Position Papers

The Canadian Medical Students' Perspective: Career Decision Making in Today's Medical School

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Career Choice and the process of career decision making is a major issue in medical education today. As the stresses of residency matching, training and matriculating are becoming more prevalent, students are finding they must choose career paths very early in their medical school careers. The problem of diminishing physician resource supply is also impacting on physician training and students are more soberly considering employment prospects and geographic preferences for practice in their decision making process. As well, a shift away from non-sustainable practice patterns to communities actively searching to attain the "critical mass" for a sustainable physician population has also had influence. Gone are the days of the "undifferentiated iatroblast" who graduates from medical school open to consider every field - medical education in Canada today is requiring that each student acquire a generalist knowledge base while also fulfilling a "pre-residency" training that prepares them to jump into their residency programme of choice with both feet! As the opportunities expand, the demands for decisions are made of students earlier in their medical education than ever before, and the CFMS is concerned that this may have an effect on the quality and diversity of medical education itself. By exploring the topic of Early Career Decision Making from a students' perspective, we hope to help shape a system that allows students to grow and learn in an encouraging environment, while continuing to produce quality physicians.

The CFMS is deeply concerned about the phenomenon of early career decision making, and is working towards change in the following ways:

- presenting a students' perspective on the counseling available in the curriculum to those currently in administration, with the aim to coordinate efforts and needs;
- facilitating elective planning though development of an online electives application service;
- encouraging and participating in the development of new career counseling curricula nationwide;
- helping to expose the reality of the current system with an awareness campaign for students that may provide assistance along their path, and;
- continuing to participate in the thoughtful discussions and activities underway with the CMA, ACMC, CaRMS, CMF and many other stakeholders nationwide.

Surveying the Landscape

The literature is replete with analyses of factors impacting on the Medical Students' career decision as administration and faculty have attempted to influence this choice in response to physician supply trends. However, the goal of graduating the best cross-section of physicians to meet social demand has recently been matched by the challenge of retaining physicians in the field in which they originally trained. In an 1991 Canadian study, it was found that two thirds of career changes occurred in 1st year residency. Thus the environmental support governing career choice is inadequate. As well, that this data is almost a decade old leaves question as to whether the changes in the system (namely the removal of the internship year) have had any impact. The most important factor to consider, however, is that evidence suggests that by forcing students to make very early career decisions, their career satisfaction ultimately will be compromised.

We have looked at many factors which lead to positive influence in career choice:

Role modeling

One of the factors observed as playing an important role in career decision making is the role modeling in which faculty and residents participate. Students identify traits in role models,

then emulate, reject or use them as reinforcement. In one study, students rank personality, clinical skills/competence and teaching ability as the most important characteristics in role models. As well, they "serve as counterexamples to negative stereotypes". Students are able to draw from their role model's repertoire of traits and characteristics and choose those that they wish to emulate. 4 Exposure to sufficient role models has been shown to have an effect on final career decisions3 and role models have been identified in both primary care and non-primary care fields4. Usually these role models identified are residents, underscoring the important contributions that post-MD trainees make to medical education3. Role models also provide a resource for advice and career counseling, and often students who have such influences in their lives will express the importance of this contribution to their career decision3. With this perspective, it seems to follow that role modeling, as both a passive and active (mentorship) process, is an important ingredient in guiding students through career choice.

Value of Early Clinical Exposure

Research on generalist career choice has shown that performing a required or elective rotation in a specific field before career choice impacts positively on final decision . The earlier that the rotation is initiated, (e.g. in first and second year), the more likely that students were to choose that as a career5. Other analyses show that those who have switched careers and reported the influential factors retrospectively recall that their decision to change paths usually occurred after gaining a better understanding of what different specialties involved4. This suggests that, if there had been adequate clinical exposure prior to the decision, a more satisfying choice may have been made initially. Early clinical exposure has many beneficial effects: It facilitates a mentorship role between student and faculty/residents in a non-artificial setting. It makes the basic science taught in the more didactic early years of medical school more relevant, forming a putative link between "bench and bedside". Some would even postulate that it increases competence in specific areas, by reinforcing the curriculum5. Most importantly, in the interest of early career decision making, it increases the volume of exposure to the clinical setting, theoretically broadening the base on which a student will make their decision.

Financial Considerations

Given the trend of recent tuition escalation, it is often suggested that debt may become an undue influence on specialty choice. Although this topic is too broad to be covered completely in this position paper and requires independent consideration, it is worth commenting on. Most research around debt as a motivator for career choice at a residency level is based on American data. Although conclusions have been ambiguous, numerous factors likely contribute to this issue, and it could be speculated that the presence of both public and private American institutions buried within these numbers is one factor that could largely influence this outcome. The exact statistics in the Canadian environment are yet to be established, but it is important to remain cognizant of the fact that debt may largely influence the decision to apply to medical school primarily, and thus the trend of tuition escalation that is rampant across Canada may be having a more profound effect on the medical student population than any curricular interventions into career choice will prove to correct. One American Source did find a significant influence and predicted an implication on the demographics of the future physician population. By conducting our own research, the CFMS will have the tools to evaluate this trend in the Canadian population in the years to come.

Respecting and Encouraging Personal Choice

Although the literature is full of analyses of factors that impact on career choice, one factor, personal choice, is difficult to measure and often ignored4. If viewed as an exercise in personal choice, career decision making becomes a very contextual, individual and complex endeavour. Thus, although a very subjective factor, this must be considered if offering students an approach to successful decision making.

More Canadian research

Although the above discussions echo the trends commonly observed throughout the medical environment, there has been limited research done specifically into the Canadian Medical System. We hope that this position paper will both highlight the importance of this issue to the well being of the entire system, but also inspire further research into the subject.

The Student Perspective

As a student based organization, the CFMS has the unique ability to canvass the national student perspective to attempt to arrive at consensus on many issues. Through an email survey administered to graduating medical students of the class of 1999, it was possible to collect a series of opinions, and extract trends that occurred at schools across the country. Ultimately we found that the resources available in the first years of medical school are important as formative influences on career paths. Ideally, maximum exposure to all disciplines within medicine very early in their education would allow students to make an informed decision when narrowing their fields. When asked about the most helpful services provided in the first two years in medical school, most of the responses reflected one of three basic areas:

- **Clinical Exposure**. For those schools who have early clinical exposure, students reported that these immersion experiences were beneficial to their final career choice. It allowed for a more realistic impression of what each field involved and worked toward breaking stereotypes, or misplaced impressions. For schools with no formal clinical exposure early on, many students admitted to "job-shadowing" or organizing "mini-electives" in order to circumvent the system. Students used their summer break times, or even reported missing lectures to dedicate time to clinical experience very early in their medical school careers when their curricula did not provide the opportunity to do so. For those who did not, there was a sense that additional clinical exposure in their first few years would have been helpful. These experiences seem to provide both an opportunity to observe a realistic picture of the field of interest, and gain students access to faculty or staff who could participate in frank discussions with them about career choice. "…Not enough exposure in Med-1 or Med-2 to really make a decision . It's not until you start doing clinical work and can play an active role in patient care that it starts to become clear where your interests are and what you do well. " - Dalhousie University
- **Mentors**. Mentioned by most of the respondents, mentors play a large role in career guidance in the first two years of medical school. These can include official faculty mentors, or upper year students. The theme of these comments tended to be a sense that this was an effective way to learn the system, and gain an understanding on what the next few years had to hold.
- **Resource sessions (specifically Career nights)**. These were generally held as very important by the respondents. The career nights provided a forum for open exchange of questions and information on a broad spectrum of ideas. With the knowledge that exposure has such a profound influence on career decision, career nights seem to be an ideal way to provide students with well characterized pictures of a wide variety of different fields BEFORE they become dedicated to any one specific field. "I didn't even know all the options until we had a career day" - University of Alberta. As noted above, clinical exposure is paramount to thoughtful career choice. When questioned about electives, many students note the progression from electives chosen based on interest or knowledge gaps to those chosen specifically to help "polish" their applications. The transition between these two mindsets appears to be the largest point of contention. For those who realized early what they were interested in, the current amount of elective time was adequate. It follows that, for the subset of students who remained undecided by clerkship, the pressure to decide and present an adequate application was great. Some felt that the clerkship schedules were limiting: "If you are undecided, the tracks in clerkship CAN be a problem. For example, I had little surgical exposure prior to clerkship and it never occurred to me that I would want to do it. My surgery rotation was not until 4th year when I realized that I am a

surgeon at heart, unfortunately too late for the match." - Dalhousie University. Other students felt the pressure to remain competitive in CaRMS drove their elective choice, and perhaps robbed them of opportunities to experience other fields: "I also wish I had had more time to just do electives to learn more 'medicine' instead of just getting the right contacts" - University of Toronto. This speaks to the need to ensure that diverse exposure to a wide variety of medical fields early in medical school will lead to a more informed final decision. As well, it may prevent the clerkship electives from becoming "pre-residency training" instead of a natural extension of a general medical school education. The expectations of residency programmes, in terms of dedicated elective time, research involvement and travelling to different programmes may be adding to this problem, as students are feeling the pressure to remain competitive. This often means that electives in one field are done in exclusion of all others, narrowing the educational experiences. If students are forced to narrow their fields too early in their medical education, the fear is that the choice may become arbitrary: "…I just went with the specialty in which I found I didn't look at the clock, and went with that. Time will tell if I made the right decision" - University of Calgary.

When asked what guided elective choice, students responded most often in four ways:

knowing people in the field
prior work in the field, or prior interest
desire to work with an individual clinician
exposure to cases during Problem Based Learning [PBL] work.

Although the first three choices vary and are difficult to control in the medical school curriculum beyond increased exposure to mentors, the final point provides a very interesting opportunity. If a PBL case is well designed, it may act as a surrogate clinical experience. Although nothing can replace the actual experience, exposing students to PBL cases within the curricula may give them an idea of what clinical scenarios are common in different specialties. This speaks to the importance of the trend to include PBL in most curricula across Canada. When incorporated, it must be ensured that the exposure is efficient and effective.

Other notable concerns that were mentioned were the financial constraints that prevented some students from doing electives at places of interest. This will be a growing phenomenon in a system where tuition increases are becoming a grave reality. As well, the pressure to polish a CV, in place of focusing on completing a well rounded medical education was echoed in many comments:

"…to NOT believe everyone when they tell you "you have time". You have to decide very early and start working towards that goal. Especially in the more competitive specialties, if you haven't made an appearance with all the big shots you can forget about getting a spot - no matter how good you are." - University of Toronto

The final data centered on advice from seasoned medical students to give to those currently going through the ranks, and to help administration gear their services accordingly. Many of the comments echoed the points above, emphasizing the need for more official elective time very early on in the school curriculum, and more scheduled sessions (i.e. Career nights) in the first and second years. These students acknowledged that different aspects of career planning are important as they progressed along the path, and the ability to access the needed information should be present equally in first year, and throughout until the end of clerkship.

"I wish someone would have told me this stuff earlier." - University of Toronto

"I would say that I received little to zero guidance. [My student advisor] was great but I think there should be a more formal process. To be quite honest, I did not start to really worry about it until it was very late!" - McMaster University

In conclusion, the above comments, although anecdotal, are reflective of a system that is not functioning to provide maximum support to medical students as they are determining their

final career path. With some adjustment, however, the suggestions provided could be implemented at each school and provide a much more encouraging environment in which to decide. As well, with adequate exposure, it may be seen that medical students opt for a greater variety of career paths, and the specialties that are currently struggling to attract interested trainees would have a greater opportunity to compete.

Building A New Curriculum

After thoughtful consideration of both the Canadian medical Student perspective and some studied opinions, the CFMS proposes the development of revisions to current medical school curriculum across the country. The CFMS acknowledges the leadership role that CaRMS and ACMC have taken in searching for solutions. It is hoped that these concrete solutions may contribute to this process, and assist the stakeholders involved in tailoring a system that truly reflects students' needs.

We envision a career guidance curriculum that is responsive to students needs at all points along the path. We found that the present situation is very supportive to students as they are very close to their final decision, but that the earlier years are not as well resourced. It is our hope that a programme would be tailored to a yearly progression: In the first years, exposure to the many different disciplines through career nights, and an approach to self evaluation and appraisal of personal decision making is needed. Acquainting students with the concept of decision making and prioritization is the goal. As well, incorporating the drive for early clinical exposure would suggest that curriculum planners should strive to leave some time for clinical electives. Role models should be introduced, both through clinical electives, and through a more active mentorship programme that acquaints new students with faculty, residents or upper year students. These electives should also be facilitated with more readily available funding, and a process of location and application that is very easily accessible. The programme should progress to later years, where more formal career counseling can be offered, as well as the support around the CaRMS process that is successfully done at all schools in Canada. Most importantly, however, the value of clinical teaching and mentorship should be recognized at an administration level, so the barriers that currently prevent devotion of adequate time for faculty and residents to fill these roles be removed, and a healthy educational environment be promoted.

With the above outline in mind, the CFMS recommends:

- That a series of career nights or brown bag lunch sessions are sponsored at each medical school across Canada within the first semester of medical school that showcases the wide variety of generalist and specialist training available. These Career Nights should be made available to students at all levels of training, so that they are able to access and utilize information to suit the many different stages of discovery of the medical system and, in later years, career choice. As well, the emphasis of these events should be placed on disseminating information about the vast opportunity available within the field of medicine. Both faculty and residents should be encouraged to contribute as their experiences and advice might be different, but equally variable.
- That a series of career guidance curricular tools are developed to assist students in analyzing and critically appraising their own personal decision making processes. Standardized scales that identify personality types or encourage self discovery/self-awareness may be incorporated into this repertoire. The Glaxo pathway, traditionally used to assist students through the later stages of this process could also be incorporated. This should be offered with faculty support available at times that is accessible to students, and allows for interpretation of results.
- That a dedicated position be created and accessible for students at all points along the path, and that this person take responsibility for ensuring that all different aspects of the career guidance curriculum be provided.
- Increase clinical exposure at all medical school by building a wide variety of patient/doctor experiences into core curriculum very early in the programmes, ideally first year. This will help cultivate a diverse knowledge of generalist and specialty fields, and facilitate career choice.

- Implement a guidance programme for students that helps them evaluate their experiences and critically appraise them beyond purely educational outcomes: priorities, "degree of fit", satisfaction. See appendix A for the preliminary measurement tool being piloted at one school. Students should be encouraged to archive such evaluations for use in future career decisions.
- Every school should be encouraged to start an electives database if one is not currently in place, that includes evaluations based on students' perspectives of the elective experience, and preceptors who are welcoming of student participation. This electives database should be cumulative and accessible to all students. Eventually it is hoped that these databases can be placed online for ease of access for every medical student in Canada.
- Every school join the CFMS in development of an Online electives application process that will facilitate electives set up across the country. This should help standardize the application process. As well, the electives fees should be standardized across the country, and remain at an economically feasible level so as to ensure that medical students can afford to take electives in any field, at any venue.
- That government funding meant to influence career choice be directed into funding elective experiences in the broad spectrum of clinical scenarios available across the country: (i.e. Rural and urban, generalist and specialty practice, clinical and research based). This is seen by students as the most effective and non-coercive way to encourage practice in northern, remote and under-serviced communities, as well as increasing the diversity of our medical school graduates.
- Encourage formal mentorship programmes and role-modeling at all schools involving both faculty and residents. Foster an environment where these more senior members of the medical team appreciate and recognize that every clinical education encounter has an impact on eventual career decision. The spectrum of involvement for role models is quite broad, from acting as a preceptor in a clinical learning experience, to becoming a mentor or advisor who is present to guide the student throughout the course of medical school. Input from as many and as wide a variety of clinicians and staff is encouraged.
- Create incentives or remove disincentives for faculty and resident involvement in medical education to encourage more role modeling. Currently, the stresses of high volume clinical medicine, coupled with the burden of economic pressure in the medical environment has lead to a trend of de-prioritization of medical education as it is not a financially sustainable activity. It must be remembered that students of today are physicians of tomorrow, and the only way to ensure a strong and healthy physician workforce in the future is to give each student a firm educational foothold now.

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