Interprofessional Education in Canadian Medical Schools

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Tavis Apramian (Western University)
Emily Reynen (McGill University)
Noam Berlin (University of Toronto)

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CFMS FEMC
Canadian Federation of Medical Students
Fédération des étudiants et des étudiantes en médecine du Canada

Executive Summary

Delivering health care has become a complex team effort. From family physicians in solo rural practice to subspecialized interventionists in quaternary care hospitals, providing health care to patients now requires physicians to be capable of communicating and collaborating with professionals from a wide variety of health disciplines. This position paper outlines the evolution of health care from an individual practice to a team-based one, describes some of the research on the effectiveness of that evolution, and highlights a few of the most effective interventions designed to prepare medical students to work in interprofessional teams.

Principles

The CFMS suggests that Canadian medical schools and organizations value the following principles when designing interventions and policy changes at the institutional, provincial, and national levels: (1) collaborating to achieve optimal health outcomes; (2) communicating across professions; (3) democratizing expertise; (4) recognizing the importance of workplace-based learning; (5) implementing longitudinal, integrated, and progressive curricula; and (5) continually monitoring the interprofessional evolution of education

These principles focus on the contributions of other health professionals and providing medical students with opportunities to work side by side with professionals with diverse types of expertise.

Challenges

The CFMS acknowledges the following challenges when attempting to implement reforms in interprofessional education: (1) continued protectionism; (2) acknowledging the hidden curriculum; (3) lack of interactive education across the health care team; and (4) logistics and resources.

By way of this position paper, Canadian medical students are creating a platform from which to draw attention to challenges faced in interprofessional education and to help medical schools to approach interprofessional education with a spirit of innovation.

Recommendations

The CFMS holds that Canadian medical schools and organizations should implement the following recommendations to bring interprofessional education in line with the team-focused future of health care: (1) exploring the full scope of accreditation standards of interprofessional education in medical education; (2) expanding concepts and contexts of the health care team; (3) regrounding the leader/manager debate; (4) supporting student and faculty excellence in IPE; (5) facilitating broader institution integration; (6) focusing on communication and situation awareness; and (7) ongoing attentiveness and monitoring.

These recommendations are based on a synthesis of institutional policies, peer-reviewed literature, and organizational reviews performed by the CFMS.

Conclusions

Confronting the challenges facing interprofessional education will not be easy. Ideally, interprofessional education should be a dynamic and engaging opportunity to collaboratively solve clinical problems with students and members of other health professions. Turning to the recommendations made here by Canadian medical students will point Canadian health care in a positive direction for future efforts to improve interprofessional education.

"One of the best ways of ensuring that health care providers are able to work effectively in new, more integrated settings is to begin with their education and training. Education programs should be changed to focus more on integrated, team-based approaches to meeting health care needs and service delivery."

- *The Romanow Report, 2002* [1]

Background

Medical practice has become increasingly interprofessional. Contemporary theories of learning posit that teaching is more likely to be successful when it closely reflects the work learners will be expected to perform.[2,3] Therefore, as the national organization representing medical students in Canada, the Canadian Federation of Medical Students (CFMS) has a vested interest in evaluating the impact of the increasing interprofessional nature of health care.

This position paper has two main objectives. The first is to *provide support* for the current position of the CFMS on the state of interprofessional education in Canadian medical schools: medical education must adapt to the fact that providing health care has become a complex team effort. The second objective is to *make recommendations* that contribute to the ongoing improvement of interprofessional education in Canadian medical schools for the next generation of medical students.

Current State of Collaboration in Medicine

The interprofessional education offered to Canadian medical students should reflect the scope of modern medical practice. Medical knowledge and technology, patient autonomy, legal statutes, and, perhaps most importantly to this review, cultural understandings of how different professionals are expected to interact and work with one another are critical in shaping scopes of practice.[4,5] These evolutions have led to a shift in identity of a physician from a paternal and self-reliant travelling practitioner[6] to a member of a diverse and comprehensive health care team.[7]

According to the Canadian Institute for Health Information (CIHI), between 2004 and 2011, the twenty percent increase in the number of physicians in Canada was less than most other health professionals including respiratory therapists (39%), social workers (32%), dietitians (30%), audiologists (38%), speech-language pathologists (37%), midwives (88%), and many others.[8] Licensure of self-regulated professions continues to expand.[9] Over several decades nurses, occupational therapists, respiratory therapists, and others have developed into self-regulated professionals,[10] while other regulated health professions such as advance practice nurses[10,11] and pharmacists[12] have expanded their scopes of practice in recent years. According to the World Health Organization, in 2010, Canada had fewer physicians per capita than five OECD countries with comparable health systems (Sweden, France, the United States, Australia, and the United Kingdom).[13] We cite these five points of interest not in an effort to claim that an increasingly insufficient share of health care provision is being allocated to physicians; instead, we have used it to support the current position of the CFMS: *the provision of health care is increasingly becoming a complex team effort.*

Benefits of Interprofessionalism

The body of research showing the utility and efficacy of interprofessional collaboration is beginning to grow.[14] Collaboration among health care professionals improves patient care plans, encourages input from a diverse group of health professionals, and ensures quality care in an increasingly complex system through overlapping scopes of practice.[15]

Interprofessional collaboration has been shown to improve organizational efficiency as well as patient outcomes. A reduction in morbidity and mortality have been seen in chronic diseases such as hypertension and diabetes,[16] in mental health care,[17] for surgical patients,[18] and for geriatrics, women's health, and sexual health.[19] Collaboration between health professionals has also demonstrated improved access to care, shorter wait times, and more efficient resource utilization.[16,20]

Conceptual Changes in Interprofessional Education

Previous threats to interprofessional education are now giving way to conceptual and practical reforms. Some medical regulatory bodies have historically interpreted the growing interprofessionalism of medical care as a threat to physicians' professional autonomy.[1,9,21] In medical education, this culture of protectionism can result in a hidden curriculum that undermines successful implementation and uptake of IPE curricula;[5,7] however, domains of progress are notable and ongoing. Regulatory bodies, physicians, and researchers are increasingly recognizing that medical education must evolve to reflect the interprofessional nature of medical care.[22] Traditional areas of focus in medical education research on mastery and expertise have expanded to include notions of individual competence such as collaboration and management that intercalate with other professional domains.[23] Even more progressively, researchers are beginning to construct notions of adaptive health systems that extend beyond any single individual and into frameworks for collective competence.[24-26] In Canada, the Royal College of Physician and Surgeons and the College of Family Physicians are beginning to write these redefined scopes of professional practice in medicine into the accreditation requirements for postgraduate medical education.[27-29] Accreditation requirements for undergraduate medical education curricula are also being modified to reflect interprofessionally-relevant competencies such as the "collaborator" role as outlined in the CanMEDS 2015 competency framework.[22,30]

Current Methods in Interprofessional Education

Despite growing attention to interprofessional education in Canadian medical schools it remains uncertain whether current methods of interprofessional education at Canadian medical schools are functioning optimally.[31] For example, based on a qualitative review of IPE in Canadian medical schools by the CFMS in 2013,[32] while all Canadian medical schools offer IPE learning opportunities which meet accreditation standards,[30] it appears that few schools make optimal use of interactive or longitudinal learning between students from different professions in actual clinical environments.

The medical education literature shows that best practices in interprofessional education are no longer based solely on didactic methods of teaching.[33] Both the medical education research[33] and informal feedback from medical students across Canada collected by the CFMS in 2013[32] show that the practice of using lecture-based teaching on IPE remains the standard at some medical schools while others are transitioning to more innovative approaches to IPE. Newer methods of IPE provide opportunities for lived experiences in other professional roles. Innovations in this area include: case-based and simulation-based learning where students from multiple disciplines work together to solve clinical problems;[34,35] collaborative interprofessional learning using arts- and humanities-based material for triangulation;[36-38] patient-based curricula where medical students participate with patients in their appointments across the spectrum of health care professionals;[39] and workplace-based learning where medical students experience the cultural contexts and workplace demands of other professionals.[40] These teaching modalities are understood to offer richer learning experiences than didactic teaching typically provides.[2] It is noted, however, that these IPE teaching modalities may be more expensive and logistically complicated for medical schools to organize.[34] These challenges may partially explain why some schools have been slower than others to adopt these methods of interprofessional education.

Evolving methods of delivery of interprofessional education are linked to similar changes in the assessment of medical students' performance in interprofessional education. Current changes in assessment that are relevant to interprofessional education include authentic assessment in in workplace-based settings.[34,41-44] Formative assessment modalities that give learners rich feedback on areas of improvement are understood to be more relevant to IPE than abstract, knowledge-based testing.[22,23,45] Settings where students of various health profession faculties can practice and be assessed in real world interprofessional care scenarios have begun to show improvement in attitudes towards IPE, interprofessional competencies, and in skills in communication and collaboration across the disciplines.[46-48] For example, simulation-based interprofessional training, team assessment, and interprofessional clinical placements have already shown promise in the promotion of interprofessional collaboration.[45,46,49-51]

Principles

The CFMS believes the following principles should be used in the design and implementation of interprofessional education curricula in Canadian medical schools. A brief methodological appendix describing how these principles were created is included after the text of the position paper.

1. **Collaborating to achieve optimal health outcomes**

Achieving high quality health outcomes is not enacted by physicians alone. Instead, in addition to health care being a collaboration between patients and their doctors, optimal patient outcomes are achieved through a team effort between the many professionals that constitute the health care system.

2. **Communicating across professions**

Effective communication is an essential component of integrating health care professions of differing training and expertise in clinical environments. Open, honest, and respectful communication develops relationally over time and with practice.

3. **Democratizing expertise**

Defining expertise is a matter of scope of training, not biomedical depth of training. Professionals in health care domains other than medicine come to patient care with diverse realms of expertise and experience which add to the health care system's ability to deliver high quality patient care.

4. **Recognizing the importance of workplace-based learning**

Lived experience in the workplaces of multiple professionals enriches the learning of medical students and, more importantly, contributes to building collective competence across the health system as a whole.

5. **Implementing longitudinal, integrated, and progressive curricula**

Aspects of care that are delivered interprofessionally should be taught interprofessionally. Curricula should introduce learners to the theoretical foundations of interprofessional education, integrate learners of multiple professions through early collaborative opportunities in the clinic and the classroom, and foster competent interprofessional teamwork through guided immersion in collaborative settings.

6. **Continually monitoring the interprofessional evolution of education**

Medical education is a high stakes process. Therefore, committing to ongoing exploration and evaluation of the teaching modalities that address the increasingly interprofessional nature of education will be crucial for ensuring that the process is both adaptable and evidence-informed.

Challenges

The CFMS believes that the implementation of best practices in interprofessional education faces the following challenges at Canadian medical schools.

1. **Continued protectionism**

The *Optimizing Scopes of Practice* report published in 2014 by the Canadian Academy of Health Sciences (CAHS)[4] indicates that IPE in Canada continues to propagate myths about the place of the physician in the health care team. According to the CAHS expert panel report, IPE curricula at some Canadian medical schools continue to reinforce the idea that the physician is responsible not only for their own scope of practice but is ultimately responsible for all actions taken on the patient's behalf in the health care process. In reality, all self-regulated health care professionals are legally responsible for, and are experts in, their own realms of practice,[4] even where those scopes of practice overlap.[9]

2. **Acknowledging the hidden curriculum**

Significant barriers to enacting robust interprofessional education exist in Canadian undergraduate medical education.[33] One such barrier is a culture of resistance to evolving scopes of practice and interprofessional practice amongst faculty role models.[7,52] Undergraduate medical curricula that assist medical students in recognizing the discrepancy between the espoused interprofessional curriculum and the enacted hidden protectionist curriculum may help students reconcile current role model behaviour with new models of collaborative practice.

3. **Lack of interactive education across the health care team**

Previous accreditations standards stated that medical students should have the opportunity to "learn in academic environments that permit interaction with students enrolled in other health professions, graduate, and professional degree programs and in clinical environments".[53(p. 4)] Current standards also expect medical students to have opportunities to learn with professions or students from other health professions (though the expectation that these opportunities include learning in clinical environments has been dropped).[30] Despite this longstanding expectation, the 2013 CFMS review of member schools found that at that time only some schools had implemented IPE curricula that include formal pedagogical interaction between students from multiple health professions training programs.[32]

4. **Logistics and resources**

Faculties tend to replicate uniprofessional curricula developed in previous years.[54] This curricular inflexibility is reinforced by uniprofessional accreditation requirements as well as separate funding streams, support staff, and senior management.[55-57] The logistics of coordinating and physically accommodating the large and diverse student bodies of combined healthcare faculties has also presented a barrier to integration.[57] Finally, poor recruitment, training, and retention of faculty champions of interprofessional education and a lack of support from senior management has negatively affected implementation in the past.[58,59]

Recommendations

1. Exploring the full scope of accreditation standards of IPE in medical education

In previous accreditation standards, every Canadian medical school was expected to provide students with opportunities for interprofessional education between students from multiple health professions that enabled workplace-based learning by taking place "in clinical environments".[53(pp.4)] While the current standards now expect medical schools to include education with students from multiple health professions in the core curriculum, the expectation that these curricular modalities will include workplace-based learning has been removed.[30] Current standards should include dedicated time for *workplace-based* IPE that is coordinated with dedicated IPE time in other health professional programs. Interprofessional student-run clinics[60-62] and wards[63-67] are examples of such opportunities.

2. Expanding concepts and contexts of the health care team

Canadian medical schools should expand opportunities for medical students to collaborate beyond traditional, acute care-focused concepts of the health care by including pharmacists, other therapists (e.g. respiratory therapists), social workers, community based nurses, spiritual care providers, health care administers, and social advocacy groups (e.g. affordable housing) into their conceptualizations of IPE.[68] With the increase in distributed medical education,[69] medical education in Canada should make use of the broad geographic area where medical education now occurs by providing medical students with opportunities to experience interprofessional collaboration across the health care spectrum from the smallest community settings to the largest quaternary centres.

3. Regrounding the leader/manager debate

Current Canadian conceptions of the multifaceted roles of the physician as suggested in CanMEDS 2015 have proposed to rename the role of 'manager' to 'leader'.[29] It is recommended that the current CanMEDS 2015 policy documents[29] take additional steps to explicitly highlight that all health care professionals are leaders in their respective fields and in patient care. Empowering all health care professions to take responsibility for their scopes of practice and to be leaders in patient care and quality improvement will lead to improved health outcomes for all.[7,52,70]

4. Supporting student and faculty excellence in IPE

Canadian medical school faculties and student government structures should be expanded to include knowledgeable champions of interprofessional education in top organizational structures.[22] Provincial and institutional support for student IPE initiatives including interprofessional student societies[68] and student-run clinics[71] should be made available. Additionally, medical schools are encouraged to offer certificates in extended study in IPE.[4] While providing opportunities to medical students to achieve baseline levels of competence in IPE is important, extended student certificates in IPE may encourage student to pursue excellence in IPE and foster a new generation of IPE champions.

5. Facilitating broader institutional integration

Developing integrative IPE curricula that meets accreditation standards[30] may rely on fostering deeper relationships between educational institutions. Creating the fundamental change that is required to overcome protectionism[1] may be best served by linking health professional schools at organizational and curricular design levels.[9] New resources and financial commitments from senior administers of various professional schools must be obtained for interprofessional education, and interprofessional faculty must be supported in their collaborations on curriculum committees.[55,58,72]

Just as students are asked to reflect on their interprofessional collaboration, so too should faculty be applying the same lessons to their collaborative efforts on IPE integration.[72] Administrations should provide resources for communication between student governments in multiple professions, and engage with students from multiple health profession as early as possible such as in orientation weeks. Interprofessional shared curricula[73] and common space[74] should be developed to facilitate casual encounters, effective communication, and informal learning.[75-77]

6. Focusing on communication and situation awareness

Situation awareness describes the process by which workers become aware of changes in work processes at a systems level.[78] With an increase in interprofessional collaboration, a commensurate increase in the distribution of liability across professional is expected.[9] Poor communication and role awareness are a strong predictors of liability in cases of medical error.[9] Therefore, for IPE to successfully prepare medical students for interprofessional collaboration in the workplace, teaching strategies such as workplace-based learning that strengthen interaction, communication, and situation awareness should be fostered.

7. Ongoing attentiveness and monitoring

A new generation of physicians are training in a culture of collaboration among health professionals who have expanding realms of expertise. As new roles for health professionals are created it will be essential to remain both open and attentive to changes in professional scopes of practice.[79] Ongoing interdisciplinary research into the practices and lived experience of new health care professionals will be as essential to maintaining positive and collaborative interprofessional relationships[22] as research that attempts to understand the impact of these new teaching modalities on the lives and careers of medical students.

Conclusions

Confronting the challenges facing interprofessional education will not be easy. Ideally, interprofessional education should be a dynamic and engaging opportunity to collaboratively solve clinical problems with students and members of other health professions. Turning to the recommendations made here by Canadian medical students will point Canadian health care in a positive direction for future efforts to improve interprofessional education.

Appendix:

The principles in this CFMS position paper were synthesized from peer-reviewed research in medicine education including best practices,[31,34] Canadian health services policy documents,[1,4,14,22,44,80] the 2008 CFMS policy statement on IPE,[81] a 2013 CFMS qualitative review of current IPE teaching practices at Canadian medical schools,[32] and the 2014 CFMS policy statement on Interprofessional Collaborative Care[82] using an iterative and collaborative writing process between members of 2014-2015 CFMS Education Committee and Committee on Health Policy.

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