quently been emphasized, but the review must be highly competent and backed by an appropriate research effort. We are a long way from being able to measure the value of human life, and its quality, in stark terms of cost-effectiveness. Perhaps we always will be. But we do know that, unless we sustain our medical school output at the present level for a while, we may well have fewer doctors in 10 to 15 years than we have now and we should at least have some idea of whether this would be good or bad, before giving the economists an easy way out. It does us no harm to feel some pressure to justify what we are doing with our jobs and with the careers of the next generation.

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Health education

THE management of chronic disease can be frustrating. Many illnesses have multifactorial causes, they may develop very gradually with unremitting progress and little amelioration from conventional medical treatment. It is easy to see why the medical profession and government are increasingly giving priority to prevention of such illnesses. Unfortunately, prevention is difficult and, as it usually involves major changes in attitudes and behaviour, many doctors and patients opt for the easy way and ignore the possibility of change. With the publication of three documents on health and prevention in primary care within the last year, the Royal College of General Practitioners (1981a, 1981b, 1981c) has indicated its commitment to this whole area of preventive medicine.

One major part of prevention is health education. It should already be considered as a potential part of every consultation in general practice (Stott and Davis, 1979), and is now beginning to have its own professionals as well. These people are in posts in Area and District administration and their function is to stimulate other health professionals in the field of health education, such as general practitioners and health visitors, and to provide material support for their activities. A recent DHSS publication (1981) has attempted to clarify some of the aims of this relatively new health professional and suggests that health education officers should be recruited either from nurses with appropriate post-nursing experience, teachers, environmental health officers or graduates in a relevant discipline. The trainee health education officer would normally have two years' in-service training, followed by at least a one-year full-time diploma course in health education.

We now have a central body, the Health Education Council, which is attempting to co-ordinate national campaigns against such things as smoking, alcoholism and irresponsible sexual behaviour; we have locally based health education officers who, with their growing administrative machinery, are striving towards a greater degree of professionalism; and we have the vast number of health professionals who are expected to include health education in their everyday work.

Perhaps we should be clearer about what this structure is being used for. What do we mean by health education? It is surely more than the simple propaganda put out in the first half of this century. Are we simply to encourage people to stop smoking, to use alcohol appropriately, to wear seat belts and so on, without taking account of the importance of encouraging governments to change their priorities and sometimes the law? We are all individuals who have evolved patterns of behaviour over the course of years, partly as a result of cultural and parental attitudes. If we are to change our behaviour to achieve better health, propaganda is not enough: education is better, but education together with cultural pressure is better still. Government and the profession need to work hand in hand.

We know that general practitioners who advise their patients to stop smoking will have a limited, though significant, impact (Russell *et al.,* 1979). We also know that government (national and local) is dragging its feet in failing to raise the price of tobacco products high enough to actively dissuade people from smoking. Government's two-faced attitude in supporting health education on the one hand and failing to reduce sales of tobacco on the other cannot be condoned, however persuasively the industrialists argue in support of the tobacco industry. The same need for joint action between the profession and government arises in other areas of health care, such as the use of alcohol and road accident prevention.

We all need reminding that health education can be

an important part of each consultation, but its impact will be the greater when it is supported by government action.

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Children's symptoms: what mothers do

THE paper in this issue by Pattison and colleagues (pp. 149-162) from the Riverside Child Health Project at Newcastle on mothers' appreciation of their children's symptoms is another nibble at the problem of understanding the reaction pattern between mothers and their children. The paper explores present concepts of health and disease, and mothers' attitudes to, and use of, their doctors.

The subject is difficult to study; we are dealing with largely untrained, self-taught observers at all levels of intelligence and education. Mothers have varying experiences of varying duration and observe with different levels of interest. They are all observing different children in differing environments, almost always in a situation that we cannot confirm, as we are unable to observe the children at the same time. The situation with children under the age of six months is further complicated in that the health and concentration of the mother is known to be variable, it being believed by some that post-natal depression affects a third of mothers to very varying degrees.

The current survey was stimulated by the observations of a series of workers on cot deaths. It has long been known that the histories as presented to coroners are unreliable (Emery and Crowley, 1956), and it is now known that a considerable number, though not all, such children exhibit symptoms before death (Stanton *et al.*, 1978). If the parents had taken action, some of the deaths might have been avoided. Does this mean that we have some dangerously inadequate mothers?

How has this current study helped us? Of a series of 58 mothers with their first child, 44 said that they were prepared to fill in daily diaries for eight weeks and 30 of them did so, stimulated by a visiting research worker every two weeks. On average, children were symptom-free on only one day in four. However, of these symptoms, the commonest were discomfort with teething and bringing up small amounts of food. When the paediatricians analysed the symptoms from the viewpoint of whether they merited a consultation with their family doctor, it was felt that 35 children had at least one episode of such severity of illness. I am a little surprised that they did not rate the non-specific symptoms (such as unusual drowsiness) as important, as others have noticed that these are missed in cot deaths (Watson *et al.*, 1981). In the Newcastle study, the probability of the parents seeking help was high. There were, however, two families where the symptoms predicted a consultation but where no such consultation took place. Both of these occurred in unmarried women not living with the baby's father. It is also probably significant that, of the nine mothers declining to take part in this study, four were unmarried, whereas fewer than one in four of those who took part in the trials were unmarried.

We find then that, while mothers notice many symptoms in their children, and the majority of mothers react correctly to these symptoms, two of the 44 did not notice, or noticed an episode but did not react correctly. If it is justified to generalize from such a small sample, we would see that 5 per cent of mothers are liable to have an ill child, should consult but do not do so.

Delay in reacting to symptoms is an important aspect of child care even in children reaching hospital. Oakley and colleagues (1976) showed that, of children they studied who died in hospital from acute disease, 80 per cent did so because they arrived at hospital too late for effective treatment. Such deaths would not be prevented by increasing hospital care. McWeeny, doing home interviews about these children (McWeeny and Emery, 1975), found that the duration and pattern of symptoms in the late hospital admissions were no different from those of the early admissions survivals. There were a variety of reasons for the delays in getting the children to hospital; these reasons included unwanted children, parents with too low a standard of health, parents