

Are the doctors of tomorrow honest?

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In the last decade, medical education has undergone dramatic changes. It has been recognised that the traditional medical course, which emphasises rote learning, memorisation of facts and primarily examines knowledge, does not adequately equip the modern medical graduate with the characteristics expected of them in the future. These characteristics include good communication skills with colleagues, patients and families, competence in practical procedures, professionalism, appropriate attitudes and an aptitude for continued personal and professional development. The General Medical Council in the United Kingdom (UK) cites honesty and trustworthiness as central tenets to their guidelines on 'Good Clinical Practice' [1]. The Medical Council of Ireland states that "*the position of trust and privilege held by doctors in the community is founded not only on technical knowledge and skill, but also on high standards of personal and professional behaviour at all times*" [2]. The Medical Council of Ireland have also issued recommendations (1996-2000) to the medical schools in relation to the medical curriculum and specifically highlighted medical ethics as an area for change in the curriculum. However, the five medical schools in Ireland have been slow to adopt this particular recommendation and the time spent on ethics as a clinical specialty across the five medical schools remains at a disappointing level at around 1-2% [3]. It has been suggested that in the UK, where there has been even more revolutionary curricular reform in medical teaching that those changes not only alter what is expected of the student but have also resulted in a change in the methods of assessment. There are concerns that these changes in assessment, combined with the pressure of a busy medical curriculum, may provide more opportunity for, and even promote, academic misconduct amongst medical students [4].

Academic misconduct is an area of particular concern in the medical profession. It is vitally important for doctors to be honest and trustworthy, as trust is a fundamental requirement for good relationships, both with patients and colleagues. Honesty is also of the utmost importance in the area of medical research. The validity and reliability of clinical research data is also essential to the profession, especially if

doctors are to base changes in patient management on the findings of clinical trials. The case of Dr. Stephen E. Breuning, a professor at the University of Pittsburgh, illustrates the importance of honest and reliable medical research data. Dr. Breuning rose to national prominence as an expert on drug treatment for the mentally retarded. From 1979 to 1983, Dr. Breuning published a third of all the articles in his field. Some states in the USA also changed their treatment protocols in response to his purported findings. In 1983, it was revealed that Dr. Breuning's data had in large part never existed and that subjects had not even been tested. Dr. Breuning eventually pled guilty to two felonies and served time in a halfway house [5].

It has been suggested in the literature that undergraduate medical students who engage in dishonest behaviour will continue this trait following graduation [6]. A survey of 428 American students in 1980 found that 58% reported cheating during medical school [7]. Another major case of falsified research data involved Dr. John Darsee, of Harvard Medical School, who falsified research data in a series of papers. Interestingly, Dr. Darsee was also found to have fabricated published research papers as an undergraduate medical student [5].

If there is a relationship between unethical behaviour as a qualified doctor and an undergraduate medical student, then it is important to explore the attitudes and behaviours of undergraduate medical students.

A landmark study published in 2001 by Rennie and Crosby assessed students' attitudes and behaviours on 'cheating' in the University of Dundee Medical School [8]. The survey was initiated, designed and conducted by medical students at the university. An anonymous questionnaire was distributed to all medical students in all years at the medical school and comprised 14 scenarios in which a fictitious medical student, "John", engaged in dishonest behaviour. John forged doctor's signatures, cheated in degree examinations, falsified patient information in assessment submissions, spoke to another student about an objective structured clinical exam that he had finished and an other student was about to do, lent work to other students to look at, lent work to other students to copy and plagiarised work. For each scenario, students were asked whether they felt John was wrong and whether they had done, or would consider doing, the same. Responses were recorded "yes," "not sure," and "no". In general, the study showed that medical students show high levels of integrity towards possible academic misconduct. However, high numbers of students expressed the view that some aspects of academic misconduct are not wrong and had reported

engaging in these areas. The percentage of students reporting that they had engaged in or would consider engaging in the scenarios varied from 2% for copying answers in a degree examination to 56% for copying directly from published text and only listing it as a reference. About a third of students reported that they had engaged in or would consider engaging in the behaviour described in the following four scenarios: chatting about an objective structured clinical examination, writing "nervous system examination normal" when this had not been performed, lending work to others to look at and copying text directly from published sources and simply listing the source in a reference list.

This study highlights a number of important points. The fact that some students did report in engaging in unethical behaviour is of particular significance and somewhat worrying. Fewer students consider it wrong to reference published text correctly compared with copying in exams, submitting a senior student's work, or copying another student's work. The responses for some of the scenarios involving plagiarism may indicate students' lack of understanding regarding referencing text appropriately and also a need for clearer guidelines. Large proportions of students were also unsure whether exchanging information regarding an objective structured clinical examination was wrong. This may reflect confusion concerning the acceptability of swapping information and a lack of guidance given to students about appropriate behaviour.

The fact that a large proportion of students expressed the view that some aspects of academic misconduct are not wrong led Rennie and Rudland to further analyse the data in 2003 [4]. The authors analysed the original data, looking at gender and differences between students in each of the five years of the medical course. For the majority of the scenarios, there was no significant difference in response for any of the five years. However, several of the scenarios were highly significant: (1) forging a doctor's signature, (2) resubmitting work for another, (3) submitting the same special study module report as another student, (4) writing 'examination normal' when it had not been performed and (5) submitting a previous thesis for a special study module report part of the course. For the first four scenarios, more first year students felt these scenarios were wrong, but this proportion decreased in subsequent years. In final year, there was an increase in the number of students who thought that writing 'examination normal' when it had not been performed was wrong. No significant gender differences were found.

This is an interesting study and in light of recent curricula changes and an emphasis on honesty and trustworthiness as laid down by the Medical Councils, both in Ireland and the UK. The most worrying finding is that a greater proportion of first year students thought that four of these scenarios were wrong and would partake in this behaviour; however, fewer students in the later years found these scenarios to be wrong and increased numbers reported indulging in such behaviour.

The question must be asked what happens to these students as they progress during the course and how medical schools can curb this change in behaviour. There are significant differences in the method of assessment of students in the pre-clinical years as opposed to students in the clinical years of the course. Assessment of pre-clinical students is primarily by invigilated end-of-year written examinations and there are no requirements to gain signatures to show satisfactory completion of aspects of the course. As students progress to the clinical part of the course, there is less emphasis on annual written examinations and a focus on collection of patient case reports, collecting signatures for practical procedures performed competently and completion of attachments.

It is possible that clinical medical students may be under greater pressure and have a greater opportunity to forge doctor's signatures on their work. Often, signatures are required to progress through the course and required from busy and unobtainable physicians and surgeons. The sheer number of signatures required and the student's perceived value of some of the procedures requiring a signature may lead to the student devaluing the importance of the signature.

The response of first year students to the scenario involving writing 'nervous system examination normal' when it had not been examined may reflect the lack of requirement to complete patient examinations early in the medical course as students are familiarising themselves with the skills of physical examination. A study of 683 American medical students by Simpson in 1989 [9] found that first year medical students were more likely to view dishonest clinical behaviour such as writing 'examination normal' when the examination had not been performed compared to more senior medical students. The reversal of this trend in the Dundee study is explained by the authors that final year medical students have a greater involvement in patient care, the proximity to qualification as a doctor and ultimately the realisation that what they write in patients records will have significant implications on their patients.

It is evident from the Dundee study that as a student progresses through the medical course his or her attitudes to academic misconduct changes. It has been postulated from a number of sources the reasons for this include increasing pressures on clinical medical students [4] in the form of extrinsic pressures in the requirement to gain signatures and collect patient case reports as well as intrinsic pressures due to a potential feeling of greater loss if the student failed the medical course during the later years as opposed to the earlier years of the course [4]. It has also been suggested by Fox and colleagues [10] that medical school ‘dehumanises’ students and the data from the Dundee study may also be interpreted that the current method of delivering medical education prevents and does not encourage student development in terms of moral reasoning [4]. Is it possible that medical school, instead of fostering an ethos of honesty and trustworthiness that should remain with students throughout their professional lives, are actually inadvertently encouraging an environment of dishonesty and lack of integrity. This flies in the face of the guidelines set down by the General Medical Council in the United Kingdom and the Medical Council in Ireland.

On the basis of the results from the Dundee study, it is necessary for all medical schools to evaluate their guidelines towards academic misconduct and to ensure that during the clinical years of the course where there is a shift away from traditional formal written examinations and an increased focus on certification of competency and producing a portfolio of work that students are made aware of the importance and value of this work, not only in relation to passing the medical course but also in their future professional lives. Lack of feedback and suboptimal inspection of patient case presentations only further devalues the work in the eyes of the student and as has been suggested by the Dundee study may lead to demotivation and encouragement of fraudulent behaviour [4]. An appropriate environment in the teaching hospitals should be cultivated, one where a student’s role is valued and that opportunities and pressures to indulge in academic misconduct are curtailed.

Most strategies to curb academic misconduct in the medical profession are targeted towards postgraduates [11], however, it is essential that the medical profession realise the importance and value of fostering and encouraging appropriate attitudes and behaviours in undergraduate medical students who are the future of the profession and tomorrow’s doctors.

References

1. General Medical Council. Good medical practice. 3rd ed. London: General Medical Council, 2001.
2. Medical Council (Ireland). An Ethical Guide to Conduct and Behaviour. 6th ed. Dublin: Medical Council, 2004.
3. Medical Council (Ireland). Review of Medical Schools in Ireland 2003. A report to the public by the Medical Council. Dublin: Medical Council, 2003.
4. Rennie SC, Rutland JR. Differences in medical students' attitudes to academic misconduct and reported behaviour across the years - a questionnaire study. *J Med Ethics* 2003;29:97-102.
5. Dingell JD. Misconduct in Medical Research. *N Engl J Med* 1993;328:1610-5.
6. Petersdorf RG. A matter of integrity. *Acad Med* 1989;64:119-23.
7. Sierles F, Hendrickx I, Circle S. Cheating in medical school. *J Med Educ* 1980;55:124-5.
8. Rennie SC, Crosby JR. Are 'Tomorrow's Doctor's' honest? A questionnaire exploring the attitudes and reported behaviour of medical students to fraud and plagiarism. *BMJ* 2001;322:274-5.
9. Simpson DE, Yindra MS, Towne JB, Rosenfeld PS. Medical students' perceptions of cheating. *Acad Med* 1989;64:221-2.
10. Fox E, Arnold RM, Brody B. Medical ethics education: past, present, and future. *Acad Med* 1995;70:761-9.
11. Anderson, A. (1989) AAU guidelines on dealing with scientific fraud. *Nature* 1989;337:196.