*et al.*¹ More recently, I reviewed² in detail the practical consequences of these pH-dependent mechanisms on the stability and efficacy of glutaraldehyde hospital formulas. This study clearly showed that there were only two fundamental types of glutaraldehyde compositions: those described in the alkaline range by the Ethicon patent (expired in January 1978) and those described in the acid and neutral range by the Wave Energy Systems patents. Under normal hospital use the alkaline compositions have a short life (maximum 14 days) and their only theoretical advantage is a slightly faster sporocidal action at room temperature. No substantial cidal advantage over the acid formula has ever been found when dealing with non-sporulated bacteria, viruses, and mycobacteria. Unlike alkaline compositions, potentiated acid glutaraldehyde solutions such as Sonacide have a slow rate of polymerisation, which corresponds to a continuous use life in hospitals of 28 days. Thanks to this extraordinary stability Sonacide decreases considerably the cost of any hospital disinfecting procedure, as recently demonstrated by Ayerst Laboratories in a two-year study covering 32 North American hospitals.³

Tarnishing and superficial metal erosion can sometime occur with glutaraldehyde disinfecting solutions. As your correspondent (26 May, p 1425) noticed, the higher the pH the milder is the potential tarnishing problem in the 6-8 pH range. One should, however, recall that potential tarnishing occurs mainly with scratched, worn-out, or poorly plated instruments which have been overexposed to disinfectant solutions. Let us recall, for instance, that five years of nationwide use of Sonacide (pH 4-6.2) in the USA never brought to light any major tarnishing problem when the product was used according to the recommendations of the Environmental Protection Agency label.

The recent discovery⁴ of the biocidal synergistic effect of ultrasonics on acid potentiated glutaraldehyde is another indication of the promising future of dialdehyde disinfecting techniques in hospitals.

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¹ Last, A J, Smith, D K, and Boucher, R M G, *Proceedings of the Western Pharmacology Society*, 1973, **16**, 282.

² Boucher, R M G, *Respiratory Care*, 1978, **23**, 1063.

³ Lin, K S, *et al*, *Respiratory Care*, 1979, **24**, 321.

⁴ Boucher, R M G, *Canadian Journal of Pharmaceutical Sciences*, 1979, **14**, 1.

Abnormal cilia

SIR,—We were pleased to see your leading article on abnormal cilia (23 June, p 1663) and would like to draw attention to another area where ciliary abnormalities have been reported, which may be of considerable medical significance.

We have described¹ abnormalities in nasal cilia in patients with Usher's syndrome and other forms of retinitis pigmentosa. In life direct examination of the modified cilia of the ear and eye is not feasible, but there is the possibility that they share abnormalities with other ciliated epithelia which can be biopsied. Thus new forms of investigation are opened into conditions of progressive loss of hearing and vision.

The last paragraph of your leader advises caution in the interpretation of electron microscope studies of cilia, with which we wholeheartedly agree; but we would like to point out that the electron-microscopical appearances of abnormal microtubular patterns are so striking that photographic enhancement techniques are unnecessary. More to the point, it is necessary to investigate large samples of material in many patients and controls because of the presence of abnormal microtubular patterns in a proportion of cilia in people who have no disease.

The interest of cell biologists has been aroused by these new reports. In Kartagener's syndrome the clinical observations provided the final confirmation of the essential role of dynein arms in ciliary immotility²; it may be that the asymmetries recently found in human disease will provide further clues to even more profound biophysical puzzles.

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¹ Arden, G B, and Fox, B, *Nature*, 1979, **279**, 534.

² Fawcett, D W, *New England Journal of Medicine*, 1977, **297**, 46.

Diabetic (insulin) oedema

SIR,—A short report on insulin oedema (21 July, p 177) affirmed that oedema of this type is rare in diabetics. We have recently described four patients (three male and one female aged 18-21 years) with typical acute diabetic oedema¹⁻³ and agree that the severe fluid retention which transiently follows the restoration of good diabetic control is not common. These episodes of oedema were associated with insulin treatment of diabetes, but, in contrast to the case reported by Mr N R Bleach and others, one patient (a boy of 12) had been on insulin for two years. All these episodes of acute oedema were not only transient but settled spontaneously *without diuretic therapy*, which should probably be eschewed in such patients.

We would like to draw particular attention, however, to subacute and chronic forms of oedema occurring in diabetics. This concept was first raised in a presentation to the British Diabetic Association in September 1977 and has been elaborated on elsewhere.^{2,3} Over the past few years we have documented 12 diabetics, all female, who suffered from severe generalised fluid retention lasting from a few months to several years. Two of these patients were not treated with insulin and all were observed to have fluid retention with the distribution described by Mr Bleach and his colleagues while on no diuretic therapy. (This latter point is of particular importance in the light of a recent report⁴ attributing unexplained oedema to diuretics.) Furthermore, in a survey of 86 insulin-requiring patients under 50 years attending a diabetic clinic, a history of intermittent mild-to-moderate fluid retention without obvious cause was obtained in 14 of 40 (27%) female patients. Only one of 46 male patients gave such a history. Subacute and chronic forms of diabetic oedema are therefore not uncommon and this diagnosis should be considered in female diabetics with

unexplained fluid retention. Clinically such diabetic oedema resembles the syndrome of idiopathic oedema of women where there is a high familial incidence of diabetes.^{2,5,6}

With regard to the aetiology of diabetic oedema, other possibilities coexist with the mechanisms mentioned by Mr Bleach and his colleagues. Acute diabetic oedema has been considered to resemble "refeeding" oedema⁷ and thus to represent a pathological degree of carbohydrate-induced antinatriuresis.^{8,9} An abnormal degree of sodium retention, not always manifest as oedema, occurs not only in carbohydrate refeeding but also follows the treatment of ketoacidosis in man¹⁰ and animals.¹¹

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¹ Craig, O, *Childhood Diabetes and its Management*, p 224. London, Butterworths, 1977.

² Lawrence, J R, MD thesis. University of Glasgow, 1978.

³ Dunnigan, M G, *Practitioner*, 1979, **222**, 321.

⁴ McGregor, G A, *et al*, *Lancet*, 1979, **1**, 393.

⁵ Sims, E A H, Mackay, B R, and Shirai, T, *Annals of Internal Medicine*, 1965, **63**, 972.

⁶ Shaw, R A, *American Journal of Cardiology*, 1968, **21**, 115.

⁷ Marble, A, *et al*, (editors), *Joslin's Diabetes Mellitus*, 11th ed, p 396. Philadelphia, Lea and Febiger, 1973.

⁸ Bloom, W L, *Archives of Internal Medicine*, 1962, **109**, 26.

⁹ Wright, H F, Gunn, D S, and Albertsen, K, *Metabolism*, 1963, **12**, 804.

¹⁰ Saudek, C D, *et al*, *Diabetes*, 1974, **23**, 240.

¹¹ Blumenthal, S A, *Diabetes*, 1975, **24**, 645.

Royal Commission report

SIR,—Your leading article on the report of the Royal Commission on the National Health Service (28 July, p 227) waxed lyrical about the preventive content of the proposals. As a trainee in community medicine I beg to differ.

Certainly the commitment is there (paragraph 5.1): "... we regret that more emphasis has not been placed in the past on the preventive role of the NHS. This must change if there are to be substantial improvements in health in the future. . . ." But what "change" is recommended? The answer is very little. Of the six preventive recommendations, four relate to health education (one of the least effective means of prevention), one (on screening) has preoccupied the DHSS for years, and the other (on seat belts) is no stranger to the House of Commons, which may finally legislate on the subject this session.

The most frustrating feature of the report is the total failure of the commissioners to harness their preventive philosophy (which is admirable in conception if not in application) to an existing organisational framework of implementation—namely, community medicine. For prevention is the *raison d'être* of community medicine, a point which may not have been sufficiently impressed on the commissioners by the representatives of the specialty when evidence was submitted. The commissioners' pious declaration that "We ourselves believe that the specialty has a future" (paragraph 14.55) carries little conviction when no attempt is made to spell out that future. Indeed, the only recommendation on community medicine, that community physicians should be given adequate supporting staff, merely begs the question "Adequate for what purpose?"

The commissioners have lost an unprece-

dented opportunity to kill two birds with one stone, for community medicine desperately needs a role and prevention equally desperately needs a formal advocate within the Health Service. Without a determined effort to knit together these two loose threads of the report neither is likely to survive the economic rigours which lie ahead.

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Self-concern about health and NHS work load

SIR,—In its conclusions the Royal Commission on the NHS (28 July, p 290) states that "groups of the population, now uncaring for their health, might become more self-conscious and take a pride in it, reducing the burden on health services."

There are obviously no hard data to support the notion that greater concern for health would reduce NHS work load. Indeed, one might consider that *community* concern for health, as shown by the founding of the NHS, has *increased* work load in so far as it is at least partly responsible for creating an aging population.

I would suggest that greater individual concern for health, while decreasing the sociomedical problems related to lack of exercise, smoking, alcohol consumption, and the like, would go hand in hand with a greater demand for regular medical check-ups, more costly health screening programmes, and a generally increased desire for all the available expensive techniques of preventive medicine. While such an outcome might be no bad thing, it would certainly not decrease the burden on health services.

Indeed, greater self-concern for health would probably add to the problem of the aging population, calling for more facilities for geriatric care. Average lifespan might increase, but since death is inevitable and often to be preceded by chronic ill health there is no reason to speculate that such increased individual interest in health would in any way decrease the burden on the NHS.

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Occupational health in the NHS

SIR,—The Royal Commission and the DHSS have both strongly recommended the provision of occupational health services for NHS employees. There will be continuing difficulties in attracting occupational health physicians of the right calibre unless the salary of these physicians is aligned with that in industry.

Advertisements in the *BMJ* are for senior clinical medical officers, and not only is the top of the SMO scale £2400 below the scale recommended for 1980¹ but the annual increments are more than £350 (gross) less. Apart from salary scales there are no fringe benefits in the NHS, unless six week's annual leave (about one week more) can be counted.

The BMA must campaign for similar scales for doctors doing essentially similar work. Should this be unsuccessful, the *BMJ* should refuse to accept advertisements for these posts from area health authorities. Until at least some of these anomalies are resolved, not only

will the NHS be unable to recruit high-calibre doctors and nurses but the occupational health physician in the NHS will rapidly become a second class doctor, which I am sure is not BMA policy.

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¹ *British Medical Journal*, 1979, 3, 347.

Vocational training

SIR,—Until recently there has been surprisingly little comment upon the Vocational Training Act, a measure which seriously restricts freedom to practise.

Whatever the merits of specialist registration, general practice, by definition and in reality, is not a specialty and it should be open to any fully registered practitioner. A system of rotating internships, with or without a period of attachment to a general practice, has much to commend it and could be of advantage to the intending specialist no less than to the aspiring general practitioner; but it would be quite wrong if entry into such schemes were to lie in the gift of an appointed representative of the Royal College of General Practitioners. The public utterances of the college spokesmen and the articles published in its journal, for the most part self-evident truth disguised in jargon or pretentious rubbish, lead one to suspect that its activists have become divorced from reality.

The man-in-the-street—nay, even the woman at an Islington soirée—still says, "I am going to see my doctor" and expects to be attended by a competent and kindly, if irascible and eccentric, general practitioner. I have yet to hear a member of the public announce to friend or neighbour that he intends to go to the health centre in order to apply for the services of the primary health care team and I do not believe that he wishes to be interviewed by a role-playing team leader, still less counselled by an amateur psychosexologist or automated Balint model. We have witnessed the building of empires by fringe pressure groups: but empires are built to fall, and so we may hope that the destinies of general practitioners will not long remain in the hands of a small clique of zealots.

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SIR,—I have recently returned from many years in the mission hospital field, whither I fled in the 1960s to avoid the fate of practising clerical medicine in the general practices of that era.

It has been a rewarding life, and nothing would have dragged me back save the recently enacted proposals for vocational training, which threatened to make me redundant in mid-career. Now, as a principal in general practice, I see nothing has changed except the verbal dressing. GPs are still fulfilling their function of rationing hospital medical care and allocating sickness benefits for the DHSS. Their clinical responsibilities have if anything diminished with the passing years.

It is therefore depressing to see suggestions that vocational training should be extended to embrace the unsuspecting mission hospitals in Africa. The sort of doctor who feels so lacking in confidence that he needs three years' training to become a British GP is not the sort of

doctor who is going to fit well into a mission hospital, except possibly as an outpatient clerk. The work is demanding and requires a degree of clinical responsibility that many recent British graduates feel they are not qualified to accept. In fact, we have in the past few years tended to discourage UK graduates in favour of Australians and South Africans, as the British appear to lack any experience in the practical skills required, although their theoretical knowledge is often as astounding as their proliferation of certificates.

Much of this is due, of course, to the decline in the quantity and scope of clinical material available to the British graduate in training, and this has undoubtedly driven many of them into the sort of paramedical training that leads to the MRCGP examination. A course more unfitted to the practice of mission hospital medicine I cannot imagine.

I fear that we will be soon having mandatory five-year courses in mission hospital care from a newly formed Royal College of Tropical Physicians before our graduates, then aged about 60, will be allowed to work in Africa.

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Costs of unnecessary tests – and staff duplication

SIR,—Dr G Sandler (7 July, p 21) has cogently argued how £3598.72 per clinic per annum could be saved on useless investigations; for the NHS a saving of £1 651 422 is estimated. History taking, especially by an experienced doctor asking discriminating questions, is probably the most important basis for parsimony in diagnostic logic.¹

According to this valuable paper on a very important subject, a medical registrar or SHO assessed each patient at the first attendance. A return visit followed after a short interval, when the consultant did a complete reassessment. That unnecessary duplication of medical work—that is, by junior staff followed by consultant—does not seem to have been an essential part of the investigation: some of the savings could be explained away by the difference between the practice of an inexperienced and an experienced doctor. (There is also considerable economic loss in unnecessary visits by patients with or without escorts.)

Unnecessary duplication of medical work is very wasteful. If such duplication is standard practice in this clinic then either the registrar or the SHO is redundant—that is, a further saving of around £5962 pa (annual salary of SHO + registrar ÷ 2, to average the effect of a public RAWP) could be achieved; but that figure might be more fairly reduced by 50%, say, to allow for work by the juniors which is done independently of the consultant. (Of course, it is entirely understandable that a filtering system tends to be evolved in response to excessive pressure of work.) Such an estimate is a purely monetary approximation, of course, which is only a part of the frustration related to those SHOs and registrars who have poor prospects of promotion. With customary restraint, a recent *BMJ* editorial (19 May, p 1299) said, "The staffing structure in the hospital service—a distorted pyramid—is a scandal. . . ." Let us hope that this serious iatrogenic (in both senses of the word) disease,