Exploring Mentoring Experiences, Perceptions, and Needs of General Internal Medicine Clinician Educators Navigating Academia: a Mixed-Methods Study

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BACKGROUND: Few studies examined specific mentoring needs and preferences of clinician educators (CEs). Further research on CEs' perceptions of mentoring adequacy, as related to educational development and career advancement, is needed.

OBJECTIVE: The study aims were to (1) explore general internal medicine CEs' experiences as mentees within various mentoring models; (2) examine the perceived quality, nature, and impact of mentoring on career development; and (3) determine whether specific models of mentoring impact their attitudes towards mentoring.

DESIGN: Sequential mixed methods study design answered the study questions.

PARTICIPANTS: Society of General Internal Medicine members identifying themselves as CEs.

MAIN MEASURES/APPROACH: Participants completed an anonymous online survey and a subsample participated in two semi-structured focus group discussions. Outcomes of interest were perceptions of mentoring experiences, and perspectives on quality of mentoring as well as mentoring needs specific to clinician educators.

KEY RESULTS: One hundred thirty-nine participants completed the survey (37% response rate) with 20 participants in focus group discussions. Among CEs with perceived high-quality mentor relationships (e.g., reporting strongly agree), peer mentorship was viewed as adequate mentorship (45% (n = 17) vs 24% (n = 24), $p < 0.05$), as beneficial for career development (77% (n = 40) vs 48% (n = 41), $p < 0.01$) and as being challenged to become a better CE (58% (n = 30) vs 35% (n = 29), $p < 0.05$), compared to reporting agree or lower. Qualitative analysis generated four themes: (1) A mentoring team promotes career advancement, (2) peer mentors are important at every stage of a CE's career, (3) there is inadequate mentoring specific to CE needs, and (4) mentoring needs protected time and skill development.

CONCLUSIONS: The traditional dyadic mentoring relationship may not adequately address all professional needs of CEs. A mentoring team can provide valuable perspectives on career goals. Peer mentoring can be powerful for professional growth. Mentoring needs change at different career stages and training in mentoring skills is essential.

KEY WORDS: clinician educator; mentoring experiences; peer mentor; mentee; mentor.

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INTRODUCTION

Similar to Odysseus who had *Mentor* as an advisor and teacher to his son Telemachus in the *Odyssey*, most academic clinicians seek out wiser and more experienced colleagues to help them navigate their careers. This traditional dyadic relationship involving an early-career mentee paired with a mid- to late-career mentor is still the most common type of mentoring in academia[1]. Although academic general internists include clinician investigators, clinicians, clinical leaders, and clinician educators, the quality and adequacy of mentoring focusing specifically on clinician educators' professional goals are not well studied.

For academic physicians, mentoring is perceived as key to professional advancement, personal growth, and job satisfaction[2]. Lack of mentoring can be a barrier to completion of scholarly projects, successful publication, and career advancement overall[2]. Mentees perceive that mentoring promotes academic progression, especially within the areas of clinical research and education[1]. In addition, faculty retention appears to be enhanced when there are mentoring programs in place[1], whereas physician turnover increases in the absence of mentoring programs[3].

However, smaller academic programs may not have enough "senior mentors" available to meet the needs of junior faculty. Newer models of mentoring such as mentoring networks, peer mentoring, virtual mentoring, and group mentoring can be effective in filling this need[4–9]. Specifically, peer mentoring provides a psychologically safe environment and considered

valuable for professional growth at multiple levels from medical students to faculty[10–12].

While the perceptions of mentors have been the subject of multiple previous studies[13], it appears that only one study has examined in-depth the mentoring experiences of junior faculty[14]. Chew et al. reported that 44 (36%) respondents (clinician researchers and CEs) had a mentor, but only 18% of CEs had access to a senior mentor[14]. Multiple systematic reviews[1,2,11] have noted that mentoring is vital in academia in general, but the specific needs of CEs are less well reported. Therefore, it would be helpful to rethink the mentoring paradigm that could adequately meet the needs of CEs, before designing mentoring initiatives around educator development[5]. The aims of this study were to (1) explore general internal medicine CEs' experiences as mentees within various mentoring models; (2) examine the perceived quality, nature, and impact of mentoring on general internal medicine CEs' career development; and (3) determine whether specific models of mentoring impact CEs' attitudes towards mentoring.

METHODS

Using a concurrent mixed methods approach, we explored mentoring experiences and perceptions of general internal medicine CEs, focusing on quality and adequacy of mentoring in meeting their specific career needs, different mentoring models available for CEs and their effects on participants' perceptions of mentoring. We administered an online survey to obtain quantitative data from a broad range of CEs around the country and used focus group discussions to obtain deeper insights into topics that may have remained untapped in the questionnaire.

Quantitative Analysis

The survey was distributed, via an anonymous online link using the Qualtrics software, to self-identified CEs within the Society of General Internal Medicine (SGIM) from October to December 2017. The SGIM Education Committee members developed, reviewed, piloted, and revised the online survey prior to sending it out for data collection. Survey questions sought to characterize various aspects of respondents' mentoring relationships. While many CEs have multiple mentors, we asked respondents to answer questions based upon their mentoring experiences with their self-defined "primary" mentor. Respondents were excluded if they did not self-identify as a CE. Summary univariate descriptive statistics and Chi-square analysis were performed using SPSS 25. For significant Chi-square results with multiple group comparisons, post hoc analyses were conducted using z-tests to detect differences in proportions among multiple categories (e.g., instructor, assistant professor, associate professor, professor). All reported multiple category differences were significant with a $p < 0.05$.

Qualitative analysis

To obtain in-depth qualitative data, we used purposeful sampling to recruit volunteers from within the survey sample to participate in one of two 60-min, in-person focus groups at the 2018 SGIM Annual Meeting. The focus groups were planned at the outset of the study and intended to be complementary to the quantitative, survey data. "Opting in" to focus group participation redirected participants to a separate Qualtrics survey to provide contact information, thus keeping all survey responses anonymous. Though not piloted, focus group trigger questions were discussed in-depth by the research team beforehand to ensure clarity. See Appendix for sample questions.

Focus groups were audiotaped and transcribed. SR facilitated the discussions and AN observed and recorded field notes. Personal identifiers were removed in the final transcripts. Investigators AN and AC independently coded the transcripts to assign codes to passages of transcripts referring to specific topics or concepts. They met with a third investigator, SR, to clarify, finalize, and reach consensus on the codes. At this point, all three investigators met to identify important themes based on key concepts repeated and/or emphasized by participants. Rigor was ensured through triangulation of data collection and analysis, and discussions at team meetings.

The Institutional Review Board at the Northeast Ohio Department of Veterans Affairs Medical Center designated this study as exempt from review.

RESULTS

Quantitative Results

A total of 139 CE faculty completed the survey. In 2017, the total membership of SGIM was 2736, with 40%, or 1094, self-identifying as being a CE. Because approximately 34% of SGIM membership was recorded as opening email links from the GIM Connect server, we estimated the denominator for potential survey respondents to be 372; thus, the estimated response rate was 37%. Demographic data are presented in Table 1.

Several CEs reported choosing their own mentors, having mentors at outside institutions and cultivating a network of peer mentors as being highly valued (Fig. 1). The three most frequent reasons CEs met with their mentors were career advancement/promotion, deciding which professional opportunities to pursue, and developing educational products (Fig. 2). Mentoring served different purposes for junior and senior faculty. More assistant and associate professors than full professors used mentoring sessions to discuss career advancement ($n = 56$ (92%), $n = 35$ (90%) vs $n = 12$ (57%); Chi-square = 19.48, $df = 4$, $p < 0.001$). In addition, more assistant professors than full professors used mentoring sessions for help in

Table 1 Demographic Data

		N	%
Gender			
	Men	40	29
	Women	99	71
	Total	139	100
Age			
	< 30	1	1
	30–35	35	25
	36–44	52	37
	45–55	31	22
	55–65	17	12
	> 65	3	2
	Total	139	100
Academic rank			
	Instructor	12	9
	Assistant professor	61	44
	Associate professor	39	28
	Professor	21	15
	Other	6	4
	Total	139	100
Number of active mentors			
	One	41	29
	Two	43	31
	Greater than 3	55	40
Frequency of meeting with primary mentor			
	Annually	13	9
	Twice per year	21	15
	Quarterly	35	25
	Monthly	34	25
	As needed	22	16
	Other	13	9

deciding which opportunities to pursue (n = 55 (90%) vs n = 12 (57%); Chi-square = 14.65, df = 4, $p < 0.01$).

Regarding mentorship experiences, the majority of CEs agreed or strongly agreed that they receive adequate mentoring, that being mentored was beneficial for career advancement and contributed to increased academic products, and that their mentors challenged them to be better CEs (Fig. 3).

After adjusting for academic rank, female mentees were more likely to discuss career advancement (88% (n = 87) vs 70% (n = 28), $p < 0.05$), to set the agenda during mentoring sessions (46% (n = 45) vs 23% (n = 9), $p < 0.05$), and to discuss negotiation tactics (34% (n = 34) vs 8% (n = 3), $p < 0.001$), than their male counterparts. Gender congruence between mentee and mentor was more common than non-congruence. Seventy percent (n = 69) of female mentees had a primary female mentor and 30% (n = 30) had a primary male mentor ($p < 0.01$). Sixty-eight percent (n = 26) of male mentees had a primary male mentor and 32% (n = 12) had a primary female mentor ($p < 0.01$).

We compared the CEs' perceived attitudes regarding the quality of their mentoring relationships with their mentoring experiences. There were no statistically significant outcomes on the CEs' mentoring experiences when reporting negative (i.e., strongly disagree or disagree), neutral, or mildly positive (e.g., agree) attitudes regarding the perceived quality of their mentoring relationships. We found significant differences in the mentoring experiences for CEs reporting high quality (e.g., strongly agree) mentoring relationships, as compared to the group reporting agree or lower. Of the examined mentoring experiences, peer mentorship was reported as the most beneficial for CEs with perceived high-quality mentoring relationships, which was followed by having a mentor at an outside institution and being in a structured mentoring program at one's home institution. Among CEs with perceived high-quality mentor relationships, the presence of peer mentorship was more likely to be viewed as having adequate mentorship (45% (n = 17) vs 24% (n = 24), $p < 0.05$), as being beneficial for one's career development (77% (n = 40) vs 48% (n = 41), $p < 0.01$) and as being challenged to become a better CE (58% (n = 30) vs 35% (n = 29), $p < 0.05$), compared to those reporting agree or lower (Table 2). Among CEs with perceived high-quality mentor relationships, the presence of having a mentor at an outside institution was also perceived as being beneficial for one's career development (72% (n = 39) vs 50% (n = 42), $p < 0.01$) and as being challenged to become a better CE (58% (n = 29) vs 37% (n = 30), $p < 0.05$), compared to those reporting agree or lower (Table 2). Also, CEs, who had perceived high-quality mentoring relationships, reported having adequate time to meet with their mentors when participating in a structure mentoring program at their home institution (45% (n = 17) vs 24% (n = 24), $p < 0.05$), compared to those reporting agree or lower (Table 2).

Qualitative Results

A total of 22 participants volunteered to participate in focus groups, and 20 were included in two focus groups (10 people each) held at the 2018 SGIM annual meeting. Two participants declined due to scheduling conflicts. We received demographic information from 18 attendees. The focus group attendees consisted of 8 assistant professors, 9 associate professors, and one professor. One was in New England, seven in Mid-Atlantic, eight in the South, one in the Midwest, and one in the Northwest. Nine were female. All were from university-based programs, representing 13 unique programs. We identified four key themes from participant narratives that were relevant to our research questions:

(1) A mentoring team promotes career advancement.
(2) Peer mentors are important at every stage of a CE's career.
(3) There is inadequate mentoring specific to CE needs.
(4) Mentoring needs protected time and skill development.

These themes are discussed in greater detail along with representative quotes below.

Theme 1: A Mentoring Team Promotes Career Advancement.

> All participants stated that mentoring is essential for career development. Many expressed the importance of having multiple mentors, or a mentoring team, who could offer a range of perspectives on different aspects of career development. Several participants reported having a diverse group of mentors, even in areas where

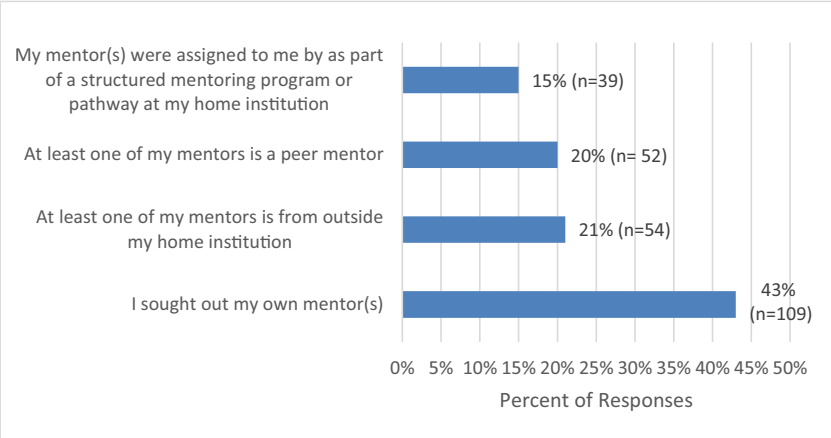

Figure 1 CE mentoring experiences.

they were "less interested," was beneficial for career development. Without a mentor advocate, educators could expend needless energy searching for opportunities, volunteer for activities they had no interest in and show up at meetings just to be seen.

"All the training in the world is one thing, but [one needs] mentorship to help guide you down the path. Lack of mentoring can be a barrier for advancement."

"The biggest thing I've noticed with having less mentors is the advocacy…less people that would bring up my name…I have to force myself to go to some stuff I don't want to go to just to be in the room…Where before I had mentors that would be in a meeting and say, hey, [name] would be good for that."

Although many participants acknowledged that a mentor is distinctly different from a sponsor, some felt sponsorship was one of the tasks of a mentor.

> "…I've had both mentors and sponsors, and without sponsors, I would never had had leadership roles that I have. I would never be able to publish a paper without some of the mentors I've had."

Theme 2: Peer Mentors Are Important at Every Stage of a CE's Career. Peer mentoring was thought to forge close professional relationships, create a collegial culture, a safe space to discuss challenges to professional growth, foster collaboration on projects, and allow a team of peers to spur each other on professionally.

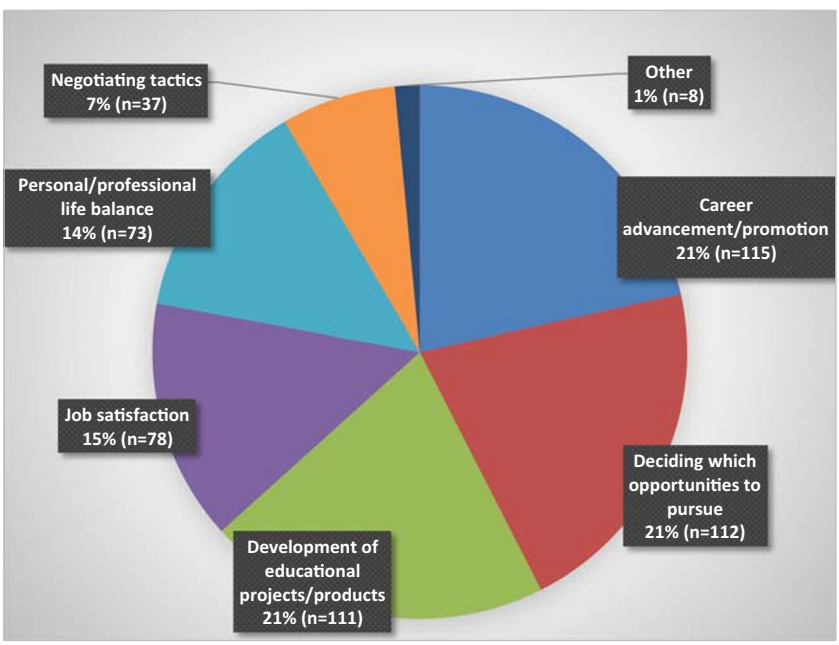

Figure 2 Reasons CEs met with their primary mentor.

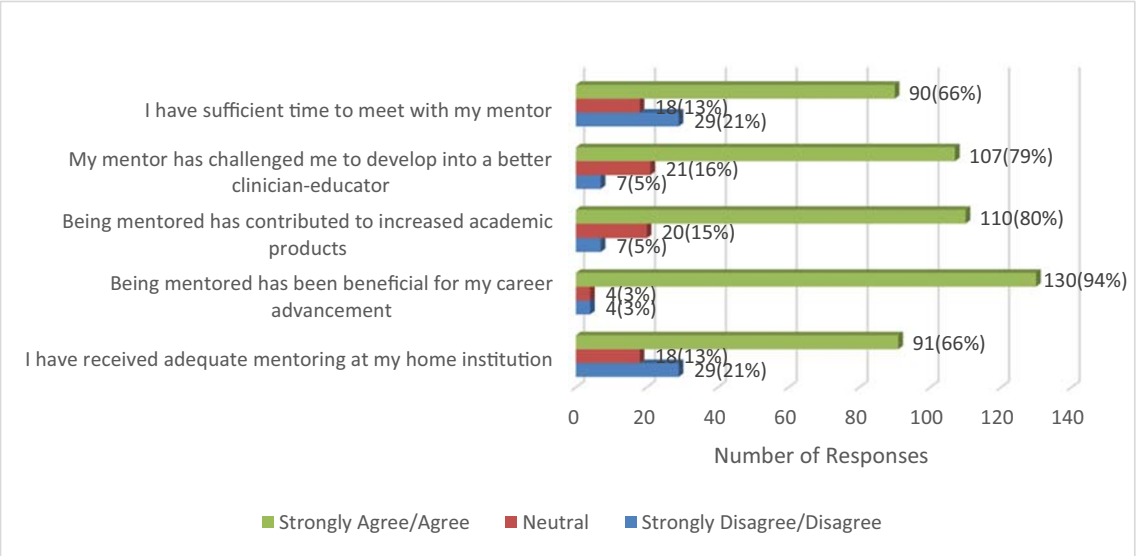

Figure 3 Perceived attitudes of CEs regarding quality of mentoring received by primary mentor.

"at my institution, you have to publish quite a bit. And it's hard as a clinician educator to get the time to really make that happen…I kind of consider my peers as this group of people who are trying to be productive and that we are all on each other's projects, but everybody tries to spearhead just one thing because that's possible, with our schedules."

"So there are little teams that produce the curricula; I oversee those teams. And the one that I feel closest to, we call ourselves the Three Musketeers…So I'll tell you that that's the mentorship I get, is just the camaraderie of those curricular groups."

Peer mentoring seemed to be particularly important and impactful for more CEs at more advanced stages of their career. Participants indicated that it was harder to find more experienced mentors who could guide them effectively as they themselves became more senior.

"….as one grows in their career and becomes more senior [there are] fewer people you think of as true formal mentors but [you have] a greater peer network."

I would say that there probably is a larger peer network now than I had when I was more junior, just because I think I've recognized how much I gained from those peer networking kinds of relationships."

Theme 3: There is Inadequate Mentoring Specific to CE Needs. There was a strong perception that CEs have unique academic challenges. Participants indicated that mentors who

Table 2 A Comparison of Percentages Between Perceived High-Quality Mentoring Relationships (Strongly Agreed vs Agree or lower) and Mentoring Experiences

Mentoring experiences	Type of mentoring relationships											
	I was assigned to a structured mentoring program			I sought out my own mentor			At least 1 of my mentors is outside my home institution			At least 1 of my mentors is a peer mentor		
	Yes, %	No, %	*p*	Yes, %	No, %	*p*	Yes, %	No, %	*p*	Yes, %	No, %	*p*
I have received adequate mentoring at my home institution	39	30	0.36	33	31	0.84	30	35	0.55	48	23	<0.01
Being mentored has been beneficial for my career	59	59	0.97	59	59	0.99	72	50	0.01	77	48	<0.01
Being mentored has contributed to increased academic products	49	45	0.69	46	45	0.89	54	41	0.14	56	40	0.07
My mentor challenged me to develop into a better clinician educator	41	45	0.65	46	36	0.34	55	37	<0.05	58	35	<0.01
I have sufficient time to meet with my mentor	45	24	<0.05	32	21	0.27	30	30	0.96	35	27	0.35

advised them on navigating the healthcare system were unable to provide effective guidance in ascending the academic ladder as a CE.

> "...I've not found a good person. The one mentor I have is really navigating all the craziness on the health care side…It's not necessarily a clinician educator mentor, it's more of like, how do I best understand the landscape of health care so that I'm not setting myself up for failure..."
> "…the difficulty in finding an educational mentor makes us sometimes value that part of our mission a little bit less. Because you don't have someone pushing you and coaching you to really excel in the educational portion, then the default is to fall back to the clinical or the research component."

Some national organizations offer one-on-one mentoring programs, but the conversations among dyads tend to veer towards research, which may not fulfill the specific mentoring needs of CEs.

> "…the pairing…was with somebody who was very research-focused and was just like all about telling me about how to get research. I was like, that's great, that's the thing I am least interested in, though."

Theme 4: Mentoring Needs Protected Time and Skill Development. Mentoring skills were not considered as innate qualities and participants strongly recommended mentor training initiatives by institutions and organizations. They expressed that mid-career CEs who straddle the divide between being a mentee and a mentor particularly need development as mentors.

> "So we train people who want to be teachers. But we need…some way to train people who might be mentors to those teachers."
> "[A good mentor needs] the people skill of recognizing where your mentee is [and] not pushing your views/ agenda on the mentee"

In addition to the skills, participants encouraged national organizations like SGIM to purposefully set aside protected time for mentoring opportunities.

> "I think the idea of providing skills or ideas for how to be a good mentor and mentee are great, in addition to providing the opportunity for it."

DISCUSSION

Our study participants believed that mentoring was essential for career development and challenged them to become better CEs. Some participants indicated that a lack of mentoring can be detrimental to one's professional growth. Having multiple mentors, including peer mentors and mentors outside their own institution who could address different goals, was considered to have a strong impact on career growth. Peer mentors were associated with the most beneficial perceived mentoring outcomes. While some of these findings are consistent with those reported in literature[1,2,15,16], it is worth exploring four key concepts that were highlighted by our study: (1) mentoring that targets specific professional goals and career aspirations of CEs, (2) the impact of peer mentoring, (3) the mentoring needs at different career stages of educators, and (4) need for professional development of mentors.

Because CE promotion criteria can be vague, vary at different institutions, and educator careers can go in many directions, CEs are likely to have unique mentoring needs. Utilizing a mentoring network, comprising different skill sets, can allow CEs to receive guidance on multiple aspects of current and future career roles. Our focus group participants reported they were not sufficiently served by the traditional dyadic mentoring model unless the goals were task- or project-driven. Other researchers have pointed out the value of a mentoring team in providing faculty guidance on a range of mentoring needs [4]. The focus-group participants also reported a sense of being devalued when mentoring was not aligned with their career goals: for example, a clinician researcher providing sole career advice to a clinician educator. Expert clinicians may not be expert educators, and expert educators are not necessarily expert educational scholars. Some CEs also emphasized the importance of an influential sponsor who can promote the CE for professional opportunities, but it is important to acknowledge that mentorship and sponsorship are not synonymous.

Peer mentoring was perceived as an incredibly powerful form of mentoring by our participants. At all academic levels, peer mentoring was thought to be an effective model to enhance career development and academic productivity. While others have described peer mentoring as useful[4,5,7], our participants emphasized that this is particularly important for more senior CEs, where fewer senior mentors are available. They felt peer mentoring can motivate collaborative scholarly efforts and is very helpful for reflecting on mutual career challenges. Our participants also reported that peer mentoring is extremely effective when a CE is in leadership position but also needs assistance with career development and academic productivity.

Perceptions of mentorship experiences and goals for mentoring relationships appeared to vary based on stage of educators' careers. In our study, we found that assistant professors appeared to use mentorship to figure out how to advance to the next academic level and what opportunities to pursue, while full professors used mentorship to increase their academic output. Our results were in agreement with prior data showing that early- and mid-career CEs use mentoring to advance academically and professionally[1], while mid- and late-career CEs were willing to mentor junior faculty if their

role in the academic community was viewed as senior leadership or if they had opportunities for co-authorship or being coinvestigators[13].

Effective mentoring is more than "see one, do one, teach one," so there is a need for professional development in mentoring skills. Focus group participants reported feeling inadequate or "just winging it" when asked or instructed to mentor junior faculty. Therefore, mentoring programs targeting professional development of CEs and training specifically in these skills are required. Academic institutions can consider creating faculty development programs that hone important skills required for effective mentoring [17]. Institutions can also consider skill development on how to be an effective mentee as well. National professional organizations can consider workshops on effective mentoring techniques. The primary role of an effective mentor, in general, is listening to the mentee, reflecting upon the mentee's concerns and career goals, challenging the mentee to reach a higher goal, and supporting the mentee along the way. Most importantly, an effective mentor will prioritize the mentee agenda and assist the mentee in developing solutions. A mentor is distinctly different from a sponsor, who in a position of leadership provides opportunities for the CE, or a coach, who assists the CE in figuring out the task on his/her own. A mentor should not be expected to be the CE's sponsor or coach but may take on aspects of these roles in certain situations.

Limitations of the Study

Several limitations of our study merit discussion. First, our study sample is small and limited to the membership of one organization, SGIM. It is likely that our sample did not have sufficient representation from clinicians with less substantial teaching roles, as they may be underrepresented in the organization or may not have taken the survey. We may have missed hospitalist educators, as only some of them maintain membership in SGIM. However, SGIM is the principal organization for general academic internists. Therefore, our study sample is likely representative of internists who teach and practice in academic settings. Second, our survey has not been externally validated. However, each survey item was developed and vetted by a team of seasoned CEs. Third, two focus groups of 10 participants each may not adequately represent the breadth of CEs' experiences. More research is needed in diverse groups of CEs to confirm our findings.

The primary strength of our study is its unique approach in exploring CEs' experiences as mentees within a variety of mentoring models and assessing the quality, nature, and impact of mentoring on CEs' career development.

Areas for Further Research/Study

An area of further study would be to examine in-depth the role of peer mentoring for CEs. From our focus group participants, there is an expressed desire for formal mentoring training, and it would be important to evaluate the impact of such initiatives.

CONCLUSIONS

Increasingly, academic CEs appear to be moving away from the traditional, dyadic top-down mentoring model towards a mentoring team, comprising mentors at different career stages. Peer mentoring is a powerful form of mentorship for CEs at all stages of career development. Peer mentorship provides a safe space to discuss challenges and frustrations, promotes a collegial environment where they act as cheerleaders for each other, and fosters strong professional collaborations. As mentors arise from multiple professional levels, it is imperative for academic institutions and professional organizations to design robust mentor training initiatives so that mentors can facilitate the academic growth of professionals with a wide spectrum of career interests.

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Compliance with ethical standards:

The Institutional Review Board at the Northeast Ohio Department of Veterans Affairs Medical Center designated this study as exempt from review.

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

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APPENDIX. SAMPLE TRIGGER QUESTIONS FOR FOCUS GROUP PARTICIPANTS

- In your opinion how have mentors impacted your professional development?
- How do you think mentees and mentors benefit from the mentoring relationship?
- Can you describe the different types of mentoring that can be effective?
- How important is it to have multiple mentors to help one's academic advancement?
- What are your opinions regarding peer mentoring?
- Do you have suggestions for the Society to expand its mentoring initiatives specifically for CEs?