Length of Family Medicine Training and Readiness for Independent Practice: Residents' Perspectives at One Canadian University

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Citation info: UBCMJ. 2015: 6.2 (15-19)
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abstract

Objectives: There is ongoing debate in North America around the appropriate length of training for family physicians. This pilot study presents a qualitative exploration of the viewpoints of family medicine residents at one Canadian university. Residents were asked to reflect on their level of readiness for practice following the standard two years of training.

Methods: Twenty–three family medicine residents completed an online qualitative survey where they ranked their self–perceived level of preparedness around the key CanMEDs–FM roles and competencies. Six residents participated in a follow–up focus group interview. A qualitative analysis of written responses to the survey and focus group data provided insight into the residents' viewpoints.

Results: Among the residents surveyed, there was a sense that two years of training was not enough to adequately prepare for independent practice. Residents reported feeling well prepared around competencies related to communication skills and psychosocial issues; however, they indicated that greater exposure to a broader spectrum of clinical domains and issues around practice management would better prepare them as generalists.

Conclusions: Lengthening training in family medicine continues to receive mixed reviews. Canadian family medicine residents need to master a wider breadth of knowledge within a shorter training period compared to their peers in other specialties. The new competency–based curriculum (Triple C) in family medicine may influence the residents' sense of readiness for practice.

introduction

Length of residency training in family medicine varies from two to five years around the world, with two years as the present standard in Canada.[1] Issues around the duration of residency training is an important focus of the medical community to determine the most effective way to prepare family physicians.[2] The current debate around the appropriate length of training for family physicians goes back several decades.[3-9] The resurgence of interest in this debate is based on several factors, many of which are comprehensively outlined by the Chairs of family medicine departments across Canada in a recent publication.[10] The Chairs all agreed that residency training is "very short"[10] in relation to all other specialties. However, they recognize that it is becoming increasingly difficult to become a competent family physician with two years of training given the increasing complexity of the health care system and the prevalence of multimorbidity in the family practice patient population.[11]

The current two-year family practice residency program enables learners to rotate through the various specialties of surgery, obstetrics, pediatrics, internal medicine, and emergency medicine. Approximately half of the residency is spent in community-based family practice. The introduction of the new Triple C Curriculum—a competency-based curriculum centered in family medicine and framed on continuous, comprehensive care, and education[12]—has rekindled the debate on length of training. This new postgraduate family practice curriculum aims to shift more specialty rotations to the community to ensure that the curriculum is truly family practice-focused. However, the impact of such a shift on the length of training overall is unknown. The recent report on length of training by the Working Group on Postgraduate Curriculum Review indicates that the current two-year standard in family medicine is not grounded in "objective evidence,"[1] a finding also confirmed by a newly-released systematic review on length of postgraduate medical training in Canada for all specialties in medicine.[13] Though third-year training is a hotly debated proposition,[15-23] Green and colleagues found a paucity of research to inform discussions when they studied the perspectives of family medicine residents and program directors on third-year family medicine programs.[14]

Literature describing residents' perceptions on preparedness for practice is limited and generally looks at preparation in terms of the four principles of family medicine[24] or the six areas of competence by the American Accreditation Council for Graduate Medical Education (ACGME).[25] There is little knowledge about the perspectives of family medicine residents on their self-

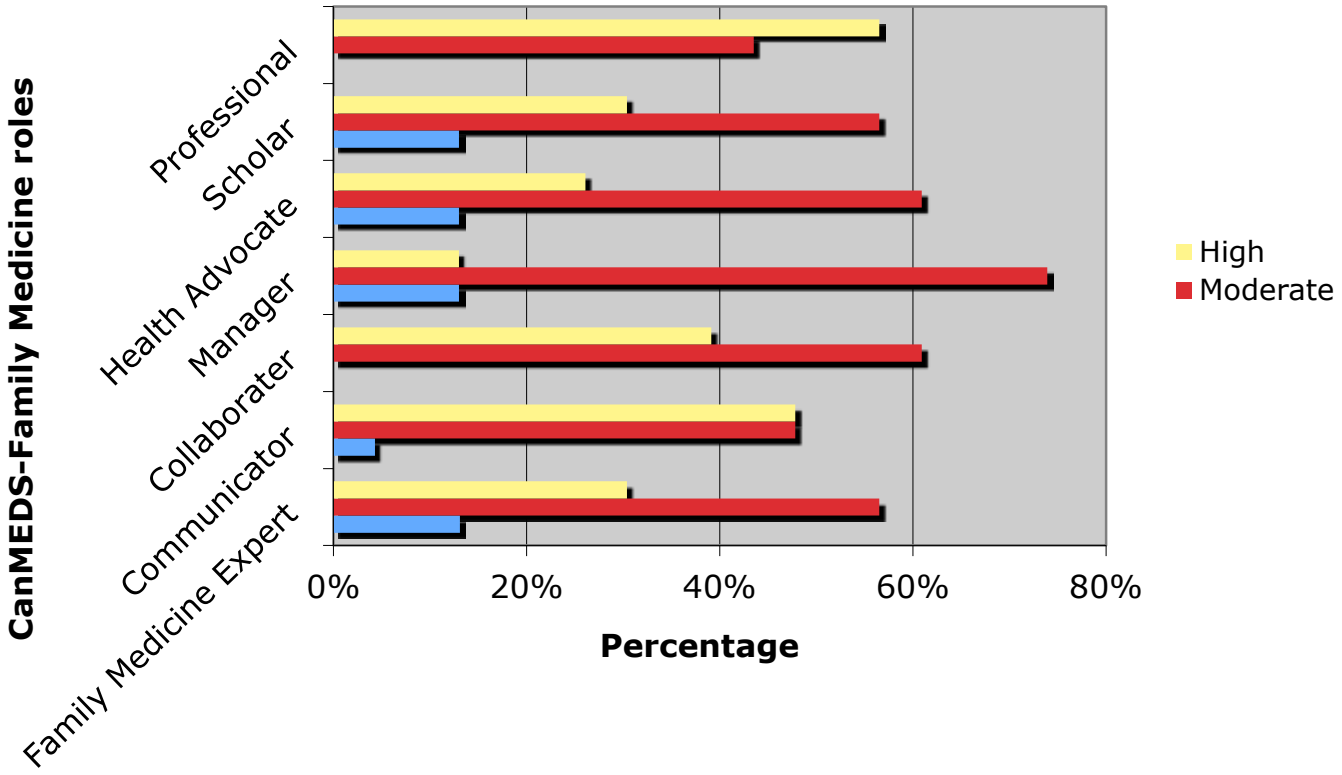

Figure 1: Family medicine residents' self-perceived level of competence in the CanMEDS-Family Medicine roles.

perceived level of preparedness around the framework of competencies outlined in the Canadian Medical Education Directions for Specialists for Family Medicine (CanMEDs-FM) in relation to their length of training and sense of readiness to start independent practice following graduation.[26]

This pilot qualitative study explores the perspectives of a group of family medicine residents from the University of British Columbia on their level of preparedness around the competencies outlined in the CanMEDs-FM framework and their sense of readiness for independent practice in relation to these competencies following two years of residency training.

methods

Given the scarcity of data around resident perspectives on length of training and level of preparedness, a qualitative research design was most appropriate for this study.[27,28] Ethics approval was obtained through the Behavioural Research Ethics Board at the University of British Columbia. One hundred and twelve second-year family medicine residents were invited to participate in the study. Twenty-three residents agreed to participate. Data collection took place just prior to completion of residency training.

The participants were asked to complete an online survey. The first part of the survey asked residents to rank their self-perceived level of preparedness around the key CanMEDs-FM roles and related competencies (Family Medicine Expert, Communicator, Collaborator, Manager, Health Advocate, Scholar, Professional) using a scale of low, moderate, or high. The second part asked them to explain why they perceived their preparation in certain areas to be low or moderate and what might have influenced this. The survey also asked residents to comment on how residency training could enhance their knowledge and skills, as well as their views on the length of residency training in relation to achieving the required competencies. Six of the 23 residents agreed to participate in a follow-up focus group interview. The aim of the follow-up focus group was to explore in detail the findings of the web-based survey. The focus group lasted 90 minutes. Participants were asked to discuss three issues: their level of preparedness for practice in relation to the CanMEDs-FM competencies, their thoughts regarding the variations in preparedness for the different CanMEDs-FM roles, and their views on the length of residency training. A family medicine resident (co-author KJ) conducted the focus group interview. The focus group was audiotaped and transcribed verbatim for analysis. The quantitative data was presented as percentages of participants with low, moderate, and high levels of competence in each of the CanMEDs-FM roles. Qualitative analysis of written responses to the online survey coupled with analysis of the focus group data provided insight into the residents' perspectives on their level of preparedness in relation to the CanMEDs-FM competencies and the adequacy of a two-year training program for achieving the capability for independent practice following graduation.

Informed by Braun and Clarke's work on thematic analysis[29]—organizing, interpreting, and consolidating qualitative data in relation to the research objective—we examined the written responses to

the web-based data together with the focus group data. The data were analyzed to distinguish a pattern of recurrently-expressed ideas. The emergent patterns were examined further through independent readings of the data, as well as using an iterative process to establish significant similarities and differences. The patterns were then organized into categories of meaning, which were then compared and collapsed into major themes.

results

The findings are organized thematically. Representative quotes and phrases for each theme are included. Results of the online survey are presented in Figure 1. All survey participants ranked their level of preparedness in both the Professional and Collaborator roles as moderate or high. The Communicator role received a low score from 4.3% of respondents, while the Scholar, Health Advocate, Family Medicine Expert, and Manager roles were ranked as low by nearly 15% of the participants. When asked about length of training, the participants expressed mixed feelings: some believed two years of training was adequate and additional time would not likely enhance their preparedness for practice in the context of the CanMEDs-FM roles. Yet, all residents expressed a desire for more exposure to a broader spectrum of clinical domains.

Written content from the web-based survey combined with results from the focus group interview yielded five themes: themes 1 and 2 highlight the residents' viewpoints around those aspects of family medicine training they felt well prepared for, i.e. the Collaborator and the Professional roles, while themes 3-5 highlight concerns regarding the remaining CanMEDs-FM roles in relation to length of training.

Theme 1: Communicator and Collaborator Roles: The Patient-Physician Relationship

All residents felt very well prepared in establishing a strong patient-physician relationship through effective communication skills. They felt that this competency was well-emphasized in their training:

"We can take a patient who comes in with a million things and make them feel heard." [*Survey response*]

Some residents observed a striking contrast between their specialty peers in terms of comfort with and utilization of high-level communication skills. They found this surprising, as all disciplines should be able to communicate effectively. Residents also indicated that the opportunity to work with socioeconomically-marginalized populations was a key factor in helping them realize the value of effective communication. The residents all agreed that the family medicine residency program successfully developed their ability to establish and maintain effective communication and collaboration with patients, which helped them better understand and cultivate patient-centered care.

Theme 2: Professional and Health Advocate Roles: Practicing Comprehensive, Holistic Care

There was general agreement that a significant strength of the family medicine residency was training that enabled residents to incorporate psychosocial aspects of the patients' illness into the delivery of primary care. The residents agreed that the concept of "comprehensive medicine" received considerable focus in the curriculum; this included a strong emphasis on treating or advocating for the care of the "whole person and not simply the disease." Residents also indicated that they were well prepared to gather and analyze information related to the patient's illness experience beyond simply managing the clinical symptoms.

"…We did focus on 'putting the need of a patient first' [and] figuring out the population [and] putting a patient in the centre [and] bringing their families in." [*Focus group response*]

Residents stated that an additional focus on professionalism and the humanistic philosophy of care set the practice of family medicine distinctly apart from other specialties.

Theme 3: Medical Expert and Manager Roles: Would More Training Impact Sense of Competence?

The residents expressed mixed feelings regarding the standard two-year length of training and their perceived competence

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in the Medical Expert and Manager roles. Many participants said that a two-year residency program was adequate with the view that most of their clinical learning would happen while in practice:

"I think that a two-year residency is sufficient for residents that will be [*sic*] very self-directed and work hard to achieve competency in that time. I think that at some point the best way to learn is to be out doing it on your own, as long as you have the resources to continue learning and to know your limitations." [*Survey response*]

However, some residents said that an extra year of residency could help them gain more confidence transitioning into independent practice. They expressed a desire for greater exposure to different domains of clinical care, along with procedural skills in common emergency presentations.

"If we could have a month of Ophthalmology, a month of Dermatology, a month of ENT, a month of Sports Medicine so I don't feel so MSK [musculoskeletally] deprived, it would be so good. I would be so much happier finishing residency." [*Focus group response*]

Although most residents indicated moderate preparation for the role of Manager in the survey, there was a common sentiment in the qualitative responses and the focus group that there was insufficient exposure to the more practical side of running a practice.

When teaching guidelines throughout all facets of residency, they felt that a structured approach—from didactic sessions to direct application of knowledge in clinical settings with faculty supervision—would increase their sense of confidence around competencies related to the clinical application of the Scholar role.

"It would be nice to know how much things cost and how money is designated to what. We don't know what's behind that at all, like how much a lab test costs. Just managing resources—what things costs, and why this is the way it is." [*Survey response*]

"[Not knowing] almost deters us from wanting to open our own practice." [*Focus group response*]

The residents desired basic knowledge on how to start a new practice, financial planning, legal issues, remuneration options, and the general day-to-day workings of a medical office.

Theme 4: The Scholar Role: The Family Physician as Teacher and Scholar

The residents expressed a desire for a more structured learning environment and focused training on "evidence-informed guidelines." When teaching guidelines throughout all facets of residency, they felt that a structured approach—from didactic sessions to direct application of knowledge in clinical settings with faculty supervision—would increase their sense of confidence around competencies related to the clinical application of the Scholar role.

Residents also suggested that "academic half days [be] tailored to the family medicine certification examination." To this effect, they wanted a more directed educational experience with specific instruction around what to study and how to prepare for the certification examination and the Short Answer Management Problems (SAMPS). Similarly, the residents wanted more meaningful involvement from their preceptors. Many felt that family medicine preceptors had the capacity to contribute more actively to the residency experience and should be better enabled to do so.

discussion

Though the findings reported in this pilot study are based on a small sample size from one Canadian university, some insight can be drawn from the perspectives of final year family medicine residents on their preparedness for practice in the context of the CanMEDs-FM roles and related competencies. The residents we studied all agreed that their training prepared them to be effective communicators and to attend to psychosocial issues in medicine. Their perspectives reflect the importance of the patient-physician relationship in primary care, which is a focus of family medicine.[30] However, many felt unprepared to handle various aspects of clinical medicine. In particular, they felt unprepared to effectively manage certain components of an independent practice, such as finances and human resources. Lack of confidence in office management and the judicious use of health care resources were regarded as key barriers to readiness for independent practice following graduation. The residents wanted a more structured teaching environment, particularly in evidence-based medicine and guidelines, as well as greater involvement from their clinical preceptors in learning sessions. The residency curriculum currently uses weekly academic sessions to teach some CanMEDs-FM core competencies. The program could further develop this academic curriculum to highlight the Manager and Scholar roles. In addition, the program could ensure that these sessions are led by family physician preceptors to increase their engagement in teaching and better model the different CanMEDs-FM roles for residents. To feel better prepared in their role as generalists, residents asked for greater exposure to a range of specific clinical domains within a primary care context, such as dermatology, rheumatology, sports medicine, gynecology, and ophthalmology. The shift to the Triple C curriculum with its emphasis on community-based learning may address this aspect of residency training to some degree. Regardless of training exposure, it is likely that practitioners will gain competence and confidence in managing the breadth of family practice through independent application during the first five years of practice. As such, there is an initiative nationally to better support residents upon graduation and through their first five years of practice. Future directions of residency training may therefore focus not on ensuring that every clinical domain is embedded in curriculum, but on ways to engage residents in life-long learning.

Finally, based strictly on analysis of pass rate on family practice certification exams, there is no indication that gaps in the medical knowledge of graduating residents exist;[31] in other words, from the perspective of medical knowledge, graduating family medicine residents appear to be well prepared for independent practice. However, some studies suggest that residents who perceive a gap or feel unprepared often limit their scope of practice.[32] The importance of our findings is based on two assumptions: 1) that perceived preparedness relates to actual preparedness; and 2) that the certification exam in family medicine measures actual preparedness for independent practice.

Limitations

There are several limitations in this pilot study. The findings here are not intended to be generalizable, but to inform further work. The response rate was small; therefore, the results do not necessarily reflect the overall experience of all family medicine residents at the University of British Columbia. The convenience or volunteer sample of 23 out of a possible 112 residents increases the possibility of

a selection bias. In addition, the resident-led design of the study may introduce a component of social desirability bias, while the focus group data can be influenced by group dynamics and intergroup bias. We also acknowledge that the three-point Likert scale (low, moderate, high) may introduce a central tendency bias. Finally, literature regarding physician inaccuracy in self-assessment should be taken into account when interpreting our findings.[33] Direct assessment of residents' abilities in the CanMEDs-FM roles would have been optimal; however, this was not possible due to time constraints and a lack of required resources.

Conclusions

This pilot study explored the self-perceived level of preparedness among family medicine residents in the context of the CanMEDs-FM competencies, which has not yet been presented in the Canadian literature. We learned that residents felt prepared for the Collaborator, Communicator, and Professional roles; however, they described only moderate preparedness for the Scholar, Health Advocate, Family Medicine Expert, and Manager roles. Family medicine residents are required to master a wider breadth of knowledge within a shorter training period compared to their peers in other specialty residencies. Framed in the CanMEDs-FM roles, the new Triple C competency-based curriculum has been introduced to ensure that residents are prepared to practice in the complex health care system. It remains to be seen whether Triple C will influence residents' self-perceived sense of preparedness and competence for independent practice, particularly around those areas that have been identified in this study as needing attention.

Though the findings of this pilot study are limited, these are interesting initial results that require further exploration across different family medicine programs in Canada and elsewhere. The authors hope that these findings will stimulate and guide continued evaluation of the impact of the Triple C competency-based curriculum on family practice residency education.

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Lack of confidence in office management and the judicious use of health care resources were regarded as key barriers to readiness for independent practice following graduation.

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