

# The importance of continuity of care in emerging primary health care organisations

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## ABSTRACT

Continuity of care has been a central concept in primary health care. Current and future restructuring of primary health care organisations may result in loss of organisational memory around such concepts. The results of a literature review of the value of continuity of care are presented. The conclusion that can be drawn from the literature is that there is considerable evidence that continuity of care is a valuable concept in primary health care and can result in lower overall health costs and better patient satisfaction.

## Key words

Continuity, care, outcomes, evidence.

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## Introduction

The development of Primary Healthcare Organisations in New Zealand has focused attention on innovative methods of health care delivery. Emerging concepts and structures include independent nurse practitioners, community ownership of primary health care organisations and increased numbers of general practitioners working as employees of health care organisations. Alongside such change is a willingness to challenge the historic and traditional methods of providing primary health

care. Continuity of care has historically been a defining concept of general practice.<sup>1</sup> Furthermore, the Primary Health Care Strategy outlined in 2001 emphasises the importance that the funder places on continuity of care.<sup>2</sup> Unfortunately, the same document does not explain or define continuity of care. Providing this aspect of care requires an infrastructure that recognises and supports the concept. Resource commitment to such an infrastructure should be made on the basis of evidence rather than historical imperatives. This document is concerned with an objective assessment of the value of continuity of care in the primary health sector.

## Method

A search of the Cochrane, Medline, Institute for Healthcare Improvement and National Patient Safety Foundation databases was undertaken using individual and combined search terms of continuity, care, primary health and outcomes. Papers were selected for their relevance to continuity of care in a primary care context. The references from the selected papers were also searched for further relevant papers. It should be noted that the overwhelming major-

ity of research in this area has been undertaken in the USA and care must be taken in extrapolating such results to the New Zealand primary care health sector.

## The meaning of continuity of care

The traditional concept of continuity of care in general practice has focused on the longitudinal interpersonal relationship between doctor and health consumer, particularly from the perspective of clinical responsibility.<sup>3</sup> Contrasting definitions have been coined in recent times concerning the meaning of continuity of care. In particular, the notion of continuity of care being the availability of clinical information across multiple primary care and secondary care providers has been suggested. This concept was examined in a 1998 study that com-

pared the effect of continuity with physicians to continuity with specific health care sites on hospitalisation rates in Delaware. The results showed significantly

higher rates of hospitalisation in a high site/low provider continuity group against a high provider/low site continuity group.<sup>4</sup> The benefits of continuity of care seem to occur in the environment of the interper-

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sonal relationship between physician and health consumer. Validated rating scales have now been developed to measure the concept of continuity of care<sup>5</sup> and the availability of such tools will substantially improve the objectivity of research in this area. In the studies quoted below, continuity of care has been defined by the authors. Each definition is unique, yet all have a common theme: continuity of care is the provision of care by one health professional to a patient over a significant period of time in a primary care setting.

### Continuity of care and health outcomes in type 2 diabetes

Several studies have examined the concept of continuity of care for specific populations and disease states. Diabetes in particular has received considerable attention due to the chronic nature of the disease, the high cost of providing care and the role of primary health care in preventing more expensive secondary health care costs.

A prospective cohort study of 256 adult diabetics with an end point of change in glycosolated haemoglobin levels was undertaken in southern USA. Continuity was measured by the number of visits and the number of different practitioners visited over 18 months. The study concluded that continuity of care with a primary health care provider is associated with better glucose control in patients with type 2 diabetes.<sup>6</sup> Quality of care was also examined in a cross-sectional patient survey and record review of 397 patients with type 2 diabetes in Texas, USA.<sup>7</sup> Continuity was measured as the proportion of visits to the usual family physician. Outcomes were measured using the American Diabetes Association Provider Recognition Program (ADAPRP). There was a positive correlation between the continuity of care score and the ADAPRP score

with the conclusion that continuity of care is associated with increased quality of care in type 2 diabetes.

Quality of life in those with type 2 diabetes has also been examined from the perspective of continuity of care in a multicentre USA study on 260 adult type 2 diabetics.<sup>8</sup> The end point was the change in score on a health-related quality of life questionnaire. The conclusion was that continuity of care positively correlates with improved quality of life for type 2 diabetics.

### Continuity of care and hospitalisation rates

Hospitalisation rates have a significant impact on health budgets. Several studies have examined the influence of continuity of care on hospitalisation rates.

A retrospective analysis of data from the Delaware Medicaid Program was undertaken with the end point of hospitalisation rate for any cause over a two-year period. Continuity of care was defined as three or more visits to their primary care physician. The study conclusion was that there was a significantly decreased likelihood of hospitalisation for those who met the criterion of having continuity of care.<sup>9</sup>

A similar retrospective cohort study of over 46 000 paediatric patients enrolled in a group health collective in Washington, using a paediatric database, produced complementary results. The study used a continuity of care index to assess the degree to which a patient had been exposed to continuity of care. This was compared to hospitalisation rates and emergency department usage. The study concluded that there was a direct correlation between high continuity of care and lower rates of both hospitalisation and emergency department use.<sup>10</sup>

In a retrospective cohort study of 252 children with type 1 diabetes the role of continuity of care as a method of reducing hospitalisation was studied.<sup>11</sup> The end point was the admission rate to secondary care with the avoidable complication of diabetic ketoacidosis (DKA). The conclusion was that low continuity of care was associated with a significantly higher risk of DKA.

Elderly care has become an increasingly important issue for health funders and providers. There is a well-accepted notion of an increasing elderly population with increasing disease burden. A large randomised trial of 776 men aged 55 years or above was undertaken in the

USA. Participants were randomly allocated to either a high continuity of care service or a low continuity of care service. End points of the study were rate of hospitalisation and duration of hospital stay. There was a statistically significant reduction in both hospitalisation rate and length of stay in hospital in the group receiving continuity of care.<sup>12</sup>

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### Patient satisfaction and continuity of care

The three outcomes of compliance with advice, patient satisfaction and improved health status were measured in a cross-sectional observational trial involving 7204 participants in Massachusetts. The conclusion was that all three of these outcomes correlate positively with the physician's knowledge of the patient and the patient's trust in the physician.<sup>13</sup>

In an evaluation of 3918 health consumers of primary health care in Norway, a direct relationship between personal, continuous care and patient satisfaction with a consultation was found.<sup>14</sup>

### Continuity of care is dependant on the quality of the relationship between health care provider and consumer

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### Emergency department utilisation and continuity of care

The Washington cohort study<sup>10</sup> quoted above found a direct correlation between high continuity of care and decreased emergency department use.

A cross-sectional study of over 11 000 participants in the Delaware Medicaid programme found that high provider continuity is associated with lower emergency department use.<sup>15</sup>

### Evidence not supporting positive clinical outcomes

No published papers were found that did not support the beneficial effect of continuity of care. However, there are periodic initiatives by health insurance companies in the USA to move away from the traditional role of the family practitioner and offer open access to specialty opinions.<sup>16</sup> These initiatives have very mixed outcomes in terms of acceptability to the general public.

The study on type 2 diabetics quoted above showed that continuity

of care was associated with higher scores on a health-related quality of life score.<sup>8</sup> However, the same study also indicated a statistically significant negative correlation between continuity of care and HbA1C.

### Conclusion

There is a growing body of data to support the notion that continuity of care has a rightful place as an important facet of primary care. Continuity of care is dependant on the quality of the relationship between health care provider and consumer. As well as increasing patient satisfaction, continuity of care has been shown to decrease hospitalisation rates, length of stay and emergency department utilisation. Better diabetes control and treatment effectiveness has also been observed. Although one study reported a negative correlation between continuity and HbA1C, this

### Continuity of care has been shown to decrease hospitalisation rates, length of stay and emergency department utilisation

conclusion is not supported by studies that specifically chose glucose control as the primary end point. It is likely that the beneficial effects of continuity of care on the outcomes of diabetes treatment would be transferable to other chronic disease states. One of the roles of primary health care is to appropriately target resources in order to avoid inappropriate or unnecessary secondary health care costs. Continuity of care can be conceptualised as an effective mechanism for achieving this goal. The value of continuity of care in primary health care delivery needs to be acknowledged and the concept incorporated into the structure and culture of primary health care organisations.

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