The Transalpine Health Service model: a New Zealand approach to achieving sustainable hospital services in a small district general hospital

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ABSTRACT

Clinical teams from West Coast and Canterbury have jointly designed the Transalpine Health Service to provide safe, high-quality hospital care, as close to home as possible, for the rural West Coast community on New Zealand's South Island. Core acute 24/7 services at the small Grey Base Hospital are provided by West Coast Rural Hospital doctors with generalist skills across specialties, working with West Coast- and Christchurch-based specialists. Services to West Coast patients are provided in the most appropriate hospital in a 'one service, two sites' approach. An effective training structure and career path for rural generalism has been important. This includes undergraduate exposure to rural communities and the rural hospital medicine registrar training programme. Barriers and enablers to service redevelopment are described. The success of the Transalpine Health Service model has been built on the relationships developed between clinicians and strong organisational leadership for change.

KEYWORDS: Generalism, rural, network, generalist, training

Introduction

The West Coast of New Zealand's South Island is one of the most rural areas of New Zealand, with 33,000 people living over a land area 300 miles long and 30 miles wide, to the west of the Southern Alps. Health services on the West Coast have had long-standing difficulties recruiting medical staff to both its small base hospital at Greymouth (the equivalent of a district general hospital) as well as general practitioners to the towns of the region. Historically, the attractions of city living to many graduates and their families have been difficult to compete with here,[1] as elsewhere. Maintaining 24/7 rosters means that 3 or 4 specialists are required in each specialty, creating onerous on-call commitments, while the volumes of routine work often don't generate the activity to keep these doctors busy during the day. Further, the trend in the last two or three decades towards sub-specialisation within the hospital-based medical disciplines has caused a loss of prestige and therefore lower uptake in generalist specialist roles.[2] Newly qualified specialists often don't have the skills and confidence to work in smaller hospitals where they are required to be competent across the breadth of their chosen specialty.

As a result, hospital and community-based medical services have relied heavily on locum doctors to provide a service. Regardless of the skill set and quality of care provided by locums individually, they remain good doctors out of their usual context. Providing quality care consistently within the team setting can be a challenge, and providing standardised care pathways is more difficult. High locum use also puts financial strain on the health system. In recent years these factors have combined to bring in to question the level of hospital services that can and should be provided on the West Coast. The alternative to local hospital service provision is that services be provided at Christchurch by Canterbury District Health Board (CDHB), the region's tertiary provider. Christchurch is several hours drive away through mountain passes. Providing services there would be costly in terms of the patient's experience of care and transport costs to the system, as well as the wider economic implications to the West Coast region that reduced hospital level services would bring. In addition, Christchurch hospitals do not have the bed capacity to absorb the West Coast community's hospital care needs.

To address these issues, the West Coast District Health Board (WCDHB) and local primary care services, and the CDHB have worked together to redesign how services are provided for West Coast people. The aim has been to provide clinically and financially sustainable services for the people of the West Coast, as close to home as possible, with access to more specialised services in Canterbury when this is appropriate. This work has identified a new way of working together for the West Coast and Canterbury medical workforce, called the Transalpine Health Services model.

The Transalpine model requires clinicians to work together in new ways. Core acute 24/7 services at Grey Base Hospital are provided by West Coast doctors trained with rural generalist skills across a range of specialties within the hospital and community settings, working as a team with West Coast-based specialists with a broad generalist skill set within their specialty, and Christchurch based-specialists (many of whom are sub-specialists). West Coast-based and Canterbury-based specialists

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work together to provide services to West Coast patients in the most appropriate place in a 'one service, two sites' approach. This concept of local generalists working in networks with specialists in Canterbury is also being applied to the nursing and allied health workforces.

The design process

There has been a long standing connection between CDHB and WCDHB, and their various predecessors. Christchurch has always been the tertiary referral centre for West Coast. Historically, various arrangements have existed to provide subspecialty services at Grey Hospital by Christchurch-based doctors, both in private and public capacities. Services such as oncology, cardiology and respiratory medicine have been successfully provided for a number of years by West Coast-based clinical nurse specialists and general physicians working with Canterbury based sub-specialist support. Paediatric services were provided at Grey Base Hospital by a general physician and general practitioner, with outpatient services provided by a visiting paediatrician.

In 2010, a joint chief executive for WCDHB and CDHB was appointed by both boards. As well, telemedicine facilities were being established up and down the West Coast, and in a few sites in Christchurch. A liaison paediatrician was jointly appointed by CDHB and WCDHB to provide oversight of paediatric services on the West Coast, with telemedicine being a key enabler of this input. Rural hospital medicine (RHM) was a new vocational scope for doctors with broad generalist skills across a range of traditional specialties, focusing on breadth rather than depth in a narrow field. They primarily worked independently in community hospitals in rural communities.[3] The branch was established in 2008, and by 2011 was gaining some momentum locally. Several 'grandparented' RHM fellows were employed on the West Coast, and were running the emergency department at Grey Hospital, or working as general practitioners and running the community hospital in Westport, a small town in the north of the region.

In late 2011 and early 2012, West Coast and Canterbury clinicians and managers were charged by the joint chief executive to develop a sustainable approach to providing hospital level services for the people of the West Coast. Two large meetings were followed by a working group of senior clinicians – doctors, nurses and allied health professionals – which developed a plan for how hospital services should be configured, and the medical workforce required to provide these services.

The working group agreed that hospital level services would be provided with a 'Transalpine' approach in future. It was recognised that moving from the current state to fully integrated 'one service, two sites' Transalpine Health Services would take time, and that each service would be starting from a different point, and move towards full integration at different speeds. The key elements in developing Transalpine Health Services are listed in Box 1.

The recommended future model for medical service provision for the range of physical health services currently provided on the Coast was outlined. It was envisaged that the model for paediatric services would be further refined, and modified to fit the needs of other services. For paediatrics, the service would move towards all acute care during the working week and out of hours being provided by generalists, being the incumbent general physician, and RHM doctors (some of whom were also general practitioners). They would be supported by Christchurch-based paediatricians, including the liaison paediatrician, through videoconferencing, telephone support and the common hospital IT and radiology systems. Outpatient care would continue to be provided on the West Coast by the liaison paediatrician. Transport to Christchurch would continue to be provided for those children and their family who were too unwell for safe care to be provided at Grey Hospital. The RHM doctors would have skill-specific ongoing training, including time at Christchurch for maintenance of required skills such as neonatal resuscitation.

The team-based generalist–specialist workforce would be extended for general medicine and orthopaedics. This would involve onsite specialist input during working hours being a mix of locally resident Greymouth, and visiting Christchurch, specialists. The rural hospital generalist doctors in Greymouth would provide the on-call component of the service, as well as paediatric on call. They would be supported out of hours by CDHB specialists, with transport to Christchurch for patients when required, as with paediatrics. As part of developing the 'one service, two sites' concept, 'rurally focused urban specialist' (RUFUS) liaison roles would be created. These people would be the 'go-to' person between West Coast and Canterbury at a clinical and service development level, to help develop the shared service approach, and troubleshoot as required.

For obstetrics, general surgery and anaesthesia, specialist-only workforces were recommended in the short to medium term.

The emergency department would continue to be served by RHM doctors, rather than moving towards emergency medicine doctors. Linkages with the emergency department at CDHB would be expanded.

The pool of RHM doctors at Grey Hospital would need to increase to cover the emergency department and other hospital commitments that these doctors would be responsible for.

Box 1. Key elements in developing the Transalpine Health services.

- Professional relationships and collegiality.
- IT connectivity, including videoconferencing.
- Shared continuing professional education.
- Clinical governance, including same standards, shared protocols, policies and procedures, shared morbidity and mortality processes.
- A collaborative approach to recruitment.
- Physical two-way traffic between district health boards:
  - people recruited to West Coast have designated time spent in Christchurch for maintenance of skills and development of areas of interest
  - designated Christchurch clinicians are focused on and committed to supporting the West Coast, spending some time working there
  - potential opportunities to 'grow your own' include registrar rotations and introducing post-fellowship positions at Grey.

The group recommended an increased focus on RHM registrar training, including dedicated time at Christchurch within the programme.

Progress to date

Service model development

This service model framework was accepted by the chief executive and senior management, and endorsed by both DHB Boards. It has continued to be the underpinning of hospital service redesign over the last three years. Subsequent to this work, mental health services have also adopted the Transalpine approach to planning future service provision. Paediatric services, orthopaedic services and the emergency department have largely moved to the model as outlined. General medicine is soon to test the proposed model. Surgery, women's health and anaesthetics are each working towards the 'one service, two sites' model. RUFUS roles are in place for paediatrics, women's health and orthopaedics, with discussions underway on developing this role in other services.

The professional colleges that govern obstetrics, general surgery and anaesthesia are Australasian. In Australia, rural general practitioners can have extended training and scope to provide generalist anaesthetist, generalist obstetrician and generalist surgeon roles. This is an area that may be explored in the future, with any such generalist positions being combined with specialist teams as described above.

Workforce development

An effective training structure and career path for rural generalism has been an important part of developing the Transalpine service. Undergraduate medical training in New Zealand at both medical schools now has compulsory placements in rural communities. There is a rural medical immersion programme available for fifth year medical students at the University of Otago, where small groups of students spend their year learning in a rural community.[4] Since the mid 2000's, three or four students come to the West Coast each year as part of this programme.

The rural hospital medicine training programme is governed by the Rural Hospital Medicine Faculty of the Royal New Zealand College of General Practitioners. Its history and training programme outline is available online.[3] The registrar programme is a four-year minimum training, with a mixture of compulsory and elective placements. Many trainees dual train with rural general practice. It provides a cohort of doctors with a broad range of skills across the medical specialties. The breadth of RHM doctors, combined with the depth of specialty doctors, provides safe, high-quality services for the majority of presentations in the small hospital setting, with the ability to smoothly transfer patient care to the more specialized services at Christchurch when required. By training registrars at Grey Hospital, and linking their tertiary centre training requirements (such as emergency medicine, intensive care medicine and paediatrics) to Christchurch rotations, the RHM doctors produced are well versed in how the service works. They are more likely to stay on the West Coast as they have developed linkages into the community while there training. Rural general practice training is also provided on the West Coast. Graduates of both registrar training programmes are now working locally as RHM doctors and general practitioners.

The 'one service, two site' approach to specialist services has also helped with recruitment of specialists to Grey Hospital. Being part of a larger group of colleagues with the ability to spend regular time at the tertiary service working in their field of special interest makes roles at Grey Hospital more attractive. Several past medical students who spent their fifth year on the West Coast are currently in specialist training, pursuing a 'generalist' career within their specialty, with the intention of returning to Grey Hospital when qualified.

Barriers

Developing the new service model has had, and continues to have, its challenges. Some of the key ones are summarised below.

Lack of trust and confidence
In the early phase of discussions, there were concerns that services may be lost or downgraded, rather than maintained or improved, but provided in a non-traditional way. Ongoing open communication with staff and the community has helped overcome this, and is an ongoing process. Providing structured time for WCDHB and CDHB clinicians to build relationships through service planning has also helped overcome this.

Regulatory body requirements
Initially Grey Hospital was considered 'too big' for RHM doctors to work within their vocational scope, as defined by the Medical Council of New Zealand. Through conversations and representation of the new service delivery model to the Faculty of Rural Hospital Medicine, the regulations have been able to be adapted to encompass this new way of working.

Staffing
RHM trainees are just starting to finish the training programme now, and Grey Hospital services need a few more RHM doctors on staff to allow the new model to reach its full potential. The willingness of Canterbury medical staff to travel to the West Coast can vary. New appointments to both DHBs are given the expectation that they will work in both hospitals, and clinical leaders of services are promoting the Transalpine model as the 'new normal' to their teams.

Funding
New roles and greater investment in training have all been done within available funding. This has been helped by a reduction in locum costs. This independence from extra central funding has moved the system away from a series of pilots that then struggle for ongoing funding. This does present challenges when extra funding is required, for example extending RHM registrar positions, but ensures that changes are sustainable.

Patient transport
Patient transport continues to be an issue, both for transport to Christchurch acutely and for returning home to the Coast post discharge, as well as for patients who need to attend outpatient services in Christchurch. Different approaches to transporting

Box 2. Enablers of successful Transalpine Health Service development.

- High trust relationships.
- Skilled clinicians (doctors, nurses and allied health professionals) on the ground both sides of the Alps, and part of the Transalpine Team.
- Easy and timely communication with the right clinical people when required.
- Protocols in place which all develop, agree and follow, so care is provided consistently and transfers of care happen without delay.
- Appropriate use of technology, such as telemedicine.
- Joint appointments with shared responsibility.
- Hard work on both sides.

patients and clinicians between the two sites are being explored. Increasing the use of videoconferencing for follow-up outpatient appointments has great potential to reduce the need for people to travel. Oncology services and paediatric services are leading the way in this area.

Lessons learned

Clinicians involved in developing and implementing the Transalpine Health Service have identified a number of key enablers. Box 2 outlines these factors, that when present have facilitated progress, and have had a negative impact on services when absent.

In areas where implementation of the Transalpine Health Service has not gone as smoothly as hoped, people tend to be nervous when new changes are proposed, in the light of their experience. Developing trust is a key to improving services when difficulties have arisen. Listening to feedback from people on the ground is also important, as in some cases problems could have been avoided. Encouraging people to take an open-minded, solution-oriented approach, rather than a problem-focused one has been valuable.

At its heart, the success of the Transalpine Health Service model has been built on two key building blocks. The first of these is the relationships developed between clinicians that has allowed trust and confidence in each other and the services provided to grow. The second has been the organisational leadership that has set the direction, enabled change, provided dedicated time for clinicians to plan and implement the changes, and created and funded new roles when appropriate. This partnership between clinicians and management is essential for clinically and financially sustainable services to flourish. ■

Acknowledgements

The following people have made significant contributions to the development of the Transalpine Health Service: Nigel Miller, Karyn Bousfield, Stella Ward, David Meates, Michael Frampton, Carolyn Gullery and the many clinicians and managers in West Coast and Canterbury who have contributed to this work.

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