Ethics in MD/MPH Curricula: A Case Study Describing Unique Considerations for Dual-Degree Students

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Abstract

Ethics is a general core competency in undergraduate medical education (UME) and represents an accepted and established component of the contemporary medical curriculum as required by the Liaison Committee on Medical Education (LCME). Similarly, ethics is a key element in many professional degrees of public health, including the Master and Doctor of Public Health programs, as mandated by the Council on Education for Public Health (CEPH). The recent rise of dual-degree programs integrating Doctor of Medicine or Doctor of Osteopathic Medicine training with Master's in Public Health, coupled with the lack of formal educational guidelines for integrating ethics into such programs, represents a new challenge to educators. In 2011, the University of Miami Miller School of Medicine (UMMSM) launched the nation's largest MD/MPH dual-degree cohort. This initiative serves as a case study of ethics playing a supporting role in such dual-degree programs. Although preliminary assessments are encouraging, additional evaluation is necessary to determine the effectiveness of integrating ethics training in dual-degree programs.

The Rise of Dual-Degree Programs and Emphasis on Interprofessional Education

UME curricular innovation is currently blossoming with an emphasis on interprofessional education (IPE) and clinical experiences. Moreover, the recent rise of dual-degree programs, combing medical degrees with degrees in law, business, public health, and other biomedical specialties, has spurred the 'specialization' of many North American medical students' academic experiences. The idea of a dual-degree program originates from the 1950's during which time the first MD/PhD dual-degree programs were launched in the United States; currently,

approximately 140 U.S. medical schools offer this course of study. Other dual-degree programs followed thereafter, with medical schools also awarding degrees in law (Juris Doctors, JD), business (Master's in Business Administration, MBA), public health, (Master's in Public Health, MPH), and other scientific fields of study (Master's in Science, MS). Currently, approximately 63 MD/MBA (Association of MD/MBA Programs 2017), 21 MD/JD (Exercise Science Guide 2017), and 87 MD/MPH (American Association of Medical Colleges 2017) dual-degree programs exist in North America (N.B. There is no central record of MD/MS dual-degree programs as each offering is institution-specific). Moreover, doctorate students from allied schools of health sciences, including doctors of osteopathic medicine (DO), doctors of veterinary medicine (DVM), doctors of pharmacy (Pharm.D), doctors of dental medicine/surgery (DDM and/or DDS), doctors of nursing practice (DNP), and doctors of podiatric medicine (DPM), may also now choose from a variety of dual-degree programs.

As more institutions recognize the power of dual-degree programs, the field of academic medicine uniformly emphasizes the importance of IPE within the twenty-first century UME. The current push for IPE integration originates from both a 2001 Institute of Medicine report highlighting the need for greater IPE exposure (Institute of Medicine 2001) and an Association of American Medical Colleges document (2007) naming IPE as a strategic priority. Since these calls for additional integration, the LCME has listed interprofessional exchanges as a core competency within UME (Institute of Medicine 2001). Medical educators and institutions have since continued assimilating such IPE exchanges and participating in clinical encounters with non-doctorate health care professionals, such as mid-level providers and ancillary staff.

While the recent rise in dual-degree programs and emphasis on IPE has undoubtedly enriched medical students' educational experiences, there still exist disconnects between the various fields of study from which students may choose. Furthermore, without independent regulatory boards for each dual-degree program, topics covered in one portion of the curriculum may not receive sufficient attention or different perspectives in other areas of study. We suggest that ethics instruction might serve one such unifying role, utilizing the fields of medicine and public health as a case study.

Ethics in Medical Curricula

The origin of contemporary attention to ethics in the medical curriculum is reasonably dated to the mid-1980s, after a generation of challenges shaped by the availability of organ transplantation, assisted reproduction, critical care medicine and the Tuskegee syphilis study. In 1985, a group of medical educators and scholars gathered at Dartmouth College to craft a list of basic curricular goals in medical ethics. Their influential report made important recommendations regarding curricular goals. First, and perhaps most importantly, they claimed that, upon entrance to medical school, students already embody their basic moral character (Culver et al. 1985). Accordingly, they argued, medical curricula should seek not to alter students' moral foundations but, instead, promote critical thinking in the face of ethical dilemmas. Recent work maintains the need to foster such critical thinking. For instance, one proposed method of addressing these issues includes small-group discussion in which such dilemmas can be mooted by peers in the classroom and experts in the field (Ranieri & Domitrov 2012). Furthermore, the Culver et al. (2015) report outlined seven core issues ranging from moral aspects of medical practice to issues of confidentiality and valid consent.

A decade later, an equally influential article discussing ethics teaching and the structure of UME took a different stance from the Culver et al (2015) report. The 'hidden curriculum' model 'de-personified' the basic medical curriculum. The authors noted that moral enculturation rooted the process of medical training. Accordingly, medical students need not rely on social actors – ethics teachers – for ethical teaching; rather, the culture of a particular

institution would suffice to promote critical thinking and encourage ethical dialogue (Hafferty & Franks 1994). Due to these 'hidden,' i.e., not explicitly taught and/or stated, or tacit ethics teaching sessions, the basic curriculum should teach students to be more aware of ethical viewpoints, comprehend multiple perspectives on an ethics issue, identify ethical concerns in various fields, and show students 'real life' applications of such topics.

Despite attempts by the LCME and others to identify key curricular goals in medical ethics, standardization remains elusive. Current LCME standards mandate only that medical schools offer medical ethics and human values instruction in both pre-clinical and clinical contexts and ensure students 'behave ethically in caring for patients…' (Liaison Committee on Medical Education 2014). There are many ways one might seek to accomplish this, and none is privileged. Indeed, ethics curricula at medical schools vary: some include philosophical foundations, some do not; some are issue-based (consent, privacy, access to care, etc.) and others focus on case studies; in fact, some medical schools do very little at all (American Society for Bioethics and Humanities 2009).

Ethics in Public Health Curricula

The evolution of the ethics in public health curricula parallel to medical curricula has occurred more slowly. Though medical ethics has ancient antecedents, public health ethics is a recent phenomenon. This is despite the fact that ethical issues related to quarantines, for instance, date to the Middle Ages, and in the 20th century the spread of HIV/AIDS, controversies over vaccination and public health interventions and challenges posed by man-made environmental toxins provided ample levers for curricular development. Toward the end of the 20th century, the World Health Organization and the Council of International Organizations of Medical Sciences began solidifying the role(s) that ethics must play in public health, and national and international bodies began circulating ethics guidelines for epidemiologists (Coughlin 2009). The first university course on ethics in epidemiology and public health was apparently offered in the early 1990s (Goodman & Prineas 2009). Several such curricula are now available (University of Miami 2017).

The CEPH establishes professionalism guidelines that include provisions for ethics in interprofessional practice (Council on Education for Public Health 2016). These guidelines resemble the LCME's interprofessional guidelines for medical students. Despite the LCME's core competency of an interprofessional training, there is a tension between the application of ethical principles among disparate fields of health care. Some professionals argue that explicit values should undergird both relationships between cross-professional exchanges and ethical considerations in health care, while others view ethics as a more specialized tool that cannot be held in common between or among different fields (Interprofessional Education Committee 2011). Consider in this regard challenges faced by public health professionals: conflicting interests and responsibilities to (a) society, to improve the overall status of a population's health; (b) employers and funding sources, to ensure accurate and meaningful work that furthers the mission of any relevant funding source; (c) professional colleagues, in that a code of professional conduct must guide relationships between members of different disciplines; and (d) research subjects, if the professional in question engages in research or other academic activity (Beauchamp 2009). Ensuring that these distinct but equally necessary commitments are satisfied becomes a difficult task for even the most accomplished professional. Interprofessional collaboration complicates these obligations.

Much like ethics in medical curricula, no 'gold standard' ethics in public health curricula has emerged. Various models encourage the use of case-based learning, along with some basic ethical theory, to introduce and reinforce ethical concepts in public health. Such cases include HIV/AIDS prevention and treatment, allocation of scarce resources, and health care reform (Coughlin 1997).Regardless of the method chosen to teach and develop ethics in public health curricula, the key goal remains two-fold: ensuring that students can view an ethical issue from multiple

perspectives and weigh pros and cons of various positions. It has been suggested that discussing ethics continuously and without judgment should be chosen over episodic, didactic sessions (Jennings et al. 2014). Such continuity would help ensure that ethics is not marginalized in public health training.

An MD/MPH Case Study

Dual-degree students face the classic tension of treating both the individual patient and serving her or his community (Fineberg 2011). Such MD/MPH programs must provide students with the resources necessary to make ethical decisions in one's practice (i.e., the tension between medical outcomes and public health priorities) and with one's colleagues (i.e., cross-professional exchanges in the field). As such, the University of Miami's MD/MPH program seeks to train public health practitioners who will confront ethical challenges arising from their conflicting professional commitments.

In the pre-clinical curriculum, ethics instruction begins in the first semester when students take three essential courses in public health: Epidemiology, Biostatistics, and Introduction to Public Health. Students participate in didactic sessions that discuss a variety of ethics topics, with the U.S. health care system, distribution of public goods, and some fundamental philosophical principles, among other introductory topics. As students transition to the basic sciences, a three-week Introduction to Medical Practice (IMP) course further develops these principles in ethics small groups, team-based learning, and problembased learning scenarios exploring cases such as mandatory vaccinations for health care workers, issues surrounding palliative care, and emergency preparedness and resource allocation. Professional practice and commitments to professional excellence are addressed. During the remainder of the pre-clinical years, two longitudinal courses, namely, Physicianship Skills (meeting weekly) and Learning Community (biweekly), either explicitly or indirectly address ethical cases. In addition, the institution's Institute for Bioethics and Health Policy conducts several additional but not mandatory sessions, including a Bioethics Journal Club, in which students have additional opportunities to debate ethical issues.

The goal of ethics instruction in the pre-clinical curriculum is to ensure that students receive adequate preparation for their clinical education. Students transition to a Regional Campus in Palm Beach County, Florida, where they experience third-year rotations and are eligible to complete fourth-year clerkships. It is during this clinical portion of the UME curriculum that students will confront several ethical dilemmas regarding the practical application of their patients' needs and their local populations' desired health outcomes. Ethics arguably helps bridge the worlds of medicine and public health and can unify these fields in one's practice (Fleming & Parker 2009).

On balance, students found this style of ethics instruction useful. For cohorts of approximately 48 students experiencing on average four or five ethics didactic sessions over four academic year, 36 students (75%) of the students present rated the sessions as 'excellent' or 'good' while 4 students (8%) assigned them 'poor' ratings.

Conclusion

The growing integration of medical and public health curricula represents a new opportunity for growth in bioethics teaching. Ethics in both undergraduate medical education and public health training retains a clear historical trajectory and importance, despite the lack of a common model used in either academic curriculum. Moreover, the evolving U.S. health care landscape further complicates ethics instruction in interprofessional practice.

Apart from ethics questions on United States Medical Licensing Examinations, no method exists to track the extent

to which ethics instruction is successful. Moreover, no single curricular model enjoys an evidence base to guide effective ethics instruction. Additional assessment is necessary to ensure that graduates' ethical reasoning and competency have sufficiently developed before students transition into medical practice and public health service. Indeed, such assessments and outcomes measurements are essential to the future success of dual-degree programs.

Take Home Messages

- Ethics instruction has the potential to unite medical and public health instruction in undergraduate medical curricula as demonstrated in this review and case study of contemporary medical education practices.
- No standardized ethics instruction model exists within UME in the United States or Canada.
- Although preliminary assessments are encouraging, additional evaluation is necessary to determine the effectiveness of integrating ethics training in dual-degree programs.
- Moreover, further review must ensure that graduates' ethical reasoning and competency have sufficiently developed before students transition into medical practice and public health service.

Notes On Contributors

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Appendices

Declarations

The author has declared that there are no conflicts of interest.

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