

are worth emphasising. Firstly, the campaign was based on the results of market research that helped to identify the most suitable brand and logo for the products to be promoted and also the most effective message for the promotional campaign. Secondly, the prices for the bed nets and the insecticide were adjusted according to the willingness to pay of the local people and thus their cost was only partially recovered. This implies that programmes to promote the use of insecticide treated materials will still need external financial support. Thirdly, distribution of the bed nets was done through a network of agents (shopkeepers and community leaders as well as health workers) trained for this purpose and involved the public as well as the private sector. Fourthly, the issue of accessibility of vulnerable groups was tackled by setting up a voucher system for mothers of young children and pregnant women so that they could buy insecticide treated bed nets at a lower price.

Since the use of insecticide treated bed nets has substantially reduced the incidence of childhood anaemia, a leading cause of death, it probably has an important impact on mortality. If this impact is confirmed by the data from the demographic surveillance system, it will further strengthen the case for insecticide treated materials, despite the worries expressed about their long term effect and in particular on the possible delay of the acquisition of immunity.<sup>13</sup> The Kilombero net project is a success story based on broad partnership, an approach that the World Health Organization's "Roll Back Malaria" initiative encourages. Its success should convince managers of malaria control programmes and international donors to invest more in promoting insecticide treated nets and curtains.

Umberto D'Alessandro *professor*

Department Parasitology, Prince Leopold Institute of Tropical Medicine, B-2000 Antwerp, Belgium (udalessandro@proto.itg.be)

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## Cheating at medical school

*Schools need a culture that simply makes dishonest behaviour unacceptable*

The *BMJ* recently featured a strong response to what was judged an inappropriately lenient reaction by a medical school to a student cheating in an examination.<sup>1</sup> Reviews of the literature suggest that we have insufficient reliable data about the extent of this phenomenon, its rate of change, its pathogenesis, its prevention, or its effective management.<sup>2-4</sup> Furthermore, because of the nature of cheating and the methodological difficulties entailed in its study, the requisite evidence based conclusions will probably never be available. Yet, much can be concluded and acted upon on the basis of common sense and concepts with face validity, even without double blind studies.

There is general agreement that there should be zero tolerance of cheating in a profession based on trust and one on which human lives depend. It is reasonable to assume that cheaters in medical school will be more likely than others to continue to act dishonestly with patients, colleagues, insurers, and government. Given the enormous power over life and death which doctors possess, we must strive to reduce the likelihood of the

troubling question by patients: "Doctor, are you doing this for me, or am I doing this for you?"

The behaviours under question are multifactorial in origin. Firstly, there are familial, religious, and cultural values that are acquired long before medical school. For example, countries, cultures, and subcultures exist where bribes and dishonest behaviour are almost a norm, while others have much higher standards of ethical conduct. There are secondary schools in which neither staff nor students tolerate cheating and others where cheating is rampant; there are homes which imbue young people with high standards of ethical behaviour and others which leave ethical training to the pernicious influence of television and the market place.

Medical schools reflect society and cannot be expected to remedy all the ills of a postmodern hedonistic society. The school's major responsibility is to focus on the young people who present themselves for admission and to nurture and enhance positive ethical behaviour. The selection process of medical students

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might be expected to favour candidates with integrity—if one had a reliable method for detecting such characteristics in advance. Few data suggest that admission committees possess such prophetic qualities. One rare piece of data is that from Ben Gurion University's interview process, which seemed to favour students with a higher score on a measure of ethical maturity<sup>5</sup> rather than simply those with high grades. Several Australian medical schools have adopted a screening test developed at Newcastle University with a component that evaluates ethical maturity, but data on its validity have not yet been published.

Medical schools should be the major focus of attention for imbuing future doctors with integrity and ethical sensitivity. Unfortunately there are troubling, if inconclusive, data that suggest that during medical school the ethical behaviour of medical students does not necessarily improve; indeed, moral development may actually stop<sup>6</sup> or even regress. Among the factors contributing to this distressing phenomenon are the overemphasis on grades and competition, negative role models, student abuse, a hidden curriculum which delivers negative messages, a culture of student unwillingness to police themselves, and an institutional tolerance of cheating.

What can be done to counter this by the medical academic establishment? The creation of a pervasive institutional culture of integrity is essential. It is critical that the academic and clinical leaders of the institution set a personal example of integrity. Medical schools must make their institutional position and their expectations of students absolutely clear from day one. The study by Rennie et al in this issue shows that there is no consensus among students on what constitutes unacceptable behaviour (p 274).<sup>7</sup> The development of a school's culture of integrity requires a partnership with the students in which they play an active role in its creation and nurturing. The emphasis should be less on "reporting" breaches, which still presents great difficulty for many students, but more on creating an environment of peer pressure in which certain behaviour simply is not acceptable.<sup>8</sup>

The teaching of medical ethics in small discussion groups throughout the entire medical curriculum is important, but it should focus not only on "classic" bioethical problems but also on the daily ethical dilemmas faced by the students themselves, as pioneered by Christakis and Feudtner.<sup>9</sup> It should be expanded to deal specifically and repeatedly with issues of integrity and professionalism.<sup>10</sup>

Moreover, the school's examination system and general treatment of students must be perceived as fair. The title, "Honesty in learning, fairness in teaching,"<sup>9</sup> expresses this goal precisely. Finally, the treatment of infractions must be firm, fair, transparent, and consistent.

There are no easy solutions to this complex and vexing problem of inculcating honesty, but each institution needs to develop a comprehensive, proactive programme to deal with the problem in accord with its own unique character and culture. The future of the medical profession depends on preserving and restoring public trust in doctors, but this trust must be deserved and earned.

Shimon M Glick *professor emeritus*

Moshe Prywes Center for Medical Education, Faculty of Health Sciences, Ben Gurion University of the Negev, Beer Sheva, Israel

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## Outpatient antibiotics for pelvic inflammatory disease

*Continued use of oral doxycycline and metronidazole is hard to justify*

Standing at the therapeutic crossroads trying to choose a path for outpatients with pelvic inflammatory disease, a clinician may find his or her evidence based map lacking in detail. Not only is pelvic inflammatory disease hard to diagnose; once it has been diagnosed it is not clear what the best outpatient treatment is.

Pelvic inflammatory disease remains a condition with imprecise diagnostic criteria where the clinical features are neither sensitive nor specific<sup>1</sup> and where the "gold standard" of laparoscopy lacks standardisation and is not routinely available in clinical practice. Non-invasive diagnosis using magnetic resonance imaging has potential and may be comparable with

laparoscopy and superior to transvaginal ultrasound,<sup>2</sup> but data and access are both limited.

Once the diagnosis of pelvic inflammatory disease has been made what outcomes are realistic after treatment? Rapid resolution of symptoms, preservation of fertility, and low rates of ectopic pregnancy are all desirable outcomes, but only the first, short term control of symptoms, has been assessed in most randomised controlled trials. In the pre-antibiotic era many women seem to have had resolution of their symptoms but then gone on to develop long term sequelae, and even those women who do receive antibiotics have a significantly increased risk of subsequent complications.<sup>3</sup>