Competencies for Interprofessional Collaboration

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Background and Purpose. Interprofessional collaboration in health care is now considered a high priority, as concerns about patient safety, health and human resources shortages, and effective and efficient care have reached epic proportions. Although there are many models for interprofessional education for collaborative, patient-centered care, there is little in the literature to describe competencies for an interprofessional collaborative practitioner. This article will describe an emerging Canadian competency framework for interprofessional collaboration that (1) considers previous descriptions of collaborative practice and (2) uses existing literature to support a model for describing competencies for collaborative practice.

Model Description and Evaluation. In this emerging competency framework, 6 competency domains are described using a competency statement and a set of associated descriptors. The collaborative leadership, dealing with interprofessional conflict, team functioning, and role clarification domains intersect with all of the others, yet are distinct and require focused descriptions. While patient-centered care and communication also are domains unto themselves, these competencies are integral elements of the other domains and are integrated throughout the framework. In the background supporting all of the domains are 3 key themes: context of practice, level of complexity, and quality improvement. The emerging framework was reviewed by a wide group of stakeholders, including an external review. Future use of the framework will assist in further shaping it to meet the needs of educators, researchers, practitioners, regulators, and accreditors.

Discussion and Conclusion. The competency framework has been designed as a practical tool for a number of stakeholder groups. In particular, physical therapy educators can use it as a basis for interprofessional education programs and activities that prepare collaborative practitioners for the future. The framework is flexible and can be used in simple or complex situations, in a variety of practice settings, as a guide for learning outcomes and evaluation or assessment of performance, and as a tool for developing entry-level curricula and continuing professional development. The strength of the framework will emerge as it evolves over time.

Key Words: Interprofessional collaboration, Competencies, Interprofessional education, Physical therapy education.

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BACKGROUND AND PURPOSE

Interprofessional collaboration (IPC) is increasingly recognized as a means of improving patient outcomes and the cost effectiveness of care in a variety of settings from primary health care to acute care to rehabilitation.[1] In a health care environment faced with patient safety issues, human resource shortages, and populations with increasingly complex health care needs, health professionals must be able to work in collaboratively in interprofessional teams or groups in order to ensure consistent, continuous, and reliable care.

Policy makers from Canada, the United Kingdom, New Zealand, and the Unites States are increasingly recommending changes in health professional curricula in order to ensure student acquisition of competencies that facilitate collaborative practice.[1-2] Through interprofessional education (IPE), students and practitioners can develop competencies in the form of knowledge, skills, attitudes, and behaviors that will enable them to work collaboratively throughout their chosen careers. Therefore, in order to achieve the ultimate goal of improved health outcomes, we must define the essential competencies required for collaborative practice and develop and implement educational interventions to ensure their adoption.

When educators share a common nomenclature and framework, they take more consistent approaches to introducing new content within health professional education, across departments, and among service delivery institutions.[3] This common framework helps educators to: plan content, curriculum structures, and learning strategies; allocate instructional resources; develop a sense of commitment to and ownership of the proposed implementation; and to legitimize unfamiliar curricular approaches and content, such as those associated with interprofessional education, in the eyes of both those delivering and participating in the educational experiences. The process of introducing interprofessional health education should be similar for all health and human service education programs, including physical therapy.

The physical therapy profession has emerged as a key contributor to primary health care, rehabilitation, acute care, residential care, and the private sector, by focusing on restoration and maintenance of function as well as pain management. As part of a comprehensive approach to treatment and prevention, physical therapists are increasingly valued members of interprofessional teams and other collaborative practice models in both urban and rural settings. For physical therapist students, educators, clinical preceptors, clinicians, managers, and researchers, the competencies for interprofessional collaboration are essential for current and future practice.

This paper begins by providing a rationale for the development of an interprofes-

sional competency framework. It describes what competencies are and then highlights the literature supporting the development of competency frameworks. The links among knowledge, skills, and attitudes as the basis for collaborative behaviors are offered and, finally, the process used to develop a Canadian interprofessional competency framework is described.[4] The paper concludes with an outline of the ways in which the competency framework can be applied to learning outcomes and assessment of competency acquisition in a variety of contexts.

Rationale

Professional education programs, such as physical therapy, have traditionally used markers to determine when a student has achieved the level of proficiency in knowledge, skills, and professional attitudes necessary for entry to professional practice. These markers are commonly developed within the context of competencies. Competencies are commonly identified within a profession with input and concurrence of the profession's regulators, educators, and practitioners. However, competencies are generally developed to reflect the practice of a professional within their own profession with limited attention as to how these same professionals interact with members of other health professions. Generic mentions of "teams" and "communication" within profession-specific competency frameworks fail to present accurate pictures of interprofessional collaboration. The literature on interprofessional education suggests an absence of a commonly agreed upon interprofessional competency framework.[5-7]

The Canadian Interprofessional Health Collaborative (CIHC), funded by Health Canada, is the national hub for activities related to interprofessional education, collaboration in health care practice, and patient-centered care. The CIHC works at the edges and interface of health, education, and the professions. Its role is to discover and share promising practices that promote interprofessional education and collaboration in order to enhance patient care. A CIHC Interprofessional Competency Working Group was mandated to develop a pan-Canadian competency framework for interprofessional collaboration.

Literature Review

In the fall of 2007, the CIHC Interprofessional Competency Working Group, with funding from Health Canada, reviewed the literature related to competencies as well as existing jurisdictional competency frameworks for interprofessional education and collaboration in order to develop a national interprofessional competency framework.[8] A search for articles related to *competencies* and *competence* within the general and interprofessional fields was conducted using search terms such as *post-secondary, higher education, competence theory, competency-based education,* and *collaborative learning.*

Criteria were identified for a meaningful competency framework such as: (1) making sense of the learning process; (2) differentiating matters by relevance; (3) applying learning to practical situations; and (4) associating learned elements. [9-10] According to Roegiers,[11] there are 4 different approaches to competencies: (1) a skills approach focused on setting objectives, identifying skills to meet objectives, and subsequently evaluating the meeting of set objectives; (2) an approach that focuses on developing the life-skills that people need to adapt as citizens in a society; (3) a competency-based approach focused on learning outcomes, rather than the learning process; and (4) an integrative approach, which incorporates (1), (2), and (3) by integrating the knowledge, skills, attitudes, and values needed to make judgments within learning or practice contexts and applying these to each situation. The CIHC framework adopted the integrative approach to competencies, which addresses the importance of focusing teaching and learning on the resources needed by the learner to guide integration of knowledge, skills, and attitudes.[10-11]

Tardif[12] describes characteristics key to the integration component of competencies: *complexity* (resulting from the dynamic organization of components); *additive* (application of knowledge, skills, attitudes, and values to formulate judgments); *integrated* (diversity of individual resources); *developmental* (capacity developed over the lifespan); and *evolutionary* (applied within a given context; each application of competencies creates new understandings). Tardif identified the complexity of interprofessional education and practice by focusing on integration as a key feature and by describing elements of competencies that can be applied to the interprofessional context. Accordingly, interprofessional competencies:

> ...describe the complex integration of knowledge, skills, attitudes, values, and judgments that allow a health provider to apply these components into all collaborative situations. Competencies should guide growth and development throughout one's life and enable one to effectively perform the activities required in a given occupation or function and in various contexts.[8(p5)]

Barr [5] suggested that an interprofessional competency framework is needed which considers 3 levels of competency: that which is *common* (shared between all or several professions); that which is *complementary* (where uniqueness that distinguishes one profession from another can be assessed); and that which is *collaborative* (where sharing occurs across professionals and others). According to McPherson and colleagues,[1] an interprofessional competency framework needs to provide identification of clear aims leading to shared understanding of goals and have clear processes that inform professionals/students of others' contributions, facilitate effective communication, manage conflict, and match roles and training to each task. In addition, the framework should offer flexible structures supporting the processes, including skills, staff and appropriate staffing mix, responsible and proactive leadership, effective team meetings, documentation that facilitates sharing of knowledge, and access to required resources and rewards. While different philosophical approaches to articulate competencies been debated among interprofessional education scholars, the CIHC framework focuses on a common approach to competencies that has the potential to inform education and practice across professions.

In Canada, from 2005 to 2008, each jurisdiction developed interprofessional competency documents to meet local needs. The documents describe interprofessional education and collaborative practice tasks and behaviors in ways that could inform interprofessional educational approaches.[4] These documents were shaped by different foundational perspectives and approaches to competence, but commonalities across the specific competencies were found. Commonalities included: patient-centered, collaborative working relationships (incorporating respect, roles and responsibilities, cooperation, coordination, trust, shared decision making, and partnership); teamwork (incorporating team function and conflict management); interprofessional communication (incorporating listening, negotiating, consulting, interaction, discussion/debate, and attending to nonverbal parameters); shared leadership; self-awareness (reflection); and evaluation.[4] These common elements were used as the basis for the pan-Canadian framework.

Development of a Pan-Canadian Competency Framework for Interprofessional Collaboration

The CIHC Interprofessional Competency Working Group developed a nationwide competency framework for interprofessional collaboration by reviewing existing competency frameworks as a starting point, and by encouraging shared thinking around the key foundations for a competency framework focused on interprofessional collaboration. It

was felt that the framework's objective should be to produce collaborative practitioners, and therefore knowledge, skills, attitudes, and behaviors representative of interprofessional collaboration were the important elements. The framework would then guide interprofessional education activities that reflected the competencies. The overall framework was based on the following assumptions derived from the literature, primarily that of Rogiers[11] and Tardif[12]:

- Competency statements are strong overarching statements that last over long periods of time.
- Competency descriptors identify specific knowledge, skills, attitudes, values, and judgments that are dynamic, developmental, and evolutionary.
- Interprofessional learning is additive and reflects a continuum of learning.
- Interprofessional collaborative practice is essential for improvement in patient/client and family health outcomes.
- The level of interprofessional competence is dependent on the depth and breadth of opportunities for education and practice with, from, and about other disciplines.
- Adoption of interprofessional competencies into health care professional education programs will occur at different rates depending upon the level of learner/practitioner and the complexity of learning tasks.
- Adoption of interprofessional competencies may require a shift in how learners, educators, and practice environments conceptualize collaboration.

The national interprofessional competency framework describes the complex integration of knowledge, skills, attitudes, values, and judgments that enables interprofessional collaboration by guiding effective performance of the activities required in a given occupation or function and in various contexts.[11-12] As "a competenc[y] can only exist in the presence of a specific situation, through the integration of different skills, themselves made up of knowledge and know-how,"[10(p1)] the integration of skills and knowledge using specific, and increasingly complex, situations as the anchors for application led to the competency statements described in the framework. Characteristics that ensure the competencies are consistent and stand the test of time, and include the following[12]:

1. **Complex character:** Each component has a dynamic organization with other components.
2. **Additive character**: Learners/practitioners' resources in demonstrating competence changes with increasing knowledge, skills, attitudes, and judgments.
3. **Integrated character**: Several resources from a variety of areas converge for learners/practitioners to achieve each competency.
4. **Developmental character**: Each competency develops over the professional lifespan of learners/practitioners; proficiency in demonstration of competence varies from concrete or simple to abstract or complex when new contexts are encountered.
5. **Contextual character:** Each competency is oriented to an action, a situation, or application.
6. **Evolutionary character**: Each competency statement can be integrated and added to new experiences and resources without being compromised.

Although the competency statements describe clear end points, the concomitant descriptors are flexible and individualized based on the learners' or practitioners' experience, as well as their learning or practice context. In addition, competency descriptors facilitate curriculum development that builds the skills, knowledge, and attitudes, influenced by values to arrive at judgments over time. Hence, they have an additive quality as the complexity of learning and practice experiences increase. By integrating the competencies into a framework, learning experiences can become evolutionary in nature, allowing learners/practitioners to achieve competencies for collaborative practice in different ways, at different levels, and in different contexts. There is a dynamic nature to the framework that allows it to be used to inform learning at all levels of experience and in all contexts of practice. It represents a part of the lifelong continuum of interprofessional learning at pre- and post-licensure levels and supports curricular development and performance assessment along this continuum. Therefore, the framework can be integrated into education and practice in a way that builds on existing knowledge, values, skills, and attitudes of learners and practitioners.

The Canadian Interprofessional Competency Framework

The National Interprofessional Competency Framework is an evolving concept that will continue to change over time as educators, practitioners, and researchers become more familiar with the domains and descriptors. For now, however, it presents a constellation of 6 interconnecting interprofessional competency domains—role clarification, patient/client/family/community-centered care, team functioning, collaborative leadership, interprofessional communication, and dealing with interprofessional conflict—all of which are essential to demonstrate interprofessional collaboration (Figure 1). None supersedes the other and all are required to achieve interprofessional collaboration. Performance of the competencies is influenced by the developmental level of the learner or practitioner. Based on Piaget's[13] developmental theory, learners begin to exercise the interprofessional competencies at a concrete level and then, with practice, move to more abstract applications. This process will repeat each time learners and practitioners enter into new contexts and develop their skills in collaboration.

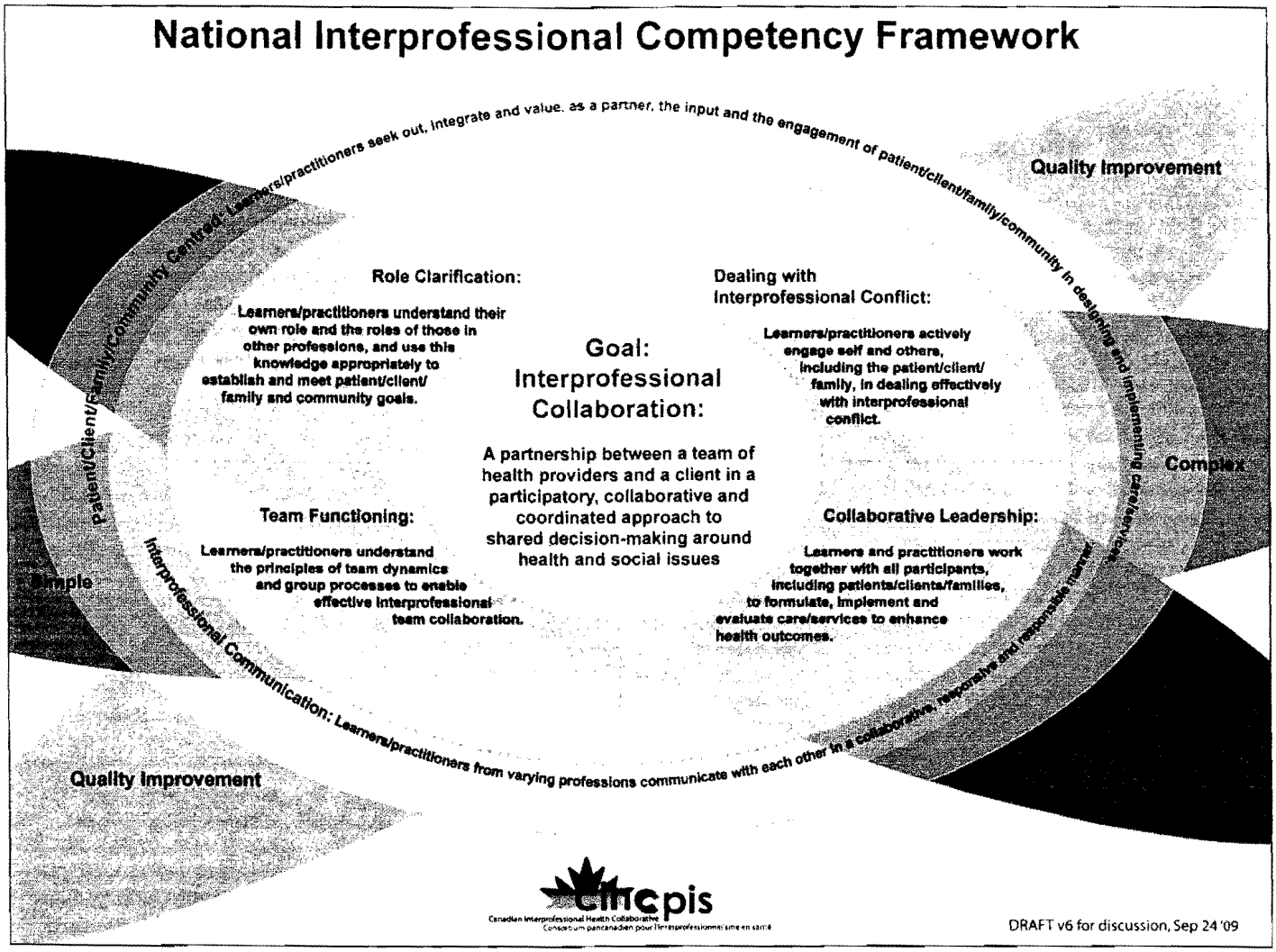
The framework is divided into 6 domains that contribute to the goal of interprofessional collaboration. Patient-centered care and interprofessional communication are elements that influence the other 4 domains. Within each domain is a competency statement with several associated descriptors. There are 3 background areas for consideration that broadly impact the interpretation and application of the competency framework. The interprofessional collaboration skill level required along a continuum of simple to complex will differ in each situation. Simple encounters may be addressed adequately by 1 or 2 health care providers, whereas more complex cases may require a large team of providers thus increasing the complexity of the collaboration. Contextual issues also influence the application of the competency framework. In specific areas of practice such as rehabilitation, geriatrics, and pediatrics, well-established, large teams allow an interprofessional team to consolidate their collaborative practice approach over time. In an emergency unit the encounters might be short and the players might change frequently, requiring a different, although equally important, form of collaboration. Practitioners likely will use core collaborative practice skills when changing to a new context or practice until a new skill set has been developed specific to the new context. At the forefront of interprofessional education is patient safety. Quality improvement is therefore a third integral consideration underpinning the competency framework.

The full set of descriptors and explanation/rationale for each domain can be found at www.cihc.ca. The domains and competency statements are as follows:

Domain: Role Clarification

Competency Statement: Learners/practitioners understand their own role and the roles of those in other professions, and use this knowledge appropriately to establish and meet patient/client/family and community goals.

Figure 1. National Competency Framework for Interprofessional Collaboration



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Domain: Patient/Client/Family/ Community-Centered

Competency Statement: Learners/practitioners seek out, integrate, and value, as a partner, the input, and the engagement of patient/client/family/community in designing and implementing care/services.

Domain: Team Functioning

Competency Statement: Learners/practitioners understand the principles of team dynamics and group processes to enable effective interprofessional team collaboration.

Domain: Collaborative Leadership

Competency Statement: Learners/practitioners understand and can apply leadership principles that support a collaborative practice model.

Domain: Interprofessional Communication

Competency Statement: Learners/practitioners from varying professions communicate with each other in a collaborative, responsive, and responsible manner.

Domain: Dealing with Interprofessional Conflict

Competency Statement: Learners/practitioners actively engage self and others, including the client/patient/family, in positively and constructively addressing interprofessional conflict as it arises.

While competency statements do not change, descriptors are flexible and change depending on the level of the learner or practitioner or on the context of practice. Underpinning the 6 domains are 3 concepts: the context of practice, the complexity of the encounter or situation, and the overarching philosophy of quality improvement. The context of practice clearly affects the approach to collaboration. In many contexts, such as rehabilitation or pediatric centers, interprofessional teams are frequently formally structured and function according to a specific set of collaborative team norms. In other contexts, such as emergency units, team members may change frequently and patient encounters are often shorter so that collaboration occurs but in a different way to that experienced in a long standing team which interacts with clients over a longer period of time. Thus the context of practice influences the type and nature of interprofessional collaboration. The complexity of the context for collaboration also influences the collaborative practice model. For example, a straightforward ankle fracture for a recreational runner might require only 1 or 2 health care providers to enable the ankle to heal and to return to full function. However, an ankle sprain for a highly paid member of a national hockey team about to play a major championship game would require a full team of health care providers to quickly restore function, reduce pain, address the psychological impact of the injury and its consequences, and prepare the player for the upcoming game. And finally, quality im-

provement is a process for addressing patient safety, quality of care, and system-wide resources in order to facilitate interprofessional collaboration and is, therefore, an important concept that supports the 6 domains in the competency framework.

Application

Understanding what shapes practice allows curriculum developers to build learning frameworks that reflect learners' and practitioners' competencies learners and practitioners and helps educators set clear learning goals aimed at training competent collaborative practitioners. The learning framework then integrates different levels of learning as learners and practitioners move from simple to complex activities and from one practice context to another. Competencies are the foundation upon which assessment of ability can be built, but they do not describe the levels at which individuals are expected to perform. One competency statement cannot stand alone and therefore the competency framework represents an integrated whole that relies on the interaction of each competency to achieve, in this case, interprofessional collaboration. The capacity of learners or practitioners to demonstrate the integrated set of competencies and transfer their application into different contexts and into each situation is the measure of their ability to practice collaboratively. Hence, it is the outcome of the judgments made in each situation based on the ability to integrate knowledge, skills, attitudes, and values that is the measure of competence.

While competency-based training suggests that competencies are what we want learners and practitioners to attain, Ten Cate[14] suggests that performance involves more than achieving competencies. The identification of competencies is just the first step of many in ensuring that future health care providers are prepared to deliver quality health care. According to Wright et al,[15] frameworks that identify the competencies necessary for effective practice provide a foundation for operationalizing teaching objectives based on the knowledge, skills, and attitudes underpinning each competency.

In order for competencies to be effectively implemented in curricula, organizations need to clearly articulate outcome goals, delivery of learning means, instructional strategies and resource needs.[16]

A common interprofessional competency framework can be used to inform curriculum development and practice for health and human service professionals, including physical therapists, throughout the continuum of learning, from before licensure to continuing professional development. However, specialty associations, universities, and program directors now face the difficult task of devising assessment models related to new competency frameworks.[14] Ways to assess competency are under development and currently there is a lack of consensus on the most appropriate approach.[17] There is scant literature on the assessment of professionalism, teamwork, and systems-based care,[18] and the number of proposed instruments, each using intriguing acronyms, are countless.[19] In order for interprofessional learning activities to be valued by students, they cannot be seen as extraneous add-ons nor as activities that are not assessed. Assessing interprofessional learning is one means of placing value on a learning experience and the criteria suggested by Webb[20] may assist physical therapy educators to consider assessment strategies for physical therapy student learning:

- The purpose of the assessment must be made clear.
- The goal of group work in the assessment must be clarified.
- The assessment procedures and criteria should be made clear—everyone should understand what will be assessed.
- The criteria for good performance should be made explicit.
- Special care must be taken to make sure that the evaluation procedures and criteria are consistent with the goal of group work and the purpose of assessment.
- Recommendations for the design and administration of assessment must go hand-in-hand with recommendations for further research.

Assessment of interprofessional collaboration can measure progress in several areas, including: individual students' competence in their thinking skills and subject-matter knowledge and expertise; how well individuals can learn to and perform within collaborative groups; and students' ability to interact, work, and collaborate with others, and function effectively as a team member.[20] Effective assessment provides appropriate individual and group feedback, which both serves as a learning strategy and provides direction for future learning.[18]

One way to assess students' interpersonal skills is through observation of their collaboration skills, evaluating their ability to reflect on their own performance and to change their own behavior within the learning situation.[20] Another method is the use of portfolios in which learners are required to demonstrate a particular level of proficiency at a set of core competencies. Assessment of the evidence focuses on proof that competencies were met, to what level, and in what context.[21] Anonymous peer assessments have also been found to an accepted form of assessment that raises students' awareness of their professional behaviors, thus fostering further reflection and helping them to identify specific behaviors that may need attention.[18] Self-assessments have also been used but with more limited success.

In competency-based curricula, however, assessments should reflect as closely as possible the actual tasks that students will face as professionals.[22] Such assessments are referred to as performance-based assessments and need to be authentic and relevant to practice. For example, the multiple-station examination or the objective structured clinical exam (OSCE), primarily used to measure clinical competence, is concerned with what students can *do* rather than what students *know*.[23] Team OSCEs may offer an opportunity to assess students' ability to practice as a team. Future research directions for the competency framework include further development and/or use of assessment and evaluation tools to determine the interprofessional competence of students and practitioners at different skill levels and in different contexts.

CONCLUSION

The emerging National Competency Framework for Interprofessional Collaboration in Canada provides the opportunity to use consistent language and concepts in education and practice. The domains, competency statements, and descriptors represent a comprehensive picture of what it means to be a collaborative practitioner. The underpinning concepts represent the context of practice, the complexity of the issue, and the quality improvement approach to service delivery, of which interprofessional collaboration is one key part. Physical therapists should be able to find themselves in the framework and to assess where they fit along a continuum of competence.

The framework serves several purposes across professions, including physical therapy. For educators the framework provides a guide to physical therapist education program curricula in the context of interprofessional practice. For practitioners it provides a guide for measuring one's own behaviour as well as that of others in a collaborative practice environment. Regulators will be able to use the framework to enhance the regulatory standards of practice to include attention to interprofessional practice. Accreditors of education programs in physical therapy will be able to develop and implement interprofessional education standards for assessing a program's engagement with interprofessional learning and practice. In the context of physi-

cal therapist education, the framework can be used effectively to embed interprofessional components of the curriculum in both academic and practice settings and can provide a foundation for assessment of competence in interprofessional collaboration.

While the framework will continue to evolve, it represents a national strategy for creating a common understanding of interprofessional collaboration that can be applied in several contexts. Physical therapy educators will be able to use the framework to design, implement, and assess interprofessional education activities aimed at developing effective, collaborative practitioners.

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