

Regional Networks: Challenges & Opportunities

Dr Amanda Holgate
ED Physician
Christchurch



Regional Networks: Challenges & Opportunities

- We face major issues to provide high-quality specialist healthcare into geographically scattered populations
- We recognise the importance of personal networks and information exchanges among health professionals
- Telemedicine can support these exchanges and bring specialist care to remote areas

Introduction

- A product of modern information technology and telecommunication
- Fast Broadband internet services
- Improves access and eliminates barriers
- Improves communication
- Timely healthcare in critical situations
- Assists in accurate decision-making

Telehealth in NZ; The Canterbury DHB experience

Dr Amanda Holgate
ED Physician
Christchurch





Early manifestations of telemedicine

- African villagers used smoke signals to warn people to stay away from the village in case of serious disease
- In the early 1900s, people living in remote areas of Australia used two-way radios, powered by a dynamo-driven set of bicycle pedals, to communicate with the Royal Flying Doctors Service



- The National Health IT Board has funded the NZ Telehealth Forum
- It recognises Telehealth is an important component of an integrated model of healthcare.

Telehealth today



Regional Networks: Challenges

- West Coast geographically isolated
- By terrain
- And by weather
- May compromise timely access to definitive care



ROAD
CLOSED



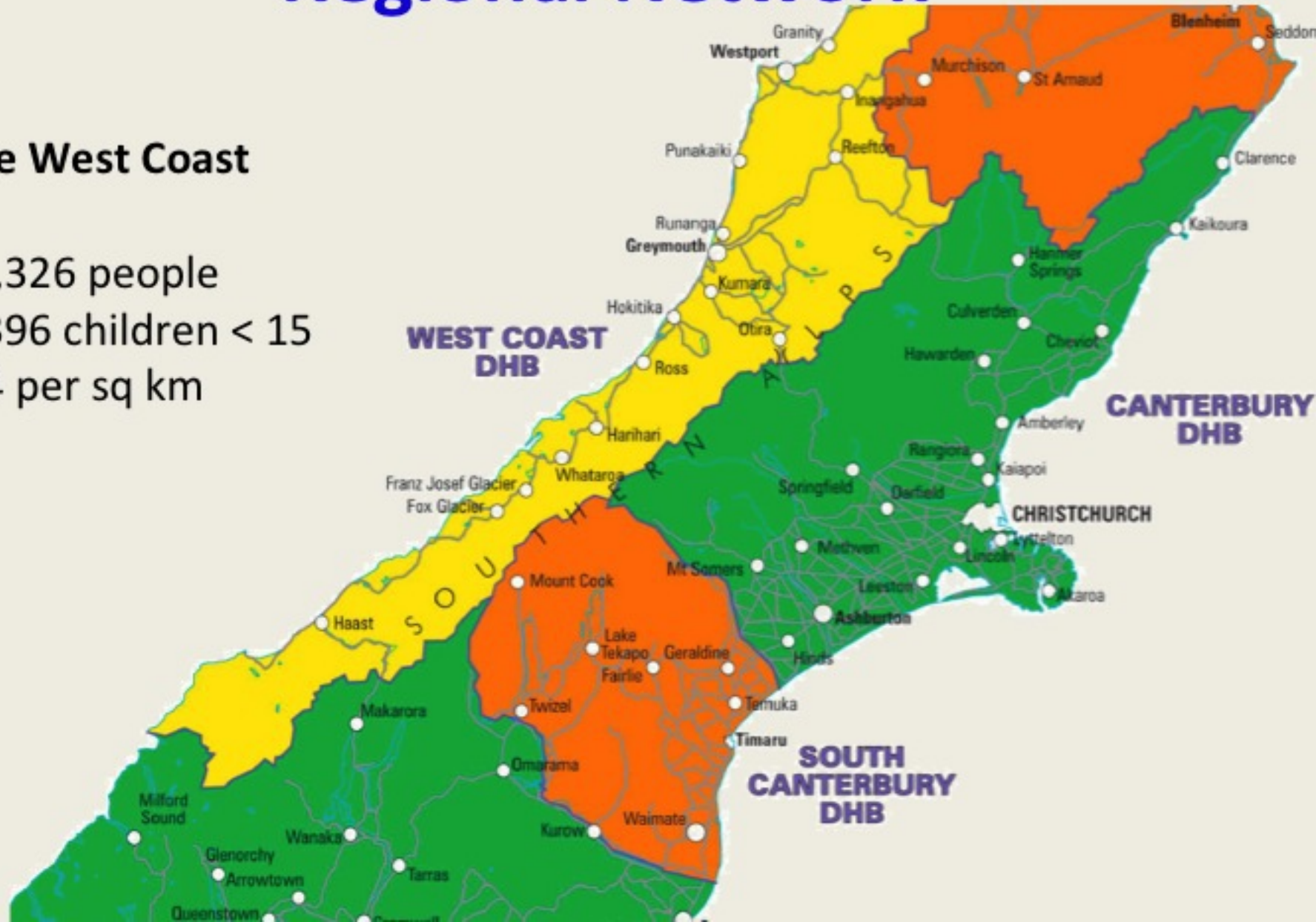
Regional Network

The West Coast

31,326 people

6,396 children < 15

1.4 per sq km



Regional Networks: Opportunities

- Telehealth supports clinical care collaboration across geographic regions
- Telehealth enhances equity of access to health care
- Economic benefits for patient and organisation
- Opportunities for emergency, outpatient and retrieval services
- Education

Canterbury DHB experience

- Telehealth is widely used in CDHB:
- Clinical applications
 - General paediatrics
 - Paediatric Oncology
 - NICU
 - O&G
 - Nutrition Services
 - Latest installation into ICU and Retrieval Service
- Education
 - Grand rounds
 - ED weekly CME

Canterbury DHB experience



- Dr John Garrett
- Paediatrician
- Conducts virtual out-patient clinics with the West Coast

Canterbury DHB experience

- How a natural disaster can accelerate change
Robert Ashford, Tony Blackler, John Garrett, Nicole Redfern
Telehealth, CDHB



Canterbury DHB experience

- Pre-earthquake
 - Paediatric service provided support to the West Coast. Regional Paediatric and Oncology support
 - Otherwise underutilised especially in acute services
 - Mainly used for education and administration
 - Low profile
 - Strategy for targeting areas for Telehealth development

Canterbury DHB experience

- The earthquake resulted in significant damage to the hospital
 - 108 beds lost ; >90% of rooms damaged
 - General Medicine across 2 sites
 - Multiple relocations and displaced staff
 - Loss of lecture theatres in damaged Medical School
- Disruption to clinical work, education and administration

Canterbury DHB experience

- Telehealth was utilized to meet the new challenges
- Telehealth incorporated into Medical Illustration
- Appointment of a Telehealth Facilitator
- Planned applications accelerated

Canterbury DHB experience

- New telemedicine applications:
 - Daily medical handover between sites – assisting smooth service delivery and focus resources
 - Grand rounds –access multiple sites within Christchurch and Region
 - Small group teaching
 - Relocated non-clinical services

TeleHealth Timelines / Key Dates

Month	Event	Significance
FEBRUARY	2011 Earthquake: General Medicine patients split across two hospitals	Earthquake
MAY	2011 Telehealth Project Facilitator	Dedicated support for TeleHealth
JUNE	2011 General Medicine daily patient hand-over	Installation
JULY	2011 Franz Josef Clinic (West Coast) opens	Installation
AUGUST	2011 Colposcopy patient reviews with West Coast Paediatrician: Desktop Unit	Patient reviews Installation
SEPTEMBER	2011 Midwifery Journal Club	Monthly meeting
OCTOBER	2011 TeleHealth Clinic room: upgraded for virtual clinic use	Upgrade
NOVEMBER	2011 Ashburton Hospital and Burwood Hospital: link with Christchurch Wednesday Clinical Grand Round WCDHB Mobile Clinical Cart Commenced roll out wireless connections	Installation Clinical Case Presentations Installation Wireless Connections
DECEMBER	2011 CEO update to medical staff across Christchurch and West Coast	CEO update to staff
JANUARY	2012 CEO Rural Hospitals GM: desktop units to support links with Christchurch Paediatric General Surgery Trainee Intern lectures "Attend Anywhere" via IPAD used for acute paediatric clinical consultation.	Installations Lectures Installation
FEBRUARY	2012 Health Quality and Safety Commission supported CLAB meeting commence incorporating VC Genetic Service South Island Hub (Hub and national case reviews and intake reviews) - weekly and monthly	National Meeting Patient reviews
MARCH	2012 Canterbury Hospitals' Friday Clinical Grand Round Clinical Audit and Quality Improvement Forums Medical Physics & Bioengineering trainee sat final exam	Clinical Case Presentations Presentations Exam sat via VC
MAY	2012 ED weekly teaching Epidural Lecture for Midwives Community and Public Health	Lectures Lectures Installation
JUNE	2012 Software Based Solution used by Paediatrician	Clinical Care
JULY	2012 Orthopaedics: daily Trauma Round	Installation
AUGUST	2012 Older Persons Health Gynaecology / Oncology MDT Meeting with Timaru	Installation Patient reviews
OCTOBER	2012 Information Services VC Unit Installed	Installation
NOVEMBER	2012 Inter-DHB Reference Group Established	Meeting
FEBRUARY	2013 Pharmacy	Regional Links
MARCH	2013 RMO multi-site meeting with Union	Meeting
APRIL	2013 Organisation-wide upgrades (6 in total) Canterbury Health Labs, AMAU Paediatric Nutrition Services MDM Coordinators Appointed	Installations Installations Virtual Clinics Clinician Support
MAY	2013 Equipment Funding Approved for 2013-14	Financial
JUNE	2013 Intensive Care Unit (ICU): clinical support to far sites	Installation
JULY	2013 Ashburton AAU: link with ICU, Christchurch Hospital General Medicine (West Coast)	Installation Virtual Clinics

Warning

- Natural disasters can lead to widened lateral thinking, increased flexibility, break down silos and 'build bridges'.

It is not a recommended catalyst

- How a natural disaster can accelerate change.
Robert Ashford, Tony blackler, John Garrett, Nicole Redfern
Telehealth, CDHB

New developments

- Telehealth allows us to re-consider how we deliver healthcare
- New opportunities to expand the use of Telehealth in the Region
- Exciting new clinical application for ICU and the Retrieval Service
- Installed June 2013

ICU application

- Telehealth clinical consultation room
- Video-conferencing between the West Coast and the ICU/Retrieval team
- Mobile telemedicine cart is taken to the bedside
- Used as support tool to evaluate patients remotely as an adjunct to the traditional telephone call.

ICU application



- Training session with the West Coast

ICU application

- Allows support and advice until the retrieval team arrives
- Allows retrieval team to liaise with the tertiary hospital
- To improve patient care and safety of air retrieval
- Assists in decision making during the medical coordination of retrieval
- Aids decisions about diagnosis, severity and priority
- Potentially could assist in avoiding unnecessary transfers
- Allows the ICU team to meet the family

Clinical Networks and Telehealth

- It's not about technology
- Telehealth is about human interaction and the content
- It only succeeds when barriers are addressed and overcome
 - Human factors
 - Service barriers

Clinical Networks and Telehealth

- Strengthens existing networks
- Develops new networks
- Builds relationships
- Trust
- Working in a team

- “It is widely accepted that Christchurch provides the most successful regional hub for coordination and communication. The only reason we are blessed with this accolade is thanks to the tireless, patient work of the Telehealth team”
- David Knight, Intensive Care Specialist, CDHB



References

- 1. The use of telemedicine to aid in assessing patients prior to aeromedical retrieval to a tertiary referral
K Matthews, M Elcock, J Furyk
J Telemed Telecare 2008 14:309
- 2. Telemedicine – bringing specialist care to remote areas
G Maw
- 3. Use of telehealth for patients referred to a retrieval service: timing, destination, mode of transport, escort level and patient care
E Kyle, P Aitken, M Elcock, M Barneveld
J Telemed Telecare 2012 18:147
- 4. How a natural disaster can accelerate change
R Ashford, T Blacker, J Garrett, N Redfern