who wear prescription glasses protective eye wear has not presented a problem. Most of my colleagues have bought clear glass spectacles because the perspex goggles provided by the department distort vision. Gowns are now worn for all invasive procedures (except peripheral venepuncture).

We adhere to the precautions laid down in the policy document for all patients coming to our operating rooms. Although the occupational risk of HIV infection seems to be low, if transmission of HIV did occur during normal professional activity without reasonable precautions being taken employer compensation and insurance would be invalid. The moral of the modern era of health care is to take precautions against transmission of HIV.

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Psychiatrists in the 1990s

SIR,—Dr Glin Bennet (23 January, p 274) suggests that psychiatrists can contribute most to community mental health teams by a return to their medical roots, and I agree with much that he says.

But Dr Bennet addresses his comments to "ordinary psychiatrists" suggesting that "we now have a new generation of neuropsychiatrists and psychogeriatricians . . . who have a clear role in aspects of psychiatry which make use of medical skills." Psychogeriatrics may indeed be a growing subspecialty, but neuropsychiatry is almost non-existent. Dr Bennet's idealised view may come from his proximity to the Burden Hospital, where three of the handful of designated neuropsychiatrists in Britain are to be found.

Neuropsychiatry is given a very low priority in training schemes, with only two of the 325 higher training posts in adult mental illness, and it is almost never considered in the creation of new consultant posts. Like biological psychiatry, neuropsychiatry does not have section status in the Royal College of Psychiatrists.

The 1990s may bring great changes in our understanding of the organic basis of some psychiatric conditions. Unless we claim our medical heritage and make use of our training and skills we may find ourselves treating a dwindling cohort of functional disorders, while striving to "maintain our usefulness" as the most expensive members of mental health teams.

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SIR,—I disagree with Dr Glin Bennet's notion that the position of the doctor at the head of the mental health team is under serious threat (23 January, p 274).

A consultant psychiatrist remains the logical choice because of the amount of experience and skill gained during the 12 years or so it takes to reach that grade. It could be argued that the first half of this time is spent learning to be a doctor, while the second half is spent unlearning aspects of the role, but the training is not negligible. Furthermore, much continuity and consistency of philosophy and practice is ensured because this member of the multidisciplinary team will not be rewarded for success with promotion away from clinical work, unlike those in other disciplines, who can look forward to being managers or (undisciplined) team leaders, ensuring that their skills diffuse away from the direct care of mentally ill people.

The trend towards psychiatric treatment that is not purely medical could be taken as posing a threat to the doctor. Good psychiatric training, however, emphasises the triad of physical, psychological, and social factors in mental illness and its treatment, so that the doctor is in a good position to coordinate a multidisciplinary team. For major psychiatric illness—severe depression and schizophrenia, for instance—physical treatments are often a prerequisite for further psychosocial management. Few psychiatrists cannot have been touched by the advances in psychodynamic and behavioural therapies and in social psychiatry over the past 25 years, so a balanced approach is increasingly likely. I therefore found Dr Bennet's warning not to "retreat back into the medical model" at odds with his advice to "keep up with your general medicine."

Finally, at least some psychiatric training is geared to the needs of the exciting expansion in community psychiatry. I am presently in an experimental post acting to all intents and purposes as a general practitioner trainee. This is providing a fascinating perspective on the interface between primary and specialist psychiatric care. Psychiatrists are necessary but not sufficient on their own to provide good mental health care, and their role is guaranteed in the 1990s as long as this interface is kept in view.

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Cocktail stick injury: a fatal outcome

SIR,—Three cases of injuries due to cocktail sticks have recently been reported by Mr C Rand (19-26 December, p 1658). We report a fourth case with a fatal outcome. There is no previous record of this occurrence.

A 38 year old man was admitted to the casualty department at Selly Oak Hospital with sudden onset of abdominal pain associated with profuse haematemesis while travelling in a car with his wife driving. On admission he was awake but confused and pale and had no recordable blood pressure. A rapid transfusion of blood was given and intubation attempted, but the larynx and cords could not be visualised owing to blood clots. In spite of all attempts at resuscitation he died 10 minutes later. His wife said that he had been complaining of pleuritic chest pain for a week and he had been given naproxen and erythromycin by his general practitioner. He had no history of a peptic ulcer.

At necropsy the most striking findings were in the chest. The oesophagus contained mucus

streaked with blood, and in its lower part, close to the cardio-oesophageal junction just above the diaphragm, half a cocktail stick about 4 cm long was impacted. The sharp point of the stick had penetrated through the oesophageal wall and into the adjacent aorta, into which it protruded by about 0.2 cm (figure). There was thrombus surrounding the stick at the site of penetration and a small quantity of thrombus between the aorta and the oesophagus. The stomach was markedly dilated and contained fresh blood clots weighing 1100 g. The small intestine was filled with blood, which was fresh in the upper part and altered in the lower part and extended to the ileocaecal valve. There was no blood in the colon. All other organs were normal. The cause of death was perforation of the oesophagus and aorta by a swallowed foreign body—half a cocktail stick. The coroner recorded a verdict of death by misadventure.

At the inquest the wife stated that on Christmas Day she and her husband were eating sausages wrapped in a piece of bacon secured by half a cocktail stick. The sticks were difficult to see and she herself found one in her mouth and removed it. Her husband jokingly said he must have swallowed his. This incident was not mentioned to the general practitioner, and at no time during the 10 days before death did the patient complain of dysphagia. A chest radiograph ordered by the general practitioner was normal but a cocktail stick would not be visualised on radiography. The patient's rapid deterioration would appear to have been due to torrential haemorrhage from the aorta at the point of penetration by the sharp end of the cocktail stick.

We thank Mr S K Banerjee for permission to report this case and Miss Robin Giles for the photograph.

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The need to make rugby safer

SIR,—We write as honorary medical advisers to our respective rugby unions and members of the medical committee of the International Rugby Football Board.

We were disappointed in your leading article by Drs H C Burry and C J Calcinaï (16 January, p 149), the medical advisers to the New Zealand Rugby Football Union, although they appear to write from the Accident Compensation Cor-

The sharp point of the cocktail stick has penetrated into the wall of the aorta (arrow).

poration in Wellington. The information they review should properly have been presented in March 1988 to the International Rugby Football Board as part of a balanced review comparing the New Zealand law modifications (minimising the duration and mobility of the scrum) in their junior rugby with the law changes introduced world wide two seasons ago affecting the formation and posture of the front rows of the scrum. These latter changes in the laws apply to junior and senior New Zealand rugby. They do not state whether there have been any serious neck injuries in senior rugby in New Zealand during the period on which they report. The application of an Australian court judgment on rugby league to rugby union seems illogical, and we are in no position to comment on either rugby league or the law.

The International Rugby Football Board and its member unions are acutely aware of the problems of serious neck injuries and have, through their medical committees, collected detailed information on the frequency and cause of these injuries and have made recommendations about prevention. As a result law changes have been introduced and their benefits continue to be analysed and some of them have been reported by Drs Burry and Calcinai. Detailed advice about the choice of players for the front row of the scrum has been issued to all rugby coaches in conjunction with specific advice on neck and shoulder girdle strengthening exercises.

The medical profession and medical advisory committees working with national rugby football unions and the International Rugby Football Board have made major advances in recognising, preventing, and managing serious injuries in rugby. This process will continue only if the messages from our profession to rugby administrators are presented in a clear and balanced manner, reviewing all relevant factors and eliminating extraneous material.

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AUTHORS' REPLY.—We wrote not as members of the Accident Compensation Corporation (which Mr Calcinai is most certainly not), nor as members of the medical advisory committee of the New Zealand Rugby Football Union, but as concerned private individuals.

Messrs Macleod and Pattison are well aware that these facts were presented at the 1986 medical advisory meeting of the International Rugby Football Board. The updated information has been published and we expect that the matter will be discussed again at the 1988 meeting. We can only hope that the response on that occasion will be more positive.

Since the article was written a senior New Zealand provincial player, while playing under current international laws, fractured his cervical spine as a scrum formed. At least one similar injury occurred in Australia in 1987. It is reasonable to conclude that the current international laws are still not adequate from a safety viewpoint. Despite your correspondents' assertion to the contrary, no reliable epidemiological data are available on cervical spinal cord injury other than the New Zealand survey to estimate the true magnitude of the problem. Our survey has detected only the most severe injuries, those of temporary or permanent cord damage. We have no knowledge of how many front row forwards damage their cervical spines without cord damage but none the

less suffer severe symptoms and disability in later life.

It is true that in some countries advice on choice and conditioning of front row players has been disseminated. This is laudable but is clearly insufficient to prevent injury if the activity is inherently unacceptably hazardous.

The appropriateness of extrapolating a legal principle and precedent from one sporting code to another seems so obvious that no further comment or justification is required.

Finally, it is difficult to escape the conclusion that Messrs Macleod and Pattison believe that the editor of the *British Medical Journal* has elected to print a paper which contained unclear, unbalanced, and extraneous material. We can only feel grateful that the editor took a different view.

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Gas exocrine "failure" in the critically ill

SIR.—In their paper on gastric exocrine failure in the critically ill (16 January, p 155) Mr V A Stannard and others observed a high gastric pH in the absence of H_2 antagonists yet do not comment on the method used to measure pH.

We are investigating the relation between gastric pH and the bacterial content of gastric aspirate using a miniaturised pH probe. Near continuous recording—sampling at 16 second intervals—shows a fluctuation of up to 2.3 pH units from the baseline. This change in pH takes only a few minutes in some patients. From our experience pH in two hourly collections of gastric aspirate may correlate with mean probe pH during the entire period of fluid collection, but it is a poor reflection of instantaneous probe pH. Our impression is that gastrointestinal motility may help to explain both short and long term fluctuations in pH, a possibility which is now being explored.

Other authors have described an apparent association between the use of H_2 antagonists and subsequent colonisation of the ventilated airway,¹ where stomach contents may act as a bacterial reservoir. The substitution of H_2 antagonists with sucralfate, an antiulcer agent which has no significant effect on gastric pH, has been shown to reduce airway colonisation and ventilator associated pneumonia.²

If the role of hypotension is confirmed in the pathogenesis of "stress" ulcers the use of alternative prophylactic treatments that do not disrupt the antibacterial effect of gastric secretions may result in a decreased incidence of ventilator associated pneumonia.

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- 1 du Moulin GC, Paterson DG, Hedley-Whyte J, Lisbon A. Aspiration of gastric bacteria in antacid-treated patients: a frequent cause of postoperative colonisation of the airway. *Lancet* 1982;ii:242-5.
- 2 Driks MR, Craven DE, Celli BR, et al. Nosocomial pneumonia in intubated patients given sucralfate as compared with antacids or histamine type 2 blockers. *N Engl J Med* 1987;317:1376-82.

Cost of prophylaxis in joint replacement

SIR.—The article by Mr Ulf Persson and others (9 January, p 99) on the economics of prophylaxis against infection in total hip replacement indicated a rational financial basis on which measures may be selected and strengthens the case for the wider

adoption of surgical enclosures. Despite long-standing evidence for their benefits we found in a survey of orthopaedic surgeons in Scotland¹ that only 19% had access to ultraclean air facilities, which had been provided in only three centres.

In their use of systemic antibiotics, although most surgeons employed prophylactic regimens for primary arthroplasties which would be expected to be effective, the chosen duration and timing were often more appropriate to a treatment policy than to prophylaxis (34% started treatment before the day of surgery and 38% continued for longer than 24 hours postoperatively). Longer periods of administration are no more effective than short term cover and clearly increase the chances of side effects as well as being more costly.^{2,3} We found that "prophylactic" costs ranged from £5 to £22.50. Over two thirds of the systemic antibiotic regimens in use could be made more cost effective without loss of efficacy by more accurate timing and limiting the duration of administration.

In 1983 we found six revisions for deep infection and 18 for mechanical loosening in a year when 216 primary hip replacements were performed. We have also noted a progressive rise in the number of revision arthroplasties from 10 per year in 1970-4 to 22 per year in 1981-5. As the pool of primary arthroplasties enlarges the number coming to revision will inevitably increase.

A previous assessment of the cost of a primary hip arthroplasty indicated that 90% of the £2427 total was due to the cost of hospitalisation.⁴ The revision joint replacements in the same period entailed more than double the length of hospital stay and increased costs with, for example, systemic antibiotic costs from £8.70 to £80 per patient. Thus our estimated cost for a revision is of a similar magnitude to that of Mr Persson and colleagues, and their conclusions would seem as valid in our area as in Sweden.

The case for greater provision of surgical enclosures should be put to those responsible for deciding priorities in health spending, and surgeons should review their antibiotic policies.

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- 1 Wilson NIL. A survey in Scotland of measures to prevent infection following orthopaedic surgery. *J Hosp Infect* 1987;9: 235-42.
- 2 Pollard JP, Hughes SPF, Scott JE, et al. Antibiotic prophylaxis in total hip replacement. *Br Med J* 1979;ii:707-9.
- 3 Nelson CL, Green TG, Porter RA, Warren RD. One day versus seven days of preventative antibiotic therapy in orthopaedic surgery. *Clin Orthop* 1983;176:258-63.
- 4 Dreghorn CR, Roughneen P, Graham J, Hamblen DL. The real cost of joint replacement. *Br Med J* 1986;292:1636-7.

False negative colposcopic cervical biopsy

SIR.—We were surprised to read of the high number of false negative results of colposcopically directed cervical biopsies recorded by Dr Paul Byrne and others (16 January, p 172). Presumably all were from women with abnormal cytological findings and a colposcopically visible lesion. Although we are not given the total number of cases from which the 132 reported arise, it is assumed to be important enough to warrant reporting.

Several explanations for these results were considered. We suspect that another possibility is that the reporting pathologist either does not recognise or does not think it necessary to report the sometimes subtle changes of minimal change human papillomavirus infection.^{1,4} In our unit, with 3500 colposcopically directed cervical biopsies