

Refereed paper

The online outpatient booking system ‘Choose and Book’ improves attendance rates at an audiology clinic: a comparative audit

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ABSTRACT

Background The ‘Choose and Book’ system provides an online booking service which primary care professionals can book in real time or soon after a patient’s consultation. It aims to offer patients choice and improve outpatient clinic attendance rates.

Objective An audit comparing attendance rates of new patients booked into the Audiological Medicine Clinic using the ‘Choose and Book’ system with that of those whose bookings were made through the traditional booking system.

Methods Data accrued between 1 April 2008 and 31 October 2008 were retrospectively analysed for new patient attendance at the department, and the age and sex of the patients, method of appointment booking used and attendance record were collected. Patients were grouped according to booking system used – ‘Choose and Book’ or the traditional system. The mean ages of the groups were compared by a

t test. The standard error of the difference between proportions was used to compare the data from the two groups. A *P* value of ≤ 0.05 was considered to be significant.

Results ‘Choose and Book’ patients had a significantly better rate of attendance than traditional appointment patients, $P < 0.01$ (95% CI 4.3, 20.5%). There was no significant difference between the two groups in terms of sex, $P > 0.1$ (95% CI –3.0, 16.2%). The ‘Choose and Book’ patients, however, were significantly older than the traditional appointment patients, $P < 0.001$ (95% CI 4.35, 12.95%).

Conclusion This audit suggests that when primary care agents book outpatient clinic appointments online it improves outpatient attendance.

Keywords: ‘Choose and Book’ system, electronic referral and booking, outpatient clinic attendance

Introduction

‘Choose and Book’ is a national electronic referral and booking service which was introduced in England in the summer of 2004, allowing patients a choice of place, date and time for their first outpatient appointment with a specialist in a hospital or clinic. One of the

purported benefits of the ‘Choose and Book’ system is an improved attendance rate as it allows patients to plan their appointments at convenient times which fit around any existing appointments, work or home commitments and carers’ schedules. In the past,

many appointments were also missed due to administrative delays and appointment letters being lost in the post. The 'Choose and Book' system should reduce the incidence of this as more communication and correspondence takes place through computers.¹

Referrals to our Audiological Medicine department, which is a single consultant's practice with an adult and paediatric service, come from both traditional and 'Choose and Book' sources, which makes it suitable for comparison between the two modalities of referral. An audit was carried out to compare the attendance rates of new patients booked into the Audiological Medicine Clinic at Manchester Royal Infirmary via the 'Choose and Book' system with those booked through the traditional booking system and to assess the effectiveness of the new system. The demographics of the two different populations were also analysed to determine if there was a difference in terms of age and sex of patients who attended and those who did not.

Method

The period from 1 April 2008 to 31 October 2008 was retrospectively analysed for new patient attendance at the department. Data collected included age and sex of the patients, method of appointment booking used and the attendance record. Data were collected on a Microsoft Office Excel 2003 (Microsoft Corp, Redmond, WA, USA) spreadsheet and the statistical package 14.0 for Windows (Chicago, IL, USA) was used for statistical analysis. The mean ages of the groups were compared by a *t* test. The standard error of the difference between proportions was used to compare the data from the two groups. A *P* value of ≤ 0.05 was considered to be significant.

Results

The data obtained are displayed in Table 1. During the seven-month period analysed, a total of 416 new patients had appointments to attend the clinic, of whose appointments 225 (54.1%) were traditionally booked and 191 (45.9%) were made by 'Choose and Book'. A total of 314 (75.5%) patients attended and 102 (24.5%) patients did not. Of all the patients booked to attend the clinic, 216 (51.9%) were male and 200 (48.1%) were female. The patients varied in age from 3 months to 96 years. The median and mean ages of the patients were 48 years and 47 years, respectively.

Patients with traditionally booked appointments

Of the 225 patients due to attend, 157 attended (69.8%) and 68 (30.2%) did not. Of those that attended, 74 (47.1%) were female and 83 (52.9%) were male, and of those that did not attend, 41 were female (60.3%) and 27 (39.7%) were male. Whilst the mean age of the patients who attended was 46 years, it was 37 years for the patients who did not attend.

'Choose and Book' patients

Of the 191 patients due to attend, 157 (82.2%) attended and 34 (17.8%) did not. Of those that attended, 72 (45.9%) were female and 85 (54.1%) were male, and of those that did not attend 13 (38.2%) were female and 21 (61.8%) were male. Whilst the mean age of the

Table 1 Results of the demographic details and attendance rates at the Audiological Medicine Clinic between 1 April 2008 and 31 October 2008

	Traditional appointment patients		'Choose and Book' patients	
	Yes	No	Yes	No
Total	225		191	
Attended	157 (69.8%)	68 (30.2%)	157 (82.2%)	34 (17.8%)
Sex				
Female	74 (47.1%)	41 (60.3%)	72 (45.9%)	13 (38.2%)
Male	83 (52.9%)	27 (39.7%)	85 (54.1%)	21 (61.8%)
Age range	3 months–94 years	3 months–90 years	3 months–96 years	6 months–82 years
Median	48 years	33.5 years	56 years	48.5 years
Mean	46 years	37 years	52.9 years	47.4 years

patients who attended was 52.9 years, it was 47.4 years for the patients who did not attend.

Comparison between traditional appointment patients and 'Choose and Book' patients

Statistical analysis demonstrated that the 'Choose and Book' patients had a significantly better rate of attendance than traditional appointment patients, $P < 0.01$ (95% CI 4.3, 20.5%). There was no significant difference between the two groups in terms of sex, $P > 0.1$ (95% CI -3.0, 16.2%). The 'Choose and Book' patients, however, were significantly older than the traditional appointment patients, $P < 0.001$ (95% CI 4.35, 12.95). Overall, regardless of the method of booking, patients who attended were significantly older than patients who did not attend, $P < 0.001$ (95% CI 3.98, 13.96).

Discussion

Non-attendance in clinics is a significant cause of wasted resources in the NHS. Despite reporting technical difficulties with access to the 'Choose and Book' system, a majority of surveyed GPs were supportive of the concept of electronic booking.² Inflexibility of the system and inappropriate referrals was a source of concern to practitioners in primary and secondary care.^{3,4} Concerns have also been raised regarding the possibility of an increase in urgent referrals to an ear, nose and throat (ENT) service via 'Choose and Book'.⁵ Recent audits have found a decline in patient attendance with 'Choose and Book' in both an ENT and an orthopaedic service.^{6,7} This may be related to the difficulties experienced by some patients in accessing the choices associated with 'Choose and Book' referrals.⁸ Generally our experience with this online booking system was more positive than previous reports.²

This audit found that there was a significantly higher attendance rate amongst patients who had 'Choose and Book' appointments than amongst patients who had traditional appointments. Overall, patients who attended were older than the patients who did not attend. The group of patients who had 'Choose and Book' appointments were significantly older than the patients who had traditional appointments and this may have a bearing on the difference in attendance rates between the two groups. The majority of the patients who did not attend traditional appointments were female whilst males accounted for the majority of patients who did not attend 'Choose and Book' appointments.

Our results differ from the other two audits in the literature.^{6,7} Modayil *et al*⁶ report a significant difference in attendance rates between GP booked and 'Choose and Book' appointments, but neither the patient numbers nor time period are reported in their pilot study. Beckingsale *et al*⁷ compared the attendance rates between traditional appointment and 'Choose and Book' appointments in an orthopaedic service, however, the two different populations were not analysed over the same period. The attendance rate for traditional appointment patients was taken from the year 2005 whilst the attendance rate for 'Choose and Book' patients was taken from the year 2008. Orthopaedic services have a level of sub-specialisation, not present in our practice, which may impair correct referrals to the appropriate clinical service. Analysis of the correct referral pathway within a large department may be more suitably carried out by analysis of the traditional referral route.⁴

Non-attendance by patients referred by the traditional method in this audit may be related to internal issues within our department due to administrative errors and communication failures. The high level of non-attendance identified in this audit has led to a reappraisal of our methods of communication and these issues will be assessed, in future, in a reaudit of similar data from a more recent time period.

'Choose and Book' appointments, in our clinical experience, have been associated with an improved attendance rate compared to that of traditional appointments. This audit recommends the continued implementation of the 'Choose and Book' system. This will improve efficacy by improving attendance rates.

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CONFLICTS OF INTEREST

None.

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