

of inhaled prophylactic agents, particularly topical steroids, reduces morbidity—eg, days lost from school dropped 10-fold after a group of asthmatic Tyneside children started regular prophylaxis.⁴ At a national level, consultation, home visit, and outpatient referral rates for the average asthmatic patient fell by 19%, 44%, and 32%, respectively, over an 11-year period, during which the proportional use of inhaled prophylactic agents (mainly topical corticosteroids) doubled, but only to 19.4%.⁷ Bucknall et al retrospectively compared acute asthma management by general and chest physicians; the latter were more likely to give oral steroids, to monitor PEFr, to increase regular inhaled drugs at discharge, and to arrange follow-up. Subsequently, their patients had less nocturnal waking (23% vs 41%), less morning tightness (37% vs 55%), and a lower re-admission rate (2% vs 20%) than those managed by general physicians.¹² More inhaled prophylaxis and good management therefore mean lower morbidity.

Patients' ignorance about their disease largely reflects the poor communication skills of the medical profession. Bucknall et al report that two-thirds of their patients had no idea how their treatment worked, 87% could not recall advice about oral steroids, and a third could give no plan to cope with an acute attack.² Even during a fatal attack the British Thoracic Association found that two-thirds of both patients and general practitioners failed to appreciate the severity of asthma.¹ To educate, and to permit both patient and doctor to assess disease activity accurately and titrate treatment accordingly, objective measurement is essential. The mini PEFr meter is reliable, robust, and, at under £10, cheap. In general, if PEFr variation is 20% or more, regular inhaled topical steroids should be started or the dose increased. If the variation is greater than 50%, a severe attack is imminent¹³ and oral corticosteroids are mandatory.

A general practice of 2000 patients includes an average of 140 with asthma, all of whom cannot be managed by chest clinics so all medical practitioners must be interested in and expert at managing asthma. In 1978 Seaton¹⁴ commented "in almost no other field is the gap between diagnostic and therapeutic knowledge and its general application so great". His words remain true, but surely not for much longer.

ECONOMICS FOR MEDICAL STUDENTS

DOCTORS' ignorance of economics often means that Oscar Wilde's epigram must be reversed—they know the value of everything, and the price of nothing. That state of affairs is hardly satisfactory, since health costs have outgrown real economic growth. In the UK, the white-paper *Working for Patients*¹ has already forced an arranged marriage between medicine and economics.² Would inclusion of economics in the medical school curriculum be useful and perhaps even cost-effective?

The gut response of many doctors would be to adopt the high moral stance that economics is irrelevant to medicine: ethical practice requires that the best be done for each patient and this view is incompatible with cost-cutting. However, such crude posturing does not withstand scrutiny. Economics is not merely about economy. Rather,

its starting point is that the resources of human societies are finite and scarce and that choices must necessarily be made, thereby excluding other options (so-called "opportunity cost").³ Economics, by valuing all costs and benefits on the single, universal metric of money, and by using techniques such as cost-benefit analysis, makes difficult choices rational and systematic, pursuing (or optimising) some stated goal (or benefit). Ethics provides justification for the desired goal or benefit, taking some form such as maximising "the happiness, fulfilment and satisfaction in living longer or more healthily"⁴ of the population. Squandering scarce resources on one patient is then unethical if other patients would benefit from those resources. Ethics and economics are both about difficult choices.

Economics is barely taught in the British undergraduate medical curriculum.⁴ Moreover, economic principles are seldom mentioned in clinical teaching⁵—although that does not stop students having opinions about economics.⁶ In his discussion paper on economics in medical education published earlier this year, Evans is surely correct in saying that "the occasional lecture on economics . . . is unlikely to achieve the desired results";⁷ small doses merely immunise students against subjects whereas more extended teaching of economics can be successful.⁸

If health care is ultimately limited by the scarce resource of money, then undergraduate medical education is limited by time. Curricula are already overloaded and an additional 20 or 30 hour course in economics is unrealistic. However, economic method also applies to its own teaching, "to determine if teaching economics to undergraduates has the desired effect, and if the benefits justify the costs".⁷ A back-of-an-envelope calculation suggests that if a 20-hour course made doctors a mere 0.1% more resource efficient, then the saving of £26 million on the total gross National Health Service expenditure of £26 billion would far exceed educational costs; and a marginal comparison of the career-length benefits of 20 hours of economics with the costs of a 5% cut in the teaching of anatomy, physiology, and biochemistry would almost certainly support economics teaching.

Although there is a case for teaching basic economics to all medical students, a more persuasive argument may be to give more extensive training to *some* medical students, the future administrators and managers. Perhaps an intercalated BSc or a postgraduate MSc in medical economics might be contemplated. How might such studentships be funded? If one believes the Government, then the pharmaceutical industry should be straining at the leash to sponsor a dozen fully funded studentships each year for such a course; the London School of Economics might well be happy to receive those students and their fees. If adopted, such a course would train economically knowledgeable doctors and also provide experienced teachers subsequently to introduce economics into the medical curriculum. If not adopted due to lack of financing, then doctors and students would still have learned a valuable lesson about the practical political economics of advanced corporate capitalism.

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