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To cite this article: Sarah Elizabeth Williams & Charlene M. Dewey (2019): Identification of training opportunities in medical education for academic faculty, Medical Teacher, DOI: 10.1080/0142159X.2019.1592138

To link to this article: https://doi.org/10.1080/0142159X.2019.1592138

Published online: 06 Apr 2019.

Article views: 19
Identification of training opportunities in medical education for academic faculty

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ABSTRACT

Introduction: Clinician-educators are responsible for providing education to trainees in medical centers. There is no clear overview of what opportunities exist for training clinician-educators in medical education related skills and techniques.

Methods: We conducted a systematic review of multiple websites and a medical educator listserve to identify medical education training opportunities for clinician-educators. We included certificate level programs or programs with comparable recognition and excluded masters programs, programs specific to one medical specialty or institution, and brief modules/sessions. We categorized results by training/focus area(s) and program details relevant for faculty.

Results: We identified 53 programs. Most focus on general medical education skills (N = 19, 36%), leadership (N = 18, 34%), or learner assessment (N = 16, 30%). Fourteen programs (26%) were exclusively online, 27 (56%) exclusively in-person, and 12 (23%) require in-person and distance components. Time requirements for completion vary greatly, ranging from 1 day to 3 years, as did program costs, ranging from $327 to $15,000.

Conclusions: Although training programs in medical education for clinical faculty exist, most focus on general medical education, leadership, and assessment. More programs focused on other topics, such as simulation or educational research, may be needed. Future investigations to understand the needs of this population would be valuable.

Introduction

Medical faculty at academic institutions conventionally engage in one or more of three principal roles: clinical care, research, and/or medical education (i.e. “the triple threat”) (Heflin et al. 2009). Although there is no consistent definition for the “clinician-educator”, the prevailing aspiration for this role is the combination of being a superior clinician, as well as a dedicated educator, to medical students, residents and physicians (Heflin et al. 2009). While most faculties received comprehensive clinical training through residency, many received less formal training (if any) in the fundamental knowledge and skills required to serve as competent and successful medical educators (Dilly et al. 2017).

As the importance and complexity of serving in the clinician-educator role grow, faculty may benefit from focused training opportunities in effective medical education techniques (Dilly et al. 2017). However, there is no clear overview of the opportunities that exist. Further, details such as the flexibility regarding the time commitment, travel requirements and costs for training opportunities would likely be important considerations for interested clinician-educators (McCullough et al. 2015). Specification of these factors would allow clinical faculty members to determine the appropriateness and accessibility of an opportunity within the context of their career and personal commitments.

The purpose of this study is to identify and describe available national and international opportunities for medical education training for academic faculty using a systematic approach. Our specific aims are to (1) identify programs that are achievable within the traditional faculty appointment (i.e. online opportunities, opportunities with brief, in-person requirements), and (2) categorize programs based on characteristics of training opportunities.

Methods

Search strategy

Using published guidelines on conducting a systematic review to execute and report our findings (Sewell et al. 2016), we applied multiple search techniques in summer 2017 to identify medical education training programs appropriate for clinician-educators. Online searches of Google, PubMed and the Education Resources Information Center, an online library of education research and information, sponsored by the Institute of Education Practice points

- Clinician-educators need attainable training opportunities in medical education.
- Multiple opportunities exist in general medical education skills, leadership, and learner assessment.
- Few training programs exist for other areas, such as innovation in medical education.

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Supplemental data for this article can be accessed here

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Inclusion/exclusion criteria

We specifically sought currently available training programs providing certificates or comparable recognition (e.g. advanced workshops, fellowships) upon completion. We excluded masters programs, training for specific medical specialties (e.g. specific for surgeons), programs limited to faculty of a particular institution, brief online modules which were not part of a certificate or other formal training program, or individual conference sessions/workshops.

Refinement

After completing the search, titles and brief descriptions of the programs were reviewed by two independent investigators (SW, CD) for determination of appropriateness for inclusion. If there was disagreement about whether a program should be included, or there was insufficient information available to determine whether a program should be included, the reviewers independently reviewed the opportunity in more depth. Issues were then resolved through face-to-face discussion. If necessary, a third reviewer made the final determination for possible inclusion.

Categorization

Training programs which met our criteria were categorized by areas of specified training program focus into eleven categories: (1) general teaching techniques/skills, (2) curriculum development, (3) feedback, (4) learner assessments, (5) simulation, (6) technology, (7) research, (8) innovation, (9) academic advancement, (10) management, and/or (11) leadership. Categories were constructed by the authors through a review of published standards for scholarship criteria. (AAMC Group on Educational Affairs 2007; Shields 2011) Categories were not mutually exclusive, therefore if one program focused on both technology and research skills, the program would be included in both categories. Further, if an identified program also included a brief introduction to other categories (e.g. a general medical education skills program introducing learner assessment), that program would only be included in the additional category if the program description included that category as a focus for the program. Both authors made these determinations.

The authors also assessed whether the training programs were intended for particular faculties, such as early career, mid-career, late career, minority faculty, or female faculty. Further, the authors attempted to identify reported costs for the program (exclusive of travel costs and conference attendance costs, if required) and time commitment needed. The authors then determined whether opportunities were to be completed exclusively in-person, exclusively online (distance) or required a combination of both in-person and distance components. Locations for the in-person components of the included programs was also determined. Results were analyzed using descriptive measures.

Results

Fifty-three ($N = 53$) faculty-training programs for medical educators were identified with organizations located in the US and internationally. An overview of each identified program is provided in Supplement Table 1 and the key features of each program are outlined in Figure 1. Fourteen programs (26%) are exclusively online, 12 (23%) programs require both in-person and distance components, and 27 (56%) are exclusively in-person programs. Time requirements for completion of training vary greatly, ranging from 1 day (2 certificate programs offered through the Association of Medical Education in Europe, or AMEE) (Association for Medical Education in Europe 2018) to 3 years (the Academic Pediatric Association (APA) Educational Scholars Program) (Academic Pediatric Association 2017). The cost for programs is also highly variable, ranging from $327 to $15,000. These costs are exclusive of additional travel or conference attendance costs if required. Four programs did not specify a cost or listed cost as to be determined at the time of manuscript preparation.

The majority of programs identified offered a certificate of completion ($n = 28, 53$%). Non-certificate granting programs were described as programs, courses, advanced seminars or workshops and frequently offered AMA APR Category 1 Credits (or equivalent international CME credits). For example, the Harvard Macy Institute (Friedrich 2002) offers 4 training programs. One of the Harvard Macy Institute’s programs entitled the Program for Educators in Health Professions offers over 100 CME credits for their one-year program.

Most programs meeting our inclusion and exclusion criteria describe their primary focus as either leadership ($n = 18, 34$%), general medical education skills ($n = 19, 36$%), or learner assessment ($n = 16, 30$%). However, several of the programs we identified covered topics in multiple areas and were therefore included as a training program in more than one category. For example, the APA Educational Scholars Program (Academic Pediatric Association 2017) focuses on general medical education skills and medical education research, thus both categories are marked for this program in Figure 1.

Nine programs focus on medical education research (17%) and five programs focus on each of the following categories: feedback (9%), simulation (9%) or management (9%). We identified four programs which focus on either technology (8%), academic advancement (8%), or
Figure 1. Program key features and focus.
curriculum development (8%) and one program focuses solely on innovation (2%).

Five entities account for over half of all identified programs. The Association of American Medical Colleges (AAMC) (Association of American Medical Colleges 2018) offers 12 separate programs which met our criteria, several of which are specific to certain populations (i.e. 2 for minority faculty and 2 for female faculty members). The Association for Medical Education in Europe (AMEE) (Association for Medical Education in Europe 2018) offers 10 programs which met our criteria, 4 of which are exclusively online. Maastricht University (Maastricht University 2019) offers 8 programs focused on a range of topics. The Harvard Macy Institute (Friedrich 2002) and the University of Illinois (University of Illinois at Chicago 2017) both offer 4 programs that met our criteria.

Discussion

Our search found a number of training opportunities to expand medical education skills and competencies for clinical educators. Opportunities exist that can be completed during a 2-day in-person session or exclusively in an online environment. We also identified programs that are specific to certain sub-groups in the clinician-educator community, such as female, minority or early career, mid-career, or senior faculty. Although there were numerous opportunities found for general medical education skills and leadership, few programs were identified that focus on certain specific topics, such as medical education research, curriculum development, innovation, or technology. Although many training opportunities exist, it is likely that more may be needed to fulfill the broad interests of this population.

Our search sought to identify meaningful training opportunities that are realistic for our target group, the clinician-educator. We found a limited number of programs that can be completed exclusively without travel from home institutions, but it is uncertain if this type of distance training provides the same level of experience and skill development as an intensive in-person program would provide. Further, it is uncertain if a distance program completed over the course of 1 year would be preferable to an intensive but brief in-person training program for clinician-educators. We also excluded programs at institutions that were only available to the institution’s own faculty. However, such programs would likely be beneficial, perhaps as a starting point for medical education training. Future studies could address these questions.

Most programs identified through our search focused on leadership, general medical education skills, or learner assessments. However, the medical education community is placing greater emphasis on other aspects of learning, such as utilizing innovative teaching methods, conducting medical education research to evaluate education effectiveness, and incorporating teaching into the familiar digital environment that exists for our millennial learners (Irby and Wilkerson 2003; Chandrasoma and Chu 2016). We identified opportunities for clinician-educators to gain skills in all of these areas, but as shown in Figure 1, more specific skill training opportunities are far fewer than opportunities focused on more general skills. For example, simulation education is increasingly used for both communication style training as well as training for traditional hands-on procedural skills, yet our search only identified 5 programs that focus on training the simulation teachers. The authors believe that given the importance of utilizing newer evidence-based and innovative educational skills, such as simulation style learning, more opportunities for this type of training would be valuable.

Approximately half of the identified programs offer a certificate upon completion of the course. However, many well-regarded programs included in our results do not offer a certificate, but are clearly still of great value and offer additional benefits to faculty members, such as CME credits. Thus, it is uncertain whether receiving a formal certificate of completion for a training course would be more valuable for an individual faculty member.

Our next steps include the development of an online portal for faculty members to identify medical education programs for themselves. We plan for the portal to be searchable by parameters that are most important for the individual faculty member (cost, time requirement, travel requirement, etc.) and updated routinely.

Our results were limited to opportunities identified in the summer of 2017. It is also likely our search technique did not identify every opportunity available at the time of this publication. However, with the development of the online portal, we hope to continue to identify new training programs and thereafter update the web-based portal as new programs, or new information on existing programs, are identified. Further, we excluded training programs that were only available to faculty members at the program institution as we were seeking programs with broader reach. Finally, certain information about specific programs was not available at the time of our review, such as updated cost or availability of the opportunity for the upcoming year.

Conclusions

A systematic review to identify opportunities for medical education training for clinician-educators identified several opportunities to gain skills in leadership, general medical education and learner assessment. However, opportunities focusing on other areas important for medical educators were limited.

Acknowledgments

We would like to acknowledge Camille Ivey, a librarian at the Eskind Biomedical Library who assisted with our search.

Disclosure statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

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