

A Practical Approach to Clinical Ethics Education for Undergraduate Medical Students: A Case Study From Guatemala

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Journal of Medical Education and Curricular Development
Volume 6: 1–7
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DOI: 10.1177/2382120519869207



ABSTRACT:

OBJECTIVE: This case study describes a faculty initiative to create a curriculum in applied medical ethics for undergraduate medical students at the Universidad Francisco Marroquín (UFM) in Guatemala City, Guatemala.

METHODS: The new ethics curriculum (PRACTICE) incorporates ethics short-courses into the university's system of nontraditional, credit-bearing electives offered to students as part of their 6-year undergraduate medical education and complements existing didactic courses in normative ethics. Structured case-based activities allow for flexibility in design and scheduling, do not compete with core requirements of the existing curriculum, and enable students to develop critical reasoning approaches to ethical situations they will encounter in medical practice. Two preliminary workshops provided teaching opportunities for the faculty, stimulated student interest in future ethics courses, and provided an evidence base to guide the development of a formal curriculum.

RESULTS: The elective currently includes six 2-hour modules, each of which is a stand-alone unit with learning goals and objectives, brief didactic lecture, assigned readings, discussion case, and assessment. To date, more than 110 students have participated in the workshops and courses. Student feedback and evaluations are being used to refine pedagogical approaches and drive future course content.

CONCLUSIONS: The PRACTICE course format offers a transformative model for ethics education in Guatemala that can be used in medical education throughout the country and region.

KEYWORDS: Medical ethics, undergraduate medical education, problem-based learning, Guatemala

RECEIVED: July 21, 2019. **ACCEPTED:** July 23, 2019.

TYPE: Methodology

FUNDING: The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Individual faculty development in ethics education for Drs. Aguilera and Martínez and partial salary support for Dr. Barchi have been provided by the National Institutes of Health Fogarty International Center and the Human Genome Research Institute (Grant No. R25-TW009738).

DECLARATION OF CONFLICTING INTERESTS: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Introduction

Reports in the academic literature about unprofessional behavior in medical schools began to appear almost 40 years ago.¹ Initially, the focus centered on fraudulent behaviors, disrespectful behavior, and failure to engage; 20 years later, investigators also began to report on poor self-awareness as part of unprofessional behavior. Guatemala has not been exempt from such cases of unethical conduct among its medical professionals and students. Recent instances of unprofessional conduct by physician and medical trainees in the Guatemala health system have included acting without required consent,² lying or withholding information to family,³ poor verbal and nonverbal communication among peers and inappropriate use of social media,⁴ and discrimination against Mayan indigenous people.⁵ Despite public outrage over such instances, little has been done to develop a practical curriculum in clinical ethics for undergraduate medical students that would encourage the development of ethical reasoning skills and behaviors. This case study describes a multi-year effort by faculty at the Universidad

Francisco Marroquín (UFM) in Guatemala City to develop such a program.

The past 5 decades have witnessed a growing commitment to ethics education in medical schools. As a discipline, medical ethics education focuses on the role that values play in how doctors interact with patients, colleagues, and society. Although often clinically centered, many ethics education programs have in recent years broadened their curricula to include ethical conduct in research activities, particularly human subjects' protections, research integrity, and the role of the clinician researcher.

Internationally, the inclusion of medical ethics as an obligatory component of physician education was recognized by a resolution of the World Medical Association in 1999⁶; in 2002, the Institute for International Medical Education Core Committee included "professional values, attitudes, behaviors and ethics" as one of the 7 broad educational competencies identified as minimum essential requirements in medical education.⁷ The committee anticipated that medical schools around the world would develop curricular designs to teach



these competencies within the social and cultural context of their own countries. Implementation of ethics education programs in medical schools in developing countries has lagged behind that of schools in high-income settings, however, largely due to lack of adequate human, financial, and physical resources. In recent years, demand within developing country medical schools has mounted for the inclusion of ethics education within their curricula to improve conduct by students and graduates in clinical settings, to enhance students' abilities to fulfill requirements for research theses, and to be attractive partners for international clinical research activities.

Twenty years ago, Miles et al⁸ defined a set of objectives for medical education that focused on providing physicians with "practical wisdom" and an "informed ability to realize values" in clinical practice. These objectives called for educational programming to teach physicians to recognize the human and ethical dimensions of clinical practice; encourage physicians to self-reflect on their moral and ethical obligations toward others; equip physicians with a foundational understanding of the philosophical, social, and legal aspects of medicine; and enhance their abilities to apply critical reasoning skills in clinical care.

Although it is widely acknowledged that both clinical practice and research are highly interactive and social activities, many medical schools frequently rely on a combination of didactic lectures and online educational tools to teach medical ethics. In some countries such as Guatemala, where training in bioethics is a requirement of the medical school curriculum, the subject matter often centers on the religious and philosophical dimensions of medicine and morality. The emphasis on normative ethics affords students only limited opportunities to examine how these fundamental principles and values are applied in the real-world settings of clinical practice and research in which they will work. Prior to this initiative, ethics content was delivered through didactic lectures with little consideration of the relevance of the content to students' exposure to clinical settings or modern theories of active learning pedagogy. Faculty for the ethics courses have traditionally been religious figures and other scholars trained in moral philosophy but with limited experience in the practice of medicine, or clinicians that have had no formal training in medical ethics and/or limited to no experience in medical research.

A growing body of evidence supports ethics education approaches that are interactive.⁹ Students who are actively engaged in the material they are studying have been shown to develop better complex reasoning skills and to absorb, process, and retain information more effectively in active learning environments than they do in classrooms where information is presented in more didactic forms. Evidence supports the use of active learning methodologies in general, but particularly in the sciences.¹⁰ To sift through a maze of possible causes and effects, problems and solutions, or actions and potential consequences and match them to a particular context or set of conditions, the ethics learner needs to consider as comprehensive

a set of possibilities as he or she can. This task is well suited to small-group discussions in which members may have different bases of understanding, points of view, and levels of curiosity. Through discussion, information give-and-take, and sometimes simply trial and error, each learner constructs the knowledge he or she needs to be able to assess critically an array of issues, situations, and challenges that arise in the course of health care and research.

Since 2000, when the National Academies published its report, "How People Learn: Brain, Mind, Experience and School," outlining rapid advances in cognitive science and neuroscience,¹¹ many institutions around the world, especially those involved in science, technology, engineering, and mathematics (STEM) education, have begun to modify, adapt, or entirely recreate their teaching programs to incorporate these findings using a multitude of active learning techniques. The use of active learning in teaching STEM and other disciplines has been documented in a large and growing body of evidence which confirms that the use of this methodology leads to significantly improved learning outcomes.¹¹⁻¹⁶ The methods used in active learning have several characteristics in common. They are programs within learner-centered environments that have been assessed and validated using scientific methodology. They require peer and student engagement through the use of discussion, writing, single or group presentations, project design and execution, problem solving, and other activities that challenge students to engage further than simply listening and taking notes.

Case-based approaches to teaching medical ethics have a long tradition in medical education. Despite the fact that there has been, to date, limited empirical research on the effectiveness of the method in comparison with other approaches such as online and didactic methods, a small body of literature suggests that using cases to introduce and discuss ethical issues results in greater student satisfaction, improved ability to recognize and respond to ethical dilemmas in hypothetical situations, and a greater appreciation for differing viewpoints among multiple stakeholders.^{17,18} Other scholars have noted the existence of a tension between such student-engaged approaches to learning and the demands of the core medical curriculum.¹⁹

This case study describes a faculty initiative at the UFM in Guatemala City, Guatemala, to enhance the existing undergraduate medical curriculum in ethics by providing opportunities for students to explore how ethical principles guide clinical practice and research, and by aligning course content with student exposure to clinical and research settings. Although such initiatives are far from uncommon in the United States and Europe, they remain novel in Latin American countries and are largely absent in medical schools in Guatemala. The likelihood that this effort would succeed and might prove a model for other medical schools in the region was high, given the institution's recent commitment to deliver its entire curriculum using

active learning methods and its reputation for excellence in Guatemala.

Methods

Setting

The UFM is a private, secular university in Guatemala City, Guatemala. Its 30-year-old School of Medicine today has 320 medical students, an undergraduate program leading to a medical degree, and residency programs in radiology, dermatology, internal medicine, ophthalmology, hemato-oncology, pediatric intensive care, and a combined degree in medicine and business. The undergraduate program is based on a 6-year curriculum, with students entering the program immediately from secondary school. The first 3 years are spent learning basic sciences exclusively in the university, with students beginning their clinical training in year 4 of the curriculum. Although this format differs from the post-baccalaureate, 4-year medical education found in medical schools in the United States and Canada, it is similar in schedule and content to those found in medical education programs in Europe and elsewhere, particularly in developing countries.

Ethics courses at UFM have always been delivered in the form of didactic lectures on the conceptual foundations of morality, with limited guidance on how such moral rules might be applied in the clinical practice or research settings. Until recently, bioethics was taught as a single, lecture-based course in the curriculum. When the medical school adopted a new curriculum in 2015, it decided to place greater emphasis on medical ethics and professionalism and directed that, by 2020, courses in these topics would be taught in every year of the undergraduate program.

Medical schools in many countries have difficulty in teaching medical ethics due to a lack of faculty with the knowledge, skills, and time to teach ethics curricula.²⁰⁻²³ Since 2014, UFM has been 1 of 2 medical schools in Guatemala to partner with U.S. universities to build capacity in research ethics education and curriculum development. The 5-year effort was funded through a grant to the University of Pennsylvania with sub-award funding to the Johns Hopkins University School of Medicine and Rutgers, the State University of New Jersey, from the National Institutes of Health (NIH) Fogarty International Center and Human Genome Research Institute. Under this program, a postgraduate faculty cohort of 9 professionals from UFM and the Universidad de San Carlos de Guatemala (USAC) received more than 240 hours of face-to-face and online instruction in research ethics, ethics curricular development, and active learning pedagogy. Faculty were awarded certificates for completed learning modules and those who completed the program received a Post Graduate Diploma in Research Ethics Education from Rutgers University in 2019. Trainees will serve as faculty members within Guatemalan medical schools, mentors for students and faculty on ethical

issues, and resources for ethics committees in public health institutions throughout the country.

Development and implementation of the PRACTICE curriculum

The development and implementation of a practical curriculum in clinical ethics (PRACTICE) involved 6 phases:

- To build capacity of Guatemalan medical faculty to serve as ethics educators and use active learning techniques;
- To secure the support of the UFM School of Medicine for the pilot of the PRACTICE curriculum;
- To promote student interest in future ethics educational activities through workshops and 1-time case discussions;
- To develop and introduce pilot PRACTICE curriculum within the UFM system of Logos short-courses;
- To evaluate the effectiveness of pilot program after 1 year in student acceptability, student learning, and institutional “fit”;
- To refine PRACTICE curriculum based on findings.

Train the trainers. Medical school around the world often cite a lack of time and qualified faculty as major challenges to the inclusion of ethics content in undergraduate curricula.²⁴ Until recently, lack of faculty qualified to teach practical ethics had been a major impediment to UFM’s planned expansion of its ethics training curriculum. As part of the Guatemala Penn Partnership, trainees participated in mentored teaching activities to build skills not only in ethics content, but also in strategies to use in teaching ethics using small-group, case-based approaches. In year 3 of the program (November 2016), the faculty trainees assisted their U.S. mentors in teaching a case-based workshop for 12 undergraduate medical students at UFM. Cases were selected to encourage discussion on several commonly experienced challenges in Guatemala—managing different cultural and language issues in treating elderly patients and recognizing the limitations of one’s expertise as a resident in a clinical setting. This was the first time that the UFM faculty trainees had the opportunity to practice engaging students in a conversation about ethics rather than defaulting to a more didactic form of teaching. In year 4 of the program (February 2017), the UFM trainees led a case-based, active learning workshop in medical ethics for 73 undergraduate students at UFM.

Institutional support. Lack of institutional support has been frequently cited in the literature as an impediment to the success of efforts to introduce or expand ethics curricula in undergraduate medical programs.²³ Fortunately, this was not the case at UFM, where the administration had demonstrated a strong interest in the Guatemala Penn Partnership ethics capacity-building efforts since its inception and supported the creation of student learning opportunities in applied ethics. This support has been reinforced by a university-wide mandate that all schools, including the

UFM School of Medicine, deliver course content using active learning and problem-based learning methodologies. The PRACTICE curriculum and Logos ethics course were therefore timely in both its content and its mode of delivery.

Student engagement. The ethics workshops developed to provide experience for the UFM faculty also provided an opportunity to gauge the potential level of student interest in the subject. More than 85 students participated in the 2 workshops and informal feedback, based on both attendance and comments, and encouraged the team to move forward with the development of a more formal curriculum.

Results

Integrating a practical ethics course into existing curriculum

A strategic approach was adopted early in the developmental phases of this project to minimize any perceived disruption of “business-as-usual” at the medical school. This approach played a key role in our decision not to introduce PRACTICE as a stand-alone course, lest it be seen as a challenge to the existing bioethics courses and their faculty, and not to embed content within core courses, as this had the potential to be viewed by the medical faculty as “stealing” time from existing content. The UFM has a credit-bearing system of course electives called “Logos” (from the Greek word meaning “discourse” or “argument”) that are short-term nontraditional courses that range from single-day instruction focused on skills-building, eg, “How to make a PowerPoint presentation,” to 2-month-long courses that examine a particular aspect of medicine or medical practice. Students are required to complete 50 preclinical and 50 clinical Logos courses during the 6-year program to graduate. Rather than challenge an existing ethics program or further constrain an already tight core curriculum, the PRACTICE program was instead designed as an elective preclinical Logos course comprising six 2-hour sessions. Sessions were scheduled in consecutive weeks at times that would not conflict with core courses. Each session focused on a particular topic, chosen by the instructors to promote learning in key areas of ethical concern identified in the clinical settings in which students would eventually train. Although the format of the course evolved over time as the instructors became more experienced in the content and teaching techniques, each unit ultimately included learning goals and objectives, assigned pre-readings, brief didactic lectures to introduce key concepts, discussion cases, and a brief assessment. Teaching units were developed using active learning, case-based methodology, with opportunities for students to work in small groups to debate, exchange, and resolve perceived ethical challenges. A total of 25 students, almost 8% of the undergraduate medical student body at UFM, participated in the 2 ethics Logos courses offered in the first year. Topics covered included moral status, patient autonomy,

and informed consent; nonresuscitation orders, futility, and advanced directives; ethical decision-making; confidentiality and privacy; research versus practice; professionalism; and ethical priority setting in health care. The choice of topics in this first year reflected the subject matter with which the UFM faculty were most comfortable, special topics identified by the school administration, and identified areas of ethical lapses in medical practice then currently being reported in the media.

The PRACTICE curriculum was created with 3 primary objectives in mind: First, the content had to complement, rather than challenge, the medical school’s existing normative bioethics curriculum and do so through exploration of context relevant examples. Second, the delivery of content was to draw on active learning pedagogy to encourage student-engaged and student-directed learning. Once fully operational, the course was to enable faculty to draw on a “tool kit” of teachable units which could be adapted and used according to the pace of student learning and level of familiarity with the clinical environment.

Student feedback and assessment

Students’ perspectives on PRACTICE varied depending on their level of training. Preclinical students in either their first, second, or third year of medical school had yet to experience or observe an ethical problem during clinical training or working, and most of them had not yet taken the required core bioethics course or participated in a case-based discussion of an ethical issue. Of the 13 students comprising the first cohort of PRACTICE students, all of them reported having spoken about ethical issues in health care with a professor or classmate, and all of them agreed that it was important to have opportunities to hear about and discuss ethics topics. A few students already in years 4 to 6 of their education had already begun clinical training; these students found that sharing their observations and experiences gave them the opportunity to reflect on any ethically questionable behaviors they had observed.

Discussion

This case study describes the strategy used in 1 medical school in Guatemala to enhance ethics education by (1) building faculty competencies in ethics content and pedagogy, (2) using existing curricular structures to introduce new ethics short-courses, and (3) complementing rather than challenging existing course content in moral philosophy and religion. Timing was critical to its success. Faculty at UFM were able to capitalize on the university’s commitment to active learning pedagogy, the availability of training resources through the Guatemala Penn Partnership program in international research ethics education and curriculum development, and public outcry over unethical conduct by residents and doctors in the country’s public health facilities which underscored the need for greater emphasis on professionalism in the curriculum.

The PRACTICE curriculum introduces preclinical undergraduate medical students in Guatemala to ethical issues that they may encounter during their clinical training and later in practice. It provides a safe environment in which students can “practice” using the moral precepts that they have been taught in a foundational bioethics course to help them identify and resolve ethical dilemmas in clinical practice and research. Stand-alone units offer flexibility in ordering of topics according to student experience and learning pace. They serve as a template for the design of additional units and can be used individually within core courses in the future to illustrate ethical issues of particular relevance.

The first year of PRACTICE was as much an exercise in faculty training as it was in pilot testing a new curriculum and teaching methodology. For example, in early sessions, the faculty simply provided a case and encouraged discussion; absent any background information or guidance on connecting a particular situation to an ethics framework, it was questionable how much student learning had actually taken place. Over time, and with additional practice, faculty realized that cases alone did not provide an adequate foundation for student learning but offered instead the opportunity for students to gain a deeper understanding of conceptual tools provided as part of an organized curricular unit. Early units are being revised and new units created that use the “Teachable Unit Framework” developed by the Summer Institutes for Scientific Learning.²⁵

A second challenge, and one that is not yet fully resolved, has to do with scheduling. Logos courses in general have less standing than the core medical curriculum and therefore can be too easily set aside to accommodate changes in core course scheduling, or student examinations. We anticipate that the ethics curriculum as a whole will gain status within the medical school as it expands across the 6-year program, but we suspect that it will always be assigned a lower priority compared with core courses. Some protection against this may be secured if at some point the teachable units become embedded in core courses, but it is inevitable that some privileging of medical content over ethics content will occur.

We observed in both the workshops and Logos ethics courses that student learning seemed to be enhanced when the groups included students from both preclinical and clinical years. More advanced students often reinforce cases by situating the ethical topics under discussion within the real-world context of the clinics and hospital wards in which they are training. Concepts that may have at first seemed abstract to first to third year medical students immediately became real when reinforced by their more advanced colleagues. Consideration should be given in future offerings to encourage enrollments by students across all years, with students with prior ethics training and/or more clinical exposure given opportunities to participate as peer educators. Peer instruction is a highly effective method of engaging students in their own

learning and has been demonstrated in a variety of STEM contexts to increase student understanding.^{26,27} At the same time, an advanced Logos course that explores more medically complex ethics cases should be considered in the future for medical students in the clinical years of their training. Such courses can provide opportunities for advanced students to bring their own “cases” into the classroom to share their experiences with others.

The development of the PRACTICE curriculum at UFM is timely given a growing commitment to ethics education in medical schools in Guatemala and elsewhere in Central America. Available in both Spanish and English, the units could be shared in the future within a larger community of medical faculty and institutions.

The first year of the ethics Logos course was an opportunity for the UFM faculty to pilot the PRACTICE curriculum and gain experience in active learning pedagogy. As such, the emphasis was more on “method” and program “acceptability” than on the systematic evaluation of student learning and faculty experience. As the program moves forward, the UFM faculty will incorporate both formative and summative assessments for each teachable unit. More rigorous assessment of student learning in the short term, ie, during and/or immediately following a unit, will provide opportunities to refine both unit content as well as delivery. In the long term, given the anticipated expansion of ethics education across all 6 years of the undergraduate curriculum, such assessments may provide opportunities for longitudinal assessments of students’ gains in ethical reasoning skills. Special attention should be given to existing evaluation tools²⁸⁻³⁰ and to their potential adaptation to assess learning in the context of intended learning goals and objectives. Ongoing assessments of course design and faculty experiences are intended as an integral part of the PRACTICE curriculum moving forward.

The UFM example described in this case study may not offer novel guidance on strategy, focus, or implementation for medical schools in the United States and Europe, where professionalism and ethics training have been important and obligatory components of medical education. However, in developing countries in Latin America and elsewhere, ethics education within medical school curricula is in its infancy, often constrained by lack of institutional commitment, inadequate capacity in faculty and curricular design, and/or existing social or religious doctrine that emphasize normative rather than applied ethical content. Driven in part by an ever-expanding portfolio of internationally sponsored global health research requiring host-country ethics committee approvals and demonstrable ethics capacity in local project personnel, however, numerous opportunities to build medical faculty capacity in ethics content and pedagogy exist. The U.S. NIH Fogarty International Center has been at the forefront of ethics training programs at the postgraduate level since 2000 and continues to fund a robust portfolio of programs in medical schools in Latin

America, sub-Saharan Africa, and other regions.³¹ Through its investments and the programmatic efforts of the United Nations Educational, Scientific and Cultural Organization (UNESCO)³² and notably in Latin America, the Pan American Health Organization,³³ faculty with academic training in medical ethics and course materials can be found in many developing countries should other medical schools like UFM decide to build their curricula in this important area.

Conclusions

The development of the Logos ethics course and the PRACTICE curriculum represents “baby steps” in realizing the UFM School of Medicine’s long-term goals for educating ethically sensitive and aware physicians. It has introduced a new pedagogical approach to realizing these goals and provided opportunities for new ethics faculty to gain experience in both subject material and content delivery. Lessons learned from this first year pilot effort can inform the development of additional course content and planning for expansion of the ethics curriculum across the 6-year undergraduate program. Stand-alone teachable units provide flexibility in how they may be used, enabling faculty to select from a menu of topics to meet course objectives, or to embed an individual ethics unit in a core course if it is of particular relevance to course content. The PRACTICE curriculum offers a model that other medical schools in Guatemala and elsewhere in Central America may be able to adapt to their own ethics curricular needs.

Acknowledgements

Special thanks are due other members of the Guatemala Penn Partnership who participated in the developmental workshops for this course and contributed to the skills training of the LOGOS faculty, particularly Jon F. Merz and Megan Kasimatis Singleton. Dr M.L.A. gave an oral presentation on the ethics LOGOS course development at the annual conference of the Consortium of Universities for Global Health in New York in March 2018 and a companion abstract by the authors appeared in the March issue of *Lancet Global Health*. Special thanks are due to Dr Federico Alfaro, Dean of the UFM School of Medicine, for his ongoing support of our efforts to contribute to medical ethics education in Guatemala.

Author Contributions

All three authors contributed jointly to the development of the LOGOS curriculum. MLA and SMS served as faculty in the face-to-face delivery of course content. All three authors contributed jointly to the writing and editing of this manuscript and have read and approved the final version.

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