Extending appointment length — the effect in one practice

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SUMMARY. The effects of extending appointment length from 7.5 to 10.0 minutes in the evening surgeries of two general practitioners in one general practice were examined. The mean consultation length increased from 7.4 to 8.4 minutes. Most of this change appeared to be due to a small increase in the length of shorter consultations and was true for all age groups. The time that patients had to wait did not decrease and for one doctor actually increased. However, the results suggest that with longer appointments there is more discussion of lifestyle factors and more screening activity.

Introduction

The 10-minute appointment looks set to become a hallmark of quality for general practice care. Support for this comes from observational studies showing associations between longer appointments and beneficial processes and outcomes of care. However, doctors themselves may be confusing such associations; those who work in certain ways have chosen certain appointment lengths, and so changing booking intervals may not result in any change in outcome. One experimental study has shown that in a trial situation of 5.0, 7.5 and 10.0 minute systems doctors behave differently, although the main differences were found between the 5.0 and 7.5 minute systems. Many practices are considering changing to a 10-minute appointment system; this study reports the experience of one practice which recently made such a change.

The study practice has three partners and a list size of 5400. The change investigated was the extension of appointment length in evening surgeries from 7.5 to 10.0 minutes. The number of bookings available per surgery was kept constant. This change was largely intended to reduce patient waiting time. The aim of the study was to examine the effects of this change on consultation length, waiting time and certain aspects of doctor behaviour.

Method

Two partners took part in the study. Both were male, UK graduates aged 30–40 years. Thirteen surgery sessions (six by Dr A, seven by Dr B) were studied before the change in appointment length, and 14 sessions (seven with each doctor) afterwards. All the surgery sessions were audiotaped to measure the duration of consultations and punctuality of seeing patients. If the patient refused to be audiotaped the microphone was turned off, but the tape was left running, so that the length of the consultation could still be measured. Consultations were analysed for the number of preventive medicine and health education activities covered. These were defined as discussion of smoking, alcohol consumption and diet and weight, and screening for hypertension and cervical cancer. All the tapes were analysed by one assessor (A.W.). The doctors completed an encounter sheet which provided information on the number of problems, investigations, prescriptions and referrals.

The planned sample size was 351 consultations. Although this was dictated largely by practical considerations, it was considered large enough to detect significant changes in consultation length. The study could only detect very large changes in doctor behaviour, such as prescribing, investigation and referral rates, but these were included as a piloting exercise for a larger, multipractice study.

Non-parametric statistical tests were applied to differences in consultation lengths and patient waiting times, as these were found to be positively skewed.

Results

The study included 350 consultations, 171 before and 179 after the change. In four consultations, the time was not recorded for technical reasons.

The median age of the patients seen before the change was slightly higher than for those seen afterwards (43.5 years versus 40.0 years, P<0.05, Mann Whitney U test). The sex distribution did not differ significantly nor did the number of problems identified.

Both consultation length and the length of time patients had to wait to be seen increased significantly after longer appointments were introduced (Table 1). The increase in consultation length appeared to be largely due to an increase in the length of shorter consultations. The proportion of consultations taking less than five minutes decreased from 30.2% before the change to 20.3% afterwards, whereas the proportion taking 15 minutes or more only increased from 8.9 to 9.6%.

In view of the possible bias caused by the difference in the age of patients seen before and after the change the effect of the change was examined for three age groups. In all three groups an increase in the median length of consultation was seen — from 5.0 to 7.0 minutes in those under 20 years of age, from 7.0 to 8.0 minutes in those aged 20 to 59 years, and from 6.5 to 8.0 minutes in those aged 60 years or over.

The median time the patient had to wait increased by 2.0 minutes after the change in appointment length (Table 1). This may be partly explained by these sessions starting late — the median time the first patient had to wait was 5.5 minutes before the change and 7.0 minutes afterwards.

There was little difference in prescribing rates (54.4% before, 55.9% after the change), rates of investigation (14.0% before, 19.0% after) or referral rates (6.1% before, 4.0% after).

Analysis of the audiotapes for health education and preventive medicine activities showed no significant difference before and after the increase in appointment length, although there was a suggestion that lifestyle factors (smoking, alcohol and diet/weight) were discussed more frequently and that screening activity increased after the change (Table 2).

Discussion

This study was operational rather than experimental in design, with the aim of investigating what happened in one practice
which chose to extend appointment lengths. The fact that the longer and shorter bookings took place at different times of the year could have influenced the problem presented and therefore the consultation itself.

Neither doctor increased the length of his face to face contact with the patient commensurately with the increase in appointment length (mean increase 1.1 minutes for Dr A, 0.8 minutes for Dr B). These findings are similar to those of Morrell,\(^4\) whose doctors had a median consultation length of 6.7 minutes with 7.5 minute appointments and 7.4 minutes with 10.0 minute slots. Clearly appointment length and consultation length are not synonymous and any benefit from 10-minute appointments might be due to an increased interval between patients, so that the doctor can review the records, or in order to reduce doctor stress.

Although in the study practice the motive for changing appointment length was to reduce patient waiting time, this did not occur, and for one doctor patient waiting time increased. It seems that because he anticipated a more leisurely surgery, he felt more justified in starting late.

Consultation analysis was a secondary aim of the study and statistical differences were not expected. However, the results suggest that for these doctors health education and preventive activities, rather than prescribing, investigation or referral rates, were sensitive to a small increase in consultation length.

Generalizations cannot be made from a single case study, particularly as both doctors responded in different ways to the extended appointments. However, for practices considering such a change in their method of work, these two examples of what might happen could be illustrative. Before consultation length and appointment length become markers of quality in general practice, more studies in different practices should be undertaken.

### Table 1. Patient waiting times and duration of consultations before and after the increase in appointment length.

<table>
<thead>
<tr>
<th>Patient wait (mins)</th>
<th>Dr A Before (n = 76)</th>
<th>Dr A After (n = 88)</th>
<th>Dr B Before (n = 94)</th>
<th>Dr B After (n = 89)</th>
<th>Total Before (n = 170)</th>
<th>Total After (n = 177)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>14.1</td>
<td>19.6</td>
<td>10.5</td>
<td>10.9</td>
<td>12.1</td>
<td>15.3</td>
</tr>
<tr>
<td>Median</td>
<td>9.5</td>
<td>15.0**</td>
<td>7.5</td>
<td>9.0</td>
<td>9.0</td>
<td>11.0**</td>
</tr>
<tr>
<td>Duration (mins)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>7.5</td>
<td>8.6</td>
<td>7.4</td>
<td>8.2</td>
<td>7.4</td>
<td>8.4</td>
</tr>
<tr>
<td>Median</td>
<td>7.0</td>
<td>7.0</td>
<td>6.0</td>
<td>8.0*</td>
<td>6.0</td>
<td>8.0*</td>
</tr>
</tbody>
</table>

\(n = \) number of consultations. \(a n = 93\) for duration, \(b n = 169\) for duration. \(\ast P<0.05; \ast\ast P<0.01;\) Mann Whitney U test.

### Table 2. Number of consultations including health education or preventive medicine activities before and after the increase in appointment length (excluding the 16 patients in each group who refused to be audiotaped).

<table>
<thead>
<tr>
<th>Number (% of consultations)</th>
<th>Before (n = 155)</th>
<th>After (n = 163)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical cytology</td>
<td>13 (8.4)</td>
<td>16 (9.8)</td>
</tr>
<tr>
<td>Blood pressure screening</td>
<td>2 (1.3)</td>
<td>4 (2.5)</td>
</tr>
<tr>
<td>Smoking</td>
<td>7 (4.5)</td>
<td>13 (8.0)</td>
</tr>
<tr>
<td>Diet/weight</td>
<td>13 (8.4)</td>
<td>16 (9.8)</td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td>1 (0.6)</td>
<td>3 (1.8)</td>
</tr>
<tr>
<td>Total</td>
<td>36 (23.2)</td>
<td>52 (31.9)</td>
</tr>
</tbody>
</table>

\(n = \) total number of consultations.

### References


### Acknowledgements

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