Failure of patients to attend a medical outpatient clinic

ABSTRACT—Failure of patients to attend outpatient clinics is common and costly. In one consultant's general medical and gastrointestinal outpatient clinic, 38% of new patients failed to keep at least one appointment, 17% did not attend for their first outpatient consultation and, of these, 59% failed to keep a second appointment sent to them. Of the patients who did attend for their first consultation 12% did not keep their next two appointments. Failure to attend was more common in men, young patients, patients from certain inner city areas, patients on the lists of certain general practices, and those who had already defaulted once. Possible background reasons for default are discussed, suggestions for further study proposed, and an attempt made to look for ways to reduce the extent of the problem.

All hospitals are concerned about the number of patients who are given appointments to outpatient clinics but fail to turn up. These ‘did not attend’ (DNA) patients make clinics inefficient, delay consultation with patients who do attend, and waste clerical and perhaps medical resource. The Department of Health (DoH) has estimated that each failure to attend costs the health service £50 [1].

Methods

An audit was undertaken of new general medical and gastrointestinal patients given appointments to be seen in one consultant's outpatient clinic between 1 August 1993 and 1 February 1994. A proforma was completed for all patients at each appointment made, until either they were discharged from the clinic or six months had elapsed after the recruitment period. The proforma recorded the patient’s age, sex, postal address, source of referral, general practitioner (GP) and diagnosis, and whether or not the patient attended the clinic. Data were recorded by medical staff and transferred to a computer.

Most patients referred to the clinic after an inpatient stay under the care of the consultant were given an appointment to be seen in clinic 6–8 weeks after discharge from the ward, with a few given an appointment in four weeks. Patients referred from other sources (general practice, other consultants, the accident and emergency department, domiciliary visits, transfer from private care) were given appointments to be seen 3–5 weeks after the referral letter was received; patients with urgent problems were seen sooner. All patients were given at least two weeks notice by post of their appointment.

If a non-attending patient had previously cancelled the appointment, that appointment was not classified as ‘failure to attend’ and was not used in analysis. Following a ‘failure to attend’ patients were sent one more appointment; this was usually four weeks later. If the patient failed to keep this second appointment, he or she was not sent another. The patient's GP was informed and another appointment was made only if the GP sent another referral letter.

Results

Of the 367 patients who were recruited (366 different patients; one was referred twice), 190 were women. Patients’ ages ranged from 16 to 88, with 21% over the age of 70. There were 99 patients (27%) referred from inpatient care, and 268 (73%) from all other sources, of whom 226 (84%) were referred from general practice. At least one appointment was not kept by 140 patients (38%). In all, 1,057 appointments were made (2.9 per patient); 221 appointments were not kept, an overall DNA rate of 21%.

Table 1 shows the DNA rate of patients sent their first appointment, and the number who failed to keep a second appointment after a first default. Failure to keep two consecutive appointments, thus resulting in discharge from the clinic, was as common (10%) in patients referred from inpatient care as from other sources. Some patients kept their first consultation but defaulted from the next two appointments: 13 (13%) of the ex-inpatient group; 30 (11%) of patients referred from other sources. Failure to keep at least

| Table 1. Failure of referred patients to keep a first clinic appointment and a second appointment after defaulting from the first |
|---|
| First appointment | Second appointment after a first DNA |
| Made DNA | % | DNA | % | % DNA twice |
| Ex-inpatients | 99 | 21 | 21 | 10 | 48 | 10 |
| Other referrals | 268 | 43 | 16 | 28 | 65 | 9.5 |
| Total | 367 | 64 | 17 | 38 | 59 | 9.6 |
one appointment occurred more often in men (77 patients, 55%) than in women (63 patients, 45%). Table 2 indicates an increased likelihood of defaulting in patients in the 16–19, 20–29 and 30–39 age groups.

Certain postal districts in Leeds were more commonly associated with non-attendance, though differences were not great. The three postal districts with the highest rates (47%, 43%, 42%) have been described as deprived inner city areas. In the seven general practices which each referred more than 10 patients, the DNA rates were 52%, 50%, 46%, 31%, 29%, 23% and 18%. Similar variations were found in practices with less than 10 referrals. Whether or not the practice was fundholding had no bearing on overall DNA rates (fundholders, 34%; non-fundholders, 39%).

It was not possible to assess DNA rates in patients in different diagnostic categories because no diagnosis could be recorded for patients who kept no appointment and who had not been referred from the ward. DNA rates did not differ between gastrointestinal referrals and general medical patients. However, among ex-inpatients 42% with respiratory problems failed to keep their first outpatient appointment whereas only 9% of cardiological patients defaulted.

Appraisal of these results by an experienced statistician indicates that the small numbers of patients in the various subgroups preclude chi-square testing to determine significant differences in failure to attend rates between different general practices or postal districts, or between cardiac and respiratory ex-inpatients. The larger numbers of patients involved allow statistical analysis of differences between non-fundholding and fundholding practices: the difference in DNA rates was statistically not significant: chi-square = 0.61 (with Yates correction), p = 0.44.

Table 2. Relationship between patient’s age and overall prevalence of failure to attend clinic

| Age (years) | Total no. of patients | Patients defaulting at least once |
|------------|-----------------------|----------------------------------|
| 16–19      | 10                    | 4                                | 40                        |
| 20–29      | 52                    | 27                               | 52                        |
| 30–39      | 42                    | 26                               | 62                        |
| 40–49      | 59                    | 21                               | 36                        |
| 50–59      | 72                    | 24                               | 33                        |
| 60–69      | 56                    | 17                               | 30                        |
| 70–79      | 65                    | 18                               | 28                        |
| 80–88      | 11                    | 3                                | 27                        |
| Total      | 367                   | 140                              | 38                        |

Discussion

The failure of patients to keep appointments in hospital clinics is well recognised. The DoH is of the opinion that the average DNA rate throughout the hospital service is 12% [1].

This audit sought to examine in more detail the failure of patients to attend a general medical and gastrointestinal outpatient clinic, and to correlate failure to attend with certain patient characteristics. It was hoped that a profile of the defaulting patient would emerge which could provide help to understand or reduce the problem.

The overall DNA rate of 21% in these clinics is considerably higher than the DoH’s estimate. The data reveal that 30% of the patients failed to keep at least one booked appointment sent to them, 21% of ex-inpatients failed to keep their first outpatient appointment, 16% of other referrals (mainly from general practice) missed their first consultation, and 10% in each group failed to keep both their first and second appointment. High failure rates at other clinics at St James’s University Hospital have been recorded recently. The DNA rate across all specialties is 14% for new patients and 19% for follow-up patients. Highest overall DNA rates were found in ear, nose and throat (35%), gynaecology (23%), medicine (22%) and surgery (20%).

High DNA rates from elsewhere also throw doubt on the DoH’s estimate; namely, an overall DNA rate of 19% in Liverpool clinics [2], a 19% failure to keep first appointments in a dermatology clinic [3] and 20.5% in an orthopaedic clinic [4]. However, a much lower general rate (8%) was reported from New Zealand [5].

A significant number of inpatients failed to attend clinic after ward discharge; 10% of medical inpatients given follow-up appointments to be seen in clinic failed to keep both a first and a second appointment. Patients are nowadays often discharged very early from the ward before results of investigations are known, or to complete their investigation as an outpatient. Gastrointestinal endoscopy, ultrasound or computed tomography scans, follow-up radiographs and exercise tests are scheduled between discharge and clinic appointment. The need for a clinic visit is discussed with patients before their discharge. We believe this is done satisfactorily, but it may be necessary to look more closely at whether ex-inpatients do require clinic follow-up. If fewer patients were followed up, fewer would fail to attend and resources might be saved. Economics would suggest that fewer should be seen, with results of tests sent direct to GPs. This approach equates with lowest common denominator medical practice; it reduces patient satisfaction and hospital doctor training and satisfaction. The Royal College of Physicians requires doctors in their higher medical training posts to follow up patients in outpatient clinics.

Seventeen per cent of patients were discharged after
their first clinic visit; of the rest, 12% failed to keep both their second and third appointments. Some of these patients underwent investigations that had been ordered; some decided not to have them done. Some may not have needed investigation and could have been discharged after their first visit.

The data available from this audit do not outline a full profile of the non-attending patient, but certain associations are apparent. As in other studies, men seem to default more frequently, but the difference between men and women is not significant [2,3,5]. In this audit, patients between the ages of 20 and 40 were approximately twice as likely to default as patients over 60. Patients living in inner city districts are more likely not to attend than those who live in the suburbs. These geographical differences are not great, and are less than those seen when the general practice origin of the patient is examined. In some practices the likelihood of patients failing to attend is very high: in two practices default on at least one occasion was as or more common than 100% attendance. Failure to attend is not more common in fundholding than in non-fundholding practices; in Leeds there has been no pressure from fundholders to limit the number of clinic attendances of referred patients.

Sixty per cent of the patients who failed to keep their first appointment defaulted when a second appointment was sent to them—a rate much higher than the overall DNA rate. This subset merits more investigation, and a study has been planned to determine whether DNA patients have defaulted from previous hospital referrals more frequently than a matched group of attenders.

A partial profile of the non-attenders based on these data suggests that young patients who live in the inner city, who attend certain general practices and who have already defaulted once from the clinic are more likely not to keep appointments than other clinic patients. These data, which are not amenable to statistical interpretation, were collected in the setting of a large hospital in a large city and may not be representative of all parts of the UK.

Why do patients fail to attend clinics? Most of the reasons put forward are uncorroborated and not open to verification. Reasons given by patients in this audit are listed in Table 3. Forgotten appointments were a prominent reason for failure to attend in another study [2]. Some of the reasons are more understandable in clinics with long waiting times, but less to be expected in clinics with a short waiting time after referral and where adequate notice of appointment is given. Of course, appointments occasionally fail to arrive due to inefficiency in the appointments department or in the postal system, or because of unrecorded recent changes in a patient’s address.

Many of the reasons given are not reasons for defaulting but indications that patients should cancel their appointment and seek another if they so wish. Patients who rearranged their appointments were not included in the DNA data in this study. Some of the patients who kept the second appointment generated after an initial default said that they had either telephoned to cancel and were told another appointment would be sent, or tried to telephone but could not get through to the hospital. Local GPs believe this is a not uncommon cause of failure to keep first appointments. It seems likely that not all cancellations are properly logged and appropriate action taken. It can be difficult to telephone hospitals; switchboards are notorious for the time they take to answer calls. The provision of direct lines to a well staffed appointments department could overcome this problem. This level of access might allow patients to negotiate a more convenient appointment. Direct lines were available to a telephone room in the appointments department throughout the study. It is not known how busy these lines were, but this could be audited by making a succession of telephone calls at different times of day.

Most considerations of the causes of patients’ failure to attend try to establish hospital operational failure as a major factor. This is often likely to be the case—but what is the patient’s role? Some hospital workers feel that patients who default without cancelling their appointments may give little thought to the effects on the service of their non-attendance. This view sometimes goes further and cites non-attendance as evidence of a lack of responsibility to others and to society, and finds confirmation in our finding of prevalence of default in young patients, in those who have already defaulted once and in those who live in an inner city. It can equally be argued that at least some of these patients are more likely to have operational difficulties.

The consultant involved in these clinics works also in a clinic where all patients have a malignant disorder. The failure rate to attend this clinic has not been measured but is clearly much less than in the clinics audited here. In the malignant diseases clinic the only defaulters are occasional patients on six months or yearly recall who forget their appointment but who turn up after a reminder. It is easy to believe that patients with malignant disease are more motivated to

| Table 3. Reasons given by patients for not keeping out-patient clinic appointments |
|---------------------------------------------------------------|
| • they did not receive their appointment                      |
| • they forgot                                                  |
| • they mixed up the date of the consultation                  |
| • they (or their spouse or children) were ill and so could not attend |
| • they could not take (or were fearful of taking) time off work |
| • they were on holiday                                         |
| • they lost their appointment card                             |
| • they are frightened of hospitals                            |
Failure of patients to attend a medical outpatient clinic

If it is believed that, despite all care with appointments arrangements, there remains a problem which is in some way centred on the patient, attention will have to be directed elsewhere. Questionnaire or interview of defaulting patients may unearth more fundamental reasons, but high response rates are difficult to obtain [2]. Hospital doctors, when discharging in-patients, and GPs need to examine their indications for referral to clinics. The appropriateness of referral has been examined [7,8], leading to the suggestion that high DNA rates may be related to inappropriate referral [8]; it has been mooted that non-attendance may be predictable from a study of referral letters [9]. It seems likely that some patients are referred who do not agree that they have a medical need to attend. This was found to be a significant reason for default in follow-up patients [2] but there are no data for first referrals. Patients may be correct in this view or improved communication may change their minds. Perhaps the fundamental role of the outpatient clinic, as perceived by the hospital doctor, the GP and the patient would bear re-examination.

References
1 Department of Health Statement. 1995.
2 Mills L. A study of why patients fail to attend for an outpatient appointment. Internal publication. Royal Liverpool and Broadgreen University Hospitals NHS Trust, 1995.
3 Bottomley WW, Cotterill JA. An audit of the factors involved in new patient non-attendance in a dermatology outpatient department. Clin Exp Dermatol 1994;19:399–400.
4 Roland MO, Porter RW, Matthews JC, Redden JE, et al. Improving care: a study of orthopaedic outpatient referrals. Br Med J 1991;302:1124–8.
5 Dockerty JD. Outpatient clinic non-arrivals and cancellations. NZ Med J 1992;105:147–9.
6 Groves S, Gagnol G, Flegel KM, Hoey JR. Improving appointment keeping by patients new to a hospital medical clinic with telephone or mailed reminders. Can Med Assoc J 1983;129:1101–3.
7 Emmanuel J, Walter N. Referrals from general practice to hospital outpatient departments: a strategy for improvement. Br Med J 1989;299:722–4.
8 Marinker M, Wilkin D, Metcalfe DH. Referral to hospital: can we do better? Br Med J 1988;297:461–4.
9 Dickey W, Morrow JL. Can outpatient non-attendance be predicted from the referral letter? An audit of default at neurology clinics. J R Soc Med 1991;84:662–3.

Address for correspondence: Dr A V Simmons, St James’s University Hospital, Beckett Street, Leeds LS9 7TF.

attend clinics than patients referred to general medical and gastrointestinal clinics, although operational difficulties should affect both types of clinic equally.

What then can be done about failure of patients to attend? The problem has been addressed recently at St James’s University Hospital but without any novel ideas emerging. It has been accepted that staffing and work practices of the appointments department must be examined and improved where possible. Dedicated telephone lines must be adequately staffed. When cancellations are made and new appointments promised, this information must be conveyed to the correct personnel and efficient action taken. Resource has to be identified to train and monitor staff. A dialogue will be set up with GPs to identify ways of educating or exhorting referred patients to attend. Some practices already display a weekly list of the number of patients who fail to keep hospital appointments.

When the waiting time for an appointment is long, the patient is now informed initially of the request for the appointment, given an indication of the likely length of wait, and told that a time and date will be sent to him or her one month prior to the consultation. It has been suggested that a postage-prepaid card should accompany appointments, and that patients should return the card indicating whether they can attend. A pilot trial is under discussion.

Policy now dictates that new patients are sent only one appointment (previously two in most clinics). If the patient does not attend, a letter is sent to the GP who must decide whether to make a fresh appointment for the patient. All follow-up defaults are now reviewed at the end of clinic by the consultant who decides whether another appointment should be sent out or a discharge letter sent to the GP. These arrangements were in place already in the clinics audited here, save for new patients who were routinely sent a second appointment, but were not standard across all specialties. They are unlikely to improve attendance rates, although they may save the hospital some resource but increase the involvement of the GP. It has been suggested that a telephone call to patients the day prior to their appointment or a letter sent 2–3 days beforehand might improve attendance rates [6]. However, in Liverpool only 60% of outpatients are potentially contactable by telephone [2].