Is there a role for a learner education handover as part of the Medical Council of Canada assessment and licensing process?

Y a-t-il une place pour le transfert d’information sur les apprenants dans le cadre du processus d’évaluation et d’octroi de licences par le Conseil médical du Canada ?

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Résumé de l’article

La transition de la formation médicale prédoctorale (FMPrD) vers la formation médicale postdoctorale (FMPrD) est une période de vulnérabilité pour les facultés de médecine, les programmes de résidence et, surtout, les apprenants.

Un gouffre sépare l’expérience de la FMPrD et celle de la FMPrD. L’information sur les étudiants partagée par les programmes de FMPrD consiste principalement en une évaluation sommative de leurs connaissances et habiletés; les programmes de FMPrD ne sont pas renseignés sur les besoins d’accommodement spécifiques et les besoins de supervision sur mesure des apprenants ou sur d’éventuelles préoccupations en lien avec la conduite professionnelle relevées pendant la formation de premier cycle.

Ce manque d’intégration entre la FMPrD et la FMPrD augmente les risques pour les apprenants, les programmes de formation postdoctorale et les patients.

Des liens plus solides et une meilleure communication tout au long du continuum éducatif pourraient optimiser l’apprentissage et réduire l’inefficacité et les risques.

Le Conseil médical du Canada (CMC) a posé la question à savoir s’il y aurait une place pour le transfert d’information sur les apprenants dans le cadre de ses processus d’octroi de licences; toutefois, il faut d’abord déterminer l’objectif visé par le transfert d’information.

Nous décrivons un modèle canadien de transfert d’information sur les apprenants, appelé modèle de transfert pour la formation des apprenants (TFA), qui comprend la divulgation des besoins de formation des apprenants et les mesures d’accommodement nécessaires selon leurs difficultés, des préoccupations générales en matière de santé, des exigences en matière d’équité/diversité/inclusion et de religion, des préoccupations en matière de professionnalisme et des recommandations concernant l’accès à des domaines spécifiques des connaissances et des habiletés pendant la résidence.

Les résultats des tests bêta et des essais pilotes confirment la valeur et la faisabilité du modèle TFA.

Le modèle est fondé sur les principes fondamentaux suivants :

- Le transfert d’information sur les apprenants a lieu après le jumelage des programmes de résidence
- Le TFA doit être orienté vers l’avenir; il est axé sur les problèmes et les besoins permanents ou récurrents des apprenants
- Les apprenants doivent participer au processus
- La mise en œuvre du modèle exigerait la participation de toutes les facultés de médecine et de tous les apprenants au Canada

La mise en oeuvre comprend les défis suivants :

- Assurer la sécurité des apprenants après la divulgation de l’information
- Mobiliser les vice-deans des programmes de FMPrD
- Assurer la protection de l’information en respectant le principe du besoin de savoir
- L’intégration du transfert d’information sur les apprenants à l’activité d’octroi de licences pourrait permettre au CMC de soutenir un système qui répond de manière proactive aux besoins des apprenants, optimise le rendement des médecins et favorise la sécurité et la qualité des soins aux patients.
Abstract

• The transition from undergraduate medical education (UGME) to postgraduate medical education (PGME) is a time of vulnerability for medical schools, postgraduate residency programs, and most importantly, trainees
• There is a disconnect between the UGME and PGME experience. Student information shared by UGME is primarily summative of knowledge and skills; PGME programs are unaware of specific learner accommodation requirements, tailored supervisory needs, or potential professionalism concerns identified during UGME
• This lack of integration between UGME and PGME increases potential risk to learners, postgrad programs and patients
• Better linkages and communication along the education continuum could optimize learning and reduce inefficiency and risk
• The Medical Council of Canada (MCC) has asked if there is a role for a learner handover (LH) within their licensing processes; however the intended purpose of an LH must first be determined
• A Canadian-based LH referred to as a Learner Education Handover (LEH) model including disclosure of student learning/disability accommodation needs, general health concerns, EDI/religious requirements, professionalism concerns, and recommendations for special focus in residency of specific areas of medical knowledge/skill is described.
• Findings from beta and pilot testing support the value and feasibility of the LEH model. Fundamental principles are outlined:
  o LEH occurs post-residency match
  o LEH should be forward facing; focused on ongoing or recurring learner issues and needs
  o Learners must be included in the process
  o Implementation would require participation by all Canadian medical schools and all learners

Résumé

• La transition de la formation médicale prédoctorale (FMPoD) vers la formation médicale postdoctorale (FMPoD) est une période de vulnérabilité pour les facultés de médecine, les programmes de résidence et, surtout, les apprenants.
• Un gouffre sépare l’expérience de la FMPoD et celle de la FMPoD. L’information sur les étudiants partagée par les programmes de FMPoD consiste principalement en une évaluation sommative de leurs connaissances et habiletés; les programmes de FMPoD ne sont pas renseignés sur les besoins d’accommodement spécifiques et les besoins de surveillance sur mesure des apprenants ou sur d’éventuelles préoccupations en lien avec la conduite professionnelle relevés pendant la formation de premier cycle.
• Ce manque d’intégration entre la FMPrD et la FMPrD augmente les risques pour les apprenants, les programmes de formation postdoctorale et les patients.
• Des liens plus solides et une meilleure communication tout au long du continuum éducatif pourraient optimiser l’apprentissage et réduire l’inefficacité et les risques.
• Le Conseil médical du Canada (CMC) a posé la question à savoir s’il y aurait une place pour le transfert d’information sur les apprenants dans le cadre de ses processus d’octroi de licences; toutefois, il faut d’abord déterminer l’objectif visé par le transfert d’information.
• Nous décrivons un modèle canadien de transfert d’information sur les apprenants, appelé modèle de transfert pour la formation des apprenants (TFA), qui comprend la divulgation des besoins de formation des apprenants et les mesures d’accommodement nécessaires selon leurs difficultés, des préoccupations générales en matière de santé, des exigences en matière d’équité/diversité/inclusion et de religion, des préoccupations en matière de professionnalisme et des recommandations concernant l’accent à mettre sur des domaines spécifiques des connaissances et d’habiletés pendant la résidence.
• Les résultats des tests bêta et des essais pilotes confirment la valeur et la faisabilité du modèle TFA.
• Le modèle est fondé sur les principes fondamentaux suivants :
  o Le transfert d’information sur les apprenants a lieu après le jumelage de résidence
  o Le TFA doit être orienté vers l’avenir; il est axé sur les problèmes et les besoins permanents ou récurrents des apprenants
  o Les apprenants doivent participer au processus
  o La mise en œuvre du modèle exigerait la participation de toutes les facultés de médecine et de tous les apprenants au Canada
Introduction
The Medical Council of Canada (MCC) is seeking informed opinions regarding what it should be assessing, how, when, and why. In the context of this initiative, the MCC has solicited our advice regarding the benefits and risks of embedding a learner handover (LH) process within the broader MCC licensing activity. This white paper thus addresses the question, ‘Should a learner handover, i.e.: the relaying of trainee information derived from the undergraduate medical training experience to the postgraduate training program, be incorporated as part of the licensing process and, if so, how?’

To answer this question, the MCC must first have clarity about the intended purpose that a LH process would serve relative to other sources of information available. Defining the purpose for a learner handover will, in turn, determine the content, format and approach of how such information would be shared. In this paper we provide the necessary background to understand the current thinking about LH, describe evidence-based support for an ongoing Canadian learner education handover (LEH) process outline the challenges and opportunities, and conclude with our recommendations to the MCC, for future directions related to a LH.

Background
A LH is the sharing of information about medical trainees among relevant individuals who oversee the trainees’ learning. The merits and risks of LHs in medical training, has been the subject of ongoing debate. What information should be shared, to whom, by whom and when in the education continuum are all key elements that are determined by the intent of the information sharing, and merits/risks are directly impacted/determined by these elements.

Medical education literature describes numerous approaches, pros and cons, and theoretical models of LHs. Models promoting information sharing about individual students are generally focused on prior performance, and information is typically shared between supervisors, to the exclusion of the learner. While this activity, often colloquially referred to as ‘forward feeding’; may enable targeted training and supervision to address real or perceived learner deficiencies, it also carries a risk of stigmatization of the learner, leading to future evaluator biases. “Knowledge of prior performance appears likely to influence ratings of current performance, and an assimilation effect is seen with prior performance information.” Not only can information sharing impact future trainee evaluations, it may result in implicit and explicit biases that could potentially impact future career paths for the trainee. Other initiatives, such as ‘boot camps’, or ‘transition to residency courses’ are offered in a group format focusing on medical knowledge and skills as opposed to intrinsic competencies, and are not individualized. They are typically offered prior to the start of residency and after Medical Doctor (MD) graduation and tend to involve top-down teaching sessions designed to address commonly identified deficiencies. They are more directed at pushing information toward trainees, rather than from trainees, they are generally not mandated and most have not been evaluated.

Typically trainees do not have the opportunity to identify areas that they would like extra help with as they enter residency and undergraduate medical education (UGME) does not share possible trainee deficiencies with postgraduate medical education (PGME).

There are generally two broad viewpoints about the purpose of a LH. One is related to graded responsibility, with the goal of ensuring appropriate monitoring of trainee function in the interests of patient safety; essentially to identify and support those individuals who are anticipated to need enhanced or customized supervision. The other is learner-centered, focusing on enabling the trainee to optimize their performance assisted by efficient and targeted evolution of teaching and thereby, ultimately optimizing patient care.

An effective LH builds on the notion of the ‘minimally acceptable candidate,’ that is, one that has met minimum criteria to graduate, and thus enter residency training in
Evidence

The current system of trainee information sharing between Canadian undergraduate and postgraduate medical programs occurs formally, prior to the residency match. This communication consists of standardized documentation, including the medical school (MD) transcript and the Medical Student Performance Record (MSPR), also known as the Dean’s letter. These documents provide limited utility to postgraduate programs; it is challenging to identify any distinguishing features of trainees or identify any unique trainee needs. This information is largely summative and provides little help to those who subsequently are called upon as teachers and program directors to rediscover learning needs, redevelop tailored educational approaches for each learner and, most importantly, re-identify risks related to supervisory needs. In brief, the current system is good at informing programs where students are at but says nothing about what it took to get them there, or what might be helpful to optimize their progression in training.

Furthermore, this information is primarily provided for the purposes of residency selection, a distinctly different activity than tailoring educational programming for a trainee once they have been accepted to a residency program. MD schools seek to enable all students to match to a residency program and orient their information to this purpose. PGME programs strive to identify and secure the best candidates for their program, often feeling the need to take a ‘rule out’ or ‘red flag’ approach due to the lack of useful discriminators in application files. Accordingly, this creates a situation wherein both UGME and PGME communities are wary of any information that could be considered negatively affecting a candidate, potentially to the detriment of the learners, based on the authors’ experience with the match process. Following the current residency matching process, no further learner information is systematically provided to PGME programs by UGME.

Unintentionally, this system contributes to the vulnerability of this transition period for trainees. It was, and still is, the philosophical position of the LEH working group that improved communication between UGME and PGME could help to ease the transition from medical school to residency, setting all stakeholders up for optimal success. Thus ensued a robust process to determine what this communication should look like; and how and when it should occur.
Following an extensive scoping review of the literature\(^9\) pan-Canadian focus groups were conducted with 60 representatives across key stakeholder groups including medical students, residents, residency program directors, medical regulatory authorities, as well as undergraduate, student affairs and postgraduate deans. The results supported a national LEH and identified key themes to guide the design.\(^{14}\) These themes led to three guiding principles that would inform the development and subsequent pilot test of the LEH.

1. The information exchange must occur post residency match – the LEH is not intended to be a selection tool, but rather to enable the development of individualized learning plans at the beginning of their residency training. Placing the communication pre-match risks undermining the goal of including candid useful information for the reasons stated above.

2. The LEH must be learner centered and adaptive. The goal is to enable learners’ success, support program efficiency and effectiveness and lead to optimal patient care. It is not intended to be judgmental or punitive.

3. In order to avoid creating unintended stigma for select individuals and to ensure the process becomes normalized during transitions to residency, the LEH should be implemented for all learners across the country.

The stakeholders were clear that the LEH must include the learner in the process. Trainee information related to disability, learning accommodations and mental health should be included. The LEH must be distinct from the MSPR. The design should be aligned with the CanMEDS Framework. Guidelines for when, what and how information should be shared would be developed internally, utilizing existing infrastructure such as resident wellness offices. While there was concern about potential biases resulting from an LEH and misuse of the information, the stakeholders also recognized that an LEH could support patient safety, resident well-being and enhance trainee/physician professionalism. Learners would have individualized educational plans, programs would be better prepared for learner needs and known issues could be dealt with pro-actively rather than re-identifying ongoing issues late into a trainee’s residency.\(^{14}\)

Based on the focus group results, and with a number of design iterations, we developed the LEH protocol that included sections for the student to complete and separate sections for UGME, in alignment with the CanMeds roles.

The student component includes a section entitled Physician Health (an element of the Professional CanMeds role) where students are asked to share personal information about previous approved accommodations in medical school, general health and mental health concerns, EDI, religious and cultural requirements, and personal coping readiness. Professionalism and Medical Expert/Communicator sections ask students to identify concerns they believe require ongoing support. The UGME component includes sections on Professionalism, Medical Expert, Communicator, and Collaborator to be completed separate from the students, indicating areas that the student could benefit from extra attention by PGME. Both student and UGME have a section to comment on student strengths and special interests. Each UGME program can determine who is best able to complete each of their sections, given knowledge of the student and previous/unresolved performance issues.

The information shared should be forward facing, not simply a report of past performance, issues or needs. The information should focus on issues and needs that are expected to be ongoing, or possibly re-occurring for all domains: professionalism, skill/knowledge acquisition, and health/learning challenges.

We conducted a beta test to evaluate the feasibility, utility and potential impact of the LEH,\(^{13}\) with University of Toronto and University of Calgary REB approval.

All six of the Ontario medical schools and Laval University MD program participated in the beta test. The protocol was provided in both official languages, English and French.

The beta test involved three phases of data collection. First, 52 voluntary medical students from the seven medical schools anonymously completed the student section of the LEH. Second, UGME Deans received a random selection of 20 completed LEH student sections with no school or student identifiers. The seven UGME faculty, including Deans, faculty leaders, Student Affairs Deans then completed the UGME section, based on their experience with similar students. Six PGME Deans received the compiled, ‘fictitious’ completed LEH forms. Participants were surveyed to evaluate the content and process of the LEH protocol. A total of 65 surveys were completed.

The small majority of students (58%) and all of the postgraduate deans rated the LEH protocol as feasible.
Given the pandemic challenges, the pilot has been extended. Three schools are currently participating. The information that has been most commonly shared by trainees has related to personal coping readiness for residency, the need for academic/personal accommodations and managing finances. Preliminary results indicate that the process is feasible for postgraduate central departments, using the existing infrastructure of their wellness offices. Postgraduate offices have found that the LEH assists them in reaching out to incoming residents. Residents report the LEH as useful, particularly in locating and accessing resources early, and being more proactive rather than reactive about their learning needs. However, fears of how such information might be used, and the stigma of reporting mental health issues remains a concern for some resident respondents. One limitation is the trainees voluntarily participated in both the beta test and the pilot and may represent early LEH adopters; their responses may not be reflective of all trainees. The purpose and intended use of the LEH must be made very clear to trainees, and it will require ongoing efforts to create a safer culture for resident disclosure in the medical education environment.

Challenges and opportunities

Engaging the learners in the information exchange process is unique to our LEH model and we consider it a key component. As stated by Kassam et al, “If learners are expected to become independent and reflective life-long learners, who are able to function in a complex educational and professional system, it is essential that programs are learner-centered with learners positioned as key stakeholders in their training.”

If the MCC aspires to contribute to solutions that ease the transition from undergraduate to postgraduate training, then the LEH is a viable tool that could be incorporated into the advancement of our medical trainees along the education continuum. If the MCC wants to contribute to an integrated, learner-centered process of moving trainees toward licensure, including seeking evidence of learner self-assessment and reflection then the LEH could be an appropriate and valuable addition.

If, however, the MCC is seeking primarily to augment the evaluation of trainee competencies or to identify ‘problem’ trainees, then this LEH model may not be an appropriate option. Focusing solely on evaluation/problem identification would likely serve to maintain the status quo and would be in conflict with what we heard from the participants of our Canadian stakeholder groups.
It is our opinion that to adopt such a limited course of action would be a lost opportunity for the MCC and for medical education in Canada. By introducing the LEH model into the educational continuum, the MCC has an opportunity to contribute to the broader wellbeing and career path for Canada’s future physicians.

Implementation of the LEH, or even potentially another variation of a generic LH, will not be without challenges. The trainee information being shared is sensitive and in some cases, what is being asked to be shared is groundbreaking. Our medical education environment is complex. However, we have the benefit of knowing what our stakeholder groups want and we all share the common goal to help our developing physicians to become the best they can be, to provide the safest and highest quality care possible to patients.

There are several notable specific challenges should the MCC chose to incorporate a LH component in their licensing process. Our UGME deans have demonstrated reluctance to implement an LEH, citing time constraints and lack of capacity to provide this level of trainee information. Although the LEH does not duplicate nor replace the MSPR, the undergraduate deans have been focusing on this document, pre-resident match, as their primary method of exchanging information with their PGME colleagues. To maximize the utility of the LEH, the inclusion of the undergraduate MD program section of the protocol would be necessary. To date, we have only been able to pilot the student section of the LEH; it would be advisable to pilot the whole LEH protocol, with both the student and UGME sections, prior to a broader implementation.

There is a potential dis-alignment with regulatory authorities – physician disclosure is perceived to lead to intrusive, more punitive-type responses from some provincial colleges. A culture of safety for honest self-assessment and identification is essential; at a minimum, the medical education community would need agreement from regulatory colleges that they would only have access to the information on a well-defined, need to know basis, with the knowledge (+/- their consent) of the trainee. Patient safety concerns must always take priority, but clear guidelines would need to be developed to ensure that trainee control over disclosure of their information to the provincial college is respected whenever possible, save for instances in which obligatory reporting exists.

More positively, at a time when trainee and physician wellness is receiving increased attention and recognized importance, the MCC could be a leader in incorporating a handover system that supports and enables the learner, addressing competencies beyond medical knowledge; proactively addressing learning accommodation, professionalism and health needs to optimize physician performance, and promote safe, high quality patient care.

Although beyond the scope of this paper, the notion of students and UGME offices recording student information relevant to the LEH form throughout their UGME training, such as an ongoing portfolio format, could be a possible means to enhance student self-insight, and reduce the workload for UGME programs in completing their portion of the LEH. Reflective narrative is increasingly integrated into UGME education programs; incorporating LEH preparation into this exercise might help to normalize the process of information sharing and contribute to the quality of information shared. This could be a potential way to engage UGME Deans in the future.

**Recommendations**

If the MCC is seriously considering incorporating a learner information handover as part of the licensure activity, they must first identify and articulate clearly what purpose the handover would be intended to serve. Engagement with all key constituent groups would be essential, including trainees. Building on the existing work of the LEH would be an option, if the LEH guiding principles were followed and the goals of the LEH and the MCC were aligned. Such a direction will call upon the MCC to expand their scope and role within the medical education environment—and would provide the MCC with an opportunity to promote a safer, inclusive and more tolerant medical community.

**Conflicts of Interest:** None.

**Funding:** None.

**References**

1. Warm EJ, Englander R, Pereira A, Barach P. Improving learner handovers in medical education. *Acad Med*, 2017. 92(7): p. 927-931. [https://doi.org/10.1097/acm.0000000000001457](https://doi.org/10.1097/acm.0000000000001457).

2. Mims LD, DeCastro AO, Kelly AG. Perspectives of family medicine clerkship directors regarding forward feeding: a CERA Study. *Fam Med*, 2017. 49(9): p. 699-705.

3. Pangaro L. "Forward feeding" about students' progress: more information will enable better policy. *Acad Med*, 2008. 83(9): p. 802-3. [https://doi.org/10.1097/acm.0b013e318181d025](https://doi.org/10.1097/acm.0b013e318181d025).
4. Humphrey-Murto S, LeBlanc A, Touchie C, et al., The influence of prior performance information on ratings of current performance and implications for learner handover: a scoping review. Acad Med, 2019. 94(7): p. 1050-1057. https://doi.org/10.1097/ACM.0000000000002731.

5. Sukhera J, Watling C. A framework for integrating implicit bias recognition into health professions education. Acad Med, 2018. 93(1): p. 35-40. HTTPS://DOI.ORG/10.1097/ACM.0000000000001819.

6. Espaillat A, Panna DK, Goede DL, Gurka MJ, Novak MA, Zaidi Z. An exploratory study on microaggressions in medical school: what are they and why should we care? Perspect Med Educ, 2019. 8(3): p. 143-151. https://doi.org/10.1007/s40637-019-0516-3.

7. Shaw T, Wood TJ, Touchie C, Pugh D, Humphrey-Murto SM. How biased are you? The effect of prior performance information on attending physician ratings and implications for learner handover. Adv Health Sci Educ Theory Pract, 2021. 26(1): p. 199-214. https://doi.org/10.1007/s10459-020-09979-6.

8. Sherbino J, Frank JR, Flynn L, Snell L. "Intrinsic roles" rather than "armour": renaming the "non-medical expert roles" of the CanMEDS framework to match their intent. Adv Health Sci Educ Theory Pract, 2011. 16(5): p. 695-7.

9. Kassam A, Nickell L, Pethrick H, Mountjoy M, Topps M, Lorenzetti DL. Facilitating learner-centered transition to residency: a scoping review of programs aimed at intrinsic competencies. Teach Learn Med, 2021. 33(1): p. 10-20. https://doi.org/10.1080/10401334.2020.1789466.

10. Wancata LM, Morgan H, Sandhu G, Santen S, Hughes DT. Using the ACMGE milestones as a handover tool from medical school to surgery residency. J Surg Educ, 2017. 74(3): p. 519-529. https://doi.org/10.1016/j.jsurg.2016.01.016.

11. Sozener CB, Lypon ML, House JB, et al., Reporting achievement of medical student milestones to residency program directors: an educational handover. Acad Med, 2016. 91(5): p. 676-84. https://doi.org/10.1097/ACM.0000000000000953.

12. Humphrey-Murto S, Lingard L, Varpio L, et al., Learner handover: who is it really for? Acad Med, 2021. 96(4): p. 592-598. https://doi.org/10.1097/ACM.0000000000003842.

13. Kassam A, Nickell L, Bandiera G. The learner education handover – lessons learned from the beta-test. in Association of Medical Education of Europe (AMEE) Conference. 2019. Vienna, Austria.

14. Kassam A, Ruetaulo M, Topps M, et al., Key stakeholder opinions for a national learner education handover. BMC Med Educ, 2019. 19(1): p. 150. https://doi.org/10.1186/s12909-019-1598-7.

15. Morgan HK, Mejicano GC, Skochelak S, et al., A responsible educational handover: improving communication to improve learning. Acad Med, 2020. 95(2): p. 194-199. https://doi.org/10.1097/ACM.0000000000002915.

16. Kilminster S, Zukas M, Quinton N, Roberts T. Preparedness is not enough: understanding transitions as critically intensive learning periods. Med Educ, 2011. 45(10): p. 1006-15. https://doi.org/10.1111/j.1365-2929.2011.04048.x.

17. Hurst C, Kahan D, Ruetaulo M, Edwards S. A year in transition: a qualitative study examining the trajectory of first year residents’ well-being. BMC medical education, 2013. 13(1): p. 1-9.

18. Busing N, Rosenfield J, Rungta K, et al., Smoothing the transition points in Canadian medical education. Acad Med, 2018. 93(5): p. 715-721. https://doi.org/10.1097/ACM.0000000000002072.

19. Association of Faculties of Medicine of Canada (AFMC). The future of medical education in Canada (FMEC): a collective vision for MD education. 2010.

20. Kulasegaram K, Hynes M, Bandiera G, Houston P. The current utility and future use of the medical student performance record: a survey of perceptions across Canada. Can Med Educ J, 2020. 11(3): p. e111-e115. https://doi.org/10.36834/cmej.69332.

21. Snell L, Frank JR, Sherbino J. CanMEDS 2015 physician competency framework. 2015: Royal College of Physicians & Surgeons of Canada.

22. Englander R, Carraccio C. From theory to practice: making entrustable professional activities come to life in the context of milestones. Acad Med, 2014. 89(10): p. 1321-3. https://doi.org/10.1097/ACM.0000000000002324.

23. Tekian A, Ten Cate O, Holmboe E, Roberts T, Norcini J. Entrustment decisions: implications for curriculum development and assessment. Med Teach, 2020. 42(6): p. 698-704. https://doi.org/10.1080/0142159x.2020.1733506.

24. Ten Cate O, Competency-based postgraduate medical education: past, present and future. GMS J Med Educ, 2017. 34(5): p. doc69. https://doi.org/10.3205/zma001146.

25. Chen HC, van den Broek WE, ten Cate O. The case for use of entrustable professional activities in undergraduate medical education. Acad Med, 2015. 90(4): p. 431-6. https://doi.org/10.1097/ACM.0000000000000586.

26. Veale P, Busche K, Touchie C, Codere S, McLaughlin K. Choosing our own pathway to competency-based undergraduate medical education. Acad Med, 2019. 94(1): p. 25-30. https://doi.org/10.1097/ACM.0000000000002410.
Appendix A. List of acronyms

AFMC: Association of Faculties of Medicine of Canada
CanMEDS: Canadian Medical Education Directives for Specialists (competency framework)
CCME: Canadian Conference on Medical Education
CFMS: Canadian Federation of Medical Students
EPAs: Entrustable Professional Activities
FMEC: Future of Medical Education in Canada
FMEQ: La Fédération Médicale Étudiante du Québec
FMRQ: Fédération des médecins résidents du Québec
LEH: Learner Education Handover (version of a learner handover created by the working group based on evidence)
LH: Learner handover or learner information handover (in a general sense)
MD: Medical Doctor as it pertains to the completion of undergraduate medical training
MSPR: Medical Student Performance Record
PGME: Postgraduate Medical Education
R1: First year resident
RCPS: Royal College of the Physicians and Surgeons of Canada
RDoC: Resident Doctors of Canada
UGME: Undergraduate Medical Education