

# Does Advanced Access improve access to primary health care?

## Questionnaire survey of patients

Chris Salisbury, Stephen Goodall, Alan A Montgomery, D Mark Pickin, Sarah Edwards, Fiona Sampson, Lucy Simons and Val Lattimer

### ABSTRACT

#### Background

General practices in England have been encouraged to introduce Advanced Access, but there is no robust evidence that this is associated with improved access in ways that matter to patients.

#### Aim

To compare priorities and experiences of patients consulting in practices which do or do not operate Advanced Access.

#### Design of study

Patient questionnaire survey.

#### Setting

Forty-seven practices in 12 primary care trust areas of England.

#### Method

Questionnaire administered when patients consulted.

#### Results

Of 12 825 eligible patients, 10 821 (84%) responded. Most (70%) were consulting about a problem they had had for at least 'a few weeks'. Patients obtained their current appointment sooner in Advanced Access practices, but were less likely to have been able to book in advance. They could usually see a doctor more quickly than those in control practices, but were no more satisfied overall with the appointment system. The top priority for patients was to be seen on a day of choice rather than to be seen quickly, but different patient groups had different priorities. Patients in Advanced Access practices were no more or less likely to obtain an appointment that matched their priorities than those in control practices. Patients in both types of practice experienced problems making contact by telephone.

#### Conclusion

Patients are seen more quickly in Advanced Access practices, but speed of access is less important to patients than choice of appointment; this may be because most consultations are about long-standing problems. Appointment systems need to be flexible to accommodate the different needs of different patient groups.

#### Keywords

appointment; family practice; health services accessibility; patient satisfaction; questionnaires.

### INTRODUCTION

General practices in the UK are under increasing pressure to improve access to care. The NHS Plan<sup>1</sup> introduced targets requiring practices to offer patients an appointment with a doctor within 2 working days, backed by financial incentives.<sup>2</sup> Practices were strongly encouraged by a National Primary Care Development Team (NPDT) to introduce the organisational model of 'Advanced Access', which is based on the concept of matching the supply of appointments to demand so that patients can be seen on the day of their choice.<sup>3</sup>

A survey suggested that 67% of practices in England claimed to operate Advanced Access, although not all did so entirely in the way advocated by the NPDT.<sup>4</sup> Many practices embargoed future appointments as a way of meeting access targets, but this led to widely publicised complaints that patients could not book in advance to be seen on the day of their choice, or to see the doctor they preferred.<sup>5,6</sup> These factors are more important to some patients than speed of access.<sup>7</sup> This raises questions about how best to operate appointment

*C Salisbury, MD, FRCGP, professor of primary health care; S Goodall, PhD, research associate; AA Montgomery, PhD, senior lecturer, Academic Unit of Primary Health Care, Department of Community Based Medicine, University of Bristol, Bristol. DM Pickin, MD, FFPH, clinical senior lecturer; F Sampson, MSc, research fellow, School of Health and Related Research, University of Sheffield, Sheffield. S Edwards, PhD, research fellow, Brighton and Sussex Medical School, Division of Public Health and Primary Care, University of Brighton, East Sussex. L Simons, PhD, senior research fellow; V Lattimer, PhD, professor of health services research, School of Nursing and Midwifery, University of Southampton, Southampton.*

#### Address for correspondence

Professor Chris Salisbury, Department of Community Based Medicine, University of Bristol, 25–27 Belgrave Road, Bristol, BS8 2AA. Email: c.salisbury@bristol.ac.uk

**Submitted:** 18 January 2007; **Editor's response:** 4 March 2007; **final acceptance:** 22 May 2007.

©British Journal of General Practice 2007; 57: 615–621.

## How this fits in

There has been little evaluation of whether Advanced Access improves access in ways that matter to patients. Different patient groups have different priorities when making appointments. In this large national study of representative practices, patients in practices operating Advanced Access were seen more quickly, but were no more likely to get the type of appointment that matched their priorities. They were no more or less satisfied with the appointment system overall.

systems to balance these potentially conflicting aims of speed, convenience, and continuity of care. This paper describes a survey of patients, conducted as part of a national evaluation of Advanced Access.<sup>8</sup> The aim was to explore the priorities of different groups of patients and to compare their experiences of gaining access to care at practices which do or do not operate Advanced Access appointment systems. Other components of the evaluation provided further insight: a study using simulated patients is reported in the companion paper,<sup>9</sup> and reports of qualitative studies and a discrete choice experiment are in preparation.

**Table 1. Importance of various factors when making the current appointment for patients in different age groups.**

	Age group, years				Total (n = 10 788) <sup>a</sup>	P-value <sup>b</sup>
	16–34 (n = 2868)	35–54 (n = 3219)	55–74 (n = 3236)	≥75 (n = 1465)		
Being seen on the day of your choice	<b>3.28</b>	<b>3.29</b>	3.20	3.21	<b>3.25</b>	0.957
Being seen as soon as possible	3.09	3.13	3.16	3.09	3.12	0.223
Seeing a doctor rather than a nurse	2.77	3.09	<b>3.29</b>	<b>3.34</b>	3.09	<0.001
Seeing a particular doctor or nurse	2.43	2.75	3.03	3.23	2.80	<0.001
Being seen at a particular time of day	2.87	2.88	2.56	2.48	2.74	0.002
Being able to book the appointment well in advance	2.37	2.61	2.81	2.87	2.63	<0.001
Seeing a female doctor or nurse rather than a male	1.90	1.83	1.71	1.83	1.82	0.144
Seeing a nurse rather than a doctor	1.70	1.68	1.73	1.77	1.71	0.019
Seeing a male doctor or nurse rather than a female	1.57	1.58	1.67	1.86	1.63	<0.001

Figures are mean scores on a scale from 4 = very important to 1 = not at all important. The top priority for each group is shown in bold. <sup>a</sup>Age missing for 33 responders. <sup>b</sup>Relationship between importance of topic and age group. Ordinal logistic regression adjusted for sex, ethnicity, chronic illness, housing, and employment status at patient level, list size, training, personal medical services, and previous fund-holding status at practice level and taking account of clustering by practice.

## METHOD

This survey was based on a comparison of patients consulting a GP in 24 'Advanced Access' and 24 'control' general practices in 12 primary care trust areas in England. Details of practice selection and recruitment are given in the companion paper.<sup>9</sup>

### Survey administration

Practices conducted the survey between March 2005 and February 2006. Details of consecutive patients were recorded on survey record sheets. Each patient was offered a questionnaire which included the General Practice Assessment Questionnaire (GPAQ) instrument.<sup>10</sup> Additional questions about patients' priorities and experiences of the appointment system were designed and piloted by the research team. Patients were asked to return the questionnaire to the practice; non-responders were sent one postal reminder. Practices returned anonymised survey record sheets daily to the research team by facsimile, so that response rates and adherence to the survey protocol could be monitored. Questionnaires were identified only by a unique number.

At some practices nurse practitioners worked in a similar way to GPs as a first point of contact for unselected patients. At these practices patients consulting a nurse practitioner were included, but patients consulting other nurses or health professionals were excluded. Other exclusion criteria were patients aged less than 16 years, those who could not complete a questionnaire in English for medical or language reasons, and temporary residents. Reasons for exclusion were recorded.

### Sample size

Practices conducted the survey over several days until they had obtained at least 25 responses per 1000 registered patients, with a minimum of 100 responses in total. Assuming an intraclass correlation coefficient at practice level in the range 0.05 to 0.01, and an average of 125 responders per practice, this sample size would have at least 80% power (5% two-sided  $\alpha$ ) to detect differences between Advanced Access and control practices of between 10 and 14 percentage points.

### Analysis

Data were analysed using Stata (version 9). The GPAQ survey includes a number of scales, each based on several individual questions, and results for these were calculated in accordance with the manual.<sup>10</sup> Comparisons between Advanced Access and control practices were made using linear, ordinal, or logistic regression models as appropriate, taking account of the clustered nature of the data and

adjusting for potential confounding factors of age group, sex, ethnicity, and housing status at patient level and list size, training, contract type, and ex-fund-holding status at practice levels.

## RESULTS

One control practice dropped out of the evaluation before conducting a patient survey, leaving 47 practices in this analysis. Of 14 402 patients consulting, 1577 were excluded (1100 because they were aged <16 years) and 10 821/12 825 (84%) responded. There were no important age or sex differences between responders and non-responders. Responders from Advanced Access practices were slightly older (mean age 51.3 versus 48.6 years), more likely to be white (98% versus 93%) and more likely to be in owner-occupied housing (70% versus 64%) than those from control practices.

### *Duration of patients' problems and time spent waiting for an appointment*

When asked about how long patients had experienced the problem for which they were consulting, 70% (7268/10 423) responded at least 'a few weeks'. Of patients in Advanced Access practices, more than half (3037/5353; 57%) were seen on the same day as they contacted the surgery,

and 75% (4004/5353) were seen within 2 days, compared with 32% (1471/4649) and 57% (2665/4649) respectively in control practices. The adjusted odds ratio (OR) for being seen sooner in an Advanced Access practice was 2.32 (95% confidence interval [CI] = 1.51 to 3.57;  $P < 0.001$ ).

### *Patients' priorities*

Patients were asked which factors were most important to them in making their current appointment. They rated level of importance on a scale from 1 (not at all important) to 4 (very important). Table 1 shows the issues most important to patients of different age groups, ranked in order of importance to patients overall, and combining patients from both types of practice. This suggests that younger patients placed more importance on being seen at a particular time, while for older patients it was more important to see a doctor rather than a nurse, to see a particular person, and to be able to book in advance. Examination of these questions in relation to other patient characteristics shows that females placed relatively more importance than males on seeing a female doctor or nurse. Patients with long-standing illness placed more importance than others on seeing a particular professional, seeing a doctor rather than a nurse,

**Table 2. Importance of appointment factors for different groups of patients.**

	Sex of patients			Do you have any long-standing illness, disability, or infirmity?			Employment status		
	Male ( <i>n</i> = 3993) <sup>a</sup>	Female ( <i>n</i> = 6810) <sup>a</sup>	<i>P</i> -value	Yes ( <i>n</i> = 5145) <sup>a</sup>	No ( <i>n</i> = 4759) <sup>a</sup>	<i>P</i> -value	Employed ( <i>n</i> = 4906) <sup>a</sup>	Other ( <i>n</i> = 5067) <sup>a</sup>	<i>P</i> -value <sup>b</sup>
Being seen on the day of your choice	3.16	3.31	<0.001	3.26	3.25	0.013	3.31	3.19	<0.001
Being seen as soon as possible	3.08	3.15	0.001	3.15	3.09	0.001	3.10	3.14	0.772
Seeing a doctor rather than a nurse	3.00	3.14	<0.001	3.26	2.90	<0.001	2.98	3.19	0.739
Seeing a particular doctor or nurse	2.70	2.86	<0.001	3.06	2.51	<0.001	2.58	3.01	<0.001
Being seen at a particular time of day	2.67	2.78	<0.001	2.68	2.80	0.162	2.95	2.51	<0.001
Being able to book the appointment well in advance	2.59	2.65	<0.001	2.77	2.47	<0.001	2.53	2.72	0.464
Seeing a female doctor or nurse rather than a male	1.45	2.03	<0.001	1.77	1.84	0.070	1.75	1.87	0.001
Seeing a nurse rather than a doctor	1.65	1.75	<0.001	1.71	1.69	0.280	1.65	1.76	0.014
Seeing a male doctor or nurse rather than a female	1.68	1.61	0.085	1.67	1.57	0.992	1.53	1.73	<0.001

Figures are mean scores on a scale from 4 = very important to 1 = not at all important. <sup>a</sup>Sex missing for 18 responders; chronic illness status missing for 917 responders; employment status missing for 848 responders. <sup>b</sup>Ordinal logistic regression. Relationship between importance of topic and patient characteristic in column, adjusted for other characteristics in the table and age group, housing status, and ethnicity at patient level; and list size, training, personal medical services, and previous fund-holding status at practice level and taking account of clustering by practice.

**Table 3. Type of appointment obtained by patients in Advanced Access and control practices.**

	Answer	Group <sup>a</sup>		Difference		
		Advanced Access, %	Control, %	Unadjusted odds ratio (OR)	Adjusted OR (95% CI) <sup>b</sup>	P-value <sup>b</sup>
Is this appointment on the day of your choice?	Yes	90	86	1.49	1.27 (0.88 to 1.83)	0.20
Is this appointment at a convenient time?	Yes	95	95	1.1	0.92 (0.64 to 1.31)	0.64
Did you get this appointment as quickly as you wanted?	Yes	90	85	1.51	1.31 (0.86 to 2.00)	0.22
Is this appointment with the particular doctor or nurse that you ideally wanted to see?	Yes	84	83	1.11	1.16 (0.83 to 1.62)	0.40
Were you able to book this appointment well in advance?	Yes	52	75	0.4	0.36 (0.20 to 0.64)	<0.001
Is this appointment with a doctor or nurse?	Doctor	98	95	2.24	2.50 (0.91 to 6.84)	0.07
Is this appointment with a male or a female?	Male	65	64	1.05	1.23 (0.77 to 1.95)	0.38

<sup>a</sup>Percentages are shown of those responding yes, as opposed to no, excluding those who did not know or did not mind, and also excluding missing values. <sup>b</sup>Logistic regression, adjusted for age, sex, ethnicity, and accommodation status at patient level; and list size, training, personal medical services, and previous fund-holding status at practice level, and accounting for clustering by practice. Full details of the results shown here are given in Supplementary Table 1.

and on being able to book an appointment well in advance. Patients in employment placed more importance on being seen on a day of their choice, and being seen at a convenient time compared with patients of other employment status (Table 2). However, for almost all groups of patients the most important consideration was being seen on the day of choice.

#### **Did patients get the type of appointment they wanted?**

Table 3 shows the type of appointment that patients obtained on the day they completed the survey. There was no difference between Advanced Access and control practices in terms of whether patients had obtained their current appointment on the day of their choice, or as quickly as they wanted, or had seen the doctor or nurse of their choice. Patients in Advanced Access practices were less likely to have been able to book an appointment in advance. Interactions between patients' priorities and their experiences were examined but no clear evidence was found that patients of Advanced Access practices were more or less likely to have obtained the type of appointment they wanted than those in control practices.

#### **Patients' usual experiences and their expectations**

The GPAQ instrument includes a number of questions about patients' usual experiences, and

how they rate that experience. Patients in Advanced Access practices who wanted to see a particular doctor stated that they were usually able to do so more quickly compared with those in control practices (adjusted OR = 2.65, 95% CI = 1.60 to 4.38,  $P < 0.001$ ; Table 4), and they rated this more highly (on a scale from 'very poor' to 'excellent'; adjusted OR = 1.68, 95% CI = 1.15 to 2.46,  $P = 0.008$ ). Similarly, when wanting to see any doctor, patients in Advanced Access practices could usually do so more quickly than those in control practices (adjusted OR = 2.50, 95% CI = 1.60 to 3.93,  $P < 0.001$ ; Table 4), and they rated this more highly (adjusted OR = 1.34, 95% CI = 1.03 to 1.75,  $P = 0.027$ ).

It has been suggested previously that quality standards can be derived by identifying the level of performance that is rated as 'good' or better by at least two-thirds of patients.<sup>11</sup> Relating patients' experiences to their satisfaction ratings in this survey, achieving this standard would mean that patients should usually be able to see any doctor by the next working day (1408/1764; 80% rated this as good or better), and a particular doctor within 2 working days (1216/1825; 67% rated this as good or better).

#### **Telephone access and continuity of care**

There has been concern that Advanced Access practices that expect patients to telephone on the same day as they wish to be seen, may be difficult

**Table 4. How quickly patients can usually see any doctor or a particular doctor in Advanced Access and control practices.**

	Any doctor, n (%)			Particular doctor, n (%)		
	Advanced Access n = 5518	Control n = 4894	Total n = 10 412	Advanced Access n = 5529	Control n = 4919	Total n = 10 448
Same day	3407 (67)	1738 (39)	5145 (54)	2126 (44)	728 (17)	2854 (31)
Next working day	731 (14)	1070 (24)	1801 (19)	668 (14)	628 (15)	1296 (14)
Within 2 working days	512 (10)	816 (18)	1328 (14)	869 (18)	1004 (24)	1873 (21)
Within 3 working days	197 (4)	389 (9)	586 (6)	436 (9)	611 (14)	1047 (12)
Within 4 working days	96 (2)	187 (4)	283 (3)	247 (5)	312 (7)	559 (6)
≥5 working days	114 (2)	270 (6)	384 (4)	518 (11)	956 (23)	1474 (16)
Does not apply	461	424	885	665	680	1345

Percentages are shown excluding patients responding 'Does not apply'.

for patients to contact the practice because telephone lines are engaged. There was no strong evidence of a difference between Advanced Access and control practices in how easily patients could contact the practice by telephone (adjusted OR = 0.71, 95% CI = 0.46 to 1.10). However, patients reported difficulties in both types of practice, with 40% (2214/5531) of patients in Advanced Access practices and 31% (1513/4845) of those in control practices describing the ability to get through on the telephone as 'fair' or worse.

With regard to continuity of care, there was no evidence of any difference between Advanced Access and control practices in how often patients stated they saw their usual doctor (adjusted OR = 1.20, 95% CI = 0.91 to 1.57; Supplementary Table 2), or how satisfied they were with this (adjusted OR = 1.25 (95% CI = 0.96 to 1.62).

### Patient satisfaction

Using the GPAQ questionnaire, scores were calculated for satisfaction with access, receptionists, continuity of care, communication, and overall satisfaction with the practice. There was no difference between Advanced Access and control practices with regard to any of these scales.

A final question asked about patients' overall satisfaction with the appointment system in their practice on a seven-point ordinal scale from 'completely satisfied' to 'completely dissatisfied'; there was no difference between Advanced Access and control practices (adjusted OR = 0.93, 95% CI = 0.67 to 1.28; Supplementary Table 3).

## DISCUSSION

### Summary of main findings

In this large national survey of patients' priorities and experiences of access to general practice, patients in Advanced Access practices obtained an

appointment more quickly than those seen in control practices, but they were no more likely to get an appointment when they wanted to be seen. Being seen quickly was not in itself the most important consideration for many people. Obtaining an appointment on a day of choice was more important and seeing a particular health professional was also a higher priority for some patient groups. This may necessitate booking in advance, which was more difficult in Advanced Access practices. The finding that speed of access is less important than choice of appointment and professional is not surprising given that more than two-thirds of patients were consulting about problems that they had experienced for several weeks or more.

Although it was clear that different groups of patients have different priorities, there was no evidence from this study that any group was particularly advantaged or disadvantaged in practices operating Advanced Access. In contrast to earlier concerns about the impact of Advanced Access on continuity of care, there was also no evidence of any difference between Advanced Access and control practices with regard to continuity. Nor did we find any evidence that patients experienced greater difficulties in making telephone contact with Advanced Access practices than with control practices. However, telephone access was a problem in both types of practice.

### Strengths and limitations of the study

This is the first nationally representative study to compare patient experience in Advanced Access practices with a control group. Earlier research has been qualitative, based in a small number of practices and/or in other countries, or lacked controls.<sup>12–20</sup>

Another strength is the use of the GPAQ instrument which enables comparison of the results with national benchmarks based on surveys conducted by practices



under the Quality and Outcomes Framework.<sup>21</sup> The findings from this survey about accessibility, continuity, and difficulties in making contact by telephone are consistent with those obtained from other aspects of the evaluation,<sup>9</sup> illustrating the benefits of the multi-method approach used.

Weaknesses of the study include its observational design: so differences between the practices or their populations other than the use of Advanced Access may act as confounding factors. Potentially important variables were adjusted for in the analyses, but there may be residual confounding factors. This comparison is based on practices' self-descriptions of themselves as using Advanced Access or not and it is possible that some practices were not fully implementing the Advanced Access approach as advocated by its originators. This can be interpreted as a strength, because it reflects the real-world implementation of policy, or as a weakness, because it is possible that Advanced Access may have had greater effects if implemented more rigorously.

### Comparison with existing literature

It is interesting to compare the findings from this study with earlier surveys about access to general practice. The 1998 survey of NHS patients<sup>22</sup> was used to justify the introduction of NHS access targets on the basis that 'around a quarter [of patients] waited 4 days or more for an appointment'.<sup>2</sup> However, this was a misquotation, since these results came from a question about people's usual experience of gaining an appointment with a doctor of their choice. The 1998 survey showed that at their last appointment 65% of patients were seen on the day of their choice, only 9% waited 4 or more days, and 81% of patients thought they were seen as soon as necessary.<sup>22</sup> In a similar survey in 2002, 61% of patients were seen on the day of choice and 77% as soon as necessary.<sup>23</sup> The current survey conducted in 2005–2006 shows that 88% of patients were seen on their day of choice and 87% were seen as soon as they thought necessary.

These findings support those of a discrete choice experiment conducted by Rubin *et al* to explore the trade-offs that different groups of patients make between factors such as the wait for an appointment, choice of doctor, or time.<sup>7</sup> Although a different approach was used, very similar conclusions were reached. This research can be compared with international research which shows that patients value both fast access when necessary and also good inter-personal care.<sup>24,25</sup> The current findings also support those of an earlier study which found that people have high expectations of appointment systems and many are only satisfied if they are seen on the same or following day.<sup>11</sup>

### Implications for future practice

One interpretation of these results is that speed of access to primary care in the UK is good and improving, and that public expectations are high. However, for some groups of patients speed of access is less of a problem than being able to see a particular person on a preferred day. This is reflected in recent policy changes, which have sought to incentivise practices to meet these needs.<sup>26</sup> It is important to recognise that most primary care activity relates to chronic rather than acute problems, and appointment systems must be sufficiently flexible to take account of the legitimate priorities of different groups of patients.

### Supplementary information

Additional information accompanies this paper at <http://www.rcgp.org.uk/bjgp-supinfo>

### Funding body

This project is funded by the NHS Research and Development Programme on Service and Delivery Organisation (SDO) (SDO/70/2004). The views expressed in this publication are those of the authors and not necessarily those of the funders

### Ethics committee

Thames Valley Multicentre Research Ethics Committee (MREC 04/12/024)

### Competing interests

The authors have stated that there are none

### Acknowledgements

We would like to thank all the patients and practice staff who contributed to this study, the members of the project Advisory Group, and the other members of the Advanced Access Evaluation Team: Jon Banks, Helen Baxter, Mary Wallace (University of Bristol), Karen Gerard, Catherine Pope (University of Southampton), Helen Smith (Brighton & Sussex Medical School), and Markella Boudioni (London South Bank University).

### REFERENCES

1. Department of Health. *The NHS plan. A plan for investment. A plan for reform*. London: The Stationery Office, 2000.
2. Department of Health. *Achieving and sustaining improved access to primary care*. The Stationery Office, 2007. [http://www.dh.gov.uk/PolicyAndGuidance/OrganisationPolicy/PrimaryCare/PrimaryCareTrusts/PrimaryCareTrustsArticle/fs/en?CONTENT\\_ID=4016138&chk=gvOn07](http://www.dh.gov.uk/PolicyAndGuidance/OrganisationPolicy/PrimaryCare/PrimaryCareTrusts/PrimaryCareTrustsArticle/fs/en?CONTENT_ID=4016138&chk=gvOn07) (accessed 5 Jul 2007).
3. Oldham J. *Advanced Access in primary care*. National Primary Care Development Team. <http://www.npdt.org/AccessToPrimaryCare/advancedaccess.pdf> (accessed 5 Jul 2007).
4. Goodall S, Montgomery AA, Banks J, *et al*. Implementation of Advanced Access in General Practice: postal survey of practices. *Br J Gen Pract* 2006; **56**: 918–923.
5. Anonymous. Patients denied advance bookings. BBC News. <http://news.bbc.co.uk/1/hi/health/4112390.stm> (accessed 5 Jul 2007)
6. Department of Health. Patients get booking 'guarantee' on NHS GP appointments. [http://www.dh.gov.uk/en/Publicationsandstatistics/Pressreleases/DH\\_4118856](http://www.dh.gov.uk/en/Publicationsandstatistics/Pressreleases/DH_4118856) (accessed 5 Jul 2007).
7. Rubin G, Bate A, George A, *et al*. Preferences for access to the GP: a discrete choice experiment. *Br J Gen Pract* 2006; **56**: 743–748.
8. Salisbury C. *An evaluation of Advanced Access in general practice*. National Research Register. <http://www.nrr.nhs.uk/ViewDocument.asp?ID=N0536160711> (accessed 5 Jul 2007).
9. Salisbury C, Montgomery A, Simons L, *et al*. Impact of Advanced Access on access, workload and continuity: controlled before-and-after study and simulated patient study. *Br J Gen Pract* 2007; **57**(541): 608–614.
10. National Primary Care Research and Development Centre. *General*

- practice assessment questionnaire. <http://www.gpaq.info/index.htm> (accessed 5 Jul 2007).
11. Bower P, Roland M, Campbell J, Mead N. Setting standards based on patients' views on access and continuity: secondary analysis of data from the general practice assessment survey. *BMJ* 2003; **326**: 258–260.
  12. Ahluwalia S, Offredy M. A qualitative study of the impact of the implementation of advanced access in primary healthcare on the working lives of general practice staff. *BMC Fam Pract* 2005; **6**: 39.
  13. Belardi FG, Weir S, Craig FW. A controlled trial of an advanced access appointment system in a residency family medicine center. *Fam Med* 2004; **36**: 341–345.
  14. Bundy DG, Randolph GD, Murray M, *et al.* Open access in primary care: results of a North Carolina pilot project. *Pediatrics* 2005; **116**: 82–87.
  15. Dixon S, Sampson FC, O'Cathain A, Pickin M. Advanced access: more than just GP waiting times? *Fam Pract* 2006; **23**: 233–239.
  16. Knight AW, Padgett J, George B, Datto MR. Reduced waiting times for the GP: two examples of 'advanced access' in Australia. *Med J Aust* 2005; **183**: 101–103.
  17. Murray M, Bodenheimer T, Rittenhouse D, Grumbach K. Improving timely access to primary care. Case studies of the Advanced Access Model. *JAMA* 2003; **289**: 1042–1046.
  18. Pickin M, O'Cathain A, Sampson FC, Dixon S. Evaluation of advanced access in the national primary care collaborative. *Br J Gen Pract* 2004; **54**: 334–340.
  19. Pierdon S, Charles T, McKinley K, Myers L. Implementing advanced access in a group practice network. *Fam Pract Manag* 2004; **11**: 35–38.
  20. Solberg LI, Hroschowski MC, Sperl-Hillen JM, *et al.* Key issues in transforming health care organizations for quality: the case of advanced access. *Jt Comm J Qual Saf* 2004; **30**: 15–24.
  21. Health and Social Care Information Centre. *Quality and Outcomes Framework 2004/5*. <http://www.ic.nhs.uk/services/qof/data/> (accessed 5 Jul 2007).
  22. Airey C, Errens B. *National surveys of NHS patients: general practice 1998*. London: NHS Executive, 1999.
  23. Boreham R, Airey C, Errens B, Tobin R. *National surveys of NHS patients: general practice 2002*. <http://www.dh.gov.uk/assetRoot/04/02/40/50/04024050.pdf> (accessed 5 Jul 2007).
  24. Grol R, Wensing M, Mainz J, *et al.* Patient priorities with respect to general practice care: an international comparison. *Fam Pract* 1999; **16**: 4–11.
  25. Wensing M, Jung PJ, Mainz J, *et al.* A systematic review of the literature on patient priorities for general practice care. Part 1: description of the research domain. *Soc Sci Med* 1998; **47**: 1573–1588.
  26. Secretary of States Direction. *The Primary Medical Services (Directed Enhanced Services) (England) Directions 2006*. Department of Health. <http://www.dh.gov.uk/assetRoot/04/13/68/70/04136870.pdf> (accessed 5 Jul 2007).