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Office of Medical Education: Opportunities for Trainees to Engage and Lead in Curricular Innovation and Reform

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Abstract

Introduction: The AAMC prioritizes promoting a diverse and culturally competent workforce which is thought to have a positive impact on the health of people living in the US. There is a lack of diversity in the current landscape of academic medicine and strategies are needed to effect change. This module introduced undergraduate and graduate medical trainees to leadership skills and opportunities in curriculum innovation and reform by learning about and interacting with the office of medical education (OME) at their institutions.

Methods: We implemented a workshop using small-group case discussions and didactics to help medical students and residents learn how to: (1) describe the structure and functions of an OME, (2) describe leadership competencies associated with various roles within the OME, and (3) identify opportunities for trainees to engage with the OME on curricular innovation and reform, especially advancing diversity and inclusion. **Results:** Across three sites, 45 learners completed partial or full workshop evaluations. Of learners, 22 (49%) were *not knowledgeable* and 13 (29%) were *somewhat knowledgeable* in identifying leadership opportunities for trainees to become engaged through the OME. There was a statistically significant increase in confidence after the workshop in “discussing an interdisciplinary approach to the creation of a medical education innovation,” and, “assessing the need for curricula change.” Over 90% of attendees agreed learning objectives were met. **Discussion:** This workshop succeeded in promoting awareness of the structure and function of OMEs and confidence in seeking opportunities to become engaged in medical education, especially in advancing diversity and inclusion.

Keywords

Academic Medicine, Workforce Diversity, Leadership Development/Skills, Case-Based Learning

Educational Objectives

By the end of this activity, learners will be able to:

1. Describe the structure and functions of an office of medical education (OME).
2. Describe leadership competencies associated with various roles within the OME.
3. Identify opportunities for trainees to engage with the OME to participate in curricular innovation and reform.
4. Review examples of how trainees can facilitate curricular change at their institutions to advance diversity and inclusion in medical education.

Introduction

The AAMC, as the key leader in medical education in the US, sets the foundation for the future development of academic medicine.¹ One of the AAMC’s strategic priorities is to promote a diverse and culturally competent workforce.² A diverse workforce is thought to have a positive impact on the health of all those living in the US.³ Unfortunately, diversity in academic medicine continues to be lacking, with white-identified individuals and men constituting 64% and 59% of faculty respectively.⁴ To achieve a diverse workforce, strategies to increase the number of minority physicians in leadership roles in academic medicine must be implemented.³

One of the principal predictors for entering an academic medicine career is the desire to do so upon medical school graduation.⁵ According to the 2019 AAMC graduation questionnaire, approximately 28% of graduates planned to participate in medical school administration and 45% planned to participate as a medical school faculty member during

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their career.⁶ Previous studies demonstrated that students want guidance in this career alternative and more experience in academia earlier in their careers,⁷ while residents need mentorship to pursue an academic medicine position.⁸

With this goal of increasing the number of diverse physicians in academic medicine through early career advising and training, Building the Next Generation of Academic Physicians Inc. (BNGAP) was developed.⁹ One of BNGAP's initiatives is the Engagement and Leadership in Academic Medicine Conference Curriculum which aims to describe the structure and function of different medical schools' offices with the purpose of enhancing medical students' and residents' understanding of what a career in academic medicine entails and provide knowledge, skills, and advising for early engagement.¹⁰

This module was created as part of BNGAP's leadership and academic medicine curriculum to introduce medical students and residents to the structure and functions of an office of medical education (OME). While the structure of the OME varies across institutions, the primary roles of the OME are to manage and oversee curriculum development, delivery, and assessment. This module familiarized trainees to the OME, then introduced participants to leadership skills and strategies to effectively engage with their institution's OME for curricular development. Additionally, the module introduced participants to Liaison Committee on Medical Education (LCME) accreditation standards that are overseen by the OME, particularly those that focus on supporting diversity and inclusion in the medical education program. During this workshop, participants learned about leadership strategies for engaging with the OME to advance diversity and inclusion through curricular change.

Although *MedEdPORTAL* has published learning modules related to increasing student awareness of academic medicine careers,¹¹ introducing the importance of mentoring in an academic medicine career,¹² and explaining the appointment and promotion process,¹³ there were no publications specific to engaging students to work with the OME while in training as a gateway for an academic medicine career and providing them with the skills needed to be successful.

The module was developed for medical students of both allopathic and osteopathic schools and graduate trainees of all residency and fellowship programs. It not only addressed knowledge about the functions and structure of a medical education office, but also provided information and practice in the leadership skills needed to engage with such an office early in their training.

Methods

Development

This workshop was created for a variety of health care professionals, particularly for medical students and residents. The preferred facilitator was a health care professional with experience in the OME, particularly in a leadership capacity, with prior experience in small-group facilitation.

We followed Kern's six-step approach to curriculum development.¹⁴ For the development of steps one and two, "Problem Identification and General Needs Assessment and Targeted Needs Assessment," the authors conducted a comprehensive literature review of the functions of an OME, the skills needed to lead an OME, and the skills needed to effect change. In addition, a literature review regarding diversity in academic medicine and the pursuit of academic medicine careers by students and residents was done to ensure the module met the needs of trainees with identities historically underrepresented in medicine (e.g., racial and ethnic minorities). For Kern's step three, "Goals and Objectives," these were developed by the coauthors based on expertise and evidence. For step four, "Educational Strategies," an interactive workshop that included multiple reflection exercises, a Microsoft PowerPoint presentation, and case discussions were chosen. For step five, "Implementation," the module was implemented at three institutions as part of the BNGAP Engagement Leadership in Academic Medicine Conference Curriculum. For step six, "Evaluation and Feedback," the institutional review board at Rutgers University Health Sciences approved the implementation and evaluation of the curriculum. Pre- and postworkshop questionnaires based on the module objectives were provided as an assessment method. Learner responses were used to revise the module.

Implementation

Ideally one or two facilitators administered the workshop. Facilitators should spend a minimum of 3 hours to review course content prior to administering the workshop. Materials suggested to appropriately conduct the workshop include: audio/visual equipment for PowerPoint, printed copies of pre- and postsurveys (Appendix E), printed copies of cases (Appendix D), pens, and tables and chairs arranged for small-group discussion of three to seven attendees.

The 1-hour workshop was presented using a didactic PowerPoint presentation (Appendix A) guided by the Facilitator's Guide (Appendix B) that began with a description of the structure and function of the OME, the leadership competencies associated

with roles within this office (Appendix C), opportunities for trainee involvement in the OME, and examples of how to facilitate curricular change through engagement with the OME at one's own institution (25 minutes). The next 25 minutes were spent on case discussions (Appendix D) in small groups and large-group debriefings led by the facilitator were embedded within the PowerPoint as a means to encourage discussion on challenging scenarios that one can encounter in a leadership position in the OME. The remaining time was used for questions and answers and the pre/postworkshop evaluation (Appendix E). Below are the resources required for this workshop.

Appendix A - PowerPoint Presentation: The presentation served as the framework for the workshop.

Appendix B - Facilitator Guide: This served as a detailed guide for the facilitator to efficiently and effectively lead the workshop with a slide-by-slide description.

Appendix C - Infographic: This handout delineated the multiple leadership competencies that trainees can gain by engaging in activities in the OME. It also provided examples of activities trainees can engage in and the leadership skills they will develop by participating in these roles.

Appendix D - Case Discussion Guide: This worksheet provided two scenarios that presented challenges that leaders can face in the OME. The discussion points focused on the leadership competencies required to effectively address the situation and possible solutions to address the challenge.

Appendix E - Evaluation Forms: These surveys asked questions regarding trainee knowledge of the OME before and after the workshop. The postworkshop survey also provided an opportunity for attendees to describe what they liked about the workshop and areas that can be improved.

Results

This workshop was held at three conference sites: Weill Cornell College of Medicine, University of Oklahoma College of Medicine, and McGovern Medical School. A total of 45 attendees completed partial or full workshop evaluations. The workshop was facilitated by a total of five presenters (two pairs and one single presenter), including an associate dean for curriculum development, an assistant dean for student affairs, an adult gastroenterology fellowship director, and two assistant professors.

Of the 45 attendees, 32 self-identified as medical students, four as residents, one fellow, one faculty, and two in other health care

professions. The attendees came from medical schools in six different states and the Dominican Republic.

Of the 45 respondents, seven (16%) identified as Asian, nine (20%) as Black or African-American, 12 (27%) as Hispanic or Latino, 12 (27%) as white, three (6%) identified as Native American or Alaska Native, one (2%) as Native Hawaiian or other Pacific Islander, and one (2%) as other. Fifteen (33%) identified as male, and 25 (56%) as female. Five (11%) identified as lesbian, gay, bisexual, or transgender, 35 (78%) identified as straight or heterosexual, and five (11%) did not respond.

Of attendees, 39 responded to the preworkshop survey question, "How knowledgeable are you in identifying leadership opportunities for trainees to become engaged through the OME?" In response, 22 (49%) attendees replied *not knowledgeable*, 13 (29%) replied *somewhat knowledgeable*, and four (9%) replied *knowledgeable*. To further understand trainee background experience, they were also asked to identify if they have "participated on a committee or taskforce overseen by the OME or its equivalent," during several time periods. One (2%) reported experience prior to medical school and 8 (18%) during medical school. None of the attendees reported experience during residency or after residency.

Additionally, on a 5-point Likert scale (0 = *no confidence*, to 4 = *complete confidence*), attendees were asked about their confidence in performing two medical education-related tasks. For the statement, "Discuss an interdisciplinary approach to the creation of a medical education innovation," 40 attendees responded with a preworkshop mean of 1.5 (median = 1.0), and postworkshop mean of 3.3 (median = 4.0). For the statement, "Assess the need for curricula change," 40 attendees responded with the preworkshop mean of 2.1 (median = 2.0), and postworkshop mean of 3.3 (median = 4.0). Using the Wilcoxon Signed Rank Test, a statistically significant difference in pre- and postworkshop survey responses for each question ($p < .01$) was found.

Workshop quality was determined by asking attendees, "To what extent do you agree that the workshop learning objectives were met?" For all four objectives, over 90% of postworkshop survey respondents either agreed or strongly agreed that the objectives were met.

Additionally, on the postworkshop survey, suggestions for improvement as well as strengths of the workshop were collected. Many of the attendees viewed the workshop positively, finding it "engaging and lively," and "informative." Attendees

“learned a great deal about the office and its goals,” appreciated the “great advice for medical students on how to make change,” and enjoyed “learning about the opportunities available through the OME.” There were also several comments that detailed the appreciation of the cases discussed during the workshop, which were “very realistic,” “relevant,” and, “real, practical examples that were beneficial to discuss as a group.” Many trainees appreciated how facilitators wove personal anecdotes about their experiences in the OME into the presentation.

Regarding workshop improvement, there were several recommendations. Some requested more specific examples on how to enact change at the medical student level, exemplified by the following remarks: “More examples/leadership in how to create curriculum change in medical school,” and “I would’ve liked to know even more about how students can enact change within the curriculum.”

Discussion

This workshop was successful in promoting trainees’ awareness of the structure and function of OMEs and of opportunities to facilitate change in medical education through curricular innovation, particularly for the advancement of diversity and inclusion. In order for trainees to successfully engage in curricular development at their institutions, they must first be familiar with structures that drive curriculum development and implementation at organizations. This includes the OME as well as LCME accreditation standards pertaining to curriculum as well as diversity and inclusion. Therefore, faculty briefly described the structure of the institution’s OME and related LCME accreditation standards during this workshop.

Our results have demonstrated that this workshop was sufficiently generalizable and can be successfully delivered to participants across different institutions and levels of training. Whereas the PowerPoint presentation provided clarity in the functioning of OME, the case-based discussions provided a lively and engaging opportunity to appreciate examples of how trainees identified and addressed curricula through the three C’s: communicate, collaborate, and commit. The infographic summary sheet (Appendix C), formatted as an *Academic Medicine* (AM) last page (a publication type in the *Journal of Academic Medicine*), provided a succinct summary of critical leadership competencies potentially acquired by trainees through work with the OME. Of particular benefit to learners were facilitators who had significant experience in working in an OME and were willing to share their career journey and involvement with educational reform.

Over the course of its implementation at three different sites, the workshop was modified in response to facilitators’ and learners’ critiques. Early in the implementation, the PowerPoint presentation included a generic organizational map of an OME. Facilitators found it difficult to comment on how their medical school structure was different from the generic one. We then asked facilitators to replace the generic slide with their own organizational map (Appendix A, slide 7) and star each OME committee/taskforce that incorporated trainees. This approach made it easier for the facilitator to explain the structure of an OME and for learners to appreciate where they can sit at the discussion table and facilitate change. We added Appendix C as an infographic modeled after an AM last page to provide a succinct diagram on how work in OME aligns with developing core leadership competencies expected of faculty. Lastly, given the value associated with completing peer-reviewed publications we added a slide highlighting peer-reviewed publications that aligned with each case. We believe that helped learners realize that the work they are currently engaged in can ultimately support a peer-reviewed publication and help them develop a niche in an area of personal interest.

Our study, while offered at three workshops at three distinct regional locations in the US, only reached a limited number of participants ($N = 45$). While the response rate was generally good (>85%), it is important to note that our population was enriched in participants underrepresented in medicine (only 27% identified as white), specifically medical students (71%), and thus caution should be used in generalizing these results to other populations. Though we were able to obtain statistically and educationally meaningful results from our pre/postsurveys of learner perception, we do not currently have longer-term data on efficacy and impact. In addition, the smaller number of participants precluded meaningful qualitative analysis of narrative comments provided.

There are multiple ways to build on the workshop content and enhance dissemination. Individuals who implement this workshop can follow up with their learners to inquire about ongoing interests and questions regarding career trajectory, development of leadership competencies, and outcomes achieved through OME activities. If a medical school or residency program has a research day, a category or award can be developed for trainees to showcase work via OME or any medical school office. Rather than using the cases in the PowerPoint presentation, learners can also be encouraged to write out their own experience with developing, implementing, and/or evaluating a project

through OME and be ready to discuss successes, challenges, and leadership competencies achieved. In the era of COVID-19, a flipped classroom approach can be applied by having learners review the slides on OME roles and responsibilities and using the live web-based time focus on the cases and explore learners' experiences working with OME. Since other graduate schools (e.g., dental, nursing, pharmacy) also typically have offices of education, the presentation can be easily modified for other graduate students to learn about career opportunities in education and academia.

Appendices

- A. PowerPoint Presentation.pptx
- B. Facilitator Guide.docx
- C. Infographic.docx
- D. Case Discussion Guide.docx
- E. Evaluation Forms.docx

All appendices are peer reviewed as integral parts of the Original Publication.

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Disclosures

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Ethical Approval

The Rutgers University Health Sciences Institutional Review Board approved this study.

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