Improving continuity: THE clinical challenge

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Continuity of care is a core feature of general practice; it creates multiple benefits for patients, doctors and society. Continuity increases trust, patient satisfaction, disclosure of information, take-up of preventive care, adherence to advice, reduction in socio-economic disadvantage, and reduces deaths. However, the level of continuity is reducing in general practice. About 15 consultations are needed with a patient for a GP to acquire enough 'accumulated knowledge' to develop a sense of continuing responsibility. This fosters GP sensitivity and mutual understanding, which enable GPs to provide 'higher-level' quality of care. The RCGP curriculum states two high-level aims: that GPs need to 'enhance continuity of care' and 'build long-term relationships with patients'. This article analyses these aims by setting them in the context of international research on continuity of care.

The GP curriculum and continuity of care

The ***Core GP curriculum statement 1.00: Being a general practitioner*** has a number of sections that stress the importance of continuity of care and developing long-term relationships with patients:

- *Core capability: Communication and consultation* states that person-centred care places great emphasis on the continuity of the relationship process
- *Core competence: Maintain a continuing relationship with patients, carers and families* requires GPs to recognise the value many patients, carers and families place on a trusted long-term relationship with 'their' doctor, and use the consultation as a means to improve access to healthcare for patients and to enhance continuity of care
- *Core competence: Adopt a structured approach to clinical management* requires GPs to contribute to an organisational and professional approach that facilitates continuity of care (e.g. through adequate record-keeping and building long-term patient relationships)

In addition, and more specifically, ***GP curriculum module 3.10: Care of people with mental health problems*** requires GPs to:

- Recognise how practice systems may reduce continuity of care, e.g. appointment systems that prioritise access may reduce patient continuity

The American Academy of Family Physicians (2016) describes continuity of care as: '… a hallmark and primary objective of family medicine …'

Continuity

When two people meet, a mass of information is exchanged, mostly non-verbally. This includes observations about the other person's, age, gender, dress, general appearance, impressions about the other person, their race, social class, education, including feelings of liking, disliking, trusting or distrusting. This is influenced by anything previously known, the setting and the duration of the meeting.

A patient–doctor meeting is a special case of human interaction, as the patient is often anxious about a diagnosis, an examination or treatment. Anxiety enhances memory recall, so patients often remember what a doctor says for years. The doctor is different too, being a professionally trained observer.

Medical consultations, normally lead to a written record, and increasingly patients also make notes. However, typically only about 5% of what the patient says is recorded, as the doctor's notes focus on medical findings, investigations and prescriptions.

Subsequent consultations

At every subsequent meeting, the patient and doctor both absorb more information, so mutual understanding develops. It becomes progressively easier for the doctor to link new understandings of the patient to previous knowledge. A single extra consultation makes little difference, but several increasingly do improve the level of interaction.

This process is fundamental in general practice, leading to the doctor progressively acquiring 'accumulated knowledge' about the patient (Hjortdahl, 1992). Doctors use such accumulated knowledge both for diagnosis and to tailor their advice. Ridd, Lewis, Peters, and Salisbury (2011) measured the depth of patient–doctor relationships, showing each additional consultation on average deepens the working relationship.

For GP registrars and new principals, it is useful knowing how long it takes a GP to achieve clinically important accumulated knowledge. Hjortdahl (1992) reported a value of 5 years or about 15 consultations, which matches our practice's 1980s teaching. The time is longer for doctors working part-time, as accumulated knowledge builds up quicker with more (density of) contacts than time alone.

Accumulated knowledge is valuable; GPs miss it when they do not have it and they use it for the benefit of their patients when they do (Hjortdahl & Borchgrevnik, 1991). Repeated patient–doctor consultations change both doctors and patients. Doctors change by becoming more sensitive to patients, according to patients (Reis et al., 2009), and feeling more responsible for them.

In Norway in 1992, 7% of GPs thought their responsibility to patients covered only the consultation, 19% thought their responsibility extended to the patient's episode of illness, and 74% considered they had a continuing responsibility for the patient over time (Hjortdahl, 1992). This matters to patients, as this sense of responsibility in the doctor fosters care and compassion. McWhinney (1998) considered 'continuity *of responsibility'* [*our italics*], a core value of general practice.

Accumulated knowledge about the patient and sense of responsibility enable GPs to report that they are providing 'higher-quality' care (Ridd, Shaw, & Salisbury, 2006). GPs are then rewarded with more professional satisfaction through doing a better job. Hence, several thousand GPs recently judged continuity as the most important feature of their practice (British Medical Association (BMA), 2015).

Continuity also changes patients' attitudes. Ridd et al. (2011) quantified the number of consultations patients have with a GP in order to make a difference. After five consultations, their model showed a 30% chance of the patient considering there was a 'deep' relationship with the GP, whereas after 20 consultations with the same GP, the odds of the patient reporting a 'deep' professional relationship approached 80%. Continuity is significantly associated with patients developing trust in the doctor (Mainous, Baker, Love, Pereira Gray, & Gill, 2001). Trust is a high-level attitude fostering important patient responses: disclosing information, satisfaction, taking-up preventive medicine, adherence to advice, and fewer deaths.

Classifying continuity of care

We summarise several definitions:

1. Interpersonal i.e. relationship continuity, between a patient and a single health professional
2. Interpersonal continuity with two or more people i.e. a team
3. Longitudinal continuity with a single health professional
4. Longitudinal continuity with a team
5. Longitudinal continuity with an institution, e.g. a general practice or an outpatient clinic
6. Informational continuity
7. Management continuity

Longitudinal and interpersonal continuity are core, and should usually be defined in relation to one single health professional. We see informational continuity and management continuity as being impersonal aspects of good record-keeping, record systems and management.

Theory of general practice

General practice differs from all other branches of medicine. Its two key features are that GPs, as generalist doctors, do not limit their work to single diseases or body systems. Generalists alone cross the mind/body divide-- the great fault-line of medicine world-wide. Second, GPs commit to the patient as a person and seek to build a therapeutic relationship (McWhinney, 1996) with each regular

patient. The RCGP (2016) curriculum states GPs should build long-term relationships with patients.

Understanding continuity of care

Continuity was in the first job descriptions of the GP and remains central today. The American Academy of Family Physicians (2016) describes continuity as: ‘a hallmark and *primary objective* of family medicine’ [*our italics*]. There is a mass of benefits from continuity. Hundreds of studies on continuity have been performed in four continents and across many cultures, languages and health systems. Early studies used cross-sectional methods, and these types of studies risk including unknown confounding factors and the problem of reverse causality. However, the multiplicity of studies in different settings makes it unlikely that any one confounding factor is important.

All continuity research faces the problem that randomised controlled trials are not usually available. It is unethical to break strong patient–doctor relationships, as with the two most-important human relationships: marriage and parenting. However, three short controlled trials on continuity, one on elderly men (Wasson et al., 1984) and two on midwifery, all showed beneficial outcomes for continuity.

Research showing the value of continuity of care has steadily grown in: volume, population size, the strength of the research methods used, and the importance of the findings. Recently, cohort studies have reported on the use of research methods more powerful than cross-sectional studies. The gains revealed for patients from continuity now include reduced death rates (Wolinsky, Bentler, & Liu, 2010).

Early continuity research was in general practice/family medicine, but continuity is now being studied in other medical specialties, such as internal medicine and psychiatry (Hoertel, Limosin, & Leleu, 2014). These studies confirmed the universality of the patient–doctor relationship and how doctors, as people, add value over and above technical medicine. Continuity is also valuable in other health professions, such as midwifery.

Problems with definitions

One problem with continuity is that multiple academic definitions have been developed. In 1980, Starfield, (Starfield 1980) a world leader on general practice/primary-care theory, bemoaned the ‘continuous confusion’ of definitions, attracting similar comments 22 years later. Few UK general practices measure continuity of care (White, Pereira Gray, Langley & Evans, 2016).

Research on continuity of care

The advantages of continuity of care fall into three categories based on the beneficiaries: patient, doctor, and the health system/society. Some benefits overlap, as reducing emergency hospital admissions benefits the patients and, and at £1844 a time, also the NHS/health system.

Continuity of care has many benefits. We list the main gains from continuity, with research references listed by date of publication, including

systematic reviews (Tables 1 to 3). Cross-cultural consistency implies a constant biological, human, effect. Although shown separately, many of these continuity advantages interact and multiply their overall effect.

Other research has not found benefits, but all the studies in the tables favour continuity. Research is not in equipoise, with hundreds of research reports supporting continuity, but only a handful describing adverse effects, which we list separately.

Discontinuity

Sweeney and Pereira Gray (1995) started discontinuity research, finding that patients missing GP continuity used A & E Departments to a significantly greater extent. Subsequently, it was found that US patients were also disadvantaged by broken continuity. In psychiatry, broken continuity is associated with an increased rate of death (Hoertel et al., 2014). The emotionally vulnerable also have greater rates of death when continuity of family–physician care is broken (Cerovecki et al., 2013).

The arithmetic of continuity

On average, NHS patients contact their general practice 5.5 times a year (Hippisley-Cox and Vinogradova.2009) and have a face-to-face consultation with a GP three times per annum. Therefore, a couple with two children will see a GP, on average, 12 times a year, thus averaging 2 hours a year in the surgery. In combined-list practices these consultations are dispersed between different doctors. However, by encouraging families to register on personal lists, GPs have plenty of time to get to know their patients as people.

Adverse effects of continuity of care

All this shows how important the patient–doctor relationship is, and relationship continuity measures a part of this interaction. Balint's metaphor of the doctor as a drug aids understanding of the concept that just as drugs have adverse effects so too can doctors (Balint, 1957).

Heart-sink relationships

The complexity of humans and diseases makes some patient–doctor relationships difficult. O'Dowd's 'heart-sink' patient occurs when the doctor, after many consultations and referrals, runs out of ideas. This can occur with patients suffering from personality disorder or somatisation. Although daunting for young doctors, experienced practitioners usually have only a few such relationships.

Table 1. Advantages for patients of greater continuity of care.

Advantage	Additional information	References
1. Familiar person	Patients gain by being more at ease and more able to disclose sensitive information	Lings et al. (2003)
2. Earlier diagnoses		Drivsholm & de Fine Olivarius (2006)
3. Having a GP with a stronger sense of responsibility implying care with more sensitivity and compassion	The GP's sense of responsibility, or commitment to the patient, *doubled* after a year and increased *16-fold* after 5 years	Hjortdahl (1992) McWhinney (1998)
4. Better quality of care received		Campbell et al. (2001)
5. Better care/outcomes for patient for diseases such as diabetes		Worrall & Knight (2010)
6. Less receipt of 'overuse' procedures		Romano & Segal (2015)
7. Better patient satisfaction		Baker & Streatfield (1995) Van Walraven, Oake, Jennings, & Forester (2010)
8. Safety	Having their repeat prescriptions usually signed by a doctor who knows them and feels responsible, as in personal-list practices, is safer than having them group-signed by doctors who do not know the patients.	Cook, Render, & Woods (2000)
9. Greater trust in the doctor	Fosters disclosure of information and adherence to advice	Mainous et al. (2001)
10. More responsive GPs	As judged by patients	Reis et al. (2009)
11. Receiving care with empathy		Derksen, Bensing, & Lagro-Jenssen (2013)
12. Better take-up of evidence-based personal preventive medicine		Cabana & Lee (2004)
13. Receiving more health education		Pereira Gray (1979)
14. More enablement/hope for patients		Byrne, Woodside, Landeen, & Kirpatrick (1994)
15. Less use of Accident and Emergency Departments		Sweeney & Pereira Gray (1995) Hansen, Halvorsen, Aaraas & Førde (2013)
16. Less use of hospital Outpatients Department		Hansen et al. (2013)
17. Fewer admissions to hospital	• Children • Elderly with ambulatory care conditions • Whole registered populations	Christakis, Mell, Koepsell, Zimmerman, & Connell (2001) Menec, Sirski, Arrawar, & Katz (2006) Bankart et al. (2011) Hansen et al. (2013) Van Walraven et al. (2010)
18. Fewer emergency admissions to hospital		Bankart et al. (2011) Chenore, Pereira Gray, Forrer, Wright, & Evans (2013) van Walraven et al. (2010)
19. Lower death rate		Wolinksy et al. (2010) Shin et al. (2014) Hoertel et al. (2014)
20. Humanity	Doctors as people add value as human beings, in addition to the technology of medicine	Lings et al. (2003)

Table 2. Advantages for GPs of greater continuity of care.

Advantage	Additional details	References
1. Accumulated knowledge	With continuity, GPs gain more accumulated knowledge of their patients and use it for the patient's benefit	Hjortdahl & Borchgrevink (1991) Hjortdahl (1992) Ridd et al. (2011)
2. GP satisfaction	Personal knowledge of the patient and the doctor–patient relationship and personal continuity enable GPs to provide 'higher-quality care'	Ridd et al. (2006)
3. Better adherence/compliance with the doctor's advice	Patients are easier to work with when they disclose more information, are more compliant, and when advice is followed	Chen, Tseng, Cheng (2013)
4. Efficiency in practice administration	• General practices run more efficiently, when staff are clear about who is the responsible GP • With personal lists queries and test results can be transmitted quickly to the patient's responsible (personal) doctor	Pereira Gray (1979)
5. Internal professional audits	• Only personal list practices can conduct internal practice audits on the performance of doctors • These internal inter-doctor audits are highly educational, sustain quality improvement, with privacy for the clinicians if weaknesses are exposed, unlike public-shaming	Pereira Gray (1995)
6. Forgiveness	Patients forgive some practice errors within strong patient–doctor relationships	Lings et al. (2003)

Table 3. Advantages of continuity of generalist care for the health system/society.

Advantage	Additional details	References
1. Better use of resources	Generalist doctors induce better use of limited NHS resources	Starfield (1994) Baicker & Chandra (2004) Van Walraven et al. (2010)
2. Less use of hospital services	See Table 1 for details and references	
3. Lower mortality rates	See Table 1 for details and references	
4. Less use of 'overuse' procedures		Romano & Segal (2015)
5. Less use of complementary practitioners	More use of evidence-based treatment	Hansen, Kristoffersen, Lian, & Halvorsen (2014)

Frustration in the patient–doctor relationship

Less severe, is the frustration that some GPs experience when they feel powerless and unable to challenge patients, and this can result in collusion with the patient over illness behaviour in chronic disease. Some blame Balint's teaching, but Balint regularly confronted colleagues. More advanced postgraduate teaching is needed by GPs for GPs on this topic.

Delayed diagnosis/ referrals

The most important disadvantage of continuity of care is its association with delayed diagnosis and referral. Sometimes, when doctors and patients have seen each other often, the doctor's diagnostic acuity becomes blunted as he/she stereotypes the patient and misjudges the significance of new symptoms. Thus, familiarity breeds neglect**.**

Ridd, Ferreira, Montgomery, Salisbury, and Hamilton (2015) found patients with a regular doctor had a marginal delay, estimated at 7 days, in the detection of bowel cancer, but no delay for breast or lung cancer and received better subsequent GP management for cancers. More delays occurred after referral.

The alternative view is that it is loss of continuity that fuels delays. Risi et al. (2015) found patients with new cancers had on average seen eight different GPs before referral. On the crucial issue of trust in GPs, which follows continuity of care, there is conflicting evidence. Diagnoses are delayed in general practices with good access to the choice of doctor, but also trust in their doctors by patients is associated with earlier diagnosis of cancer. Apart from cancer, Drivsholm and de Fine Olivarius (2006). found that GPs diagnosed diabetes earlier in patients they knew well.

For generations, GPs practised continuity and experienced its benefits, without having a scientific basis for its use. Research on continuity started in the mid-20th century and has steadily progressed. Science now shows the power of a patient and doctor who know each other working together. Bankart et al. (2011) found that NHS patients, consulting the GP of their choice, have significantly less chance of a subsequent emergency hospital admission compared with seeing some other GP. Given how crude this outcome is, the implication is that the quality of a consultation involving a patient who trusts the GP is far superior to a consultation when the patient is seeing some other GP.

Recently, big databases have facilitated cohort studies. These reveal that continuity of care is significantly associated with reduced death rates. A paradox exists, as research on continuity has increased in breadth and power, so continuity of GP care in the NHS has reduced. Over a quarter of NHS patients seeking a GP of their choice are unsuccessful (Aboulghate et al. 2012), a serious failure of personal doctoring.

Why GPs do not value and practise continuity of care

There are at least nine reasons why GPs do not value or always try to provide continuity.

Inadequate knowledge of research

GPs are excellent verbal communicators and Wanless 2002 reported that they have greater patient satisfaction scores than hospital outpatients and inpatient clinics. However, GPs read less about their own discipline than do specialists about their areas. Many GPs do not know, or really believe, that continuity has all thebenefits listed. GP training currently does not provide enough research-based teaching, as many GP trainees are emerging unaware of most continuity research.

Misunderstanding personal lists

The best way of improving continuity in general practice is through personal lists (Pereira Gray, 1979). These significantly increase continuity (Freeman and Richards, 1990; Roland, Mayor, & Morris, 1986) and patients in such practices are significantly more satisfied (Baker and Streatfield, 1995). We have used them continuously since 1974. They do not require any additional expenditure by the NHS and operate more efficiently.

Some wrongly believe that personal lists cannot be used if GPs work part-time; however, in fact they are regularly used in many practices with part-time partners. Freeman and Richards (1990) suggest that personal-lists reduce patients' choice of doctor, but personal-list practices should allow patients to change personal doctor. One issue is when a patient of one gender needs an intimate physical examination when their personal doctor is the opposite gender, usually female patients registered with male doctors. Personal-list practices should accommodate such reasonable wishes and practice nurses do perform many cervical smears. Most practices now have female doctors and Sidaway-Lee (2016, personal communication) has quantified this uptake. Overall, personal lists more than compensate for these problems by the increased continuity and the enhanced GP sense of responsibility for patients, which triggers increased GP responsiveness and patients' greater satisfaction, trust in the doctor and adherence to advice. The key research is better patient satisfaction with personal lists (Baker & Streatfield, 1995).

Continuity conceived as an administrative rather than a clinical issue

Continuity is sometimes seen as an administrative feature of general practice, and even the RCGP Curriculum (2016) places record-keeping in the same sentence as personal relationships. We believe continuity is a *clinical feature* associated with high-quality care. Hence, the title we chose for this paper.

Day-to-day pressures

General practice is currently under significant strain, this leads to short-term pressures to get a patient seen by any doctor, and not necessarily the doctor the patient wants to see. There is no immediately obvious adverse effect. However, outcomes are different when patients see the GP of their choice, as significantly fewer emergency hospital and elective admissions follow (Bankart et al., 2011).

Most GP receptionists are not trained in the benefits of continuity. They see their job as getting a patient seen, rather than helping the patient to see the doctor they would like to consult. GP partners are responsible for policy, and receptionists need specific training in the benefits of continuity. The RCGP curriculum states that GPs should be aware how prioritising access may reduce continuity.

Bigger groups

General practices are coalescing into bigger groups, which have reduced access and continuity. A major problem in combined-list practices is 'collusion of anonymity' (Balint, 1957), that is the patient getting lost between doctors, which can have lethal consequences. Hill and Freeman (2011) reported a patient with mental illness having had nine GP consultations in a year before committing suicide. That general practice gave that patient 90 minutes of attention, but most of the doctors seen did not feel responsible. The RCGP curriculum states that GPs should provide opportunities for continuity of care to people with mental illness.

Counter measures are possible, such as grouping GPs and nurses into 'micro teams' or 'teamlets'. In combined-list practices these improve continuity and, if a single GP takes responsibility for each patient, then personal lists are achieved.

Policy pressure for access

The Government has prioritised access, fostering the idea that any doctor will do.

Lack of action by allies

General practice does not receive enough support from its allies. Patients have been observed to take-up evidence-based preventive medicine significantly more often if they receive continuity of GP care. Public health bodies should campaign for such continuity, if only to improve preventive care.

Reducing emergency admissions is a Department of Health (DH) priority, so the DH should foster continuity in general practice, as it reduces emergency admissions. The DH's substitution of practice registration for doctor registration was a policy mistake, as the first rule of management is to clarify who is responsible. This problem has been partly solved by the creation of personal lists with 'named doctors'.

Changes in newly qualified GPs

A new factor weakening continuity in UK general practice is the reluctance by some newly qualified GPs to commit to long-term working. Factors

include: uncertainty about DH policy and perverse NHS financial incentives that favour locums. General practice is flexible enough to accommodate many sessional doctors, but the recent increase in locums is different. Locums do not commit to the patients or to the practice and reserve the right to stop work when they want to or to change jobs. Locum work usually focuses on single consultations with a few reaching care over episodes of illness. Locums cannot usually acquire significant 'accumulated knowledge' and provide the 'higher-level' GP care needed to achieve the large gains from continuity: trust, satisfaction, compliance, amelioration of social disadvantage, take-up of preventive care, and reduced rates of deaths. Patients understand this: Clare Rayner, President of the Patients' Association, once said: 'God preserve us from your locums!' If too many GPs work as locums, then younger GPs will inhibit their own professional development and lose opportunities to practise 'higher-level' general practice skills. This might degrade the overall quality of GP consulting in the UK.

Age cohort

Newly qualified doctors are in an age-cohort that generally values continuity to a lesser extent than patients and are less likely to have experienced it themselves. They may value it less than older patients.

Time

The over-riding constraint in general practice is time. Time constrains GPs more than other doctors, as their role is the broadest in medicine and to practise person-centred medicine, generalist doctors must work in three dimensions: physical, psychological, and social, simultaneously. Patients value doctors who listen to them unhurriedly (Lings et al. 2003). Textbooks state that doctors need to identify 'the patient's ideas, concerns, and expectations'

Hence, the doctor needs to understand the context of both the illness and the patient. Do they live alone? Are they pressurised at home or at work? Of what are they frightened? How do they respond to illness? What relevant determinants of illness are present?

'Higher-level' GP skills need accumulated knowledge, and time. Patient satisfaction with accident/emergency medicine, which is relationship-free, is much lower than with general practice. Doctors tend to overestimate their effectiveness when consulting with patients they do not know, and underestimate their effectiveness when consulting with patients they know.

Extending time with patients

There are two ways of obtaining more time: lengthening consultations or continuous care. General practice has progressively lengthened the duration of booked consultations with good evidence that longer consultations benefit patients (Wilson and Childs 1991). Since 2014, we book 15-minute appointments, but appointment demand limits further lengthening. Continuity is the main

way GPs gain time with patients, without extra cost.

General practice operates at three levels: when the doctor's sense of responsibility is limited to the consultation, when the sense of responsibility relates to the illness-episode, and when the doctor's inner sense of responsibility for the patient extends into the future. A key test in group practices is whether doctors know or expect to see the patient again, and whether or not they care if they do. About 15 patient–doctor consultations are needed to achieve important accumulated knowledge, which leads to mutual understanding and respect.

In our personal-list practice the median duration of registration of 8559 patients is 7 years, so our average patient has attended more than the necessary 15 times before consulting. Improving continuity means measuring it within the practice. 'If you do not measure it, you cannot manage it'. Measuring longitudinal continuity is easy and can be helpful (White et al., 2016), but the best approach is to measure, as we do monthly, the percentage of personal continuity provided by all GP partners.

The future of general practice

Some visualise GPs as 'expert generalists' suggesting their future is seeing patients after referral from nurses. We know no research supporting this proposition, and as multi-morbidity mainly affects the elderly, this role is akin to a community geriatrician. Research supports GPs providing continuity for many groups of patients. Therefore, GPs should be primarily, personal, generalist, doctors seeking to build therapeutic relationships for a personal-list of patients for whom they feel responsible. Improving continuity is THE clinical challenge**.**

Key points

- Continuity of care has a large number of benefits for patients, for GPs and for the NHS
- The research on continuity is relatively unknown and deserves much more attention
- Continuity of care is deteriorating in NHS general practice
- Combined-list practices face the problem of collusion of anonymity, which can have serious consequences for patients
- Personal lists produce significantly more continuity of care and higher patient satisfaction
- Continuity of care is a central feature of high-quality general practice

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