Medical Education in Internal Medicine: The Current Canadian Landscape: A Workshop Delivered at the 2019 CSIM National Meeting

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Abstract

The 2019 Canadian Society of Internal Medicine (CSIM) national meeting included a workshop focused on current topics related to medical education across Canada. The workshop topics included leadership in education, teaching point of care ultrasound, teaching clinical reasoning, and using competency-based medical education to design a program meant for the maintenance of competency of practicing specialists. This article reflects the experience and discussions from the session, with the goal of stimulating national conversations and collaborations between CSIM members.

RÉSUMÉ

Le Congrès annuel de la Société canadienne de médecine interne (SCMI) de 2019 comprenait un atelier portant sur des sujets d'actualité liés à l'enseignement médical au Canada. Les thèmes abordés étaient le leadership en éducation, l'enseignement de l'échographie au point de service, l'enseignement du raisonnement clinique et l'utilisation de l'enseignement médical fondé sur les compétences pour concevoir un programme de maintien du niveau de compétence des spécialistes en exercice. Cet article rend compte de l'expérience et des discussions de la séance, dans le but de stimuler les conversations et les collaborations à l'échelle nationale entre les membres de la SCMI.

Introduction

The mission of the Education Committee of the Canadian Society of Internal Medicine (CSIM) is to support practicing internists and trainees with interactive, evidence-based, continuing professional development (CPD) activities based on their learning needs. In recent years, there has been an increasing interest within the CSIM membership to learn more about medical education, especially with regard to Internal Medicine. For this reason, the CSIM

Education Committee proposed adding a session focused on medical education to the 2019 annual national CSIM meeting.

Two members of the education committee volunteered to organize this session in a workshop format, dividing it into four different topics considered relevant to the current medical education landscape for Internal Medicine across Canada. Each topic allowed participants to reflect on and discuss ideas and experiences, aiming to share perspectives and identify

opportunities for future development. This approach was used to stimulate interest and enthusiasm among our membership, as well as potentially foster a national platform for further networking opportunities with local and regional interests. The work-shop serves as a springboard for Canadian Internal Medicine specialists and trainees with an interest in medical education to collaborate and share ideas.

We approached clinician educators within our membership with specific interests and expertise to lead each of the four topics presented. Dr. Leslie Martin led a discussion on the idea of authentic leadership in medical education. Dr. Irene W. Y. Ma led a conversation on teaching point of care ultrasound (POCUS) in Internal Medicine, as well as developing scholarship to support its use. Dr. Daniel Brandt Vegas led a discussion about how to teach clinical reasoning. Finally, given the sweeping changes brought about by the implementation of Competency Based Medical Education (CBME) across Canadian residency training programs, we decided to dedicate a large segment of the workshop to learn about the experience of a Gastroenterology subspecialty group implementing CBME for maintenance of competencies (MOC) using a peer mentorship program. Dr. Ford Bursey led this segment.

The workshop was well attended, and the participation reflected a level of enthusiasm and interest that suggests a potential for a national collaboration and conversation in these different topics. This article intends to reflect the experience of the workshop.

Leadership in Medical Education—Leslie Martin

Leadership is crucial for institutional success, particularly during times of significant change. During the session, we explored areas of medical education and clinical practice that are undergoing rapid change, and will continue to shift in the coming years. Leadership is crucial in all of these spheres in order to achieve and maintain success.

Introducing authentic leadership

What kind of leaders should we seek to be during our career as clinicians and educators? Whom do we need to emulate in order to achieve success? Fortunately, it has been shown that there remains “no clear profile of the ideal leader.”¹ Rather, authentic leadership emerges from one’s personal story, experiences, and understanding of who we are and how we can best serve others.¹ Authentic leadership can incorporate other well described positive forms of leadership, such as transformational,

Figure 1.

charismatic, and servant, and is defined by core elements including self-awareness, self-regulation, and positive perspective.² A recent scoping review highlighted a general consensus that authentic leadership should be promoted within health care; however, there is a need for more research to understand the role and value of authentic leadership in different populations, contexts, and health care sectors.³

How do we get there?

In the most recent CanMEDS framework, the decision was made to change the role from “Manager” to “Leader” in order to emphasize the importance of leadership as a core competency for physicians, highlighting the integration of patient safety, resource allocation, and health informatics as part of this role.⁴ We are increasingly evaluating this “Leader” competency, yet formal longitudinal leadership training is not universally available within our medical education curricula. Given the recognized importance of leadership development, there is an increasing promotion of faculty development initiatives. These initiatives have been found to improve the knowledge, skills, and attitudes of participating physicians and led to the adoption of new leadership roles and responsibilities.⁵

Given the critical role of leadership in all spheres of medical practice, we call for more research and systematic investment into leadership development at the individual and organizational level.

Behind the Scenes: POCUS from an Educational Scholarship Perspective—Irene W. Y. Ma

The utility of point-of-care ultrasound (POCUS) in assessing medical patients at the bedside is increasingly being recognized. In the United States, a number of Internal Medicine organizations have issued position statements of support for its use, including the American College of Physicians,⁶ Society of Hospital Medicine,⁷ and the Alliance of Academic Internal Medicine.⁸ While evidence is now beginning to emerge in its utility at the bedside in improving diagnostic accuracy, such as the case for the assessment of patients with dyspnea^{9,10} and for the determination of splenomegaly,^{11,12} some critics argue against its use, citing inconsistency in or absence of evidence for clear educational benefits.^{13,14}

Incorporating POCUS into clinical medicine presents a paradigm shift in the way that patient examinations are performed at the bedside. Ability to directly visualize findings such as right ventricular chamber collapse in the presence of pericardial effusion and loculated pleural effusions in a septic patient provides clinicians with valuable additional data points to guide and triage the urgency of subsequent management strategies. But for each sonographic finding, there exist false-positives and false-negatives, some of which may be technique-dependent. In addition, clinical

context significantly impacts on the interpretations of any given finding. Therefore, there is a critical need for physicians to be trained properly in the use of this powerful tool.

Although its use is not intended to replace consultative and comprehensive scans performed by diagnostic imaging specialists, concerns regarding potential patient harm exist,¹⁵ especially in the setting of insufficient understanding of the scope of use, suboptimal training on its technique, interpretation and clinical integration, and the absence of quality assurance processes. Questions abound such as, “What is the evidence for improving the accuracy of diagnosis?” “Can learners learn the technique effectively?” “Under what circumstances should POCUS be used or not used?” and “How should competency be assessed?” As such, more than ever, there is an urgent and pressing need for POCUS practitioners, clinician researchers, medical educators, education researchers, and administrators to work together to shape POCUS education, so that evidence can be created and evaluated, and policies and processes can be set in place to guide the responsible use of POCUS. This task is daunting. As general internists, we are well versed in clinical research and medical education scholarship. We are therefore well-positioned to help collectively guide this POCUS implementation effort, as evidenced by our collective work to date.^{16,17} Much more work needs to be done and the future for POCUS is looking bright and echogenic. “In truth, whatever is worth doing at all, is worth doing well; and nothing can be done well without attention.”—Philip Stanhope, Letters to His Son on the Art of Becoming a Man of the World and a Gentleman, 1752.

How to Teach Clinical Reasoning—Daniel Brandt Vegas

Clinical reasoning and diagnostic skills have long been the focus of educating Internal Medicine specialists. There have been many strategies based on well-developed theories in cognitive psychology that have been tried with varying experiential results. The dual process theory is clearly the most widely accepted conceptual framework used to understand and teach clinical reasoning.¹⁸ Since this theory proposes the combined implicit, intuitive, unconscious thinking process (system I) with the explicit, rational, conscious thinking process (system II), most efforts to improve clinicians’ clinical reasoning have focused on the system II process.¹⁹ Given the conscious aspect of this process, it appears to be a reasonable target for efforts to train and improve our thinking skills. However, Monteiro et. al. recently made the argument that previous studies have shown that efforts to improve the system II thinking process have had minimal, if any, impact on diagnostic accuracy or efficiency.^{20,21} Given that other studies of clinical reasoning have repeatedly shown that the best predictor for better diagnostic accuracy is years of clinical practice and prior experience, they

propose that the way to improve clinicians' diagnostic reasoning is improving their knowledge of clinical medicine and increasing their clinical experience.

Based on this, the following recommendations were made as "best practices" for educators looking to teach clinical reasoning in any context or at any level:

1. Focus on the system I process of thinking. This means don't focus on the actual process of thinking. Instead, focus on ensuring that the clinician has a broad, updated, and accurate knowledge of clinical medicine, including pathophysiology, clinical presentation of disease, basic epidemiology, and the basic operational characteristics for diagnostic tests for clinical conditions. Since acquiring this type of knowledge and having it within our working memory takes a huge effort and a very significant time commitment, having the skills to quickly identify a knowledge gap and efficiently address it is almost as important as having the knowledge itself.
2. The quality of the data being processed is as important as the way the data is being processed. This means that rather than focusing on teaching clinicians how to think, it's as important (and arguably less controversial) to teach clinicians how to get high-quality and reliable data. Ensuring clinicians have highly proficient communication and history-taking skills as well as advanced physical examination skills, including the use of novel technology such as point of care ultrasound, is a fundamental part of developing strong clinical reasoning skills.
3. The use of a systematic reflective practice, in which a clinician reviews the intermediate and long-term outcomes of the clinical decisions made can help identify important knowledge gaps, as well as erroneous concepts that need to be revisited. This strategy will help focus and strengthen the process outlined in the first point.

CBME and CPD—Ford Bursey

Medical education in Canada is in the process of adopting a competency-based approach. The focus on feedback and coaching this paradigm provides will help trainees achieve proficiency in specific specialty-related and stage-appropriate clinical tasks. This effort, however, has mostly focused on training programs, despite the universally accepted idea of the physician as a lifelong learner.

The Royal College of Physicians and Surgeons of Canada (RCPSC) and the College of Family Physicians of Canada, as well as provincial regulatory colleges, have set the standard requiring every physician in Canada to participate in CPD activities in order

to retain practice certification in their area of specialization. In 2015, the RCPSC organized an international summit on competency-based CPD, and since then there have been several efforts at exploring the rationale for a change toward an updated model of CPD based on the demonstration of clinical skills specific to each specialty including peer mentorship and coaching.^{23,24}

Currently, the RCPSC requires members to demonstrate participation in a set amount of hours of practice assessment activities over a 5-year cycle. The clinical impact or educational effect of these activities is not captured in this model. The proposed shift is toward building on clinical skills beyond competence, toward mastery through the review of clinician's performance data as well as feedback provided by trusted colleagues and mentors. The RCPSC website now includes items as a chart audit tool that can be used by clinicians to review and reflect on aspects of their practice.

As an example of this shift toward competency-based CPD, the Canadian Association of Gastroenterology (CAG) has developed a program that aims to develop and enable peer feedback and support as part of CPD. The "Skills Enhancement in Endoscopy" (SEE) initiative includes courses that promote the move from competence toward excellence and mastery utilizing coaching and provision of feedback to peers.

The CAG also promotes a program that assesses the clinical quality of endoscopy services provided in over 200 hospitals in Canada. The Canada-Global Rating Scale allows for the collection of data from patients on the quality of their experience. This allows reflection not only on the practice of individuals but also of the entire care team. When collated and analyzed by individual endoscopy centers, the team can reflect on and potentially improve the quality of care of all allied health professionals that make up the endoscopy services team.

We are moving toward competency-based CPD in Canada. As there is likely to be increased attention on how clinicians demonstrate continued or enhanced competence in their chosen scope of practice, they will need to learn from each other on how best to accomplish this.

Conclusion

Medical education is an area of growing interest and attention for Internal Medicine given the important changes of the education landscape across Canada. A recent workshop was delivered at the 2019 CSIM meeting in Halifax to provide an update and foster a conversation on specific topics in this field, such as leadership in education, teaching POCUS, teaching clinical reasoning skills, and using a peer mentorship CBME framework to develop an advanced CPD program. The goal is for this conversation to continue over time and hopefully lead to national collaborations in different areas within medical education.

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