

## Mentoring needs of distributed medical education faculty at a Canadian medical school: a mixed-methods descriptive study

Robin J. Krishnan,  
BSc, MSc

Lavanya

Uruthiramoorthy, BSc,  
MSc

Department of Epidemiology  
and Biostatistics, Schulich  
School of Medicine &  
Dentistry, Western  
University, London, Ont.

Noor Jawaid, BHS,  
MD

Division of Internal  
Medicine, Department of  
Medicine, University of  
Toronto, Toronto, Ont.

Margaret Steele, MD  
Department of Psychiatry,  
Schulich School of Medicine  
& Dentistry, Western  
University, London, Ont.;  
present address: Faculty of  
Medicine, Memorial  
University, St. John's, NL

Douglas L. Jones, PhD  
Departments of Physiology  
and Pharmacology and of  
Medicine, Schulich School of  
Medicine & Dentistry,  
Western University, London,  
Ont.

Correspondence to: Douglas  
Jones, dljones@uwo.ca

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**Introduction:** The Schulich School of Medicine & Dentistry in London, Ontario, has a mentorship program for all full-time faculty. The school would like to expand its outreach to physician faculty located in distributed medical education sites. The purpose of this study was to determine what, if any, mentorship distributed physician faculty currently have, to gauge their interest in expanding the mentorship program to distributed physician faculty and to determine their vision of the most appropriate design of a mentorship program that would address their needs.

**Methods:** We conducted a mixed-methods study. The quantitative phase consisted of surveys sent to all distributed faculty members that elicited information on basic demographic characteristics and mentorship experiences/needs. The qualitative phase consisted of 4 focus groups of distributed faculty administered in 2 large and 2 small centres in both regions of the school's distributed education network: Sarnia, Leamington, Stratford and Hanover. Interviews were 90 minutes long and involved standardized semistructured questions.

**Results:** Of the 678 surveys sent, 210 (31.0%) were returned. Most respondents (136 [64.8%]) were men, and almost half (96 [45.7%]) were family physicians. Most respondents (197 [93.8%]) were not formal mentors to Schulich faculty, and 178 (84.8%) were not currently being formally mentored. Qualitative analysis suggested that many respondents were involved in informal mentoring. In addition, about half of the respondents (96 [45.7%]) wished to be formally mentored in the future, but they may be inhibited owing to time constraints and geographical isolation. Consistently, respondents wished to have mentoring by a colleague in a similar practice, with the most practical being one-on-one mentoring.

**Conclusion:** Our analysis suggests that the school's current formal mentoring program may not be applicable and will require modification to address the needs of distributed faculty.

**Introduction :** L'École de médecine et de dentisterie Schulich, à London en Ontario, offre un programme de mentorat à tout le personnel enseignant à temps plein. L'École aimerait étendre son programme aux médecins enseignants des établissements de formation médicale décentralisée. Le but de cette étude était de déterminer à quel mentorat, le cas échéant, ces médecins ont accès actuellement et d'établir leur intérêt pour le programme de mentorat de l'École et leur vision du programme le plus approprié pour répondre à leurs besoins.

**Méthodes :** Nous avons mené une étude en méthodologie mixte. Lors de la phase quantitative, nous avons envoyé des questionnaires à tous les médecins des établissements de formation médicale décentralisée afin d'obtenir des renseignements sur les caractéristiques démographiques de base ainsi que les expériences et besoins de mentorat. La phase qualitative comprenait quatre groupes de discussion composés de médecins enseignants décentralisés dans deux grands et deux petits centres des deux régions du réseau de formation décentralisée de l'École, soit Sarnia,

Leamington, Stratford et Hanover. Les entrevues étaient d'une durée de 90 minutes et se composaient de questions semi-structurées normalisées.

**Résultats :** Sur les 678 questionnaires distribués, 210 (31 %) ont été retournés. La plupart des répondants (136 [64,8 %]) étaient des hommes et presque la moitié (96 [45,7 %]) étaient des médecins de famille. La plupart des répondants (197 [93,8 %]) n'agissaient pas comme mentors officiels auprès du personnel enseignant de l'École de médecine et de dentisterie Schulich et 178 (84,8 %) ne recevaient pas de mentorat officiel actuellement. L'analyse qualitative suggère que plusieurs répondants participaient à une forme quelconque de mentorat informel. De plus, environ la moitié des répondants (96 [45,7 %]) souhaitaient recevoir un mentorat officiel à l'avenir, mais avaient possiblement des contraintes liées au manque de temps et à l'isolement géographique. Les répondants ont systématiquement exprimé le désir d'obtenir un mentorat d'un collègue dans une pratique similaire et un mentorat individualisé, de façon pratique.

**Conclusion :** Notre analyse suggère que le programme actuel de mentorat de l'École n'est peut-être pas applicable et nécessitera des modifications pour répondre aux besoins du personnel enseignant décentralisé.

## INTRODUCTION

Extensive research has shown mentorship to be positively associated with faculty retention, career satisfaction and research productivity.<sup>1-5</sup> The Schulich School of Medicine & Dentistry at Western University, London, Ontario, is committed to facilitating the professional development and success of their faculty. In 2010, a formal mentorship program extending across the school was initiated to facilitate mentorship relationships among clinical and basic science full-time academics. An ongoing evaluation study conducted annually showed that over 50% of full-time medical faculty agreed that formal mentorship was beneficial to their career;<sup>6</sup> this finding was in accordance with previous research.<sup>7</sup>

Within the program's current framework, only full-time faculty must be offered a formal mentorship committee ([www.schulich.uwo.ca/hospitalandinterfacultyrelations/faculty\\_mentorship](http://www.schulich.uwo.ca/hospitalandinterfacultyrelations/faculty_mentorship)). The school also has an extensive distributed medical education program across southwestern Ontario, including a regional campus in Windsor. The distributed education program was established in 1997 to complement traditional undergraduate and postgraduate medical education within the academic London Health Sciences Centre and to offer learners additional rural exposure in the surrounding areas ([https://www.schulich.uwo.ca/medicine/undergraduate/current\\_students/dme.html](https://www.schulich.uwo.ca/medicine/undergraduate/current_students/dme.html), [https://www.schulich.uwo.ca/distributededucation/about\\_us/what\\_is\\_distributed\\_education.html](https://www.schulich.uwo.ca/distributededucation/about_us/what_is_distributed_education.html)). To date, several hundred distributed faculty have been appointed across the region to help support the school's distributed educational initiative.

The school would like to expand its mentorship program to physician faculty located in distributed medical education sites, as mentoring is recognized as being essential for career success.<sup>5,7,8</sup> We conducted a prospective mixed-methods study to determine what,

if any, mentorship distributed physician faculty currently have, to gauge their interest in expansion of the mentorship program of the Schulich School of Medicine & Dentistry to distributed physician faculty and to assess whether the school's current mentorship program is equipped to address their needs.

## METHODS

We used a mixed-methods approach encompassing a quantitative survey and qualitative focus group interviews. The primary population for this study was the distributed physician faculty of the Schulich School of Medicine & Dentistry, defined as physician faculty members with predominantly limited duties who reside in the school's distributed region. The questionnaire was designed by 2 of the authors (M.S. and D.L.J.). To ensure its appropriateness, it was piloted to members of the school's Faculty Mentorship Working Group and to 10 physicians who were full-time faculty with positions dealing with issues of faculty affairs. The quantitative survey, divided into 4 sections, was designed to determine 1) basic demographic characteristics (e.g., primary department affiliation and academic status), 2) whether the respondent was currently a mentor (defined as someone with experience and expertise in a field who provides guidance to other faculty members), 3) whether the respondent was currently a mentee (defined as someone who is less experienced or a novice in a certain field of expertise who is being guided by someone in that field) and 4) whether the respondent desired to be a mentee in the future (e.g., preferences for the format of a mentoring relationship).

We used 2 methods to maximize the response rate. First, quantitative surveys and information letters were mailed in accordance with the Dillman procedure, which emphasizes the use of sequential

mail outs to ensure adequate response rates.<sup>9</sup> Second, we used both handwritten and online surveys; respondents had the option to choose either format.

For the qualitative portion of this study, focus group interviews were conducted by M.S. and D.L.J. in 2 large and 2 small centres in both of the Local Health Integration Networks (Erie St. Clair and South West) of the school's distributed education network: Sarnia (Erie St. Clair; population 71 594), Leamington (Erie St. Clair; population 27 595), Stratford (South West; population 31 465) and Hanover (South West; population 7648). The largest distance between sites was about 325 km. Interview sessions were about 90 minutes in length, and an interview guide with preset questions was used to provide structure and consistency. Interview questions were open ended and were designed to highlight participants' mentorship experiences, perceived challenges and/or barriers to mentoring, mentoring needs and caveats that were deemed important in the format of a mentoring program. Interview transcripts were thematically analyzed by 4 independent reviewers (R.J.K., M.S., L.U. and N.J.) and were then merged. We used STATA 14 (StataCorp) for descriptive analysis of quantitative data.

### Ethics approval

The study was approved by the Western University's Health Sciences Research Ethics Board.

## RESULTS

### Quantitative results

Of the 678 physicians invited to participate in the study, 210 returned a survey, for a response rate of 31.0%. Most of the respondents were men (136 [64.8%]) and adjunct professors (178 [84.8%]); 96 (45.7%) were practising family physicians, and 27 (12.8%) were surgeons. The respondents ranged widely in age and clinical experience.

#### *Being a mentor*

Thirteen respondents (6.2%) perceived themselves to be mentors to school faculty. They engaged in a variety of mentoring relationships, including one-on-one mentoring (3 [23%]), participating in a mentorship committee at another school (1 [8%]), peer mentoring (2 [15%]) or a combination of all 3 (5 [38%]); 2 respondents (15%) did not answer this question.

Mentors felt confident in a variety of mentoring skills (Fig. 1) and had experienced both personal and professional benefit from their mentoring relationships (Fig. 2 and Fig. 3). Eight respondents (62%) stated that they wished to have additional training in being a mentor, specifically in the form of faculty development workshops (5 [62%]), modelling a mentor in combination with having

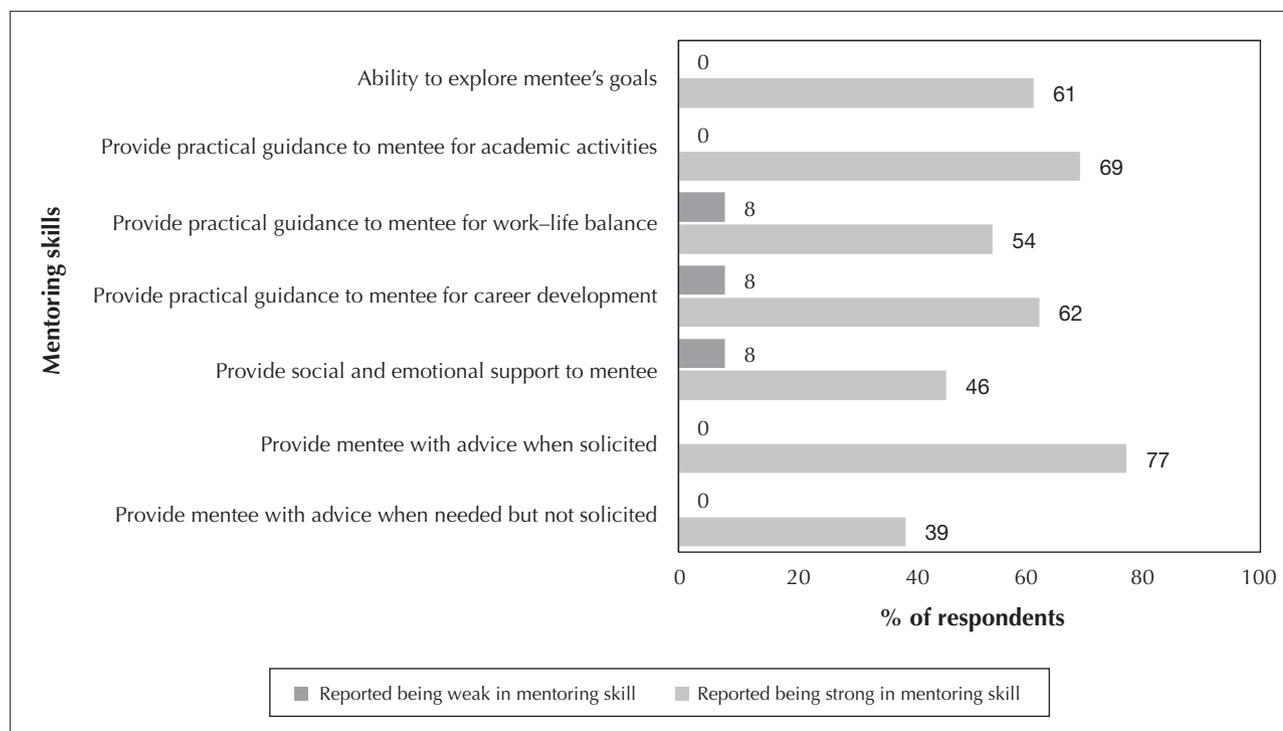


Fig. 1: Reported confidence in mentoring skills among mentors ( $n = 13$ ).

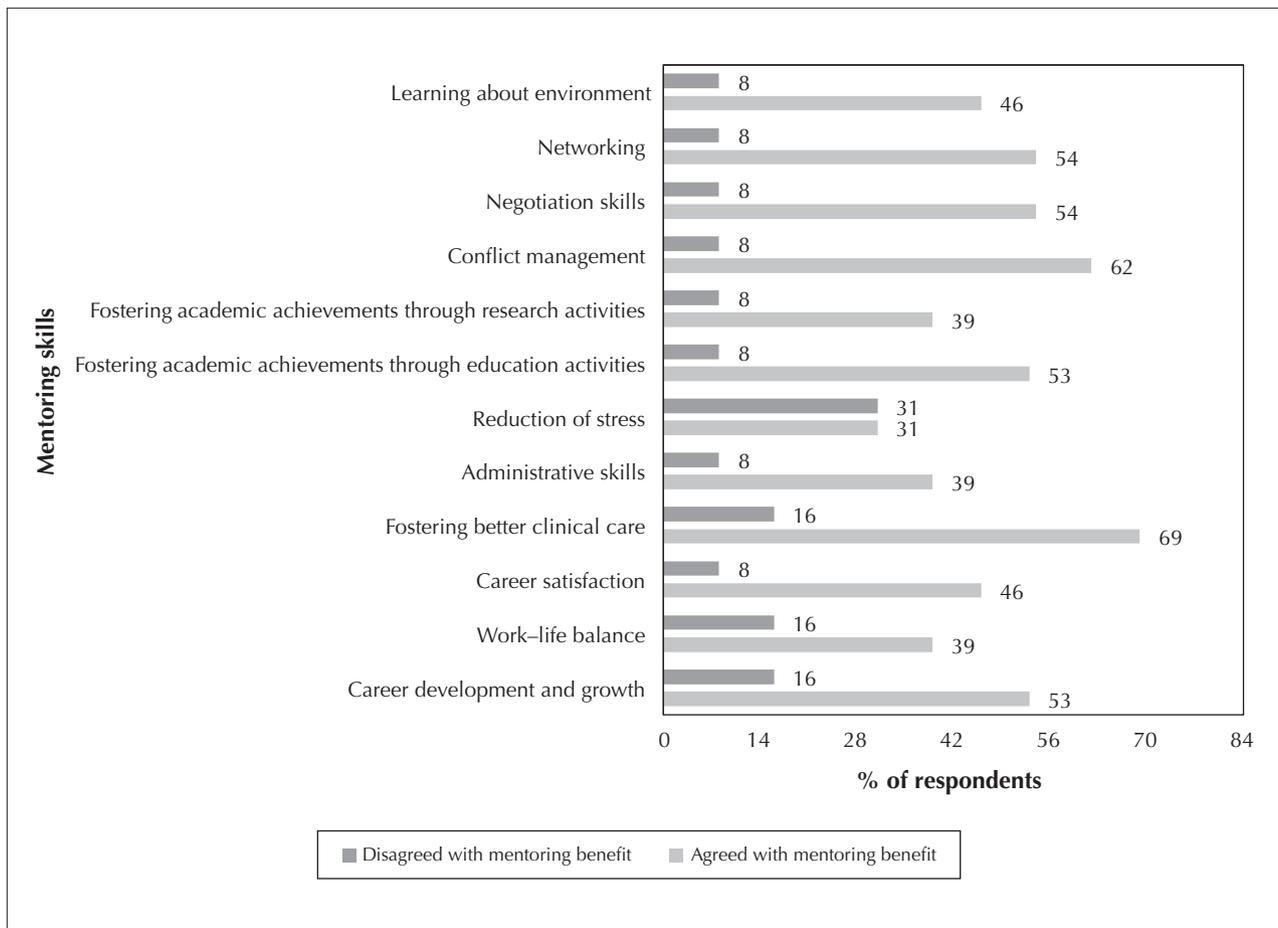


Fig. 2: Reported professional benefits of mentoring (n = 13).

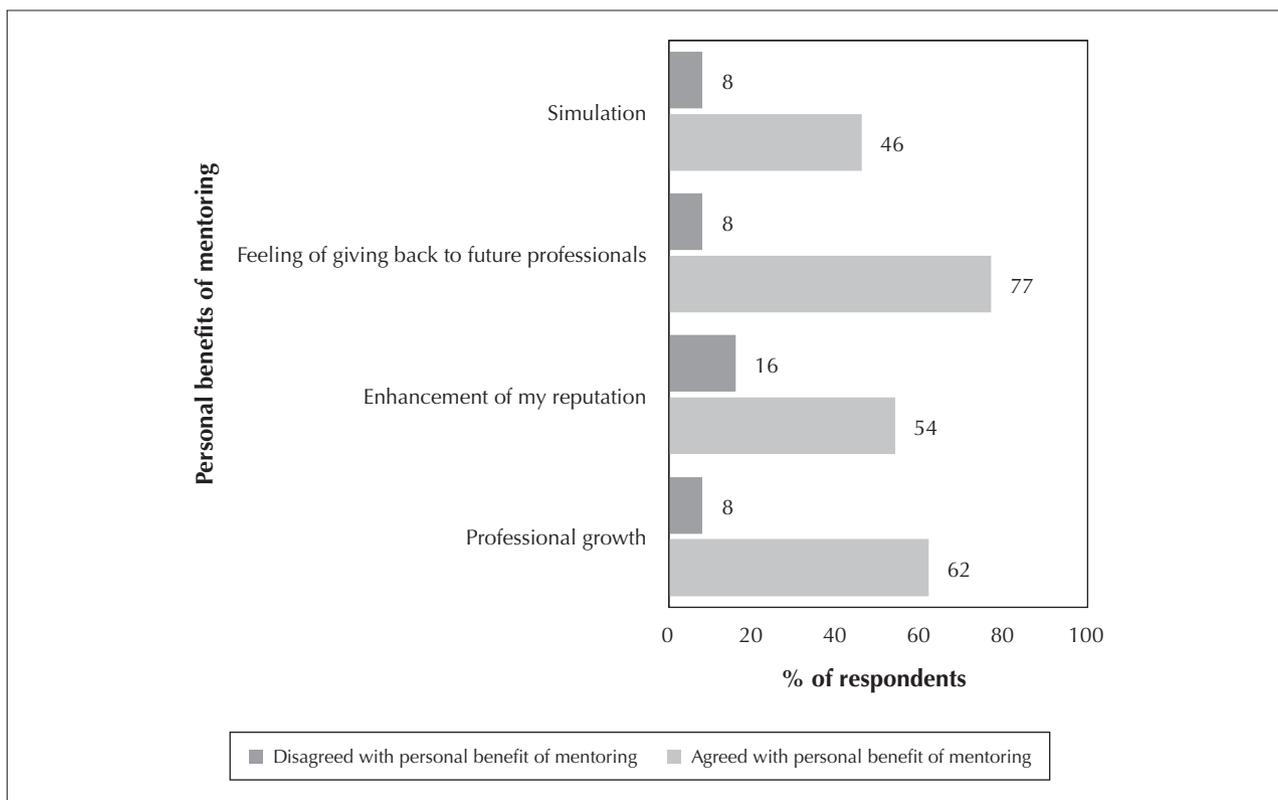


Fig. 3: Reported personal benefits of mentoring (n = 13).

supervision in mentoring (1 [12%]) or other forms of training, such as Web-based learning, books or self-learning modules (4 [50%]).

### Being a mentee

A total of 178 respondents (84.8%) reported not currently being formally mentored. However, 116 (55.2%) stated that they had benefited from some form of mentoring in the past: 56 (48.3%) had bene-

fit most from informal mentoring, and 39 (33.6%) had benefited from various combinations of mentoring types (Table 1). None had benefited from a peer mentoring committee alone.

Nearly half (96 [45.7%]) of respondents were considering being or wished to be mentored sometime in the future. Most (62 [64%]) wished to choose their mentor from a predetermined pool of willing mentors (Table 2). Respondents who wished to be mentored in the future were asked to rate their preferences regarding a variety of mentor attributes and mentorship opportunities. They valued mentors with primarily clinical or educational experience, and those holding a faculty appointment for more than 10 years (Table 3). They placed importance on opportunities within a mentoring relationship related to formal teaching in small groups, advisory meetings, informal discussion, sessions on faculty development, how to mentor medical students, how to conduct a literature review, developing networking skills and developing negotiation skills (Table 4).

Sixty-three respondents (30.0%) stated that they wished to have additional training in being a mentee, specifically in the form of faculty development workshops (49 [78%]), having supervision in being a mentee (4 [6%]), other training (2 [3%]), or 2 or more of these training types (6 [10%]); 2 respondents (3%) did not specify the type of training desired.

### Qualitative results

Attendance was low in all 4 focus group sessions, with 9 participants attending the focus groups across all 4 locations. Thus, it is highly unlikely that

**Table 1: Reported benefits of being a mentee among respondents who had previously benefited from mentoring**

Type of mentoring	No. (%) of respondents <i>n</i> = 116
Informal	56 (48.3)
Peer	11 (9.5)
Peer mentoring group	2 (1.7)
Multiple/network mentoring	1 (0.9)
Other	4 (3.4)
≥ 2 mentoring types	39 (33.6)
Not answered	3 (2.5)

**Table 2: Preferred method of being mentored among respondents who wished to be mentored in the future**

Preferred method	No. (%) of respondents <i>n</i> = 96
Randomly assigned	7 (7)
Choosing from predetermined pool of willing mentors	62 (64)
Personally choosing mentors	17 (18)
≥ 2 preferences	3 (3)
No preference	1 (1)
Not answered	6 (6)

**Table 3: Importance of mentor attributes among respondents who wished to be mentored in the future**

Mentor attribute	Importance; no. (%) of respondents <i>n</i> = 96					
	Not at all	Neutral	Somewhat important	Very important	Always important	Did not answer
Same sex	40 (42)	33 (34)	13 (14)	6 (6)	1 (1)	3 (3)
Opposite sex	41 (43)	47 (49)	5 (5)	0 (0)	0 (0)	3 (3)
From rural/regional area	13 (14)	38 (40)	21 (22)	14 (15)	7 (7)	3 (3)
From urban centre	18 (19)	45 (47)	19 (20)	10 (10)	1 (1)	3 (3)
Primarily educational expertise	7 (7)	13 (14)	30 (31)	35 (36)	8 (8)	3 (3)
Primarily research expertise	31 (32)	28 (29)	19 (20)	11 (11)	3 (3)	4 (4)
Primarily clinical expertise	1 (1)	7 (7)	15 (16)	42 (44)	28 (29)	3 (3)
Newly appointed faculty member (< 5 yr of appointment)	23 (24)	45 (47)	18 (19)	2 (2)	2 (2)	6 (6)
Established faculty member (> 10 yr of appointment)	2 (2)	16 (17)	32 (33)	35 (36)	8 (8)	3 (3)

thematic saturation was reached. Nonetheless, our qualitative study elucidated interesting aspects that align with our quantitative results.

Three major barriers to accessing structured mentorship programs were identified: time constraints, distance and inability to coordinate mentorship meetings (Table 5). Furthermore, in line with this study's quantitative results, focus groups revealed that distributed faculty perceive them-

selves to have no "structured" mentorship ("I don't think I've really had any mentorship from the school"); however, there was some evidence to suggest that distributed faculty were unknowingly engaging in informal mentorship ("Yeah, I do have my contacts of colleagues ... we talk to each other").

Qualitative analysis also revealed specific perceived needs and logistical requirements for the school's distributed faculty (Table 5).

**Table 4: Importance of mentorship opportunities among respondents who wished to be mentored in the future**

Mentorship opportunity	Importance; no. (%) of respondents n = 96					
	Not at all	Neutral	Somewhat important	Very important	Always important	Did not answer
Observing mentor during clinical hours	33 (34)	17 (18)	26 (27)	15 (16)	1 (1)	4 (4)
Observing mentor during research/academic work	33 (34)	28 (29)	24 (25)	7 (7)	0 (0)	4 (4)
Formal teaching in large groups	23 (24)	29 (30)	26 (27)	11 (11)	3 (3)	4 (4)
Formal teaching in small groups	15 (16)	17 (18)	31 (32)	22 (23)	7 (7)	4 (4)
Advisory meetings	13 (14)	22 (23)	29 (30)	22 (23)	6 (6)	4 (4)
Informal discussions	2 (2)	5 (5)	28 (29)	40 (42)	17 (18)	4 (4)
Sessions on faculty development — how to be a mentor or mentee	2 (2)	19 (20)	27 (28)	31 (32)	12 (12)	5 (5)
Sessions on how to mentor medical students and/or residents	2 (2)	11 (11)	25 (26)	38 (40)	15 (16)	5 (5)
Learning to do a literature review	15 (16)	26 (27)	26 (27)	19 (20)	6 (6)	4 (4)
Developing a research grant	27 (28)	25 (26)	24 (25)	13 (14)	2 (2)	5 (5)
Writing papers	25 (26)	26 (27)	19 (20)	14 (15)	8 (8)	4 (4)
Developing network skills	7 (7)	21 (22)	19 (20)	32 (33)	12 (12)	5 (5)
Developing negotiation skills	7 (7)	15 (16)	25 (26)	29 (30)	9 (9)	11 (11)

**Table 5: Perceived barriers to structured mentorship programs, and needs and logistical requirements**

Variable	Representative quote
<b>Barriers</b>	
Time constraints	It's just too busy, you're just overwhelmed with work.
Distance	I have always felt there's that distance barrier [with regard to formal mentorship].
Inability to coordinate meetings	Sometimes we are not able to coordinate with each other at the same time.
<b>Needs</b>	
Guidelines for teaching medical students	It would be good just to have feedback about what I should expect [the medical students] to do. ... Like certain guidelines.
Guidelines for giving constructive feedback	I would like to get more experience [as to] how to give constructive feedback to the [medical students].
Learning how to perform small procedures in the office	Other than that, maybe a little bit more in skill in doing small procedures in the office.
<b>Logistical requirements</b>	
Use of teleconference	I think it would be interesting if there was a teleconference that we sit there and go through, then definitely I think that a lot of us could access it.
Prerecorded videos	The video, that's a very good idea. Because then, you do that on your own time.
Shadow opportunities within other physicians' practices	We can always watch things on YouTube, but seeing in person is different. ... If I can have, like, a day with somebody: a dermatologist or orthopedic surgeon or somebody when they are doing small procedures. Go there, see them and see them practise.
Facilitation of informal mentoring networks and small-group sessions with distributed faculty from surrounding areas	It would be nice to have a local person ... who knows the community, knows the hospital, the delivery of care, the emergencies ... that's the most helpful ... so he would know our needs, our constraints, our time and all, [rather] than somebody from outside, although somebody from outside may know more about the academic and that side of it.

## DISCUSSION

Our results support the assumption that distributed faculty are interested in having mentorship. However, the current program for major academic centres is felt to be difficult to develop for distributed faculty, and an alternative strategy using technology and more one-on-one mentoring was felt to be more appropriate.

The sex and age distribution of our sample was heavily weighted toward male physicians and those more than 41 years of age. This is in line with the literature on mentors and mentees.<sup>10</sup> It will take some time to determine whether this will change, with enrolment in medical schools currently being equal between the sexes or slightly higher for women.

Our respondents clearly identified the advantages of the mentor–mentee relationship, and their input reflected an understanding similar to that of physicians at the larger centre.<sup>6</sup> Notably, a greater proportion of distributed faculty within this sample placed importance on having a rural mentor (44%) than an urban mentor (31%). This result was corroborated within the focus groups, where some participants felt strongly that finding a mentor with a similar practice was important, and from the quantitative survey, where 64% of respondents preferred to choose a mentor if given the opportunity. Furthermore, 90% of respondents wished to have more informal discussion opportunities as opposed to formal mentorship. These results are consistent with those of a previous study examining mentorship experiences among family physicians in another academic centre in Ontario.<sup>11</sup>

Perhaps not surprising were the perceived barriers due to time constraints and distance, which contributed to the issue of coordinating meetings. Although there are parallels in large centres, these were perceived to be more acute for the distributed faculty, which may also have contributed to the relative rarity of mentorship activities occurring on a regular basis for the distributed physician faculty. Nevertheless, respondents suggested ways to facilitate additional opportunities, many of which included the use of technology, while recognizing that different centres and offices could be limited in the extent to which they could use sophisticated technology. Thus the necessity for low-level but reliable technological solutions was important.

An unexpected finding was that, although those associated with larger centres had more ready access to opportunities to gather at a central location, there did not seem to be much of a discrepancy

in perceived barriers between the smaller and larger centres. Also, there was a desire for additional training opportunities for both mentors and mentees. As most of these opportunities are through face-to-face sessions at large centres, the need to address the availability of such training through technology is noteworthy.

Although the main objective of the study was to determine what type of peer mentorship would be most useful to the distributed clinical faculty, a consistent concern of the respondents related to their clinical practice and their interactions with residents with whom they were in a supervisory relationship as clinical teachers. There was some relation with mentorship, as this could be interpreted as looking for opportunities to be able to share best practices and discuss difficulties with trainees. In addition, there was a consistent request for the use of technology for improving access to professional development, thus circumventing the issues of protracted travel time for a short professional development session. There was also recognition that there could be an advantage to having occasional larger gatherings a few times per year with those in similar practices, which could be a social event coupled with educational programs. At the same time, there was a recognition that opportunities for ongoing and regular mentorship with peers were more likely to be achievable with one-on-one peer interactions (informal and formal), which could also be facilitated with technology.

## Limitations

Like all studies using survey design, this research was subject to lack of response. Our response rate was 31%. This, combined with the fact that the study was conducted within 1 school and the low attendance across the focus group sessions, means that our results should be interpreted with caution, as they may not be reflective of all distributed medical faculty population at this school or at other institutions. Despite these limitations, we believe that our results hold merit and set the standard for future studies.

## Conclusion

The current Schulich Faculty Mentorship Program involves formal mentorship catered to full-time faculty at the school. However, for the distributed faculty at this school, the combination of distance and time constraints, together with a desire for more informal discussions, suggests that the school's current formal mentoring program may not be

applicable to the needs of distributed faculty. It will require modification to address their perceived needs. There was a strong desire to have mentorship opportunities available, although it was felt that a variety of different formats were needed.

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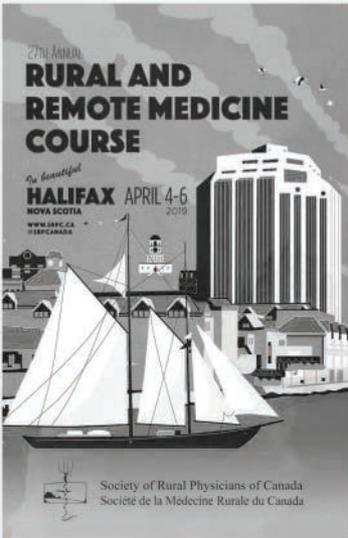
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**Competing interests:** None declared.

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