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Challenges for Family Medicine Residents in Attaining the CanMEDS Professional Role: A Thematic Analysis of Preceptor Field Notes

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Abstract

Purpose

Among the roles of the competent physician is that of a professional, according to the CanMEDS framework, which describes the abilities physicians require to effectively meet the health care needs of the people they serve. Through examination of preceptor field notes on resident performance, the authors identified aspects of this role with which family medicine residents struggle.

Method

The authors used a structured thematic analysis in this qualitative study to explore the written feedback postgraduate medical learners receive at the University of Toronto Department of Family and Community Medicine. Seventy field notes written between 2015 and 2017 by clinical educators for residents who scored “below expectation” in the CanMEDS professional role were analyzed. From free-text comments in the field notes, the authors derived inductive codes, amalgamated the codes into themes, and measured the frequency of the occurrence of the codes. The authors then mapped the emerging themes to the key competencies of the CanMEDS professional role.

Results

From the field notes, 7 themes emerged that described reasons for poor performance. Lack of collegiality, failure to adhere to standards of practice or legal guidelines, and lack of reflection or self-learning were identified as the major issues. Other themes were failure to maintain boundaries, taking actions that could have a negative impact on patient care, failure to maintain patient confidentiality, and failure to engage in self-care. When the themes were mapped to the
key competencies in the CanMEDS professional role, most related to the competency “commitment to the profession.”

Conclusions

This study highlights aspects of professional conduct with which residents struggle and suggests that the way professionalism is taught in residency programs—and at all medical training levels—should be reassessed. Educational interventions that emphasize learners’ commitment to the profession could enhance the development of more practitioners who are consummate professionals.
The Canadian Medical Education Directives for Specialists, better known as CanMEDS, is an applied physician competency-based medical education framework containing 7 thematic categories expressed as physician roles: medical expert, communicator, collaborator, leader, health advocate, scholar, and professional. Each role is unique in laying the foundation of physician training. All medical postgraduate training programs in Canada use the CanMEDS framework to assess trainees. These learner assessments can be infrequent (e.g., objective structured clinical examination or oral examination) or frequent (e.g., shift cards or daily encounter cards). Guided by the adaptation of the CanMEDS framework developed by the College of Family Physicians of Canada, known as CanMEDS-FM, frequent learner assessments at the family medicine residency program at the University of Toronto have taken the form of field notes, a qualitative tool to document and evaluate learner progress. When used frequently, field notes serve as a robust way to assess competency and facilitate critical reflection and feedback among teachers and learners. However, the process of evaluating learners’ ability to meet the CanMEDS roles can be quite complex, as evidenced by the plethora of tools designed to complete the task.

In the definition of the CanMEDS professional role, the Royal College of Physicians and Surgeons of Canada states that professionals are “committed to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, accountability to the profession and society, profession-led regulation, and maintenance of personal health.” CanMEDS-FM describes further that a professional family physician must uphold 5 key commitments: to patients, society, the medical profession, physician health and well-being, and reflective practice. Although many resources try to simplify an approach to
implementing and assessing the professional role in the medical curriculum, this role is still reported as difficult to assess.\textsuperscript{11}

The objective of this study was to describe, through a thematic analysis of field notes, the aspects of the professional competency with which postgraduate family medicine learners struggle. Understanding in this area will allow medical education programs using the CanMEDS framework to adjust and enhance the way certain concepts in professionalism are taught to ensure that graduating physicians entering the workforce are skilled professionals.

**Method**

We received deidentified data from encounter-based field notes written between October 2015 and October 2017 by multiple clinical preceptors from the 14 training sites affiliated with the University of Toronto Department of Family and Community Medicine. These data were provided without identifiers for unique preceptors or learners. When preceptors write a field note, they select the relevant CanMEDS role. Thus, we were able to examine field notes pertaining to the professional role. Because we were interested in understanding areas in which postgraduate learners struggle, we further limited our analysis to encounters with poor performance (those receiving a score of “below expectation”). Any field note marked as “critical incident” was excluded from the analysis because these entries are difficult to deidentify.

We analyzed the free-text comments of the field notes using thematic analysis\textsuperscript{12,13} through an inductive and structured approach,\textsuperscript{12-14} whereby coding and theme development were driven by the content of the comments. This approach allowed the process of coding to accommodate any evaluator feedback that may pertain to performance outside the scope of the professional role.\textsuperscript{15} Two reviewers (G.K. and J.L.M.) independently coded all field notes, and a third reviewer (F.-H.L.) coded 20\% of the field notes.
Through the analysis, notes were made of any potential codes for each individual entry in the datasets by identifying recurring words or other units of meaning. Field notes were assigned as many codes as were appropriate to cover the content of the note. Once the initial analysis of each dataset was completed, the reviewers (G.K., J.L.M.) compared and contrasted the assigned codes to create consistency of meaning within the codes. Disagreements between the 2 reviewers (G.K., J.L.M.) were resolved by discussion with the third reviewer (F.-H.L.). During this process of constant comparison, codes that shared similar meanings were amalgamated into themes. After this process, a fourth researcher (J.C.Y.N.) reviewed the coding decisions for a random 50% of the comments. There were few discrepancies or disagreements, which were discussed by the team and resolved through consensus. The frequency of the occurrence of the themes was measured to give an indication of the prominence of each theme. The themes were then mapped by G.K. and J.L.M. to their appropriate key competencies within the CanMEDS professional role.7 Internal reliability was tested with one of the initial reviewers (J.L.M.) through a code agreement test16 of a random subset (50%) of comments. Interrater reliability was examined by another team member (J.C.Y.N.), who was not included in the initial coding process. The data were analyzed using the Dedoose 8.0.35 web application (SocioCultural Research Consultants, LLC, Los Angeles, California). Approval for this study was obtained from the University of Toronto Research Ethics Board.

Results

Between October 2015 and October 2017, a total of 17,183 field notes were written, with 1,029 focusing on the professional role. Of those, 80 indicated a failure in the competency, with a score of “below expectation.” Field notes of critical incidents were excluded, and the remaining 70 field notes were used for analysis. Because the anonymized dataset was provided in a format
lacking unique identifiers, we were unable to infer how many unique preceptors and postgraduate learners the dataset was describing.

During the analysis, a codebook was created (Table 1), and multiple codes were often assigned to a single comment. After the analysis and amalgamation of the codes, 7 themes emerged. Each highlighted a different area of struggle, with some being much more common than others.

**Themes**

**Collegiality.** Collegiality was the most reported theme in the free-text comments, evident in almost half of the field notes. Common issues mentioned were “tardiness,” “absence,” “disrespectful action to others,” and “negative remarks about colleagues.” A good illustration of this theme can be seen in one preceptor’s feedback to a resident who chose to use a lieu day on a day that he was scheduled to help run a clinical group session, leaving colleagues in the lurch looking for a replacement. Should remember to consider the impact of his actions on colleagues and when these scenarios are unavoidable, should make attempts to mitigate the effect on others (i.e., offer to find someone to replace him, make arrangements to facilitate an alternate session, etc.).

Multiple other comments involved similar complications of lateness or absence from prescheduled work events, resulting in others having to bear the extra workload.

**Standards of practice/Legal guidelines.** Adherence to standards of practice and legal guidelines was the second most commonly reported theme, found in just under a quarter of all comments. Issues highlighted included “incorrect procedural processes,” “ignoring preceptor’s instructions,” and “failure to follow legal guidelines.” Incorrect documentation or failure to abide by instructions may lead to inappropriate care for patients, as seen in one preceptor’s feedback:
Despite requesting that resident . . . speak to me prior to sending patients home prior to start of clinic, patient was sent home. Resident had to recall the patient to review next steps as plan was incomplete.

Fortunately, only a small portion of the comments indicated legal issues, such as this preceptor’s comment:

Renewing medication for the patient’s son is not acceptable—son was not present [and] you had never assessed the son; you should have deferred to the son’s MD.

**Reflection/Self-learning.** This theme was the third most common in the analysis. It relates to application and practice of one’s knowledge base. Codes identified in this dataset included “failure to complete homework,” “failure to seek assistance,” and “need to reflect on level of knowledge.” Many of the comments pertained to postgraduate learners lacking knowledge needed for the specific clinical situation. Most suggested that the learner “commit to read around patient problems,” especially those assigned by preceptors. Others suggested that learners “be careful to state clearly what is not known and admit to what [is] not.” One quote from a preceptor that exemplifies these points notes that

It is highly recommended that residents come to the clinic prepared for any procedures booked in their schedules. It really helps increase resident knowledge and confidence [and] demonstrates to the patient that the resident is competent, and supervisors expect it at this stage of training. On this occasion, an IUD [intrauterine device] insertion had been booked ahead of time, but the resident had not prepared until prompted to. This was discussed in person.
**Boundaries.** This theme pertains to times when learners breached personal privacy, either through procedural examination or by oversharing personal information. An example of the boundaries theme can be seen in this comment:

Please do not tell pt [patient] that you have the same illness they do—crossing the boundary and is not appropriate.

**Impact on patient care.** This theme indicates times when a learner’s action directly led to potential harm to a patient and delay of treatment. Although many of the comments associated with themes may be perceived to indirectly affect patient care, comments included in this category were explicitly focused on the impact on the patient. One preceptor highlighted that care for a patient was inappropriately delayed when the learner

Lacked appropriate follow-up on investigations and condition of patient. A phone call or follow up in 1-2 days to reevaluate condition, especially since urine culture was negative and pt was still symptomatic with hematuria while on antibiotics for a few days.

**Patient confidentiality.** This theme refers to incidents in which patient files were not properly stored and risked exposure of patients’ private information, such as indicated in the following comment:

Please take care to ensure patient confidentiality. This includes being cautious with any paperwork that has patient identifiers on it and only discussing cases in private spaces.

**Self-care.** The theme of self-care was the least reported and described times the learners failed to ensure their own safety and well-being during patient encounters. Only one comment was tagged with this theme, in which the preceptor’s feedback instructs the trainee to
Use the prompts on the doors to ensure proper removal of PPE [personal protective equipment] for preventive health measures.

**Linkage to CanMEDS-FM competencies**

To provide generalizability to our findings, the emerging themes were related to the 5 key commitments (to patients, society, the medical profession, physician health and well-being, and reflective practice) that a professional family physician must uphold, according to CanMEDS-FM. Commitment to the profession by adhering to standards and regulations was found to be the most common competency breached in our analysis, relating to 3 themes (collegiality, standards of practice and legal guidelines, and boundaries). In addition, 2 themes were related to commitment to patients through clinical excellence and ethical standards (impacts on patient care, patient confidentiality), while both commitment to reflective practice and commitment to the physician’s health and well-being were each related to one theme (reflection and self-learning and self-care, respectively). None of the emerging themes was matched to the physician’s commitment to society and societal needs.

**Discussion**

Our thematic analysis identified collegiality, adherence to standards of practice and legal guidelines, and reflection and self-learning as the most common underlying professional issues for the postgraduate learners in the family medicine program at the University of Toronto. Postgraduate learners also struggled with issues related to boundaries, impacts on patient care, patient confidentiality, and self-care.

Although our analysis is the first to identify these themes as areas of lapses in professionalism in postgraduate learners, it is not the first to recognize their importance as medical professionalism concepts. A recent study conducted in Singapore attempted to assess how medical
professionalism is viewed in the eyes of staff and patients. Through thematic analysis, the researchers identified several professional domains that are considered important and relevant to both groups. The domains include doctor–patient relationship, reflective, time management, and interprofessional relationship. When broken down to their subdomains, these findings align almost completely with the themes identified in our study. Interestingly, one of the new medical professional subdomains emerging from this publication was “demonstrated collegiality,” which was identified as particularly important for staff. These findings reinforce the idea that medical professionalism is an important concept that should be taught and reinforced in medical trainees.

Our analysis suggests that to improve the professional performance of postgraduate learners and prevent future lapses in professionalism, an assessment should be done to evaluate how the commitment to the medical profession is taught in postgraduate medical education programs that use the CanMEDS framework. Specifically, we recommend that the concept of collegiality and the aspects highlighted in this study be addressed when designing changes to the postgraduate curriculum. An analysis published in 2012 describes several elements important for teaching medical professionalism. The analysis identifies concepts such as institutional support, dedicated teaching time, reflection, and continuity as key features of any professional curriculum.

The faculty in the Department of Family and Community Medicine at the University of Toronto considers professionalism to be an embedded competency in everyday work, best learned from evaluation. Therefore, the faculty focuses on providing institutional support through identifying learners struggling in the professional competency and creating formal remediation plans to address these lapses in professionalism.
We suggest that to enhance professionalism in postgraduate learners, more time should be allotted for teaching the aspects of professionalism and allowing learners to reflect on their professional behavior. This enhancement can be achieved through development of longitudinal physicianship programs, creating whole class and unit-specific activities, forming mentorship programs, and dedicating academic half days for professionalism teaching. Furthermore, because continuity is an important feature of the professionalism curriculum, it may be valuable to assess how professionalism and collegiality are taught within the undergraduate medical program because undergraduate medical students are also periodically assessed on their adherence to the CanMEDS framework and the intrinsic professional role.

The analysis of free-text comments in field notes can add valuable information above and beyond the discrete performance scores that are commonly used to evaluate learners. This analysis is supported by a systematic review that highlighted direct observation tools as critical for reliable, feasible, and valid assessment of professionalism. In particular, the review identified the mini-CEX [mini-clinical evaluation exercise] and the P-MEX [professionalism mini-evaluation exercise], both very similar to field notes, as excellent tools to gain insight about the professionalism lapses seen in medical learners. Our analysis of the free-text comments has been shown to be more sensitive than numeric scores for the early identification of learners in academic difficulty and can be predictive of future performance. Providing free-text comments gave the analysis team the opportunity to understand the reasons for which preceptors fail postgraduate learners on the professional competency. Analysis of the free-text comments also provided a much greater insight into the specific problems preceptors witnessed during their work with the postgraduate learners. When relating these themes to the CanMEDS definition of professionalism in the family medicine setting, the analysis revealed that the majority of
professional failures lie in the learners’ lack of commitment to the profession’s standards and regulations. Interestingly, learners’ commitment to society by recognizing and responding to societal needs in health care did not emerge as an area of struggle. Further analysis may be warranted to understand if this finding relates to the competent performance of the learners or to the preceptors’ inability to detect failure in this competency.

A strength of this study was the structured approach followed to analyze the large dataset. However, because field notes, which include free-text comments, competency assignment, and numeric evaluation, are entered by different preceptors across 14 sites, our findings rely on the ability of preceptors to correctly evaluate a competency, which has been shown to be a difficult task in the past. Because we selected field notes for analysis on the basis of competency and score assigned by a preceptor, errors in an entry, such as mislabeling the competency evaluated or assigning an incorrect score, would have excluded the entry from our analysis and therefore restricted our ability to evaluate all failed encounters pertaining to the professionalism role.

Faculty development strategies focused on expanding preceptors’ knowledge and understanding of the CanMEDS framework and its intrinsic roles may increase the utility and consistency of the feedback provided in field notes.

Our findings may have also been affected by our decision to exclude field notes of critical incidents. Because critical incident reports often describe events that have a significant influence on a learner’s future practice, it is safe to assume that the content of those field notes could have influenced our codes, themes, and general mapping results. To mitigate the breach of anonymity that can be associated with analyzing and presenting data from critical incidents, we suggest exploring this type of feedback on a larger scale, such as a national level. Lastly, due to the anonymization process of our data, we are unable to infer what proportion of the comments were
made about the same postgraduate learner. We know that the field notes evaluated were written by multiple preceptors, each evaluating one observed interaction. For this reason, our analysis likely represents the full group of learners who were given this feedback.

Conclusions

This study and findings highlight areas of lapses in professional conduct, with information gathered from observations and evaluations by preceptors of family medicine residents in the clinical setting. An assessment and adjustment of the current professionalism education curricula in all medical education programs that use the CanMEDS framework should be considered to address these emerging themes. Moreover, focus on developing learners’ commitment to the profession has the potential to enhance learners’ professional performance and therefore contribute to the development of more practitioners who are consummate professionals. We hope to continue conducting thematic analyses of the remaining CanMEDS intrinsic roles with the goal of improving medical education, and by doing so, improving patient care.
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Table 1
Themes Identified in an Analysis of Preceptor Field Notes for Residents Who Scored “Below Expectation” in Assessments of the CanMEDS Professional Role, University of Toronto Department of Family and Community Medicine, 2015-2017

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>Description</th>
<th>Representative quote</th>
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| Collegiality | • Tardiness  
• Negative comments about colleagues  
• Disrespectful  
• Punctuality  
• Poor interprofessional communication  
• Problem working with others | Negatively affecting colleagues or the relationships built with other members of the medical profession. | [The learner] arrived at 9:16 a.m. for a 9 a.m.-start clinic. [The] 9 a.m. patient was waiting, scheduled for a blood pressure check visit. |
| Standards of practice/ Legal guidelines | • Documentation  
• Procedure  
• Clinical process  
• Legal | Falling below the defined average or expected quality of procedures or ability to follow clinical protocols. When real or perceived legal action could be taken against the learner. | This resident provided a patient with a referral . . . without having reviewed the patient’s chart history or having examined him. |
| Reflection/ Self-learning | • Review material  
• Preparation  
• Overestimate knowledge  
• Seek assistance | Trend of poor academic performance or failure to submit academic work within deadlines. Being aware of gaps in knowledge and actively seeking assistance from teachers to fill them. | Be aware of your limits of clinical competence . . . and review with [your] preceptor before applying treatment. |
### Boundaries
- Physical boundary
- Social boundary
- Personal life
- Irrelevant information

Fail to adhere to physical or social professional boundaries, leading to the patient or preceptor feeling uneasy.

Please do not reveal personal information to the patient... not relevant to the patient’s presentation at all.

### Impact on patient care
- Inappropriate care
- Poor follow-up
- Made worse
- Inadequate
- Preventable

Failure to provide satisfactory medical care or actions leading to potentially unfavorable outcomes for the patient.

[The learner] lacked appropriate follow-up on investigations and [the] condition of [the] patient: a phone call or follow-up in 1-2 days to reevaluate condition, especially since [the] patient is still symptomatic.

### Patient confidentiality
- Breach
- Purposeful
- Accidental
- Share information
- Information security

Failure to maintain identifying patient information as private to only those in the circle of care. Failure to adhere to information security guidelines.

We have observed that you have left the office... and have left [the] computer on and logged in under your name.

### Self-care
- Personal protective equipment
- Signage

Failure to follow safe practice guidelines and adhere to posted signage.

Use the prompts on the doors to ensure proper removal of PPE [personal protective equipment] for preventive health measures.

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Anonymized data were analyzed from 70 field notes containing feedback for family medicine residents. The field notes were written by preceptors between October 2015 and October 2017.