



Research report November 2018

Improving access and continuity in general practice

Evidence review

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nuffieldtrust

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Introduction

As the *Improving Access to General Practice* programme rolls out across England – with additional investment intended to ensure 100% coverage of the population by October 2018 – NHS England commissioned the Nuffield Trust to conduct a project to investigate the impact of improved access upon continuity of care.

This report sets out our findings and provides a series of recommendations for commissioners and policy-makers (page 49). It sets out the evidence on continuity of care, its impact on clinical outcomes and wider health services, its importance to patients and GPs, and the relationship between improved access initiatives and continuity of care within general practice. The report aims to help providers, commissioners and policy-makers to maximise the opportunities to improve continuity provided by the additional investment in primary care to support improved access. It examines how to achieve the optimal balance between these two dimensions of care when redesigning services for local populations.

We set out to address four key research questions:

1. What is the evidence that continuity within general practice benefits patients, or is important to health professionals?
2. Which primary care patients are more likely to want continuity of care, and how likely are they to report receiving it?
3. How might policy initiatives to improve access affect continuity of care, and to what extent is there evidence of this?
4. What factors might best support continuity of care in the context of improved access?

A separate summary document sets out the key points and recommendations.

Overview of methods

The study included:

- a rapid review of academic and grey literature
- interviews with nine primary care providers (four of which are General Practice Access Fund [GPAF] sites), one commissioner of services, and site visits to two practices in South East England

- analysis of the GP Patient Survey (GPPS) to investigate the variation in, and factors associated with, proxy measures of continuity (see Box 1)
- two workshops to review emerging issues, gain additional insights and discuss policy implications, opportunities and challenges.

The methods are described in more detail in Appendices 2 and 3 (page 62).

Box 1: The GP Patient Survey (GPPS) questions.

Our analysis focused on two questions from the survey:

- Is there a particular GP you usually prefer to see or speak to?
- How often do you see or speak to the GP you prefer?

Neither question asks respondents specifically about their desire for, or receipt of, continuity. However, these questions are used here, and in other previous studies (e.g. Paddison and others, 2018; Aboulghate and others, 2012), as proxies for relational continuity. With no other readily available national data on continuity, insights that can be drawn from these questions are valuable, especially when analysed alongside information from other sources.

Structure of the report

The following section sets out the key concepts and the policy landscape, as context for the research. The remainder of the report covers:

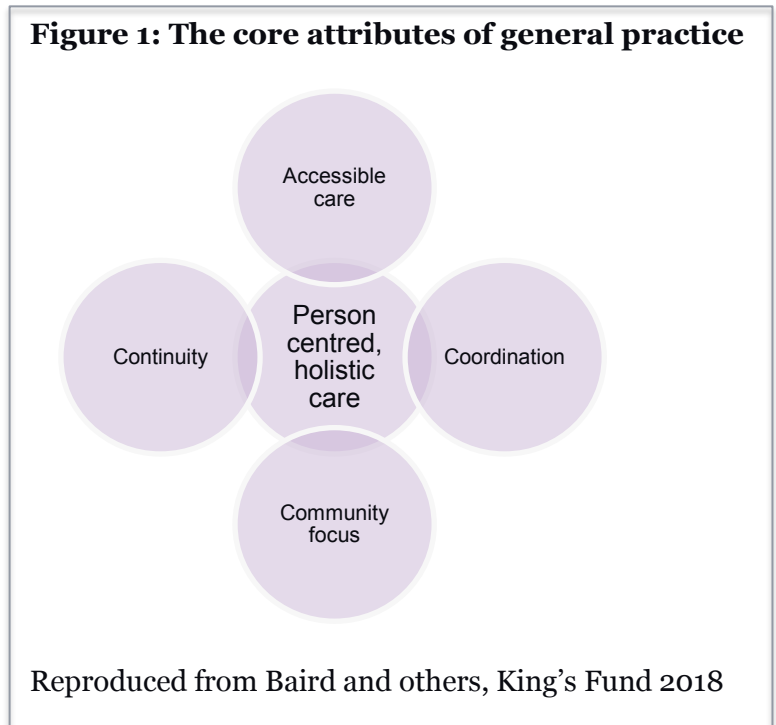
- patients' preferences towards, and outcomes from, continuity (page 12)
- the evidence on the effect of access initiatives on continuity of care (page 22)
- the factors and models that may promote the delivery of both improved access and continuity of care (page 31)
- a discussion on the implications of our findings for policy-makers and those implementing improvements in GP access (page 46).

Concepts and definitions

Quality in general practice

‘General practice remains the bedrock of the NHS in England, carrying out an estimated 340 million consultations each year... It is still seen as an international exemplar of what good, local, family-centred primary care should be.’ (Rosen and others, 2016)

Quality of care in general practice is multi-dimensional (Campbell and others, 2000), and includes patient experience, integration and coordination of care, accessibility, clinical effectiveness, safety, equity, and efficiency. Both continuity of care and access are core attributes of general practice (Figure 1).



Defining continuity

There is no agreed definition of ‘continuity of care’. The term continuity of care is most commonly used to capture:

- **Relational continuity:** An ongoing therapeutic relationship between a patient and a clinician, whereby both “know each other well” (Freeman G. 2018, pers. comm.). This is referred to as relational, personal or interpersonal continuity.

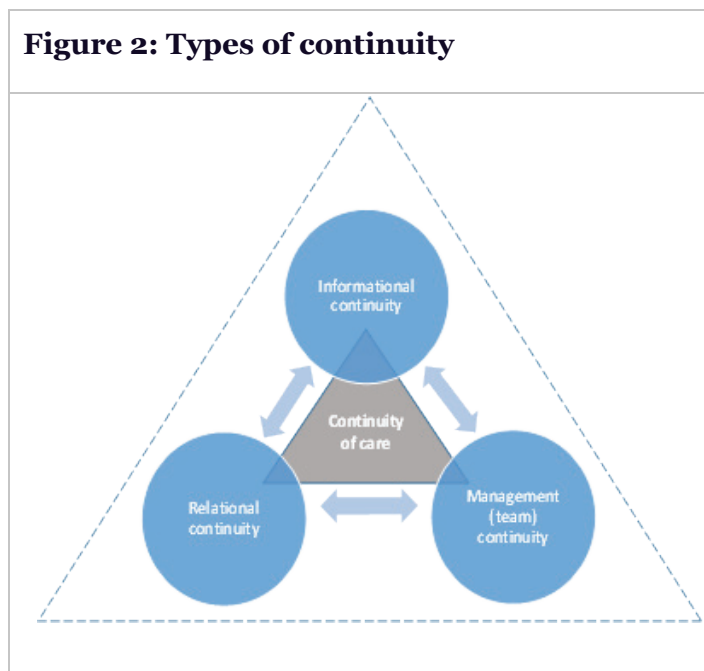
However, other types of continuity exist (Figure 2), including:

- **Management continuity:** A consistent and coherent approach to the management of a health condition that is responsive to a patient’s changing needs.
- **Informational continuity:** The use of information on past events and personal circumstances to make current care appropriate for each individual (Haggerty and others, 2003).

The three types of continuity are interdependent, and the different forms of continuity shape patients’ experience of care over time (Haggerty and others, 2003). Sometimes an ongoing patient-clinician relationship may be prioritised by patients or professionals but, in other circumstances, for example when care is delivered across different settings, continuity of information may be considered more relevant. Other types of continuity have also been identified, including longitudinal, geographic and familial (Saultz , 2003).

This study has focused primarily on relational continuity, for which there is most evidence, and has also sought to explore initiatives to support other forms of continuity. However, we recognise that disaggregating between different types of continuity is not always possible as not all evidence sources are specific. There is a need for further work to explore the impact of management and informational continuity, and the relationship between all three.

Figure 2: Types of continuity



Defining access

‘Access’ does not easily lend itself to definition either, but can cover physical access, timely access, convenience, and includes choice of practice and professional (Boyle and others, 2010). As with continuity, access is valued for what it enables: ‘most people would not consider good access to a poor service to constitute “good access”’ (ibid).

Policy context*

Successive policies have promoted improved access to general practice (see Figure 3). In October 2013, the Prime Minister's Challenge Fund was launched, with an initial £50 million to invest in initiatives to improve access to general practice. This was later renamed the General Practice Access Fund (GPAF) and a further £100 million was added in 2015/16. The programme aimed to improve access to GP services, with the intention that everyone in the country should have easier and more convenient access, including appointments at evenings and weekends (NHS England, 2017a). The *NHS Operational Planning and Contracting Guidance 2017–19* included the ambition that 100% of the country should have extended access to GP appointments at evenings and weekends by March 2019. In February 2018, NHS England brought this forward to October 2018.

Policy on continuity of care has been less visible than that on access (Figure 3). Although several policy documents have stated the importance of continuity, most recently the *General Practice Forward View*, few have set out specific targets and initiatives have not been accompanied by significant additional funding. Proactive care planning was incentivised as part of the Enhanced Services Avoiding Unplanned Admissions policy in 2016, but, one year after implementation, the sum was included in the global sum received by practices. The inclusion in the GP contract in 2014/15 of the 'named GP' for patients over 75 was rolled out to all patients from April 2015. However, an evaluation of its impact on the wider health service suggested no effect upon either the numbers of referrals to specialist care or the numbers of common diagnostic tests (Barker and others, 2016).

Alongside these, a wide range of other policies has been driving change, including:

- initiatives to promote integration, urgent care, self-care and the use of pharmacists
- promoting better use of the wider workforce and the uptake of technology, such as online consultations
- the vanguard programme, which includes initiatives such as care navigation to better signpost services and help people access the right services in a timely way.

Figure 3: Policy timeline



Continuity of care: preferences and outcomes

Introduction

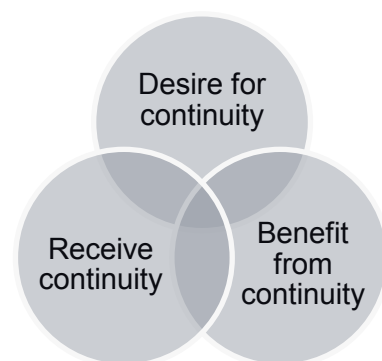
Patients differ in the way that they prioritise aspects of quality – including continuity and timely access. Patients can be categorised according to whether they want, are likely to benefit from, and receive continuity (Figure 4). A key group to understand is those who would benefit from continuity but do not receive it.

To investigate which patient groups and professionals value continuity of care, when and why, we reviewed over 100 published papers and grey literature, supplemented by analysis of the GP Patient Survey, interviews, site visits and workshops.

The literature is of varying quality and the extent to which we could synthesise the results was limited due to differences between studies in terms of definitions of continuity; measures of continuity; use of different datasets; and, in some cases, use of qualitative methods with small sample sizes.

This chapter begins with a summary of the evidence on which types of patients value continuity the most, in particular relational continuity. Second, we explore the reasons why patients value relational continuity. Following this, we present the views of professionals on continuity of care. Finally, we present the wider outcomes and benefits associated with patients receiving continuity.

Figure 4: Patients' desire for, benefit from, and receipt of continuity

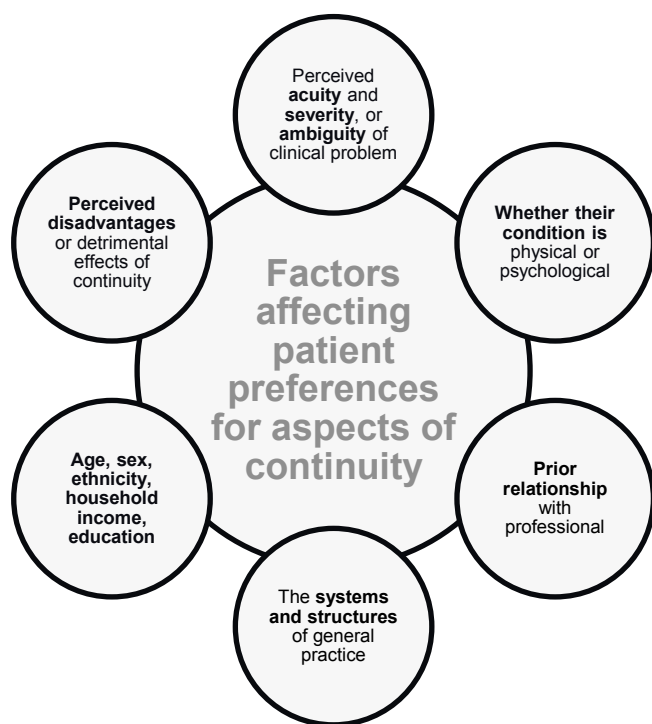


Source: Nuffield Trust

What factors influence patient preferences for, and ability to obtain, continuity?

There is a body of research on continuity in general practice, and the patient groups which prefer and value continuity, dating back to the 1970s (Starfield, 1980). The main characteristics associated with patient preference for continuity that we identified in published literature are summarised in Figure 5. The trade-offs made by patients between continuity and other aspects of care are described further below.

Figure 5: What factors influence patient preferences for continuity?



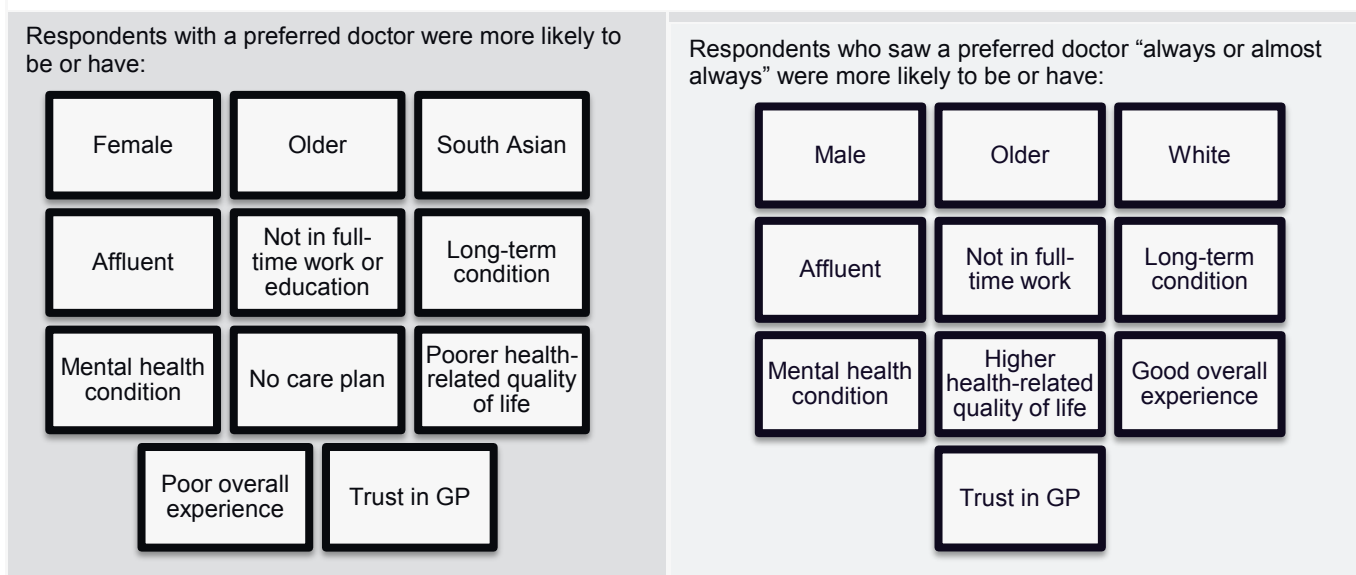
Source: Nuffield Trust

Our analysis of the GPPS demonstrates that gender, socio-economic status, and having a long-term or mental health condition influence preference for, and receipt of, continuity (Figure 6). This is also reflected in recent work produced by the Primary Care Foundation (2018), which reports that patients from the least deprived quintile are more likely to see their preferred GP than the most deprived quintile (37% versus 34%). In addition, the likelihood of having a preferred GP and of managing to see that GP is associated with ethnicity; age and employment and education status (see Figure 7, 8 and 9 on page 15). In particular, respondents who were

older or not in full-time work were more likely to both have, and to see, a preferred GP. Our analysis of the GPPS suggests that compared with British and Northern Irish respondents, those from Indian, Pakistani and Bangladeshi ethnic groups are more likely to have a preferred GP (54–55% versus 51%), but are less likely to see a preferred GP (17–25% versus 38%). The significant variation between ethnic groups remains even after adjusting for other factors (Table 4 and Table 5, Appendix 3).

Where patients live is a key factor. Practices in major urban conurbations had, on average, 31% of respondents reporting seeing their preferred GP always or almost always, compared with an average of 47% across practices in villages. This significant variation persists even after adjusting for practice size and a range of other practice characteristics.

Figure 6: Characteristics of patients who have, and are able to see, their preferred doctor



Source: GP Patient Survey (2017). *NB. Indicators within the survey are used as proxy measures for relational continuity.*

The analysis also highlighted that respondents with high overall satisfaction with their GP surgery, and who trusted their GP, were also likely to see their preferred GP (if they had one), with the latter also more likely to have a preferred GP. Those respondents with poor overall satisfaction with their GP surgery are less likely to have a preferred GP. The causal relationships between these associations are, however, unclear.

Figure 7: Likelihood of having, and seeing, a preferred GP, by ethnicity

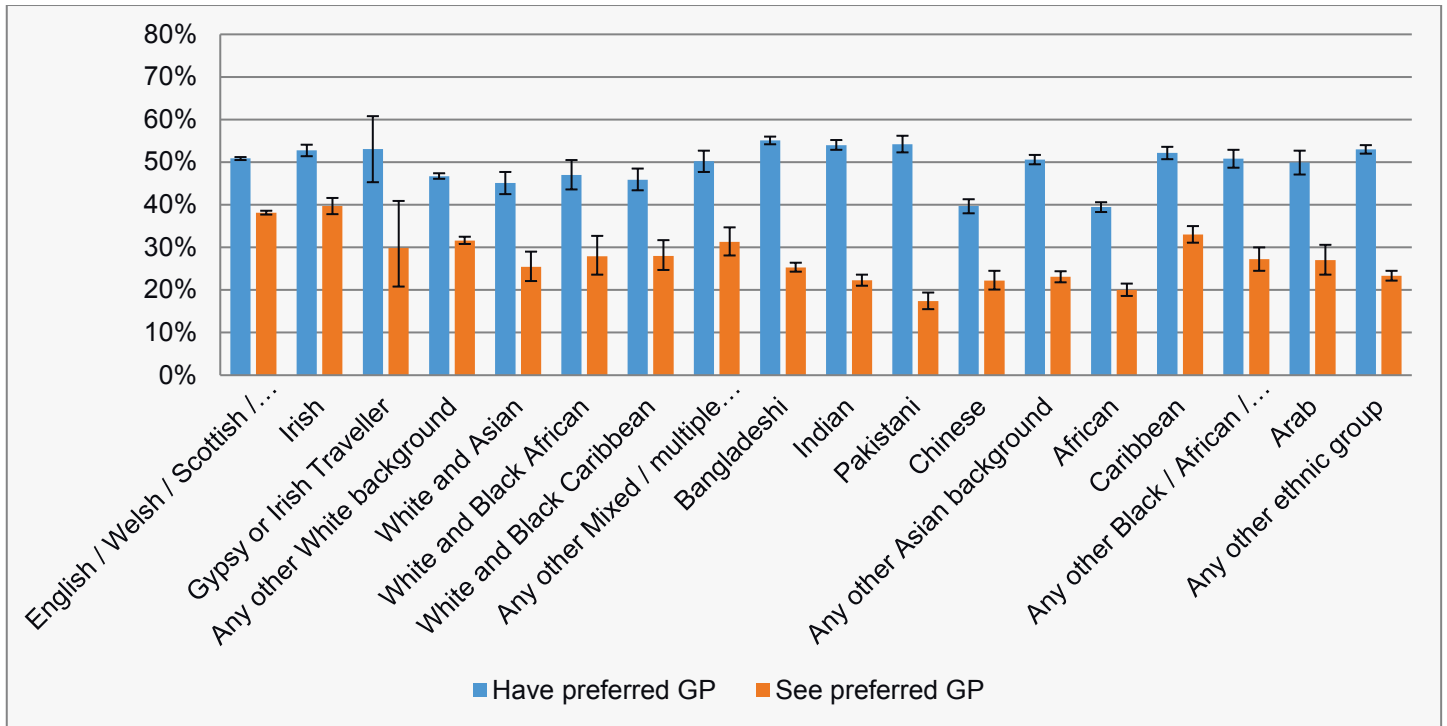


Figure 8: Likelihood of having, and seeing, a preferred GP, by age

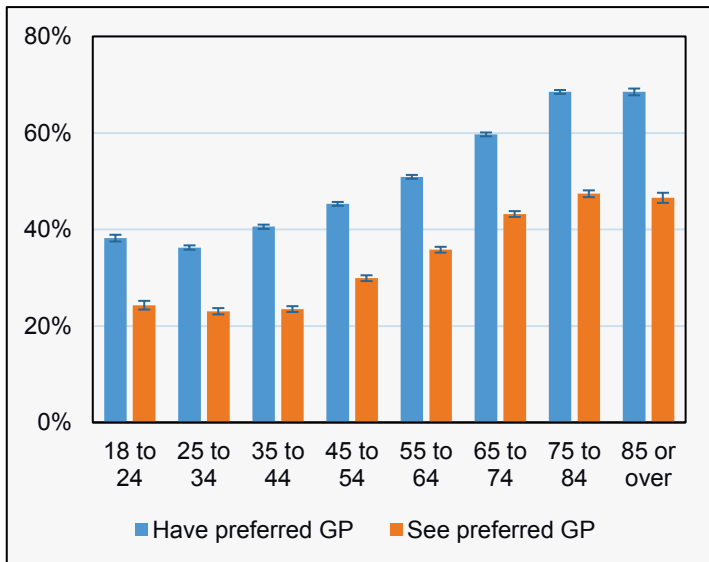
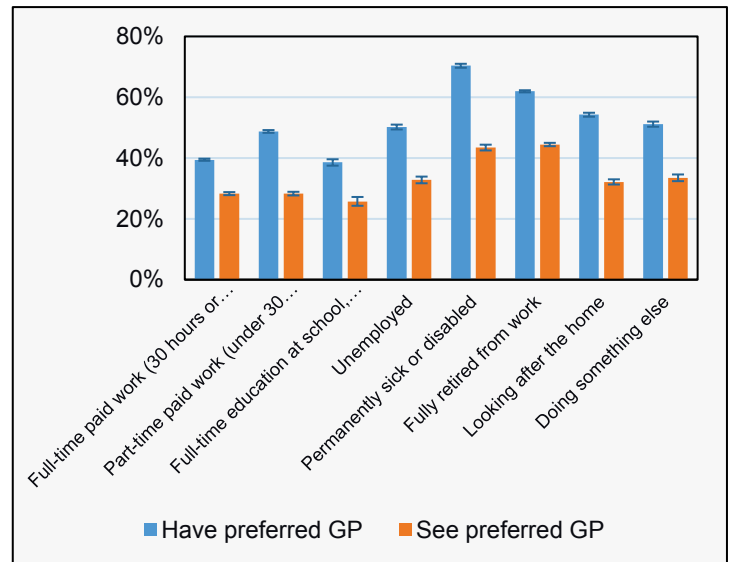


Figure 9: Likelihood of having, and seeing, a preferred GP, by employment and education status



Some patients do not value continuity of care – particularly when they perceive themselves as fit (Baker and others, 2001), do not like their usual doctor, or if the doctor does not take their health concerns seriously (Frederiksen and others 2009).

Further research is needed as there is still relatively little published literature regarding working age people both in and out of employment, adolescents and young people, and patients with protected characteristics – including sexual orientation and religious belief.

Desiring and achieving continuity: what trade-offs are made?

While some groups prioritise continuity of care over quick access, others see an appointment at a convenient time as most important. This preference is not consistent for all patient groups or situations. The evidence about how patients make these choices includes ‘discrete choice experiments’, which examine the trade-offs that patients make. These studies highlight instances when patients are willing to trade-off other aspects of care to prioritise seeing the same clinician (Table 1, page 17).

While there is some evidence to support segmenting groups of patients in this way, it is critical to acknowledge that ‘generalisations can be misleading’ due to the transient and variable way that patients value continuity (Freeman and Hughes, 2010);

“Our need and desire for continuity waxes and wanes throughout our life in many different, complex ways” (workshop participant).

Table 1: Summary of patient trade-offs

Preference for	Patient group	Strength of preference	
Quick access	Parents	Preferences were strongest for access to same-day sick visits followed closely by good continuity with their child’s primary care professional. ^a	
	With urgent physical condition	In a willingness to pay experiment, individuals were willing to pay the most for the shortest wait. ^{*b}	
	With minor, familiar symptoms	Prefer quick access for likely minor ‘low impact’ symptoms. ^c	
	Child, or for a new health problem	Shortness of waiting time to make an appointment is only important if the appointment is for a child under five, or for a new health problem. ^d	
Evenings and weekends	Parents of younger children	Strongly preferred evening and weekend hours compared to practices with no evening or weekend hours. ^a	
Choice of time	Employed	Choice of time is six times more important than a shorter waiting time and they are willing to wait up to one day extra for this. ^d	
Relational or informational continuity	Majority of patients	Seeing a doctor who ‘knew them well’ takes precedence over flexibility of appointment time for most patients. ^b	
	With minor, familiar symptoms	Willing to wait 0.9 days for relational continuity and 1.6 days for informational continuity. ^c	
	Parents of children with special health care needs	Had stronger preferences for seeing the same doctor. ^a	
	With problem causing uncertainty or needing a routine check-up	Preference to wait longer to see a familiar medical practitioner who was well informed about their case. ^c	
	Ambiguous physical or psychological condition	Willing to pay the most to see a doctor who knew them well. ^{*b}	
	Long-term condition	Value seeing their own GP more than seven times as much as having a shorter waiting time for an appointment and will wait an extra one day for an appointment with the GP of their choice. ^d	
	Women	Will wait an extra two days for an appointment with the GP of their choice. ^d	
	Older patients	Will wait an extra 2.5 days for an appointment with the GP of their choice. ^d	
	Choice of type of clinician	Routine check-up	For a routine check-up, an individual would be prepared to trade off an additional wait of 3.5 days to see a GP rather than a nurse, 4.2 days for relational continuity and 7.8 days for informational continuity. ^c
		With minor, familiar symptoms	Willing to wait one extra day to see a GP rather than a nurse. ^c
Thorough examination	All patients	A thorough physical examination was always the most important attribute. ^b	

a = Zickafoose and others, 2015 (USA); b = Cheraghi-Sohi and others, 2008 (UK); c = Turner and others, 2007 (UK); d = Rubin and others, 2006 (UK). Note that across these four discrete choice studies, different measures were used to assess strength of preference.

* The cost attribute (‘willingness to pay’) is typically used by researchers to aid in interpretation, however, Cheraghi-Sohi and others note the limitations of this in the UK, where patients do not routinely pay for health care at the point of delivery. We include this study to illustrate the extent and quality of existing evidence on patient trade-offs within general practice.

What aspects of continuity do patients value, and why?

Relational continuity may be valued by patients for what it signifies (e.g. trust, good communication) rather than in-and-of-itself. Patients appear to value the specific aspects afforded by, and enhanced by, relational continuity – and when some of these elements of care are absent from the patient-doctor relationship, seeing the same doctor loses its value. In addition, most patients would not value repeatedly seeing a doctor they considered to have, for example, poor communication skills. Some of these factors that shape patient experience also overlap with informational and management continuity. The aspects include:

- Maintaining information and familiarity (not having to repeat their story, and knowledge of family history).
- Trust (Freeman and Hughes, 2010) – as noted above, there is a strong positive relationship between level of trust in the GP and likelihood of both having, and managing to see, a preferred GP. However, the causal relationship is unclear.
- The efficiency provided, and the ability to navigate the system as smoothly as possible to see the right person quickly (Cowie and others, 2009).
- Feeling safe – in terms of being treated with respect and feeling confident that they will be given sufficient consultation time (Rhodes and others 2014).

These aspects can drive positive outcomes. For example, a high-trust patient-doctor relationship may support shared decision-making, improve adherence to treatment and enhance patient experience (Tammes and Salisbury, 2017; Chauhan and others, 2012). Patients who are particularly isolated, vulnerable, have complex needs, or who encounter a language barrier or lack resources (capacity, money or social skills), particularly benefit from a known and trusted health professional to coordinate care on their behalf.

Continuity and the general practice workforce

Most studies focus on GPs, with fewer studies having investigated the views of other primary care professionals on continuity. The perspective of general practice professionals is that:

- Continuity is a *core* attribute to their work (BMA and others, 2015; Freeman and Hughes 2010) with continuity:

“the golden thread running throughout our practice... It is what makes us what we are” (GP participant at roundtable).
- GPs develop both knowledge and a sense of responsibility towards patients through continuity of relationship, and the knowledge they accumulate over numerous consultations helps them to consult more efficiently (particularly with children and older people, and those with psychosocial problems or long-term conditions) and to use fewer health care resources (Hjortdahl, 1992; Hjortdahl and Borchgrevink, 1991).
- Continuity can increase their job satisfaction. Delivering continuity:

“gives me a lot more job satisfaction, it’s really nice to be able to offer a better service. So the thought of going back to the system where people started a conversation with ‘I’ve been waiting three weeks to see you’, it gives you a lot more job satisfaction knowing that you’ve already spoken to the patient” (GP interviewee).
- It can be challenging to provide continuity at times. Workshop participants described how some GPs find it challenging to provide continuity for psychological rather than physical problems, as this requires longer consultations and greater investment on the part of the doctor.

There is less agreement about which type of continuity matters most. Our workshops highlighted that GPs and other clinical staff may value different types of continuity for different patients (e.g. relational continuity for psychosocial issues; managerial for physical problems). Informational continuity underpins both relational and management continuity (Hill and Freeman, 2011), while some clinicians and patients think that informational and management continuity cannot replace an ongoing therapeutic relationship (Rhodes and others, 2014; Guthrie and others, 2008; Freeman, 2013).

Different parts of the general practice workforce may understand continuity differently and place more or less emphasis on the relational aspects of continuity, depending on their relationship with the patient (Alazri and others, 2007a). There is, however, consensus that for a health system to be effective, it must encompass all three dimensions of continuity (Guthrie and others, 2008).

The effect of continuity of care on outcomes

Continuity of care in general practice is associated with a wide range of positive clinical outcomes and benefits to the health system (Figure 10). For example, compared with people with *low* continuity of care, those with *medium* and *high* continuity had an estimated 9% and 12% fewer admissions, respectively (Barker and others, 2017).¹ A systematic review around continuity of care with doctors (albeit not limited to the general practice setting and covering evidence from a range of health systems) identified 18 papers reporting statistically significant reductions in mortality (Pereira Gray and others, 2018). The review found some evidence that within general practice, continuity provided by multidisciplinary teams and with other professionals (including geriatricians and nurse practitioners; Wolinsky and others, 2010) was also reported to improve mortality.

Positive patient experience is associated with the receipt of relational continuity of care (National Audit Office, 2015). In particular, our analysis suggests patients reporting a more positive experience were less likely to have a preferred GP but, for those with a preferred GP, more likely to see them. The causal relationship is unclear, but one possible interpretation is that meeting expectation of continuity (seeing your preferred GP) leads to a positive experience, but, where patients have expectations for continuity (i.e. have a preferred GP), there is an increased likelihood of failing to meet this expectation, leading to a negative experience.

Our analysis of the GPPS found that when patients are unable to see their preferred health professional, the care burden may transfer to other services. Around one in five (18.9%) respondents said they were unable to get a convenient appointment the last time they wanted to contact someone from their practice and, for a small proportion of those responding (8.1%), it was because they couldn't see their preferred GP. Extrapolating the figures, an estimated 140,000 accident and emergency (A&E) attendances a year took place because some patients were unable to get a convenient appointment with their preferred GP.

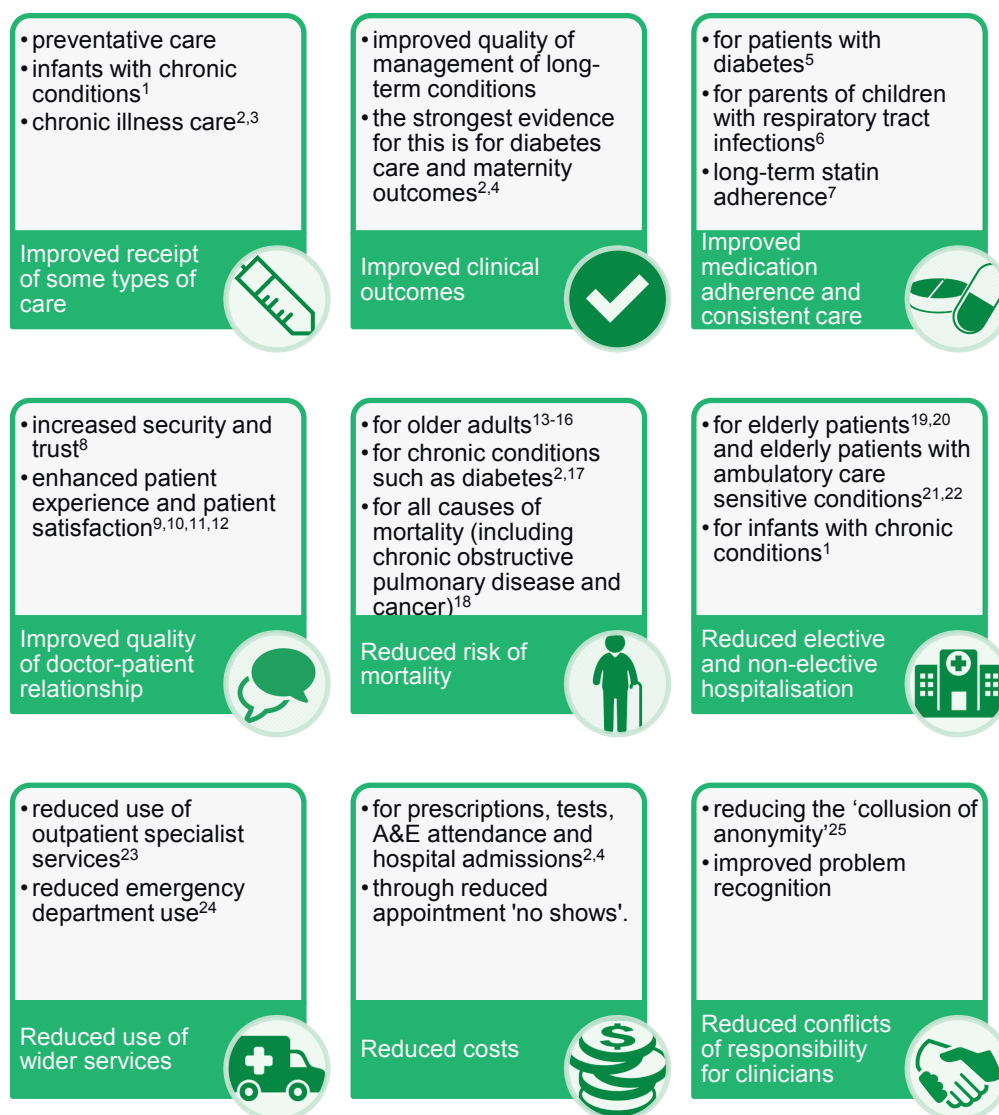
Detrimental effects of continuity

There is also evidence to suggest that continuity of care may, at times, have a detrimental impact. For example, over-familiarity may delay an early diagnosis of a chronic condition, or impair the

¹ The *low* continuity of care group had less than 40% of appointments with the same GP; *medium* between 40% and 70%; and *high* at least 70%.

effective management of an ongoing condition, when instead a pair of fresh eyes would be beneficial (Broom, 2003; Alazri and others, 2006). Workshop participants highlighted that continuity of care may also be detrimental if the patient does not like their usual clinician; when the usual GP's knowledge of their patient is poor; when the patient prefers quick access; or where there is potential for collusion (e.g. prescribing inappropriate drugs).

Figure 10: Outcomes associated with relational and longitudinal continuity



Sources: ¹ Enlow and others, 2017; ² Saultz and Lochner, 2005; ³ Cowie and others, 2009; ⁴ Baird and others 2018; ⁵ Alazri and others, 2006; ⁶ Brookes-Howell and others, 2014; ⁷ Warren and others, 2015; ⁸ Tarrant and others, 2010; ⁹ Levene and others, 2018; ¹⁰ Cabana and Jee, 2004; ¹¹ Nutting and others, 2003; ¹² Adler and others, 2010; ¹³ Maarsingh and others, 2016; ¹⁴ Leleu and Minvielle, 2013; ¹⁵ Worrall and Knight, 2011; ¹⁶ Wolinsky and others, 2010; ¹⁷ Lustman and others, 2016; ¹⁸ Pereira Gray and others, 2018; ¹⁹ Tammes and others, 2017; ²⁰ Bankart and others, 2011; ²¹ Baker and others, 2017; ²² Nyweide and others, 2013; ²³ Hansen and others, 2013; ²⁴ Katz and others, 2015; ²⁵ Freeman and Hughes, 2010.

The relationship between improved access and continuity of care

Introduction

This chapter examines the evidence about how initiatives to improve access may impact continuity of care. We review two broad groups of initiatives:

- *Within* practices, including policies to incentivise longer opening hours at individual practices, earlier approaches dating to 2000 to ‘advance access’, and use of telephone, email and online consultations.
- *Across* practice boundaries, including the first wave Prime Minister’s Challenge Fund initiatives, the initiative to rollout extended access policy to 100% of the population, and other ‘at scale’ initiatives.

Practice-level initiatives

We summarise the evidence below, primarily from analysis of the GPPS, on the association between continuity (using GPPS proxy measures) and four policies delivered at the practice-level: the enhanced service to increase opening hours (the extended hours *Directed Enhanced Service*); practice list size; ‘advanced access’; and alternatives to face-to-face consultations.

Important context for these findings is the wide variation in patient experience found at practice level. Analysis of the GPPS² shows that for some practices, almost all their respondents stated that they saw their preferred GP when they wanted to; while in others almost no respondents did. This variation has persisted over the last six years. While the level of variation is far greater

² The GPPS produces weighted practice-level results which adjust for a number of patient characteristics (e.g. age and gender) and area-level characteristics (e.g. deprivation).

than might be expected through random chance, it could be due to unmeasured differences between practices.

Enhanced service on practice opening hours

Since 2008, practices have been able to receive additional funding for extending their opening hours. The national scheme, which is one of a number of funding streams available through the *Directed Enhanced Services (DES)* mechanism, requires practices to provide 30 minutes per 1,000 registered patients per week of appointments outside of core hours. Around three-quarters of practices provide these appointments and receive, on average, around £1.90 per patient per year for doing so. Based on analysis of the GPPS, the association between opening hours and continuity is unclear:

- Patients at those practices receiving funding from this scheme are more likely to have a preferred GP and are more likely to see their preferred GP, although the effect size is small (less than one percentage point increase in the proportion of respondents both with a preferred GP and seeing them), even after adjusting for other practice characteristics.
- Practices with a higher proportion of respondents reporting being satisfied with the convenience of opening times had, on average, a higher proportion of respondents with a preferred GP actually seeing them, although the causal relationship is unclear.
- The National Audit Office previously found that patients from practices with longer opening hours during the week and those opening on the weekends reported that they were, on average, less likely to see their preferred GP (National Audit Office, 2017). We did not have reliable data on opening hours of practices so could not further explore the direct relationship between opening hours and continuity.

Some patients – including elderly and retired patients – may use appointments outside core hours ‘not because they were more convenient but because they were unable to access weekday appointments’ (Baird and others 2016). A different interpretation of this use of appointments was made by an interviewee who described older people actively choosing extended hours appointments so they could attend with a carer or relative who worked during the day. Others noted that patients with mental health problems may choose to attend evening clinics when the waiting room is quieter and less stressful.

Practice list size

Over the last 20 years, many policy initiatives have promoted a shift towards general practice working at scale. As well as practices becoming, on average, larger, there is also a move for organisations to become part of a federation or network; with the intention of achieving closer, more integrated working with other primary health care teams and practices. This latter policy is covered in the next section on initiatives across – rather than within – practices (page 26).

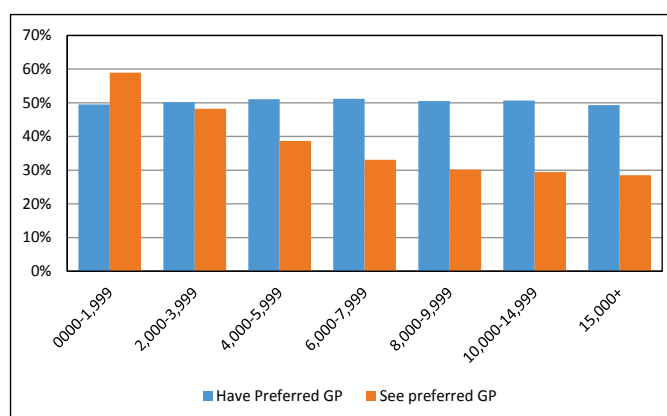
The arguments for scale, be that at practice or network level, are largely based around the twin issues of critical mass and capacity. Larger scale enables practices to develop a wider range of services and develop a managerial infrastructure that supports service improvement, innovation and development. Large scale has also supported greater financial sustainability (Rosen and others, 2016). The recent Care Quality Commission (CQC) report on general practice also found a positive link between their rating of quality and size of practice (Care Quality Commission, 2017).

While scale may support a range of positive elements of care for patients, there is a strong body of evidence, supported by our own analysis of the GPPS (see Box 2) and the feedback from those we interviewed, that practice size is negatively correlated with continuity (e.g. Baker and others, 2001, cited in Parker and others, 2010; Kristjansson and others, 2013). For example, patients from larger practices – with at least seven full-time equivalent GPs – are, on average, 4% less likely to see the same GP than those at medium-sized practices (four to six GPs), and 11% less likely than at small practices (one to three GPs) (Barker and others, 2017).

These findings are, perhaps, intuitive as small practices are likely to have fewer GPs and therefore the chances of seeing a preferred GP will be higher. The negative relationship identified in our analysis of the patient survey (Box 2) suggests that, as list size increases, a patient is increasingly less likely to see their preferred GP. However, our site visit to the Park Practice in Littlehampton (which has a list size of 10,000 patients) demonstrated that it is possible to combine access and continuity in a larger practice through careful organisational design and professional commitment (see Case study F, page 61).

Box 2: The association between practice list size and patients seeing their preferred GP

There is no clear relationship between practice list size and the likelihood of having a preferred GP. However, there is a strong negative association between list size and the likelihood of a respondent seeing their preferred GP, even after adjusting for the characteristics of the practices' respondents.



Advanced access

The 'advanced access' approach has been widely used to improve access within individual practices and was strongly promoted following the introduction (in 2000) of targets for everyone to see a GP within 48 hours. The approach is based on the principle of 'doing today's work today' by ensuring sufficient on-the-day capacity to see patients immediately (Salisbury and others, 2007). Although 'advanced access' arrangements have mainly been superseded by other ways of organising and delivering care, its impact on continuity has been evaluated, with UK evaluations reporting mixed results.

Some studies of reforms in the early 2000s that were designed to improve access found that they reduced levels of continuity of care (Campbell and others, 2010). Others report that same-day access was delivered by restricting patients' scope to book appointments ahead with their preferred GP (Gill and Freeman, 2007; Windridge and others, 2004), while others reported slightly quicker access to an appointment but with no effect on continuity (Salisbury and others, 2007). One study noted perceptions among some GPs that any possible detrimental effect to relational continuity, GP workload and stress can be mitigated if information and management continuity are maintained (Ahluwalia and Offredy, 2005).

For some providers, "if you sort out the same day access then you can focus on the continuity" (Nuffield Trust interview). However, there is a risk that reserving a high proportion of appointments for on-the-day demand results in very long waits for routine appointments, which means patients become incentivised to book a same-day appointment rather than a routine

appointment with a doctor they know (Baird and others, 2016). This ‘both adds to the pressure on practices and reduces continuity of care for those patients’ (Baird 2017).

Alternatives to face-to-face consultations

The use of video, telephone or email consultations could significantly reduce staff workload and improve patient access (Atherton and others, 2018). Despite the longstanding use of some of these alternatives to face-to-face consultations, there is still limited evidence on the effect on continuity, as well as broader concerns about its effect on professional identity and workload (Jackson, RCGP; Jeffers and Baker, 2016; Atherton and others, 2018). However, there is some emerging evidence that using technology can have a positive effect on continuity:

- A pilot of telephone triage in one of the Prime Minister’s Challenge Fund sites (Brighton and Hove) saw a 3% increase in patients who get to see their preferred GP always or a lot of the time (Mott MacDonald, 2015).
- The introduction of a GP-led telephone-first approach was associated with a slight increase in relational continuity, although there was some subsequent decline over time (Newbould and others, 2017).

Our research suggests that the effect on continuity is likely to be determined, at least in part, by the way in which such initiatives are designed. We discuss the opportunities and key challenges to adopting these models of care in the following chapter.

Across-practice initiatives: ‘at scale’ and networks

Introduction to ‘at scale’

Around 80% of practices now report that they are part of a formal or informal collaboration, in the form of a large-scale network, federation or super-partnership (Kumpunen and others, 2017). There is policy ambition for all general practices to work ‘at scale’ (National Audit Office, 2017). It is hoped that through operating at scale, practices will become more sustainable and be better able to harness economies of scale while offering patients better and timelier access to a wider range of services. The trend towards ‘at scale’ general practice has accelerated in response to recent initiatives:

- NHS England expects working at scale across practices to provide extended access collectively, in a similar way to how many GPs currently collaborate within GP cooperatives

to provide out-of-hours care. These services are often called primary care **‘access hubs’** (NHS England, 2016d).

- In 2015, NHS England – as part of the **‘vanguard’** programme – selected 14 sites to act as multi-specialty community providers (MCPs), which seek to integrate primary care and specialist services in an integrated network or single organisation for a local population.
- Around 15% of the population are covered by over 200 **‘primary care homes’** – a smaller-scale care model funded by NHS England – which involves practices voluntarily collaborating at scale and often across settings.

NHS England set out its ambition in February 2018 to actively encourage ‘every practice to be part of a local primary care network, so that there is complete geographically contiguous population coverage of primary care networks as far as possible by the end of 2018/19, serving populations of at least 30,000 to 50,000.’ This scale is the same as populations for the primary care home model and noted by NHS England as the ‘neighbourhood population’ underpinning MCPs. That said, NHS England noted that, at a minimum, an MCP will need a population of 100,000 (NHS England, 2016f).

Evidence of cross-practice initiatives to organise for both access and continuity

As noted earlier, Mott MacDonald's evaluation of the GP Access Fund pilot sites (NHS England, 2016b) highlighted one pilot site which increased the number of patients able to see their preferred GP. The evaluators concluded that future waves of pilots should address differing needs of patients, some of whom prefer to see their own GP. However, the evaluation did not address continuity across all the pilot sites.

While our case studies were limited in scope, they included services where general practices working at scale seemed to support both improved access and continuity. Our interviews with five providers are outlined below, with further details of these and other interviews available in the list of case studies in Appendix 1.

Table 2: Examples of innovative ‘at scale’ working drawn from Nuffield Trust interviews

Site	Population	Design
Fleetwood GP federation; a wave two GPAF site	30,000	- Any patient can choose extended access, but reception staff target those appointments at children, people of working age and the elderly with carers. This last category reflects an unexpected demand from older people for weekend appointments, so that they can be accompanied by carers or family members.

(Case study A, page 52)		<ul style="list-style-type: none"> - Having an external provider take responsibility for extended access has increased the capacity of practices to focus their efforts on addressing the health needs of their town.
Lewes, East Sussex GP network (Case study B, page 54)	3 practices covering 32,600 patients	<ul style="list-style-type: none"> - ‘Streaming’ by practice receptionists to direct patients to the best clinician for their needs. - Acute clinic GPs provide rapid access for new and acute symptoms. - Multidisciplinary ‘continuity teams’ deliver pre-bookable and longer slots for people with complex needs.
Larwood and Bawtry Primary Care Home; a large single practice (Case study D: Larwood surgery page 58)	32,000 patients	<ul style="list-style-type: none"> - Comprehensive telephone triage to assess all patients who request an appointment and designed to support continuity where needed. - Multi-professional team working with community nurses, pharmacists and others to provide team-based continuity for care home residents and patients with complex needs.
Southampton GP federation; a wave two GPAF site (Case study C, page 56)	33 practices covering 269,000 patients	<ul style="list-style-type: none"> - Organised into seven ‘access hubs’ delivering pre-bookable GP appointments between 8am and 9pm, seven days a week. - Hubs attach high importance to both informational continuity (patients only telling their story once) and supporting relational continuity with each patients’ usual GP through swift transfer of information to their usual practice.
Richmond GP federation; a wave two GPAF site (Case study E, page 59)	28 practices covering 215,000 residents	<ul style="list-style-type: none"> - Seven-day access originally offered through four hubs in sites chosen to secure good geographical access, each covering 30–50,000 patients. Promoted strong sense of ownership and ties to local community, i.e. ‘our hub’. - Improved access is now delivered across two larger hubs, covering 100,000 patients. This has reportedly affected the social interaction amongst staff, reduced capacity and lost the sense of local ownership. As a result, promoting relational continuity, compared to informational and team-based continuity, has become difficult. - Some practices have been able to increase their consultation length to 15 minutes, thereby improving the management of people with co-morbidities or complex conditions.

We identified some commonalities across these ‘at scale’ services, which helped to support both access and continuity. These are discussed in more detail in the following chapter. In brief, they include: **professional commitment to continuity of care; service design; role of reception staff; identifying which patients** may benefit most from continuity; and **balancing the priority** given to access and continuity, given the risk that staff can be diverted away from providing continuity to instead maintain on-the-day access. An evaluation of larger scale general practice ‘polyclinics’ also provides useful insights about the potential for hub-based, centralised services, suggesting the **location of services** (in relation to transport hubs)

and the **design of clinical pathways** had a substantial effect on access, workload, and patient experience (Imison and others, 2008).

The wider organisational context for the service may also influence continuity. Experience from Sweden suggests that an **integrated organisation** seems more likely to favour the development of care coordination and therefore continuities of care than a system of care networks (Sheaff R and others, 2015). Combining general practice and community health services into one organisation may be likely to coordinate care better than the separation of general practice and other health services, and the expansion of integrated organisations has advantages when adding new services on a longer term and a larger scale (Sheaff R and others, 2015).

Interviewees and workshop participants also highlighted challenges that need to be addressed to support both access and continuity for larger population sizes:

- Where access hub services have been recommissioned across much larger population groups (above 100,000 population), there is a risk of disrupting the local relationships and organisational processes that had been developed to support continuity of care. A number of providers and the commissioner stressed the risks of fragmenting access, and the importance of streamlining multiple points into a single point of access for patients (Nuffield Trust interviews).
- Working at larger scale may affect soft factors that support services to combine continuity and improve access. One interviewee noted that delivering the service to 350,000 patients has resulted in some “local clinicians not wanting to work in such a big system, where your chances of seeing one of your own patients... are now very small”. Another interviewee noted a perceived loss of ‘ownership’ and ‘connection’ felt by GPs and patients when their hubs grew to cover more than 100,000 patients – with the chances of seeing a patient from their local area far less likely.
- There were concerns about merging provision of extended hours with out-of-hours because the ethos of the out-of-hours doctors who joined the access hub was less focused on continuity of care.

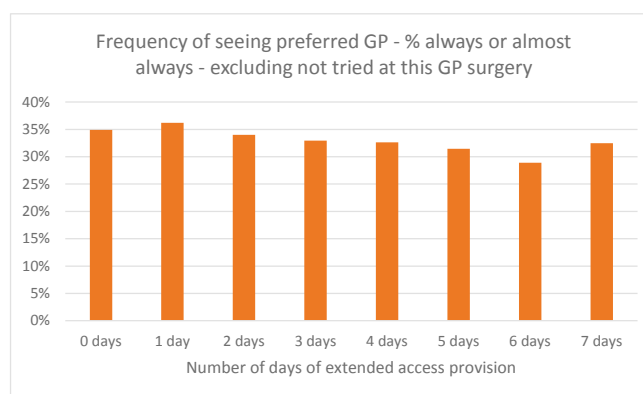
Extended access

As per the ‘Refreshing NHS Plans’ 2018/19 guidance (NHS England, 2018b), all areas are expected to provide extended access – including additional appointments in evenings and weekends – by October 2018. The expectation is that this extended access could be delivered in a hub and spoke model covering a defined population, across a number of practices, with patients’ views included and models agreed locally.

There is not yet sufficient trend data to analyse the relationship between provision of extended access and continuity in detail. The most recent data, which are available at practice rather than area level, appear to suggest there is no clear relationship at a practice level between extended access and continuity (Figure 11). However, after adjusting for other practice characteristics, patients at those practices offering more days of extended access are more likely to

see their preferred GP, although the effect size is small (around 0.2 percentage point increase in this proxy for continuity for every additional day of extended access). In addition, the causal relationship is unclear, with those practices that have adopted NHS England’s policy earlier likely to be different in nature to those that have yet to do so.

Figure 11. Relationship between extended access and continuity (practice level)



Methodological issues

There are various methodological difficulties in measuring associations between access and continuity. Firstly, the multi-dimensional nature of both access and continuity results in inconsistent terminology and variable measures. Second, the lack of robust routine data on patients’ patterns of contact with professionals at practice level (Freeman and Hughes, 2010). Third, the GP Access Fund initiatives were established relatively recently and have been evaluated while they are still evolving.

It is also difficult to isolate any effect caused by ‘improved access’ upon continuity due to the potential confounding effects of wider factors and policy initiatives which are at play. Current initiatives that are likely to be having some effect on continuity of care include: changes in

funding; increasing GP workload (Jeffers and Baker, 2016; Gibson and others, 2017); workforce changes, including more frontline roles for nurses (Ridd and others, 2006) and an increase in locum, salaried and part-time GPs (Aboulghate and others, 2012); and demographic changes (Hill and Freeman, 2011; Guthrie and others, 2008).

Supporting continuity of care

In this chapter we discuss what factors may support continuity in the context of improved access, within three broad areas: service design, workforce and technology.

Service design

Clinic design

Practices can support continuity through arranging clinics and responsibilities to include:

- *Clinic templates* designed to include ‘continuity slots’ (appointments reserved for those who may benefit from seeing a particular clinician) to help balance the capacity available for supporting urgent care with that for continuity (Haggerty and others, 2008) (see Case study B, page 54).
- *Access clinics* shared by groups of practices and staffed by a mix of different clinicians to enable GPs to spend more time with complex patients in their own surgeries (Rosen, 2018).
- *Personal lists*, where an individual or group of clinicians is allocated a defined patient list, which may “**square the circle of access and continuity**” (roundtable participant), especially in large practices (Alazri and others 2007a, 2007b).

Longer consultations can also support the doctor-patient relationship (Jeffers and Baker, 2016) and the Royal College of General Practitioners (RCGP) has suggested they are incentivised (Hill and Freeman, 2011). Longer consultations can help build trust (Freeman and Hughes, 2010) – a key aspect associated with continuity – as well as mitigate the risk associated with a clinician not have an existing relationship with, and knowledge of, the patient. Our site visits and interviews

found different models, with some services consistently offering longer appointments (a GPAF wave two site), while others provide them only for some patients, including where they are not known to the clinician (see Case study C, page 56). Our analysis of the 2017 GP Patient Survey suggests that – controlling for other characteristics – practices with a higher proportion of respondents reporting that the GP gave them enough time during their last GP appointment also typically had more respondents who reported seeing their preferred GP, although the nature and causality of this relationship is unclear.³

Patient profiling

Practices can seek to identify those individuals or groups who may benefit most from continuity, and then design and arrange services to ensure that these patients can receive it. Such profiling involves dividing the practice population according to their different needs and then designing services that aim to meet those needs.

Conversely, the practice can ensure services and processes are in place to meet the needs of the ‘segments’ of the practice population who are more likely to benefit from, say, quicker access as opposed to continuity. We heard views during our fieldwork, however, that suggest such profiling for continuity is complex and dynamic, as patients’ needs change over time and over the course of episodes of illness. It will be important that any approach does not undermine the role of professional knowledge and clinical judgement.

Booking systems?

Booking systems can be designed to support continuity. There are different approaches being used for booking systems within general practice, some of which allow patients or clinicians to prioritise continuity (e.g. seeing a specific GP) or access (e.g. taking the earliest appointment). Such systems may be either accessed directly by the patient (e.g. online) or via a receptionist or clinician, who may screen patients before offering them appointments. They may also account for either some or all of the available appointments. Our fieldwork highlighted three key design features that support continuity:

³ An increase of 1% in the proportion of respondents reporting being given sufficient time was associated with a 0.2% increase in the proportion of patients seeing their preferred GP ‘always or almost always’. However, we cannot determine whether patients, when rating a GP on being given enough time, saw their preferred GP during their last GP appointment.

1. **Flexibility.** Booking systems should meet the needs of different types of patients and reflect the fact that most consultations are not urgent (Salisbury and others, 2007). There is widespread support for flexible booking systems that allow patients to choose between continuity and rapid access (Aboulghate and others, 2012; Baker and others, 2007; Cowie and others, 2009; Primary Care Workforce Commission, 2015), although they could also require GP approval before appointments are confirmed (Freeman and Hughes, 2010).
2. **Explicit.** One factor which may promote continuity is a written practice policy to support the booking system. A UK survey of receptionists found that, when there was a written practice policy, receptionists were more reluctant to offer an appointment with another doctor, even if the named doctor was unavailable (Alazri and others, 2007a).
3. **Continuity-focused.** Booking systems can – through the way in which appointments are allocated – either specifically promote continuity (Barker and others, 2017) or give clear direction on managing continuity with respect to any potentially competing objective, such as rapid access (Robinson and others, 2014).

Case example: Booking systems designed for continuity

The primary purpose of their appointment system is about promoting continuity as much as it about managing demand via triage. It results in a daily list of telephone calls for each doctor, plus an on-call list. “As our aim is to support relational care and continuity, sometimes a patient who does not initially feel able to wait is later booked in with their usual doctor after some reassurance or advice.”

Source: Dr Ben Jackson, RCGP

The GPPS results published in 2017 suggest that 36% of patients are aware of the service to book appointments online, but only a quarter of these (9%) actually book appointments online. Our analysis suggests that, controlling for other factors, practices with a higher proportion of patients booking appointments online also have, on average, a higher proportion of patients who see their preferred GP; however, the causal relationship is unclear.

Patient awareness

Continuity ‘is as much in the hands of the patient as the doctor’, according to Hill and Freeman (2011). GPs may see patients as having individual responsibility to actively ‘co-construct’ and maintain relational continuity (Andres and others, 2016); although not all GPs inform their patients when and why personal continuity matters or how to balance access and continuity when making appointments (Guthrie and Wyke, 2006). As such, many have suggested increasing patient awareness around the

value of – and process for obtaining – continuity (Baker and others, 2014; Barker and others, 2017; Deeny and others, 2017). More generally, ensuring patients are aware of the relative benefits of seeing certain staff groups (e.g. nurse or GP) or specific individual clinicians is important, both so that their expectations are in line with how care is provided, and to support informed choice. Patient awareness can be supported by national bodies, regional initiatives and commissioners, but can also be improved by individual, or groups of, practices (see case example above).

Case example: Patient awareness at Exchange Surgery, London

This practice has advertised the benefits of continuity to patients. Patients were encouraged to request to see their preferred GP each time they book an appointment, and the practice advertises that those with long-term illnesses would particularly benefit. The practice also improves its ability to provide continuity by employing only permanent GPs, covering annual leave internally and, where possible, using the same locums on the occasions they are required.

Source: Baker and Jeffers (2016)

Workforce

GP numbers and participation

If unaddressed, GP staffing pressures are likely to adversely affect continuity. Over the last two years there have been declines in both the levels of staffing per head of population (from one GP per 1,373 patients in March 2016, to one per 1,415 in March 2018) and participation (from an average of 0.832 full-time equivalents per GP to 0.805).

Previous research has suggested that relational continuity can be hindered by the high average population size per GP (Kringos and others, 2015), high staff turnover (Alazri and others, 2007a) and part-time working (Robinson and others, 2014; Rosland and others 2015; Nutting and others, 2003; Sheaff and others, 2015; Panattoni and others, 2014). Our own analysis, based in part on the GPPS supports these findings: while there was no clear relationship between

practices' level of GP staffing per head of population and measures of continuity, we found that practices with a higher proportion of patients seeing their preferred GP had, on average:

- lower levels of **part-time working** (an increase in the ratio of full-time equivalents to headcount of 0.1 was associated with a 1% increase in the average likelihood of seeing a preferred GP at least a lot of the time)
- higher levels of seniority payments, which is a proxy for **lower turnover and experience of staff**. These seniority payments are based, in part, on a GP's years of reckonable service, and in 2016/17 contributed to an average of around £1.50 per patient to practice income. An increase of £1 per patient was associated with around a 3% increase in the average likelihood of seeing a preferred GP at least a lot of the time.

We did not investigate the factors affecting workforce recruitment, participation and retention, however, we have noted elsewhere that some models of general practice – including giving clinicians autonomy to manage patient lists, which in itself can support continuity – may have a positive influence on staff morale. The RCGP suggests an increased focus on team-based continuity, including buddying, job sharing, teams within teams, organised handover systems, enhanced use of communication and record-keeping technology, and increased involvement of patients and carers in care planning, as a means to address the impact of part-time working (Freeman, 2013).

Use of nurses and other non-medical clinicians

The ambition to use a broader range of staff within general practice is longstanding (Baird and others, 2016). An analysis done in 2002 suggested that at least 20% of the work undertaken by doctors could be done by nurse practitioners, while maintaining the safety and quality of care (Wanless, 2002). The CQC also found that incorporating a mix of skills from a range of professional backgrounds contributed to high quality care (Care Quality Commission, 2017). On average, for every 1,000 registered patients, a practice employs 0.6 GPs, 0.3 nurses, 0.2 other direct clinical care staff, and 1.3 administrative and managerial staff. However, there is substantial variation between practices in their use of different staffing groups.

In theory, using a broader skill mix has the potential to improve continuity both directly – by assigning certain patients' care to a specific non-medical clinician – or indirectly, by freeing up GPs' time. In a recent audit, clinicians suggested that nurse practitioners (29%), practice pharmacists (19%) and mental health nurses/therapists (13%) could take workload off GPs

(Primary Care Foundation, 2018). An editorial by the RCGP has suggested practice nurses have a vital role in delivering continuity when managing chronic illness, but noted the risk of discontinuity, with patients interacting with a greater number of professionals (Jeffers and Baker, 2016).

There is mixed evidence on the effect of nurses on continuity, although this may be due to the different roles they may play in primary care (Uijen and others, 2012):

- A Canadian study found that having more nurses in a practice was related to lower continuity, irrespective of practice size. The authors suggested that where there are more nurses, they are relied on to cover routine aspects of care to increase efficiency, at the expense of relational continuity (Kristjansson and others, 2013).
- Our own exploratory analysis, based in part on the 2017 GPPS, suggests that patients in practices with higher numbers of nurses – and, to a lesser extent, other non-medical clinical staff – are, on average, less likely to see their preferred GP. Therefore, they may experience lower relational continuity with their usual doctor. This may be expected as increasing availability of non-medical clinicians will decrease the proportion of people who see their GP and, therefore, is likely to reduce the number seeing their preferred GP. Our review of the literature and case studies did, however, suggest some encouraging models of care.

Case example: Team-based care

- In **Manchester**, triage teams made up of advanced nurse practitioners, paramedics and receptionists have shown promise, including where a team focuses on complex patients (workshop participant).
- At a wave 2 GP Access Fund **pilot site**, same-day appointments are provided via access to a broad skill mix – physician associates, urgent care practitioners, advanced nurse practitioners, practice nurses, support workers and pharmacists. Patients are triaged by a GP and 60–70% of these acute patients are dealt with by ‘alternative workforce capacity’ (Nuffield Trust interview).

The role of receptionists

Practice receptionists can play a critical role in supporting continuity. They can facilitate relational continuity if that is clinically preferable or desired by the patient (Jeffers and Baker,

2016; Freeman, 2013; Freeman and Hughes, 2010). Receptionists can free up professional time for patient care by undertaking administrative tasks (NHS England, 2016d); managing the workload between clinicians (Jeffers and Baker, 2016); and navigating some patients to other services, such as community pharmacy, where appropriate. In a recent audit, working with reception staff (41%) was identified by clinicians as the single most effective way of directing patients to the right practitioner (Primary Care Foundation, 2018).

National data suggest substantial variation in the use of receptionists, with a quarter of practices having at maximum of 0.36 full-time equivalent receptionists per 1,000 registered patients; while, at the most resourced end, a quarter have twice this level (0.72 per 1,000 patients). Our exploratory analysis suggests that, after controlling for other factors, practices with a higher proportion of respondents who have a preferred GP who they get to see, also have, on average: a higher proportion of respondents reporting that the receptionist was helpful; but lower numbers of receptionists. This latter finding could suggest receptionists are often not used as effectively as they could be.

There is scope for further education and training for receptionists around the importance of relational continuity and how to facilitate it (Alazri and others, 2007a, 2007b; Baker and others, 2007; Barker and others, 2017). The role of reception staff in facilitating access and continuity was recognised by a number of interviewees, as “they have a personal relationship on the phone with the patients... And, if they have a concern about a patient, either because of their behaviour or something’s out of the ordinary... They’re encouraged to flag that up with the duty team” (Nuffield Trust interview). There are a number of examples of federations and practices that are seeking to develop administrative staff to become ‘care navigators’, including commissioners who are adopting the Wakefield model of care navigation (Nuffield Trust interview). NHS England has committed £45 million across every practice to support the training of current reception and clerical staff so they can play a greater role in the navigation of patients (NHS England, 2016d).

Micro-teams

Micro-teams have the potential to support continuity and respond to other pressures facing general practice. Such teams typically include a small number of GPs and may include other health and care workers providing care for an allocated group of patients (Ware and Mawby, 2015). A number of interviewees told us they are actively supporting micro-teams, or larger multidisciplinary teams, to take responsibility for specific groups of patients, including mental

health, respiratory conditions, complex chronic illness, end-of-life care, frail and elderly populations, and patients with substance abuse. Our commissioner and provider interviewees spoke of the importance of weekly team meetings for multidisciplinary teams managing end of life and substance abuse patients (Nuffield Trust interviews. See also Wagner 2000 and NHS England 2016b).

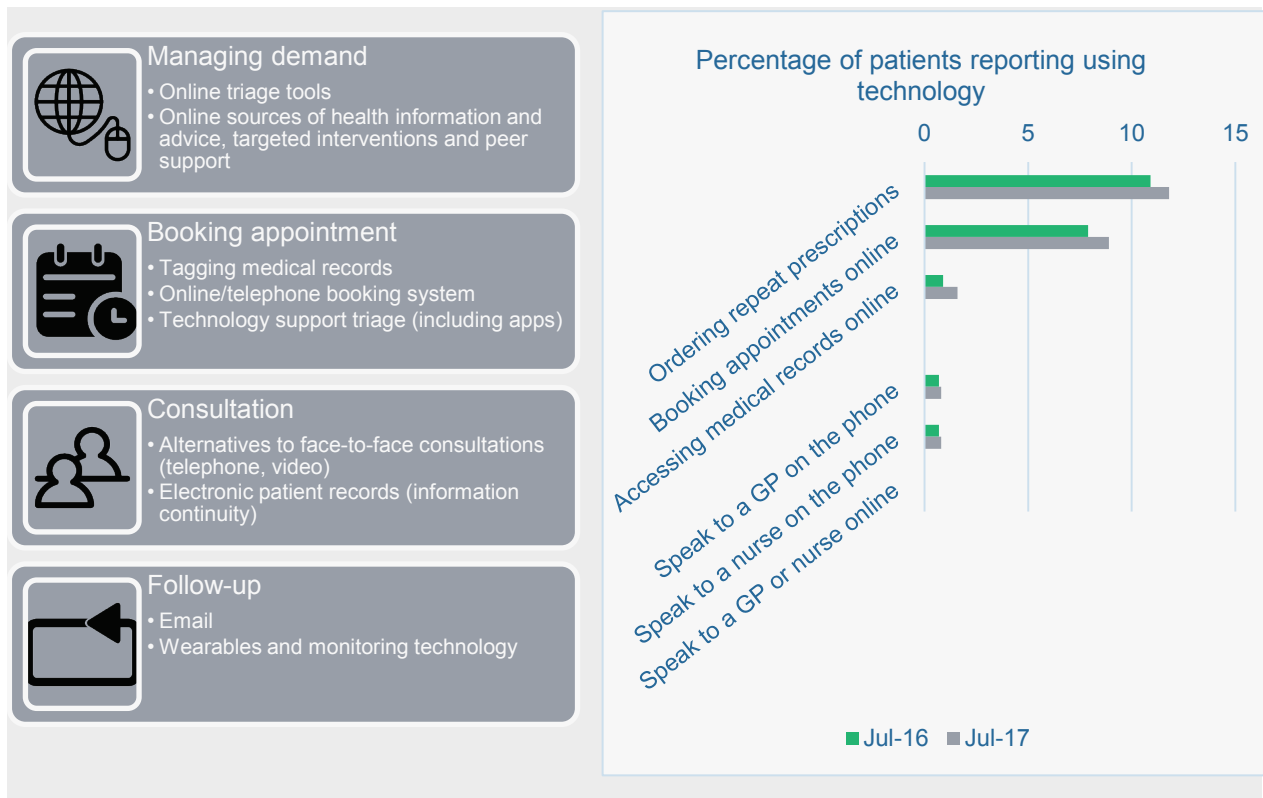
Micro-teams could improve quality through extended clinical reviews and support, improved shared decision-making, as well as improved continuity of care (Freeman, 2013); if a patient is unable to book an appointment with their preferred clinicians, they are seen by another member from their micro-team (Jeffers and Baker, 2016). This model can be particularly useful for supporting continuity where practices have staff working part time (Jeffers and Baker, 2016). Research shows that a number of elements are required for successful team-working in primary care, including: co-location; a stable organisational structure; defined roles and workflow; and good communication (Baird and others, 2018).

Technology

Introduction

Digitising services is a national policy imperative. In general practice, this includes specific commitments to introduce electronic systems to book and cancel appointments; order repeat prescriptions; communicate with the practice; and access patient records (Department of Health, 2012; National Information Board, 2014; NHS England, 2016d). However, current uptake is low, as demonstrated in the GPPS (Figure 12) (Freeman and Hughes, 2010; Baird and others, 2016; Castle-Clarke and Imison, 2016).

Figure 12. Role and uptake of technology



Source: Nuffield Trust and GP Patient Survey 2017

Some key technology developments have not been evaluated through the lens of continuity. In Bury, as a result of the GP Access Fund, 180,000 patients across 30 GP practices can now have telephone conversations with their GP instead of face-to-face appointments. This, in principle, aims to improve continuity; however, there does not yet appear to be an evaluation of the effects of this initiative on continuity (Jeffers and Baker, 2016). Evaluating the effect of technology on continuity is important, not only in understanding the benefits, but also in evaluating the risks, including that fragmentation across different modes of access services may be to the detriment of continuity. In particular, we did not find compelling evidence on the specific role that two key areas of technology can play in supporting continuity:

1. **Online health advice.** This includes the development of health information websites and the use of social networks for advice and clinician collaboration, which can support consistency of treatment. This may be an aspect of what patients value in typical

relational continuity. Such initiatives may also help promote self-care and therefore reduce demand on general practice, which can free up clinician time and so could also indirectly support continuity.

2. **Wearable technology.** There has been a proliferation in the use of wearable technology in recent years. Such devices have the potential to support the management of demand and patient follow-up. For example, wearable and monitoring technology could allow patients to communicate health data, such as blood pressure levels, to their clinician. In addition, they can provide an ongoing flow of information between the patient and clinician (or team), and so support the relationship between the two. However, there is limited evidence on the effect of wearable and monitoring technology on continuity.

Electronic patient records

Electronic patient records have the potential to provide a range of continuity benefits and help deliver the aspects of continuity that are valued by patients, such as knowledge and trust (Figure 13). There is scope for improvement in this area, with fewer than one in 10 patients being aware of this service and only 2% making use of it. While there are frustrations at the low uptake, there have been recent initiatives to improve data sharing, including across services.

GPs generally recognise electronic medical records as an essential clinical tool and an enabler of continuity of care (Bouamrane and Mair, 2013). During our fieldwork we came across a range of ways in which electronic patient records can be used to support continuity, for example:

- A ‘three-strike rule’ whereby patients who remain undiagnosed after three consultations are given a longer consultation with a new clinician. This seeks to prevent late diagnosis by addressing the risk that relational continuity may mean patients do not benefit from broader clinical input.
- At a practice in Leicester, the electronic medical record is ‘tagged’ to note which patients would most benefit from continuity. Flagged patients saw their preferred GP 3.3% more often after the system was implemented (Jeffers and Baker, 2016).

Figure 13: How electronic patient records can support continuity

Relational

An ongoing therapeutic relationship between a patient and one or more providers

- **Analysis:** Software that analyses clinical data and patterns of service use can also help to identify who will benefit most from continuity and help plan services accordingly.
- **Prompts:** Electronic records can be 'tagged' so that booking systems and receptionists ensure those that will benefit most from continuity do receive it.

Management

A consistent and coherent approach to the management of a health condition that is responsive to a patient's changing needs

- **Consistent care:** Electronic transfer of records between services can ensure consistent care - this may be particularly important to reduce the effects of a more fragmented primary care landscape.

Informational

The use of information on past events and personal circumstances to make current care appropriate for each individual

- **Shared records:** Shared records can allow a clinician to have a better understanding of a patient who they have never met before (i.e. partly mitigate where relational continuity is not possible).
- **Patient access:** Giving patients access to their own record can help with the sharing of medical and care history between services and settings, and can contribute to more consistent, joined-up care.

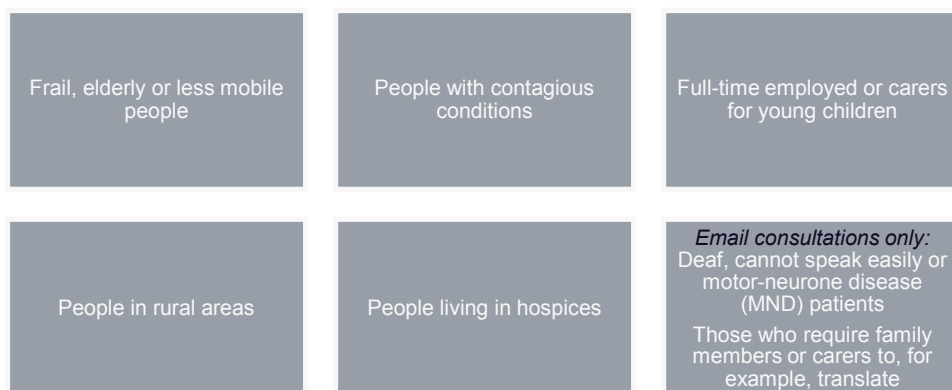
Source: Freeman, 2013; Baker and others, 2014; NHS England, 2016d; Rosen, 2018

Overview of alternatives to face-to-face consultations

Practices are increasingly using alternatives to face-to-face consultations – including via video, telephone or email – although they are more routinely used in other countries such as Denmark and the US (Atherton and others, 2018).

National and local bodies will need to ensure that alternatives to face-to-face consultations can support continuity. In particular, further work is required to understand: supply-induced demand; possible detrimental effects on the quality of the consultation; the 'digitally excluded'; possible medico-legal challenge; and which incentives can ensure local initiatives are designed to support continuity (Castle-Clarke and Imison, 2016; Baird and others, 2018; Atherton and others, 2018). The use of such technology will also have to be tailored to specific groups as it might be more useful for some rather than others (Figure 14).

Figure 14: Examples of patient groups identified as having potential to benefit from alternatives to face-to-face consultations



Source: Baker and Jeffers, 2016; McKinstry and others, 2009; Jackson, RCGP; Patt and others, 2003; Brant and others, 2016; Shalec and others, 2017

Telephone consultations can maintain relationships between patients and clinicians, and some patients may be willing to trade off access to face-to-face care for improved continuity delivered through telehealth services (Locatelli and others, 2014; Ohl and others, 2013). The RCGP has suggested that telephone use can improve continuity and have recommended, in particular, that practices try having follow-up consultations as telephone calls with a known clinician (Freeman, 2013). However, as noted earlier, the model of telephone consultations has yet to be sufficiently evaluated in terms of its direct impact on continuity, professional identity and workload (which indirectly impacts the ability to provide continuity) (Jackson, RCGP; Jeffers and Baker, 2016; Atherton and others, 2018).

Video and online consultations also provide the opportunity to maintain relational continuity. While the Mott MacDonald and other key evaluations have not focused on identifying tangible benefits, particularly in terms of continuity, there are some novel and promising examples where such technology potentially enables patients to access their usual or preferred GP:

- *Manchester Medical's* use of Skype provides the opportunity for patients to contact their preferred GP (Jeffers and Baker, 2016).

- *Some providers* use video consultations for housebound patients and patients in care homes, and employ paramedics who undertake most home visits using webcams. Video consultations, despite reported low uptake, show most promise where a health professional facilitates the consultation and can draw in both a pharmacist and on-call GP to conduct a case conference over video. Not only does this save GP travelling time, it achieves continuity and timely access for house-bound patients (Nuffield Trust interview).
- *Commissioners are actively exploring innovative ways to harness technology, including commissioning a service where paramedics use Google Glass when visiting care homes so that the GP can provide oversight of the patient while physically being in the room* (Nuffield Trust commissioner interview).

In addition, recent polling published by the Health Foundation (2018) suggests that there is willingness among patients to use video consultations when seeking medical advice – with nearly two-thirds of people (63%) saying they were willing to use a video consultation with their own GP. However, this compares with 71% if the GP is someone they didn't already know. This may reflect the preferences of the younger population sampled, which included adults aged 15 and older.

Technology-supported clinician triage has been found in some instances to positively support continuity (see page 26; NHS England, 2016b; Newbould and others, 2017). These are triage models whereby telephone – and in some cases video – technology is used to ensure that people seeking a GP appointment are first assessed remotely by a clinician. While there are concerns about the impact on workload (Jeffers and Baker, 2016; Murdoch and others, 2015), the RCGP has suggested that such initiatives to manage flow can support continuity of care by better capturing information about patients' interactions with services (Ware and Mawby, 2015). However, it is worth noting that models that depend on clinical triage are at odds with policy ambitions for online appointment booking, which can result in appointment misuse (Castle-Clarke and Imison, 2016).

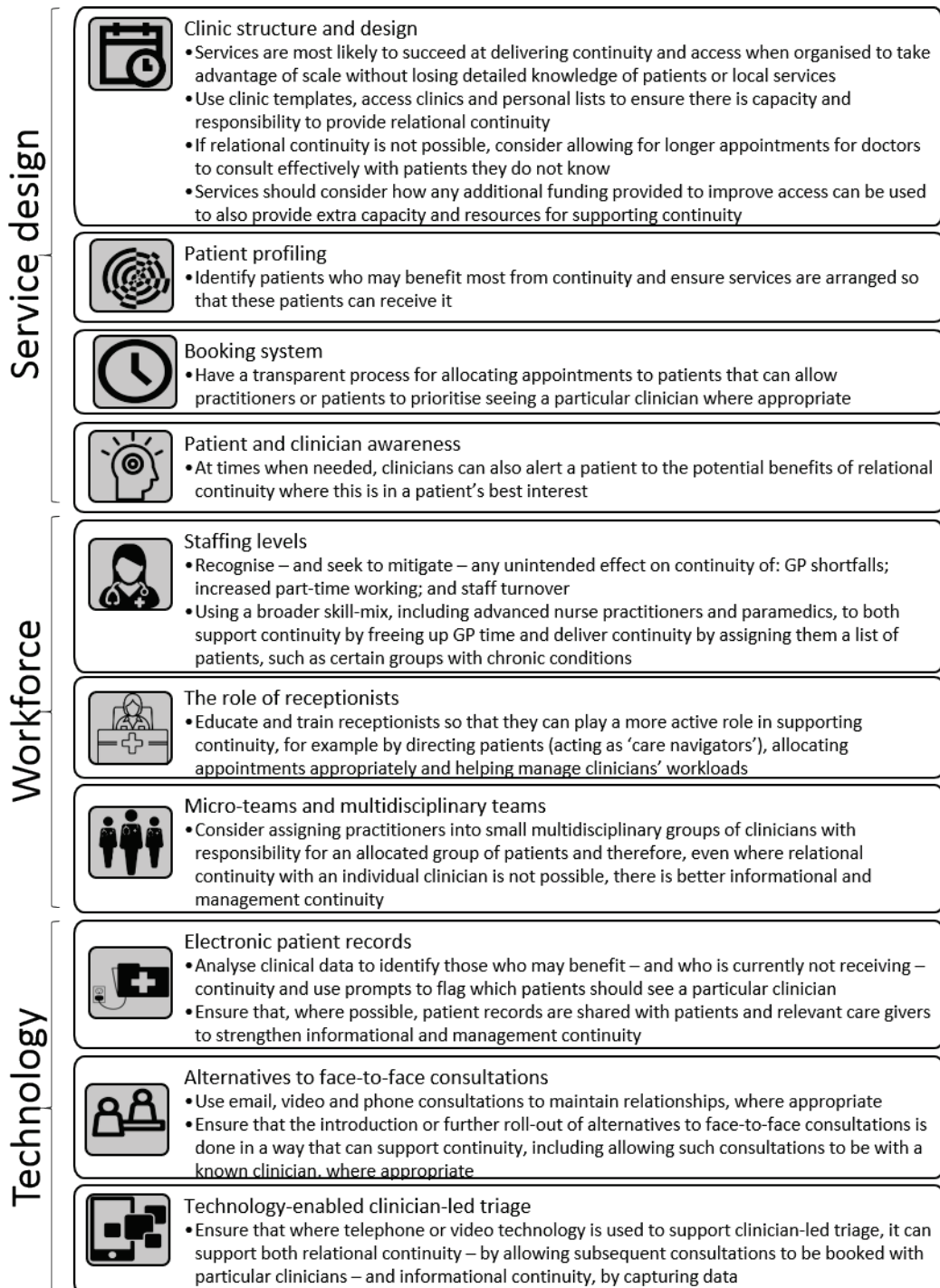
Email communication can enable patients and their GP, or clinical team, to communicate about their care, including about repeat prescriptions, appointment booking and clinical enquiries (Neville and others, 2004). Despite its longstanding use in some services, there is limited understanding of the effect on the patient-clinician relationship, with continuity overlooked in most evaluations (Atherton and others, 2012). Some studies suggest that email consultations may have the potential to improve continuity (e.g. Moyer and others, 2002; Car

and Sheikh, 2004), particularly if it used to collect information before a face-to-face attendance and for follow-up (Patt and others, 2003), or when emails are with a patient's usual clinician (Freeman, 2013). However, there are concerns from both patients and doctors about the effect – particularly on the computerised interface for communications – on the patient-clinician relationship (Podichetty and Penn, 2004).

Summary on factors supporting continuity

We summarise the key actions practices should consider in efforts to support continuity while improving access below.

Figure 15: Summary of initiatives that can support continuity and improved access



Discussion

This study has identified some compelling reasons for an increased focus on continuity by policy-makers, commissioners and service providers. Central to them are:

- the wide range of improved outcomes associated with continuity that can benefit individuals and the wider health system
- the proportion of patients with a preferred GP who do not get to see them, and the inequalities our study has highlighted in terms of patient groups who are less successful in obtaining continuity
- the added value to professionals of delivering relational continuity, including more efficient consultations, increased professional responsibility and greater job satisfaction.

These findings should encourage policy-makers to reduce the inequalities in access to continuity experienced by some patient groups and, to also consider how to maximise the health gains and benefits to wider services that could be achieved through improved continuity. Equally, policy-makers should explore with GPs and other practice staff how to harness the professional and operational benefits of continuity for selected patients and how to increase patient awareness about the value of continuity in some clinical situations.

A lack of evidence on the impact of access initiatives and working at scale on continuity

There is limited evidence about the impact of improved access on continuity. Few evaluations of access and other initiatives within primary care have set out to measure their impact on continuity. There is also little known about the impact of practices working within larger federations or networks. However, there is strong evidence, from the GPPS, of a negative association between practice list size and the likelihood of receiving relational continuity.

Based on the current evidence, it is not possible to give a definitive recommendation on the scale at which primary care should be organised to best support the delivery of both improved access and relational continuity. However, commissioners should ensure that services (such as access hubs) are delivered in ways that maximise opportunity to secure

continuity of care. For example, it may be possible to commission for larger populations of 200,000 patients or more, through careful design with providers on the location and number of access hubs.

Our case studies suggest that current policy to develop primary care networks would result in organisations at a scale that could include the above characteristics, and accommodate the relationships and local knowledge we identified as being particularly useful for supporting continuity. Although limited in scale and number, our case studies highlight that efforts to deliver improved access at large scale, across organisational boundaries, should be mindful to support local arrangements between small groups of practices to ensure continuity. This, in turn, highlights the need for purposeful design of GP and unscheduled care services to combine both improved access and continuity of care for those patients who will benefit from it. As CCGs commission extended access services, they could consider encouraging providers to develop access hubs at the scale of primary care networks, in order to combine improved access with characteristics that support continuity.

The current integrated urgent care initiatives (NHS England, 2016a) could have a significant impact on continuity. We recommend reviewing these proposals and considering how opportunities for continuity can be maximised within these.

Identifying those who would benefit from continuity

There are a number of practical challenges when it comes to improving continuity. Not least, the need to develop systematic ways that can be easily applied – both within individual practices and across practice and organisational boundaries – to identify patients who might benefit from continuity, and to raise patient awareness about the benefits of continuity and the things they can do to obtain it.

Methods to identify patients who would benefit from continuity have traditionally involved risk stratification using data on hospital admissions (see Lewis and others, 2011). Similar methods could be applied to the data held in GP practices. NHS England is encouraged to support such developments.

Actions to support continuity

Drawing on a combination of literature, site visits and interviews, we have described various practical approaches that can support the delivery of better continuity. Broadly divided into approaches involving organisational design, workforce development and use of technology, we have identified several generic factors that could support the delivery of continuity in the context of improved access. These include:

- an organisational culture that attaches importance to continuity for selected patients
- purposeful design of services with a focus on continuity
- thoughtful introduction of technology to support both access and continuity
- organisational systems and processes that support clinical and non-clinical staff to identify patients who may benefit from continuity and enable them to obtain it.

Figure 15 on page 45 summarises the range of practical actions that can be undertaken within individual practices and wider collaborations, such as federations and networks. This list has some similarities with the ‘10 high impact actions for general practice’ to reduce workload, as described in the *General Practice Forward View* (NHS England, 2016d). NHS England’s GP improvement team could play a key role in supporting practices to introduce these actions by applying a similar methodology to that used for the ‘10 high impact actions’.

The workforce actions described in this report are consistent with recommendations made in other recent publications, including the Primary Care Workforce Commission’s *The Future of Primary Care: Creating teams for tomorrow* (Primary Care Workforce Commission, 2015) and the *General Practice Forward View* (NHS England, 2016d). Practices will require considerable support to develop and implement these new roles. We recommend that NHS England, Health Education England, CCGs and, at a local level, Community Education Provider Networks, seek to provide this support.

Finally, regarding the growing use of digital technology in general practice, the challenge will be to apply the learning outlined in this report on how tools (such as booking templates, electronic records and e-consultations) can enable patients to maintain relational continuity with their usual GP, where it is desired or is likely to improve health outcomes. As new forms of electronic general practice emerge, it will be important to ensure they are implemented in ways that can identify patients who would benefit from continuity and enable them to obtain this.

Recommendations

We include below recommendations and suggested actions for commissioners and policy-makers. We also include suggested topics for future research, as this report has demonstrated that this is an area with significant gaps in the evidence base.

For commissioners

- a. **Build local knowledge.** As well as the risk and disease profile of their population, commissioners need a detailed understanding of the patient experience. This should include the level of continuity within their area and the populations most at risk from not receiving continuity. This analysis could be fed back to CCGs and their practices with targets for improvement.
- b. **Support providers to design services to include continuity.** Provide practical support to practices to implement the approaches described in Figure 15, including:
 - i. ensuring the design of service provision – including hubs, local care pathways and policy objectives – can support continuity of care for those patients who would benefit from receiving it
 - ii. supporting workforce initiatives to broaden skill mix and developing skills in team-based working in order to provide continuity in the context of improved access
 - iii. supporting the introduction of digital technology to enable continuity where it is wanted by patients or needed for better outcomes.

For policy-makers

- c. **Balance priorities.** National bodies need to ensure they give an appropriate level of prominence to continuity in the development, communication and monitoring of policies and planning guidance.
- d. **Monitor continuity.** To supplement insights from the GP Patient Survey, NHS England should support the development of systematic methods to identify patients who need continuity and to better measure the extent of continuity they receive.
- e. **Support improvements in the delivery of continuity.** Draw on the good practice examples in this report to inform initiatives to improve continuity.

Methods used by the NHS England improvement team to raise awareness of the ‘10 high impact actions for general practice’ may also be effective at supporting practices to combine access, continuity, workforce innovation, technology and scale.

- f. **Workforce.** Health Education England, NHS England and the Royal Colleges should support the development of a broader skill mix within general practice so it has the capacity and capability to deliver both access and continuity. Moving towards a competency-based, rather than role-based, planning of staff, and developing skills in multi-professional teams, may support this objective.
- g. **Policy coherence.** National bodies should implement policies such as the *General Practice Forward View*, Integrated Urgent Care initiative and general practice being increasingly delivered ‘at scale’ – in ways that are conducive to supporting both access and continuity.
- h. **Regulation.** The Care Quality Commission should include questions during practice visits about how the practice, multidisciplinary team or clinic provides continuity.
- i. **Public awareness.** NHS England should consider how it can help practices to promote an increased awareness of the benefits of, and how to achieve, continuity.

Potential topics for future research

- j. **Patient profiling.** Further research is needed in this area to enable commissioners and practices to target continuity to individuals who are most likely to benefit from it. Future research should test and evaluate, in terms of feasibility and outcomes, different approaches to identifying patients who will achieve better outcomes if they receive continuity of care and who currently miss out.
- k. **Understanding continuity.** Future studies should seek to understand the relative impact – and interdependence – of relational, management and informational continuity on outcomes.

- l. **Team working.** More work is needed to understand the impact of team working within general practice, including multidisciplinary and micro-team models, on experience of continuity and clinical outcomes.
- m. **Non-medical staff:** More should be done to explore the impact on job satisfaction for non-medical staff of delivering continuity of care to patients.
- n. **Receptionists.** Future work should seek to support, where appropriate, the opportunities to develop the role of receptionists in supporting continuity.
- o. **Working at scale.** With general practice increasingly being delivered at larger-scale, both through increased practice sizes and federation and network models, future research should evaluate the longer-term impacts of working at scale on continuity, patient experience and wider outcomes.

Appendix 1: Case studies

Case study A: Fleetwood

‘Keeping it small’: delivering access and continuity in a GP federation

The town of Fleetwood has two large practices and a third practice formed from the merger of three single-handed practices. These cover a population of around 30,000. The GP federation was a recipient of the second wave GP Access Fund. The federation’s model, which ran for three years until March 2018, separated acute care from non-acute care. It is based on the view that continuity may be less important than speed of access for patients with an acute illness or injury.

Receptionists have been trained to undertake a non-clinical assessment of the urgency of a patient’s condition. Patients with a minor, self-limiting condition are streamed either into the community pharmacy service or to an acute access centre based in the largest practice. Those needing a weekend appointment are allocated their regular doctor where possible.

Local GP and chair of Fleetwood Neighbourhood GP federation, explained: “Any patient can choose extended access, but reception staff target those appointments at children, people of working age and the elderly with carers.” This last category reflects an unexpected demand from older people for weekend appointments, so that they can be accompanied by carers or family members. The importance of keeping it small is also stressed: “The bigger you get, the more you start to lose continuity”.

A new model became operational in March 2018, reflecting a decision by the two CCGs to commission access arrangements under a new provider, covering around 50 practices and a population of 350,000. Our interviewee noted that local clinicians are reluctant to work in such a big system, where the chances of seeing their own patients are very small. He noted: “Scaling up works for acute care where continuity is not important”. As such, the new model has lost direct resident involvement. Our interviewee believes the focus should be on primary care networks, each covering a population of 30–50,000 patients, each with their own access hub. The new model has some upsides, however, according to our interviewee. Having an external provider take

responsibility for extended access has increased the capacity of practices to focus their efforts on addressing the health needs of their town.

Case study B: Lewes, East Sussex

Triage, tagging and teams: redesigning GP services across a network

Lewes has 28,000 residents and three GP practices. The practices have been working increasingly closely over the last few years, to the point that they are planning to merge into a single organisation and move into a single, purpose-built health centre.

In the meantime, they have collaborated to develop a shared access service for acute problems that can be used by patients from all three practices, which are staffed by GPs and nurse practitioner or paramedic practitioner roles. This acute team runs alongside appointments for people with more complex problems, provided via ‘continuous care teams’, which are made up of small groups of GPs providing care for urgent needs five days a week.

The reception staff have all been trained as care navigators. They ‘stream’ patients into three categories of response:

Green: Patients are streamed to the acute triage list and can be booked in with their own continuous care team if follow up is needed. Patients include those who are generally well, and those with long-term conditions that are well controlled.

Amber: Patients with ongoing needs requiring more continuity are streamed to the continuous care team. These patients will be offered an ‘on the day’ phone assessment. ‘On the day’ appointments are available for each continuity team in case the triaging clinician thinks a physical examination is needed. Ongoing needs are managed with pre-booked telephone or face-to-face appointments. Patient groups include those people with: a mental health disorder; health anxiety; multiple long-term conditions needing input; mixed social and medical needs; or an ongoing current problem that needs further input.

Red: Patients who are frail, at the end of life, with significant mental health problems or whose condition is very complex, have pro-active case management by members of a multi-agency team, such as specialist nurse, social worker or mental health worker. Urgent medical needs can be dealt with on the day by their continuous care team. Patient groups include those: with complex social and medical disorders; needing palliative care; with severe frailty; with dementia; or with a complex mental health disorder.

The practices face three challenges: how to work out which patients belong in which stream (particularly the amber stream); the heavy work load of the acute list; and the challenge of finding the right staffing level across acute and continuity teams.

The development of continuity teams addresses the challenges of providing continuity with a single clinician in a world of part-time working; regular staff turnover and when

clinicians have to work part of their time in the access service. By grouping a small cluster of clinicians together, the teams can offer a wider range of clinical skills than through continuity with an individual doctor, and a ‘fresh pair of eyes’ when one clinician cannot identify the cause of a patient’s symptoms.

Case study C: Southampton

Access hubs: taking the pressure out of the system

Southampton's GP federation consists of 26 practices, serving 269,000 patients. It was established in 2015 as a second wave GP Access Fund site, with six hubs providing access to medical help from GPs and other practitioners from 8am to 8pm, seven days a week. Continuity of care is a high priority for the hubs, where appointments are provided by sessional doctors who feedback to practices via discharge summaries. The staff have access to all the patient records where consent has been given. System One is read and write access, EMIS is read only and so these practices receive feedback by DTS (electronic discharge summaries).

The federation's chief executive and practice manager feel that a centralised point of access is important in supporting continuity of care. Patients access the hubs via their own GP surgery or by calling 111. Ambulance crews, care and nursing homes, and community teams have direct access to the hubs for advice and guidance, and can also request medications or an appointment; this is particularly pertinent in the case of non-conveyance. Patients are asked, at the time of booking, to consent to the hub having access to their patient record. The hubs offer 15-minute appointments as standard; recognising that a consultation with a patient unknown to the doctor can take longer. Some patients attend the hubs repeatedly including, for example, some people with mental health conditions who prefer to attend the hubs at times when it is quieter.

The primary relationship for the patient is with their local GP practice and more than half the practices use eConsult; a platform that enables patients to self-manage and consult online. The hubs do not offer online consultations as they are keen not to disrupt the relationship between the GP and their practice. The single point of access is key to this model of care.

The primary care team has started to see a split in terms of access, with patients with urgent care needs going to the hubs and patients with long-term conditions preferring, when possible, to be seen in their own practices. By providing practices with a facility to pass on acute cases, the hubs have taken the pressure out of the system, freeing them to focus on long-term needs. Relationships across clinical teams (e.g. care homes and ambulance crews) have strengthened through these new ways of working, which has improved care continuity.

The pilot scheme has now ended, and the federation is currently bidding to deliver a modified service combining out of hours and extended access appointments from 2019,

utilising a wider skill mix in the primary care team which must function as a 24/7 integrated primary care service. This will require a radical change in thinking as the hubs have functioned as an extension of in-hours general practice; and out-of-hours services have operated as a separate urgent or holding treatment/management service. The federation's chief executive reiterated: "We want patients to say their story once and to treat the patient – not tide them over until Monday morning when they can see their own practice."

Case study D: Larwood surgery

Designing telephone triage to offer both rapid access and relational continuity

Providing GP services to 32,800 registered patients across five sites, this practice exemplifies how services can be purposefully designed to offer both rapid access and continuity with a preferred doctor. Although continuity is recognised as being highly important, the practice has always struggled with providing it.

Since October 2017, the practice has worked in association with *Ask my GP* to improve access through a combination of telephone and online services. Approximately 30% of patients contact the surgery through online services. The remaining patients who want to see a GP are first offered telephone triage, followed by a face-to-face appointment if needed.

The practice also employs pharmacists and paramedics who work with community clinicians, and voluntary sector groups and other agencies based in a 'community hub' in the practice. These multi-professional teams provide proactive assessments, care coordination and management continuity for selected patients with complex problems, including those living in care homes.

Patients who want continuity (around 30%) can request a call back from a doctor who knows them. Practice staff also encourage patients to have a period of continuity with a different GP, if that doctor has clinical skills relevant to their symptoms or diagnosis.

Patients who request e-consultations can also receive continuity, although with several part-time doctors, emails may arrive on days when a preferred doctor is not there. Reception staff – who review the e-consultations – have been trained to promote continuity if possible by forwarding messages to the usual doctor. Some are being trained in care navigation to steer patients to other local services.

One downside of the initiatives to improve on-the-day access has been an increase in workload, with an initial 2,800 calls per week when the telephone triage was introduced; increasing to 3,450 per week over the winter period. This equated to an approximately 20% increase in workload for GPs. This was only just starting to reduce at the time of the interview (in March 2018).

Case study E: Richmond

The challenge of preserving continuity when delivering access at larger scale

The EASTIR initiative (Enhanced Access and Service Transformation in Richmond) is a second wave GP Access Fund site which serves the 215,000 residents of Richmond in London. The service provides seven-day extended-hours access, delivered by GPs in four localities. The service was set up by the local GP federation (which covers 28 practices and 160 GPs), with hubs serving around 50,000 patients each. The service is now delivered through two hubs serving 100,000 patients each.

Hub working – supporting the balance of access and continuity

The federation worked hard to preserve a local culture of continuity when establishing the four access hubs. This was partly achieved through careful use of language to build a sense of ownership of the hubs across clinicians and patients. The Richmond General Practice Alliance Chair explained:

“The challenge is to make sure you have a sense of continuity as you step up to locality working, and that’s organisational, informational and relationship as well... with careful use of the concept of localities and careful use of language around referrals into hubs, we’ve maintained this sense of patients’... ownership of the hubs. Many is the time I’ve had people refer to the hub as ‘our hub’ or ‘my hub’ or ‘our locality hub’.”

Serving a population of 50,000 was also felt to be a ‘sweet spot’, as the hubs then aligned with natural local communities. Another key element was IT interoperability, which was seen as critical to the hubs’ successful operation.

Recently, commissioning arrangements for the hubs have changed, with funding reduced per patient. This now covers the cost of two hubs serving around 100,000 patients each. There are several ways in which these changes affected the nature of the hubs. With fewer appointments, they are fully booked earlier in the day, so they are a less reliable resource for GPs. For patients, the hubs are geographically further away, so harder to reach. The hubs have the same system, management and informational continuity, but relational continuity has become stretched, with less ‘social interaction’ between clinicians.

Other local strategies to support continuity and improve care

Our interviewee also described a range of other strategies to support continuity and improve care, alongside the development of extended access. These include:

- **Targeting vulnerable patient groups to receive continuity.** People with significant mental health issues are identified and the teams try to ensure they see the same GP each time they visit.
- **Support for team working.** The practice makes full use of their multidisciplinary team to manage patients, with regular team meetings to ensure clinical information and expertise is shared across the team.
- **Extending GP practice appointment times to 15 minutes.** It was found that the extended clinical consultation time reduced overall consultation rates.

Case study F: Littlehampton

Three-strike rule: using skill mix and personal lists to promote continuity

The Park Surgery in Littlehampton has 10,000 patients, with a relatively high proportion of older people. They operate a strict ‘personal list’ system in which continuity is delivered by booking patients with their usual doctor, unless that clinician is on leave.

In response to changing patient expectations for rapid access and to policy expectations about extended access, they have introduced a wider clinical skill mix into the practice so that they can deliver an on-the-day ‘access service’, overseen and supported by GPs. Patients with new onset or acute symptoms are initially telephoned by a senior nurse or a paramedic, who assesses their problem and invites them into the practice for a physical examination if required. If a follow-up appointment is needed, this can be arranged with the patient’s usual GP.

The acute care team is seen as ‘the eyes and ears of the GPs’. If they spot somebody with severe symptoms, they can call a GP to assess the patient urgently (ideally their usual GP or the duty GP if needed). Patients who are thought to benefit from continuity are booked directly to see their usual GP. Alternatively, if these patients have an acute problem and want an on-the-day call-back, the nurse or paramedic can discuss the patient with their usual GP *before* phoning them, so they are aware of current health issues, and any family or social factors. They can access their full medical record to check the notes before phoning the patient.

The GPs divide their time between: seeing those patients who are prioritised for continuity; providing follow up for ‘acute patients’ who have contacted the surgery twice about the same problem; providing supervision and clinical advice to those working in the access clinic; and providing back-up to the paramedic who does the home visits.

If patients consult repeatedly for the same problem and their usual GP can’t find the underlying cause, the practice’s ‘three-strike rule’ requires a GP colleague to review the patient with ‘a fresh pair of eyes’ to reduce the risk of a missed diagnosis.

Appendix 2: Qualitative methodology

Rapid review of the literature

Search strategy

A literature review was conducted to identify literature on the value of continuity of care to patients and professionals, the outcomes associated with continuity, and the impact of improved access on continuity of care. The literature search strategy was developed with support from the University of Birmingham's HSMC library and information service. A further review was conducted on technology as an enabler of continuity.

For the academic literature review, four databases were searched: Ovid (including Medline, Embase, PsycINFO and the Cochrane Library); Applied Social Sciences Index and Abstracts; Sociological Abstracts; and Social Science Citation Index. These were searched for both UK and international literature in English language. We extracted papers from 2000 (when a key paper we used in the review by Freeman and colleagues was published, which we include in our literature set) to March 2018.

Searches of academic literature around the benefits of, desire for, and receipt of continuity used the term 'relational continuity' as the conceptual start point, recognising this to be the traditional understanding of continuity within general practice. Due to time constraints, specific database searches on informational and management continuity were not conducted. Searches of academic and grey literature around the effect of improved access on continuity and factors supporting continuity employed the broader term 'continuity'. Full search strategies are available upon request.

All titles and abstracts identified were screened to find studies with the greatest relevance to current developments in England and that have robust research methods (inclusion and exclusion criteria are given in Box A).

Box A: Inclusion and exclusion criteria for the rapid review

Inclusion criteria – studies which:

- predominantly – but not necessarily exclusively – were from a general practice setting
- report on the association of continuity with one or more of the following: patient outcomes, use of services, experience, patient or professional satisfaction, or costs
- used the GP Patient Survey
- relate to care of ‘Veterans’ in US literature on primary care
- define or measured continuity.

Exclusion criteria – studies which:

- looked at continuity between settings (e.g. between primary and secondary care)
- did not predominantly address general practice (e.g. community care and palliative care) – some primary care studies were included, particularly from US literature, which were deemed relevant
- covered international experience deemed not comparable, transferrable or too context dependent (e.g. US literature on medical students/residents and their curriculum)
- covered out-of-hours and after-hours services
- addressed private patients (non-registered)
- addressed access but not continuity.

Additional academic and grey texts were identified by reviewing the references of relevant publications, seeking recommendations from experts in general practice, and by examining relevant websites and policy documents. Much of the literature stems from a national research programme commissioned by the NIHR Service Delivery and Organisation (SDO) Research and Development Programme, from 2000 onwards (Parker and others, 2010); a review by Freeman and Hughes (2010); and more recent UK and international research.

About the literature

A number of studies we included in our rapid review relied upon the GP Patient Survey, or used a different dataset with a similar choice of indicators as a proxy (e.g. ‘preferred doctor’), as a proxy measure for continuity. It was not possible to conduct a meta-synthesis of findings due to the heterogeneity of material. As a result, we produced a narrative synthesis of a range of studies of varied quality. It should be noted that the included studies:

- use different definitions of continuity
- use different measures of continuity (e.g. Usual Provider Continuity Index, Bice-Boxerman Index, Modified Continuity Index)
- use different data sets (some representative and others not; some used measures from the GP Patient Survey)

Some studies use qualitative methods with small sample sizes.

There were several limitations to our approach. A wide, systematic review was not feasible given the short timeframe and heterogeneity of terminology used in the literature. Despite using several search strategies, it became evident that a specific literature search on ‘models’ of care to promote both ‘improved access’ and continuity was difficult to generate and conduct with respect to the published literature. Lastly, by excluding transitional care settings and focusing specifically on general practice, we may have excluded some relevant studies.

Interviews

Ten semi-structured interviews were conducted; nine with a single informant and one with two interviewees (a practice manager and clinical lead). Interviewees included three representatives from individual practices, four federations, two networks and one commissioner.

Interviewees were recruited in collaboration with NHS England. A longlist of both GP Access Fund pilot sites and those not involved in that initiative was considered, and interviewees were selected based on the specific initiatives they were trialling, and on their availability.

An interview schedule was used and findings were analysed using a deductive framework based on the interview topic guide. In parallel to our interviews, two site visits to practices based in South West England were conducted to supplement findings.

Not all GP Access Fund sites we originally selected for interview were available.

It was not feasible to interview patients within the timeframe of this study.

Workshops

Two workshops were held at the Nuffield Trust. The first aimed to triangulate and validate emerging findings with academics, clinicians, providers and commissioners. The second aimed to shed light on policy implications and to generate additional insights to inform recommendations for national bodies, providers and commissioners. Participants were recruited in collaboration with NHS England.

Appendix 3: Analysis of the GP Patient Survey

Introduction

Analysis of the GP Patient Survey (GPPS) was used to complement findings from the rapid reviews, interviews and workshops. The survey is the only national dataset which covers patient experience of primary care and can therefore provide novel, generalisable insights. There are no questions that ask respondents directly about their preference and experience of continuity, but there are questions around respondents preferred GP in the 2017 survey, for example, including:

- Question 8: Is there a particular GP you usually prefer to see or speak to?

If “Yes”:

- Question 9: How often do you see or speak to the GP you prefer?

The analysis focused on these questions, as responses to these can be used to infer something about respondent desire for, and success in achieving, relational continuity. They therefore act as proxy measures.

Our analysis was conducted in two parts, using:

- respondent-level data to investigate whether particular groups were more likely to have a preferred GP and to see their preferred GP
- practice-level results with this more aggregated dataset were used to explore what practice characteristics are associated the higher reported continuity.

Respondent-level analysis

Data sources

Respondent-level data, including 808,332 responses, was provided by NHS England, while the practice-level data are readily available online. Questionnaires were sent out for this survey year

in January to March 2017 and therefore people will have been responding to questions in relation to their early 2017 and 2016 experience of their GP surgery.

Other sources of data included postcode-level deprivation (2015 Index of Multiple Deprivation⁴) and information on practice list size, using October 2016 data⁵ to coincide with the period respondents will have been considering in their responses to the survey.

Data preparation

Responses to question 8 that were either missing or flagged as ‘There is usually only one GP in my GP surgery’ were excluded to create a ‘Yes’/‘No’ response. Missing responses and responses of ‘Not tried at this GP surgery’ were excluded for question 9. The response of ‘Always or almost always’ was compared to an aggregation of all other responses as ‘Not, always or almost always’.

We used a range of different explanatory variables, including:

- patient characteristics – gender, age, ethnic group, deprivation, working pattern
- health-related measures – longstanding health condition, long-term mental health condition, care plan, health status (EQ5D)
- practice list size
- two measures of patient experience (‘trust in GP’ and ‘experience of GP surgery’).

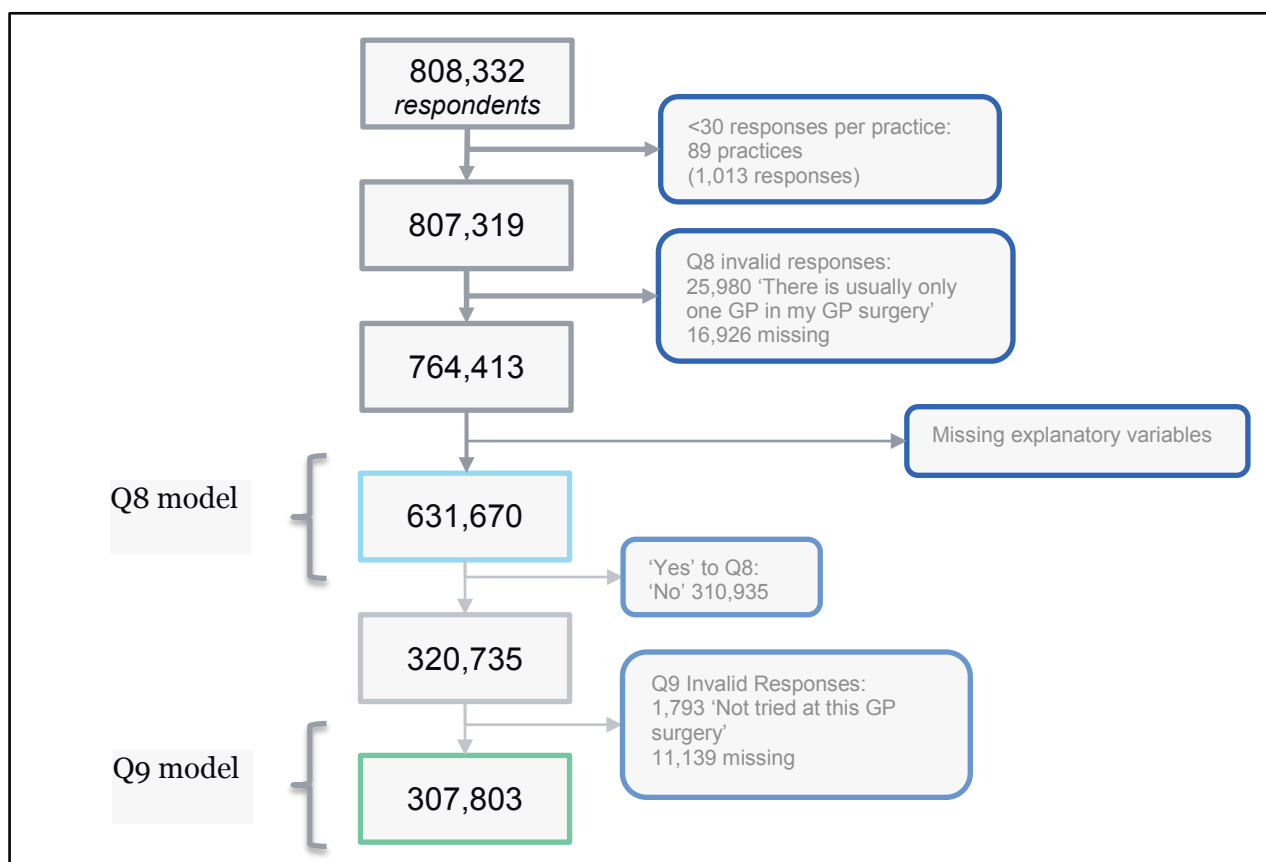
A second model – excluding the two patients experience variables – was also created as a sensitivity analysis.

Respondents who came from practices with less than 30 responses were excluded from the analysis because the sample size was too small for robust analysis at subgroup level. This amounted to 1.2% of practices and 1,013 responses. Further exclusions were applied to prepare the data for the statistical analysis. These are outlined in the model exclusions diagram.

⁴ See: www.gov.uk/government/statistics/english-indices-of-deprivation-2015

⁵ See <https://digital.nhs.uk/catalogue/PUB22008>

Model exclusions diagram



To ascertain which groups of respondents had a preferred doctor and which groups saw their preferred GP 'always or almost always', logistic regression models were produced. The models included a random intercept for practice to account for clustering of results. Crude and adjusted odds ratios were produced, along with 95% confidence intervals. The crude models still incorporated the random intercept for practice. The crude predicted probability of experiencing either outcome by characteristic was also presented as a percentage with 95% confidence intervals.

Results

Not all those who responded to the GPPS were incorporated in the models as many did not have valid responses to the questions of interest. Full details of the exclusions are presented in the model exclusions diagram. The key results are set out below:

- Characteristics of the patients included in the model (Table 3, page 71).
- Results from model on whether patients have a preferred GP (Table 4, page 73).
- Results from model on whether patients see their preferred GP ‘always or almost always’ (Table 5, page 75).

The exclusion of the patient experience explanatory variables – which was done as a sensitivity analysis – had little effect on the results. However, there are limitations worth noting. For example, some important potential explanatory factors are not captured within available data and are therefore not included in the model. The survey does not distinguish between those who have a preferred GP and want to see them all the time, versus those who have a preferred GP but wouldn’t necessarily prioritise seeing them. This limits the conclusions that can be drawn from this analysis as it has to be assumed that those who have a preferred GP want to see them ‘always or almost always’, which won’t always be the case. A similar analysis of the 2018 survey results, when they are available, will be able to better isolate the group who want to see their preferred GP for all appointments, as there have been changes to the response options for question 8.

This analysis, with its limitations taken into consideration, has still highlighted some potential gaps where groups with patients aren’t seeing their preferred GP ‘always or almost always’. While these groups might not always want to see their preferred GP, there will still be those within these groups who may be experiencing barriers, indicating that there are opportunities for intervention.

Practice-level analysis

Data sources

Additional analysis was conducted using the published practice-level results. Again, the analysis focused on questions 8 and 9, with practice-level dependent variables adjusted for missing or invalid results. A further dependent variable – based on the proportion of all respondents, rather than just those with a preferred GP, who saw a preferred GP – was modelled.

We used a range of practice-level explanatory variables including:

- practice characteristics (e.g. contract type, level of rurality, patient list size)
- respondent characteristics (e.g. proportion with long-standing health conditions)

- staffing levels (e.g. GPs and nurses)
- funding (seniority payments and extended hours funding)
- number of days of extended access provision.

All practice-level data were taken from published sources, including the NHS Digital website.

Results

We used a range of models to check the sensitivity and validity of the results. Some of the key models are available in:

- Table 6: Proportion of patients who see their preferred GP (page 78)
- Table 7: Proportion of patients who have a preferred GP and who both have and see a preferred GP (page 80)

The results appear to be relatively stable to the choice of model, including when CCG-level variation is adjusted for (using dummy variables). Despite this, a number of limitations should be noted. In particular, a number of practices are excluded from certain models due to missing data for the explanatory variables. In addition, the explanatory variables are not comprehensive and there could be a range of unmeasured confounders. For instance, those practices that have implemented certain initiatives (e.g. extended access) or received particular funding streams (e.g. enhanced access DES) may be different in nature than those that have not.

As such, the results from this exploratory analysis should be treated with caution. Future analysis should focus on using panel-data approaches to exploit the longitudinal nature of the dependent and explanatory variables.

Tables

Table 3: Characteristics of responders for all key variables in each model (percentage unless otherwise stated)

Characteristics		Question 8	Question 9
Sample (N)		631,670	307,803
Gender			
	Male	49.9%	45.0%
	Female	50.1%	55.0%
Age group			
	18 to 24	9.1%	7.2%
	25 to 34	17.7%	13.3%
	35 to 44	17.5%	15.0%
	45 to 54	19.1%	18.5%
	55 to 64	15.6%	17.1%
	65 to 74	12.4%	16.1%
	75 to 84	6.3%	9.4%
	85 or over	2.3%	3.4%
Ethnicity			
	English / Welsh / Scottish / Northern Irish / British	79.4%	80.3%
	Irish	0.8%	0.8%
	Gypsy or Irish Traveller	0.0%	0.0%
	Any other White background	6.6%	5.9%
	White and Asian	0.3%	0.3%
	White and Black African	0.2%	0.1%
	White and Black Caribbean	0.3%	0.3%
	Any other Mixed / multiple ethnic background	0.4%	0.3%
	Bangladeshi	0.6%	0.7%
	Indian	2.5%	2.8%
	Pakistani	1.6%	1.8%
	Chinese	0.8%	0.5%
	Any other Asian background	1.5%	1.5%
	African	1.5%	1.1%
	Caribbean	0.7%	0.7%
	Any other Black / African / Caribbean background	0.4%	0.4%
	Arab	0.3%	0.3%

	Any other ethnic group	2.0%	2.1%
Deprivation			
	1 (Most Deprived)	19.3%	18.6%
	2	20.2%	19.6%
	3	20.2%	20.2%
	4	20.2%	20.5%
	5 (Most Affluent)	20.1%	21.2%
Which of these best describes what you are doing at present?			
	Full-time paid work (30 hours or more each week)	47.0%	37.7%
	Part-time paid work (under 30 hours each week)	14.0%	14.3%
	Full-time education at school, college or university	3.6%	2.7%
	Unemployed	4.1%	4.2%
	Permanently sick or disabled	3.7%	5.5%
	Fully retired from work	20.2%	27.4%
	Looking after the home	4.7%	5.3%
	Doing something else	2.8%	2.9%
Do you have a long standing health condition?			
	No	45.7%	33.3%
	Yes	51.9%	64.5%
	Don't know / can't say	2.4%	2.2%
Do you have a mental health condition?			
	No	94.9%	92.5%
	Yes	5.1%	7.5%
Health related quality of life as measured by EQ5D			
	Mean	0.8	0.8
Do you have a written care plan?			
	No	93.8%	92.6%
	Yes	2.9%	3.8%
	Don't know	3.3%	3.6%
Practice list size			
	0000-1,999	0.4%	0.4%
	2,000-3,999	6.5%	6.7%
	4,000-5,999	12.5%	12.9%
	6,000-7,999	15.9%	16.3%
	8,000-9,999	16.3%	16.3%
	10,000-14,999	32.0%	31.8%
	15,000+	16.3%	15.4%

Did you have confidence and trust in the GP you saw or spoke to?			
	No, not at all	4.1%	3.8%
	Yes, definitely	64.5%	70.2%
	Yes, to some extent	27.9%	24.7%
	Don't know / can't say	3.4%	1.3%
Overall, how would you describe your experience of your GP surgery?			
	Very poor	1.3%	1.2%
	Very good	42.4%	46.7%
	Fairly good	42.4%	40.0%
	Neither good nor poor	10.1%	8.5%
	Fairly poor	3.8%	3.7%

Table 4: Crude percentage for having a preferred GP with crude and adjusted odds ratios (crude adjusted for clustering of results around practices)

Variable	Category	Crude Percentage	Crude Odds Ratio	Adjusted Odds Ratio
Gender				
	Male	46.9% [46.6,47.2]	ref	ref
	Female	53.7% [53.4,54.0]	1.31* [1.30,1.33]	1.40* [1.38,1.41]
Age group				
	18 to 24	38.2% [37.5,38.9]	ref	ref
	25 to 34	36.2% [35.8,36.7]	0.92* [0.89,0.95]	0.88* [0.85,0.91]
	35 to 44	40.6% [40.1,41.0]	1.10* [1.07,1.14]	0.99 [0.95,1.02]
	45 to 54	45.3% [44.9,45.7]	1.34* [1.30,1.38]	1.11* [1.08,1.15]
	55 to 64	50.9% [50.5,51.3]	1.67* [1.63,1.72]	1.24* [1.20,1.28]
	65 to 74	59.7% [59.3,60.1]	2.39* [2.33,2.46]	1.54* [1.49,1.60]
	75 to 84	68.5% [68.1,68.9]	3.52* [3.41,3.63]	2.01* [1.93,2.09]
	85 or over	68.5% [67.8,69.2]	3.51* [3.37,3.66]	1.71* [1.63,1.79]
Ethnicity				
	English / Welsh / Scottish / Northern Irish / British	50.9% [50.5,51.2]	ref	ref
	Irish	52.8% [51.4,54.1]	1.08* [1.02,1.14]	1.00 [0.95,1.06]
	Gypsy or Irish Traveller	53.1% [45.3,60.8]	1.10 [0.80,1.50]	1.15 [0.82,1.61]
	Any other White background	46.7% [46.1,47.4]	0.85* [0.83,0.87]	1.27* [1.24,1.31]
	White and Asian	45.1% [42.5,47.7]	0.82* [0.74,0.91]	1.16* [1.04,1.29]
	White and Black African	47.0% [43.6,50.5]	0.86* [0.75,0.98]	1.22* [1.06,1.41]
	White and Black Caribbean	45.9% [43.4,48.5]	0.79* [0.72,0.88]	1.06 [0.95,1.19]
	Any other Mixed / multiple ethnic background	50.2% [47.7,52.7]	0.97 [0.88,1.07]	1.34* [1.21,1.49]

Bangladeshi	55.1% [54.2,56.0]	1.15* [1.06,1.24]	1.66* [1.53,1.80]
Indian	54.0% [52.9,55.2]	1.19* [1.15,1.23]	1.67* [1.61,1.74]
Pakistani	54.2% [52.3,56.2]	1.14* [1.09,1.19]	1.66* [1.58,1.74]
Chinese	39.7% [38.0,41.3]	0.64* [0.59,0.68]	0.94 [0.88,1.01]
Any other Asian background	50.6% [49.5,51.7]	0.99 [0.95,1.03]	1.38* [1.31,1.45]
African	39.5% [38.3,40.6]	0.63* [0.60,0.66]	0.95* [0.91,1.00]
Caribbean	52.2% [50.7,53.6]	1.05 [1.00,1.12]	1.17* [1.10,1.24]
Any other Black / African / Caribbean background	50.8% [48.7,52.9]	1.00 [0.92,1.08]	1.20* [1.10,1.31]
Arab	49.9% [47.1,52.7]	0.96 [0.86,1.08]	1.31* [1.16,1.47]
Any other ethnic group	53.0% [52.0,54.0]	1.09* [1.05,1.13]	1.39* [1.33,1.45]
Deprivation			
1 (most deprived)	49.6% [49.1,50.0]	ref	ref
2	49.8% [49.4,50.2]	1.01 [0.99,1.03]	1.06* [1.04,1.08]
3	50.3% [49.9,50.7]	1.03* [1.01,1.05]	1.11* [1.08,1.13]
4	51.3% [50.8,51.7]	1.07* [1.05,1.09]	1.17* [1.15,1.19]
5 (least deprived)	52.4% [52.0,52.8]	1.12* [1.10,1.14]	1.24* [1.21,1.26]
Which of these best describes what you are doing at present?			
Full-time paid work (30 hours or more each week)	39.4% [39.1,39.8]	ref	ref
Part-time paid work (under 30 hours each week)	48.7% [48.3,49.2]	1.46* [1.44,1.49]	1.18* [1.16,1.20]
Full-time education at school, college or university	38.6% [37.5,39.6]	0.97 [0.93,1.01]	1.04 [0.98,1.09]
Unemployed	50.2% [49.0,51]	1.55* [1.50,1.60]	1.13* [1.10,1.17]
Permanently sick or disabled	70.4% [69.0,71]	3.65* [3.55,3.76]	1.15* [1.11,1.19]
Fully retired from work	62.0% [61.6,62.3]	2.51* [2.48,2.54]	1.22* [1.19,1.24]
Looking after the home	54.3% [53.6,54.9]	1.83* [1.78,1.87]	1.23* [1.20,1.27]
Doing something else	51.2% [50.3,52.0]	1.61* [1.56,1.67]	1.25* [1.21,1.30]
Do you have a long standing health condition?			
No	36.3% [36.0,36.7]	ref	Ref
Yes	59.8% [59.4,60.1]	2.60* [2.57,2.63]	1.69* [1.67,1.71]
Don't know / can't say	46.5% [45.5,47.4]	1.52* [1.46,1.58]	1.46* [1.40,1.52]
Do you have a mental health condition?			
No	49.7% [49.4,50.0]	ref	ref
Yes	70.2% [69.6,70.8]	2.38* [2.32,2.44]	1.59* [1.55,1.64]
Health related quality of life as measured by EQ5D			
Decrease of one unit (0.1) in the utility score	-	1.22* [1.21,1.22]	1.12* [1.12,1.12]
Do you have a written care plan?			
No	50.0% [49.7,50.3]	ref	ref

Yes	63.4% [62.7,64.1]	1.73* [1.68,1.78]	0.96* [0.93,0.99]
Don't know	55.5% [54.8,56.3]	1.25* [1.21,1.29]	1.01 [0.98,1.04]
Practice list size			
0000-1,999	49.5% [47.5,51.4]	ref	ref
2,000-3,999	50.4% [49.7,51.1]	1.03 [0.95,1.12]	1.06 [0.97,1.16]
4,000-5,999	51.3% [50.6,52.0]	1.06 [0.98,1.16]	1.10* [1.01,1.20]
6,000-7,999	51.4% [50.7,52.2]	1.07 [0.98,1.16]	1.11* [1.02,1.21]
8,000-9,999	50.8% [49.9,51.6]	1.04 [0.96,1.13]	1.07 [0.98,1.17]
10,000-14,999	50.9% [50.2,51.6]	1.05 [0.96,1.14]	1.08 [0.99,1.17]
15,000+	49.6% [48.3,50.8]	0.99 [0.91,1.09]	1.03 [0.94,1.14]
Did you have confidence and trust in the GP you saw or spoke to?			
No, not at all	22.2% [21.6,22.9]	ref	ref
Yes, definitely	54.2% [53.9,54.5]	1.4* [1.36,1.44]	1.57* [1.52,1.63]
Yes, to some extent	45.2% [44.9,45.6]	0.98 [0.95,1.01]	1.09* [1.05,1.12]
Don't know / can't say	45.7% [45.0,46.5]	0.34* [0.32,0.36]	0.42* [0.40,0.44]
Overall, how would you describe your experience of your GP surgery?			
Very poor	45.7% [44.4,47.0]	ref	ref
Very good	54.2% [53.9,54.5]	1.41* [1.33,1.48]	0.83* [0.79,0.88]
Fairly good	48.0% [47.7,48.3]	1.10* [1.04,1.15]	0.87* [0.82,0.92]
Neither good nor poor	43.8% [43.3,44.4]	0.93* [0.88,0.98]	0.94* [0.88,0.99]
Fairly poor	48.9% [48.1,49.7]	1.14* [1.07,1.21]	1.15* [1.08,1.23]

Table 5: Crude percentages for seeing preferred GP ‘always or almost always’, and crude and adjusted odds ratios (crude adjusted for clustering of results around practices)

Variable	Category	Crude Percentage	Crude Odds Ratio	Adjusted Odds Ratio
Gender				
	Male	39.4% [38.9,39.9]	ref	ref
	Female	33.2% [32.7,33.6]	0.76* [0.75,0.78]	0.85* [0.83,0.86]
Age group				
	18 to 24	24.3% [23.4,25.2]	ref	ref
	25 to 34	23.0% [22.4,23.7]	0.93* [0.88,0.99]	0.90* [0.84,0.96]
	35 to 44	23.5% [22.9,24.1]	0.96 [0.91,1.01]	0.84* [0.79,0.89]
	45 to 54	29.9% [29.3,30.5]	1.33* [1.26,1.40]	1.04 [0.98,1.09]
	55 to 64	35.8% [35.2,36.4]	1.74* [1.65,1.83]	1.21* [1.13,1.28]
	65 to 74	43.2% [42.6,43.8]	2.37* [2.25,2.49]	1.38* [1.29,1.47]

75 to 84	47.4% [46.7,48.1]	2.81* [2.66,2.95]	1.47* [1.38,1.57]
85 or over	46.6% [45.5,47.6]	2.71* [2.55,2.88]	1.43* [1.33,1.54]
Ethnicity			
English / Welsh / Scottish / Northern Irish / British	38.1% [37.7,38.6]	ref	ref
Irish	39.7% [37.8,41.6]	1.07 [0.99,1.15]	0.92 [0.85,1.01]
Gypsy or Irish Traveller	29.9% [20.8,40.9]	0.69 [0.43,1.12]	0.84 [0.50,1.41]
Any other White background	31.6% [30.8,32.5]	0.75* [0.72,0.78]	1.19* [1.14,1.24]
White and Asian	25.4% [22.1,29.0]	0.63* [0.53,0.75]	0.93 [0.77,1.12]
White and Black African	27.9% [23.6,32.7]	0.63* [0.50,0.79]	0.78* [0.62,1.00]
White and Black Caribbean	28.0% [24.7,31.7]	0.55* [0.46,0.66]	0.78* [0.64,0.94]
Any other Mixed / multiple ethnic background	31.3% [28.1,34.7]	0.74* [0.64,0.86]	1.12 [0.95,1.32]
Bangladeshi	25.3% [24.3,26.4]	0.34* [0.30,0.39]	0.57* [0.49,0.66]
Indian	22.3% [21.0,23.6]	0.55* [0.52,0.58]	0.75* [0.71,0.80]
Pakistani	17.4% [15.5,19.4]	0.47* [0.43,0.50]	0.71* [0.66,0.77]
Chinese	22.2% [20.1,24.5]	0.46* [0.41,0.53]	0.72* [0.63,0.83]
Any other Asian background	23.1% [21.8,24.4]	0.49* [0.45,0.52]	0.65* [0.60,0.71]
African	20.0% [18.6,21.5]	0.41* [0.37,0.44]	0.48* [0.44,0.53]
Caribbean	33.0% [31.1,35.0]	0.80* [0.73,0.87]	0.94 [0.85,1.03]
Any other Black / African / Caribbean background	27.2% [24.5,30.0]	0.61* [0.53,0.69]	0.67* [0.58,0.78]
Arab	27.0% [23.6,30.6]	0.60* [0.50,0.72]	0.75* [0.62,0.91]
Any other ethnic group	23.3% [22.2,24.5]	0.49* [0.46,0.53]	0.58* [0.54,0.62]
Deprivation			
1 (most deprived)	33.6% [33.0,34.3]	ref	ref
2	35.0% [34.4,35.6]	1.06* [1.03,1.09]	1.07* [1.03,1.10]
3	36.5% [35.9,37.0]	1.13* [1.10,1.16]	1.10* [1.06,1.13]
4	36.9% [36.3,37.5]	1.15* [1.12,1.19]	1.10* [1.07,1.14]
5 (least deprived)	36.8% [36.2,37.5]	1.15* [1.12,1.19]	1.09* [1.05,1.12]
Which of these best describes what you are doing at present?			
Full-time paid work (30 hours or more each week)	28.3% [27.8,28.8]	ref	ref
Part-time paid work (under 30 hours each week)	28.3% [27.7,28.9]	1.00 [0.97,1.02]	0.92* [0.89,0.94]
Full-time education at school, college or university	25.7% [24.3,27.2]	0.88* [0.81,0.95]	1.16* [1.06,1.27]
Unemployed	32.8% [31.7,33.9]	1.23* [1.18,1.29]	1.15* [1.09,1.21]
Permanently sick or disabled	43.5% [42.5,44.4]	1.94* [1.87,2.02]	1.44* [1.37,1.51]
Fully retired from work	44.4% [43.9,45.0]	2.02* [1.98,2.06]	1.15* [1.12,1.19]
Looking after the home	32.1% [31.3,33.0]	1.20* [1.15,1.24]	1.09* [1.04,1.13]
Doing something else	33.5% [32.4,34.6]	1.27* [1.21,1.34]	1.12* [1.06,1.18]

Do you have a long standing health condition?			
No	27.9% [27.4,28.3]	ref	ref
Yes	39.1% [38.6,39.6]	1.66* [1.63,1.69]	1.21* [1.18,1.23]
Don't know / can't say	27.0% [25.7,28.3]	0.96 [0.90,1.02]	1.12* [1.05,1.20]
Do you have a mental health condition?			
No	35.4% [35.0,35.9]	ref	ref
Yes	40.7% [39.8,41.5]	1.25* [1.21,1.29]	1.34* [1.29,1.39]
Health related quality of life as measured by EQ5D			
Decrease of one unit (0.1) in the utility score	-	1.03* [1.03,1.04]	0.99* [0.99,0.99]
Do you have a written care plan?			
No	35.5% [35.1,36.0]	ref	ref
Yes	42.8% [41.8,43.8]	1.36* [1.31,1.41]	0.99 [0.95,1.03]
Don't know	33.9% [32.9,35.0]	0.93* [0.89,0.97]	0.89* [0.85,0.94]
Practice list size			
0000-1,999	59.0% [56.2,61.6]	ref	ref
2,000-3,999	48.2% [47.2,49.2]	0.65* [0.58,0.73]	0.68* [0.61,0.77]
4,000-5,999	38.7% [37.8,39.6]	0.44* [0.39,0.49]	0.45* [0.40,0.50]
6,000-7,999	33.1% [32.2,34.0]	0.34* [0.31,0.39]	0.34* [0.30,0.38]
8,000-9,999	30.2% [29.2,31.2]	0.30* [0.27,0.34]	0.29* [0.26,0.33]
10,000-14,999	29.4% [28.6,30.3]	0.29* [0.26,0.33]	0.28* [0.25,0.31]
15,000+	28.5% [27.1,30.0]	0.28* [0.24,0.32]	0.27* [0.24,0.30]
Did you have confidence and trust in the GP you saw or spoke to?			
No, not at all	11.4% [10.4,12.6]	ref	ref
Yes, definitely	44.0% [43.6,44.5]	9.23* [8.57,9.95]	3.24* [2.99,3.52]
Yes, to some extent	17.2% [16.8,17.5]	2.43* [2.25,2.62]	1.50* [1.38,1.62]
Don't know / can't say	7.9% [7.3,8.4]	1.51* [1.33,1.72]	1.17* [1.03,1.34]
Overall, how would you describe your experience of your GP surgery?			
Very poor	6.7% [5.8,7.7]	ref	ref
Very good	51.7% [51.2,52.2]	14.93* [12.77,17.46]	6.08* [5.16,7.16]
Fairly good	23.3% [22.9,23.7]	4.24* [3.62,4.95]	2.40* [2.04,2.82]
Neither good nor poor	11.5% [11.1,12.0]	1.81* [1.54,2.13]	1.41* [1.20,1.67]
Fairly poor	7.9% [7.4,8.6]	1.20* [1.01,1.43]	1.07 [0.90,1.28]

Table 6: Practice-level modelling on proportion of patients who see their preferred GP

Question 9 – see preferred GP always or almost always							
	No. practices	Mean across practices, %	Core model	+ other survey results	+ other staffing groups	Model including funding variables	Model including CCG control variables
Adjusted R-squared			0.244	0.501	0.236	0.264	0.301
Practices included in model			5627	5627	4549	5436	5436
(Constant)			40.6**	-20.7*	44.2**	35.6**	45**
Practice and population characteristics							
% aged 65 and over			46.1**	13.6**	48.5**	43.5**	34.6**
% females			-31*	-35.4**	-30.2*	-29.7*	-42.9**
Deprivation decile			0.5**	0.3**	0.4**	0.4**	0.4**
Geography							
Village (including in a sparse setting)	272	46.7%	4.2**	2.3*	5.7**	4.1**	3.6**
Rural town and fringe	721	37.9%	0.8	0.5	1.6*	1	1
Rural town and fringe in a sparse setting	48	39.7%	0.8	-0.9	1.9	0	0.4
Urban city and town	2796	33.0%	ref	ref	ref	ref	ref
Urban minor conurbation	261	31.5%	-1.2	-0.3	-1.1	-1	1.4
Urban major conurbation	2900	31.7%	-2.2**	-1.4**	-3.1**	-2.2**	0.1
Patient list size							
1 to 1,999 people	42	54.5%	16.5**	11.6**	13.3*	13**	13.3**
2,000 to 3,999 people	1172	44.7%	9.4**	6**	8.9**	9**	9.1**
4,000 to 5,999 people	1482	36.0%	ref	ref	ref	ref	ref
6,000 to 7,999 people	1307	31.2%	-5.7**	-4.1**	-5.9**	-5.8**	-5.6**
8,000 to 9,999 people	1029	28.9%	-8.8**	-6.9**	-9.1**	-9**	-8.8**
10,000 to 14,999 people	1488	28.6%	-9.4**	-7.3**	-9.4**	-9.6**	-9.4**
15,000 or more people	478	27.6%	-10.3**	-7.9**	-10.2**	-10.2**	-10.3**
Contract type							
GMS	4790	34.8%	ref	ref	ref	ref	ref
PMS	2005	31.3%	-0.6	-1.1*	-0.1	-0.4	-1.1*
APMS	128	24.5%	-8.2**	-9.6**	-6.2**		
APMS limited company	64	25.0%	-9.1**	-6.7*	-7.3*		
Respondent characteristics							
Longstanding health condition - % yes excluding don't know or can't say			-1.1**	-0.1	-1.1**	-1**	-0.7*
Working status - % full-time paid work			0.2	0	0.1	0.3	0.4
Staffing levels, as at September 2016							
GP staffing (FTEs per 1,000 population)			-0.2	-6.5**	2.3*	-2.6*	-3.3*

Nurse staffing (FTEs per 1,000 population)			-11.4**	-14.4**	-7.7**	-9.9**	-10.1**
Direct patient care staffing, excluding nurses and GPs (FTEs per 1,000 population)					-3.2*		
Administration and managerial staffing excluding receptionists (FTEs per 1,000 population)					-3.9**		
Receptionist staffing (FTEs per 1,000 population)					-5.6**		
GP participation - Average FTE at practice (capped at 1)			11.4**	10.8**	10.7**	11.8**	12.3**
Practice service level							
QOF achievement, 2016-17			0	-0.1**	0	0	0
Number of extended access days			0.2*	0.1	0.1	0.2	0.1
Other survey results							
Ease of getting through to someone at GP surgery on the phone - % easy	Average by practice	74%			23.9**		
Helpfulness of receptionists - % helpful		90%			6		
Online booking services - % aware		62%			-3.8*		
Proportion who normally book appointments to see a GP or nurse online		8%			9.7*		
% rating of GP giving you enough time as good		87%			22.9**		
% with confidence and trust in GP		96%			10.1		
% reporting that practice is open at times that are convenient to them		82%			17.8**		
% rating overall experience of GP surgery as good		86%			45.9**		
Practice funding (2016-17)							
Seniority payments, £ per weighted population		£1.66				2.3**	2.3**
Receipt of extended hours access (DES) funding		£1.38				0.9*	0.5

Notes: Some categories with smaller numbers of practices have been removed from the table to simplify the presentation. Variables listed in *other survey results* exclude 'don't know' or similar responses.

Table 7: Practice-level modelling on proportion of patients who have a preferred GP and who both have and see a preferred GP

Question 8 – have preferred GP				Q8&9 – have and see (including a lot of the time) their preferred GP (of all respondents)				
	No. practices	Mean across practices, %	Core model	Model including funding variables	N	Average across practices, %	Core model	Model including funding variables
Adjusted R-squared			0.137	0.177			0.224	0.257
Practices included in model			5874	5656			5627	5436
(Constant)			60.2**	50**			31.5**	25.2**
Practice and population characteristics								
% aged 65 and over			35.6**	31.7**			44.9**	41**
% females			-26.1*	-12.6			-17.3	-13.7
Deprivation decile			0.1	0			0.4**	0.3**
Geography								
Village (including in a sparse setting)	289	50.0%	-1.4	-1.2	272	37.9%	2.2*	2.2*
Rural town and fringe	754	49.0%	-1	-0.6	721	32.1%	0.3	0.6
Rural town and fringe in a sparse setting	49	51.0%	-0.4	-1	48	34.2%	0.7	0
Urban city and town	2950	47.4%	ref	ref	2796	28.0%	ref	ref
Urban minor conurbation	278	44.1%	-3.6**	-3.2**	261	25.0%	-2.8*	-2.5*
Urban major conurbation	3109	47.0%	-0.1	-0.2	2900	26.7%	-1.5**	-1.5**
Patient list size								
1 to 1,999 people	216	47.2%	0.1	-2.2	42	50.4%	16.2**	12**
2,000 to 3,999 people	1405	48.1%	0	-0.6	1172	35.0%	5.2**	4.3**
4,000 to 5,999 people	1491	48.3%	ref	ref	1482	30.1%	ref	ref
6,000 to 7,999 people	1310	47.8%	-0.8	-0.8	1307	27.3%	-3.6**	-3.7**
8,000 to 9,999 people	1030	46.9%	-2.3**	-2.4**	1029	25.1%	-6.4**	-6.6**
10,000 to 14,999 people	1491	46.6%	-2.7**	-2.8**	1488	24.7%	-7.1**	-7.2**
15,000 or more people	483	44.9%	-3.5**	-3.2**	478	23.5%	-7.9**	-7.7**
Contract type								
GMS	5602	48.9%	ref	ref	4790	29.6%	ref	ref
PMS	2101	45.3%	-1.6**	-1.3**	2005	25.9%	-0.9*	-0.8*
APMS	169	35.0%	-7.5**		128	17.5%	-8.1**	
APMS limited company	64	33.3%	-11.8**		64	16.9%	-9.9**	
Respondent characteristics								
Longstanding health condition - % yes excluding don't know or can't say			0.6*	0.7**			-0.2	0
Working status - % full-time paid work			-1.3**	-1.2**			-0.6*	-0.5*

Staffing levels, as at September 2016

GP staffing (FTEs per 1,000 population)	0.9	-2.6**	0.7	-2.3*
Nurse staffing (FTEs per 1,000 population)	-12.7**	-12.3**	-14.7**	-12.9**
GP participation - Average FTE at practice (capped at 1)	10.4**	10.1**	10.7**	10.9**
Practice service level				
QOF achievement, 2016-17	-0.1*	-0.1*	0	0
<i>Number of extended access days</i>	0.1	0.1	0.1	0.1
Practice funding (2016-17)				
Seniority payments, £ per weighted population		2.8**		2.8**
Receipt of extended hours access (DES) funding		0.5		0.6

Note: Some categories with smaller numbers of practices have been removed from the table to simplify the presentation.

Glossary

Advanced access: A specific access model originally established in the US to improve appointment booking systems. The objective was to free up the backlog of appointments and ‘do today’s work today’. Also known as **open access**.

GP Access Fund: National incentive scheme launched in 2013 to improve access to primary care, IT and premises. Originally termed the Prime Minister’s Challenge Fund, wave one launched 20 pilots in April 2014. In March 2015, 37 wave two pilots were launched.

Improved access: National programme established by NHS England, stemming from the GP Access Fund. Encompasses the range of access initiatives developed locally by individual pilot sites.

Extended access: A specific initiative to extend access to routine appointments in general practice to include mornings, evenings and weekends. Extended access is typically delivered through an **access hub**. Extended access services operate in parallel with existing out-of-hours services (which only treat emergency or urgent medical concerns), or in some instances may be commissioned together with out-of-hours services.

Extended Hours Access Scheme Directed Enhanced Services (DES): A national scheme through which practices can receive funding (on average £1.90 per patient) for offering an additional 30 minutes of appointments, per 1,000 patients, outside core opening hours.

Alternatives to face-to-face consultations: Consultations conducted remotely, including through telephone, online, video or email.

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