Interdisciplinary Ethics Certificate Program for Graduate Medical Education Trainees

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ABSTRACT

Background Ethics education is an essential component of developing physician competency and professionalism. Although prior studies have shown both a wide interest and a need for ethics education during residency, structured learning opportunities are not widely available at the graduate medical education (GME) level.

Objective Through the Vanderbilt Center for Biomedical Ethics and Society, we developed a 1-year certificate program offering a Distinction in Biomedical Ethics, open to all active trainees in GME programs at the Vanderbilt University Medical Center. This certificate program provides advanced education in biomedical ethics and can be completed without additional cost to the trainee or time away from training.

Methods This certificate program has been offered each academic year since 2017–2018. The program curriculum includes case-based seminars, a rotation on the Ethics Consultation Service, participation on the hospital ethics committee, and a capstone project. Outcomes were assessed using a post-course evaluation.

Results During the first 4 years of the program, 65 trainees participated from 19 different specialties. Course evaluations were obtained from 58 participants (89.4% response rate) and were strongly favorable in most domains. All participants agreed that this program enhanced their knowledge of biomedical ethics and they would use something they learned in their future practice. Most participants (57 of 58, 98.3%) would recommend this course to a friend.

Conclusions We designed and implemented a Distinction in Biomedical Ethics program to provide advanced training in clinical Bioethics, which has been favorably received by participants.

Introduction

Over the past several decades, the Accreditation Council for Graduate Medical Education (ACGME) has placed greater emphasis on ethics as a component of professional competency.[1] As part of the ACGME Common Program Requirements, all graduate medical education (GME) programs must have curricular elements focused on the "advancement of residents' knowledge of ethical principles foundational to medical professionalism."[2]

Substantial effort has been put into centralizing the goals of ethics education and optimizing content delivery at the undergraduate medical education (UME) level.[3–5] However, there has been less success in continuing this education in GME. Ethics education within GME varies significantly in curriculum, duration, and scope, depending on the institution and specific residency programs.[6–11] Explanations for this gap include a real or perceived lack of time, lack of infrastructure or resources to teach ethics, as well as numerous competing demands for educational content within the residency core curriculum.[10,12] However, many residents and program directors want ethics education.[13,14] Therefore, we in the Center for Biomedical Ethics and Society (CBMES) sought to improve GME ethics education through a certificate program open to all active trainees at the Vanderbilt University Medical Center. This 1-year course integrates seminars, clinical and administrative experiences, and a capstone project to enhance trainees' understanding and practical application of health care ethics. Future expansion of this program may fulfill the requirement of ethics education across residency programs at our institution.

Methods

The Ethics Certificate program was designed to provide further in-depth training to residents and fellows with an interest in biomedical ethics. All residents and fellows in postgraduate year (PGY) 2 or greater in any specialty were eligible to participate in the program. A Distinction in Biomedical Ethics was awarded by the Office of Graduate Medical Education at graduation to all participants who completed all curricular elements. The application process for the program included a brief personal statement, as well as a letter from the program director supporting the trainee's time commitment to the program. The

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Ethics Certificate program required satisfactory completion of 3 primary educational components: didactics/seminars, experiential activities, and a capstone project (BOX).

Group Discussion Seminars and Ethics Conferences

Seminars were led by core faculty and pairs of trainees assigned to each session; these seminars were also facilitated by invited faculty content experts. Faculty and staff support was voluntary and, given their expertise, no training was necessary. Each seminar consisted of a roughly 30-minute didactic on the seminar subject followed by a 1-hour case-based discussion. Seminar content was developed by the CBMES faculty to cover primary areas of clinical bioethics (BOX). Trainees were expected to attend all seminars, which were scheduled in the early evening to increase attendance.

Experiential

Clinical experience with biomedical ethics was gained through a 2-week elective on the Vanderbilt Ethics Consultation Service. Trainees also participated in the Vanderbilt University Medical Center (VUMC) Ethics Committee. Combined, these experiences taught participants to work through the process of ethics consultations.

Post-Program Outcomes

Following the certificate program, trainees completed a course evaluation distributed electronically via REDCap.[15,16] Ten multiple-choice questions using a 5-point Likert scale (1, strongly disagree, to 5, strongly agree) were included (FIGURE). The results were compiled from the first 4 years of the program (academic years 2017–2018, 2018–2019, 2019–2020, 2020–2021). Scholarly research in the field of ethics published by program participants was also tracked. Publications were confirmed with PubMed searches of program participants, ranging from the date of their participation to July 2021. The Vanderbilt University Medical Center Institutional Review Board approved the survey plan as exempt research.

BOX Curriculum Outline, Requirements, and Seminar Content for the Graduate Medical Education Ethics Certificate Program

Group Discussion Seminars (9 credit hours, intermittent)

- Leadership of 1 seminar session: didactic teaching and case-based discussion

Experiential

- Ethics Consultation Service (60 credit hours, 2 weeks)
- Ethics Committee Attendance (2 credit hours, intermittent)

Capstone

- Ethics Committee Presentation
  - Example Presentations: Ethical Considerations for Vulnerable Populations; Surrogacy and Advance Directives; Virtue Ethics in Medical Training
- Monday Case Conference at the Center for Biomedical Ethics and Society
  - Example Presentations: Introduction and Approach to Ethical Challenges in Epilepsy; Disclosure of Error: the Infectious Disease Consultant
- Other: alternative capstone project ideas may be approved
  - Examples: Cultural Psychiatry Lecture Series—Health Disparities; published manuscripts on topics related to biomedical ethics

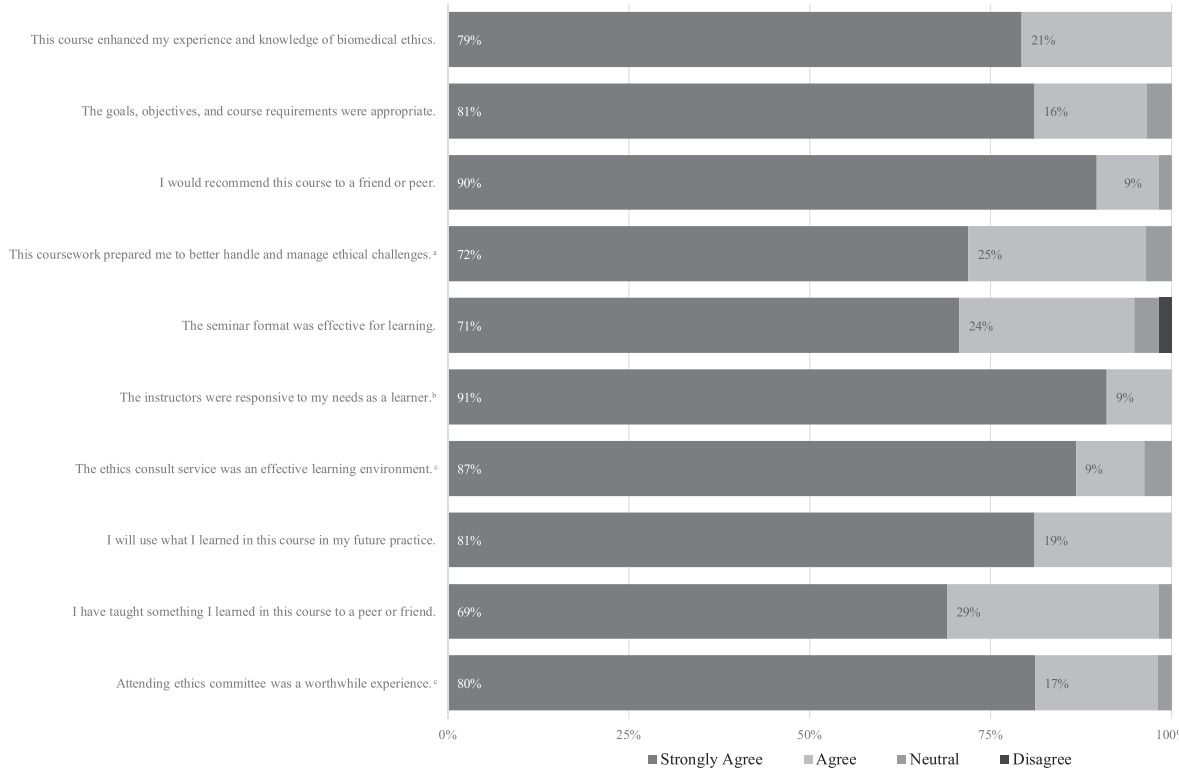
Seminar Content

- Approaching ethics at the bedside: theories and principles, ethics infrastructure
- Informed consent, decision-making capacity, surrogacy, and advanced directives
- Financial conflicts and resource allocation
- End-of-life, withdrawal of care, and medically ineffective care (futility)
- Unique ethical considerations for trainees
- Mistakes and disclosure of errors
- Vulnerable populations

Results

Sixty-five trainees completed the program over 4 years. The participants spanned a diverse range of specialties, including internal medicine, pediatrics, surgery, anesthesiology, and many others. The most well-represented specialty was pediatrics and its associated subspecialties. Enrollment breakdown followed trends based on residency department sizes at our institution. Of the 65 participants, 58 (89.4%) completed the post-course evaluation. Overall, the course was well-received, and 98.2% (57 of 58) of respondents indicated they would recommend it to a friend (FIGURE). Respondents unanimously agreed that the course enhanced their knowledge of biomedical ethics, and all believed they would use something they learned in the course in their future practice. Additionally, 86.8% (46 of 53) of respondents strongly agreed that the ethics consult service was an effective learning environment.

While not a requirement for completing the certificate program, participants were encouraged to pursue scholarly endeavors to add to the literature on clinical ethics. Three trainees subsequently



FIGURE

Percentage Distribution of Trainee Survey Responses (N = 58) Following Completion of the Certificate Program Spanning 4 Years of Program Offering (2017–2021)

Note: All questions used a 5-point Likert response scale (1, strongly disagree, to 5, strongly agree). No responses of strongly disagree were received and are thus not shown.

[a] N = 57.

[b] N = 56.

[c] N = 53.

published articles related to topics addressed in the program.[12,17,18] All other participants delivered conference- or seminar-based teaching to their peers as their capstone project (see the BOX for examples), and several trainees presented their work at national meetings.

Discussion

We sought to develop a program that would provide advanced ethics training within the available time of active clinical trainees. This program offers a unique learning experience through the inclusion of multiple specialties. Prior works discussing ethics education for residents have been focused within specific residency programs or specialties. That model, however, is counter to the proposed structure of ethics education by Culver et al which encourages interdisciplinary ethics education.[3] The team-based nature of medicine necessitates an integrated approach to bioethics, as clinicians may lack a full understanding of all ethical situations, and bioethicists may not appreciate the clinical nuances of a particular case. Through its establishment in the CBMES and collaborations with nearly 20 different residency programs, this course exposed participants to a greater breadth of experiences and perspectives compared to prior ethics education models. While this optional certificate program does not directly fulfill the ACGME ethics-related competency expectations for all trainees, the capstone projects serve as an opportunity for peer-to-peer ethics education across all the residency programs involved. This was invaluable for delivering ethics content across our medical center. Other institutions could expand on this voluntary certificate program depending on local resources to help meet the mandate of required ethics education.

Several limitations of this study should be noted. First, the 65 participants represent a fraction of all trainees at VUMC. Enrollment in this program has intentionally been kept under 20 trainees per year to provide ample support and mentoring to each

participant. Likewise, we recognize adopting this program at other institutions may be limited by faculty constraints and ethics consult service volume. Selection and nonresponse bias may also limit the generalizability of these findings. Additionally, because a pre-course survey was not administered, the true effects of the program on trainee responses cannot be fully determined. Finally, while the goal of this certificate program was to develop ethical and professional physicians, as well as to enhance trainees' practical application of bioethics, measuring these variables is uniquely complex. Thus, the post-course evaluation questions were limited to only the scope of skill and knowledge acquisition. Future work will aim to implement objective and subjective assessments to more robustly quantify program outcomes, in addition to enrolling larger trainee cohorts.

Conclusions

We designed and implemented a Distinction in Biomedical Ethics program at our academic medical center. This unique program, open to all trainees PGY-2 or higher, provided advanced training and experience in clinical bioethics. Participants were able to share the knowledge they gained with their residency programs through capstone projects.

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