and especially in KwaZulu, the Zulu homeland, we have an extreme shortage of medical staff. The KwaZulu Department of Health has divided itself into six regions, each of which contains about five wards centred on their own hospital. Specialists are based at the regional hospitals but are encouraged to visit the ward hospitals for teaching and to provide services. The ward hospitals are rural. Around each ward hospital is a network of residential clinics staffed by nurses trained in primary health care. Patients with conditions beyond the nurses' competence are referred to the ward hospital for care. Rural hospitals are therefore very much part of the community, and a good rural physician can have considerable contact with the local people.

Because the rural hospitals are up to 200 km from the regional hospital the doctors staffing them are general practitioners in the true sense and have great clinical responsibility. Rural doctors also manage the hospital. Our department's policy is to allow management to be done by the local team of medical superintendent, matron, and administrator. This gives the physician additional opportunities to develop programmes of care and even research programmes. The physician can also learn the art of management.

I would like to appeal to young recently qualified doctors and to older doctors (who in South Africa are highly valued and do not retire at 60) to come to KwaZulu to work. Many of my colleagues are in their 70s, and I am sure that their continued work stimulates them and keeps them young in spirit. Anyone interested can contact me at Private Bag X 10, Ulundi 3838, or by facsimile (0358 202439). All letters will receive a personal reply.

D ROBERTS
Secretary for health

KwaZulu Department of Health,
Private Bag X 10,
Ulundi 3838,
South Africa

1 Chambers R. Avoiding burnout in general practice. *Br J Gen Pract* 1993;43:442-3.

Management of acute symptomatic hyponatraemia

EDITOR,—Christopher Heneghan and colleagues discuss the management of hyponatraemia during transurethral resection of the prostate.¹ Having been a urologist throughout my career, since my retirement I have acted as reviewer for legal assessment firms. I have been impressed by certain recurring patterns that may be important.

Acute hyponatraemia after transurethral resection of the prostate is known to increase with the duration of the operation, which, with experienced operators, usually implies excessive venous bleeding that has been resistant to control. In many such cases in which litigation is threatened, a careful examination of the case notes reveals a record, sometimes tucked away in the nurse's or house officer's history, that the patient is taking daily aspirin. Absence of a note does not rule this out. Daily aspirin can be fatal. If the irrigant used contains mannitol or sorbitol (seldom nowadays) and the hyponatraemia is not immediately remedied, pulmonary oedema often follows. Cerebral oedema and renal failure ensue often.

Faced with the early signs of distress mentioned by Heneghan and colleagues, a wise urologist immediately gives hypertonic saline. Not much is needed to produce dramatic improvement. Unfortunately, in panic, some surgeons do turn not to fellow urologists for advice but to "internists," who are adept at treating chronic hyponatraemia as it is a familiar problem to them. This is physiologically a different condition, for which they often advocate use of diuretics. In acute

hyponatraemia the delay in treatment often leads to an unfortunate outcome and devastating litigation in the United States. Ask about aspirin before surgery.

D T H PAINE

Georgetown, SC 29440, USA

1 Heneghan C, Goldrick P, Pham H. Management of acute symptomatic hyponatraemia. *BMJ* 1994;308:203. (15 January.)

Emergency radiography of the ankle

EDITOR,—D O'Keeffe and colleagues give advice on emergency radiology of the ankle.¹ Recent work by Stiell *et al* has greatly refined the indications for x ray examination of patients who have injured their ankle.^{2,3} The guidelines resulting from Stiell *et al*'s studies (that is, obtain an x ray film in patients unable to bear weight for four steps both immediately and in the emergency department or with bony tenderness at the posterior edge or tip of either malleolus—though there are exclusions) are clear, brief, and thus easily remembered and readily used by doctors and nurses assessing the need for x ray examination of the ankle.

Implementation of the guidelines in an audit project in my department has reduced the percentage of patients with ankle injuries undergoing radiography of the ankle by an estimated 28%. The authors claim a 100% sensitivity for their selection criteria, and this is supported by our experience over the 11 months we have used the criteria.

Radiography of the ankle is common in accident and emergency departments, and the refinement of selection criteria clearly benefits patients, budget holders, and junior doctors trying to learn a lot in a short time.

A M T GOOD
Senior registrar

Accident and Emergency Department,
Royal Liverpool University Hospital,
Liverpool L7 8XP

- 1 O'Keeffe D, Nicholson DA, Driscoll PA, Marsh D. ABC of emergency radiology: the ankle. *BMJ* 1994;308:331-6. (29 January.)
- 2 Stiell IG, Greenberg GH, McKnight RD, Nair RC, McDowell I, Worthington JR. A study to develop clinical decision rules for the use of radiography in acute ankle injuries. *Ann Emerg Med* 1992;22:384-90.
- 3 Stiell IG, Greenberg GH, McKnight RD, Nair RC, McDowell I, Reardon M, *et al*. Decision rules for the use of radiography in acute ankle injuries. Refinement and prospective validation. *JAMA* 1993;269:1127-32.

Infant death and consanguineous marriage

EDITOR,—The finding of a higher infant mortality in Pakistani immigrants than in the indigenous population in Norway¹ is similar to the findings of the Yorkshire infant mortality study, which took place for 22 months from 1 April 1991.² Analysis on ethnic group was carried out for the nine districts for which denominators were available—namely, Airedale, Bradford, Calderdale, Dewsbury, Harrogate, Huddersfield, Leeds, Scunthorpe, and York. These districts had a total of 65 680 births in the 22 months, of which 6933 were to Asian mothers, mostly of Pakistani origin.

The overall postperinatal mortality was 7.36/1000 for Asians and 4.06/1000 for non-Asians. This difference resulted mainly from the higher incidence of congenital and metabolic abnormality among Asians, although deaths from perinatal problems were also more common (table). These figures do not include deaths in the first week of life, which are likely to have accentuated these differences. We did not collect data on consanguinity, but autosomal recessive conditions were

Postperinatal mortality in white and Asian infants

	White		Asian	
	Rate/1000 live births	95% Confidence interval	Rate/1000 live births	95% Confidence interval
Perinatal factors	0.599	0.412 to 0.841	1.587	0.792 to 2.837
Congenital abnormalities	0.835	0.611 to 1.113	3.173	1.990 to 4.800
Metabolic disorders	0.054	0.011 to 0.159	0.865	0.318 to 1.883

relatively common among Asian families. This is being examined in more detail by a study in Bradford in conjunction with the National Perinatal Epidemiology Unit.

After the recent fall in the incidence of the sudden infant death syndrome we suggest that the next major reduction in infant mortality in populations that include a high proportion of Pakistani families may be achieved by greater emphasis on and acceptance of genetic counselling and antenatal diagnosis. As in previous reports,^{3,4} we found the sudden infant death syndrome to be much less common among Asian than white infants (0.14/1000 live births v 1.25/1000). This, together with the greater frequency of metabolic abnormality in Asian families, suggests that when an Asian baby dies unexpectedly metabolic investigation is particularly important.

CHRISTOPHER BACON
Consultant paediatrician

Friarage Hospital,
Northallerton

PAUL FRYERS
Assistant statistician

Yorkshire Health,
Harrogate HG1 5AH

- 1 Orstavik KH, Lindemann R, Steen J. Infant death and consanguineous marriage. *BMJ* 1994;308:659. (5 March.)
- 2 Yorkshire Regional Health Authority. *Report of regional confidential enquiry into infant mortality*. Harrogate: Yorkshire RHA (in press).
- 3 Balarajan R, Soni Raleigh V, Botting B. Sudden infant death syndrome and post-neonatal mortality in immigrants in England and Wales. *BMJ* 1989;298:716-20.
- 4 Kyle D, Sunderland R, Stonehouse M, Cummins C, Ross O. Ethnic differences in incidence of sudden infant death in Birmingham. *Arch Dis Child* 1990;65:830-3.

Haematuria clinics

EDITOR,—In their editorial on haematuria clinics Philip Marazzi and Roger Gabriel¹ comment on our study of a haematuria clinic² and raise two points on which we would like to comment. Firstly, they comment on the apparent absence of urinary infections in 105 patients with prostatic hyperplasia and cancer, urolithiasis, and urethral stricture. We considered urinary tract infections in these patients to be secondary to those conditions and did not report them separately. In fact, seven of these patients had urinary tract infections proved on culture, and many had received antibiotic treatment from their general practitioner before coming to our clinic.

Secondly, we agree that widespread dipstick testing of urine in general practice can overload haematuria clinics such as ours. We studied the activity of this clinic for the two months July and August 1993 (that is, two years after the end of the period reported in our previous study). In this time 28 patients attended the clinic. Eight (29%) had microscopic haematuria, compared with 53 (17%) of 304 patients in the earlier period. Not surprisingly, the proportion with no demonstrable pathological finding on investigation was higher in the second period. In our earlier study we reached no diagnosis in 61 (20%) of the 304 patients, while in the second period this proportion had risen to 13 (46%) of the 28 ($P < 0.01$, χ^2 test). The aim of our haematuria clinic was to expedite the investigation