates' exam scores; reliability coefficients tend to increase as the number of candidates and number of items/stations increase, as well as when the candidate population is more heterogenous (i.e., wider range in scores). That being said, in the context of a 16-station OSCE-style exam, the Cronbach's alpha coefficients indicate that the CC demonstrates good internal consistency; at the station level, these coefficients typically have values between 0.6 and 0.9 (depending on the number of checklist items in the station). At the exam-level, the reliability coefficient is typically lower (as it is based on 16 "items"), with an average total score reliability coefficient of 0.67 over the past 10 administrations. Values in this range are considered very good for a performance-based assessment and are comparable to what is reported in similar exams.*

Further information was provided on other types of validity.

The committee asked if there had been any investigation of discriminant validity as demonstrated by a negative correlation of exam results with test anxiety, coping mechanisms (esp. re: organization, performance under pressure, response to stress, confidence)?

> *CAPR currently has no mechanism to determine the extent to which candidates' exam scores are related to construct-irrelevant factors such as text anxiety and coping mechanisms. Validity considerations are, however, incorporated into every aspect of the PCE's design and delivery.*

While testing agencies have no control over candidate-specific factors (e.g., anxiety, fatigue) that may impede their ability to demonstrate competence on a given administration, CAPR offers many free online preparatory materials to assist candidates in familiarizing themselves with the exam content, structure, and format, as well as administration logistics, so they can perform to the best of their ability on exam day. Preparatory materials include an Essential Exam-Taker Guide (which provides information on the purpose of the exam, what it tests, how it is structured and scored, how to prepare for the exam, and exam day procedures), practice stations, information on common candidate errors, orientation videos that familiarize candidates with how the exam is run (e.g., how candidates rotate through stations, the role of examiners and standardized patients, etc.), and tips for how candidates should approach the stations. In addition, candidates participate in mandatory orientation on the day of their exam in order to ensure all candidates are familiar with the structure and process of the clinical exam.

The committee requested information regarding the predictive validity of the PCE-CC.

Does performance on the exam actually predict competent practice? Is this an objective of the exam process?

As with all licensure testing programs, the PCE has a well-defined purpose: to protect the public by ensuring that individuals who pass the exam have acquired the requisite knowledge, skills, and judgment to practice completely and without risk to their clients. As stated in the Standards for Educational and Psychological Testing, "No test permits interpretations that are valid for all purposes or in all situations". Given the purpose of the PCE, CAPR collects ongoing validity evidence to support the interpretation that candidates who meet or exceed the passing score have demonstrated entry-level competence. Put simply, the PCE is intended to provide physiotherapy regulators with a dependable mechanism for identifying candidates who have met the minimum standard of competence; it is not intended to predict job performance.

The CAPR indicated that there was no information to determine outcomes of the examination process correlated to travel of candidates, preparation of candidates through exam "boot camps" or other means. There was further explanation as to the make-up of the examination being 5 – 10 minutes stations and how that identifies competency as compared to coping under a pressure situation. CAPR indicated the following:

Assessments are not designed or intended to test everything a candidate needs to know and do to be safe and competent as a practitioner; yet, they must cover a representative sample of the content domain, as outlined by the exam blueprint. The OSCE-style format used for the CC is widely recognized as the "gold standard" for performance-based assessment because of evidence of the

reliability, validity, and practicality of this approach for assessing clinical skills. Factors contributing to greater reliability of the OSCE over other types of performance-based assessments include the ability to assess multiple samples of competence in a relatively short period of time, with each candidate being evaluated by several trained examiners (i.e., no one examiner determines a candidate's pass/fail status) against the same pre-defined criteria (i.e., standardized checklists and rating scales are used to evaluate candidates during the client encounter, each of which is linked to a competency from the PCE blueprint).

Despite the above, there are always trade-offs when determining how long stations should be and how many stations should be included on an exam; longer stations may allow for a more realistic client encounter, but limit the number of stations that can be administered (which also limits the breadth of competence that can be demonstrated). Shorter stations allow for more stations to be administered (which generally increases the reliability of an exam), yet limit the depth of the client interaction a candidate will have in each station.

CAPR provided the PCE committee access to certain documents that were identified on the CAPR website. These documents included reports from external evaluators that CAPR retained to critically review the examination process. The CAPR identifies that they are committed to continuous quality improvement. This is noted by the regular request for external reviews. The CAPR had a review completed in 2010, 2016 and is currently in the process of commissioning further external review – as noted on the website.

The information contained within the 2016 external review report is consistent with the information that was provided by the CAPR. There were 18 recommendations made that related to the written and clinical component of the PCE, as well as the general administration of the exam. Discussions with CAPR identified that actions have been instituted for all 18 recommendations.

One recommendation that the committee requested further information was related to the scoring of the exam components. The best practice has criteria-based scoring for these types of examinations. The report identified that CAPR was implementing this type of scoring for the written component. An external report raised concerns that the clinical component relied on norm-based scoring. This committee shared this concern because the number of checklist items required to pass a station is dependent on the performance of the borderline candidates in each specific exam cohort. CAPR responded that it is using well-established criterion reference scoring:

Two well-established methodologies are used to establish the passing score for the total score criterion of the PCE Clinical Component: the Borderline Group method and the Contrasting Groups method. These methods are referred to as

examinee-centered methods because judgements regarding actual examinee performance are used to set the cut score for the exam.

The Borderline Group method is used to calculate a passing score for the clinical encounter portion of each station. This method requires examiners to identify borderline candidates, which is done once an examiner has completed their evaluation of the candidate. Specifically, the examiner in each station evaluates a candidate's readiness to practice based on how well the candidate demonstrated safe and effective physiotherapy practice in the station. Readiness to practice is rated on a six-point scale (1=unacceptable, 2=poor, 3=borderline unsatisfactory, 4=borderline satisfactory, 5=good, 6=excellent), and the mean score of all candidates whose performance is judged to be "borderline satisfactory" or "borderline unsatisfactory" is used to derive a passing score.

The Contrasting Groups method is used to calculate a passing score for the written portion of each 5+5-minute couplet station. Using this method, candidates are classified according to pre-established performance descriptions of acceptable and unacceptable based on the quality and accuracy of their written responses. Specifically, after marking a candidate's response, the examiner indicates whether the candidate's response was "adequate" or "inadequate". The test score distributions for each classification of candidates are then compared and the passing score is where the distribution of the contrasting groups intersect.

Prior to the exam, all physiotherapist examiners receive training on how to make judgments about readiness to practice based on pre-established definitions of acceptable/satisfactory and unacceptable/unsatisfactory performance that are linked to the standard of minimum competence.

It is important to note that the Borderline Group and Contrasting Groups methods are examinee-centered methods fall under the category of absolute or criterion-referenced (as opposed to relative or norm-referenced) standard setting procedures because examiner ratings of candidates are based on a predetermined standard of competence that does not depend on the performance of candidates taking the exam.

CAPR provided two articles to supplement their response:

Procedures for Establishing Defensible Absolute Passing Scores on Performance Examinations in Health Professions Education: Steven M. Downing, Ara Tekian, Rachel Yudkowsky: RESEARCH METHODOLOGY

How to set standards on performance-based examinations: AMEE Guide No. 85: Danette W. McKinley & John J. Norcini: MEDICAL TEACHER 2014; 36: 97 - 110

The external report clearly identified that CAPR was truly committed to ongoing continuous quality improvement. The engagement in the review process was identified to be genuine and all information required and requested was provided.

In summary, the communication and engagement with CAPR identified that the examination process would meet best practice standards. The administration of the exam was fair across candidates and there were no regional differences identified in exam make-up, delivery or ability to pass. Statistically the CC was consistent with typical OSCE style examinations. This information was confirmed from the external review completed for the CAPR.

Report Summary

In the 1990s and early 2000s, when the PCE was implemented for Canadian graduates, there was far less national standardization than exists today. Although accreditation standards and a professional syllabus existed pre-PCE, most other forms of national standardization were absent. The Competency Profile for Entry-Level Physiotherapy was in its infancy (1998) and was refreshed in 2009. The national curriculum guidelines were not harmonized with the competency profile until 2009. Clinical education national guidelines were not released until 2011. There were a variety of clinical education assessment tools in use until 1997 when the US developed (PT-CPI) tool was released. A Canadian-based clinical performance tool was not released until 2015. Physical therapy programs were mixed between Bachelor and Master programs until 2014 when all schools finally transitioned to Master level programs.

The situation is very different in 2021; many mechanisms are now in place which support standardized assessment of entry-to-practice. We have well established National Curriculum guidelines (2019) that include clinical education experiences and are based on the national Competence Profile (2017). All Canadian programs are at the Master level, accredited by Canadian standards, and assess student clinical performance using the Canadian-based clinical performance tool (ACP) which is harmonized with a national entry-level competence profile.

The OSCE was developed in the 1970's as a formative tool for educational purposes. By the mid-1990s, the exam was identified by some as the "Gold Standard" for providing post-graduates with feedback on clinical performance. The 1990s sees OSCEs adopted for the first time by some health professions as a summative tool to assess competence for licensure. By the mid-2000s, critiques of the OSCE question whether there is sufficient evidence to rely so heavily on OSCEs in summative assessments. The current literature continues to discuss whether this type of exam is most appropriate for high stakes examinations.

The discussion about the use in a high-stake situation encompasses the reliability and validity of the examination. The reliability of the OSCE is typically in the .66 range across stations for Cronbach's alpha. Some authors suggest this reliability should be in the .8 or above range for the high-stake exam.

Validity related to the OSCE exam is in the form of content validity, predictive validity and concurrent validity. CAPR presents strong evidence for PCE-CC content validity. There is minimal information coming forth indicating concurrent validity or predictive validity. The CAPR indicates that the exam is not designed to predict a candidate's future practice. However, some authors indicate:

> "To achieve the goals of providing robust evidence of competence, and the identification of appropriateness for advanced training, summative assessments scores must necessarily be predictive of student's future performance. However, there is limited evidence to support this assumption."[41]

When reviewing the self-regulated health professions in Saskatchewan the majority required a written exam for licensure. Only 8 of 27 professions require OSCE for licensure. Not all OSCEs required as much direct-patient interactions or demonstration of hands-on skills as the PCE-CC. The majority of health professions integrate clinical hours within the education program.

When reviewing physiotherapy licensure requirements from other countries, it is noted that no other nation requires an OSCE for licensure of domestically trained PTs from an accredited domestic program. The level of involvement that the regulatory body has in the curriculum development and educational program accreditation is variable. 50% of other countries require passing a written examination prior to licensure for domestically trained physiotherapists. 20% of countries reviewed require a post-graduate internship prior to licensure.

Upon reviewing the Canadian PT education system, we found that Canadian MPT programs must deliver education consistent with the national entry-to-practice competence profile and national curriculum guidelines. PT regulators (and other key stakeholders such as CPA, CCPUP) participate in the creation of these guidelines/standards. However, there is some variability on the “focus” of each MPT program owing to different regional and demographic demands. A rigorous and expansive Canadian accreditation process ensures that program curriculum delivery and clinical education will facilitate student achievement of the competencies required for entry-level physiotherapy practice. This includes the knowledge, skills, and judgement to practice safely. Within the MPT program there are many (>100) evaluation ‘check points’ using a variety of assessment strategies, a minimum of 1025 clinical hours, and multiple evaluators (faculty, guest lecturers, clinicians, CIs). Of note, the majority of clinical practice hours are not at the entry-level. In addition to the recruitment of high-caliber students, the program also has clear academic standards which must be maintained throughout the program. Failure to meet these standards results in significant consequences including repetition of courses or expulsion from the program. Apart from first-time PCE-CC pass rates, internal and external evaluations of the program, including graduate and employer surveys, indicate that >90% of graduates emerge with the ability to practice at entry-level.

The administration and logistics of the CAPR PCE – CC reveal no remarkable differences as compared to other professions completing an OSCE examination. The information provided by the CAPR for candidate preparation is as good or better than other professions. With respect to pass rates, CAPR annual reports from 2017-2019 indicate that first-time PCE-CC pass rates for Canadian graduates range from 83%-91%, and for IEPTs from 38%-54%. CAPR communicated to the committee that by the third attempt over 99% of Canadian Educated candidates and 82.5% of IEPTs pass the PCE - CC. The significantly lower IEPT first-time and final attempt pass rates may indicate more need for the examination process for the IEPT cohort.

Conclusions Related to the Committee's Original Guidelines

The original guidelines presented to the PCE-CC review committee were the following:

1. Complete a thorough and transparent review of the exam process, marking criteria and site/examiner variability to ensure that it has been based on best practices and that it creates a fair and equal opportunity to all candidates (including both Canadian and International Educated)

2. Review the validity and reliability of the clinical component of the PCE as compared to other reputable licensing competency measures of a similar scope. Review information from environmental scan of what is currently being used for licensure exams/competency measures for entry to practice in other professions within Saskatchewan and throughout Canada

3. If deemed necessary, given the information gathered above, investigate the potential impact of changes to licensure requirements in terms of both public protection and labour mobility.

The review identified the following related to the original request:

1. When reviewing the exam process the CAPR PCE – CC did not present with any variability of site, examiners or marking criteria. External reviews indicate that, while there is some room for improvement, the PCE has met all best practice guidelines and the CAPR was open and committed to ongoing evaluation and improvement of the process. The administration of the exam was fair and equitable to all candidates.

   We found that the amount of information available to candidates about the PCE on the CAPR website (re: exam process, scoring, example questions, etc.) is thorough and comparable to similar exams for other professions. Although the PCE-CC scoring criteria is complex, it is fully explained. PCE has extensive process for setting exam content. This includes surveying Canadian PT practice to create an exam blueprint and creating exam questions/check lists with input from clinicians across Canada. Overall, we had no concerns about exam content validity. Within the limits of exam security, standardized clients and examiners participate in extensive training. Characteristics of unsatisfactory, borderline, and satisfactory performance are provided. Global ratings are clearly defined. Examiners must provide detailed description of unsafe/ inadequate performance. All of this helps to ensure the standardization of the exam.

   The exam is fair from the perspective that no statistically significant difference in pass rates, as reported by the CAPR, have been found across exam sites or time of sitting (AM vs PM). CAPR also denies any regional differences in exam pass rates;

we were not allowed to see exam results identified by MPT program (to protect the schools' reputations).

The committee did have discussions about the fairness of availability of exam review. The large scale, multi-location nature of the PCE, video recording has not been possible to date. This makes it difficult for a third party to verify standardized client, examiner, and candidate performance. There is no way to objectively assess what happened in a station after the fact. This, in combination with the confidential nature of the stations, diminished the transparency of the appeal process and may contribute to a sense of unfairness with the exam. A silver-lining of the virtual exam development may be the introduction of 'video-replay' capabilities to the PCE-CC.

2. When reviewing the reliability and validity of the examination process the findings were mixed. The statistical evaluation of the examinee in respect to reliability and content validity places the CAPR PCE – CC within the levels that are typical for this type of exam.

   There is no statistical review from CAPR related to predictive validity. There is information from other documents that indicates some relationship to early complaints of physiotherapists that did poorly on initial attempts of the PCE – CC, however there are many other factors that may account for this. There is low to moderate indication of concurrent validity.

   Although the reliability of the PCE – CC is within the levels of other OSCE type examinations, several authors question whether the current reliability levels are sufficient for high-stake exams. Given the identified limitations of OSCE exams with respect to some important aspects of reliability and validity, it is perhaps time to reconsider the practice of using the PCE-CC as the final determinant to full licensure as a physical therapist.

   The environmental scan for health professions within Saskatchewan indicate only 30% of self-regulated professions use OSCEs as a licensure requirement. When looking at physical therapy practice internationally, there is no use of OSCEs for domestic licensure and only Australia uses this process for some IEPTs. There is significant variability between nations with regards to amount of PT autonomy, regulation, expectations of the profession, standardization of curriculum, and amount of regulator participation in education standards.

3. The impact on licensure requirements for public protection and labour mobility is discussed in the Recommendations section below.

The discussion of the added mandate of recommending alternatives for the licensing requirements is also found in the Recommendations section below.

Recommendations & Rationale for Alternative Licensing Process

The committee acknowledges that some of the recommendations outlined below will necessitate revisions to the SCPT bylaws, and potentially the Act. However, given the evidence reviewed, the complexity of competency assessment, and the balance of pros and cons with regards to fairness and protection of the public, we believe that the following recommendations are worth pursuing.

1. **We recommend that all licensure candidates be required to pass the written component of the current CAPR PCE.**

This is consistent with the majority (93%) of Saskatchewan self-regulated health professionals and 50% of the international physical therapy licensure standards we reviewed.

Licensure requirements for Canadian graduates:

2.1. We recommend that candidates who have successfully graduated from a Canadian PEAC fully accredited MPT program no longer be required to sit the PCE-CC to be eligible for licensure in Saskatchewan. Canadian graduates could take the exam if they wish, to facilitate transferability between provinces, but the PCE-CC is not a requirement for licensure in Saskatchewan.

This change would be consistent with international physical therapy licensure norms; no other nation surveyed required its own graduates to sit an OSCE. Within a Saskatchewan context, this change would be consistent with the practice of 70% of self-regulated health professions.

The Canadian MPT university programs that have met the rigorous and ongoing Canadian accreditation standards set by PEAC have demonstrated that their programs meet exceptionally high education and evaluation standards harmonized to nationally agreed upon Canadian curriculum guidelines and Canadian entry-to-practice competency profile. These national documents and the accreditation process include significant input from regulators and other stakeholders which ensures that the principle of protection of the public is enmeshed in the programs. Program advancement policies ensure students are given appropriate opportunities for remediation with significant consequences (including withdrawal from the program) when expectations are not met. Within Canadian MPT programs, Canadian students must successfully pass many different types and hours of evaluation (including OSCEs and practical exams) conducted by multiple assessors; taking different learning and communications styles into account.

Graduates of Canadian accredited MPT programs must complete >1025 clinical practice hours; the vast majority, if not all, of these hours are completed in a Canadian context where the degree of professional autonomy and expectations are identical to the post-licensure environment. Clinical placement evaluations again harmonize with the nationally developed Canadian entry-to-practice competency profile. The placement evaluation tool (ACP) contains many items that assess “transferable” or “soft skills” (clinical reasoning, communication, professionalism, ethics, commitment to ongoing learning) which are essential to safe practice, but are difficult to assess in the time limited, high-pressure, artificial setting of an OSCE. Although students do not have identical clinical experiences, they are required to perform in a wide sampling of settings, client ages, and main areas of practice (CR, MSK, neuro). Placement expectations, passing criteria, and amount of supervision required are clearly outlined by the MPT program thereby eliminating some of the pitfalls which were originally noted in the traditional assessments (oral exams, residency) used in medicine training programs.

Although the PCE-CC’s reliability scores are on par with other exams of this type, information from several authors in our literature review cast doubt upon whether these reliability scores are sufficiently high for a high-stakes, gatekeeping exam. The concurrent validity of the PCE-CC (and other OSCEs reviewed in the literature) is underwhelming, with only low to moderate correlation to relatively few other measures of performance. The predictive validity of OSCEs, including the PCE-CC, is also not definitively demonstrated. Although CAPR does not believe the exam should predict future competence, our literature review suggested that predictive validity is critical if OSCEs are to be used for high-stakes decisions. From a Saskatchewan context, it should be noted that USask graduate first time failure rates are not consistent with (i.e. are poorer than) employer direct supervisor and one-year post-graduation evaluations of entry-level competence. Given these concerns with the PCE-CC's reliability, concurrent validity, and predictive validity, we believe that it should not be used as the gatekeeper to full licensure if a reasonable alternative exists; for Canadian graduates, we believe the accredited MPT programs represent a reasonable alternative.

We believe that a graduate from a Canadian accredited MPT program has, by virtue of their training within a Canadian context, gained the requisite knowledge, skills, and judgment to practice competently and without risk to the public. Post-graduation, these individuals’ time and energy would be better spent developing in-depth postgraduate level skills in their specific area of practice, rather than working to maintain entry-level practice in all areas to pass the OSCE. The overall success rate on the PCE-CC for Canadian graduates is greater than 99% as is expected since they have already demonstrated entry-level knowledge, skills, and judgement to graduate.

2.2) If a licensure candidate has graduated from a Canadian MPT program with an accreditation status other than Fully Compliant, we recommend the SCPT review that school's most recent performance on PEAC standards 4 & 6 (which relate to clinical practice and competencies). If there are significant criteria not met for these standards, graduates from that program may be required to sit the PCE-CC.

When determining accreditation status[15], each criterion is assigned a level of compliance – either fully met, partially met, or not met. The overall accreditation status is then assigned by identifying the number of criteria within each of the six standards whose level of compliance is 'not met'. Accreditation –Fully Compliant is awarded when 100% of criteria are fully or partially met. In the case of partially met criteria, the program must submit progress reports to show their ongoing work towards fully meeting the criteria. Accreditation – Partially Compliant or Probationary are awarded when there is evidence that some or many criteria are 'not met'. Given the breadth of standards, the SCPT should investigate which criteria are 'not met'. Standards 4 & 6 most relate to student education, evaluation, and clinical practice.

2.3) If the SCPT is concerned that government or other stakeholders will not allow the PCE-CC to be removed without replacement for Canadian graduates, we have two possible replacement recommendations. The SCPT may wish to implement one, both, or neither of these:

a) **Consider requiring successful completion of a 3-month (12 weeks of full-time work), post-graduate, internship to be eligible for full licensure**.

The internship would require on-the-job evaluation of entry-level practice by a supervising therapist. The goal would be to allow sufficient time to confirm whether an individual is practicing at entry-level, without overwhelming the resources of the employer/supervisor. This type of internship model is used in 15% of other self-regulated health professions in Saskatchewan and in 20% (or more) of international physical therapy licensure processes surveyed. Whereas the OSCE evaluates fragments of practice, an internship evaluates whether the individual can put all the fragments together in the clinical setting.

The SCPT currently recommends the use of a combination of chart reviews and completion of the Canadian Physiotherapy Assessment of Clinical Performance (ACP) tool to ensure adequate practice of restricted license holders. Three months is the typical amount of (non-pandemic) time required by most restricted licensees. We believe that a similar process would be appropriate to evaluate an internship. Given that the time frame is relatively short, immediately post-graduation, and the goal is to confirm that the new graduate is in fact at entry-level, especially with regards to 'soft-skills', the ACP seems like a reasonable assessment tool. Further work may be requested to validate this tool for determination of entry level practice competence outside the educational setting. The SCPT should carefully consider the amount of direct (face-to-face) supervision required; one of the original critiques of conventional performance

appraisal was the lack of direct observation with over-reliance on self-report. From our literature review, there are several possible biases and common pitfalls of competency evaluation that should be reviewed in a mandatory education package provided to supervisors. It should be noted that many of these pitfalls can be addressed by using a clear assessment tool, establishing clear internship goals, and setting clear supervision guidelines. This education package would also be an opportunity to highlight to the supervisor the responsibilities and 'protection of the public' function of the internship.

If the SCPT chooses to implement an internship requirement, we suggest the SCPT develop an 'Internship Review Committee', something akin to the SRS Clinical Practice Courses Sub-Committee. It would be the responsibility of this Internship Review Committee to review all evidence and make a final decision about licensure, extending the internship (much as probation can be extended), allow a change in supervisor, etc. This committee could review the components of the internship assessment (i.e. chart audits, ACP scores, a character reference statement provided by the supervisor, etc.) to help make the final determination. The SCPT would have to establish for itself clear criteria of what scores/criteria are required to 'pass' the internship and/or what would constitute a 'fail'. Mechanisms will have to be established to ensure fair evaluation in cases where an internee does not get along with the supervisor or disagrees with the internship assessment results. Costs incurred by this process could possibly be offset by charging an internship application fee.

Another reason to consider a post-graduate internship is that Canadian MPT programs intersperse clinical hours throughout the program to facilitate learning. Consequently, only the final placement(s) are required to be at entry-level to pass. The theory is that students will be able to integrate skills/practice completed earlier in the program at an entry-level by virtue of their overall improvement and development as physical therapists. A post-graduate internship provides an opportunity to confirm that this goal has been achieved. Our literature review suggested that evaluating the candidate in the workplace may provide a better evaluation of actual functional competency.

If the SCPT chooses to implement this recommendation and other provinces do not, careful consideration will have to be given to prevent an influx of candidates coming to Saskatchewan in the hopes of evading the PCE-CC, or getting licensure here despite previous failed attempts elsewhere. One mechanism to help with this might be an internship fee. It is also possible that a longer internship will need to be considered.

b) Consider requiring Canadian graduates to complete a comprehensive review of all clinical skills prior to licensure.

One of the advantages of having to sit the PCE-CC was that, to prepare for the exam, candidates completed a comprehensive review of all entry-level clinical practice skills. We suspect that the need to study all areas of clinical skill, including early foundational skills, in a practical way[49] helps Canadian candidates to consolidate and integrate all program learnings. This type of review may be especially important for MPT programs where content is presented in blocks. Although no longer required to sit the PCE-CC, we believe that Canadian graduates would still benefit from a thorough, all-encompassing review of clinical skills. Therefore, **we propose that Canadian graduates be required to show proof of a comprehensive skills review. This could be accomplished within the MPT program via passing a final, comprehensive OSCE or via the successful completion of a summative, program-end practical course.** The goal is for the student to study/review all entry-level clinical skills and receive formative feedback on the performance of these skills.

If the graduate comes from a Canadian accredited program that does not include an adequate final practical review course or OSCE, this requirement could be met by completing the PCE-CC. It should be noted that an in-program course that gives feedback on performance would be preferable to the PCE-CC which is a poor source of formative feedback. Given that the pandemic has interrupted many in-person classes/OSCEs, and that MPT programs may need to adjust to include this type of exam/course, we recommend that this requirement be implemented in 1-2 years' time if it is deemed necessary.

2.4) Canadian graduates from PEAC fully accredited MPT programs who have been successfully practicing under a restricted license but cannot complete the PCE-CC because of the COVID-19 pandemic should be allowed to complete an internship to qualify for full licensure.

The proposed virtual format of the PCE-CC raises concerns because physical therapy is not typically performed in a virtual context. Additionally, given some of our current concerns regarding OSCE reliability & validity in high stakes exams, we question whether the abbreviated, virtual format would provide a fair and accurate assessment of candidates. To date, a suitable exam alternative has not yet been outlined by CAPR. We have already described under recommendation 2.1 why graduates from Canadian accredited MPT programs should be eligible for full licensure without having to complete the PCE-CC. Consequently, we believe that this recommendation should apply to all Canadian graduates currently working under a restricted license, regardless of previous PCE-CC attempts. Given that 99% of Canadian graduates successfully complete the PCE-CC when given the chance there is little reason, apart from process-requirements, to insist on the completion of the exam for Canadian graduates who are working

successfully under their restricted license. Many of the individuals now caught in COVID-19 licensing limbo will have completed over 6 months to 2 years of practice hours ("internship") under a restricted license. With this in mind, we suggest that the SCPT either:

a) **Consider the already completed restricted licence practice hours completed in Saskatchewan as an Internship, so long as the total number of hours meets or exceeds 3-months of full-time hours (480 hours).**

If the direct supervisor(s) of an individual holding a Saskatchewan restricted license is able to demonstrate (via chart audits, completion of the ACP at 'entry-level', provision of a reference statement, etc.) that the restricted licensee has the requisite knowledge, skills, and judgment to practice competently and without risk to the public, then the SCPT should grant full licensure to this individual.

b) **If the SCPT does not feel comfortable evaluating practice hours retroactively to meet the internship requirement, then we suggest that current restricted licensees be required to complete a 3-month internship (as described above in recommendation 2.3.a) to qualify for full licensure.**

This option has the advantage of enabling the SCPT to set clear internship performance expectations with the supervisors before practice is reviewed.

Licensure requirements for IEPTs

3.1) We recommend that IEPTs be required to pass the PCE-CC to be eligible for full licensure in Saskatchewan.

The situation for IEPTs is significantly different than for Canadian graduates. Although IEPTs must graduate from programs that have been assessed as being "not significantly different" from Canadian programs, this does not mean that these international programs are equivalent to a Canadian program. The education programs in other nations are not built around Canadian curriculum guidelines and Canadian competence profiles, nor do these institutions have to meet and maintain the standards required by PEAC. Canadian stakeholders and regulators do not contribute to the physical therapy programs in other nations. Clinical placements and experiences are not completed within a Canadian context. The clinical placement assessment tools in other countries are not directly based upon the Canadian competency profile. There are significant and potentially problematic differences in the amount of autonomy and professional expectations of physical therapy practice between different nations. There are also differences in cultural, communication, and educational norms among nations. Given these differences we cannot be sure that upon graduation an IEPT has the requisite knowledge, skills, and judgment to practice competently and safely within a Canadian context. A screening tool is required to assess the clinical skills of IEPTs. The PCE-CC is a reasonable option here. The clear differences in IEPT performance on the

PCE-CC as compared to Canadian graduates, suggests that the exam is performing this screening function. By their third attempt, only 82.5% of IEPTs pass the PCE-CC.

Although this is not the approach used by the majority, there is precedence. Australia uses an OSCE to screen some IEPTs but not domestic graduates. In Saskatchewan internationally trained nurses are required to submit their education to the National Nursing Assessment Service (NNAS) to determine equivalency. One of the recommendations that NNAS may make is for the applicant to complete a Substantially Equivalent Competency Assessment (SEC) at Saskatchewan Polytechnic before being eligible to challenge the NCLEX-RN. This competency assessment includes an OSCE component.

Another option, if we decide we have to treat IEPTs & Canadian grads the same for the PCE-CC, and therefore don't require the PCE-CC for IEPTs, perhaps we require a longer internship for IEPTs i.e. 1025 hours (the equivalent of Canadian placements) + 3 months (the post-grad internship). The disadvantage is it places a large burden on supervisors/ employers. There would also require a process to oversee the hours required by the IEPT.

3.2. Other requirements for IEPTs

a) If the SCPT requires an internship for Canadian graduates (recommendation 2.3.a), this internship should also be required of IEPTs.

An on-the-job internship provides a different depth of assessment than an OSCE, with greater potential to focus on 'soft-skills' in an actual practice setting. The PCE is a verification of IEPT entry-level skills (completed by Canadian graduates within their accredited programs) and should not 'replace' the internship evaluation. Both should be required for IEPTs.

b) If the SCPT requires Canadian graduates to provide evidence of practical skills review (recommendation 2.3.b), the IEPT's passing of the PCE—CC would stand as proof of skills review.

3.3 IEPTs that have not been able to sit the PCE – CC due to COVID 19 Pandemic will be required to wait for an opportunity to sit the examination.

Appendix A – Committee Members

Celeste Boucher:

- Graduate of McGill University – B.Sc.P.T. 1999
- Successful candidate of the PCE process on 1st attempt – 1999
- Currently working at Wascana Rehabilitation Center in Regina – Manager
- Previous chair of the Continuing Competence Committee for the SCPT
- Previous examiner for the PCE-CC in Saskatchewan
- Clinical Instructor of physiotherapy students

Christel Gee (public representative):

- Graduate University of Saskatchewan – Bachelor of Education
- Experience on Boards, Councils and Committees
  - 2007-2015: Pre-Health Professions Club, Indigenous Health Careers Committee for Post-Secondary Education (chair)
- Volunteer Experience
  - 2018-ongoing – Saskatchewan College of Psychology, Health Council, public representative
  - 2019-2021 – Saskatchewan Health Council
  - 2017-ongoing – Green Hope Foundation, Tanzania
- Professional Experience: University of Saskatchewan, College of Medicine
  - 2015 – present - Non-Physician Instructor for year 2 Advanced Communications module
  - 2016 – 2020 - Facilitator for year 2 Inter-professional Problem Based Learning
  - 2007 – 2015 - Administrative Coordinator, Pre-Health Professions Club

Bronwyn Lasair:

- Graduate of the University of Alberta – B.Sc.P.T. 1999
- Successful candidate of the PCE process on 1st attempt – 1999
- Currently working at St. Paul's Hospital in Saskatoon
- Front-line PT supervisor of restricted licensees (both Canadian trained & IEPT) in Saskatchewan and previously in Alberta. Supervised 12 staff who were unsuccessful on PCE-CC first attempt (5 passed on 2nd attempt, 5 on 3rd, 2 interrupted because of COIVD) and 1 unable to take the CC because of COVID
- Guest lecturer for University of Saskatchewan – School of Rehabilitation Science and previously for University of Alberta – Faculty of Rehabilitation
- Previous member of the Practice Review Board, College of Physical Therapy of Alberta
- Previous examiner for the PCE-CC in Saskatchewan and Alberta
- Clinical Instructor of physiotherapy students

John Marshall:

- Graduate of of University Western Ontario – B.Sc.P.T. 1990 M.Sc.P.T. 1995
- Graduated prior to the requirement of the PCE
- Currently working at FIT for Active Living – Saskatoon City Hospital in Saskatoon
- Guest lecturer at University of Saskatchewan – School of Rehabilitation Science
- Previous Board member of the Canadian Physiotherapy Association: 2000 - 2003
- No examiner experience for the PCE-CC

Dale Pitura (chair):

- Graduate of University of Saskatchewan B.Sc.P.T. 1995
- Graduated prior to the requirement of the PCE
- Currently working at Courtside Sports Medicine and Rehabilitation Center and Saskatchewan WCB
- Current Vice-President of the SCPT
- Previous president of the Canadian Athletic Therapist Association
- No examiner experience for the PCE-CC
- Clinical Instructor of physiotherapy students

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Appendix C – Saskatchewan Self-Regulated Health Professions Licensure Requirements

Profession	Approved Education Program	Written Exam	OSCE Practical Exam	Clinical hours or Internship	Licensure for International Educated
Audiologist Speech Language Pathologist	YES	YES National	NO	Integrated clinical hours 350 min.	No different process for foreign trained
Chiropractor	YES	YES National	YES	Integrated	Foreign trained candidates from an accredited education program must pass all three components of national exam (A, B &C) Only parts B&C required if entering from regulated jurisdiction with > 3 years experience.
Dental Assistants	YES	YES National	NO	Integrated 3 weeks	Complete clinical practice evaluation and pass the NDAEB-exam
Dental Hygienists	YES	YES National	NO	Integrated	If not CDA or AMA but qualifications are approved by NDHCB – same as Canadian PLUS -completion of required practical exam approved by Council.
Dental Technician	YES	YES Provincial	NO	18 months under supervision of registered dental technician	Contact International Qualifications Assessment Service and forward results to Council.
Dental Therapist	No program in Canada since 2011 Approved by Council	NO	NO	Information not readily available	Information not readily available
Dentist Dental Surgeon Orthodontist Pedodontics Periodontics Prosthodontic	YES	YES National	YES	Integrated	Graduates of International non-accredited dental programs are required to complete: 1. Qualifying or degree completion program OR 2. Complete the equivalency process offered by the National Dental examining board. AND Complete the NDEB written and OSCE exam.
Denturist	YES	YES Provincial	NO	YES	Information not readily available

Profession	Approved Education Program	Written Exam	OSCE Practical Exam	Internship	Licensure for International Educated
Doctor	YES	YES National	YES	Integrated	Documents must be verified, transcripts, degree, post graduate training certificates, speciality certificated. **1.Examination route** a. complete a period of practice under a provisional license **and** b. Attain certification by CCFP or RCPSC **and** c. Obtain designation licentiate of medical council of Canada or successfully complete licensing exams. **2.Summative Ax Route** a. same as above. b. been successful in an ax which demonstrates to the satisfaction of the Council that the applicant has the appropriate skill, knowledge, and suitability to practice independently.
Licensed Optician	YES	YES National	YES	Depending on Program could be integrated or 2000 hours post graduate direct supervision	Application for a Prior Learning Assessment (PLA). Could recommend bridging before writing exams.
Licensed Practical Nurse	YES	YES National	NO	Integrated	Must apply to NNAS to evaluate documents and take LPN code of ethics course. Complete remedial education if required and then pass the CPNRE exam. In Sask. 3 mandatory courses must take at Sask Polytechnic 1.Health Assessment 2. Med. Administration 3. IV initiation/therapy
Medical Laboratory Technologist	YES	YES National	NO	Integrated Year 1→1 week Year 2→22 weeks Year 3→19 weeks	Complete Canadian Society for Medical Lab Science (CSMLS) Prior Learning Assessment to (PLA) to determine if eligible to write CSMLS certification exam
Medical Radiation Technologist	YES	YES National	NO	Integrated	Proof of equivalent education program and complete MRT exam
Midwife	Recognized by Council	YES National	NO	Integrated	International education not recognized must do IMPP –International Midwifery Pre-registration Program – 9 month bridging Or IEMPP program or PLEA-Prior Learning and Experience Assessment. Must pass the CMRE written exam
Naturopathic Doctor	YES	YES National	Practical exams for: Acupuncture, Manipulation, & Physical Clinical Diagnosis	2-3 years of integrated clinical placements; 1 year clinical internship	Information not readily available

Profession	Approved Education Program	Written Exam	OSCE Practical Exam	Internship	Licensure for International Educated
Occupational Therapist	YES	YES National	NO	Integrated	Must apply to ACOTRO to complete SEAS- Substantial Equivalency Ax System. 4 components- academic credentials, professional specific credentials, jurisprudence knowledge and competency ax (interview)
Optometrist	YES	YES National	YES	Integrated with optional residency post training	Information not readily available
Paramedic	YES	YES National	NO	Integrated	Can submit for an equivalency assessment
Pharmacist Pharmacist Technician	YES	YES National	YES	Integrated	Must enroll with National Program “Pharmacists Gateway Canada” to navigate licensure process and facilitate their preparation for licensure in Canada
Physical Therapist	YES	YES National	YES	Integrated	Contact CAPR to determine the equivalent to Canadian PT education- any deficiencies will be addressed. Must pass the PCE.
Podiatrist	Recognized by Council	Provincial Exam or equivalent recognized by Council	NO	Information not readily available	Information not readily available
Registered Dietitian	YES	YES National	NO	35 weeks	Substantially equivalent assessment- may be required to do practical experience or upgrade education
Registered Nurse	YES	YES National	NO	Integrated	Receive a report from NNAS may need to do SEC- Substantially Equivalent Competency Assessment at Sask Polytechnic which includes an online diagnostic ax exam, clinical judgement ax-interview style and OSCE. Pass the NCLEX-RN exam.
Registered Psychiatric Nurse	YES	YES National	NO	Integrated	Submit documents to NNAS
Registered Psychologist	YES	YES National	NO Oral exam	1500 hours post-Masters experience under supervision of psychologist recognized by executive council	Assessment of their credentials from International Qualifications Assessment of Course Work to include “Description of Course Work” OR International Credential Evaluation Service include “Comprehensive Report”
Registered Respiratory Therapists	YES	YES National	NO	Integrated	Currently updating information for internationally educated applicants
Registered Social Worker	YES	NO	NO	Integrated	International evaluation by Canadian Association of SW

Appendix D – Saskatchewan Health Professions Licensure OSCE Formats

Summary of Saskatchewan self-regulated health professions' OSCE requirements and exam formats

Profession	Requirements to Take OSCE		OSCE Exam format		
	Pass Accredited Education Program	Pass Written Exam	Number of Stations	Length of Stations	Overall Length of OSCE exam
Chiropractic	Yes	Yes (2)	10		3 hrs Total
Dentistry	Yes	Yes	25 - 30	5 min	2 sessions in one day
Dietician	Yes	Yes	N/A	N/A	N/A
International Trained Nursing	??	No-done same day	12	13 min	Written/ Clinical in one day
Medicine	Yes	Yes	10	6–14 min; 7 non- paired and 3 paired stations	
Occupational Therapy	Yes	Yes	N/A	N/A	N/A
Orthotics/ Prosthetics	Yes	Yes	8	25 min	4-6 hrs in one day
Pharmacy	Yes	Yes	13	7 min: interactive, non -interactive, rest stations	3 hrs with 20 min break in middle
Physical Therapy	Yes	Yes	16	10 min	5 – 6 hours
Respiratory Therapists	Yes	Yes	N/A	N/A	N/A

Note: This table represents pre-COVID 19 parameters of the OSCEs. All professions have made changes to the OSCE format and or delivery in the COVID 19 environment.

Appendix E – Case Study: Details of Two Specific Professions for Comparison

1. Psychology: Information for the Provisional Psychologist

The Provisional licensure period is:

- **Legislated to be three (3) years from the date of initial licensure** Extensions cannot be granted, however, medically approved leaves and maternity/paternity/parental leaves (as authorized by the Registration Committee) pauses the three-year 'clock' until the provisional member's return from leave. The missed time is added to the three-year time limit.

- **A period of supervision and not training** – it is a time to demonstrate your competence and readiness to enter into independent practice, it is not meant as a time to learn new skills (e.g., how to complete psychometric assessments) and should not be viewed as a practicum. Supervision should be fairly evenly distributed across the practice hours.

- **A period of direct supervision throughout the entire Provisional period** – thus even after one has completed their 1500 hours they must still be under the direct face-to-face supervision of their supervisors at the rate of 6 hours for each 160 hours of practice until Full Practice is awarded.

  During this period of licensure one must successfully complete the 1500 hour supervised practice requirement, the EPPP and the SCP established oral examination before one can be awarded a license to practice independently (i.e - Full-Practice licensure).

- **Direct observation** - a minimum of 10 hours of direct observation of the provisional member's practice is mandatory; to be completed throughout the 1500 hours of supervised practise.

Once admitted to the Register as a Provisional Psychologist you will be required to submit the following document (this document must be approved by the Registration Committee of the College before you may begin to count hours toward the 1500 hour supervised practice requirement):

- A "Supervision Plan" which clearly outlines the goals and objectives to be met during supervision. The Supervision Plan must be signed by all supervisors (primary and secondary). A provisional member cannot count/log their hours officially until the Registration Committee has approved their Plan.

During the Provisional licensure period the following must be submitted/ completed:

- Supervision/practice logs which are endorsed by at least the primary supervisor and the provisional member at the mid-point (750 hours) and end-point (1500 hours) of the 1500 hour supervised practice period.
- "MRA Assessment Rating Form" – completed by the primary supervisor and/or all supervisors together at the mid and end points of the 1500 hour supervised practice period. The supervised practice hours must be endorsed by your supervisor(s) as having been successfully passed in order to count toward the 1500 hour requirement.
- The Examination for the Professional Practice in Psychology (EPPP). Only three (3) attempts are allowed at passing the exam.

Once you are approved for the SCP oral examination, which is the final requirement you must meet before you are eligible for Full Practice licensure, you must submit once you receive the call for submission:

- An Authorized Practice Endorsement (APE, diagnostic competence) application if relevant (including the application fee for APE). The application includes a rating by your supervisor with regard to your competence to diagnose. The forms must be signed by the supervisor and yourself.
- Materials for the examination: an assessment sample, an intervention sample, a professional statement, and an updated competency grid sent electronically. Work samples must be co-signed by your supervisor. If you are applying for the (APE) your work samples must include diagnoses. The exam fee must be submitted.
- Only 3 attempts are allowed at passing the oral examination.

The Saskatchewan College of Psychologists orally examines provisional candidates which is the final requirement for licensing. The oral exams, when done in person, are always audiotaped, as in the event of a failure, the audio recording goes directly to the Registration Committee for an automatic review of the failure (as per regulatory bylaws). During the pandemic, these exams have been held virtually (via the Zoom platform). Given this virtual platform, we have been able to both audio and video record the exams (again for purposes of automatic review in the event of a failure). They are finding that this process is better for exam review than just the audio and we had discussions that may retain that process beyond the pandemic.

All exam results must be approved by the Registration committee.

2. Nursing

In the last semester of the fourth year, students from the University of Saskatchewan, College of Nursing write a series of examinations that prepare them for the qualifying licensing exam. The mark from this exam, known as Health Education Systems Inc. (HESI), becomes part of the evaluation for their fourth-year transition course (a senior terminal course). This exam is administered by Elsevier, the publisher of the

examination and is sanctioned by the Canadian Nurses Association which is the national testing body and by the Canadian Association of Schools of Nursing.

Each student receives a mark on their exam and feedback from Elsevier on areas where the student need improvements prior to writing the licensing exam. The students, as part of the HESI package, receive access to multiple practice examinations and may ‘re-take’ examinations in advance of their national examination. The University of Saskatchewan, College of Nursing, negotiated with the company for a lower fee, given that the university made it a requirement for all the fourth-year students. Research has shown that this practise has really increased the success rate of their students on the national licensing exam.

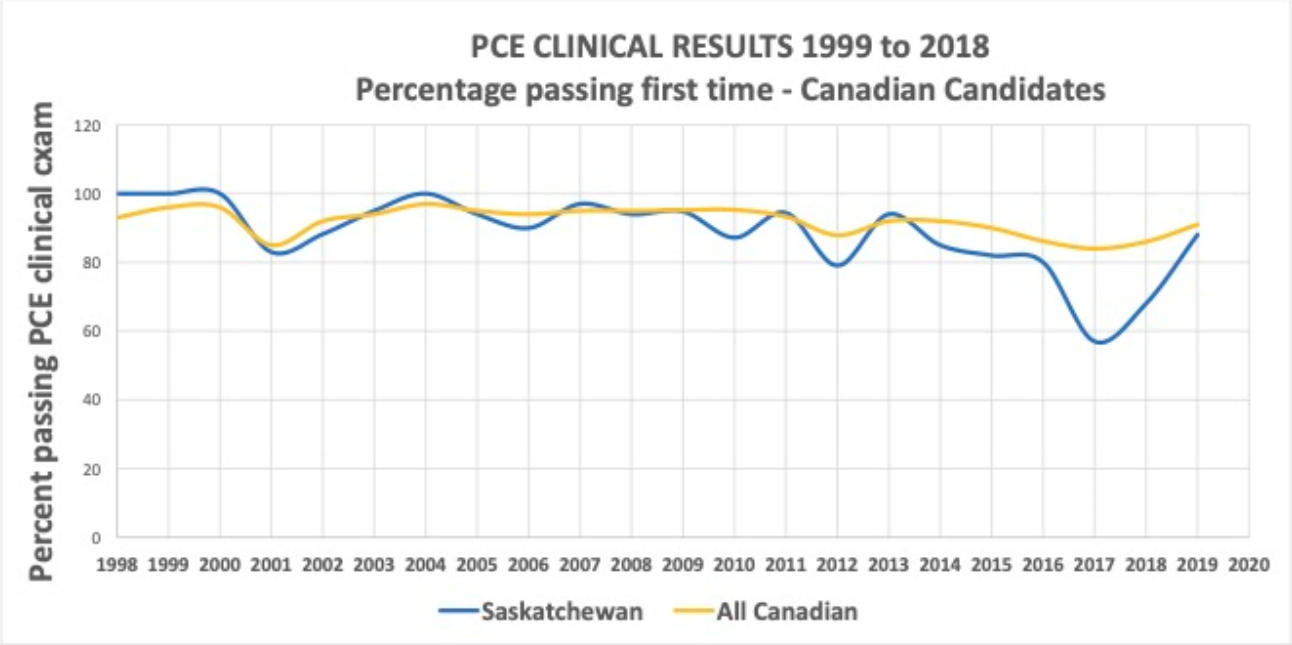
Appendix F – Global Scan of Physical Therapy Licensure Requirements

Country	Regulatory Model			Licensure for domestic trained				Licensure for IEPTs
	National	Region or State	Other	Approved education program	Written exam	OSCE Practical exam	Internship	
Australia	X			X				Assessment may include **written and clinical exam**
Canada		X	-National accreditation, competency profile & curriculum -National exam -Provincial colleges that may have additional requirements	X	X	X		CAPR determines "not significantly different" qualifications; pass written and OSCE exam
Croatia	X			X	X		1 year	Information not readily available
France	X			X				Graduate from approved program
Germany		X		X	X set by each state			Information not readily available
India			Unregulated – in most states a PT degree (with no oversight on degree quality) is all that is required to practice	X				Information not readily available
Israel	X			X	X		6 months	Same as for domestic – degree from approved program, proof of practice hours, pass the exam
Kenya	X			X	X			Information not readily available
Nepal	X			X	Not yet			Information not readily available
New Zealand	X			X				Case-by-case, qualifications are checked against set minimum competencies
Nigeria	X			X	X			Information not readily available
Peru	X		Largely unregulated. Regulated public system requires completion of degree and a thesis. Affiliation with national college is mandatory.	X				
Poland	X			X	X		6 months	Obtained professional qualifications that are recognized by EU/EEA/Swiss ± worked for 3 years in country of qualification
Portugal	X			X				Information not readily available
Republic of Korea	X			X	X			Information not readily available

Country	Regulatory Model			Licensure for domestic trained				Licensure for IEPTs
	National	Region or State	Other	Approved education program	Written exam	OSCE Practical exam	Internship	
South Africa	X			X			1 year community service	Information not readily available
Switzerland			Regulation by 26 cantons; Education set federally.	X				Assessment of equivalent qualifications (done at federal level)
Taiwan	X		Exam is national; must register with local bureau	X	X			Information not readily available
UK	X			X				Graduate from approved education program
USA		X		X	X			Graduate from approved program; pass national exam

Appendix G – Graph: 1st time PCE-CC pass rates for USask vs Canadian graduates

11-year trend of PCE-CC first-time pass rates for USask and Canadian graduates



Provided by SRS

Appendix H – List of Acronyms

- ACCPAC – Accreditation Council for Canadian Physiotherapy Academic Programs (now PEAC)
- ACP – Canadian Physiotherapy Assessment of Clinical Performance
- AERA - American Educational Research Association
- APA - American Psychological Association
- APTA – American Physical Therapy Association
- CAPR – Canadian Alliance of Physiotherapy Regulators
- CAPTE – Commission for Accreditation in Physical Therapy Education (American)
- CC – Clinical Component of the PCE
- CCPUC – Canadian Council of Physiotherapy University Programs
- CERS – Continuing Education in Rehabilitation Science
- CEU – Clinical Education Unit (USask MPT program)
- CI – Clinical Instructor
- CIGT – Clinical Item Generation Team (CAPR)
- CPA – Canadian Physiotherapy Association
- CR – Cardiorespiratory
- CTDG – Clinical Test Development Groups (CAPR)
- CUPTAC – Canadian University Physical Therapy Academic Council
- ECC – Executive Curriculum Committee (SRS)
- GPA – Grade Point Average
- IEPT – Internationally Education Physical Therapist
- INPTRA – International Network of Physical Therapy Regulatory Authorities
- MCC – Medical Council of Canada
- MPT – Master in Physical Therapy degree
- MSK - Musculoskeletal
- NACEP – National Association for Clinical Education in Physiotherapy
- NCCA - National Commission for Certifying Agencies
- NCME - National Council on Measurement in Education
- NPAG – National Physiotherapy Advisory Group
- OSCE – Objective Structured Clinical Examination
- PCE – Physiotherapy Competency Examination
- PEAC – Physiotherapy Education Accreditation Canada
- PRT – Peer Review Team (for accreditation)
- PT – Physical Therapy/ Physical Therapist
- PT-CPI – Physical Therapist Clinical Performance Instrument (American)
- SC – Standardized Client
- SCPT – Saskatchewan College of Physical Therapists
- SRS – School of Rehabilitation Science
- SSR – Self-Study Report (for accreditation)
- USask – University of Saskatchewan
- WC – Written Component of the PCE