Use of patients in professional medical examinations: current UK practice and the ethicolegal implications for medical education

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The questionnaire used in this study appears on bmj.com

Medical education has evolved from a system of apprenticeship by recruits[1] and patients have thus always been involved in the education of doctors. Medical students learn by exposure to a wide range of patients during their training. To pass their finals they are required to show that they can examine patients competently.[2] It is widely accepted that the use of live patients validates assessment of undergraduates in a way that use of actors and manikins does not.[3] Patients can display abnormal findings. They reduce the need for the "suspension of disbelief" that is necessary when examining simulated patients. Staff, candidates,[4] and patients[5 6] all find patients' involvement in final assessment of skills of final year students highly acceptable. Real patients are also relatively inexpensive to provide and, in some situations, readily available.[3] Recently patients have been active participants in the education and evaluation of undergraduates.[7–9]

In our experience of recruiting and supervising patients in many educational settings we have often been struck by a lack of clear arrangements for the further medical supervision once selected, even though they have been chosen because they are unwell or have abnormal physical signs; some may be clinically unstable, and we have observed adverse events affecting patients during the assessment of students.

The literature on the use of real patients focuses mainly on such practicalities as methods for improving patient satisfaction[10] and for ensuring that assessment criteria are met.[3] The ethical and legal implications of working in this field have not been adequately considered. We suspected that a clinician's or an institution's responsibility towards a patient attending solely to participate in an educational event has never been clarified. This was confirmed informally by the General Medical Council and the medical defence organisations.

In the past the issue of responsibility was more straightforward. Most assessment of undergraduates took place in a clinical setting. Patients were recruited, and often supervised, by the same clinicians who were directly responsible for their medical care. Nowadays, student examinations are often held in educational centres which may be separate (and differently insured) from hospital or trust buildings and in which the level of clinical provision is not the same as might reasonably be expected in a hospital ward. Patients may be recruited and supervised by people with no clinical training. Furthermore, the current climate demands accountability and emphasises the importance of informed consent and confidentiality in all aspects of patient care.

In this article we explore the ethical and legal issues arising from the use of patients in professional qualifying examinations. We have looked at current practice in UK medical schools and its ethical and legal implications. Methods of assessment and the clinical supervision of clinical "cases" vary widely between institutions, and it may not be practical to lay down universally applicable guidelines for this use of patients.

Summary points

- Patients are widely, and increasingly, involved in UK medical education, both within and outside of traditional clinical settings
- The current medical climate emphasises the need for transparency and accountability towards patients
- Provision for patient care during assessments of students varies between UK medical schools, and all medical schools report that adverse events have occurred on these occasions
- Medical schools should ensure they have adequate systems in place for guiding staff and protecting patients involved in any aspects of medical education

Methods

We devised a postal questionnaire (see bmj.com) by consensus of authors, piloted it in the authors' two medical schools, and then sent it to deans or heads of all UK medical schools; the points covered are listed in the box. Respondents could give multiple answers to some questions. Recipients completed the questionnaire themselves, or delegated where this was

Points covered in the questionnaire

Before the day
- consent
- confidentiality and access to records before the examination

On the day
- extent of patient involvement
- duties of care
- payment to patients
- confidentiality
- adverse and unexpected events

After the day
- storage of data

necessary to ensure that responses were accurate. The results were collated using the SPSS social sciences software package.

Results

The results are presented in the order of the questionnaire. Twenty out of 23 medical schools replied, a response rate of 87%.

Involvement of real patients in undergraduate examinations

"Patient" groups and models used—Nineteen of the 20 responding schools had clinical students and all 19 used real patients in the assessment of undergraduates (the odd one out is St Andrew's, which at present has only preclinical students). In addition, actors were used by 15 schools, volunteers by 14, manikins by all 19, videos by 11, and simulators by four. Patients are involved in objective structured clinical examinations (OSCE) in 15 schools, for "long cases" in 13, and for "short cases" in eight. Each of these formats is likely to include physical examination of the patient. Large numbers of patients participate: 12 schools reported using more than 100 patients a year, and seven reported using between 40 and 100 patients.

Recruitment

Who is responsible for recruiting the patients?—In 18 schools doctors were responsible for recruiting patients, and they were likely to obtain them from other clinicians' lists as well as their own. Five schools involved administrators in this task. No school volunteered information on whether non-clinical staff receive training or supervision before contacting patients, and this point remains unclear.

From what source(s) are patients initially recruited for participation in exams?—All schools recruited patients from outpatient lists; 14 schools asked general practitioners; and 16 made use of their current inpatients.

What payment, if any, do patients receive for their involvement in professional examinations?—Sixteen hospitals reimbursed only patients' expenses; six offered a flat rate fee or honorarium; five provided a gift; and two gave nothing. Arrangements may differ within a school depending on the examination concerned.

Preparatory information given to patients—Eighteen schools informed patients about practical matters such as travel arrangements and expenses. All the 19 clinical schools gave dates, times, and the location of the examination, and 16 acquainted patients with its purpose. Nine schools reported that some form of consent was obtained before the examination. Only three described the clinical care available to patients during their part in the examination.

How is this information delivered to patients and by whom?—Seventeen schools contacted patients by post, nine used the telephone, and nine arranged a meeting. In 11 schools clerical or administrative staff made this contact; in 18, doctors were involved.

Information about patients

In general, to what extent do you know the medical details of participating patients?—Depending on the examination setting, nine schools had access to patients' full medical records; 10 had a short précis of history, examination, and investigations; seven had only a statement of diagnosis.

How is patient information stored for use in subsequent exams?—Twelve schools store patient information on paper, 11 in computer files; two schools used other methods, and three did not store patients' data.

Clinical care for patients on the day of the student assessments

Where do the examinations involving patients take place?—Hospital wards were used in 13 schools, outpatient departments in 11, and "other clinical areas" in 10. It was unclear if these clinical areas are designated for educational use only, in which case the facilities for emergency patient care would probably be reduced or non-existent. Eleven schools used "educational spaces" which they all termed a "skills laboratory."

In general, who (excluding examiners) is directly responsible for supervising the patients?—In 13 schools a named person was responsible for providing clinical care for patients. Nurses were involved in clinical supervision at 17 schools, though no school reported that nurses were involved in the recruiting or preparatory communication with patients; doctors were involved in clinical supervision in 17 schools. In 11 schools administrators had responsibility for supervising the patients.

In general, what facilities do you have available for the patients on the day of the examination?—Provision varied from school to school. All 19 provided a bed or couch; a resuscitation team was available in 17 cases, a resuscitation trolley in 16, oxygen in 14, a basic first aid kit in 13, a selection of drugs in 13, an electrocardiograph in 12, and a glucometer in 11; nine schools had an ambulance service standing by, and three schools claimed to make "other provisions."

Drugs available and who would administer them—At six schools (30%) over the counter drugs were available and at eight (40%) prescription only drugs. The range of available drugs included simple analgesia in 11 cases, inhalers and nebulisers in eight, intravenous frusemide in eight, opiate analgesia in seven, and "other drugs" in four cases, regardless of the examination setting. Eight schools stated that a doctor was described as responsible for giving these drugs. However two schools stated that an administrator would give drug treatment.

Adverse events—All the 19 clinical schools had experience of an adverse event involving a patient dur-

Information to be given to participating patients before an exam

- The purpose of the examination
- The status of the participating students
- The fact that the examination is a training process
- The extent of clinical care available during the examination
- The potential risks and consequences of participation
- How to ask questions about any of the above

ing undergraduate assessments. In 10 schools a patient's existing clinical condition had deteriorated during the course of an exam; in two a previously undiagnosed condition had been discovered; and three schools had experience of a patient dying in the course of an exam. Two schools reported onset of labour and two reported accidents or injuries to a patient. Eleven schools said that a named person was responsible for responding to adverse events involving patients and 14 felt their response to the adverse events they described was adequate.

Opportunist second opinions—Patients sometimes seek advice from clinicians who are not directly responsible for their care: five schools (25%) reported this occurring.

Discussion

"Patients in education" occupy a strange hinterland between clinical practice and research in which the ethical and legal rights and responsibilities of the participants are poorly defined. Our findings have ethical and legal implications for four key areas: consent; confidentiality and data protection; duties and standards of care; and adverse events.

Consent

Valid consent, given by a competent person, is informed, voluntary, and continuing. Most schools limit to practicalities the information they give to patients about the examination in which they are to take part, although almost half of schools believe that they are thereby seeking consent from patients. Adults are presumed to be competent,[11] but where there is doubt an assessment based on established criteria should be made.[12] Patients should be given information covering the points in the box.

Eighteen of the 19 schools involve doctors in recruiting patients for examinations. Patients and doctors are not in an equal relationship, and evidence shows that patients seek to please their doctors.[13] Patients should be reassured that refusing to participate in student assessments will not compromise their care. Payment can further complicate the issue of consent. By analogy with consent for participation in research,[14] if payment exceeds what can be considered reasonable recompense for the expenses and inconvenience of participation, it may constitute an inducement and invalidate consent. Our study found that is usual for expenses to be reimbursed; sometimes a flat fee or honorarium is paid; five schools give patients a gift for attending.

Confidentiality and data protection

Most medical schools store data about the patients used in undergraduate examinations, which raises questions about confidentiality and data protection. It is common for both clinical and non-clinical staff to have access to patient information. Indeed, in more than half the schools a patient's complete medical record is made available—more than is generally required for organising an assessment of students. Medical schools should be aware of their responsibilities following the Caldicott recommendations on protecting patient data, and under the Data Protection Act 1998.[15 16] Schools also have a responsibility to train staff about the importance of confidentiality.

Duties and standards of care

The extent of the duties of care of parties involved in assessment of students is complex. In 11 of the 20 of schools, these examinations take place in an educational setting. Have the organisers or the examiners (or both) undertaken a legal duty of care for the participating patients? Some commentators have argued that staff have a legal duty of care to act in emergencies that occur in or near a clinical location.[17] This argument has been accepted in an Australian case.[18]

The General Medical Council is clear that all doctors have an ethical duty to provide treatment that could reasonably be expected to be provided in emergencies.[19] However, our study found the equipment and staff required to manage common medical emergencies are not always available at sites of student assessments. We found that emergency facilities ranged widely from the provision of simple analgesia to that of intravenously administered drugs and full resuscitation facilities. Should it be the responsibility of the organisers to ensure that there is someone on site for the duration of each student examination who is trained in operating the emergency equipment and administering the treatment that is available?

Questions of duties of care also arise in routine exchanges between patients and doctors on these occasions. About half of respondents reported that patients acting as clinical "cases" had during this contact with doctors either received or solicited medical advice. How should examiners respond to such requests?

Adverse and unexpected events

We found that all 19 clinical schools had experienced what might be described as an adverse event during student clinical assessments. Organisers need procedures not only to be able to manage adverse events but also to ensure that the details are afterwards communicated to the patient's healthcare team. It should be clear who is to take responsibility for leading the inquiry procedure into adverse events and for liaison with the patient's regular health carers.

Conclusion

The results of this survey indicate that there is a wide variation in the experiences of using real patients in undergraduate examinations at UK medical schools. Important ethical and legal issues arise at all stages of organising an assessment in which patients are to be involved. The value of using real patients is well documented.[3–6] However, patients must be more than

Points to be covered in local guidelines

Before the day

- Information for patients
- Consent (informed, voluntary, by a competent patient, and continuing)
- Reasonable payment
- Availability of, and access to, medical records

On the day

- Legal and ethical duties of care to act in an emergency
- Availability of equipment to manage deterioration in patients' conditions or emergencies
- Access to staff able to use the equipment available
- Management of patients seeking advice or treatment
- Confidentiality and protection of patient information

After the day

- Debriefing about adverse or unexpected events
- Communication with patient's regular healthcare team
- Storage or disposal of data

merely means to desirable educational ends. Anyone involved in medical education has duties and responsibilities to those patients who volunteer to help in the training of doctors.

The findings of this study are applicable to patients participating in medical education at all stages of training—undergraduate, postgraduate, and continuing medical education. All medical schools that involve patients in medical education should consider drawing up local guidelines that cover the key ethical and legal issues listed in the box.

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A memorable patient

A compassionate end

After 30 years in general practice, I don't often experience an event in a working day that, as my grandmother used to say, "brings up lumps." Recently, the death of a patient produced such a reaction.

Angela was 53 and had Down's syndrome. Institutionalised most of her life, she spent her last few years in a small unit for those with severe learning difficulties. Her Down's syndrome was severe: she had no speech or language, just shouting. Incontinence, an old ununited fracture of the humerus, and an aversion to examination completed the picture. But she was well cared for, had her daily routine, and seemed to enjoy music. When I visited her she was usually sitting at the same place at the communal meal table, where she spent most of her day frowning at all who came and went.

A few months ago Angela had an episode of orthopnoea and swollen ankles. Her cardiac failure developed quite quickly, and her drugs increased (which she took without trouble). One weekend her dyspnoea worsened, so in my absence she found herself on the local hospital's coronary care unit. And a merry dance she led them: no drips stayed in, no masks stayed on, no electrodes stayed attached, and she threw her food everywhere. After she was discharged, the home manager and I agreed that, should she deteriorate again, there would be no hospital. For a month or so Angela settled back into her routine. Then the cardiac failure worsened despite maximal treatment.

I was called to her one morning: they thought she was dying. In Angela's room the manager was stretched out in an armchair, and Angela was lying face up on top of her, cradled in the manager's arms. She was virtually unconscious, pale and dyspnoeic, her protruding tongue deeply cyanosed. Two other care workers sat with her, one on each side. The atmosphere was calm, almost serene. No words were exchanged as I entered. Having felt her thready pulse, I said, "I don't think she'll make it this time."

"I know, doctor. She is quite peaceful. I will let you know when she goes."

Two hours later, I had heard nothing so I popped back. The quartet were still there in the same position, the manager gently stroking Angela, who was heavy with the death rattle and Cheyne-Stokes respiration. Half an hour later, she died.

I was deeply moved by this selfless display of compassion. How many of us with normal chromosomes will be able to die in peace with the comforting arms of those we've known most closely around us?

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