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Medical Education and Professionalism

The Medical Ethics Curriculum in Medical Schools: Present and Future

Alberto Giubilini, Sharyn Milnes, and Julian Savulescu

ABSTRACT

In this review article we describe the current scope, methods, and contents of medical ethics education in medical schools in Western English speaking countries (mainly the United Kingdom, the United States, and Australia). We assess the strengths and weaknesses of current medical ethics curricula, and students' levels of satisfaction with different teaching approaches and their reported difficulties in learning medical ethics concepts and applying them in clinical practice. We identify three main challenges for medical ethics education: counteracting the bad effects of the "hidden curriculum," teaching students how to apply ethical knowledge and critical thinking to real cases in clinical practice, and shaping future doctors' right character through ethics education. We suggest ways in which these challenges could be addressed. On the basis of this analysis, we propose practical guidelines for designing, implementing, teaching, and assessing a medical ethics program within a four-year medical course.

Alberto Giubilini, PhD, is a Research Fellow at the Oxford Uehiro Centre for Practical Ethics at the University of Oxford. *alberto.giubilini@philosophy.ox.ac.uk*

Sharyn Milnes, MBioeth, is a Lecturer in Medical Ethics at the School of Ethics at Deakin University in Warun Ponds, Victoria, Australia, *sharyn.milnes@deakin.edu.au*

Julian Savulescu, PhD, is Director of the Oxford Uehiro Centre for Practical Ethics at the University of Oxford, *julian.savulescu@philosophy.ox.ac.uk*

SCOPE AND AIMS OF ETHICS EDUCATION IN MEDICAL SCHOOLS

In the last few decades, medical ethics has become an important aspect of the education of new doctors. A doctor with ethical competencies is more likely to be a trustworthy doctor. In order to further increase patients' trust in new doctors, however, it is important that the ethics curriculum be homogenous across medical schools.[1] Relevant work aimed at unifying the medical ethics curriculum includes, among others, documents produced by working groups in the U.K.,[2] the U.S.,[3] and in Australia,[4] containing guidelines for designing, implementing, and assessing ethics education in medical schools.

There is widespread agreement that staff with appropriate ethics backgrounds should be responsible for the delivery of ethics education in medical schools, at least in preclinical years. Actually, a shortage of staff with appropriate ethics training was identified by the working group of the ATEAM (the Association of Teachers of Ethics and Law in Australian and New Zealand Medical Schools) as one of the main challenges in implementing an ethics curriculum.[5] According to the 1998 U.K. "Consensus Statement by teachers of medical ethics and law in UK medical schools," (hereafter, the 1998 U.K. "Consensus Statement"), implementation of a medical ethics curriculum requires "at least one full-time

senior academic in ethics and law with relevant professional and academic expertise."[6] During clinical years of training, a more effective way to deliver ethics education might be an ethics expert and a clinical expert co-leading ethics clerkship sessions, as effectively implemented, for example, at the Icahn School of Medicine at Mount Sinai in the U.S.[7]

The objectives of medical ethics education can be divided into two main categories: cognitive (or competency) objectives and attitudinal (or virtue) objectives.[8] The first category refers to the knowledge and understanding of the values, principles, and norms that inform and regulate medical practice; the second category refers to the development of the approach, attitudes, and virtues of a good doctor. This second category can be further divided into two subgroups: the formation of the character of the good doctor (which should include virtues such as compassion, honesty, integrity), and the development of an analytic approach and critical thinking skills. These include the capacity to critically examine one's own beliefs and values, especially when they conflict with professional obligations, and to develop ethical awareness, that is, a capacity to recognize ethical issues as they arise in clinical practice and to balance different competing principles.

Documents about the ethics curriculum of medical schools have placed different emphases on these aspects. The 1998 U.K. "Consensus Statement" is more focused on cognitive objectives and on the development of critical thinking than on shaping doctors' character. It stresses in particular the importance of knowing and understanding ethical and legal principles and professional obligations, and of developing critical thinking skills.[9]

In general, however, character formation is considered at least as important as teaching notions,[10] if not more important.[11] The AAMC (the Association of American Medical Colleges), in its "Learning Objectives for Medical Student Education—Guidelines for Medical Schools," (hereafter, the AAMC "Guidelines") states that medical education should not only provide students with a knowledge of the values and principles governing ethical decision making, but should also foster attitudes of compassion and respect towards patients: virtues such as honesty and integrity, respect for the roles of other healthcare professionals, and commitment to the best interests of patients over doctors' own interests.[12] The ATEAM "An Ethics Core Curriculum for Australasian Medical Schools" highlights the importance of both cognitive and attitudinal aspects: the ethics curriculum should aim not only at knowledge of ethical principles, but also at fostering critical thinking skills and humanistic qualities and behavior, particularly those that promote patients' interests (through doctor-patient relationships), interests of colleagues (through professional relationships), and students' own well-being.[13]

One reason for focusing on the development of the attitudes and character of medical students is that, as some have observed, students' positive attitudes—such as empathy and a desire to improve the human condition—tend to diminish during the course of the curriculum. This tendency is due in part to time pressures that prevent students from properly relating with individual patients, and in part to the alienating activities required of them, such as memorizing long lists of facts and exposure to "frustrated and overwhelmed faculty members."[14] Ethics education should counteract these effects by reinforcing desirable virtues.

Indeed, sometimes character and virtues are considered even more important than cognitive objectives.[15] For instance, the U.S. Accreditation Council for Graduate Medical Education's 2007 "ACGME Common Program Requirements," refers only to character and attitudinal aspects in stating requirements that residents must satisfy to demonstrate professionalism: compassion, integrity, respect, responsiveness to patients' needs superseding self-interest, respect for patients' privacy, accountability, and sensitivity to a diverse patient population.[16]

It is, however, misleading to conceive of cognitive and attitudinal aspects of medical ethics education as two separate types of objectives that can be pursued independently. As Favia and colleagues note, "developing knowledge and skills goes hand in hand with developing virtue. When students come to understand and accept their professional responsibilities, they also are more disposed to act on the principles that express those commitments."[17] According to Campbell and colleagues, medical ethics education has three main aims:

1. Knowledge of principles, values, and norms
2. Habituation, consisting in developing the right attitudes and character, such as the ability to empathize with patients and ethical sensitivity
3. Action, which consists in implementing knowledge and attitudes in practice.[18]

These three aspects form a pyramid, whose base is knowledge, middle is habituation, and top is ethical action. The metaphor of a pyramid indicates that developing the right attitude requires mastering knowledge of principles and values, and both are necessary to sustain ethical decision making in clinical practice. Thus, the cognitive and attitudinal as-

pects are equally important, and both are necessary to form doctors who are capable of acting ethically on wards.

WHAT TO TEACH

Cognitive Aspects: Concepts, Principles, and Professionalism

It is sometimes claimed that doctors should have at least a basic knowledge and understanding of the fundamental notions of ethics (not just of medical ethics), what it means to make an "ethical" choice (as opposed, for example, to making a choice based on convenience or on self-interest), what it means to balance different principles against each other, what the difference is between a consequentialist and a deontological approach to ethics, and so on.[19] A study from 2004 found that more than half of the medical schools in the U.S. and Canada had a mandatory introductory ethics course.[20]

While not every educational system mentions fundamental ethical concepts, and therefore an ethics course, as an essential aspect of the core curriculum (for example, the 1998 U.K. "Consensus Statement" does not), there is agreement about some specific notions of medical ethics and bioethics that students should know and master.

In particular, ATEAM stresses the importance of teaching medical students both foundational concepts in ethics and bioethics (such as autonomy, personhood, disease, and so on) and specific notions of medical ethics (such as the doctor-patient relationship, informed consent, and so on). The 1998 U.K. "Consensus Statement" and its 2010 update[21] list as fundamental topics to be covered in medical ethics education informed consent and refusal of treatment, confidentiality, topics in medical research (such as history of abuses), issues in human reproduction (for example, ethical and legal status of fetuses, the maternal-fetal relationship, and so on), the new genetics (for example, ethics of gene therapy), ethical issues regarding children (their rights, competence, and so on), mental disorders and disabilities, end-of-life decisions, vulnerabilities and responsibilities of doctors, resource allocation, and the notion of rights (what they are, international declarations, *et cetera*).

To all of these aspects, the 2010 update of the 1998 U.K. "Consensus Statement" added "professionalism" as an essential notion: future doctors should be able to understand what their role requires, what their responsibilities are, the professional boundaries that need to be maintained between them and patients, the limits of conscientious objection.[22] Indeed, in recent years "professionalism" has become a central notion in the literature on the ethics education of medical students. Thus, for example, the U.K. Institute of Medical Ethics (IME), in its *Medical ethics and law: A practical Guide to the assessment of the core content of earning* (hereafter, IME *Medical ethics and law*), listed "professionalism" as first among the 11 key topic areas that constitute the core content of the medical ethics curriculum; professionalism is there defined with reference to the criteria set in the U.K. In its "Good Medical Practice," the U.K. General Medical Council states that good professional doctors "are competent, keep their knowledge and skills up to date, establish and maintain good relationships with patients and colleagues, are honest and trustworthy, and act with integrity and within the law."[23] The IME's list of key topics is attached at the end of this article as Appendix 1.

Also relevant in the professional education of medical students are legal notions (for example, battery, trespass, tort of negligence) and an understanding of what doctors can be liable for.[24]

Most topics mentioned above are taught in most medical schools. A study from 2004 reported that more than 70 percent of medical schools in the U.S. and Canada covered the following topics in their preclinical ethics teaching: informed consent (96 percent of the surveyed schools), end-of-life issues (92 percent), confidentiality (92 percent), truth-telling (90 percent), allocation of scarce resources (75 percent), assessing patients' competence (71 percent), and access to care (70 percent).[25]

Attitudinal Aspects: Virtues, Critical Thinking, and Conscience

In Australia and New Zealand, ATEAM acknowledges the importance of promoting humanistic qualities and behaviors in prospective doctors by fostering adequate professional attitudes. Among the essential attitudes listed are the following:

- Honesty, integrity, and trustworthiness
- Critical self-appraisal (including recognition of limitations and errors)
- Empathy and compassion
- Respect for [the dignity of] patients as people
- Respect for the roles of other healthcare professionals in the care of the patient
- Responsibilities of the medical professional towards the local and global community
- Responsibility and reliability
- Commitment to clinical competence and lifelong education
- Commitment to self-care.[26]

Another important attitude that many documents highlight is a critical approach to ethical issues. Students need to learn not only what principles and values are, but how to apply them to real cases, how to balance them against each other in cases, and how they should be balanced against students' own personal values. More precisely, according to ATEAM, critical reasoning requires a capacity to analyze ethical issues, construct arguments and counter arguments that are valid and sound, and examine and interpret the arguments of others. According to ATEAM, to achieve these objectives, some familiarity with ethical theory and principles, and not just with medical ethics, is required.

The 2011 Project to Rebalance and Integrate Medical Education in the U.S., which included the participation of a group of U.S. educators whose aim was to improve the medical ethics curriculum, highlighted the importance of the "question everything" approach to medical professionalism: "The unique critical skills of ethics and humanities will equip our students and residents to be professionally adaptive to the future organization and financing of health care, whatever they might become."[27] At Icahn School of Medicine at Mount Sinai, Favia and colleagues have adopted a template to assist students in developing clinical moral reasoning.[28] Their template follows this article as Appendix 2.

One thing worth noticing is that an emphasis on critical thinking may seem inconsistent with conscientious objection in healthcare, as it is currently construed. Conscience clauses that allow doctors to refrain from performing legal activities to which they have some moral and/or religious objection (for example, abortion) typically do not require doctors to provide reasons and arguments for their views (although some have suggested they should[29]), nor to question their views in light of a patient's views and needs, and of professional values and obligations. This is in contrast to the emphasis the literature places on critical thinking, on the "question everything" approach, and on the importance of being able to construct valid and sound arguments to justify ethical choices. Of course, some conscientious objectors can provide good arguments for their positions, but, for many, such positions may be held on faith without a willingness to consider or to tolerate other justifiable value systems. Indeed, the issue of healthcare practitioners' conscientious objection is an under-explored topic in the literature and in work group documents. An exception is the 2010 update of the 1998 U.K. "Consensus Statement," which states that students should be able to understand "issues raised by the religious beliefs of patients, students and other healthcare professionals and the role and limits of conscientious objection."[30] The topic of conscientious objection, however, has not been further explored in this or in other documents. This is a gap that needs to be filled, especially in light of increasingly frequent conflicts of values in clinical settings due to the multi-cultural character of our societies and to the broad range of medical services that doctors are asked to provide, or will likely be asked to provide in the future.

HOW TO TEACH: STRATEGIES AND METHODS

While ATEAM states "there is no single 'best' method by which ethics should be taught,"[31] work on medical education in subsequent years—including research based on students' experiences—has suggested that some methods of teaching ethics are more effective than others.

Lakhan and colleagues propose that a longitudinal approach is an effective strategy (ethics education throughout the medical curriculum) that includes course work and projects that are relevant to real-life medicine.[32] They mention, as a good example of this strategy, the ethics curriculum at the University of Pittsburgh, which includes an elective area of concentration program, which is student-driven, theme-based, and personalized: students pursue specific areas of inquiry according to their own interests.[33] For instance, students who choose to focus on disability attend regular meetings in which faculty members tell about their experiences dealing with disabled patients and discuss themes relevant to that area, such as how to elicit a medical history from a patient with a mental disability or to respectfully perform a physical examination with an individual who is in a wheelchair. Often these meetings include encounters with real patients, and teaching staff may put teaching into practice by, for example, physically examining an individual who is in a wheelchair in front of students. In this way, students have an opportunity to engage in a deeper form of learning, in which personal and societal values regarding disability are not just a matter of theoretical discussion, but inform the actual medical practices of working with (that is, touching, medically inspecting, talking to, asking for consent, *et cetera*) persons with physical and/or mental disabilities. Students pursue this type of activity throughout the curriculum, and in the fourth year they engage in an ongoing research project in the field. They keep a portfolio that includes research reports, personal considerations, and journal entries, and are

required to produce a deliverable, such as an oral presentation or a short film.[34] Both Kanter and colleagues[35] and Lakhan and colleagues[36] claim that this strategy is more effective than one based on lectures and large classes, although a separate course entirely dedicated to ethics should be offered to give students the fundamental notions they need to carry out their more personalized projects.

The example of the University of Pittsburgh is in line with a more general tendency to discount the importance of lectures and large classes in favor of a small group or even an individualized focus. ATEAM maintains that "ethics education is fundamentally discursive, and thus it is essential to facilitate at least some learning of ethics knowledge in small groups."[37] ATEAM also suggests that, in order to teach the attitudes and the critical approach necessary for doctors' professional life, three strategies have been particularly successful: values journals and portfolios, case discussion with a particular focus on personal experience, and debriefing sessions devoted to discussing the attitudes and behaviors encountered in day-to-day practice. Lehman and colleagues' survey of medical ethics education at U.S. and Canadian medical schools in 2004 revealed that small-group discussion is the most widespread form of course structure, and case discussion the primary pedagogic method.[38]

This structure reflects what students themselves consider to be the most effective teaching strategies. Foundation year one students (that is, one year after graduation) in the U.K. reported that ethics education could be improved by giving more space to case discussions and to role play, that is, activities that are better carried out in small-size groups than in large classes.[39] Smith and colleagues compared the efficacy of two slightly different teaching methods that were implemented at the University of Washington School of Medicine. One group of students was assigned a written case analysis of four consecutive cases, and another group had the same assignment, but with participation in a discussion session before submitting the fourth case analysis. In this session, students in the second group discussed the analysis of the previous three cases with the supervision of an external reviewer with formal training in medical ethics. Students in the second group had higher scores on the fourth assignment.[40] The four cases discussed are attached as Appendix 3.

Other teaching strategies that are effectively implemented include not only repetition of content (for example, ethics case analysis in the first year that is applied in clinical clerkship in subsequent years), but also the use of first-person narratives,[41] and role play scenarios with simulated patients after gaining ethical knowledge in the classroom.[42]

The use of narratives is particularly useful to develop students' ability to recognize ethical issues as they arise in their day-to-day work, to better explore[43] their moral beliefs, to consider cases from different ethical perspectives, and to gather material for small-group discussion, so that they can learn from their colleagues' experiences.[44] Van Ments describes role plays as follows:

> Ask[] someone [in the class] to imagine that they are either themselves or another person in a particular situation. They are then asked to behave exactly as they feel that person would. As a result of doing this they, or the rest of the class, or both, will learn something about the person and/or situation. In essence, each player acts as part of the social environment of the others and provides a framework in which they can test out their repertoire of behaviors or study the interacting behavior of the group.[45]

Role play in medical ethics education involves students acting as patients, as interviewers, or as observers. Role play has been shown to have a positive effect on students' learning and capacity to reflect on ethical issues by enhancing their motivation to engage in critical ethical analysis of cases (especially when the cases are based on students' improvisations in dealing with fictitious patients[46]) as well as by enhancing their communication skills.[47]

Appendix 4 provides an example of how different objectives of teaching medical ethics can be integrated in a unified teaching strategy, from the IME *Medical ethics and law* 2013 report.

THREE CHALLENGES FOR MEDICAL ETHICS EDUCATION

Three main problems can be identified in current medical ethics education, which correspond to three challenges for those engaged in developing a medical ethics curriculum.

The "Hidden" Curriculum

Alongside formal ethical training in class, there is a "hidden" or "silent" curriculum in which students take up the attitudes of senior clinicians on the ward, particularly by interiorizing and imitating their behaviors. Such attitudes and behaviors are a substantial part of the ethics education of future doctors and can influence students' attitudes as much as or even more than the official curriculum. The influence of these dynamics on the forma-

tion of future doctors' moral character cannot be overstated. According to Hilton, the hidden curriculum "is probably the most important factor influencing development of professionalism."[48] Recognizing the importance of hidden forms of teaching and learning in medical schools means recognizing that ethics education does not occur in a cultural or social vacuum, that is, in value-neutral environment, but is always influenced by the values displayed by teaching staff.[49]

The types of messages that are conveyed to students through the hidden curriculum span from evaluations of the nature and scope of science to gender or racial stereotypes (for example, through jokes or personal anecdotes told by faculty). Students may be led by clinical staff's attitudes to believe that their ignorance about technical notions is a form of ignorance about ethical notions, or in any case that the two kinds of competencies depend on each other,[50] which need not be the case. Ethical sensitivity and reasoning presuppose a distinct set of skills that encompass, for example, cultural competence (the skills and behavior allowing a professional to relate and work efficiently with patients from different cultural backgrounds), empathic consideration for patients, recognition of responsibility in decision making with patients, a capacity for shared decision making, and communication skills.

This type of learning by apprenticeship tends to be conservative and is based on copying rather than reasoning.[51] Therefore, the hidden curriculum involves the risk that students will simply assimilate the unethical behaviors of their teachers. The hidden curriculum is often driven by pragmatic rather than ethical considerations.[52] For example, in a survey by Hicks and colleagues of 108 students who were one year out of medical school at the University of Toronto, 61 percent said they had seen a clinical teacher acting in a way that was perceived to be unethical very frequently/frequently/occasionally, and 47 percent declared that very frequently/frequently/occasionally they felt pressure from teachers to make unethical choices.[53] The problem is not so much that by witnessing unethical behavior students lose the capacity to distinguish what is morally acceptable and what is not, but that they feel disempowered to act according to what they think is good or to refrain from doing what they think is bad. With time, this translates into an insensitivity towards the importance of acting ethically.[54] For example, students might feel disempowered to ask for consent when treating a patient,[55] such as when they should ask for consent to perform an intimate examination, but fail to do so.

From Theory to Practice

One of the main difficulties that students report in their ethics learning lies not in the identification of ethical principles and critical engagement with these principles, but in their implementation and critical reflection in daily practice.[56] Vivekananda-Schmidt and Vernon found that foundation year one doctors felt ill-prepared and often unsupported by senior members in the implementation of the medical ethics and law curriculum in their practice.[57] Some of the foundation year one doctors declared that no amount of undergraduate teaching could fully prepare them for taking responsibility for ethical decisions in clinical practice.

Shaping Character

Another problem is that those who enter medical school will probably have already formed certain moral beliefs, attitudes, and ultimately their moral characters. Therefore, formal medical ethics education might have little influence on the values that will inform doctors' medical practice.[58]

THREE WAYS OF MEETING THE CHALLENGES

Having the Right Role Models

The presence of a hidden curriculum in medical ethics suggests that role models play a pivotal role in shaping the ethical approach of future doctors.[59] This means that doctors who are involved in the teaching of medical students should have expertise in ethics and act according to appropriate ethical principles. If teachers did not receive adequate ethics education (for example, because they graduated a long time ago), then medical ethics education should be required of them—while this would be desirable for all medical doctors, it is very important for those involved in the education of new doctors. The 1998 U.K. "Consensus Statement" proposes ethics courses and workshops for teachers.[60] Professional ethicists (for example, moral philosophers) could provide this type of training.

Practical Approaches to Medical Ethics

Mills and Bryden[61] have proposed the use of Sokol's ethical checklist (which Sokol proposed for clinical practice[62]) for teaching purposes. This involves providing students with a list of ethical issues during their rounds with patients. Sokol's ethical checklist includes the following issues: patient's wishes are unclear, patient refuses treatments, questionable capacity to consent to or refuse treatment, disagreement involving relatives, end-of-life issues

(for example, advance directives, lasting power of attorney, *et cetera*), issue regarding the goal of care and appropriateness of treatment, confidentiality or disclosure issues, resource or fairness issues, other issues (to be explained), no ethical issues. Students are required to tick the relevant boxes that correspond to the ethical issues that arise. A way to make the use of an ethical checklist more effective is to discuss it in dedicated tutorials, as well as any notes relative to the list that students might have made, so that the ethical issues that have emerged can be discussed with staff in the same way that medical issues would be.[63]

A student who used the list for the purpose of her ethics education reported the following: "using the ethical checklist made me look at the patients in a way that I probably should, but never had, considered before. I was able to apply what I had already learnt in lectures to real-life situations."[64]

While the method of using an ethical checklist might be valid, we think that a more effective way to implement this method is to have students compile their own checklists. As we illustrate in the proposal for a medical ethics curriculum in the final section, during clinical years students will have acquired the knowledge and competencies that will enable them to recognize ethical issues as they arise in practice, and therefore to build up their own list of ethical issues as they encounter them on wards.

Professionalism

Defining medical professionalism is difficult, which makes it challenging to teach when clear competencies and skills do not exist.[65] However, this clearly remains an essential component of medical education,[66] considering that professional obligations should prevail over doctors' particular attitudes and beliefs. As Doukas and colleagues note, being professional means to have "mastery of the fund of knowledge and skills, and the cultivation of professional virtues, essential to the ethical concept of medicine as a profession."[67]

It is therefore important to teach new doctors to be, first and foremost, serious professionals. A good doctor is a professional doctor.[68] Medical students themselves consider professionalism as one of the topics with greater value and relevance in medical ethics, and increasingly more as they proceed toward the final years of their training;[69] also, in this case, they think that ethicists or medicolegal experts are best suited for delivering the relevant teaching.[70] In order to have doctors who are serious professionals, three main (not mutually exclusive) strategies have been proposed: the first is to only select students for medical schools who have the right character; according to Lakhan and colleagues, for instance, "Admission committees must seek to find those individuals that best exemplify "virtue" among their applicants, if the school truly seeks to produce ethically oriented physicians."[71] This strategy would be the best one if we agreed with Campbell and colleagues' scepticism about the influence that ethics education can exert on the already formed character of medical students. The second strategy is to introduce curricular changes that support students' focus on patients rather than on their own values and preferences, for example, providing earlier clinical experience or requiring them to participate in student-directed clinics.[72] The third strategy is to assess professionalism rigorously and not allow students who lack the necessary skills to advance in training.[73] The Australian Medical Council lists "Professionalism and Leadership" among the requirements that medical students must demonstrate at graduation.[74] According to the ACGME, professionalism requires students to demonstrate "compassion, integrity, and respect for others; responsiveness to patient needs that supersedes self-interest; respect for patient privacy and autonomy; accountability to patients, society and the profession; sensitivity and responsiveness to a diverse patient," covering all the fundamental cognitive and attitudinal objectives of medical ethics education.[75]

HOW TO ASSESS

Effectively assessing ethics competencies is an important aspect of medical ethics education. If we think medical ethics is a fundamental component of the education of medical students, then it should be formally assessed on a par with medical competencies.[76]

Medical students often perceive ethics as a "fluffy" discipline.[77] This perception might change if ethics assessment was brought to the same high standard of rigor that characterizes the assessment of medical competencies. A good way to do this is to link its evaluation to specific learning objectives through the so-called "SMART" approach, that is, creating teaching objectives that are **s**pecific, **m**easurable, **a**ction-oriented, **r**easonable, and **t**imebound.[78] This approach is based on the idea that, as Favia and colleagues put it, there is a "critical relationship between a program's goals and the design of an assessment strategy."[79]

Linking assessment to specific objectives facilitates the design of an assessment strategy that satisfies the four fundamental requirements indicated by

Savulescu and colleagues: assessment must be (1) valid, meaning it should assess only the relevant ethical skills, and not other aspects (for example, clinical competencies); (2) reliable, meaning it should guarantee that the same performance be assessed equally, regardless of who assesses it; (3) relevant to clinical practice; and (4) publicly justifiable and subject to review.[80] Savulescu and colleagues developed a marking system for vignette-based tests to assess critical thinking skills, and statistically demonstrated their system displays good reliability in terms of inter-rater and test-retest consistency. An example of their system is presented below as Appendix 5.

While this assessment tests a specific set of skills (critical thinking), Campbell and colleagues suggest that different assessment methods are required for the three different ethical competencies that medical students must demonstrate: essay-style questions are best suited to assess knowledge; case analyses are best suited to habituate competencies; students' behavior in clinical practice is better assessed using an ethics objective structured clinical examination method, in which students are observed and assessed during planned clinical encounters.[81]

At the Icahn School of Medicine, the following assessment method is adopted. In a case-based written assessment, students are asked to define some basic ethical concepts and to identify ethical issues that arise in the given case, and then a case-based oral exercise requires students to demonstrate communication skills by mapping effective communication strategies with peers, patients, and families. In the first three years, students are required to complete short writing tasks (for which they receive feedback) and three formal assessment exercises to test their knowledge of basic concepts and a capacity to apply the concepts to a given case.[82]

Appendix 6 contains a model used at the University of Wisconsin School of Medicine to assess students' ethical knowledge.[83] A review of attempts to develop standardized tests can be found in an article by Savulescu and colleagues published in 1999; it includes semi-structured interviews based on given moral dilemmas to assess moral reasoning, and subjective reports based on vignettes to assess ethical sensitivity, inspired by Kohlberg's theory of childhood moral development.[84]

A PROPOSAL FOR DESIGNING A MEDICAL ETHICS CURRICULUM IN MEDICAL SCHOOLS

We propose the following medical ethics curriculum for medical schools. It is tailored to a four-year course that includes two years of preclinical education and two years of clinical education. This curriculum takes into account the positive and most effective teaching strategies and contents that emerged from the previous review, and it avoids or minimizes the presence of strategies that appeared to be negative or less effective.

This curriculum is based on constructivist pedagogy, in which knowledge is built upon and core concepts are revisited to further "construct" knowledge with new information. In this curriculum, students learn the "facts" of health law and the principles of ethics in the preclinical years, with increasing opportunities to practice application of these principles throughout those years. In the clinical years, students apply the knowledge and skills they learned in their preclinical years to experiences in the clinical context.

We intend this as a practical suggestion for those engaged in designing and teaching a medical ethics curriculum, and as an attempt to unify medical ethics education across schools. More importantly, we intend it to be a focus and source of development for others as they revise, contribute, and develop such a program. There will necessarily be some inter-school variation of the content and methods of the teaching, to reflect local practices (for example, euthanasia in the Netherlands) and cultural factors (for example, a significant presence of a Muslim population in a given area). However, we think any medical ethics curriculum should have the following minimal components.

We suggest a timetable of one to two hours per week across each semester. This ensures that the content can be logically constructed over time and has the added advantage of utilizing cases and content from other areas of the curriculum, for example, bioscience and clinical skills. For example, early in case-based learning in bioscience subjects and in clinical skills, students could learn principles of bioethics and the legal requirements for consent. Simple clinical skills such as phlebotomy and giving injections can be used to demonstrate the application of autonomy, consent, and, with some alteration of scenarios, best interests.

Year One

Year one is preclinical and includes introductory medical ethics, professionalism, and law courses. These can be delivered in large classes (although dividing students into small groups, when possible, would be an advantage) and should be taught by relevant content experts, such as a medical ethicist, a health law expert, and an expert on

professional regulation. This could be the same person or several visiting experts.

At this early stage, students should also be taught a framework for ethical deliberation in the clinical context. Tutorials or large-group work, using a team-based learning format, can be used to help students "practice" the application of this framework, using concepts taught in the current teaching period. An example is provided in Appendix 7.

The goal is to provide students with the fundamental notions of medical ethics, law, and professional regulation that will inform their further medical ethics training in preclinical and clinical years.

Courses should include the teaching of basic concepts of medical ethics and medical law, as well as the teaching and critical analysis of the deontological code of the relevant medical association. Topics to be covered could include informed consent, autonomy, confidentiality, trust, professionalism, different conceptions of doctor-patient relationship, and conscientious objection (both in its legal and ethical aspects). We suggest something like the handbooks by Kerridge and colleagues[85] or Hope and colleagues[86] as course books, as they cover all of the fundamental concepts in medical ethics and law that a health professional should master.

Year Two

Year two is also preclinical, and includes small-group classes with case discussions in the form of seminars and role-plays. The objective is to develop students' critical thinking skills by rationally applying the principles and concepts learned in year one to clinical cases. It is ideal for the content of these scenarios to align with other content in the curriculum. Concurrent problem-based learning or content-based learning from bioscience subjects can also be used. For example, during the children's health block, students can build on content they learned earlier on consent and best interests by learning about consent for the "mature minor" and decision making using the "best interest" framework for older teenage children, including family-centered care. The continued use of the framework in deliberating these cases will structure and reinforce learning in a meaningful way for the students. The content relates back to information learned in year one, and knowledge continues to be constructed and applied.

Ideally, these seminars should be run jointly by a professional ethicist and a clinician, as this is more likely to guarantee acquisition of the required ethical expertise and the medical expertise—which will increase students' trust in their teachers. Students are presented with different cases that include ethical dilemmas in the clinical setting, and are asked to indicate which principles and concepts are involved and what kind of decisions are more ethical in each. Textbooks exist that can be used as sources of cases for discussion,[87] or real cases from senior doctors' experience could be used.

Assessment can be based on small-group work, including collaboration and communication and the use of the framework to work logically through case scenarios. Alternatively a case presentation—written or verbal—can be assessed using the tools provided in Appendix 5 and Appendix 6.

Year Three

Year three is clinical, and includes small-group classes and one-on-one discussion sessions with a clinical supervisor and a professional ethicist, ethical checklists, and debriefing sessions. Classes and one-on-one discussions should be based on the students' own experience on wards. Also, as mentioned in the section "Three Ways of Meeting the Challenges," point two, "Practical Approaches to Medical Ethics," at this stage students could be required to compile "ethical checklists" on the basis of the ethical issues they recognize in their encounters with patients. The ethics education received in their first two years should have equipped them with the knowledge and abilities required to perform this task. As students build their own checklists, they will be able to apply it to subsequent cases and to continuously update or refine it. To ensure that their new knowledge is constructed and reflected upon, it is important that learning sessions occur regularly and not in discreet "blocks" or "residentials" only once or twice in the academic year.

The objective is to give the ethics training of the two previous years practical application that is relevant to students' professional development.

Since students also find debriefing sessions with peers to be very useful for their professional development,[88] this type of activity could make a valuable addition to the ethics teaching offered in clinical years. It should be based on first-person narratives under the supervision of a professional ethicist, in which students in small-sized groups tell about how they managed ethical dilemmas, what kind of values they applied in different circumstances, and what attitudes informed their behavior. Students are encouraged to identify their own clinical experiences and apply the framework in considering ethical considerations in coming to a conclusion or action. Assessment could be based on identification of ethical issues and the use of the framework in the clinical context.

Year Four

Year four is clinical, and includes individualized projects by medical students and reports on their ethical checklist. This year should involve individual research and the writing of a short essay on a student's chosen topic (for example, respecting the autonomy of mentally impaired patients, handling family-patient conflict about clinical decisions, *et cetera*), based on the students' clinical experiences and on their research on the relevant literature on their topic. Objective outcomes that involve both cognitive and attitudinal objectives should be assessed in this project, including the application of critical thinking and students' ability to reflect on their own biases, beliefs, and values in considering professional responsibility. Students should also be able to review the ethics literature, summarize it, synthesize it, evaluate it, and apply it to real-life cases. Skilled tutors in both ethics and clinical knowledge should facilitate this.

Both a professional ethicist and a clinician would act as supervisors. It is important to bear in mind that, in the final year, the main source of ethics learning is observation of clinical practice on ward rounds,[89] so it is important that clinical staff act ethically and professionally when in the presence of medical students, and, if necessary, receive adequate ethics training.

Also, at this final stage, the ethical checklist that students have built during their previous two years should be assessed: students should be required to write a short report or narrative about their checklist, illustrating the situations in which they have recognized ethical issues and how the same issues arose in subsequent situations. The checklist should be assessed for completeness and accuracy.

Taking into account the distinction between the cognitive and the attitudinal objectives of medical ethics education, the former objective is more suited for the preclinical years and the latter for the clinical years. However, as pointed out in the review above, the two types of objectives are not easily separable, and, from the very beginning, students should start forming an idea of what it means to be a serious professional, which involves mastering a knowledge of ethics, having the right approach to patients and to one's professional duties, and being capable of rationally reflecting on the ethical implications of different medical options. Professionalism, in its different dimensions, should be a core concept in medical ethics education, both as a theoretical concept (particularly in the preclinical years) and as a practical approach (particularly in the clinical years). Medical students report that professionalism is very important, but are very critical of the efficacy of the lecture-based system of teaching professionalism. They believe that a seminar-style instructional setting would work better.[90] It is therefore important that there is a follow up, in the form of case discussion and clerkship, to the formal teaching of the first years about professionalism.

APPENDIX 1
Core Content of the Ethics Curriculum

- Professionalism: "good medical practice"
- Patients: their values, narratives, rights, and responsibilities
- Informed decision making and valid consent/refusal
- Capacity and incapacity
- Confidentiality
- Justice and public health
- Children and young people
- Mental health
- Beginning of life
- Towards the end of life
- Medical research and audit

Institute of Medical Ethics, *Medical ethics and law: A practical guide to the assessment of the core content of learning* (Gloucestershire, U.K.: Institute of Medical Ethics, 2013), 2, box 2.

APPENDIX 2
How to Approach a Clinical Ethical Dilemma

- Collect all relevant data that could help with resolving the matter.
- Identify the basic principles involved and explain how they relate to the case.
- Consider whether principles conflict in this situation OR whether there is uncertainty about what a particular principle (e.g., beneficence, respect for autonomy) directs you to do.
- Formulate a question that reflects the conflict.
- Decide which principle should have priority in this case and support that choice with factors relevant to the case OR find an alternative that avoids the dilemma.
- When uncertainty persists, note whether there is some missing information that would help you to resolve the dilemma. Which information? How will it help to resolve the dilemma?
- Evaluate your decision by asking if it is what a consensus of exemplary doctors would agree to do.
- Plan the practical steps that you should take, focusing on the details of the case and the future issues that you foresee.

Adapted from R. Rhodes and D. Alfandre, "A Systematic Approach to Clinical Moral Reasoning," *Clinical Ethics* 2, no. 2 (2007): 66-70.

APPENDIX 3
Description of Ethics Cases and Issues Raised for Use in Two Pediatrics Clinical Ethics Teaching Methods, University of Washington School of Medicine, 1999-2000

Case	Issues raised
An intelligent 16-year-old girl with cystic fibrosis who is not a candidate for lung transplant because of the severity of her disease, wishes to have a DNR order written during a current hospitalization for a severe pulmonary infection exacerbation. Her parents do not wish such an order written, and demand all care, including resuscitation, be continued.	Adolescent decision making Parental decision making Informed consent End-of-life care Triadic relationships in pediatrics
You are a primary care physician who is assuming the care of a family. Upon review of the medical history of the 1-year-old daughter, you find that she has no immunizations although she received several well-child examinations. You ask the parents about this and they state, "we don't believe in immunizations."	Parental decision making Cultural/religious differences Responsibility to patient and society Informed consent
During your rotation on pediatrics, you have the opportunity to perform a lumbar puncture on a 1-month-old infant. You have seen one done by your resident but you haven't done one. Your resident introduces you as "Dr. X" and explains that you will be doing the procedure.	Misrepresentation Informed consent Adequate supervision Confronting a supervisor Training and providing "best care"
Final: You are in a busy clinic seeing a 15-year-old girl for a "sore throat." Her physical examination findings are normal and as you are ready to leave the room, she blurts out that she thinks hat she is pregnant. Her mother is in the waiting room.	Adolescent decision making Reproductive health issues Parental decision making Confidentiality

S. Smith et al., "Finding Effective Strategies for Teaching Ethics: A Comparison Trial of Two Interventions," *Academic Medicine* 79, no. 3 (March 2004): 265-71, 267, table 1.

APPENDIX 4
Embedding Learning Outcomes

The following is an example of embedding or mapping learning outcomes into the curriculum.

TOPIC: Towards the end of life

LEARNING OUTCOME: Demonstrate in practice an understanding of the ethical and legal issues of dignity, patient choice and the limits on respect for patient autonomy

IMPORTANCE AND RELEVANCE: Over the last five years there has been a profusion of media, legal and ethical discussion regarding patients anticipated to be in the last year of life. This subject touches on the aging population, rationing and economics, advance decisions and patient choice but the list is not exhaustive. Doctors in virtually every specialty would be expected to have a working knowledge of these areas.

In relation to mental capacity, students will need to be able to:
- Know how to assess capacity for a specific treatment
- Establish the clinical relevance of an advance decision
- Establish the legality of lasting power of attorney
- Know how to assess a patient's best interests

In relation to end of life guidance, students will need to be able to:
- Establish a patients preferred priorities of care
- Identify a means of recognizing patients who are in the last year of life
- Discuss the relevance of patient choice, religion and the law in the context of different cases *[continued next page]*

APPENDIX 4, Continued

In relation to ethical principles, students need to be able to:
- Define and discuss the concept of dignity
- Define and discuss the concept of autonomy and its limits in different settings (for e.g. acute illness, terminal illness, acute hospital).

TEACHING: The relevant teaching could initially be delivered in a lecture format. After or during clinical attachments, students could be expected to more widely explore the issues and limitations around end of life autonomy and decision making in a small group setting. Teaching can be reinforced at the bedside such that students would be expected to demonstrate a working knowledge of assessing capacity, best interests and relevant end of life guidelines.

LINKING AND MAPPING: Throughout the course, regular links need to be made to the relevance and importance of the subject and also to the learning outcomes. These can be used as a driver for learning if students are assessed on their ability to demonstrate achievement.

Issues of autonomy, capacity, dignity, and best interests are not particular to older adults in palliative care. These issues can be explored, and learning reinforced, in a number of other appropriate settings including:
- Child health
- Mental health
- Humanities and social science
- Acute care settings

Institute of Medical Ethics, *Medical ethics and law: A practical guide to the assessment of the core content of learning* (Gloucestershire, U.K.: Institute of Medical Ethics, 2013), 31, Appendix A.

APPENDIX 5
Critical Thinking Skills Vignettes

Here is one example of the vignettes with marking instructions.

During your morning general practice surgery a 50-year-old woman comes to see you, complaining of some mild clumsiness and worsening memory. She tells you that her father and his mother both died from Huntington's disease in their mid-fifties. The rest of her family do not know of the occurrence of Huntington's disease in her relatives. She insists that you do not tell them and forbids you to let them know your present concern. Later that morning this woman's daughter sees you to discuss coming off the contraceptive pill as she and her husband wish to conceive a child.

[There follows some information about Huntington's disease].

What should you say to the daughter?

Justify your decision and note what other options are open to you.

Why do you think that these other options are less satisfactory than the one you chose to adopt?

Give one mark only for each point—broadly construed—made from the list below. Note any point made which you consider appropriate but which do not appear on the list.

1. Obligations and confidentiality
2. "Implied contract" argument for respecting confidentiality
3. Utilitarian argument for respecting confidentiality
4. Autonomy-based argument for respecting confidentiality
5. Duty of care to one's own patient
6. Trust and the doctor-patient relationship
7. Autonomy versus beneficence conflict
8. Consequences for the potential child
9. Interests of the husband
10. Counselling of the mother
11. Counselling of the daughter
12. Advising the daughter to research into grandparents' medical history

J. Savulescu et al, "Evaluating Ethics Competences in Medical Education," *Journal of Medical Ethics* 99, no. 25 (1999): 366-74, 373, Appendix 1.

APPENDIX 6
Sample Feedback Form Used to Evaluate Students' Ethics Case Number 1 [see Appendix 3]
During their Pediatrics Rotation, University of Washington School of Medicine, 1999-2000

Ethical issues suggested by the essay	**Implicit (0.5 pt)**	**Explicit (1 pt)**
Determination of end-of-life care	_____	_____
Rights of adolescent patients	_____	_____
Parental rights to guide care	_____	_____
Ability of physician to maintain relationship with all parties with conflicting views	_____	_____

Score (# identified): (0-4) ☐

Consideration /weighing the issues (discussion of the following)

Scale:

Excellent: (4)	In depth discussion of all/most of the identified ethical dilemmas
Good: (3)	In depth discussion of at least one of the identified ethical dilemmas plus a limited discussion of all/most of the identified ethical dilemmas
Satisfactory: (2)	In depth discussion of at least one of the identified ethical dilemmas or a limited discussion of all/most of the identified ethical dilemmas
Borderline satisfactory: (1)	Limited discussion of at least one of the identified ethical dilemmas
Unsatisfactory: (0)	No clear discussion of the identified ethical dilemmas

In depth discussion—addresses multiple aspects of the issue using correct information;
Limited discussion—addresses one aspect of the issue

End-of-life care/DNR **Score (0-4)** ☐

- What constitutes futility?
  - Who decides this?
  - What is competence?
  - Deals with issues of quality of life?
- Does the student recognize his/her own biases?

Rights of the adolescent patient

- Emancipated vs. mature minor
- Philosophy of increasing involvement of care with increasing age/maturity

Parental rights to guide care

- What are the responsibilities of parents to their children?
- Are there any limitations to these responsibilities?

Informed consent

- What are the elements of informed consent?
- In this case who will give this? To whom should the physician speak?

Ability of physician to maintain relationship

- Recognition of physician/student bias—why have they their chosen position?
- Is there an advantage for maintaining relationship with all parties? Why?

Forming a plan: **Score (0-4)** ☐

(One point each for):
Presence of plan
Degree of detail
Feasibility of the plan
Addressing multiple critical issues with the plan

Explicit justification of plan by identification of ethical principles/professional duties: **Score (0-1):** ☐

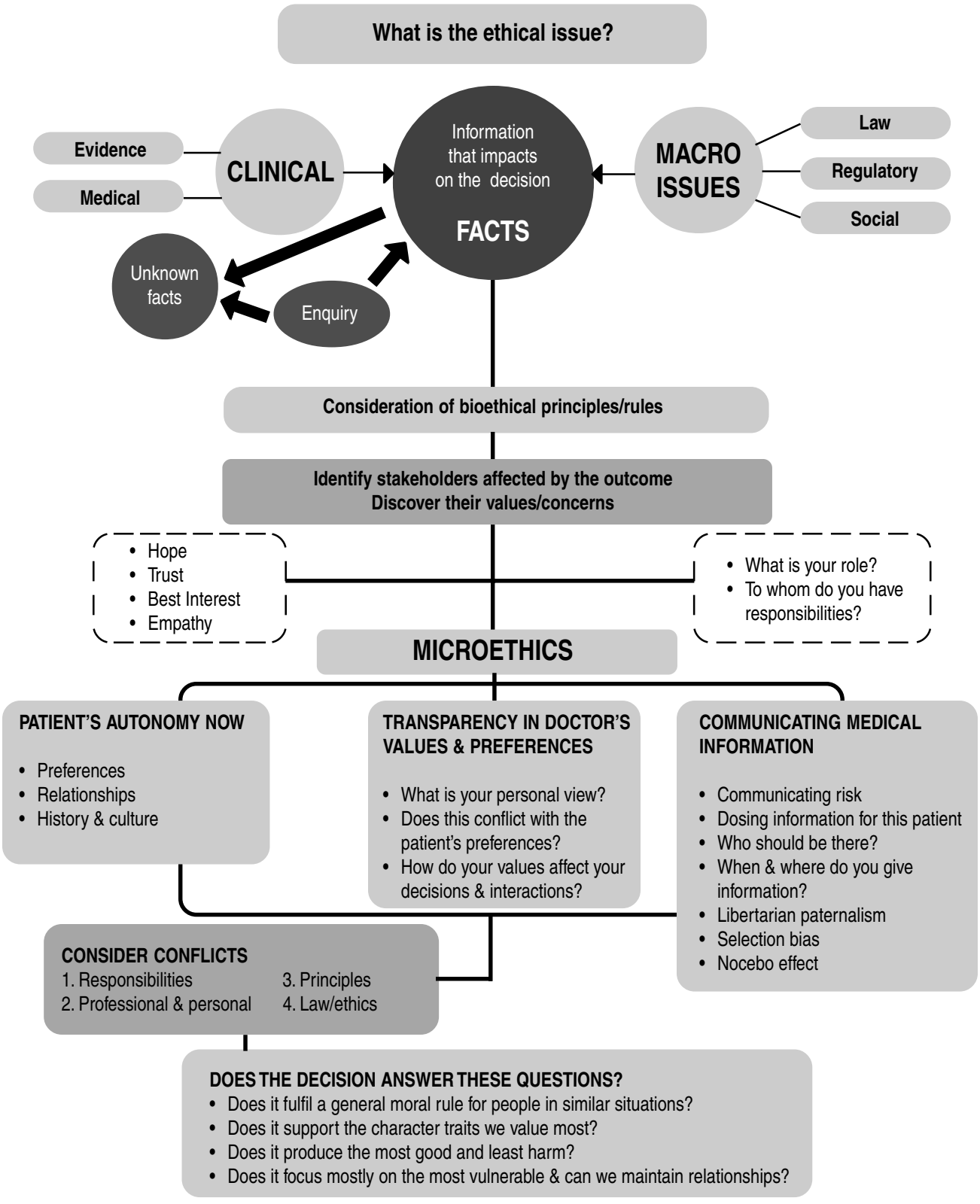
Comments:

Total score: ☐

S. Smith et al., "Finding Effective Strategies for Teaching Ethics: A Comparison Trial of Two Interventions," *Academic Medicine* 79, no. 3 (March 2004): 265-71, 268, figure 1.

APPENDIX 7

MEDICAL ETHICS AND LEGAL DECISION-MAKING FRAMEWORK



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