Editorial

Overcoming Ethical Challenges of Bedside Medical Education

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Introduction

Bedside teaching has long been a time-honoured component of medical education, and this was emphasised by Sir William Osler, father of modern medicine who once said, "To study the phenomena of disease without books is to sail an uncharted sea, while to study without patients is not to go to sea at all." While utilitarian arguments have been used to justify such training, deontological ethics mandate that we do not arbitrarily use teaching subjects as means to an end.[1] Patients are under no obligation to participate in medical education and their involvement remains an act of altruism. The moral burden of practising on patients lies with our profession and the challenge is to educate without compromising either the rights or safety of patients.

The Seven Ethical Requirements

It is necessary to consider an ethical framework to justify bedside medical education in terms that can be directly addressed to the subjects themselves, i.e. patients.[2] We propose such a framework, adopted from Emmanuel et al[3] on ethical requirements in research, which shares an analogous moral dilemma: balancing individual risk for third part benefit.[3] The 7 ethical requirements that were identified are: 1) social value, 2) validity, 3) fair subject selection, 4) favourable risk-benefit ratio, 5) independent review, 6) informed consent and, 7) respect for subjects.[3]

Value

Social and clinical value is an ethical requirement because finite resources need to be managed responsibly and to avoid exploitation.[3] Bedside medical education must not expose teaching subjects to potential harm without some possible social or clinical benefit. The value of bedside teaching has been well extolled in the literature, including learning in context, increasing learners' motivation and nurturing of clinical reasoning. In addition, it provides opportunity for role modelling, professional thinking, observation of communication skills and teamwork and the integration of these various skills in the process of patient care.[4]

Validity

Clinical education needs to be based on sound pedagogical principles to be ethical. Poorly planned teaching will lead to limited benefits to learners even if the skills being taught are important. The justification for validity is the same as value, i.e. avoidance of exploitation and management of finite resources.[3] Strategies to improve the effectiveness of bedside teaching can be briefly categorised into stages that can be carried out sequentially before rounds, during rounds and after rounds (Table 1).

Table 1. Strategies Involved in Bedside Teaching That Will Increase Validity

Stages	Key Strategies	Details of Strategies
Pre-rounds	Preparation	Familiarise with clinical curriculum[5]
		Understand learner's knowledge, clinical skill level and needs
		Set learning objectives for the session
	Planning	Decide on teaching methods[6]
		Select appropriate patients
		Set aside protected teaching time
	Orientation	Set learner expectations and roles during the patient encounter
Rounds	Introduction	Introduce team to patient, emphasising nature of the encounter
	Interaction	Role model a physician-patient interaction[7]
	Observation	Keen observation of learner interaction with patient
	Instruction	Teach in a non-humiliating, non-judgemental way
Post-rounds	Summarisation	Tell the learner what has been taught
	Debriefing	Discuss the bedside encounter
	Feedback	Review with learner what went right or badly
	Reflection	Gain insights from the encounter to help prepare for the next teaching session[6]

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Fair Selection of Subjects

Patients who are included or excluded from teaching and the strategies used for selecting them are addressed by this requirement. Fair selection requires that teaching aims (and not vulnerability or privilege) to be the basis for choosing teaching subjects. Convenience is not a justifiable reason for choosing who will be practised upon because efficiency cannot override fairness.[4] If a group of patients is unlikely to gain from teaching, then this group should be excluded as teaching subjects. The poor, socially vulnerable, poorly educated and those lacking decision-making capacity cannot bear a disproportionate burden for the wealthy, educated and privileged to enjoy the benefits.

Favourable Risk-Benefit

The potential for risk to a patient who is taught upon must be minimised and any possible benefits maximised. Use of simulators, peer physical examination and non-patient volunteers can prepare learners to gain competency before their first real patient encounter.

Risks of procedures performed by trainees can be minimised by attentive supervision especially in the early stages of training.[8] This is supported by data that such supervised procedures can have equivalent outcomes to those performed by qualified staff.[9]

Enhancement of benefits to teaching subjects should be linked to their health and not financial inducements or additional unrelated medical benefits. There is qualitative data suggesting patients value the companionship and the relief from loneliness due to longer contact time.[10] Talking about their illness may help patients gain insight into their condition and about the training of doctors.[11] There is also the satisfaction of altruism and of having contributed to something of genuine value in service to the community.[12]

Independent Review

Curriculum and pedagogy review by experts and stake holders is not yet routine. This procedural requirement ensures that medical schools are following ethical requirements and helps openly manage conflicts of interests. All these safeguards must be preserved without compromising the equally important public interest that doctors should attain competence before they qualify. To achieve these aims, the members of the review board should understand medical science, pedagogy, ethics, and law, as well as represent the values, concerns, and priorities of the population from whom the teaching subjects will be chosen.

Informed Consent

Informed consent champions the autonomy of patients to ensure that their decisions are consistent with personal values, interests, and preferences. It requires patients to be provided with information in the context of their medical condition to enable them to make voluntary decisions about involvement in teaching without manipulation or coercion. Patients should be informed in advanced about teaching sessions and not feel pressured to decide at short notice.[13] Studies have shown that patients even want to be explicitly asked before students were allowed into surgical theatres as observers and before students have any access to medical records.[14] Patients need to be counselled of their right to refuse to see students without fear of abandonment by their physicians. However, evidence suggests that most patients will allow medical students to perform clinical evaluations and minor procedures even when informed of the student's inexperience.[15] While patients have expressed their desire to be explicitly informed if it is the first time that the student is performing the procedure,[16] they are more likely to consent if there is already established rapport.[17]

Special challenges exist for patients with persistent mental incapacity. Substituted judgement standard can be used in previously-competent adults (e.g. geriatric populations) and best interest standard can be used in never-competent individuals (e.g. paediatric patients) by the relevant healthcare decision-making proxies. Strict guidelines should also be in place and compliance checked when circumstances such as medical emergencies make it impossible to obtain consent.

Respect for Patients

Respect for patients goes beyond obtaining informed consent and is the affirmation of individual dignity. It requires sensitivity to preferences and values without prejudice.[18] This is achieved by ensuring privacy, allowing them to change their minds with regard to participation at any time without fear of repercussion and monitoring their welfare throughout the session. A patient-centred approach changes the role of the patient from a passive "interesting case" to one where they serve as a teacher. They can be trained as facilitators in the development of clinical skills and attitudes.[10] Treating patients as teachers recognises the value of their contributions and will increase the respect accorded by both clinicians and students.

Conclusion

The therapeutic needs of patients and the learning needs of students do not necessarily have to be in conflict. Instead, a compromise must be sought where both can be safely and justifiably met. Most patients have found their experience

with medical education a positive one and most felt that trainees did not undermine the standard of clinical care. Understanding the ethical requirements of bedside medical education as outlined in this editorial will help us to find ways to overcome the various ethical challenges in this area.

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