

epidemiological research, but here it is essential to give credit to the specialist epidemiologists who have been responsible for much of that research.

A factual error which could be corrected is that, since the 1974 NHS reorganisation, local authorities have not provided clinical services in the community; the community health services have, since that time, been under the umbrella of the National Health Service.

Finally, I would like to express the hope that any young doctor considering community medicine among his or her career options speaks to active community physicians to obtain enthusiastic, optimistic, and up to date ideas of what the speciality is all about.

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SIR,—I agree wholeheartedly with Professor Philip Rhodes's article on a career in community medicine that the job is fascinating, that it ought to attract some of the best intelligence in medicine because it is vital now and in the future, and that it is often misunderstood. I do not agree that it is about administration, that its main concern is with the interface of clinical medicine and the social environment, and that it may be a useful career for some women who may wish to work only part time. Furthermore, there are a number of inaccuracies in the description of the tasks of the community physician, the most serious one being the comment on clinical community medicine, which, contrary to the description, is part of the National Health Service and comes under the direct control of the community physician.

Community medicine is concerned with enhancing the overall health of communities—a formidable task. But if I were a young doctor trying to decide on my future the description of community medicine provided by Professor Rhodes would hardly inspire me to seek my future in the speciality. While not wishing to indulge in semantics—quibbling over the use of the terms of administration and management as the focus of community medicine practice—Sheps¹ makes a sharp distinction between management and administration, describing management as involvement in policy making and planning and defining administration as the day to day running of services. Whereas community physicians are not needed for the running of established services, they should be intimately and centrally concerned with policy making and planning if they are to effect positive change in the health of the population. Their training gives them the ability to partake in decision making at the most influential levels. They have a central position as members of management teams in influencing and changing the health of communities. They are concerned to identify the present health problems and anticipate the future, understanding the intricacies and ramifications entailed in applying solutions. They are concerned to develop and institute the means whereby health can be improved on a broad front. The role has far reaching implications and demands the highest intellectual calibre. Furthermore, to be a community physician requires the political skills of a Churchill, the detective powers of a Sherlock Holmes, the communication skills

of a Shakespeare, and the presentation abilities of a Gielgud. Is it any wonder that we are a shortage speciality?

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¹ Sheps C. *Higher education for public health*. New York: Milbank Memorial Fund Commission, 1976.

SIR,—If Professor Philip Rhodes (22 January, p 294) believes after nearly nine years that the community health services are still run by the local authorities then indeed community medicine has yet again been, to quote Professor Rhodes, misunderstood. It is unfortunate that so gross an error should appear in an article intended to guide young doctors. Perhaps Professor Rhodes could make amends by including in his series a paper on the structure and functioning of the National Health Service, in which he could describe, *inter alia*, the links between health and local authorities, including the advice given to the latter by community physicians.

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SIR,—Professor Philip Rhodes has performed a service to doctors in training with his series of articles on careers and the routes by which these careers may be achieved.

The penultimate paragraph of his article on 1 January (p 37) may, however, give rise to some confusion to potential general practitioners and anxiety to regional advisers. Doctors are encouraged to collect "statements of satisfactory completion of training" (VTR/2) (not certificates) at the end of each educationally approved post in hospital, signed by the supervising consultant, and authenticated by the hospital stamp. They should also obtain a statement (VTR/1) from their general practitioner trainer not sooner than one month before completing their training, which must be authenticated in the regional adviser's office. The responsibility for obtaining all these forms and submitting them to the joint committee rests with the applicant and not the regional adviser. The joint committee is normally able to issue its certificate quickly if these procedures are followed, although when equivalent experience is submitted the procedure may take longer. Those doctors who are exempt from the regulations need an exemption certificate from their last contracting authority.

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SIR,—Professor Philip Rhodes, in his otherwise excellent article on general practice (8 January, p 127) states: "You might have to undertake further hospital work, which may mean becoming a senior house officer after you have been a registrar, but it should then be possible to preserve your salary at the level of registrar or even senior registrar while you are being retrained for general practice." This is not so. Statement of Fees and Allowances 38.6(f) states: "Where the trainee has held an appointment as a registrar but has

subsequently been appointed as a senior house officer, for the purpose of his training, the maximum payment will be the rate appropriate to a last hospital post of second year registrar." The trainee of one of my constituents is presently £3000 a year out of pocket because he held the same belief as Professor Rhodes.

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Polyradiculitis associated with *Mycoplasma pneumoniae* reversed by plasma exchange

SIR,—Dr F E Cotter and others have recently reported a case of transverse myelitis and psychosis apparently caused by *Mycoplasma pneumoniae* which was reversed by plasma exchange (1 January, p 22). We would like to describe a case of polyradiculitis and brain stem affection in association with *Mycoplasma pneumoniae* infection, in which treatment by plasma exchange also had good effect.

The patient was a 30 year old previously healthy man who fell ill with cough, sore throat, fever, and myalgia in September 1982. About 10 days later he developed pain in the legs, back, and abdomen and had difficulties in micturition and impairment of hearing. Within two weeks flaccid paresis of the legs and weakness of the arms appeared, as well as bilateral facial paresis and difficulties in swallowing and breathing. He required intubation for two days but remained alert and orientated.

Culture of cerebrospinal fluid grew no pathogens; the number of leucocytes was $0.097 \times 10^6/l$ ($97 \mu l$), all of them mononuclear; and the protein concentration was 2.7 g/l (0.27 g/100 ml). The ratio of cerebrospinal fluid to serum IgG was raised, suggesting local immunoglobulin synthesis in the central nervous system. The electroencephalogram and computed tomogram of the brain were normal. Chest x ray film showed bilateral infiltrates. In the serum *M pneumoniae* complement fixation test the titre rose from 1/8 to 1/128, and no appreciable changes were seen in antibody titres to herpes simplex, varicella zoster, cytomegalovirus, adenovirus, influenza A or B, parainfluenza 1 or 3, mumps, measles, coxsackie B, or rotaviruses, or to toxoplasma, chlamydia, *Yersinia enterocolitica*, or *Listeria monocytogenes*. Also antistreptolysin-O, antistaphylolysin, teichoic acid, and Paul-Bunnell antibodies remained normal. Cultures and antibody tests for *Treponema pallidum* and *Neisseria gonorrhoea* were negative.

When the patient's condition deteriorated plasma exchange was begun. On five separate occasions within 10 days a total of 12 l of plasma was exchanged by membrane plasmapheresis. After the second treatment the clinical picture improved—for example, in the hand grip force—and before the end of the treatment the patient was able to sit and two weeks later he could walk. After nine weeks in hospital he was discharged in good condition despite a right sided facial paresis and weakness in the deep tendon reflexes.

Central nervous symptoms occur in about 2% of all infections due to *M pneumoniae*,¹ and as many as 4-5% of cases require admission to hospital.² These figures may be somewhat overestimated, however, owing to occasional non-specificity of the complement fixation test in extrapulmonary infections.³ According to a summary of cases published up to 1978 the commonest central nervous system manifestations associated with *M pneumoniae* are encephalitis, polyradiculitis, and aseptic meningitis,² and the mortality has been as high as 10%. Most deaths and permanent neurological deficits have been due to encephalitis

and polyradiculitis, whereas aseptic meningitis has invariably had a benign course. Thus vigorous treatment is needed in cases of encephalitis and polyradiculitis, and, as shown by the present case and that described by Dr Cotter and others, plasma exchange may be the method of choice.

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¹ Noah ND. *Mycoplasma pneumoniae* infection in the United Kingdom 1963-73. *Br Med J* 1974;ii:544-6.

² Pönkä A. Central nervous system manifestations associated with serologically verified *Mycoplasma pneumoniae* infection. *Scand J Infect Dis* 1980;12:175-84.

³ Pönkä A, Pönkä T, Sarna S, Penttinen K. Questionable specificity of *Mycoplasma pneumoniae* complement fixation test in patients with extra-pulmonary manifestations. *J Infection* 1981;3:332-8.

Failure patterns after total hip arthroplasty

SIR,—Mr John E Nixon's suggestion (15 January, p 166) that trochanteric osteotomy increases blood loss and operative time is unfounded¹; it does, however, avoid complications associated with inadequate exposure. A review from this unit showed that out of 14 672 Charnley low friction arthroplasties dislocation occurred in 92 and only 16 required revision.² It is heartening to report that of nearly 18 000 operations performed since November 1962 only 730 had to be revised—a revision rate of just over 4% over 20 years. With improvements in the design and technique, introduced as a result of long term studies, the revision rate should be reduced still further.

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¹ Del Sel H, Brittain G, Wroblewski BM. Blood loss and operation time in the Charnley low friction arthroplasty. *Acta Orthop Scand* 1981;52:197-200.

² Fraser GA, Wroblewski BM. Revision of the Charnley low friction arthroplasty for recurrent or irreducible dislocation. *J Bone Joint Surg* 1981;63B:552-5.

SIR,—Mr J E Nixon (15 January, p 166) mentions thromboembolism as the most serious medical postoperative complication. There is increasing evidence that the type of anaesthetic used for hip surgery may contribute to the incidence of postoperative thromboembolism.

In a comparative study of spinal and general anaesthesia for surgical correction of fractured neck of femur McLaren *et al*¹ showed a 31% postoperative mortality after four weeks in the general anaesthesia group compared with 3.6% in the spinal group. The causes of death were usually pulmonary embolism or bronchopneumonia.

The incidence of thromboembolism after major hip surgery has been studied by Modig (European Society of Regional Anaesthesia, Edinburgh, September 1982. Abstracts p 42-3). Patients requiring total hip replacement were randomly allocated to receive either epidural or general anaesthesia. The epidural was prolonged for 24 hours to provide initial postoperative analgesia. Patients in the general anaesthesia group received on demand narcotics for pain relief. No prophylactic anticoagulants were given. The incidence of deep

vein thrombosis in calf and thigh veins was studied by phlebography, and the incidence of pulmonary embolism was determined by pulmonary perfusion lung scanning. In the general anaesthetic group 77% of the patients had deep vein thromboses and 33% pulmonary embolism. In the epidural group 40% had deep vein thrombosis and 10% pulmonary embolism. The differences were significant. In addition, the general anaesthetic group had much larger deep vein thromboses.

Further studies are urgently needed to ascertain whether the continued use of general anaesthesia for major hip surgery can be justified.

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¹ McLaren AD, Stockwell MC, Reid VT. Anaesthetic techniques for surgical correction of fractured neck of femur. A comparative study of spinal and general anaesthesia in the elderly. *Anaesthesia* 1978;33:10-4.

SIR,—Mr John E Nixon (15 January, p 166) assumes that total hip replacements will for the next 10 or 15 years involve the acceptance of acrylic cement by living tissue.

Since 1975, however, European surgeons have been using a "cementless" total hip replacement, and Professor G A Lord in Paris has experience of some 1200 cases (paper presented to the American Orthopaedic Association, Boston, 1981). Similar work in North America was delayed by strictures of the Food and Drug Administration, but the Madroporique (a name derived from the French for coral) system has been used by Dr D Ellis at Nanaimo, western Canada. Early results have been reported in the UK.¹ Although the long term failure rate of this method is unknown, it will obviously be unrelated to cement acceptance.

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¹ Kaye G. The cementless total hip arthroplasty. *Physiotherapy* 1982;68:394-8.

Reduced sinus arrhythmia in diabetic autonomic neuropathy

SIR,—Age is an important determinant of the magnitude of respiratory sinus arrhythmia.¹ In her study on reduced sinus arrhythmia in diabetic autonomic neuropathy Dr S A Smith (4 December, p 1599) reports on the arrhythmia assessed from one deep breath² rather than that based on the average of six consecutive breaths.¹

We measured the magnitude of the inspiration-expiration difference¹ in 43 diabetic patients at 9 and 11 am on the same morning. We calculated the inspiration-expiration difference of one² and six consecutive respiratory¹ cycles (see table). The inspiration-

expiration differences of one and six cycles were almost identical both at 9 and 11 am. The coefficient of variation of one cycle, however, was much higher than the coefficient of variation of six cycles. We also reanalysed the normal range in 133 healthy subjects previously studied by us.¹ We found a much wider scatter of values for the inspiration-expiration difference based on one instead of the average of six cycles.

We suggest, therefore, that the average of six and not one cycle should be used in screening for vagal neuropathy in diabetic patients. There is much to be learnt about factors that influence the tests measuring vagal control of heart rate not related to damage of autonomic nerves.³ Hence we propose that a combination of tests is used to establish vagal neuropathy in diabetic patients.¹

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¹ Wieling W, Brederode JFM van, Rijk LG de, Borst C, Dunning AJ. Reflex control of heart rate in normal subjects in relation to age: a data base for cardiac vagal neuropathy. *Diabetologia* 1982;22:163-6.

² Bennett T, Farquhar IK, Hosking DJ, Hampton JR. Assessment of methods for investigating autonomic nervous control of the heart in patients with diabetes mellitus. *Diabetes* 1978;27:1167-74.

³ Borst C, Wieling W, Brederode JFM van, Hond A, Rijk LG de, Dunning AJ. Mechanism of initial heart rate response to postural change. *Am J Physiol* 1982;243:H676-81.

New thoughts for the Health Education Council

SIR,—I am assured and would in any case have expected that you practise responsible journalism, and I find much in the leading article on the Health Education Council (18 December, p 1761) that indicates your concern for the health of the nation. You choose smoking and alcohol abuse as your targets, to which nearly everyone interested in health education would give top priority. You point to the obvious allies for the council—the health professionals and the politicians. You urge us to court and use the media. If you had had the privilege, as I have, to be part of the council's work for nearly five years you would know that practically everything you urge is a matter for daily concern and action at the council's headquarters.

What disappoints, indeed depresses, me most about your article is that it illustrates a very superficial knowledge of the council's work, its objectives, and how it tries to reach them. It is unjust to make such sweeping judgments when you do not appear to have informed yourself. Even a cursory reading of the council's annual reports and a glance at a booklet on the council's programmes of work would have widened your knowledge.

I could give a tediously long list of the council's endeavours and achievements in the

Inspiration-expiration differences of one and six respiratory cycles

	9 am	11 am	p	Coefficient of variation
Resting heart rate	78 (55-95)	73 (57-82)	p < 0.001	—
Inspiration-expiration differences (average six cycles)	20 (2-48)	20 (1-44)	NS	9 %
Inspiration-expiration difference (one cycle)	22 (1-54)	21 (1-49)	NS	19 %

Results (in beats/min) expressed as median with range in parentheses.