must be comparatively few centres nowadays which cannot call upon the services of a dietitian.

At the same time may I also make one or two comments on your leading article "Are dietitians a luxury?" (20 November, p 1214)? In view of the fact that dietetics is still a comparatively young profession the task of "selling" its worth is largely the responsibility of dietitians themselves. Obviously there is bound to be a greater concentration of dietitians in centres with access to teaching facilities, but surely this is true of most professions. It is unfortunate that we are subject to acute economic stringencies at a time when we are endeavouring to expand the service on a more educative basis (as has been recommended by the Macdonald Report[1]). Inevitably hard-pressed health authorities will not give priority to the creation of completely new posts: the tendency is to utilise the existing establishment more effectively. It is therefore up to the dietitians who are currently in post to state their case clearly. Hopefully their evaluation of their role in both hospital and community fields will ultimately improve the career prospects for newly qualified dietitians.

However, all this will be to no avail unless we can call upon the "large fund of medical good will." At a time when the number of experts available to deal with various nutritional problems is increasing (albeit slowly) may I make an appeal that their knowledge and experience should not be wasted through ignorance or neglect?

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[1] *Dietitians of the Future.* A report by a working party of the Dietitians Board. London, Council for Professions Supplementary to Medicine, 1975.

SIR,—Are dietitians a luxury, your leading article asks (20 November, p 1214). Having worked for 25 years in diabetic clinics with and without dietitians I am in no doubt of their value not only sitting in the diabetic clinic with the doctor but also in the practical and detailed advice and follow-up of the patient, particularly in one-to-one consultation, whatever Macdonald[1] may say.

Of course we must not be obsessional about dietary details, but optimum control of diabetes, and this certainly involves time-consuming dietetic advice, is still the principal aim of this physician in his diabetic clinics.

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[1] *Dietitians of the Future.* A report by a working party of the Dietitians Board. London, Council for Professions Supplementary to Medicine, 1975.

Risks of exotic infections

SIR,—We must all be grateful to Professor H M Gilles and Dr J C Kent (13 November, p 1173) for reminding us that Lassa fever is not necessarily fatal or highly infectious. That it may sometimes be both entitles it to proper respect, and for severe cases the combination of "high isolation" facilities[1] and intensive care by trained staff in special units is appropriate. But excessive alarm over this and other exotic infections currently in the news seems unjustified.

Infectious diseases became so unfashionable and unfamiliar to many in recent decades that attitudes to strange infections now seems to be commonly determined by irrational "Doomwatch" fantasies and folk-memories of smallpox. It seems appropriate to recall that the mechanisms of potential spread of these infections in Britain are simply the usual routes exploited by hepatitis B, rubella, and diphtheria, and that the corresponding infection-control measures should be effective. The arenaviruses, rhabdoviruses, and arboviruses, unlike the stable virus of smallpox, are delicate, easily killed, and unlikely to infect by the airborne route except at short range.

Safety is of very proper concern, but it is relative, not absolute. Calculated and intelligently minimised risks characterise our everyday existence, including the care of the victims of dangerous infections. When planning our arrangements we must be watchful that over-elaborate rule books and codes of practice do not divert the attention of operatives and increase the chances of mistakes and accidents in practical situations.

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[1] Grist, N R, *Lancet*, 1973, **2**, 1340.

Incidence of repeated legal abortion

SIR,—Among women having legal abortions in Britain the proportion who give a history of one or more previous induced abortions has risen from 0·1% in 1968 to 4·9% in 1973[1] (the last year for which official figures are available). Clearly this proportion will tend to increase with time so that the official figures probably do not reflect the current situation. They are also lacking in one other important respect since they do not distinguish between women who have had only a single previous abortion and those who have had more than one.

The records of the British Pregnancy Advisory Service (BPAS) provide a valuable alternative source of information to the official figures and we wish to present some of our findings about repeat abortion based on an analysis of 4579 consecutive patients attending four BPAS branches during the first six months of this year and who were subsequently aborted.

Of the 4579 patients, 430 (9·4%) gave a history of one previous induced abortion, 15 (0·3%) of two abortions, 4 (0·1%) of three abortions, and one patient had had four. There was no significant difference between figures from the various branches. The proportion of married (27·3%), single (57·6%), and "other" (15·1%) categories among repeat aborters did not differ significantly from the sample as a whole. Of the total sample, 16·9% gave their religion as Roman Catholic and the incidence of repeat abortion among them was 9·9% compared with 9·4% for the whole sample. Of the repeat aborters, four (0·9%) had had their last previous abortion during the six months covered by the study and 46·5% of previous abortions had been done in the two years immediately preceeding the study. Other than housewives (16·7%) the largest single occupational group among repeat aborters was students (8·9%), followed closely by nurses (7·6%). Only one patient aged 15 or under was having her second abortion and the majority of repeat abortions took place in the 20-24 and 25-29 age groups, which accounted for 36·9% and 23·6% respectively.

Second abortions are clearly not uncommon, but these figures demonstrate that multiple abortion is relatively rare. In a study of 50 women having their third or subsequent abortion Brewer[2] concluded that almost half of them were pregnant because of contraceptive failure rather than erratic contraception. In some cases the unwanted pregnancy reflected inappropriate contraceptive advice, and erratic contraception was significantly associated with a history of emotional disturbance. Both Brewer[2] and Rovinsky[3] have discussed the possibility that multiple abortion may be prevalent among women from cultures in which, unlike Britain, abortion is widely or officially regarded as a major method of birth control. It is noteworthy that of the four women in this survey who had already had three induced abortions, two had had all their previous abortions in Greece and Yugoslavia respectively, although at the time of their latest abortion they had become British residents.

It is probable that the national figures will show a slightly lower incidence of repeat abortions because many general practitioners may be unwilling to expose women with a second unwanted pregnancy to the sometimes unpredictable attitudes of NHS consultants. The proportion of Roman Catholics among the sample (16·9%) is a little higher than the proportion in the population as a whole (13·2% of all live births were baptised as Catholics in 1950[4]), but this is probably accounted for by the inclusion of Merseyside with its large Catholic community. It is interesting that the incidence of repeat abortions among Catholics is no less than among the rest of the sample.

The prominence of nurses among the occupational groups is a frequent finding in abortion research, and Brewer found that they accounted for 10% of third-timers.

With the exception of 14 women from Eire and 10 from Ulster, all the patients appeared to be resident in Britain. The small proportion of foreign residents among the BPAS patients generally pass through the London and Brighton branches, which were excluded from the survey for this reason.

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[1] Office of Population Censuses and Surveys, *Registrar General's Statistical Review of England and Wales for the Year 1973*, Supplement on Abortion. London, HMSO, 1975.
[2] Brewer, C, *Journal of Biosocial Science*. In press.
[3] Rovinsky, J, *Obstetrics and Gynecology*, 1972, **39**, 649.
[4] Catholic Education Council, *Handbook for 1967*, p 20. London, CEC, 1967.

D-Penicillamine in palindromic rheumatism

SIR,—May I comment on Dr E C Huskisson's interesting report on the treatment of palindromic rheumatism with D-penicillamine (23 October, p 979)?

If this condition is to be regarded as prodromal rheumatoid disease a good response to penicillamine may well be expected. However,

surely this is sledge-hammer treatment: not all cases go on to develop true rheumatoid arthritis with permanent joint changes and in any case if this happens the disease may well turn out to be mild and easily controlled by simpler measures. The potential hazards of penicillamine, especially the immune complex nephropathy, should not be taken too lightly. Dr Huskisson states "it is a considerable advantage that D-penicillamine can be used in a small dose [250 mg daily] which is unlikely to cause side effects," but many rheumatologists feel that penicillamine nephropathy, which may persist for years, is not dose-related.

While classic palindromic rheumatism is characterised by bouts of very severe joint pain, many cases show a tendency to a decrease in the severity and frequency of attacks. Is it wise to prescribe continuous penicillamine when attacks occur only once or twice yearly with symptom-free intervals? If future trials show that the drug does delay the development of permanent joint changes there may be a case for using it in episodic disease and palindromic rheumatism. However, until this is known treatment is directed towards the reduction of frequency and severity of attacks. In this context it may be of interest to report my (unblemished) experience with short courses of chloroquine in this condition. Alleviation of symptoms occurred in most of 18 patients treated with chloroquine phosphate 250 mg daily for 6-8 weeks. Retinal examinations were made before, during, and after therapy, no ophthalmic complications being encountered. So far as I am aware there have been no reports of intermittent low-dosage therapy with antimalarials in palindromic rheumatism, which would seem to be a useful and safe form of treatment pending knowledge of the ability or otherwise of penicillamine to influence the course of the disease.

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Complement in inflammatory acne vulgaris

SIR,—Increased sebum production and sebaceous duct obstruction are well-recognised features of acne vulgaris. Nevertheless, the pathogenesis of inflammatory lesions is unclear. *Corynebacterium acnes* and other microorganisms can be regularly isolated from both comedones and pustular lesions.[1 2] Although the latter can be modified by antibiotics, the precise role of the organisms remains uncertain. It has been suggested that fatty acids derived from sebum lipids by bacterial lipase activity may initiate inflammation,[3] but convincing evidence for this is lacking. We have considered the possibility that an immune mechanism might be involved and wish to report the finding of complement (C_3) deposition in early inflammatory acne lesions.

Sections (5μ) from fresh frozen biopsy specimens of early inflammatory acne lesions from 13 male patients aged 15-27 years were examined by direct immunofluorescence for the presence of IgG, IgM, IgA, and C_3 using specific fluorescein isothiocyanate-conjugated goat antihuman sera (Nordic Immunology Laboratories). The lesions were approximately 0·5-1·0 cm in diameter. Although their precise age could not be determined, bright erythema, tenderness, induration, and the absence of (or only slight) pus formation were used as clinical criteria of early lesions. All specimens were taken from the upper trunk or upper arms under local anaesthesia with lignocaine. Specimens of adjacent non-inflamed skin were also obtained from seven of the patients.

In all 13 lesional specimens C_3 was present. Dermal blood vessels of varying size and at all depths of the dermis were involved in 11 and a granular pattern of deposition along the dermo-epidermal junction was also present in 11, though involvement of adjacent papillary vessels was observed in only three. At the periphery of the lesions, where inflammatory cell infiltrate was sparse or absent, C_3 was localised to endothelial cells which appeared undamaged. Towards the centres of the lesions, where inflammatory cell infiltrate was intense, C_3 was present both in the vessel walls, which showed varying degrees of disruption, and also as granular perivascular aggregates. C_3 was not detected in six of the seven control specimens of non-inflamed skin. However, in a localised area of one control specimen small amounts were detected on the endothelium of two adjacent vessels. We consider that this may have represented either a preclinical or a subclinical lesion.

Both IgM and IgA were detectable in the inflammatory exudate, both as extracellular and intracellular aggregates, in 11 out of 13 specimens of lesional skin. However, examination of serial sections has so far failed to produce evidence of immunoglobulin located at the same sites as C_3. Immunoglobulin was not found in any of the control specimens.

We have observed vascular deposition of C_3 as a regular and prominent feature of early inflammatory acne lesions. Since C_3 deposition appears to precede the development of the cellular infiltrate we consider that activation of the complement system may be important in initiating the inflammatory component of this disease. Although immunoglobulin is present in acne lesions, it is not found at the same sites as C_3 and it is not yet clear whether it participates in complement activation.

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[1] Smith, M A, and Waterworth, P M, *British Journal of Dermatology*, 1961, **73**, 152.
[2] Shehadeh, N H, and Kligman, A M, *Archives of Dermatology*, 1963, **88**, 829.
[3] Strauss, J S, and Pochi, P E, *Archives of Dermatology*, 1965, **92**, 443.

A case of asthma

SIR,—You do publish some pretty odd articles. Your "Clinics in General Practice" series recently featured a case of asthma (23 October, p 1003). The article in question seemed to me to exhibit almost everything that is wrong with modern teaching of medicine.

Either the child had asthma or he had not. He obviously had. Since there is no evidence that social circumstances influence the incidence of asthma all the talk about the family is just so much verbiage. It is conceivable that the family are of poor genetic make-up, but there isn't anything you can do about that either. All you then do is to focus the attention away from the uncomfortable disease to comfortable reflections on social background.

Why should the boy be referred to a hospital? Why should general practitioners delegate skin testing and peak flow meters to hospitals? Most keen, young GPs would want to do these investigations themselves, and referring them to hospitals merely impoverishes the content of general practice. What is the point of these useless pulmonary function studies at the hospital? These studies are useful for obtaining statistically valid data when comparing one drug against another, and they may be useful in obscure pulmonary diseases, but they do seem to me to be a waste of highly trained personnel and equipment in a straightforward case of juvenile asthma.

It is quite obvious that frequent attacks of asthma must initially be treated with disodium cromoglycate. The reason for that is simply that it is harmless. Since it is also effective it is the obvious first choice. The choice of this preparation is in practice not governed by the result of pulmonary function studies but by the clinical impression of the GP. Nor does social status influence the choice of this drug. Much more interesting would have been a discussion on whether the second choice should be a sympathomimetic amine or a steroid spray.

No doubt we are all in need of further education in general practice, but the woolly thinking behind the paper you published is not likely to give much encouragement.

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Caring for vagrants

SIR,—In your leading article "Caring for vagrants" (30 October, p 1027) you raise the question of special medical facilities for homeless people. The Lothian Health Board is to be commended for tackling this problem with real commitment. In England and Wales we have been working for three years to encourage area health authorities to take similar initiative in finding doctors (and nurses) to provide cover for hostel residents. In some cases this has involved making special arrangements, although we would ideally like to see general practitioners accepting homeless people on their lists in the usual way. This can be done either as temporary residents or even on a permanent basis; a government survey of hostel residents in 1972 found that a third of all residents had stayed in the same hostel for at least two years. It is partly because most GPs are reluctant to do this that health care has to be delivered in a "special" way. Doctors must be found to take on the residents of a specific hostel as a limited-list practice—this has happened in Liverpool, Nottingham, and Salford since our discussions with the DHSS led to the issue of a DHSS circular to family practitioner committees in 1975. There is, of course, a small number of stalwart GPs who have for many years accepted homeless people as patients in the normal course of their work.

In the case of the many young homeless people in London's West End, CHAR has some funds, but not enough, to open a long-awaited, much-discussed clinic in Soho. The DHSS has given CHAR £5000 to set up and run for one year a very minimal service in conjunction with the area health authority. We have had offers of premises, nursing staff, and funds to provide a social worker, but we need a further £3000 and a long-term funding commitment before the project can start.

For homeless people of all ages we are planning with the British Thoracic and Tuberculosis Association ways of improving tuberculosis services to hostels, which are one of the last remaining pockets of the disease in this country.