Incorporating leadership development into family medicine residency: a qualitative study of program directors in Canada

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Abstract

Background: To understand Canadian family medicine programs directors' perspective on the incorporation of leadership skills development in curriculum.

Methods: Semi-structured interviews based on CanMEDS Leader role competencies were conducted and audio recorded. Recordings were transcribed and analyzed by two independent researchers using an interpretive approach to thematic analysis.

Results: Eight interviews were conducted. All participants indicated that leadership development in family medicine residency education was important. There were varying levels of leadership development at all institutions. Barriers to incorporating leadership development included curricular time, suitable teaching skills of faculty and cost. Important factors to consider in developing curricula included approaching the subject collaboratively and offering a variety of levels of engagement. Of the 22 Key Concepts in the CanMEDS Leader Role, three were not referenced by participants: complexity of systems, effective committee participation, and information technology for healthcare. Participants offered three concepts that were not included in the CanMEDS list: communication, teamwork and research skills.

Conclusions: There were varying levels of incorporation of leadership skills development into family medicine training. A clearer understanding of each of the leader competencies is needed by educational leaders in order to identify and prioritize the skills to include in family medicine residency programs. This study contributes to the knowledge of what leadership skills should be incorporated into family medicine programs.

Keywords: Leadership development
Introduction

As healthcare systems evolve, there is an increased need for effective leadership (Bhatia, K., Morris, C.A., Wright, S.C., Takayesu, J.K., Sharma, R. & Katz, J., 2015). In Canada and internationally, there is growing interest in leadership development for physicians, with many academics recognizing that this development should begin during medical training (FMEC, 2016; Matlow, A., Chan, M.K., & Bohnen, J.D, 2016). To date, during residency, physician training has been focused on developing competent clinicians with formal leadership skills rarely being taught. This is an important omission to address as the integration of leadership skills in residency training has the potential to improve the quality of healthcare delivery (Bhatia et al, 2015).

Influential stakeholders have endorsed leadership skill development as an important addition for medical training. The Future of Medical Education in Canada Postgraduate (FMEC PG) Project (2012) formally recommended that training programs foster the development of leadership skills in future physicians. In addition, competency frameworks are being updated to include leadership concepts. In 2015 the Royal College of Physicians and Surgeons of Canada (RCPSC) updated their CanMEDS competency framework, changing the role of ‘Manager’ to ‘Leader,’ to better reflect a physician’s scope of practice (Dath, D., Chan, M-K, & Anderson, G., 2015; Frank, JR., Snell, L. & Shervino, J., 2015). In family medicine, there is a growing need for effective leadership. Increasingly, primary and community care sectors are being called upon to work as part of an integrated healthcare system to improve access, quality, patient outcomes, and value for healthcare dollars (Lavis, J.N., Moat, K.A., Tapp, C. & Young, C., 2015). Providing leadership skills development for family physicians is important as historically, support has not been provided to develop strong management and leadership in this sector. The College of Family Physicians of Canada (CFPC) has just updated the CanMEDS-Family Medicine framework to reflect this (Shaw, E., Onandasan, I. & Fowler, N., 2017).

In response to these changing needs and direction postgraduate residency programs are seeking ways to address leadership development in their curriculum (Frich, J.C., Brewter, A.L., Cherlin, E.J. & Bradley, E. H. (2014). At the 2014 International Conference on Residency Education (ICRE) eight countries came together to form a working group to explore and develop leadership curriculum that could be implemented internationally (Matlow et al, 2016). The Toronto International Summit on Leadership Education for Physicians (TISLEP) was designed to address the creation of a postgraduate curriculum that, according to the purpose statement could ‘collaborate to build the physician leaders of tomorrow’ (Matlow et al, 2016).

The purpose of this research was to identify what type of leadership training is currently being offered in Canadian family medicine programs, the factors to consider in the design of a leadership curriculum for postgraduate medical trainees, and what skills and knowledge would be required to achieve the competencies identified in the CanMEDS Leader role (2015) (Dath, et al, 2015). We invited family medicine program directors from Canadian universities to share their thoughts on the importance of leadership skills training in residency, and how their program supported leadership skills development. They were also asked to comment on types of skills and leadership knowledge needed by family physicians to fulfill the four defined competencies of the RCPSC Leader Role: 1. Contributes to the improvement of healthcare delivery in teams, organizations and systems, 2. Engages in the stewardship of healthcare resources, 3. Demonstrates leadership in professional practice, and 4. Manages career planning, finances, and health human resources in a practice. Results reported here will help to inform future leadership curriculum for family medicine programs in Canada.
Methods

Methodology

Qualitative methods were used which fit within a constructivist paradigm. This approach recognizes that the attributed value of leadership for residents and the subjective interpretation of leadership skills would inform findings. Ethics approval was obtained from the Health Sciences Research Ethics Board of Queen's University-HSREB reference #6018454.

Study population

A purposive method was used to identify participants. A letter of invitation was mailed to 13 family medicine program directors from Canadian family medicine programs. Interested participants replied to the principle investigator and a telephone interview was scheduled. A follow up email was sent to those who had not responded after 2 weeks. Participants provided oral consent to participate in a 30 to 45-minute semi-structured interview.

Data collection

Data collection took place between September and December 2016. Two research team members (C.G. and E.J.) conducted the semi-structured interviews. Questions were developed by the team of investigators to explore whether Canadian family medicine post-graduate programs were incorporating leadership skills development into their programs and to identify what skills were most relevant in relation to the CanMEDS Leader role competencies. An interview tool was used as a guide (Table 1). A comprehensive literature review of international residency leadership programs informed the development of questions. Each interview was approximately 30 to 45 minutes in length. Interviews were audio recorded, transcribed verbatim, and reviewed for accuracy.

Data analysis

A data-driven approach to analysis included a two-step process and multiple coding. Investigator triangulation was the first part of the analysis with interview transcripts first coded independently by two of the investigators (C.G. and E.J.), analyzing text segments in relation to the questions. Second, using thematic analysis and an interpretive approach, responses were grouped by theme with identified skills mapped to key concepts from the CanMEDS Leader framework to determine alignment. Data were entered into Microsoft Excel for storage and comparison. Quotes illustrative of key themes were identified. All investigators examined themes and exemplary quotes. Discrepancies related to coding were discussed and resolved.

Findings

Of the thirteen programs, eight participants volunteered and were primarily female from 5 provinces in Canada. Of the eight programs included in this study there are 2,363 family medicine residents. Various themes emerged from the transcripts and provided a clear picture of these Canadian family medicine program director’s perceptions on the incorporation of leadership skills development and skills necessary for clinical practice.

Importance of leadership development and current opportunities

All participants indicated that including leadership development in the curriculum was important although the level
of importance attributed to this inclusion ranged from ‘somewhat important’ to ‘extremely important’. Qualifiers were added by some related to applicability. Most directors thought that leadership development in residency was important for all, however, one thought that it was important only for those with an identified interest or that it could be gained over their years of practice.

"My leadership training has come over my career and I think that's perfectly well positioned”.

Two program directors identified that a formal curriculum on leadership had been established in their program. One of these stated that their curriculum developed in response to the identification of a gap in leadership skills training in the program by both residents and faculty five years earlier and in advance of the change to CanMEDS. All represented programs offered some level of leadership development opportunity to residents where possible. Examples of leadership opportunities included supporting residents to attend the annual leadership course at the International Conference on Resident Education or participate in existing committees. One participant remarked that residents gained exposure to leadership skills from their role models (preceptors) rather than in any formal manner. Most noted that leadership skills were embedded in various projects (i.e. quality improvement projects) but did not identify whether enhanced leadership skills via this route was a primary objective or whether the associated knowledge gained through exposure or experiences was considered supplementary to the activity goals (such as a better understanding of the science of quality improvement). Many different responses were provided when asked whether leadership skills training was currently offered.

"we actually teach team building or work on team building and leadership skills [during a non-mandatory wilderness medicine retreat] where everybody has to run a team of rescuers"

"residents sit on committees, get involved through the College of Family Physicians or the local union for residents"

"the program we run is probably the most formalized method of incorporating leadership skills training for our university. We have leadership skills training integrated in PGY1 and PGY2 with a leadership course in PGY3"

Universities with several distributed sites identified that leadership training varied among sites and was dependent upon the level of expertise (and interest) of site directors. None indicated that there was an effort to formalize this across all sites for consistent opportunity.

Roadblocks to incorporating leadership development

Regardless of its importance, several challenges related to the incorporation of leadership skills training into curriculum were noted. The challenge posed by time in the curriculum was mentioned by several. Some questioned where the addition of yet another type of training would fit into an already packed two years while others suggested that it’s unclear what the optimal learning period would be for residents to acquire leadership skills.

Two other challenges cited most often related to the capacity of faculty and the cost to deliver leadership training. Faculty may be more, or less capable of imparting leadership knowledge as most have varying degrees of training themselves. The cost to deliver leadership training was mentioned as prohibitive for some schools due to the requirement to bring in business experts.

"I think the biggest challenge is cost. [For] a lot of the extra initiatives there's often a fee… and with shrinking budgets it's increasingly challenging.”
Types of skills

Participants identified the types of skills residents would need in order to meet each of the four defined competencies of the CanMEDS Leader role and whether their program was teaching these skills. While each of the four competencies is further defined by the RCPSC with enabling competencies and key concepts, for the purpose of this research only the over-arching competencies were provided for discussion. Each competency was interpreted uniquely by participants (Table 2).

1. *Contribute to the improvement of healthcare delivery in teams, organizations and systems.* Knowledge for this competency was taught through various teaching methods including: having exposure to team-based case, exposure to different community groups, quality improvement projects, preceptor role modeling, and didactic models for teaching theory.

   "I think a lot of this is probably taught in the preceptor-resident dyad rather than as a lecture. And I think it's probably taught best by showing rather than telling"

2. *Engage in the stewardship of health care resources.* Knowledge for this was taught through various teaching methods including: clinical teaching (through the resident-preceptor dyad), field notes, didactic teaching (i.e. courses on evidence-based medicine and on the cost of medicine, or talks from the Ontario Medical Association), and through an optional Master's program.

3. *Demonstrate leadership in professional practice.* Knowledge was taught through various teaching methods. Several participants identified that a practice management curriculum was in place, most often in PGY2. One Program Director noted that they were able to benefit from a collaboration with a local hospital for their residents to receive training in communication. The university with an established leadership curriculum identified that residents gain skills related to this competency over a two-day period with topics such as: self-assessment, characteristics and impact of leadership, interpersonal skills, building teams, resolving conflict and communication styles.

4. *Manage career planning, finances, health human resource in a practice.* Knowledge was taught using various methods. Participants identified that residents gained skills related to this competency through a practice management curriculum, usually a weekend course and mentioned by more than one participant that MD Financial Management (an organization that supports the Canadian Medical Association by helping members achieve financial well-being) taught this. Career planning was gained through faculty advisors and mentors.

   "Role modeling [leadership development] is obviously highly faculty dependent and preceptor dependent."

Of the 22 key concepts associated with the four enabling competencies in the CanMEDS Leader role, 3 concepts were absent from the list of those referenced by participants: complexity of systems, effective committee participation, and information technology for health care. In addition, participants offered three concepts that are not included in the RSCPC list: communication, teamwork and research skills. It is worth noting that skills related to communication were identified as important to have in each of the four competencies; skills related to teamwork were identified in two of the four competencies and research skills were seen as important in the knowledge required to manage health care resources.

Important program factors

When asked which factors should be considered when designing leadership training in postgraduate programs, participants suggested that the focus should be on practical application of skills rather than theory. While some
suggested that residents should be exposed to leadership skills early, others suggested that supporting the development specifically for those who self-identify as interested should be a priority. Almost all thought that having a variety of levels of engagement available to residents was seen as necessary for different states of resident readiness.

"Exposure in 1st year is really important and then reinforcing it throughout the two-year and then at the end making sure you’ve kind of monitored and evaluated that they actually have those skill sets"

Also suggested was that leadership skills should ideally be situated within a collaborative model which built upon opportunities that already exist within the program such as leading a quality improvement project.

"For me I'd like to look at it from a more interdisciplinary model ... bridge [leadership] with other professionals"

"I think looking at key opportunities of where you can you know not only assess all the other things that we're assessing but also add in that leadership piece as well."

"A QI project, quality improvement, is ... specifically designed to help all our residents understand how to be leaders in improvement in health care delivery within their environment"

Discussion

Leadership can be considered a nebulous concept (Dine, C.J., Khan, J.M., Abella, B.S & Asch, D.A., 2011) and it became clear in the variety of responses that the types of skills pertaining to leadership were not easily identifiable. It was evident in this study that even though four key competencies are defined by RCPSC, participants stated that they were unclear about what was meant by these definitions and that the types of skills and training required to achieve each competency were difficult to identify and to prioritize. The most important skills pertaining to leadership can also vary depending on which list or which framework is used.

Of note, teamwork and communication were missing from the RSCPC's list of key leadership concepts aligned with the four key competencies. These skills were seen by all but one participant as important. In light of the shift seen in healthcare over the past decade, residents are more likely to work in a team-based model of care rather than in individual private practice which makes these skills critical. In a systematic review related to Emotional Intelligence (EI) and physician leadership development, Mintz and Stoller (2014) purport that EI is considered to be a vital element of leadership and required to enable the leadership needed most now in health care. Furthermore, the authors identify that physicians are 'collaboratively challenged' and yet little attention is being paid to developing collaboration skills.

It was also evident that ideal methods for teaching leadership skills were difficult to define with one participant commenting that "I'm not sure you can teach leadership. It’s a little awkward in my mind". One participant stated that learning took place through exposure to community practice and "it's up to them to ask questions." This suggests that residents bear responsibility for learning what they need to know about leadership. Furthermore, as we know that leadership development opportunities are not provided for all physicians, many residents work with preceptors that have minimal leadership capacity and may not identify leadership as valuable enough to coach residents on. This research did not seek to identify whether curriculum objectives were specific to the acquisition of these skills and this analysis provides the assessment of skill development from the participant's view.
Time is seen as one of the largest challenges for post-graduate programs; the lack of available time to add anything to family medicine residency and identifying the optimal period for development of leadership skills is difficult. One participant pointed out that if leadership skills development was incorporated into the curriculum it would be necessary that it span the two years as didactic learning and demonstration of the skill in practice are not accomplished at the same time.

**Limitations**

Our study has some limitations. Notably, we used the RCPSC CanMEDS framework as a guide for our interview questions. As the CanMEDS-FM framework had not yet been released at the time of this study family medicine programs may not have yet made changes to incorporate leadership skills development into training. Additionally, researcher subjectivity factors into this analysis when trying to match what participants offered as a particular skill and how that might be defined according to the CanMEDS Leader role concepts. Finally, our sample included participants from only 5 provinces, therefore generalizability to other provinces may be limited. Further research can be done to identify optimal methods of delivering leadership skills training in residency and also to increase capacity for assessment of leadership skills throughout residency. A mixed methods approach that would include quantitative data collection nested into qualitative data and include the site directors from each of the 8 universities would add rich detail to what has been gained from the program directors and enhance understanding about applying consistent approaches to leadership development across sites.

**Conclusions**

With the recent change to CanMEDS framework, not only in title but in the underpinning philosophy that views physicians as leaders in the health system, postgraduate programs must find ways to enhance curriculum. This study identified leadership skills development as it is currently being offered to family medicine residents across Canada. The level of incorporation of leadership development training in the postgraduate programs was variable; some programs provide opportunities only to those residents with an identified interest and other programs have embedded leadership development into the curricula for all. Despite the number of factors identified for consideration in the design of leadership skills development in postgraduate medical education there are institutions that are tackling these barriers and have demonstrated that it can be done.

If physician leadership is to be recognized as important, another look at the FMEC Postgraduate Project recommendations and development of a national strategy is critical and timely. An increased understanding of the leader competencies is needed first in order to then identify and prioritize the types of skills required to achieve success in the Leader role. The challenge of when and how best to incorporate leadership skills training will be largely dependent upon the availability of resources to support curriculum change. A number of existing program initiatives, for example quality improvement projects, can be structured to more deliberately highlight and assess the leadership skills needed for such work. No further evidence is needed to emphasize the need to ensure that future doctors are well-equipped for the many important roles they play in Canada's health care system.

**Take Home Messages**

- There is a variety of leadership development opportunities being offered in family medicine across Canada
- Time and capacity were often cited as barriers to incorporating leadership development into curriculum
- Early exposure, interdisciplinary involvement and building upon currently existing opportunities were
considered important factors in designing and incorporating a successful leadership development program into residency education

- Teamwork and communication are thought to be important leadership concepts missing from the CanMEDS Leader Role

Notes On Contributors

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Appendices

Table 1. Interview guide for exploring resident leadership skills development with family medicine Program Directors

| Number | Question |
|--------|----------|
| 1      | Although physicians are looked to as leaders, many indicate that there is little to no education provided to them during their training to support leadership skills development. How important do you think it is to include of this type of skill development in formal curriculum? |
| 2      | Does your institution currently include some type of leadership skills training for family medicine residents? If no, is there any current plan to modify curriculum in this regard? What are the barriers to doing this? If yes, how did this become incorporated into curriculum? |
The new iteration of CanMEDS identifies 4 key competencies for a physician to assume a Leader role. I am going to walk through each of these key competencies and ask you to identify the types of skills and knowledge that would be important for a family medicine resident to gain in order to meet each competency. A leader…

1. Contributes to improvement of health care delivery in teams, organizations and systems. What type of knowledge would be helpful? Are you currently teaching this and if so, how are you teaching it?

2. Engages in stewardship of health care resources. What type of knowledge would be helpful? Are you currently teaching this and if so, how are you teaching it?

3. Demonstrates leadership in professional practice. What type of knowledge would be helpful? Are you currently teaching this and if so, how are you teaching it?

4. Manages career planning, finances, and health human resources in a practice. What type of knowledge would be helpful? Are you currently teaching this and if so, how are you teaching it?

Can you think of any other factors that should be taken into consideration when designing medical education curriculum that incorporates leadership skill development during residency?

### Table 2. Alignment of leadership skills noted by Canadian family medicine Program Directors with Key Concepts included in the Royal College of Physician and Surgeons Leader Role.

| CanMEDS Key Competency | Skills noted by Program Directors | Key Concepts addressed | Other concepts |
|------------------------|-----------------------------------|------------------------|----------------|
|                        |                                   |                        |                |
### Contribute to the improvement of healthcare delivery in teams, organizations and systems

| Know what systems/structures are for healthcare delivery; Historical context of healthcare | Systems thinking |
|---|---|
| How to be a leader and a follower; Wellness | Personal leadership skills |
| Quality improvement | Quality improvement |
| How to make change | Leading change |
| Organizational skills | Organizing, structuring, budgeting and finance; Time management |
| Advocating for patients | Consideration of justice, efficiency and effectiveness in the allocation of healthcare resources |
| Communication; Conflict resolution | Communication |

### Engage in the stewardship of healthcare resources

| Resource knowledge; Cost of medicines; Choosing wisely concepts | Consideration of justice, efficiency and effectiveness in the allocation of healthcare resources; Stewardship |
|---|---|
| Understanding systems | Systems thinking |
| Critical appraisal/research skills; Evidence based medicine | Research skills |
| Communication | Communication |
| Demonstrate leadership in professional practice | Professional behavior; Ethics; Professional standards; How to address people; What you wear | Personal leadership skills |
|------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------|
| Role awareness                                  | Physician roles and responsibilities in healthcare system                       |                             |
| Organizational skills                           | Priority setting                                                               |                             |
| Practice management; Running an office; Selecting staff; Personality types; Motivation strategies | Supervising others                                                            |                             |
| Life balance; Wellness; Resilience              | Practice management to maintain a sustainable practice and physician health     |                             |
| Work in teams; Team leadership; Team-based care; Collaborative skills; Team dynamics | Teamwork                                                                      |                             |
| Critical conversations; Crucial conversations   | Communication                                                                 |                             |

| Manage career planning, finances, health human resource in a practice | Preparing for practice; Managing/running a practice; Running an office/business; Hiring people; Managing staff | Practice management to maintain a sustainable practice and physician health; Management of personnel |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Contracts; Accounting/billing; Financial business knowledge; Incorporation | Administration                                                                                       |                                                                                                  |
| Negotiation                                                           | Negotiation                                                                                          |                                                                                                  |
| Planning and finance; Long-term investing; Compensation; Investing; Paying taxes; Planning for retirement | Organizing, structuring, budgeting and finance; Physician remuneration                               |                                                                                                  |
| Career planning/exploration                                           | Career development                                                                                    |                                                                                                  |
| Communication; Public relation skills; Conflict resolution            | Communication                                                                                        |                                                                                                  |

**Declaration of Interest**

The author has declared that there are no conflicts of interest.