Teaching clinical ethics as a professional skill: bridging the gap between knowledge about ethics and its use in clinical practice

Catherine Mysler, Ian H Kerridge and Kenneth R Mitchell

Abstract
Ethical reasoning and decision-making may be thought of as ‘professional skills’, and in this sense are as relevant to efficient clinical practice as the biomedical and clinical sciences are to the diagnosis of a patient’s problem. Despite this, however, undergraduate medical programmes in ethics tend to focus on the teaching of bioethical theories, concepts and/or prominent ethical issues such as IVF and euthanasia, rather than the use of such ethics knowledge (theories, principles, concepts, rules) to clinical practice. Not surprisingly, many students and clinicians experience considerable difficulty in using what they know about ethics to help them make competent ethical decisions in their day-to-day clinical practice. This paper describes the development of a seminar programme for teaching senior medical students a more systematic approach to ethical reasoning and analysis and clinical decision-making.

Despite disagreements regarding the ‘application’ and scope of ethics in medicine (1), ethical analysis and reasoning have come to be regarded by many as essential components or ‘professional skills’, common to all clinical practice (2). Indeed, we would argue that ethical analysis and reasoning are skills as central to good patient care as efficient interactional skills or the application of biomedical knowledge and clinical sciences (3). However, education in ethics usually emphasizes a knowledge of ethical theory, principles, concepts and issues, such as informed consent, euthanasia and quality of life, rather than the process of clinical ethical analysis and reasoning. Given the priorities in medical education it is not surprising then that medical students struggle to apply such knowledge of ethics to particular clinical cases and sometimes confuse technical facts, personal opinions, personal or professional values, or clinical consensus with reasoned argument and justifiable clinical ethical decision-making.

Currently, in the student’s preclinical years we structure the teaching of medical ethics around theory, principles and concepts (4). We recognize that there is some controversy about the principle-based approach to clinical ethics (5), not the least of which concerns the difficulties in conceptualizing the relationship between ethical theory and clinical practice (6–14). Nevertheless, if a principle-based approach also emphasizes the importance of exploring the relationships between different principle-based obligations and the necessity rigorously to justify why one set of ethical obligations should be overriding in a particular case, then it can serve as an action-guide for ethical decision-making in clinical practice. When adapted in this manner, therefore, the principle-based approach offers a strategy for clinical ethical reasoning that can be readily taught and grasped by students and medical practitioners. A remaining problem for us as medical educators was how to help students bridge the apparent ‘gap’ between knowledge of ethical theory, principles or concepts, and ethical reasoning in clinical practice as they move from the preclinical to the clinical years of medical education.

Ethical reasoning and clinical decision-making
How then should we teach clinical ethics? How do we educate medical students to make ethically justifiable decisions? As others have argued, the development of clinical ethics skills requires its own educational focus and teaching strategies (15–19). However, even though the teaching of clinical ethics now has growing academic support, few appear to have addressed the problem of how best to teach students to link ethical knowledge with clinical practice and how to measure resulting changes in student competence. This paper describes the development of a three-session seminar programme at the University of Newcastle, which attempts to provide senior students with a more systematic approach to applying their knowledge about ethics as they attempt to analyze and manage the ethical aspects of clinical decision-making.

Key words
Clinical ethics; ethical reasoning and clinical decisions; linking ethical knowledge with clinical practice.
Teaching clinical ethical reasoning and decision-making

With the above considerations in mind, we developed in 1992 and revised in 1993 a programme for teaching clinical ethical reasoning and decision-making for students in years 4 and 5, the clinical years of our curriculum. Table 1 outlines the step-by-step process we used to teach students how to deal with the ethical dimensions of clinical decision-making.

The programme itself comprised three sessions for students in years 4 and 5 which drew from and built on the bioethics knowledge base already acquired in the preclinical years of the curriculum (4, 20). (See Table 2.)

The aim of these sessions was not only to establish a concrete link between ethical knowledge and clinical practice, but to provide students with a systematic and critical approach to clinical ethical decision-making which we hoped would result in better patient care. One additional goal is worth highlighting and that was our aim to teach students to: 1) distinguish between law and ethics; and 2) consider if, and why the law should guide management, especially when it conflicts with carefully reasoned ethical judgments. One benefit of our approach, we believe, is that it encourages the practice of ethical medicine and discourages the practice of defensive medicine.

Given the large number of students involved we devised an interactive process which enabled us to work with multiple groups of students prior to and between the formal teaching sessions. At the commencement of session 1, all students were informed that a different group of students would be selected to present in each of the three seminar sessions, thus, nine students were directly involved in case work-ups and analysis.

CASE SELECTION
One month before session 1, three students chosen from different clinical rotations met with us to discuss the format of the three training sessions and the criteria for choosing a case for analysis and management. Students were instructed to select a case, after discussion with each patient's health care team which involved ethical, legal, and social issues, and were advised of the importance of an orderly and broad approach to fact-gathering. The final decision regarding the acceptability of the case for learning purposes was made following a review of each case selected by a student. Upon acceptance of the three clinical cases students were instructed how to proceed with clinical ethical analysis and decision-making with each subsequent set of three students advancing the analysis and management of his or her case by performing the next 'professional skill' being taught and demonstrated in a particular session.

IN Volvement OF students NOT presenting A CASE
Each of the three sessions was structured around the three cases presented by students. Particular efforts were made to facilitate learning among the non-presenting members of the class by stimulating explicit consideration of the specific step or steps being highlighted in each session. To achieve this, all students were provided with 'stimulus' materials in the form of charts and were instructed to record all important information presented by their colleagues.

Table 1

<table>
<thead>
<tr>
<th>Step-by-step process used to guide students regarding the ethical dimensions of clinical decision-making</th>
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<tbody>
<tr>
<td>(1) Get the facts: medical, social, and ethical histories; physical examination; relevant investigations.</td>
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<td>(2) Identify existing and/or anticipated ethical issues.</td>
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<td>(3) Distinguish medical, ethical, social, and legal issues.</td>
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<td>(4) Determine which bioethical principles and/or concepts are relevant (ie: For whom? Why? When?) to clinical-ethical decision-making.</td>
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<td>(5) Identify existing and/or anticipated conflicts between principle-based obligations.</td>
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<td>(6) Explain why principle-based obligations clash.</td>
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<td>(7) Clearly state clinical ethical decision.</td>
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<td>(8) Justify clinical ethical decision: for example: (a) specify how guiding principles should be balanced and why; (b) Consider possible objections to decision stated; (c) Consider counterarguments to possible objections.</td>
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<tr>
<td>(9) Identify relevant laws and how they might guide management.</td>
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<td>(10) Examine relationship between clinical ethical decision and law.</td>
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<tr>
<td>(11) Argue which of the ethical and legal obligations in this case should guide decision-making and why. Where the law provides guidance incorporate considerations of where it is deficient and where it may need reform.</td>
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</table>
Discussion and review of relevant bioethical principles and concepts were led by student presenters and assisted by faculty.

**Case illustration: ‘Baby H’**

One of the cases identified by students and worked up for class presentation was that of ‘Baby H’. Baby H was transferred from a rural hospital for evaluation and management of spina bifida, and provides a useful illustration of how students use the step-by-step process taught in each session in clinical ethical decision-making.

‘Baby H is a female infant born at term (40 weeks’ gestation) by normal vaginal delivery to a healthy 28-year-old woman in her first pregnancy. The prenatal course was unremarkable with fetal ultrasound scans performed at 16 and 32 weeks reported as normal. Immediately following delivery the parents were informed that she was a “normal” healthy child, although a large spinal lesion (myelomeningocele, lumbasacral in this case) was subsequently noted upon bathing. At this point Baby H was transferred to the nearest teaching hospital with neonatal facilities, some 100 miles away. Examination on admission revealed a large (6×6 cm) open spinal lesion, the location of which (L1) indicated a very poor outcome in terms of future intellectual and motor functioning. Indeed, Baby H exhibited minimal spontaneous movement and further examination demonstrated multiple neurological problems (a right flaccid quadriaparesis, left spastic quadriaparesis, full fontanelles and a large left occipital cephalohaematoma). She was irritable when touched and fed poorly, although meconium was passed without difficulty. Emergency treatment consisted of saline packs applied to the

### Table 2

**Summary of seminar content and teaching strategies**

**Session 1: 120 minutes**

* Introduction to three cases (15 minutes).
* Students taught how to use bioethical principles and concepts to identify and anticipate ethical issues in clinical cases (30 minutes), as well as how to distinguish ethical issues from social issues and legal issues, emphasizing the need to do this prospectively or preventively (15 minutes).
* Case presentations by students illustrating ethical, social and legal issues.
  
<table>
<thead>
<tr>
<th>Case</th>
<th>Description</th>
<th>Duration</th>
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<tbody>
<tr>
<td>1: (Baby H) Paediatrics rotation</td>
<td>– (20 minutes)</td>
<td></td>
</tr>
<tr>
<td>2: (Mrs W): Medicine rotation</td>
<td>– (20 minutes)</td>
<td></td>
</tr>
<tr>
<td>3: (Mr B): Surgery rotation</td>
<td>– (20 minutes)</td>
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Steps: 1, 2, 3 of Table 1

**Session 2: 90 minutes**

* Students taught how to determine which bioethical principles and concepts are relevant in a particular case, and how to identify where the obligations engendered by these guiding principles and concepts clash and why (30 minutes).
* Case presentation by students illustrating their clinical ethical analysis.
  
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<td></td>
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<tr>
<td>3: (Mr B)</td>
<td>– (20 minutes)</td>
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Steps: 4, 5, 6 of Table 1

**Session 3: 120 minutes**

* Students taught how to state their clinical ethical decision in concrete terms, specifying how the ethical obligations engendered by the guiding bioethical principles should be balanced, and how to justify their argument and decision (35 minutes).
* Students also taught to identify possible legal obligations and examine if and how they should guide management, especially when legal obligations appear to conflict with ethical obligations (10 minutes).
* Presentation by students with each stating their management decision and providing ethical justification for their argument.
  
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* Brief revision of clinical ethical reasoning process (15 minutes).

Steps: 7, 8, 9, 10, 11 of Table 1
spinal lesion, intravenous fluids, and intravenous antibiotics.

Subsequent investigation, including a cranial ultrasound and head CT scan, revealed multiple associated serious neurological complications (obstructive hydrocephalus, an Arnold Chiari malformation type II, suspected agenesis or dysgenesis of the corpus callosum, a large left parietal extra-dural haematoma, a right subdural haematoma, and an intraventricular haemorrhage). Following these investigations Baby H was reviewed by the medical team, including a paediatric neurologist and neurosurgeon. The parents were informed of the relevant findings and advised that the prognosis included probable mental retardation, faecal and urinary incontinence, mobility problems (diplegia), repeated neurosurgery for shunting, and possible early death. At the case conference on day three of Baby H’s admission her parents were offered either surgical closure of the lesion or more conservative management. In consultation with the health care team Baby H’s parents declined surgical intervention and chose palliative management. At this point antibiotics were ceased and Baby H was commenced on morphine, midazalam and metoclopramide “for irritability and vomiting”. Her parents were unable to feed or handle her as a result of persistent irritability and she required increasing doses of narcotics and sedation. She received no supplemental intravenous or enteral feeds and was maintained on “demand feeds” only. Her condition slowly deteriorated and on day 17 of her admission Baby H died in her parents’ arms of dehydration.’

SESSION ONE
This case provoked considerable debate and raised a number of ethical, social and legal issues. The ethical issues identified and anticipated by students in this case are summarized below under the headings of autonomy, beneficence/non-maleficence and justice. The students identified three autonomy-related issues. One issue is the procedural question of who should decide what happens to Baby H, the parents or the doctors. A related issue is the validity of parental choices regarding treatment, given the ‘intrinsic pressures’ of grief and stress. A third issue is how directive, if at all, counselling by the doctors should be.

Multiple beneficence/non-maleficence-related issues were identified by students. A central issue identified was whether it was in Baby H’s ‘best interests’ to survive given her ‘gloomy’ prognosis and possible ‘poor quality of life’, or whether interventions to prolong life merely prolonged suffering and thus harmed Baby H. Related issues identified were whether closure of the lesion was ethically ‘optional’ and thus justified ‘selective nontreatment’, and whether provision of IV fluids was ethically ‘obligatory’ even if the lesion was not surgically closed. Another issue concerned whether doctors should err on the side of prolonging life despite possible long-term handicaps, or on the side of preventing long-term handicaps even if some lives which could have been saved were lost? Other issues identified related to the use of narcotics and the appropriateness or otherwise of ‘active’ euthanasia, especially if it was determined that death was in Baby H’s ‘best interests’.

The students identified three justice issues. The issue seen as being immediate was whether the use of hospital resources aimed at keeping Baby H alive would represent a ‘disproportionate’ use of limited resources (micro-allocation of resources). A second issue concerned the geographical isolation of the rural hospital and its effect on that hospital’s capacity to provide adequate health care service (macro-allocation of resources). The third issue concerned health policy regarding who was responsible for providing resources and long-term care for infants such as Baby H (macro- and micro-allocation of resources).

The social issues identified by students in this case included the effects of Baby H’s illness not only on the parents and their relationship but also its effects on the extended family and future children. Students focused on the parents also included their concern for the parents’ financial stability, the level and cost of community support and services, and the effects on the family of Baby H’s possible institutionalization. The legal issues identified by students concerned the possible ‘negligence’ of the rural obstetrician in failing to diagnose spina bifida antenataly and, following delivery, the legal consequences of withholding or withdrawing treatment, and the current legal status of ‘physician-assisted’ death.

Student difficulties in session one
Some students had problems in distinguishing ethical from social issues, particularly in relation to issues of justice and health care allocation. However, following some guidance on how to distinguish the ‘moral’ and ‘non-moral’, students became better able to identify the ‘marks’ of ethical issues and thus distinguish them from social issues (21). Admittedly, this distinction can be very difficult to make, and we aimed only at getting students to make ‘rough’ distinctions which would enable them to determine what specialist, if any, might be of assistance in analyzing and/or managing a particular type of problem. For example, the ‘justice’ issues identified might involve more ‘philosophical’ analysis and exploration, and thus an ethicist might be called on to help explore such issues. Some such issues, for example macro-allocation issues of just access to resources in a rural setting, might not be resolvable by the health care professional or others in any particular case. The ‘social’ issues, on the other hand, might require the specific, practical attention of a social worker, for example, to counsel parents about psychological matters and/or assist them in gaining access to financial or community services. Interestingly, because they were forced to consider
ethical and legal issues separately, the students seemed better able to distinguish these without the confusion between the two that often plagues clinical ethical analysis, and that also tempts medical practitioners to practise ‘defensive’ medicine. Another difficulty experienced by students, due in part to their lack of knowledge of neonatal medicine and the psychosocial development of spina bifida patients was in anticipating ethical issues, such as those to do with non-treatment or the determination of ‘quality of life’ that might arise in the course of long-term management. As this difficulty involved the common problem in clinical ethical decision-making of how one should manage diagnostic and prognostic uncertainty (22), students were advised of the importance of both: (a) clarifying the diagnosis and prognosis in a case, and (b) determining the clinical and ethical significance of each (23). An important example in this case was the suspected unformed or malformed corpus callosum, as this diagnosis was never made with certainty and in fact varied from specialist to specialist, and its prognostic significance was also unclear and even controversial.

SESSION TWO
In session two, students were encouraged to determine which of the ethical issues identified by them in session one were relevant in Baby H’s case and in what priority (see Table 2). To do so, they were taught to ask a series of questions regarding the determination of ‘relevance’ including: (1) For whom is this particular issue relevant? (2) Why is this particular issue relevant? and (3) When is this particular issue relevant – i.e., acutely or chronically? The goal of requiring students to ask such questions was to get them to acknowledge the value-laden nature of determinations aimed at identifying which ethical issues were actually relevant in a particular case. For example, students thought the issue of parental grief might be particularly relevant for health care professionals, as they believed it might impair the capacity of the parents to make an informed decision. They therefore questioned whether and how the parents of Baby H could participate in decision-making on his behalf, at least for short-term acute decisions. In response, we pointed out that such ‘parental competence’ questions might be more relevant in a clinical ethical approach that was more beneficence-based than autonomy-based and that an autonomy-oriented approach might question the assumption that parental grief necessarily undermined competence to participate in decision-making. At the same time we emphasized the ethical obligation to facilitate parental involvement in decision-making.

In session two, students were also encouraged to identify where the ethical obligations engendered by the relevant principles and concepts clashed and why. The goal in urging them to do so was to increase student understanding of the principles and concepts themselves and of the relationships between them. Such understanding prepared students to better address questions about how they should balance ethical obligations engendered by the principles/concepts and thus resolve such conflicts. Conflicts they identified included:

(A) Beneficence-based versus autonomy-based obligations: For example, health care professionals’ obligation to determine Baby H’s medical ‘best interests’ and/or ‘quality of life’ and subsequent counselling versus their obligation to respect autonomous parental determinations of Baby H’s ‘best interests’ and the parents’ own ‘quality of life’.

(B) Beneficence-based versus non-maleficence-based obligations: For example, obligation to relieve suffering (for example, provide pain relief) versus obligation not to hasten Baby H’s death; the obligation to promote Baby H’s welfare versus the obligation to prevent harm (for example, due to the burdens of his existence) to third parties such as parents or society; and, the obligation to ensure that Baby H has a comfortable death versus the obligation not actively to kill.

(C) Beneficence/non-maleficence-based versus justice-based obligations: For example, the obligation to provide neonatal intensive care to Baby H versus the obligation justly to distribute health care resources both to other infants in the unit and other members of society.

Student difficulties in session two
Although students were able to recognize ethical issues relating to the management of Baby H, they experienced some difficulty in relating these clinical ethical conflicts back to underlying ethical principles. It was only when students were directed towards clarification of specific clinical ethical management issues, such as the use of narcotics, in terms of principle-based obligations, that they were able to make determinations of ethical relevance and make some progress towards informed conflict resolution.

SESSION THREE
In the final session, the student presenter was required to state her clinical ethical decision regarding the management of Baby H, specifying how the obligations engendered by the guiding principles/concepts should be balanced, and justifying her decision (see Table 2). Non-presenting students were given the opportunity to argue alternative views and to critique the actual management decision of the health care team involved in the care of Baby H, as part of their learning of clinical ethical reasoning and decision-making. The clinical ethical decision of the student presenter was that it was in Baby H’s ‘best interests’ to die, and that she should actively assist the infant’s death with narcotics to meet fully the obligations of
promoting Baby H's welfare and not harming the infant. Specifically, her clinical ethical reasoning was that Baby H was likely to have a poor 'quality of life', and therefore interventions to prolong life such as IV fluids were ethically 'optional' and were not in Baby H's 'best interests', and would in fact constitute a greater harm than death. Additionally, the student argued that justice-based obligations were paramount and that given the prognosis, keeping Baby H alive would entail a disproportionate use of scarce resources.

A number of counterarguments were raised by the other students in response to the clinical ethical decision and justification of the student presenter. A major objection was the argument that 'quality-of-life' judgments are so difficult as to have limited or no ethical relevance in clinical decision-making and that our primary consideration should be promoting the 'best interests' of the neonate rather than preventing emotional, financial or other burdens to the family or society. The response was made, however, that when it is judged to be in an infant's 'best interests' to die, our traditional assumptions about beneficence-based obligations may be challenged, in that hastening the infant's death may promote her interests better than prolonging her life or allowing her to die.

Student difficulties in session three
The student presenter had not anticipated various objections to her clinical ethical argument, and thus did not always have responses to these objections. The Baby H case provided a good example of a case which could result in conflicting decisions, each of which could appear to be ethically justifiable. A problem for us here was that some students concluded either that there was therefore no right-or-wrong decision in such cases, or that the grounds for clinical ethical decisions were no more than shared values or socio-cultural customs and therefore ethical reasoning was not useful. Appeals by students to personal values, attitudes and feelings as a means for resolving complex ethical issues is particularly noticeable in the preclinical years of medical education and we find that it is necessary to remind students of some inadequacies of such appeals to feelings, attitudes, moral authority or professional consensus in relation to the management of complex clinical ethical issues (24).

Conclusion
While clinical ethics enjoys increasing academic and clinical support, educationally, few have addressed either the actual problems experienced by students in linking ethical theory and clinical practice, or, the important task of devising teaching strategies to assist students in integrating their ethics knowledge to enable them systematically to analyze and manage the clinical ethical aspects of their clinical practice. After two years of teaching this programme, several observations can be made.

1. Students do appear to experience real difficulties in bridging the gap between the possession of ethical theories, principles, and concepts and the use of such knowledge in clinical practice.
2. The results of evaluation suggest that the clinical ethics seminar programme does appear to improve students' skills in ethical reasoning and analysis.
3. Furthermore, the ethical competence of students may be facilitated by the type of assessment we have developed to examine whether or not students had actually acquired the 'professional skills' we are attempting to teach (25).

Linking teaching and assessment is important both because it reinforces the centrality of ethical analysis and reasoning as essential skills in clinical decision-making. This is true because when students know that their assessment will involve the application of clinical ethical reasoning to the management of actual cases they are more likely to structure their learning to acquire those skills.

While this paper has focused on our approach to teaching ethical analysis and reasoning as a 'professional skills' essential to clinical decision-making, it remains only one component of our overall Health Law and Ethics Programme. Other important components of this programme which we believe contribute to competent clinical practice include effective interactive discussion and communication skills, and a knowledge of ethical theories, principles and concepts, all of which are formally taught in both the preclinical and clinical years at Newcastle, and specifically integrated through this and other teaching programmes.

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News and notes

Religious perspectives on bioethics

Part 2 of the two-part Scope Note, Religious Perspectives on Bioethics, has just been published by the National Reference Center for Bioethics Literature. Providing bibliographic citations to literature about the divergent attitudes religion can bring to bioethical issues, the 22-page document includes the views of Native American religious traditions, Protestantism, and Roman Catholicism.

Scope Note 26 is a follow-up to Scope Note 25, which alphabetically presented African religious traditions, Baha’i Faith, Buddhism and Confucianism, Eastern Orthodoxy, Hinduism, Islam, Jainism, and Judaism.

Separate reprints of Scope Notes 25 and 26 are available from the National Reference Center for Bioethics Literature, Kennedy Institute of Ethics, Georgetown University, Washington, DC 20057-1065, for $5 each, prepaid ($8 overseas airmail).