The benefits of general practice computerisation include ease of practice management, safer prescribing, and a change from palliative to preventive medicine, as well as enhanced research facilities. Postmarketing surveillance should benefit, with the spread of the electronic yellow card allowing improved follow up and feedback and the opportunity to develop a record linkage database. As a result of the computer schemes these advantages are available to a larger number of practices.

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SIR,—Dr Mike Pringle (26 September, p 738) gave a necessary reminder of possible pitfalls in the offer of "free" computers to general practitioners, but he did not explore sufficiently the wider implications of this new initiative.

Until recently general practice computing has been fragmented and of variable quality, and, since even the market leaders had installed only 100 to 200 systems, it was irrelevant in any wider context. Now, with 2000 to 3000 AAH Meditel or VAMP systems due to be installed, it would seem foolhardy for general practitioners to invest in any other systems, both because economies of scale have meant that costs for renting from the two suppliers have fallen sharply and because they have become ipso facto the standard for general practice computing.

As a hospital specialist with an interest in maternity computing and a strong commitment to community based care, I have despaired until now of the way hospital computer systems seemed destined to draw antenatal care more and more firmly into hospital. With the prospect that general practice computing may become relatively standardised it seems worth while investing the resources necessary to pilot a community initiated computerised antenatal care scheme (the Milton Keynes electronic shared care computer project). In many other areas of clinical medicine—for example, cytology, diabetes, geriatrics, infertility, etc.—any prospect of standardisation in general practice computing should also be strongly welcomed.

Many areas of clinical computer strategy now need to be reassessed to take full account of this exciting new development. This is especially urgent in obstetric care since next April's untimely Körner maternity deadline looks set to precipitate the purchase of centralised and shortsighted maternity computer systems in many regions.¹

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1 Fawdry RDS. Cattle markets or community care? Current trends in maternity computing. *Br J Health Care Comp* (in press).

SIR,—Dr Mike Pringle's concerns about commercial control of general practice computer data (26 September, p 738) are dismissed a little too readily by Dr M S Lawrence (17 October, p 995).

The review of the government sponsored Micros for GPs scheme indicated that it fell considerably short of the claims originally made by the companies concerned.¹ Although it may have helped the first steps towards computer literacy and organisation that all practices will eventually require, it was based almost entirely on prescribing, and the current generation of software does not go much further. After a year only 4% of practices could claim to have a viable computerised prevention scheme in operation.

But the AAH Meditel and VAMP schemes are all on a much larger scale, and for such an important initiative we should at least be clear what is on offer. Before selling my practice data to the drug companies I would want to know what my patients and practice will get out of the system—apart from legibly typed prescriptions. How accessible will the data be, not only to the highest bidder but also the health team? If systems can be designed to enter complex data with minimal training, they can also be designed flexibly to output and format complex reports and audits. The software currently on offer has fairly crude reporting facilities at present.

Secondly, a few fields for blood pressure or cervical smears do not constitute adequate ascertainment, follow up, and display of risk factors for cardiovascular disease, cancer, or chronic illness. If a fraction of the effort which has gone into prescribing had been spent on this aspect these systems would look a little more useful to the practices as well as the drug companies.

The drug companies want this information badly. Surely general practice is in a position to dictate not only the terms of contracts but also the content of software. For all but prescribing, it is currently mediocre and inaccessible to the practice team.

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1 Department of Health and Social Security. *A prescription for change—a report on the longer term use and development of computers in general practice*. London: HMSO, 1986.

Monitoring medicines: opportunity knocks

SIR,—Two of your recent leading articles related to monitoring of adverse drug reactions call for alternative views to be aired.

Dr Glyn Volans (3 October, p 797) suggests several measures to improve safety monitoring of over the counter medicines, but they only cloud the main issue. If patients suspect that adverse reactions to such products have occurred then they should consult a doctor as for any other illness not suitable for self treatment. Patient education should be devoted to this end. The doctor can then decide on reporting and managing the clinical problem, which is now no different from a suspected adverse reaction to a prescription medicine. Asking other agencies to screen possible reactions will produce only confusing and false information. This strategy does, however, reinforce the need for informed and efficient medical services at both general practitioner and hospital levels for dealing with such reactions.

And this is where the second leading article falls down: Dr Mike Pringle (26 September, p 738) loses an opportunity to encourage the development in Great Britain of a postmarketing surveillance system for medicines that could meet many long felt needs and would be the best in the world. Instead, he parades, as have others, luddite myths about the possible response to widespread computerisation of general practice. Confidentiality—such an emotional word—need not be a problem and, in fact, is secured by collecting data within practices. Activity will not be "diffused" or "fragmented" but rather encouraged and organised so that, for the first time, good clinical use can be made of all that information in Lloyd George's envelopes. The Micros for GPs experience is completely irrelevant to modern technology and systems, which offer clear advantages to doctors and patients as well as to medical knowledge. Time and patience are needed by doctors to acquire the necessary skills, but thereafter many efficiencies in time can be made.

Of course, data quality must be of the highest, and for the first time doctors are being offered training and review of their records to ensure this. The ethical behaviour of all the parties concerned remains important and requires detailed guidelines and supervision, all of which have been or are being provided. There remains to be worked out integration with other surveillance systems.

Many doctors are now making the commitment to computerise, and the entrepreneurs are investing heavily in helping them to do so. There is no shortage of protection and guidance from the sidelines so why not offer some encouragement to the players, who are embarking on a unique venture of profound medical importance? Why should medicine be so behind all our other activities in achieving the benefits of computerisation when it has an opportunity to do so that may not come again?

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Angiotensin converting enzyme inhibitors in the elderly

SIR,—Professor J L Reid (17 October, p 943) highlights the increased potential for adverse reactions in elderly patients who are prescribed angiotensin converting enzyme inhibitors. The use of inappropriately high maintenance doses in patients with heart failure may compound the problem. The data sheets clearly state that if clinical circumstances permit increases in dose should be delayed for at least two weeks (captopril) or titrated over two to four weeks (enalapril). In our experience many doctors increase the dose more rapidly, perhaps influenced by the manufacturers' statements of the usual maintenance treatment: 25 mg thrice daily for captopril and 10 to 20 mg a day for enalapril. Inhibition of the renin-angiotensin system, however, occurs at much lower doses.^{1,2} For some patients the small initial dose may be sufficient for maintenance therapy.

We would emphasise the need for patience when starting an angiotensin converting enzyme inhibitor for the treatment of heart failure in the elderly. A good therapeutic response may be obtained from a low dose regimen, thus reducing the potential for adverse reactions in this high risk group.

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1 Sharp DN, Douglas JE, Coxon RJ, Long B. Low-dose captopril in chronic heart failure: acute haemodynamic effects and long term treatment. *Lancet* 1980;ii:1154-7.

2 Cleland JF, Semple P, Hodsman P, Ball S, Ford I, Dargie H. Angiotensin II levels, haemodynamics and sympathoadrenal function after low dose captopril in heart failure. *Am J Med* 1984;77:880-6.

Aluminium bone disease

SIR,—Dr D Maharaj and others reported the accumulation of aluminium in patients receiving regular plasma exchange therapy using albumin replacement solutions contaminated with aluminium (19 September, p 693). They suggested that our study¹ implied that the amount of aluminium delivered by infusion of albumin solutions is too small to present a risk of aluminium accumulation and its resultant toxic effects. This is not a conclusion we can accept.

From our observations in patients with acute renal failure we concluded that the major cause

of aluminium accumulation, as measured by changes in serum aluminium concentration, was haemodialysis using dialysate fluid prepared from softened mains water (mean aluminium concentration 1.47 $\mu\text{mol/l}$, range 0.3-3.7 $\mu\text{mol/l}$). This practice is still common in many intensive care units. We do not, nor did we, dispute that the regular administration of albumin solutions contaminated with aluminium will result in aluminium accumulation, an effect most pronounced in patients with chronic impairment of renal function.

Dr Maharaj and colleagues themselves presented some anomalies: their third patient, who had been exposed to 5707 μmol of aluminium over seven years, achieved a serum aluminium of 14.4 $\mu\text{mol/l}$ 48 hours after a desferrioxamine challenge whereas their second patient, who had been exposed to 885 μmol of aluminium over six months, had a value of 3.6 $\mu\text{mol/l}$, yet both patients were quoted as having similar bone aluminium content on biopsy and a similar degree of renal impairment. These data suggest that desferrioxamine may remove aluminium from other body tissues as well as from bone.

In three patients who presented with acute renal failure and subsequently developed life threatening septicaemia we observed considerable increases in the serum aluminium concentration, from a mean of 0.96 $\mu\text{mol/l}$ (range 0.7-1.2 $\mu\text{mol/l}$) to a mean of 6.2 $\mu\text{mol/l}$ (range 3.5-7.6 $\mu\text{mol/l}$). Subsequent histochemical analysis of iliac bone specimens at necropsy failed to show any aluminium, even though these patients had undergone haemodialysis with softened mains water (the mean number of dialysis treatments was 16.3 (range 13-20)) and had been given infusions of human albumin solution known to be contaminated with aluminium (mean amount of albumin solution given 21.5 litres (range 12.3-34.3)). To account for the increases observed aluminium must have been stored in tissues other than bone.

Obviously aluminium accumulation will occur over long periods in bone and other body tissues in patients who are exposed to high aluminium concentrations, the accumulation being greater in those with renal impairment; but the extent of the accumulation—and here we agree with Dr Maharaj and colleagues—cannot be accurately predicted by serum aluminium measurements alone.

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1 Davenport A, Roberts NB. Serum aluminium levels in acute renal failure. *Lancet* 1986;iii:1397-8.

Why sports injury clinics?

SIR,—Mr P G Stableforth raises several important issues about providing sports injury services to the community (3 October, p 799).

An appreciable proportion of attendances at hospital accident departments, particularly at weekends, result from acute musculoskeletal injuries caused by sport. The numbers stretch the resources of junior emergency staff to a level at which their primary concern is to define whether (using conventional orthopaedic priorities) an injury requires referral to a fracture clinic. Patients with overuse injuries peculiar to sport also present to general practitioners, whose difficulties are often due to a lack of knowledge of biomechanics and techniques related to particular sports; decision making and advice in consequence become arbitrary.

The only satisfactory remedy ultimately lies in an improved level of tuition in musculoskeletal

examination techniques for medical students and an improved level of postgraduate education in recognising and managing soft tissue injuries. Such training would allow the doctor of first contact—the general practitioner and traumatologist—to cope adequately with most of the problems (however and wherever occurred) as part of primary health care. The future generalist sports physician must inevitably come therefore from the ranks of general practice, and orthopaedic (physical) medical teaching needs to be an obligatory part of the general practitioners' vocational training scheme. Appropriate postgraduate education in sports medicine would then lead to the establishment of a satisfactory career structure for doctors in this specialty. With some two million sports injuries occurring every year this may well be inevitable.

Regrettably, there continues to be a body of opinion within the medical profession which considers sports injuries as self imposed and therefore deserving of private treatment only. Soft tissue trauma, however, may give rise to as much morbidity and loss of time from work as fractures, which have historically been accorded priority in orthopaedic practice. There is no point in attempting to gloss over the absence of fundamental training, but first there needs to be a radical revision of medical opinion in line with rising consumer demand in favour of accepting the need for the development of orthopaedic and sports medicine within the general framework of medicine in the United Kingdom.

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Should medical students go to South Africa?

SIR,—The tragic divisions that exist within South Africa over how to end apartheid and bring in a just and free society there reach us continually over here.

Thus it is that two medical students—Helen Gray (5 September, p 348) and Tom Coffey (26 September, p 781)—arrive at completely opposite conclusions about working in South Africa. Both probably exaggerate—for good or ill—the effects of a student elective on the future of that unhappy land. But none can miss the passion through which each comes to the conclusion to go there or to stay away.

It is a sad but unavoidable truth that we humans disagree only when we are talking about the same thing. The wish of both parties is for the same justice, the same peace. Yet their responses are totally opposed. It is exactly so, though with far more serious consequences, between the prophetic Archbishop Tutu and the more pragmatic Chief Buthelezi.

Recently, we spent six months working in the casualty department of the health clinic in Alexandra, a black suburb of Johannesburg. This was a calculated response to an invitation. We went knowing that we must offend some who believe that only absolute isolation can bring about change in South Africa. While we were there we met both Archbishop Tutu and Chief Buthelezi. From both we seemed to receive absolution for our conduct, since what we did was of apparent benefit to their suffering people.

Now we hear Oliver Tambo, from the headquarters of the African National Congress, reminding his people—and all of us—that South Africa must be looking at "the alternatives," must prepare the nation for the time when the people are free and the old tyrannies done away with. To this end, the African National Congress has instructed

the young to go back to school after three years of boycott.

Is it not time for us in Britain also to begin to look at "the alternatives" and actively embrace this reconstructive process? We are not in medicine to keep our political noses clean but to hear the shout of pain. There is no right way to go, and no wrong way either. We have only our humanity to guide us, and our age old professional discipline.

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SIR,—Driving 900 km every month to visit ex-mission hospitals in Kwa Zulu (Zululand) gives ample time to ponder on how "the old order changeth." Once admired efficient hospitals, many founded by and with a notable contribution from the British, are now understaffed and battling for survival. It is fair to contend that this is South Africa's problem. In fact, despite the exodus of doctors, most of the doctors are South African, helped by some Canadians and Germans. It is the paucity of British that hurts. A notable exception has been some dedicated students but even this is likely to cease if a total medical boycott, which is the objective of the UK Medical Students International Committee, is enforced.

Only those who have never been down into the valley of the shadow could take to themselves the right of denying life to people and that the end justifies the means: that sanctions and a medical boycott with consequential deaths will abolish apartheid and improve the health and welfare of the blacks.

If apartheid is the major cause of black ill health how is it that the Indian community of about one million, many of whom came to South Africa as indentured "coolie" labour and who suffer all the indignities and disadvantages of apartheid, are now a wealthy community with a lower infant mortality rate than that of people from Pakistan in the United Kingdom? In Cape Town the infant mortality rate of "coloureds" is almost at parity with that of whites, while in Soweto the infant mortality rate of blacks has dropped from 232 in 1950 to 35 in 1979. While these are localised areas they are also those where the restrictions and injustices of apartheid are most deeply felt and bitterly resented. Nutrition is dominantly determined by economics, which sanctions will worsen; by education, which boycotts will worsen; and by family planning, an unAfrican concept.

While I accept students' idealism and understandable abomination of apartheid, they do not justify lack of factual information like maintaining that students coming to hospitals do nothing to help; or biased claims that the cultural gap is too wide to be bridged by white United Kingdom students (what have missionaries achieved?), or ignoring the importance of infant mortality rate and the history of treatment of Indians in other areas by "democratically" elected African governments. What is unacceptable is that the Hippocratic Oath—that my first concern is the welfare of my patient—is to be replaced by: my first concern shall be the politics of a country. The one factor that has placed medicine apart from and virtually above all other professions and commands the respect of all communities no longer holds, and medical values are comparable with those of West Indian cricketers, who believe that all things South African are untouchable even if some mitigation can be expected if public vilification is expressed.

To maintain that this is just student behaviour no longer holds. Student protest coupled with the pusillanimous policy of the university authorities ensured the withdrawal of the medical faculty of