

Table 1. Number of appointments and default rate for individual doctors.

	Dr A	Dr B	Dr C	Dr D	Dr E (Trainee)	Total
Total number of appointments made	422	359	347	204	316	1648
Number of defaulted appointments	0	1	3	0	3	7
Default rate (%)	0	0.28	0.86	0	0.95	0.43

Defaulted appointments in general practice

Sir,

I was very interested to read an article last year by C.B. Bickler about defaulted appointments.¹ This appears to be a large problem in his practice in Edinburgh. My own impression was that in our own practice, covering two villages in the New Forest, the problem was insignificant. I have, therefore, duplicated the first half of Bickler's study by noting the number of defaulted appointments in one month.

The practice involved in this study consists of three full-time partners, one partner with limited commitment and one trainee, based in two surgeries approximately four miles apart with a list size of 7500 patients. Out of a total of 1648 consultations in a month (excluding special clinics) there were only seven defaulters (0.43%). Table 1 shows the analysis of appointments and default rate for individual doctors.

I felt that these numbers were not large enough for further analysis. However, at a glance there are at least two major differences between the Edinburgh practice and our own.

1. Social class distribution

Bickler states in his method that 80% of the practice were in social classes 4 and 5. The social class breakdown of our two villages, from the 1981 population census, is shown in Table 2.

Table 2. Social class distribution of two New Forest villages X and Y (as a percentage of 10% sample).

Social class	X	Y	Total
1	13	10	12
2	35	49	41
3N	16	11	14
3M	22	10	17
4	8	14	11
5	3	2	2
Armed forces and unclassified	4	3	3

That is, in the practice population overall, the percentage of social class 4 and 5 is 13%. Crombie² states that the

basic problem with social classes 4 and 5 is their 'general inability to cope with life' which leads to misuse and under-use of health services. They may well include defaulting appointments.

2. Waiting time for appointments

In our practice we make it a point of principle to give any patient an appointment on the same day if at all possible. This means that patients tend not to book ahead and so we do not have to keep aside appointment slots for emergencies on Mondays and Tuesdays. I think that Bickler would find that the default rate for Mondays and Tuesdays would be comparable to the rest of the week if he excluded the four 'emergency' slots from his statistical analysis.

In conclusion, defaulting is not a problem in our practice and this is either because of the difference in social class distribution between the practices or it may be merely a function of an efficiently run appointment system which offers the patients an appointment on the same day.

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Reference

1. Bickler CB. Defaulted appointments in general practice. *J R Coll Gen Pract* 1985; 35: 19-22.
2. Crombie DL. *Social class and health status. Inequality or difference. Occasional paper 25.* London: RCGP, 1984.

Parental reasons for failure to vaccinate

Sir,

Prompted by the poor attendance at some baby clinics, we wished to know more about parental reasons for non-immunization of their children. Fifty-five persistent defaulters from appointments were identified by the regional computer. A questionnaire was sent to the patient's health visitor for completion by a parent at a home visit. Forty questionnaires were returned fully completed.

The main reason (85%) given for failure to attend for vaccination was the concurrent occurrence of minor illness in the child. Of the parents completing the questionnaire 75% considered immunization to be effective, 13% thought that immunization was not generally a safe procedure and only 70% thought the diseases we immunize against were still serious.

Poor motivation in the parents seems to be the major underlying reason why this particular group of children were not immunized. When asked about possible incentives which might encourage immunization, half the parents completing the questionnaire thought that linking child allowance to the completion of immunization would make a difference but only a quarter felt compulsory immunization before school attendance would make any difference. Three-quarters of the parents would have liked a doctor to visit the home to immunize their child.

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Are your computer files safe from 'hackers'?

The terms of the Data Protection Act 1984,^{1,2} make the protection of certain information held on computer file a statutory obligation. Computer security can be jeopardized accidentally, or deliberately by 'hacking'. Hacking — the unauthorized attempt to gain access to computer files — poses a serious threat to computer users and to the data for which they are responsible. Hackers fall into four categories:

— The casual browser: an amateur computer operator who gains access to files and looks at the contents out of curiosity.

— The flasher: an amateur who gains unauthorized access, reads the files and leaves a message. This is a common student prank and messages range from 'Kilroy was here' to obscene computer graffiti.

— The thief: this type of hacker is notorious in the business world. A computer professional gains access to data and can use the information for financial gain.

— The wrecker: a professional, sometimes a disgruntled ex-employee, who gains access and tampers with, or wrecks, the data held.

Computerized medical information is vulnerable to all types of hacking, from the casual computer user accidentally

gaining access, to deliberate attempts to breach security. Mindful of this potential threat to our research data our Department undertook to test our computer security by challenging a hacker to gain access to our files.

Our chosen hacker works in the University Computing Unit and has considerable experience with our type of computer and of protecting files against unauthorized access. Our hacker gave an undertaking not to disclose any personal information which he obtained during the course of the study.

Following an invitation from us the hacker attempted to 'access' and read the information stored on our files using a University mainframe terminal. The timing of this exercise was carried out without prior arrangement. After a first casual browse our hacker than used his privileges as a member of the computing staff to access and examine any file of his choosing. Our hacker than submitted a confidential report on our departmental computer security.

The first part of the report indicated that our hacker was able to obtain some computer file names and to guess their purpose but he was unable to obtain access to their contents. At this stage he did not seek to override protection by passwords. In the second part of the report our hacker, using his privileges, was able to look at all the files and their contents but was unable to identify individuals, or to interpret the data relating to them. The report then outlined suggestions for additional safeguards.

The patient information held would appear to be relatively safe from hacking, even by wreckers. We have subsequently added additional security programmes to make access even more difficult. Following his search the computer expert was able to give us professional advice on how best to do this. One suggestion was to protect the programme for processing data and thus prevent unauthorized users obtaining computer file names and guessing their purpose. This protection would prevent someone accidentally seeing file titles and thus being tempted to access file contents.

Perhaps other clinical and research departments might try inviting a friendly hacker to test their computer security systems. The ability to maintain confidentiality of patient information stored on computer is an essential prerequisite for maintaining research standards and ultimately patient care.

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1. *Data Protection Act*. London: HMSO, 1984.
2. Dyer C. Data Protection Act and medical records. *Br Med J* 1985; 291: 1070-1071.

Small computers can be useful in large practices

Sir,

It has been claimed by some computer experts, not least the College's ICI Research Fellow, Dr Norman Stoddart, that home computers are inadequate for the tasks demanded of large general practices.¹ Our practice has found that this is not the case, as our experience over the past year shows.

In April 1985 our practice acquired a computer for the sole purpose of repeat prescribing. Although we are a large group practice of 10 partners looking after 22 500 patients, we decided on a small system for this single purpose as an inexpensive introduction to general practice computing. We chose a BBC 'B' microcomputer with a dual disc drive and dot matrix printer, using the 'G and G' software for repeat prescribing.

The practice is run from two separate surgeries and the computer is used at one surgery only where six doctors look after 14 500 patients. After collecting carbon copies of all our repeat prescriptions over a seven-week period, we calculated that about 2000 patients received repeat prescriptions, which meant that all the patients' details could be stored on one floppy disc. Initially a drug formulary was constructed using the *British national formulary* and with the agreement of each partner. The drug names in our formulary are predominantly generic names and the tear-off portion of the FP 10(comp) is used as a repeat prescription card, issued to the patient in a plastic wallet.

The program has excellent search facilities which make it possible to identify patients who are receiving various drugs by age and sex, so acting as a limited disease register for conditions such as diabetes, epilepsy, hypertension and myxoedema. This has provided useful material for clinical audit and trainee projects.

The BBC Subgroup of the Primary Health Care Specialist Group has been helpful in providing free software and we have found the trainee assessment programs especially useful. We have also utilized some of the commercial programs available for the BBC microcomputer. One is a general purpose data base which serves admirably as a cervical smear call and recall system, linking up with the in-built word processor to produce standard

letters and address labels. Another program is used to construct graphs, bar charts and pie charts displaying statistics of consultation rates, immunization uptakes, births and deaths, referrals, night visits and so on, for inclusion in our practice annual report.

I have been delighted by the versatility of the BBC microcomputer and the total cost of our system, including software, was only £1500 or £83 per partner after tax relief. There are disadvantages, of course, compared with larger systems but I feel that home computers are an excellent first step for practitioners who are unsure about the benefits, and are wary of the cost of computerization. The relatively inexpensive experience that they offer will enable doctors to make informed decisions when stepping up to integrated systems.

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Reference

1. Stoddart N. Horses before carts. *Practice Computing* 1983; 2: 22.

Plasma fibrinogen in a diabetic population

Sir,

The recent paper by Stone and Thorp (December *Journal*, pp. 565-569) provides further evidence from a tightly controlled prospective study that plasma fibrinogen is an independent risk factor for coronary heart disease. Its importance is equated with that of blood pressure, cigarette smoking and serum cholesterol. Patients suffering from diabetes mellitus were rightly excluded from this study as they may form a heterogeneous subgroup with other risk factors operating. It is well known that diabetes mellitus is associated with an increased risk of coronary heart disease and this is particularly so for the non-insulin dependent patient. The explanation of this increased risk is not entirely satisfactory.

We have recently conducted a cross-sectional study of 95 male and 53 female non-insulin dependent patients from a diabetic clinic population. All the patients were assessed for the presence of macrovascular disease (that is coronary heart disease and/or peripheral vascular disease) by means of a standardized symptoms questionnaire, a resting electrocardiogram and the measurement of ankle systolic blood pressure.

In the male group, mean plasma fibrinogen (measured by radial immuno-