Coles that may help anyone who is planning a comparable experiment.

We could not have started if the regional health authority had not been willing to fund an additional rotation, nor would the house officers have been able to visit patients at home as easily if the St Mary's Hospital Special Trustees had not agreed to lease a car and make it available to us. The house officers attend some of the sessions of the release course of the vocational training schemes we organise, which they find worthwhile because it adds a little depth to their learning. We believe that this kind of rotation is particularly useful for doctors who intend to follow careers in hospital medicine; the medical and surgical posts must, therefore, carry a prestige which is apparent to appointments committees that know nothing of the experiment.

We would agree wholeheartedly that the educational aims of the rotation should extend to the hospital posts, but despite the great commitment and enthusiasm of the consultants involved, we cannot see how to put this admirable theory into practice. Can anyone from Southampton or elsewhere tell us?

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ABC of 1 to 7: whooping cough

SIR,—The letter from Professor G T Stewart (24 April, p 1263) in which he renews his attack on the safety of pertussis vaccine is seriously misleading. He complains first that the numbers of deaths associated with vaccination notified to the Committee on Safety of Medicines may be incomplete. This may be, but whether they are complete or not it is essential to recognise that these reports should not be used to calculate a risk rate or even to imply a causal relationship without further clinical information and appropriate controls. This is because a few infant deaths can be expected to occur purely by chance after a procedure as common as immunisation. It could be shown, for instance, that on a plausible set of assumptions seven sudden infant deaths might be expected to occur each year within a week of an event such as the child's christening. The point is underlined by the findings of the National Childhood Encephalopathy Study, which for three years carried out a systematic inquiry into cases of acute neurological illness and deaths in young children, including sudden infant deaths, which might have been attributable to immunisation. Two of the reported deaths occurred within seven days of diphtheria-tetanus-pertussis vaccine and four deaths within seven days of diphtheria-tetanus vaccine. Although these figures may also be incomplete, they emphasise that a time relation with immunisation is not confined to vaccines containing pertussis antigen. Furthermore, in some of these children possible alternative causes of death were found. An association of the two events in time cannot be accepted as evidence of a causal relationship without adequate clinical information and control data. Professor Stewart does not make this clear.

In referring to the 28 deaths from whooping cough in England and Wales during the 1977-79 epidemic, Professor Stewart also fails to caution your readers that this figure is likely to be an underestimate of the number of deaths caused by the disease. He says this is the lowest death rate on record but does not mention the considerable numbers of children who suffer complications which may cause permanent disability or those who required admission to intensive care units to save their lives. Is he content that children's lives should depend on the availability of these facilities, and why does he emphasise the risks of the vaccine while ignoring the dangers of the disease?

Professor Stewart next refers to a study of adverse reactions to diphtheria-tetanus-pertussis and diphtheria-tetanus vaccine reported by Baraff and his colleagues in the United States, which he claims provides a reliable estimate of the frequency of convulsions after vaccination. His reference is obscure, but a more recent report by these authors[1] gives a rate of 1 in 1750, based on nine cases of convulsions within 48 hours of 15 752 diphtheria-tetanus-pertussis immunisations, hardly enough to provide a reliable estimate. Two of the nine had had previous convulsive episodes, and all made an apparently complete recovery. It should be noted that this study was uncontrolled, and so the rate given is not a *risk* rate but a *frequency* rate which takes no account of any chance association in the same population. On its own, therefore, it means little. The National Childhood Encephalopathy Study found 28 cases of encephalitis or prolonged or complicated convulsions in previously normal children who had had diphtheria-tetanus-pertussis within seven days before onset (a statistically significant excess compared with matched controls) but there were also 11 such cases associated with diphtheria-tetanus vaccine (more than expected by comparison with controls, though not a statistically significant excess). Thus, while the National Childhood Encephalopathy Study confirms that pertussis-containing vaccine probably does carry some excess risk, again this cannot be measured without reference to controls.

Professor Stewart describes the National Childhood Encephalopathy Study as "very limited and inadequate." A study involving 1000 children with serious acute neurological illnesses admitted to hospitals throughout Britain and 2000 controls during a three-year period hardly seems to merit the description "very limited." As for "inadequate," Professor Stewart vacillates on this point and must make up his mind. During its formative stages and while the study was in progress he frequently commended it. When its results failed to confirm his estimates of risk he changed his stance. His own estimates, which vary from paper to paper, are based entirely on ill-defined series of cases with no attempt to include controls. His present suggestion that cases awarded "recompense for vaccine damage" should be included in his calculation of the frequency of damage attributable to diphtheria-tetanus-pertussis vaccine without qualification is a gross abuse of the data. The Vaccine Damage Payments Scheme was introduced as a humane measure to alleviate the plight of children with brain damage *possibly* attributable to vaccine. In no case can an award be construed as implying proof of causation and most relate to events many years past. (The "recognised disaster" rate quoted by Professor Stewart from *Hansard* relates only to cases occurring in the 1960s and early 1970s). Again Professor Stewart disregards basic epidemiological principles by bringing these cases into his calculation of attributable risk without controls.

Finally, Cody and his colleagues,[1] to whose work Professor Stewart refers, and other American workers,[2] have computed a balance of risks and benefits from pertussis immunisation and reached the firm conclusion that "the benefits of pertussis immunisation far outweigh the risks." Those who have weighed the *scientific* evidence or who have seen the distressing and sometimes disastrous consequences of whooping cough will agree with this assessment.

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[1] Cody CL, Baraff LJ, Cherry JD, *et al. Pediatrics* 1981;**68**:650-9.
[2] Koplan JP, Schoenbaum SC, Weinstein MC, Frazer DW. *N Engl J Med* 1979;**301**:906-11.

Do women with menorrhagia need iron?

SIR,—With reference to the paper by Mr Graham John Lewis (17 April, p 1158) I would dispute its conclusion that women with menorrhagia do not need iron. In a group practice of 10 500 patient, 255 women between the ages of 35 and 65 years were identified who had had a hysterectomy. Of these, 58 were anaemic (haemoglobin less than 11 g/dl) before operation. By far the largest group of anaemic women coming to hysterectomy were those who complained of "menorrhagia" (35), and a significant number of anaemic women who had not complained of menorrhagia had a diagnosis of fibroids (17). In fact, they may well have had excessive bleeding which did not cause them undue concern.

The "menorrhagia" group contained many women with a haemoglobin less than 8 g/dl who needed intensive iron therapy or transfusion before operation. I believe the difference between my findings above and those of the author may be due to the fact that my figures refer to a population with a pathology significant enough to need hysterectomy. I find, however, the author's results in themselves somewhat surprising. A false impression can be gained by using imprecise indices of menorrhagia, such as the length of menstrual loss, and the number of tampons used.

From a general practice point of view it is important to deliver the patient in a good general condition when gynaecological procedures are being contemplated, and the patient's wellbeing can be vastly improved by such simple drug therapy with oral iron.

I would point out that all patients complaining of menorrhagia should have a blood count performed as, regardless of the severity of the history, it often produces a surprising result.

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Acute renal failure in dense deposit disease: recovery after plasmapheresis

SIR,—We note with interest the report of successful treatment of type II mesangiocapillary glomerulonephritis by plasma exchange (27 March, p 940). We wish to report a similar case.

A 15-year-old girl presented with oedema and haematuria. Investigation showed proteinuria of

17 g/24 h, serum albumin 18 g/l, serum creatinine 343 μmol/l (3·88 mg/100 ml), and a urinary sediment containing red and white blood cells plus casts. Treated with diuretics and sodium restriction she deteriorated and required a period of peritoneal dialysis to control pulmonary oedema. When transferred to us she was frankly nephritic and in renal failure—serum creatinine 736 μmol/l (8·32 mg/100 ml) and creatinine clearance 2 ml/minute.

A percutaneous renal biopsy showed mesangiocapillary nephritis. There were epithelial crescents in all glomeruli. Heavy deposits of C3 were present in capillary loops by immunofluorescence. Electron microscopy showed typical dense deposits within the glomerular basement membrane. In the serum a low C3 and normal C4 were evidence for complement consumption through the alternative pathway. Large amounts of C3d were present in the serum, and activity compatible with C3 nephritic factor was demonstrated. Her renal function was deteriorating rapidly, and therapy was undertaken with cyclophosphamide (3 mg per kg), pulsed methylprednisolone (1 g on alternate days), and daily 4 l plasma exchange. Over a two-week period there was progressive improvement in renal function (serum creatinine 346 μmol/l (3·91 mg/100 ml), creatinine clearance 20 ml/minute, proteinuria 10 g/24 hours). C3d was no longer detectable in the circulation.

This therapy was undertaken to remove C3 nephritic factor from the circulation and terminate its production. The disappearance of C3d in spite of the use of fresh frozen plasma as replacement in plasma exchanges suggests that the first objective was achieved. Improvement of glomerular function may, however, have been due to the potent anti-inflammatory activity of the treatment. The effect was not simply due to altered glomerular circulation through restored plasma dynamics after each exchange. Studies with labelled red cells showed that the patient's blood volume was normal prior to treatment.

This case, together with that reported previously, suggests that plasma exchange plus immunosuppression may have a role in the treatment of type II mesangiocapillary glomerulonephritis. In this patient, however, the production of C3 nephritic factor was not terminated as she has since relapsed while still taking immunosuppressive drugs, with a return of C3d to the circulation.

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No-fault compensation

Sir,—I read with interest Dr Richard Smith's summary of the New Zealand accident compensation scheme (15 May, p 1457). The introduction of the accident compensation scheme in 1974 was given a cautious welcome by the New Zealand Medical Association. While many of the association's fears have been allayed, others have not, and some new fears have arisen. It is a little sad that Dr Smith did not find time to contact the New Zealand Medical Association during his visit to obtain the association's views on the operation of the scheme. With 82% of practising doctors as association members, we are in a good position to comment.

One aspect in particular of Dr Smith's article requires clarification. The author notes the concern of "some New Zealand doctors including the Dean of the Auckland Medical School" that there may be a decline in the standard of New Zealand medicine following the introduction of the Accident Compensation Scheme with its strong disincentive to patients not to initiate common law actions for negligence. The New Zealand Medical Association has voiced its concern to the Accident Compensation Corporation about this very real risk repeatedly. Curiously, the Corporation has expressed similar concern to the association, suggesting that the conduct of some doctors is unacceptable. As the Corporation has the evidence, however, and as it has not, since the inception of the scheme in 1974, addressed a complaint to the Medical Practitioners' Disciplinary Committee relating to the clinical competence of a doctor, the association has been frustrated in its desire to overcome this potential weakness.

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General Secretary

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Sexual abuse of children

Sir,—The women who helped to make the programme "Breaking the Silence" for *Brass Tacks' Report* (BBC2 13 May) deserve more credit than Dr Margeret Lynch was able to give (22 May, p 1553). These women who were sexually abused as children find it difficult to trust people. They are very sensitive to being exploited or used for whatever purpose and are easily hurt. The filming exposed many painful memories for them, as they knew it would. Some of them had had the opportunity to work through their pain before the filming, and others were able to do so after. It took a lot of heart searching, considerable effort, and a lot of courage to participate in the programme. They all needed a lot of support, and the married women could not have done it without the encouragement and help of their husbands.

These women agreed to help for the following reasons. (1) To let older victims like themselves know they are not alone and that they can seek help. (2) To confront the taboo by gently making people aware that child sexual abuse happens and that it hurts. (3) To prepare the way for professionals who come into contact with children to consider child sexual abuse as one of the causes of children's distress. (4) To help professionals reconsider the whole topic of how they attempt to help families. (5) To take the responsibility for "keeping the family together" away from the child.

The sexual abuse of children is horrific. The *Brass Tacks' Report's* team were right to introduce this difficult subject to us from the perspective of adult victims. In small doses maybe we can accept the pain it can cause without switching off the television set because it is too overwhelming.

Two fairly recent cases were dealt with in the programme but without too many details. From these cases and the other anecdotal evidence, I understood the presenter, David Henshaw, to be asking these questions of us. Are there alternatives to children being cross-examined in court? Do families have to be broken up? The Netherlands have found another way of handling the problem. Many States in America and Australia have changed their methods of intervention. Surely it is time for us in the United Kingdom to step back and rethink what we are doing. It is the very least that these courageous women would want us to do. They know just how much some of these children can expect to suffer, and they do not want them to have to live with the shame, guilt, and pain in total isolation for as long as they have had to. It is a medical problem because children and adults present to doctors with psychosomatic illness and emotional disorders, and the roots of their distress come from the sexual abuse.

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Captopril in essential hypertension

Sir,—The conclusions of Dr G A MacGregor and coworkers (6 March, p 693) about the differing responses to propranolol and hydrochlorothiazide in hypertensive patients pretreated with captopril appear unjustified: in particular the statement that the angiotensin converting-enzyme inhibitor abolishes the hypotensive effect of propranolol.

Two separate studies were carried out: the first one in 16 patients with mean supine diastolic pressure of 121 mm Hg; and the second in eight patients with a mean supine diastolic pressure 113 mm Hg. It is not stated if these were significantly different, nor is the way in which patients were allocated to the two groups described. The response of the patients to captopril in the two groups was different: in the first group mean supine blood pressure fell from a baseline of 142 ± 3 mm Hg to 129 ± 4 mm Hg after 150 mg thrice daily of captopril and to 110 ± 3 mm Hg after the addition of hydrochlorothiazide; in the second group pressure fell from 136 ± 4 to 108 ± 3 mm Hg after captopril and increased after propranolol. It is probable that the mean pressures after captopril alone are significantly different and may have been a most important factor in influencing the response to hydrochlorothiazide or propranolol. It seems likely that the ability of propranolol to reduce blood pressure is dependent on the value before treatment. The two captopril-treated groups were clearly different, and different responses might well have been expected following propranolol administration. It is interesting that the final mean supine blood pressure after captopril and hydrochlorothiazide (110 ± 3 mm Hg) in the first group was similar to that after captopril alone (108 ± 3 mm Hg) in the second group.

Until these observations are repeated with all patients receiving both hydrochlorothiazide and propranolol in random order on a double-blind basis it is not possible to accept the suggestions advanced in this paper.

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**We sent this letter to the authors, who reply below.—Ed, *BMJ*.

Sir,—We agree entirely with Professor Shanks and Dr Johnston that if they are sceptical of our results they may be more convinced by a randomised double-blind crossover study. As they will know, we were constrained in doing further studies with captopril in mild-to-moderate essential hypertension because of adverse reactions that were being described at the time. We felt, however, that the results that we had obtained were