Effect on hospital attendance rates of giving patients a copy of their referral letter: randomised controlled trial

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Abstract

Objectives To investigate whether sending patients a copy of their referral letter can reduce non-attendance at outpatient departments.
Design Blinded randomised controlled trial.
Setting 13 general practices in Exeter, Devon.
Subjects 2078 new consultant referrals from 26 doctors.
Main outcome measures Non-attendance at outpatient departments.
Results The doctors excluded 117 (5.6%) referrals, and 100 (4.8%) received no appointment. Attendance data were available for 1857 of the 1861 patients sent an appointment (99.8%). The receipt of a copy letter had no effect on the non-attendance rate: copy 50/912 (5.5%) versus control 50/945 (5.3%).
Conclusion Copy letters are ineffective in reducing non-attendance at outpatient departments.

Introduction

Non-attendance for hospital outpatient appointments, both new and follow up, is about 12% nationally.[1] The cost per lost appointment during 1984 ranged from £20 to £50.[2] In 1997 it had risen to £65.[3] An estimated total cost to the NHS is £300 million annually.[1] Non-attendance increases waiting lists.[4] Non-attendance is unrelated to the seriousness of the illness,[5] and patients who do not attend may have treatable morbidity.[6] The duration of new appointments is usually longer than follow up appointments[7] making non-attendance for new appointments more wasteful.

There are several reasons for non-attendance including illness and work commitments.[8 9] Patients may forget their appointment,[10 11] but others make a conscious decision to miss it, balancing perceived benefits and costs.[12 13] The main hospital factor is inadequate communication.[10 11 14] Two studies looked at the provision of information to the patient by the referrer, and showed increased attendance of informed patients.[5 15] Another study suggested non-attendance might be an indicator of inadequate communication between the patient and the referring doctor.[9]

Strategies to reduce non-attendance have previously been hospital based. Reminders alone can reduce non-attendance by 23%.[16] Letting the patient make the outpatient appointment can reduce non-attendance by 30% to 50%.[17] Larger reductions of 60%[18] and 82%[19] have been achieved by requesting that patients confirm their attendance by reply paid letter, and then telephoning those that do not reply. Non-attendance can be partially compensated for by overbooking but, if all patients attend, the clinic staff are pressurised. The increased waiting time is also unpopular with patients.[20]

Extending the concept of sharing information between referrer and patient, we hypothesised that sending patients a copy of their referral letter might reduce non-attendance. A pilot study[21] established the acceptability of the process and showed a non-significant reduction in non-attendance.

Subjects and methods

We conducted a blinded randomised controlled study, with randomisation at the level of the individual patient. Our sample size was calculated with 750 referrals in the intervention group and 750 controls: assuming a non-attendance rate of 6% in controls (as shown by the pilot study and from reviewing available data for Exeter) and 3% in the intervention group, this provided 80% power of detecting a significant difference at the 5% level. The study was approved by the local research ethics committee.

All 71 general practitioners in Exeter city, except one on sabbatical and one of the authors (WH), were invited to participate. Overall, 44 showed an interest of whom 26, representing 13 of the 19 practices, were selected using a random numbers table. Data on their fundholding status, hours worked, sex, and qualifications were available from the North and East Devon Health Authority.

Enrolment of patients

All patients referred to consultants in the two local trusts between January and May 1997 were eligible. Exclusion criteria were: termination of pregnancy; referral letters which might distress the patient; and inability to read. We recorded the reasons for exclusion. The doctors dictated the referral letters, stating if the referral was to be excluded. After typing the letter, the secretary was permitted, before randomisation, to check with the doctor that the referral was included. The randomisation was computer generated, and a numbered sealed envelope allocated the patient to receive a copy of their referral letter (copy group) or not (control group). The secretaries were instructed to

website *e*xtra

A profile of the trial appears on the BMJ's website

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enter all referral letters, other than those excluded by the doctors, to ensure all eligible referrals were included. This resulted in some letters being entered into the randomisation process which were ineligible as they were not referrals to local NHS consultants. We did not allow exclusions after randomisation in the study—that is, where a doctor decided not to send a copy after allocation to the copy group. Those that did occur were identified by retrieving envelopes after the study, and were added to the copy group for analysis by intention to treat.

Copy letters were sent with a compliments slip marked "For your interest." The doctors were not involved in the randomisation and remained blinded to the allocation of patients.

Outcome measures

The main outcome measure was the number of non-attendances at new outpatient appointments, either as a first time non-attendance or non-attendance at a rearranged appointment. We monitored attendances by two methods.

The doctors' records were examined by WH for written replies from the hospital team, while blinded to the group to which the patient was allocated. Deaths and hospital admissions were documented. Notes of patients who died (8 cases) were obtained from the North and East Devon Health Authority, who also provided details of new doctors when patients had changed practices (28 cases). The new doctor extracted attendance data from their records.

The doctor is not routinely notified of cancellations, and some departments do not notify the general practitioner of a first non-attendance. For these we used hospital data. The large majority of consultant referrals from Exeter doctors are to the Royal Devon and Exeter Healthcare Trust. All outcomes of outpatient appointments are coded in the hospital's patient activity system as attendance, cancellation, or non-attendance. In addition to finding cancellations and unnotified non-attendances, this dataset was compared with attendance data from the doctors' notes. To assess the representativeness of our doctors, we calculated non-attendance rates for those included in the study and those not included in the study before, during, and after the trial, from the hospital dataset.

We sent participating practices a questionnaire after enrolment, enquiring about perceived acceptability of sending out copy letters routinely and about any patients' comments.

Statistical methods

We used a χ^2 test to compare attendance outcomes, Student's *t* tests to compare the means of continuous variables, and a Mann-Whitney U test for non-parametric data.

Results

Recruitment of doctors and enrolment of referrals

The 26 doctors included in our study were representative of the 71 Exeter doctors for fundholding status, hours worked, sex, and membership of the Royal College of General Practitioners. Overall, 2329 referral letters were dictated of which 251 were ineligible (not local NHS consultant referrals) leaving 2078 eligible (see website). The doctors excluded 117 (5.6%) before randomisation owing to termination of pregnancy,[17] inability to read,[8] potentially serious illness,[37] sensitive conditions,[29] previous suboptimal care,[3] or the patient's attitude or lifestyle.[30] Some had more than one reason.

Therefore, we analysed 1961 eligible referrals; 961 in the copy group (including 12 exclusions after randomisation) and 1000 controls. No appointment was made for 100 referrals: advice letters,[33] direct additions to the waiting list,[17] rereferral privately,[14] hospital admission or death,[9] specialist investigation,[11] or no apparent reason.[16] A total of 1861 outpatient appointments were made. No patients were lost to follow up. Four were still awaiting their appointment at the end of the study in July 1998, making a total of 1857 for whom outcome data were available. Table 1 shows the number referred to each specialty and table 2 shows the demographic details. The small number of psychiatric referrals probably reflects the involvement of community psychiatric nurses, who may arrange consultant referral without direct doctor involvement. There were no significant differences between the copy and control groups for these variables.

Table 1 Numbers (percentages) of patients sent appointments, by specialty*

Specialty	Copy group	Controls	Total
Surgery	208 (22.8)	205 (21.8)	413 (22.3)
Medicine	130 (14.3)	123 (13.1)	253 (13.7)
Ear, nose, and throat, and oral surgery	114 (12.5)	131 (14.0)	245 (13.2)
Obstetrics and gynaecology	108 (11.8)	120 (12.8)	228 (12.3)
Dermatology	99 (10.7)	110 (11.7)	209 (11.3)
Orthopaedics	100 (11.0)	109 (11.6)	209 (11.3)
Ophthalmology	109 (12.0)	91 (9.7)	200 (10.8)
Other	44 (4.8)	50 (5.3)	94 (5.1)
Psychiatry	0 (0)	6 (0.5)	6 (0.3)
Total	912	945	1857

χ^2=4.6, df=8, P= 0.71.
*Appointments before study closure only.

Attendance rates

The doctors' records contained attendance data for all 1857 patients given an appointment. Corroborating hospital data were available for 1487 (80%). In seven instances a letter in the records described the outpatient consultation, of whom three were recorded by the hospital as non-attenders and four as having cancelled. These patients were classified as attenders. Table 3 shows the attendance data. There was no difference in non-attendance rates between the copy and control groups: 5.5% and 5.3% respectively ($\beta^2 = 3.2$, $P = 0.36$). Overall, four of the 111 patients (3.6%) excluded from randomisation failed to attend.

Table 2 Characteristics of patients given appointments

Characteristic	Copy (n=912)	Control (n=945)	Total (n=1857)	Significance of difference between groups
Mean age in years (SD)	48.9 (22.1)	48.5 (23.2)	48.7 (22.7)	t=0.37, P=0.71
No (%) female	538 (59.0)	551 (58.3)	1118 (58.6)	χ^2=0.09, P=0.8
No (%) from fundholding doctor	213 (23.4)	229 (24.2)	442 (23.8)	χ^2=0.20, P=0.70
Interval to appointment in days (interquartile range)	71 (28-94)	70 (27-94)	70 (28-94)	P=0.99 (Mann-Whitney U test)

Table 3 Outcome of appointments. Values are numbers (percentages)

Outcome	Copy (n=912)	Controls (n=945)	Total (n=1857)
Total attendances	836 (91.7)	856 (90.6)	1692 (91.1)
Cancelled and no further appointment requested	26 (2.9)	39 (4.1)	65 (3.5)
Total non-attendances	50 (5.5)	50 (5.3)	100 (5.4)

χ^2=3.2, df=2, P=0.36.

Non-attendance rates for patients of all Exeter doctors, from the hospital dataset, remained stable throughout the study with no difference between study and non-study doctors (data not shown).

All practices replied to the questionnaire. All were prepared to consider sending a copy letter routinely, provided it was shown to be beneficial and that the additional cost could be offset. Ten practices had received positive comments from patients. Three patients had telephoned concerned that the copy had been sent to them in error, and three patients had consulted with their doctor to correct inaccuracies in the letter.

Discussion

This is the largest prospective study of non-attendance at outpatient departments. The results do not support the hypothesis that sending patients a copy of their referral letter reduces non-attendance, despite earlier work suggesting that this might be so.[5 15 21] The suggestion that non-attendance reflects inadequate communication between doctor and patient[9] is not supported by the results. The study shows the importance of performing a full randomised controlled trial rather than relying on impressions from underpowered pilot studies. The non-attendance rate of 5.3% is low compared with previous studies,[5 7 10 11 22] but was similar to non-study doctors concurrently. The patients excluded from the randomisation cannot explain this; there were few, and they had a low non-attendance rate, probably reflecting the conditions that led to their exclusion from randomisation. Nor can the seven mismatches between the attendance record in the doctor notes and the hospital data fully explain the low recorded non-attendance rate. The doctor record was used as the gold standard, in that a consultant's reply letter is unequivocal evidence of attendance, whereas other studies quote hospital data,[1 17] which will contain these small inaccuracies.

Possible effects of a copy letter

A referral letter may not contain the information that a patient needs to decide if attendance is worthwhile; conversely, it may inform some patients such that they consider attendance unnecessary. In the case of a referral made primarily for reassurance, the copy letter alone may provide this. Although such reassurance might decrease attendance, this effect should increase cancellations rather than non-attendances. It is possible two effects are operating, in different directions: increased attendance (in those whose understanding of their condition—and thus the need for an appointment—is improved) and increased non-attendance (in those reassured by the letter who decide not to attend). On the other hand, it may simply be that any effect of the copy letter is lost by the time of the appointment, on average 10 weeks later. A copy may have to be sent nearer to the time of the appointment to be effective.

Key messages

- Copy letters to the patient do not decrease non-attendance at hospital outpatients
- The concept of copying letters to patients is acceptable to doctors and patients
- It may be possible to apply interventions from primary care to reduce non-attendance

The copy letter is not without value, however. Theoretically it empowers patients; it was certainly not seen as undesirable by patients, given the lack of adverse comments. This supports the findings of the pilot study,[21] which showed that patients find copy letters helpful. Previous studies have shown the acceptability of sending patients a copy of the consultant's reply to their general practitioner,[23 24] but none has studied a copy of the general practitioner's letter to the consultant. The low rate of excluded patients and the doctors' replies to the questionnaire show that they also accept the concept. Several saw provision of a copy as a logical extension of patients' access to their records. The discipline of knowing that the patient may receive a copy could have improved the letter's accuracy, as only three patients sought to have inaccuracies corrected. This can be compared with accuracy levels of 63%-95% when letters are assessed by doctors,[25] and 43% when assessed by patients.[21]

Non-attendance remains an important issue for doctors and their patients. Despite the negative results of this study, the possibility of applying interventions in primary care to reduce non-attendance still exists. Primary care groups will be well placed to advise on which interventions are likely to be best for their populations.

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Treatment of shoulder complaints in general practice: long term results of a randomised, single blind study comparing physiotherapy, manipulation, and corticosteroid injection

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Descriptive studies have shown that shoulder complaints can be persistent and recurrent, requiring long term evaluation of treatment.[1] Unfortunately, in most randomised studies comparing treatments for shoulder complaints the study period varies from a few weeks (trials of non-steroidal anti-inflammatory drugs) to 3-6 months (injection therapy and physiotherapy trials).[2–4])

In a trial in 1994-5 of treatment of shoulder complaints in general practice we showed that in a study period of 11 weeks, injection therapy with a corticosteroid was superior to physiotherapy and manipulative therapy in the patients whose complaints originated from the structures of the glenohumeral joint, the subacromial space, or the acromioclavicular joint (synovial group).[5] In the patients whose complaints related to functional disorders of the cervical spine, the upper thoracic spine, or the adjoining ribs (shoulder girdle group), manipulation was superior to physiotherapy. To assess the various treatments in the long term, we re-examined these patients two to three years after the original study.

Patients, methods, and results

In September 1997 we sent a questionnaire to all 172 patients who had taken part in the earlier trial, inquiring about persisting, recurrent, or new shoulder complaints since the initial treatment. Diagnostic procedures and further treatment were assessed. We asked patients with current complaints to indicate if they felt "cured" and invited those who did not feel cured for a physical examination. Details about the assessment of the patients, the definition of the diagnostic categories, feeling cured, and the treatments given are described elsewhere.[5] Statistical testing was done with the χ^2 test.

We received 130 (76%) questionnaires that could be evaluated. The distribution of the patients' characteristics across the five treatment groups was similar to the original study. A substantial proportion (64%) of the non-respondents had paid jobs. The table shows that 29/40 (73%) patients in the shoulder girdle group had experienced a shoulder complaint at some time since the earlier trial. Thirteen of the 22 (59%) patients in the physiotherapy group had current complaints, of whom 8 (62%) did not feel cured. In the manipulation group 6/18 (33%) patients had current complaints, of whom 4 did not feel cured. Most (18/19) patients with current complaints had had previous complaints. No significant differences were found between the two treatment groups for the items examined. Only two patients reported referral for specialist assessment.

In the synovial group 47/90 (52%) patients had experienced a shoulder complaint at some time since the earlier trial. Twenty two (24%) patients had current complaints, of whom 21 (95%) did not feel cured. Nineteen (21%) patients had consulted their general practitioner, and 12 (13%) patients were referred to a specialist, in most cases an orthopaedic surgeon. No significant differences were found between the three treatment groups for the assessed variables.

Of the 33 patients not feeling cured, 25 attended for a physical examination. Ten (40%) patients seemed to have changed diagnostic category.

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