

Continuity of Care

Literature review and implications

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الرعاية المستمرة مراجعة الأدبيات ومقتضياتها

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الملخص: تعتبر الرعاية المستمرة من أساسيات الرعاية الأولية. إن هدف هذا المقال هو مراجعة الأدبيات لمعرفة مفهوم الرعاية المستمرة والتركيز على العوامل التي تؤثر على الاستمرارية، وإيجابياتها وسلبياتها. وكذلك تأثيرها على النتائج. ومن ثم على جودة الرعاية. تمت مراجعة المعطيات الإلكترونية ومواقع الشبكة الدولية التي تحتوي على الأدبيات ذات العلاقة. أظهرت نتائج هذه المراجعة أن الرعاية المستمرة تتأثر بالعوامل الديموغرافية والعوامل التي تتعلق بالمريض والعاملين في حقل الطب وعلاقة المريض مع العاملين في مهنة الطب والعلاقة بين العاملين في مهنة الطب أنفسهم وتصرف موظفي الاستقبال وكذلك الشؤون التنظيمية. أظهرت الدراسة وجود إيجابيات عديدة للرعاية المستمرة في مجالات التخصصات الطبية المختلفة كالطب الوقائي والصحة العامة وصحة الأمومة والطفولة والصحة النفسية والعقلية والأمراض المزمنة. وكذلك تكاليف الرعاية. هناك عدة عوامل تؤثر على الرعاية المستمرة. معظم أنواع الرعاية المستمرة لها نتائج جيدة ولهذا تؤثر بشكل غير مباشر على نوعية الرعاية - لذلك يتحتم على العاملين في الحقل الطبي وواضعي السياسة الصحية ملاحظة تلك النتائج الإيجابية للرعاية والعوامل التي تؤثر عليها إذا كانوا يريدون المحافظة عليها كأساس للرعاية المستمرة.

مفتاح الكلمات: مراجعة الأدبيات، الرعاية المستمرة، طبيب مارس.

ABSTRACT Continuity of care is widely regarded as a core value of primary care. The objective of this article is to explore the literature about the concept of continuity of care focusing on factors that influence continuity; advantages and disadvantages of continuity and the effect of continuity on outcomes, hence on the quality of care. Electronic databases and other websites were searched for relevant literature. The results of this review showed that continuity of care is influenced by demographic factors, factors related to patients and healthcare professionals, patient-healthcare professional relationship, inter-professional factors, role of receptionists and organisational factors. Several advantages were found to be associated with most types of continuity in various medical disciplines preventive medicine, general health, maternity and child health, mental and psychosocial health, chronic diseases and costs of care. Various factors influenced different types of continuity. Most types of continuity were associated with good outcomes, hence indirectly affecting the quality of care. Health care professionals and policy makers should be aware of the effect of continuity on quality of care and of the factors that influence continuity if they wish to preserve it as a core value of primary care.

Keywords: Continuity of care; General Practitioner; Literature review

CONTINUITY OF CARE HAS BEEN REGARDED as one of the core values of primary care and as a fundamental part of the work of the general practitioner (GP).¹ Evidence from international literature has shown that the strength of a country's primary care system is associated with improved population health outcomes.² Continuity is a complex concept because it means several different things;

hence many types of continuity have been identified, which are defined in Table 1.

Throughout the world, good quality primary care improves health outcomes for the population;⁶ continuity powerfully affects patient-focused outcomes.^{7, 8} However, in many countries, enormous changes are occurring in primary care organisations, such as increasing care team membership of professionals allied

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to medicine.⁹ Thus, patients can consult several health care professionals and may be given conflicting advice by different team members.¹⁰

Where services are not available in primary care, patients may move to secondary care, potentially affecting the continuity and hence the quality of care. Furthermore, the information in clinical records may be incomplete or incorrect and problems may be compounded between care settings.¹¹ GPs are thus faced with a challenge to provide good services, including continuity, to ensure good quality of care. The aim of this paper is to provide an overall review of the literature for the concept of continuity of care, focusing on factors that influence continuity, advantages and disadvantages of continuity and how continuity affects the outcomes and hence the quality of care.

LITERATURE REVIEW SOURCES

The electronic databases searched were Medline/PubMed (from 1966), EMBASE (from 1980), CINAHL (from 1981), PsycINFO (from 1967), and Web of Science Citation (from 1981). Other websites were also searched, including the Cochrane Library, Science Direct and Ingenta. The search terms used were “continuity”, “coordinated care”, and “seamless care” in combination with “factors”, “process”, “outcomes”, “patients”, “general practitioners”, “family doctors”, “family practitioners”, “primary care practitioners”, “family physicians” and “GPs”. The literature review was not limited to particular countries, but only included literature published in English. Abstracts of retrieved references were studied; copies of original articles were requested if they could not be obtained electronically.

REVIEW RESULTS

FACTORS WHICH INFLUENCE CONTINUITY

A number of factors identified from the literature influence each type of continuity as outlined in Table 1; these include demographic factors, patient and healthcare professional factors, patient-healthcare professional relationships, inter-professional factors, the role of receptionists and organisational factors.

Demographic factors

In the USA, a study found that the majority of patients intended to stay with their doctors as long as they could travel to the practice.¹² In contrast, another study in Australia showed that geographical distance was not the sole, nor even the most important, determinant of

choice of general practice or of a doctor with whom patients felt more comfortable.¹³ Indeed, people who are more mobile and have frequent changes of address are less likely to keep in contact with the same doctor; hence they are less likely to be followed up by the same doctor.¹⁴

Patient and healthcare professional factors

Patients sometimes wish to exercise choice of healthcare professional because of the particular nature of their problem. A female patient might choose a female doctor for a gynaecological problem, or a doctor with manipulation skills for back pain.¹⁵ Patients also want to be able to choose a doctor with whom they have a rapport and whom they could entrust with their confidences.¹⁶

Studies have shown that a high level of continuity is more important for certain conditions than others. Schers et al.¹⁷ found in the Netherlands that although patients felt it was important for them to see their personal doctor, fewer did so for minor problems than for family problems or to discuss the future when they were seriously ill. Kearley et al.¹⁸ found in the UK that the majority of patients highly rated relational continuity, particularly for more serious conditions such as cancer, psychological problems, and family problems. However, relational continuity had much less value for minor and acute illnesses such as cough and cold, itchy rash, painful knee and contraceptive advice.

Patients of full-time GPs experience higher levels of continuity than patients of part-time GPs.¹⁹ However, healthcare professionals in different countries are increasingly taking on other responsibilities, such as management and teaching, which reduce their availability to patients.²⁰ Consequently, patients may find that their chosen doctor is only available on some days or at particular times of the day; therefore, their attachment to a particular doctor may decrease.²¹ Whilst GPs regard continuity as an important aspect of patient care and would like to be available to see every patient at every consultation, they feel that this is an unrealistic expectation and that continuity could be provided by different doctors within the same practice (team continuity) if they have good working relationships.²²

Patient-healthcare professional relationship

Patients who exhibit trust are more likely to have had a longer relationship with their doctor.²³ Lack of trust or confidence could lead to conflict between patients and doctors which enhanced movement of patients from

Table 1: Definitions of different types of continuity as emerged from the literature

♦ Experienced continuity - the patient's judgement of co-ordinated and smooth progression of care. ³
♦ Relational (interpersonal) continuity * - an ongoing therapeutic relationship between a patient and one or more providers. ^{3,4}
♦ Team continuity - Care obtained from a group of healthcare professionals working in either primary or secondary care settings, providing consistent communication and co-ordination of care for their patients.
♦ Cross-boundary continuity - Care that follows the patient across settings (e.g. from primary care to hospital or vice versa). ³
♦ Longitudinal continuity * - care from the same healthcare professional or as few professionals as possible, consistent with other needs. ³
♦ Flexible continuity - services that are flexible and adjusted to the needs of the individual over time. ³
♦ Management continuity - a consistent and coherent approach to the management of a health condition that is responsive to a patient's changing needs. ⁴
♦ Geographic continuity - care that is given or received in person on one site (office, home, hospital, etc). ^{4,5}
♦ Informational continuity - information transfer that follows the patient. ³

* Relational continuity and longitudinal continuity are not easy to distinguish from each other and are therefore often regarded as one type of continuity.⁴

one doctor to another.²⁴

Patient satisfaction has been regarded as an important measure of good quality of care; continuity has been associated with increased patient satisfaction.^{20, 25} Patients who experienced relational continuity were more likely to be satisfied with their consultation than those who had seen different GPs, thus, reinforcing longitudinal continuity might be one way of increasing quality of care.²⁶

Inter-professional factors

Inter-organisational communication (continuity of information) among multiple providers is the core function of consistency and has been regarded as central to continuity of patient care.¹⁵ However, healthcare professionals must accept responsibility for overall co-ordination, including responsibility to communicate, in order for coordination to occur.²⁷ Cross-boundary continuity between the practice and the hospital needs effective communication and problems in communication between different services disrupt cross-boundary continuity.²⁸

Role of receptionists

The behaviour of receptionists tends to vary with the size of the practice; as the organisation becomes more complex, the accessibility to a named healthcare professional is reduced. Therefore, patient criticism of receptionists becomes more frequent as the organisation

becomes bigger and more complex, as patients find it more difficult to access the doctor of their choice.²⁹ Kibbe et al.³⁰ in the USA, recognised the role of the receptionist in making it easier for patients to see their usual doctor; they therefore emphasised the importance of training receptionists to help in this respect.

Organisational factors

Studies have consistently shown that longitudinal continuity is higher in smaller than in larger group practices and that patients registered with doctors in large practices are usually not guaranteed to see either the same doctor or their doctors of choice.²⁰ In countries such as the UK, the Netherlands, and Denmark, where patients are registered with a named doctor, longitudinal continuity might be promoted.³¹ However, in other parts of the world, particularly where primary care services are provided privately, it can be difficult for patients to maintain longitudinal continuity. For example, in the USA where primary care is frequently provided by Health Maintenance Organisations, health insurance has led to increased access to care being accompanied by an interest in reducing costs. Thus, patients have to enrol with a new doctor annually if their company's insurer swaps policies in response to market competition; this affects both relational and longitudinal continuity.¹⁶

Table 2: Summary of the advantages of different types of continuity

Area/ discipline	Type of continuity	Advantages
Preventive medicine and general health	Geographic	Patients reported better screening of blood pressure, cholesterol, and cervical cytology. They reported ease of following advice for smoking cessation, exercise and diet
	Longitudinal	<ul style="list-style-type: none"> • Improvement in control of hypertension and more compliance with medication • Blood pressure and cholesterol are checked regularly • Decrease in illness visits <ul style="list-style-type: none"> • Improvement in diagnosis of bacterial meningitis • Fewer missed appointments • Less smoking, more exercise and weight control
Maternity and child health	Relational (midwife)	<ul style="list-style-type: none"> • Reduced risk of white coat hypertension, pre-eclampsia and use of epidural anaesthesia <ul style="list-style-type: none"> • Low rates of episiotomy, perineal lacerations and electronic foetal monitoring
	Team (midwifery)	<ul style="list-style-type: none"> • Low rate of Caesarean Section and reduction in analgesic requirements during delivery. <ul style="list-style-type: none"> • Higher birth weight of infants and fewer admissions of infants to a neonatal intensive care unit
	Longitudinal	<ul style="list-style-type: none"> • Good maintenance of the child's developmental and immunisation profile <ul style="list-style-type: none"> • Reduced incidence of rheumatic fever in children
Behavioural, mental and psycho-social health	Team	<ul style="list-style-type: none"> • Reduced risk of re-admission of psychiatric patients and risk of suicide
	Relational	<ul style="list-style-type: none"> • Increased trust, confidence, and rapport between the patient and the healthcare professional; patient discloses psychosocial problems • Greater enablement in the consultation and increased patient satisfaction • Patients less likely to have drug and alcohol abuse behaviour • Healthcare professionals became better at understanding patients' social and family context; they becomes better at identifying patients' psychosocial problems and unspecific symptoms
Cancer	Geographic	<ul style="list-style-type: none"> • Better screening of cervical cytology
	Longitudinal	<ul style="list-style-type: none"> • Better cancer screening
Asthma	Relational	<ul style="list-style-type: none"> • Better emotional and mental well-being
	Longitudinal	<ul style="list-style-type: none"> • Good communication with the healthcare professional
Diabetes	Relational	<ul style="list-style-type: none"> • Better emotional and mental well-being
	Longitudinal	<ul style="list-style-type: none"> • Good preventive measurements (more foot examinations, blood glucose monitoring, retinal examinations, etc.) and usually better diabetic control
	Team	<ul style="list-style-type: none"> • Good diabetic control

Advantages of continuity

Continuity of care has been regarded as a crucial component of quality of care,³² as it influences both the process (interactions between users and services) and outcomes of care.³³ Furthermore, continuity of care has been evaluated concerning the extent to which it has an impact on healthcare outcomes, such as prevention or reduction of physical, mental, and social disabilities, increased patient satisfaction and reduced aggregate healthcare spending.³⁴

Table 2 summarises the advantages of different types of continuity within various medical disciplines. The details of the association between different types of continuity and outcomes of care for the various medical disciplines will each be presented in turn.

Preventive medicine and general health

Steven et al.³⁵ in Australia found that patients, who only visited one practice on a regular basis, were significantly more likely to report for blood pressure, cholesterol screening, and cervical cytology testing, and to follow smoking cessation, exercise and dietary advices.³² Devroey et al.³⁶ found in Belgium that patients without a named GP were less likely to have a healthy lifestyle than those who had a named GP. They were more likely to smoke, be less physically active, less concerned about the calories in their food, and have their blood pressure and cholesterol checked less frequently.

Mainous et al.³⁷ found in the USA that having a regular doctor was associated with a higher likelihood of attempted weight loss among obese patients. Furthermore, it has been shown that continuity with a

GP for hypertensive patients is associated with a lower chance of developing hypertension-related complications, such as stroke, congestive heart failure and acute myocardial infarction.³⁸

Women who experienced longitudinal continuity over one year were more than four times as likely to have had a Papanicolaou smear test for early diagnosis of cervical cancer, twice as likely to have had a breast examination, and three times as likely to have had a mammogram compared with those without.³⁹

Maternity and child health

A known midwife has been found to reduce the likelihood of white coat hypertension, decrease the risk of pre-eclampsia, reduce the use of epidural anaesthesia during delivery, and is associated with lower rates of episiotomy, perineal lacerations and electronic foetal monitoring.⁴⁰ If women have continuity in the midwifery team during the antenatal period, there is a reduced rate of caesarean section, a lower risk of miscarriage and more likelihood that labour and delivery occur without intervention.⁴¹ On the other hand, midwifery team continuity seems to have no effect on improving psychological outcomes, such as improved postpartum depression.⁴²

In child health, the records of physical problems in children, as well as immunisation and developmental profiles, are more likely to be maintained with longitudinal continuity.⁴³ Psychosocial problems in children are more likely to be recognised if the children are evaluated by their usual GP.⁴⁴

Mental and psychosocial health

Patients who had a usual GP are less likely to misuse drugs and alcohol and have a better emotional status and mental well-being than those without.⁴⁵ Moreover, there is a widespread belief that failure to provide continuity of care may increase the likelihood of untoward incidents such as suicide.⁴⁶

Relational continuity is commonly associated with increased patient satisfaction with the consultation and services provided in primary care,^{26, 47} trust in the usual doctor and midwife,²³ familiarity with and confidence in the usual doctor,¹² and easy communication with the usual doctor.⁴⁸ Lack of relational continuity, on the other hand, is associated with an increased number of relationship problems between the patient and the doctor, including 'difficult' consultations, non-attendances and communication problems.⁴⁹

Chronic diseases

The willingness to undertake cancer screening is higher in patients with a regular care provider and longitudinal continuity has been associated with stricter adherence to recommended screening among patients with colorectal cancer.^{50, 51}

Love et al.⁵² assessed the role of relational continuity in predicting the perceptions of the physician-patient relationship held by patients with asthma. They found that for these patients continuity of care was an important factor, which contributed to good communication with the usual doctor.

In Type 2 diabetes, relational and longitudinal continuity could decrease diabetes-related complications and improve the quality of life⁵³; however, another study showed that longitudinal continuity was associated with significantly more diabetic complications.⁵²

COSTS OF CARE

People who see the same doctor (relational and longitudinal continuity) have fewer and shorter hospitalisations, decreased use and utilisation of emergency departments, fewer operations, fewer duplicate diagnostic tests, decreased use of open access clinics and hence reductions in resource utilisation and costs.^{49, 54}

DISADVANTAGES OF CONTINUITY

A study has shown that continuity could sometimes waste resources by increasing prescribing, referral, and the issuing of sickness certificates.⁵⁵ Patients who knew their doctors well, sometimes persuaded them to do more because they felt more empowered, and these doctors responded by trying to do more for such patients; thus, rational continuity in such circumstances is not cost effective.⁵⁶

Sometimes, a GP who frequently sees the same patient might miss the slow development of disease, while another GP who has not previously seen the patient might recognise it.⁵⁷ For example, patients with chronic, recurring depression, who received care from their primary care physician, continued to be distressed with unrelieved symptoms.⁵⁸ In diabetes, longitudinal continuity has been associated with worsening diabetic control and increased risk of complications.⁵³

Within the context of team continuity, there might be a problem in the relationships between team members or between any member of the team and the patient.⁵⁹ Availability of medical records, including electronic records (continuity of information), is particularly important when a different healthcare profes-

sional needs to know what is already known, or has been deduced, about the patient. Nevertheless, the security and confidentiality of electronic information cannot be guaranteed, particularly if the information is shared in a network between different healthcare organisations.⁶⁰

DISCUSSION

The purpose of this integrated literature review is to explore the concept of continuity of care, with particular emphasis on factors that promote or inhibit continuity, the advantages and disadvantages of continuity and the effect of continuity on outcomes, hence on the quality of care.

Several factors were found to influence continuity of care. The development of primary care organisations is an essential process of modernisation that goes with the development of society and technology; however, this development could harm some types of continuity, hence indirectly affecting the quality of care. Many GPs now work in teams with nurses, receptionists, and other professionals allied to medicine.⁹ However, there might be concern that patients will get confused within the context of team continuity, if management is inconsistent, hence the quality of care provided for patients might be affected. Indeed, it is damaging to patient confidence if one member of the team, for example, is known to act differently in certain situations.¹⁵ Nevertheless, being registered in a large practice is usually not a guarantee that the patient will see the same GP consistently, as the practice's systems may not promote longitudinal continuity.⁶¹

Unavailability of the patient's usual GP could interfere with continuity;³ indeed, many patients still prefer small practices rather than larger ones because they perceive that larger practices offer less relational and longitudinal continuity.⁶² Thus, this component of quality, 'personal care', could be affected.

Patients in primary care could move between different care settings and consult specialists at the hospital. As a result, they may be given conflicting advice. Poor communication with hospitals caused difficulties, which were a source of dissatisfaction in primary care leading sometimes to poor quality of care provided for patients.⁶³

Medical records may be incomplete, not recorded sufficiently or recorded incorrectly. Furthermore, doctors and nurses who treat patients do not always have the information needed for the consultation, and pa-

tients may thus have to repeat the same information to different healthcare professionals. The problem may be worse if patients move between primary and secondary care settings, especially if the transfer of information between the two settings is delayed, thus potentially affecting the quality of care. Electronic communication may be important to avoid duplication of services.⁶⁴

Relational continuity improved the relationship with the named professional.⁶⁵ A doctor who knew the patient was more likely to identify appropriate therapies.⁶⁶ Also, knowing the patient contributes to quality of care by ensuring that patients are treated as individuals; it is associated with increased knowledge which can inform decision-making and may be a factor that improves patient outcomes.¹⁶

The potential risk of familiarity leading to misdiagnosis may occur in relational continuity because GPs may assume that they are already aware of everything significant and may not conduct more important investigations.⁶⁷ Misdiagnosis is one indicator of poor quality. Indeed, patients reported benefits of consulting an unfamiliar doctor, such as early detection of diabetes.^{62, 68} However, unfamiliar doctors may not show a personal interest and be more likely to provide physical rather than psychosocial care as the length of contact is usually short.¹⁸

Although quality of care is a complicated concept meaning different things to managers, patients and practitioners, who may each use different methods for its measurement, continuity of care has been regarded as a crucial component of good quality care.⁶⁹ Team continuity has been found to provide good quality care;⁷⁰ there were fewer short and long-term complications of chronic diseases in large practices that implemented a team approach.⁶⁹ This might indicate that the "physical" care provided by team continuity, rather than "personal" care accruing in relational continuity, plays a role in achieving good outcomes.

On the other hand, certain elements in relational continuity (trust, confidence, good communication, good rapport) can make patients adhere better to recommendations leading to improved outcomes.⁷¹ Also, the usual healthcare professional may understand the patients' views of the diseases better, thus influencing self-care and, thereby, improving outcomes.³³ However, sometimes healthcare professionals may be concerned that circumstances promoting relational continuity could impede their developing skills to manage

chronic diseases.⁷²

IMPLICATIONS OF FINDINGS FOR PRACTICE, POLICY AND RESEARCH

Several recommendations have emerged from this review for policy makers and researcher at primary care level to improve quality of care. Whilst there are some advantages in consulting an unfamiliar doctor, patients' priorities and requirements should be paramount. Patients may seek relational continuity in a practice where organisational factors prevent them from accessing their usual healthcare professional. Healthcare professionals must be aware that the continuing relationship between patients and their usual healthcare professionals should not be threatened. Indeed, relational continuity appears to be important for providing more "psychosocial" than "physical" care. Therefore, if healthcare professionals and policy makers wish to preserve continuity as a core value of primary care, they should be aware of the threat to relational continuity as future policy is developed.

It seems that there is more need for effective communication between the practice and hospital to improve cross-boundary continuity and thus to improve the quality of care. Healthcare professionals should be aware that poor communication between primary and secondary care may impede cross-boundary continuity. Better implementation of technology, such as computer links and e-mails to improve communication between the practice and the hospital, should improve cross-boundary continuity thus indirectly improving quality.

Receptionists have a role in determining some aspects of continuity in primary care; hence the training of receptionists could be targeted to emphasise the importance of patients seeing their usual healthcare professional, whenever that is possible and appropriate.

As stated previously, there are enormous changes occurring in primary care organisations as part of development and "modernisation", but this has affected continuity of care. Therefore, in the light of these changes, future research is needed to explore how patients and healthcare professionals experience continuity of care in primary care.

CONCLUSION

Several factors have emerged from the literature which has influenced the various types of continuity, these include demographic factors, factors related to

patients and healthcare professionals, patients-healthcare professional relationships, inter-organisational communication, the role of receptionists and factors related to the structure and function of primary care organisations.

Most types of continuity were found to be associated with improving outcomes of care, hence indirectly affecting the quality of care. Continuity of care was found to improve outcomes in preventive medicine and general health, maternity and child health, mental and psychosocial health, management of chronic diseases and cost of care. However, there were a few disadvantages associated with certain types of continuity, such as misdiagnosis occurring in relational continuity, problems in delivering consistency of care in team continuity, and the security and confidentiality of electronic information in providing continuity of information.

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COMPETING INTERESTS

None

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