

Canadian National Guidelines and Recommendations for Integrating Career Advising Into Medical School Curricula

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Abstract

Career planning, decision making about specialty choice, and preparation for residency matching are significant sources of stress for medical students. Attempts have been made to structure and formalize career advising by including it in accreditation standards. There is an expressed need for national guidelines on career advising for medical students. The Future of Medical Education in Canada Postgraduate (FMEC PG) Implementation Project was created to ensure Canadian medical trainees receive the best education possible. From this, a diverse sub-working group (SWG), representing different

Canadian regions, was formed to review career advising processes across the country. The SWG developed, through a modified formal consensus methodology, a strategy for medical student career advising that is adaptable to all schools in alignment with existing accreditation standards. The SWG outlined five guiding principles and five essential elements for Canadian universities offering an MD degree with recommendations on how to integrate the elements into each school's career advising system. The five essential elements are a structured approach to career advising, information about available

career options, elective guidance, preparation for residency applications, and social accountability. This Perspective endorses the view of the FMEC PG Implementation Project that national guidelines are important to ensure Canadian medical schools are consistently meeting accreditation standards by providing reliable and quality career advising to all medical students. The SWG's position, based on national and provincial feedback, is that these guidelines will stimulate discourse and action regarding the requirements and processes to carry out these recommendations nationwide and share across borders.

Career planning, deciding which specialty to pursue, and preparation for residency matching are significant sources of stress for medical students.^{1,2}

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Many students enter medical school without a clear appreciation of the types of practices or lifestyles associated with specific disciplines, and a number of medical students switch career choice at some point during their education, citing factors that include “medical lifestyle, encouragement, positive clinical exposure, economics or politics, competence or skills, and ease of residency entry.”³

Career advising initiatives offered by some national and international schools aim to help students navigate the difficult decision of choosing a specialty. Examples include mentoring, coaching, and counseling programs^{4–8}; career services provided by a nonmedical adviser⁹; computer-assisted career guidance programs¹⁰; Web-based resources¹¹; workshops¹²; peer-designed specialty career options electives¹³; speed advising sessions¹⁴; and career courses in the curriculum.^{15–17} Some medical schools are beginning to integrate a career advising syllabus into the curriculum, which may help to better prepare students for making career decisions.^{18,19}

Much of the work to date has demonstrated that, to effectively

integrate career advising into the medical curriculum, it is important that it be structured, formalized, evaluated, timely, standardized, linked to accurate resources, and based on the needs of medical students.^{9,12,20} One study focused on educating faculty advisors about how to provide career advising rather than directly aiming interventions toward the medical students.¹³ Other work has proposed an advising framework to assist faculty in the development of a mentoring relationship with medical students that includes a focus on career advising, decision making about specialties, and residency matching.²¹ Attempts have been made in both the United States and Canada to structure and formalize career advising by including it in accreditation standards, but, to date, no specific guidelines and recommendations have been generated.^{22,23}

All U.S. and Canadian medical schools were accredited through the Liaison Committee on Medical Education (LCME)²⁴ until 2015, when the Committee on Accreditation of Canadian Medical Schools (CACMS)²² became the sole accrediting body for Canadian schools. The LCME and CACMS use

an almost identical standard relating to medical student career advising,^{23,24} so the guidelines and recommendations in this paper are applicable in both settings. In the LCME document, the standard states, in part:

A medical school has an effective career advising system in place that integrates the efforts of faculty members, clerkship directors, and student affairs staff to assist medical students in choosing elective courses, evaluating career options, and applying to residency programs.²³

The CACMS standard differs only by adding, “A medical school has an effective and where appropriate confidential career advising system in place”²⁴ (added text in italics).

There is an expressed need for national guidelines on career advising for medical students in Canada, given the importance of accreditation standards and the relative paucity of literature on this topic. The Future of Medical Education in Canada Postgraduate (FMEC PG) Implementation Project was formed to ensure that, in the face of Canada’s ever-changing society and resulting health care needs, medical trainees in Canada receive the best education possible. Our physician workforce must continue to be socially accountable to Canadians, dedicated to their patients, and committed to their own role as lifelong learners.²⁵ To assist in reaching their goal, the FMEC PG Steering Committee formed a Transitions from Medical School to Residency sub-working group (SWG) to specifically gather information on how career advising is implemented in Canadian medical schools and to develop national guidelines.

The FMEC PG Implementation Project

Beginning in 2010, the FMEC PG Steering Committee, in consultation with hundreds of stakeholders, developed 10 recommendations²⁶:

1. Ensure the right mix, distribution, and number of physicians to meet societal needs.
2. Cultivate social accountability through experience in diverse learning and work environments.
3. Create positive and supportive learning and working environments.

4. Integrate competency-based curricula in postgraduate programs.
5. Ensure effective integration and transitions along the educational continuum.
6. Implement effective assessment systems.
7. Develop, support, and recognize clinical teachers.
8. Foster leadership development.
9. Establish effective collaborative governance in [postgraduate medical education].
10. Align accreditation standards.

Working groups were formed to implement each of the recommendations. The Career Planning and Residency Matching Process Working Group was charged with bringing to light Recommendation 5: Ensure effective integration and transitions along the educational continuum. To help accomplish this, the Steering Committee recognized the need to create an SWG whose purpose would be to examine the career advising processes across Canada and develop guidelines and recommendations. This Transitions from Medical School to Residency SWG, convened in 2014, understood the importance of constructing a framework that would generate consistency across the country while simultaneously granting flexibility when it came to organization and delivery of the recommendations at each school. The LCME and CACMS accreditation standards formed the basis for the creation of new national guidelines for career advising; these guidelines were directed by five guiding principles supported by five elements to be carried out by specific recommendations for integration, all detailed in the following sections. In this Perspective, we outline the development of these guidelines and recommendations and address the issue of standardizing, for the first time, career advising content across all Canadian medical schools to better assist medical students in making informed career decisions.

The Transitions from Medical School to Residency SWG

The SWG was composed of six faculty physicians and six career counselors who provided career advising from 9 of the 17 universities across Canada

that offer an MD degree, two medical residents from the Professional Association of Residents of Ontario, one medical student from the Canadian Federation of Medical Students, and one administrator from the Council of Ontario Universities.

A modified formal consensus methodology was used to develop national guidelines and recommendations.²⁷ This methodology provided a process for recognizing and synthesizing the perspectives of key stakeholders involved with career advising in medical education.²⁸ The consensus decision-making process included reviewing evidence-based research, defining criteria, seeking advice from national experts not connected to the SWG, and achieving unanimous agreement among SWG members. The modified formal consensus process allowed all SWG members to discuss issues in a face-to-face and electronic environment, thereby ensuring contributions by all members of the group.²⁹

Informed by the diverse representation of the 16-member SWG (representing 53% of Canadian medical schools) and a review of the literature and accreditation standards, the preliminary guidelines were centered on:

1. producing an effective system that integrates the efforts of faculty members, clerkship directors, and student affairs staff,
2. evaluating career options, choosing electives courses, and applying to residency programs, and
3. ensuring social accountability.

The SWG held a total of four, two-hour consensus development meetings and frequent e-mail discussions from November 2014 to April 2015. These meetings and iterative discussions included developing and prioritizing initial guidelines and recommendations. The elements were determined through review of evidence-based research and accreditation standards, as well as the knowledge and experience of the SWG members, and discussions continued until full consensus was reached. A draft of the proposed national guidelines was circulated in the summer of 2015 to the following key national stakeholders for feedback: undergraduate medical education committees (through the

medical schools' deans' offices), the Association of Faculties of Medicine of Canada Committee on Student Affairs, the FMEC PG Strategic Implementation Group, the Resident Doctors of Canada (RDoC), the Canadian Federation of Medical Students, Fédération des médecins résidents du Québec, and Fédération médicale étudiante du Québec (FMEQ). All stakeholders, except RDoc and FMEQ, suggested revisions. These suggestions were reviewed in the fall of 2015 by the SWG and incorporated into the final version of the document. Consensus for approval of the final document was reached by all members of the SWG.

Medical Student Career Advising: National Recommendations

The final document of the SWG was entitled "Medical Student Career Advising: National Recommendations" and outlined an informed perspective of the guiding principles and essential elements of medical student career advising.

We developed five guiding principles for all Canadian universities that offer an MD degree:

1. Planning a career in medicine, including making a specialty choice and applying to a residency matching service, is ultimately the medical student's responsibility.
2. The career advising system should support the medical student's own role in
 - a. Seeking out and interpreting meaningful experiences and relevant information.
 - b. Developing career management skills that will assist the student throughout medical school, residency, and during future career transitions.
3. Many individuals may play a role in equipping medical students to make informed career choices, including clerkship directors, career advisors, faculty members, staff, residents, and other medical students.
4. The Office of Student Affairs (or its equivalent), in collaboration with the Office of Undergraduate Medical Education, is responsible for providing an integrated system to support medical student career decision making.

5. The career advising system should be based on sound career development theory and experiential learning practices.

We also expanded upon the current accreditation standards and recommended five essential elements of medical student career advising (Table 1). Each essential element includes recommendations for implementation. The organization of the career advising system may vary between Canadian medical schools, but the essential elements should be considered and made available in a timely manner to all medical students.

Essential element 1: A structured approach to career advising

The first essential element states that it is important for each program to include a structured approach to career planning that integrates the efforts of faculty and staff. To realize this, all SWG members agreed that some elements of the career advising system should be embedded in the curriculum with an emphasis on career options, elective guidance, and applying to residency. We also recommended that students apply self-reflection to guide career choices as well as be given access to confidential, individualized career planning support. Finally, we saw a need to continually assess the effectiveness of the career advising system to ensure that it longitudinally meets the needs of students in a changing health care system.

Essential element 2: Information about available career options

The second essential element includes providing information about available career options to medical students. We agreed it was important to expose students to a variety of clinical disciplines, provide opportunities to access a range of resources throughout their training program, and offer information about alternative career options, when appropriate.

Essential element 3: Elective guidance

Guidance when choosing electives is the focus of the third essential element. Elective choice can be very important in informing career decisions and as part of residency match strategies. For a career advising system to be effective, each medical school should include

designated personnel who are responsible for providing elective guidance, as well as provide specific career advisors to act as sources of information for students. This element also incorporates the need for student access to support systems when choosing appropriate electives, developing career goals, or changing specialty choice or career plans unexpectedly.

Essential element 4: Preparation for residency application

The fourth essential element addresses the need to prepare medical students for applying to residency programs. The SWG suggested that educational programs should provide opportunities for students to be informed about all components of the application process, develop effective applications and presentation skills for the matching process, and have a good understanding of the Canadian Resident Matching Service match statistics, and competitiveness for the various disciplines.

Essential element 5: Social accountability

The final essential element centers on social accountability. The World Health Organization has defined the social accountability of medical schools as

the obligation to direct their education, research and service activities towards addressing the priority health concerns of the community, region, and/or nation they have a mandate to serve. The priority health concerns are to be identified jointly by governments, health care organizations, health professionals and the public.^{30(p3)}

The SWG agreed it was important for students to be informed of their medical school's social accountability mandate (articulated in its mission statement and fulfilled in its educational program^{24,31}) and be encouraged to research the specialty practice opportunities available to them. The SWG also recommended that medical schools employ strategies that motivate students to access current data pertaining to societal needs and human health projections, and be able to critically analyze these data to address the health needs of the Canadian population.

Discussion

The work of the SWG and this Perspective endorse the viewpoint of

Table 1

Recommendations for Implementing Essential Elements for Integrating Career Advising Into the Medical School Curriculum in All Canadian Schools

Essential element	Recommendations for implementation
Essential Element 1: A structured approach to career advising	
1.1	Schools should have a reporting mechanism that allows integration of career advising into the curriculum and the implementation of required career advising sessions.
1.2	Schools should have a calendar of events and an orientation at the beginning of the first year outlining the structure of a longitudinal career advising system that covers, at a minimum, the three main areas of (1) career options, (2) elective guidance, and (3) applying to residency.
1.3	Students should have opportunities to engage in self-assessment and reflection of their personal characteristics, values, interests, skills, future goals, and constraints to help guide their career choice (e.g., standardized instruments, formal and informal methods, AAMC CiM self-assessments, etc.).
1.4	Students should have access to confidential, individualized assistance with their career planning.
1.5	Schools should conduct a continual needs assessment for faculty and students and monitoring of the effectiveness of the career advising system (e.g., Canadian Graduation Questionnaire, Independent Student Analysis, residency match statistics, internal evaluations, etc.).
Essential Element 2: Information about available career options	
2.1	Students should be provided with the opportunity to explore different clinical disciplines in a variety of ways (e.g., early clinical exposure, interest groups, core rotations, electives, mentorship, community service, research or creative projects, etc.).
2.2	Students should be encouraged to utilize a range of resources early in their medical training (e.g., Canadian Specialty Profiles, CaRMS, CMA, AFMC, CFMS, FMEQ and other provincial Web sites, CiM, etc.).
2.3	Students should be directed to information on exploring alternative medical career options (e.g., nonclinical), when appropriate.
Essential Element 3: Elective guidance	
3.1	A core group of individual(s) should be identified as those primarily responsible for providing elective guidance.
3.1.1	Additional career advisors (faculty or staff) could be designated as sources for students to contact for information.
3.2	Students should have access to guidance in choosing electives appropriate to their educational and career goals.
3.2.1	Students should be provided with elective planning support, when possible, if their specialty choice or career plans change unexpectedly.
Essential Element 4: Preparation for residency application	
4.1	Students should be informed about the residency application process, including, but not limited to: timelines, MSPR or dean's letter, curriculum vitae, personal statements, letters of reference, and interviews.
4.2	Students should be informed about how to develop effective application packages and candidate presentation skills for the residency match, aiming towards an understanding of the fit between their competencies and the discipline/residency requirements.
4.3	Students should be assisted in critically appraising strategies and myths related to residency selection.
4.4	Students should be abreast of CaRMS match statistics and the competitiveness of different disciplines (e.g., number of residency spots available in the student's discipline(s) of choice, oversubscribed disciplines, etc.).
Essential Element 5: Social accountability (current information on the needs of the Canadian population)	
5.1	Students should be informed of their medical school's social accountability mandate.
5.2	Students should have access to current data on societal needs and human health resource projections (e.g., Future MD Canada Tool), recognizing the limitations of these projections.
5.3	Students should be encouraged throughout medical school to research the needs of the population and specialty practice opportunities in Canada (e.g., provincial Web sites).

Abbreviations: AAMC indicates Association of American Medical Colleges; CiM, Careers in Medicine; CaRMS, Canadian Resident Matching Service; CMA, Canadian Medical Association; AFMC, Association of Faculties of Medicine of Canada; CFMS, Canadian Federation of Medical Students; FMEQ, Fédération médicale étudiante du Québec; MSPR, Medical Student Performance Record.

the FMEC PG Implementation Project that national guidelines are important to ensure that Canadian medical schools are consistently providing quality career advising to their medical students. Although attempts have been made to ensure that career advising becomes a part of curricula across Canada by including it in accreditation standards,²² the content taught and methods of delivery are presently the responsibility

of each medical school. This has created a wide variety of interpretations and adoption techniques. Hence, the SWG developed national recommendations and essential elements to assist Canadian medical schools with implementing a consistent and organized strategy for career advising, while still providing them with the flexibility to deliver the content in a format best suited to specific student and faculty groups.

It is the SWG's perspective, based on feedback from national and provincial health sciences academic and organizational stakeholders in Canada, that these guidelines will stimulate discourse and action regarding the requirements and processes for implementing these career advising recommendations. We are confident that these recommendations will encourage a standardization of career advising content

across all Canadian medical schools to better assist medical students in making informed career decisions. We hope that this work will help further guide the exploration and sharing of relevant resources both across the country and across borders.

The limitations to enacting the national recommendations on medical student career advising include institutional variability in career advising student and faculty resources, interprovincial variability in terms of societal need, residency positions and job opportunities for physicians, and constraints in residency match and health–human resource projections.

Once implemented, we will evaluate the uptake of these recommendations, both in Canadian medical schools and potentially in other nations with similar medical education systems. Our next steps will be to continuously reevaluate the recommendations on the basis of accreditation standards; feedback from medical students, residents, and faculty; and the limitations as outlined above. Our goal is to work toward creating a national repository of resources and data to help guide medical students in their career decision-making process and to ensure their successful transition from medical school to residency.

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