
Teaching medical ethics

Teaching ethics using small-group, problem-based learning

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Abstract

Ethics is the emphasis of our first-year Introduction to Clinical Medicine-1 course. Introduction to Clinical Medicine-1 uses problem-based learning to involve groups of seven to nine students and two facilitators in realistic clinical cases. The cases emphasize ethics, but also include human behaviour, basic science, clinical medicine, and prevention learning issues. Three cases use written vignettes, while the other three cases feature standardized patients. Groups meet twice for each case. In session one, students read the case introduction, obtain data from the written case or standardized patient, identify the case's ethical problems, formulate learning issues, discuss ways to resolve the moral conflicts, and assign research responsibilities. In session two, students discuss their assigned learning issues and specify and justify clinical actions to address the case's ethical dilemmas. Following three cases, groups write an essay discussing what they learned and describing how they would approach and resolve the case's learning issues.

Introduction

Medical educators have emphasized the necessity of including ethics in the medical school curriculum.^{1,2} They suggest that medical ethics education can contribute to the development of "physicians' values, social perspectives, and interpersonal skills for the practice of medicine."³ Five medical ethics education objectives which have been proposed in a review of the literature are noted below:

- teach physicians to recognize the humanistic and ethical aspects of medical careers;
- enable physicians to examine and affirm their own personal and professional moral commitments;
- equip physicians with a foundation of philosophical, social, and legal knowledge;

Key words

Ethics; problem-based learning; standardized patients; small-group learning; student-centred learning.

- enable physicians to employ this knowledge in clinical reasoning, and;
- equip physicians with the interactional skills needed to apply this insight, knowledge and reasoning to human clinical care.⁴

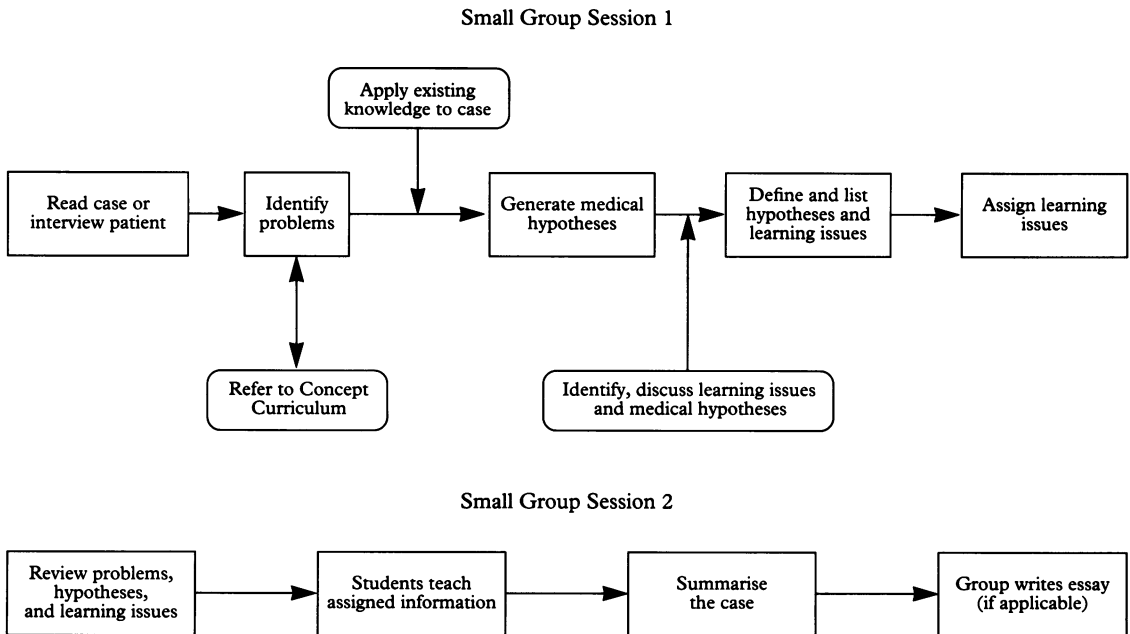
Three key features related to the teaching of medical ethics have also been identified. One is allowing a variety of medical and non-medical professionals to interact with students.⁵ A second feature is actively involving students in the learning process instead of merely lecturing about ethical principles.^{6–8} A third feature is assessing how students apply their knowledge of ethical principles in simulated and actual situations.⁹ Incorporating these features in a course should allow students to share ideas with people from different backgrounds and perspectives, to identify their learning needs using situations like those they will encounter as physicians, and to assess their gains using a variety of measures.

The Introduction to Clinical Medicine-1 (ICM-1) course at the University of Texas Southwestern Medical School emphasizes ethics using a small-group, problem-based learning approach. The course gives students a clinical context to build their ethical, behavioural, preventive medicine, and basic science knowledge and to develop their clinical reasoning skills. This paper describes the ICM-1 course, explains how students use problem-based learning in the course, discusses how ethics issues are developed into patient-based cases, and shares student and facilitator feedback about the course.

The Introduction to Clinical Medicine-1 course

OVERVIEW

The Introduction to Clinical Medicine-1 is a two-semester first-year course that uses small-group, problem-based learning to expose first-year medical students to realistic clinical problems. Seven to nine students and two facilitators, one a physician and the other a non-physician from a variety of disciplines,

Figure 1 *Problem-based learning activities that occur in Sessions 1 and 2*

compose an ICM-1 group. The groups study six patient-based cases that emphasize ethics learning issues, but also include human behaviour, basic science, clinical medicine, and prevention learning issues. Groups meet twice for each case. In the first session groups:

- read the case or interview the patient to gather relevant information;
- identify the problems (in each of the five areas) presented by the case;
- apply existing knowledge and experience to the problems in the case;
- develop and discuss medical hypotheses related to the case;
- identify and discuss the learning issues (ie, knowledge deficits) required to support or refute the evidence for each hypothesis;
- define and list medical hypotheses; and
- assign specific learning tasks.

In the week or two between the sessions, students research the learning issues they identified in session one, organize and summarize the key information in their learning issues to present to the group, and resolve the case's ethical dilemmas. In session two, the students present the learning issues they researched and resolve the case problems in each of the five target areas (see figure 1). The course also includes a history clinic in which faculty model patient-interviewing techniques and students practise interviewing with a trained standardized patient.

STUDENT AND FACILITATOR ORIENTATIONS

Since small-group, problem-based learning is new to most students and some faculty, both students and facilitators attend separate course orientations to meet their particular needs. In the student orientation, the course director gives an overview of the course and explains its rationale, goals, objectives, and evaluation criteria. Immediately following, the course director, co-director, and selected course facilitators use video-taped sessions or active role plays to demonstrate the process of problem-based learning. In the facilitator orientation, the course director gives an overview of the course, describes its rationale, discusses its goals and objectives, and suggests strategies to help students take responsibility for their learning. All students and facilitators receive a course syllabus containing a course schedule, goals and objectives, student and facilitator evaluation criteria, and suggested references. Most of those references, including ethics resources,^{10 11} are on reserve in the library. In addition, the syllabus contains a "concept curriculum" (see sample items in table 1) that lists and defines key concepts in ethics and human behaviour that the students should learn, understand, and apply as they study the patient cases.

Table 1 *Sample items from ethics "concept curriculum"*

Autonomy – personal rule of the self; ability to choose meaningfully; freedom from controlling interference from others. A fundamental ethics principle.
Beneficence – providing benefits; promoting welfare and preventing or removing harm; considering the balance between benefit and harm. A fundamental ethics principle.

Table 2 The ethics component of the ICM-1 design matrix

Case Number	Title	Ethics learning issues
1	Sickling on Tour	Fiduciary nature of the doctor-patient relationship; abandonment, standard of care, beneficence <i>v</i> non-maleficence.
2	Sugar and Vinegar	Informed consent in the care of a minor.
3	An Abnormal Baby	Malpractice (four elements), paternalism.
4	MI and My Choice	Distributive justice is the focus of this case. The moral dilemma concerns allocating limited resources <i>v</i> respecting patient's wishes in a managed care setting.
5	Water-skiing Accident	Distributive justice in an indigent-care setting.
6	A Final Dignity	Euthanasia.

ETHICS EMPHASIS

The Introduction to Clinical Medicine-1's six patient-based cases emphasize ethics learning issues, but also include human behaviour, basic science, clinical medicine, and prevention learning issues. Both students and facilitators are informed in their separate course orientations that ethics is to be stressed in the sessions. The ICM-1 course matrix (the ethics learning issues are shown in table 2) is used by the course developers to delineate the learning issues for all topic areas and guide case development. The concept curriculum is a list of terms provided in the syllabus that links a concept perceived by a student and the literature. Identifying a "label" for a concept helps students access the literature when researching a term. For example, students easily sense the discomfort when facing a drug-abuser who claims to be in extreme pain. The concept curriculum helps the student realize that this discomfort stems from a conflict between beneficence and non-maleficence.

Students are expected to recognize the ethical issues of the cases through discussion in the small group. Differing opinions about how the ethical aspects of a case should be addressed frequently emerge, simulating the actual moral conflicts that physicians face in medical practice. Once the students recognise differences in opinion, the group discusses the rationale for each opinion, referring to the concept curriculum for the appropriate ethics terms that apply to the rationale that students express in their own words. Moreover, the facilitators encourage students to discuss how they would interact with a patient who disagreed with their viewpoint about an issue. Once the ethical terms and dilemmas are identified, the students explore the ethics literature between session one and two. In session two students report their findings to the group. The emphasis in the small group sessions is on understanding and becoming comfortable with their own and opposing opinions and planning ethically justifiable clinical actions, not on finding the "correct" resolution of the case.

PATIENT CASES

The patient cases are carefully developed to reflect the learning issues in the course matrix. Case development begins when the course director, co-directors (clinicians and basic scientists) and course developer identify the topics to be included in the cases for the year. Cases are developed so that students must resolve each case's ethical dilemmas. The ethical contents of the cases are sufficiently complicated or ambiguous (as in real life) to ensure that students discuss a range of alternatives in order to decide which is the best among the available options.

Instructional materials

MATERIALS FOR STUDENTS

Students receive a handout containing key case information at the beginning of the first session of each case. For the paper-based cases, the student handout presents the case information in a progressive-disclosure style, starting with the patient's chief complaint and a brief background paragraph on page one, followed by the patient's history; physical exam; and lab, electrocardiogram, and radiology findings on other pages. The students use the information on the handout to work through the case, discussing the problems, hypotheses, and learning issues. For standardized patient-based cases, the student handout contains the patient's chief complaint and a brief background statement. Before the students meet the standardized patient, students and facilitators discuss the case and formulate questions to ask the standardized patient. The standardized patient then enters the room and students take a history. After students complete the history, the patient is excused and the group determines the problems in the case. Relevant patient data (for example, laboratory findings) are presented to students at an appropriate time on a handout.

MATERIALS FOR FACILITATORS

One week before a case's first session the facilitators receive a tutor's guide containing a list of the case's learning issues outlined in the course matrix. The tutor's guide contains the material presented in the student handout, or in cases using standardized patients, contains the information that students should discover in the case. The tutor's guide also contains structured and case-specific background information that facilitators can read to prepare for the case discussion.

Student and facilitator feedback regarding the ethics component of the ICM-1 course

The ICM-1 course is evaluated using participant feedback and assessment of student essays. Both students and facilitators provide feedback about

Table 3 *Student comments about the ICM-1 course*

"Group learning is great: ethics is *experienced* – not described!"
 "ICM-1 provided an opportunity to think about the importance of ethics and human behaviour in medicine; small groups allowed participation and discussion instead of lecture and memorisation."
 "The small group setup was very beneficial to the ethics discussion. It helped to get perspectives from all the different members of the group. I thought we had some very interesting, intense discussions regarding ethics and human behaviour issues – this was the best part of the course."

ICM-1 via computerized evaluation sheets three times each academic year. The course director uses this feedback to determine how the groups are functioning, to identify specific groups that need intervention, and to insure that course priorities are attained (for example, ethics is emphasized as instructed). Assessment of group essays and student responses regarding the amount of session time spent on specific topics indicate that ethics is emphasized during the sessions. Responses on the computerized evaluation forms indicate that both students and facilitators are very pleased with the ethics component of ICM-1. Some of the student comments are included in table 3. While facilitators stated that they enjoyed interacting with the students, several facilitators expressed concern, from a content knowledge perspective, about guiding the ethics discussion in their small groups.

Discussion and conclusions

The appeal of using problem-based learning to teach ethics is obvious – it places ethical problems in the context of clinical problems encountered by physicians. Students actively analyze each case; systematically consider the respective approaches to each problem; and thoughtfully discern the case's ethical, behavioural, diagnostic, and other types of problems with their peers. The problem-based learning approach also appeals to clinicians, who often lament that students on the wards frequently fail to recognize ethical problems – even when those same students skilfully reason about them once they are identified. Using problem-based learning as described in this course, however, does have two disadvantages. First, since students write group essays, facilitators may be unable to assess whether each *individual* student shows equivalent learning in ethics-reasoning skills. The second disadvantage of problem-based learning concerns the difficulties in providing a broad-based exposure to ethics problems. The requirement that cases be unique, specific, and realistic significantly curtails the range of ethical issues that can be covered in our problem-based learning format. A combined lecture/small-group discussion ethics course has the advantage of systematically covering the chosen breadth of theory

and the chosen range of common moral problems in medicine.

At the University of Texas Southwestern Medical School, presenting ethics content in the context of small-group, problem-based learning has successfully introduced students to thinking about medical ethics. Discussing ethical problems presented in the context of patient cases in small groups, supported by facilitators who have clinical expertise and experience in other disciplines, personally involves students in resolving the cases' ethical dilemmas. Both students and facilitators alike have enjoyed this interactive learning approach. In this academic year, we will offer an ethics orientation for the facilitators prior to the first session of each case to address the facilitators' concerns about understanding each case's ethical issues and guiding the small-group discussion.

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