

Rural health care in New Zealand: the case of Coast to Coast Health Centre, Wellsford, an early Integrated Family Health Centre

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ABSTRACT

INTRODUCTION: Primary health care is critical, particularly in rural areas distant from secondary care services.

AIM: To describe the development of Coast to Coast Health Centre (CTCHC) at Wellsford, north of Auckland, New Zealand and reflect on its achievements and ongoing challenges.

METHODS: Interviews were conducted with staff and management of CTCHC and with other health service providers. Surveys of staff and a sample of enrolled patients were undertaken. Numerical data on service utilisation were obtained from the practice and from national datasets.

RESULTS: The CTCHC provides a wide range of services, including after-hours care, maternity and radiology, across a network of electronically connected sites, as well as interdisciplinary training for a range of health students. General practitioner (GP) recruitment is problematic and nursing roles have been expanded. Staff report positively on the work environment. Consultation rates are higher than in comparable practices, especially consultations with nurses. Rates of hospital admission are relatively low. The development of the CTCHC was assisted by formation of a local primary health organisation (PHO) and by recognition by the local district health board (DHB). Issues with poor coordination of local services, and less service provision than is characteristic in urban areas, remain. Contracting processes with the DHB were complex and time-consuming. The merging of the local PHO into a larger PHO within the Waitemata DHB catchment inhibited progression towards more complete locality planning.

DISCUSSION: A dedicated and locally controlled provider was able to generate a more than usually complete community health service for Wellsford and area.

KEYWORDS: Interdisciplinary; New Zealand; primary health care; rural health services

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Introduction

The provision of primary health care (PHC) in rural areas has particular challenges and enjoys certain advantages.¹ Difficulties include: a shortage of general practitioners (GPs)—the shortfall is estimated at 20% of the ideal workforce;² high workload and frequent ‘on-call’ duties; and difficulty finding or affording locum cover.^{3–5} These issues will be exacerbated in the future if recruitment is inadequate or if GPs leave rural prac-

tice.^{6,7} Fees in rural practice are relatively low.⁸ It has been estimated that earnings for rural GPs for out-of-hours work and maternity care are less than the minimum wage.⁹ Further, core support services (for example, home phlebotomy, community therapies and gerontology) available in cities may be absent or unaffordable.¹⁰

Advantages of rural PHC include strong relationships with individual patients and the community, and the ability to provide a wider range of

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care than in urban practice.⁵ Lower housing costs and idyllic surroundings are attractive to some, but may be off-set by lack of work opportunities for spouses and perceived deficiencies in educational or entertainment facilities.

For the population, access to care is affected by affordability and distance to services; both are exacerbated by economic disadvantage. Rates of consultation, laboratory testing and prescribing are often lower in New Zealand rural areas.^{11,12} Further, there may be no public transport and no access to public hospitals as an alternative to the after-hours GP service.^{2,6,13}

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System efforts to improve rural PHC in New Zealand have included the refinement of the Rural Subsidy scheme, the formation of the New Zealand Rural General Practice Network, university centres for rural health, and the creation of training programmes for rural practice (for both GPs and nurses). In addition, several rural trusts to support health care have been founded, often based in decommissioned hospitals.

This paper describes development of the Coast to Coast Health Centre (CTCHC) at Wellsford, situated an hour by road north of Auckland. It presents the history and achievements of CTCHC and reflects on further developments, in the hope that others may benefit from understanding the process, as well as by emulating achievements. Further, the paper attempts to present a full picture of a New Zealand rural health service.

Methods

The researchers visited CTCHC and the associated primary health organisation (PHO) offices on numerous occasions between May 2010 and

July 2014. During 2010, informal interviews were conducted, with a purposive sample of clinical, management and reception staff at CTCHC. Interviews were also conducted with staff at a partner organisation, Te Hā Oranga, and with all other local health care providers, including Waitemata District Health Board (WDHB), public health and district nurses, Plunket nurses (Plunket is a New Zealand organisation dedicated to well child care), Wellsford Pharmacy, Te Korowai Aroha, and local occupational therapists and physiotherapists.

A paper-based survey instrument was distributed to the staff of CTCHC, including those working at five peripheral sites, between July and September 2010. Data were obtained on workload and work satisfaction using a questionnaire developed for the evaluation of the New Zealand Primary Health Care Strategy.¹⁴ A random sample, stratified by age, ethnicity (Māori/Pacific and Other) and the NZiDep (New Zealand index of socioeconomic deprivation for individuals; Quintile 1 vs 4/5),¹⁵ was drawn from the enrolled patient register. Each selected patient was called and invited to answer a series of questions. In rating the service, options were those used in the New Zealand Health Survey.¹⁶ The interviewer was employed by the PHO to undertake the survey and so identified himself; he was not known to the respondents who were informed that their identity would be known only to the interviewer. A small group of students were also interviewed and the feedback sheets from all students were reviewed.

Data on fees and utilisation were generated by HealthStat, a system that downloads practice information electronically. Hospital discharge data were obtained from the National Minimum Dataset. This identifies the 'domicile code' of each patient but not the PHC practice or PHO to which they belong. Discharge rates for areas where a majority of patients were enrolled with the CTCHC were compared with rates for the relevant DHBs using adjusted intervention ratios (AIR), which compare the actual rate with the rate that would have occurred if the average discharge rate of all New Zealand public hospitals had applied.

Interview responses were interpreted thematically¹⁷ by one of the authors (AR). Simple descriptive statistics were derived from the questionnaire responses.

Ethical approval for the study was obtained from the Northern Ethics Committee (Ref. NTY/06/12/135).

Findings

History

The primary care practice at Wellsford was founded in the post-war period and, from the mid-1990s, additional practice sites were added. This facilitated continued local access to primary care for the rural population and, by 2010, services were provided at six sites (Wellsford, Mangawhai, Maungaturoto, Paparoa, Snell's Beach, and Matakana). Typically, these practices had been owned and operated by solo medical practitioners who were unable to obtain locum cover, wanted time off, or were unwilling to cope with new compliance and reporting requirements. Wellsford Medical Centre (as it was then known) began by providing assistance and ended by accepting full responsibility for medical and nursing cover. A multi-practice intranet was created in 2003.

CTCHC joined with Te Hā Oranga to form the Coast to Coast PHO (CTC PHO) in October 2003. Te Hā Oranga is the local Māori health services provider, operated by Te Rūnunga O Ngāti Whātua.

In response to the closure of rural maternity facilities in the adjoining township, CTC PHO provided space for a maternity facility (2004), and in response to the imminent closure of the local residential care home, the service was purchased and brought under the CTC PHO in 2009.

In 2009, Wellsford was recognised as an outpost of the WDHB unit for innovation, education, research and health service development (Awhina) and given the name Te Whariki Teitei. It was further recognised by an innovation grant from District Health Boards New Zealand in 2010 and has successfully supported

WHAT GAP THIS FILLS

What we already know: Primary health care is of particular importance in rural areas, but staff recruitment can be problematic. Primary health care needs to provide a wider range of services in rural than in urban areas.

What this study adds: This study describes a rural example of an Integrated Family Health Centre, providing a wide range of services as well as interdisciplinary education. Integrated Family Health Centres have been supported by recent government policy. The study identifies positive results and discusses factors that assisted and hindered development of the health centre.

community activity, conferences and the production of educational material.

Services provided

The functions for which CTCHC became responsible are shown in Table 1, those for Te Hā Oranga in Table 2. Of particular note are radiology and after-hours services. The latter services included extended hours of opening at CTCHC, as well as stabilisation and retrieval of the acutely sick or injured. From the end of 2011, provision was made for point-of-care laboratory testing, reducing waits for test results and enabling a wider scope of informed care of sick patients in the community.

Additional services were provided in Wellsford by visiting health professionals from Warkworth, Auckland's North Shore and from Whangarei. These health professionals included public health nurses, district nurses and Plunket nurses; allied health professionals (five types); and medical specialists (five specialties). Social services were provided by Te Korowai Aroha, an NGO. Integration with CTCHC was informal.

Education

Since 1996, CTCHC has hosted medical students and, to a limited extent, Auckland University of Technology nursing students. This widened into an interprofessional approach (see Finlayson and Raymont¹⁷ for a definition of an interprofessional approach in the context of New Zealand PHC) from 2006, hosting students in a variety of health-related disciplines from tertiary educational organisations in Auckland. These

students are exposed to rural PHC practice and rural lifestyles, and to each other's experience and disciplines. By 2012, 63 students had visited, some by themselves, but mostly in groups of two to seven. Each group undertook a shared project which was presented to members of the community and to the health team at the end of the placement. Feedback from the students has been strongly positive and some have returned to work at CTCHC. The student feedback indicated a new awareness of population health needs and the advantages of interprofessional teamwork

and communication. The components of the programme and the disciplines represented are shown in Table 3.

Uptake by universities and polytechnics of the interprofessional education programme has been very low, despite the provision of accommodation for students. Data gathered on practice placements across professional curricula highlighted silo-based approaches across, and within, tertiary education institutions. It was noted that there is difficulty coordinating work placements across disciplines, lack of any requirement that students experience PHC placements, low value placed on teamwork learning, and reluctance to leave Auckland among both students and teaching staff.

Staff experience

The response rate for the survey was 90% (including 11/11 GPs, 23/26 practice nurses and 14/16 reception and other staff). Where possible, the numerical information that was provided has been compared to that obtained from a national sample surveyed in 2007.¹⁸

General practitioners at CTCHC worked an average of 34.4 hours a week during Monday to Friday 8 a.m. to 5 p.m. 'office hours', and the number of hours reported varied from 27.5 to 42 hours. General practitioners may work an additional 22 hours on call. Nationally, the standard work week for GPs was longer, being 41 hours for all GPs and 42.4 for those working at (access-funded) practices serving disadvantaged populations.¹⁸ CTCHC doctors spent 78% of their time in patient contact, and 16.8% on paperwork and administration. Nationally, GPs spent less time on patient contact (71%) and more time on other categories of work.¹⁸ Respondents were asked to rate their work satisfaction on a scale of 1 (dissatisfied) to 5 (satisfied) over seven domains (rewarding work, work/life balance, practice freedom, professional development, administration support, income, and clinical support). GPs at CTCHC reported an overall satisfaction score (3.7) just above the national average (3.5).

CTCHC nurses averaged a work week of 36.2 hours, longer than that reported nationally (29.6 hours). This included 5.4 hours worked after

Table 1. Activities undertaken and contracts held by Coast to Coast Primary Health Organisation

PHO head contract	Other contracts
First-contact services—enrolled population	After-hours care—all levels
First-contact services—casuals	Labour/delivery and postnatal
Very Low Cost Access Programme	Antenatal and education
Services to improve access (SIA)	Podiatry for at-risk diabetic feet
Health promotion	Meet New Zealand Guidelines Group guidelines (targets)
Primary mental health	Coordination of diabetes care
Immunisation	Educate staff to advise smokers
Immunisation outreach	Coordination and packages of care
Care Plus services	Gardening, weaving and nutrition
Radiology	Long-term/respite care—rest home
Venesection	Work in schools
Diabetes education	Māori Healthy Eating, Healthy Action
Cardiovascular and diabetes risk assessment	Home Instruction Program for Preschool Youngsters (HIPPY)
Rural premiums	Service coordination for older people (SCOPE)

Table 2. Services provided by Te Hā Oranga

Human papillomavirus education and vaccination
Home-based support services
Residential rehabilitation; alcohol and other drug rehabilitation
District Health Board—Home Bases Support Services' training initiative
Well Child services
Mobile primary nursing and health promotion
General practitioner and practice nurse services
Family/whānau support (for children 0–5 years)
Disease state management Māori mobile services
Whānau Ora—Māori community health support

hours. Other staff, employed mainly in reception, worked an average of 28.6 hours per week. Practice nurses' comments on their work experience were positive, with one respondent saying that the belief that everyone was working for the same purpose was better developed than in any other workplace s/he had experienced. Some clinicians raised the issue of the relative shortage of GPs; they noted that, as a result, although acutely ill people were seen promptly, there were sometimes delays of several days before people could see a GP on a routine matter. The number of people with long-term (chronic) conditions has resulted in nurses advancing from running chronic condition clinics, to an innovative Wellness Programme including a health psychologist and an occupational therapist. This is geared to health improvements on the part of proactive, informed clients, supported by well-functioning local GP teams.

Patient experience

The sample included 416 people and 307 (73.8%) were able to be contacted and agreed to participate. Rating the services, 192 (62.6%) said the service was excellent, 104 (33.9%) that it was satisfactory, and 11 (3.5%) that it was poor. Respondents were asked three questions concerning their interactions with the health services—whether, over the last 12 months, the clinicians they saw: listened carefully to what they had to say; discussed with them, as much as they wanted, their health care and treatment; and treated them with respect and dignity. The responses were compared

Table 3. Interprofessional education programme

Activities provided	Disciplines represented
Introduction to Coast to Coast PHO	Health informatics
Powhiri and orientation	Management
Teamwork briefing and coaching	Medicine
Observing consultations	Nursing
Meetings with mentors	Occupational therapy
Discussion of treatment etc.	Paramedic
Informal interaction	Pharmacology
Visits to rural businesses	Physiotherapy
Project work/presentation	Podiatry
Interaction with community	Psychology

with data from the New Zealand Health Survey (2006/7), adjusting for patient characteristics. For the three questions, respectively, the percentage answering 'always' was 42.5% (vs 77.3%), 65.9% (vs 76.1%) and 90.2% (vs 92.6%). Patients' comments were mostly positive; negative comments referred to waiting for a GP appointment and lack of continuity of care.

Fees and utilisation rates

Average fees and consultation rates (presented as rate ratios) were calculated for the year September 2009 to August 2010. Fees were, on average, 3% lower than access-funded practices sampled nationally. The overall consultation rate was 21.5% higher than the national sample; this differential was greater for nurse visits (43% higher) than for GP visits (9% higher).

Table 4. Hospital discharges and adjusted intervention ratios for Coast to Coast Primary Health Organisation (CTC PHO), and for Waitemata and Northland District Health Boards

	Discharges			Adjusted intervention ratio		
	Acute	Non-acute	Total	Acute	Non-acute	Total
Wellsford	5221	1543	6764	0.96	0.85	0.93
95% confidence interval				0.93–1.01	0.81–0.94	0.91–0.97
Waitemata DHB (ex. Wellsford)	194 577	41 656	236 233	1.28	0.92	1.20
Northland DHB (ex. Wellsford)	63 764	19 939	83 703	1.03	1.05	1.03
New Zealand Total	1 466 613	440 464	1 907 077	1.00	1.00	1.00

Use of secondary care services

The results for use of secondary care services are shown in Table 4. The key findings were that acute admissions from CTCHC were significantly lower than for the remaining population of Waitemata DHB (AIR 0.96 vs 1.28), and non-acute admissions were significantly lower than the national average (AIR 0.85).

System issues

Various informants reported that the development of PHC at CTCHC benefited from a united group of clinicians and from being the only provider in the area, which encouraged a coordinated, population-based approach. The relatively small size of the population was also seen as allowing a strong sense of, and identification with, the community.

A number of problems remain to be resolved. Firstly, it remains problematic to recruit an adequate number of GPs to CTCHC. Secondly, there is duplication and lack of cooperation in some areas. In particular, Well Child care is divided between GPs, practice nurses, Tamariki Ora nurses (nurses who work in Māori organisations), public health nurses, school nurses and Plunket. Similarly, chronic care management is divided between GPs, practice nurses, Te Hā Oranga and hospital outreach nurses. Thirdly, access to some services considered to be core services in urban areas remain out of reach to the local population by reasons of distance and/or cost.

CTC PHO management reported that WDHB has assisted the development of services at CTCHC by recognising it as an evolving centre of excellence and as a node of WDHB's Awhina Health Campus.

Management also reported that multiple contracts (with multiple related reporting requirements) have encouraged the formation of separate work-streams. Further, these contracts are managed for the DHB by a variety of managers who have changed frequently and do not appear to have a mandate to work together. There were other difficulties associated with contracting/funding—mainly delays in signing documents and changes in policy. Progress is hindered by the need to

compete in the 'Request For Proposal' process for contracts with small dollar values, and to support audits across a multitude of contracts.

In July 2011, the CTC PHO was merged into Waitemata PHO, with a loss of autonomy and increasing uncertainty about funding. Waitemata PHO represents the urban, and largely advantaged, population of the North Shore and is not attuned to the needs of a small, disadvantaged rural population. Some services provided by Waitemata PHO were not available locally and mental health services were reduced, with a population-based approach to the distribution of funds. Management of CTCHC reported a loss of enthusiasm and had been unable to implement a number of planned programmes (e.g. in-patient beds, clinical pathways and a case manager working between clinicians, Accident Compensation Corporation services and services for the Ministry of Social Development).

Discussion

CTCHC at Wellsford provide a wider range of services to the area population than is typical for PHC services in New Zealand.¹⁴ A network of peripheral practices sites, no longer viable as independent businesses, is maintained, assisting access for the dispersed population. The service makes extensive use of practice nurses to support service provision and works effectively with a range of allied health services and medical specialists. CTCHC can be seen as a pioneer Integrated Family Health Centre, as called for by present policy.¹⁹

Fees are low and utilisation rates are high. Patients have lower utilisation rates for secondary care services than the New Zealand average. Staff members report high work satisfaction. Patients report satisfaction with the services provided, with some lower patient satisfaction scores possibly reflecting delays, the 'busy-ness' of the practice and the shortage of GPs.

CTC PHO and the CTCHC provide a model of care appropriate to smaller communities distanced from secondary care facilities. Continuing development includes further locality planning and support—that is, greater integration of services

from different providers and the development of a stable, locality-based model with universal funding. Issues relating to GP recruitment and the unavailability of some community services remain. Interdisciplinary education has also been provided: here difficulties have been encountered in coordinating placement of students, a problem common to such programmes.²⁰

Factors facilitating service development have included a single service for the area, the dedication of the staff and recognition and support from the WDHB. Barriers to service development have included cumbersome and divided contracting processes.

This study has sought to provide a full picture of the health service provided by CTCHC in Wellsford and has included data from staff and patients and quantitative information on service utilisation. The staff data on work satisfaction and the patient data on secondary care utilisation is limited by sample size and should be seen as indicative only.

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COMPETING INTERESTS

None declared.