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Henry Li, Victor Do and Franco Rizzuti

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Teaching and fostering change management in medical education

L'enseignement et la promotion de la gestion du changement en éducation médicale

Henry Li,¹ Victor Do,² Franco Rizzuti³

¹Department of Emergency Medicine, Faculty of Medicine and Dentistry, University of Alberta, Alberta, Canada; ²Department of Pediatrics, Temerty Faculty of Medicine, University of Toronto, Ontario, Canada; ³Department of Community Health Sciences, Cumming School of Medicine, University of Calgary, Alberta, Canada

Correspondence to: Henry Li, 750 University Terrace, 8303-112 Street NW, Edmonton, Alberta, Canada, T6G 2T4; email: henry9@ualberta.ca

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Background

It is an understatement to say that the world is constantly evolving, with the pace of change seeming to accelerate with each year. Patients and healthcare issues have never been more complex—people are living longer and experiencing increasing comorbidity in old age. Digital transformation has been increasing exponentially, with new technologies outpacing the ability of society to implement them. The rapid pace of change has also had significant impacts on the practice of medicine including through digital health⁴ and artificial intelligence.

This background of change has been accelerated by the COVID-19 pandemic, which has forced the healthcare system to adjust to rapidly changing environments and tested the limit of society's adaptability. It is certain that the pandemic will have long lasting effects in healthcare, and in this context, it has never been more important to harness change management processes to ensure effective evolution of care delivery. Adoption of change management in medicine has been a topic of focus in recent years, with a recent systematic review¹ identifying thirty-eight studies applying change management principles to the healthcare setting.

To harness the power of change management in medicine, we must teach, support, and foster medical trainees as they drive innovation. In recent years, learners have been instrumental in leading key shifts in medical culture such as

physician wellness, environmental education, as well as equity, diversity, and inclusion. Furthermore, over the past year and a half, learners played a critical role helping medical education adapt and evolve given the limitations of the pandemic. It is evident that trainees as the future of the profession are also at the forefront of innovation—indeed, Nakagawa et al² recently highlighted how the potential benefits of technology must be driven by a younger generation of physicians to reach its full potential in healthcare. Thus, it is critical to teach them change management principles and support their application thereof.

Current status of leadership in medical education

Teaching innovation and leadership in medicine is not a new concept in Canada. The Future of Medical Education in Canada Postgraduate Project (FMED PG)³ was a collaborative project that set out 10 key recommendations for residency education to best serve Canadians. Recommendation eight was to foster leadership development including “feedback, conflict resolution, change management, and working as part of a team...so they can work effectively with other stakeholders to help shape our healthcare system to better serve society.” Furthermore, the CanMEDS physician competency framework,⁴ used internationally, identifies the ‘Leader’ role as one of seven key competencies required of a physician. This role is defined: “as Leaders, physicians engage with others to contribute to a vision of a high-

quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.” An enabling competency within the Leader role is “Facilitate change in health care to enhance services and outcomes.”

This focus is further reflected in accreditation with leadership development and the CanMEDS roles referenced in standards of both the Committee on Accreditation of Canadian Medical Schools⁵ and the Canadian Residency Accreditation Consortium⁶ outline.

Although there have been efforts to integrate the ‘Leader’ role in medical education, there is still ample opportunity to improve how medical education fosters leadership development amongst trainees, particularly with certain aspects of leadership. Despite the fact that the FMEC PG project and CanMEDS Leader role specifically reference change management and leading change as key components of leadership, this specific skill set continues to be underexplored. Through deliberate education and engagement, the next generation of physicians can be more prepared to effectively drive change in our health system.

Path moving forward

In order to help develop the next generation of physicians as competent change makers, we suggest the following steps:

Fostering change management in medical education

Teaching change management requires strategic curriculum mapping to ensure concepts are well integrated into the formal curriculum. Change management principles should be integrated starting from pre-clerkship. Small group, case-based and problem-based learning sessions are an ideal setting to highlight the principles and importance of change management in the health system. For example, a case about sepsis can highlight health systems, process and safety issues that lead to late recognition. As part of the discussion, learners can be challenged to discuss and develop plans for a quality improvement (QI) project with specific highlights of what change management principles need to be considered to execute the project.

All curricula should be grounded in established change management theory. We suggest Kotter’s *Leading Change*⁷ as an excellent starting point. Consideration should be given to promoting Kotter’s *Our Iceberg Is Melting*⁸ as optional reading material for learners interested in

conducting change projects. The fable serves as an easy-to-read introduction to basic change management principles.

As we continue the shift to Competence-By-Design, change management principles should be included in Entrustable Professional Activities (EPA) so that learners and preceptors can reflect on their roles in change processes and their growth in the ability to bring about change in a variety of settings. Inclusion in low-stakes evaluations which are meant to foster learning and development help ensure faculty are actively participating in developing this skill set and that learners note its significance. Learners in all programs, especially those who are more senior, encounter many situations that require change management principles in clinical and non-clinical settings. Any resident who serves on a residency program committee for example will likely have been involved in change management when new curricular or program initiatives roll out. Many other learners need to demonstrate effective change management when the clinical institution where they are on rotation implement changes to procedures and policies.

We recommend that change management not be approached through assigning a single stand-alone change management assignment. This approach, sometimes taken to fulfill non-medical expert competencies, is ineffective as it gives learners the sense of an additional burden of activity. Kern’s six steps to curriculum design⁹ can readily be applied to change management curricular design. Performing a needs assessment and clearly outlining goals and objectives are important initial steps. Carefully considering educational strategies which we comment on as well as implementation and evaluation methods can all be done with learner engagement.

In addition to understanding change management theory, there are arguably more important skill sets that are important to foster during early medical education. An inquisitive mindset, the knack to seek out opportunities and see potential for change in everyday challenges and situations are just some of the oft-described intangibles that the curricular culture should aim to promote. To this end it is important that trainees are afforded the opportunity for authentic professional identity formation (PIF). PIF can be defined as the transformative journey through which one integrates the knowledge, skills, values, and behaviours of a competent humanistic physician with one’s own unique identity and core values. Supporting the varied backgrounds and experiences that learners bring is important in helping them feel empowered to undertake

change initiatives that are based on their lived experiences. A wide range of delivery methods from panel discussions to simulations can be utilized to stimulate discussion on fostering and supporting authentic PIF. Mentorship is also known to have significant effects on PIF and we return to mentorship as critical to change management development later in this paper.

Deliberate engagement of learners in change processes

All medical faculties and healthcare organizations should make it a priority for learners to be involved in change processes within medical education. Firstly, the learner voice is critical to helping ensure diversity in perspectives at planning and execution tables. As key stakeholders of change processes in medical education, it is critical that learners have the opportunity to be involved. Moreover, as future educators and health systems leaders, these opportunities serve as important springboards and learning experiences for the future.

Learner engagement must be deliberate and meaningful, acknowledging varying levels of previous experience learners enter medical school with. Further, medicine's natural hierarchy can contribute to situations where even when learners are engaged, it is done in a more token manner, sometimes attributed to the fact that learners may have limited experience. In recent years, faculties of medicine and medical organizations in Canada have made strong advancements in learner engagement and involvement in committees and decision-making structures. They should be commended for their efforts and supported to continue this pattern as there continue to be areas where learner engagement can be strengthened. Continuing to create optimal learning and working environments which invite diverse learner input and participation is key to ensuring authentic and productive engagement and improving medical education.

Further to this, learners who are invited to committees and change making bodies should be supported with meaningful mentorship. Mentorship has been noted to be critical in academic medicine. Learners should be set for success when they enter leadership tables, and the importance of having mentors with whom to discuss their ideas, questions, and struggles cannot be overstated. Both formal and informal opportunities are welcomed.

Opportunities for further enrichment in change management

Lastly, for learners with special interest in change management and leadership, faculties should foster opportunities for them to develop additional skill sets. This can be accomplished through para-curricular educational opportunities and encouraging deliberate engagement in real-world change management opportunities outside of the medical faculty. Opportunities with the broader medical education community (e.g. national organizations), the health system (e.g. local health authority) and other unique settings (e.g. start-up healthcare companies) would greatly strengthen student learning experiences.

These can be done both through brief shadowing like experiences as well as through immersive experiences with both having the potential to further promote and develop change management leaders within medicine. Similar to curricular initiatives though, these opportunities must be carefully and deliberately planned. What exactly is the role of the learner in the change management project? How much responsibility will they have at the leadership table? What skill sets will they need prior to engagement?—to continue to develop as they participate? How will they be supported and mentored? Thoughtful consideration and co-development of learning goals with enthusiastic learners will increase the likelihood of the experiences being mutually beneficial.

Conclusion

Leadership, specifically change management, is a critical competency of being an effective physician. Although the importance of this concept is supported by medical organizations and faculties of medicine in Canada, there remain many areas of improvement to ensure that all medical trainees learn to lead change in their local and larger contexts. Herein we outline key recommendations to support the inclusion of change management principles throughout medical education in Canada, including systematic adoption of educational opportunities, thoughtful, authentic engagement in the medical education and healthcare systems, as well as supporting para-curricular opportunities for further enrichment. Only by training all physicians to be change makers will we be able to realize the full potential of our healthcare system in caring for Canadians.

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