A snapshot
of how we're doing

Canterbury
District Health Board
Te Poari Hauora ō Waitaha

Canterbury Health System Quality Accounts 2013-14

PHOTO: ANDREW KNEWSTUBB

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Disclaimer:

We have endeavoured to ensure that information in these Quality Accounts is accurate at the time of printing.

Welcome to our Quality Accounts

The Quality Accounts demonstrate our commitment to high quality health care, how we progress with continuous quality improvement, and how we monitor quality and safety. It highlights our successes, what we have learned and our future improvement plans.

In Canterbury, we are strongly motivated to do the very best we can to deliver the most efficient and effective services possible to improve the health and well-being of the people living in our community.

Our vision is a truly integrated health system that keeps people well in their own homes by providing the right care, in the right place, at the right time, by the right person with the right experience. At the core, our vision depends on achieving a 'whole of system' approach where everyone in the health system works together to do the right thing for our people and the right thing for our system.

The Quality Accounts demonstrate our commitment to high quality health care, how we progress with continuous quality improvement, and how we monitor quality and safety. It highlights our successes, what we have learned and our future improvement plans. We have made significant progress in orientating our health system around the needs of patients and our community. We continue to connect our system to improve continuity of care, minimise waste, reduce the time people spend waiting for treatment and improve the overall outcomes for our population.

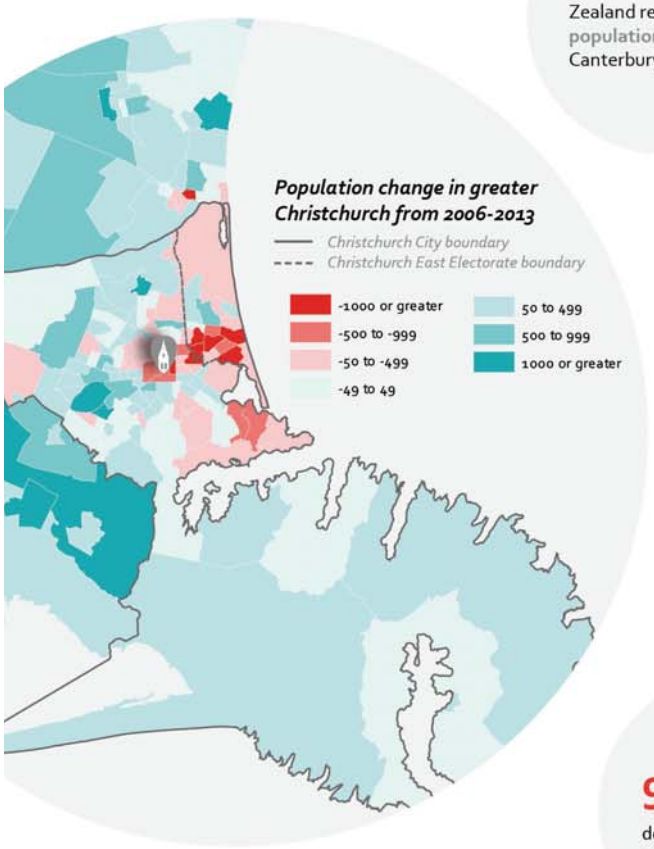
Throughout the coming year we will remain focused on achieving Ministry of Health targets and the Health Quality and Safety Commission's Quality and Safety Markers, and on a number of initiatives to reinforce our commitment to continuous quality improvement.

Everyone who works in the Canterbury Health System plays a crucial role in ensuring we deliver safe and high quality health services. We are all part of one Canterbury Health System, making a better environment for the people of Canterbury.

We have every confidence that our people have the aptitude and drive to build on the successes captured in this set of Quality Accounts, and that we will continue to go from strength to strength by supporting a culture of continuous quality improvement and innovation.

David Meates
Chief Executive,
Canterbury DHB

Dr Daniel Williams
Chair,
Canterbury Clinical Board



11.4%
of the total New Zealand resident population live in Canterbury.

We are becoming more diverse
2.6% are Pacific.
8.2% are Māori.
7.5% are Asian.

15%
of our population are aged 65 years or older, up from 13.4% in 2006. The national percentage of people aged 65 years or older is 14.3%.

9.8%
decrease in one-parent families with dependent children.

1,281
more two-or-more family households than in 2006.

32%
Increase in the usual resident population of the Selwyn district.

Who makes up THE CANTERBURY DHB Community

The census was held on the 5th of March 2013, two years after it was cancelled as a result of the earthquake on the 22nd of February, 2011.

The Canterbury region has undergone significant changes since the previous census was conducted in 2006. The results of the census indicate how the profile of our population has changed. Consideration of these changes is crucial to the planning of future health services in Canterbury.

482,181* residents.

Our population growth

Our resident population has increased from 466,404 in 2006 to 482,181 in 2013. This is a rate of growth of 3.4%. Nationally there has been a 5.3% rate of growth.

2,841 more males aged 20-29 than in 2006.

Our rebuild population

There has been a noticeable increase in the number of males aged 20-29 years of 2,841 since 2006. In comparison, there are only 228 more females of this age. This reflects the workers coming into the region for the Christchurch rebuild.

What we do not know*

The 'real' number of rebuild workers

Our resident population only includes people that listed their usual residence as being in our region. Rebuild workers that have come from other parts of the country, or overseas, and do not consider Canterbury to be their place of usual residence, were not counted in our resident population.

Population projections

The current Statistics New Zealand population projections are still based upon the 2006 Census results. Updated population estimates and projections using the 2013 results will be available in late 2014.

Data sources: *Statistics New Zealand, Census of Population and Dwellings, 2013.*

ON AN Average CANTERBURY DAY

16 babies are born in Canterbury facilities

258 attendances at Canterbury DHB Emergency Departments

46 people have elective surgery

318 people are discharged from hospital

442 consultations are delivered by specialist mental health services+

57 people receive brief intervention counselling in primary care

133 people have a cardiovascular disease risk assessment

205 children have a dental check+

236 under 18 year-olds have a free influenza vaccine *(during FLU season)*

91 women have a cervical smear

5,139 laboratory tests are completed

49 adolescents access free oral health care+

105 people receive support and advice to quit smoking

16 children receive a Before School Check (B4SC)

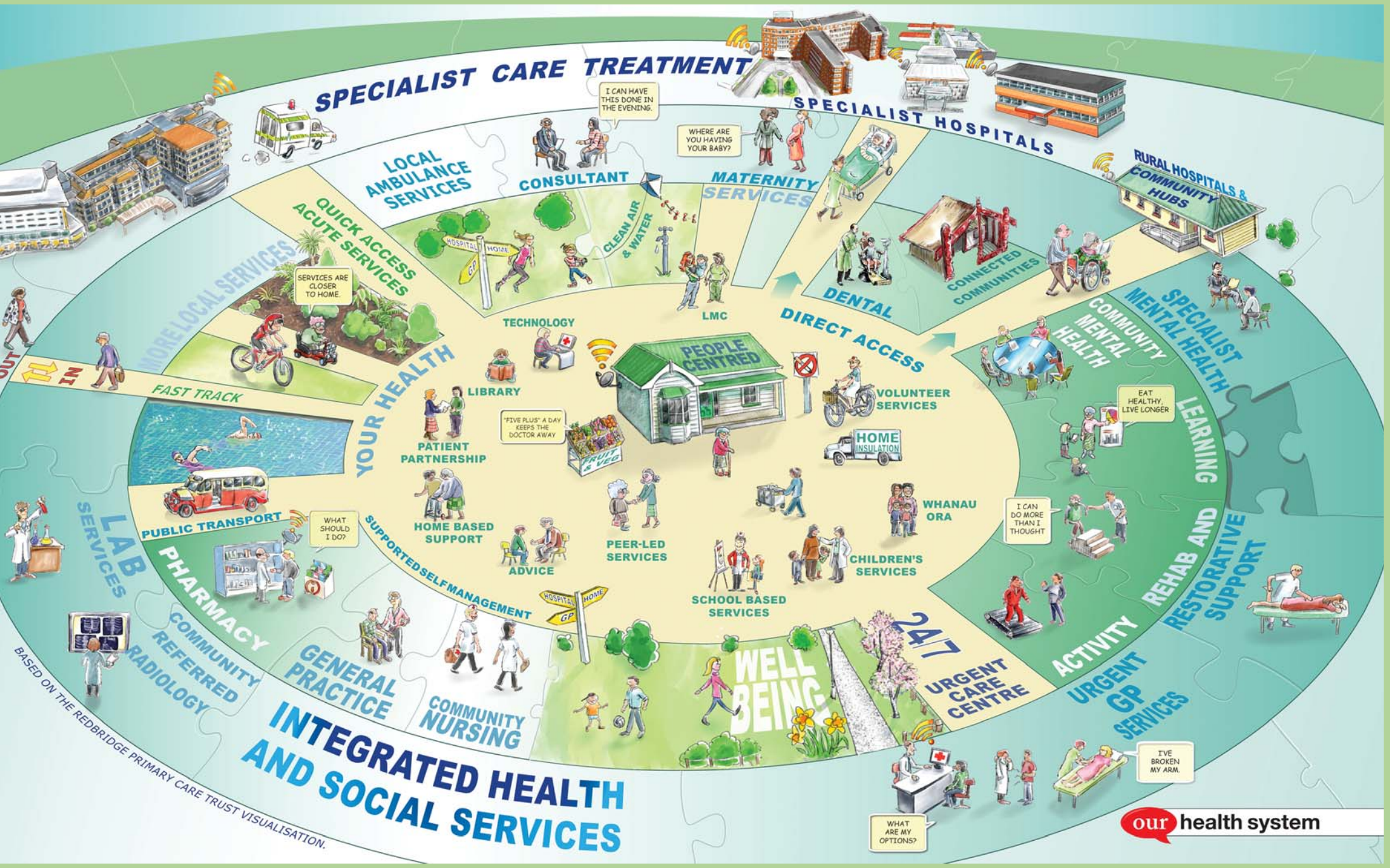
90 women are screened for breast cancer

8 people are given a green prescription—a referral for increased physical activity

12 older people received a comprehensive clinical assessment—using InterRAI

15 8 month olds completed their vaccinations

+ represents the 2013 calendar year. All other figures are for the 2013/14 financial year and are based on the DHB's Annual Report.


SPECIALIST CARE TREATMENT
SPECIALIST HOSPITALS
RURAL HOSPITALS & COMMUNITY HUBS
LOCAL AMBULANCE SERVICES
CONSULTANT
MATERNITY SERVICES
I CAN HAVE THIS DONE IN THE EVENING.
WHERE ARE YOU HAVING YOUR BABY?
QUICK ACCESS ACUTE SERVICES
CLEAN AIR & WATER
HOSPITAL
HOME
GP
MORE LOCAL SERVICES
SERVICES ARE CLOSER TO HOME.
DENTAL
CONNECTED COMMUNITIES
TECHNOLOGY
LMC
DIRECT ACCESS
SPECIALIST MENTAL HEALTH
COMMUNITY MENTAL HEALTH
LEARNING
REHAB AND RESTORATIVE SUPPORT
ACTIVITY
URGENT GP SERVICES
I'VE BROKEN MY ARM.
24/7 URGENT CARE CENTRE
WHAT ARE MY OPTIONS?
WELL BEING
OUT
IN
FAST TRACK
PEOPLE CENTRED
YOUR HEALTH
LIBRARY
"FIVE PLUS" A DAY KEEPS THE DOCTOR AWAY
FRUIT & VEG
VOLUNTEER SERVICES
HOME INSULATION
EAT HEALTHY, LIVE LONGER
PATIENT PARTNERSHIP
PUBLIC TRANSPORT
WHAT SHOULD I DO?
HOME BASED SUPPORT
ADVICE
PEER-LED SERVICES
WHANAU ORA
I CAN DO MORE THAN I THOUGHT
CHILDREN'S SERVICES
SCHOOL BASED SERVICES
SUPPORTED SELF MANAGEMENT
LAB SERVICES
PHARMACY
COMMUNITY REFERRED RADIOLOGY
GENERAL PRACTICE
COMMUNITY NURSING
INTEGRATED HEALTH AND SOCIAL SERVICES
BASED ON THE REDBRIDGE PRIMARY CARE TRUST VISUALISATION.
our health system

The Canterbury way: A whole-of-system approach

For the Canterbury Health System, quality means delivering the right care, in the right place, at the right time by the right person with the right experience.

The focus on a whole of system approach and an integrated, connected system is not new in Canterbury. Since 2007, health professionals, providers, consumers and other stakeholders have been coming together to find solutions to the challenges we face. We knew that if we didn't actively transform the way we delivered services, by 2020 Canterbury would need 2,000 more aged residential care beds, 20 percent more General Practitioners and another hospital the size of Christchurch Hospital.

We began reorienting our health system around the needs of the patient. This is not just about our hospitals; our vision is dependent on achieving a truly integrated approach, in which everyone in the health system works together to do the right thing for our people and the right thing for our system.

Together we are focused on the delivery of a clear direction and vision for our health system that includes:

- The development of services that support people/whānau to stay well and take greater responsibility for their own health and well-being.
- The development of primary and community-based services that support people/whānau in the community and provide a point of ongoing continuity (which for most will be general practice).
- The freeing-up of hospital-based specialist resources to be responsive to one-off hospital visits, to provide complex care, and to provide specialist advice to primary care.

Our Quality Accounts

The Quality Accounts are a collaborative effort from staff across our health system. Every effort has been made to ensure we provide a system-wide account of the improvement and innovation activities happening throughout Canterbury. Our spotlight areas, together with our National Health Targets and Quality and Safety Markers, are designed to provide you with a snapshot of how we are doing and to highlight some key areas of work.

The spotlight areas are strategies from the Canterbury District Health Board (DHB) outcomes framework, with the addition of the "Consumer experience" section and a section about facilities redevelopment – "It's all happening". These were included because they are important development areas for Canterbury DHB and it was felt they would be of interest and benefit to our readers. Each spotlight area consists of a consumer story and two pages of quality improvements/initiatives. When you see "identified in the 12-13 Quality Accounts" under a story heading, the story was in our Accounts last year and we have provided you with an update.

Later in the document is our "How we measure up" section, a performance review comparing our progress with the National Health Targets and the Quality and Safety markers set by the Health Quality and Safety Commission. This document concludes with the "What next" section, in which we confirm our commitment to continuous quality improvement and priority areas for the coming year.

This production was overseen by a sub-group of the Canterbury Clinical Board, which included representation from the Corporate Quality and Patient Safety team, clinicians, the Executive Management Team, Planning and Funding, Community and Public Health, Primary Care, the Canterbury Clinical Network and the Canterbury DHB Consumer Council.

Quality of care and patient safety is core business for Canterbury DHB. Our Quality Accounts will stand beside our Annual Plan 2014-2015, the Māori Health Plan 2014-2015 and the South Island Regional Health Services Plan 2013-2016, as our key accountability documents. All of these documents are available on the Canterbury DHB website www.cdhb.health.nz.

We want to hear from you

We publish the Canterbury Health System Quality Accounts annually, so your feedback is very important to us. This feedback will help us ensure the Quality Accounts provide relevant and useful information on the quality of health services being delivered in Canterbury.

You can either let us know what you think by emailing qualityaccounts@cdhb.health.nz or write to Susan Wood, Director Quality & Patient Safety, Canterbury DHB, PO Box 1600, Christchurch.

Consumer experience

To help us understand our patients' views of their healthcare experience, we share their stories across our workforce including at ward meetings, quality seminars and even with the Clinical Board. Hearing patient stories encourages us to keep up the good work and informs us of areas we can improve on. This is Gae Beer's story as told to Jacqui Gapes.

Gae was admitted to the Orthopaedic and Spinal service via the Emergency Department and the Intensive Care Unit, after a high speed, head-on collision on the open road early in 2014. Among her multiple injuries there was an unstable spinal injury and a spiral fracture of her right tibia and fibula. Her total length of stay in hospital was eight weeks. For part of her journey Gae was transferred from Christchurch to Ashburton Hospital for ongoing nursing care of her spinal and leg injuries.

The first thing that became apparent when talking to Gae was her focus on the human side of caring, the interaction with staff, how she felt, and how the staff made her feel cared for, listened to and fully included in the plans for her management and recovery. When I mentioned this, Gae said "I had faith that they knew their jobs. What I needed was the human compassion."

I asked about her emotional response. Gae stated: "It is all about self-attitude and the cup being half full at all times. The only way

"I cannot fault the service I received or the care I was given."

to go was forward." When I asked her about her attitude and her day by day progress she indicated that it was not always easy but the care and treatment she received from the staff made it so she could focus on the cup being half full. If she had a down day the staff were there to support her with positive thoughts and interactions designed to boost her morale without invalidating what she was actually feeling. Gae stated that "I cannot fault the service I received or the care I was given." Both Gae and her family felt that the communication was clear and staff were "happy" to explain what was happening, and what was going to happen. Gae's family felt welcomed and included through her stay.

Her biggest frustration was "self-frustration", having to rely on staff to help her, from passing her out-of-reach items to intimate personal care. Gae lost her independence and truly appreciated the staff, who enhanced what independence she did have. She never felt that staff "… just took over. They treated me as an individual and with respect."

Gae Beer

I asked if there was anything Gae would like to have changed about her inpatient stay. Reluctantly she admitted that the transfer to Ashburton was a trial. Her family could no longer visit every day and she found the lack of visitors was detrimental to her positive attitude. The other concern she had was the travel costs incurred by her family and friends travelling three hours to see her.

I asked if there was anything else she wanted to add about her stay. She wanted me to emphasise that "things happen that are out of our control, sometimes things don't go right, sometimes the staff were busy, but I acknowledge these were not the norm, and I am truly appreciative of the consistency of the care, the compassion and expert skills I received during my stay. Without these I would not be here, at home today."

In conclusion Gae would not like to repeat her journey, but when she needed the clinical expertise and the human care, empathy and compassion, it was here for her in the Canterbury Healthcare Services. For this she is truly grateful to all involved in her care.

We recognise that consumers have a unique and essential perspective of health services and are able to provide important information about the experience of care they receive. By working in partnership, we will be able to improve their experience of care, as well as their health and well-being.

Consumer participation in decision-making

There are many consumer and community reference groups and working parties involved in the Canterbury Health System. Their advice and input assists in the development of new models of care and service improvements. The DHB also has a 16-member Consumer Council which ensures a strong and viable voice for consumers in health service planning.

In the last year the Consumer Council has been very active, including with the development of these Accounts, the Quality Improvement and Innovation Awards, the electronic medication management programme, the Hospital Falls Prevention Programme, and the Infection Prevention and Control Committee, the Patient Portal Project, the re-development of the hospital and are currently working with the DHB on the Disability Strategic Action Plan.

Take another look at Healthinfo

Healthinfo is an easy-to-use health information website just for the people of Canterbury.

In June it was revamped and is now much better looking and even easier to use. On it, you'll find up-to-date information about many health conditions and diseases, medications, tests and procedures, local support groups and organisations, as well as tips for keeping healthy. You can trust the information as it is written or approved by local health professionals.

New pages are added weekly and each month there are three featured topics on the homepage covering local/national health campaigns or topical issues.

Youth Advisory Council

The Youth Advisory Council (YAC) is an advisory and liaison council formed in April, to provide a youth perspective in planning, policy and service development within the Canterbury DHB. Community groups were approached to nominate youth between 15 years and 24 years to be on the committee. They could either be consumers of a health service or siblings of consumers. Each committee member had to go through an interview process with questions on

Youth Advisory Council (YAC)

personal qualities, teamwork, leadership and advocacy for both youth and their organisation. Nine committee members represent Canteen, Autism New Zealand, anxiety disorders, Haemophilia Foundation, Diabetes Youth, At Heart, Kidney kids, Arthritis New Zealand and the deaf community.

How was your patient experience?

(identified in the 12-13 Quality Accounts)

Canterbury DHB has started a new survey which will canvass adults who recently spent time as inpatients in our hospitals. An invitation to be part of the survey will be delivered via email or a link in a text message. It will enable us to find out about your hospital experience, what we are doing well, and where we can improve.

Improving maternity services

As part of implementing the Maternity Quality Safety Programme across Canterbury and West Coast DHB the 'We Care About Your Care Maternity Services Feedback Form' was launched in June 2014. We want to ensure a robust system to obtain and act on feedback from consumers on maternity care provision. The survey is given to all women prior to discharge, and is also available on the DHB's website. Charge midwife managers and quality co-ordinators will follow up with women who raise concerns. A database has been developed to enable collection of feedback information. Issues and trends will be identified and communicated to staff in reports, and quality improvement initiatives will be implemented.

Parents given more answers on viruses

The Microbiology Laboratory has been using a Multiplex PCR test for detecting respiratory viruses. This means that a number of different significant and circulating viruses can be tested at the same time on the same sample. This allows clinicians to answer patient queries around their illness in more specific terms than simply saying "it's a virus". The benefit of the testing has been most welcomed in the Paediatric Department where clinicians are able to provide definitive answers to parents and can target treatment options appropriately.

Health information more accessible

The first of several health information kiosks is being trialled at Bealey Avenue's 24hr surgery. The idea of the touch-screen kiosk is part of an overall strategy from the Canterbury Clinical Network's Child and Youth workstream to make health information more accessible to young people and families in particular.

Nicola Austin, chair of the Child and Youth workstream, says we mustn't assume that everyone has free access to the web at home or at work or can just use a search engine to find out what they need. People with the least access to information are often our most vulnerable and in most need of health information. "We have set up the kiosk to provide access only to trusted sites that provide a good spread of tried and tested information to support healthy living."

Kiosks are part of the bigger picture of improving health literacy so that people can take greater responsibility for their own health, rather than wait until they are really sick and hoping someone can fix them – an oil change and a bit of regular maintenance is better than a seized engine. "While we would always recommend that people make their family doctor their first point of call for health advice, sometimes it is just information that is needed, and kiosks can

Nicola Austin with the Healthinfo kiosk

provide access to information that people might not otherwise get," Nicola says.

Kiosks have been proven to work best in high traffic areas, which is why the 24 hour surgery was selected for the trial. The plan in the longer term, should the trial be successful, is to install them in other high traffic areas such as malls or in places where people would normally expect to go for information, such as libraries and council service centres.

In three months people viewed more than 2,000 webpages at the kiosk. The kiosk provides access to three key websites: Healthinfo, Linkage Webhealth, and Skylight. Webhealth is an online directory of health and social services and Skylight provides information about grief counselling and support groups.

Preventing harm

Investment in technology leads to safer care

Over the past year special software was installed at Christchurch Hospital within infusion pumps used to deliver intravenous medications, fluids and nutrients to patients admitted to dedicated children's wards/areas. The software, known as Guardrails®, has the ability to stop incorrect doses and rates of infusions reaching a child and causing harm. Not unlike guardrails seen on roads which both caution drivers and physically prevent cars from veering off the road, the software provides warnings when a clinician has programmed the pump with a dose/rate of medication which is considered outside of safe limits and can also prevent the medication being administered to the child.

Guardrails has seen close collaboration between Child Health physicians, pharmacists and nurses with the common goal of making the system of providing medications to children safer. The adoption of the technology has been very successful. The software is being used 85 percent of the time the infusion pumps are used to deliver intravenous medication to children. Child Health leadership staff are working closely with clinicians to improve this compliance figure to 100 percent through ensuring that all medications likely to be infused are available within the software and keeping communication open around challenges preventing clinicians from using the technology.

The success of the implementation of Guardrails is ultimately being measured through information taken from the infusion pumps. This has revealed that from December 2013 to April 2014 children have been protected from receiving incorrect doses or rates of medication delivery on 386 occasions. Of these, 39 occasions were considered to be high-risk events possibly leading to harm if Guardrails had not intervened. It is important to note that nurses have a long-standing practice of checking with colleagues about drug doses and rates programmed into infusion pumps to identify errors before they happen and that this practice now works alongside the Guardrails system.

Sue Unger is a senior paediatric nurse who was initially apprehensive about the introduction of Guardrails and how it would affect practice. Now she feels "… it is a wonderful tool. I feel safe when we walk away from a child that the programming of the pump settings is correct." Another

paediatric nurse, Tina Anngow, "found Guardrails safe and easy to use."

In addition to Guardrails, tracking technology has been implemented to help clinicians to efficiently locate infusion pumps and to ensure that they remain in Child Health areas for clinicians to use. The tracking technology acts like a GPS system, showing clinicians on a computer screen where to find the infusion pump.

"I feel safe when we walk away from a child that the programming of the pump settings is correct."

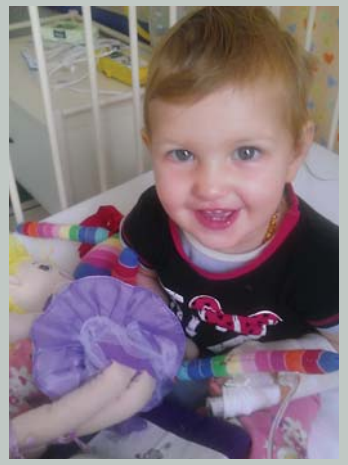
Providing excellent care to the people of Canterbury is always the priority for those who work in our health system. However we know that people are fallible, that there are known risks with many procedures, and that there are additional risks for some groups of people when they are in hospital. Our job is to design systems that take this knowledge into account and to act to buffer our patients against harm.

Electronic referral tool

General Practitioners and nurses are now able to make referrals via electronic forms that are delivered automatically to any one of 800 community and hospital services. A milestone was reached in February, with the system having delivered over 300,000 referrals. The use of this system is an important step to improve patient safety as it reduces misunderstandings arising from handwritten requests and means that general practices no longer need to maintain their own directories of services. These are all stored and maintained within the system. The possibility of a referral letter being inadvertently sent to the wrong place is also reduced.

Keeping children safe in hospital

Just like home, there are potential hazards in the hospital environment that we all need to be aware of. It is important that while a child is in hospital, those caring for them, including their parents/caregivers are aware of hazards. An entertaining DVD has been produced for parents/caregivers and children to watch about keeping your child safe while in hospital. There are other great videos designed specifically for children explaining common procedures including blood tests, X-rays and scans and plastercasts. These are available to view on the Canterbury DHB website www.cdhb.health.nz in the Child Health section.



Angelica Saywell, Ward 22, Christchurch Hospital

New-look yellow ambulances

St John has brought out the first of their yellow ambulances in a move to improve safety for staff, patients and the public. Yellow vehicles are the most noticeable on the road, particularly in low light. Yellow is also the most visible colour for people with colour blindness (which affects an estimated 1 in 12 men and 1 in 200 women). The ambulances have a new, bolder design and have been fitted with more reflective signage than that on the predominantly white vehicles. It is hoped that the new colour will result in more people noticing the vehicles and giving way to them, making for safer journeys as they travel to and from treating patients.

Reducing pressure injuries

Pressure injuries (also known as bed sores) are injuries to the skin and underlying tissue from prolonged pressure on the skin. A point prevalence study is conducted each year to provide an accurate picture of the prevalence of pressure injuries.

We have changed policies and procedures, introduced pressure injury prevention strategies and tools, increased awareness and training, and reviewed our hospital mattresses for their pressure-reducing abilities. Results from Canterbury DHB's latest prevalence study show we have decreased the number of pressure injuries and low level early pressure signs among inpatients. A survey taken on a single day in 2011 indicated 154 (39 percent) of the inpatient population were affected. In 2013 it had dropped to 44 people (17 percent).

The Yellow Envelope

The Yellow Envelope is a new system that was introduced throughout Canterbury in October, to assist with communication between Rest Homes and Hospital facilities. The envelope is a mode of transport for the information that is essential for both hospital and aged residential care staff to help with effective handover of care across the health sector.

Improving medicine management

(identified in the 12-13 Quality Accounts)

Through the electronic medicines management programme we are working towards an electronic

system that will give all healthcare providers access to patients' medication information. This includes prescribing, administering, reconciling, dispensing and tracking medications. Improving medicine management will result in better quality of care, improved patient safety and more efficient processes.

From September 2014 inpatient medications at Hillmorton Hospital are being prescribed and administered using an electronic system rather than a paper chart. Kathryn Brankin, Registered Nurse at Te Awakura, Hilmorton Hospital says, "I think it will be a major improvement on how we presently give out meds – easy access to up-to-date, easy to read information on screen and no more worrying about illegible hand writing and poor charting. Bring it on I say!"

Reporting serious adverse events

A serious adverse event is one where patient care has an unintended consequence resulting in significant harm or death. All serious adverse events are investigated. This enables us to find out what went wrong, learn from them, and put in place measures to prevent harm occurring again.

The Health Quality and Safety Commission (HQSC) produces a report each year detailing the events which occurred in all DHBs (available at www.hqsc.govt.nz) and locally we publish our own report. In 2012-13 Canterbury DHB had 49 events and in 2013-14 we had 56. The increase in serious adverse events reported may suggest we are getting better at identifying these events, rather than an increase in the number of events. We expect the number of reported events to continue to rise as our reporting systems continue to improve.

New Patient Safety Officer to lead reviews

At the Specialist Mental Health Service we are continuously looking at ways to improve patient safety and reduce avoidable harm to consumers. To assist with this, in the last year we piloted a new Patient Safety Officer role, which from August 2014 became permanent.

The Patient Safety Officer leads teams of senior health professionals in a prompt review of serious incidents. Their review reports reflect a robust investigation which includes meeting with family affected by the events to understand and address their perspectives. The recommendations from the reports are designed to contribute to safe systems and the minimisation of harm.

Breast Biopsy Review

In 2012 the Ministry of Health and the Office of Health Disability Commissioner undertook an investigation after several errors in New Zealand histology laboratories resulted in patients undergoing unnecessary surgery. The report contained recommendations for handling patient specimens in the laboratory. Canterbury Health Laboratories introduced a new information system solution in June 2014 to provide improved security and tracking of its patient specimens.

Canterbury Ski Fields Project

In 2011 a project team was formed to address concerns around patient outcomes and the safety of emergency staff in getting patients from Canterbury ski fields to the hospital. Initiatives included improving communication with emergency and medical services, how to best prepare the patient for ambulance and helicopter transport, and suggesting they purchase special 'scoop boards' and casualty sleeping bags for quicker patient turnaround and comfort.

An annual forum is now held and in June 2014 the first edition of the Emergency Services newsletter for ski field personnel was published. The newsletter ensures ski fields have the correct information to prepare safe helicopter landing sites, details of what they need to convey to St John's clinical control centre and the correct emergency service and medical centre numbers.

Fewer people need hospital care

More convenient having antibody treatment at home

Eight weeks after Christine White started self-administering immunoglobulins she noticed fewer chest infections, less anxiety around her treatment and a feeling of self-empowerment.

Christine has a condition called common variable immune deficiency and once a month for the last five years has caught a bus to Christchurch Hospital's Medical Day Unit, from her home in Hornby, on the outskirts of Christchurch, for an intravenous infusion.

A Canterbury District Health Board quality improvement initiative means Christine can instead, with training, dispense the product to herself at home. For patients like Christine this means less disruption to their lifestyle and work commitments.

"I think it's great to know you are doing something for yourself. I feel empowered."

The immunoglobulin product is formulated specifically for subcutaneous administration, it provides immunoglobulin replacement therapy for adults and children for primary immunodeficiency disease and symptomatic hypogammaglobulinaemia secondary to underlying disease or treatment.

Christine says she used to dread the intravenous therapy as it was always difficult for staff to find a suitable vein.

"It wasn't pleasant and I used to get anxious about it."

When she was invited to try self-administering the product she was immediately keen. "I know people with diabetes successfully put needles in their tummy so thought it wouldn't be a problem for me to do that."

Over several weeks Christine was taught the correct technique, including how to avoid a blood vessel and how to numb her stomach before inserting the needles into two sites. "It was easy to learn," she says.

Administering the product through her stomach was more comfortable because she could slow the speed of the infusion, which made her feel less nauseous or fatigued.

Christine White self-administering at home

It was also much quicker than her four-hour monthly hospital visits. Self-administering the product took only 15 minutes for each needle – one on each side of her stomach.

Christine says her immune system is coping better with weekly, rather than monthly infusions and she is getting fewer of the chest infections she is prone to.

"I think it's great to know you are doing something for yourself. I feel empowered and it involves my husband as well. He is there to help me if I need it."

Eight other Canterbury DHB patients are giving themselves subcutaneous immunoglobulins at home, and there are several more in training.

There are many conditions for which earlier identification and treatment can prevent hospital admission. Reducing these 'avoidable' admissions provides opportunities to improve our population's health and ease demand. Many hospital admissions can be prevented by investing in services that help to keep people well or providing alternative care pathways that deliver the right care sooner. Other services can support people to recover after a hospital admission or episode of illness, so that they don't become unwell again.

Rehabilitation Services for older people

(identified in the 12-13 Quality Accounts)

The Community Rehabilitation Enablement and Support Team (CREST) programme provides rehabilitative services for older people in their own homes. This service supports timely discharge from hospital, reduces hospital length of stay and works to avoid admissions for older persons at high risk of hospitalisation.

CREST services provide up to four home visits a day, seven days a week to support rehabilitation in the home. This improves clients' independence, reduces the need for long-term care and the burden on family members. The service is highly valued by older people and has reduced demand on Canterbury's constrained hospital beds.

A consumer survey (of 900 respondents) completed in 2013/14 showed 91 percent of clients were very satisfied with the CREST service. Eighty four percent of clients set their own goals and believed that the CREST service enabled them to regain their independence. In the 2013/14 year, over 2,000 people were supported in their own homes by CREST services, an impressive increase on the 2012/13 year. A service similar to CREST was piloted in Kaikoura this year, and is to be reviewed and developed in the 2014/15 year.

Freida Cocks doing strength and balance exercises at home.

Heart Failure Pathway

Heart failure diagnoses account for approximately 250 acute admissions to Canterbury DHB hospitals each month. Eighty percent of heart failure patients admitted are brought in by ambulance.

A working group was formed to address these statistics and incorporate prior work on chronic obstructive pulmonary disease in Canterbury. A Red Card for people with diagnosed heart failure was developed by the working group in April 2014. This is a fridge magnet and contains key information for the patient about keeping well and when to seek help. It is also a valuable aid to any visiting clinicians and ambulance teams, allowing them to evaluate the patient's condition and refer them to the right provider based on their current health status (their general practice, the 24 hour surgery, or hospital).

The overall objective is to empower patients to look after themselves, remain well in their own homes and communities, and to make sure they are getting the best care in the best setting.

Supporting people in the community

The Acute Demand Management Service continues to support an increasing number of people in their own homes. General practice teams and community nurses deliver a mix of services that support people to be cared for in their home or community instead of going to the hospital Emergency Department. Services include mobile nursing service, doctor visits, and home support.

The service was expanded following the earthquakes to ease pressure on hospital services. In the year to June 2014, the service

supported 28,738 people, surpassing the target of 22,000. Canterbury continues to have very low hospital admission rates compared with the national average.

Mental Health Mobile Respite Services

Prior to April 2013, Mental Health Respite was solely inpatient bed-based. After a review of consumer need and feedback, a mental health working group identified that this did not meet the needs of many consumers. In many cases accessing a bed away from home was not practical or recovery-focused. In response a new mobile respite service was introduced, taking a 'whatever it takes' approach to support people in their own homes and communities.

A consumer can be referred for mobile respite by their General Practitioner or Specialist Mental Health team. Then, alongside the clinical team, the consumer, their family and the community respite worker can identify the most appropriate response to reduce stress and enhance recovery for both the consumer and their family. This response could include one-to-one support, access to childcare and help with household management (e.g. getting the groceries).

This service is now at capacity and demand continues to grow. It will soon to be added to HealthPathways, which is anticipated to improve general practice awareness and is likely to increase demand.

Quick results deliver the right care sooner

Urinary tract infections (UTIs) are one of the most common bacterial infections in healthcare. The microbiology laboratory at Canterbury Health Laboratories (CHL) receives over 53,000 urine samples annually, making urinalysis one of the highest volume testing areas. Samples are received from Canterbury DHB hospitals, and from a number of community centres including the After Hours Medical Centre.

Timely reporting of urine results is important, UTIs can cause significantly dangerous complications such as urosepsis, so clinicians need to have the information they require to ensure the patient receives the correct antibiotics.

The February 2011 earthquake forced the MedLab South community testing laboratory out of their facilities and into the CHL premises. The consequential combination of increased workload, unfamiliarity with new surroundings, existing CHL computer systems, and a lack of common protocols caused problems. There was a large increase in the time to report urine microscopy results, competition for the analysers, inconsistencies in procedures and an unacceptable error rate averaging eight missed tests per day.

A project was developed with the overall aim to provide a first class urine analysis service; meeting the needs of both the community and the hospital. By introducing a number of initiatives including merging hospital and community samples, processing on a first-in-first-out basis, streamlining procedures, agreeing on common protocols and modification to staff working hours, they were able to dramatically decrease the time to report results to clinicians and increase the number of results that are reported on the same day. This project has been a great success. Up to 100 percent of positive urine cultures are now finalised on day 1 and the average monthly culture reporting time has dropped from a high of 2.8 days to a low of 1.2 days. Furthermore, these results have been sustainable over the past 12 months and are monitored every month as part of CHL monthly test statistics.

The laboratory is now able to provide quicker results to clinicians, improving patient care. The healthcare system will benefit with a reduction in antibiotic costs, avoidance of inappropriate therapy and better infection control practices. The overall outcome of the changes that this project made will be better for the patient, better for the clinician and better for the health system.


People are seen
and treated early

Home visits make a difference for teen with diabetes

Christchurch secondary school student Amy Milne has to live with type one diabetes but at least now taking care of her health doesn't interfere so much with school time.

Amy was 10 when her mother, Gillian, became concerned about her daughter's health.

"We were on a camping holiday and I noticed Amy was drinking water all the time and losing weight. As a nurse I know the signs and I was concerned that she might have diabetes."

That intuition proved correct. Soon after, Amy became very unwell and her test results showed a blood sugar level of 27. Normal levels are between four and eight.

She spent a week in hospital while her treatment was sorted out.

Now, four years later, Amy has regular appointments at Christchurch Hospital's Paediatric Outpatients Department but can also receive home visits from a Dietitian and Clinical Nurse Specialist (CNS) for any extra help that may be needed.

The Dietitian checks that carbohydrates are being counted correctly and the CNS reinforces education, checks insulin injection technique and ensures correct ketone testing. The home visits are on top of Amy's standard clinic appointments and mean Amy and her mother don't have to make extra trips into hospital.

When Amy recently started using an insulin pump and needed extra support, the home visits were invaluable, Gillian says.

"It's a lot more convenient to have them coming to the house because I am quite busy and now that Amy is at high school I don't really want her to have to keep taking time off school for appointments. And I know that if Amy is having problems they can come and see us. It's great."

Amy Milne received home visits from a Dietitian and Clinical Nurse Specialist.

Home visits are on top of Amy's standard clinic appointments and mean Amy and her mother don't have to make extra trips into hospital.

Community-based care can deliver services sooner and closer to home and help prevent disease and illness through education, screening, early detection, diagnosis and timely provision of treatment.

Four-year-old health check

The B4 School Check is a nationwide programme for four-year-olds. It identifies and addresses any health, behavioural, social, or developmental concerns before children start school. It involves a variety of assessments including an oral health screen, height and weight checks, developmental, vision and hearing testing.

This year timeliness was a focus, to get the check completed as early as possible in a child's 4th year. Children nearing their 5th birthday were prioritised for their vision and hearing check. Referral processes were also improved for children with oral health and speech concerns. In the 2013/14 year Canterbury provided a B4 School Check for 90 percent of the eligible population and 92 percent of the most vulnerable children.

Extra support in navigating cancer patient journey

In May 2013 Canterbury DHB appointed four Cancer Nurse Coordinators. Patients are referred to the Cancer Nurse Coordinators after an initial screening if there is a high suspicion of cancer or an early cancer diagnosis. The job of these nurses is to co-ordinate patient care and act as a point of contact across different health services. It is also to support and guide patients and whānau to enhance their experience and keep them fully informed about their care.

Reduction of waiting times for children with suspected hearing loss

In May 2013 community referral waiting times for hearing tests were up to 12 months for children under three years and 15 months for children over three. The waiting time after the hearing test, for follow-up appointments, was 30 months for all children. This could result in delayed diagnosis of hearing loss and could affect a child's development.

A project team was formed to target "high-risk" patients, they ran special clinics and improved the waiting list process. Waiting lists have been reduced significantly – children now only wait six weeks for a hearing test, there is no waiting time for a follow-up appointment for children under three and those over three only have a six-week wait.

Reducing speciality services waiting times for young people

The Specialist Mental Health Service's Child and Family outpatient service is introducing a new model of care known as the 'Choice and Partnership Approach' (CAPA). This is being implemented nationally by the Ministry of Health. The initial phase of CAPA has seen waiting lists abolished, with young people being booked into an initial appointment with speciality services within two to six weeks.

The initial appointment is an opportunity to gain an understanding of the situation and determine the options available to the young person and their family/whānau. Consideration is given to all possible sources of support, and relationships with community agencies have been strengthened as part of this process.

Healthy weight gain in pregnancy

Gaining a healthy amount of weight in pregnancy is one of the most important things a woman can do to support her health and the health of her baby. An intervention has been developed to support women to work out how much weight they should gain in pregnancy and to track their weight gain throughout pregnancy. This intervention has been used by Canterbury DHB for the past year and has been hugely successful.

Resources that have been released include a poster and interactive pamphlet, as well as

an education sheet for lead maternity carers. The release of these resources coincides with the June 2014 release of the Ministry of Health guidance for healthy weight gain in pregnancy.

Reducing smoking in mental health consumers

The prevalence of smoking among mental health consumers has traditionally been high and remains so. The Specialist Mental Health Service (SMHS) is actively addressing this issue with all consumers who are identified as smokers by including smoking cessation interventions in their treatment plans. During an eight-week 'snapshot' period from June to October 2013, 100 percent of consumers discharged from in SMHS had been offered advice and support to quit during their admission.

New defibrillators in ambulances

St John has installed 20 new defibrillators in ambulances and rapid response vehicles. The machines are used to shock patients in cardiac arrest, restoring their heart beat to a normal rhythm. They also monitor heart rate, blood pressure and temperature. A key function of the life-saving machines is their ability to transmit information on the patient's condition through the mobile phone network to an intensive care paramedic in the St John clinical control room who can provide further advice on patient care at the scene. They are used at an average of 14 incidents a day.

Managing Rheumatic Fever

Most sore throats are harmless and caused by a viral illness, but some are caused by Group A Streptococcal bacteria and need to be treated with antibiotic tablets or a penicillin injection. In a small number of patients, an untreated Group A Streptococcal sore throat can cause an autoimmune response and heart, joints, brain and skin can become inflamed and swollen – this is called rheumatic fever and can cause scarring of the heart valves.

In New Zealand, the majority of children who contract rheumatic fever are Māori and Pacific children. Once patients develop rheumatic fever, further Group A Streptococcal infections can cause a relapse. Penicillin injections are given four-weekly for at least 10 years to protect against these rheumatic fever relapses.

As rheumatic fever is quite rare in Canterbury we have had to develop a system to ensure that children moving from other DHBs get access to the correct treatment. Patients are now provided with a package of free health care including free injections, free quarterly optional general practice appointments, and dental care. This is supported by a new HealthPathway, developed in late 2013 to further improve the treatment of rheumatic fever in Canterbury DHB.

These preventative services allow for self-management of health and relapse prevention, keeping people with rheumatic fever well and out of hospital.

Emergency Department attendances

(identified in the 12-13 Quality Accounts)

In the 2013/14 year, the overall number of Emergency Department (ED) attendances has continued to increase. Strategies to care for older people in their own homes and the community, including the CREST service, Falls Prevention Programme and the Acute Demand Management Service, have become embedded in our health system and have reduced the growth in attendances, particularly for older people.

We are exploring strategies to reduce ED presentations. Focus areas have included community-based care for abdominal pain presentations, and others presenting to ED with conditions better suited to primary care. The use of social media to engage and educate young adults to seek care at appropriate locations is being explored.

The largest growth in ED attendances has been among those aged 25-29 years. We are concerned the growth amongst younger adults may be driven by the rebuild workforce who could be unfamiliar with how the Canterbury Health System works and are presenting in ED rather than in primary care. Canterbury DHB has engaged with Christchurch Earthquake Recovery Authority (CERA) to ensure employers provide information to new migrants regarding their health care and appropriate places to seek care for urgent needs.

People are supported to stay well

PHOTO: THE PRESS

Since launching in February 2013 the All Right? campaign has developed a loyal and dedicated following in Canterbury. One such fan is Sandy Turner – educator, clown doctor, and road-cone-wearing cyclist. Sandy believes *All Right?* has helped lift the stigma often associated with mental health.

"The earthquakes, repairs, and challenges navigating the city make this a really trying time. *All Right?* has helped people understand that it's all right to feel how you do, and has helped to make talking about mental health a normal, everyday thing," says Sandy.

The Canterbury roller coaster is the latest initiative in the All Right? campaign, it encourages people to name their emotions and check in with themselves and others as to where they are on the recovery journey.

Working as a literacy and numeracy tutor for the YMCA, and as a part time clown doctor, Sandy is well aware that her mood has a big impact on those around her. "All Right's messages have supported me during a time that's really challenging, and have given me more energy and enthusiasm. If it's beneficial to me then it's beneficial to everyone I am in contact with."

Sandy can often be seen cycling around the streets of Christchurch wearing a crocheted road cone helmet. She says the helmet was inspired by *All Right?*

"The idea for the road cone helmet came to me after reading a message that said *It's all right to feel pretty stoked.* On the back of the postcard it talked about using your energy to motivate others, and that really gelled with me."

"I had some energy and enthusiasm so I wanted to share it. I started wondering how to bring a bit of humour to people driving through those awful traffic jams. When I wear my helmet I find myself thinking 'why is everyone so smiley!'"

All Right? has an online poster generator where groups can create their own posters with ideas of what makes their members feel all right. Sandy says it's been a great door-opening exercise for her students. The ideas submitted have also helped reinforce that her students enjoy similar things to her and her workmates – simple things like catching up with mates, listening to music, and getting active outdoors.

Clown Doctors Dr Bob and Dr Azolla la la (aka Sandy Turner) spreading the love at The Princess Margaret Hospital by handing out All Right? compliments to staff and patients.

All Right's tear-off compliment slips have proven a great tool to Sandy in her role as a clown doctor. "The compliments have been really great – they are fun and playful and everyone who gets one loves them. When I first saw them I cut the compliments out of the newspaper and let parents and children select them and act them out. We had so much fun acting out things like frolicking in fields and being pirates and ninjas combined!" says Sandy.

All Right? is a Healthy Christchurch initiative led by Canterbury DHB and the Mental Health Foundation of New Zealand. For more information on the *All Right?* campaign go to www.allright.org.nz.

When people are supported to stay well in the community, they need fewer hospital-level or long-stay interventions. This is a better health outcome for our population, it reduces the rate of acute hospital admissions and frees up health resources for those who need it most.

The Fruit and Vegetable Co-op

The Fruit and Vegetable Co-op is a health promotion partnership between Community and Public Health (the Public Health division of the Canterbury DHB), the Christchurch Anglican Cathedral, and the Christchurch community. The aim of the project is to increase the quantity and variety of fruit and vegetables consumed among participating families by providing low-cost fresh fruit and vegetables.

Volunteer at the Fruit and Vegetable Co-op.

The project has experienced rapid growth since it began in September 2011, and there are now more than 2,000 packs of fruit and vegetables being ordered each week, with seven packing hubs, and 40 distribution hubs. Health information and recipe cards are included in the fruit and vegetable bags. A recent survey found that the Co-op is serving some of our most vulnerable families, the recipe cards and health information are used, and being a Co-op client is associated with increased fruit and vegetable intake. Sixty percent of those surveyed met the Ministry of Health target of at least three servings of vegetables a day and 80 percent met the target of at least two servings of fruit a day.

Gateway Assessments

Children and young people up to 16 years old who are in Child, Youth and Family (CYF) care or at risk of entering care are often detached from health services, and are more likely to have physical, behavioural, and emotional difficulties. CYF social workers can refer eligible children to Canterbury DHB for an assessment of their physical health, mental health and development. Their health and education history is also reviewed. This comprehensive assessment provides a complete picture of the child's needs and helps plan access to the right health care, and education for them.

This year a team of five paediatricians, two clinical nurse specialists, and Child, Youth and Family staff ran a Saturday clinic. Seventeen children attended the clinic.

Alcohol-related harm

(identified in the 12-13 Quality Accounts)

Summer studentship research provided a detailed insight into the impact of alcohol-related harm on Emergency Department (ED) services. They found evidence that alcohol was associated with over 5500 ED admissions per annum, that the busiest hours for alcohol-related admissions occurred between 10pm and 4am in the morning and over 75 percent of the alcohol consumed prior to admission was sourced from off-licenses. This research will inform service provision.

To reduce alcohol-related harm, new resources and training have been rolled out to general practices throughout Canterbury. The resources will help General Practitioners identify patients who are drinking too much alcohol. The main goal is to raise awareness of harmful drinking habits and the links between alcohol and chronic disease. This training pack will be sent to Rural Canterbury general practices by spring 2014.

Alcohol screening in the construction industry

Alcohol and other drug problems are present within the Canterbury construction industry. As part of a wider project involving Health Promotion Agency and Canterbury DHB, a Brief Intervention Training programme for construction workers has been developed by the Mental Health Education and Resource Centre. An Alcohol Brief Intervention involves screening people's drinking level to determine if their drinking is unsafe. If unsafe, Brief Intervention techniques are used to help people change their thinking patterns around alcohol consumption and help them make more informed decisions about alcohol use.

The Brief Intervention Training programme will raise awareness of unsafe alcohol and other drug practises, provide education and resources to increase knowledge and skills about reducing alcohol and drug use, and improve access to referral pathways. This will be key to supporting a culture change.

Tackling influenza

(identified in the 12-13 Quality Accounts)

Influenza is a serious and sometimes fatal illness, particularly in the elderly and the very young. As part of a strategy to reduce the spread of influenza in our communities, free influenza vaccinations were offered to under 18s again this year. Children up to the age of 18 are considered the main spreaders of the disease.

Vaccination reduces the risk of visits to the doctor for influenza by approximately 60 percent among the overall population (when the vaccine is well matched to the flu viruses circulating in the community) and reduces the risk of more serious outcomes such as hospitalisation, for those who are well and for those with pre-existing health problems. [1]

Promoting immunisation is a way general practitioners are supported to manage the impact of influenza patients through the winter months.

An evaluation of the 2013 under-18 influenza vaccination programme found an overall uptake of 32.9 percent, which is close to the target of 40 percent and substantially higher than the 2012 coverage of 18.5 percent. Uptake was higher in primary care (29.2 percent) than in the school-based programme (19.7 percent).

In primary care, more deprived children under 18 years old were less likely to receive the vaccine. In terms of ethnicity, in primary care uptake for Māori and Pacific under-18s was lower than the overall uptake. When vaccinations were offered at school, Māori had a higher uptake than New Zealand European students. There was no difference in uptake between Pacific and non-Pacific students in the school-based programme.

Factors contributing to the increased uptake in 2013 are thought to include the cumulative effect of three years' experience in targeting and delivering vaccines, and a timely and effective media campaign.

[1] http://www.cdc.gov/flu/pdf/freeresources/general/flu-vaccine-benefits.pdf.

Living within our means

Alarm system created to monitor patients on breathing machines

Sleeping can really be a matter of life and death for some people. A number of Cantabrians require the extra support of a breathing machine. However, up until now, early detection of when a machine's airflow might suddenly become interrupted has been difficult as most do not have an inbuilt alarm system.

Geoff Shaw, Intensive Care Unit (ICU) Specialist and Honorary Fellow of the Institution of Professional Engineers of New Zealand, says there may be no obvious sign of distress if breathing machines used at home stop working properly. This commonly happens to patients using Continuous Positive Airway Pressure Machine (CPAP) or non-invasive ventilation machines, if the mask becomes loose, or if the connecting airway hose falls off while they are sleeping.

Geoff recognised the need for some sort of alarm while working with patients using CPAP machines in ICU. He worked with Alex Lowings from Canterbury DHB's Medical Physics and Bioengineering (MPBE) team to create the Sentinel monitor and alarm device.

The Sentinel is designed to help monitor people who rely on breathing machines while recovering in intensive care as well as those who suffer from sleep disorders and need help to breathe at home when they are asleep.

"There's been a real gap in the market because the only ventilators with these alarms are for people who are not breathing on their own, and they cost more than $40,000 each," Geoff says. "I saw a need for a device that could tell staff and patients how well their breathing machine is working and to sound an alarm when it isn't. I knew we had a specialist team with the skills, experience and creative bent that could find a more effective solution."

Following a discussion on patient needs, a working prototype was produced and evaluated. "The enablers for this project have really been Alex's ability to clearly communicate across the organisation, with staff, and clinicians to build those relationships, and to see the project through," Geoff says. Alex says they are lucky to be based on site where they can engage with clinicians and see their devices working at the bedside. "We can just go up to the ward and see how things are going, talk to the doctors and nurses, get their feedback and see the devices working in real patient situations – it's unique as a lot of other hospitals around the world do not have the expertise of clinical and bioengineering all under one roof."

Sentinel alarm with patient

Since developing the first prototype the Sentinel device has been made smaller, with a touch screen display. The devices and software are made in-house using a combination of off-the-shelf components and custom-made electrical circuits and mechanical fittings. The MPBE team is currently making 10 units for the Sleep Clinic and is expecting to make an additional seven for ICU and PHDU.

Paul Kelly, Sleep Unit Team Leader, has picked up the first six devices from MPBE and says the Sentinel device is a vital piece of equipment for many of their power-dependent patients who use a non-invasive ventilator in their own homes. "In the event of a power failure, it is not only essential to have a backup power source, but also a smart alarm to notify the caregiver of a critical situation. The Sentinel device helps reduce risk in the event of an emergency."

MPBE is now working with Geoff and Via Innovations to look at the potential to market the product to other DHBs.

The Canterbury Health System is facing increasing demand for services and rising costs to deliver these services. The DHB is expected to provide the best possible value for every dollar spent in health; we will continue to invest in programmes that help us improve the health of Cantabrians in smarter, more efficient ways.

Helping more people

The Specialist Mental Health Service has been able to absorb a continued increase in demand for services within existing resources. Since 2010, the adult community mental health service has seen a 30 percent increase in the number of consumers seen and a 40 percent increase in the number of times people were seen. The Psychiatric Emergency Service has seen a 37 percent increase in the number of consumers seen and Child and Youth services a 42 percent increase in the number of consumers seen.

Despite this, average waiting times for both adult and child/youth services has continued to decrease. In the adult community mental health service, average waiting times have decreased from 22 days in July 2010 to 18 days in July 2014. In Child and Family Services which includes youth average waiting times have decreased from 41 days to 29 days over the same period.

Improving eye socket surgery

Canterbury DHB performs an average of 40 eye socket surgeries a year. From 2010 to 2013 eye socket fractures were repaired using commercial titanium plates costing approximately $1000 each. These were inserted at Christchurch Hospital theatres and scans were performed the following day to verify the plate was fitted correctly. Plates had to be cut to size and bent to fit the eye socket in theatre. They were often inserted several times before a correct fit. The surgeries were time-consuming and each attempt to fit the plate resulted in extra bruising and scar tissue for the patient.

A review of eye socket surgery procedures took place, and now 3D models of eye sockets are printed from scans and used to pre-adapt a titanium plate. Using the new pre-formed plates has improved patient experience and reduced operating time, the rate of return to theatre, and equipment costs. The cost of the plates has been reduced from $1000 to $26.

RELEASING TIME TO CARE
whakawātea wā ki te tiaki

Canterbury DHB is using the United Kingdom National Health Service's 'Releasing Time to Care' initiative to improve ward processes and environments, helping nurses and therapists spend more time on patient care, improving safety and efficiency. We are currently focusing on training staff in Older Persons Health, aiming to standardise the way we deliver care in these services ahead of their relocation to the new Burwood Health Campus.

Embracing sustainability

In June 2014 Canterbury DHB appointed its first Sustainability Officer, to help reduce the Canterbury Health System's environmental impact in an economical way. He has already been able to identify opportunities for simple intervention to increase sustainability, such as areas where lighting is excessive and exploring opportunities to 'green' the Canterbury DHB vehicle fleet. Within weeks of him starting his role, he saved the Business Development Unit approximately $9000 by putting sellotape on some light switches.

Getting the right antibiotic

Identification of the most appropriate antibiotic is a routine task performed by the Microbiology Department. An organism is firstly identified and then further tested to determine the range

of antibiotics that can be used to successfully treat the organism. This is known as antibiotic susceptibility. In January 2014 the department changed the methods used for looking at susceptibility by switching from an American system to one developed in Europe called EUCAST. This stands for European Committee on Antimicrobial Susceptibility Testing. The advantage of the switch has been quicker access to data on changing susceptibility patterns. Following international moves to the system, Canterbury Health Laboratories were the first to adopt EUCAST in New Zealand.

Bacteria are always trying to outwit antibiotics and become resistant to conventional treatment. The most appropriate antibiotic can be prescribed in line with emerging international trends, this change benefits patients and reduces treatment costs.

Small changes can make big differences

Christchurch Hospital's Dental Department has the capacity to treat 760 patients under general anaesthetic (GA) each year. To ensure they utilise as many of these appointments as possible, the department asks for confirmation on a dedicated telephone number by a specific date.

If confirmation is not received and they and are unable to make contact with the patient/ parent/carer the appointment is cancelled and reallocated. A third of the appointments made are not confirmed and need to be followed up. When following up non-confirmations, it appeared many people were not aware they needed to confirm the appointment.

"I decided to see whether changing the layout of the letter and putting more importance on the confirmation aspect would lead to improved confirmation compliance" says Pauline Eagleton, Oral Health Administration Assistant. Pauline restructured the letter, separating the confirmation instructions from the appointment information with the confirmation instructions on the first page.

Changing the letter resulted in a 95 percent confirmation rate compared with 66 percent for the old letter. The time saved works out to 165 hours a year or $4,950 per year. But an even bigger cost saving to the organisation is the potential that 'lost' GA slots will be avoided, as once a slot is unused, we can't get the capacity back.

Pauline says she feels proud that she was able to make a difference and would encourage colleagues to take time to think about their everyday tasks, be critical and evaluate whether they do things a certain way because 'that is the way it's always been done'. "If they feel there is a better way of doing things to eliminate waste in time/money then don't be afraid to suggest and make changes. You may find that others have always thought there could be a better way to do things," she says.

Reducing inefficiencies

Canterbury DHB runs workshops throughout the year designed to help people working in health develop skills and gain experience in quality improvement and "lean thinking". Lean thinking encourages people to look at ways their services can operate more efficiently in order to reduce waste, reduce errors and spend more time with their patients.

Nurse Maude's Community Palliative Care team Clinical Nurse Specialist, Raewyn Robinson, took part in a workshop after seeing it advertised. She and her team realised that not having the name and phone number of a patient's general practice team on the ID sticker on their files was creating inefficiencies. "There are patient files that we take into the patient's home. Often we need to contact their General Practitioner while we are there. Not having the details on file meant we would have to ask the patient for their doctor's name, then ask for a phonebook and look the number up," Raewyn says.

As well as being time-consuming it did not look professional. The patient labels were updated to have the name, phone and fax numbers of the general practice. "It was a tiny, tiny project but made life easier. Raewyn estimates that over a year the new labels would potentially save Nurse Maude about $5000 in staff time.

Equity

Managing warfarin levels in the community

Visiting her local pharmacy for warfarin monitoring is now much more convenient for Christchurch woman, Sue Johnston.

Sue has a medical condition that requires her to take a low dose of the anti-coagulant drug every evening.

To ensure she was taking the correct dose Sue used to have to make weekly visits to a blood testing facility in New Brighton, where she would sit and wait for up to 45 minutes to have blood taken. The sample was then sent to the laboratory, which processed it and sent results back to her general practice. Her doctor would calculate the dose and a nurse would phone her by late afternoon with the correct dosage.

“A nurse would phone and give me the lab number, which was basically always the same anyway,” she says.

Now Sue visits a pharmacy just around the corner from her home, where she gets a finger prick. A small drop of blood is put into a machine which gives a reading within 10-15 seconds. Pharmacy staff use the reading to calculate the amount of warfarin Sue needs.

Sue can have a print-out of the results if she wants one, and the results are also sent to Sue’s general practice team.

Sue Johnston

“I used to wake up in the morning and think, ‘oh I have got to go to New Brighton for a blood test today’. Now there’s no more waiting around and I don’t have to have a needle in my arm, I’m very happy – it’s brilliant,” says Sue, who works from home.

To ensure she doesn’t forget, Sue receives email reminders from the pharmacy.

In December 2010 a Community Pharmacy Anti-Coagulation Management (CPAM) Service was piloted in community pharmacies throughout New Zealand. The CPAM Service uses international normalised ratio (INR) point-of-care testing and adjusts warfarin doses with the aid of a decision-support system in the pharmacy.

After a successful evaluation of the pilot by the University of Auckland, the service was expanded under the new Community Pharmacy Service Agreement (CPSA).

Already available in Western Christchurch, CPAM has been introduced in the eastern suburbs, allowing patients to be tested locally with no waiting time and an immediate result. With pharmacies in the east gaining this service, people now have the same access to the service across the city.

Our services are targeted to help reduce inequalities in the health and independence of our population. We are increasing our emphasis on vulnerable population groups, particularly children and young people, our older population, those struggling with mental health issues and our Māori and Pacific population.

Increasing outreach services

(identified in the 12-13 Quality Accounts)

Key health promotion programmes in oral health, the Human Papilloma Vaccine (HPV) programme, cervical screening and B4 school checks (for all four-year-olds) are regularly monitored and strategies have been implemented to improve their uptake by Māori and Pacific families, including increasing outreach services.

Increases in participation of Māori and Pacific patients in the priority areas have been achieved. In particular, B4 school checks for Māori and Pacific children have exceeded their target, and HPV uptake has increased by 20 percent since the establishment of the programme in schools at the beginning of 2014. Overall there has been a slight increase in cervical screening for Māori but there is still work to be done in this area.

Improving ethnicity data

(identified in the 12-13 Quality Accounts)

Guidelines for the collection and recording of ethnicity data have been developed for general practice teams to ensure ethnicity coding across practices are consistence. This also includes the collection and recording of iwi data for Māori.

Having consistent ethnicity coding across general practice helps us to understand the composition of our communities and supports us to develop services that better meet their needs.

Provide culturally appropriate care

(identified in the 12-13 Quality Accounts)

A comprehensive cultural competency programme has been developed to assist general practice teams to provide cultural appropriate care to all populations. Te Tiriti o Waitangi and its application to healthcare has been delivered to around 180 primary care providers in Canterbury. A Pacific health cultural competency module is being introduced.

The Pacific module is called Engaging Pasifika Peoples. It acknowledges the diversity of Pasifika peoples both ethnically, generationally and culturally and encourages health services to consider different ways to engage Pasifika peoples. Health services genuinely want to get it right when it comes to working with Pacific patients, but sometimes it can be a case of ‘you don’t know what you don’t know’. It can be as simple as looking at something with a different lens. The training invites practitioners to think about different ways to communicate health messages and to consider the environment in which a patient lives so health solutions make sense and are achievable within their normal home and community environments. Often we forget as health professionals how intimidating it is for our patients to navigate the health system/environment.

Pacific Health Framework

(identified in the 12-13 Quality Accounts)

Leilani & Blake Pokoina

A draft Pacific Health Framework to guide activities around Pacific Health improvement in Canterbury has been developed with community consultation. The purpose of the Pacific Health framework is to encourage collaboration between health, social and wider services to work towards agreed outcomes to improve the health of individuals and their communities.

The framework aims to ensure people are healthier, have optimal quality of life and take greater responsibility for their health within home and community environments. It is envisaged that this will be achieved through a range of services including health promotion and prevention, early detection and management of health issues, providing and improving intensive assessment, treatment, rehabilitation and support services. There will be a focus on actively utilising Whānau Ora, improving access to care, developing the workforce, better understanding our populations, ensuring cross sector collaboration and the development of community and organisational leadership. Overall it requires each health provider to consider how they can improve the health of Pacific communities in the Canterbury area.

Health initiatives making a difference to the wellbeing of some of our most vulnerable

A collaborative initiative aimed at improving the future of children with a parent or parents in prison is making a difference to communities. In April this year Canterbury DHB teamed up with Pillars (children of prisoner's social services charity) to provide Infant2Teen health assessments for children of prisoners in Canterbury.

Sue Miles, Canterbury DHB Child and Family Safety Service coordinator, says many children of prisoners have fewer opportunities and complicated health needs that are overlooked. "Infant2Teen Health Assessments are aimed at breaking the cycle of the next generation of families entering the justice system," Sue says. "Using a holistic approach that takes into account family strength, needs are identified and interventions are implemented to improve the overall health and wellbeing of children and young people."

To date, Infant2Teen staff have been in contact with about 30 children and young people. Of those, 23 health assessments have been completed and the child or young person were found to have either one or more health and/or social issues: including learning difficulties, behaviour/mental/medical health concerns, an inadequate food supply, or living in cold/damp housing.

Sharen Small, Clinical Nurse Specialist and Infant2Teen Health assessor, says it's well known that health issues can affect a child's learning abilities. "This can subsequently limit their future opportunities. Our assessments find out what the child's needs are and then we develop a Health Plan, which directs them to the right place for care. We also ensure that the plan is followed up," Sharen says.

Sharen says she has also discovered that community support is a vital to the success of the initiative. "The Health Plan needs to be realistic, achievable and practical for the family. It frequently involves volunteers who can work alongside the family in a mentoring role," she says. "Local community supports, preferably within walking distance, are sourced to provide a sense of belonging and connectedness." Sharen says this is in line with the Canterbury DHB's aim to provide health care closer to people's homes. "It ensures they have the right care, in the right place, at the right time, by the right person," she says.

Improving end of life care

Have a Conversation that Counts

Discussing what you want to happen when you are dying is not something we often do, but it is one of the most important 'Conversations that Count' in your lifetime. The 16th of April was the first time a national awareness day was held to encourage people to think about, talk about and plan for their future health and end of life care. This is known as Advance Care Planning. People were encouraged to visit the website conversationsthatcount.org.nz to download and send postcards to their friends and family members to help them to 'start the conversation'.

Jane Goodwin, Canterbury DHB Advance Care Planning Facilitator, says it's about discussing the things which are most important to you with your family, friends and health care professionals so they know what you would want to have happen if you become too unwell to speak for yourself. "Most people think Advance Care Plans are something for older people or for those who are dying – and while it's really important for these people to have an Advance Care Plan, there's no harm in starting the conversation at any age. In fact the earlier you start, the better," Jane says.

"Conversations that Count is about having a chat with your family and friends and letting them know what you would like to have happen at the end of your life. For example, it's discussing everything from what's important to you as you get older, and where you would want to be cared for if you could no longer care for yourself, to whether you want to be an organ donor and where you would prefer to die."

Once developed, an Advance Care Plan can be stored alongside a patient's medical records, making it easier for health professionals to make treatment and care decisions about their patients, especially when they are unable to speak for themselves.

Peter Dixon from Christchurch says that having a Conversation that Counts and making an Advance Care Plan is something everyone needs to do, whether they are healthy or not. Peter is in chronic renal failure, and so for Peter and his family, making decisions about what type of medical care and intervention he wishes to receive at the end of his life are real-life questions he is dealing with now.

"I've had a lot of discussions about what I want to happen at the end of my life with my family, and having the advance care plan is giving me peace of mind that the medical profession aren't going to intervene at the end of my life against my wishes," Peter says.

The South Island Alliance is also working to support the promotion of Advance Care Planning

across the South Island through its Health of Older People Service Level Alliance (HOPSLA). Dr Jenny Keightley, Canterbury-based GP and Chair of HOPSLA, says it's particularly important that people living with chronic health conditions and progressive illnesses have the opportunity to discuss their health care options for the future and to express their own values and choices during conversations with doctors and nurses about their treatment.

"Through HOPSLA, South Island DHBs are working together to achieve standardised documentation for advance care planning and to ensure that dedicated training is made available to health professionals across the South Island to support more widespread use of this important tool," Jenny says.

End of life care is the provision of supportive and palliative care. It focuses on preparing for an anticipated death and managing the end stage of a life-limiting or life-threatening condition in accordance with the person's and family/whānau wishes.

Advance Care Planning

Advance Care Planning (ACP) is a process of discussion and shared planning for future health care which involves the individual, their family/whānau (if they choose) and their healthcare professionals. It encourages people to develop and express preferences for future care based on their beliefs and values as well as an understanding of the treatment and care options that might be available to them in the future. These conversations can be formalised into an Advance Care Plan. Within this, people may choose to make specific requests to consent or to refuse certain treatment(s) which may be offered in the future when they no longer have capacity. This is called an Advance Directive.

ACP is gaining traction in Canterbury. Two facilitators have been employed and are working across the sectors to raise ACP's profile and to encourage consumers and healthcare providers to start having ACP conversations. This has been achieved through a variety of mediums including presentations, in-service training, one-on-one advice and the promotion of the national Level Two ACP training to increase the pool of ACP champions in the district.

Canterbury is the first area in the country able to share Advance Care Plans electronically. This helps to ensure this important information is available to the health professionals involved in a person's care so that their wishes are known. Our first electronic plan was loaded on Christmas Eve 2013 and we now have more than 80 plans published to the system. The majority of Advance Care Plans are being generated in general practice, with a smaller number being produced in hospital and by 'other' health care professionals such as the ACP facilitators and the Motor Neuron Disease Coordinator. Further information on the Advance Care Planning process can be found on Healthinfo (the Canterbury DHB website for patient information) www.healthinfo.org.nz. The public awareness generated by the April 'Conversations that Count' campaign has been followed up with education sessions and consumer group presentations. As a result, the ACP page on Healthinfo was the 9th most popular, with 383 hits since the beginning of April.

Advanced heart failure guidance

A pathway has been developed to guide the management and care of people with end-stage heart failure. The pathway is available on HealthPathways, an electronic source of information for all doctors (in the community and hospital). The pathway will help ensure patients with heart failure have good access to symptom control and palliative care. The pathway also guides how patients can be linked into the appropriate community services as required.

Focus on experience of end of life care

A group of Canterbury DHB representatives from palliative care and general practice attended the 2014 meeting of the Health Roundtable. Health services across Australia and New Zealand can subscribe to The Health Roundtable. It exists to provide opportunities to learn how to achieve best practice, to network and for collecting, analysing and publishing information to compare members.

Innovations in end of life care were shared, analysed and discussed. Areas of focus include advance care planning, Chronic Obstructive Pulmonary Disease, heart failure, and the frailty pathway (a guide to ensure timely and appropriate care of particularly frail patients). The meeting concluded with commitment to the common goal to research, trial and implement a tool which will evaluate end of life care experienced in the community, in hospital and in aged residential care.

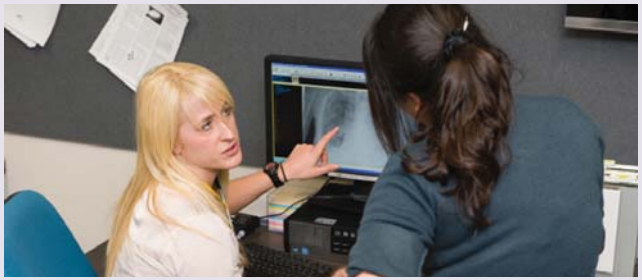
We would like to use the VOICES (Views of Informal Carers – Evaluation of Services) tool to evaluate end of life care in Canterbury. This questionnaire surveys bereaved relatives and carers. Funding arrangements for VOICES are still to be confirmed.

New hospice for Nurse Maude

The Nurse Maude Foundation acquired a large piece of land last year across the road from its current Merivale site. It has been announced that a brand-new hospice will be built on this Mansfield Ave section. This is very exciting news for the Nurse Maude Hospice Palliative Care service. The land has been readied for building and User Groups for design are currently being formed.

Better communication between palliative care professionals

The Canterbury Integrated Palliative Care service is currently introducing a new performance status tool for patients called the Palliative Performance Scale. It was developed a decade ago by Victoria Hospice, Canada and was recently introduced by a Canadian locum palliative care physician in South Canterbury. He was involved in its inception and spoke highly of its benefits in communication between health professionals and its use as an outcome measure. It is an 11-point scale that communicates to others the patient's level of ambulation, disease progression, oral intake,



ability to self-care and level of consciousness. We are already seeing the benefits of this simple tool as we work regionally with other DHBs, across many providers and with a large group of complex patients.

Study on enzyme replacement for pancreatic cancer patients

In collaboration with the New Zealand Institute of Community Health Care, a team of researchers working at Nurse Maude Hospice Palliative Care has been studying malabsorption in metastatic pancreatic cancer. It is well-known that the vast majority of patients with this aggressive cancer do not digest their food correctly without enzyme replacement. An audit of 129 patients in 2010-12 showed that approximately 20 percent were receiving the treatment. The results of this study have been accepted by the British Medical Journal: Supportive and Palliative Care for publication.

The research team obtained funding from the Canterbury Medical Research Foundation to extend their study of the quality of life of these patients before and after enzyme replacement. This work is ongoing and results might be available in 2015.

Improvements in palliative care

The South Island Alliance has established a palliative care workstream to promote effective communication and collaboration to plan, design and prioritise integrated accessible palliative care. There is excellent representation from a cross-section of stakeholders including acute care, Hospice Palliative Care paediatrics and aged care.

Areas of focus include:

- sharing best practice tools
- encouraging implementation of national standards
- standardised information collection to support review of services and inform service planning for the future
- workforce education and planning
- community engagement with a focus on diverse cultural approaches to death and dying.

It's all happening

Artist's impression of the new Acute Services building at Christchurch Hospital.

Facilities development project

The earthquakes of 2010-11 damaged hundreds of buildings and thousands of rooms across the region's hospitals. Some 14,000 rooms were damaged, and 630 rest-home and 105 acute inpatient beds were lost. In response, existing redevelopment plans for Christchurch's health facilities were fast-tracked and the necessary funding was approved in March 2013.

With a $650 million plus budget, the redevelopment of Christchurch and Burwood Hospitals is the largest ever health-related building project in New Zealand.

By June 2013, teams of architects and health planners were hard at work, with preliminary designs close to completion for the Burwood Health Campus.

Quake repairs

Earthquake repair work has continued across all Canterbury DHB buildings in 2013-14. Wherever possible, repairs are done after hours to ensure minimal disruption, however, it's acknowledged that this has created a lot of noise and vibrations at times, which has been difficult for staff and patients. In our larger facilities, the most common repairs are to seismic joints in floors and staircases, replacing ceiling tiles with more modern, lighter materials, and replacing lighting and sprinkler systems. Resin injecting cracks to restore strength to floors and walls is also happening throughout many of our buildings.

In some cases it has been necessary to temporarily move whole wards to do the repair work. This is known as "decanting" a ward. Staff and patients have been very understanding of the need to get the repairs done as quickly as possible. The end result is safer hospital facilities. These repairs will continue for the next five years.

Burwood Health Campus

At the Burwood Health Campus, construction is already underway on a purpose-built health facility that will specialise in care for older people and rehabilitation services. The redevelopment will include 230 new inpatient beds, an extended radiology department and a new outpatient department.

During the second half of 2013 and into 2014, extensive site preparation works were carried out, including site levelling and the construction of large new car parks at the rear of the site. The main hospital entrance and reception area was moved to a temporary new location – also at the rear of the site. Some buildings were demolished, including the Brain Injury Rehabilitation Services ward, and patients were rehoused elsewhere on site.

Artist's impression of Burwood Health Campus.

In December 2013, the main build contract was signed in the presence of the Prime Minister, the Rt Hon John Key and the then Minister of Health, Hon Tony Ryall. As with the Christchurch project, user groups and planners have worked extremely hard through the preliminary and developed design stages at Burwood. The project is now well into the detailed design phase, with specific fixtures, fittings and equipment being decided upon.

Following the site preparation work, construction has begun in earnest at Burwood, starting with the on-site manufacture of reinforced steel foundations. The first major concrete pour was done for the foundations of the Back of House building, in early June 2014.

MORE THAN **1,500** TRADESPEOPLE WILL WORK ON SITE OVER THE NEXT TWO YEARS

32,500m² APPROX AREA OF ALL FLOORS

1800 TONNES OF STRUCTURAL STEEL

229 PRE CAST COLUMNS

APPROX **15,000m³** OF CONCRETE

AT LEAST ONE **200** TONNE CRAWLER CRANE

130 MOBILE CRANES

MULTIPLE SMALLER CRANES AND ACCESS EQUIPMENT

BUILDING FOOTPRINT IS 14,000m²

APPROX **450** PRE CAST PANELS

APPROX **15,000m³** SOIL & SAND HAS BEEN REMOVED FROM BOTH THE NORTHERN CAR PARK AND GROUND IMPROVEMENT WORKS

NEW FACILITIES DEVELOPMENT

IT'S ALL HAPPENING

BURWOOD HEALTH CAMPUS

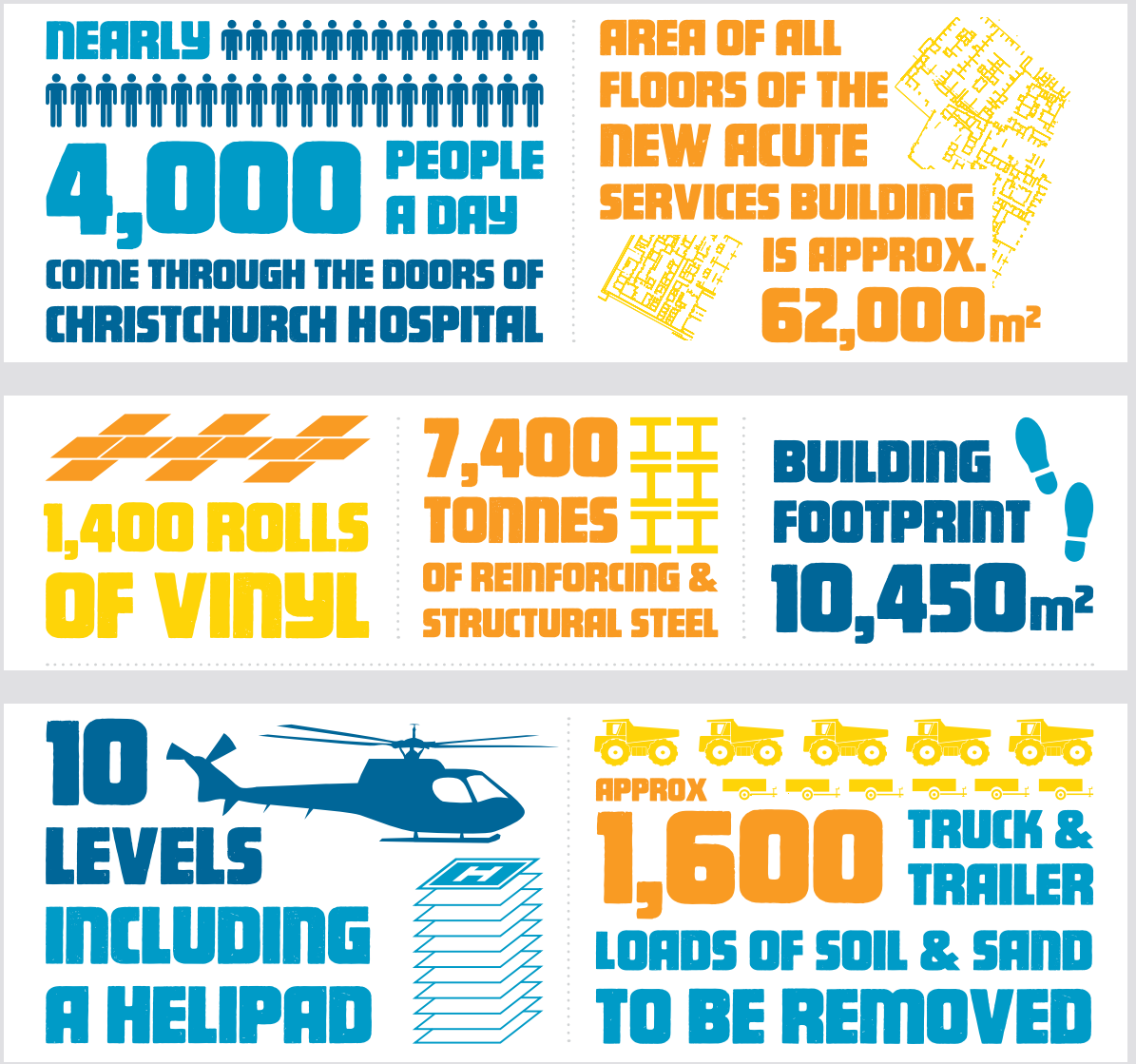
New developments completed in 2016

Christchurch Hospital

The new Acute Services building (pictured page 41) at Christchurch Hospital is being designed to meet the future needs of Cantabrians, and people across the South Island, for top-quality public hospital care.

When complete, the new facility will have new operating theatres, around 400 beds, including purpose-designed spaces for children, an expanded intensive care unit, a state-of-the-art radiology department, a new emergency department, and a rooftop helipad.

This year a huge amount of preparatory work has been done. Architects, planners and user groups have moved through the preliminary design stage and are currently engaged in developed design. It has been an immense behind-the-scenes effort. A land swap between the Canterbury DHB and the Christchurch City Council, first mooted in 2010 and publicly consulted on at that time, was achieved in late March 2014.



NEW FACILITIES DEVELOPMENT

IT'S ALL HAPPENING

CHRISTCHURCH HEALTH CAMPUS

New developments completed in 2018

Christchurch Health Precinct

The new Health Precinct will be located adjacent to Christchurch Hospital. As a world-class hub for health education, research and innovation, the Health Precinct will drive activity in the city centre. It will help boost our health workforce and provide unique opportunities for cutting edge research and enhance the links between health and education.

Research and education science facilities will include the University of Canterbury, CPIT, University of Otago, and the learning and development component of the Canterbury DHB. All facilities will be within walking distance of Christchurch Hospital.

The Precinct will form a new western gateway to the city centre, with easy access to Te Papa Ōtākaro/Avon River Precinct, Metro Sports Facility and Hagley Park, public open spaces and a new public transport super stop.

Artist impression of the Health Precinct.

How do you build a hospital?

Building a hospital is a bit like building a house – there are several design stages to work through, from preliminary design (outlines of the layout of the building and what goes where) to developed design (deciding what to put in each room) and then detailed design (the exact locations of windows and doors, fixtures, fittings and equipment).

Of course, a hospital is a lot more complicated than a house – and that's where the support of user groups is vital. At Canterbury DHB, more than 20 user groups have been set up to help the architects plan our new facilities. User groups include staff working in each area of the hospital, but also represent patients and their families, healthcare providers, hospital suppliers, patient advocates, volunteers and many others.

One of the most important resources has been the Canterbury DHB's Design Lab – a large warehouse space in western Christchurch with enough space to mock-up life-sized wards, rooms and department layouts, including a "high-fidelity" ward as close to real-life as possible. Being able to visualise, test and adapt hospital spaces in 3-D, to work out the best ways to organise wards and equipment, has been invaluable for user groups.

Looking ahead to 2014-15

At Burwood Hospital, the Back of House building will be the first main block completed. This building is designed to house the kitchens; cleaners' offices; bike stands; staff amenities such as showers and toilets; the supply and distribution centre; mail room and courier collection/drop off; clean and dirty loading bays; IT services; and plant rooms to support the rest of the facilities. Once the Back of House building is finished, the old kitchen area will then be demolished.

Overall, construction at the Burwood site is tracking to completion in early 2016.

At Christchurch Hospital, site works for the new Acute Services building began in September 2014, clearing the site ahead of actual construction and diverting service pipes away from the construction area. Building a large new facility right next to a major tertiary hospital is a huge logistical challenge. The site preparation team is currently working on issues such as staff and public car parking for the duration of the build.

Facilities development across Canterbury

Across Canterbury, people have benefited from facilities investment commitments made over the past 12 months. For example, at Ashburton Hospital architects were appointed and tenders invited for the work on the new theatre complex. The demolition of unsafe buildings is underway.

Hillmorton Hospital

On the Hillmorton site, construction work at the adult mental health inpatient unit was completed in July and the Fergusson building has been refurbished.

Kaikoura Integrated Family Health Centre

In Kaikoura, final detailed design work for the new $13 million Kaikoura Integrated Family Health Centre is complete. This centre will replace the old hospital. The Kaikoura hospital originally opened on June 3, 1912 – parts of it are over 100 years old, making it the oldest health facility in use in Canterbury, and possibly New Zealand.

Artist's impression of Kaikoura Integrated Family Health Centre

The new centre will provide facilities for primary care, aged care, acute care, maternity care, radiology services and trauma stabilisation. The government has agreed to a $10 million spend to support the construction of a family healthcare centre at Kaikoura. The community is raising the other $3.4 million that is needed.

Rangiora Health Hub

After much public consultation and stakeholder input, the Rangiora Health Hub was given the green light in September 2013, followed by the appointment of architects and project managers to progress the design work. At the end of May 2014, the Prime Minister the Rt Hon John Key turned the first soil of the project at Rangiora Hospital.

Site enabling works are due to start in the second half of 2014, with an anticipated completion date in the second quarter of 2015. The hub will increase the sustainability of health services in North Canterbury and provide the community with better access to a variety of services. Secondary services will be linked either via specialist outpatient services or potentially telemedicine, which will help better support people with complex health requirements.

Artist's impression of Rangiora Health Hub

How we measure up

Quality and Safety Markers

Quality and Safety markers are designed to track progress and improve healthcare in four areas; falls, hand hygiene, improving surgical safety and central line associated bacteraemia. The markers measure healthcare processes that should be undertaken routinely and threshold are set high to reflect this. When these processes are complied with they are known to reduce patient harm. The thresholds have been set by the Health Quality and Safety Commission (the Commission).

Falls

Patient falls that result in harm are the most frequently reported adverse event in hospital. Broken hips and head injuries are the most serious injuries caused by falls. Of those people over 65 who suffer a hip fracture, the majority will require help with daily living or long-term care. Sadly nearly 20 percent will die within a year of having a fall (Osteoporosis New Zealand. 2012. Bone Care 2020. Wellington: Osteoporosis New Zealand).

Threshold

90 percent of older patients (aged 75+ and 55+ for Māori and Pacific Islanders) are given a falls assessment.

Are we doing the right things?

At Canterbury DHB hospitals 93 percent of older patients were assessed for the risk of falling, and 85 percent of older patients who were identified as at risk of falling received an individualised care plan that addressed those risk factors.

The Canterbury DHB has a 'Whole of System' approach to falls prevention. We are committed to achieving zero harm from falls and are focusing on three key areas - falls prevention in the wider community, falls prevention in rest homes, and falls prevention for older people receiving care in our hospitals.

Pam with Falls Champion Marie.

In the community and rest homes:

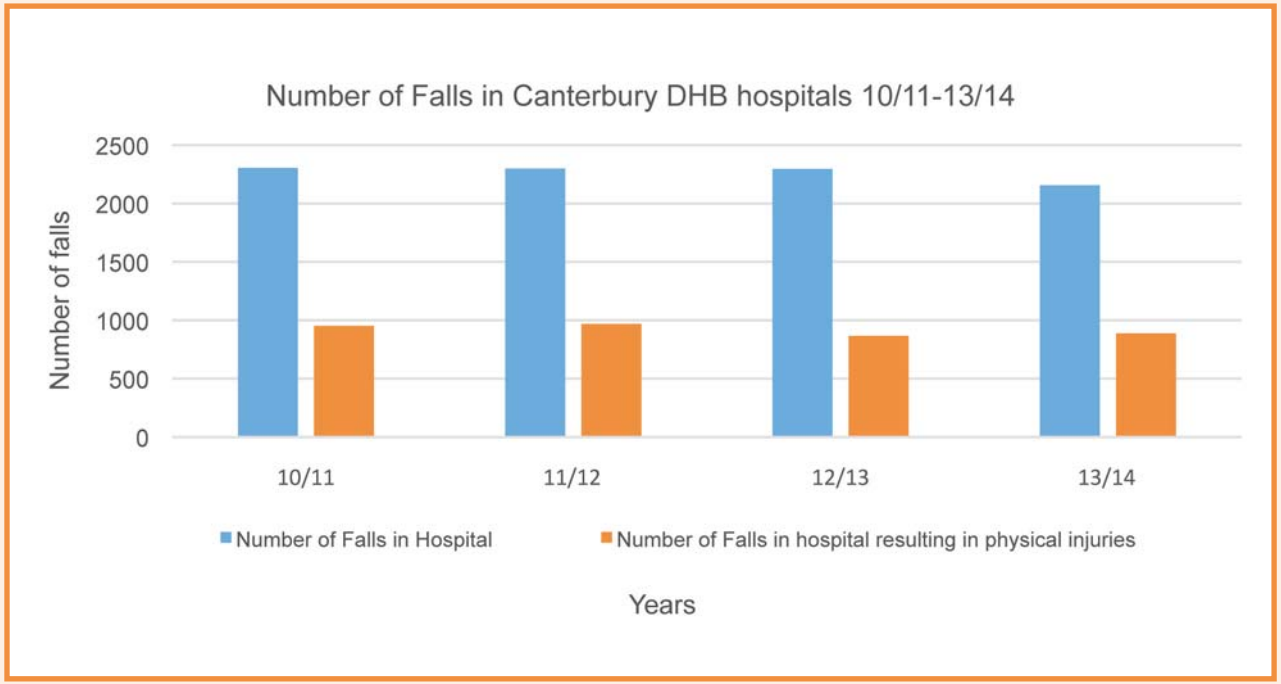
The Canterbury Community Falls Prevention Programme, which enabled over 3000 older people to be seen in their own homes, has been reviewed and improved. Since May clients have had access to a more responsive, clinically-led falls programme, no matter their level of frailty. Following an initial visit including a home hazard check, the most appropriate falls prevention programme will be delivered.

The Canterbury DHB is working with rest homes and primary care providers to ensure that at least 75 percent of residents over 65 years old are receiving Vitamin D supplementation. Research suggests, for this group of older people, Vitamin D supplementation can help maintain bone health, improve muscle function and significantly reduce falls and serious harm from falls.

In our hospitals:

We continue to focus on patient assessment and tailoring falls prevention strategies to meet the needs of individual patients while they are in hospital and when they return home. In August 2013 a Steering Group was introduced to provide oversight and direction across hospitals for the Hospital Falls Prevention Programme. This programme aims to reduce falls in hospital and includes routine activities such as the annual Falls Awareness Campaign, reviewing policies, monitoring falls and patients' assessments as well as key projects. Two current projects are:

- Standardising the falls prevention visual cues across hospitals and the care of patients following a fall. Visual cues can be displayed at the patient's bedside, worn as a bracelet or tagged to equipment. They indicate to family and staff at a glance the level of assistance a patient requires in moving about.
- Ensuring patients have access to appropriate walking aids. This involves identifying the barriers to patients bringing their own walking aids to hospitals as well as knowing the availability of walking aids in hospital.



Hand hygiene

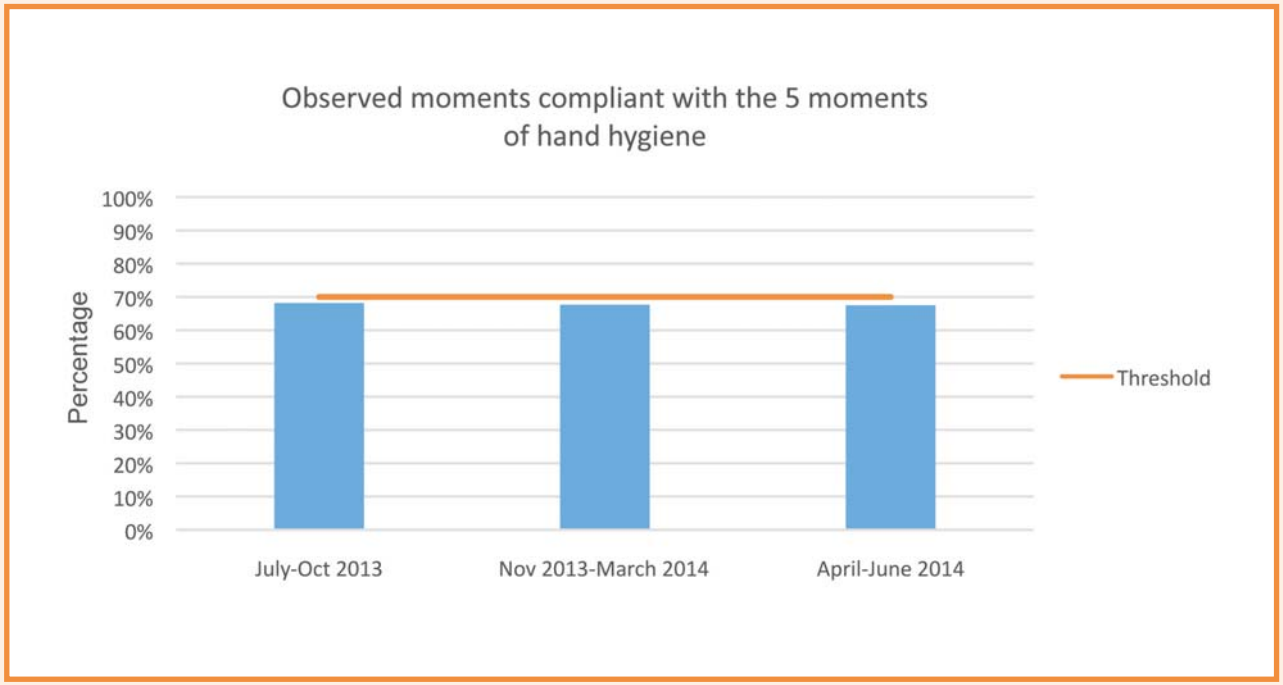
Good hand hygiene is recognised as the most effective strategy to prevent the spread of infection. The Commission promotes staff washing their hands with liquid soap or using alcohol-based hand rub during the five moments of hand hygiene (before patient contact, before a procedure, after a procedure or body fluid exposure risk, after patient contact and after contact with patient surroundings).

Threshold

70 percent compliance with good hand hygiene.

Are we doing the right things?

We had only 67 percent compliance rates in our latest hand hygiene audit. In July 2014 we formed a Hand Hygiene Governance Group to lead improvements in this area including overseeing the development of targeted education packages for staff.



Improving surgical safety

Safe Surgery Checklist

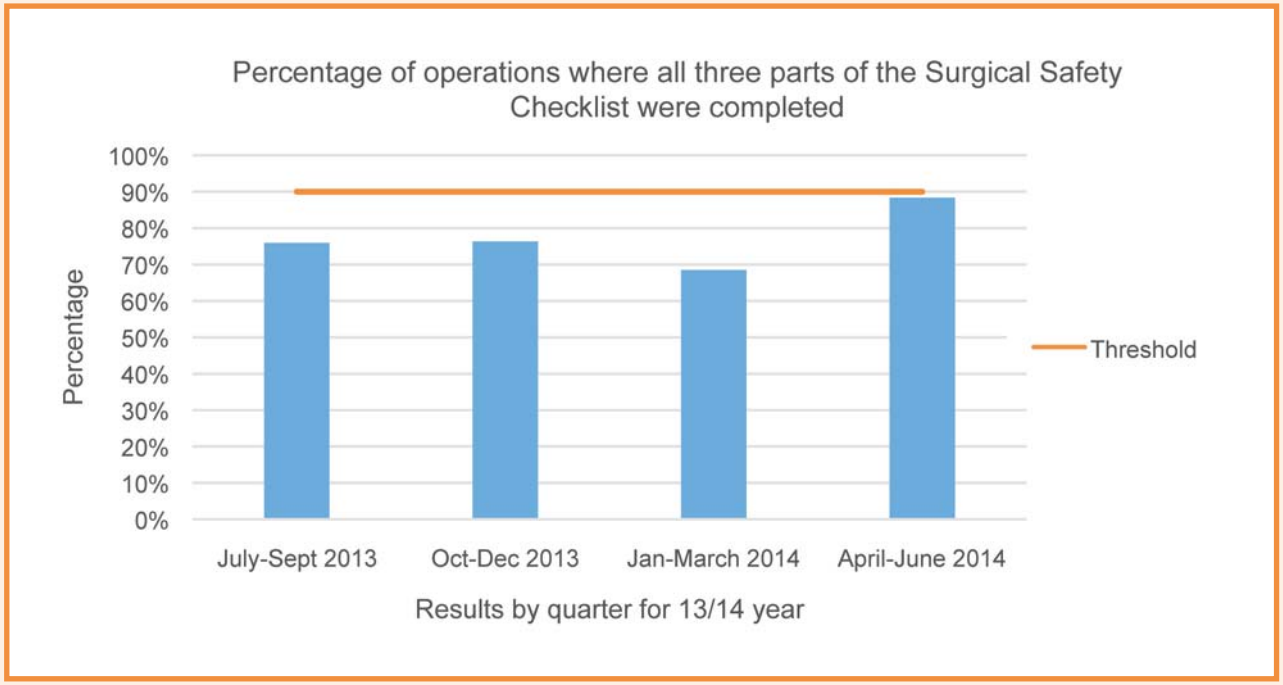
The Commission has also promoted the use of the Safe Surgery Checklist to improve the quality and safety of care for patients during surgery. This Checklist ensures that the correct surgery is being carried out on the correct patient, and promotes a culture of teamwork and good communication in operating theatres.

Threshold

All three parts of the surgical safety checklist completed in 90 percent of operations.

Are we doing the right things?

Canterbury DHB completed all three parts of the surgical safety checklist 88 percent of the time in the last audit. Although this is a significant improvement from previous audits, there is still room to improve.



Surgical site infections

A surgical site infection is an infection of a surgical wound in a patient following surgery. Some infections are minor and only involve the skin, but other more serious ones can involve the tissues under the skin and organs, or implanted material such as joint replacements.

Surgical site infections are one of the most common healthcare associated infections. They occur in approximately 2-5 percent of patients undergoing inpatient surgery. If a patient develops a surgical site infection this has a huge impact on the patient, their family and doubles the cost of their healthcare. The Commission is focused on reducing the likelihood of patients developing a surgical site infection and are currently targeting hip and knee replacement surgeries. They recommend that the correct dose and type of antibiotic is given immediately before surgery with the correct skin preparation to help prevent these infections.

Thresholds

In hip and knee replacements the following thresholds have been set by the Commission:

- 100 percent of primary hip and knee replacement patients will receive the appropriate antibiotics 0-60 minutes before incision
- 95 percent of hip and knee replacement patients will receive 2g or more of cefazolin
- 100 percent of primary hip and knee replacement patients will have appropriate skin antisepsis in surgery using alcohol/chlorhexidine or alcohol/povidone iodine.

Are we doing the right things?

In the audit period from January to March 2014, at Canterbury DHB antibiotics were given less than 60 minutes before "knife to skin" 97 percent of the time and the appropriate skin preparation occurred 99 percent of the time. However the right antibiotic was given in the right dose only 54 percent of the time. Our compliance rate with this dosage is low as staff at Canterbury DHB were adhering to local policy which included a lower dose for elderly patients. Following discussions about which patients were appropriate to receive this lower dose, posters and education have been provided and compliance is expected to improve.

Central Line Associated Bacteraemia

In the Intensive Care Unit (ICU) about half of patients require a fluid line (also known as a central line) to be inserted into a large vein for resuscitation and giving of multiple drugs. Unfortunately central line insertion can allow bacteria to enter the blood stream. We can reduce the chances of a patient getting an infection by ensuring that staff comply with insertion and maintenance processes.

Threshold

90 percent compliance with procedures for inserting central line catheters.

Are we doing the right things?

The Canterbury DHB Intensive Care Unit was compliant with these processes 90 percent of the time. ICU reported three central line infections from July 13 to June 14, with the last one reported in January 2014.

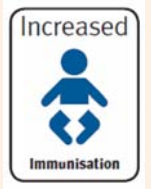
Delivering on the National Health Targets

The National Health Targets are a set of national performance measures set by the Minister of Health for all DHBs. While they capture only a small part of what is necessary and important to our community's health, they provide a focus for collective action and performance improvement. They also present a summary of performance across the continuum of care, from prevention and early intervention through to improved access to intensive treatment and support. In this sense, achievement of the Health Targets can be seen as a reflection of how well every level of the health system is working together to improve the health and well-being of our population.

Details of the actions we will take to deliver against the Health Targets can be found in the Canterbury DHB Annual Plan 2014-15, available on our website: www.cdhb.health.nz

Top marks from Auditor General

Canterbury was the first DHB ever to achieve the Government's highest rating for robust service performance reporting. The Office of the Auditor General said Canterbury DHB's service performance reporting earned a 'very good' grade. This reflects our robust systems and processes.

	TARGET
	***2014/15 Government Expectation:*** 95% of patients will be admitted, discharged, or transferred from an emergency department within 6 hours. ***Canterbury contribution:*** ✔ Canterbury achieved this target in 2013/14 with 95% of patients admitted, discharged, or transferred from an emergency department within 6 hours.
	***2014/15 Government Expectation:*** 17,484 elective surgical discharges will be delivered in 2014/15. ***Canterbury contribution:*** ✔ 16,961 elective discharges were delivered, exceeding the target of 16,861 in 2013/14.
	***2014/15 Government Expectation:*** 85% of patients referred urgently with high suspicion of cancer receive first cancer treatment within 62 days by July 2016 (from Quarter 2). ***Canterbury contribution:*** ✔ Canterbury achieved this target with all patients, ready-for-treatment, waiting less than four weeks for radiotherapy or chemotherapy.
	***2014/15 Government Expectation:*** 95% of eight-month-olds will have their primary course of immunisations on time by July 2015. ***Canterbury contribution:*** ✔ 93% of eight-month-olds had their primary course of vaccinations on time by July 2014.
	***2014/15 Government Expectation:*** 90% of smokers seen in primary care and 95% of hospitalised smokers provided with brief advice and support to quit smoking. ***Canterbury contribution:*** ✔ Canterbury achieved this target with 95% of hospitalised smokers given advice to quit. → Canterbury improved performance against the target with 75% of smokers seen in primary care provided with brief advice and support to quit.
	***2014/15 Government Expectation:*** 90% of the eligible population having had their CVD risk assessed once every five years. ***Canterbury contribution:*** → Canterbury improved performance against the target with 66% of the eligible population having had their cardiovascular risk assessed in the last five years.

What next?

The Canterbury Health System commits to continuous quality improvement. In the coming year we will focus on improving patient flow, improving care in the community and improving the environment.

Improving patient flow

Our goal is to achieve the best outcome for the patient, in a timely way with no delays. We will improve patient flow with the following five initiatives:

Frail Older Person's Pathway

The objective of the Frail Older Person's Pathway is to get frail older people back home, faster and safely. This minimises the impact of a hospital admission on their health and well-being. Working across the system, this programme promotes a team response that supports the older person to achieve what is important to them. The ultimate goal is a seamless pathway with no delays to ensure the best possible clinical outcomes for frail older people and to improve their quality of life.

Enhanced Recovery after Surgery

The Enhanced Recovery after Surgery programme is designed to optimise surgical outcomes by improving the patient experience and ensuring all patients receive the right care at the right time. This is achieved by ensuring the patient is in the best possible condition for surgery, that they have the best possible management during and after the operation and ensuring the patient experiences the best possible rehabilitation. The programme looks to reduce waiting times and supports early recovery and discharge from hospital, allowing patients to return to their normal activities more quickly. The programme is currently targeting knee and hip surgeries.

Faster Cancer Treatment

The Faster Cancer Treatment programme seeks to improve the journey for cancer patients. The programme will ensure that patients have timely access to appointments and tests that detect cancer, and to cancer treatment. The programme will reduce barriers to treatment, to ensure (over time) all patients will have access to the same quality of care within the same timeframes, no matter where they live. As the majority of referrals with a high suspicion of cancer are first seen in the surgical specialities, the Faster Cancer Treatment programme links closely with other programmes of work that improve quality of care across the patient pathway.

Canterbury's outpatient & surgical flow (100 days) programme

Canterbury's 100 days programme seeks to significantly reduce the amount of time that patients wait for a first specialist assessment and surgery. To achieve this, the programme team is working with each medical and surgical service to understand their demand and capacity and to share improvements in referral, prioritising care, booking and reporting processes. The ultimate goal is that patients wait no longer than 100 days for any type of specialist assessment or procedure.

Theatre Utilisation

Until our new hospital is built, operating theatre capacity will be our biggest constraint. The Theatre Utilisation programme is focused on improving the performance and productivity of operating theatres across the Canterbury DHB, reducing cancellations, improving patient flow and achieving shorter waiting times for patients.

Improving care in the community

Much of the care given to patients in Canterbury is in parts of the system outside the hospital. Primary and community health services are not only committed to improve the quality and safety of what they do but also to work in an integrated way with the rest of the Canterbury Health System.

Polypharmacy

This initiative aims to prevent avoidable hospital admissions due to drug side effects. The more medicines a person is on the more likely they will have side effects. A whole system approach to support people with multiple co-morbidities will be developed to balance the need to follow guidelines with the risk of medication side effects.

Child and Youth health

Child and youth health are recognised as an important focus area for the Canterbury Clinical Network. Pegasus Health has identified key areas of action relevant to children and youth over the past six to eight months through consultation with the Pacific Reference Group, Te Kāhui o Papaki Kā Tai, the Culturally and Linguistically Diverse Health Advisory Group and the Canterbury Clinical Network Child and Youth workstream.

Following this consultation and internal discussion, five high priority areas in child and youth health have been identified by the Pegasus Health community and clinical boards for particular focus in the next and subsequent years:

- Oral health
- Mental health
- Access to primary health care services
- Childhood obesity
- Healthy start.

Patient experience

Patients are the real experts on the working of the health system as a whole. In Canterbury we hold that the worst waste in the system is when the patient's time is wasted. Understanding and responding to patients' experience is crucial to us as a force for improvement.

Sonya Watson and her daughter Lily.

The national Health Quality and Safety Commission is working to develop patient experience indicators for community and primary care in New Zealand. We expect such measures to be part of the Integrated Performance and Incentive Framework. We will look to be at the forefront of these developments.

Improving the environment

Our goal is healthy physical and social environments that support people to stay well. We will improve Canterbury environments with the following initiatives:

Sustainability

Canterbury DHB's new Sustainability Officer will focus on the Canterbury Health System's environmental impact. Work plan areas include leadership, chemicals, waste, energy, water, transport, food, pharmaceuticals, building and purchasing. In addition Canterbury DHB has joined the Carbon Emissions Measurement and Reduction Scheme, and we will be measuring our current carbon footprint and identifying initiatives and solutions for emissions reduction.

Joint work plans with Councils

In recognition of the important role our Councils play in shaping healthy environments, Canterbury DHB has agreed to a joint work plan with Environment Canterbury and is currently developing a joint work plan with Christchurch City Council.

Priority areas for our work with Environment Canterbury include: Canterbury Water Management Strategy, transport, Ngāi Tahu relationships, and environmental health (including hazardous substances, waste, air quality and contaminated land). Focus areas for our work with Christchurch City Council include: a liveable city, strong communities, a healthy environment, and good governance.

Resilient Cities

Christchurch is now part of a global network focused on building resilience, sharing best practices and leading by example for cities throughout the world. Having been selected by the Rockefeller Foundation as one of the inaugural 33 Resilient Cities in the 100 Resilient Cities network, Christchurch will receive support to hire a Chief Resilience Officer, create a resilience strategy, and receive access to tools, technical support and resources for implementing a comprehensive resilience plan.

Canterbury DHB nutritionist Janne Pasco at the Agropolis. Agropolis is a scalable productive farm tailored to a bustling urban environment, an edible landscape and a shared space accessible to all. Agropolis challenges our approach to food resilience, land use and food production and distribution in relation to Christchurch's future.

The eight functions of a Resilient City are:

- Delivers basic needs
- Safeguards human life
- Protects, maintains and enhances assets
- Facilitates human relationships
- Promotes knowledge, education and innovation
- Defends the rule of law, justice and equity
- Supports livelihoods
- Stimulates economic prosperity.

Canterbury DHB and Healthy Christchurch are closely aligned with the development of Christchurch as a Resilient City, and we will ensure relevant strategies, workstreams and approaches reflect us working together towards a healthier environment.

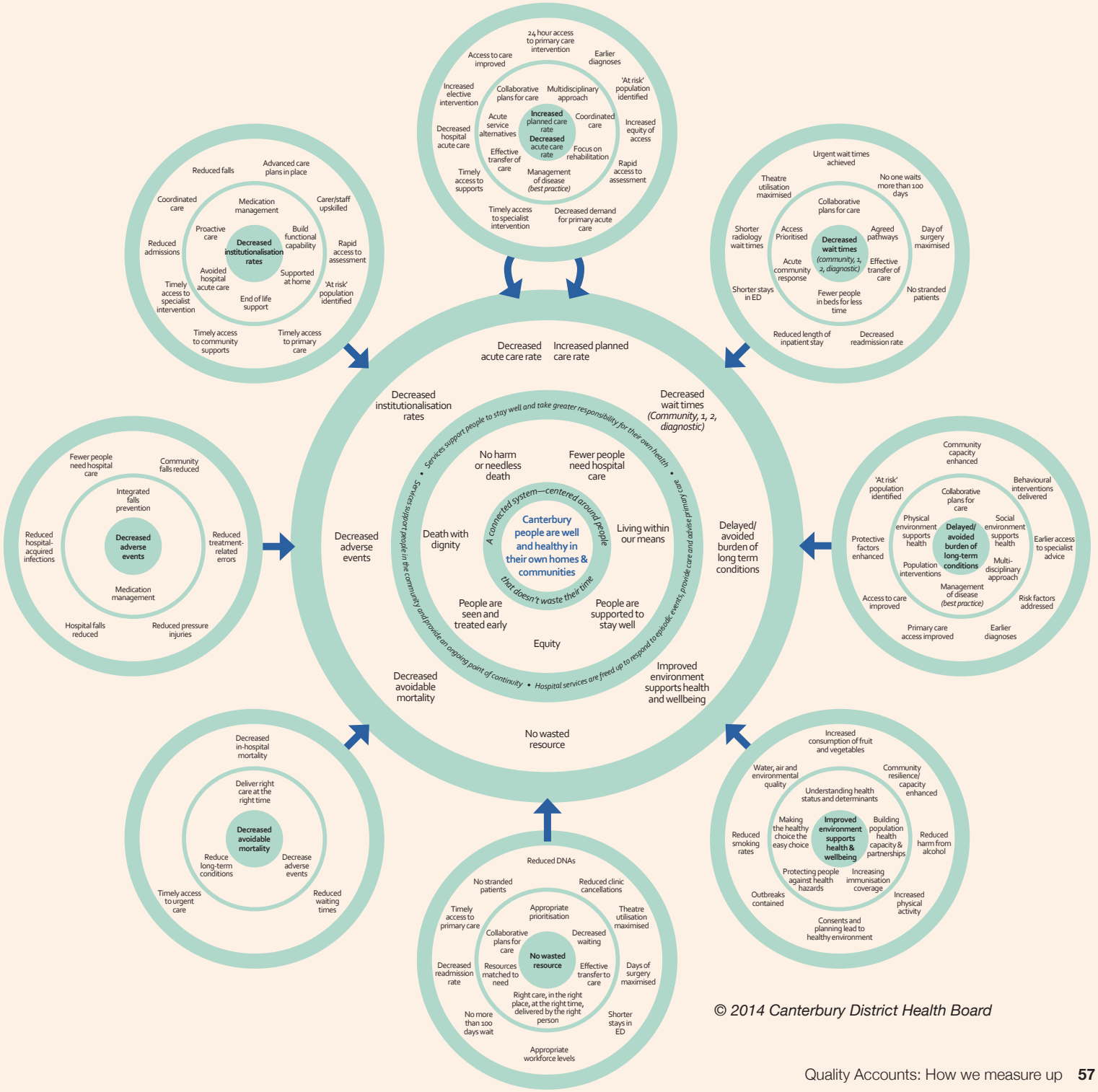
Canterbury Health System Outcomes Framework

June 2014

The Outcomes Framework was introduced to help people working across the Canterbury Health System to visualise the impact of the work that we do at a system level.

The Framework also allows us to demonstrate the cross over and interaction between our strategies and the effect of our combined effort. It focuses on the collective contribution towards achieving system goals and allows 'line of sight' between activities and progress against high-level outcomes.

In light of the changing needs of the Canterbury population – the Outcomes Framework is a living document and will evolve over time to reflect changing strategic emphases.



Human Milk for Our Babies

In February 2014 Christchurch Women's Hospital (CWH) opened New Zealand's first Human Milk Bank with the generous support of the Canterbury Neonatal Unit Trust.

Breast milk is considered the optimal nutritional source for babies, but some mothers of those born too early or with other health problems are unable to provide enough milk for their babies. The Neonatal Unit team always supports mothers in the provision of their own milk supply but before the Milk Bank opened, formula milk was offered as the standard supplement in the absence of mother's own milk. Now, through the generosity of mothers donating their surplus breast milk, our most vulnerable babies within Christchurch Women's Neonatal Unit may be eligible to receive pasteurised donor milk.

Predominantly our donors are mothers with babies admitted to CWH Neonatal Unit who donate their surplus milk just prior to their babies being discharged. Those wanting to donate undertake a screening process which includes a lifestyle questionnaire and blood tests. The milk bank has had 33 donors so far. All donors are presented with a thank-you card for their gift of human milk.

Mothers have provided the service with positive feedback around their donor experience.

"Having a prem baby is tough in lots of ways. One thing… I could do for my wee prem was supply him with my own breast milk, even if he had to have it through a tube. Spending nine weeks in the neonatal intensive care unit I saw lots of mums who were not so fortunate. The Human Milk Bank is an absolute marvel and I feel very privileged to be able to donate my excess milk so others can benefit. These wee babies need all the help they can get and I am glad to be part of that help." Mel Camp, Donor.

"After having a prem baby earlier this year it really opened my eyes as to how some babies have such a struggle to the start of their wee life. …when I was asked to donate to the human milk bank it was a small way that I could make a big difference to their beginning. The human milk bank is an amazing facility for Christchurch babies and I am so pleased to be a part of this." Rebecca Eckersley, Donor.

The Human Milk Bank aims to help protect our most medically fragile babies against life-threatening illnesses such as necrotising enterocolitis (a severe bowel condition that preterm babies are prone to), potentially serious infections, and other complications related to preterm birth. It achieves this by supplying pasteurised donor milk which like a baby's mothers milk contains components which optimises the health and development of babies.

Since February 2014 approximately 110 litres of pasteurised donor breast milk has been provided for 87 babies. Most of these babies have been less than 35 weeks gestation and have had between seven and 28 days of donor breast milk that has supplemented their mother's own supply. One mother of a baby who received pasteurised donor milk commented: "It took the pressure off getting my supply up right away. It gave us peace of mind because we didn't want them to have formula especially as they were premature." Nicole Lawson as pictured with her triplet sons.

Human Milk Bank Facts

- Milk banking is a common practice worldwide and is endorsed by the World Health Organization, societies within the medical profession and the New Zealand Breastfeeding Authority.
- Currently pasteurised donor milk is provided free of charge to babies meeting certain criteria who are admitted to CWH Neonatal Unit.
- Over 200 CWH staff have been educated about the Human Donor Milk Bank.

Nicole Lawson with triplet sons who received milk from the Milk Bank.

The right care and support, by the right person, at the right time, in the right place, with the right patient experience

Canterbury
District Health Board
Te Poari Hauora ō Waitaha

www.cdhb.health.nz