1976. At about the same time she became pregnant and in December the same year she gave birth to a normal girl weighing 2.94 g. At the time of delivery the mother was still HBsAg-positive and had HBeAg as well as DNA-polymerase in her serum. The cord blood was HBsAg negative and negative also for HBeAg and DNA-polymerase. The newborn child was given 3 ml high-titred HBIG (Kabi) (anti-HBs about 1/300 000 by passive haemagglutination) immediately after delivery. The same dosage was repeated one, three, and six months after birth. A further prophylactic dose was planned at nine months after birth but at that time the mother turned HBsAg negative (18 months after onset of symptoms) so that no more injections were given.

Today, about 18 months after birth, the girl is still HBsAg-negative and she has no anti-HBs in her serum. Her liver function tests are, as previously, normal.

Our conclusion after previously having experienced three failures with single prophylactic injections of HBIG to three children of HBsAg-positive renal dialysis mothers is that repeated administration of HBIG in high dosage may be of value for babies of highly contagious mothers.

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Interaction of digoxin with antacid constituents

SIR,—The use of activated dimethicone as a constituent of proprietary antacid preparations has increased dramatically in recent years. Dimethicone has already caused drug absorption problems with the oral anticoagulant warfarin,¹ giving rise to decreased bioavailability of the drug. The absorption of digoxin has been shown to be dramatically affected by various antacid constituents.²⁻⁴ It was therefore thought important to determine the effects, if any, of dimethicone on the absorption of digoxin in relation to other antacid constituents. This work was carried out using an in-vitro experimental model of drug interaction in the gut.⁵ This model involves absorption across a physiological membrane and has been shown to correlate well with the in-vivo situation.⁵ The cumulative absorption of digoxin (0.25 mg) was followed alone and while in combination with therapeutic quantities of antacid constituents. Digoxin in all cases was measured using radioimmunoassay.

The results shown in the table indicate that activated dimethicone does not significantly affect the absorption of digoxin. This was subsequently confirmed by an in-vivo study in healthy volunteers in the department,

Effects of antacid constituents on digoxin absorption in vitro

Antacid constituent	Percentage decreased absorption of digoxin
Aqueous emulsion of activated dimethicone (35%)	3.4
Aluminium hydroxide gel, BP	11.4
Bismuth carbonate	15.2
Light magnesium carbonate	15.3
Magnesium trisilicate	99.5

which indicated that the digoxin pharmacokinetic parameters did not vary in the presence of dimethicone. Other antacid constituents investigated, using the present in-vitro technique, indicated decreased percentage digoxin absorption values comparable to those reported in the literature.

In conclusion, although dimethicone did not affect the absorption of digoxin, it is clear from these results and from other reports²⁻⁴ that antacid constituents will affect digoxin's bioavailability. This is especially so in the case of magnesium trisilicate, which, in the present study, decreased the absorption of digoxin by 99.5%. We therefore suggest that patients stabilised on digoxin should be made fully aware of this interaction as many of the implicated antacid constituents are included in freely available "over the counter" antacid preparations.

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- ¹ Talbot, J M, and Meade, B W, *Lancet*, 1971, **1**, 1292.
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Misuse of pressurised nebulisers

SIR,—We have been concerned about the difficulties many of our patients appear to have in using pressurised aerosols containing bronchodilators or steroids and would like to report a small survey we have performed to evaluate the extent of this problem.

We investigated 53 consecutive outpatients using bronchodilators by pressurised aerosol and found that some 25% were using an undoubtedly incorrect technique. These patients were on average older (mean age 58 years) than those using their inhalers correctly (mean age 40 years). There were many different faults in usage, but these all seemed to result from a basic inability to synchronise the activation of the nebuliser with inspiration. In fact 15% of the patients found this completely impossible even while under supervision. It is also worth noting that three patients from the "incorrect" group and 10 from the "correct" group could not remember receiving instruction in the use of their inhaler.

The patients whose technique we managed to correct did show evidence of an improved therapeutic response in terms of forced expiratory volume in the first second (average increase of 0.5 l above the value obtained when incorrect technique was employed). There was, however, no dramatic fall in frequency of usage apart from one patient who virtually stopped using her bronchodilator nebuliser (we think this was probably explained by the coincidental correction in the use of her beclomethasone inhaler).

The figures we report are considerably worse than those of Patterson and Crompton,¹ who found 8% of their patients with an incorrect and 6% with a doubtful technique. We would suggest that incorrect use of pressurised nebulisers is probably much higher in many populations than is realised

and that even after instruction many older patients are incapable of using these devices correctly.

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- ¹ Patterson, I C, and Crompton, G K, *British Medical Journal*, 1976, **1**, 76.

Sodium cromoglycate in intrinsic asthma

SIR,—The place of sodium cromoglycate (SCG) in the management of allergic and exercise asthma is now well established. SCG has been shown to stabilise mast cell membrane and prevent chemical mediator release in the type I allergic reaction. This effect may be mediated by SCG's ability to inhibit cyclic phosphodiesterase¹ and to interfere with Ca⁺⁺ ion transport across the mast cell membrane, which is essential for the activation of the reaction.²

The mechanism involved in the pathogenesis of intrinsic asthma is unknown and the evidence for any local or generalised immunological involvement as seen in extrinsic asthma is lacking. It is, therefore, not surprising to find SCG ineffective in the treatment of intrinsic asthma as reported by Dr K B Saunders and others (6 May, p 1184). Further, the questions their study set out to answer still remain unanswered and the improvement observed in three patients could well have been due to the placebo effect of SCG or the variability of the disease process itself. SCG does have a transient irritant effect in some patients³ but rarely requires the treatment to be discontinued. It would have been of interest if the authors had studied the patients who developed irritant bronchoconstriction by monitoring their peak expiratory flow rate over a period of time to determine the duration and the degree of irritant bronchospasm caused by SCG.

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Medical Act 1978: a new anxiety for overseas doctors?

SIR,—I represent the BMA's Hospital Junior Staffs Committee on the General Medical Council's working party which is studying the implementation of the new Medical Act. The HJSC discussed the Act at its meeting on 30 May. Members were worried about the proposals for limited registration as they foresee these creating the same anomalies that have beset temporary registration under the old regulations.

To begin with there will be a large pool of doctors who will have "unlimited limited registration" and, of course, newcomers will be worse off with a five-year limit on their registration. This will hinder most of the doctors who intend to make a career in this country. Admittedly, there will be an avenue for doctors to progress from limited to full registration, but the criteria for this progress

are not clearly defined and are left to the discretion of the GMC. I think most of the doctors who came here before the Medical Act 1978 and gained considerable experience from their long stay in the UK deserve rapid transfer or upgrading to full registration as of right. I hope those implementing the new Medical Act will take a sympathetic stand on this in the future. The HJSC would be interested to hear views on this aspect of the new Medical Act.

E KANDIYALI
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GMC Working Party

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A British "Doctors' Ten"

SIR,—I was pleased to read of the planned medical runs in Leeds and Edinburgh (20 May, p 1352). A similar event is being held in Birmingham on the afternoon of Saturday 23 September at the University of Birmingham track. The distance involved will be 10 000 metres for men and 5000 metres for women. If the various regional runs are successful then perhaps a national run could be organised in future years. Any doctors in the West Midlands who are interested in participating might like to contact me at the Queen Elizabeth Hospital (021-472 1311, ext 32).

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Remuneration for dental anaesthetics

SIR,—I refer to the item on dental anaesthesia which was published in the *BMJ* of 29 April (p 1154). It is clear that the valuable proposals set out in the report of the working party on training in dental anaesthesia stand little chance of reaching reality until outpatient dental anaesthetics are adequately paid for. It is the policy of the Association of Anaesthetists that dental anaesthetics should be remunerated on the new scales advocated by the Review Body for domiciliary visits.

PETER BASKETT

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Termination of senior registrar contracts

SIR,—We write as officers and regional representatives of the Association of Surgeons in Training.

It has come to our attention that the institution of formal senior registrar training programmes with accreditation after a fixed time may be leading to undue pressure being exerted upon those who have completed the prescribed training period. There is evidence from several regions that not only are such senior registrars being encouraged to apply for every consultant vacancy but in some cases are being threatened with dismissal.

We view this situation with disquiet. We feel that accreditation was introduced to provide newly appointed consultants with a certificate of adequate training and hence to preclude the appointment of those not sufficiently prepared. We feel certain that the

various royal colleges which supervise training programmes did not intend that the possession of a certificate of higher professional training should lead to dismissal from a senior registrar post.

We are aware that an increasing number of vacant consultant posts attract no applicants from British trainees. We fear that the Department of Health and Social Security sees the dismissal of those with a certificate of higher training as a means of encouraging senior registrars to apply for posts they would otherwise not be prepared to accept. Higher training accreditation was not designed to solve the manning problems of the NHS and we deplore this subtle introduction of direction of labour into the appointment of consultants.

We wish to draw the attention of the profession to this undesirable implication of the formalisation of higher professional training.

J BLACK
President,
Association of Surgeons
in Training

and 16 other signatories

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* * *The Secretary writes: "This is a problem which the Hospital Junior Staffs Committee is actively considering. It would be helpful if details of any individual cases could be sent to us."—ED, *BMJ*.

The other crisis of health care

SIR,—In his letter comparing the French and British systems of financing health care Dr A E Finnigan (6 May, p 1211) errs in referring to "the Australian system of the bills being sent to the Government."

Such a system, the lynch-pin of the Australian Labor [sic] Government's original Medibank scheme, never came to fruition. A significant number of private doctors insisted on direct payment by the patient. With the return of the Liberal Government the Labor plan was abandoned.

Today most Australians belong to private (non-government) health insurance organisations. Only a small minority of bills are sent to the Government, mainly in respect of social security beneficiaries.

PETER C ARNOLD

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Future of British anaesthetics

SIR,—Dr P K Schütte (6 May, p 1227) has mentioned the wastage of staff from anaesthetics. At senior house officer level this is likely to be because the person finds the work too frightening, too boring, or of insufficient interest. At registrar level, however, the cause is probably that, although anaesthetics is interesting, enjoyable, and worthwhile, the individual balks at the prospect of a life spent giving anaesthetics, only anaesthetics, and nothing but anaesthetics. An additional factor may be an unattractive working environment—for example, no windows in the operating theatre (Mr G A D Lavy, 13 May, p 1285). Under the present arrangements, therefore, a shortage of anaesthetists is almost inevitable if Dr Schütte's argument is correct.

Paying anaesthetists a special premium might be one way of overcoming the problem, but it is unlikely to be implemented. The other is part-time posts. It is already accepted that anaesthetics can be combined part-time in varying proportions with intensive care, pain clinics, general practice, and the commitments of a house and family. But why not combined with other specialties—for example, respiratory medicine, clinical physiology, geriatrics, rehabilitation, or community medicine? The possibilities are vast, though a combination of part-time anaesthetics with surgery is probably inadvisable, since it is likely to lead to schizoid sensations.

Dr T Mortimer (13 May, p 1284) has noted a flight from specialist medicine. Widening the prospects for part-time anaesthetic practice may start to reverse this trend and also help the future staffing problems in anaesthesia.

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New Consultant Contract

SIR,—In editing my letter (20 May, p 1353), the final version of which you kindly sent to me for signing, you did rather shorten my praise of Mr Bolt as a negotiator. I said originally that "it must be emphasised that the profession is greatly in the debt of David Bolt and his colleagues on the working party who have negotiated well and worked tirelessly in the interests of consultants." I had also written that "it is greatly to the credit of David Bolt that he gave me permission without restriction to speak against the new contract proposals." I asked for this permission in order that a minority view might be expressed to a wider audience and not only on the Negotiating Subcommittee of the Central Committee for Hospital Medical Services. I would always regard it as an essential obligation of office fully to inform consultants even if this would necessitate preliminary or subsequent resignation. Information in Mr Bolt's letter (27 May, p 1415) additional to that available at the CCHMS on 4 May (13 May, p 1297) is particularly welcome.

The opinion of Mr I G Schraibman (27 May, p 1415) never ceases to interest me. It is perhaps unfortunate, however, that he was not able to attend the last meeting of the North-west Regional Committee for Hospital Medical Services. I trust that he will find it easier to distinguish between the wrapping and content of a package than I have found it to distinguish fact from opinion.

JOHN S S STEWART

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Phased justice?

SIR,—Thank you for your leading article "Phased Justice?" (20 May, p 1305). Regrettably, although one has to agree with the word "phased," to call what is proposed justice is a travesty.

Those of us who have reached the high point of consultant remuneration are, I gather, to be offered a gross increase of 11%. At first sight this would appear to offset the effects of inflation over the next year, but of course one will only be paid a third of it.