Research

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Do English patients want continuity of care, and do they receive it?

Abstract

Background

Interpersonal continuity of care is valued by patients, but there is concern that it has declined in recent years.

To determine how often patients express preference for seeing a particular GP and the extent to which that preference is met.

Design of study

Analysis of data from the 2009/2010 English GP Patient Survey.

A stratified random sample of adult patients registered with 8362 general practices in England (response rate 39%, yielding 2 169 718

Method

Weighted estimates were calculated of preference for and success in seeing a particular GP. Multilevel logistic regression was used to identify characteristics associated with these two

Results

Excluding practices with one GP, 62% of patients expressed a preference for seeing a particular GP. Of these patients, 72% were successful in seeing their preferred GP most of the time. Certain patient groups were associated with more preference for and success in seeing a particular GP. These were older patients (preference odds ratio [OR] = 1.7, success OR = 1.8), those with chronic medical conditions (preference OR = 1.9, success OR = 1.3), those with chronic psychological conditions (preference OR = 1.6, success OR = 1.3), and those recently requesting only non-urgent versus urgent appointments (preference OR = 1.4, success OR = 1.6). Patient groups that had more frequent preference but less success in seeing a preferred GP were females (preference OR = 1.5, success OR = 0.9), patients in larger practices (preference OR = 1.3, success OR = 0.5), and those belonging to non-white ethnic groups.

Conclusion

The majority of patients value interpersonal continuity, yet a large minority of patients and specific patient groups are not regularly able to see the GP they prefer.

Keywords

continuity of patient care; England; general practice; primary healthcare.

INTRODUCTION

There are a number of dimensions of continuity of care.1-6 A widely used classification identifies three types of continuity, namely informational, management, and interpersonal (or relational) continuity (Box 1).1

Studies from different countries suggest that interpersonal continuity of care is highly valued by patients, especially by females, older patients, and those with chronic disease.^{7,8} Continuity of care is associated with improved patient outcomes 9,10 and increased patient satisfaction. 11-13 However, interpersonal continuity has declined in recent years in the UK and in other countries.14-16 This decline may reflect increasing emphasis on technical (clinical) aspects of primary care quality, as well as a reduction in doctors' working hours, an increase in part-time working, and organisational changes in out-of-hours

METHOD

Data

Data from the 2009/2010 English General Practitioner Patient Survey (GPPS) were analysed; the GPPS is a national questionnaire survey covering different aspects of patient experience, sent by post to a stratified random sample of adult patients registered with an English primary care practice. In 2009/2010, the questionnaire was sent to 5.5 million individuals. 17,18 Results of the survey are reported publicly for all practices. To ensure a minimum number of responses per practice, practices serving small populations and practices that were likely to have low response rates were oversampled.19

In the GPPS, continuity of care was assessed by two questions focusing on preference for and success in seeing a preferred doctor (Box 2).

Using data provided by the survey responders, associations between these two measures of continuity of care and patient age, sex, ethnicity (16 categories as defined by the Office for National Statistics), and self-reported chronic medical or psychological/emotional condition were examined. Associations with patient deprivation (Index of Multiple Deprivation 2007, based on the patient's postcode²¹) and the number of non-trainee GPs in each practice (as a marker of practice size) were also examined, using data from the 2009 GP census provided by the NHS Information Centre. Finally, associations with types of appointments requested in the previous 6 months, as reported by patients, were examined using а four-category classification; that is, whether the appointment(s) they had tried to make were urgent (within 2 working days) or nonurgent (after more than 2 working days), or both, or neither.

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How this fits in

Previous studies suggest that patients value interpersonal continuity of care, but this preference varies in different patient groups. This study shows that 62% of primary care patients in England express a preference for seeing a particular doctor. Patients who were more likely to have such a preference were found to be females. older patients, those with chronic medical or psychological/emotional conditions, and patients of non-white ethnic origin. However, more than one-quarter of patients who prefer to see a particular doctor do not succeed in doing so most of the time. This study provides evidence that continuity of care is valued by the majority of patients. More needs to be done to meet these aspirations, especially in the light of evidence that continuity of care has declined in general practice in recent

Analysis

Responses to how often patients were able to see their preferred doctor (where they expressed a preference for doing so) were dichotomised into a yes ('always or almost always' or 'a lot of the time')/no ('some of the time' or 'never or almost never') measure.

Survey weights were developed by Ipsos MORI (the survey provider) and were used in the analysis to account for the complex survey design and non-response in prevalence estimates of preference for and success in seeing a preferred doctor. These

Box 1. Types of continuity of care¹ Informational continuity: the use of information on past events and personal circumstances to

make current care appropriate for each individual Management continuity: a consistent and coherent approach to the management of a health condition that is responsive to a patient's changing needs.

Interpersonal (relational) continuity: an ongoing therapeutic relationship between a patient and one or more providers.

Box 2. Questions on continuity of care as they appear in the

2009/2010 GPPS questionnaire
Q15. Is there a particular doctor you prefer to see at your GP surgery or health centre? Yes Please go to Q16 No Please go to Section F There is usually one doctor in my GP surgery or health centre Please go to section F
Q16. How often do you see the doctor you prefer to see?
Always or almost always
A lot of the time
Some of the time
Never or almost never
Not tried at this GP surgery or health centre

weights employed rim weighting with two rims: (a) age-by-sex (8*2 levels), and (b) practice (8362 levels).19

Crude and multivariate logistic regression models were used to examine the association between various patient and practice characteristics and preference for and success in seeing a preferred doctor, separately. The data were adjusted for sex, age group, ethnicity, deprivation quintile, self-reported chronic medical or psychological/emotional condition, number of practice doctors, and type of appointments requested by the patient in the previous 6 months.

Crude models made use of the weights and adjusted standard errors to account for the survey design. Multivariate models did not make use of the weights but did include random intercepts for practice to account for clustering of patients within practices and to better distinguish the experiences and preferences of patient subgroups from general variation in continuity at practice

Although patient registration with a given practice is largely determined by geographical proximity, some patients might choose to register with a smaller practice specifically to get better continuity of care, in which case it would not have been appropriate to adjust sociodemographic associations for practice size. For this reason, a sensitivity analysis was performed, excluding the number of practice doctors. The results were very similar, so the data are not shown.

Stata (version 11) was used for the descriptive analyses and SAS (version 9.2) for the regression analyses.

RESULTS

The overall response rate was 39%, with 2 169 718 completed responses from patients in 8362 practices. 17,18 The sociodemographic characteristics responders are shown in Table 1.

Preference for seeing a particular doctor

Two per cent of patients reported that there was only one GP in their practice. After excluding those patients from further analysis, 62% of patients reported having a preference for seeing a particular doctor (Table 2). Such a preference varied across patient groups (Table 2) and was higher in females (68% versus 56% in males), older patients (52% for age group 18-24 years, increasing to 81% for the age group 75-84 years), those with chronic medical or psychological/emotional conditions (75% and 78% respectively) compared to those

without chronic conditions (52% and 61% respectively), and those living in more affluent areas (from 60% to 64% for patients

Table 1. Demographic characteristics of responders to the 2009/2010 General Practice Patient Survey

Characteristic		n	%
All survey responders	5	2 169 718	100
Sex			
Male		897 326	42.4
Female		1 218 009	57.6
Age group, years			
18-24		103 865	4.9
25-34		230 654	10.9
35-44		326 488	15.5
45-54		376 472	17.8
55-64		428 774	20.3
65-74		357 022	16.9
75-84		223 834	10.6
≥85		66 621	3.2
Ethnic group (ONS 6)	Ethnic group (ONS16)		
White	White British	1 746 425	82
	Irish	28 805	1.4
	Any other white	86 278	4.1
Mixed	White and Black Caribbean	4345	0.2
	White and Black African	2808	0.1
	White and Asian	4182	0.2
	Any other mixed	5046	0.2
South-Asian	Indian	53 464	2.6
	Pakistani	29 056	1.4
	Bangladeshi	9711	0.5
	Any other Asian	21 270	1.0
Black	Black Caribbean	24 095	1.1
	Black African	29 936	1.4
	Any other black	4750	0.2
Chinese	Chinese	10 007	0.5
Other ethnic group	Other ethnic group	69 665	3.3
Deprivation quintile	3		
1 (affluent)		387 771	17.9
2		418 707	19.3
3		430 329	19.9
4		446 263	20.6
5 (deprived)		483 594	22.3
	orted chronic medical condition		22.0
No		948 565	49.9
Yes		951 323	50.1
	orted long-standing psychologic		
No		1 792 622	94.2
Yes		110 507	5.8
Number of practice (BPs .		
1		259 957	12.1
2		347 707	16.2
3		285 727	13.3
4		281 408	13.1
5		257 185	11.9
6-9		651 996	30.2
≥10		72 390	3.4
	s sought in previous 6 months	. =	5
No appointments re		570 480	26.3
Urgent only	7	554 818	25.6
Non-urgent only		271 794	12.5
on angent only		2/1//4	12.0

from the most to the least deprived areas).

Patients' preference for seeing a particular doctor ranged from 47% to 65% of responders across the 16 ethnic groups, and increased with the number of practice GPs (58% for practices with two GPs, increasing to 63% for practices with six to nine GPs). Preference for seeing a particular doctor was higher in patients who had requested only non-urgent appointments in the previous 6 months (68%) compared to patients who had requested only urgent appointments (58%). The crude odds ratios (Table 2) reflect the associations described above. All associations are stronger than would be expected by chance (P<0.001).

In multivariate analysis, there was strong evidence that differences exist in the preference for seeing a particular doctor across all sociodemographic groups after adjusting for other factors (P<0.001 for all variables) (Table 2). This preference was more common among females (odds ratio [OR] = 1.50, older people (OR = 1.71 for age)group 74-85 years compared to age group 55-64 years), responders suffering from a chronic medical (OR = 1.87) psychological/emotional condition (OR = 1.59), and those from more affluent areas (OR = 0.84 for most deprived compared to most affluent areas). Patients from South-Asian ethnic groups (Bangladeshi, Indian, Pakistani and 'any other Asian') had substantially higher preference for seeing a particular doctor (OR = 1.74, 1.49, 1.49, and 1.28 respectively, compared to white British). Patients were more likely to express such preference if they were registered with practices with a greater number of GPs (OR = 1.3 for patients registered with practices with six to nine GPs compared to patients registered with practices with two GPs) and if they had sought non-urgent appointments (OR = 1.4 patients seeking non-urgent appointments only compared to patients seeking urgent appointments only).

Success in seeing a preferred doctor

Subsequent analysis is restricted to patients with a preference for seeing a particular doctor. Of these patients, 72% were successful in seeing the doctor they preferred 'always or almost always' or 'a lot of the time': those two response categories are referred to using the term 'most of the time' hereafter (Table 3). The proportion of patients who were successful in seeing their preferred GP most of the time was higher in males (74% versus 70% in females), older

patients (60% for age group 18-24 years, | years), and those with chronic medical or

increasing to 87% for age group 75-84 psychological/emotional conditions (77%

Characteristic		Weighted prevalence ^a (95% CI)	Crude weighted OR ^a (95% CI)	Adjusted OR ^b (95% CI)
All survey responders		62.2 (61.9 to 62.4)	N/A	N/A
Sex				
Male		56.3 (56.1 to 56.6)	Reference	Reference
Female		67.5 (67.2 to 67.7)	1.60 (1.59 to 1.61)	1.50 (1.49 to 1.52
Age group, years				
18-24		51.7 (51.1 to 52.2)	0.49 (0.48 to 0.50)	0.65 (0.64 to 0.66
25-34		51.0 (50.6 to 51.3)	0.48 (0.47 to 0.48)	0.55 (0.54 to 0.56
35-44		56.0 (55.6 to 56.3)	0.58 (0.58 to 0.59)	0.66 (0.65 to 0.67
45-54		61.4 (61.1 to 61.7)	0.73 (0.72 to 0.74)	0.79 (0.78 to 0.80
55-64		68.6 (68.3 to 68.9)	Reference	Reference
65-74		76.0 (75.8 to 76.3)	1.45 (1.44 to 1.47)	1.36 (1.35 to 1.38
75-84		81.1 (80.8 to 81.4)	1.97 (1.94 to 2.00)	1.71 (1.69 to 1.74
≥85		80.0 (79.5 to 80.4)	1.83 (1.78 to 1.88)	1.54 (1.50 to 1.58
Ethnic group (ONS 6)	Ethnic group (ONS16)			
White	White British	62.9 (62.6 to 63.2)	Reference	Reference
	Irish	65.1 (64.2 to 65.9)	1.10 (1.06 to 1.14)	0.97 (0.94 to 1.00
	Any other white	57.5 (56.9 to 58.1)	0.80 (0.78 to 0.82)	1.03 (1.01 to 1.05
Mixed	White and Black Caribbean	56.8 (54.8 to 58.9)	0.78 (0.72 to 0.84)	1.05 (0.97 to 1.14
	White and Black African	52.2 (49.6 to 54.7)	0.64 (0.58 to 0.71)	0.92 (0.84 to 1.02
	White and Asian	56.7 (53.8 to 59.6)	0.77 (0.69 to 0.87)	1.07 (0.99 to 1.16
	Any other mixed	59.7 (57.7 to 61.7)	0.88 (0.81 to 0.95)	1.09 (1.02 to 1.18
South-Asian	Indian	63.0 (62.2 to 63.9)	1.01 (0.97 to 1.04)	1.49 (1.45 to 1.53
oodii /ioidii	Pakistani	61.4 (60.4 to 62.4)	0.94 (0.90 to 0.98)	1.49 (1.43 to 1.54
	Bangladeshi	61.7 (60.2 to 63.2)	0.95 (0.89 to 1.01)	1.74 (1.64 to 1.84
	Any other Asian	59.0 (57.9 to 60.1)	0.85 (0.81 to 0.89)	1.28 (1.23 to 1.33
Black	Black Caribbean	61.9 (60.9 to 62.8)	0.96 (0.92 to 1.00)	1.14 (1.10 to 1.18
Diadit	Black African	47.3 (46.4 to 48.2)	0.53 (0.51 to 0.55)	0.81 (0.78 to 0.83
	Any other black	59.1 (57.2 to 61.1)	0.86 (0.79 to 0.93)	1.08 (0.99 to 1.17
Chinese	Chinese	48.5 (47.0 to 50.0)	0.56 (0.52 to 0.59)	0.86 (0.81 to 0.90
Other ethnic group	Other ethnic group	58.5 (57.9 to 59.1)	0.83 (0.81 to 0.85)	1.14 (1.12 to 1.17
Deprivation quintile	other ethine group	00.0 (07.7 to 07.1)	0.00 (0.01 to 0.00)	1.14 (1.12 to 1.17
1 (affluent)		64.1 (63.7 to 64.5)	Reference	Reference
2		63.3 (62.9 to 63.6)	0.96 (0.95 to 0.98)	0.96 (0.95 to 0.97
3		62.2 (61.8 to 62.6)	0.92 (0.90 to 0.94)	0.92 (0.91 to 0.93
4		61.0 (60.6 to 61.3)	0.87 (0.86 to 0.89)	0.89 (0.88 to 0.90
5 (deprived)		59.5 (59.1 to 60.0)	0.82 (0.81 to 0.84)	0.84 (0.83 to 0.85
<u> </u>	ted chronic medical condition	37.3 (37.1 to 50.0)	0.02 (0.01 to 0.04)	0.04 (0.00 to 0.00
No	ted emonic medical condition	52.1 (51.7 to 52.4)	Reference	Reference
Yes		74.8 (74.5 to 75.0)	2.73 (2.70 to 2.76)	1.87 (1.86 to 1.89
	ted long-standing psychological or		2.76 (2.76 to 2.76)	1.07 (1.00 to 1.07
No		61.3 (61.1 to 61.6)	Reference	Reference
Yes		78.3 (77.9 to 78.7)	2.28 (2.23 to 2.33)	1.59 (1.57 to 1.62
Number of practice GP	S			
1		56.4 (55.6 to 57.2)	0.94 (0.90 to 0.97)	1.01 (0.97 to 1.05
2		58.0 (57.4 to 58.6)	Reference	Reference
3		61.9 (61.3 to 62.5)	1.18 (1.13 to 1.22)	1.20 (1.15 to 1.25
4		63.5 (62.9 to 64.1)	1.26 (1.22 to 1.30)	1.29 (1.24 to 1.35
5		63.6 (63.0 to 64.2)	1.26 (1.22 to 1.31)	1.31 (1.26 to 1.37
6-9		63.0 (62.6 to 63.4)	1.23 (1.19 to 1.27)	1.30 (1.25 to 1.34
≥10		62.2 (60.7 to 63.6)	1.19 (1.11 to 1.27)	1.28 (1.19 to 1.37
	ought in previous 6 months	02.2 (03.7 (0 00.0)	, (, to 1,27)	(1.17 to 1.01
No appointments requ		47.5 (47.2 to 47.8)	0.65 (0.64 to 0.66)	0.67 (0.66 to 0.68
Urgent only		58.3 (58.0 to 58.6)	Reference	Reference
Non-urgent only		67.5 (67.1 to 67.9)	1.49 (1.46 to 1.51)	1.40 (1.39 to 1.42
	urgent	73.5 (73.2 to 73.7)	1.98 (1.96 to 2.00)	1.85 (1.83 to 1.87

N/A = not applicable. ONS = Office for National Statistics. OR = odds ratio. **Estimated from weighted unadjusted analysis; P<0.001 for all association (joint tests for categorical variables). Estimated from a single multivariate logistic regression model including all variables that appear in the table, plus a random practice intercept; P<0.001 for all associations (joint tests for categorical variables). As reported by the patients (see Method).

and 75% respectively) when compared to those without (66% and 72% respectively). see the doctor of their choice, compared to

White patients were more likely to be able to

Characteristic		Weighted prevalence ^a (95% CI)	Crude weighted ORa (95% CI)	Adjusted OR ^b (95% CI)
All survey responders		71.8 (71.4 to 72.1)	N/A	N/A
iex				
Male		73.6 (73.2 to 74.0)	Reference	Reference
Female		70.2 (69.9 to 70.6)	0.85 (0.84 to 0.86)	0.87 (0.86 to 0.88
Age group, years				
18-24		59.8 (59.1 to 60.5)	0.43 (0.42 to 0.44)	0.43 (0.42 to 0.44
25-34		60.2 (59.7 to 60.8)	0.44 (0.43 to 0.44)	0.48 (0.47 to 0.49
35-44		63.6 (63.1 to 64.0)	0.50 (0.49 to 0.51)	0.54 (0.53 to 0.55
45-54		69.8 (69.4 to 70.3)	0.67 (0.66 to 0.68)	0.68 (0.67 to 0.69
55-64		77.7 (77.3 to 78.1)	Reference	Reference
65–74		84.3 (84.0 to 84.7)	1.55 (1.52 to 1.58)	1.53 (1.50 to 1.56
75-84		86.5 (86.1 to 86.8)	1.84 (1.80 to 1.87)	1.82 (1.79 to 1.86
≥85		85.3 (84.8 to 85.7)	1.66 (1.61 to 1.72)	1.56 (1.51 to 1.61
Ethnic group (ONS 6)	Ethnic group (ONS16)			
White	White British	73.7 (73.4 to 74.1)	Reference	Reference
	Irish	74.1 (73.2 to 75.1)	1.02 (0.97 to 1.07)	0.90 (0.86 to 0.94
	Any other white	66.9 (66.2 to 67.5)	0.72 (0.70 to 0.74)	0.85 (0.83 to 0.88
Mixed	White and Black Caribbean	61.8 (59.1 to 64.4)	0.58 (0.52 to 0.64)	0.90 (0.81 to 1.00
	White and Black African	56.6 (53.4 to 59.8)	0.46 (0.41 to 0.53)	0.68 (0.60 to 0.78
South-Asian	White and Asian	63.4 (60.7 to 66.1)	0.62 (0.55 to 0.69)	0.81 (0.72 to 0.90
	Any other mixed	62.4 (60.1 to 64.7)	0.59 (0.54 to 0.65)	0.74 (0.67 to 0.81
	Indian	60.7 (59.3 to 62.1)	0.55 (0.52 to 0.58)	0.73 (0.71 to 0.76
	Pakistani	54.4 (52.9 to 55.9)	0.43 (0.40 to 0.45)	0.66 (0.63 to 0.69
	Bangladeshi	50.2 (48.1 to 52.3)	0.36 (0.33 to 0.39)	0.57 (0.53 to 0.61
	Any other Asian	56.8 (55.4 to 58.1)	0.47 (0.44 to 0.49)	0.59 (0.56 to 0.62
Black	Black Caribbean	65.6 (64.2 to 67.0)	0.68 (0.64 to 0.72)	0.83 (0.79 to 0.87
	Black African	52.3 (50.9 to 53.8)	0.39 (0.37 to 0.42)	0.55 (0.53 to 0.58
	Any other black	58.0 (55.3 to 60.6)	0.49 (0.44 to 0.55)	0.70 (0.62 to 0.78
Chinese	Chinese	56.2 (54.1 to 58.4)	0.46 (0.42 to 0.50)	0.55 (0.51 to 0.59
Other ethnic group	Other ethnic group	60.6 (59.9 to 61.4)	0.55 (0.53 to 0.57)	0.66 (0.64 to 0.68
Deprivation quintile				
1 (affluent)		74.3 (73.7 to 74.8)	Reference	Reference
2		74.1 (73.6 to 74.6)	0.99 (0.97 to 1.02)	0.99 (0.97 to 1.01
3		72.3 (71.8 to 72.8)	0.90 (0.88 to 0.93)	0.95 (0.94 to 0.97
4		69.6 (69.1 to 70.1)	0.79 (0.77 to 0.82)	0.91 (0.89 to 0.93
5 (deprived)		67.0 (66.4 to 67.6)	0.70 (0.68 to 0.73)	0.86 (0.84 to 0.88
•	ed chronic medical condition	(() (() () () () ()	D (D (
No		66.3 (65.8 to 66.7)	Reference	Reference
Yes		76.8 (76.4 to 77.1)	1.68 (1.66 to 1.70)	1.29 (1.27 to 1.30
•	ed long-standing psychological or		D (D (
No V		71.9 (71.5 to 72.2) 75.3 (74.8 to 75.8)	Reference 1.19 (1.17 to 1.22)	Reference
Yes		75.5 (74.6 to 75.6)	1.17 (1.17 (0 1.22)	1.25 (1.22 to 1.27
Number of practice GPs		78.5 (77.3 to 79.6)	1 10 (1 01 + 1 10)	1.42 (1.33 to 1.52
1 2		76.9 (76.0 to 77.7)	1.10 (1.01 to 1.19) Reference	1.42 (1.33 to 1.52 Reference
3		74.5 (73.6 to 75.4)	0.88 (0.82 to 0.94)	0.76 (0.71 to 0.81
4		73.4 (72.6 to 74.3)		0.76 (0.71 to 0.81 0.66 (0.61 to 0.70
5		73.4 (72.6 to 74.3) 72.0 (71.1 to 72.9)	0.83 (0.78 to 0.89) 0.77 (0.73 to 0.83)	0.57 (0.53 to 0.61
6–9		69.7 (69.2 to 70.3)	0.77 (0.73 to 0.83) 0.69 (0.66 to 0.73)	0.57 (0.53 to 0.61 0.48 (0.45 to 0.51
6-9 ≥10		68.8 (67.0 to 70.7)	0.67 (0.60 to 0.74)	0.48 (0.45 to 0.51 0.44 (0.40 to 0.49
	ought in previous 6 months ^c	00.0 (07.0 (0 70.7)	0.07 (0.00 (0 0.74)	0.44 (0.40 to 0.49
No appointments requ	-	73.6 (73.2 to 74.0)	1.23 (1.21 to 1.25)	1.17 (1.15 to 1.19
Urgent only	eated	69.4 (68.9 to 69.8)	Reference	Reference
Non-urgent only		78.8 (78.4 to 79.2)	1.64 (1.60 to 1.68)	1.59 (1.57 to 1.62
Both urgent and non-u		78.8 (78.4 to 79.2) 70.3 (69.9 to 70.7)	1.05 (1.03 to 1.06)	1.59 (1.57 to 1.62 1.12 (1.10 to 1.13

N/A = not applicable. ONS = Office for National Statistics. OR = odds ratio. *Estimated from weighted unadjusted analysis; P<0.001 for all association (joint tests for categorical $variables). \ ^bEstimated from a single \ multivariate \ logistic \ regression \ model \ including \ all \ variables \ that \ appear \ in \ the \ table, \ plus \ a \ random \ practice \ intercept; \ P<0.001 \ for \ all \ properties \ for \ all \ properties \ prop$ associations (joint tests for categorical variables). ^cAs reported by the patients (see Method).

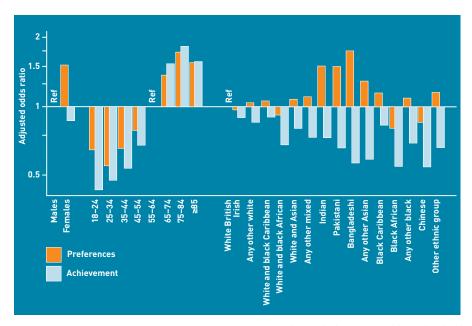
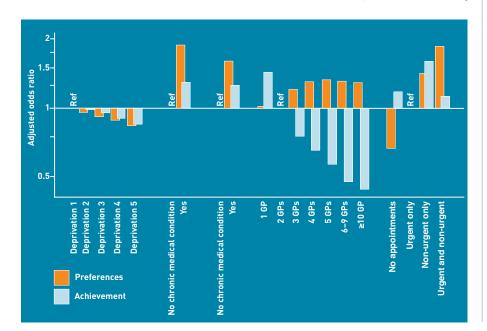


Figure 1. Adjusted odds ratios of having preference for seeing a particular doctor, and success in achieving it most of the time (sex, age, and ethnicity).

Figure 2. Adjusted odds ratios of having preference for seeing a particular doctor, and success in achieving it most of the time (deprivation, chronic conditions, practice size, and appointment type).

most other ethnic groups. More deprived patients were less successful in seeing the doctor they preferred most of the time (67% for the most-deprived, rising to 74% for the least-deprived patients). Success in seeing a particular doctor decreased as the number of practice GPs increased (77% for practices with two GPs compared to 69% for practices with 10 or more GPs). Success in seeing a particular doctor was least among patients requesting urgent appointments only (69%), where it was greatest for patients requesting only non-urgent appointments (79%). The crude odds ratios (Table 3) reflect the associations described above. All associations are stronger than would be expected by chance (P<0.001).

In multivariate analysis, there was strong



evidence that differences in the success of seeing a preferred doctor persist after adjusting for other factors (P<0.001 for all variables) (Table 3). Female patients were less likely to be successful than males in seeing the doctor of their preference (OR = 0.87). This contrasts with older patients (OR = 1.82 for age group 74-85 years compared to age group 55-64 years), those with a chronic medical (OR = 1.29)psychological/emotional condition (OR = 1.25), and white patients, all of whom were more likely to be successful compared to their respective reference groups. Success in seeing a preferred doctor was also less common in deprived areas (OR = 0.86 for most deprived compared to most affluent). Patients registered with larger practices were less likely to report that they could see a doctor of their choice most of the time (OR = 0.48 for patients registered with practices with six to nine GPs compared to patients registered with practices with two GPs). Patients who requested only non-urgent appointments were more likely to be successful in seeing the doctor they prefer (OR = 1.59 compared to patients requesting only urgent appointments). The odds ratios from Tables 2 and 3 are summarised in Figures 1 and 2.

DISCUSSION

Summary

About two-thirds of English patients have a preference for seeing a particular doctor. and of these patients, about three-quarters succeed in seeing their preferred doctor most of the time. This figure reflects some success of English general practice in meeting patients' preferences for continuity, but also represents an opportunity for improvement for more than one-quarter of patients who found it difficult to see the doctor of their choice most of the time.

The preference for and success in seeing a particular doctor varied across patient groups. Females, older people, patients with long-term conditions, and South Asian individuals were more likely to prefer to see a particular doctor. Males, older patients, those with long-term conditions, and white patients reported more success in seeing their preferred doctor. Patients requesting urgent appointments were less likely to want to see a particular doctor. This may reflect a greater value placed by patients on swift access to medical care in the context of acute/urgent conditions. However, patients making urgent appointments were also less likely to succeed in doing so if they did want to see a particular doctor, reflecting the

difficulty for practices in offering speedy access and continuity of simultaneously.

In spite of their higher preference for relational continuity, South Asian individuals (and to a lesser extent females and patients from large practices) were less likely to be successful in seeing a particular doctor. One possible reason why South Asian patients report such disadvantage in seeing their preferred doctor could be that, for some, their first language is not English, making them less able to negotiate with the receptionists in order to book an appointment to see their preferred doctor.

The findings suggest that relational continuity is preferred and achieved more frequently by older patients and those with chronic conditions. These patients are more likely to request appointments in advance (for example, for managing a chronic condition) compared to younger healthier patients (who are likely to request appointments for acute conditions). However, because the study analysis was adjusted for appointment type, it is not likely that the observed relation between age and health conditions on one side and preferring and achieving continuity on the other is confounded by the type of appointments

Although the analysis was restricted to the 98% of responders who reported that their practice had more than one doctor, one in eight responders were registered with a practice recorded by the NHS Information Centre as being 'single-handed'. It is likely that these patients were attending practices formally recorded as having just one practice doctor but in which other doctors also worked from time to time (for example, in assistant, salaried or locum capacity).

Strengths and limitations

Most previous evidence on variation in continuity of care comes from relatively small studies. The present study increases the evidence base substantially, with its large national sample of 2.2 million responders. This allowed the independent associations of a large number of different sociodemographic variables to be estimated robustly.

Caution should be applied when interpreting the results of the GPPS, due to its relatively low response rate (39%), with the mean response rate being lower than 25% in some primary care trusts. Significant sociodemographic differences in patterns of non-response have also been reported, with males, young adults, and people living in deprived areas being under-represented

among responders.¹⁷ To minimise the effect of selective non-response bias, all prevalence estimates were weighted using weights accounting for oversampling from small practices and from practices with low response rates, as well as for individual nonresponse patterns (by age, sex, and practice). These weights, however, would not have accounted for any systematic difference in experiences of continuity between responders and non-responders that were not associated with these factors.

Given the wording of question 15 ('Is there a particular doctor you prefer to see at your GP surgery or health centre?'), it is possible that some patients who value continuity might reply 'No' to this question, because they have no preference for seeing a particular doctor. This might apply, for example, to individuals with no recent encounters or those who value all doctors equally but still prefer to see the same doctor regularly. To that extent, it is possible that the true prevalence of preference for interpersonal continuity was underestimated in this survey. Some patients may also have a preference to avoid seeing a specific doctor (as opposed to seeing a particular one). Other patients may have a preference for seeing different doctors for different aspects of their care, for example, a particular doctor for the management of a mental health condition and another for a physical health problem. Such preferences could affect patients' desire for and success in achieving relational continuity. The wording of the survey questions, however (Box 2), does not allow examination of such aspects of preference for relational continuity.

Comparison with existing literature

In a paper produced by The King's Fund,²² Freeman and Hughes used the 2008/2009 GPPS results to assess patients' and clinicians' perspectives on continuity. Descriptive analysis was performed to identify the proportion of patients who want to see their preferred doctor and those who could achieve this. Variation by age, sex, ethnicity, chronic disease status, and practice size was in agreement with the findings of the present study. The present study took the analysis further by conducting multivariate analyses to adjust for potential confounding by sociodemographic variables and appointment type. In accordance with previous research, the present study indicates that interpersonal continuity of care is valued by the majority of patients, especially females, older patients, and those with chronic diseases. 7.8 Previous studies similarly suggest that males, older patients,

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Ethical approval

Ethical approval was not required for this study.

Provenance

Freely submitted; externally peer reviewed.

Competing interests

Martin Roland and John Campbell act as academic advisers to Ipsos MORI for the English GP Patient Survey.

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white patients, and those registered with small practices are more likely to receive continuity of care.22-28

Implications for research and practice

Continuity of care can be viewed from the perspective of the patient, the doctor, or the healthcare system.²⁹ This study takes the patient's perspective and confirms that interpersonal continuity of care is valued by patients. However, by no means all patients expressed this preference. Some patients will prefer rapid access to appointments, but in other situations they may trade off rapid access for better continuity.30,31 This underscores an important aspect of healthcare quality, which is the need to provide a system that is sensitive to the needs of individual patients. Practices need to provide flexible appointment systems that offer a choice between continuity of care and rapid access to appointments.

However, there is a substantial minority of patients, up to one-quarter, who, most of the time, are not successful in seeing their preferred doctor. This is particularly important, given the evidence that continuity of care has declined in recent years.14-16 There are a number of possible reasons for this, including a focus on access and rapid appointments in the 2004 GP contract, increasing part-time working among doctors, and an increase in salaried (and potentially transient) GPs. The larger medical teams now present in many general practices also make personal continuity more difficult to achieve.32

There are clear messages here for the organisation of general practice. Continuity of care is valued by patients, and is said to be highly valued by GPs as well.33 If interpersonal continuity of care is indeed a core value of general practice, then more needs to be done to ensure that continuity is reflected in the service that practices offer to patients. Government, the Department of Health, and commissioning groups, in turn, should work together to support and incentivise practices to improve patients' experiences through fostering continuity of care.

REFERENCES

- Haggerty JL, Reid RJ, Freeman GK, et al. Continuity of care: a multidisciplinary review. BMJ 2003; 327(7425): 1219-1221.
- Wall EM. Continuity of care and family medicine: definition, determinants, and 2. relationship to outcome. J Fam Pract 1981; 13(5): 655-664.
- 3. Starfield B. Continuous confusion? Am J Public Health 1980; 70(2): 117-119.
- Banahan BF Jr, Banahan BF III. Continuity as an attitudinal contract. J Fam Pract 1981: **12(4):** 767-778.
- Freeman G. Continuity of care in general practice: a review and critique. Fam Pract 5. 1984; 1(4): 245-252.
- 6. Freeman G, Hjortdahl P. What future for continuity of care in general practice? BMJ 1997: **314(7098):** 1870-1873.
- 7. Turner D, Tarrant C, Windridge K, et al. Do patients value continuity of care in general practice? An investigation using stated preference discrete choice experiments. J Health Serv Res Policy 2007; 12(3): 132-137.
- Pandhi N, Saultz JW. Patients' perceptions of interpersonal continuity of care. ${\it JAm}$ 8. Board Fam Med 2006; 19(4): 390-397.
- Saultz JW, Lochner J. Interpersonal continuity of care and care outcomes: a critical 9 review. Ann Fam Med 2005; 3(2): 159-166.
- Hsiao CJ, Boult C. Effects of quality on outcomes in primary care: a review of the 10. literature. Am J Med Qual 2008; 23(4): 302-310.
- Hjortdahl P, Laerum E. Continuity of care in general practice: effect on patient 11. satisfaction. BMJ 1992; 304(6837): 1287-1290.
- Weyrauch KF. Does continuity of care increase HMO patients' satisfaction with physician performance? JAm Board Fam Pract 1996; 9(1): 31-36.
- Wasson JH, Sauvigne AE, Mogielnicki RP, et al. Continuity of outpatient medical care 13. in elderly men. A randomized trial. JAMA 1984; 252(17): 2413-2417.
- Emanuel EJ, Dubler NN. Preserving the physician-patient relationship in the era of managed care. JAMA 1995; 273(4): 323-329.
- Guthrie B, Wyke S. Does continuity in general practice really matter? BMJ 2000; 321(7263): 734-736.
- Campbell SM, Kontopantelis E, Reeves D, et al. Changes in patient experiences of 16. primary care during health service reforms in England between 2003 and 2007. AnnFam Med 2010; 8(6): 499-506.
- Roland M, Elliott M, Lyratzopoulos G, et al. Reliability of patient responses in pay for performance schemes: analysis of national General Practitioner Patient Survey data in England. BMJ 2009; 339: b3851.
- Campbell J, Smith P, Nissen S, et al. The GP Patient Survey for use in primary care

- in the National Health Service in the UK development and psychometric characteristics. BMC Fam Pract 2009; 10: 57.
- Ipsos MORI. Technical annex for the GP Patient Survey 2009/10 annual report. http://gp-patient.co.uk/results/annual/technicalannex200910 (accessed 7 Jun 2012).
- Ipsos MORI. The GP Patient Survey. http://www.gp-patient.co.uk (accessed 7 Jun 20. 2012).
- 21. Noble M, McLennan D, Wilkinson K, et al. The English Indices of Deprivation 2007. London: Department of Communities and Local Government, 2008. http://www.communities.gov.uk/documents/communities/pdf/733520.pdf (accessed
- Freeman G, Hughes J. Continuity of care and the patient experience. London: The King's Fund, 2010.
- Baker R, Boulton M, Windridge K, et al. Interpersonal continuity of care: a crosssectional survey of primary care patients' preferences and their experiences. BrJGen Pract 2007; 57(537): 283-289.
- Boulton M, Tarrant C, Windridge K, et al. How are different types of continuity achieved? A mixed methods longitudinal study. Br J Gen Pract 2006; 56(531): 749-755.
- Mead N, Roland M. Understanding why some ethnic minority patients evaluate medical care more negatively than white patients: a cross sectional analysis of a routine patient survey in English general practices. BMJ 2009; 339: b3450.
- Campbell JL, Ramsay J, Green J. Age, gender, socioeconomic, and ethnic differences in patients' assessments of primary health care. Qual Health Care 2001; 10(2): 90-95.
- Campbell JL, Ramsay J, Green J. Practice size: impact on consultation length, workload, and patient assessment of care. Br J Gen Pract 2001; 51(469): 644-650.
- Kontopantelis E, Roland M, Reeves D. Patient experience of access to primary care: identification of predictors in a national patient survey. BMC Fam Pract 2010; 11: 61.
- Salisbury C, Sampson F, Ridd M, Montgomery A. How should continuity of care in primary health care be measured? Br J Gen Pract 2009; 50(561): e134-141.
- Guthrie B, Wyke S. Personal continuity and access in UK general practice: a qualitative study of general practitioners' and patients' perceptions of when and how they matter. BMC Fam Pract 2006; 7: 11.
- Gerard K, Salisbury C, Street D, et al. Is fast access to general practice all that should matter? A discrete choice experiment of patient preferences. J Health Serv Res Policy 2008; **13(suppl 2):** 3–10.
- Wagner EH, Reid RJ. Are continuity of care and teamwork incompatible? Med Care 2007; 45(1): 6-7.
- Ridd M, Shaw A, Salisbury C. 'Two sides of the coin' the value of personal continuity of GPs: a qualitative interview study. Fam Pract 2006; 23(4): 461-468.