Assessing an appointment system

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SUMMARY. A simple method of assessing the way in which an appointment system is working is described.

Introduction

It is a measure of the speed with which appointment systems have found favour with family doctors that whereas Hadfield in 1952 found that only two per cent of the practices he surveyed had full appointment systems, Lloyd-Hamol (who supply most of the ledgers) reported in 1972 that 64 per cent of all British practices had appointment systems and that the figure was as high as 81 per cent in parts of the South of England.

In their comprehensive survey of appointments systems in 1967 Bevan and Draper found that waiting times for patients had been decreased by about half in those practices which ran appointment systems. This finding has been confirmed by the survey of the Consumers' Association in 1974; it was also found that people whose doctors did not have appointment systems were twice as likely to be dissatisfied with the way the surgery was run.

Method

A six-column grid is drawn (figure 1). The columns can be drawn in the appointment ledger,

NAME					
A	B	C	D	E	F

Figure 1
The grid

NAME					
A	B	C	D	E	F
5.0	5.1	5.2	+1	+2	
5	5.1	5.7	−4	+7	
10			BREAK		
15	5.20	5.20	+5	+5	
20	5.25	5.29	+5	+9	
25	5.25	5.25	0	0	
30	5.18	5.18	−12	−12	
35			BREAK		
40	5.35	5.36	−5	−4	
45	5.20	5.45	−25	0	
50	5.48	5.50	−2	0	
55	5.55	6.5	0	+10	
60	5.56	6.8	−4	+8	

Figure 2
A completed grid for one surgery

or on a separate piece of paper. The name of the doctor taking the surgery is placed at the top of the grid. Column A shows the appointment time, column B the time the patient arrives and column C the time the patient leaves the waiting-room for the doctor's consulting room.

These three columns are filled in by the reception staff during the surgery. The other columns can be filled in at leisure by doctor or reception staff. Column D shows the time the patient arrived, relative to the appointment time (B-A), column E the time the patient saw the doctor, relative to the appointment time (C-A) and column F is left blank for the moment. If a patient arrives or sees the doctor before the appointment time the figures in columns D and E are negative. Figure 2 shows the grid completed for a typical surgery of one hour.

This is all that needs to be done. Analysis of a doctor's performance can be made from the figures alone, but it was found that it was less confusing to express the results graphically.

My training practice is predominantly urban, with a list size in September 1973 of 6,484. There are four partners, all of whom have hospital commitments of up to five sessions every week, and one trainee. The surgery is on a main road close to the town centre and is well served by public transport. A full appointment system has been in operation since May 1967; appointments for the one-hour surgeries are at five-minute intervals, with two five-minute breaks to the hour for the partners and four five-minute breaks for the trainee.

The grid was filled in for all patients attending the surgery in the week 15–22 October 1973.

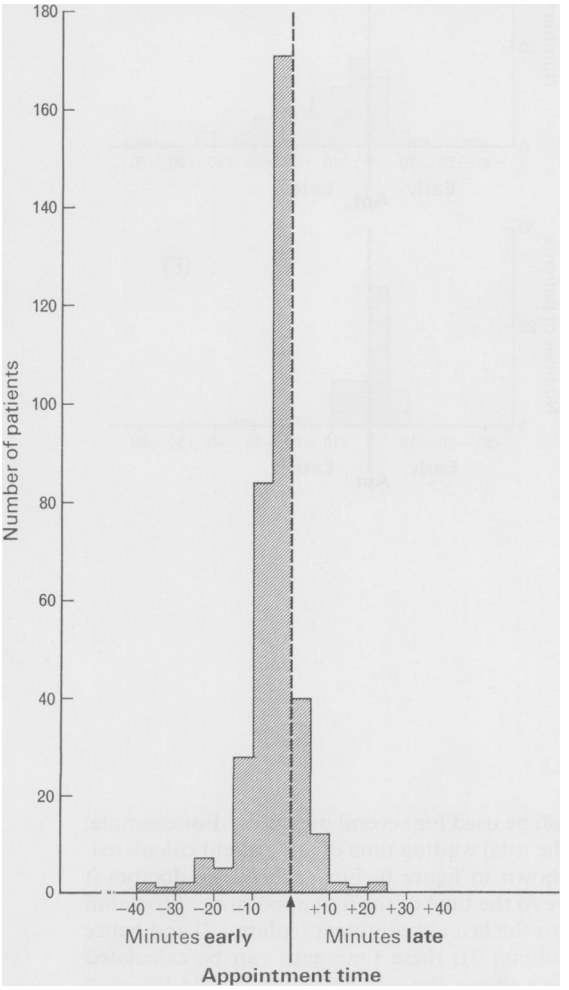

Figure 3

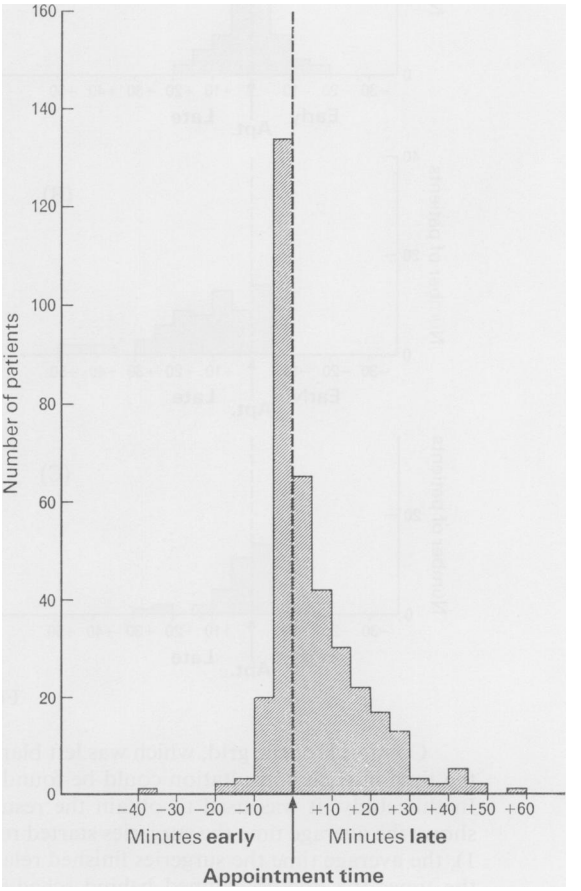

Figure 4

Results

There were 384 patients who made appointments, of whom 373 kept their appointment. Eleven unbooked patients were also seen.

Figure 3 shows the times patients arrived in the surgery relative to the appointment time, calculated from column D. Three hundred and six (84·3 per cent) arrive early or on time, 346 (95·3 per cent) were less than five minutes late.

Figure 4 shows the times patients were seen by their doctor relative to the appointment time, calculated from column E. One hundred and sixty-three (44·9 per cent) were seen on time or early, 250 (66·1 per cent) were seen no later than five minutes after their appointment time, but 90 (24·8 per cent) were seen more than ten minutes late.

Figure 5 shows the times patients were seen by each of the five doctors relative to the appointment time.

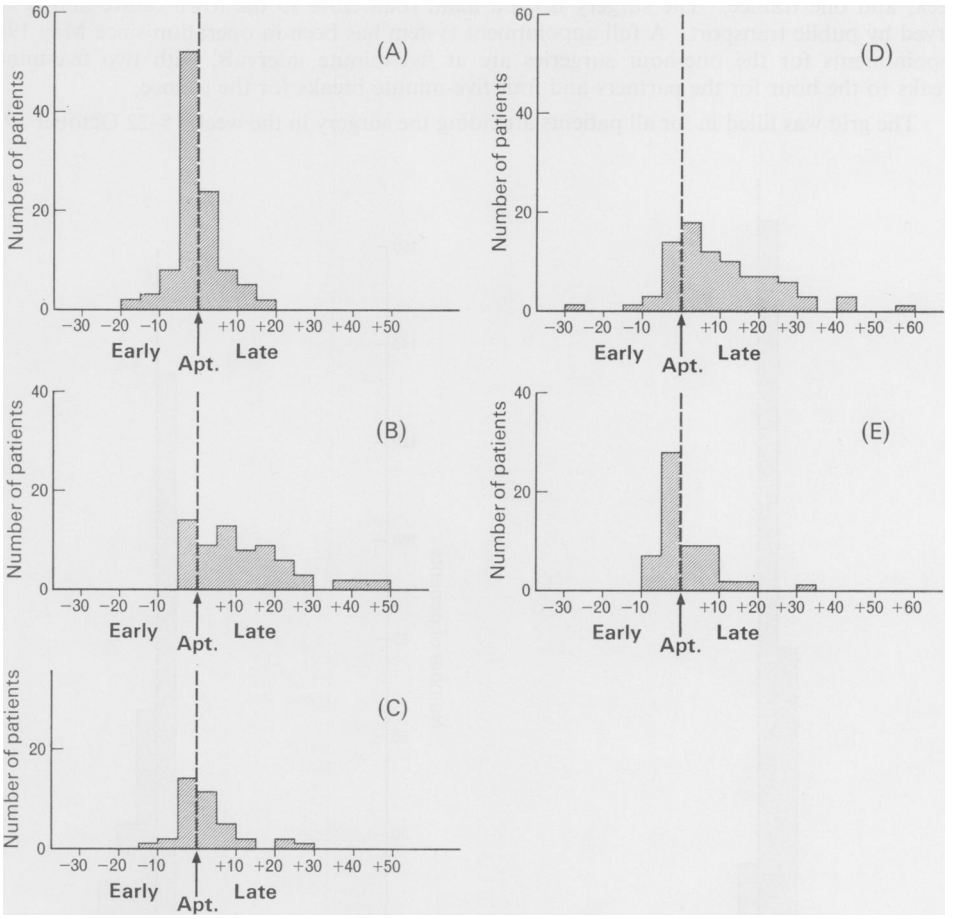

Figure 5

Column F of the grid, which was left blank, can be used for several purposes. For example, the time of each consultation could be found or the total waiting time of any patient calculated. In this study, it was used to obtain the results shown in figure 6. For each of the doctors it shows the average time the surgeries started relative to the time of the first appointment (column 1), the average time the surgeries finished relative to the last appointment (column 2) and hence the times the doctors slipped behind schedule (column 3); these time gaps can be calculated from columns A and C of the grid. Figure 6 also shows the average waiting time for each doctor relative to appointment time (column 4); these are calculated from column E of the grid.

Discussion

The method described gives an accurate picture of how doctors and patients are using the appointment system.

Most patients are punctual (figure 3) and two thirds of patients are seen no more than five minutes after their appointment time (figure 4); these facts indicate that the appointment system is working well. Nonetheless, a quarter of patients had to wait more than ten minutes. Figure 5 shows that doctors A, C and E are keeping to schedule better than doctors B and D, at least in the week of the study. In addition, figure 6 shows that the doctors with the worst

DOCTOR	1	2	3	4
A	−0.7	+1.1	1.8	0.4
B	+8.0	+24.5	16.5	13.3
C	+3.0	+5.4	2.4	4.0
D	+11.6	+19.5	7.9	13.1
E	−0.6	+4.6	5.2	1.1

Figure 6
Starting time of the surgeries

profiles on figure 5 had the highest average waiting times, as expected; but figure 6 also shows that those doctors who start late fall on average further behind as the surgery progresses, compared with their colleagues, rather than making up time for the benefit of their later patients.

What these performances may mean in clinical rather than chronological terms is uncertain, but patient dissatisfaction increases with waiting time. The method described puts doctors in a position where they know their own performance and can consider what action, if any, to take.

Acknowledgements

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Addendum

Dr G. Worrell is now a principal in general practice at Cleckheaton, West Yorkshire.