for parathyroid hormone estimation, the diagnosis of primary hyperparathyroidism is relatively straightforward: the demonstration of inappropriate parathyroid hormone secretion in the face of hypercalcaemia confirms the diagnosis. In our view, the use of indirect and less reliable tests for hyperparathyroidism, such as steroid suppression tests,¹ is unnecessary. We wholeheartedly agree with the sentiment that intensive and long-term follow-up of patients with hypercalcaemia, which is mandatory, may prove to be at least as costly as parathyroid surgery.

We therefore recommend that all patients with asymptomatic hypercalcaemia be referred to specialist centres with full facilities both for the investigation of calcium metabolism and for expert parathyroid surgery.

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¹ Heath DA, Wright AD, Barnes AD, Oates GD, Dorricott NJ. *Br Med J* 1980;280:1406-8.

² Purnell DC, Scholz DA, Smith LH, et al. *Am J Med* 1974;56:800-9.

³ Habener JF, Potts JT. In: Avioli LV, Krane SM, eds. *Metabolic bone disease*, vol 2. New York: Academic Press, 1977:1-147.

⁴ Watson L, Moxham J, Fraser P. *Lancet* 1980;i:1320-5.

Pre-employment medical examinations

SIR,—I have read with interest the letters of Dr J W Todd (19 July p 232), Dr G H Sylvester (28 June, p 1616), and more recently Dr F H Tyrer (2 August, p 391).

In the first place I agree very much with Dr Tyrer that it is necessary at times to reject an applicant for nursing and certainly it is kinder to do this at the onset of training. Unfortunately we continue to see trained nurses incapacitated by chronic back disorders which should have been foreseen by careful pre-employment selection.

Perhaps more important is the fact that pre-employment medical assessment seems to be viewed as a clearcut "pass or fail" procedure. I suspect that some of this may be a relic of the Forces medical examination. Working as an occupational health physician for the area health authority and the local authority for many years, I have conducted many pre-employment medical assessments and found only a handful of those examined to be unfit for work. I do agree with Dr Tyrer that only firm medical and occupational considerations should lead to rejection. More important than the question of accepting or rejecting applicants is the selection of those cases where either on account of the requirements of the work, the medical condition of the applicant, or both, it is felt worthwhile to accept the individuals for employment subject to carrying out regular reviews of them with the aim of keeping them at work in an optimal state of physical and mental health. Surely this is the essence of good occupational medicine. Regrettably, it is still not recognised by some employing authorities that an occupational health adviser requires no less expertise than any other medical specialist.

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Research and risk

SIR,—May I comment on your leading article "Research and risk" (14 June, p 1391), which seems to be incorrect on two points—at least according to published information?

(1) "The system whereby the DHSS provided clinical resources for research has lapsed through lack of money." According to the DHSS *Handbook of Research and Development* 1978, "From 1 April 1978 full responsibility for the administration of the scheme [locally organised research scheme] was devolved to health authorities. A sum of £2.4 million will be distributed to health authorities in 1978/79 by means of additions to authorities' revenue cash limits to enable them to maintain a level of local investment in research consistent with the effort of previous years." It would be interesting to know whether this scheme has indeed lapsed with the individual RHAs.

(2) "The cost of translating findings into practice is no longer met from DHSS development funds." The DHSS *Handbook of Research and Development* 1979 states: "Funds are available from the Department's central reserves for the trial or experimental development of new techniques or services within the National Health Service, which have passed out of the initial research stage, but which need to be evaluated before they can be adopted generally. . . . In 1978/79 these contributions amounted to over £600 000 capital and approximately £500 000 revenue." Has this scheme in fact ceased?

Your leading article briefly mentions, perhaps too briefly, the problems of the doctor who wishes to do a spell of research without being penalised if he returns to the clinical ladder. It seems quite wrong that the increasingly rigid requirements of the clinical training scheme should make taking time for a period in research so difficult. One drawback is the possible loss of one or two years of NHS pension rights; but surely this should be taken care of by transfer arrangements if a research worker temporarily leaves the NHS. The clinical rat race should not be allowed to steamroller originality; if it continues to do so, bright students are likely to turn increasingly elsewhere for careers.

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Contraception and the under-16s

SIR,—I read with interest a possible defence by your legal correspondent (26 July, p 318) for a doctor finding himself prosecuted by a parent who has discovered his child in receipt of the contraceptive pill without his knowledge and consent.

Some bias and hence interpretation in this matter is understandable as he is advocating a hypothetical defence, but until there is a suitable test case the matter remains one of opinion. It cannot be at all reassuring that as a matter of public policy the police would be unlikely to take action. Public policy may well change.

I would urge all medical practitioners to have some sensibility and feeling for the well-intentioned, responsible parent who may find his child encouraged to have sexual intercourse because of the ready availability of contraception. At 15 years of age at best she is adolescent, immature, feckless, and in grave peril from the social and medical complications of sex.

Doctors should not be autonomous in matters which are not strictly medical. The law is specific that girls under 16 need protection. When there is good, sound medical evidence that sex for 12-15-year-olds is beneficial and not harmful and the minimum age of consent has been changed by informed debate and public opinion, then is the time to change prescribing practice.

Such medical autonomy as is practised by many well-intentioned doctors today is no more than anarchy, and in a respectable profession is all the more reprehensible.

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A computer in every surgery?

SIR,—I read your leading article (28 June, p 1556) "A computer in every surgery?" with great interest since we are ourselves involved with a computer system for general practice, CLINICS. We have collected five and a half years' detailed clinical and patient information. I believe that your article contains several important points that are perhaps not sufficiently realised by people in the field today. For instance, you say a computer does not automatically improve research, and you emphasise that what comes out of computers is only as good as what goes in.

Although these two facts are usually true the second can be modified, as our experience has shown. On looking at a sizable sample of our data we found a raw error rate of the order of 10%. This is the level of errors that the computer-held information would contain if it had been accepted with no checks. The actual rate of errors in our stored data has been estimated to be around 1%.¹ This significant reduction has been achieved by employing the following: (1) Sensitive error checks, specially designed for the messy and error-ridden data generated in general practice. A list of our checks is given by Basden and Clark.¹ (2) Mechanisms that positively encourage error correction. CLINICS normally refuses to accept any more data until the errors are dealt with, but it does meet the user half way by offering powerful interrogation facilities to aid his or her decision. In this way error correction is not a cumbersome chore that is easily "forgotten" when one is busy. (3) The ability to make corrections not only in the incoming data but also in the data already stored where an error has escaped detection first time round. With this facility we are able to reverse the normal tendency of information to deteriorate with time; our information becomes more accurate the more we put in.

It is significant that the initial 10% error rate is made up of 3% due to computer processing, 3% due to unclear writing, and 4% caused by the GPs themselves. Thus we have been able to overcome not only the errors generated by the complications of having a computer but also many of the errors which GPs are producing all the time but normally go unnoticed. Therefore when a computer system has the above three characteristics it is not strictly true that "what comes out of computers is only as good as what goes in." Unfortunately, however, few GP systems have all these; most fall down on the first in particular, so your comment certainly appears applicable to them.