

Integrating Bioethics Into Postgraduate Medical Education: The University of Toronto Model

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Abstract

Bioethics training is a vital component of postgraduate medical education and required by accreditation organizations in Canada and the United States. Residency program ethics curricula should ensure trainees develop core knowledge, skills, and competencies, and should encourage lifelong learning and teaching of bioethics. Many physician-teachers,

however, feel unprepared to teach bioethics and face challenges in developing and implementing specialty-specific bioethics curricula. The authors present, as one model, the innovative strategies employed by the University of Toronto Joint Centre for Bioethics. They postulate that centralized support is a key component to ensure the success of

specialty-specific bioethics teaching, to reinforce the importance of ethics in medical training, and to ensure it is not overshadowed by other educational concerns.

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Residents must develop the skills required to identify and address ethical issues arising in clinical practice and research. Medical educators, however, face challenges of incorporating ethics training into postgraduate medical education (PGME) in a practical and effective manner at a time when residents' skill and knowledge development in other areas is increasingly demanding because of the information and technology explosion that medicine has experienced in recent years. Further, many physician-teachers may not be familiar with teaching bioethics and will need a framework so that they can develop the appropriate knowledge, teaching skills, and tools to teach residents successfully.

Since 1995, the Royal College of Physicians and Surgeons of Canada (RCPSC) and the College of Family Physicians of Canada (CFPC) have mandated residency programs to provide specialty-specific ethics curricula for trainees. Ideally, residency ethics curricula should ensure trainees develop core knowledge, skills, and competencies, as well as encourage the lifelong learning and teaching of bioethics. Programs supporting bioethics education efforts should provide leadership and coordination, build teaching capacity, and create sustainable, specialty-specific curricula.

Medical schools throughout Canada and the United States include formal ethics instruction as part of undergraduate medical curricula, though there is significant variation in content, methods, and timing. The effectiveness of ethics education initiatives depends on institutional willingness to devote curricular time and funding to medical ethics.¹ Although ethics is an accepted part of curricula, the methods by which ethics is taught deserve to be reconsidered: Trainees would likely be better served by greater integration of ethics education with their clinical and other educational experiences and less reliance on theoretical aspects of ethics.²

These challenges are broadly mirrored in specialty-specific residency programs and may be exacerbated by a lack of correspondence between trainee needs

and faculty knowledge. Sulmasy and colleagues³ reported that faculty confidence in their ability to address ethical issues was not matched with their knowledge scores. This gap may present barriers in the ability of faculty members to model and teach ethical behavior to trainees. Another study found that 28% of general surgery residencies in the United States offered no formal ethics teaching activities and that many program directors were opposed (50%) or undecided (20%) regarding inclusion of ethics questions on in-service and qualifying examinations.⁴ More than two-thirds (69%) of State University of New York pediatrics residents at the University at Buffalo School of Medicine and Biomedical Sciences reported that their training had not prepared them to address ethical issues. Seventy-four percent desired more training, and 69% thought attending physicians were interested in discussing ethical issues.⁵ Finally, a majority (86%) of pediatric general surgery residents in the United States and Canada felt competent to handle ethical problems in clinical practice, although 47% gave incorrect responses to or were unsure about routine bioethics questions.⁶

Trainees, regardless of discipline or level, perceive a need for more training regarding practical ethical dilemmas they confront in medical education and practice.⁷ Residency specialty programs have recognized ethics-training deficiencies with regard to ethics training and made

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efforts to assess what is being taught and how curricula may be improved. For example, although all Canadian physical medicine and rehabilitation residency training programs include ethics teaching, one study recommended implementing a standardized ethics curriculum to address the variation in the qualifications of the teacher, the hours allocated to ethics education, the pedagogic method used, and the topics taught.⁸ In a survey of 198 obstetrics–gynecology programs, Cain and colleagues⁹ noted that the number of hours dedicated to ethics was small relative to a long list of ethical issues that might need to be covered. Just 29% of faculty members had any training in medical ethics, and the teaching, except in rare circumstances, lacked structure and used few of the available reading materials. The researchers recommended developing a uniform ethics curriculum and offering encouragement and support for faculty development in medical ethics. Some researchers have conducted surveys to identify specialty-specific ethical issues in pathology, gastroenterology, neurology, emergency medicine, and pediatrics residency programs.^{10–14} Other studies describe ethics curricula for pediatric rheumatology, neonatal–perinatal medicine, family medicine, pediatrics, and obstetrics–gynecology.^{15–19}

In this article, we consider current postgraduate bioethics education (PGBE) programs at several universities in Canada. We then offer as a model the innovative program at the University of Toronto, which provides centralized support to help physician–teachers develop specialty-specific curricula and appropriate teaching skills for their residency programs. Other initiatives include teacher workshops and bioethics training days for residents. In addition, we offer a master’s program in bioethics and maintain a Web site with teaching resources. We describe our program, initiatives, and research here to share with other educators our model and the lessons we have learned.

PGBE in Canada

To better understand how the University of Toronto model for PGBE compares with programs across Canada, we contacted 11 Canadian medical education centers in February and March 2008 regarding ethics teaching in their residency programs. The four

responders* indicated that ethics education was encouraged in specialty programs but that their centers did not have an overarching ethics teaching strategy with central funding or an existing structure to build teaching capacity or provide resources to teachers. Brief descriptions of each responder’s program at the time of our survey follow:

- The University of Dalhousie’s Department of Bioethics provided teaching in residency programs by invitation and specifically to first-year residents through the PGME office. Some programs offered regular ethics rounds, many conducted ethicist-led seminars on a semiregular schedule, and others held sessions where residents were responsible for writing cases, identifying and researching topics within the cases, and presenting the cases.
- Memorial University of Newfoundland’s PGME office provided two half-day ethics sessions for first-year residents. The bioethics coordinator worked to develop bioethics rounds and offered residency programs three contact hours per year. Specialty-specific curricula had been developed, and an active ethics consultation service and a hospital education program were in place.
- McGill University’s Biomedical Ethics Unit faculty led bioethics seminars in many specialty programs. These included informal case rounds where residents were mentored in the preparation and presentation of their sessions. No unified residency ethics curriculum existed, and each specialty operated independently to meet RCPSC objectives for bioethics teaching.
- The University of Manitoba Faculty of Medicine’s coordinator for bioethics encouraged each specialty program to address bioethics as part of the professionalism component of its curriculum. However, there was no centrally sponsored effort that provided support for ethics teaching.

*The four responding Canadian medical education centers were the University of Dalhousie Faculty of Medicine, Halifax, Nova Scotia; Memorial University of Newfoundland Faculty of Medicine, St. John’s, Newfoundland; McGill University Faculty of Medicine, Montreal, Quebec; and University of Manitoba Faculty of Medicine, Winnipeg, Manitoba.

Bioethics Education at the University of Toronto

The Joint Centre for Bioethics (JCB) is a network of more than 180 multidisciplinary professionals engaged in bioethics-related activities, including research and clinical endeavors, at the University of Toronto and throughout its 15 partnered health care organizations. As part of the JCB’s educational activities, and in response to the RCPSC/CFPC mandate, in 1996 the JCB asked each PGME program at the University of Toronto to designate a faculty member as its bioethics coordinator to promote and facilitate specialty-specific residency bioethics teaching.

In 2001, we surveyed bioethics education coordinators and chief residents from the 67 PGME programs at the University of Toronto Faculty of Medicine (University of Toronto) to gauge the effectiveness of residency bioethics teaching and responses to the RCPSC/CFPC mandate.²⁰ The standardized questionnaires (short-answer and checkbox responses) focused on teaching methods and resources, goals and objectives, course content, and suggested improvements. We used two versions of the questionnaire so we could examine each group’s perceptions of bioethics education. The response rate among coordinators was 76% (42/55). The response rate was lower among chief residents (57%, 37/64; $P = .05$). Not all respondents answered every question.

A majority (79%, 27/34) of responding residents indicated that ethics teaching was as important as clinical education; all respondents indicated that ethics education is important, worthwhile, and should remain part of their specialty’s curriculum. Nearly all (98%, 41/42) responding coordinators reported that ethics was taught in their programs, although there was wide variation in time spent teaching bioethics (1.5–9 hours per year); more than half (55%, 23/42) reported that their programs spent four hours or less per year. A ranked comparison of ethical issues showed discordance between the curriculum topics faculty chose to teach and those that residents selected as the ethical issues most often faced in practice. Fewer than half (46%, 17/37) of program coordinators reported that their program conducted a formal evaluation of its ethics education curriculum.

To address concerns identified in our survey—and as part of the ongoing effort to strengthen postgraduate bioethics teaching at our university—the JCB instituted several initiatives.

The “hub and spokes” model

An experienced bioethics and medical educator (A.V.L.) was designated as the director of PGBE to support the faculty bioethics coordinators with funding through a grant from the JCB and a matching grant from the University of Toronto PGME office. The director, the “hub,” works with the faculty coordinators, the “spokes,” to develop, support, and implement a specialty-specific bioethics curriculum for each of the 72 residency programs. (Five programs were added after the survey was made.)

The PGBE program provides resources, such as those listed below:

- opportunities to connect with bioethics teachers from the JCB or other specialties;
- reading selections for syllabi, such as the *Canadian Medical Association Journal's* Bioethics for Clinicians series (http://collection.nlc-bnc.ca/100/201/300/cdn_medical_association/cmaj/series/bioethic.htm);
- standardized patients through the University of Toronto Standardized Patient Program (www.spp.utoronto.ca); and
- suggestions for other creative teaching methods (e.g., teaching with narrative).

A listserv provides direct communication between the director and the faculty coordinators and among coordinators themselves. The listserv experiences approximately 100 messages per year. It is used to keep bioethics coordinators posted on bioethics education activities throughout the university, grant opportunities, award competitions, and services provided by the hub. The ultimate goal of the PGBE program is to develop each spoke to the point of independent proficiency.

Teaching support and curriculum development

The PGBE program cultivates the growth of specialty-specific bioethics teaching by encouraging and supporting medical educators who may feel that teaching

ethics is outside their area of expertise. Often, a bioethics faculty coordinator consults the director for guidance on how to organize teaching sessions and how to integrate bioethics into his or her residency program’s curriculum. The director asks the coordinator to describe perceived needs for the program and identify possible teaching opportunities and available class time. If the program’s bioethics teaching priorities are not clear, the director asks the coordinator to poll the program’s faculty members and residents separately, asking them to list the bioethics issues they feel are most important to address in the curriculum. Merging these lists helps coordinators develop congruence between both formal and informal curricula.

The director may suggest possible teachers for each topic and, as appropriate, alternative teaching methodologies (e.g., debate, role-playing) and suitable methods of evaluating teaching sessions. Program faculty members are the preferred session leaders and are coached by the director or another experienced bioethics teacher with expertise in the topic to be covered. This approach encourages independent bioethics teaching within the specialty, and the faculty member provides an authentic voice to answer residents’ technical questions.

Master of health science in bioethics

Encouraging and grooming new bioethics teachers is crucial to continue the development of human capital within PGME programs. Bioethics coordinators and other medical practitioners who desire formal education in bioethics may do so through the University of Toronto master of health science (MHSc) in bioethics (www.jointcentreforbioethics.ca/education/mhsc.shtml). This two-year executive professional program at the JCB offers multidisciplinary training in theory and practice relevant to bioethics as well as opportunities to apply this knowledge in the practitioner’s chosen specialty and to connect with others interested in bioethics. The program provides grounding in the theoretical underpinnings of bioethics and frameworks for research and scholarly publication. It also emphasizes application of methods relevant to and practical experience in teaching bioethics.

As of this writing, 13 specialty PGME programs at the University of Toronto have MHSc-trained faculty.[†] Within the University of Toronto health care community, graduates of the MHSc in bioethics represent a wide range of disciplines, including staff physicians and residents (21), research (4), nursing (5), rehabilitation (1), pharmacy (2), social work (2), perfusion services (1), and midwifery (3). These individuals are the spokes of our model and provide expert teaching and bioethics support within their specialty residency programs and cross-disciplinary support to those programs without MHSc graduates.

Teaching the teachers

The bioethics issues that arise in residency training situations can create unique teaching challenges and opportunities for medical educators. Overcoming these challenges and capitalizing on these opportunities may require a physician–teacher to employ unfamiliar teaching methods and practices. To support medical educators facing this situation, the PGBE program introduced an annual half-day retreat focusing on relevant bioethics topics and useful teaching techniques. The “Teaching the Teachers” retreat offers two or three interactive workshops on topics such as teaching informed consent with standardized patients and using debate as a teaching tool (List 1).

Experienced bioethics teachers lead the workshops, and the topics change each year to engage returning attendees and tackle timely subjects. Participants include not only faculty bioethics coordinators but also other staff members and residents interested in how best to address ethical issues with trainees and peers. Attendees consistently rate the workshops very good to excellent on a five-point scale. Participants have indicated that they appreciate the opportunity to focus on bioethics issues and to discuss their successful and less successful experiences teaching bioethics with both session leaders and their peers.

[†]The specialty programs with MHSc-trained faculty are Anesthesiology, Cardiology, Critical Care Medicine, Emergency Medicine, Family and Community Medicine, Neonatology, Neurosurgery, Obstetrics and Gynecology, Oncology, Ophthalmology, Palliative Care Medicine, Pediatric General Surgery, and Pediatrics.

List 1

Topics Covered in Teaching the Teachers Workshops Hosted by the University of Toronto Joint Centre for Bioethics, 2003–2008*

- The state of postgraduate bioethics education at the University of Toronto
- Teaching residents bioethics: How do we know if we're making a difference?
- "Good teacher/Bad teacher"
- Teaching residents to care for our patients: The ethical quandary of academic clinicians
- Teaching with games
- Resolved: Innovative treatments do/do not require REB review
- Anatomy of informed consent
- Conflict of interest: Should residents interact with drug companies?
- What do we do about the incompetent physician?
- Teaching ethics in small, case-based groups: The difficult student
- Mock research ethics board: Teaching research ethics (The REB isn't your enemy!)
- How to develop a residency program bioethics curriculum
- Teaching bioethics with case studies
- Collegial conversations: Teaching and learning professionalism
- Royal College accreditation of bioethics in residency: What do they expect? What can we do?
- Culturally sensitive medical training
- Developing an exciting bioethics curriculum for residents

* REB indicates research ethics board.

One hundred eighty-six participants attended sessions from 2003 to 2008.

Research Ethics Day/Clinical Ethics Day for Residents

To ensure the professional development and grooming of future bioethics teachers, it is important to foster resident interest and enthusiasm for bioethics in practice and as an area of critical appraisal and research. In 1996, the University of Toronto Clinician Investigator Program (CIP) sought to address ethics issues faced by clinician researchers by introducing Research Ethics Day (RED). This initiative gives trainees opportunities to work with seasoned bioethics educators to plan and lead workshops during RED for their peers on relevant research ethics topics. Invited speakers also discuss their experience with bioethical issues. Topics addressed in resident-run workshops and by speakers have included authorship, research misconduct, research ethics boards, conflicts of interest, innovation, and informed consent. Participants have rated this format very good to excellent on a five-point scale. In 2004, a companion conference, Clinical Ethics Day for Residents (CEDR), was initiated for trainees outside the clinical research stream. Topics for CEDR have included futility, medical error, trainee dilemmas, breaking bad news, professional boundaries, medical–industry

interactions, and international health care ethics. Approximately 75 to 90 residents attend each day, and provisions are made for residents from the same program to split the day to allow for clinical coverage if needed.

RED and CEDR are held on two consecutive days each spring at a conference center within the University of Toronto campus. Each day begins with a plenary session by an invited guest speaker, which is followed by two breakout sessions. Because smaller groups encourage more active participation, each resident-led and -developed workshop includes half the attendees and is then repeated for the other half. Another plenary session takes place during the midday break, and the afternoon workshops follow the same arrangement as the morning sessions.

RED and CEDR augment specialty-specific ethics training by offering interested residents the chance to gain mentored experience teaching bioethics. Trainees gain an opportunity to learn about a range of bioethics topics and to discuss these issues with their colleagues outside traditional training settings. Using a standardized evaluation tool, participants typically rate these conferences very good to excellent on a five-point scale. Residents also indicate that they appreciate this active approach to learning through teaching their colleagues.

CIP trainees are required to attend at least one RED during their course of study. Attendance at CEDR is not required for any PGME program, yet 63 of the University of Toronto's 72 specialties were represented from 2003 through 2008 at the conference, which is usually oversubscribed. Attendance at CEDR is not limited to our residents; residents from training programs in British Columbia, Newfoundland, and Quebec have also participated. Their expenses were covered by their residency programs.

We also encourage the development of national bioethics conferences for residents. The PGBE director (A.V.L.) assisted in the development and continuing organization of a national bioethics conference for Canadian ophthalmology residents, which is offered every other year by Dr. Robert LaRoche of the Department of Ophthalmology at Dalhousie University. Residents from all but one ophthalmology residency program in Canada have attended.

Web-based support

The PGBE hub maintained a Web site (www.utoronto.ca/pgme) to act as a portal for faculty coordinators and others to access bioethics teaching resources. Visitors will find a list of current University of Toronto bioethics coordinators for all postgraduate specialty programs, past bioethics education event syllabi, and links to other resources. The site offers more than 20 specialty-specific bioethics curricula designed predominantly by JCB MHS in bioethics students. Materials from nine "Teaching the Teachers" workshops and five CEDR programs are available on the site. These materials may serve as starting points for medical educators who wish to develop their own bioethics curricula.

In addition to these locally developed materials, the site also provides links to unique online bioethics teaching resources, including the American Medical Association's online publication Virtual Mentor (<http://virtualmentor.ama-assn.org>) and Educating Future Physicians for Ontario's bioethics objective structured clinical examination (www.wings.buffalo.edu/faculty/research/bioethics/osce.html). The site also provides links to policies and codes of ethics from local, national, and international medical institutions and associations.

Promoting PGBE Research

Bioethics topics are usually selected by teachers and reflect what teachers feel trainees need to know. Research suggests that such curricula may not completely reflect the ethical issues actually faced by residents and may leave a gap between what trainees are taught and what they need to learn. Identifying such gaps between formal bioethics curricula and the real-life bioethics challenges (the informal or “hidden” curriculum²¹) is important to keep bioethics education relevant and vital.

Our current research, which was supported by a two-year grant from the Association for Surgical Education, uses focus groups and interviews with bioethics coordinators and residents in a qualitative study of ethics training within surgical specialty programs at the University of Toronto. We hope to use our findings to improve surgical bioethics teaching with curriculum recommendations that reconcile what surgeon–teachers think they should be teaching their residents with what surgical residents feel they should be learning. This research will also guide our future efforts to create evaluation strategies designed to ensure graduate surgeons have acquired the knowledge and skills that will allow them to deal effectively with ethical issues they face.

Discussion

Adoption of the CanMEDS framework in 1996 organized PGME in Canada around seven roles: Medical Expert, Communicator, Collaborator, Health Advocate, Manager, Scholar, and Professional. As part of the 2005 revision, ethics competency has been integrated in several areas of the framework: ethics of practice (Medical Expert), ethics of teaching and research (Scholar), ethics in the doctor–patient relationship (Communicator), and team ethics (Collaborator), including confidentiality, resource allocation, and professionalism.²² In the United States, the Accreditation Council for Graduate Medical Education Outcome Project expects similar competencies from trainees in accredited specialty programs. This recognition of the importance of bioethics competency underscores the ubiquity of ethical issues in medical practice. We believe ethics must remain as a core and distinct component of residency education within

specialty-specific curricula. Providing dedicated time for residents to acquire skills and knowledge that will assist in identifying and coping with ethical issues that arise in their practice will certainly enhance their roles as professionals and physicians.

The emphasis placed on ethics and other nonmedical competencies by CanMEDS and the Outcome Project represents a challenge to faculty members who may be familiar with handling ethical issues at the bedside but uncomfortable addressing such issues in formal teaching. Coteaching and providing access to specialty-relevant trained bioethics teachers and resources are the best ways to reinforce faculty knowledge and help build teaching capacity within a residency program.

Although formal bioethics teaching is important, role modeling of ethical behavior and bedside teaching around ethical issues influence residents’ development the most. Specialty-specific and practical bedside application of bioethics knowledge engages residents and starts them thinking about issues they face. The approach must represent faculty experience, be relevant to trainees, and provide practical tools and recommendations. Case-based ethics teaching is familiar and useful for trainees, but trying alternate training methods and settings for bioethics teaching sessions enriches the learning experience.

Dedicated resources also reinforce the importance of bioethics in medical education and ensure it is not eclipsed by other educational concerns. Central support, in the form of funding from the University of Toronto PGME office and the JCB, has been fundamental to organizing and implementing our initiatives by allowing for the hiring of an administrative assistant. This position provides the program with a concrete presence and leverages the PGBE director’s ability to respond to the needs of the 72 residency programs.

Locally, we continue to strive to increase residents’ interest in bioethics to enrich the clinical and academic bioethics community and to generate specialists who will be comfortable teaching bioethics to residents. The JCB approaches physicians with a demonstrated interest in bioethics

education for recruitment into the MHSc program. Other JCB initiatives include bioethics electives for residents, research opportunities, awards, scholarships, and roles for residents on research ethics boards. Ultimately, we hope residents will view bioethics study, research, and teaching as viable career components that will enrich their lives as practitioners and teachers.

Although this article focuses on the University of Toronto, we believe the concepts presented here are generalizable to other medical schools.

Teaching bioethics in a residency program presents challenges to physician–teachers: How should they identify topics of relevance to trainees? What are engaging and appropriate ways to teach about these issues? How can the program build bioethics teaching capacity? Attempting to develop bioethics curricula in relative isolation at individual residency specialty programs may intensify these challenges. We believe that the success of our PGBE program shows that providing opportunities for faculty members across specialties to share successes and setbacks in bioethics teaching is a key part of helping develop specialty-specific, comprehensive bioethics curricula. Trainees should be encouraged to explore bioethics issues they face and be given the chance to learn from the experiences of others. Initiatives to implement PGBE strategies benefit from dedicated central support, such as in our hub and spokes model, to reinforce educational priorities and to ensure bioethics remains an integral part of medical education.

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