adopted in North America in an effort to reduce the financial burden and inconvenience to the patient, there is less pressure to shorten the stay of a surgical patient in a National Health Service hospital, where the benefactor is a little anonymous, compared with a patient in a private hospital, where one is more aware of having to cut personal costs. There should now be a good case for every district and teaching hospital in the UK to establish and make proper use of a day surgery department.

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Disequilibrium hypercalcaemia

SIR,—Dr D J Hosking (29 January, p 326) defines disequilibrium hypercalcaemia as the result of imbalance between destruction and formation of bone, which may present as a hypercalcaemic crisis. Hypercalcaemia from any cause must be due to such an imbalance and may present as a hypercalcaemic crisis; therefore the introduction of the term disequilibrium hypercalcaemia seems to add little. It is the height of the hypercalcaemia that determines the urgency of the case, which may lead to acute volume depletion and acute renal failure.

A hypercalcaemic crisis is always an emergency, and Dr Hosking rightly points out that there is no time to wait for lengthy investigations such as estimation of parathyroid hormone concentration; and serum phosphate concentration is of little value in this condition. One simple investigation which is often helpful is the erythrocyte sedimentation rate, which is usually not raised in primary hyperparathyroidism. This, combined with the clinical history, physical examination, and skeletal radiographs, will often point to the correct diagnosis.

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Safer insertion of pleural drains

SIR,—I believe that Mr J B Bristol and Dr J E Harvey (29 January, p 348) have had to resort to designing a safety guard to avoid the risk of penetrating internal organs during the placement of chest drains only because the conventional technique of chest drain placement that they illustrate is inherently unsafe.

I wholly agree with the authors that it is desirable to incise the chest wall so that only minimal force is needed to insert a drain into the thoracic cavity. I equally agree that drains are often inserted by relatively junior staff, sometimes in difficult circumstances, when the temptation to push harder than is prudent may be difficult to resist. The danger is that during the percutaneous insertion of any instrument into a body cavity the resistance to the passage of the instrument is liable to reduce suddenly and unexpectedly once any particularly tough structures are penetrated.

The authors' illustration shows an operator (presumably right handed) inserting a chest drain by steadying the proximal end with the left hand and pushing with the palm of the right hand on the distal end of the drain. If excessive force is used with this technique sudden penetration of the chest wall will tend to propel the drain into the chest until the pushing hand contacts the chest wall. As the pushing hand is placed on the far end of the instrument there is a danger that most of the trocar and canula will suddenly be pushed into the chest. It was to avoid this risk that the authors devised their special guard.

I suggest that the position of the hands when inserting a chest drain should be reversed: the pushing (right) hand should grip the trocar and canula about 7 cm from its tip and the other (left) hand should be used only to steady the distal part of the drain and not to provide any pushing force. If resistance suddenly decreases the drain is pushed forward only until the right hand contacts the chest wall and is in no danger of being pushed further. No complex guard is required.

More importantly, the procedure I have described can be applied to the safe percutaneous insertion of any instrument into a body cavity. The insertion technique described by the authors will tend to lead operators into the bad habit of inserting instruments with the pushing hand at the far end of the instrument. Once such a bad habit is learnt it could be applied to another instrument in another site which has never had a complex guard designed for it. This might result in the accidental, and avoidable, perforation of an internal organ.

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Hours of work of junior hospital doctors

SIR,—Mr Paul Hurst (12 February, p 562), in his letter about the on call rotas of senior registrars in surgical specialties, raises an important point. Many senior registrars are happy to work one in three rotas and believe that standards of patient care and training can be adequately safeguarded. But there are some, like Mr Hurst, who believe quite sincerely that their duties are more akin to those of a consultant (that is, with almost continuous responsibility for their patients) and that for them the current hours of work proposals will not mean less responsibility but merely less financial reward for the same work.

I should say firstly that salary protection is being negotiated for those whose rotas are altered as a result of the hours proposals; there should therefore be no detriment at least until a post is changed. We are also trying, with some hope of success this year, to get an improvement in the units of medical time (UMT) rates to compensate at least for the extra work that will need to be done each hour owing to the rota changes.

This, however, is surely as far as we can go under the present contract. A special case cannot be made for surgical senior registrars, whose average contracted hours (1981 figures) are 125·7 a week and whose average UMTs—at over 21 a week—have long been cited by "the powers that be" as an abuse of the system. This "SR racket," as it is widely known, is certainly one of the reasons why junior doctors have not been given a better overtime rate in the past. A system whereby some senior registrars are able to earn more than a junior consultant is clearly unsatisfactory, as is a system whereby surgical senior registrars can earn more than those in other fields when their consultant colleagues are paid the same whatever specialty they may be working in.

My personal view is that a new but optional contract for senior registrars should be negotiated. This would not be time sensitive like the present junior contract but responsibility sensitive, along the lines of the consultant contract; it would have to be priced somewhere just below the consultant starting salary. This would give senior registrars the option of the old contract, with its assured periods of off duty, or a new contract which would commit them to complete continuity of care but with an all embracing salary.

There are obviously problems associated with this suggestion, but the Hospital Junior Staff Committee, which represents all doctors in training, believes that no doctor should be contracted to work more than 80 hours a week and cannot be seen to allow exceptions to this principle unless there is a danger of a unit being forced to close as a result.

I am now, for reasons published elsewhere (12 February, p 578), resigning my position as deputy chairman of the HJSC, but I hope that my colleagues and representatives of the senior registrars will consider this suggestion seriously as it may offer a way forward in what may become a major issue.

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SIR,—Mr Paul Hurst (12 February, p 562) is correct in stating that a one in three rota is against the interests of senior surgical registrars, whose hours of work are dictated by the vicissitudes of surgery. Their work pattern, like that of consultants, is flexible. It entails availability most of the time, although not necessarily long hours of work.

The problem is surely that the present closed contract for junior hospital doctors has never been appropriate for the payment of senior registrars. The difficulty was surmounted by the expedient of attaching large numbers of units of medical time (UMTs) to many of these posts. This was welcomed by the holders, who received extra pay, but it resulted in unfair anomalies between similar posts which were differently assessed. It also caused the absurdity whereby the senior registrar suffered a cut in salary on becoming a consultant.

Now that the one in three rota is to be imposed one of two things will happen. Senior registrars may continue to work flexible hours, regarding their UMTs as "notional" sessions, in which case they will merely suffer a reduction in salary for the same amount of work. Alternatively, they may cease to be available outside normal hours during two days out of three. This would prevent them from providing continuity in patient care and would greatly reduce their exposure to interesting problems and instructive cases. This cannot be in the interests of training.

The solution is to scrap the present contract for senior registrars (and if possible for other grades) and to revert to a contract of the previous type. Until now it has been impossible to put the clock back because of the reduction in earnings which would have resulted. Now that all junior hospital doctors are to work a rota of not more than one in three (and presumably few will work less), however, there is no longer any need for UMTs. Salary scales could be based on present average earnings and would reflect the seniority and responsibility of the grade. Conditions of service could provide safeguards against excessive hours of work but without going into detail about precise rota commitments. There would be a saving in administrative cost to the