test. On the other hand, many who have symptomless mild or transient serous otitis media would be detected. What should be done with them? Sent to E.N.T. departments for myringotomy and insertion of grommets? Of course, most otologists would consider this as preposterous. We have difficulty at present in getting children with significant hearing losses examined and treated within a reasonably short time when we think treatment is urgent.

Impedance testing and school screen audiometry are complementary. There is some overlap between the two, but their functions are different. First of all we must consider the time taken for a screen test. It takes one minute per ear to test by screen audiometry. For the impedance test one needs five minutes per ear. A skilled audiometrician can screen out 40-60 pupils in about two hours. For the same number of children impedance testing would take 10 hours.

To criticize the screen audiometric test on the grounds that it is badly performed in some areas or that it is performed by untrained and unskilled people is not an argument against the test itself. It is to be hoped that your readers, particularly those involved with school health services, will not be influenced by this unhelpful and misleading article.—I am, etc.,

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Contaminated β -Lactamase and Blood Cultures

SIR,—The letter from Mr. R. Lynn and Dr. Susannah Eykyn (6 July, p. 46) is of considerable interest since their finding that blood cultures have become contaminated by diagnostic additives is of obvious concern. However, we were disturbed by the final sentence of their letter, which states that the enzyme preparation is now filtered through a Millipore filter. In the light of our previous experiences with β -lactamases, especially that of *Bacillus cereus* 569/H, it occurred to us that such a procedure could lead to removal of enzymatic activity. This enzyme is notorious for the avidity with which it adsorbs to surfaces such as glass powder¹ and Celite (diatomaceous silica).² It seemed to us possible that the enzyme would also adsorb to the material of the Millipore filter (a mixture of cellulose acetate and nitrate).

The Whatman β -lactamase preparation is not in routine use in this laboratory, but we had been fortunate enough to receive a sample vial (batch 3) from the manufacturers. The contents were dissolved in 10 ml of M/30 Sørensen's phosphate buffer, pH 7, and half of the solution was passed through a filter of pore size 0.22 μ m (Millex disposable filter unit, Millipore Ltd.), using minimum pressure. The unfiltered and filtered portions were then assayed for β -lactamase activity against benzylpenicillin (for total activity) and oxacillin (for β -lactamase II activity³), each substrate separately at 2 mg/ml, using hydroxylamine assay.⁴ We found that passage through the filter removed all but 0.7% of the total activity. β -Lactamase II activity was less affected, 3.6% remaining after filtration; however, β -lactamase II makes up only 2.5%

of the original total activity of this particular batch of Whatman β -lactamase.

Thus passage of the enzyme through the filter may have the effect of removing almost totally the active principle of this preparation. Several other commercially available β -lactamase preparations⁵ are also derived from *B. cereus*, and filtration of these might also be expected to result in loss of activity. Therefore the investigator has two possibilities. Firstly, to accept that the enzyme preparation is sterile, or secondly, to question the practice of adding β -lactamases to blood cultures media routinely. In view of the well-known lability of the β -lactam moiety to sulphhydryl groups and in reducing conditions⁶ such as obtain in media used for the culture of anaerobes, β -lactamase may be unnecessary. Timing of the blood culture in relation to the last dose may enable the use of penicillinase to be avoided where the concentration of penicillin has fallen to a low level. On dilution this would become insignificant. Studies to settle this important question would be worth while.—We are, etc.,

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- 1 Kogut, M., Pollock, M. R., and Tridgell, E. J., *Biochemical Journal*, 1956, **62**, 391.
- 2 Miller, G., Bach, G., and Markus, Z., *Biotechnology and Bioengineering*, 1965, **7**, 517.
- 3 Kuwabara, S., and Abraham, E. P., *Biochemical Journal*, 1967, **103**, 27C.
- 4 Batchelor, F. R., et al., *Proceedings of the Royal Society. B*, 1961, **154**, 498.
- 5 Newsom, S. W. B., and Walsingham, B. M., *Journal of Medical Microbiology*, 1973, **6**, 59.
- 6 Schwartz, M. A., and Buckwalter, F. H., *Journal of Pharmaceutical Sciences*, 1962, **51**, 1119.

Sun, Wind, and the Skin

SIR,—Further to your timely leading article (13 July, p. 72), it would seem clear that the aggravation of sunburn by wind is largely, if not entirely, due to the desiccating action of the wind on the horny layer of the epidermis on all exposed surfaces. This takes place irrespective of the environmental temperature so that skiers as well as soldiers wearing the professional military garb of shirt and shorts (which is entirely unsuitable for desert wear,^{1,2} unlike the excellent protection provided by the Bedouin burnous and Arab headdress against sun, wind, and sand) can be affected. These are almost perfectly adapted to hot desert conditions.^{1,2} The holiday-maker similarly clad and, even more so, the girl in her picot-bikini find themselves in a climate little different from that of an arid desert when a fresh sea breeze is blowing.

Ichthyotic infants and atopic children with lichenification of the hands, elbows, knees, ankles, and/or face are particularly vulnerable in this respect and should therefore wear light jeans and long-sleeved cotton shirts or blouses to reduce the risk of windburn on the sea shore. Sea bathing itself is of course to be encouraged in these patients, who will benefit from the high salt content of sea water. This helps to combine water more effectively to the keratin of the horny layer, thereby reducing loss of water through evaporation.

There is another cause of sunburn of which many yachtsmen may not be aware. The burn occurs when a cotton shirt or other garment becomes saturated with sea

spray through which the shorter wavelengths of the sunlight, excluding the ultra-violet, can penetrate and damage skin. It should be remembered that water tends to absorb the longer wavelengths of the invisible spectrum as well as the infrared and to allow the shorter waves to penetrate further. Therefore in these conditions yachtsmen should wear plastic garments impenetrable by the sun's rays.—I am, etc.,

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- 1 Moynahan, E. J., *Practitioner*, 1958, **180**, 135.
- 2 Schmidt-Nielsen, K., *Desert Animals Physiological Problems of Heat and Water*. London, Oxford University Press, 1964.

Who is the Dental Anaesthetist of the Future?

SIR,—The remarks attributed to an operator/anaesthetist recently publicized in the national press following another patient fatality (see medicolegal report, p. 419) make one wonder when the powers that be will say, "Enough!" It is a fact that the British Dental Association¹ has cautioned the dental profession as to possible legal repercussions of using operator/anaesthetist technique—but no more. It is another fact that the Joint Sub-Committee on Dental Anaesthesia of 1967² deprecated the practice of dentists giving general anaesthetics alone. It is also a regrettable fact that the then Secretary of State decided not to implement the recommendations of this subcommittee because he "did not wish to interfere with the clinical freedom of dentists."³

Two professional people must be the bare minimum for any dental work done under general anaesthesia, a fully-trained anaesthetist ideally being one of these. "Dental anaesthetics is one of the most difficult branches of the medical specialty of anaesthesia" (Flt. Lt. D. Hogg, 18 May, p. 386). If the professional bodies will not stop this dubious and uniquely exercised prerogative of the dental profession in accepting the operator/anaesthetist, then perhaps the medical defence organizations should cease to provide cover for the operator/anaesthetist. Must we wait for litigation?—I am, etc.,

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- 1 B.D.A. Committee, *British Dental Journal*, 1966, **120**, 89.
- 2 Ministry of Health, *Dental Anaesthesia—Report of a Joint Sub-Committee*. London, H.M.S.O., 1967.
- 3 Hansard, House of Commons, 22 December 1971, Written Answers.

Reporting Deaths to the Coroner

SIR,—Dr. Harold Price (20 July, p. 171) writes that "the doctor is obliged by common law to report all sudden and unexpected deaths . . ." etc. I feel that this statement requires an important proviso before it can be regarded as accurate. The Brodrick Report¹ states (para. 12.02 (iv)) that "there is an obligation at common law on 'any person about the deceased' to give immediate notice to the coroner of circumstances requiring the holding of an inquest" and (para. 12.02 (v)) that "there is no duty on doctors to report any death to the police

or, unless the doctor is a 'person about the deceased' (see iv), to the coroner." It is regrettable that there is no authoritative definition of the vague and archaic phrase "person about the deceased," but it seems likely that it must mean someone, such as next of kin, who is in close daily contact with the patient before death. The doctor may be the appropriate person, or the only such person in certain circumstances.

It would be unfortunate if Dr. Price's otherwise excellent letter were to be interpreted as stating present law to be that a doctor is under a common law duty to report deaths to coroners. That the law requires amendment is made clear elsewhere in the Brodrick Report. The fact that there is no legal duty on a doctor to notify a death to the coroner is not to imply that a doctor need not or should not do so when the circumstances require such action, for moral, ethical, and traditional considerations are as much relevant as legal duties.—I am, etc.,

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1 Home Office, *Report of the Committee on Death Certification and Coroners*, Cmnd. 4810. London, H.M.S.O., 1971.

Effect of Methohexitone on Infants Delivered by Caesarean Section

SIR,—Unfortunately, the interesting study reported by Dr. Anita Holdcroft and her colleagues (1 June, p. 472) was undertaken on supine subjects. In addition, fetal umbilical venous blood-gas/acid-base status was measured, whereas umbilical arterial measurements would have been more representative of the fetal metabolic condition at birth.

Clinically, the infants delivered after the high dose of methohexitone were more depressed than those delivered after the lower dose. Calculation of the fetal umbilical venous base excess values, corrected for haemoglobin desaturation,¹ is of interest. Assuming a fetal haemoglobin level of 15 g/100 ml the mean result for the high-dose group is -4.19 mEq/l. (S.E. 0.99) and for the low-dose group -1.43 mEq/l. (S.E. 0.93). The difference between the two groups just fails to reach statistical significance ($t=1.9401$, $n=23$, $0.1 > P > 0.05$).

Analysis of the umbilical arterial blood-gas status and calculation of the maternal to fetal acid-base gradients carried out in a larger series might have revealed a more significant difference in metabolic status between the high- and low-dosage groups. The base excess values shown above, however, do suggest the presence of a relatively greater degree of acidemia in the high-dose infants. Is it not possible that at least some degree of the clinical fetal depression measured might have been due to biochemical fetal asphyxia? Perhaps the larger dose of methohexitone, administered to mothers in the supine position, resulted in a greater lowering of cardiac output and hence a reduction in uterine perfusion and fetoplacental exchange.—I am, etc.,

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1 Andersen, O. S., *Scandinavian Journal of Clinical and Laboratory Investigation*, 1963, 15, 211.

N.H.S. Contraceptive Services

SIR,—The signatories of the letter from the Doctors and Overpopulation Group (3 August, p. 340), which I understand is yet another pressure group bearing down upon those of us at grass roots who have to run the Health Service, seem not to be acquainted with the economic facts of running such a service at the incomprehensibly low fee of £1.72 now offered by the Department of Health and Social Security.

To have to pay for female staff assistance, lighting, heating, and secretarial work before we draw any financial reward ourselves would place us in the red at the end of the year such a scheme was working. It is well to inform the group at this stage that the D.H.S.S. is paying £6.40 per annum per patient to the Family Planning Association for the service and I have seen how poorly equipped some of their clinics are. How does the D.H.S.S. expect us to do similar work at a high standard of skill for a mere £1.72?

The last paragraph of their letter, in which they state we should think seriously of the implications of any pressure by doctors to delay the scheme, is not being really honest as I am not aware that any pressure has been exercised by us. We have only used our fundamental democratic rights to state that we do not wish to be involved in an unseemly scramble which might bring public annoyance to our surgeries. Mrs. Castle chose herself to rush the scheme without much consultation with the General Medical Services Committee and seemed confident three months ago that she could manage without our help. Now it seems the pressure is on the F.P.A. and they are already beginning to throw bouquets in our direction. How strange it all is—only a short while ago we were told we were not competent as general practitioners to do family planning at all. At least we have stayed out of the arena, and no doubt wisely too. We shall wait until a proper fee is agreed to cover costs of staff, etc. Meanwhile my working class patients (many now earning over £2,000 a year) do not seem a bit worried at paying for their contraceptives. It seems only the politicians and some academics have got themselves steamed up about the matter.—I am, etc.,

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SIR,—As a member of the General Medical Services Committee who has been closely concerned in the negotiations with the Department of Health and Social Security in relation to a possible contraceptive service, may I reply to the letter by Sir George Pickering and others (3 August, p. 340)? It should be made clear that the G.M.S. Committee took the formal decision to reject the offer made by the D.H.S.S., on the advice of Lord Halsbury, only after consulting local medical committees and finding that two-thirds of them insisted on rejecting the present offer.

This view was reinforced by the decision taken at the Annual Representative Meeting of the B.M.A. at Hull when a resolution was overwhelmingly supported that no branch of the profession should enter into contract to provide contraceptive services until a satis-

factory contract had been negotiated with all branches of the profession (*B.M.J.*, 6 July, p. 288). It is heartening to see that at long last a united profession has served notice on the Government that it is not prepared to provide further services which in effect would be subsidized by the doctors taking part. It is surely not unreasonable, in view of the economic benefits which your correspondents believe will accrue to the nation in the event of a further contraceptive service being introduced, to accept that the Government will pay a realistic fee to the doctors who have to undertake this work.

Your correspondents' anxieties about overpopulation can hardly apply to the United Kingdom, as the latest Registrar General's figures show that there is now a zero population growth in the U.K. with the present level of contraceptive services. If, however, their main concern is with a world population explosion in under-developed countries may I suggest that they offer their own professional skills to those governments who still have a rising population and accept fees of approximately 25% of the normal rate, for this is what is being offered to their colleagues in this country.—I am, etc.,

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Treatment of Giardiasis

SIR,—The correspondence in your columns on giardiasis in the U.K. from Dr. A. M. Geddes (27 October, p. 236), Dr. P. A. Shave and B. T. Thom (16 February, p. 288), and Dr. Linda Stanton (9 March, p. 453) prompts us to report on the use of a short intensive course of metronidazole for the treatment of giardiasis in the U.K.

The patients were from two hospitals for subnormality and the infestations were found during a survey of intestinal parasites. All were passing cysts as determined by stool examination by the formal ether concentration technique.¹ The doses used are expressed below as the adult dose. The dose for a child was calculated according to Catzel's formula based on surface area² and was proportionate to age. If, as sometimes happened, the weight of the child was grossly abnormal, weight alone was used for the calculations.

Three dosage schedules were used: (1) 2 g as a single dose daily on two successive days; (2) 2 g as a single dose daily on three successive days; and (3) 2.4 g as a single dose daily on three successive days. In the first schedule nine children were treated, in the second schedule nine children and two adults were treated, and in the third schedule eight children and three adults were treated. The ages of the children ranged from 1 to 14 years. The stools of the patients were examined after treatment weekly for a total of four weeks. It was considered irrelevant to follow up beyond that time owing to the liability of re-infection in these wards.

The first schedule cured six out of nine of the children. The remaining three children showed no parasites one week after treatment (two stools examined) but parasites were present at 14 days. The other two schedules gave 11 out of 11 cures in both