Knowledge, Attitudes and Practice of Medical Students at the Cave Hill Campus in Relation to Ethics and Law in Healthcare

ER Walrond¹, R Jonnalagadda¹, S Hariharan¹, HSL Moseley¹

ABSTRACT

Objectives: The purpose of this study is to assess the knowledge, attitudes and practices among medical students in relation to medical ethics and law. The results of the study will be a useful guide to tutors of medical students and curricula designers.

Methods: A thirty-item self-administered questionnaire about knowledge of law and ethics, and the role of an ethics committee in the healthcare system was devised, tested and distributed to all levels of students and staff at the Queen Elizabeth Hospital in Barbados (a tertiary care teaching hospital) in 2003. The data from the completed questionnaires were entered into an SPSS database and analyzed using frequency and multiple cross-tabulation tables.

Results: Completed responses were obtained from 55 (96%) of the medical students. Medical students generally attested to the importance of ethical knowledge but felt that they knew little of the law. Students varied widely as regards the frequency with which they saw ethical or legal problems, with a quarter seeing them infrequently, but another quarter seeing them every day. They received their knowledge from multiple sources and particularly from lectures/seminars, and found case conferences the most helpful. Only a few students felt that text books had been helpful. Students were generally knowledgeable about most ethical issues, but many had uncertainties on how to deal with religious differences in treating patients, on the information to be given to relatives, and how violent patients should be treated.

Conclusions: The results of the study highlight that medical students felt an inadequacy of knowledge of law as it pertains to their chosen career. Since most of their knowledge of law was obtained from lectures, these should be reviewed and other avenues of tuition explored. The study also highlights the need to identify the minority of students who have problems with their ethical knowledge and to devise means whereby any deficiencies can be discussed and modified.

Conocimientos, Actitudes y Prácticas de los Estudiantes de Medicina en el Campus Cave Hill en Relación con la ética y las Leyes en el Campo de la Atención a la Salud

ER Walrond¹, R Jonnalagadda¹, S Hariharan¹, HSL Moseley¹

RESUMEN

Objetivos: El propósito de este estudio es evaluar los conocimientos, las actitudes y la práctica entre los estudiantes de medicina en relación con la ética y las leyes en el campo de la medicina. Los resultados del estudio serán una guía útil para los tutores de los estudiantes de medicina y los diseñadores de currículos de estudios.

Métodos: Una encuesta auto-administrada de treinta puntos sobre los conocimientos de leyes y ética, y el papel de un comité de ética en el sistema de atención a la salud, fue diseñada, probada y distribuida a todos los niveles entre los estudiantes y el personal del Hospital Queen Elizabeth en Barbados (un hospital docente de atención terciaria) en 2003. Los datos de las encuestas completadas fueron introducidos en una base de datos de SPSS, y analizados usando tablas de frecuencia y tablas múltiples de tabulación cruzada.

From: School of Clinical Medicine and Research, Queen Elizabeth Hospital¹, Barbados, West Indies.

Correspondence: Professor ER Walrond, School of Clinical Medicine and Research, Queen Elizabeth Hospital, Barbados, West Indies. Fax: (246) 429-5374, e-mail: ewalrond@uwichill.edu.bb.
INTRODUCTION

In spite of tremendous advances in healthcare resulting in the prolongation of life and the cure or amelioration of previously incurable conditions, many communities express dissatisfaction about the care they receive. Dissatisfaction is reflected in expressions about poor ethical conduct within the healthcare sector and an increasing use of litigation against healthcare practitioners. It is also reflected in an increase in the popularity of ‘alternative medicine’ in spite of it being largely untested, unregulated and with little accredited training required by its practitioners.

Concern for the conduct of the caring professions is not new, it goes back to antiquity when there was little scientific basis for medicine and ‘alternative medicine’, as we now know it, held sway. Nevertheless, the principles in the Hippocratic Oath have endured and remain important for the ethical conduct of health professionals. Codes of conduct and laws regulating the profession have been updated from time to time; they are taught and there has been a growth of ethicists and ethical committees, yet concerns about professional conduct appear to grow (1, 2). Complaints may be a reflection of better public awareness or poor practices within the health sector. How doctors are trained, is regarded as a key element in determining the ethical and legal conduct within the healthcare sector (3). It is therefore important to find out from medical students their knowledge and attitudes about medical ethics and law and relate it to the knowledge and attitudes of the people they work with. The medical students studying at the Queen Elizabeth Hospital (QEH) in Barbados are The University of the West Indies students at the Mona or St Augustine campuses in Jamaica and Trinidad and Tobago respectively. At the time of the study, there was no formal course in ethics in the final two years, although there were activities which provided exposure to ethical problems including lectures and case conferences. Various methodologies have been tried to stimulate better ethical conduct in healthcare settings but there are few studies designed to measure what is known and practised, so that educational efforts may be better targeted (4).

SUBJECTS AND METHODS

A self-administered questionnaire was devised to determine the knowledge, attitudes and practice of ethics and law of all categories of healthcare personnel. The questionnaire was developed with the inclusion of a wide range of response options to some questions, a 5-point response option for attitudinal questions, and it was pre-tested on a group of healthcare workers.

The questionnaire contained questions dealing with demographics of the respondents, how often ethical or legal problems were encountered, how knowledge about ethics and law was obtained, who would be consulted on such problems, the perception and role of an ethics committee, and on attitudes to patient autonomy, confidentiality, informed consent in adults and children, end of life care, abortion, religion and the treatment of violent patients.

Six hundred questionnaires were distributed to all levels of staff at the Queen Elizabeth Hospital in Barbados and collected from drop boxes in the institution. Data from the returned questionnaires was entered into the SPSS version software and analyzed using its data analysis programmes. Since the sampling of different categories of personnel was ‘convenient’, a descriptive analysis, rather than statistical significance, was performed.
RESULTS

Sixty-two per cent (373) of the questionnaires were returned, of these 55 were medical students, representing 96% of the students at the QEH at the time of the survey. The demographic characteristics of the respondents were typical of their groups. Seventy per cent of the respondents overall as well as the medical students were female.

The following questions were asked:

‘How often do you meet an ethical or legal problem in the course of your work’?

Eleven per cent of medical students responded that they never saw ethical or legal problems, a similar percentage responded that they saw problems once a year or less, and one quarter said they saw ethical problems on a daily basis (Table 1).

Table 1: Frequency of seeing ethical or legal problems

<table>
<thead>
<tr>
<th>Frequency of Ethical or Legal problems</th>
<th>No of Responses</th>
<th>Per cent of Medical students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>Once a year or less</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>Once a month</td>
<td>16</td>
<td>30%</td>
</tr>
<tr>
<td>Once a week</td>
<td>10</td>
<td>18%</td>
</tr>
<tr>
<td>Every day</td>
<td>13</td>
<td>23%</td>
</tr>
<tr>
<td>No response</td>
<td>4</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100%</td>
</tr>
</tbody>
</table>

‘How important is knowledge of ethics to you in your work’?

Medical students were generally very positive about the importance of ethical knowledge (Table 2). However, one student thought such knowledge was not important and that student was among those who responded that they saw ethical problems infrequently.

‘How did you get your knowledge of ethics?’

The majority of students (60%) responded that they acquired their knowledge from multiple sources and in particular during their training. Nearly 40% of the students said they had single sources for their knowledge about ethics and this contrasted with more than 50% responding to a similar question about their knowledge of the law (Table 3). The single source for either knowledge of ethics or law was predominantly lectures and seminars.

‘Do you know the laws pertaining to your work?’

The vast majority of students (93%) said they had little or no knowledge of the law related to their work (Table 4). A lesser majority of the professional cadre also stated that they knew none or little of the law pertaining to their work. For example, 14 out of 27 consultants who responded to the questionnaire said they knew little of the law. There was no correlation between frequency of seeing problems and knowledge of the law among students (Table 5).

Table 2: Importance of ethical knowledge

<table>
<thead>
<tr>
<th>Importance of Ethical Knowledge</th>
<th>No of Responses</th>
<th>Per cent of Medical students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Little</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Important</td>
<td>12</td>
<td>22%</td>
</tr>
<tr>
<td>Very important</td>
<td>15</td>
<td>27%</td>
</tr>
<tr>
<td>Extremely important</td>
<td>27</td>
<td>49%</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 3: Main sources of ethical and legal knowledge

<table>
<thead>
<tr>
<th>Sources of Knowledge</th>
<th>Responses</th>
<th>Single sources</th>
<th>Responses</th>
<th>Single sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>During training</td>
<td>58.2%</td>
<td>9.1%</td>
<td>41.8%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Job experience</td>
<td>43.7%</td>
<td></td>
<td>30.9%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Lectures and</td>
<td>44.5%</td>
<td>21.8%</td>
<td>81.8%</td>
<td>45.5%</td>
</tr>
<tr>
<td>Seminars</td>
<td>44.5%</td>
<td>21.8%</td>
<td>81.8%</td>
<td>45.5%</td>
</tr>
<tr>
<td>Self tuition</td>
<td>16.2%</td>
<td></td>
<td>12.7%</td>
<td></td>
</tr>
<tr>
<td>Other sources</td>
<td>38.2%</td>
<td>5.5%</td>
<td>5.5%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Knowledge of the law

<table>
<thead>
<tr>
<th>Knowledge of the law</th>
<th>No of</th>
<th>Per cent of Medical students</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>9</td>
<td>16.4%</td>
</tr>
<tr>
<td>Little</td>
<td>42</td>
<td>76.4%</td>
</tr>
<tr>
<td>Enough</td>
<td>1</td>
<td>1.8%</td>
</tr>
<tr>
<td>Most of them</td>
<td>3</td>
<td>5.4%</td>
</tr>
<tr>
<td>All</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 5: Little or no knowledge of the law (51 students) vs frequency of seeing problems

<table>
<thead>
<tr>
<th>Frequency of Ethical/legal problem</th>
<th>Little or No Knowledge of the Law</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never/Once a year or less</td>
<td>11</td>
</tr>
<tr>
<td>Once a month</td>
<td>16</td>
</tr>
<tr>
<td>Once a week</td>
<td>9</td>
</tr>
<tr>
<td>Every day</td>
<td>11</td>
</tr>
<tr>
<td>No response</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>51</td>
</tr>
</tbody>
</table>

‘How did you get your knowledge of the law related to your work?’

In contrast to the question related to sources of ethical knowledge, a majority of students responded that they had single sources for their knowledge in relation to law and in particular through lectures and seminars (Table 3).

Would you say that you know the main contents of: The Hippocratic Oath; The Nurses’ Code; The Helsinki Declaration; The Nuremberg Code?

Seventy per cent (38) of the students responded that they were familiar with the contents of the Hippocratic Oath. However, apart from two students who responded that they were familiar with the Nursing code as well as the Hippo-
critic Oath, none knew of these or any other codes of conduct.

‘Whom would you prefer to consult on an ethical problem?’

All except five students chose multiple responses to this question. The majority of students said they would consult with their immediate supervisor or the head of a department and about half of them would consult with their own colleagues. Four students (7%) would not consult with any institutional resource, preferring to go to close friends or family and in one instance their priest. Only three students would have considered going to a text.

‘If you thought you had a legal problem arising at work who would you consult?’

The responses were similar to those on whom students would consult on an ethical problem but the responses were less positive, eg, 50% rather than 60% would have gone to their immediate supervisor or head of a department and a third rather than half would have consulted their colleagues. There were similar small numbers that would not use any institutional resource but go to friends, family or their personal lawyer.

‘Is there an Ethics Committee at your Institution?’

About half of the students (30) knew that there was an ethics committee at the institution but 20% were positive that there was none, the others responded that they did not know. Of those who answered affirmatively, two thirds of them thought the committee was performing its role satisfactorily. Of the students who did not know that there was an ethics committee at the QEH, about half of them (13/25) felt that there was a role for such a committee.

‘If an Ethics committee exists, what do you see as its role?’

Only the 30 students who responded that they knew that there was an ethics committee at the institution were invited to answer this question, and they chose multiple roles. All responded that they saw the committee as advisory to the administration and 55% (17) saw it as advisory to staff; a minority saw the committee as having a role in dealing with complaints (4), the disciplining of staff (12) or having a teaching role (10) (Table 6).

‘Ethical conduct is only important to avoid legal action’

Fifty out of the 52 students responding disagreed with this statement. The responses to this and other questions on ethics are summarized in Table 7, with percentages adjusted to 0.5.

‘Have you attended or used any of the following activities which dealt with ethics and law in healthcare? If so, state how helpful they were?’

<table>
<thead>
<tr>
<th>Questions</th>
<th>Strongly Disagree</th>
<th>Not sure</th>
<th>Strongly Agree</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>'Ethical conduct is only important to avoid legal action’</td>
<td>91</td>
<td>–</td>
<td>3.5</td>
<td>5.5</td>
</tr>
<tr>
<td>’The patient’s wishes must always be adhered to’</td>
<td>16.5</td>
<td>20</td>
<td>60</td>
<td>3.5</td>
</tr>
<tr>
<td>‘The patient should always be told if something goes wrong’</td>
<td>9</td>
<td>13</td>
<td>74.5</td>
<td>3.5</td>
</tr>
<tr>
<td>‘Confidentiality cannot be kept in modern care and should be abandoned’</td>
<td>89</td>
<td>3.5</td>
<td>2</td>
<td>5.5</td>
</tr>
<tr>
<td>‘The doctor should do what is best irrespective of the patients opinion’</td>
<td>85.5</td>
<td>7.5</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>’Patients only need to consent for operations not for tests or medications’</td>
<td>91</td>
<td>5.5</td>
<td>–</td>
<td>3.5</td>
</tr>
<tr>
<td>‘Close relatives must always be told about a patients condition’</td>
<td>31</td>
<td>22</td>
<td>43.5</td>
<td>3.5</td>
</tr>
<tr>
<td>’Children [except in an emergency] should never be treated without the consent of their parents or guardians’</td>
<td>23.5</td>
<td>2</td>
<td>72.5</td>
<td>2</td>
</tr>
<tr>
<td>’Doctors and nurses should refuse to treat patients who behave violently’</td>
<td>67</td>
<td>11</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>‘The law allows abortion to be performed, therefore a doctor cannot refuse to do an abortion for a patient’</td>
<td>83.5</td>
<td>9</td>
<td>5.5</td>
<td>2</td>
</tr>
<tr>
<td>’A patient who wishes to die should be assisted in doing so no matter what their illness’</td>
<td>78</td>
<td>18</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>’A patient who refuses to be treated on religious or other grounds should be told that they need to find another doctor with their beliefs or accept the treatment offered’</td>
<td>65.5</td>
<td>25.5</td>
<td>7</td>
<td>2</td>
</tr>
</tbody>
</table>
Twenty-six students, nearly 50%, did not respond to this question. The results are summarized in Table 8. Very few students who responded had any exposure to Journals or books on ethics, and those that had found them helpful. The greatest exposure was to case conferences and undergraduate lectures and these were helpful and in particular the case conferences. It is of interest that a third of the students responding said that they had no experience of lectures on ethics and law, when this was the primary mode of instruction in this area. The areas which some students found unhelpful were textbooks, handouts, newspapers and television.

‘How would you personally use an ethics committee?’

There were multiple responses offered for this question. The frequency of responses is in Table 9. Three-quarters of the students would want to use an ethical committee to seek advice on problems, but only a quarter of students would see it as having a role in dealing with complaints related to staff.

**DISCUSSION**

Ninety-six per cent of the students responded to the questionnaire, therefore the results can be considered to be representative of the knowledge and opinions of the medical students at the QEH at the time of the study. The response rate to individual questions was greater than 90 per cent, except for the question related to the helpfulness of various activities for learning ethics and law, where the response rate was just over 50%. Taking together the non-responders and those who said they had no experience of various teaching/learning activities related to ethics and law, one could draw the conclusion that there is little interest among the students in attending learning activities in this subject area.

In response to the question as to the frequency of the ethical and legal problems seen, there was a full spectrum of responses from ‘never’ seeing any to seeing them ‘every day’. There appeared to be no differences in how important medical students thought ethical knowledge was, or how much law they knew in relation to how often the students saw problems. The variation in the perception of how often ethical and legal problems were seen was also seen in the wider survey among the professional cadres including those who are called on to supervise the students. If those students who responded that they saw problems every day reflect an increased awareness of these students, one needs to decide how to increase awareness among other students and those who supervise them, for the students do state that they are more likely to look to their seniors for advice on ethical and legal problems.

In a study in the United States of America (USA) comparing attitudes regarding ethics between faculty and house staff, Sulmasy et al found that the high confidence of staff to teach ethics did not match with the staff’s low knowledge scores on ethics found in the study (5). In the present study, medical students said that they would consult their supervisors or heads of a department if they had an ethical or legal problem. It is noteworthy that over half of the persons responding that they knew little of the law pertaining to their work were immediate supervisors (ie consultants).

Most of the students were very positive about the importance of ethical knowledge, however, since it is known that one or a few individuals could be responsible for a number of complaints about the conduct of staff, then methods should be devised to identify and try to stimulate an interest in ethical knowledge and conduct among those few who did...
not think that these matters were important. The dilemma of 
mixing the actual experience of ethical problems to the 
education process of students has been noted elsewhere (4). 
The information gleaned about the education process of med-
dical students in this study showed that a substantial per-
centage of the students obtained their knowledge from 
lectures only. It is also a matter of concern that students 
expressed the view that they knew little of the law in spite of 
the lectures they had received, although a substantial number 
said they had no experience of lectures on the topic. This 
indicates that there is a need for greater attention to be paid 
to the methods of training in the law appropriate to medicine 
and in the international codes of conduct, for without such 
knowledge there is likely to be a continuing mismatch of 
beliefs between practitioners’ and ethicists on social situa-
tions as concluded by Dickenson in a study of practitioners 
attitudes towards end of life decisions (6).

Although the students would use their supervisors and 
heads of departments as sources of knowledge, few would 
use a text. This probably relates to the fact that there are cur-
rently no recommended texts that deal with ethics and law for 
these students. Students were most positive about the educa-
tional experience they received at case conferences and their 
undergraduate lectures (Table 8). Case conferences are an in-
novation within the last two years of the ethics committee at 
the QEH, and they have been attended by doctors and nurses 
as well as the medical students. The proceedings of some of 
the case conferences have been published in the Bulletin of 
the Barbados Association of Medical Practitioners (7).

Students also responded that they would want to use an 
ethical committee to consult on problems. However, the 
existence of the ethical committee at the QEH was not known 
to nearly half of the students nor a substantial number of 
other professionals (8), for its existence and functions have 
not been published by the administration of the hospital.

The responses of students to specific questions suggest 
that the majority of students understand the usual ethical 
issues and their nuances. As regards the autonomy of pa-
tients, students expressed a strong sense that patients should 
make decisions for themselves, although some 15 per cent, in 
the opinion of the authors, rightly expressed some caution as 
regards following the patients’ opinions when doing what is 
best for the patient. In addition, most students were com-
mitted to telling the truth to patients, 90 per cent expressed 
their commitment to the confidentiality of patient informa-
tion and 80 per cent did not agree to the suggestion of euthan-
asia. However, it is important to derive mechanisms to 
discover students such as the two who responded that they 
strongly agreed that ethical conduct was only important to 
avoid legal action, and to explore with them their views. There 
was also the substantial uncertainty among students on 
how to deal with religious strictures in treating patients, on 
the information to be given to relatives, and a substantial 
body of disagreement as to how to deal with violent patients. 
These are important issues which when encountered often 
need to have on the spot decisions made, and therefore are 
areas that require some emphasis in the education process. 
The means of dealing with the perceptions of a minority 
among students may require the use of interactive techniques 
such as workshops with role play, of which the majority of 
the students had no experience (Table 8).

This survey did not examine the frequency with which 
specific ethical issues arose, but differences existed in 
perception between the students and other health workers (7). 
This accords well with the findings of Robillard et al that 
older practitioners reported lower frequencies of occurrences 
of ethical problems than juniors (9).

In summary, medical students at the QEH in Barbados 
generally understand the importance of ethical knowledge 
and the majority answered correctly to questions designed to 
test how they would respond in situations which deal with the 
nuances of consent, confidentiality and patient autonomy. 
There were substantial minorities of students who were un-
certain or incorrect on the questions pertaining to dealing 
with relatives, religious conflict situations and violent 
patients. The students responded that they knew little of the 
law, and were unaware of codes of conduct other that the 
Hippocratic Oath. Case conferences and lectures seem to 
have been the most helpful mode of education for the stu-
dents, and most had no experience of journals, books or 
interactive workshops in dealing with this important area of 
their education. These findings should be taken into account 
in determining how to teach ethics to health professionals.

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