

## A process evaluation of medical ethics education in the first year of a new medical curriculum

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**Background** Despite the recent increase in activity in the field of medical ethics education, few evaluative studies have been carried out. Most studies have taken place in North America, in curricula where teaching is discipline-based, and have concentrated on outcome rather than on the curricular processes adopted.

**Aim** To evaluate the process of medical ethics education in the first year of a new learner-centred, problem-based, integrated medical curriculum.

**Method** A qualitative, multi-method approach was adopted using open questionnaires, focus groups and tutor evaluation rating scales. The study involved all 238 students in the first year of the new medical curriculum, and the 30 clinical tutors who facilitated ethics learning. A stratified sampling technique was used to choose focus group participants.

**Results** Small group teaching proved highly acceptable to both students and tutors. Tutors' teaching skills were

central to its effectiveness. Tutors played an important role in promoting students' appreciation of the relevance of medical ethics to clinical practice, and in establishing a climate where constructive criticism of colleagues' actions is acceptable. Course integration, including the provision for students of clinical experiences on which to reflect, was an important aid to learning. Students and tutors were noted to be driving the ethics curriculum towards having a contextual rather than theoretical base.

**Conclusion** This evaluation identified those aspects of the medical ethics course which contributed to its effectiveness and those which detracted from it. This information will be used to inform future development.

**Keywords** Curriculum; education, medical, undergraduate, \*methods; ethics, medical, \*education; problem-based learning, \*methods; programme evaluation.

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### Introduction

Medical ethics has a 2500-year history in medical education, but despite this it has only been in the last 30 years that it has 'come of age'<sup>1</sup> in terms of formal inclusion in medical curricula. Most United Kingdom medical schools now include medical ethics teaching in their undergraduate curricula.<sup>2</sup> Despite the increased activity in this field, few evaluation studies have been undertaken.<sup>3,4</sup> Where studies have been performed they have occurred mainly in North America, where the students are generally older and already possess a first degree in which there is often exposure to ethics instruction.<sup>5</sup> The studies have taken place in curricula where ethics is taught as a distinct course and the teaching is discipline-based, and have concentrated

mainly on outcome with little reflection on the educational philosophy and curricular processes adopted.<sup>3</sup>

In October 1996, Glasgow University Medical School, in response to *Tomorrow's Doctors*,<sup>6</sup> introduced a new learner-centred, problem-based curriculum in which teaching is integrated both horizontally and vertically. Medical ethics and law is one of the vertical themes which run throughout the new curriculum, and commences in the first year as one of nine domains (Table 1) of the vocational studies course. This is an innovative course which complements the problem-based learning (PBL) core. It is designed to facilitate the development of professionally responsible attitudes and skills required by students for clinical practice.

### Format of medical ethics education in the first year of the vocational studies course

There has been a diversity of goals set, and methods used, in medical ethics education, and while the consensus is that there is no single best model for medical

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**Table 1** Learning domains in vocational studies

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- Understanding people, patients and communities
  - Communication skills
  - Working with others
  - Clinical skills
  - The clinical context
  - Information skills
  - Evidence-based medicine
  - Finding out
  - Ethics (the right thing to do)
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ethics education,<sup>1,7</sup> a number of recommendations have been made about its incorporation into medical curricula. The UK Consensus Statement,<sup>7</sup> on the teaching of medical ethics and law in UK medical schools, has a number of recommendations (Table 2). The curricular aims, and design of teaching in medical ethics and law in Glasgow's new curriculum, are consistent with this approach.

The aims of ethics learning in the first year of the curriculum are shown in Table 3. Law and legal reasoning are covered in certain sessions, including those on autonomy, consent, confidentiality, alcohol, rights and, in subsequent years, negligence and malpractice. Some of these are supported by plenary sessions offered by legal representatives, and certain topics will be re-addressed in clinical years 4 and 5 when students are closer to the reality of their professional responsibilities.

To achieve the aims of ethics learning, the students participated in a variety of activities, the main one being small group discussion, of cases and underpinning

**Table 3** Aims of teaching

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- 1 To develop students' awareness of relevant ethical issues and consensus professional opinion for resolving ethical problems.
  - 2 To develop students' critical self-awareness.
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theory, with groups of eight students, facilitated by a clinical tutor. The tutors had no particular expertise in medical ethics, but had been trained for the sessions and encouraged to use their professional ability. Also, prompt sheets and background material were provided by the course designer, developed with input from philosophers, lawyers, clinicians and other relevant professionals. The small group sessions were complemented by plenary seminars, where students had the opportunity for interactive discussion with ethicists, legal experts and members of other relevant disciplines. A list of the ethics sessions in the vocational studies course is shown in Table 4. For each of these 3-hour sessions learning objectives were provided in the course notes.

Assessment of students' learning in medical ethics was incorporated into the first MB exam, as part of the modified essay and short notes components, which included questions relating to ethical issues raised during the year.

This paper presents the results of a process evaluation of medical ethics education in the first year of the vocational studies course. The outcome evaluation will be reported separately.

**Table 2** UK Consensus Statement recommendations

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Teaching should allow students to:

- 1 Understand the ethical principles and values underpinning the practice of good medicine.
- 2 Be able to think critically about medical ethics issues, critically reflect upon their own beliefs, understand and appreciate alternative, and sometimes competing approaches, and be able to argue and counter-argue in order to contribute to informed discussion and debate.
- 3 Know the main professional obligations of doctors in the United Kingdom.
- 4 Have knowledge and understanding of the legal process and the legal obligations of medical practitioners sufficient to enable them to practice medicine effectively and safely.
- 5 Appreciate that ethical and legal reasoning and critical reflection are natural and integral components in their clinical decision making and practice.
- 6 Enable students to understand that ethical and legal issues arise in everyday practice.

To achieve this the following curricular recommendations are made:

- 1 Ethics and law should be introduced systematically to prepare students to meet their own professional and legal responsibilities when working with patients.
- 2 It should be a feature of the whole medical curriculum, be introduced early and be fully integrated with the rest of the curriculum. It should have sufficient curricular time and resources allocated to achieve its goals.
- 3 It should be formally assessed as with other core subjects within the curriculum.

It is recommended that 'a variety of teaching methods, ideally which entail a mix between large and small groups, exploring issues in a case-based fashion' be used, and that teaching is made clinically relevant.

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**Table 4** Ethics sessions in first-year vocational studies

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Term 1	
Session 1:	Introduction to vocational studies/core values exercise
Session 2	Plenary on alcohol
Session 3	Newspaper clippings/medical models
Session 4	Autonomy/informed consent/competence (Combined with a personal measurement workshop)
Session 5	Plenary on autonomy
Term 2	
Session 6	Vulnerability
Session 7	Telling the truth
Term 3	
Session 8	Confidentiality
Session 9	Medical-legal aspects of infection. (Combined with an evidence-based medicine session)

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### Aims of the process evaluation

The aims of the process evaluation were:

- 1 To judge the value of the curricular experiences provided for students in terms of:
  - (a) acceptability to both students and tutors;
  - (b) relevance of the material to the teaching aims;
  - (c) feasibility.
- 2 To judge the effectiveness of clinical tutors as facilitators of learning in medical ethics education.

### Method

A multi-method approach was used to obtain process data, which involved the use of the following instruments:

- 1 A brief open questionnaire administered to all students after each ethics session in the vocational studies course.
- 2 A similar open questionnaire administered to all tutors.  
The open questionnaires were the primary instruments used to obtain process data.
- 3 Focus group sessions at the end of the year with a subgroup of students.
- 4 Focus group sessions at the end of the year with a subgroup of tutors.
- 5 Brief structured scale for rating tutors, given to all students at the end of terms one and three.

The rating scale has been adapted from that of Dolmans *et al.* for tutor evaluation in a problem-based curriculum.<sup>8</sup> This rating applied to the tutor's performance during all vocational studies sessions, not just ethics sessions.

The study involved all 238 students in the first year of Glasgow University's new medical curriculum starting in October 1996, and the 30 clinical tutors facilitating ethics learning as part of the vocational studies course. The student focus group participants were randomly selected for invitation to participate according to the proportion of males to females in the class (1:2). Three groups of eight were chosen, that is, 10% of the total student population.

The tutor focus group participants were stratified by gender and by whether they worked in a hospital or community setting. Two groups of six participants were chosen, comprising 40% of all tutors. The reason for running two separate groups was to reduce the risk that a substantive content of the discussion might arise from one group's unique composition or dynamics.

The analysis of the data obtained from the open questionnaires proceeded along the topological lines suggested by Becher & Kogan,<sup>9</sup> its basis being the issues and concerns experienced by the students and tutors (after Guba & Lincoln<sup>10</sup>). To establish the validity and reliability of the findings, draft reports were circulated to all students and tutors for comment and criticism. A further report incorporating these comments was circulated to the members of the Vocational Studies Evaluation Group for further comment and criticism.

A standardized interview format was chosen for the focus groups which followed the pre-existing agenda for the research. In choosing the themes, the purposes of the evaluation and the issues and concerns identified by the open questionnaires were taken into consideration. Moderator intervention, however, was kept to a minimum. The moderator for both tutor groups was the researcher (J.G.). Each student group required a separate moderator because of the time constraint in running the groups between the first MB exam and the end of term. The other two moderators (L.S., J.M.) were briefed prior to the running of the groups in an attempt to maximize uniformity of approach.

The themes chosen for the interviews were:

- 1 Overall impressions of the course.
- 2 Acceptability/feasibility of the curricular experiences provided in the ethics sessions.
- 3 Relevance of the curricular experiences provided in the ethics sessions to the aims of the teaching.
- 4 Impact of the course on the students' development.
- 5 The acceptability and effectiveness of clinical tutors as facilitators of medical ethics learning.
- 6 Other topics that may have been included.

The sessions were audiotaped, transcribed and analysed using a 'grid' analysis after Knodel.<sup>11</sup> What each group said, in response to each question, was system-

atically summarized. The responses were then coded and a 'group to group validation' applied.<sup>12</sup> With this method, the emphasis a topic should receive is determined by a combination of three factors:

- 1 How many groups mention the topic.
- 2 How many people within each group mention the topic.
- 3 How much energy and enthusiasm the topic generated among the participants.

The reliability and validity of the focus groups' findings was established by submitting a draft report to all the participants for their comment and criticism. A further report, including comments received, was circulated to the members of the Vocational Studies Evaluation Group for further comment and criticism.

The structured tutor-evaluation form was administered at the end of the first term and then again at the end of the third term. The data obtained were analysed both quantitatively and qualitatively. As the findings applied to the tutors' performance throughout the vocational studies course as a whole, the data produced were used mainly for triangulation purposes in establishing tutor effectiveness.

Having obtained and analysed the data from each instrument, the findings were submitted to methodological triangulation,<sup>13</sup> to ascertain the degree of convergence.

## Results

Following an initial high rate of completion of the open questionnaires, the number of forms returned by students, and tutors decreased towards the end of the first term. The main reason for this, from questionnaire returns and anecdotal comment from members of the Medical Education Unit, was that the students developed evaluation fatigue because they were asked to fill in questionnaires after all vocational studies and PBL sessions. To attempt to improve the situation the vocational studies evaluation was modified before the third term. Students and tutors were only asked to complete individual questionnaires for the ethics sessions; group responses were accepted for the other sessions. This had the effect of improving the completion rate.

The student attendance for the focus groups was not as planned. Just over half of the invited students attended, and the groups had to be augmented with a convenience sample of students who were present.

A total of 155 (65%) tutor rating forms were returned at the end of term 1 (series one), and 126 (53%) were returned at the end of term 3 (series two). In the

first series, evaluation forms were returned for ten tutors from only three or four students. In the second series no forms were received for two tutors and four or fewer forms were returned for 11 tutors. The results for the tutors, where fewer than half the group returned the forms, were interpreted with caution.

## Acceptability and feasibility of the curricular experiences provided

### *Small group process*

The small group process was viewed, by both students and tutors, as being enjoyable and particularly well suited to ethics learning. Issues, and particularly controversial issues, could be raised and discussed in a non-threatening environment, promoting the sharing and discussion of individuals' views. Students were often able to relate personal experiences, both positive and negative, which facilitated discussion. The media often provided the students with useful prior knowledge on the issues covered, and topical issues from the media, introduced to the sessions, often prompted discussion.

Tutors played an important role in the successful functioning of individual groups, the productiveness of sessions often being dependent on the tutor's small group skills. Effective tutors were identified by students as being able to promote discussion and often being seen as part of the group. Tutors perceived as being less effective were seen as controlling the group to the extent where students' participation was inhibited by the tutor's behaviour.

### *Curriculum integration*

The integration of the medical curriculum helped promote learning. Within vocational studies, the provision of contact with patients in a variety of clinical settings afforded students ethical experiences on which to reflect. Predominant among these were experiences which illustrated lack of confidentiality. Debriefing by tutors facilitated students' reflection on their experiences, and was integral to its effectiveness. PBL sessions also covered issues which reinforced learning from vocational studies sessions, and generated topics which could be taken to ethics sessions for discussion.

### *Plenary sessions*

Students appreciated the provision of different perspectives from the various professionals involved in the plenaries. Most students disliked the lecture component, during plenary sessions, preferring the opportunity, where provided, for small group work. The facilities provided, however, were felt not to be

conducive to the small group format. The plenaries were viewed as being complementary to the small group sessions.

### **Relevance of the curricular experiences provided to the teaching aims**

There was a mixed response, among students and tutors, to the question of how much the students had been exposed to professional consensus opinion. The tutors felt that, while they had not always stressed the consensus opinion on the various issues discussed, the students had developed an awareness of the importance of peer judgement of the individual's actions. Exposure to peer pressure during the small group sessions was felt to promote awareness. A further factor was the promotion of a climate where tutors were open with students about the fact that they did not always have the answers, and often had to consult colleagues and expert opinion on meeting difficult ethical problems in practice.

The small group process was seen as being particularly important in the development of critical self-awareness. It provided a non-threatening environment which promoted reflection on students' pre-existing knowledge and views concerning ethical issues. It encouraged the airing and challenging of students' views, and exposed students to the opinions of their peers and tutors. This was especially effective where these views were different from the student's own. Within the group setting, the use of role play, structured debating of issues, and case scenarios, particularly the use of staged scenarios, were noted to promote critical self-awareness. The tutors also helped to promote the development of students' critical abilities through admitting their own shortcomings when sharing their experiences with students.

### **The acceptability and effectiveness of clinical tutors as facilitators of medical ethics teaching**

From the tutor-evaluation rating scale returns, there was widespread acceptance of the clinical tutors as facilitators of learning in vocational studies. The open questionnaires and the student focus group findings corroborated this.

Initially tutors found it difficult to facilitate sessions that were not directly case-based, and students found these sessions less acceptable. Introducing relevant cases improved the effectiveness of these sessions. Tutors were able to contextualize ethical concepts for students, through relating them to their own experiences, which in turn illustrated their relevance to clinical practice.

The tutors felt that, while they were performing effectively, their effectiveness as facilitators should improve with further experience.

### **Discussion**

The variable student response to the evaluation instruments used in the study potentially affected the representativeness of the data obtained from individual instruments. However, the adoption of the multi-method approach, using the methodological triangulation technique to ascertain the degree of convergence of the data obtained, along with the validation procedures used for the individual instruments, helped to overcome these problems. In the case of the open questionnaires, although the numbers were low for some of the sessions, the fact that draft reports of the findings were circulated on two occasions to all the students and tutors for comment and criticism, before being included in the report to the Evaluation Group, helped validate the data obtained. In addition, the issues and concerns raised by the questionnaires were explored further in the focus groups. While the focus group composition was not as planned, it was felt that the groups were representative, despite not being completely random. For the structured tutor ratings where four or fewer forms were returned for individual tutors, the evaluations were interpreted with caution as they did not represent the views of the majority of the group. Despite these limitations, the data were of value for use in triangulation.

The small group method, the main teaching method used in ethics teaching and throughout the first year of Glasgow's new curriculum, is very acceptable to both students and tutors. The tutors appear to be performing effectively as facilitators. Tutors' teaching skills, particularly their small group skills, are integral to the effectiveness of the method. The small group method appears to be particularly suitable for the aims of the teaching, especially in the development of critical self-awareness. The provision of a non-threatening environment where students can examine and air their pre-existing knowledge and beliefs in safety, and be exposed to beliefs different from their own, is an important factor in the success of the small group method. Role play, structured debate, particularly where students are encouraged to consider a view contrary to their own, and case scenarios, especially staged scenarios, all promote students' examination of the beliefs they have hitherto held and exposure to opposite views. The media represent a useful resource: providing students with pre-existing knowledge of many of the issues raised; providing material which promotes discussion and, occasionally reinforcing and/

or promoting learning on issues covered. The media also help tutors to contextualize ethical concepts for the students. The drive to use the media often comes from the students, and perhaps this potential could be harnessed more effectively by both the course planners and tutors when planning individual sessions.

The integration of the medical curriculum helps to promote learning. Within the vocational studies course, the provision of contact with patients in a variety of clinical situations is particularly important, as it provides students with ethical experiences on which they can reflect. This helps to reinforce and/or promote learning about ethical issues raised in the small group sessions, and illustrates the relevance of medical ethics education to clinical practice.

The tutors play an important part, through debriefing, in the students' reflection. These experiences are an important element in introducing a climate where non-threatening, constructive criticism of the actions of colleagues is acceptable. The tutors also contribute to this process through acting as role models, willing to admit their fallibilities, when sharing their own relevant experiences with students. The exposure of students to such a climate, from this early stage in their development, may have the potential to lessen some of the negative effects of the socialization process engendered by medical training.<sup>14</sup> It is important that this climate continues throughout the curriculum, and especially that students are afforded the continuing opportunity for debriefing with regard to their ethical experiences during the more clinically orientated years of the course. This has implications for the training requirements of the medical teachers responsible for this part of the course.

The current trend in both medical ethics education, and in bioethics theory and research, is towards increased attention to context.<sup>15</sup> Both students and tutors wished for greater emphasis to be placed on context. Perhaps both groups view students' needs in medical ethics education, to paraphrase Hundert *et al.*,<sup>15</sup> as being less to take part in an academic discipline, but more for it to be part of their professional development and to become a routine part of their professional lives. However, while the students and clinical tutors are likely to continue to drive the curriculum towards what Wear<sup>16</sup> calls 'a more nuanced approach' to medical ethics education, it is essential to ensure that students attain the minimum knowledge base required for an appropriate undergraduate ethics education.<sup>7</sup>

This process evaluation identified those aspects of the medical ethics course which contributed to its effectiveness and those which detracted from it. This information will be used to inform the future development of this course.

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