ACADEMIC MEDICINE
Journal of the Association of American Medical Colleges

Author: Triemstra Justin D. MD; Iyer Maya S. MD, MEd; Hurtubise Larry MA; Poeppelman Rachel Stork MD; Turner Teri Lee MD, MPH, MEd; Dewey Charlene MD, MEd; Karani Reena MD, MHPE; Fromme H. Barrett MD, MHPE

Title: Influences on and Characteristics of the Professional Identity Formation of Clinician Educators: A Qualitative Analysis

DOI: 10.1097/ACM.0000000000003843

Academic Medicine

DOI: 10.1097/ACM.0000000000003843

Influences on and Characteristics of the Professional Identity Formation of Clinician Educators: A Qualitative Analysis

Justin D. Triemstra, MD, Maya S. Iyer, MD, MEd, Larry Hurtubise, MA, Rachel Stork Poeppelman, MD, Teri Lee Turner, MD, MPH, MEd, Charlene Dewey, MD, MEd, Reena Karani, MD, MHPE, and H. Barrett Fromme, MD, MHPE

J.D. Triemstra is assistant professor of pediatrics and human development, and associate program director, Pediatric Residency Program, Department of Pediatrics and Human Development, Helen DeVos Children's Hospital, Michigan State University College of Human Medicine, Grand Rapids, Michigan.

M.S. Iyer is assistant professor of clinical pediatrics, and director, pediatric emergency medicine faculty development, Nationwide Children's Hospital and The Ohio State University College of Medicine, Columbus, Ohio.

L. Hurtubise is director, Office of Educational Innovation and Scholarship, College of Pharmacy, The Ohio State University, Columbus, Ohio.

R. Stork Poeppelman is a pediatric critical care fellow, Nationwide Children's Hospital, The Ohio State University College of Medicine, Columbus, Ohio.

T.L. Turner is professor of pediatrics, and vice chair of education, Section of Academic General Pediatrics, Baylor College of Medicine, Houston, Texas.

C. Dewey is professor of medicine and medical education and administration; assistant dean of educator development, and director, Center for Professional Health, Vanderbilt University Medical School/Vanderbilt University Medical Center, Nashville, Tennessee.

R. Karani is professor of medicine and medical education; senior associate dean of medical education and curricular affairs; and director, Institute for Medical Education, Icahn School of Medicine at Mt. Sinai, New York, New York.

H.B. Fromme is professor of pediatrics, and associate dean for faculty development in medical education, The University of Chicago Pritzker School of Medicine, Chicago, Illinois.

Correspondence should be addressed to Justin D. Triemstra, 100 Michigan St. MC 013, Grand Rapids, Michigan, 49503; telephone: (616) 391-2123; email: Justin.triemstra@helendevoschildrens.org; Twitter: @JTriemstraMD.

Supplemental digital content for this article is available at http://links.lww.com/ACADMED/B43.

Acknowledgments: The authors wish to thank the Helen Devos Children's Hospital Pediatric Research Operations for their support of this study and Linessa M. Zuniga, MD, MEd, Baylor College of Medicine, for her assistance with focus groups at this site.

Funding/Support: None reported.

Other disclosures: None reported.

Ethical approval: The study was approved or exempted by the institutional review board (IRB) at all sites with Michigan State University's IRB acting as the primary site.

Disclaimers: None reported.

Previous presentations: None.

Abstract

Purpose

Professional identity formation is the process of internalizing the ideals, values, and beliefs of a profession. In recent years, research on clinician educator (CE) identity formation has expanded, yet gaps exist in understanding initial influences on an educator identity, sustainment throughout a career, and development of successful pathways for early CEs. This study explored the initial influences on and characteristics of the professional identity formation of CEs in an age-diverse, multispecialty population in the United States.

Method

This was a cross-sectional qualitative study of a purposive sample of medical educators at 6 institutions across the United States between 2018–2019. Focus groups were conducted to obtain participants' perspectives on their career choice and subsequent formation of their professional identity as CEs. The authors used a thematic analysis of focus group data to identify themes and domains through an iterative process.

Results

Twelve focus groups were conducted with a total of 93 participants. Responses were categorized into 5 domains: community supportive of medical education, culture of institution and training, personal characteristics, facilitators, and professionalization of medical education. Themes highlighted the importance of role models and mentors, an affinity and aptitude for teaching and education, specific facilitators for entry into a career in medical education, the evolution from a layperson, importance of formalized training programs, and a supportive academic community.

Conclusions

Clinicians experienced a variety of factors that influenced their initial career choice in medical education and subsequent professional identity formation as a clinician educator. This study confirms and expands the current understanding of this process in an age-diverse, multispecialty population of CEs. Educators and administrators designing career development programs across the continuum of medical education should consider these aspects as they mentor and support their learners and faculty.

Cultivating a physician's professional identity has become a focus in medical education in recent years.[1] Professional identity formation (PIF) can be defined as the process of internalizing a profession's core values and belief.[2] In Cruess and colleagues' model of professional identity formation, a learner's identity is influenced by socialization through networks of mentors and role models, experiences, and attainment of knowledge throughout medical training.[3,4] Through these influences, learners move from peripheral participation in a community of practice (CoP) to full participation, and thus form their professional identity as a physician.[4]

Learners make multiple decisions related to their identity as they determine their specialty, clinical practice setting, and research interests.[5–7] During this process, learners consider future professional identities by testing, adopting, or rejecting specific career paths.[8] Specific influences such as values, role models, mentors, and a positive academic environment may direct an individual's decisions to choose an academic medical career.[6,7] Once in academia, physicians begin careers in research, education, or administration and express multiple identities in these mixed roles.[9] In particular, physicians who choose a career in education juggle multiple professional identities as clinicians, leaders, teachers, and educators.[10] Unlike other academic physicians, such as physician scientists or researchers, clinician educators (CEs) lack a well-defined academic career pathway despite having the essential roles of providing clinical care, training future physicians, and serving as health care administrators.[10–13]

Previous research on CE PIF demonstrates that CEs come from diverse professional backgrounds and often report a serendipitous career entry into medical education.[11,14,15] Once in medical education, an individual's motivation, organizational support, and effective networking are factors that contribute to a strong educator identity (EID).[16] The professional identity of an individual is an important aspect for personal growth,[17,18] but also for the practice of medicine

itself. For the individual CE, professional identity influences key aspects of faculty well-being, such as personal productivity, motivation, and career satisfaction.[1,3,17–19] For medicine as a whole, a dedicated, skilled CE workforce is required to advance the field of medical education, thereby also advancing medicine.

Previously, EID research has focused on specific, smaller educator cohorts, resulting in gaps around understanding EID.[10,16] More evidence is needed to understand initial influences on PIF, the sustainment of EID throughout a career, and successful career pathways for CEs.[12,16,19,20] By identifying initial influences and characteristics of EID, we create a pipeline effect where educators identify and train the next generation of CEs to affect the ever-changing health care environment through development of educational curricula and effective teaching strategies.[19,21] In this article, we further explore and report the thematic characteristics and inspirational events that have previously been found to positively influence a career choice in medical education and subsequent EID of an age diverse, multispecialty population of CEs in the United States.

Method

Recruitment and sampling

We conducted a multi-institutional cross-sectional qualitative study using focus groups of a purposive sample of CEs across the United States. Since PIF develops within a CoP,[3] we selected focus groups as our method for data collection to reflect the institutional CoP of our participants while they discussed shared experiences and perceptions.

Focus groups were held between August 2018 to September 2019 at 6 U.S. medical schools or affiliated hospitals. The health systems were diverse in size and geographic location: Michigan State University College of Human Medicine and Spectrum Health, University of Chicago Pritzker School of Medicine, The Ohio State University College of Medicine and Nationwide

Children's Hospital, Vanderbilt University School of Medicine, Icahn School of Medicine at Mt. Sinai, and Baylor College of Medicine. Each site leader invited CEs at their institution through email to participate in the focus groups. Participation in the focus groups was voluntary and participants did not receive any compensation.

Focus group format and questions

As site leads, researchers from our author group led the focus groups for their own institutions. Focus group questions were developed through an iterative process of literature review and expert input. The question guide included instructions and questions. Questions focused on initial influences of a career choice to explore formation of an EID and questions on career pathways to assess sustainment of EID. All site leads received training in facilitating focus groups using a semi-structured transcript with 8 open-ended questions (see Supplemental Digital Appendix 1, at http://links.lww.com/ACADMED/B43).

Data collection

We collected focus group data in real-time using audio recordings and/or written transcripts by institutional leads. The first 5 questions were relevant to this study and used in the analysis. Focus group transcripts were de-identified and recordings and notes were destroyed. We collected and managed participant demographic data using REDCap.[22,23]

Data analysis

Three investigators (J.D.T., M.S.I., and L.H.) conducted a thematic analysis of the focus group transcripts iteratively throughout data collection.[24] The coding group included a diverse group of health professions educators: a junior CE currently enrolled in an advanced educational degree program (J.D.T.), a junior CE and a senior CE with advanced educational degrees (M.S.I., H.B.F.), and a health professions educator with an advanced educational degree (L.H.). Theme

agreement was reached through an iterative coding process. Investigators (J.D.T., M.S.I., and L.H.) independently coded 2 transcripts, compared results, and fully aligned coding and theme definitions to develop a code book that was reviewed by an additional author (H.B.F.). All 3 coding investigators used the codebook to analyze a third transcript. All codes and themes were reviewed to ensure theme agreement. Subsequent transcripts were divided equally between the 3 primary coding investigators, who discussed final codes and themes to ensure consensus. Any new codes or themes were discussed throughout the coding process. The investigators agreed that theme saturation had been met when no new codes emerged. The study was approved by the institutional review board (IRB) at all sites, with Michigan State University's IRB acting as the primary site.

Results

Ninety-three individuals participated in the 12 focus groups, with 5–9 participants in each group. The participants represented a wide diversity in age, gender, academic track, educational experience, specialty, and roles in medical education (Table 1). We identified 5 overarching domains: a community supportive of medical education, culture of institution and training, personal characteristics, facilitators, and the professionalization of medical education. There were 20 themes within these domains, shown separately in Table 2 with representative quotes. Through these domains and themes, we were able to identify the following factors influencing the professional development of CEs.

Domains

Community supportive of medical education. Participants frequently noted how mentors and role models were essential to creating a supportive community, which included the process of socialization into the field of medical education. One participant related the importance of mentors: "I've had lots of different mentors, but having someone actually say that you can make a career out this, I had no idea." Another participant stated the importance of a role model as, "My idea of a medical educator was from the people that I observed and wanted to be like them, and think like them, and teach like them." Finally, the socialization, or citizenry, in medical education helped initiate and advance 'CEs' careers by having a supportive group of educators to help them develop and grow professionally.

Culture of their institution or training. Participants identified the culture of their institution or training as affecting their decision to choose a career in medical education. The academic culture of their training institution provided them with the opportunity to see medical education as a career choice early on. One participant reported, "Probably the main reason that I am in medical education is because I went to a medical school that had an expectation that you would stay in academic medicine." In addition, the culture of their current institution affected participants' professional development as well, with another participant stating: "Most believe that the environment here is an exciting and encouraging place for developing a medical education path." We noted that participants who worked primarily at or were currently employed by a community-based health system viewed their culture differently. One mentioned, "There wasn't much educational leadership … training," and another noted, "it's just not the same as the academic culture."

Personal characteristics. In addition to external influences such as mentors and culture of institution, internal influences emerged frequently as influencing their EID formation. These were grouped into personal characteristics and included the themes affinity , agency, aptitude, and responsiveness to learners. CEs frequently stated how having an affinity for teaching was essential for the reason they sought a career in education, such as, "Teaching was my passion." Also, participants expressed they had agency for seeing problems and having the internal motivation to fix them in the medical educational system. One respondent noted: "I looked at what the guy was teaching and I remember thinking … I would definitely teach this course very differently if I have to, and I had to." Furthermore, CEs mentioned they had aptitude—specific gifts or skillsets that led them to a career in education—and were responsive to learners' needs.

Facilitators. CEs expressed that their first formal roles were primarily facilitated through 3 different methods of entry into the profession: being selected, serendipity, or saying yes. Some participants were selected to take leadership roles. One educator noted that a supervisor had observed, "We need someone to do this … you look like a good person." Other participants mentioned it was a more serendipitous entry into formal opportunities, as when opportunities just "fell into" their laps. Another participant related how simply saying yes to non-formal opportunities allowed them the opportunity to be seen as an educator, which led to formal roles in the future. One CE reported, "You just look at every opportunity to get in front of the group or take on a small group and do it that way to get an educational role."

Professionalization of medical education. The concept of the professionalization of medical education and how there has been an evolution of medical education as a field influenced how some physicians transitioned to being a CE. One participant noted how formalized training programs might improve their teaching and scholarship skills in medical education: "If I got

some more formal training, I can take this skill to the next level. I can make it more rigorous." Another participant said: "Educators went from being the people who are good at it and loved it, to the people who are good at it, loved it, and had additional training in it."

Similarly, participants discussed how their evolution from a lay person was essential in their identity formation. They discussed how an ongoing transition occurred throughout their early career. One participant observed: "You went to medical school to learn to be physicians, and now you're doing more medical education and some people even introduce themselves as teacher, opposed to physician." And although this was a mostly positive transformation, some highlighted how "challenges can occur, including the changing of your professional identity as you move from clinician, to a leader, teacher, or administrator."

Participants also prominently mentioned a sense of duty, to help train the next generation of physicians. One noted, "I can influence the next generation of physicians who can go out and do more." Finally, ongoing experiences in education helped build the participants' identity as an educator. Another participant reported, "I didn't get a lot of the background on it. I just spent more time teaching the students, and so it's really just now that I'm seeing myself as a medical educator."

Discussion

This was a large-scale, multi-site, qualitative study of the influences and characteristics that affect the PIF of CEs in the United States. Due to the continued lack of value placed on educational scholarship[25] and a lack of a well-defined career pathway for CEs, it is important to focus institutional resources on the development of EID to improve academic productivity, motivation, and career satisfaction.[15,17,18] This development will prepare CEs to enable change to conventional curricular approaches and better prepare future physicians for the rapidly changing

educational and health care environment. Moreover, this also enables CEs to teach future teachers after developing solid educational foundation themselves. In this study, we utilized a specialty and experiential diverse sample of CEs to address the call for continued research into CE PIF.[19] Our larger sample size substantiates previous findings of smaller, less diverse cohorts and highlights the factors and characteristics that influence the PIF of CE described in theoretical schematics and frameworks on PIF.[4,26]

In addition to Cruess and colleagues' framework on PIF in learners, the influences and characteristics identified by participating CEs are similar to those related to medical student primary care specialty choice as described by the Bland-Meurer model.[27] Evidence about students' choice of primary care documents the influence of personal, societal, and career needs. Career needs are determined by a combination of pre-medical school life experiences, individual personality, and demographic features, and are shaped by the institutions' values and culture. Similarly, our data confirm that institutional environments, communities supportive of education, and personal characteristics influence career choice for CEs as well.[27] However, CEs also recognized that specific facilitators and the professionalization of medical education influenced their career choice. Therefore, recognizing how the 5 domains we identified have influenced CE career choices and subsequent EID can then be recognized as key contributors to PIF for this group.

Communities supportive of medical education, or CoPs, are key components of identity formation.[4,13] Similar to the professional socialization of a medical student to a physician, CoPs help move CEs from peripheral participation to full participation in education through mentorship, role models, and the process of socialization, as well as formal, informal, or hidden curriculum.[3] Mentors are key components of this supportive community and existing research

describes the important influence they have on PIF.[12,28,29] Mentors influence mentees' scholarship productivity, retention, career satisfaction, and development as a leader and educator.[13,30–33] In our study, mentors and role models also created a community supportive of medical education. Mentors allowed interested faculty the opportunity for socialization in the field of medical education and were an introductory influence on a career as a CE.[12] In addition, role models acted unknowingly as introductory influencers for CEs. Participants discussed observing exemplar educators and how they strove to emulate a similar career path.[8] Once in their professional role as a physician, the socialization and community of educators at their institution or in their professional organizations helped them further develop and identify as an educator.[4,12] These early career influences, whether through role models, mentors, or socialization, served as first introductions to the formation of an identity as a CE and entrance into a CoP. Mentors and role models are in their own process of professional formation and are being shaped by institutional learning environments and other external forces.[2] Early-career CEs, however, are watching and need their guidance. Therefore, institutional or departmental faculty development programs should support early CE PIF by providing the CoP and intentionally selecting exemplar educators as coaches or mentors.

Other early perceptions were shaped by the culture of participants' institution or training. Previous studies have shown that an academic environment during training leads to careers in academia[6,7] and has an effect on identity formation.[4] Similarly, our participants reflected how the culture of their institution or training acted as another introductory influence in EID development. While most of our participants trained at a university-based residency training programs, the importance of the institutional culture in providing early perceptions of a future professional identity as a CE was prominent. Alternatively, participants who identified as

community-trained physicians recounted the lack of this academic culture and how they felt it hindered their growth and knowledge of a CE career. Similar to findings from previous research, they saw themselves as a physician who teaches, not a CE.[34] It is possible this delayed introduction into a career in education at community-based training programs limits an individual's professional productivity while also affecting a clinician's entrance into their EID; however, this should be further explored in future studies.

In addition to external factors and motivators, the field of vocational psychology describes the individual's perception of their own innate ability to perform the tasks that are vital in a specific career when deciding on a career.[35] In medical education, these tasks emerged as the personal characteristics of affinity, agency, and aptitude. The affinity and aptitude to teach is an essential component of the job description of a CE to remained satisfied with their identity. Furthermore, recognizing gaps in the current educational system—for example, a curriculum—and having the skillset or aptitude as well as agency to change and innovate is also a crucial component to the identity of a CE.[26] These personal characteristics likely acted as specific facilitators that provided educators formal roles in medical education; either by being selected for a position or by simply saying yes to an opportunity, or by having a serendipitous career entry into medical education. It is important to note that this informal entry into a career as a CE may be contributing to the absence of a defined career pathway for educators. However, obtaining a formal position allows a CE to evolve from a layperson to a formally identified educator,[10] potentially hastening development of their EID. This transformation from clinician to a CE allows an individual increased institutional recognition and provides them specific avenues for continued career growth and furthering of their professional identity.[10] Thus, these personal characteristics can and should be measured, identified, valued, and nurtured earlier rather than later.

An increasingly common method of hastening and sustaining EID is to participate in formalized educational training programs, one example of the recent professionalization of medical education.[26] From 1996 to 2012, there was an increase from 7 master-level programs in health professions education to 76 master-level programs worldwide.[36] Similarly, over half of our participants had participated in local or national educational training programs, indicating the continued professionalization of medical education and evolution of medical education as a field and career path in academia. These formalized training programs, whether degreed, certificate, or at the institutional level, have hastened the development of EID through increased opportunities and training in curricular development, scholarship, and networking.[36–39] Therefore, resources should be directed to supporting faculty interested in participating in these programs as their success is evident for the individual and the institution.[19]

There are limitations in this study. Using focus groups across institutions with multiple site leads introduces variations in the focus group process. While we discussed the importance for consistency between focus group leads, slight differences in interviewing styles may have influenced participants' responses. Also, since medical educators can be difficult to identify, our recruitment through known communities of educators at each institution may have affected our sample of participants, thus resulting in a sampling bias.[11] However, our quantitative data appear to be a representative sample of the medical educational workforce across the Unites States. Therefore, future quantitative studies of a wide representation of CEs through large-scale sampling should occur to compare EID between specialties, experience level, and sociodemographic data to minimize concern for potential bias.[40]

Conclusions

Understanding the factors that influence a physician's decision to become an educator and subsequent PIF as a CE are essential for the future recruitment and development of an educational workforce. Our study confirms and advances the understanding of CE identity formation by outlining 5 themes in a diverse population of CEs. Educators can use these themes to design faculty and professional development programs for CEs. It is critical to build communities supportive of education, design programs that nurture specific personal characteristics essential to education and teaching, provide resources and funding for physicians to partake in formalized health professions education training programs, and develop a clinical learning environment supportive of medical education. Failure to do so could limit the professional growth of the CE workforce and negatively affect the future educational and health care environment. As CEs seek professional development, medical academics can turn to evidence to support the development of the EID and recruit a dedicated, diverse educational workforce that provides clinical care, researches and enhances medical education, and trains future physicians.

References

1. Cooke M, Irby DM, O'Brien BC. Educating Physicians: A Call for Reform of Medical School and Residency. San Francisco: Jossey-Bass; 2010.
2. Cruess RL, Cruess SR, Steinert Y. Teaching Medical Professionalism: Supporting the Development of a Professional Identity. 2nd ed. Cambridge, UK: Cambridge University Press; 2016.
3. Cruess RL, Cruess SR, Boudreau JD, Snell L, Steinert Y. Reframing medical education to support professional identity formation. Acad Med. 2014;89(11):1446-1451.
4. Cruess RL, Cruess SR, Boudreau JD, Snell L, Steinert Y. A schematic representation of the professional identity formation and socialization of medical students and residents: A guide for medical educators. Acad Med. 2015;90:718–725.
5. Borges NJ, Manuel RS, Duffy RD, Fedyna D, Jones BJ. Influences on specialty choice for students entering person-oriented and technique-oriented specialties. Med Teach. 2009;31:1086–1088.
6. Ranieri VF, Barratt H, Rees G, Fulop NJ. A qualitative study of the influences on clinical academic physicians' postdoctoral career decision making. Acad Med. 2018;93:1686–1693.
7. O'Sullivan PS, Niehaus B, Lockspeiser TM, Irby DM. Becoming an academic doctor: Perceptions of scholarly careers. Med Educ. 2009;43:335–341.
8. Ibarra H. Provisional selves: Experimenting with image and identity in professional adaptation. Adm Sci Q. 1999;44:764–791.

9. Rosenblum ND, Kluijtmans M, ten Cate O. Professional identity formation and the clinician-scientist: A paradigm for a clinical career combining two distinct disciplines. Acad Med. 2016;91:1612–1617.

10. Cantillon P, Dornan T, De Grave W. Becoming a clinical teacher: Identity formation in context. Acad Med. 2019;94:1610–1618.

11. Hu WCY, Thistlethwaite JE, Weller J, Gallego G, Monteith J, McColl GJ. "It was serendipity": A qualitative study of academic careers in medical education. Med Educ. 2015;49:1124–1136.

12. Bartle E, Thistlethwaite J. Becoming a medical educator: Motivation, socialisation and navigation. BMC Med Educ. 2014;14:110.

13. Sherbino J, Snell L, Dath D, Dojeiji S, Abbott C, Frank JR. A national clinician-educator program: A model of an effective community of practice. Med Educ Online. 2010;15.

14. Huwendiek S, Mennin S, Dern P, et al. Expertise, needs and challenges of medical educators: Results of an international web survey. Med Teach. 2010;32:912–918.

15. Sabel E, Archer J, Early Careers Working Group at the Academy of Medical Educators. "Medical education is the ugly duckling of the medical world" and other challenges to medical educators' identity construction: A qualitative study. Acad Med. 2014;89:1474–1480.

16. Browne J, Webb K, Bullock A. Making the leap to medical education: A qualitative study of medical educators' experiences. Med Educ. 2018;52:216–226.

17. O'Sullivan PS, Irby DM. Reframing research on faculty development. Acad Med. 2011;86:421–428.

18. Steinert Y, O'Sullivan PS, Irby DM. Strengthening teachers' professional identities through faculty development. Acad Med. 2019;94:963–968.

19. O'Sullivan PS. What questions guide investing in our faculty? Acad Med. 2019;94(11 Suppl):S11–S13.

20. Jippes E, Steinert Y, Pols J, Achterkamp MC, van Engelen JML, Brand PLP. How do social networks and faculty development courses affect clinical supervisors' adoption of a medical education innovation? An exploratory study. Acad Med. 2013;88:398–404.

21. Simpson D, Marcdante K, Souza KH, Anderson A, Holmboe E. Job roles of the 2025 medical educator. J Grad Med Educ. 2018;10:243–246.

22. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap): A metadata-driven methodology and workflow process for providing translational research informatics support. J Biomed Inform. 2009;42:377–381.

23. Harris PA, Taylor R, Minor BL, et al. The REDCap consortium: Building an international community of software platform partners. J Biomed Inform. 2019;95:103208.

24. Hanson JL, Balmer DF, Giardino AP. Qualitative research methods for medical educators. Acad Pediatr. 2011;11:375–386.

25. Irby DM, O'Sullivan PS. Developing and rewarding teachers as educators and scholars: Remarkable progress and daunting challenges. Med Educ. 2018;52:58–67.

26. Jauregui J, O'Sullivan P, Kalishman S, Nishimura H, Robins L. Remooring: A qualitative focus group exploration of how educators maintain identity in a sea of competing demands. Acad Med. 2019;94:122–128.

27. Bland CJ, Meurer LN, Maldonado G. Determinants of primary care specialty choice: A non-statistical meta-analysis of the literature. Acad Med. 1995;70:620–641.

28. Farrell SE, Digioia NM, Broderick KB, Coates WC. Mentoring for clinician-educators. Acad Emerg Med. 2004;11:1346–1350.

29. Kashiwagi DT, Varkey P, Cook DA. Mentoring programs for physicians in academic medicine: A systematic review. Acad Med. 2013;88:1029–1037.

30. Taylor CA, Taylor JC, Stoller JK. The influence of mentorship and role modeling on developing physician-leaders: Views of aspiring and established physician-leaders. J Gen Intern Med. 2009;24:1130–1134.

31. Sambunjak D, Straus SE, Marusić A. Mentoring in academic medicine: A systematic review. JAMA. 2006;296:1103–1115.

32. Choi AMK, Moon JE, Steinecke A, Prescott JE. Developing a culture of mentorship to strengthen academic medical centers. Acad Med. 2019;94:630–633.

33. Kirsch JD, Duran A, Kaizer AM, Buum HT, Robiner WN, Weber-Main AM. Career-focused mentoring for early-career clinician educators in academic general internal Medicine. Am J Med. 2018;131:1387–1394.

34. Snook AG, Schram AB, Jones BD, Sveinsson T. Factors predicting identity as educators and openness to improve: An exploratory study. Med Educ. 2019;53:788–798.

35. Krumboltz J. A learning theory of career counseling. In: Handbook of Career Counseling Theory and Practice. Palo Alto, CA: Davies-Black; 1996:55–80.

36. Tekian A, Harris I. Preparing health professions education leaders worldwide: A description of masters-level programs. Med Teach. 2012;34:52–58.

37. Haftel HM, Swan R, Anderson MS, et al. Fostering the career development of future educational leaders: The Success of the Association of Pediatric Program Directors Leadership in Educational Academic Development Program. J Pediatr. 2018;194:5–6.e1.

38. Corral J, Guiton G, Aagaard E. The impact of an academy of medical educators on the culture of an American health sciences campus. Acad Med. 2017;92:1145–1150.

39. 2012 National DMEFP Conference Team, Dewey CM, Turner TL, et al. Twelve tips for developing, implementing, and sustaining medical education fellowship programs: Building on new trends and solid foundations. Med Teach. 2016;38:141–149.

40. Volpe RL, Hopkins M, Haidet P, Wolpaw DR, Adams NE. Is research on professional identity formation biased? Early insights from a scoping review and metasynthesis. Med Educ. 2019;53:119–132.

Table 1

Characteristics of 93 Focus Group Participants, From a Multi-Institutional Study of Influences on and Characteristics of Clinician Educator Professional Identity Formation, 2018–2019

Demographic characteristic	No. (%)
Gender	
Male	31 (33.3)
Female	62 (66.7)
Other	0 (0)
Did not disclose	0 (0)
Age	
<30	0 (0)
31–40	22 (23.7)
41–50	35 (37.6)
51–60	23 (24.7)
>60	13 (14)
Specialty	
Pediatrics	27 (29.0)
Internal medicine	19 (20.4)
Psychiatry	7 (7.5)
Surgery	5 (5.4)
Obstetrics–gynecology	5 (5.4)
Family medicine	4 (4.3)
Neurology	1 (1.1)
Other	25 (26.9)
Academic track	
Clinician educator (non-tenure)	59 (63.4)
Clinician educator (tenure)	25 (26.9)
Research (non-tenure)	4 (4.3)
Research (tenure)	3 (3.2)
Did not answer	2 (2.2)

Academic rank	
Clinical instructor	2 (2.2)
Assistant professor	30 (32.2)
Associate professor	37 (39.8)
Professor	24 (25.8)
Setting of residency program	
University-based	77 (82.8)
Community-based	12 (12.9)
Military	2 (2.15)
Did not answer	2 (2.15)
Additional training in medical education[a]	
Certificate program (local)	22 (22.4)
Certificate program (national)	18 (18.4)
Masters	9 (9.2)
EdD/PhD	0 (0)
None	41 (41.8)
Other	8 (8.2)
Current role in medical education[b]	
Course director	4 (4.0)
Clerkship director	16 (16.2)
Program director	31 (31.3)
Assistant dean	5 (5.05)
Associate dean	6 (6.05)
Dean	0 (0)
Other	37 (37.4)
Total years in current role, mean (range)	7.19 (1–34)

Total years in formal education role	
Fewer than 10	48 (51.6)
11–20	29 (31.2)
21–30	12 (12.9)
>30	4 (4.3)
Total years in medical education	
Fewer than 10	41 (44.1)
11–20	25 (26.8)
21–30	17 (18.3)
>30	10 (10.8)

[a]N = 98 due to multiple answers per some participants.
[b]N = 99 due to multiple roles per some participants.

Table 2

Domains and Themes from Focus Group Transcripts, From a Multi-Institutional Study of Influences on and Characteristics of Clinician Educator Professional Identity Formation, 2018–2019

Domain and themes	Quotes
Community supportive of medical education	
Mentorship	"I think med ed is built on a culture of near peer and peer mentoring…. I think that's what makes med ed a lot different than perhaps other niches that people choose."
Role model	"I encountered two people and left that time and said, 'I want to be able to think like that.' It was patient care. It was education, it was all of it."
Socialization (citizenry)	"I think that network is helpful for advice and way finding in mentorship … that you have a critical mass of people that can help each other."
Culture of institution and training	
Academic	"I just was always surrounded by that [academia], so it was always the expectation that at some point, you take on some leadership opportunities [in med ed] or research."
	"The people in leadership were visible, the head of education, my clerkship director, my program director, and residency were very visible people and somewhat approachable."
Community	"I think a med ed career is just not as organic as it might be at an academic institution."
Personal characteristics	
Affinity	"I wanted to be a teacher or a doctor and I chose doctor over teacher, but now I get to do both."
	"When you go home and you pick up something to read for work, what do you pick up to read? If you are reading things that are about medical education, that's telling you something."
Agency	"Part of what inspired me to do it is to think I can't train these people to do my field if I don't really actually know how to teach to begin with."

Aptitude	"A lot of us were naturally gifted in teaching."
Responsive to learner	"The biggest thing I had to bring to the table is keeping who my customer is, making sure that I'm representing the residents and the medical students every time I'm in some type of a meeting."
Facilitators	
Selected	"The associate dean of student affairs helped by pulling me in and being selected and becoming the go to person that did a lot before I got a formal title."
Serendipity	"It truly was accidental." "I fell into it."
Say yes	"If you think specifically about what gets you into a more leadership role, as unfortunate as it is, it's saying yes to a lot of things, taking opportunities even if you don't really either get support or have the time. The more you say yes, the more you're willing to learn, the more opportunities you find overtime."
Professionalization of medical education	
Formalized training program	"I ended up doing a Master's in Health Professions Education and it was a door.… It was specifically that 4-plus years on professional development that made me very strongly say, 'This is what I'm only doing, educator stuff.'" "I learned to look for more exposure and completed the Educator Development Program scholars program and that American College of Cardiology skills development at the national meeting. I've also completed the Harvard Macy leaders' program."
Evolution of lay person	"Organically, I just started to do things and then I guess people noticed and then you get the well-defined, well-circumscribed role."
Duty	"I think the positive aspect is investing in the future of medical education." "This is really important. This is the next generation of doctors."

Evolution of medical education as a field	"Education is probably more defined … not just the teaching aspect but the curriculum development, the administrative opportunities and responsibilities."
Resilience in career	"I think another important thing is a little bit of comfort with failure in terms of you already know that if you make changes, not all of them are going to be right."
Developing a skillset	"I became used to making objectives, writing curriculum, all pretty much self-taught, but taught by example of those senior to me."
Experience	"You learn all kinds of things about yourself and about what's out there by actually doing stuff. One of the things you learn is actually how to be a medical educator actually through mentorship and through trial and error and through innovation. You figure things out."
Visibility	"Educators were extremely visible, and very hands on."