American Society of Anaesthesiologists' (ASA) grade system (ASA I, healthy patient; ASA II, mild systemic disease; ASA III, severe, non-incapacitating systemic disease; ASA IV, severe, incapacitating systemic disease which is a constant threat to life; and ASA V, moribund patient, not expected to live for 24 hours with or without surgery) abnormal values were found in 1.5% of patients in grade I, 17% in grade II, 35% in grade III, and 48% in grades IV and V.¹ In addition, most abnormal values in patients in grade II were minor and not clinically important. Therefore patients in grades I and II do not need routine estimations of urea and electrolyte concentrations whereas those in grades III, IV, and V do, as the results are much more likely to be abnormal.

I therefore suggest that this grading system, which could be easily learnt by junior medical staff, would be more appropriate than age as an indicator of the need for biochemical screening preoperatively.

GARY McCLEANE

Department of Anaesthetics,
Altnagelvin Hospital,
Londonderry,
Northern Ireland

1 McCleane GJ. Urea and electrolyte measurement in preoperative surgical patients. *Anaesthesia* 1988;43:413-5.

We agree with Drs Ian T Campbell and Peter Gosling (1 October, p 803) that routine preoperative biochemical screening is unnecessary and not cost effective in patients under 50. Blood tests by either venepuncture or finger pricking can be an unpleasant part of any hospital stay, but this is especially so in children, and we have specifically examined the value of routine preoperative blood tests in paediatric orthopaedic practice at the Royal Liverpool Children's Hospital, Alder Hey.¹ One of our conclusions was that preoperative estimation of serum urea and electrolyte concentrations and full blood counts are unnecessary in healthy children. Out of 346 patients admitted for elective operation, 28 (8.1%) underwent estimations of serum urea and electrolyte concentrations. Two had abnormal results, both patients who had developed renal failure. We also agree that the inexperience of junior staff is often an important factor in unnecessary, excessive blood testing. As it is unlikely that our specialty is alone in this respect we strongly urge other operators on children to review their policies.

M JONES

Royal Liverpool Children's Hospital,
Alder Hey,
Liverpool L12 2AP

I HARVEY

Chester Royal Infirmary,
Chester CH1 2AZ

1 Jones MW, Harvey IA, Owen R. Do children need routine preoperative blood tests and blood cross matching in orthopaedic practice? *Ann R Coll Surg Engl* (in press).

Drug Tariff increases

I sympathise with Dr J D Beale (15 October, p 981), who throws away his new copy of the *Drug Tariff* every month, and I agree that this is a shameful way to waste the nation's money. Dispensing doctors such as myself, however, make frequent use of the *Drug Tariff*, and we welcome its new format and monthly publication. Dr Beale may find one or two copies a year adequate for his needs, but I would prefer to receive monthly copies as at present. I suggest, as a compromise, that a single copy of the *Drug Tariff* should be sent monthly to every practice rather than to every general practitioner. Large non-dispensing practices would receive sufficient copies for each doctor to have one or two a year, whereas small

dispensing practices would continue to receive the up to date information that they require.

M I ARCHER

King's Lynn,
Norfolk PE32 1BT

Children and apartheid

Dr R J Kobrin's reply (24 September, p 795) to Dr Naomi Richman's article (13 August, p 495) confuses the role of a white South African doctor with that of a white South African man.

As a doctor he has chosen to work in that country and apparently treats patients of all races. He has, however, chosen also to live in South Africa, and therefore, as a white man, he enjoys the fruits of the apartheid based political and social system.

Many white South African doctors did not choose that path. Nor did they wish to be jailed, or worse, for opposing the system. They can now be found in their thousands in the United Kingdom, the United States, Canada, Israel, Australia, and New Zealand.

Dr Kobrin might not agree with their view that imperatives as a human being take precedence over calling as a doctor. It is this perspective, however, that underlies support for Dr Richman's argument.

PETER ARNOLD

New South Wales 2030,
Australia

Points

Does wearing two pairs of gloves protect against skin contamination?

Mr A W FOWLER (Bridgend General Hospital, Bridgend, Mid Glamorgan CF31 1JP) writes: Dr H Matta and colleagues (3 September, p 597) report that surgeons wearing two pairs of gloves punctured 18% of the outer gloves and 4.5% of the inner gloves. A logical extension of protection with two pairs of gloves is to apply a layer of povidone-iodine surgical scrub between the gloves. This will ensure sterilisation of the needle point before it penetrates the second glove. The detergent basis of the surgical scrub facilitates the application of the second glove.

Maternal age, illegitimacy, and postneonatal mortality

Dr I F GREATOREX (Salford Health Authority, Peel House, Manchester M30 0NJ) writes: The paper by Drs R R Gordon and R Sunderland (24 September, p 774) provides further confirmation of the association between illegitimacy at birth and subsequent paediatric mortality. In Salford in 1986, 1214 of the 3330 (36%) live births were illegitimate. Because the number of illegitimate births is so high this proportion has been used as an indicator of inequalities in health among the 20 electoral wards within the district. For example, in 1986 in the worst ward 66% of births were illegitimate compared with only 10% in the best ward. Although the social stigma of illegitimacy has decreased in recent years, illegitimacy may still be a useful indicator in helping health authorities to plan the provision of preventive child health services.

Non-steroidal anti-inflammatory drugs and peptic ulceration

Dr RICHARD LOGAN (University of Nottingham Medical School, Nottingham NG7 2UH) writes: Drs M P Skander and F P Ryan show (1 October, p 833) that in patients referred for endoscopy peptic ulceration associated with non-steroidal anti-inflammatory drugs tends to be silent until bleeding or anaemia occurs. Their findings confirm what has been found by others.¹ The authors then suggest that these drugs mask the pain and other dyspeptic symptoms of peptic ulceration. A more likely explanation for their findings is that they are the result of a diagnostic referral bias. Dyspeptic symptoms often develop soon after

patients start taking such a drug. Many patients recognise that the drug is causing their symptoms and stop taking it of their own accord; others report their symptoms to their general practitioner, who then recommends that they stop. Unless their symptoms persist most of these patients will not be referred for investigation.² Bleeding and perforation therefore tend to occur in patients who can take such drugs without developing dyspeptic symptoms severe enough for the drugs to be stopped.

1 Armstrong CP, Blower AL. Non-steroidal anti-inflammatory drugs and life threatening complications of peptic ulceration. *Gut* 1987;28:527-32.

2 Steele K, Mills KA, Gilliland AEW, Irwin WG, Taggart A. Repeat prescribing of non-steroidal anti-inflammatory drugs excluding aspirin: how careful are we? *Br Med J* 1987;295: 962-4.

Depression resistant to tricyclic antidepressants

Dr FREDERICK W ENGSTROM (Mental Health Department, Park Nicollet Medical Center, Minneapolis, Minnesota 55416, United States) writes: Dr P J Owen (13 August, p 435) pointed out that up to one third of patients with major depression either fail to respond or respond partially to treatment with tricyclic antidepressants. Further drug treatment is considered for many patients. This argument equates clinical non-response with failure of drugs and ignores the issue of non-compliance, perhaps because compliance is hard to measure. Recently, the measurement of compliance has been enhanced significantly. Nineteen patients who were prescribed antidepressant drugs were given pill bottles equipped with micro-electronic monitors in their caps; the microprocessors embedded in the caps were made by Apex Corporation. Five of the 19 patients showed poor compliance in taking their drugs, and, not surprisingly, four of them did not improve at all. One patient had to be admitted to hospital, and the three other patients' non-compliance with treatment was improved when it was discussed openly. Before this none of the five patients had admitted to non-compliance. Accurate assessment of compliance can help doctors decide whether adding lithium or changing the drugs in other ways will help treat depression or whether the patient merely needs to take the original drug as prescribed.

Needling doubts about where to vaccinate

Mr J PIGGOT (Belfast BT9 6FZ) writes: With reference to the article by Dr Keith Thompson (24 September, p 779) I would comment that three babies have been referred to me with sciatic nerve palsy after injections in the upper outer quadrant of the buttock. One baby received an injection of calcium for hypocalcaemic fits, the second received diazepam intramuscularly for asthmatic crisis, and the substance injected in the third was unknown as the injection was given "on the mainland." The baby who received calcium made a full recovery from a complete sciatic nerve palsy but had cerebral palsy. The other two recovered function in the medial popliteal nerve but not in the lateral popliteal nerve. Diagrams illustrating division of the buttock into quadrants have been accompanied by a syringe and needle directed towards the centre point of the buttock. If an infant is injected firmly in this direction, no matter how short the needle, the sciatic nerve can be penetrated. The upper outer quadrant of the buttock is safe only if the needle is pointed upwards and outwards away from the nerve. Though measles, mumps and, rubella vaccine may not be neurotoxic, inserting a needle into a major nerve cannot be considered to be good practice. Injections in the lateral aspect of the thigh should not be given in the lower third as acute chemical synovitis has resulted from the needle entering the suprapatellar pouch. Repeated injections of antibiotics in infants can produce fibrosis and contracture of the quadriceps muscle, resulting in loss of knee flexion or habitual dislocation of the patella. Such a course of antibiotics is best given intravenously. All injections cause trauma to the injected tissues. I have even seen osteomyelitis of the os calcis after a stab wound of the heel, made to collect blood for estimation of haemoglobin. A considerable disturbance of growth of the os calcis ensued. No site is taboo as long as the risks and complications are understood and the correct technique is used.