Towards integrated person-centred healthcare – the Canterbury journey

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ABSTRACT

The Canterbury District Health Board (DHB) is the second largest by population (over half a million people) and by geographical area of the 20 DHBs in New Zealand, which were established in 2000. The DHB directly employs over 9,500 staff, and a similar number work in non-governmental sector and private based DHB-funded health services, which includes general practice. The DHB is government funded to plan the strategic direction for health and disability services in Canterbury; fund the majority of health and disability services provided in Canterbury; provide health and disability services primarily for the population of Canterbury but also extensive tertiary services for the South Island and, in some cases, for residents of the lower North Island; and promote, protect and improve the health and wellbeing of the Canterbury population.

KEYWORDS: Integrated care, clinical leadership, whole of system, planning, outcomes

Introduction

Providing an integrated, person-centred health system that crosses the boundaries between primary-, community- and hospital-based care is the goal of most health services worldwide.[1] Canterbury has been identified by the King's Fund as having many similarities with other high-performing healthcare systems, including Jonkoping County Council in Sweden and Intermountain Healthcare in the USA.[2] Since the report by the King's Fund was published in 2013,[3] the Canterbury 'way of working' has been adapted in many health systems across Australasia.

However, whether integrating a system has a positive impact on the population-based outcomes and assists in addressing the increasing burden of disease associated with long-term conditions in ageing populations remains unclear. To date, there has been mixed success; for example, Steventon *et al* (2011)[4] described the Partnership for Older People Projects interventions that provided integrated care in the UK, in which the aim of avoiding unplanned admissions to hospital and reducing net costs was not realised.

Here, we address this challenge and that of the King's Fund report, namely to better demonstrate measureable impacts of a given transformation on patient outcomes. Canterbury has demonstrated measurable reductions in demand for hospital and long-term residential care services, and achieved this while the proportion of people over 65 years has increased from 13.4% to 15.0% between the 2006 and 2013.

Some measurable impacts

Acute admission reduction

Canterbury has developed an integrated response to prevent acute admissions to hospital. Avoiding these is the result of a large-scale acute demand management programme that provides resources and permission for general practice to do 'whatever it takes' supported by a rapid-response community nursing team to provide services in the community for patients who would otherwise require an emergency department (ED) attendance or acute admission.

Acute demand epitomises a patient-centred approach to care that accounts for social circumstances, as well as clinical issues. It is delivered by the general practice team, with support from community-based providers, hospital-based specialist advice and a coordination function based in the Primary Health Organisation. The programme is designed to meet the needs of all people whom the general practice team would have otherwise referred to hospital but who can be safely managed in the community. After analysis, it has focused more on children, older people and people with respiratory- or cardiology-related conditions, but the service is deliberately generic, creating an enabling framework that supports decision-making at the patient–clinician interface. The programme has evolved so that it is now accessed by ambulance paramedics and ED physicians, and nurses 'pull' patients from daily ward rounds to be supported at home with nursing care, home-based support, allied health, diagnostics, meals and medical care as required. These services are available free to the patient (in a healthcare system that only partially subsidises primary care) and are rapidly deployed during their acute episode of illness (commonly 1–3 days).

In Canterbury, acute medical admissions (including direct admissions) have still been increasing over time, albeit at a lower rate than in the rest of New Zealand.[5] Moreover, since the earthquakes in 2010 and 2011, and the doubling of the capacity

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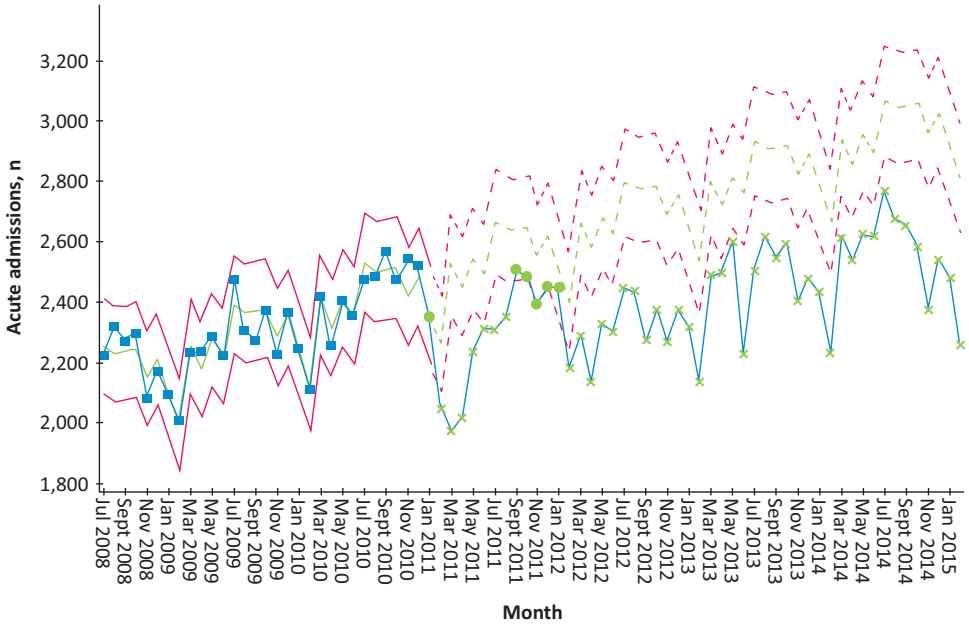

Fig 1. Number of acute admissions in total patient population.

of the acute demand management programme from 14,000 cases per annum to 29,000, the rate of growth has declined even further. Fig 1 demonstrates this growth among the total population and Fig 2 among the over-65-year group, in which acute admissions slowed until a winter spike over the past 12 months.

Age-standardised acute medical admission rates in Canterbury have not only been lower as a result of the Acute Demand Management Programme (which started in 2000), but have also increased at a slower rate than national figures. Fig 3 illustrates that only minor changes in rate occurred associated with the earthquakes (following 2010 and 2011) and that Canterbury is now admitting 30% fewer people than is the practice in New Zealand as a whole. If Canterbury admitted at the national rates, an additional 100 beds (assuming 85% occupancy) would be required.

Reducing length of stay

The integrated system approach by Canterbury has also focused on supporting patients for timely discharge with rehabilitative services in the community. This has particularly enabled older people to return home more quickly, with the number of beds required by people over 75 years with long stays (14 days or longer) decreasing by 28 beds (14%) over the past 12 months (Fig 4).

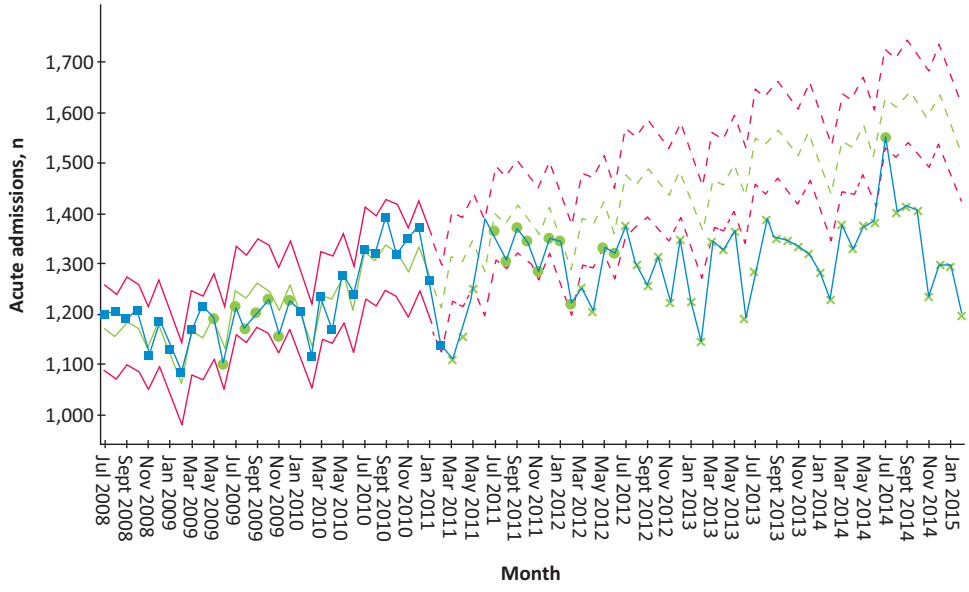

Fig 2. Number of acute admissions in patients over 65.

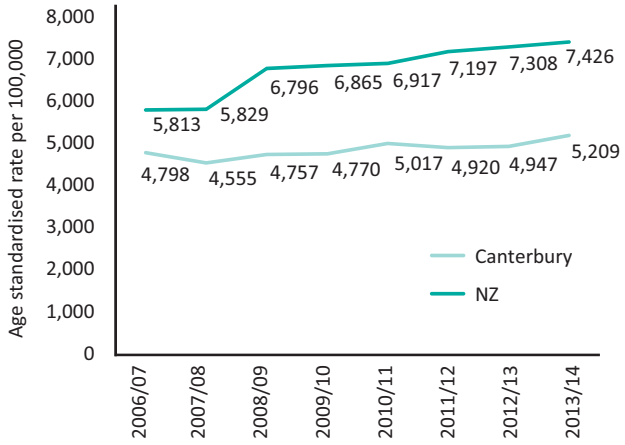

Fig 3. Acute medical admission rate (age standardised).

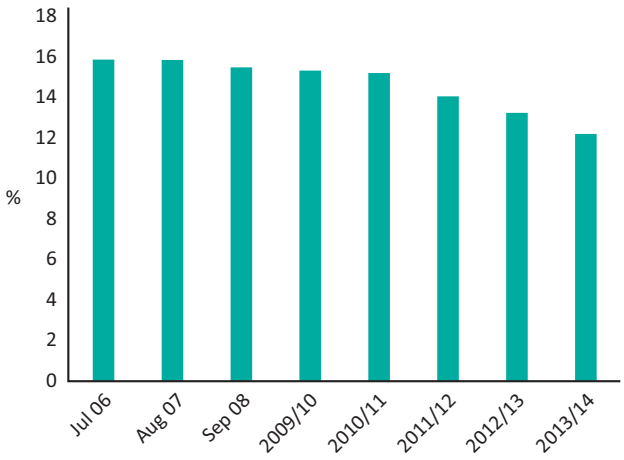

Fig 5. Proportion of population aged 75 years or more living in their own home.

Reduction in aged residential care

The strategy of keeping people well and in their own homes has impacted on the proportion of older people who have remained there rather than requiring residential care. Fig 5 demonstrates that the proportion of people over 75 years of age living in care homes has fallen from approximately 16% to just above 12% over the past 7 years. This reduction equates to over 400 fewer people in such beds despite a growing older population.

Building an integrated health system – a journey

In 2006–2007, the Canterbury District Health Board (DHB) faced several challenges, both clinical and financial, culminating in a deficit of NZ$16.9 million in the 2007–2008 financial year. The DHB had among the longest waiting times for cancer radiation therapy and elective procedures in New Zealand, with low access to diagnostics and to specialist advice for primary care services.[6] This resulted in waiting lists for patients in the community. In 2006, almost 5,000 people were abruptly removed from waiting lists for specialist advice or surgery. Elective performance was poor, with 30% less than the required cost-weighted additional electives target being delivered in 2006–2007. Performance on standard measures, such as average length of stay and day of surgery admission, was poor. Christchurch Hospital (the main acute facility) frequently entered 'gridlock'.

These weaknesses were combined with important strengths, including a robust primary care infrastructure and a traditionally strong focus on public health, including high performance in screening and immunisation. These strengths were further developed by adopting a lean thinking approach in the hospital-based system through the implementation of an 'Improving the Patient Journey' project, which began to address some of the patient flow issues.

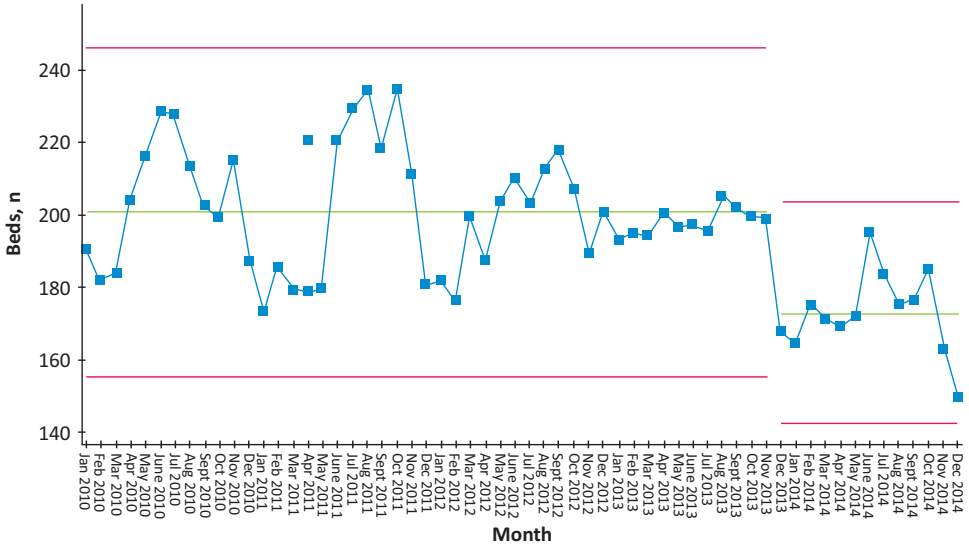

Fig 4. Number of beds required for patients over 75 years old with stays in hospital of over 14 days (excluding mental health, maternity and rural).

Importantly, Canterbury DHB realised that 'business as usual' would by 2020 require an additional 450 acute hospital beds, 20% more general practitioners and 2,000 more aged residential care beds. The metric that captured the clinicians' attention was that resourcing all of this capacity would require another 8,000 people in the health workforce just when the working age population was contracting in size. Based on the realisation that something had to change, Canterbury embarked on a journey of transformation focused on a shared vision of 'a connected system', centred on people that aims not to waste their time'.

The unifying concept of 'not wasting the patient's time' resonated across the system, as did the concept of 'one health system, one budget' and a collaborative way of working based on an alliance approach. This approach empowered a system to not only innovate with a focus on 'best for people', but also to recognise and balance the tension of maintaining a sustainable health system ('best for system').

With the largest population over 75 years of age in New Zealand, Canterbury has maintained a specific focus on keeping older people well, healthy and in their own homes and communities; a reversal of previous trends that has been both remarkable and sustained.

The health services planning exercise (in 2007) engaged more than 1,000 people (clinicians and consumers) painting a picture of a Canterbury health system that was not performing as well as should be expected. Three key approaches for service design were identified that remain at the core of the Canterbury health system strategy.

- Development of services that support people to take increased responsibility for their health and a change of approach within existing services to support this.
- Development of primary healthcare and community services to support people in a community-based setting and provide a point of ongoing continuity.
- Freeing up secondary care-based specialist resources to be responsive to episodic events, more complex cases, and the provision of advice and support to primary and community care.

The strategic direction adopted by Canterbury included a focus on ensuring that community-based capacity and capability could be rapidly developed, so that the design of needed replacement hospital facilities would be done in the context of a functioning whole health system.

The whole-system approach adopted in Canterbury (Fig 6) focuses on doing more in the community, making best use of specialised and scarce resources, and doing the right thing for the patient regardless of historical health system and funding silos. At its core lies identifying what is best for the patient, with what is best for the system as a balancing focus, and an emphasis upon empowering clinical leadership.

This approach is supported by several key enablers in terms of new service models, such as the Acute Demand Management Service (a hospital avoidance programme) and the Community Rehabilitation Enhancement Support Team (a wraparound, home-based rehabilitation programme for older people post discharge).

It is also supported by several key system enablers that allow the Canterbury Health System to evolve and adapt rapidly. Two are described below.

First, since 2008, the HealthPathways and the Canterbury Initiative has involved general practitioners and hospital-based specialists developing and agreeing primary care management and referral pathways.[7] These are published to a website (HealthPathways) accessed by Canterbury clinicians across the system more than 1.3 million times per annum. This resource was developed to address weaknesses in translating clinical guidelines and structured decision support systems into improved practice and patient outcomes.[8] General practitioners perceived that prescriptive guidelines were developed by experts who neither understood general practice nor considered how these could be implemented in the patient consultation.[9] The development of each pathway involved local clinical leadership with general practitioners and hospital

Fig 6. Canterbury health system vision.

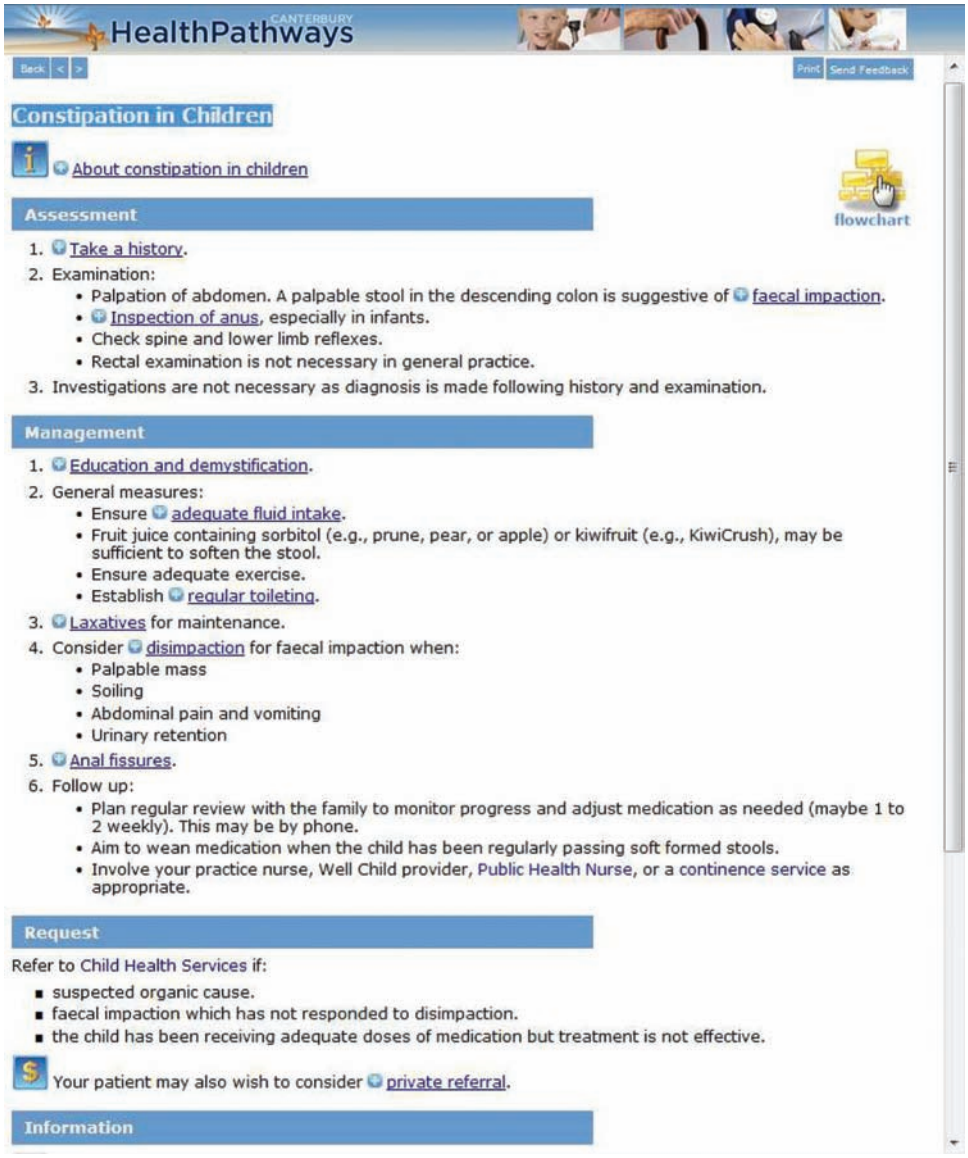

Fig 7. HealthPathways – an example of a clinical pathway.

clinicians discussing improvements in pre- and postreferral patient management, enabled by an integrated funding and service environment. The resulting password-protected website provides over 570 clinical pathways that are consistent, easy-to-follow, localised 'best practice' guidance for GP teams that can be used in the patient consultation.[8]

HealthPathways contains resources specifically developed to help general practice navigate (Fig 7). It is effectively 'the way we do it' for the Canterbury Health System, and has contributed to a 43% increase in population access to elective surgery and saved millions of days of waiting time. Reviews have highlighted the strengths: 'At first sight HealthPathways looks merely like another set of guidelines for treatment or the Map of Medicine. But the way it has been constructed, and what it contains, makes it much more than that. Developed from 2008, it is a set of highly applied and detailed local agreements on best practice.'[10]

There are now more than 600 pathways, and localised versions have been deployed in 23 health systems across Australia and New Zealand, covering a total of 14 million people and allowing these systems to rapidly share and deploy innovation.[11]

Second, alliance contracting for health services was developed in Canterbury to support the strategy of organising a system based on trust and empowering clinicians and consumers to make informed system-level allocation decisions together. It is based on the alliance model of the construction industry and is premised on the view that local solutions developed in the context of local issues are a better way to tackle the problem of health service improvement.

The core of the alliance approach is the clinically led Alliance Leadership Team (Canterbury Clinical Network), which establishes service-level alliances and work groups to drive service transformation and tackle population-level issues, while maintaining an overview and ensuring that the right

connections and balance occur across the health system. The Alliance is not a legal entity in its own right, being reliant on the contribution of the organisations that form its constituent parts. Now a national policy in New Zealand, at its minimum the participants are the DHBs and Primary Health Organisations, but in Canterbury, participation is broader and includes non-governmental organisations (NGOs), pharmacy, public and private laboratory providers, and not-for-profit and for-profit nursing organisations.

The alliance participants formally agree to work together on the basis of balancing the tension between what is best for a patient with what is best for the sustainability of a health system. The DHB in its planner and funder role sits on the Alliance Leadership Team and the model works because there is confidence that the DHB as the ultimately accountable party (in statute) will enact decisions made by the Alliance.

The ultimate test

An extreme challenge for our integrated health system occurred at 12:51 pm on 22 February 2011, when a 6.3 magnitude earthquake struck Christchurch, the second largest city in New Zealand. It claimed 185 lives, destroyed much of the buildings and core infrastructure of the city, and severely disrupted vital services, such as water, power, sewerage and communications. The health system lost 106 acute hospital beds (17% of its acute capacity), other services and facilities had to be vacated, 635 aged residential care beds, 19 community pharmacies and five GPs were lost and many small NGOs were displaced from their central city facilities because the central city was cordoned off for more than 12 months.

Without our integrated way of working, the Canterbury health system would have failed to meet the needs of our population.

The health response led by the Canterbury DHB was highly praised in subsequent reviews of the disaster response and acknowledged by many agencies as a model health system response.[12,13] In the years since the disaster, the Canterbury Health System has continued to demonstrate how an integrated system built upon a shared vision, empowered through trust and using data to plan and drive service improvement, can be resilient enough to tackle the on-going consequences of the largest natural disaster that has occurred in New Zealand (and recognised by insurance reports as one of the top 10 disasters in 2011 and 2012 on a world stage). At the same time, Canterbury has shown that an integrated system can meet the core pressures that health systems around the world are facing; rising demand, an ageing population, limited health budgets and the need to reduce the pressure on ED attendances, acute inpatient admissions and long-term care.

The Canterbury health system is in the midst of a transformation, empowered by engaged clinical leadership across the whole system in the development of integrated patient pathways and innovative models of care to improve health outcomes. Alliance relationships and transparent partnerships have been built up through a shared commitment to the vision of one health system that provides a seamless flow of care, irrespective of the provider.

At its core, its vision is centred on everyone working together to do the right thing for the patient and the right thing for the system, and the key measure of its success at every point is reducing the time people waste waiting. ■

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