

intermediate level service grade will be welcomed by junior doctors, especially overseas doctors who have the right to stay in Britain and may wish to seek a career here. There is something in the report for every grade in the hospital service, except the long neglected senior hospital grade—namely, associate specialist.

The senior house officer may become registrar and ultimately get a consultant post. Those SHOs who cannot get to registrar level may work in the new intermediate level grade. The post holders of the new grade would be eligible for personal regrading to associate specialist or might, exceptionally, compete for regional registrar posts and become consultants.

Clinical assistants with six or more sessions would be eligible to be considered for personal regrading as associate specialists or indeed would be free to compete for posts in the new intermediate service grade.

The associate specialist grade is a senior grade, and those in it are very experienced in their particular specialties. Most of them have undergone their general professional training in their specialties as SHOs and registrars. Some have memberships or fellowships of the appropriate college. Even though theoretically associate specialists might become consultants after getting their postgraduate qualifications and appropriate training in their specialties, in reality the chance of it happening is non-existent.

I feel that all the professional bodies, including the royal colleges, should take this opportunity to discuss this matter. Those associate specialists with postgraduate qualifications and with an aptitude and willingness to become consultants should be encouraged to get the appropriate higher training without losing their seniority to become eligible to apply for consultant posts. The royal colleges should take the responsibility of monitoring their training through their approval visits.

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SIR,—*Hospital Medical Staffing—Achieving a Balance* represents a remarkable volte face by the Joint Consultants Committee, which includes presidents of the royal colleges as well as senior members of the relevant BMA craft committees. For many years the Hospital Consultants and Specialists Association has pursued a consistent policy of relating training posts to hospital career post opportunities and at the same time creating a new non-consultant career grade in the NHS hospital service. The first part has always been impossible to implement in the acute specialties without the introduction of a new grade, but the HCSA has always been told, first by the BMA, then by the chairman of the JCC, and, finally, by the colleges that a non-consultant grade was totally unacceptable to the "profession." We can only applaud the fact that HCSA's practical good sense has been finally recognised.

Nearly all the proposals in the document reflect HCSA policies: more consultant posts in the acute services; early retirement made more attractive, especially with the option to go part time in the few years before full retirement; relating registrar posts to senior registrar posts and relating them to predicted consultant vacancies; sensitive assessment of the potential of those in senior house officer posts; and the provision of officially recognised registrar training posts for foreign graduates.

What is missing is a recommendation for the salary of the new post, and this omission is highly significant. Unless the new posts are competitive in terms and conditions of service and salary with those applicable to principals in general practice

then medical graduates of the appropriate calibre will not train or compete for posts in this grade. If this grade is not a success and fails to attract the necessary 2000 doctors then the "safety net" designed to ensure that "the number of intermediate level staff to support consultants in the major acute services should not be reduced below a minimum safety level for 24 hour emergency cover" is unlikely to work.

The current antipathy to hospital medicine shown by newly qualified UK medical graduates is an ill omen for the future of hospital practice and this document could offer a feasible solution. Provided the pay is right and the terms and conditions of service are attractive the scheme should work. If not, then I shall be glad to retire as early as the regulations allow.

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SIR,—Your leading article (12 July, p 87) asks some pertinent questions but gives no answers, yet it calls on doctors to support a proposal with enormous consequences. It raises, perhaps unfairly, the suspicion that things are being left deliberately vague in order to obtain maximum support and that the less palatable details will emerge only later.

The major questions arise over the new "intermediate level service grade," which is quite clearly subconsultant—but to what extent? Will these doctors have autonomy or will they be permanent juniors? If they have autonomy will it really be possible to stop health authorities using them as cheap consultants? (What, indeed is the expected level of remuneration?) If they do not have autonomy will a 55 year old be the resident "medical registrar" on call, while his 35 year old consultant sleeps at home?

You correctly emphasise the need to take some action soon: but it must be the correct action. These points are not details which can be negotiated after acceptance of the principle. If the answers are known then they should be published. If they are not then the initiative, and its discussion, should be halted until they are.

In the mean time expansion of the consultant grade would seem to be the best way to improve both patient care and doctors' career prospects. The defeatist tone of your leading article on this point is disappointing.

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SIR,—The report of the working party on hospital medical staffing has major flaws.

One hundred new consultant posts with central funding are to be welcomed, although they will not solve the problem of inadequate consultant expansion.

Rationalisation of the registrar grade is overdue. Those individuals who are potential consultants must be identified early. But it is not acceptable that the best training posts should be reserved for them. This would be immoral and counter-productive as overseas doctors would soon be discouraged by a system which restricted them to inferior training. (The present system may favour local graduates in practice but is not structurally discriminatory.) The answer is to identify the trainee consultant, not the training post.

The proposed new service grade is bizarre. Recruited from the ranks of senior house officers, doctors in this grade would have status and remuneration below those of the associate specialist. Young doctors might be content in their early years

in the grade, but what a mountain of disaffection would ensue. Consultants bemoan their lack of status and inadequate pay—what of this grade in a decade? Registrar numbers will diminish (though the report masks this fact) and substitutes need to be found.<sup>1</sup> But this grade is no answer. The numbers in the grade will be less than one for every 10 consultants. Few in number and junior in status, they will make little impact. Similarly, the proposed "safety net" is fatuous. Unless real substitutes for the registrar grade are found intermediate level support for consultants cannot be guaranteed. I suspect that the working party, aware that its proposals are a move towards the "Short consultant," has manufactured the new grade and safety net as a sop to consultants.

Implementation of the report will mean more consultants working in "Short" posts. This should be recognised, as the contractual consequences are substantial. These should be considered now, not when large numbers of consultants are in difficulties.

Most of the other suggestions are sensible: early retirement, proper balance between trainee numbers and opportunities for promotion, better manpower planning, review of medical school output, etc. I doubt whether more senior house officers are required and find any discussion of medical manpower which ignores general practice inadequate—principals in general practice outnumber consultants, and this sector offers at least comparable scope for increasing medical employment.

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1 McFarlane T. Registrar substitutes and the DGH. *Br Med J* 1982;284:606.

#### Halothane and the liver

SIR,—Dr Colin Blogg's leading article (28 June, p 1691) was most ill advised. It will undoubtedly have guaranteed a gratifying increase in the income of many lawyers for many years to come.

The tenor of the advice is that the use of halothane should be entirely abandoned, for what else does the remark, "increasingly hard to find expert witnesses to defend . . . even its [halothane's] reuse after longer periods if minor non-specific signs of hepatitis had followed the first exposure" amount to other than that? However diligent anaesthetists are in their preoperative interview with their patients, there are inevitably occasions when a history of previous exposure to anaesthetics is not forthcoming. General examples are legion: patients who have lived overseas; women who have had a social termination of pregnancy; an unremembered childhood operation; and what about the young child who received transplacentally derived halothane when delivered by caesarean section? If such events are overlooked, who is going to recall "minor non-specific signs of hepatitis?"

Thus the diktat, consummated by your leading article, logically suggests that throughout the world halothane vaporisers should be discarded and the bottles emptied into appropriate receptacles in favour of enflurane or isoflurane (the former, incidentally, costs six times as much as halothane when used in a standard technique, and the latter 20 times as much).

Yet hold! As Dr Blogg hints, there are some case histories suggestive of liver failure caused by these agents. The fact that the "incidence of reports of hepatotoxicity . . . has not increased in the United States" is not very persuasive; complications tend to be under-reported until some dramatic event breaks the log jam, and the newer volatile agents are yet still young. Even so, were the incidence of

hepatotoxicity considerably lower than that relating to exposure to halothane, would not the strictures he has laid down with regard to halothane apply equally to enflurane and isoflurane? He was surely not discussing numbers but considering the individual case.

Had Dr Blogg published his views in the form of an article from a single author the consequences would possibly have been not quite as serious—one independent expert's opinion can be set against another's. For the powerfully expressed advice to be presented in the editorial columns of an authoritative medical journal gives that advice an imprimatur and is, I believe, ill judged.

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SIR,—Dr Colin Blogg's leading article (28 June, p 1691) takes a very one sided view of the problem of halothane and the liver. It implies that there is still some doubt about the nature of the problem, indicates that it is very rare, and admits that the question about the safe interval between exposures remains unanswered, yet goes on to make some very dogmatic recommendations. Much is made of the medicolegal aspects, but rather than encourage defensive medicine Dr Blogg should have presented some scientific evidence to support the reference in the penultimate paragraph to a (very stringent) six month interval between exposures.

Is the problem "best solved by the alternatives to halothane"? In considering the volatile agents Dr Blogg assumes that halothane, enflurane, and isoflurane are entirely interchangeable. Each inhalational anaesthetic is characterised by its physico-chemical properties and these may be related to clinical performance. The differences may not be readily apparent to the non-specialist but are to the experienced anaesthetist, who can pick the agent appropriate to the type of surgery as well as to the individual patient. It should also be remembered that the newer agents have been available for a relatively short time. It is too early to consider that they are not associated with some other equally rare complication.

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SIR,—Dr Colin Blogg raises, but does not fully answer, the question: "Are there now any absolute indications for the repeated use of halothane within six months?" Despite agreeing with Dr Blogg's conclusions that less hazardous agents are available, I believe that there may be one situation where no suitable alternative to halothane exists. For example, a child presenting with acute upper airway obstruction, as in acute epiglottitis, who has undergone routine surgery under halothane anaesthesia in previous weeks demands careful non-irritant anaesthesia. Halothane has long been the agent of choice for such acute emergencies and is superior to other halogenated agents because of its lack of pungency, acceptability to the patient, and low incidence of airway irritation. Respiratory problems are far more common in children aged 8 months to 14 years when isoflurane is used for induction of anaesthesia rather than halothane.<sup>1</sup> Enflurane is also irritant and pungent.<sup>2</sup>

Secondly, an appropriate plan is needed for patients who have shown non-specific signs of hepatitis after a single exposure to halothane, albeit in the distant past. Rather than simply receive an alternative inhalational agent, these patients should be treated in a similar way to those who are

susceptible to malignant hyperpyrexia. Therefore the use of an agent free anaesthetic machine and breathing system would seem mandatory.

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1 Pandit UA, Leash A, Steude GM. Induction and recovery characteristics of halothane and isoflurane anaesthesia in children. *Anesthesiology* 1983;59:A445.

2 Wade JG, Stevens WC. Isoflurane: an anaesthetic for the eighties? *Anesth Analg* 1981;60:666-82.

SIR,—Dr Colin Blogg has raised several important points. He may not be aware that as recently as December 1985 the liver unit at King's College Hospital had experience of another fatal case of halothane hepatitis, this time in a 3½ year old boy.

The coroner's inquest into this death was heard on 16 June 1986, with the cause of death being recorded as massive hepatic necrosis (halothane hepatitis). In that case death followed three minor operations under general anaesthetic at another hospital in a period of 130 days. Halothane was used each time.

The evidence from the experienced anaesthetists concerned was that they were well aware of the possibility of hepatitis associated with halothane in adults but were not aware of any such association in infants. This highlights a problem of reporting such cases. Dr Roger Williams, whose comments were reported in the article, has referred to five cases among children. Dr A P Mowatt, consultant paediatrician at King's College Hospital, described at the inquest his personal knowledge of four cases of halothane hepatitis in children.

At the conclusion of the hearing the coroner, believing that action should be taken to prevent the recurrence of such deaths, exercised his discretion to report the matter in writing to, *inter alia*, the Committee on Safety of Medicines, the Faculty of Anaesthetists, and the new National Anaesthetic Adverse Reaction Advisory Service at Sheffield University Medical School. The coordinator of the advisory service has recently expressed concern that there has been inadequate reporting in the past and that the "yellow card" system is no longer adequate. It is not surprising to a lawyer that there are practitioners who are reluctant to report adverse reactions in such circumstances. That might be regarded as an invitation to sue.

From a medicolegal point of view the following points arise from this important debate. Firstly, it will be increasingly hard, as the Medical Defence Union suggests, to find expert witnesses to defend the close repeated use of halothane. Secondly, this now applies equally to adults and to children. Thirdly, although the risk of halothane hepatitis is statistically low, the key point from a legal point of view is that it is a risk which is avoidable by using other agents, albeit at extra cost. It will be increasingly hard in legal terms to justify the taking of such an avoidable risk.

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SIR,—Dr Colin Blogg is absolutely right about the added costs of alternative agents such as isoflurane (28 June, p 1691)—but these are at most £5 per hour.

It is quite possible that the incidence of fatal halothane hepatitis is one in 10 000. However, we heard at the Bristol meeting referred to in the article how a court settlement for such a case could be in the order of £500 000. Should only half of these cases reach this point it represents a cost of £25 per case receiving halothane. This will,

of course, be paid by us through our defence societies, in contrast to the £5 per hour of use of isoflurane payable by the health authority. This presents a simple mathematical argument for switching to alternative agents.

However, neither enflurane nor isoflurane produces as smooth an anaesthetic as halothane. By using alternative agents to halothane we believe that there would be an increase in morbidity that would be as great as the incidence of halothane hepatitis. If this proves to be the case, then it is important that anaesthetists should be able to continue to use halothane for its undoubted qualities rather than being forced, for defensive reasons, to abandon it.

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AUTHOR'S REPLY—Drs Selwyn Crawford, Wildsmith, and Youssef are rightly concerned by the rhetorical question I posed about the indications for repeated use of halothane. Similar questions were asked in a recent exhaustive review by Stock and Strunin,<sup>1</sup> who point out that the use of halothane has greatly declined in some countries, partly as a result of the introduction of the alternative agents enflurane and isoflurane. In the United States, where enflurane was introduced in 1972 and isoflurane in 1981, although the use of halothane has largely been supplanted, no one seems to mourn its passage from a position of pre-eminence.

Of course, as Dr Youssef indicates, specific indications remain for the repeated use of halothane but these are increasingly hard to define as experience grows in the use of the alternatives. This can, however, be little comfort in the case of the 3½ year old child reported by Mr Taylor.

Although patients known to have had halothane hepatitis have successfully been anaesthetised again with the agent,<sup>2,3</sup> for a very few patients there is no safe interval between exposures to halothane. In the series of Neuberger and Williams three of 46 patients suffering from the most severe form of hepatic failure after halothane had been re-exposed after intervals of two, three, and six years.<sup>4</sup> It is more depressing to realise that some 60% of patients in whom adequate data were available had had a documented adverse reaction to halothane previously which had not come to the attention of the anaesthetist. If it is that which will produce the increase in income to lawyers which gratifies Dr Selwyn Crawford then plainly care has to be taken in the preoperative assessment of patients to reduce further the small possibility of halothane associated hepatitis. Although abolition of the use of halothane would eradicate the problem, such a drastic step is unnecessary and may result in substitution of other adverse effects. However, since the first reports in 1958 of the problem<sup>5,6</sup> the problem and solutions have changed. Alternative agents are available. The experience gained from many millions of anaesthetics in the United States and now in Europe has failed to produce a single clinical case report of hepatotoxicity due to isoflurane,<sup>1</sup> and the incidence of otherwise unexplained hepatotoxicity associated with enflurane is about 1 in 3 million anaesthetics.<sup>7</sup>

It is a truism that rare problems occur rarely, and the extremely rare problem of halothane associated hepatitis is likely to appear, albeit extremely rarely, if enough patients are exposed to the agent. This has now become apparent in children<sup>8</sup> but not to the extent that the problem can be regarded as equal to that in adults.<sup>9</sup> Opinion among anaesthetists in Britain, if those in the South Western region are typical, suggests that a