

Medical Ethics Education: Current Practices and Future Directions

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Abstract

This article examines current practices in medical ethics education within medical schools in the United States and internationally and, discusses potential future steps in medical ethics curricula reform. While many improvements have been made over the last several decades, our review of the published literature on this topic has revealed wide variation in the structure of curricula, topics taught, modes of instruction, and methods of assessment demonstrate the inconsistent nature of medical ethics education nationally. Moving forward, as the field of medicine advances, medical students, trainees, and physicians will continue to be exposed to an increasingly complex array of ethical challenges. Therefore, there is an important need for medical schools to review current ethics education practices and take steps to further improve and standardize ethics curricula. The results of this article will help inform medical schools' next steps in the reform of their ethics curricula.

Introduction

Medical ethics education seeks to prepare medical students in the evaluation and management of ethical issues that arise related to patient care [1]. In recent years, increasing emphasis has been placed on reaching a national consensus on how to best approach teaching medical ethics. It has become clear that nurturing ethical competence should be a fundamental goal in medical education, as evidenced by 94% of medical school deans agreeing that ethics education should be mandatory [2]. This is heavily due to the fact that as the field of medicine advances, physicians will continue to be exposed to increasingly complex ethical dilemmas, both during training and within their practices. While medical students are taught fundamentals of patient diagnosis and treatment, they must also be taught to traverse difficult situations without clear solutions, such as within the realm of informed consent, death and dying, and equitable health care delivery. Recent surveys of medical students suggest a gap between the level of education that students desire to confidently traverse ethical dilemmas and the level provided during medical school [3,4]. It is time for medical ethics education to undergo a transformation that provides students

with the preparation they seek. By improving ethics education, students will be better prepared to support patients when faced with difficult situations. The purpose of this review is to highlight the current state of medical ethics education in the United States and internationally, and to identify strategies for continued improvement in the way medical ethics is taught. For medical schools, this article will provide a concise summary of potential gaps to address and interventions to use when reflecting on their own ethics curricula.

Methods

A search of literature relevant to medical ethics education was performed using Google Scholar. The following search phrases were used: "ethics education in medical school"; "medical ethics education"; "ethics education in residency". The references sections of chosen literature were reviewed to include any relevant literature that was not collected in the initial search. There were no time limitations in the search. Additional searches were performed as needed to supplement discussions of ethics. These results were reviewed and summarized in the following sections.

Medical Ethics Education in the United States

While improvements have been made as medical schools incorporate increased ethics education, deficits remain. A 2004 survey of US and Canadian medical schools revealed that while 78% of schools provided a form of ethics education during preclinical years, only 59% offered structured ethics teaching [2]. It should be noted that this is an increase from 34% in 1989.¹ While encouraging that more medical schools have incorporated formalized ethics education, there remains a lack of standardization of learning objectives, modes of evaluation, and teaching methods [5].

Many barriers to standardization of ethics curricula have been identified. The first series of obstacles are largely logistical. Scarce funding, few trained ethics faculty, and lack of time make it difficult for medical schools to expand ethics curricula [5]. Educators have also struggled with determining effective ways to evaluate students' ethical maturation. Consequently, medical schools often adopt a pass/fail system where attendance is the only evaluation measure [6]. Additionally, wide variation exists in what is taught, and learning objectives are often left to the judgment of course directors, leading to vastly different experiences among students at different schools [2,6].

Several potential solutions to these issues have been proposed (Table 1). First, a four-year ethics curriculum would expose medical students to ethics using various different venues and teaching methods, including introductory courses, small group seminars, research projects, and case studies [7]. A longitudinal curriculum would facilitate learning ethical principles during preclinical years and subsequently application during clerkships [8]. It would also allow ethics course directors to build a solid foundation, rather than a cursory overview of a large body of material in a short time period.

Table 1: Strategies to improve medical ethics education.

Strategy	Description	Reference
Longitudinal (four-year) ethics curriculum	Didactic teaching of topics during preclinical years and application during clinical years	7
Use of various methods and environments	Introductory courses, group seminars, research projects, case studies	9
Identification of ethical role models	Ethical behavior is reinforced when students see such behavior in their mentors	11
Improved evaluation methods of ethical progression	Knowledge-based exams, Objective structured clinical exams	13
Incorporate guided reflection into ethics curricula	Mentor helps learner better understand their own thinking on particular issues, thereby transforming passive instruction into an active experience	15
Address hidden curriculum	Recognize shifting perceptions as students enter clinical settings and encourage ethical decision-making even if others are not practicing such behavior	

Table 2: Content areas to cover in medical ethics curricula [7,11].

Category	Examples
Foundational Ethics	Moral philosophy, history of medical ethics
Specialty Specific Ethics	Clinical medicine, surgery, transplant, genetics, psychiatry, pediatrics, reproductive health, palliative care
Macroethics	Global health, healthcare disparities, pandemic ethics, ethics of epidemiology

Second, the importance of ethical role models has been identified. As students transition to clinical environments, it is crucial that preceptors and mentors demonstrate ethical behavior [9,10]. While a preclinical ethics curriculum may be effective in teaching fundamentals, if medical students do not see ethical behavior in their instructors, their ethics education may be impaired [11]. Students and residents may experience 'moral erosion' (i.e., diminishing professional behavior leading to poor patient care), due to pressures of medical education and practice [11].

Lastly, improved evaluation methods within ethics courses are important. While no single evaluation method has proven best for judging students' ethical advancement, a combination of different approaches may be effective [11]. Knowledge-based exams can be used to test competency of core principles, while objective structured clinical examinations and entrustable professional activities can be used to test students' application of principles [12]. Further research and experimentation should be performed to determine the efficacy of these evaluation methods.

As structural changes are made to ethics curricula, specific content taught within ethics courses should be determined with the intent of familiarizing medical students to the foundations of medical ethics and to specific scenarios within patient care settings. Table 2 lists content areas that should be covered to ensure a breadth of knowledge that spans a wide variety of ethical topics [7,11].

Educators must also understand the importance of reflection and incorporate a more active experience into ethics curricula. Several studies describe the importance of guided reflection in moral development [13]. In guided reflection, the learner expresses thoughts on a particular topic or experience, and a mentor helps the learner better understand their thinking. This individualized approach has been shown to improve the efficacy of ethics education by fostering mature patterns of thinking and understanding of underlying principles [14].

Lastly, the hidden curriculum of medicine must be addressed [15]. As medical students become immersed in the culture of medicine, there is pressure to conform to professional norms [16]. The friction between what one is taught to do and what one sees others doing may weaken ethical decision-making in patient care, and stimulate feelings of cynicism and moral relativism [15]. Therefore, ethics cannot be taught in a vacuum; educators must find ways to support students as their perceptions shift due to this hidden curriculum.

Medical Ethics Education on an International Scale

The need for medical ethics education reform is not unique to the United States- globally, countries have been taking steps to better prepare their medical trainees for the variety of ethical dilemmas they will encounter in medical practice.

The Medical Council of India (MCI) recently began to implement the Attitude, Ethics and Communication Module (AETCOM), which is composed of 27 case-based modules completed over the course of medical school.¹⁷ These modules, among many things, review the physician-patient relationship, communication skills, and ethical principles used in patient care [17]. In recent years, it had been noted that Indian medical students lack exposure to ethical role models and frequently observe unethical behavior by physicians [18]. Furthermore, a 2013 survey of Indian medical students revealed major deficiencies in medical students' understanding and application of ethical principles [19]. The addition of AETCOM to their national medical school

curriculum combats these shortcomings by providing longitudinal medical ethics education- medical graduates will have a better understanding of what is expected of them as ethical decision makers. As the ethics curriculum continues to evolve, Zayapragassarazan et al. note the importance of experiential learning, meaning that the curriculum must allow for students to apply their knowledge of ethics to real or simulated clinical situations [17].

A review of South Korean medical schools revealed a similar trend as seen in other countries: while most medical schools have implemented some degree of medical ethics education, there lacks a consensus on the structure and content of the ideal curriculum [20]. There is a sense that the first step in improving curricula depends on discussions regarding the goals of medical ethics education [21]. Then, educators must determine the instruction and assessment methods best suited to achieve these goals. Miyasaka et al., in their discussion of medical ethics education in Asian countries, make an important distinction: Western models of medical ethics may be, in some ways, incompatible with the values of different cultures [22]. Therefore, the development of improved curricula must address culturally-specific ethical dilemmas and solutions.

Developing countries face unique ethical challenges, and medical schools should adequately prepare their students for these situations. Like many other developing countries, patient care in Nigeria is heavily influenced by cultural and religious norms, so medical ethics education must reflect this- physicians should be prepared to adjust their care based on challenges presented by a patient or their family's traditional customs, while still observing basic ethical principles [23]. Scarcity of resources also presents another dimension of ethics that medical trainees should be prepared to handle. A 2010 survey of Nigerian medical students demonstrated that while most students believe that formal ethics training would improve their skills as physicians, they feel that their current education does not sufficiently prepare them [24]. The downstream effects of this deficiency is noticeable, as a survey of Nigerian physicians revealed that due to their inadequate formal ethics education, most physicians must expand their knowledge through self-directed education on their own time [23].

Although curriculum reform is typically an extensive process that takes many years, students may still improve their ethics education using online resources. The People's Open Access Education Initiative has developed their free *Medical Ethics Online* course with the goal of improving public health in low- to middle-income populations [25]. Free online course, like this one, may act as a bridge while new medical ethics curricula are developed.

While each country faces their own challenges regarding medical ethics education, there is a seemingly universal need for drastic improvements to ensure that physicians are prepared to care for their patients during challenging scenarios.

The Goal of Ethics Education

As solutions are developed for the previously stated problems, educators must also answer a fundamental question: what is the goal of ethics education? There must be consensus on what schools hope to accomplish through their ethics curricula. Eckles et al. discuss virtue/skill dichotomy, in which there are two competing goals of medical ethics education: 1) creating virtuous physicians and 2) providing physicians with skills to resolve ethical dilemmas [26]. Although overlap exists, creating virtuous physicians focuses on character traits, while teaching skills places emphasis on practical implementation

Table 3: Evolution of ethical competency during medical training.

Level of Training	Level of Ethical Competency
Medical Student	Ability to identify common ethical dilemmas, pertinent stakeholders, and potential solutions; early stages of application of ethical principles
Resident	Maturing ability to identify and apply ethical principles to various scenarios within specialty
Attending Physician	Ability to identify and address complex ethical issues, on both a micro and macro scale; mature application of ethical principles to various scenarios within specialty

of clinical ethics [21]. This fundamental difference implies that the ensuing curriculum for each goal is starkly different.

Arguments justifying either side of this dichotomy have been made. Shelton suggests that utilizing an Aristotelian concept of virtue, in which “virtue becomes ingrained...and flows from one’s character”, is key in developing competent physicians [27]. This perspective suggests that simply teaching an ethical rule set by which students act is not enough. Rather, it is imperative for educators to nurture sustained character development within students and foster improved awareness of both complex and common ethical dilemmas [27]. This character development involves a drastic transformation for the individual. Gross describes a Kantian perspective in which the individual’s moral principles are initially rooted in an egocentric desire for reward and avoidance of punishment, but evolves to be grounded in universal moral principles that foster moral integrity and respect for others’ autonomy [28]. This approach addresses an individual’s moral identity beyond their role as a physician. As medical students experience new ethical dilemmas throughout their career, an ethics education that is built on developing one’s virtuous nature may lead to more ethical decision making in situations of moral ambiguity [27].

However, others argue that this approach, while admirable, is difficult to incorporate into medical curricula, and that a more reachable goal is to provide students with “practical wisdom” to comprehensively navigate ethical dilemmas [1]. This approach focuses not on creating physicians of sound moral character, but rather on providing morally sound physicians with knowledge and skills to manage ethical challenges, thereby ensuring that students are prepared to make ethical decisions in the clinical setting [1]. It should be noted that this approach does not simply revolve around providing an algorithm by which students will make decisions. A curriculum modeled on this perspective would aim to increase students’ sensitivity to ethical issues and actively combat moral erosion [29]. Rather than the curriculum addressing the students’ individual virtues, it would place emphasis on a comprehensive understanding of the identification of ethical dilemmas, the importance of managing these situations appropriately, and the foundational knowledge necessary for this management.

Interestingly, by expanding medical ethics education to span the duration of medical school, a curriculum with the intention of achieving “practical wisdom” could begin to develop more inherently virtuous students. Increased exposure to ethical role models over the course of medical education and the opportunity to play a larger role in decision making could promote sustained virtuous behavior [9].

Future Directions

While past studies provide crucial insight into the state of medical ethics education, limited recent studies address this, especially in the United States. Further studies are warranted, and it is important to create benchmarks to gauge progress. Ethics itself is a complex field, and its teaching is also complex. Couple this with the fact that medical students are often overwhelmed by the sheer amount of knowledge taught in medical school, and the issue of creating effective ethics education seems potentially insurmountable. However, the first step in making further improvements is to update our understanding of the state of ethics education in the form of a national survey of US medical schools. The Romanell Report (2015) notes a lack of interinstitutional discussion aimed at solving the problems discussed herein; therefore, an updated

comprehensive national survey of medical schools’ ethics curricula would provide crucial information and spark further collaboration [11]. Medical schools will be able to use such results to identify key areas within their own programs that need improvement, and also to collaborate and create a consensus of best practices in ethics education.

However, ethics education reform should not end at the level of medical school. A study by the University of Pennsylvania identified several deficits in medical residents’ understanding of informed consent and capacity, prompting a request for further education in core ethical concepts [30]. By improving ethics education in medical school, incoming residents will have a stronger foundation for residency programs to structure their own ethics education around. Learning the nuances of ethical decision-making is a longitudinal process, and improvements at each level of medical education will allow for a more comprehensive understanding of the role of medical ethics in patient care. Table 3 demonstrates how ethical competency evolves over the course of medical training.

Limitations

There were several limitations to this review. The search used limited phrases and was performed using Google Scholar. Furthermore, there is little evidence on the best techniques to teach medical ethics. Therefore, this article does not determine any single best approach. Rather, it provides an overview of potential approaches that must be further researched. Lastly, the cultural context in which these discussions occur must be noted- the ideal medical ethics curriculum may vary from country to country.

Conclusion

The utility of medical ethics in patient care is in determining not necessarily what can be done, but rather what should be done. It protects the best interests of patients and family members, and ensures that our actions correlate with our values. Determining the best way to train in this realm is no easy task, but it is something that deserves our immediate attention. The results of this review have revealed that, while there have been many discussions regarding various potential changes to medical ethics curricula, little has been done to implement these changes. Medical schools throughout the world face similar obstacles in determining the ideal content, teaching methods, and assessment criteria for such a curriculum, but they also face challenges that are unique to their own cultural environment. Despite these differences, there is a need for collaboration among institutions to achieve the common goal of training ethically competent physicians. Moving forward, further investigation into the current state of medical ethics education will provide a clearer path for implementation of these much-needed changes.

References

1. Miles SH, Lane LW, Bickel J, Walker RM, Cassel CK. Medical Ethics Education: Coming of Age. *Academic Medicine*. 1989; 64:705-714.
2. Lehmann LS, Kasoff WS, Koch P, Federman DD. A Survey of Medical Ethics Education at U.S. and Canadian Medical Schools. *Academic Medicine*. 2004; 79:682-689.
3. AlMahmoud T, Hashim MJ, Elzubeir MA, Branicki F. Ethics teaching in a medical education environment: preferences for diversity of learning and assessment methods. *Medical Education Online*. 2017; 22:1328257.

4. Roberts LW, Warner TD, Hammond KAG, Geppert CMA, Heinrich T. Becoming a Good Doctor: Perceived Need for Ethics Training Focused on Practical and Professional Development Topics. *Acad Psychiatry*. 2005; 29:301-309.
5. DuBois JM, Burkemper J. Ethics Education in U.S. Medical Schools: A Study of Syllabi. *Academic Medicine*. 2002; 77:432-437.
6. Baylis F, Downie J. Ethics education for Canadian medical students. *Acad Med*. 1991; 66:413-414.
7. Giubilini A, Milnes S, Savulescu J. The Medical Ethics Curriculum in Medical Schools: Present and Future. 2016; 27: 129-45.
8. Cook AF, Spars G, Black L, Beard M, Freeman J. Making Ethics Education Matter: A Novel Approach for Enhancing Ethics Education in a Medical School. *MedEd Publish*. 2019; 8.
9. Singer PA. Strengthening the role of ethics in medical education. *CMAJ*. 2003; 168:854-855.
10. Goldie JGS. The detrimental ethical shift towards cynicism: can medical educators help prevent it? *Med Educ*. 2004; 38:232-234.
11. Carrese JA, Malek J, Watson K, Lehmann LS, Green MJ, McCullough LB, et al. The Essential Role of Medical Ethics Education in Achieving Professionalism: The Romanell Report. *Academic Medicine*. 2015; 90:744-752.
12. Mattick K, Bligh J. Teaching and assessing medical ethics: where are we now? *Journal of Medical Ethics*. 2006; 32:181-185.
13. Rest JR, ez DN. *Moral Development in the Professions: Psychology and Applied Ethics*. Psychology Press. 1994.
14. Stark DP, Roberts C, Newble D, Bax N. Discovering professionalism through guided reflection. *Medical Teacher*. 2006; 28:e25-e31.
15. Hafferty FW, Franks R. The hidden curriculum, ethics teaching, and the structure of medical education. *Academic Medicine*. 1994; 69:861-71.
16. Karnieli-Miller O, Vu TR, Holtman MC, Clyman SG, Inui TS. Medical Students' Professionalism Narratives: A Window on the Informal and Hidden Curriculum. *Academic Medicine*. 2010; 85:124-133.
17. Zayapragassarazan Z, Kumar S, Kadambari D. Record Review of Feedback of Participants on Attitude, Ethics and Communication Module (AETCOM) proposed by Medical Council of India (MCI). *EIMJ*. 2019; 11:43-48.
18. Pandya SK. Clinical ethics: a practical approach. *Natl Med J India*. 2006; 19:340-341.
19. Arun TB, Venkatesh C, Sharmila V. Are tomorrow's doctors aware of the code of medical ethics? *IJME*. 2013; 10.
20. Lee J-W, Lee H-W. A Study on the Medical Ethics Education at Colleges of Korean Medicine. *Journal of Society of Preventive Korean Medicine*. 2018; 22:13-24.
21. Cheong Y-S. Quality Improvement Strategies of Medical Ethics Education in Korea. *Hanyang Medical Reviews*. 2012; 32:30-34.
22. Miyasaka M, Akabayashi A, Kai I, Ohi G. An international survey of medical ethics curricula in Asia. *Journal of Medical Ethics*. 1999; 25:514-521.
23. Fadare JO, Desalu OO, Jemilohun AC, Babatunde OA. Knowledge of medical ethics among Nigerian medical doctors. *Niger Med J*. 2012; 53:226-230.
24. Ogundiran TO, Adebamowo CA. Medical Ethics Education: A Survey of Opinion of Medical Students in a Nigerian University. *J Acad Ethics*. 2010; 8:85-93.
25. Worthington RP, Madhok R, Heller RF. Improving global access to medical ethics education: a free self-paced online course on the Peoples-uni website. *IJME*. 2020; 1-6.
26. Eckles RE, Meslin EM, Gaffney M, Helft PR. Medical Ethics Education: Where Are We? Where Should We Be Going? A Review. *Academic Medicine*. 2005; 80:1143-1152.
27. Shelton W. Can virtue be taught? *Academic Medicine*. 1999; 74:671-4.
28. Gross ML. Ethics education and physician morality. *Social Science & Medicine*. 1999; 49:329-342.
29. Glick SM. The teaching of medical ethics to medical students. *J Med Ethics*. 1994; 20:239-243.
30. Zhong R, Northrop J, Sahota P, Glick H, Rostain A. Informed about Informed Consent: A Qualitative Study of Ethics Education. *Online Journal of Health Ethics*. 2019; 15.