Stakeholder Groups' Unique Perspectives About the Attending Physician Preceptor Role: A Qualitative Study



Jane B. Lemaire, MD^{1,2}, Erin Nicole Miller, MD³, Alicia J. Polachek, MA², and Holly Wong, MA, JD Candidate (2018)²

¹Division of General Internal Medicine, Department of Medicine, Cumming School of Medicine, University of Calgary, Calgary, Canada; ²W21C Research and Innovation Center, Cumming School of Medicine, University of Calgary, Calgary, Canada; ³Division of Endocrinology and Metabolism, University of Ottawa, Ottawa, Canada.

BACKGROUND: Attending physician preceptors are accountable to many stakeholder groups, yet stakeholders' views about what the preceptor role entails have not been sufficiently considered.

OBJECTIVE: To explore stakeholder groups' unique perspectives of the preceptor role.

DESIGN: Qualitative study with a constructivist orientation.

PARTICIPANTS: Semi-structured interviews were conducted with 73 participants from two university teaching hospitals between October 2012 and March 2014. Participants included representatives from seven stakeholder groups: patients and their families, allied healthcare providers, bedside nurses, nurse managers, medical students, internal medicine residents, and preceptors.

APPROACH: An inductive thematic analysis was conducted where researchers coded transcripts, abstracted codes into themes, and then mapped themes onto six focus areas: role dimensions, role performance, stressors and rewards, mastery, fulfillment, and impact on others. Two authors then identified "recurrent themes" (emerging in two or more focus areas) and compared them across groups to identify "unique themes" (emerging from a maximum of two stakeholder groups). "Unique thematic emphases" (unique themes that would not have emerged if a stakeholder group was not interviewed) are described. KEY RESULTS: Patients and their families emphasized preceptors' ultimate authority. Allied healthcare providers described preceptors as engaged collaborators involved in discharge planning and requiring a sense of humor. Bedside nurses highlighted the need for role standardization. Nurse managers stressed preceptors' need for humanism. Medical students highlighted preceptors' emotional labor and their influence on learners' emotional well-being. Residents emphasized preceptors' responsibilities to multiple stakeholders. Preceptors described lifelong learning and exercising control over one's environment.

CONCLUSIONS: Various stakeholder groups hold unique and nuanced views of the attending physician preceptor

Prior Presentations An earlier version of the manuscript was presented at a research session at the Canadian Conference on Medical Education in Montreal, Canada, April 2016.

Electronic supplementary material The online version of this article (https://doi.org/10.1007/s11606-019-04950-7) contains supplementary material. which is available to authorized users.

Published online April 1, 2019

role. These views could broaden formal role guidance for medical education and patient care. This study generated real-world, practical examples of what stakeholders feel are important preceptor skills. These skills should be practiced, taught, and role modeled in this clinical setting.

KEY WORDS: health services research; medical education-faculty development; stakeholder engagement.

J Gen Intern Med 34(7):1158–66 DOI: 10.1007/s11606-019-04950-7 © Society of General Internal Medicine 2019

INTRODUCTION

The Medical Teaching Unit (MTU) is an internal medicine inpatient ward in academic teaching centers where patient care and medical education co-occur. As medical education and health care systems have evolved,^{1, 2} so has the role of the attending physician, also known as the MTU preceptor. The role is inherently complex and central to all aspects of medical education and patient care. Research based on medical educator and learner perspectives has provided extensive knowledge about the attributes and skills required to be an effective clinician-teacher.^{3, 4} More recently, there has been recognition of the influences of the complex work environment and contextual tensions on role performance, as well as the behaviors and attitudes preceptors use to mitigate the influence of contextual factors.^{5–8} Despite this knowledge, little formal role guidance such as written job expectations or standards exists for preceptors.

Preceptors teach the next generation of physicians, role model this training in their real-world work setting, and do so while caring for patients and working within multidisciplinary teams. The perspectives of stakeholder groups such as patients and their families, allied healthcare providers, bedside nurses, nurse managers, and learners are not well represented in our current understanding of the role. Although these groups may hold overlapping views of what the preceptor role entails, each group may also have specific expectations of the preceptor. An exploration of each group's unique perspectives could provide important insights. This knowledge could broaden formal role guidance as to how MTU preceptors are trained and transitioned into real-world practice where multidisciplinary teamwork, inter-professional learning, and patientcentered care are paramount. Stakeholder groups' unique insights could further identify real-world work situations and contextual influences that preceptors should teach⁹ and role model for learners. Overall, these insights could help preceptors and the physicians they train to better meet the expectations of each stakeholder group and improve their role performance. The aim of this study was therefore to explore MTU stakeholder groups' unique perspectives of the preceptor role.

METHODS

Study Design

This paper describes a supplementary analysis of data from a study exploring the MTU preceptor role through interviews with MTU stakeholders, with the aim to understand variations in stakeholder groups' perceptions of the role. Using a constructivist orientation, reality is viewed as subjectively constructed through experiences and interactions.^{10, 11} Rather than trying to reconcile divergent understandings into a single, universal reality, this approach acknowledges that the preceptor role may hold distinct meanings for different stakeholder groups.

Data Collection

Semi-structured, open-ended interviews were conducted between October 2012 and March 2014 with 73 participants from seven stakeholder groups: patients and their families, allied healthcare providers (e.g., occupational therapists, pharmacists, social workers), bedside nurses, nurse managers (e.g., charge nurses, nurse educators, unit managers), medical students with MTU clerkship experience, internal medicine residents, and preceptors. Participants were recruited from two hospitals within a single university teaching center (Table 1).

Participants were selected using disproportionate sampling, stratified by site and stakeholder group.¹² Individuals were randomly selected from comprehensive lists of each group, except for nurse managers who were all invited to participate due to the small number employed. Patients were screened to ensure a minimum 3-day MTU admission and mental and physical eligibility. The initial goal of 10 participants per

stakeholder group (5 per site) was estimated as sufficient to achieve theoretical saturation where no new themes emerged, without being too large for detailed analysis.^{13, 14} Only three of five interviews with bedside nurses at site two were completed due to recruitment difficulties. A researcher contacted potential participants via email or in person. Interviews with each stakeholder group were divided between at least two interviewers to reduce interviewer biases. The four interviewers were female and included one author (AP). All worked as researchers with master's level training in Sociology and experience in qualitative interviewing. Interviewers had no prior relationships with study participants. All participants were informed of the aim of the research study. The principal investigator (JL) was known to many participants through her work as a physician on the MTU and research interests in physician wellness and medical education.

After acquiring consent, face-to-face interviews were conducted. When patients and their families were interviewed in rooms shared with other patients, they provided consent to proceed despite limitations to ensuring confidentiality. All other interviews were conducted in private spaces. Interviews were recorded, transcribed verbatim, and assigned a confidential identification number. Interviews lasted an average of 35.98 min (range = 5.93 to 93.58) (Table 1). All participants were asked the same questions with the exception of preceptors, who were asked additional questions given their experience in the role, and patients and their families, who were asked fewer questions given their current health and relative unfamiliarity with the role (Online Appendix A). Twenty-six people declined participation (13 nurses, 2 allied healthcare providers, 5 medical students, 3 nurse managers, 3 residents) for reasons that included not interested, on leave or out of city, no time, new to position, and unable to provide necessary information. No participants withdrew. The local University Ethics Board approved the study.

Participants

Participants were asked demographic questions applicable to their stakeholder group (Table 2). They included 46 women (63%) and 27 men (37%), with an average age of 40.82 years (range = 24–96). Most were married, and healthcare providers had worked on the MTU for an average of 7.39 years (range = < 1 to 30).

Table 1	Breakdown	of Intervi	iews Across	Stakeholder	Groups	and MTU Sites

Stakeholder group	NumberNumberinterviewedinterviewed(site 1)(site 2)		Total number interviewed	Average interview duration (minutes)	ew Range of interview duration (minutes)	
Patients and their families	5	5	10	11.41	5.93-21.90	
Allied healthcare providers	5	5	10	30.47	13.72-48.55	
Bedside nurses	5	3	8	27.40	14.07-40.48	
Nurse managers	8	4	12	42.32	15.93-75.00	
Medical students	*Medical students work at both sites		11	42.17	14.30-67.00	
Internal medicine residents-year 1	*Internal medicine residents work at both sites		4	35.28	15.12-67.20	
Internal medicine residents—year 2			3			
Internal medicine residents—year 3			3			
Preceptors	6	6	12	55.33	21.58-93.58	

Stakeholder group	Average years of experience as a healthcare provider (range)	Average years of experience on MTU (range)	Employment status		Age in years	Sex		Marital status	
			Full time	Part time or casual	(range)	Female	Male	Cohabitating or married	Single or widowed
Patients and their families	N/A	N/A	N/A	N/A	64 (35–96)	5	5	N/A	N/A
Allied healthcare providers	11 (<1–35)	6 (<1–29)	6	2	41 (26–59)	9	1	9	1
Bedside nurses	5 (1-11)	5 (1-12)	2	5	32 (25-53)	7	1	6	2
Nurse managers	18 (4-43)	12 (3-26)	5	4	45 (29-65)	11	1	10	2
Medical students	N/A	N/A	N/A	N/A	28 (24-34)	6	5	7	4
Internal medicine residents	N/A	N/A	N/A	N/A	31 (27–38)	4	6	6	4
Preceptors	13 (<1-30)	11 (<1-30)	N/A	N/A	43 (31-61)	4	8	12	0

Table 2 Participant Characteristics Across Stakeholder Groups

N/A not asked

Data Analysis

Data analysis occurred in two phases. Both phases used an inductive approach informed by grounded theory where themes emerged from the data, rather than coding preestablished themes, as analysis progressed from concrete data to abstract understandings.¹¹ This allowed participants' perceptions to become evident without restricting analytic attention to dimensions chosen by the researchers.

First, teams of two data coders (from a total of seven) analyzed transcripts from each stakeholder group. Analysts independently read a set of transcripts and identified initial codes, then met to compare analyses, reach consensus on emerging themes, and catalog reconciled codes using NVivo 10 software (QSR International, Doncaster, Australia). Analysts then examined transcripts and codes in greater depth to refine, abstract, and integrate ideas into overarching understandings of the preceptor role. Themes were then mapped onto six focus areas: dimensions of the role, role performance, stressors and rewards, mastery, fulfillment, and impact on others. Data saturation was achieved. A comprehensive description of the MTU preceptor role based on further abstraction of these data from stakeholder groups' perspectives is not yet published.

In the secondary analysis presented here, two analysts (EM, AP) further reviewed the themes to examine how perceptions of the preceptor role varied between stakeholder groups. No analysis software was used. Analysts independently reviewed themes before discussing and reconciling their analyses. For each stakeholder group, analysts first noted recurrent themes. These were defined as themes that emerged in at least two of the six focus areas. There was substantial overlap in these recurrent themes, with overlapping themes defined as those where at least three stakeholder groups identified the recurrent theme. Recurrent themes were then compared across stakeholder groups to identify unique recurrent themes. These were defined as emerging from no more than two stakeholder groups. Unique recurrent themes were further refined into unique thematic emphases, defined as themes that would not have emerged if a stakeholder group had not been interviewed.

RESULTS

There was substantial overlap in stakeholder groups' views of the MTU preceptor role, (Fig. 1). Overlapping themes (i.e., identified by at least 3 groups of stakeholders) included (1) enjoying, caring about, and being engaged in the role; (2) being available and approachable to others on the MTU; (3) being relational with others; (4) balancing various demands and roles; (5) ensuring patient and team safety within the clinical training environment; and (6) negotiating a complex, dynamic work environment and healthcare system (detailed results available from authors). In this paper, however, we focus on the differences between stakeholder groups' unique understandings of the role. Specifically, we emphasize descriptions and ideas about the role that would not have emerged had that stakeholder group not been interviewed. Ten unique thematic emphases emerged (Table 3 and Fig. 1).

Patients and Their Families

While all stakeholder groups described the preceptor as a leader, patients and their families stressed the need for the preceptor to assume ultimate responsibility for all aspects of the MTU team, as the ultimate overseer:

Well it's a lot of responsibility for one thing... being the lead doctor, I would imagine...he's gotta oversee all the ones under him...he's like the boss of doctors. That's what I figure he is. [P08]

In referring to the preceptor as the "boss of the doctors," patients and their families highlighted the preceptor's role in supervising junior team members as well as ensuring providers know their role and perform to a certain standard. This group also described the preceptor as the key point of contact and face of the MTU team and hospital, ultimately responsible for ensuring effective communication between team members and patients or their families regarding conditions and treatment plans.

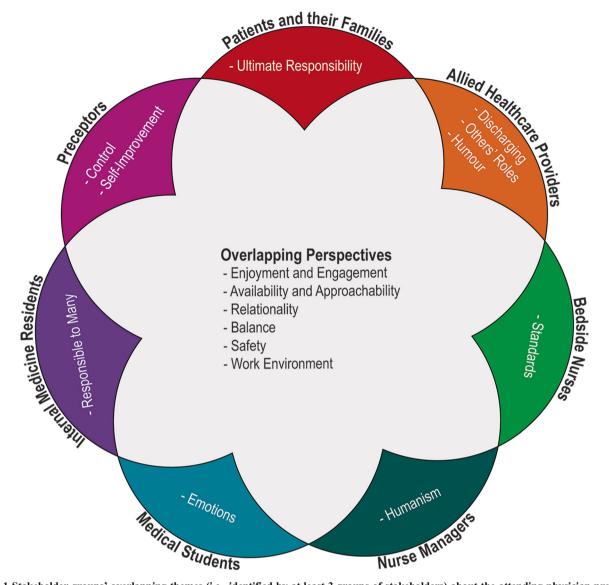


Figure 1 Stakeholder groups' overlapping themes (i.e., identified by at least 3 groups of stakeholders) about the attending physician preceptor role and unique thematic emphases for each stakeholder group.

Allied Healthcare Providers

There were three unique emphases identified by the allied healthcare providers. First, the preceptor plays a central role in discharge planning, with foresight and big picture thinking as keys to mastering the discharge role.

Second, allied healthcare providers emphasized that preceptors' awareness of interdisciplinary team members' roles could facilitate more effective teamwork:

...the referral, and the timeliness of the referral, and the appropriateness of the referral all play into...how that role effects my job. So if they're...putting in good referrals, and they're appropriate and timely then it helps me perform my job... [AHP01] Allied healthcare providers appreciated a preceptor who understands how to make appropriate patient referrals, thus facilitating patient discharge.

Third, allied healthcare providers identified having a sense of humor as an important aspect of mastery:

I think you have to laugh at some of our stuff because it's pretty intense. We're dealing with people's lives, and [sigh], you cannot not be affected by this job. It's too intense...you have to find humour in some of the stuff that we deal with, otherwise it'll kill ya. It's really intense, it's an intense place to work. [AHP10]

This participant implied that maintaining a sense of humor, despite the demands of the job and the stressful nature of the MTU, demonstrates effective coping and stress management, making the preceptor better able to perform the role.

Table 3 Unique Thematic Emphases in Each Stakeholder Group's Perceptions of the MTU Preceptor Role Compared to Other Groups

Unique thematic emphases by stakeholder group	Description The role involves being: - the key point of contact for patients - the face of the MTU team and hospital - responsible for communicating with patients and their families - responsible for overseeing the work of other providers - responsible for ensuring other providers know their role and perform to a certain standard				
Patients and their families Having ultimate responsibility within the MTU team					
Allied healthcare providers Engaging in planning and discharge activities in patient care	The role: - includes discharge planning - requires foresight and big picture thinking - is fulfilled well when the preceptor ensures safe discharges and avoids negative outcomes - can be both stressful and rewarding as a result of the discharge process				
Understanding the roles of other providers Maintaining a sense of humor	 can be bold stressful and rewarding as a result of the discharge process The role requires: - an awareness of the roles of other interdisciplinary team members - knowledge about appropriate referrals and resources available from other providers Performance in the role is facilitated by: - maintaining a sense of humor, despite the demands of the job and the stressful nature of 				
Bedside nurses Needing role clarity and performance standards	the environment Guidelines and expectations around the role: - are not clearly defined - could guide preceptor's work and performance - would reduce stress for preceptors and other members of the interdisciplinary team - are also important for understanding what is required of the trainees that preceptors over				
Nurse managers Displaying humanism in interactions with others	Success in the role requires: - viewing and treating others as a whole person - treating others with dignity and respect - knowing how to approach or respond to others - respectful interactions - role modeling humanism and instilling this ethic in trainees				
Medical students Having an impact on the emotions of trainees	The role and how it is fulfilled: - has a direct impact on trainees' emotional experiences - can contribute to trainees feeling supported, valued, and appreciated - can contribute to trainees feeling unsupported, excluded, undervalued, or emotionally abused				
Internal medicine residents Being responsible to various stakeholders	 Those in the role are responsible to: a variety of stakeholders who may have complementary or competing interests bodies such as the Royal College of Physicians and Surgeons of Canada the healthcare system as a whole safeguard scarce healthcare resources balance the needs of patients with those of the healthcare system educate and provide career guidance to trainees consider input from various stakeholders regarding his or her performance 				
Preceptors Exercising control over thoughts, behaviors, and environment Striving for self-improvement	The role may require preceptors to: - direct and regain control over the unexpected or unpredictable - take advantage of opportunities as they arise - control their own emotions and reactions - choose whether they view potential job stressors as constraining or enabling Those fulfilling the role well may: - strive for continual self-improvement - hold high standards for themselves - seek to fine tune their skills and further develop their strengths - engage in self-reflection, demonstrate humility, and recognize their own weaknesses - be committed to lifelong learning and participation in professional development activities				

Bedside Nurses

Bedside nurses emphasized a paucity of performance standards, guidelines (e.g., what is in or out of scope of practice), and expectations for the preceptor, describing how it can be difficult to perform a role without this guidance. They argued that performance standards would reduce stress not only for preceptors but also for other team members:

...there's no standard for them to necessarily meet as far as I know...if they had some sort of guidelines of what

they should be doing...if the preceptors kind of have a...standard that they're...kept to I think it will ultimately just make everyone a million times happier. Decrease some of the stress in the environment and just kind of help those residents in a comfortable environment and learn which just provides growth which... you know filters down to the rest of us and just more positive environment for sure. [N03]

Bedside nurses advocated for a clear role description to inform and manage expectations of the preceptor role and scope of practice. This group further explained that the preceptor is responsible for being aware of training requirements and standards for trainees as well as ensuring appropriate training is provided.

Nurse Managers

Nurse managers emphasized the need for humanism. They discussed viewing and treating patients and trainees as a whole person in a way that encompasses dignity and respect. Nurse managers also suggested that the preceptor is responsible to teach, role model, and instill this art of medicine and ethic of humanism in others:

...[the preceptor should] teach the residents about...the human side of it. The experience of being in healthcare and how demeaning it can be and taking away people's freedoms...whether it's just through conversations or by the family meetings, that to me is something that takes a little extra because these residents won't learn about that in a lecture or a textbook necessarily. [SN01]Teaching this art of medicine to trainees was seen as critical, as this is likely the only place trainees formally learn this skill.

Medical Students

Medical students emphasized the emotional aspects of the preceptor role, acknowledging both the emotional toll and how the preceptor's behavior and performance impact students' experiences:

[I] was coming off...one of the 26-hour call shifts. It was sort of busier than normal and...I would say this is like the highlight of med school [laughs] like the worst moment in med school ever [laughs]...I...had done an admission for a patient in the ER and was presenting it to the team the next morning and I was just way too tired and couldn't really focus or concentrate...I...must have been a little bit verbose and I'm not sure if...maybe my preceptor was just having a bad day or what but [he/she] sort of stopped me in the middle of it in front of the whole team and said 'while I was on the way here and really

hoping that you were going to impress us this morning but that's obviously not going to happen'...and so I think that...sort of ruined any rapport that I had with that preceptor and...then you're always a little bit more well actually quite a bit more guarded in...trying to do things so that you don't get embarrassed rather than doing things so that you're learning about them or so that you're sort of doing good patient care. [MS09]

This student explained how the preceptor's statements had an imposing effect on the rest of the rotation, leaving the student in an exceptionally vulnerable position.

Internal Medicine Residents

Internal medicine residents raised the idea that the preceptor has responsibilities and accountabilities to a variety of stakeholders who may have complementary or competing interests. These include a responsibility to the healthcare system, where the preceptor must safeguard scarce healthcare resources and balance fiscal responsibility, efficiency, and quality patient care

...their primary concerns are obviously the safety of their patients right but I think they have to be...an efficient, you know kind of business person as well... they can't take three hours with a patient or anything like that and...also...an economist too right, so every time we're talking to a good preceptor they would...try and analyze the cost-benefits of each test, the costbenefits of each drug and tailor it...to their patient. [R05]

Residents also stressed the preceptor's responsibility to teach learners, and serve as mentors and career advisors:

I actually was having a pretty rough time personally and I remembered [the preceptor] pulled me aside and that we spent half an hour talking about life stuff and like trying to get through residency and...trying to deal with all those other things... [R02]

This resident suggested that the preceptor could be a valuable mentor for when trainees face work and personal challenges.

Preceptors

There were two unique emphases identified by preceptors. The first centered on exercising control over their environment, thoughts, and behaviors. They noted that effective preceptors are skilled at regaining control over the unexpected, taking advantage of opportunities:

...you've got a challenge that shows up before you – either a challenging patient or situation – and...the

team together is able to rise and...manage that and... use it as an opportunity for learning...things I think are probably the biggest examples of how a team can really work...where you can seize the opportunity and have the ability of the various members to sort of go, 'ok, this is our priority right now. We're going to manage this.' [DR01]

This preceptor highlights how strong preceptors turn unexpected challenges into opportunities for growth. Preceptors stressed being in control of their emotions and reactions, where a preceptor could choose to view challenges as constraining, thus exaggerating the stress, or choose to regain control over potential stressors by reframing and viewing challenges as enabling which could mitigate stress and enhance role performance.

Second, preceptors highlighted the importance of continually striving for improvement, holding themselves to high standards, refining their skills, building on their strengths, and engaging in lifelong learning:

...I think [the preceptor] can be taught to work on elements of [the role] and the beauty is that you don't have to be amazing at all of them, but you have to be insightful enough to know what your strengths and weaknesses are and how your experience allows you to...push your strengths. I don't think that's a bad thing...And I'll come on teams, and it happens every year, where there's a senior trainee who inspires me to do my job better and it happens often you know. And I say ok, what is it about this person's style that is different...or that makes me excited to be here? And then you can kind of learn from that and see what it is... [DR06]

This preceptor described dedication to self-reflection, willingness to recognize one's own weaknesses, and the ability to demonstrate humility as essential to mastering the role.

DISCUSSION

A role should be built and negotiated through the input of the multiple groups affected by how a role is enacted.¹⁵ MTU preceptors have a widespread and sustained influence within the healthcare system because they care for patients and train the next generation of physicians. Our study provides insight into this complex role as viewed by various stakeholder groups. Although there was overlap in how the stakeholder groups viewed the preceptor role, each stakeholder group also emphasized at least one unique aspect. The results of this exploratory research are important for medical education and patient care.

First, this study demonstrates that various stakeholder groups highlight unique, nuanced views and expectations of the preceptor. Not all aspects of the preceptor role are experienced and understood uniformly across groups. What stakeholder groups see as important to the role depends on where they are located in relation to that role and how they interact with the role. The results of this study could serve to broaden formal role guidance by including these nuanced perspectives. Written descriptions outlining role standards, performance expectations,¹⁵ and evaluation criteria can inform medical education around how MTU preceptors are trained and transitioned into clinical supervision, multidisciplinary teamwork, inter-professional learning, and patient-centered care.

Second, the unique insights raised by each stakeholder group generate practical suggestions about important aspects of the role. This provides the MTU preceptor with an opportunity to gain further insight into what they should teach and role model in the clinical setting. The unique insights highlight opportunities that extend beyond the central medical expert role of medical education frameworks, to include other roles such as communicator, collaborator, professional, leader, and patient advocate.¹⁶ Many of the stakeholder groups' unique thematic emphases could inform the development of entrustable professional activities, defined as units of professional practice that can be entrusted to a sufficiently competent learner or professional, for those who will fulfill an attending physician role.¹⁷ For example, charged with the ultimate responsibility for coordination and communication, preceptors may need to recognize and fill communication gaps to ensure patients' and their families' expectations are met, particularly since multidisciplinary providers may not have time to process the vast information on their patients, leaving patients and families to feel that staff are not familiar or do not have time to communicate with them.¹⁸ Preceptors who teach and role model this responsibility as well as the understanding and experience of inter-professional learning about other disciplines' roles can help reduce documented deficiencies in communications between physicians and allied healthcare providers.^{19–21} Furthermore, since humanism is a key component of effective healthcare and medical education,^{8, 22} preceptors may consider actively incorporating humanism into their teaching and patient care. Preceptors should also understand how vulnerable medical students' emotional well-being is to the preceptor's influences. The toxic features of the "hidden curriculum" in medical education are well documented.²³ Medical students report their experiences of emotional abuse within the medical education systems,²⁴ and mistreatment such as described in our study is associated with student burnout.²⁴ ²⁶ In training the next generation of physicians, preceptors may also need to acknowledge and provide additional mentorship around the complexity of their role, and especially their accountability to diverse stakeholders. Within this complex role and environment of multiple accountabilities, preceptors should also teach and role model professionalism through self-improvement. This specifically includes developing strategies for actively overcoming contextual challenges,⁸ as healthcare systems are complex adaptive systems, where simple cause and effect models seldom suffice.^{27, 28}

Lastly, this study emphasizes the challenges of successfully fulfilling the numerous demands of this complex preceptor role. How do preceptors care for acutely ill patients, teach the next generation of physicians, lead multidisciplinary teams, care for themselves, and meet everyone's expectations at all times, in particular when there may be divergent views on what is important? Perhaps the definition and application of the preceptor role is contextually based, where the role is enacted slightly differently based on the stakeholder group and preceptors' interactions?^{8, 15} This likely already happens to some degree with preceptors "switching hats" throughout their day. Yet, given competing and at times conflicting expectations from various stakeholder groups, it may prove an unreasonable expectation for preceptors to constantly assess their interactions and adapt to each groups' needs. However, the knowledge from this study could potentially improve their ability to do so, by highlighting the various attributes of the role that diverse stakeholder groups may deem important. For example, allied healthcare providers emphasized a sense of humor as a strategy for promoting wellness and nurse managers advocated for role modeling humanism in the role. Adding this knowledge to preceptors' training could potentially improve their ability to successfully meet stakeholders' varying needs, resulting in enriched relationships and better role performance. It is nevertheless important to recognize the stress this may add to the preceptor's already complex and demanding role.

The results of this study should be interpreted within the study design. This is a single-center study, meant to be exploratory to generate, rather than test, hypotheses. Our goal was to more broadly characterize the MTU preceptor role by including the perspectives of various stakeholder groups within this context. Experiences at different field sites may vary. Furthermore, the data source used in this paper was the completed thematic analysis of interviews where different groups of analysts analyzed data from various stakeholder groups. Some of the unique thematic emphases identified here may be compounded by differences in the original analysts' analytic attention, not just differences in stakeholder groups' perspectives. To mitigate this potential bias, original interview transcripts were reviewed for clarification as needed.

Our study identifies the unique emphases that each MTU stakeholder group ascribed to the preceptor role and generated real-world, practical examples of what each stakeholder group considered to be important. This knowledge may broaden formal role guidance for preceptors with respect to medical education and patient care; enable preceptors to better enact, teach, and role model these role expectations; and ultimately enhance professionalism,²⁹ role performance, inter-professional collaboration, and patient satisfaction. Future research should explore whether formally practicing, teaching, and role modeling these concepts improves teamwork, medical education, and patient care, with consideration of the added stress these varying expectations may have for the preceptor. Research should also explore stakeholders' views of other important MTU roles (e.g., nurse managers, allied healthcare providers). This may further enhance collaboration, change the culture in healthcare and medical education systems to promote a stronger focus on multidisciplinary team-based care and inter-professional teamwork,^{30–32} and ease some of the preceptor's demands by sharing appropriate tasks and better utilizing the skills of the other team members.

Acknowledgments: We would like to acknowledge Jaya Dixit, Kenneth Blades, Kristen Desjarlais-deKlerk, Laurie Vermeylen, and Jill de Grood for their role in data collection and analysis.

Corresponding Author: Jane B. Lemaire, MD; Division of General Internal Medicine, Department of Medicine, Cumming School of Medicine, University of Calgary, Calgary, Canada (e-mail: lemaire@ucalgary.ca).

Funders This study was funded by the Canadian Institutes of Health Research (grant number 123422), with a grant from the Faculty of Medicine, University of Calgary, and with in-kind support from W21C Research and Innovation Centre, Cumming School of Medicine, University of Calgary. Grant title: Exploring the Dimensions of the Medical Teaching Unit Preceptor Role.

Compliance with Ethical Standards:

The local University Ethics Board approved the study.

Conflict of Interest: The authors declare that they do not have a conflict of interest.

REFERENCES

- Borden WB, Mushlin AI, Gordon JE, Leiman JM, Pardes H. A new conceptual framework for academic health centers. Acad Med. 2015;90(5):569–73.
- West DC, Robins L, Gruppen LD. Workforce, learners, competencies, and the learning environment: Research in medical education 2014 and the way forward. Acad Med. 2014;89(11):1432–5.
- Sutkin G, Wagner E, Harris I, Schiffer R. What makes a good clinical teacher in medicine? A review of the literature. Acad Med. 2008;83:452–466.
- Steinert Y, Mann K, Centeno A, et al. A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education: BEME Guide No. 8. Med Teach. 2006;28:497–526.
- Hoffman KG, Donaldson JF. Contextual tensions of the clinical environment and their influence on teaching and learning. Med Educ. 2004;38:448–454.
- Bates J, Ellaway RH. Mapping the dark matter of context: A conceptual scoping review. Med Educ. 2016;50:807–816.
- Michtalik HJ, Yeh H-C, Pronovost PJ, Brotman DJ. Impact of attending physician workload on patient care: A survey of hospitalists. JAMA Intern Med. 2013;173:375–377.
- Lemaire JB, Wallace JE, Sargious PM, Bacchus M, Zarnke K, Ward DR, Ghali WA. How attending physician preceptors negotiate their complex work environment: a collective ethnography. Acad Med. 2017;92(12):1765–73.
- Bacchus M, Ward DR, Grood J, Lemaire JB. How evidence from observing attending physicians links to a competency-based framework. Med Educ. 2017 Jun 1;51(6):633–44.
- Tavakol M, Sandars J. Quantitative and qualitative methods in medical education research: AMEE Guide No 90: Part II. Med Teach. 2014;36:838–848.
- 11. **Berg BL, Lune H.** Qualitative research methods for the social sciences. 8th ed. Boston, MA: Pearson; 2012.

- 12. **Neuman WL**. Social research methods: qualitative and quantitative approaches. 7th ed. Boston, MA: Allyn and Bacon; 2011. 631 p.
- Guest G, Bunce A, Johnson L. How many interviews are enough? An experiment with data saturation and variability. Field methods. 2006 Feb;18(1):59–82.
- Sandelowski M. Sample size in qualitative research. Research in nursing & health. 1995 Apr 1;18(2):179–83.
- Biddle BJ. Recent developments in role theory. Ann Rev Sociol. 1986 Aug;12(1):67–92.
- Royal College of Physicians and Surgeons of Canada. The CanMEDS Framework. http://canmeds.royalcollege.ca/en/framework. Accessed August 22, 2018.
- Ten Cate O, Chen HC, Hoff RG, Peters H, Bok H, van der Schaaf M. Curriculum development for the workplace using entrustable professional activities (EPAs): AMEE guide no. 99. Med Teach. 2015;37:983–1002.
- Goudy E, Jackson M, den Otter R, Bater M. The journey to include patient and family voices. Healthcare Management Forum. 2015;28(2):61–64.
- Atwal A, Caldwell K. Do all health and social care professionals interact equally: a study of interactions in multidisciplinary teams in the United Kingdom. Scandinavian Journal of Caring Sciences. 2005;19(3):268–73.
- Reeves S, Rice K, Conn LG, Miller KL, Kenaszchuk C, Zwarenstein M. Interprofessional interaction, negotiation and non-negotiation on general internal medicine wards. Journal of Interprofessional Care. 2009:23(6):633–45.
- Zwarenstein M, Rice K, Gotlib-Conn L, Kenaszchuk C, Reeves S. Disengaged: a qualitative study of communication and collaboration between physicians and other professions on general internal medicine wards. BMC health services research. 2013 Dec;13(1):494.
- Stone S, Ellers B, Holmes D, Orgren R, Qualters D, Thompson J. Identifying oneself as a teacher: the perceptions of preceptors. Med Educ. 2002;36(2):180–5.

- Hafferty FW, Gaufberg EH, O'Donnell JF. The role of the hidden curriculum in. Virtual Mentor. 2015;17(2):130.
- Dyrbye L, Shanafelt T. A narrative review on burnout experienced by medical students and residents. Med Educ. 2016; 50(1):132–49.
- Cook AF, Arora VM, Rasinski KA, Curlin FA, Yoon JD. The prevalence of medical student mistreatment and its association with burnout. Acad Med. 2014;89(5):749–754.
- Jenkins TM, Kim J, Hu C, Hickernell JC, Watanaskul S, Yoon JD. Stressing the journey: Using life stories to study medical student wellbeing. Adv Health Sci Educ. 2018. https://doi.org/10.1007/ s10459-018-9827-0.
- Holden LM. Complex adaptive systems: Concept analysis. J Adv Nurs. 2005;52:651–657.
- Report: Complex adaptive systems: Research Scan. London, UK: The Health Foundation, 2010 August.
- Lesser CS, Lucey CR, Egener B, Braddock CH, Linas SL, Levinson W. A behavioral and systems view of professionalism. JAMA. 2010 Dec 22;304(24):2732–7.
- Aase I, Hansen BS, Aase K. Norwegian nursing and medical students' perception of interprofessional teamwork: a qualitative study. BMC Med Educ. 2014 Dec;14(1):170.
- Wilkes M, Kennedy R. Interprofessional health sciences education: it's time to overcome barriers and excuses. JGIM.2017 32(8):858–859.
- Reeves S, Zwarenstein M, Goldman J, Barr H, Freeth D, Hammick M, Koppel I. Interprofessional education: effects on professional practice and health care outcomes. Cochrane Database Syst Rev. 2008 Jan 23;1(1).

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.