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Changes in social recovery

Interpreting changes in greater Christchurch

- In the wheel diagram, the outer shading and coloured arrows and bars represent year on year changes (favourable, neutral, and less favourable) in greater Christchurch for each indicator, and for New Zealand where comparable data is available.
- The coloured dot represents how greater Christchurch compares to New Zealand for the most recent 12 months of data.
- The inner shading represents how the current situation in greater Christchurch compares to the pre-earthquake period of 2008-2010, where comparable data is available.

<table>
<thead>
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<th>Indicator</th>
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<td>for the most recent 12 months compared to the previous 12 months</td>
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<td>dots</td>
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<td>Direction of change in New Zealand for the most recent 12 months compared to the previous 12 months</td>
<td>arrows up</td>
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<td>Greater Christchurch in comparison to New Zealand</td>
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<td>Greater Christchurch compared to the pre-earthquake period</td>
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*For these indicators from the Canterbury Wellbeing Survey, the arrows and bars represent the change from the September 2015 survey to the April 2016 survey. The outer shading represents the overall trend of change from September 2012 to April 2016, rather than the year on year change. No New Zealand or pre-earthquake comparison is available.
Canterbury Wellbeing Index 2016
An overview

Overall
As the greater Christchurch region moves beyond the fifth anniversaries of the 2010 and 2011 earthquakes, there are many signs of progress in the community's recovery. The majority of residents report a high overall quality of life and this has improved over time. Specific earthquake-related stressors have diminished overall over time, although some persist and others re-emerge in response to events such as aftershocks. Similarly, the positive impact of the earthquakes on community connectedness has diminished to some extent over time.

Residents are seeing tangible signs of progress in terms of access to new and repaired facilities, and rebuilt and repaired private dwellings.

The rebuild has generated substantial economic growth, and increased training and employment opportunities, which are reflected in employment and education data. However, there are some recent declines in the rates of improvement of such measures, for example youth unemployment and household income, which may be related to the slowing of rebuild-related economic growth.

The health system has responded to the ongoing challenges of high demand (particularly for mental health services) and reduced capacity (for example, a reduction in acute hospital beds), and services have been adapted and extended over time to meet these challenges.

Housing pressures remain a key stressor with some households still living in damaged or temporary accommodation, or continuing to negotiate settlement of their insurance claims. However, both rental and sales data indicate that some pressures have eased in the area of housing affordability over the last year, with an overall decrease in both rents and house sales prices.

Much is still to be done to regenerate greater Christchurch. Recovery is different for different population groups, which may be defined. For example in terms of where people live, their ethnicity, income, whether they are home owners or renters, or the status of their insurance claim. These differences may relate to pre-existing vulnerabilities, to specific impacts of the earthquakes, or to a combination of the two.

However, the overall picture for the last year is a positive one, with noteworthy increases in indicators relating to access to facilities and subjective wellbeing. As the earthquake recovery continues, ongoing efforts need to be made to identify emerging social trends and to monitor equity to inform the actions of local and national agencies.
Against a backdrop of considerable disruption, learners in greater Christchurch are achieving good academic outcomes. Early childhood education participation has been consistently higher than the national average since before the earthquakes. At the secondary school level, NCEA Level 2 or higher pass rates for 16-year-old students have been consistently higher than pre-earthquake pass rates with an overall pass rate for greater Christchurch of 66 per cent in 2009 compared to 75 per cent in 2015 (compared with 62 per cent and 73 per cent nationally). In Christchurch City, pass rates generally increased over time from 66 per cent in 2009 to 75 per cent in 2015. In 2015 the Waimakariri District pass rate was 76 per cent and Selwyn District students achieved a pass rate of 81 per cent.

In 2015, total intakes of tertiary students at Christchurch-based institutions remained 25 per cent down on 2010. When compared with 2014, international enrolments increased (15 per cent) in 2015 while domestic enrolments were down 14 per cent.

The proportion of young people aged 15–24 years who are not in employment, education or training (NEET) in greater Christchurch peaked after the February 2011 earthquakes at 16.8 per cent in March 2011. However, as young people in greater Christchurch have taken advantage of rebuild opportunities, the NEET rate has decreased overall and at March 2016, the greater Christchurch rate was 7.4 per cent, compared with 13.2 per cent across New Zealand. While the greater Christchurch NEET rate remains well below the national rate, the post-earthquake decrease appears to have levelled off and it will be important to watch this indicator in coming years.

The work involved in the residential, commercial, and horizontal infrastructure repair and rebuild is contributing to employment opportunities and to economic growth. Prior to the earthquakes, the unemployment rate in greater Christchurch was tracking upwards but typically remained lower than the national unemployment rate. Between the pre-earthquake period (two years to March 2010) and the year to March 2016, the unemployment rate dropped by 26 per cent overall in greater Christchurch (to 3.2 per cent) compared with a 5 per cent increase across New Zealand (to 5.9 per cent). Over the same period, the unemployment rate for young people aged 15–24 years in greater Christchurch dropped by 42 per cent, compared with a 2 per cent increase across New Zealand.

Household Labour Force Survey data suggest that young people are gaining employment opportunities from the rebuild and recovery. In March 2016, the unemployment rate for young people aged 15–19 years in greater Christchurch, was 11.2 per cent, compared with a pre-earthquake (March 2010) rate of 27.1 per cent and a national rate of 23.4 per cent. In the same month, the unemployment rate for young people aged 20–24 years in greater Christchurch was 5.8 per cent, compared with a pre-earthquake rate of 6.2 per cent (March 2010) and a national rate of 10.5 per cent. As with the NEET rates, the decrease in unemployment rates for greater Christchurch appears to have levelled off more recently.

Median gross household income is the dollar amount whereby half the households have an income above that amount, and half the households have an income below that amount (data are “equivalised” based on household composition). Greater Christchurch had a 24 per cent increase in median weekly household income between the pre-earthquake period (of 2008 to 2010) and 2014 compared with a 14 per cent increase across New Zealand. The majority of the increase for greater Christchurch ($228 of a total $283) occurred between 2012 and 2014. In 2015, however, median weekly income dropped by three per cent for greater Christchurch from $1409 to $1361, while it continued to grow nationally.

Alongside an increasing proportion of settled earthquake dwelling claims, both rental and sales data indicate that housing affordability pressures have eased over the last year.

By the end of the first quarter of 2016, 140,202 of the approximately 141,917 property claims under the EQC cap had been settled, as had 19,998 of the 25,753 over-cap claims lodged with private insurers. This is a total of 160,200 properties, representing 95.5 per cent of the approximately 167,670 properties with earthquake dwelling claims in greater Christchurch.

Greater Christchurch experienced substantial increases in mean house sale prices between 2010 and 2015, however between March 2015 and March 2016, house sales prices decreased across most areas of greater Christchurch. In the areas that saw increases in mean house prices, growth had slowed substantially. The post-earthquake increase in mean weekly rent in greater Christchurch slowed in 2015, with mean weekly rent decreasing overall in the year to June 2016. This decrease coincides with and
The proportion of Canterbury respondents reporting excellent, very good, or good self-rated health in the 2014/15 New Zealand Health Survey (NZHS) was 87.5 per cent compared to 90.8 per cent in 2006/07 and 2013/14. There was no statistically significant difference between proportions of Canterbury respondents and all of New Zealand respondents reporting excellent, very good, or good self-rated health in 2014/15.

Total numbers of acute medical admissions have been increasing over time and have a seasonal pattern of increases in the winter months. Previous research has found that there was a statistically significant fall in the seasonally adjusted admission rate after the February 2011 earthquake from 6.59/1000 people to 5.83/1000 people (a lower age-standardised acute medical admission rate than nationally).

With respect to primary care, for the 2014/15 year, the proportion of respondents from the Canterbury DHB region who reported that they were unable to get an appointment at their usual medical centre within 24 hours (12.8 per cent) was statistically significantly lower than the national proportion of 16.8 per cent. Despite small changes over time, access to general practice services in Canterbury appears generally similar to access nationally.

Wellbeing is also influenced by a wide range of environmental, social, and behavioural risk factors, such as smoking and obesity. The prevalence of tobacco smoking is slowly declining in Canterbury. Results from the NZHS show that the rate of adult smoking (at least monthly) in the Canterbury region decreased from 18.4 per cent in 2006/07 to 13.1 per cent in 2014/15 (16.6 per cent nationally). Similarly, NZHS results indicate that the proportion of Canterbury young people aged 15–24 years who currently smoke at least monthly has declined from 18.6 per cent in 2006/07 to 10.9 per cent in 2014/15, although this decline is not statistically significant. These data are also consistent with Census data, which have shown that the proportion of daily smokers in Canterbury has decreased from 18.8 per cent in 2006 to 14.5 per cent in 2013.

The NZHS also reports obesity data, and these indicate that the prevalence of obesity in Canterbury decreased from 30.7 per cent in 2012/13 to 25.7 per cent in 2014/15 (30.7 per cent nationally), slightly higher than the 2006/07 prevalence of 24.3 per cent.

International evidence indicates that people’s psychological and social recovery can take between five and ten years after a major disaster. In greater Christchurch there is evidence that many groups remain impacted by the earthquakes and the multiple stressors that have emerged since.

Eight in ten (82 per cent) of those surveyed in the latest Canterbury Wellbeing Survey (April 2016) rate their quality of life positively (23 per cent rate it as extremely good, while 59 per cent rate it as good). This is a statistically significant increase since September 2015 and continues the statistically significant upward trend that has been evident since September 2012. Some 5 per cent rate their quality of life poorly (4 per cent as poor and one percent as extremely poor), which is consistent with previous surveys.

Just under three quarters (73 per cent) of April 2016 Canterbury Wellbeing Survey respondents have experienced stress at least sometimes in the past 12 months that has had a negative effect on them (a result which has been showing a significant gradual downward trend since the earthquakes – 80 per cent in September 2012 to 73 per cent in April 2016). However, one in five (21 per cent) say that they experience this stress most or all of the time (up from 19 per cent in April 2015 but not statistically different).

Map 1 shows that there are geographic differences in wellbeing across greater Christchurch (as measured by the WHO-5 scale, a widely used tool for assessing self-reported emotional wellbeing). The WHO-5 produces a raw score ranging from 0 (lowest level of wellbeing) to 25 (the highest level of wellbeing). Mean WHO-5 scores in April 2016 were lowest (indicating relatively lower wellbeing) in the Inner South and East and highest in the Inner North, South West and in the Selwyn District.
The overall mean WHO-5 score for greater Christchurch showed a small but statistically significant increase between September 2015 and April 2016.

Map 2 displays the prevalence of the ‘top four’ stressors reported by Canterbury Wellbeing Survey respondents in April 2016, specifically: stress or anxiety associated with ongoing aftershocks, being in a damaged environment and / or surrounded by construction work, additional financial burdens, and loss of other recreational, cultural and leisure time facilities. There are geographic differences between the impacts of these issues on people living in different parts of greater Christchurch. In general, a higher proportion of people living in the North East and East have reported being impacted by the top four negative issues, followed by the Inner North, South and Inner South. In general, a lower proportion of people living in the West of greater Christchurch have reported being impacted by the top four negative issues.
Mental wellbeing

There has been a 21 per cent increase for the 18-64 year age group in those accessing mental health services from the 12 months prior to the February earthquake (February 2010 to January 2011) to the most recent 12 months of data (April 2015 to March 2016). For the 0-17 year age group, there has been a 27 per cent increase in those accessing mental health services from the 12 months prior to the February earthquake (February 2010 to January 2011) to the most recent 12 months of data (April 2015 to March 2016). For all age groups combined, for the most recent year of data, the year to March 2016 compared to the year to March 2015, 1.3 per cent fewer clients accessed mental health services.

For the period from 2011 to 2015 total scores on the Health of the National Outcome Scale (or HoNOS, which measures both number and severity of symptoms) on admission for those attending community mental health services have been higher in Canterbury than nationally. Higher HoNOS scores indicate higher levels of symptoms, distress, and dysfunction associated with mental health difficulties, while lower scores indicate fewer symptoms or severity.

Safety

In greater Christchurch, the New Zealand Police recorded a significant fall in total crime in the year following the September 2010 earthquake. There are likely to be many reasons for this initial reduction in criminal behaviour, and total crime patterns in greater Christchurch now appear broadly similar to New Zealand overall.

Reported monthly victimisation data from Statistics New Zealand for assault, serious assault, and abduction and kidnapping show no obvious trend of increasing or decreasing victimisations for the period July 2014 to May 2016 (the most recent data available). However, for theft and burglary victimisation data, there appears to be an increasing trend in greater Christchurch.

Monthly proceedings data for assaults from Statistics New Zealand for the period from July 2014 to May 2016 highlight two points: that the 15-24 year age group accounts for the highest number of proceedings, and that the number of proceedings then decreases with each increase in 10-year age band. There are no apparent trends over time during the relatively short time period of the data.

Assaults in dwellings (a category that primarily includes incidents of family violence) have shown a different pattern from assaults in public places. Overall in greater Christchurch there was a 20 per cent increase in dwelling assaults between the two years to December 2009 and the 2014 year. Nationally there was a 4 per cent increase over the same period. Similarly, when comparing the pre-earthquake period to the 12 months to June 2014, child investigations (notifications requiring further action which are generated by concerns about child abuse, or the behaviour of a child or young person) increased by 11 per cent, compared with a 3 per cent increase across New Zealand. However, child investigations have shown a decreasing trend since 2013 in Canterbury and across New Zealand.

Social connectedness

People’s connections to their communities are important, particularly in recovery after disaster. Ninety seven per cent of respondents to the April 2016 Canterbury Wellbeing Survey indicated that they have ‘someone to turn to’. Family (91 per cent) and friends (86 per cent) continue to be the most common forms of support that residents use in times of need. However, since September 2012, the proportion of Canterbury Wellbeing Survey respondents feeling ‘a sense of community’ (agree or strongly agree) has trended downwards to below 50 per cent at April 2016. This decline (from 55 per cent in September 2012 to 49 per cent in April 2016) is statistically significant.

In April 2016, only 32 per cent of those living in the East reported a sense of community, compared with 58 per cent in the South (down from 39 per cent and 64 per cent respectively, in September 2015). Residents of Selwyn and Waimakariri districts continue to feel a stronger sense of community than people living in Christchurch City.
About the Canterbury Wellbeing Index

Why do we need the Canterbury Wellbeing Index?

The Canterbury Wellbeing Index was developed by the Canterbury Earthquake Recovery Authority (CERA) with the support of multiple agencies to track the progress of the social recovery in greater Christchurch. Indicators are used to identify emerging social trends and issues to enable agencies to respond in a timely way. The Canterbury Wellbeing Index is also prepared to provide the greater Christchurch community with accurate and comprehensive information about the social recovery. With the disestablishment of CERA in April 2016, social recovery monitoring was inherited by the Ministry of Health and delegated to the Canterbury District Health Board (Canterbury DHB), which is now responsible for producing the Canterbury Wellbeing Index and Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey).

The Canterbury Wellbeing Index has been published annually since June 2013. Current and past results can be accessed in full at www.cph.co.nz/your-health/canterbury-wellbeing-index/

How was the Canterbury Wellbeing Index developed?

In late 2011, CERA convened a series of meetings with representatives of 28 agencies to identify the social indicators that should be tracked through the recovery. Expert advice was received through the literature review of international best practice “Designing indicators for measuring recovery from disasters”, undertaken by Canterbury DHB.

Administrative and survey data from multiple agencies are requested and collated to form the basis of the indicators in the Canterbury Wellbeing Index. Where possible, indicators are tailored to the greater Christchurch boundaries comprised of Christchurch City, and the Selwyn and Waimakariri districts.

In addition, the six-monthly Canterbury Wellbeing Survey was developed to provide recovery focused data on the wellbeing of the residents of greater Christchurch. It forms a significant part of the Canterbury Wellbeing Index. Draft indicators are subjected to peer review and quality assurance processes, and agencies responsible for the indicators review the content prior to public release.

The Canterbury Wellbeing Index is a collaborative project across many government and non-government agencies: Action on Smoking and Health; Canterbury District Health Board; Canterbury Earthquake Temporary Accommodation Service; Child, Youth and Family; Christchurch City Council; Creative New Zealand; Department of Corrections; Department of Internal Affairs; Department of Labour; Earthquake Commission; Electoral Commission; Energy Efficiency and Conservation Authority; Environment Canterbury; Housing New Zealand Corporation; Ministry of Business, Innovation and Employment; Ministry of Civil Defence and Emergency Management; Ministry of Culture and Heritage; Ministry of Education; Ministry of Health; Ministry of Justice; Ministry of Pacific Island Affairs; Ministry of Social Development; New Zealand Police; Pegasus Health; Selwyn District Council; Sports Canterbury; Sports New Zealand; Statistics New Zealand; Te Pou; Te Puni Kōkiri; Te Rūnanga o Ngāi Tahu; and Waimakariri District Council.

What happens in response to the trends identified in the Canterbury Wellbeing Index?

Emerging trends and issues identified through the Canterbury Wellbeing Index are used to inform decision-making by the greater Christchurch Urban Development Strategy; intersectoral Psychosocial Governance Group; Psychosocial Committee; and government and non-government agencies to protect and promote the wellbeing of the greater Christchurch community. In addition, Canterbury Wellbeing Index data is used across agencies to plan the delivery of the psychosocial services under the Community in Mind psychosocial strategy for greater Christchurch.

Methodological considerations

The selection and presentation of measures in the Canterbury Wellbeing Index is informed by the international indicator literature. In order to meaningfully consider both any impact of the earthquakes on any given measure, and the current wellbeing of the greater Christchurch population, time series are presented from prior to the earthquakes to the present, national comparisons are presented where feasible and statistical significance testing (95 per cent confidence intervals or trend analysis, for time series) is noted where it has been provided with data. Important known influences on measures are also noted in the text to aid interpretation.

Some data sources are available only periodically (for example, Census data) or may be discontinued (for example, when a survey has been ceased). Similarly, time series may be broken when an agency’s method of collecting and / or reporting its data is altered to the extent that comparisons prior to and after this change are no longer valid. In addition, comparability can be affected by subtle differences in methodology, either over time or between surveys. All such instances are noted and discussed in the relevant sections.

The Index provides a comprehensive picture of the wellbeing of greater Christchurch. While focused on the impact of the earthquakes on wellbeing, attribution (the factors influencing or driving any given measure) is complex and varies over time and between measures. While the role of the earthquakes is discussed where appropriate, the Index serves as a current snapshot in time of the wellbeing of the greater Christchurch community, irrespective of the factors driving the data.

Future direction

As the Canterbury Wellbeing Index continues to develop, greater emphasis will be placed on factors that shape or influence health and wellbeing and the distribution (and impact of such distribution) of these factors across different population groups. This shift in emphasis will focus on ethnicity and socioeconomic status in the first instance and will require ethnicity and socioeconomic deprivation breakdowns of key measures, using methods such as age standardised rates (where relevant) and statistical significance testing. This work will be prioritised, and implemented incrementally.
The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

**Why is participation in education important?**

Participation in the education system is crucial so that young people can develop the skills and knowledge they need to find employment and gain a high quality of life. When levels of participation and achievement are high, the region and the country benefit economically, society is more cohesive, and cultures are enriched.

By participating in early childhood education, young children are prepared socially and academically for their transition to primary school. Participation in early childhood education can also help reduce the inequalities experienced by our most vulnerable children.

A low level of participation in compulsory education can be a signal that issues such as a disruptive home life or behavioural problems are interfering with attendance. Sustained truancy affects educational achievement and can be a strong predictor of violence, delinquency, substance abuse, suicide risk, unemployment, and early parenting. Linkages between truancy and crime are of considerable concern.

Young people who are not engaged in employment, education, or training (NEET) miss the opportunity to develop skills and knowledge at an age that has a strong influence on future success.

Tertiary education builds on human capital. It is vital for creating a socially cohesive greater Christchurch. Young people who have valued qualifications and skills are more likely to find sustainable employment, put roots down in the city, and work to create a better future.

International students have a doubly positive impact on the region. Firstly, they strengthen the financial position of the schools and tertiary providers they attend. Secondly, they bring an international perspective to greater Christchurch.

Continuing to attract domestic and international students back to tertiary providers based in greater Christchurch will contribute significantly to economic recovery.

**How was participation in education impacted by the earthquakes?**

After the February 2011 earthquake, 18 schools were relocated and 7,000 students were bussed daily to host sites. Fifty-five per cent of secondary students were ‘site sharing’, with one school holding classes in the mornings and another school holding classes in the afternoons.

Within three weeks, 84 per cent of school students were able to attend school again, and within a month 78 per cent of early childhood education centres were back up and running.

However, the earthquakes continued to have a major impact on education provision. Many early childhood centres, schools, and tertiary facilities had been damaged in some way or the number of enrolments had changed as people moved around or away from greater Christchurch.

The earthquakes changed patterns of attendance in early childhood education, with enrolments down by 1,125 in the year to July 2011. Many affected centres were located in the east of the city.
Following the February 2011 earthquake, over 12,000 primary and secondary students also left the school they had been attending and enrolled elsewhere, often at a school outside the region. Many returned, but in July 2012 there were 3,573 fewer students enrolled in greater Christchurch schools than in July 2010.

In the tertiary sector, 2011 domestic enrolments were down 14 per cent on 2010. Across Lincoln and Canterbury universities, first year enrolments were down by 28 per cent.

International enrolments for the first eight months of 2011 were down 31 per cent. The earthquakes dented the confidence of potential international students in Christchurch as an education destination. A large proportion of the reductions in international students were in private training establishments.

What is happening now?

The Ministry of Education and Tertiary Education Commission have engaged with educators and communities to develop the Education Renewal Recovery Programme for greater Christchurch.

The draft Education Renewal Recovery Programme was released for public consultation in May 2012 and finalised in August 2012 in the document entitled Directions for Education Renewal in Greater Christchurch. It was developed in response to population change and damage to land and educational facilities that occurred after the Christchurch earthquakes in 2010 and 2011. The programme aims to offer an innovative response to the earthquakes by improving the delivery of education, extending options for learners and lifting student achievement.

Schools

As part of the overall plan for education renewal, proposals to close or merge 38 schools in greater Christchurch were announced in September 2012. These proposals took into account earthquake damage, roll numbers, weather tightness, the age and wear and tear of buildings, population movement and future population growth and school locations.

Extensive consultation was undertaken with schools and communities on these proposals. Considerable feedback informed the final decisions, which affected 24 of the original 38 schools. Eleven schools merged to create five merged schools, 11 others closed (including the four schools that will form the new Aranui Community School for years 1-13) and two schools chose to close voluntarily.

These final decisions then fed into the Christchurch Schools Rebuild Programme announced in November 2013 in which the Government committed to invest $1.137 billion to rebuild and renew 115 schools in greater Christchurch over the next 10 years.

During the 10-year programme, the Ministry of Education plans to construct 13 new schools on new sites, rebuild 10 schools on existing sites, fully redevelop 34 schools and moderately redevelop 58 schools.

The Ministry of Education has a dedicated team that works in partnership with schools from initial planning to design and final construction. This programme is now fully under way. Halswell School and Pegasus School were completed in 2015. In February 2016, four schools opened on new premises: Rāwhiti School in North New Brighton, Waitākiri Primary School in Burwood, Marshland School, and West Rolleston School.

Redcliffs School is the only school in the Christchurch Schools Rebuild Programme with a decision on its future still outstanding. In July 2016, Education Minister Hekia Parata set aside her interim decision to close Redcliffs School at the end of 2016 and initiated discussions on relocating the school to an alternative site in Redcliffs.

When the Christchurch Schools Rebuild Programme is complete, more than 80 per cent of teaching spaces in greater Christchurch will be repaired and/or modernised to facilitate quality teaching and learning environments.

To make the most of the flexibility, openness, and access to resources offered by modern, quality teaching and learning environments, there is also a focus on ensuring teachers are supported to adopt modern learning practices. This will ensure greater Christchurch has a quality teaching and learning environment that will serve as a platform for student learning well into the future.
Tertiary

In October 2013, the Government announced an $18.9 million funding boost for Christchurch Polytechnic Institute of Technology (now Ara Institute of Canterbury), which allowed it to train an additional 1,000 trade students each year to support the growing demand for skilled workers for the Canterbury rebuild.

The Tertiary Education Strategy (2014–19) released in March 2014 set out the Government’s long-term strategic directions for the tertiary education system and highlighted “delivering skills for industry” as one of its key priorities. The University of Canterbury’s redevelopment programme has been designed to modernise 80 per cent of its campus and infrastructure. The total programme is valued at $1.1 billion over 10 years, and is jointly funded by insurers, the university and $260 million from the Government. The university has awarded two major construction contracts for the Canterbury Engineering the Future project (engineering rebuild) and the Regional Science and Innovation Centre. Both are due for completion in 2017.

Lincoln University is working on its campus redevelopment plan as it identifies what it needs to do to recover and grow, and is considering a number of different investment options. A core component of this plan is the ‘Lincoln Hub’ which is a collaborative partnership between AgResearch, Dairy NZ, Landcare Research, Plant and Food Research and Lincoln University. In July 2014 Cabinet agreed to an ‘in principle’ investment of $107.5 million for the Science Facilities Rebuild in conjunction with the Lincoln Hub.

In March 2016, CPIT and Aoraki Polytechnic formally merged to create Ara Institute of Canterbury, a new vocational education provider for Canterbury with goals for 2015-2017 of market relevance, graduate outcomes, and dynamic learning and environments.

What are the indicators telling us?

ECE participation

ECE participation is measured in this report as the proportion of Year 1 entrants who had prior participation in early childhood education (ECE).

Before the earthquakes, greater Christchurch was well-served with 15,644 ECE places, which increased to 16,907 in 2015. Figure 1 confirms that despite the earthquakes, ECE participation has been consistently higher in greater Christchurch than the national average.
Student absences

Student absence is measured through the total absence rate and total unjustified absence rate from primary and secondary schools. Total unjustified absence, which includes unjustified absences as well as intermittent unjustified absences, is also called ‘truancy’.

Both the total absence and total unjustified absence rates decreased in the immediate post-earthquake period in the three areas that make up greater Christchurch. The rates have generally increased since 2011, apart from Christchurch city where both total absence and total unjustified absence rates dropped again in 2014.
Figure 2: Total absence rate and total unjustified absence rate

![Graph showing total absence rate and total unjustified absence rate for New Zealand and Christchurch, Waimakariri, and Selwyn districts.]

NEET (not in education, employment or training) rate

Figure 3 shows that the proportion of young people aged 15–24 years who are not in employment, education or training (NEET) in greater Christchurch peaked after the February 2011 earthquakes at 16.8 per cent in March 2011.

However, as young people in greater Christchurch have taken advantage of rebuild opportunities, the NEET rate has decreased. In the year to March 2016 the greater Christchurch NEET rate, at 8.2 per cent, was 21 per cent lower than the pre-earthquake period (two years to March 2010) rate of 10.5 per cent. This compares to an 11 per cent decrease over the same time period nationally (from 12.9 to 11.5 per cent). At March 2016, the greater Christchurch rate was 7.4 per cent, compared with 13.2 per cent across New Zealand. The decline in the greater Christchurch NEET rate appears to have levelled off since 2014, and it will be important to monitor this indicator in coming years.

By March 2016 there were just 1,900 NEET males in greater Christchurch (4.8 per cent of males in the relevant age group, compared with 12.3 per cent in New Zealand overall) and 3,500 NEET females (10.7 per cent of females in the relevant age group, compared with 14.2 per cent in New Zealand overall). These are substantial decreases from the March 2011 quarter when there were 3,900 NEET males in greater Christchurch (15.8 per cent) and 4,700 NEET females (17.8 per cent).

In December 2012 the NEET rate for females peaked at 21.3 per cent. This may have reflected early rebuild-related employment opportunities favouring males combined with a loss of significant retail and hospitality work in which young females traditionally found employment.

Trade training scholarships for women (aged under 25 years) offered by Ara Institute of Canterbury aim to provide the skills and knowledge needed to start a career in the trade industry. These scholarships are also expected to encourage women to explore career opportunities in the rebuild, particularly those in traditionally male-dominated occupations.

*Due to the earthquakes, figures for Christchurch may not represent ‘typical’ rates for the region. The survey of school rolls was scheduled to take place during the week of June 2011 that was subject to substantial aftershocks. Schools had the option of reporting the week earlier or later instead. Note schools were surveyed for absence rates in 2009, but the data are not available at the territorial authority level for that year.*
Overall, employment and training opportunities generated by the rebuild have led to a reduction in the NEET rate in greater Christchurch and a widening gap between the greater Christchurch and national rates.

Figure 3: ‘Not in employment, education or training’ (NEET) rate for the youth population by sex
Tertiary enrolments

Tertiary enrolments is a measure of the domestic and international students enrolled in tertiary institutions.

Figure 4 shows that enrolments of all part-time and full-time students in formal tertiary education in greater Christchurch declined by more than 20 per cent between 2009 (48,120 students) and 2013 (38,170 students), compared with an 11 per cent decline across New Zealand for the same period. Annually, the greatest decrease in total enrolments in greater Christchurch occurred between 2010 and 2011. Enrolment figures levelled off between 2011 and 2014 but remained below those recorded before the earthquakes. In 2014 there was a slight increase in total enrolments for greater Christchurch to 39,185 and then a further decrease of 10 per cent to 35,115 in 2015. Comparatively, tertiary enrolments across New Zealand remained relatively stable between 2013 and 2015.

Enrolments in universities in greater Christchurch steadily declined by a total of 17 per cent between 2009 (21,550 students) and 2014 (17,905 students) and remained stable in 2015 at 18,075. Polytechnic enrolments initially dropped by 25 per cent from 15,855 in 2010 to 11,965 in 2011, and then steadily increased back to 14,915 in 2014, before dropping substantially again to 10,700 in 2015. In contrast, national polytechnic enrolments decreased by 24 per cent between 2009 and 2013 before recovering slightly over the last two years.

Table 1 sets out enrolment numbers for domestic and international students. Between 2010 and 2011 enrolments in tertiary education dropped substantially, by 15.5 per cent for domestic students and 19 per cent for international students.

In 2015, total intakes of tertiary students at Christchurch-based institutions remained 22 per cent down on 2010. When compared with 2014, international enrolments increased (by 15.4 per cent) in 2015 while domestic enrolments were down 13.8 per cent.

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This denominator differs from that used for Figure 4.
Table 1: Full-year domestic and international student enrolments in greater Christchurch 2010–2014

<table>
<thead>
<tr>
<th>Type of student</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>39,345</td>
<td>33,640</td>
<td>34,575</td>
<td>34,115</td>
<td>34,585</td>
<td>29,805</td>
</tr>
<tr>
<td>International</td>
<td>5,645</td>
<td>4,670</td>
<td>3,885</td>
<td>4,055</td>
<td>4,600</td>
<td>5,310</td>
</tr>
<tr>
<td>Total</td>
<td>45,990</td>
<td>38,310</td>
<td>38,460</td>
<td>38,170</td>
<td>39,185</td>
<td>35,115</td>
</tr>
</tbody>
</table>

Student engagement

Student engagement is measured in this report by the age-standardised rate of exclusions, expulsions, stand-downs, and suspensions for primary and secondary school students.

Stand-downs and suspensions declined in 2011 after the major earthquakes but have subsequently increased in line with national rates.

Figure 5 shows that the age-standardised rate for stand-downs in greater Christchurch decreased between 2009 and 2011 by 10 per 1,000 students (from 28 per 1,000 students in 2009 to 18 per 1,000 students in 2011). The rate subsequently increased to 22 per 1,000 students in 2013 then decreased to 18 per 1,000 in 2015.

The age-standardised rate for suspensions in greater Christchurch also decreased between 2009 and 2011 by 2 per 1,000 students (from 5 per 1,000 students in 2009 to 3 per 1,000 students in 2011). The rate subsequently has decreased to 2 per 1,000 students in 2015, just below the New Zealand rate of 4 per 1,000 students.
Student transience

In this report, student transience is measured by the number of times a school student has re-enrolled within greater Christchurch during the school year.

Figure 6 shows that student transience increased in 2011 but is now below pre-earthquake levels.

The proportion of students who re-enrolled at least once, more than doubled between 2009 (2.7 per cent or 1,926 students) and 2011 (6.8 per cent or 5,091 students). By 2014 the rate had dropped back to 2.9 per cent (2,110 students) and was 2.5 per cent (1,818 students) in 2015.

The number of students who re-enrolled in a new school twice or more increased almost five-fold from 123 students in 2009 to 600 in 2011. However, by 2014 this number had dropped back to 114 and remained at this level in 2015.

The 2010-2011 increase in transience reflected the significant upheaval families faced with damaged homes and changes to employment patterns and social connections. From 2012 onwards this upheaval has reduced and numbers now reflect standard patterns of pre-quake transience.

Over 97 per cent of students remained enrolled in the same school each year between 2008 and 2015, with the exception of 2011 in which, due to the earthquakes, only 93 per cent remained enrolled in the same school.
Figure 6: Number of students who re-enrol at a different school in greater Christchurch each year

Find out more

Find out more about the Ministry of Education’s education renewal plans: [www.shapingeducation.minedu.govt.nz](http://www.shapingeducation.minedu.govt.nz)

Find out more about education statistics: [www.educationcounts.govt.nz](http://www.educationcounts.govt.nz)

Find out more about Right Service Right Time, an innovative approach to ensure the wellbeing of children and families: [www.rightservice.org.nz](http://www.rightservice.org.nz)

Find out more about Ara Institute for Canterbury free trades training: [www.ara.ac.nz/study-options/our-study-interest-areas/trades](http://www.ara.ac.nz/study-options/our-study-interest-areas/trades)

Find out more about the Ministry of Women’s Affairs research on using women’s labour in the Canterbury recovery: [www.mwa.govt.nz](http://www.mwa.govt.nz)

Technical notes

ECE participation

Data source: Ministry of Education administrative data

Data frequency: Yearly

Data complete until: 2015

Notes: The measure is institution-based, so the geographic assignment is based on where children are in childcare, not where they normally reside. Christchurch city, Selwyn and Waimakariri refer to the territorial authority boundaries.

Data presented are yearly to June, and yearly to each quarter. ECE prior participation rates are affected by seasonal variations.
Student absences

Data source: Ministry of Education’s Attendance in New Zealand Schools Survey


Notes: Rates for the Christchurch area in 2011 should be interpreted with caution. These data were collected during the week in June 2011 when there were significant aftershocks and schools may have been closed. Schools had the option to report the week before or after, depending on whether they kept electronic or paper records.

NEET (youth not in education, employment or training)

Data source: Household Labour Force Survey (HLFS), Statistics NZ

Data frequency: Quarterly

Data complete until: March 2016

Notes: The HLFS interviews approximately 32,000 people or 16,000 private households in New Zealand each quarter. Each person is interviewed for eight quarters (two years) so that changes in the labour market can be measured. Interviews are carried out each week of the quarter so that the data are an average for that quarter. The working-age population consists of the usually resident, non-institutionalised, civilian population of New Zealand aged 15 years and over.

The labour force consists of members of the working age population who, during the survey reference week, were classified as ‘employed’ or ‘unemployed’.

Those not in the labour force comprise any person in the working-age population who is neither employed nor unemployed. They mainly consist of people who:

• are retired
• are not actively seeking work
• attend educational institutions
• are permanently unable to work due to physical or mental disabilities
• were temporarily unavailable for work in the survey reference week
• have personal or family responsibilities such as unpaid housework or childcare.

NEET includes both those people who are unemployed (part of the labour force), and those who are not in the labour force, and, at the same time, not in education and training.

Greater Christchurch is comprised of Christchurch City Council, Selwyn District Council and Waimakariri District Council and is below survey design level. Data are indicative only and should be interpreted cautiously. Data for greater Christchurch during 2011 are subject to slightly higher sampling error than normal owing to interruption of surveying.

The HLFS is a sample survey and therefore subject to sampling error. Estimates based on populations fewer than 1,000 are suppressed as they are subject to sampling errors too high for most practical purposes. Estimates of numbers have been rounded to the nearest hundred.

Tertiary enrolments

Data source: Ministry of Education administrative data

Data frequency: Yearly

Data complete until: 2015

Notes: Numbers are head counts, not equivalent full-time students, and include New Zealand and international students. The numbers include Christchurch campus enrolments for institutions headquartered elsewhere (e.g., Wellington Institute of Technology, Southland Institute of Technology, University of Otago), and exclude non-Christchurch enrolments of Christchurch-based providers (e.g., the Telford campus of Lincoln University, Timaru Campus of Ara Institute for Canterbury). Telford Rural Polytechnic merged with Lincoln University in 2011.
Students who were enrolled in more than one sub-sector have been counted in each sub-sector. Consequently, the sum of the sub-sectors may not add to the total number of students. Students who were enrolled in more than one territorial local authority have been counted in each authority. Consequently, the sum of the students in all territorial local authorities may not add to the total number of students.

Total figures include students from universities, polytechnics, Te Wānanga o Aotearoa and private training establishments.

**Student engagement**

**Data source:** Ministry of Education Stand-downs and Suspensions database and the Ministry of Education July school roll returns

**Data frequency:** Yearly in July

**Data complete until:** 2015

**Notes:** The numerator for the rates in this indicator was from the Ministry of Education Stand-downs and Suspensions database, and the denominator for the rates was from Ministry of Education July school roll returns. Only state and state integrated schools are included in the data.

The age-standardised rate of intervention per 1,000 students eligible for that intervention is the number of observed interventions divided by the number of expected interventions multiplied by the latest national rate per 1,000. By age-standardising, rates from different areas can be compared more accurately by controlling for the effect of differing age distributions in those different areas. All of the age-standardised rates are standardised against the current year national rate so that the data are comparable across years.

All students are eligible for suspension and stand-downs. Only students up to the age of 16 years are eligible for exclusions. Only students 16 years and older are eligible for expulsion.

The data have been aggregated for all of New Zealand, and separately for those territorial local authorities that constitute greater Christchurch (Christchurch City Council, Selwyn District Council and Waimakariri District Council).

The engagement data are defined as:

- **Stand downs** – the removal of a student from school for a specified period
- **Suspension** – the removal of a student from school until the Board of Trustees decides the outcome
- **Exclusion** – a student under 16 years old is permanently removed from school and has to enrol elsewhere
- **Expulsion** – a student 16 years old or over is permanently removed from the school.

**Student transience (number of moves within greater Christchurch)**

**Data source:** Ministry of Education school enrolment data

**Data frequency:** Yearly in March

**Data complete until:** 2015

**Notes:** The data include students who were enrolled in schools in greater Christchurch (Christchurch City Council, Selwyn District Council and Waimakariri District Council) throughout the entire school year.
References


4. Information retrieved from: www.shapingeducation.govt.nz


The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why is NCEA achievement important?
A formal school qualification, such as the National Certificate of Educational Achievement (NCEA), is a measure of the extent to which young adults have completed a basic prerequisite for higher education and training, and many entry-level jobs.

People who achieve higher educational qualifications tend to earn more, which allows them to maintain better health, participate more in community life, and live in better-quality housing. In addition, their children tend to go further in their own education.

An educated workforce is also critical to a region’s future economic success. Cities with higher education levels grow jobs and population faster and are more resilient to economic downturns than cities with lower education levels. NCEA Level 2 is considered the minimum qualification needed to continue with further education or join the workforce. One of the Government’s priorities is to increase the proportion of 18-year-olds with NCEA Level 2 or an equivalent qualification so they can reach their full potential.

Since NCEA was introduced, NCEA Level 2 pass rates for Christchurch students have been higher than the national average. Selwyn District students have also achieved at a high level over time. Results in the Waimakariri District have generally been similar to the national average.

How was NCEA achievement impacted by the earthquakes?
In 2011 the New Zealand Qualifications Authority developed a special derived grades procedure for students in greater Christchurch to address concerns that school closures and site sharing may have impaired learning and to mitigate any such impact.

Many greater Christchurch schools, including a large number who were site sharing, achieved better results in 2011 than in 2010. This finding is consistent with the trend towards improving results in the area since the introduction of NCEA. The special grades procedure may also have contributed to some extent to the improvement between 2010 and 2011.

What is happening now?
As part of the Better Public Services programme the Government has set a target that 85 per cent of 18-year-olds will gain NCEA Level 2 or an equivalent qualification by 2017.

The Ministry of Education is leading the greater Christchurch Education Renewal Recovery Programme, which aims to build on the best of existing practice, while supporting the development of new, more effective approaches to teaching and learning. One of the key objectives of this programme is that learners achieve a solid academic base, gaining at least NCEA Level 2.
The Ministry of Education’s Youth Guarantee initiative creates clear pathways from school to work and tertiary study. A range of programmes including Vocational Pathways and Secondary–Tertiary Programmes (such as trades and service academies and fees-free places) provide young people with opportunities to achieve NCEA Level 2 and engage in higher education and vocational training.

**What are the indicators telling us?**

NCEA achievement can be measured in different ways to present different pictures of how students are performing in the schooling system.

- The ‘16-year-old’ data focus is only on the 16-year-old cohort who attained NCEA Level 2 or an equivalent qualification, providing a clear picture of examination success
- ‘School leavers’ data show the highest qualification of people who have left the schooling system, indicating how well prepared students are for further education or employment

Figure 1 shows that NCEA Level 2 or higher pass rates for 16-year-old students have been consistently higher than pre-earthquake pass rates with an overall pass rate for greater Christchurch of 67 per cent in 2009 compared to 76 per cent in 2015 (compared with 63 per cent and 73 per cent nationally).

In Christchurch city, pass rates generally increased over time from 66 per cent in 2009 to 75 per cent in 2015. In 2015 the Waimakariri District pass rate was 76 per cent and Selwyn District students achieved a pass rate of 82 per cent.

These findings indicate that NCEA achievement for this cohort of students was high despite the earthquakes.

*Figure 1: Proportion of 16-year-old students who attained NCEA Level 2 or equivalent qualification*
Figure 2 shows that school leavers in greater Christchurch achieved NCEA Level 2 or above at an increasingly higher rate in 2010 (72 per cent) and 2011 (75 per cent) despite significant challenges caused by the earthquakes. While the level remained steady in 2012 at 75 per cent, it rose again to 78 per cent in 2013, 79 per cent in 2014, and 80 per cent in 2015 and remains higher than the pre-earthquake rate (70 per cent in 2009). National figures have shown a steady increase since 2009.

Figure 2: Proportion of school leavers who achieved NCEA Level 2 or a higher qualification

Figure 3 presents, by ethnicity, the proportion of school leavers who attained NCEA Level 2 or a higher qualification. In particular, it highlights the disparity between the achievement of Māori and Pacific students compared with other ethnicities, both locally and New Zealand-wide.

Between 2009 and 2015, school leaver achievement rates for European and Asian students in greater Christchurch increased from 73 to 82 per cent and 84 to 86 per cent respectively. This pattern is generally consistent with national trends.

Notably, school leaver achievement for both Māori and Pacific students in greater Christchurch increased between 2009 and 2011 from 45 to 54 per cent and 49 to 62 per cent respectively, but decreased in 2012 to 52 per cent for Māori and 57 per cent for Pacific. Pacific school leaver achievement then improved to 67 per cent in 2013 and remained near this level through to 2015 (67 per cent). Achievement among Māori school leavers remained relatively stable at 54 per cent in 2013 and 55 per cent in 2014, then increased to 60 per cent in 2015. During the same period Māori and Pacific students’ school leaver achievement has consistently improved at the national level.
The proportion of school leavers gaining NCEA Level 2 or above has consistently been higher for female students than for male students (data not shown). In greater Christchurch, 83.8 per cent of female school leavers gained level 2 or above in 2015 compared to 76.1 per cent of male school leavers. For all of New Zealand, 82.0 per cent of female school leavers achieved level 2 or above in 2015 compared to 76.3 per cent of male school leavers.
Find out more

Find out more about the Canterbury Wellbeing Index:
http://www.cph.co.nz/your-health/canterbury-wellbeing-index/

Find out more about NCEA from the New Zealand Qualifications Authority:
www.nzqa.govt.nz/qualifications-standards/qualifications/ncea

Find out more about the Youth Guarantee programme:
http://youthguarantee.net.nz

Technical notes

Data sources: Ministry of Education database of New Zealand Qualifications Authority
NCEA results

Data frequency: Yearly in September and June

Data complete until: 2015

Notes: International students and students with gender unknown are excluded from the overall data and data by gender.

Specific schooling year-level data have been discontinued; therefore we have moved to target 16-year-olds (as at 1 May) to align with students at curriculum Year 12 (NCEA Level 2). This also tends to be more accurate as schooling year level can be a more variable measure.

Another option that was considered was to use the Better Public Services measure which relates to a national indicator set by the Government and specifically targets 18-year-olds with NCEA Level 2. Analysing this on a regional basis is problematic as data relate to the school a student last attended whereas, for this age group, movement is common for further tertiary study. To avoid this problem we have considered those students who are 16 years of age with NCEA Level 2 or above.

When comparing 16-year-olds with NCEA Level 2 or above with school leavers, results need to be interpreted with caution as cohorts tend to be more variable across specific year groups, especially at a regional level. School leaver data capture a mixed age cohort, generally making them a more robust measure.

Total students have been used as the denominator (rather than candidates or the July roll). Total students are defined as domestic, normally resident students that have been enrolled in any New Zealand school for more than 20 days after 1 March.

The definition of candidates has changed from ‘students who have gained at least one credit in a year’ to ‘students who have been enrolled to participate in at least one standard during the year’ – regardless of the result.

Greater Christchurch includes Christchurch city and Waimakariri and Selwyn districts.
References
3. The New Orleans Index at Six. Greater New Orleans Community Data Centre.
The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why is employment important?

Employment has a direct impact on wellbeing. It affects the economic wellbeing and the quality of life of an individual and their family and also has significant impacts on social and emotional wellbeing. Being employed is an important way for a person to get enough income to meet their material needs and to fully participate in their community. Employment is also central to an individual’s identity and their role in society.

Studies show unemployed people have higher mortality rates, a higher risk of mental health issues and a higher rate of criminal activity. Longitudinal studies show that unemployment has a direct effect on health over and above the effects of socioeconomic status, poverty, and prior ill-health.

When people move from unemployment to employment, they gain in material wellbeing, physical and mental health, and socioeconomic status.

Levels of employment and unemployment differ across ethnic groups in New Zealand. Unemployment rates for Māori and Pacific peoples are more than two times higher than for Europeans, and these population groups are therefore less likely to experience the employment-related benefits described above.

It is also important that young people are able to find employment when they finish their education and training. Young people are particularly vulnerable in the job market because they generally do not yet have the experience and skills to compete with older workers.

How was employment impacted by the earthquakes?

The February 2011 earthquake had immediate economic consequences across greater Christchurch and the whole of the South Island. Most severely affected were the tourism sector, small businesses, and service industries such as retail, hospitality, international education, and aged care.

Businesses in the central business district cordon could not trade from, or even access, their premises. Smaller suburban centres in older parts of town such as Sydenham were disproportionately affected as damage from unreinforced masonry buildings closed roads and footpaths, making it harder for members of the public to reach them. Some of the large shopping malls could not open due to damage, and economic activity was disrupted completely or forced to shift to different parts of town.

On 28 February 2011 the Government set up the Earthquake Support Subsidy so that businesses could continue to pay their employees when they were unable to operate or were losing significant trade. A similar package called Job Loss Cover assisted the self-employed. Because of these payments, a large number of businesses were able to remain viable. In addition, these measures prevented the population flight that might have occurred if people had not been able to access weekly wages during this emergency response period.

Primarily as a result of these measures, fewer people moved onto the unemployment benefit than might have been expected in the period after the earthquakes. Since then the labour market has picked up as many businesses relocated to new premises and began trading again. Others started trading online.
What is happening now?

The work involved in rebuilding and repairing domestic dwellings and commercial buildings is expected to fuel economic growth in the Canterbury region for a number of years. This growth has increased employment in the region.

Between the March 2015 and March 2016 quarters, the number of people employed in Canterbury increased by 9,100, although the employment rate decreased by 0.5 per cent compared to a 0.3 per cent decrease across New Zealand. In March 2016 the employment rate in Canterbury was 71.3 per cent, compared with 65.4 per cent nationally. The unemployment rate was 3.2 per cent, compared with 5.9 per cent nationally.

Looking ahead, an estimated 5,000 additional construction workers will be required at the peak of the rebuild in December 2016. The current skills shortage list for Canterbury includes construction project managers, surveyors, engineers, and construction tradespeople including carpenters, plumbers, electricians, joiners, painters, concreters and plasterers. Additional employees are also required in non-construction occupations that support the rebuild, such as accountants, lawyers, and hospitality and retail workers.

According to the latest Census, construction has replaced manufacturing as the largest industry in greater Christchurch. In 2013, one in eight adults (25,764 people) in greater Christchurch worked in the construction industry. This is an increase of 59.3 per cent (9,594 people) since 2006.12 Other industries to experience growth include health care and social assistance (up 13.4 per cent in 2014), professional, scientific and technical services (up 14.8 per cent) and public administration and safety (up 29.7 per cent).13

As before the earthquakes, most construction workers are male; however, females accounted for 14.5 per cent (3,735 people) of workers in this industry in 2013, an increase from 13.1 per cent (2,112 people) in 2006.13

New Zealand-born workers (81.1 per cent) comprised the majority of construction workers in 2013, followed by those born in the United Kingdom and Ireland (9.4 per cent) and Asia (2.4 per cent).

In June 2015 Canterbury employed 26 per cent of all those who entered New Zealand under the Essential Skills worker category, compared with 14 per cent in 2010.14

In recognition of the need for large numbers of additional workers in the rebuild, Immigration New Zealand streamlined some of the visa processes to improve labour market flexibility in Canterbury.15 From July 2015 to December 2016 these changes will:

- extend the Essential Skills visa from one year to three years for lower skilled occupations
- allow visa holders to change employers (within the same occupation) more easily
- introduce an accreditation scheme for recruiters of migrant workers for Canterbury.

The rebuild stimulated above average Gross Domestic Product (GDP) growth in Canterbury during 2012, 2013, and 2014.16 GDP growth remained high at 5.8 per cent growth in the year to December 2014 before easing back to 1.9 per cent growth in 2015, although economic activity remains high, particularly in the construction sector.

In 2011 the Government invested $42 million in trades training through Skills for Canterbury, which included up to 3,000 more construction-related training places in polytechnics in order to capitalise on rebuild opportunities. In November 2012 the Government committed an extra $28 million to maintain the expanded training pipeline for tradespeople with 10,000 new apprenticeships and a further 300 places through the He Toki ki te Rika Māori trades training initiative.

Between July 2014 and June 2016, beneficiaries living outside the Christchurch area were able to apply for a special, one-off $3,000 payment to help them relocate to a confirmed, full-time job offer in Canterbury.4 By February 2016, 2,119 beneficiaries had moved to greater Christchurch.17 The majority moved into construction, manufacturing, transport, postal work and warehousing. The payment was open to all ages but particularly targeted young people aged 18–24 years, who made up a third of those who took up the offer.

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*Areas included in the 3K to Christchurch programme were Ashburton, Hurunui, Selwyn, and Waimakariri District Councils, and Christchurch City Council.*
Workplace stress (i.e. workplace relocation and workload increasing as a result of the earthquakes) is having a negative impact on a decreasing number of people. In 2012, 27 per cent of CERA Wellbeing Survey respondents identified it as a stressor and this was down to only 7 per cent by the April 2016 Canterbury Wellbeing Survey.

Initiatives like the Public Sector Organisational Resilience Team worked across government departments to share information and plans to promote workforce resilience through the response and recovery phases. Private sector organisations have also offered their staff support and assistance in acknowledgement of the wider stressors on workforce wellbeing. In mid-2015 the Canterbury Employers’ Chamber of Commerce initiated a positive messaging campaign to facilitate the positive settlement of new migrant rebuild workers and their families arriving in greater Christchurch.

In 2012, 16 per cent of CERA Wellbeing Survey respondents were concerned about the safety of their workplace, but this had reduced to 4 per cent by April 2016. While concerns about workplace safety remain as the rise in construction work increases the risk of work-related injuries, innovative safety programmes have been put in place to reduce accidents and injury.8

One example is the Canterbury Rebuild Safety Charter which is an agreement on health and safety between government and companies leading the rebuild. The Charter sets out a consistent approach to health and safety by raising standards across worksites and has signatories from project management offices, major construction firms including group builders, key insurers, recruitment companies and local and central government.

Another example is the collaboration between the Canterbury District Health Board, the Mental Health Education & Resource Centre, the Accident Compensation Corporation, and construction industry businesses such as Hawkins, Arrow International, Naylor Love, Fletcher Construction, and Corbel Constructions focusing on changing the culture of alcohol and drug use in the construction industry.

What are the indicators telling us?

Rates of employment, unemployment, and participation

The unemployment rate is the number of unemployed expressed as a percentage of the labour force.

The employment rate is the number of those employed for more than an hour a week expressed as a percentage of the working-age population.

The labour force participation rate is the total number of people classified as employed or unemployed expressed as a percentage of the working-age population.9

Unemployment8

Figure 1 shows that prior to the earthquakes, the unemployment rate in greater Christchurch was tracking upwards but typically remained lower than the national rate. Since 2011 the rate has lowered substantially, peaking at 6.7 per cent in June 2012 and dropping to 3.1 per cent by the June 2014 quarter. It has remained around this level since.

Between the pre-earthquake period (two years to March 2010) and the year to March 2016 the unemployment rate dropped by 26 per cent overall in greater Christchurch (to 3.2 per cent) compared with a 5 per cent increase across New Zealand (to 5.9 per cent).

Over the same period, the unemployment rate for young people aged 15-24 in greater Christchurch dropped by 42 per cent, compared with a 2 per cent increase across New Zealand.

Over the same period, the unemployment rate for young people aged 15-19 years in greater Christchurch was 11.2 per cent, compared with a pre-earthquake (March 2010) rate of 27.1 per cent and a national rate of 23.4 per cent. In the same month, the unemployment rate for young people aged 20–24 years in greater Christchurch was 5.8 per cent, compared with a pre-earthquake rate of 6.2 per cent (March 2010) and a national rate of 10.5 per cent. This data indicates that young people have gained employment opportunities from the rebuild and recovery.

While unemployment in greater Christchurch remains well below the New Zealand level, the decline in unemployment rates appears to have levelled off since 2014 and it will be important to monitor this indicator in coming years.

8See technical notes relating to the Household Labour Force Survey (Statistics New Zealand).
9This rate is not seasonally adjusted.
After a sharp decline following the earthquakes, the employment rate for greater Christchurch has since trended upwards, overtaking the national rate and moving well above pre-earthquake levels. Figure 2 shows that the employment rate in greater Christchurch fell from 66.8 per cent in September 2010 to 63 per cent in September 2011 before recovering to 67.6 per cent in September 2013 and continuing to climb. The March 2016 employment rate of 71.3 per cent is 5.9 percentage points higher than the national rate (65.4 per cent) but may ease as the peak of the rebuild is approached.

The March 2016 employment rate of 71.3 per cent is 5.9 percentage points higher than the national rate (65.4 per cent) but may ease as the peak of the rebuild is approached.

*aThis rate is not seasonally adjusted.*
Labour force participation rate

Figure 3 shows that the proportion of the greater Christchurch population participating in the labour force decreased significantly in the period after the February 2011 earthquake but subsequently tracked upwards and is now above pre-quake levels. The proportion dropped to 67 per cent in September 2011 but returned to pre-quake levels of 70.2 per cent in the September 2012 quarter and reached 73.6 per cent in March 2016 (compared with 69.5 per cent across New Zealand).

Benefits of obtaining work

This report uses two measures of beneficiaries obtaining employment, both of which use data from the Ministry of Social Development.

- The proportion of the total population of beneficiaries who cancel their benefit because they have obtained work.
- The number of cancellations of a benefit due to obtaining work.

Note that not all unemployed people seek or are eligible for a benefit.

Prior to the February earthquakes the proportion of beneficiaries leaving a benefit for work monthly was consistently higher nationally than in Canterbury.

Figure 4 shows that the proportion in Canterbury decreased to 1.2 per cent of beneficiaries leaving a benefit for work for the quarter in which the February 2011 earthquake occurred. This was the lowest proportion since June 2009.

Since then, there have been marked increases. Just under four (3.7) per cent left a benefit for work in the June quarter of 2011, compared with 2.3 per cent across New Zealand. The Canterbury rate has generally remained above pre-earthquake levels. In the December quarter of 2015, however, 1.2 per cent of beneficiaries left a benefit for work in Canterbury, compared to 1.6 per cent nationally.

\* This rate is not seasonally adjusted.
\f Canterbury excluding Ashburton
Figure 4: Proportion of beneficiaries leaving a benefit for employment

![Proportion of beneficiaries leaving a benefit for employment chart](image)

Figure 5 shows that the number of people leaving a benefit for work in Canterbury peaked at 2,909 during the June quarter 2011 and has gradually decreased to just less than 1,000 for the December quarter 2015.

Figure 5: Number of beneficiaries leaving a benefit for employment

![Number of beneficiaries leaving a benefit for employment chart](image)
Figure 6 shows that since the earthquakes, more male beneficiaries have entered into employment. Numbers leaving benefits for employment in Canterbury peaked at 2,909 in the June quarter of 2011. Of these, 1,788 (61 per cent) were male and 1,121 (39 per cent) were female. This compares with 59 per cent male and 41 per cent female nationally during the same quarter.

This gender imbalance has now narrowed in Canterbury where in the December quarter 2015, 51 per cent of those leaving a benefit for employment were male and 49 per cent were female. Nationally 56 per cent were male and 44 per cent were female in the same time period.

The gender imbalance is changing as the rebuild generates wider economic growth and employment opportunities. However, one reason for this disparity, regardless of labour market opportunities, is access to childcare and the need for part-time employment options for the primary caregiver.

**Figure 6: Number of beneficiaries leaving a benefit for employment, by gender**
Figure 7 shows that immediately after the earthquakes, employment opportunities were strong for young people. At the peak during the June quarter 2011 when 2,909 people left a benefit for employment in Canterbury, 1,009 were aged 18–24 and 701 were aged 25–34 years. Together these age groups made up 59 per cent of all people leaving a benefit for employment, which was slightly higher than the national proportion (57 per cent).

By the end of the December quarter 2015 the number of people aged 18–34 years leaving a benefit for employment had eased back in Canterbury (48 per cent of all people leaving a benefit for employment in Canterbury) and across New Zealand (54 per cent).

*Figure 7: Number of beneficiaries leaving a benefit for employment, by age*
Work-related injury claims

Figure 8 shows that nationally the incidence of work-related injury claims steadily decreased between 2008 and 2014. Since 2013 the incidence has remained stable at approximately 111 accidents per 1,000 full-time equivalent employees (FTEs) per annum. In comparison, the pattern in greater Christchurch has been more variable, partly due to smaller numbers, increasing from a pre-earthquake rate of approximately 107 accidents per 1,000 FTEs in 2009 to a peak of 123 per 1,000 FTEs in 2011, then dropping to 113 per 1,000 FTEs in 2012 and then remaining above the national level through to 2014 at a rate of 116 per 1000 FTEs in 2014. This indicator will need to be carefully monitored during the rebuild as the construction industry typically has a high incidence rate of injury. Employers and recruitment agencies in Christchurch have a strong focus on training in workplace safety.

Figure 8: Number of work-related injury claims per 1,000 full-time equivalent employees

![Graph showing work-related injury claims per 1,000 FTEs from 2008 to 2014 for New Zealand and Greater Christchurch. The graph shows a steady decrease in New Zealand, while Greater Christchurch has had more variability, peaking in 2011 and remaining above the national level through 2014.]
Find out more

Find out more about the Canterbury Wellbeing Index: [www.cph.co.nz/your-health/canterbury-wellbeing-index/](http://www.cph.co.nz/your-health/canterbury-wellbeing-index/)

Find out more about the Canterbury Skills and Employment Hub: [www.opportunitycanterbury.org.nz](http://www.opportunitycanterbury.org.nz)

Find out more about jobs for young people: [www.facebook.com/BBCanty](http://www.facebook.com/BBCanty)

Find out more about economic development in Christchurch city: [www.cdc.org.nz](http://www.cdc.org.nz)

Find out more about economic development in the Waimakariri District: [www.northcanterbury.co.nz/business/ENCInfo](http://www.northcanterbury.co.nz/business/ENCInfo)

Find out more about economic development in the Selwyn District: [www.selwyn.govt.nz/services/economic-development](http://www.selwyn.govt.nz/services/economic-development)

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Technical notes

**Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey)**

**Data source:** Canterbury Earthquake Recovery Authority, Canterbury District Health Board

**Data frequency:** Six-monthly September 2012, April 2013, September 2013, April 2014, September 2014, April 2015, September 2015 (all CERA) and April 2016 (CDHB)

**Data complete until:** April 2016

**Notes:** The April 2016 Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey) is the eighth survey in the series providing information about the residents of greater Christchurch. Respondents were randomly selected from the electoral roll. The survey was delivered online and by hard copy from 30 March to 18 May 2016. The response rate was 41 per cent. Weighting was used to correct imbalances in sample representation. The survey was originally developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. For results from the surveys, see: [www.cph.co.nz/your-health/wellbeing-survey/](http://www.cph.co.nz/your-health/wellbeing-survey/)

**Employment, unemployment and labour force participation rate**

**Data source:** Household Labour Force Survey (HLFS), Statistics New Zealand

**Data frequency:** Quarterly

**Data complete until:** March 2016

**Notes:** The HLFS interviews approximately 32,000 people or 16,000 private households in New Zealand. Each person is interviewed for eight quarters (two years) so that changes in the labour market can be measured. Interviews are carried out each week of the quarter so that the data are an average for that quarter.

Data has been revised and reweighted to reflect Census 2013 estimates.

The greater Christchurch area includes Christchurch city, Waimakariri District and Selwyn District Councils and is below survey design level. Data are indicative only and should be interpreted cautiously.

Data for greater Christchurch during 2011 are subject to slightly higher sampling error than normal owing to interruption of surveying.

The HLFS is a sample survey and therefore subject to sampling error. Estimates based on populations fewer than 1,000 are suppressed as they are subject to sampling errors too high for most practical purposes. Estimates of numbers have been rounded to the nearest hundred.
‘Unemployed’ refers to all people in the working-age population who during their reference week were without a paid job and were available for work and had either actively sought work in the past four weeks, or had a new job to start within four weeks. A person whose only job search method in the previous four weeks has been to look at job advertisements in newspapers is not considered to be actively seeking work.

The ‘unemployment rate’ is the number of unemployed people expressed as a percentage of the labour force.

‘Employed’ refers to HLFS respondents who, during the survey reference week, had: 1) worked for one hour or more, for pay or profit, in the context of an employee–employer relationship or self-employment; 2) worked without pay for one hour or more in work that contributed directly to the operation of a farm, business or professional practice owned or operated by a relative; or 3) had a job but were not at work due to a) own illness or injury, b) personal or family responsibilities, c) bad weather or mechanical breakdown, d) direct involvement in an industrial dispute, or e) leave or holiday.

The ‘employment rate’ refers to the employed, as a percentage of the working-age population.

The ‘labour force’ refers to members of the working-aged population who, during the survey reference week, were classified as ‘employed’ or ‘unemployed’.

The ‘labour force participation rate’ refers to the total labour force expressed as a percentage of the working-age population.

**Beneficiaries obtaining work**

- **Data source:** Ministry of Social Development’s (MSD) database
- **Data frequency:** Monthly
- **Data complete until:** December 2015

**Notes:** Until 15 July 2013, cancellations and clients are calculated from the total number of working-age benefits of the following types: 1) Domestic Purposes Benefit (DPB) and DPB-related benefits, which include DPB-Caring for Sick or Infirm, DPB-Sole Parent, DPB-Woman Alone and Emergency Maintenance Allowance; 2) Invalid Benefit; 3) Sickness Benefit and Sickness Benefit Hardship; and 4) Unemployment Benefit and Unemployment Benefit Hardship. Cancellations in these benefit types were counted if they were cancelled for the reason ‘Obtained work’.

From 15 July 2013, benefit categories have changed. For more information on benefits currently available, see: [www.workandincome.govt.nz/products/a-z-benefits/index.html](http://www.workandincome.govt.nz/products/a-z-benefits/index.html).

The Canterbury Work and Income region presented here excludes the Ashburton service area.

Note that the eligibility requirements for the Unemployment Benefit are different from the definition of unemployed in the Household Labour Force Survey (HLFS). See MSD for information about Unemployment Benefit (now known as Jobseeker Support) eligibility requirements: [www.workandincome.govt.nz/products/a-z-benefits/jobseeker-support.html](http://www.workandincome.govt.nz/products/a-z-benefits/jobseeker-support.html). Note that these benefit data may be affected by earthquakes as some service centres had interrupted services following the February 2011 earthquakes. These data are not adjusted for external factors affecting employment (e.g., government policy or recession).

Data for the month of July 2013 have been excluded from figures 1, 2, 3 and 4. This is due to benefit changes in mid-July, which would mean that benefit categories would be understated if they were included during that month.

All data used relates to the ‘working age’ – being those aged 18 to 64 years.
Work-related injury claims

Data source: Injury statistics - Work-related claims, Statistics New Zealand

Data frequency: Yearly

Data complete until: 2014 (provisional)

Notes: Injury Statistics – Work-related Claims measures claims accepted by the Accident Compensation Corporation (ACC) for work-related injuries. The statistics are based on one claim for each person for each injury event. Only accepted claims are included.

Full-time equivalent employee information from the Household Labour Force Survey (HLFS) is used to calculate the number of work-related injury claims per 1,000 FTEs. Full-time equivalent employees (FTEs) is a standard measure used in labour force statistics, for example, to calculate average weekly earnings. FTEs are calculated as the number of full-time employees plus half the number of part-time employees.

On 31 March 2015, the HLFS underwent a population rebase that revised the statistical series back to the beginning of the series. A population rebase is done to update the weights used in the survey, based on the population counts from the most recent census. This rebase also included the introduction of regional benchmarks, to improve the quality of regional estimates used in the HLFS.

Incidence rates in the work-related claims release were back-dated to 2002 to include the new FTE estimates from the HLFS.
References


The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why is household income important?

Having sufficient household income contributes substantially to a family’s wellbeing. With an adequate income, a household can access essential services and items such as quality housing, food, health services, and transport, and can participate in social and recreational activities in the community.

Where parents have sufficient income, the children in a household are more likely to experience wellbeing. Increases in household income also have wider benefits by contributing to economic growth and increasing a country’s tax base.

For families with insufficient income, children are more likely to experience negative outcomes such as lower educational achievement, poorer health, poorer economic status in their adult life, and behavioural problems.

It is important to note that income disparity exists across ethnic groups in New Zealand. While it is not possible to classify ethnicity at a household level, the 2013 census showed that the national median personal income for all people aged over 15 was $28,500, while median personal income for Māori, Asian, and Pacific peoples aged over 15 was $22,500, $20,100, and $19,700 respectively. This difference means that these population groups are likely to be disproportionately affected in terms of the income-related determinants of wellbeing mentioned above.

How was household income impacted by the earthquakes?

The earthquakes caused significant damage to the economy.

A quarter of the respondents in the first (September 2012) CERA Wellbeing Survey experienced potential or actual loss of employment or income as a result of the earthquakes. More about impacts on employment can be found in the Employment Outcomes section.

In addition, 45 per cent of respondents in 2012 reported moderate or major negative impacts of ‘additional financial burdens (e.g. replacing damaged items, additional housing costs, and supporting family members)’ as a result of the earthquakes.

On the other hand, almost one quarter (24 per cent) of respondents had experienced positive business and employment opportunities as a result of the earthquakes and one in seven (18 per cent) had experienced income-related benefits.

What is happening now?

The rebuild fuelled economic growth in the region between 2012 and 2014. In turn, this growth is likely to have increased household incomes. Canterbury remained one of the top performing regions in 2014 with annual growth of 4.4 per cent, compared with 3.6 per cent across New Zealand. However, economic growth slowed in 2015 as the initial impetus of the rebuild levelled out.

In the April 2016 Canterbury Wellbeing Survey, 11 per cent of respondents reported that additional financial burdens as a result of the earthquakes continue to have a strong negative impact on their everyday lives.

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*For information on the Canterbury Wellbeing Survey, refer to the technical notes.

*For 26 per cent of respondents, additional financial burdens had ‘moderately’ or ‘majorly’ negatively impacted their everyday life.
What are the indicators telling us?
This report measures household income in two ways.

- Median and 20th percentile equivalised gross weekly household income.
- Median weekly household income net of housing costs for renters and home owners.

**Median and 20th percentile equivalised gross weekly household income**

Median gross household income is the dollar amount that divides all households into two equal groups based on their income. Half of the households have an income above that amount, and half the households have an income below that amount.

The 20th percentile for household income is the dollar amount that divides households into the 20 per cent of households that have an income below this amount and the 80 per cent that have an income higher than this amount.

Household income has been ‘equivalised’, which means the dollar amounts have been adjusted based on the number of adults and age and number of children in the household.

Figure 1 shows that the median equivalised gross weekly household income increased for greater Christchurch and New Zealand overall from 2008 to 2014 before dropping slightly in 2015.

Greater Christchurch had a 24 per cent increase in median weekly household income between the pre-earthquake period (of 2008 to 2010) and 2014 compared with a 14 per cent increase across New Zealand. In 2015, however, median weekly income dropped by three per cent for greater Christchurch from $1409 to $1361, while it continued to grow nationally.

Between 2008 and 2014, the majority of the increase for greater Christchurch ($228 of a total $283) occurred between 2012 and 2014. Nationally, income increased by only $100 per week over this period. In 2014 median weekly income in greater Christchurch reached a peak at $178 higher than the New Zealand median before the difference was reduced to $97 for the year to June 2015.

**Figure 1: Median equivalised gross weekly household income**

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Greater Christchurch had a 24 per cent increase in median weekly household income between the pre-earthquake period and 2014 compared with a 14 per cent increase across New Zealand.
The 20th percentile for equivalised gross weekly household income increased by 32 per cent in greater Christchurch, from $545 in 2008 to $722 in 2015. This compares with a 15 per cent increase across New Zealand over this time period, from $525 in 2008 to $606 in 2015.

Greater Christchurch’s greatest annual increase of 20 per cent occurred between 2012 and 2013 (from $563 to $677) compared with five per cent nationally over the same time period (from $527 to $554).

Between June 2014 and June 2015, income growth as measured by this indicator slowed in greater Christchurch. The national increase for this period of five per cent (from $575 to $606) exceeded that for greater Christchurch, which was less than one per cent (from $716 to $722) for the first time in three years.

Figure 2 shows that the 20th percentile for equivalised gross weekly household income increased by 32 per cent in greater Christchurch, from $545 in 2008 to $722 in 2015. This compares with a 15 per cent increase across New Zealand over this time period, from $525 in 2008 to $606 in 2015.

Median weekly household income net of housing costs

This is the median amount that households have in gross weekly income after housing costs have been deducted. Home owners have higher median weekly household incomes than those who rent, both in greater Christchurch and in New Zealand as a whole.

Note that the findings in this section (Figures 3, 4, and 5) relate to a small sample and should be treated with caution.

Figure 3 shows the median equivalised weekly household income net of housing costs for greater Christchurch home owners has varied substantially between 2008 and 2015, including large dips in 2011 and 2014. Overall, it increased by 48 per cent (from $973 in 2008 to $1,442 in 2015), compared with an increase of 24 per cent across New Zealand over this time period.
Figure 3: Median equivalised weekly household income net of housing costs for home owners

Figure 4 shows that median equivalised household income for renters also dipped in mid-2011 but has recovered since. Overall, there was a 75 per cent increase in median equivalised weekly household income net of housing costs for renters between 2008 and 2015 in greater Christchurch, compared with 24 per cent nationally.
Figure 4: Median equivalised gross weekly household income net of housing costs for renters

![Graph showing median equivalised gross weekly household income net of housing costs for renters in Canterbury over the years June 2008 to June 2015. The line graph compares New Zealand and Greater Christchurch.](image)

Figure 5 shows that low income earners living in rental accommodation also experienced income increases at a higher rate than their housing costs increased during the post-earthquake period, and there are now fewer greater Christchurch households that have less than $480 per week after rental housing costs than there were before the earthquakes.

The proportion dropped from 39 per cent in 2011 to 19 per cent in 2013. Nationally there was little change during this period. In 2014 there was an increase for greater Christchurch to 33 per cent, in line with the national trend, and then a slight decrease to 26.5 per cent in the year to June 2015.

Figure 5: Proportion of renting households that have less than $480 of gross weekly household income net housing costs

![Graph showing the proportion of renting households with less than $480 of gross weekly household income net housing costs in Canterbury over the years June 2008 to June 2015. The line graph compares New Zealand and Greater Christchurch.](image)
Find out more

Find out more about the Canterbury Wellbeing Index: www.cph.co.nz/your-health/canterbury-wellbeing-index/

Find out more about the Canterbury economic indicators: www.cdc.org.nz


Technical notes

Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey)

Data source: Canterbury Earthquake Recovery Authority, Canterbury District Health Board

Data frequency: Six-monthly September 2012, April 2013, September 2013, April 2014, September 2014, April 2015, September 2015 (all CERA) and April 2016 (CDHB)

Data complete until: April 2016

Notes: The April 2016 Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey) is the eighth survey in the series providing information about the residents of greater Christchurch. Respondents were randomly selected from the electoral roll. The survey was delivered online and by hard copy from 30 March to 18 May 2016. The response rate was 41 per cent. Weighting was used to correct imbalances in sample representation. The survey was originally developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. For results from the surveys, see: www.cph.co.nz/your-health/wellbeing-survey/

Median and 20th percentile gross weekly household income

Data source: New Zealand Income Survey (NZIS), Statistics New Zealand

Data frequency: Annually during the June quarter

Data complete until: June 2015 quarter

Notes: The NZIS is run annually during the June quarter as a supplement to the Household Labour Force Survey (HLFS). In the HLFS, approximately 15,000 private households (approximately 29,000 individuals) in New Zealand are interviewed. Data from the NZIS have been re-based to reflect Census 2013 estimates. Equivalisation is of gross weekly household income using the Revised Jensen Scale. Adult and child definitions are consistent with Household Economic Survey treatment (see below). Households composed exclusively of people outside the ages 18–64 years are excluded.

Dollar values presented are nominal, which means they represent the currency value each year they are reported, but they have not been adjusted for inflation. Therefore the value (or ‘purchasing power’) of one dollar may change from year to year.

Greater Christchurch is the aggregation of Christchurch City, Waimakariri District and Selwyn District Councils and is below survey design level. Data are indicative only and should be interpreted cautiously.

Data for greater Christchurch in 2011 are subject to slightly higher sampling error than normal owing to interruption of surveying.
**Weekly household income net housing costs**

**Data source:** Household Economic Survey (HES) and HES (Income), Statistics New Zealand


**Data complete until:** June 2015

**Notes:**

The HES is conducted every three years, and collects information on household expenditure and income, as well as a wide range of demographic information. A shorter version of the survey, HES (Income), is collected in the two years between the full HES.

Data from the HES (Income) have been re-based to reflect Census 2013 estimates.

Greater Christchurch is the aggregation of Christchurch City, Waimakariri District and Selwyn District Councils and is below survey design level. Data are indicative only and should be interpreted cautiously.

Households that are ‘Not owned’ cover dwellings where the household does not own the dwelling, and either pays rent or lives there rent-free. ‘Owned’ households cover dwellings that are held (or not held) in a family trust, regardless of whether mortgage payments are made or not made for the dwelling.

Household income is from total regular and recurring income sources, and is gross (before tax) income. Weekly household income net of housing cost is defined as Gross Household Income less Housing Cost. Differences between HES and HES (Income) mean that caution should be used when comparing the results.

Dollar values presented are nominal, which means they represent the currency value each year they are reported, and so have not been adjusted for inflation. Therefore the value (or ‘purchasing power’) of one dollar may change from year to year.

Housing costs include mortgage principal repayments, mortgage interest payments, mortgage application fees, rent payments, other payments associated with renting (e.g. bonds paid in the last 12 months), property rates payments (both regional and local government), and payments associated with building-related insurance.
References


Canterbury Wellbeing Index

Housing affordability and availability

The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why are housing affordability and availability important?

Access to housing is a basic human need. There is also growing recognition that good-quality, affordable housing is essential for strong communities.

Affordable housing is usually defined as housing (rented or owned) that costs no more than 30 per cent of a household’s gross income.\(^1\) Affordability and availability are closely linked. Where housing supply is low and demand for houses is high, the market prices increase. People with limited income may find it more difficult to obtain affordable housing.

Changes in relative levels of affordability also affect the demand for different types of housing. For example, if home ownership becomes less affordable, more households will rent.

Poor-quality or overcrowded housing can affect people’s mental and physical health.\(^2\) In particular, housing that is cold, damp, and mouldy significantly worsens the health of older people, young children, and people who already have health problems.\(^3\) Adequate housing is particularly important for children, as poor-quality accommodation can limit their educational attainment.\(^4\)

How were housing affordability and availability impacted by the earthquakes?

As a result of the 2010 and 2011 earthquakes, there were an estimated 167,740 properties in greater Christchurch with a dwelling damage claim.\(^5\) Of these properties, 26,147 were seriously damaged (over the $100,000 EQC cap) and 8,061 were classified as being within the residential red zone. Over half the respondents (51 per cent) in the 2012 CERA Wellbeing Survey reported having to 'live day to day in a damaged home' and 22 per cent said this had a negative impact on their everyday life.

Housing New Zealand Corporation (HNZC) and Christchurch City Council (CCC) provide social housing to people with a serious housing need.

Prior to the earthquakes, HNZC had 6,127 housing units in greater Christchurch, which housed approximately 18,000 people. Ninety-five per cent of HNZC’s housing units were damaged in the earthquakes with 550 deemed uninhabitable, including 215 in the residential red zone (188 in Christchurch and 27 in Kaiapoi).\(^6\)

Prior to the earthquakes, CCC had 2,649 housing units in Christchurch. Ninety-seven per cent of CCC’s housing units were damaged in the earthquakes with 366 deemed uninhabitable, including 113 in the residential red zone.\(^7\)

Detailed engineering evaluations have been completed on all housing units to determine whether they were structurally able to withstand any earthquakes in the future. Unoccupied units have been prioritised for evaluation and repair/rebuild as a way of increasing the supply of units available for rent.

After each of the major earthquakes, the immediate response of both organisations was to establish the wellbeing of tenants and ensure properties had access to essential services. Urgent repairs were made and, where necessary, tenants were re-housed.

International evidence indicates that the quantity of low-cost, private rental accommodation reduces after a disaster.\(^7,9,10,11\) This is partly due to the loss of properties that are not rebuilt and higher rents charged for houses that have been repaired to a higher standard.

\(^1\) In addition to HNZC and CCC, it is estimated that there are an additional 704 beds provided by non-governmental organisations in Christchurch. Ministry of Business, Innovation and Employment. (2013). Housing pressures in Christchurch: a summary of the evidence. Ministry of Business, Innovation and Employment.
According to tenancy bonds data, in the year to January 2011 there were 9,954 bonds lodged with weekly rents below $300 in greater Christchurch, but in the year to January 2016 this number stood at 3,456, up slightly from 3,378 in the year to January 2015. This suggests there has been a 65 per cent reduction in the supply of low-cost private rental stock between 2011 and 2016.

In addition to private rental housing, some niche forms of housing were particularly affected by the earthquakes. For example, at least 250 beds in boarding houses, bedsits, and low-cost, one-bedroom units in the east of the inner city were lost.

What is happening now?

Housing and wellbeing

There is evidence that earthquake-related housing and insurance issues can act as ‘secondary stressors’ that have a direct impact on individual and community resilience. Secondary stressors are circumstances, events, or policies that are indirectly related to the primary stressor (the earthquakes). Secondary stressors typically persist longer and can delay people’s recovery. International experience shows that delays in insurance and housing recovery are secondary stressors, as is living in temporary accommodation.

In the April 2016 Canterbury Wellbeing Survey, 10 per cent of respondents reported that dealing with insurance issues had a strong (moderate or major) negative impact on their everyday life, a substantial improvement from 37 per cent in September 2012. Nine per cent said ‘decisions about house damage, repairs and relocation’ were still having a strong negative impact on their everyday lives, compared with 29 per cent in 2012.

Housing and insurance-related issues continue to have significant impacts on the wellbeing of those with on-going repair and rebuild issues, but there has been progress in resolving earthquake-related dwelling claims. By the end of the second quarter of 2016, 140,575 of the approximately 141,593 property claims under the EQC cap had been settled, as had 21,005 of the 26,147 over-cap claims lodged with private insurers. This is a total of 161,580 properties, representing 96.3 per cent of the approximately 167,740 properties with earthquake dwelling claims in greater Christchurch.

Housing affordability and availability

Since the earthquakes, three significant market pressures have impacted on housing affordability and availability, particularly in the rental market:

- Permanent relocation of households from the residential red zone and other homes that cannot be repaired or rebuilt
- Displaced households requiring temporary accommodation while their homes are repaired or rebuilt
- The arrival of the labour force that is assisting with the rebuild.

Canterbury housing recovery programmes were previously delivered jointly by Canterbury Earthquake Recovery Authority (CERA) and the Ministry of Business, Innovation and Employment (MBIE).

CERA was responsible for ‘residential repair and rebuild’ including:

- brokering solutions for emerging residential repair and rebuild issues
- monitoring the pace and rate of insurance settlements
- participating in governance of the Residential Advisory Service (RAS) and operational delivery of RAS services
MBIE was responsible for a ‘New Housing Action Plan’, which was partially implemented through the Christchurch Housing Accord (the Accord), with activities including:

• monitoring the housing market generally and providing advice (as needed) on housing supply, the housing shortfall, rents and house prices
• provision of temporary village accommodation and the Canterbury Earthquake Temporary Accommodation Service (CETAS)
• supporting the Accord implementation in partnership with the Christchurch City Council (CCC)
• using the Accord fund to facilitate residential development at Awatea, and at Welles and Colombo Street sites
• supporting analysis of residential aspects of the Land Use Recovery Plan, Christchurch Central Recovery Plan, and Christchurch District Plan Review

MBIE also provided support for CERA’s Residential Repair and Rebuild work. For example, by providing technical guidance on residential construction, surveying the quality of earthquake repairs, and providing a technical engineering panel to support RAS.

From 1 December 2015, as provided for in the ‘Greater Christchurch Earthquake Recovery: Transition to Regeneration’, MBIE assumed full responsibility for the residential repair and rebuild programme work when CERA was disestablished.

**Short- and medium-term solutions for temporary accommodation**

After the February 2011 earthquake, the exact number of people needing urgent accommodation was unknown. MBIE commissioned 350 campervans to provide temporary shelter for displaced residents and HNZC established an 0800 service to match displaced residents with unused private homes or holiday homes. However, uptake of these services was relatively low as people opted to stay with friends and family.

In 2011, MBIE partnered with the Ministry of Social Development (MSD) to form the Canterbury Earthquake Temporary Accommodation Service (CETAS).

Under CETAS, MBIE has a responsibility to coordinate the provision of temporary accommodation to earthquake affected residents, and manage the government’s Canterbury earthquake temporary accommodation housing stock, comprising:

- Kaiapoi village (22 re-locatable homes), opened July 2011, closed April 2016 – due to easing demand
- Linwood Village (42 re-locatable houses), opened August 2011
- Rawhiti Village (20 re-locatable houses), opened July 2012
- Rangers Park (40 permanent houses), opened September 2013

Residents are eligible for CETAS assistance to find temporary accommodation, including accommodation in the temporary village housing, when they are the legal owner or tenant of a house that is confirmed as having earthquake damage and the household must vacate that house for repair, rebuild or remedial work to begin.

Since August 2011, CETAS has helped over 6,360 earthquake affected residents find temporary accommodation, including placing over 1,160 households into temporary accommodation village housing. The median length of stay in the temporary villages is currently 42 nights for occupants whose home is being repaired and 234 nights for occupants whose home is being rebuilt.

Demand for assistance to find temporary accommodation is reducing. Currently, CETAS is managing 240 displaced residents/households, down from 470 in June 2015 and 830 in June 2014.

MSD’s obligations under CETAS are to support households affected by the earthquakes to plan their recovery and connect to the services they need. This support is provisioned through the Earthquake Support Coordination (ESC) Service. By 30 April 2016, 10,406 individuals and families had registered with this service.
MSD has another role under CETAS, to provision government financial Temporary Accommodation Assistance (TAA) to support homeowners who have a temporary accommodation cost (e.g. rent, board or motel stays). This assistance is only available once insurance cover for temporary accommodation costs has expired; it is not income or asset tested. In total, 3,259 households have received this financial support since 2011 at a total cost of over $50 million. As at 30 April 2016, 315 households were receiving it, a total of $86,322 weekly. TAA is currently funded until December 2017.

On 1 December 2015, MBIE inherited the Residential Advisory Service (RAS) when CERA was disestablished. The RAS was established in May 2013 and provides free independent legal and technical advice to residential property owners to enable progression of their unresolved insurance claim. Since 2013 the RAS has helped over 3,500 property owners.

Social and affordable housing

The earthquakes had a significant impact on social and affordable housing demand and supply. Supply of low-cost housing fell after the earthquakes, particularly within the rental market and social housing sector, while demand for low-cost accommodation increased. MBIE’s March 2013 Housing Pressures Report documented these changes and the subsequent increasing trend in overcrowding, homelessness and demand for NGO services.16

By December 2012, HNZC had repaired and tenanted 212 vacant earthquake-damaged homes. In April 2013, it reached a $320 million settlement with insurers over 5,559 homes damaged in the Canterbury earthquakes, which has enabled it to develop its repair and rebuild programme. HNZC announced that by the end of December 2015, up to 5,000 of its earthquake-damaged properties would be repaired. In addition, up to 700 new houses would be built to replace housing lost due to the earthquakes, including red-zoned housing. HNZC subsequently completed all repairs in 2015, as well as 643 new builds. A further 59 new builds are scheduled for completion by September 2016, and a further 100-150 new houses are planned to be constructed in Canterbury from next year on.

The Government’s Social Housing Fund provided $24 million of capital grant funding between 2012 and 2015 to support the provision of new social and affordable housing in Canterbury. This was supplemented by $10 million from the Canterbury Community Trust (now known as the Rātā Foundation). In total this funding will deliver 194 units with a total project value of $56 million. As at 30 June 2016, 136 houses had been completed, with the remaining 58 houses currently expected to be completed by June 2017.

In 2014 the Government also announced a Housing Accord with the CCC to boost the supply of temporary and affordable housing, improve supply and quality of social housing, and remove regulatory barriers to the development of more residential housing. Government established a Christchurch Housing Accord Fund to progress three housing developments at Awatea, Welles Street, and Colombo Street totalling around 420 houses that will be completed by 2017. All the developments require a proportion of houses to be affordably priced. The first houses at the Awatea development were opened in March 2016, where 40 per cent of almost 240 dwellings will be priced under $415,000 (in 2014 dollars) and ten houses will involve shared equity ownership with the New Zealand Housing Foundation.

MSD contracts VisionWest and Comcare to provide short-term housing for families and single households in Christchurch. At the end of June 2016, 9 families and 12 single households were housed. Six families and 45 single households were awaiting assistance. Providers report that the average stay is less than 8 weeks and that the households exit to social or private rental housing.

In July 2015 CCC provided funding for one year to the Christchurch Methodist Mission to provide transitional housing for six homeless households.

The City Mission, CCC, and MBIE provided funding for the Christchurch City Mission to refurbish a shelter to provide transitional housing for up to three homeless families, which opened in December 2015. To date six families have been housed, all of them moving on to more permanent accommodation.

In July 2015 the Supported Accommodation for Youth initiative commenced in Christchurch. MSD contracts Presbyterian Support to assist up to eight young people at a time, providing both housing and mentoring.
In 2015, MSD completed the Emergency Housing Funding Review as part of the Social Housing Reform Programme, which led to the recommendation of a new Emergency Housing Funding Model. As part of Budget 2016, the Government committed $41.1 million over four years towards a new Emergency Housing Funding Model, which has two main parts:

- Contracts with selected emergency housing providers to provide around 3,000 emergency housing places a year (approximately 800 places at any one time) for individuals and families across New Zealand, with a significant proportion of these being in Auckland. This will ensure the availability of places and give providers greater certainty of income.
- A new, non-recoverable emergency housing Special Needs Grants for individuals and families unable to get into one of the contracted places to cover the cost of emergency housing, generally for up to seven days. This grant has been available from 1 July 2016.

The Request for Proposal (RFP) for contracted emergency housing places opened on 1 June 2016, and funding was made available for 14 existing providers from 1 July 2016. Contracts for places are currently being negotiated.

In July 2016, the Christchurch Methodist Central Mission purchased five Canterbury Earthquake Temporary Accommodation houses from Kaiapoi village. These homes have been reinstated on their Tifford Street, Linwood site and once ready, will be used to accommodate people from the social housing waitlist.

**Regulations to encourage an increase in the housing supply**

Land has been freed up to enable rapid rebuilding, with thousands of sections rezoned since the earthquakes. Between September 2010 and March 2015 consents were issued for more than $2.7 billion of earthquake-related building in Canterbury, including consents for 3,188 new dwellings.17

Regulatory changes have been made to District Plans to streamline the design and consenting process. In November 2012 the Minister for Canterbury Earthquake Recovery directed Environment Canterbury to prepare a Land Use Recovery Plan (LURP) for greater Christchurch with support from Christchurch City Council, Selwyn and Waimakariri District Councils, Te Rūnanga o Ngāi Tahu, New Zealand Transport Agency and CERA.

The LURP responds to the impacts of the earthquakes on residential and business land use, and provides a framework for rebuilding and future development. It puts land use policies and rules in place to assist in the rebuilding and recovery of communities (including housing and businesses) that have been disrupted by the earthquakes. The LURP took effect on 6 December 2013.18

By April 2016, thirty of the actions in the LURP were completed, eleven further actions must be completed before the Christchurch Replacement District Plan process is completed. There are nine actions which are ongoing, including Action 10: Investigation of housing models. This action directs central government and district councils to investigate mechanisms to encourage the provision and retention of affordable housing in proposed new residential developments.

The LURP identified greenfield land adjacent to existing urban areas for potentially 40,000 residential sections. To date around 28,500 residential sections have been zoned, through plan changes, from rural land to residential. Of these around 13,000 sections are subject to or have received subdivision consent. The greatest areas of new housing have been in Selwyn and Waimakariri districts. Housing affordability and intensification within urban areas remain issues despite the LURP enabling provision for broader housing choices. However, social housing supply has been supported by the HNZC being able to use rules introduced by the LURP to replace and build new housing stock. As at February 2015 the new rules had provided for the consenting of 164 HNZC houses.19

The Residential Chapter of the Christchurch Replacement District Plan places a focus on increasing the supply of housing to enable a wide range of housing types, sizes and densities, meeting the diverse needs of the community in the immediate recovery period and longer term (including social housing options), and assisting in improving housing affordability.
What are the indicators telling us?

The following indicators for housing are, where possible, broken down into the eight geographic areas of Christchurch city shown in map 1 below, as well as Selwyn and Waimakariri districts, which together form the greater Christchurch area. Please refer to Map 1 when reading this section.

Map 1: Geographic areas of Christchurch city

Houses and sections

Trends in affordability and availability within the house and section market are being measured using the following indicators:

- Mean sale price for houses as an indicator of affordability, which can also reflect changes in availability
- Number of houses and number of sections sold each month in greater Christchurch as indicators of changes in demand and supply.

Figure 1 shows that monthly mean house sale prices remained largely stable before and immediately after the earthquakes for most of greater Christchurch. However, pressures subsequently pushed up prices throughout greater Christchurch. House sale prices have stabilised in greater Christchurch since 2014, in contrast to house price appreciation for the rest of New Zealand since that time.
Taking a longer view, Table 1 shows that greater Christchurch experienced substantial increases in mean house sale prices between 2010 and 2015. Prices rose most notably in the Inner North (51 per cent), North West (47 per cent), Inner North (51 per cent), and South West (46 per cent) of the city. There were smaller overall increases over this time period across the North East (19 per cent), the East (15 per cent), and the South (6 per cent). Selwyn (46 per cent) and Waimakariri districts (28 per cent) also experienced overall price increases over this time period.

Table 1 also shows that between March 2015 and March 2016, mean house sales prices dropped across most areas of greater Christchurch (ranging from a 3 per cent drop in the South, East of Christchurch and for the Selwyn District, to a 16 per cent drop in the North East of Christchurch). In areas that saw increases in mean house prices, growth slowed substantially.
Table 1: Change in mean house prices from September 2010 to March 2016

<table>
<thead>
<tr>
<th>Area</th>
<th>September 2010</th>
<th>March 2015</th>
<th>% change 2010-2015</th>
<th>March 2016</th>
<th>% change 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>South</td>
<td>$506,773</td>
<td>$535,260</td>
<td>6</td>
<td>$521,542</td>
<td>-3</td>
</tr>
<tr>
<td>East</td>
<td>$280,028</td>
<td>$322,562</td>
<td>15</td>
<td>$312,280</td>
<td>-3</td>
</tr>
<tr>
<td>North East</td>
<td>$370,656</td>
<td>$440,295</td>
<td>19</td>
<td>$371,573</td>
<td>-16</td>
</tr>
<tr>
<td>North West</td>
<td>$382,579</td>
<td>$562,557</td>
<td>47</td>
<td>$535,926</td>
<td>-5</td>
</tr>
<tr>
<td>South West</td>
<td>$328,295</td>
<td>$479,200</td>
<td>46</td>
<td>$506,768</td>
<td>6</td>
</tr>
<tr>
<td>Inner North</td>
<td>$501,644</td>
<td>$755,435</td>
<td>51</td>
<td>$774,345</td>
<td>3</td>
</tr>
<tr>
<td>Central City*</td>
<td>$296,813</td>
<td>$367,470</td>
<td>24*</td>
<td>$579,538</td>
<td>58*</td>
</tr>
<tr>
<td>Inner South</td>
<td>$289,759</td>
<td>$391,596</td>
<td>35</td>
<td>$420,688</td>
<td>7</td>
</tr>
<tr>
<td>Christchurch city (total)</td>
<td>$382,105</td>
<td>$509,564</td>
<td>33</td>
<td>$490,905</td>
<td>-4</td>
</tr>
<tr>
<td>Selwyn District</td>
<td>$396,424</td>
<td>$578,609</td>
<td>46</td>
<td>$562,803</td>
<td>-3</td>
</tr>
<tr>
<td>Waimakariri District</td>
<td>$372,740</td>
<td>$478,499</td>
<td>28</td>
<td>$473,915</td>
<td>-1</td>
</tr>
<tr>
<td>National</td>
<td>$417,185</td>
<td>$589,608</td>
<td>41</td>
<td>$535,498</td>
<td>-9</td>
</tr>
</tbody>
</table>

* Low sample size means this area is measured with significant measurement error.

Figure 2 shows the number of houses sold monthly in each area of greater Christchurch through December 2015. The number of monthly house sales in Waimakariri District increased considerably after the February 2011 earthquake, peaking at 180 sales in September 2011. House sales also grew in Selwyn District, reaching a peak of 147 in March 2014.

Sales in Waimakariri increased substantially from 666 in 2010 to 1,248 in 2012. Sales slowed in 2013 and 2014 and dropped back to 1,041 in 2015.

Sales in Selwyn also increased substantially from 504 in 2010 to 1,128 in 2012. Sales continued to grow to 1,197 in 2013 and 2,256 in 2014, before decreasing to 1,287 in 2015.

In comparison, sales in Christchurch city declined from 6,114 in 2010 to 5,283 in 2011 (down 16 per cent). Sales then increased to 7,176 in 2012 and continued to grow to 7,683 in 2014 and 8,271 in 2015.

Across the geographic areas within greater Christchurch, a pattern emerged of a market that had declining sales in the pre-earthquake period followed by a growth in sales in 2012. This pattern was particularly noticeable in the North West and South West of the city and Waimakariri District. The South, East, and North East have recorded gradual increases over the years since 2011, but remain below the pre-earthquake levels. However, the rate of increase appears to have levelled off in a number of areas since 2012 (Figure 2).

When viewed together, Figures 1 and 2 indicate that while house sales increased in 2011, there was sufficient supply in most areas. However, high demand in North West, Inner North, and Inner South of Christchurch increased mean prices markedly in those areas between 2010 and 2014. Despite a more subdued market in the South and a decrease in the Central City (partly due to low sales), overall mean house prices in greater Christchurch increased at a faster rate than those across New Zealand until 2014.25
Between 2011 and 2012 the number of sections sold in Christchurch city increased by 65 per cent (from 421 to 694). Sales rose another 42 per cent to 986 sections in 2013 before dropping to 800 in 2014. No comparable section sales data are available beyond 2014.

**Rental market**

The affordability and availability of rental housing are measured using the following indicators:

- Mean (average) weekly rent for new tenancies each month, as an indicator of changes in affordability
- The total number of bonds lodged for rental properties in Christchurch that cost under $300 per week, as an indicator of affordability and the availability of low-cost rental properties
- The number of new rentals listed with Trade Me in Christchurch city each week, as an indicator of availability.

Figure 3 shows that mean weekly rent for new tenancies increased substantially throughout greater Christchurch following the earthquakes but this plateaued from mid-2014, around the time that almost 80 percent of under-cap repairs had been completed, and has been decreasing since 2015.
Table 2 shows the change in mean weekly rent for Christchurch city increased by 37 per cent between September 2010 and March 2015, which equates to rents being $126 higher per week. Mean weekly rent increased across homes of all sizes between 2010 and 2015, but especially for houses with more bedrooms. Demand for larger houses and increasing rents may have been driven by the growing need for accommodation for incoming workers and the large number of household being displaced due to the residential repairs (as shown in Figure 11).

Weekly rent decreased between March 2015 and March 2016 for all areas except for the South West. The largest decreases were in the South and Inner North of Christchurch city, and in the Waimakariri District. This decrease coincides with and may have been influenced by the steady decrease in the estimated number of households displaced due to residential repairs and rebuilds, shown in Figure 11 later in this section, as EQC claims are settled.
Table 2: Mean weekly rent in September 2010, March 2015, and March 2016

<table>
<thead>
<tr>
<th>Area</th>
<th>September 2010</th>
<th>March 2015</th>
<th>% change 2010 to 2015</th>
<th>March 2016</th>
<th>% change 2015 to 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>South</td>
<td>$354</td>
<td>$489</td>
<td>23.0</td>
<td>$435</td>
<td>-10.9</td>
</tr>
<tr>
<td>East</td>
<td>$263</td>
<td>$369</td>
<td>32.6</td>
<td>$348</td>
<td>-5.6</td>
</tr>
<tr>
<td>North East</td>
<td>$304</td>
<td>$400</td>
<td>26.3</td>
<td>$384</td>
<td>-3.9</td>
</tr>
<tr>
<td>North West</td>
<td>$310</td>
<td>$469</td>
<td>48.9</td>
<td>$462</td>
<td>-1.5</td>
</tr>
<tr>
<td>South West</td>
<td>$294</td>
<td>$391</td>
<td>41.4</td>
<td>$416</td>
<td>6.3</td>
</tr>
<tr>
<td>Inner North</td>
<td>$285</td>
<td>$442</td>
<td>41.3</td>
<td>$402</td>
<td>-9.1</td>
</tr>
<tr>
<td>Central City</td>
<td>$281</td>
<td>$356</td>
<td>26.6</td>
<td>$355</td>
<td>-0.2</td>
</tr>
<tr>
<td>Inner South</td>
<td>$265</td>
<td>$412</td>
<td>46.7</td>
<td>$389</td>
<td>-5.4</td>
</tr>
<tr>
<td>Christchurch city (total)</td>
<td>$294</td>
<td>$420</td>
<td>37.1</td>
<td>$403</td>
<td>-4.0</td>
</tr>
<tr>
<td>Selwyn District</td>
<td>$340</td>
<td>$476</td>
<td>39.8</td>
<td>$475</td>
<td>-0.1</td>
</tr>
<tr>
<td>Waimakariri District</td>
<td>$311</td>
<td>$440</td>
<td>24.3</td>
<td>$386</td>
<td>-12.1</td>
</tr>
<tr>
<td>Greater Christchurchb</td>
<td>$394</td>
<td>$437</td>
<td>49.3</td>
<td>$422</td>
<td>-3.5</td>
</tr>
<tr>
<td>Nationalc</td>
<td>$320</td>
<td>$398</td>
<td>24.4</td>
<td>$416</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Figure 4 shows that the proportion of bonds for low-cost rentals (less than $300 per week) lodged per month within greater Christchurch remained relatively steady in the three years before the September 2010 earthquake (averaging 51-52 per cent of all bonds lodged). After the earthquakes there has been a substantial decrease in the proportion of low-cost rentals to 17 per cent in January 2015, before recovering slightly to 19 per cent in February 2016.

Figure 4: Percentage of rental bonds lodged monthly with weekly rent below $300

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Figure 5 shows the percentage of rental bonds lodged by weekly rental price band.

In January 2010 84 per cent of rentals in greater Christchurch cost less than $400 per week (50 per cent cost less than $300 per week and 34 per cent cost between $300-399).

By 2012, 73 per cent of rentals in greater Christchurch cost less than $400 per week and by January 2015 this had dropped to just 41 per cent of the market (16 per cent costing less than $300 and 25 per cent costing between $300-399).

During 2014, the proportion of rental bonds over $400 per week exceeded those under $300 for the first time, a pattern which has continued despite slowing in 2015 and 2016.

Figure 5: Percentage of rental bonds lodged monthly by weekly rent level
Greater Christchurch rent levels have largely decreased since early 2015 and were again below Wellington and the national level as at April 2016.

Figure 6 shows that before the earthquakes greater Christchurch had mean weekly rent levels below both the national rate and the other main centres. Between mid-2012 mean and early 2015, however, rent in greater Christchurch tracked above the national rate and eventually exceeded that of Wellington. After a period of consistent growth, greater Christchurch rent levels have largely decreased since early 2015 and were again below Wellington and the national level as at April 2016.

Figure 6: Mean weekly rent for Auckland, Wellington, greater Christchurch and National
Figure 7 shows that the number of rental listings on Trade Me for Christchurch fell between August 2011 and February 2013. In August 2011 there was a weekly average of 1,078 properties listed but this fell to 536 by February 2013. Listings have subsequently shown a pattern of increase, recovering to a weekly average of 1,398 in March 2015, which likely reflects the gradual inclusion of earthquake-repaired housing in the rental market. These data are not available beyond March 2015.

Figure 7: Number of rental listings on Trade Me
Social housing impacts are measured in two ways in this report:

- Habitability rates for CCC and HNZC social housing units
- Social housing waiting lists.

Following the earthquakes, a large number of social housing units were damaged and became 'uninhabitable', reducing the supply. Since April 2011, detailed engineering evaluations have found structural problems in additional units and some have become uninhabitable.

Figure 8 shows that the percentage of habitable CCC and HNZC housing units decreased after the September 2010 earthquake and continued to decrease as detailed engineering evaluations progressed.

The proportion of habitable CCC housing units reached a low of 83 per cent in August 2013 and levelled off at 84 per cent in 2014 before increasing to 93 per cent in January 2016.

The proportion of habitable HNZC housing units followed a similar pattern and reached a low of 88 per cent habitability in July 2012. By October 2012 over 90 per cent of HNZC units were repaired and became habitable and at February 2016 99 per cent were habitable.

The significant improvement in HNZC habitability occurred due to completion of HNZC’s planned programme to repair 5,000 houses by December 2015.

Figure 8: Proportion of habitable HNZC and CCC housing units

From April 2014 the Ministry of Social Development has been responsible for managing applications for social housing. Categories A and B are applicants with the most urgent housing needs.

Figure 9 shows that while the social housing register for Christchurch city and the Waimakariri District decreased over the first half of 2012, assisted by the repair of a number of units, it generally grew from mid-2012 to a peak of 592 in June 2015, before dropping back to 425 in March 2016.

The CCC’s waiting list for its housing stock increased over 2012 and early 2013 but eased back from late 2013 before peaking again at 358 in early 2015 and then settling back to 171 in February 2016.
Figure 9: CCC and HNZC/MSD (categories A and B only) waiting lists\textsuperscript{22}
Temporary accommodation assistance

Most insurance policies cover Temporary Accommodation Claims (TAC) for a fixed period of time (typically a year). After this, home owners who are still unable to return home can apply for Temporary Accommodation Assistance (TAA) from the Canterbury Earthquake Temporary Accommodation Service (CETAS).

Figure 10 shows the number of households displaced from their usual residence due to the repair or rebuild of their earthquake-damaged home. The data is based on the number of completed repairs by EQC, over-cap settlements by private insurance companies and estimates of how many households have been displaced long-term due to their house becoming uninhabitable after the earthquakes. It includes households who receive TAC paid by insurers or TAA from the Government and estimates those that do not have any assistance.

Figure 10 shows that displaced residents peaked in December 2012, when 6,800 households received payments for temporary accommodation (approximately 18,000 people). Latest estimates indicate a decreasing need with over 95 per cent of EQC claims settled as at the first quarter of 2016. Due to the complexity of some settlements, a small number of households are expected to continue to require temporary accommodation into 2018.

The number of households receiving TAA increased every month during the first year that the programme was established, peaking in September 2012 with 1,334 households registered for assistance. This demand has subsequently decreased to 315 households in April 2016.

Figure 10: Estimated number of households who are displaced due to residential repair or rebuild
Housing costs relative to income

Housing affordability is usually defined as housing that is of reasonable quality and does not cost so much that households cannot afford other basic needs (i.e. no more than 30 per cent of household gross income).

Figure 11 indicates that the proportion of those in greater Christchurch spending more than 30 per cent of their household income on housing decreased from 34 per cent of renters in the year ending June 2008 to 25 per cent in 2013 (after a peak of more than 40 per cent in 2011). In 2014 this proportion increased back to 34 per cent, in line with the national rate, before decreasing to 31 per cent in greater Christchurch while the national rate increased to 37 per cent.

Over the same time, the percentage of home owners who spend more than 30 per cent of their household income on housing decreased from 16 per cent in 2008 to 11 per cent in the year ending June 2013. This proportion increased slightly to 12 per cent by June 2014 but remained slightly below the national rate of 14 per cent, and this continued in 2015.

These findings relate to a small sample and should be treated with caution.

Figure 11: Percentage of households who spend more than 30 per cent of their household income on housing
Find out more

Find out more about the Canterbury Wellbeing Index: www.cph.co.nz/your-health/canterbury-wellbeing-index/

Find out more about the Land Use Recovery Plan: www.developingchoices.org.nz

Find out more about changes to social housing provision: www.msd.govt.nz and www.hnzc.co.nz

Find out more about a new client-focused social housing website: www.housing.msd.govt.nz

Find out more about the Canterbury Earthquake Temporary Accommodation Service, including temporary villages and Temporary Accommodation Assistance: www.quakeaccommodation.govt.nz


Find out more about the Earthquake Commission: www.eqc.govt.nz

Find out more about the Insurance Council of New Zealand: www.icnz.org.nz

Technical notes

Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey)

Data source: Canterbury Earthquake Recovery Authority, Canterbury District Health Board

Data frequency: Six-monthly September 2012, April 2013, September 2013, April 2014, September 2014, April 2015, September 2015 (all CERA) and April 2016 (CDHB)

Data complete until: April 2016

Notes: The April 2016 Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey) is the eighth survey in the series providing information about the residents of greater Christchurch. Respondents were randomly selected from the electoral roll. The survey was delivered online and by hard copy from 30 March to 18 May 2016. The response rate was 41 per cent. Weighting was used to correct imbalances in sample representation. The survey was originally developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. For results from the surveys, see: www.cph.co.nz/your-health/wellbeing-survey/

House and section sales

Data source: Quotable Value (QV) Residential Property Monthly Price Movement Dataset

Data frequency: Monthly

Data complete until: December 2015 (house sales) and March 2014 (section sales)


The method of extraction for those properties classified as “residential” has been revised from previous versions of the Canterbury Wellbeing Index. General trends remain similar, but the new filter method is considered a better reflection of residential sales.

Data for section sales is not available post March 2014.

Median house sale prices and weekly rents are not monitored as sale prices and rent values tend to cluster at specific dollar amounts. This is a problem because, unlike an average, a median has to be an actual number taken from the data. This means that median values can have larger variation over time, instead of moving smoothly. For example, there can be long periods when there is no or little change, followed by sharp jumps up or down.
Rental market

Data source: Tenancy Bonds database, MBIE
Data frequency: Monthly
Data complete until: April 2016
Notes: Seasonality may exist in the rental and housing market. Rentals may be especially affected by the university term. Data are for new tenancy bonds registered per month.

Data source: Trade Me data, CETAS
Data frequency: Weekly
Data complete until: 16 March 2015
Notes: Seasonality may exist in the rental and housing market. Rentals may be especially affected by the university terms. Includes all listings not listed as ‘section’. Trade Me data refer to all rental listings within Christchurch city, which makes up approximately 90 per cent of greater Christchurch’s rental market. Data no longer available post March 2015.

Social housing capacity and waiting lists

Data source: Christchurch City Council and Housing New Zealand
Data frequency: Monthly (MSD waitlist data – quarterly)
Data complete until: February 2016 (HNZC and CCC – habitable housing) and March 2016 (HNZC/MSD and CCC – waitlist)
Notes: Occupancy rates are calculated by dividing total habitable units by total occupied/let units. Housing New Zealand habitability rate = (number of let properties at month end + number of vacant properties at month end) / Total properties. Social housing criteria: http://housing.msd.govt.nz/housing-options/social-housing/index.html Housing New Zealand data are for waitlist categories A and B only. CCC habitability rate = (Total Vacancies at month end + Total Occupied at month end) / Total housing units. Waiting list eligibility criteria: http://resources.ccc.govt.nz/files/CityHousingApplicationForm-docs.pdf
On 14 April 2014, the social housing assessment and waitlist was transferred from HNZC to MSD. MSD publish the social housing waitlist each quarter.

Temporary accommodation

Data source: Canterbury Earthquake Temporary Accommodation Service (CETAS) administrative records
Data frequency: Monthly
Data complete until: April 2016
Notes: CETAS data shown represent current claims/assistance on one day each month and therefore should not be interpreted as an exact representation of the current claim levels over the entire month. Figures displayed are those current, not the total who have applied. CETAS Temporary Accommodation Assistance started on 21 February 2011, was stopped on 22 February 2011 due to the earthquake, and became operational again in April 2011. Data relate to households with current accommodation assistance/claims rather than individuals.
Housing costs relative to income

**Data source:** Household Economic Survey (HES) and Household Economic Survey (Income), Statistics NZ

**Data frequency:** Years ending June 2008–2014

**Data complete until:** June 2015

**Notes:** The HES is conducted every three years, and collects information on household expenditure and income, as well as a wide range of demographic information. A shorter version of the survey, HES (Income), is collected in the two years between the full HES.

Differences between HES and HES (Income) mean that caution should be used when comparing results over time.

Greater Christchurch is the aggregation of Christchurch city, Waimakariri District and Selwyn District Councils and is below survey design level. Data are indicative only and should be interpreted cautiously.

Households that are ‘Not owned’ cover dwellings where the household does not own the dwelling, and either pays rent or lives there rent-free. ‘Owned’ households cover dwellings that are held (or not held) in a family trust, regardless of whether mortgage payments are made or not made for the dwelling.

Household income is from total regular and recurring income sources, and is gross (before tax) income.

Housing costs include mortgage principal repayments, mortgage interest payments, mortgage application fees, rent payments, other payments associated with renting (e.g., bonds paid in the last 12 months), property rates payments (both regional and local government), and payments associated with building-related insurance.

The percentage spent on housing is calculated by dividing household income by housing costs.

Note that households with higher income can afford to pay more than 30 per cent of their income on housing costs and may choose to do so without reducing their ability to afford other basic needs.
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    Ministry of Business, Innovation and Employment.

22. Note that CCC data are missing for 2011 due to internal disruptions as staff were displaced from their offices. Missing data from 2012 are due to staffing issues. Data trends between these periods should be viewed with caution and are represented in the graph by a dotted line.
Canterbury Wellbeing Index

Keeping well and having access to health services

2016

The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why are keeping well and having access to services important?

Good health is crucial to the wellbeing of individuals, their families, and their communities. The health system aims to maximise both the length and quality of life. Health care services manage disease and trauma and are an important determinant of health outcomes. However health creation and wellbeing (overall quality of life) are influenced by a wide range of factors beyond the health sector.

By keeping healthy, people are more able to lead rich and rewarding lives within their families and their communities. People who are less healthy may find it more difficult to participate in sports and recreation, or arts and cultural activities, or simply to complete the tasks of daily living. They may also struggle to socialise with their family, friends and community.

Health is determined by a number of environmental and social factors. For example, living in poor-quality housing, having a low income, being unemployed, and having few educational qualifications significantly lessen people’s health and wellbeing. Poor-quality housing that is cold, damp and mouldy significantly worsens the health of older people, young children, and people who already have health problems.

Our health system aims to maintain the health of the population, identify any disease or health condition as soon as possible, and provide timely access to health care services. Early access helps to restore health (for example, through surgery) or helps people with a long-term condition to continue to function as well as possible. Reducing geographical, cultural and other barriers to care helps people access services in a timely manner.

Acute medical admissions

In an acute medical admission, a person is admitted to a hospital because they require urgent specialist attention, which may be for any of a wide range of medical conditions. If the rate of acute medical admissions increases, it could indicate the underlying health status of the population is declining. Alternatively it could mean that people are not accessing or engaging with community services early enough, especially their general practice (GP) team, which is the point of first contact with the health system for most people.

Influenza-like illness

Influenza (flu) is a significant public health issue. Ten to 20 per cent of New Zealanders are infected every year. While most recover at home, some are admitted to hospital because their condition becomes serious. In 2009, hospital admissions for H1N1 Influenza were three times higher for Māori and 6.7 times higher for Pacific people than for the ‘European and Other’ ethnic group. Influenza can be fatal for a small number of people, most of whom already have health problems. Death rates for the 2009 H1N1 influenza pandemic were also higher for people living in the most deprived neighbourhoods compared to the least deprived neighbourhoods in New Zealand. As well as affecting wellbeing, influenza has a financial impact on workplaces, and can place a heavy load on primary care and hospital services during winter epidemics.
Access to primary health care

Primary health care services, such as general practices and medical centres, are the main means by which New Zealanders take care of their health needs. People need to be able to access primary health services on time to get treatment for a health condition before it becomes more severe. In the 2014/15 New Zealand Health Survey, 81.3 per cent of Canterbury respondents had visited a GP in the past 12 months compared with 80.0 per cent nationally.\(^4\) There was no statistically significant difference between these results.

Childhood immunisation rates

Childhood immunisation provides protection from a range of serious illnesses, including rotavirus, measles, mumps, rubella, tetanus, diphtheria, polio, hepatitis B, haemophilus influenza type b, pneumococcal disease and whooping cough.

Childhood immunisation rates are a good indicator of access to primary care, as these immunisations are undertaken by GP teams. If there are barriers to seeing GP teams, such as cost or transportation, then it is possible that immunisations rates will decrease.

The Government targets for immunisation required that 85 per cent of two-year-olds were immunised by July 2010, 90 per cent by July 2011 and 95 per cent by July 2012.\(^12\) This has been a successful approach, with two-year-olds’ immunisation coverage rates across New Zealand rising from 67 per cent in 2007 to 88 per cent in December 2010.\(^12\)

In 2012 the Government’s target changed to focus on eight-month-olds, requiring district health boards to ensure that 85 per cent were immunised by July 2013, 90 per cent by July 2014 and 95 per cent by December 2014.\(^13\)

How were keeping well and having access to health services impacted by the earthquakes?

In the first two weeks following the September 2010 earthquake, there was a significant increase in overall cardiology admissions, admissions for heart attack, and admissions for non-cardiac chest pain.\(^14\) The February 2011 earthquake did not lead to a significant increase in heart attack admissions, which might, in part, be due to the different times of the day that the earthquakes struck; 4:35am for the September 2010 earthquake and 12:51pm for the February 2011 earthquake. The risk of heart attacks is known to increase during the morning after waking and arising.\(^14\) It might have also been partly due to the ‘harvesting effect’, which is when a major disaster causes an initial surge in heart attacks in vulnerable people, slightly earlier than when they would have had one if there was no earthquake.\(^15\) This surge is then followed by a corresponding fall in heart attacks, since a proportion were triggered already by the September 2010 earthquake.

In the four days following the February earthquake, there were, however, 21 admissions for stress cardiomyopathy,\(^16,17\),\(^b\) which is extremely high, given the annual average of approximately six admissions.\(^14, 16, c\)

The February earthquake had a major impact on hospital services, with a loss of 106 acute beds in general medicine and 635 beds in aged residential care.\(^1\) Over 250 elderly rest home residents were evacuated to other regions because their facilities were no longer habitable. This group was repatriated by December 2011, although approximately 60 residents chose to continue to live outside Canterbury.

The February earthquake also had a profound impact on the primary care and community provider infrastructure and its capacity to provide health care. However, most services were soon back up and running again. Within 24 hours of the February earthquake, 96% of pharmacies were open, often in makeshift conditions, and 95% of general practices were operational over a similar time period.\(^19\)

The Institute of Environmental Science & Research (ESR) investigated whether liquefaction silt deposits posed any health risks. Two issues were considered; the effect of the silt particles on respiratory conditions, and the risk from microorganisms from sewage contaminated silt.

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\(^a\) Figures reported are unadjusted rates from the New Zealand Health Survey (customised data request).

\(^b\) Stress cardiomyopathy is a potentially fatal condition in which intense emotional or physical stress can cause rapid and severe heart muscle weakness.

\(^c\) All 21 admissions for stress cardiomyopathy were women aged between 52 and 85 years and all had good outcomes at 12 months follow-up.
In an ESR report written after the September 2010 earthquake, it was noted that while it was likely that most silt dust particles were large enough not to cause health problems, some fine dust particles could cause nuisance and people with respiratory disorders could have experienced additional irritation of their symptoms.20

Another ESR report written after the February earthquake that broke many sewerage pipes concluded that since there were no outbreaks of gastrointestinal illness reported in Canterbury during the time of liquefaction clean-up, this suggested that most silt was not heavily contaminated with sewage.21 The report noted that “if sewage contamination has occurred, then liquefaction silt represents a potential exposure route to pathogenic microorganisms for more than five months” (p. V). The report also noted that the risks are independent of silt depth, since microorganisms were found in piles of silt only 5 cm high. ESR recommended that if silt deposits from liquefaction occur again, people should avoid contact with the silt, and if contact happens, people should avoid touching their face and should wash their hands with soap and clean water before eating and drinking, food handling or smoking.21

What is happening now?

The Canterbury District Health Board (Canterbury DHB) leads agencies across the Canterbury health system to deliver services that support people to stay well and healthy in their own homes. In this way, the health system’s ability to manage demand for health services and keep people well is being enhanced.

Immediately after the February 2011 earthquake, support was provided to vulnerable populations and providers. Acute demand services to support people at risk of acute admission to hospitals were extended and new programmes were developed to support people in their own homes following discharge from hospital. These programmes have been enhanced and further developed over time to ensure the health system is able to cope with the reduction in acute hospital beds caused by the earthquakes, until 2019 when more capacity becomes available with construction of the new Acute Services Building. The Government’s influenza immunisation programme targets people aged 65 years and over, pregnant women, and people under 65 years with a long-term health condition. Canterbury DHB extended free influenza vaccinations for children under 18 years until 2014 to keep young people well and because of the housing situation and pressure on hospital beds. Over the last two years the focus has been on the older population where Canterbury has achieved among the highest vaccination rates in the country.

The proportion of Canterbury respondents reporting excellent, very good, or good self-rated health in the New Zealand Health Survey has not changed statistically significantly since 2006/07. In 2014/15, the proportion was 87.5 per cent compared to 89.9 per cent in 2006/07 and 90.8 per cent in 2013/14.4 There was also no statistically significant difference in rates between Canterbury respondents and all of New Zealand respondents reporting excellent, very good, or good self-rated health in 2014/15.

What are the indicators telling us?

Acute medical admissions

The measure used in this report is the number of acute general medical admissions.4

Figure 1 shows that acute medical admissions have been increasing over time and have a strong seasonal pattern of increases in the winter months.4 Acute medical admissions peaked in July 2015 with 1,588 admissions. The data for 2016 is current up until June 2016, and at this point, there were fewer acute medical admissions than in June 2015 (1,402 compared to 1,562). Previous research has found that there was a statistically significant fall in the seasonally adjusted admission rate after the February 2011 earthquake from 6.59/1000 people to 5.83/1000 people.22 During the period from 2006/07 to at least 2013/14, Canterbury had a lower age-standardised acute medical admission rate than the national rate and the Canterbury rate increased more slowly than nationally.22
Influenza-like illness (rates)

Influenza-like illness rates (per 100,000 people enrolled in general practices) are determined by a number of factors including the type and virulence of the influenza viruses that are circulating in any given year, previous exposure, and the proportion of the population that has received the influenza vaccination. Differences between regions in the coverage of the surveillance system can also influence the reported rates.

In 2011 New Zealand experienced a low incidence of influenza compared with previous years. During that year (May to October), Canterbury had even lower rates than New Zealand overall. However, as shown in Figure 2, the 2012 season had a higher rate. The rates in Canterbury were more than double those of New Zealand during the July peak and were the highest reported by any region. In 2013 and 2014, rates dropped notably in both Canterbury and nationally before increasing again in 2015, when Canterbury had a higher rate than nationally. Influenza incidence is unpredictable; vaccination and good personal hygiene are the best things that individuals can do to avoid contracting influenza.
Influenza (vaccinations)

In this report, influenza vaccinations are measured as the proportion of the population enrolled in general practices aged 65 years and over who receive an influenza vaccine each year.

Vaccination is the most effective means of protecting against influenza at the population level. The yearly 65+ vaccination rate for influenza in the Canterbury area has remained relatively stable over time, ranging from 71 to 75 per cent between 2008 and 2014. In 2011, when the rate dropped to 71 per cent, it was still higher than the national rate of 66 per cent. By 2013 the rate had returned to pre-earthquake levels, increasing to 75 per cent. In 2015, the vaccination rate for the 65+ age group was 74 per cent compared to the national rate of 67 per cent.

Access to general practice services

The two measures used in this report are:

• self-reported barriers to health care
• childhood immunisation rates.

Table 1 summarises self-reported barriers to health care in the Canterbury DHB region over time. It shows that for survey respondents, there has been no statistically significant change in experiencing unmet need for primary health care from 2011/12 to 2014/15. In 2012/13 there was a significant decrease in the proportion of respondents reporting being unable to get an appointment at their usual medical centre within 24 hours, however there were no significant differences between all other years. Although these were small changes over time, the table shows that there are no other significant differences in the other indicators of barriers to health care.

For the 2014/15 year, the proportion of respondents from Canterbury who reported that they were unable to get an appointment at their usual medical centre within 24 hours (12.8 per cent) was statistically significantly lower than the national proportion of 16.8 per cent.

Table 1: Summary of barriers to health care for adults in the past 12 months from the New Zealand Health Survey

<table>
<thead>
<tr>
<th>Indicator</th>
<th>CDHB area % (95% C.I.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced unmet need for primary health care</td>
<td>27.6 (23.0-32.8)</td>
</tr>
<tr>
<td>Unable to get appointment at usual medical centre within 24 hours</td>
<td>14.9 (12.2-18.1)</td>
</tr>
<tr>
<td>Unmet need for GP services due to cost</td>
<td>15.0 (12.0-18.4)</td>
</tr>
<tr>
<td>Unmet need for after-hours service due to cost</td>
<td>8.7 (6.8-11.0)</td>
</tr>
<tr>
<td>Unfilled prescriptions due to cost</td>
<td>5.9 (4.5-7.7)</td>
</tr>
</tbody>
</table>

Note: Results reported are unadjusted prevalence (%) data for adults 15 years and over.

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2 2015 data is supplied by the Ministry of Health, from DHB Shared Services. No confidence intervals were supplied.

3 Figures reported are unadjusted rates from the New Zealand Health Survey (customised data request).
Childhood immunisation rates are measured in two ways in this report:

- two-year-old immunisation rates (Government target July 2010 – July 2012)
- eight-month-old immunisation rates (Government target July 2013 – current).

Figure 3 shows that the immunisation rates for two-year-olds dipped in the two quarters after the February 2011 earthquake in Canterbury. A dip in the two-year-old immunisation rate was also seen nationally during this time period, although it was smaller. Since September 2012 the national and Canterbury immunisation rates for both eight-month-olds and two-year-olds have generally tracked upwards. Since 2013, the Canterbury eight-month-old and two-year-old immunisation rates have generally been higher than the national rates and since 2015, have generally been close to or above 95 per cent.

*Figure 3: Immunisation rates for two-year-olds and eight-month-olds*
Find out more

Find out more about the Canterbury Wellbeing Index:
www.cph.co.nz/your-health/canterbury-wellbeing-index/

Find out more about the links between health and housing in New Zealand:
www.healthyhousing.org.nz

Find out more about how to keep healthy:
www.cdhb.health.nz/Your-Health/Healthy-Well/Pages/default.aspx

Find out more about accessing health services in Canterbury:
www.cdhb.health.nz/Your-Health/Pages/default.aspx

Find out more about the Canterbury District Health Board Transition Programme:

Technical notes

Acute medical admissions
Data source: Canterbury District Health Board
Data frequency: Monthly
Data complete until: June 2016
Notes: Acute medical admissions are defined as acute general inpatient admissions where the health specialty is general medicine. The Canterbury District Health Board geographical region covers Christchurch City, Kaikoura District, Hurunui District, Waimakariri District, Selwyn District, Ashburton District, and the Chatham Islands.

Influenza-like illness (rates)
Data source: Canterbury District Health Board
Data frequency: Weekly
Data complete until: October 2015
Notes: The rate presented is the influenza-like illness (ILI) rate per 100,000 practice population. ILI is measured weekly starting in week 18 (approximately the first week of May) through to week 40 (approximately the first week of October).
ILI surveillance is a voluntary national surveillance programme conducted in every district health board annually by sentinel medical practices. General practitioners identify all ILI patients who attend their practices from weeks 18–40 inclusive during the influenza season.

Influenza (vaccinations)
Data source: Canterbury District Health Board and Ministry of Health
Data frequency: Yearly
Data complete until: 2015
Notes: The vaccination rate is the number of people over 65 years who are vaccinated each year divided by the enrolled population for the target group. The Primary Health Organisations' Performance Programme has been the source of national data up until 2014. Data are quarterly and the fourth (December) quarter has been used in reporting to align with CDHB data. National data for 2014 aligns with the June quarter as the programme finished on 30 June 2014. In 2015, the data is from DHB Shared Services, supplied by the Ministry of Health, and is from the September 2015 quarter.
New Zealand Health Survey: Access to general practice services and self-rated health

Data source: Ministry of Health
Data frequency: Data collected 2006/07, 2011/12, 2012/13, 2013/14, and 2014/15
Data complete until: 2014/15

Notes: The New Zealand Health Survey has a multi-stage, stratified, probability-proportional-to-size sampling design. The survey is designed to yield an annual sample size of approximately 13,000 adults and 4,500 children.

A dual frame approach has been used where participants are selected from an area-based sample and a list-based Electoral Roll sample. The aim of this approach is to increase the sample sizes for Māori, Pacific and Asian ethnic groups.

Interviews are conducted in participants’ homes, with the interviewer typing responses directly into a laptop computer using computer-assisted personal interview software. Showcards with predetermined response categories are used to assist respondents, where appropriate.

The New Zealand Health Survey respondents were asked if “In the past 12 months, has there been a time when you wanted to see a GP, nurse or other health care worker at your usual medical centre within the next 24 hours, but they were unable to see you?”

The Canterbury region was defined as the Canterbury District Health Board area.

The results reported are unadjusted prevalence (%) data for adults aged 15 years and over.

Immunisations

Data source: Canterbury District Health Board and Ministry of Health
Data frequency: Quarterly
Data complete until: December 2015

Notes: Immunisation data come from the National Immunisation Register from the Ministry of Health. The data represent the proportion of children who have completed their age-appropriate immunisations by the time they turned the milestone age (eight months or two years). Data are reported quarterly.
References


The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why is mental wellbeing important?

Mental wellbeing is a positive state where people are emotionally healthy, are able to live full and creative lives, and can deal with life’s challenges. Mental wellbeing can also be defined as flourishing, where people are engaged with life, and have a sense of meaning and purpose. Mental wellbeing can positively affect most dimensions of people’s lives: family and friendships, employment, education, physical health, and life expectancy. People who are mentally well are more productive in the workforce, do better in education, and are able to function better cognitively. They are also more likely to live longer, are less likely to engage in adverse behaviours like smoking, hazardous drinking, drug use, and risky sexual behaviour, and they are less likely to be obese. One in four people will experience a mental health problem at some point in their life. At any given time, one in every six adults is experiencing mental illness. Experts agree that disasters have a negative impact on people’s mental wellbeing, particularly at the severe end of the spectrum. The World Health Organization estimates that after a disaster, severe mental health disorders increase from 2–3 per cent to 3–4 per cent of the population, and mild to moderate mental disorders can double from 10 per cent to 20 per cent. However, it is agreed that over time, those experiencing mild psychological reactions will be able to cope and recover if they receive basic support.

In May 2011 Chief Science Advisor Professor Sir Peter Gluckman indicated that 5-10 per cent of people may need some help, and up to 5 per cent of the population may continue to have ongoing significant psychological ill health requiring professional help as a result of the earthquakes. Recovery from the psychosocial effects of disaster includes how individuals and communities feel and relate to each other. The recovery process can be very protracted, taking 5-10 years or even longer.

International experience suggests that post-disaster stressors, such as delayed decisions about property and insurance, are some of the most significant factors that increase the risk of mental ill health and hold back recovery. Primary stressors are defined as stressors that are directly related to the disaster; for example, injuries sustained or aftershocks. Secondary stressors are circumstances, events, or policies that are indirectly related or ‘non-inherent and consequential’ to the earthquakes. Examples are housing difficulties, problems with insurance, and loss of social networks.

The mental wellbeing of some population groups may be particularly vulnerable after a disaster. These groups include people who already had mental health issues and those who lack the social supports necessary to help them cope. A review of disasters in the United States found that the poor are more vulnerable at all stages of a disaster, including to both physical and psychological impacts. The review noted that poor people are more likely to be financially devastated by a disaster and specifically referred to those of low socioeconomic status reporting greater stress related to the possibility of losing their jobs. The review also noted that “the poor were less likely to have access to physical resources and mental health services… further exacerbating emotional vulnerability” (p.96). Disparities in the impacts of disasters between different ethnic groups have also been found in United States research. Following Hurricane Ike, research found that African Americans reported significantly higher depressive and post-traumatic stress disorder symptoms than ‘White’ survivors. Other vulnerable people are those who had no previous difficulties, but who have experienced significant loss as a result of the earthquakes. This may include loss of a loved one, personal injury, loss of property, or financial problems. Recovery is improved where affected people perceive that social supports are available and are able to access these supports.
How was mental wellbeing impacted by the earthquakes?

The earthquakes have deeply affected the residents of greater Christchurch. Psychological recovery was interrupted by the sequence of aftershocks during 2011 and 2012 which meant that people had to continually respond to new events. The latest substantial aftershock likely to have caused many residents further distress and anxiety was on the 14 February 2016. Levels of general distress in the population were high immediately after the earthquakes. Some health and welfare services reported high demand for assistance with general symptoms of stress and anxiety. For some people, these symptoms continued for a long time.

By the middle of 2012, services were reporting that people’s mental wellbeing was less affected by aftershocks. However, a growing number of people were reporting that secondary stressors such as uncertainty around decisions relating to their insurance and the repair or rebuild of their homes were causing stress and anxiety.

Several studies have attempted to measure the impact of the earthquakes on adult and child mental wellbeing. A study of middle-aged Christchurch residents 18 months after the February 2011 earthquake found that rates of major depressive disorder and bipolar disorder were higher than rates found in a pre-earthquake and a national study. In 2012, a study of the Christchurch Health and Development cohort found that after controlling for various factors including prior mental health, those from the cohort who were exposed to the Canterbury earthquakes were at greater risk of major depression, post-traumatic stress disorder, other anxiety disorders, and nicotine dependence.

For children, one study analysed Strengths and Difficulties Questionnaire data from the B4 School Check and found no significant differences in pre and post-earthquake scores for behavioural and emotional problems. However, a study which measured post-traumatic stress symptoms in one pre-earthquake group of Christchurch five year olds and one post-earthquake group of Christchurch five year olds three to four years after the first earthquake found that the post-earthquake group had significantly more teacher-reported behaviour problems, and post-traumatic stress symptoms and scores.

Table 1 shows key findings from the 2012 CERA Wellbeing Survey, which asked a number of questions about secondary stressors associated with the earthquakes. In 2012 the largest secondary stressor was ‘distress or anxiety associated with ongoing aftershocks’. The survey also found that secondary stressors around insurance and repairs as well as loss of leisure facilities had impacted the majority of the population.

### Table 1: Most common negative outcomes of the earthquakes, as reported in September 2012

<table>
<thead>
<tr>
<th>Negative outcome</th>
<th>% who had experienced outcome</th>
<th>% who reported moderate or major negative impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of other recreational, cultural and leisure time facilities (cafes, restaurants, libraries etc)</td>
<td>69</td>
<td>34</td>
</tr>
<tr>
<td>Distress or anxiety associated with on-going aftershocks</td>
<td>66</td>
<td>42</td>
</tr>
<tr>
<td>Dealing with EQC/insurance issues in relation to personal property and/or house</td>
<td>65</td>
<td>37</td>
</tr>
<tr>
<td>Making decisions about house damage, repairs and relocation</td>
<td>54</td>
<td>29</td>
</tr>
</tbody>
</table>

While there were some obvious challenges to mental wellbeing due to the earthquakes, people also reported many positives.

Table 2 shows the four most common positive outcomes, which include ‘renewed appreciation of life’, ‘pride in ability to cope’ and ‘heightened sense of community’. Research has shown that bonds with family and friends can become stronger, and that people become more knowledgeable about themselves, wiser, more compassionate, and find new perspectives on life after facing adversity.
Table 2: Most common positive outcomes of the earthquakes, as reported in September 2012

<table>
<thead>
<tr>
<th>Positive outcome</th>
<th>% who had experienced outcome</th>
<th>% who reported moderate or major positive impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pride in ability to cope under difficult circumstances</td>
<td>76</td>
<td>41</td>
</tr>
<tr>
<td>Family’s increased resilience</td>
<td>69</td>
<td>36</td>
</tr>
<tr>
<td>Renewed appreciation of life</td>
<td>68</td>
<td>45</td>
</tr>
<tr>
<td>Heightened sense of community</td>
<td>67</td>
<td>34</td>
</tr>
</tbody>
</table>

What is happening now?

Since September 2010, government and non-government social service agencies have worked together to develop a layered system of wellbeing support for people experiencing distress, based on the Psychosocial Intervention Pyramid (Figure 1). Many of these services and supports are focused on early intervention, to ensure that people can access help and support that will prevent them from developing more severe mental health conditions. This stepped approach is illustrated in the following pyramid; services, support, and information are then outlined below.

Figure 1: Psychosocial Intervention Pyramid

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4 adapted from Inter-Agency Standing Committee
Across the pyramid a number of community and family services are in place to help people access information and the health and social services they need.

- The 0800 Canterbury Support Line, established immediately after the September 2010 earthquake, provides callers with advice and referral to timely and appropriate support. The 0800 Canterbury Support Line, counselling services, and the Earthquake Support Coordination Service were funded for three years from 1 July 2010 to 30 June 2014 through the Government’s Canterbury Earthquake Recovery Fund. The Government announced new operating funding of $13.5 million in 2014 which will see the provision of these services, based on need, for four years (from 1 July 2014 to 30 June 2018). The 0800 Canterbury Support Line was funded through the Ministry of Social Development (MSD) and is now funded through Canterbury District Health Board (Canterbury DHB).

- Counselling services have been provided at no cost to residents affected by the earthquakes. The main provider until May 2015 was Relationships Aotearoa (formerly Relationship Services). This service is now being transitioned to a range of counsellors in Christchurch under the umbrella of the Mental Health Education and Resource Centre who act as fund holder. Access to these counselling services is via the Canterbury Support Line.

- The Earthquake Support Coordination Service is available for people who require more support. This service includes 21.4 full-time equivalent staff including Kaitoko workers who support vulnerable and at-risk whānau. The Earthquake Support Coordinators and Kaitoko provide practical information and support to people displaced from their homes or who have ongoing issues relating to the earthquakes.

- The All Right? social marketing campaign, launched in February 2013, works to support and improve Cantabrians’ mental health and wellbeing as Canterbury recovers and rebuilds from the earthquakes. The campaign is a Healthy Christchurch initiative, led by Canterbury DHB and Mental Health Foundation.

- All Right? uses a mental health promotion approach to support the wellbeing of the people of Canterbury. Mental health promotion is “the process of enhancing the capacity of individuals and communities to take control of their lives and improve their mental health while showing respect for culture, equity, social justice and personal dignity (p. 16)." While the campaign is focused on the whole population, specific streams have been designed for parents, Māori, Pacific, youth, and culturally and linguistically diverse (CALD) communities.

- The aim of the campaign is to actively support Cantabrians to become champions of their own wellbeing, to capture what Cantabrians have learnt as a community over the past four years, and to provide ways the region can share this information with others - be it by assisting other global communities post-disaster, when in need, or simply by becoming a leader for wellbeing promotion in New Zealand.

- Canterbury DHB developed new mental health services and expanded many existing services in response to earthquake related needs. High demand has been maintained, and Canterbury DHB is currently working with the Ministry of Health on the implementation of a package of additional services that are expected to support the system to better meet the needs of its community. Children, young people and families are considered priority groups by the Canterbury Clinical Network Mental Health Workstream who have oversight of the development of additional services across primary care, the community and the DHB.

- Funding for extended general practitioner (GP) consultations is available to enable people with complex needs/issues, including people with mental and physical health effects, to spend longer with their general practice team. These will be further extended in 2016/17.

- Brief intervention counsellors have provided up to five sessions of treatment for individual patients. Primary mental health teams continue to provide brief interventions to individual patients and there is work underway to strengthen the response to people with more complex challenges.

- Many agencies and businesses including Canterbury DHB and MSD have introduced or increased a range of wellbeing and support initiatives for their staff.
• The Residential Advisory Service was established in May 2013 to help address rebuild-related stressors for property owners with insurance and other repair or rebuilding challenges. The service provides impartial and independent legal advice and assistance to help residential property owners understand and progress the repair and rebuild. By May 2016, this service had received 14,080 contacts from residential property owners; of these, 3,656 have met with an independent advisor and 1,047 have been referred to other agencies or organisations better matching their individual needs.

• New Zealand Red Cross is continuing to work in post-quake greater Christchurch, implementing the River and Reeds Community Resilience Programme. The River and Reeds programme has been designed to work in partnership with communities and other agencies to build community connections and social capital and provide a legacy of stronger communities in greater Christchurch, better prepared to withstand shocks and disasters in the future.

The River and Reeds programme will work to:
- increase the capability of individuals, households, and communities in greater Christchurch to cope with new shocks and disasters;
- ensure people have the knowledge, skills, and motivation needed, and are taking steps to strengthen their resilience; and
- support the creation of stronger social connections between individuals, neighbourhoods, and organisations.

• A range of funders including MSD, Red Cross, Rātā Foundation, Christchurch City Council, Canterbury DHB, the Tindall Foundation, and the Wayne Francis Trust have funded the Leadership in Communities (LinC) course, run by Leadership Lab, to help support community leaders, frontline staff, and professional health and social service staff working with affected clients and communities.

• The Ministry of Education continues to offer tailored support to early childhood centres, schools, and students, which is evidence informed and promotes wellbeing, where the need for this support is identified.

• The Ministry of Education, MSD and Canterbury DHB continue to work closely to identify issues impacting on children and young people, ensuring joined up planning and responses in terms of support provided to schools. This partnership has led to the development of Schools Based Mental Health Services (now in 107 Canterbury schools) and shared workforce development.

• A Canterbury-wide parent support package brings together information and services to help parents of children manage the challenges of dealing with direct stressors arising from the experiences of the Canterbury earthquakes and secondary stressors that affect them and their children. Examples of secondary stressors that can have social and psychological impacts on children include change, relocation, resettlement, rebuilding, loss of services, and stress arising from parental housing, property, and employment-related stress.

• Earthquake Assistance Centres in Avondale and Kaiapoi provided information and assistance for home owners. The Avondale Centre was closed in December 2013 after providing residents with a total of 13,582 face-to-face appointments with specialists since it was set up in August 2011. The Kaiapoi Centre saw a total of 4,828 people before its closure in 2014.

• The In the Know Hub was set up at Eastgate Mall in April 2015 with earthquake recovery agencies and support services able to advise on progressing home repair and rebuild processes. This service is now closed.
Looking forward

In February 2014 Cabinet approved the Community in Mind Strategy – a psychosocial strategy for greater Christchurch. The Strategy was released in June 2014 with the associated Shared Programme of Action launched in May 2015.

The Programme is intended to guide agencies and community groups in developing, targeting, and coordinating their programmes and activities for the psychosocial recovery of greater Christchurch over the next five years. It has three focus areas:

1. **Community-led (Kurupae Hāpori)** – strengthening and supporting communities to drive their own recovery

2. **Communication and engagement (Taumata Kōrero)** – ensuring coordination of recovery information and facilitating engagement opportunities

3. **Innovative services (Pāpori Rerekē)** – promoting the development and delivery of innovative services, supports, and information to assist psychosocial recovery.

The Shared Programme of Action sets out the activities that will improve community and individual resilience, deliver positive outcomes, and support people to shape and lead their own recovery.

The Greater Christchurch Psychosocial Committee supports the ongoing development, implementation and review of the Shared Programme of Action. The Committee is now overseen and supported by the Psychosocial Governance Group led by Canterbury DHB and connected to a governance group that has been convened as a part of the greater Christchurch Urban Development Strategy Implementation Committee (UDSIC).

Partners in this work programme include the three territorial authorities in greater Christchurch, Canterbury DHB, Ministry of Education, MSD, Ministry of Health, Police, MBIE, and a wide range of other networks, agencies, and organisations.

Canterbury DHB has received new funding of $20 million over three years in recognition of the pressures faced in Mental Health Services. This will fund: an extension of the All Right? campaign; more specialist staff to provide brief interventions to children, adolescents, and adults with mental health issues; an increase in School Based Mental Health Team capacity; extended GP consults; consult/liaison and interventions for Specialist Mental Health Child, Adolescent and Family Services; online support for Māori exiting alcohol and drug treatment and for children and young people in primary care; telehealth support; workforce wellbeing support; and alternatives to inpatient care.
What are the indicators telling us?

Overall quality of life

This is measured using data from two surveys: the New Zealand Quality of Life Survey; and the Canterbury Wellbeing Survey.

Prior to the earthquakes, quality of life in Christchurch City was monitored every two years using the New Zealand Quality of Life Survey. A substantial change was made to the methodology of this survey between 2010 and 2012, resulting in a loss of time series. This means that direct comparisons of the data pre and post these changes are not possible. Since 2012, quality of life in greater Christchurch has also been measured using the twice-yearly Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey). This survey asks the same quality of life question as the New Zealand Quality of Life Survey “Would you say that your overall quality of life is: extremely poor; poor; neither poor nor good; good; extremely good” although it is couched in an earthquake recovery context, which may have a different influence on how people respond to the question.

Figure 2 shows the results from the New Zealand Quality of Life Survey, separated by the two different methodologies of Computer Assisted Telephone Interviewing (CATI) and the Sequential Mixed Methodology (SMM). The most influential factor contributing to the decrease in quality of life seen in the data between 2010 and 2012 is likely to be the change in survey methodology.

In 2010, a significantly greater proportion of Christchurch City respondents reported a high quality of life than each of the regions that make up the non-Christchurch group. For the years 2012 and 2014, while Figure 2 shows that a smaller proportion of Christchurch respondents reported a high quality of life than non-Christchurch respondents, there were no significant differences found between any of the regions during this period except that a significantly greater proportion of Wellington City respondents reported a high quality of life in both years.

Figure 2: Overall quality of life reported as good or extremely good (New Zealand Quality of Life Survey)

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* Up until 2010 the New Zealand Quality of Life Survey used computer assisted telephone interviewing (CATI); it relied upon telematching from the electoral roll, which excluded 60% of the population; it included ages 15-17 in the survey, by using an in-house database of named individuals who had indicated they were willing to participate in surveys in the future; and it included the following city councils: Auckland, Manukau, North Shore, Waitakere, Wellington, Christchurch, and the following territorial authorities: Rodney, Hamilton, Tauranga, Hutt, Porirua, and Dunedin. From 2012 onwards, the New Zealand Quality of Life Survey used Sequential Mixed Methodology (SMM), which uses internet and hard copy questionnaires and does not exclude 60% of the population; it only included 18 years and older; and it included the newly amalgamated Auckland City, Hutt City, Porirua, Wellington, Christchurch, and Dunedin. Hamilton and Tauranga withdrew.

f Being asked to reflect on the impacts of the earthquakes, for example, how many times people have had to move, may influence how people respond to this question in the Canterbury Wellbeing Survey compared to the New Zealand Quality of Life Survey.

g See footnote e.


i The power of the survey to pick up statistically significant differences is limited by the regional sample sizes (approximately 2500 for greater Auckland and 500 to 650 for the other centres).
Eighty two per cent of greater Christchurch residents reported their quality of life was good or extremely good in April 2016, which was significantly greater than the previous time point. Over the time period of the survey, there has been a significant trend of increasing proportions of respondents reporting good or extremely good quality of life. This has tracked up slowly following a low of 73 per cent in September 2013. From September 2012 until April 2016, the proportion of respondents indicating that their quality of life is poor has not changed significantly; at April 2016, the figure was five per cent, and it has ranged from five to seven per cent.

Those more likely to rate their overall quality of life positively in April 2016 were from higher income households (i.e. $60,000-$100,000 or more than $100,000) (87 per cent and 91 per cent), those whose total value of their dwelling claim was up to $15,000 (90 per cent) or $15,001 to $50,000 (91 per cent), or those who had not needed to make an insurance claim (86 per cent).

In comparison, those less likely to rate their overall quality of life positively were from a household with an income of less than $30,000 (63%), living with a health condition or disability (64%), living in temporary housing (68%), renting the dwelling they usually live in (72%), or of Pacific, Asian, or Indian ethnicity (73%).

**Figure 3: Overall quality of life reported as good or extremely good (Canterbury Wellbeing Survey)**

Change in quality of life

The September 2012 CERA Wellbeing Survey asked respondents if their quality of life had changed since the earthquakes. Over half (54 per cent) reported that their quality of life had ‘decreased significantly’ (10 per cent) or ‘decreased to some extent’ (44 per cent). By April 2016, only 13 per cent of respondents reported deterioration in their quality of life compared to 12 months ago. Population groups more likely to report deterioration in their quality of life were those living with a health condition or disability (28%), those who had unresolved claims at the property they own and usually live in (25%), those from a household with an income of less than $30,000 (24%), those aged 75 years old or over (24%), those living in temporary housing (20%), and those whose total value of their dwelling claim was over cap ($100,001 or more) (17%).
Impacts of the earthquake on stress and emotional wellbeing

Stress is measured using data from two surveys: the New Zealand Quality of Life Survey; and the Canterbury Wellbeing Survey. Both surveys ask respondents:

"At some time in their lives, most people experience stress. Which statement below best applies to how often, if ever, over the past 12 months you have experienced stress that has had a negative effect on you? Always; most of the time; sometimes; rarely; never."

Figure 4 shows that in 2014, 19 per cent of Christchurch city residents reported experiencing stress often (always or most of the time). As with Figure 2 above, the most influential factor contributing to the increase in stress for non-Christchurch and Christchurch seen in Figure 4 between the Computer Assisted Telephone Interviewing (CATI) surveys and the Sequential Mixed Methodology (SMM) surveys is likely to be the change in survey methodology. From 2008 to 2014, there was no statistically significant difference between the proportion of Christchurch residents reporting stress always or most of the time and each of the regions making up the non-Christchurch group.

Figure 4: Proportion of respondents reporting stress always or most of the time (New Zealand Quality of Life Survey)

Figure 5 displays data solely from the Canterbury Wellbeing Survey. Just under three quarters (73%) of respondents from greater Christchurch have experienced stress at least sometimes in the past 12 months that has had a negative impact on them. There has been a statistically significant downward trend since the earthquakes – 80% in September 2012 to 73% in April 2016. The proportion of respondents reporting stress always or most of the time (represented by the grey and blue portions of the bars) has ranged from 23 per cent in September 2012 to 19 per cent in April 2015. There is no statistically significant trend for change for this data. In April 2016, 21 per cent of respondents reported stress always or most of the time. The groups more likely to report experiencing stress always or most of the time in April 2016 were those living in temporary housing (38%), those living with a health condition or disability (31%), those renting the dwelling they usually live in (28%), and those aged 18 to 24 (27%) or 25 to 34 years old (26%).

Those less likely to say they had experienced stress always or most of the time were those aged 65 to 74 years old (11%) or 75 years or over (13%), and those who had not needed to make an insurance claim on their dwelling (13%). A lower proportion of Selwyn District (16%) and Waimakariri District (17%) residents reported experiencing stress often than those living in Christchurch City.

Just under three quarters of respondents from greater Christchurch have experienced stress at least sometimes in the past 12 months that has had a negative impact on them. There has been a statistically significant downward trend since the earthquakes – 80% in September 2012 to 73% in April 2016.

Footnotes:
1. See footnotes above for the methodological changes in the New Zealand Quality of Life survey, and the difference in context of the Canterbury Wellbeing Survey compared to the New Zealand Quality of Life Survey.
2. The following sentence is also included in the question: "Stress refers to things that negatively affect different aspects of people’s lives, including work and home life, making important life decisions, their routines for taking care of household chores, leisure time and other activities."
3. See footnote e.
4. The power of the survey to pick up statistically significant differences is limited by the regional sample sizes (approximately 2500 for greater Auckland and 500 to 650 for the other centres).

Canterbury Wellbeing Index 2016 | Mental wellbeing | 9
The WHO-5 index is a self-rated measure of emotional wellbeing, which is scored out of 25, with higher scores indicating better wellbeing. Respondents are asked to rate the extent to which each of the five wellbeing indicators has been present or absent in their lives over the previous two-week period, using a six-point scale ranging from ‘all of the time’ to ‘at no time’.

The five wellbeing indicators are:

- I have felt cheerful and in good spirits
- I have felt calm and relaxed
- I have felt active and vigorous
- I woke up feeling fresh and rested
- My daily life has been filled with things that interest me.

Table 3 shows that the overall mean WHO-5 score for greater Christchurch increased by a small but statistically significant amount between September 2015 and April 2016. A significant increase in mean score was also seen between September 2014 and April 2015. Those living in Selwyn District have a significantly higher mean than those living in Christchurch City and Waimakariri District. Those more likely to have WHO-5 scores below the greater Christchurch mean are those living with a health condition or disability and those renting the dwelling they usually live in. Those more likely to have WHO-5 scores above the greater Christchurch mean are those aged 65 to 74 years old and those who have not needed to make an insurance claim on their dwelling.

The WHO-5 has not been used in any other population based surveys of adults in New Zealand, so there is no New Zealand comparison for the findings in Table 3. However, the WHO-5 was used in a representative survey of adults in the UK in 2012, where the mean was 14.65, similar to Christchurch City and Waimakariri District means, and slightly lower than Selwyn District’s mean.\(^\text{27}\)\(^\text{p}\)
Table 3: Trend – WHO-5 raw score mean over time (Mean and margin of error (95% CI level))

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Christchurch</td>
<td>13.8 ± 0.22</td>
<td>13.7 ± 0.21</td>
<td>13.6 ± 0.22</td>
<td>13.9 ± 0.20</td>
<td>14.1 ± 0.21</td>
<td>14.4 ± 0.18</td>
<td>14.4 ± 0.18</td>
</tr>
<tr>
<td></td>
<td>n=2343</td>
<td>n=2398</td>
<td>n=2405</td>
<td>n=2658</td>
<td>n=2453</td>
<td>n=2799</td>
<td>n=2999</td>
</tr>
<tr>
<td>Christchurch City</td>
<td>13.6 ± 0.31</td>
<td>13.5 ± 0.30</td>
<td>13.3 ± 0.30</td>
<td>13.7 ± 0.30</td>
<td>14.1 ± 0.28</td>
<td>13.9 ± 0.30</td>
<td>14.3 ± 0.26</td>
</tr>
<tr>
<td></td>
<td>n=1171</td>
<td>n=1204</td>
<td>n=1219</td>
<td>n=1359</td>
<td>n=1285</td>
<td>n=1178</td>
<td>n=1347</td>
</tr>
<tr>
<td>Selwyn District</td>
<td>14.6 ± 0.41</td>
<td>14.9 ± 0.38</td>
<td>15.1 ± 0.41</td>
<td>14.9 ± 0.38</td>
<td>15.0 ± 0.40</td>
<td>15.6 ± 0.39</td>
<td>15.1 ± 0.35</td>
</tr>
<tr>
<td></td>
<td>n=599</td>
<td>n=628</td>
<td>n=610</td>
<td>n=629</td>
<td>n=571</td>
<td>n=626</td>
<td>n=800</td>
</tr>
<tr>
<td>Waimakariri District</td>
<td>14.8 ± 0.43</td>
<td>14.4 ± 0.43</td>
<td>14.3 ± 0.43</td>
<td>14.4 ± 0.39</td>
<td>14.9 ± 0.40</td>
<td>15.1 ± 0.39</td>
<td>14.9 ± 0.36</td>
</tr>
<tr>
<td></td>
<td>n=573</td>
<td>n=566</td>
<td>n=576</td>
<td>n=670</td>
<td>n=597</td>
<td>n=641</td>
<td>n=762</td>
</tr>
</tbody>
</table>

Map 1 shows that there are geographic differences in mean WHO-5 scores in greater Christchurch. Survey respondents living in the East had the lowest WHO-5 mean score, which was the only mean score statistically significantly lower than the mean score for all greater Christchurch respondents. It was also statistically significantly lower than all other regions’ mean scores except for the Inner South and North East. Survey respondents living in Selwyn had the highest WHO-5 mean score, which was the only mean score statistically significantly higher than the mean score for all greater Christchurch respondents.

Map 1: Mean WHO-5 score by geographic area, April 2016
Table 4 shows that in general, the proportion of greater Christchurch residents reporting being strongly impacted by various negative issues is decreasing, as indicated by the ticked figures. The notable exception to this trend is the increase in distress or anxiety associated with ongoing aftershocks in the April 2016 survey, likely in response to the 14 February earthquake.

The other most prevalent issues continuing to have negative impacts on residents include living in a damaged environment and/or surrounded by construction work, financial burdens, loss of facilities, dealing with EQC/insurance, transport pressures, and uncertainty about the future in Canterbury.

Table 4: Most common negative issues, as reported in April 2016

<table>
<thead>
<tr>
<th>Issues ranked based on April results from highest to lowest in terms of proportion still being strongly impacted by each issue</th>
<th>Sept 2012</th>
<th>Apr-2013</th>
<th>Sept 2013</th>
<th>Apr-2014</th>
<th>Sep-2014</th>
<th>Apr-2015</th>
<th>Sep-2015</th>
<th>Apr-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distress or anxiety associated with ongoing aftershocks</td>
<td>42</td>
<td>16✓</td>
<td>14</td>
<td>14</td>
<td>12✓</td>
<td>12</td>
<td>9✓</td>
<td>18x</td>
</tr>
<tr>
<td>Being in a damaged environment and/or surrounded by construction work</td>
<td>30</td>
<td>21✓</td>
<td>20</td>
<td>24x</td>
<td>19✓</td>
<td>19</td>
<td>20</td>
<td>14✓</td>
</tr>
<tr>
<td>Additional financial burdens</td>
<td>26</td>
<td>16✓</td>
<td>15</td>
<td>15</td>
<td>13✓</td>
<td>10✓</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Loss of other recreational, cultural and leisure time facilities</td>
<td>34</td>
<td>21✓</td>
<td>17</td>
<td>20x</td>
<td>17✓</td>
<td>15</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Loss of indoor sports and active recreation facilities</td>
<td>24</td>
<td>16✓</td>
<td>13</td>
<td>17x</td>
<td>14✓</td>
<td>12</td>
<td>13</td>
<td>10✓</td>
</tr>
<tr>
<td>Dealing with EQC/insurance issues in relation to personal property and house</td>
<td>37</td>
<td>26✓</td>
<td>23</td>
<td>21</td>
<td>15✓</td>
<td>13</td>
<td>13</td>
<td>10✓</td>
</tr>
<tr>
<td>Transport related pressures</td>
<td>20</td>
<td>17✓</td>
<td>14✓</td>
<td>22x</td>
<td>15✓</td>
<td>15</td>
<td>12✓</td>
<td>10✓</td>
</tr>
<tr>
<td>Uncertainty about my own or my family’s future in Canterbury</td>
<td>30</td>
<td>16✓</td>
<td>16</td>
<td>15</td>
<td>13✓</td>
<td>13</td>
<td>11✓</td>
<td>10</td>
</tr>
<tr>
<td>Making decisions about house damage, repairs and relocation</td>
<td>29</td>
<td>22✓</td>
<td>21</td>
<td>19</td>
<td>14✓</td>
<td>12</td>
<td>11</td>
<td>9✓</td>
</tr>
<tr>
<td>Loss of outdoor sports and active recreation facilities</td>
<td>20</td>
<td>12✓</td>
<td>10</td>
<td>13x</td>
<td>11✓</td>
<td>11</td>
<td>10</td>
<td>8✓</td>
</tr>
<tr>
<td>Additional work pressures</td>
<td>27</td>
<td>16✓</td>
<td>12✓</td>
<td>13</td>
<td>10✓</td>
<td>8✓</td>
<td>9</td>
<td>7✓</td>
</tr>
<tr>
<td>Loss of meeting places for community events</td>
<td>NA*</td>
<td>10</td>
<td>8</td>
<td>11✓</td>
<td>10</td>
<td>8</td>
<td>10x</td>
<td>6✓</td>
</tr>
<tr>
<td>Living day to day in a damaged home</td>
<td>22</td>
<td>16✓</td>
<td>16</td>
<td>12✓</td>
<td>12</td>
<td>8</td>
<td>8</td>
<td>6✓</td>
</tr>
<tr>
<td>Loss of usual access to the natural environment</td>
<td>24</td>
<td>13✓</td>
<td>10</td>
<td>12</td>
<td>10✓</td>
<td>8</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Relationship problems</td>
<td>16</td>
<td>9✓</td>
<td>9</td>
<td>9</td>
<td>8</td>
<td>6✓</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Dealing with barriers around disabilities whether existing or earthquake related</td>
<td>12</td>
<td>8✓</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Having to move house permanently or temporarily</td>
<td>16</td>
<td>13✓</td>
<td>12</td>
<td>11</td>
<td>10</td>
<td>8</td>
<td>6✓</td>
<td>5</td>
</tr>
<tr>
<td>Dealing with frightened, upset or unsettled children</td>
<td>18</td>
<td>7✓</td>
<td>5</td>
<td>6</td>
<td>4✓</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Poor quality of house</td>
<td>14</td>
<td>10✓</td>
<td>13x</td>
<td>9✓</td>
<td>9</td>
<td>7✓</td>
<td>7</td>
<td>4✓</td>
</tr>
<tr>
<td>Lack of opportunities to engage with others in my community through arts, cultural, sports or other leisure pursuits</td>
<td>15</td>
<td>9✓</td>
<td>7</td>
<td>9</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>4✓</td>
</tr>
<tr>
<td>Potential or actual loss of employment or income</td>
<td>18</td>
<td>10✓</td>
<td>7✓</td>
<td>8</td>
<td>5✓</td>
<td>5</td>
<td>6</td>
<td>4✓</td>
</tr>
<tr>
<td>Workplace safety concerns</td>
<td>16</td>
<td>6✓</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Difficulty finding suitable rental accommodation</td>
<td>12</td>
<td>9✓</td>
<td>10</td>
<td>10</td>
<td>9</td>
<td>7✓</td>
<td>6</td>
<td>3✓</td>
</tr>
<tr>
<td>Loss or relocation of services</td>
<td>13</td>
<td>8✓</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>3✓</td>
</tr>
<tr>
<td>House too small for the number of people in the household</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
As can be seen in Map 2, there are large geographic differences between the impacts of the top four negative issues on people living in different parts of greater Christchurch. In general, a higher proportion of people living in the North East and East have reported being impacted by the top four negative issues, followed by the Inner North, South, and Inner South. In general, fewer people living in the west of greater Christchurch have reported being impacted by the top four negative issues.

Map 2: Impact of most common negative issues by geographic area, April 2016
Access to earthquake support services

The 0800 Canterbury Support Line is a government-funded service providing information about a range of services and supports to callers affected by the earthquakes and subsequent recovery. Figure 6 shows there was a spike in calls to the 0800 Canterbury Support Line immediately after the February 2011 earthquake. A smaller increase in calls in February 2012 may have been due to the anniversary of the 2011 earthquake and the increase in August 2012 may have followed land zoning announcements. Between September 2010 and June 2016, more than 23,000 residents have sought assistance through this service. The small spike in February 2016 is likely to be a result of the Valentine’s Day aftershock. In the year to June 2016, there have been 1,370 calls compared to 1,934 calls for the year to June 2015.

Figure 6: Calls to the 0800 Canterbury Support Line

The Earthquake Support Coordination Service was established to provide information and practical support for those whose homes and lives have been affected by the Canterbury earthquakes. Figure 7 shows that between 28 and almost 400 households have enrolled with the service each month since October 2011. The number of active households peaked at 2,511 in September 2012 and has since gradually declined. Overall, 10,468 households have been supported by the service as at April 2016, and of those 806 households remain registered.

Figure 7: Households registered with Earthquake Support Coordination Service
Access to brief intervention counselling in general practice

Brief intervention counselling provides people with mild to moderate mental health issues up to five sessions of free psychological intervention mostly from their general practice team, with the possibility of onward referral to a related community agency.\(^{29}\)

Figure 8 shows there has been an increase in the number of people seeking brief intervention counselling services in the CDHB region monthly from July 2011 with the service employing additional staff to meet increased demand following the earthquakes. Attendances peaked at over 1,300 per month in August 2013 which was nearly triple the rate in August 2010 (486 presentations). For the year to December 2015, 993 people attended sessions, which remains around double the pre-earthquake number.

Figure 8: Number of attendances for brief intervention counselling by age

![Figure 8: Number of attendances for brief intervention counselling by age](image)

Total number of clients accessing existing CDHB mental health services

Figure 9 shows the total number of clients accessing mental health services in the CDHB region and provides a breakdown by service type: specialist mental health services (SMHS), non-government organisations (NGOs), and primary mental health (PMH). Many factors influence service use data, including data recording processes, service delivery models, policy and funding, barriers to service access, service capacity, and service demand. Direct comparison between DHBs is difficult, due to the effects of population size and geography on case mix and service delivery. Figure 9 presents the number of times services have been used per month (a service user may be recorded more than one time in each month if they have had more than one service use event in that month), not population rates of service use, so the data is not adjusted for population changes over time.

The most prominent feature of Figure 9 is the large peak in the 18-64 year old NGO data: The number of clients accessing NGO services has increased since January 2010, although the peak seen is largely due to a data collection issue. There was an expansion of services before the data was fully captured, so the peak represents when this service activity was “caught-up” in the system. A gradually increasing line from mid-2012 to early 2014 would more closely reflect the reality of service use.\(^{30}\) This data collection issue for NGO services has caused a corresponding peak in the ‘All’ services 18-64 years line at the top of the figure.

The ‘step’ increase seen in the 65+ specialist mental health services (SMHS) from August to September 2012 is due to a change in reporting process to adequately capture mental health service activity formerly recorded under ‘Older Person’s Health’.\(^{30}\) This ‘step’ increase has caused a corresponding increase in the ‘All’ services 65+ years line.
Primary mental health services (PMH) largely comprise brief intervention counselling (BIC), also represented in Figure 8 above, hence the similar pattern of the shape of the two lines. In addition to BIC, PMH services also include GP-led extended consults.

Total recorded service use did not change substantially in the period immediately after the earthquakes. For ‘All’ 18-64 year old clients, there has been a 21 per cent increase in those accessing mental health services from the 12 months prior to the February earthquake (February 2010 to January 2011) to the most recent 12 months of data (April 2015 to March 2016). For ‘All’ 0-17 year old clients, there has been a 27 per cent increase in those accessing mental health services from the 12 months prior to the February earthquake (February 2010 to January 2011) to the most recent 12 months of data (April 2015 to March 2016). Given the change in reporting processes for mental health clients 65+ years, a similar comparison over time is not possible.

For all age groups combined, for the most recent year of data, the year to March 2016 compared to the year to March 2015, 1.3 per cent fewer clients accessed mental health services: for 0-17 year old clients, there was a 4.1 per cent decrease; for 18-64 year olds, there was a 1.0 per cent decrease; and for 65+ year olds, there was a 0.5 per cent increase in service access.

**Figure 9: Total number of clients accessing mental health services, by service type and age**
The Health of the Nation Outcome Scales (HoNOS) are the national clinical outcome collection tool administered by clinicians and mandated by the Ministry of Health to measure a mental health service user’s mental health problems and problems with functioning. The figures in the Canterbury Wellbeing Index use data from one of the five HoNOS family of measures: HoNOS for adults aged 18-64 years.

HoNOS (18-64 years) includes twelve items:

1. Overactive, aggressive, disruptive or agitated behaviour
2. Non-accidental self-injury
3. Problem drinking or drug-taking
4. Cognitive problems
5. Physical illness or disability problems
6. Problems associated with hallucinations and delusions
7. Problems with depressed mood
8. Other mental and behavioural problems
9. Problems with relationships
10. Problems with activities of daily living
11. Problems with living conditions
12. Problems with occupations and activities.

A score of 0–4 is assigned to each item according to the severity of symptoms (0 indicating no problem and 4 indicating a severe problem). A score of 2 represents a mild problem that requires monitoring and may require active treatment or a management plan. A score of 3 or 4 represents a moderate or severe problem that requires monitoring and requires active treatment or a management plan.

The Ministry of Health notes five uses for HoNOS scores. The first two use data at an individual user level, and the last three use data at an aggregated level:

- Clients can use their own outcomes data to: reflect on their health, wellbeing, and circumstances; talk to clinicians about their support needs; and inform their recovery plans.
- Clinicians can use outcomes data to: inform therapeutic discussion with clients; support their decision-making in day-to-day practice; monitor change; improve their understanding of client needs; and evaluate the effectiveness of different interventions.
- Service and general managers can use outcomes data to: inform service provision and identify workforce development and community needs.
- Planners and funders can use outcomes data to: assess population needs for mental health services and assist with allocation of resources.
- Policy and mental health strategy developers can use outcomes data to develop policy based on nationally aggregated data.

HoNOS data is collected in specialist community and in-patient settings. This Index uses community ‘outpatient’ data, with the aim of monitoring an indicator of wellbeing for the group of DHB mental health service users still living in the community. It is likely that the wellbeing of this group will be more sensitive to the greater Christchurch recovery than the in-patient group. HoNOS data should be regularly collected on admission to a service, and on discharge. It may also be collected for the purposes of review during a period of contact with a service. This Index only uses admission HoNOS data, with the aim of measuring the severity of symptoms on presentation, rather than after receiving care from a service.
While HoNOS enables the possibility of comparing Canterbury mental health service user data with New Zealand service user data, the Ministry of Health notes two limitations of the HoNOS data. Firstly, it does not require NGO organisations, and some teams, such as alcohol and drug teams, to collect outcomes data. This limitation is common to all DHBs. Secondly, that among those DHB organisations where outcome data collection is mandated, the data is incomplete.

For the HoNOS data represented in the figures in this index (HoNOS (18-64 years) community admission scores), quarterly completeness for the period from 2009 - 2015 ranges from 25.0 per cent to 74.2 per cent for Canterbury DHB, and 16.8 per cent to 31.8 per cent for New Zealand. There are several reasons why achieving 100 per cent completeness of admission data is practically not possible. These reasons are listed in the technical notes at the end of this chapter. The influence that these differences in completeness of data has, both over time and regionally, on the average totals displayed in the figures below, needs to be considered before drawing conclusions about differences over time and between regions.

In general, more complete community admission data may be more likely to capture those people who have briefer contact with mental health services due to less severe symptoms, thus lowering the average total HoNOS scores and decreasing the proportion of clients with severe symptoms. Therefore if the HoNOS collections were more complete nationally, the differences found in the HoNOS (18-64) results in recent years (higher HoNOS totals for Canterbury DHB data since 2012 than for New Zealand) are likely to be even greater. Given that it is not known whether the proportion of clients with admission data captured in HoNOS are representative of the whole population of clients accessing community mental health DHB services, it is possible that factors other than those discussed above are influencing the observed results.

Trends in the HoNOS dataset for clients using community mental health services at admission are monitored using the following indicators:¹

- The total average score across all 12 HoNOS items as a high level indicator of symptoms and functioning.
- The index of severity across the first 10 HoNOS items as an indicator of the severity of clients’ conditions.¹
- Average scores for each of the 12 HoNOS items.

Figures 10 – 12 generally show increases across the first two measures for the period from 2010 to 2013, and higher scores for the first two measures from 2011 to 2015 in Canterbury DHB community mental health services compared to New Zealand. In contrast, HoNOS (18-64 years) inpatient admission scores (not graphed) show lower average HoNOS totals and severity scores in Canterbury compared to New Zealand each year from 2009 to 2015. It is not expected that inpatient HoNOS totals and severity scores will be susceptible to change due to the earthquakes or recovery, since admission to inpatient services is dependent on clinical thresholds of severity of symptoms.

Figure 10 illustrates that for those with a completed HoNOS on admission to community mental health services, total scores have been higher in Canterbury for the period from 2011 to 2015. Higher HoNOS scores indicate either more symptoms or more severe symptoms or a combination of both.

¹ Confidence Intervals for these data cannot be calculated because it cannot be known whether those service users with a completed HoNOS collection are a representative sample of all service users.
² See technical notes for more detail.
Figure 10: Average total HoNOS score for clients accessing community mental health services, by area

Figure 11 uses the HoNOS index of severity, which is a measure designed to assess whether severity of symptoms has changed over time for a chosen population. Higher scores represent higher severity of symptoms. The index of severity uses the scores in the first 10 HoNOS items listed above. Of those community DHB service users with a completed admission HoNOS, those in Canterbury have been more likely to exhibit severe symptoms than those in New Zealand overall, since 2010.

* Quarterly completeness of Canterbury DHB data ranges from 25.0 per cent to 74.2 per cent, has increased every year since 2011, averages 41.7 per cent for the period 2009-2015, and was 69.5 per cent in 2015. Quarterly completeness of New Zealand data ranges from 16.8 per cent to 31.8 per cent, averages 29.1 per cent, and was 30.5 per cent in 2015.
Figure 11: Distribution of Index of Severity for clients accessing community health services, by area

Figure 12 shows the breakdown of the percentage of clients in the clinical range for the 12 items that make up HoNOS. For those community DHB mental health users with completed HoNOS admission data, the items that are contributing to higher severity scores in Canterbury compared to New Zealand are: Overactive, aggressive, disruptive or agitated behaviour; Non-accidental self-injury; Problem drinking or drug-taking; Problems with depressed mood; Problems with relationships; Problems with activities of daily living; Problems with living conditions; and Problems with occupations and activities.

* See above footnote.
Figure 12: Per cent of clients in the clinical range accessing community health services, by item and area*

* See above footnote.
Dispensing of pharmaceuticals for mental health

These indicators are measured by using the number of anti-depressants and anti-anxiety medication units dispensed. The dispensing of mental health pharmaceuticals is followed as another way of monitoring any possible changes in mental health needs. Several factors may influence these data, including service use and access to primary care and mental health services, and dispensing practices. Compared to nationally, Canterbury DHB has a higher than average rate of dispensing of mental health pharmaceuticals, but that rate is increasing more slowly than nationally. In general, Canterbury DHB is an early adopter of new treatments and has always had higher use of mental health pharmaceuticals.\(^{33}\)

Figure 13 shows that overall the number of anti-depressants dispensed has gradually increased in Canterbury DHB since 2008. Anti-depressants are used to treat a range of mental health issues. For the most recent data, for the year to February 2016, the number of anti-depressants dispensed in Canterbury DHB increased by 3.6 per cent compared to the year to February 2015. This rate of increase has slowed compared with the pre-earthquake rate of increase.

A study of anti-depressant dispensing in Canterbury compared to the rest of New Zealand for the period of July 2007 to January 2014 found no significant change in Canterbury DHB dispensing following the earthquakes.\(^{34}\) It also found that there was a national trend for increased dispensing, but this was less prominent in Canterbury DHB.

Figure 13: Number of anti-depressant units dispensed, Canterbury DHB
Figure 14 shows that the number of anti-anxiety medications (anxiolytics, sedatives and hypnotics) dispensed in the Canterbury DHB region increased immediately after the February 2011 earthquake. Levels peaked in March 2011 when 363,246 units of anxiolytics and 419,623 units of sedatives and hypnotics were dispensed. This represented an increase of 33 and 32 per cent respectively compared with a year earlier (March 2010). These medications are usually prescribed in response to acute stress and sleep difficulties. Since then the number of units dispensed has generally been decreasing or has been steady, in contrast to an increasing trend before the earthquakes. For the year to February 2016, the number of anti-anxiety medications dispensed in Canterbury DHB increased by only 0.02 per cent compared to the year to February 2015.

The same study referred to above also analysed dispensing data for anti-anxiety medications for Canterbury DHB and the rest of New Zealand and found that there was a short-term increase in dispensing in the Canterbury DHB catchment area after the February 2011 earthquake, but this increase was not sustained.34

Figure 14: Number of anti-anxiety units dispensed, Canterbury DHB
Find out more

Find out more about the Canterbury Wellbeing Index: www.cph.co.nz/your-health/canterbury-wellbeing-index/

Find out more about the All Right? Campaign on their website http://allright.org.nz/.

Ring the Canterbury Support Line on: 0800 777 846

Be connected to an Earthquake Support Coordinator: 0800 673 227

Be connected to a Kaitoko Whānau Earthquake Support Worker on: 0800 KAI TAHU or 0800 524 8248

Technical notes

Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey)

Data source: Canterbury Earthquake Recovery Authority, Canterbury District Health Board

Data frequency: Six-monthly September 2012, April 2013, September 2013, April 2014, September 2014, April 2015, September 2015 (all CERA) and April 2016 (CDHB)

Data complete until: April 2016

Notes: The April 2016 Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey) is the eighth survey in the series providing information about the residents of greater Christchurch. Respondents were randomly selected from the electoral roll. The survey was delivered online and by hard copy from 30 March to 18 May 2016. The response rate was 41 per cent. Weighting was used to correct imbalances in sample representation. The survey was originally developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. For results from the surveys, see: www.cph.co.nz/your-health/wellbeing-survey/

New Zealand Quality of Life Survey

Data source: The New Zealand Quality of Life Survey


Data complete until: October 2014

Notes: The New Zealand Quality of Life Survey is a national survey run every two years. Up until 2010 the New Zealand Quality of Life Survey used computer assisted telephone interviewing (CATI); it relied upon telematching from the electoral roll, which excluded 60% of the population; it included ages 15-17 in the survey, by using an in-house database of named individuals who had indicated they were willing to participate in surveys in the future; and it included the following city councils: Auckland, Manukau, North Shore, Waitakere, Wellington, Christchurch, and the following territorial authorities: Rodney, Hamilton, Tauranga, Hutt, Porirua, and Dunedin. From 2012 onwards, the New Zealand Quality of Life Survey used Sequential Mixed Methodology (SMM), which uses internet and hard copy questionnaires and does not exclude 60% of the population; it only included 18 years and older, and it included the newly amalgamated Auckland City, Hutt City, Porirua, Wellington, Christchurch and Dunedin. Hamilton and Tauranga withdrew.

The 0800 Canterbury Support Line

Data source: Family and Community Services Southern, Ministry of Social Development

Data frequency: Monthly

Data complete until: May 2016

Notes: Calls are logged as low, medium or high priority by staff. Calls are also categorised by reason for call.
Earthquake Support Coordination Service

Data source: Canterbury Earthquake Temporary Accommodation Service
Data frequency: Monthly
Data complete until: April 2016
Notes: Data from February 2011 to September 2011 were not available for graphing as they were previously collated monthly.

Brief intervention counselling services

Data source: Canterbury District Health Board
Data frequency: Monthly
Data complete until: December 2015
Notes: The BIC service provides up to five sessions of free psychological intervention for clients and, in some cases, also refers clients to other community services for ongoing support, such as Presbyterian Support and the Stop Trust. Clients are referred to the BIC service through their general practice teams.

Mental health referrals to pre-existing services

Data source: Canterbury District Health Board
Data frequency: Monthly
Data complete until: March 2016
Notes: The data represent all referrals received from all sources, and referrals seen. Referrals seen are those referrals that proceeded to be seen for assessment/treatment (one day or more) for one or more contacts and include mental health earthquake-related services.

Health of the nation outcomes scales

Data source: Te Pou
Data frequency: Yearly
Data complete until: 2015
Notes: Data was sourced from Ministry of Health Programme for the Integration of Mental Health Data (PRIMHD).

Overall caveats: Only service users in mental health and alcohol and drug services who have HoNOS collected are included i.e. the information provided only applies to service users who have an outcome collection. Canterbury DHB mix of service users can be different to that of New Zealand.

Average Total HoNOS Score: Total score is the sum of the valid items in HoNOS (12 items in total). It is an aggregated ordinal scale, not a continuum scale. A HoNOS score of 4 is not twice as severe as a 2, and 2 is not twice as severe as 1. Summing the 12 HoNOS items may not adequately capture the clinical severity in situations where a client has severe symptoms on a few items and no problems on the rest.

Index of severity: The index of severity is a measure of outcome in which different levels of acuity are defined by the items in the clinical range for the first 10 HoNOS items. Index of severity provides a measure of whether severity is increasing, declining or staying the same for a chosen individual or population. The data is not case mix adjusted, so care needs to be taken when making direct comparisons between different services.
Index of severity categories:

- The sub-clinical category has no HoNOS scores greater than two (mild problem)
- The mild category has all scores less than three (moderate problem) and at least one item greater than one (minor problem)
- The moderate category has only one item which is a moderate or severe problem
- The severe category has at least two items which are a moderate or severe problem

More information on the meaning of the variables can be found here: [www.tepou.co.nz/resources/mental-health-outcomes-information-collection-protocol-honos-family-version-21/93](http://www.tepou.co.nz/resources/mental-health-outcomes-information-collection-protocol-honos-family-version-21/93)

More information on the HoNOS tool can be found here: [www.tepou.co.nz/outcomes-and-information/honos-e-books/131](http://www.tepou.co.nz/outcomes-and-information/honos-e-books/131)

PRIMHD outcome compliance limitations: Measuring compliance is not a simple process. Data for PRIMHD is based on a referral, where outcome data is based on an episode, or episodes, of care. An episode of care can be made up of multiple referrals, or it could be split by an inpatient episode of care, with a community episode of care on either side. Below lists some of the limitations of PRIMHD outcome compliance.

- The HoNOS family of measures is only required for mental health secondary DHB services. It requires a comprehensive assessment. Community compliance is affected by crisis teams doing triage or brief assessment type activity which is not a comprehensive assessment.
- Overall compliance measures that a service user has at least one collection at any point in the period. It can be an assessment only, admission, review or discharge collection. This does not necessarily mean the collection is done at the correct point of time.
- Each DHB uses a different IT system, this results in data being collected differently. It means that for admission and discharge compliance some DHBs show lower compliance because their system makes fitting the collection rules difficult. They may collect the admission and discharge information but it will not fit within the specified timeframes required.
- DHBs have different ways of configuring their services. For example it is possible to have a team type which is a community mental health service but who also have drug and alcohol services integrated. Drug and Alcohol service users are not required to collect HoNOS therefore this will affect the compliance.
- Admission and discharge compliance is only measured when overlapping referrals end. If a referral is kept open in the community, while in an inpatient stay, then it is not possible to measure if the community discharge and subsequent admission is carried out.

Age grouping 4 to 17 years, 18 to 64 years and 65 years and over generally align with HoNOSCA, HoNOS and HoNOS65+. However, it does not mean that they are the only outcome measures used and/or collected. For example a service user aged between 4 to 17 years could have a HoNOS collection, likewise, a service user aged 18 to 64 years could have a HoNOSCA collection. Also note, if the service user is in a forensic service then a HoNOS secure collection could occur; in an intellectual disability dual diagnosis team a HoNOS-LD collection could occur.

### Mental health pharmaceuticals

**Data source:** Pharms Data Mart via Canterbury District Health Board

**Data frequency:** Monthly

**Data complete until:** February 2016

**Notes:** The data presented are for units within prescriptions that are dispensed. This does not measure the number of people that are actually taking prescribed medications, rather the volume of medication. Further, some people do not fill prescriptions due to cost (5.1 per cent in 2014/15 in the Canterbury DHB region – according to the New Zealand Health Survey) and these people may be disproportionately represented in those prescribed mental health pharmaceuticals.

Paxam (Clonazepam) is a drug primarily used to treat epilepsy. This has changed therapeutic groups and now is classified as an anxiolytic.
References


17. Information from Canterbury Earthquake Recovery Authority.


30. Personal communication, Planning and Funding, Canterbury DHB.


The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why are risk factors important and how were they impacted by the earthquakes?

Wellbeing is influenced by a wide range of environmental, social and behavioural risk factors. This chapter provides context to some of these risk factors, gives an update on what is happening locally to address them, and summarises what the indicators show.

Problem gambling

Around 2.5 per cent of New Zealand adults are at risk of problems from their own gambling. In New Zealand increased risk of problem gambling is associated with being of Māori or Pacific Island ethnicity, being male, younger age, not having formal qualifications, being unemployed, and living in the most deprived neighbourhoods.

Problem gambling affects not only the gamblers themselves but also the people around them. Evidence indicates that between 5 and 10 other people are affected to varying degrees by the behaviour of each serious problem gambler.

Many of the consequences of problem gambling are financial. A 2010 study estimated that eight per cent of adults had experienced someone in their wider household going without something they needed or a bill being unpaid in the previous 12 months because of gambling. Problem gambling can lead to addiction, social isolation, depression, suicide, relationship breakdown, lowered work productivity, job loss, bankruptcy, and crime, including family violence and fraud.

Before the earthquakes, Christchurch had 114 venues operating 1,767 gaming machines. Earthquake damage reduced the number of functioning premises. The February 2011 earthquake closed, either permanently or temporarily, nine venues in the central business district, 15 venues in the eastern suburbs, and the Christchurch Casino.

No venues closed in the western suburbs as an immediate impact of the earthquakes. Analysis of gambling spending indicates that displaced users of damaged premises shifted their use of gaming machines to functional premises in the western suburbs.

In Kaiapoi, the September 2010 earthquake closed three of the four licensed gambling venues.

Air quality

Clean air contributes to quality of life, not only through supporting good physical health, but also through protecting or maintaining the “beauty of the natural and physical environment”. Air and air quality is a tāonga and part of the traditional kaitiakitanga for Māori.

Home heating is the main cause of air pollution in urban centres in winter and people’s heating decisions can present health risks to others. The main pollutant of concern is PM$_{10}$ (including PM$_{2.5}$) which is a mix of combustion particles, organic matter, metals, sulphates, nitrates, sea salt, and dust. PM$_{10}$ is emitted from the combustion of fuels, such as wood and coal (from home heating and industry) and petrol and diesel (from vehicles). PM$_{10}$ is associated with severe health effects such as cancer, respiratory problems, and cardiovascular disease. PM$_{2.5}$ comes mainly from human activities (home heating, transport, industry). Many of the main health effects attributable to particulates are more likely associated with the finer PM$_{2.5}$ component than the coarser particles within PM$_{10}$.

In mid-2012, the Canterbury District Health Board (Canterbury DHB) released a position statement acknowledging the considerable international evidence that air pollution causes excess morbidity and mortality, particularly through increases in the incidence of respiratory and cardiovascular illness. These effects are particularly concerning for the elderly and infants, people with asthma and other respiratory diseases, and sufferers of other chronic diseases, such as heart disease.

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<sup>a</sup>PM stands for Particulate Matter. PM$_{10}$ and PM$_{2.5}$ are often understood to mean particulate matter with a diameter of less than 10 millionths of a metre, and less than 2.5 millionths of a metre respectively. In fact, these definitions are simplifications. The official definitions can be found here: https://www.iso.org/obp/ui/#iso:std:iso:23210:ed-1:v1:en
The Government’s National Environmental Standards for Air Quality set national targets that polluted airsheds around New Zealand must meet. These include the World Health Organization guideline of 50 micrograms of PM$_{10}$ per cubic metre of air (µg/m$^3$) averaged over a 24-hour period. Days when this guideline is exceeded are referred to as high pollution days. Christchurch and Kaiapoi must reduce the number of high pollution days to meet a target of three days a year by September 2016 and one day a year from September 2020. Rangiora must meet a target of one day a year from September 2016.

Christchurch ratepayers have made a significant investment in cleaning up the air over the last 10 years. Before the earthquakes, the number of annual high pollution days in Christchurch fell from 60 to 16. Although considerable gains have been made, there is still some way to go to achieve the National Environmental Standards for Air Quality.

There is a great deal of uncertainty about how the earthquakes affected air quality. Although thousands of chimneys fell down, many were for unused open fires and therefore do not represent a gain for air quality. Concerns about future power outages as a result of the earthquakes led many households to continue using woodburners or to put woodburners back into homes.

In August 2012 the Institute of Environmental Science and Research (ESR) released a report on the health and other impacts of liquefaction silt following the Canterbury earthquakes. This report concluded that PM$_{10}$ from liquefaction silt has different physical and chemical properties from existing PM$_{10}$ in Canterbury, and resulting health impacts are unknown. The report recommended that silt should be removed as soon as possible if further liquefaction occurs.

The Earthquake Commission (EQC) Winter Heating Programme was established after the earthquakes. It offered people with damaged chimneys the choice of replacing their old log burners or open fires with a new, clean, efficient, heating system, with the cost being covered through their claim to EQC. In the first year after the February earthquake there were almost 13,000 clean heating repairs and replacements. By 30 January 2015, 19,172 repairs or replacements of heating appliances had been completed (10,666 heat pumps and 8,506 fires). This programme has now finished.

Warm homes

Many New Zealand homes do not meet World Health Organization recommendations for an indoor temperature of 18 degrees Celsius (and up to 21°C for the very young and the very old). A random sample of 400 New Zealand homes found that cold, damp homes have negative health effects, especially for older people, children and people with a health condition or disability. Those from the most deprived neighbourhoods spend a greater proportion of their income on home heating, and are more likely to be in debt to their electricity retailer. New Zealand’s past housing energy efficiency regulation has resulted in a housing stock with poor levels of insulation. The benefits of improved home insulation and more efficient heating include reduced health risks and lower heating costs.

In response to these issues, the Government introduced the Warm Up New Zealand: Heat Smart programme in 2009, which ran until June 2014, and the Warm Up New Zealand: Healthy Homes programme which began in September 2013 and concluded in June 2016. The Energy Efficiency and Conservation Authority (EECA) administered the Warm Up New Zealand: Heat Smart programme and provided $347 million over five years for insulation retrofits and clean, efficient heating grants into 241,000 homes nationally. The Government invested a further $100 million over the three years from July 2013 as part of its Warm Up New Zealand: Healthy Homes insulation programme. This programme aimed to insulate 46,000 low-income households in New Zealand by June 2016 but achieved more than 52,000 retrofits.

Thousands of homes lost their primary heat source in the earthquakes. In addition, roof leaks, blocked drains or ventilation blockage due to earthquake damage to homes may have caused dampness and mould. Earthquake-damaged houses may become more draughty and harder to heat.

Smoking

Tobacco smoking kills 5,000 New Zealanders a year. Up to two-thirds of regular smokers will be killed by their smoking. Smoking causes more loss of health than any other risk factor. Smoking contributes to six of the eight leading causes of death worldwide (ischaemic heart disease, cerebrovascular disease, lower respiratory infections, chronic obstructive pulmonary disease, tuberculosis and lung cancer). In New Zealand the main causes of smoking-related death are cancer, vascular diseases and respiratory diseases.
For Māori, the mortality rate from smoking is 10 per cent higher than for non-Māori. Across New Zealand, smoking prevalence for Māori (38.1 per cent) is 2.7 times greater than the rate for non-Māori, and for Pacific people, it is 1.4 times greater than for non-Pacific. After adjusting for age, sex and ethnicity, smoking prevalence is 3.1 times greater for those living in the most deprived neighbourhoods compared to the least deprived neighbourhoods.

The average age of starting smoking in New Zealand is 14.8 years. Children who have a parent who smokes are seven times more likely to become smokers. Smoking around children increases their risk of croup, bronchitis, pneumonia, meningococcal disease, ear infections, coughs, colds and wheeze. Smoking around infants increases the risk of sudden unexpected death in infancy.

Although prevalence has reduced over time, 16.6 per cent of New Zealanders 15 years or older smoke at least monthly. The 2013 Census showed that 14.5 per cent of the greater Christchurch population aged 15 years and over were daily smokers, compared with 15.1 per cent of the New Zealand population.

Internationally, rates of smoking have tended to increase after a natural disaster. Christchurch research following the earthquakes indicated that many ex-smokers resumed smoking after the earthquakes. The research also found that many residents who were smokers pre- and post-earthquakes increased the number of cigarettes they smoked and over half cited the earthquake and subsequent lifestyle changes as a reason for the change. GP-reported smoking data for Canterbury showed a slight increase in smoking in 2011, which subsequently tracked downwards.

**Obesity**

Obesity is defined as an excessively high amount of body fat in relation to lean body mass. Obesity is associated with an increased risk of a number of health conditions, including type 2 diabetes, ischaemic heart disease, high blood pressure, cancers, arthritis (especially osteoarthritis) and stroke.

Rates of obesity have increased in almost all countries in the past 3-4 decades. Most of this increase has been attributed to increased access to foods that are more processed, affordable, and effectively marketed. Energy-dense and nutrient-poor foods have become by far the most affordable way to meet daily calorie needs compared to nutrient-rich and high-quality foods, resulting in low income groups having a poorer diet than high income groups. Eating a healthy diet and getting regular physical activity can help maintain a healthy body size. Policies and programmes that make it easier to eat healthily and exercise regularly are required to reduce obesity at the population level.

New Zealand has one of the highest rates of obesity in the world. The latest results from the New Zealand Health Survey show that in 2014/15 just over three in ten adult New Zealanders were obese. In terms of numbers, most of the 1.1 million obese adults in New Zealand are of European/Other ethnicity (816,000 adults). However, rates of obesity are highest in Pacific adults (66 per cent) and Māori adults (47 per cent). Obesity rates are strongly associated with socioeconomic deprivation. After adjusting for age, sex and ethnicity, the obesity rate for adults living in the most deprived neighbourhoods is 1.7 times greater than for adults living in the least deprived neighbourhoods. Children living in the most deprived neighbourhoods are five times more likely to be obese than children living in the least deprived neighbourhoods.

It has been suggested that levels of obesity may increase because disasters trigger a survival instinct which may cause people to consume more calories. A research study of Canterbury women found that before the earthquakes eating habits were fairly stable. Following the February 2011 earthquake, emotional eaters who reported high levels of post-earthquake distress reported an increase in overeating.

**Hazardous drinking**

Alcohol is the most commonly used recreational drug in New Zealand. New Zealand Health Survey data indicate that in 2014/15 17.7 per cent of New Zealand adults drank alcohol at a level that is hazardous to their health. The survey data indicates that there was a significant increase in the rate since 2011/12, and a small but not significant increase since 2013/2014. The survey data also indicate that those living in the most deprived neighbourhoods, men, Māori, and Pacific peoples, have higher rates of hazardous drinking. Alcohol is causally related to over 60 different health conditions and for almost all of these conditions, heavier alcohol use means higher risk of disease or injury.
It is estimated that between 600 and 1,000 people die from alcohol-related causes each year in New Zealand.\textsuperscript{35}

Alcohol also contributes to death and injury through traffic accidents, drowning, suicide, assault and domestic violence.\textsuperscript{36} Up to 35 per cent of injury-based emergency department presentations are estimated to be alcohol-related, rising to up to 70 per cent during the weekend.\textsuperscript{36} New Zealand Police estimate that approximately one-third of all apprehensions involve alcohol.\textsuperscript{37}

Many studies suggest that disasters can lead to increased alcohol use and abuse.\textsuperscript{38} In greater Christchurch there were anecdotal reports of heavy alcohol use and domestic violence following loss of employment immediately after the earthquakes.\textsuperscript{39}

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**What is happening now?**

**Problem gambling**

As of April 2016, 90 venues in Christchurch city were operating with 1,356 gaming machines, which remains lower than before the earthquakes. Just over 8.3 per cent of all gaming machines in New Zealand are located in Christchurch. Total greater Christchurch gaming machine proceeds for 2015 were $89,586,768.82, accounting for 10.8 per cent of the national total.\textsuperscript{40} This is slightly higher than greater Christchurch’s proportion of the total New Zealand population, which is 10.4 per cent.\textsuperscript{41}

The Multi Venue Exclusion programme was introduced to Canterbury in 2012. Under this programme, people who have recognised that their gambling has become a problem can choose to exclude themselves from several venues at once without having to visit each venue separately to do so.

The Ministry of Health recently released the Strategy to Prevent and Minimise Gambling Harm 2016/17 to 2018/19.\textsuperscript{42} The strategy “sets out the Ministry’s approach to and budget for funding and coordinating services to prevent and minimise gambling harm”. The following services are involved in the strategy: public health; intervention; research; evaluation; and workforce development.\textsuperscript{42}

**Air quality**

In 2014 Environment Canterbury released a discussion document on a review of the Canterbury Air Plan and in early 2015 a proposed plan was publically notified. This proposed plan addresses air quality issues associated with home heating, industry, outdoor burning, odour and dust. In relation to home heating the plan provides for wood burning into the future through requiring a combination of both better burning and better burners.\textsuperscript{43} As part of the Air Plan review, Environment Canterbury in conjunction with the Canterbury DHB finalised a health impact assessment for wood burning households. This provided further insight into which parts of the community were vulnerable in relation to heating issues and where assistance should be focused, and informed policy development. A key recommendation from this study was that a cross-organisational approach was required to assist these households.

During winter 2016 the priority for Environment Canterbury is for people to keep warm. For those who are not able to replace a non-compliant woodburner there are home heating subsidies available. Community Energy Action is able to undertake home energy checks and banks are supporting the programme, offering financial solutions for both heating and insulation through putting costs on existing mortgages.

Environment Canterbury may be able to offer leniency for households that cannot upgrade their burner this winter if they are still waiting for decisions on their earthquake repairs, if they are experiencing financial difficulty or if they are awaiting the permit for installing a new appliance.

**Warm homes**

A change to the Earthquake Commission’s rules around the Canterbury earthquake repairs process has allowed customers the opportunity to install insulation in areas exposed during earthquake repairs, even if the insulation work is not earthquake related. Home owners are responsible for organising and paying for any insulation that has not been installed in the house already. The initiative has been a collaboration between the Earthquake Commission’s Canterbury Home Repair Programme and EECA.
The Build Back Smarter project has also meant homeowners are able to get a prioritised plan for making their homes warmer, drier, healthier and more efficient during the rebuild process.

The Warm Up New Zealand: Healthy Homes programme offered free ceiling and underfloor insulation to low income households with occupants at risk from illnesses linked to cold, damp housing. This includes low income households with children under 17 and elderly residents over the age of 65. EECA partners with service providers, third-party funders and health and social agencies to ensure that eligible low income households are identified and their houses are insulated for free. By end of June 2016, insulation had been installed in 4,546 homes in greater Christchurch.

This work is on top of the five-year Warm Up New Zealand: Heat Smart programme (which ended in June 2014) installing insulation in 22,277 rented and owned homes in addition to the installation of 8,965 clean and efficient heaters.

Environment Canterbury is continuing to work with partners such as Community Energy Action to support low income households with free home energy checks and where needed, help with insulation and curtains and financial assistance for replacing older woodburners with more efficient technology. Eight ultra-low emission woodburners have been made available to the market and these are available for installation in all homes, even new homes in Christchurch, Rangiora and Kaiapoi.

‘Let’s Find & Fix’ was a community-led initiative launched in April 2014, which aimed to identify earthquake-damaged homes that needed temporary repairs to keep them safe, secure and weather tight. This campaign, initiated by Canterbury Communities’ Earthquake Recovery Network (CanCERN), was supported by CERA, Red Cross, Community Energy Action, EQC and Insurance Council of New Zealand members. At the conclusion of the initiative in January 2015, repairs had been made to 400 homes.

The EQC and EECA Warm Up New Zealand: Heat Smart programme installed clean heating options in both rental and owner-occupied homes in greater Christchurch. The EQC Winter Heating programme spiked in September 2011, with 2,016 installations completed after the February earthquake. Between March 2011 and January 2015, EQC installed 19,172 clean heating appliances in greater Christchurch. The Winter Heating Programme was discontinued in February 2015.

As part of the Warm Up New Zealand: Heat Smart programme, EECA installed heating appliances in 8,965 greater Christchurch homes between January 2010 and the closure of this programme in June 2014 (and insulation in over 22,000 homes).

Smoking

Smokefree Canterbury provides a range of initiatives to support progress to Smokefree Aotearoa 2025. The Canterbury DHB and the Canterbury Primary Health Organisations (PHOs) work alongside other organisations interested in smokefree to achieve a common strategic direction and co-ordinated activity in smokefree.

All primary and secondary care health services have focused on identifying patients who smoke, providing them with advice to quit and offering support by referring them to cessation services. Canterbury people are high users of the Quitline service and the three Canterbury PHOs all provide GP practice based cessation services. The PHOs have recently revised their cessation services, developed and provided new training modules to practice staff, and developed systems to ensure all patients who smoke are provided with appropriate cessation support. The revamped PEGS programme is delivered in Pegasus practices, Rural Canterbury have appointed a cessation specialist who takes referrals on behalf of practices and Christchurch PHO has made improvements to their cessation provision. Enrolments in these general practice-based cessation programmes have increased substantially in recent years. Pharmacy in Canterbury is active in smokefree and provides brief advice and support and access to nicotine replacement therapy.

Mental Health services, including Mental Health NGOs are working to address the needs of their clients who smoke. A mental health smokefree group has formed, and most of the organisations have a smokefree policy in place, and some have residential services that are now fully smokefree. Many social service agencies also work to motivate their clients to quit and refer them to a cessation service. Schools, workplaces and sports clubs are also encouraged to consider their practices around smokefree and establish systems whereby trained staff can motivate and provide back-up support for those wishing to quit.

The Canterbury DHB continues to work to reduce the visibility of smoking by partnering with local government on providing smokefree public spaces. The Christchurch City Council (CCC) has recently
extended its smokefree policies to the entrances and exits to council buildings and bus passenger shelters and the Selwyn District Council recently endorsed the national Smokefree 2025 goal. The CCC has also established a smokefree social housing initiative, in which all new and refurbished housing stock is smokefree and prospective and current tenants encouraged and supported to stop smoking. These initiatives continue to encourage smokefree environments, with a particular focus on places where children and young people gather. In Ashburton, several cafés have gone fully smokefree.

Research has identified that the trend of modestly declining national smoking prevalence in Census and New Zealand Health Survey data is inadequate to achieve the smokefree 2025 goal. Similar modest trends are found for smoking prevalence in Canterbury, and are presented in the following section.

**Obesity**

Some local initiatives that encourage healthier diets and more physical activity are Health Promoting Schools, Appetite for Life, and Green Prescription programmes. Pegasus Health has endorsed a focus on Child and Youth Health for the next three to five years, of which one of the key areas of action will be childhood obesity.

The Healthy Families Spreydon-Heathcote team works collaboratively with local leaders and organisations to identify, design and implement changes to help people make healthier choices and live healthier lives. The aim is to slow the growth of obesity and chronic disease by supporting families and communities to eat well, be physically active, be smoke-free, and to only drink alcohol in moderation.

Healthy Families Spreydon-Heathcote works with early childhood education, schools, workplaces, food outlets, sports clubs, marae, businesses, places of worship, local governments, health professionals and more to create healthier environments for all. Canterbury DHB is working collaboratively with Healthy Families Spreydon-Heathcote.

**Hazardous drinking**

The CCC has developed a local alcohol policy (LAP) with tougher rules on where and when alcohol can be sold in Christchurch. The LAP is a provision of the Sale and Supply of Alcohol Act 2012. It enables the council to regulate opening hours for licensed premises, control location, and implement one-way door restrictions in late-night bars and clubs. The draft LAP was out for consultation between May and June 2013.

In October 2013, the council committee reviewing the LAP concluded deliberations on the 4,060 submissions it received and recommended that the incoming Christchurch City Council publicly notify the provisional LAP sometime after 18 December 2013 as allowed under the Sale and Supply of Alcohol Act 2012. Christchurch City Council approved notification of its provisional LAP on the 28 May, 2015 at which point 19 appeals were lodged against the provisional LAP (pLAP). A provisional date of 3 October 2016 has now been established for the pLAP appeals to be heard.
What are the indicators telling us?

Problem gambling help seeking

We are measuring this in two ways:

- the number of new callers recorded in the Gambling Helpline database
- the number of clients seeking help from face-to-face problem gambling intervention services funded by the Ministry of Health.

Figure 1 shows that the general pattern for new client calls to the Gambling Helpline from New Zealand and greater Christchurch residents has been a decline since 2008, and no substantial change from June 2013 to June 2015. In greater Christchurch, 34 new clients called the Gambling Helpline from June 2014 to 2015, making up 2.4% of the 1,439 new clients who called the Gambling Helpline in the same period nationally. Numbers increased slightly (2 per cent) between 2010 and 2011 after a general pattern of decline, in line with the national trend.

Figure 1: Number of new clients that have contacted Gambling Helpline
Figure 2 shows the number of people accessing face-to-face problem gambling services decreased substantially between June 2010 and June 2012 in greater Christchurch, while it remained relatively steady nationally. In contrast, between June 2013 and 2014 there was an increase both in greater Christchurch and nationally. From June 2014 to June 2015, the number of people accessing face-to-face problem gambling services continued to increase in greater Christchurch, to nearly equal the figure for June 2010, while nationally there has been little change in the past year. This June 2014 to June 2015 pattern is in contrast to the number of new clients that have contacted Gambling Helpline in the same period, shown in Figure 1.

**Figure 2: Number of problem gamblers assisted by an intervention service**

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**Air quality**

Air quality breaches are measured as the number of days the particulate level exceeds the daily level for particulate matter (PM$_{10}$ of 50µg/m$^3$) each year.

Figure 3 shows the number of high pollution days each year. The number of days that exceed the standard vary annually and are affected by the weather. Typically, high pollution days occur on still, cold winter nights when households burn wood for heating.

Environment Canterbury reported that 17 of the 32 high-pollution days recorded in Christchurch during 2011 were influenced by liquefaction silt and dust on roads. It was during this time that strong winds blew dry liquefaction silt around. Traffic also moved silt and finely ground gravel on roads into the air, which increased the number of days of air quality breaches in Christchurch during 2011.

In 2015 there were eight high pollution days in Christchurch. This was substantially fewer than the 19 breaches recorded in 2014, and less than the number of exceedance days recorded prior to the earthquakes in 2009 (16 breaches). In 2015, Rangiora equalled its lowest number of exceedances achieved in 2014, with three. Kaiapoi achieved its second lowest number of exceedances in 2015 with 13 days, compared with 11 days in 2013 and 14 days in 2014.

The maximum concentration of 71µg/m$^3$ of PM$_{10}$ measured in 2015 in the Christchurch airshed was lower than the maximum measured in any other year. Kaiapoi and Rangiora also achieved their lowest maximum concentrations on record with Rangiora at 55µg/m$^3$ and Kaiapoi 70µg/m$^3$.

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In 2015 there were eight high pollution days in Christchurch. This was substantially fewer than the 19 breaches recorded in 2014.
While an improvement in air quality is evident since the early 2000s, it is less apparent in recent years. In a few more years it will become clearer whether or not the decline in 2015 is part of a long-term trend. For the current year, as of the 19 August, 2016, Christchurch has had five high pollution days, Rangiora has had six, and Kaiapoi has had seven.

Figure 3: Number of days of air quality breaches each year
Warm homes

The Warm Up New Zealand: Healthy Homes programme has been offering free ceiling and underfloor insulation to high-risk households. Figure 4 shows that the number of installations reached a peak of 293 per month in September 2014. As of February 2016, 4,123 homes in greater Christchurch have had insulation installed as part of this programme.

Figure 4: Number of insulation installations. Warm Up New Zealand: Healthy Homes programme

Smoking rates

We are measuring this in three ways:

- youth smoking – measured as the proportion of the Year 10 population who smoke every day
- adult smoking – the proportion of the adult population presenting to their general practitioner (GP) who are current smokers
- adult smoking – the proportion of the adult population who are current smokers from the New Zealand Health Survey.

Figure 5 shows that the proportion of Canterbury Year 10 students (aged 14 or 15 years) who smoke every day has generally declined over time, consistent with national trends. In 2015, the daily smoking rate was 2.3 per cent, significantly lower than the rates from 2008 to 2011. Similarly, results from the New Zealand Health Survey indicate that the proportion of Canterbury young people aged 15–24 years who currently smoke at least monthly has declined from 18.6 per cent in 2006/07 to 10.9 per cent in 2014/15, although this decline is not statistically significant.

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Although installations are free for eligible house owners, landlords may be asked to make a contribution.

There has been a trend of increasing completeness of this data. The most recent year’s worth of data is around 90 to 92 per cent complete. Those not enrolled in a PHO and those with no smoking status recorded may be more likely to be smokers.

The New Zealand Health Survey defines a current smoker as someone who smokes at least monthly, and who has smoked a total of at least 100 cigarettes in her or his whole life.

The New Zealand Health Survey can only identify large regional differences as statistically significant, due to the small size of the regional sample.
Figure 5: Proportion of the Year 10 population who are daily smokers

Figure 6 shows that the proportion of the adult population (ages 15–74) registered at Pegasus Health PHO who reported to their GP that they ‘are current smokers’ increased slightly after the February 2011 earthquakes to just over 20 per cent by April 2011. The proportion has since dropped to 15.1 per cent in October 2015.

Figure 6: Proportion of adult population enrolled at Pegasus Health who are current smokers (GP reported data)

This decline in GP-reported adult smoking is consistent with results from the New Zealand Health Survey (Figure 7), which found that the Canterbury region’s rate of adult smoking (at least monthly) decreased from 18.4 per cent in 2006/07 to 13.1 per cent in 2014/15 (compared with 16.6 per cent across New Zealand). This represents a 28.8 per cent decrease in smoking rates in Canterbury during this period, compared with a 17.4 per cent decrease across New Zealand. These data are also consistent with the Census data, which have shown that the proportion of daily smokers in Canterbury has decreased from 18.8 per cent in 2006 to 14.5 per cent in 2013.

The Canterbury region’s rate of adult smoking decreased from 18.4 per cent in 2006/07 to 13.1 per cent in 2014/15 (compared with 16.6 per cent across New Zealand).

This decrease is not statistically significant.

Figures reported are unadjusted rates from the New Zealand Health Survey (customised data request).
Obesity

Figure 7 presents data from the New Zealand Health Survey which indicates that the prevalence of obesity in Canterbury decreased from 30.7 per cent in 2012/13 to 25.7 per cent in 2014/15, slightly higher than the 2006/07 prevalence of 24.3 per cent. For the total New Zealand adult population, the prevalence of obesity increased from 26.5 per cent in 2006/7 to 31.3 per cent in 2012/13, and was 30.7 per cent in 2014/15.¹

Hazardous drinking

Figure 7 shows that in Canterbury and New Zealand, there was a decrease in self-reported hazardous drinking rates from 2006/07 to 2011/12. In Canterbury, the rate remained around 10 per cent from 2011/12 to 2013/14 before increasing to 15.9 per cent in 2014/15. For New Zealand, the self-reported rate of hazardous drinking has steadily increased from 14.9 per cent in 2011/12 to 17.7 per cent in 2014/15, which is similar to the rate in 2006/07 of 18.0 per cent.¹

Figure 7: Proportion of Canterbury (CDHB) and New Zealand residents (15+ years) who are current smokers, obese, or hazardous drinkers

¹ Figures reported are unadjusted rates from the New Zealand Health Survey (customised data request).
<table>
<thead>
<tr>
<th>Year</th>
<th>Current smoking % (95% CI)</th>
<th>Obesity % (95% CI)</th>
<th>Hazardous drinking % (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006/07</td>
<td>18.4 (15.4-21.6)</td>
<td>24.3 (21.7-27.2)</td>
<td>18.8 (17.2-18.9)</td>
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<tr>
<td>2011/12</td>
<td>15.9 (12.8-19.5)</td>
<td>24.1 (20.7-27.8)</td>
<td>9.6 (7.4-12.4)</td>
</tr>
<tr>
<td>2012/13</td>
<td>14.8 (12.5-17.4)</td>
<td>30.7 (26.3-33.8)</td>
<td>9.4 (7.5-11.6)</td>
</tr>
<tr>
<td>2013/14</td>
<td>14.1 (11.4-17.4)</td>
<td>30.1 (26-34.6)</td>
<td>10.2 (7.6-13.6)</td>
</tr>
<tr>
<td>2014/15</td>
<td>13.1 (10.5-16.3)</td>
<td>25.7 (22.4-29.2)</td>
<td>15.9 (12.8-19.7)</td>
</tr>
</tbody>
</table>

Find out more

Find out more about the Canterbury Wellbeing Index: [www.cph.co.nz/your-health/canterbury-wellbeing-index/](http://www.cph.co.nz/your-health/canterbury-wellbeing-index/)

Ring the Gambling Helpline on 0800 654 655 or visit the website: [www.gamblinghelpline.co.nz/](http://www.gamblinghelpline.co.nz/)

Find out more about problem gambling, including how to seek help in Canterbury and other parts of New Zealand, from the Health Promotion Agency’s Choice Not Chance website: [www.choice-not-chance.org.nz](http://www.choice-not-chance.org.nz)

Find out more about actions to eliminate disease and death caused by tobacco from ASH New Zealand: [www.ash.org.nz](http://www.ash.org.nz)

Ring the smoking Quitline on 0800 778 778 or visit the website: [www.quit.org.nz](http://www.quit.org.nz)

Find out more about the National Environmental Standards for Air Quality from the Ministry for the Environment: [www.mfe.govt.nz/laws/standards/air-quality](http://www.mfe.govt.nz/laws/standards/air-quality)

Find out more about air quality in greater Christchurch, including air quality rules and policy, from Environment Canterbury: [http://ecan.govt.nz/services/online-services/monitoring/air-pollution/Pages/Default.aspx](http://ecan.govt.nz/services/online-services/monitoring/air-pollution/Pages/Default.aspx)


Find out more about the effect of alcohol on health: [www.alcohol.org.nz/alcohol-its-effects](http://www.alcohol.org.nz/alcohol-its-effects)


Technical notes

Problem gambling prevalence

**Data source:** Ministry of Health administrative data

**Data frequency:** Year ending June

**Data complete until:** June 2015

**Notes:** Gambling Helpline data represent clients who are first time callers

The intervention client data represent the number of clients who have received problem gambling treatment services and who have identified to the service provider a primary problem gambling mode causing them significant harm.

A direct comparison between the July 2004 to June 2008 data and the July 2008 to June 2012 data has limitations because 1) new service specifications for problem gambling intervention service providers were implemented from January 2008 and 2) equivalent intervention services provided by the Gambling Helpline have been included in the data since November 2008.

Air quality breaches

**Data source:** Environment Canterbury air quality monitoring data

**Data frequency:** Data collected daily and reported annually in this report

**Data complete until:** December 2015

**Notes:** Environment Canterbury monitors air quality for three airsheds in the greater Christchurch area: Rangiora, Kaiapoi, and Christchurch city. PM$_{10}$ in Christchurch city is measured at two locations: St Albans and Woolston. Data for Christchurch city come from the maximum reading from the two locations in the city. The data reported are the 24-hour average PM$_{10}$ concentrations from midnight in µg/m$^3$.

The critical value for an exceedance is 50 µg/m$^3$, so the daily concentration has to be greater than 50 µg/m$^3$. Environment Canterbury reports there is uncertainty in measuring the PM$_{10}$ concentrations (+/- 2 µg/m$^3$), so it reports PM$_{10}$ concentrations in whole numbers. We have used the same method as Environment Canterbury and count the day as an exceedance if the PM$_{10}$ concentration is greater than or equal to 50.5 µg/m$^3$.

EECA Warm Up New Zealand: Healthy Homes programme

**Data source:** Energy Efficiency and Conservation Authority

**Data frequency:** Data collected monthly

**Data complete until:** February 2016

**Notes:** *Warm Up New Zealand: Healthy Homes* is a three-year (2013/14 to 2015/16) government insulation programme delivering warmer, drier and healthier homes. The programme is targeted at households (including renters) that have a Community Services Card and are at high health risk. Only subsidised insulation retrofits are included in the data.

Apportionment changes have been made at a Territory Authority level to better align with ECCA’s monthly reporting. Greater Christchurch is the aggregation of Christchurch city and Waimakariri and Selwyn districts. For more information on TLA boundaries please visit - [www.lgnz.co.nz/home/nzs-local-government/new-zealands-councils/](http://www.lgnz.co.nz/home/nzs-local-government/new-zealands-councils/) This data is accurate at the date of reporting and is subject to change. Note that this data is published ‘live’ from EECA’s grants management database. As such corrections or adjustments to claims will result in small variations between the monthly data released to Canterbury DHB this year when compared to the data released last year.
Smoking rates for youth from the Year 10 ASH Snapshot Survey

Data source: ASH New Zealand
Data frequency: Data collected annually
Data complete until: 2015

Notes: The Year 10 ASH Snapshot Survey has been used to monitor student smoking since 1999. The ASH survey samples approximately half of the schools in New Zealand with Year 10 students annually, and reports results for students who were 14 or 15 years of age at the time of the survey. The indicators are based on the results that are estimates for the whole population based on the Year 10 sample.

The survey normally takes place in Term 3. In 2011 it was changed to Term 2. In 2011, Term 2 went from 2 May to 15 July. In 2010, Term 3 ran from 1 August to 7 October.

Daily smokers are those students who reported that they smoke ‘at least once a day’ when asked, “How often do you smoke now?”

The Canterbury area refers to the Canterbury District Health Board boundaries.

PHO smoking rates for adults

Data source: Pegasus Health, Primary Health Organisation
Data frequency: Data collected quarterly
Data complete until: October 2015

Notes: This is measured as the proportion of the adult population (15–74 years) who are current smokers in the Canterbury District Health Board area. The data are provided by GPs. The smoking rate is based on all patients with a current smoker status recorded. As of October 2015 91.7 per cent of the adult population registered with Pegasus Health had a smoking status recorded.

Prior to 30 September 2015, Pegasus Health sourced the data from the Integrated Performance and Incentive Framework. Since October 2015, Pegasus Health has been unable to source data using the same method, so has sourced it internally.

New Zealand Health Survey: Results for smoking, obesity and hazardous alcohol use

Data source: Ministry of Health
Data frequency: Data collected 2006/07, 2011/12, 2012/13, 2013/14, and 2014/15
Data complete until: 2014/15

Notes: The New Zealand Health Survey has a multi-stage, stratified, probability-proportional-to-size sampling design. The survey is designed to yield an annual total sample size of approximately 13,000 adults and 4,500 children.

A dual frame approach has been used where participants are selected from an area-based sample and a list-based Electoral Roll sample. The aim of this approach is to increase the sample sizes for Māori, Pacific and Asian ethnic groups.

Interviews are conducted in participants’ homes, with the interviewer typing responses directly into a laptop computer using ‘Survey System’ computer-assisted personal interview software. Showcards with predetermined response categories are used to assist respondents, where appropriate.

Current smoker, based on the World Health Organization definition, is someone who has smoked more than 100 cigarettes in their lifetime and is currently smoking at least once a month.

Obesity is defined as a body mass index (BMI) of 30 or more. Survey interviewers measured respondents’ height and weight, from which BMI could be calculated. BMI is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. It is defined as a person’s weight in kilograms divided by the square of their height in metres (kg/m²). According to the World Health Organization 48
• a BMI greater than or equal to 25 is overweight  
• a BMI greater than or equal to 30 is obesity.

BMI provides the most useful population-level measure of overweight and obesity as it is the same for both sexes and for all ages of adults. However, it should be considered a rough guide because it may not correspond to the same degree of fatness in different individuals and ethnicities.

**Hazardous drinking** is defined as a score of 8 or more on the 10-question Alcohol Use Disorders Test (AUDIT), which includes questions about alcohol use, alcohol-related problems and abnormal drinking behaviour. Hazardous drinking refers to an established drinking pattern that carries a risk of harming the drinker’s physical or mental health, or having harmful social effects on the drinker or others.

This score indicates a potentially hazardous drinking pattern with high risk of future damage to physical and/or mental health due to drinking alcohol, but may not yet have resulted in significant adverse effects.
References


Canterbury Wellbeing Index

Offending patterns

The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why are offending patterns important?

Offending and people's fear of offending affect the wellbeing of individuals and communities. People who hold fears for their personal security can have a lower quality of life and a decreased sense of wellbeing, and may find it difficult to participate fully in their community.\(^1\)\(^2\)

Similarly, where offending in a community is perceived to increase or actually does increase, the community may become less appealing for new residents and/or for people who go there for recreation or shopping.\(^3\)\(^4\)\(^5\) In contrast, communities with low levels of offending attract greater investment from the private sector, which in turn creates more employment opportunities and a higher quality of life as the community is more stable and healthier.\(^6\)\(^7\)\(^8\)

Offending patterns are associated with poverty, exclusion, and low quality of life. Conditions that make offending more likely are high levels of unemployment, low incomes, low educational achievement, and difficult early family circumstances, including abuse and neglect.\(^9\)\(^10\)\(^11\)

In addition to preventing people from starting a life of offending, significant social and economic resources are invested in reducing re-offending. Experts agree that crime is linked to unemployment, low earnings, and job instability, and that gaining stable employment is 'an important step away from offending'.\(^12\)

The path to employment is smoother where the released prisoner has overcome any substance abuse issues, has found stable housing, and has significant support to reintegrate into the community.\(^13\) It is also beneficial if they receive training before they are released so that they have skills required in the labour market, and if local employers are prepared to employ ex-prisoners.\(^14\)

According to the New Zealand Crime and Safety Survey, in 2013 Māori were more likely to experience all types of crime than the New Zealand average; 33 per cent compared to 24 per cent.\(^15\) For European New Zealanders, the figure was 23 per cent. After controlling for age and socioeconomic deprivation, the difference between Māori victimisation and European victimisation dropped from 10 percentage points to 3 percentage points, but was still statistically significant.

The survey also found that compared to the New Zealand average: people aged 65 and over were less likely to be the victims of crime. The groups more likely to be the victims of crime were those aged under 40; one-parent households; and people experiencing financial hardship or living in more highly socioeconomically deprived areas.\(^15\)

How were offending patterns impacted by the earthquakes?

As would be expected, the number of calls to emergency services in the immediate aftermath of the September 2010 and February 2011 earthquakes was high. These calls largely related to earthquake needs rather than criminal activity. Fewer calls were received after the 6.3 aftershock in June 2011.

In the aftermath of some disasters such as Hurricane Katrina in New Orleans, violence and property crime spiked immediately and later fell to a lower rate than before the disaster.\(^16\) However, the context in New Orleans before the disaster was quite different from that in greater Christchurch. It is more typical for crime rates to drop after disasters and return to usual levels within six months to a year.\(^17\) One study analysing crime trends in Florida post natural disasters for the period 1991 to 2005 found that reported index, property, and violent crimes significantly decreased, but reported domestic violence crimes significantly increased.\(^4\),\(^18\)

\(\text{Index crimes were a broad category, including murder, sexual assault, assault, robbery, and theft. Property crimes and violent crimes were a subset of the above. Domestic violence crimes included relevant crimes from the above categories, and other domestic crimes not included above.}\)
In greater Christchurch, the New Zealand Police (the Police) recorded a significant fall in total crime in the year following the September 2010 earthquake. Expressed as a rate per 10,000 of population, total recorded crime for the three years before the earthquake was 1,073 offences per 10,000. The rate for the year after the September 2010 earthquake dropped to 876 offences per 10,000 people.19

Burglary rates fell in a similar way to the rate for crime overall.19

There are likely to be many reasons for this reduction in criminal behaviour. For example, after the earthquakes many people moved away from greater Christchurch and the communities that remained became more connected. In addition, after the February 2011 earthquake, the central business district, historically a high crime location, was closed and extra police and military personnel from around New Zealand and other countries provided a reassuring presence to the community.

With the central business district closed, some of the criminal activities that are usually associated with centres of nightlife moved to other areas such as the entertainment hubs of Riccarton and Merivale.

Researchers have found that immediately after other disasters, family violence rates have increased.20,21,18 Police data however suggest that in the immediate post-earthquake period greater Christchurch may not have followed this pattern.

Total reported family violence offences did increase in the month of the September 2010 earthquake (434 compared with 291 in September 2009). However, no increase was apparent immediately after the February 2011 earthquake and comparatively low levels of offences were reported in each of the four months following.22 Yet, these figures may not be an accurate record of offending; it is possible that reporting was lower due to other pressures caused by the earthquake. It is estimated that even in ‘normal times’ only 18 per cent of family violence events nationally are reported to the Police.23

Women’s refuge providers supported the view that rates of reporting may have been affected by the earthquakes. Their experience was that victims were less able to seek help due to many stressors, including damaged homes, lost employment, and more frequent risk behaviours such as hazardous drinking.24,25 Anecdotally, social services reported that cases became more complex with the addition of earthquake-related stress.26

Like many other sectors, the justice sector experienced significant damage to infrastructure in the earthquakes. After losing its facilities, the Ministry of Justice opened a criminal court at Ngā Hau e Whā National Marae which operated until May 2013. Social agencies based at the marae reported that this created stronger links with the community and across agencies.

Currently under construction to be completed in 2017, the Christchurch Justice and Emergency Services Precinct will bring together all justice and emergency services in one purpose-built, world-class precinct. The precinct will help provide better public services and support agencies in their work to reduce crime and re-offending.

What is happening now?

In 2014, New Zealand Police changed the way it recorded crime statistics to capture more information and remove some statistical bias. New Zealand Police provide crime data to Statistics New Zealand, which is now the primary agency from which the public can access crime data. As a result of this change, it is no longer possible to present continuous time series for these data from the period prior to the earthquakes.27 Prior to this change, following the earthquakes, total crime patterns in greater Christchurch appeared to deviate from the trends evident after disasters overseas. Total assault and property-related crime decreased significantly since the start of the earthquakes in September 2010 and as of December 2014 was 12 per cent below pre-earthquake levels.28

Police note that challenges faced by people in the community such as housing pressures, growth in internal and external migrants, potentially earthquake-related mental health illness, and changing alcohol and drug use patterns have provided a more challenging policing environment.

Police continue to focus on the five drivers of crime, which are addressed through the ‘Prevention First’ operating strategy and a focus on victims. In 2015 Police launched ‘Policing Excellence: the Future’, a multi-phased programme of work. One theme of this initiative is Safer Whānau. Overall, ‘Policing Excellence: the Future’ is about looking at opportunities to deliver sustainable policing

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1 Overall burglary rates are total, and include both households and business related burglaries.
services into the future and addressing challenges such as the rates of violent crime. Police continue to focus on the goal of reducing total reported crime by 20 per cent by 2018.

In response to little change in the incidence of family violence, despite high level Government spending to tackle the problem, the Integrated Safety Response (ISR) pilot was commenced in Christchurch in July 2016. This pilot is part of a range of initiatives in the Government’s cross-agency approach to stopping family violence and sexual violence, reducing the harm they cause, and breaking the cycle of re-victimisation and re-offending. The ISR involves collaboration between Police, CYF, Corrections, Health, specialist family violence NGOs, and kaupapa Māori services.

A key feature of the collaboration is the identification of ‘high risk’ victims and the provision of an independent family violence specialist to support these victims to reduce the risk of further violence. The new approach has a family/whānau focus – it aims to assess and support the whole family’s needs. The year-long Christchurch pilot will provide an opportunity to test and review the new approach to ensure a new national model is robust, adaptable, and makes a real difference to the lives of victims and families.

The Department of Corrections (Corrections) is working to assist more offenders to find employment when they are released from prison. Among other forms of education, prisoners who meet certain criteria can participate in Trade and Technical National Certificates approved by the New Zealand Qualifications Authority, as well as in industry training qualifications.

Under the Better Public Services results action plan, the Government has set a target of reducing re-offending by 25 per cent by June 2017.

The repair and rebuild offers significant opportunities for employment. In response, Corrections is providing rebuild-related training to prisoners, in areas such as light engineering, painting and decorating, timber joinery, and grounds maintenance. Canterbury prisons have restructured their industry training courses to align with rebuild activity, enabling prisoners and community offenders to contribute to the community in a meaningful way while gaining highly employable trade skills.

The Rolleston Construction Yard project is a partnership between Housing New Zealand (HNZ) and Corrections to provide prison offenders with qualifications and skills for employment, as they rejuvenate social housing stock and contribute to the Canterbury rebuild.

By early 2016, 40 houses had been re-clad, re-wired, re-plumbed, insulated, re-plastered, and re-painted, with new or modernised bathrooms, toilets, and kitchens and new floor coverings. These are being returned to the social housing pool by Housing New Zealand. Rolleston Prison has a further stockpile of houses, relocated from the red zone, waiting to be transported into the construction yard for refurbishment work. Through this initiative, prisoners are learning employable trade skills, including painting, plastering, carpentry, and timber joinery. Instructors on the site are also receiving literacy and numeracy education as this is embedded into their trade training.

Corrections are working closely with other social agencies, especially Work and Income, to ensure that offenders in the community and prisons are work ready to gain employment and help with the Canterbury rebuild. This includes assisting in the development of CVs and interview skills.

Site sharing by Corrections and Police, since the Canterbury earthquake, has led to improvements in the sharing of information and intelligence, and joint projects targeting at-risk groups, for example learner drivers, Māori youth, and returned offenders.

What are the indicators telling us?

For the period up until 2014, offences and apprehensions data included in this Index (figures 1, 3-5) are from New Zealand Police statistics. From 2015 onwards, this Index uses New Zealand Police data stored by Statistics New Zealand. From 2014, the New Zealand Police changed the methodology of how they record crime statistics, making it difficult to compare data pre and post this change, therefore data up until 2014, and data from 2015 onwards are displayed in separate figures.
Offences usually reported to the Police

For the period up until 2014, this is measured in this section using the following offence:

- **Assault-related**: 1) Assaults in public places, 2) Assaults in dwellings, 3) Serious assaults resulting in injury
- **Property-related**: 1) Burglary, 2) Vehicles stolen, 3) Robbery.

This section breaks the data down for assaults and property-related offences. However, when taken together there was a 12 per cent reduction in total assaults and property offences between the two years to December 2009 and the 2014 year. Nationally there was an 8 per cent reduction over the same period.

Assault-related offences

Reported assault-related offences declined in 2011 and have fluctuated since. Overall, total assaults in the 12 months to December 2014 were similar to the average number recorded in the pre-earthquake period.

Figure 1 shows that assaults in public places dropped by nearly a third in 2011 compared with pre-earthquake levels of 2009. Serious assaults resulting in injury also dropped 11 per cent over this period. This decrease was likely due to the reduction of licensed premises in the centre of Christchurch in 2011.

Assaults in dwellings have shown a different pattern from assaults in public places. Overall in greater Christchurch there was a 20 per cent increase in dwelling assaults between the two years to December 2009 and the 2014 year. Nationally there was a 4 per cent increase over the same period.

Figure 2 shows reported monthly victimisation data from Statistics New Zealand. While no statistical significance testing has been done, there has been no obvious trend of increasing or decreasing victimisations during the period from July 2014 to May 2016. The number of victimisations from assault has ranged from a high of 423 in both November and December 2015 to a low of 297 in May 2016, the most recent month of data available. Reported sexual assaults ranged from a low of 24 in February 2015 to a high of 72 in December 2015, and were 27 in May 2016. Abductions and kidnappings are less frequent, and have remained in single figures throughout the time period covered.
For the most recent year’s data compared to the previous year’s data, there was a 4.7 per cent increase in the combined categories of assault, sexual assault, and abduction and kidnapping victimisations in the Canterbury Metro Area compared with a 5.5 per cent increase for New Zealand.¹

Figure 2: Number of victimisations² (Assault, Sexual assault, and Abduction and Kidnapping) in the Canterbury Metro Area by month³

![Graph showing the number of victimisations by month](image)

One measure of family violence is the number of court-ordered final protection orders issued.⁴ Figure 3 shows a decrease in the number of final protection orders corresponding to the period of the major earthquakes in 2010 and 2011. While there has been no statistical trend analysis done, since late 2011 there appears to have been a general trend of increasing final protection orders.

Figure 3: Three-month rolling average of the number of final protection orders granted at Christchurch/Rangiora Courts

![Graph showing the number of final protection orders](image)

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¹ The time period for this data is from July 2014 to June 2016.
² Victimisations counts each case of a victimisation from crime, not the number of individuals victimised by crime. One victim can be counted more than once if they are the victim of multiple instances of crime.
³ Canterbury Metro Area is a Policing boundary that most closely matches the greater Christchurch and Hurunui districts. It is made up of the Southern Canterbury, Northern Canterbury, and Christchurch Central Police boundaries.
⁴ Data for this figure is supplied by the Ministry of Justice, so has not been affected by the methodological changes affecting New Zealand Police data.
Property-related offences

Figure 4 shows that the number of burglaries, robberies, and stolen vehicles generally decreased after the earthquakes and burglaries were well below pre-earthquake levels in 2014.

Overall, property-related offences in greater Christchurch declined by 17 per cent in the 12 months to December 2014 compared to the average number recorded in the pre-earthquake period comprising the two years to December 2009.

Figure 4: Number of property-related offences by year in Canterbury Metro Area

Figure 5 shows reported monthly victimisation data from Statistics New Zealand for the period from July 2014 to May 2016. There appears to be an increasing trend in theft and burglary victimisations, although no statistical trend analysis has been done to confirm this. The number of victimisations for theft have ranged from a low of 1,011 in September 2014 to a high of 1,488 in December 2015, and were 1,401 in May 2016, the most recent data. For burglary, victimisations have ranged from a low of 438 in July 2014 to a high of 753 in January 2016, and for May 2016, were 678. Victimisations of robbery and extortion have ranged from a low of less than 10 in March 2015 to a high of 45 in January 2016.

For the most recent year’s data compared to the previous year’s data, there was a 14.8 per cent increase in the combined categories of theft, burglary, and robbery and extortion victimisations in the Canterbury Metro Area compared with a 4.4 per cent increase for New Zealand.

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^ Canterbury Metro Area is a Policing boundary that most closely matches the greater Christchurch and Hurunui districts. It is made up of the Southern Canterbury, Northern Canterbury, and Christchurch Central Police boundaries.

^ The time period for this data is from July 2014 to June 2016.
Figure 5: Number of victimisations (Theft, Burglary, and Robbery and extortion) in the Canterbury Metro Area by month

Victimisations counts each case of a victimisation from crime, not the number of individuals victimised by crime. One victim can be counted more than once if they are the victim of multiple instances of crime.

Figure 6 shows that there was a decline in apprehensions for serious assaults resulting in injury across most age ranges between 2010 and 2013. In contrast, in 2014 there were increases in most age groups, most notably in the 31–50 years age group although this figure still remained below pre-earthquake levels.

Apprehensions for offences usually reported to Police

This was measured using the number of apprehensions for serious assaults resulting in injury reported to Police.

The number of apprehensions for assault-related offences reported to Police increased in 2014 after consecutive decreases from 2011 to 2013. However, numbers of apprehensions in 2014 were 14 per cent lower than in the pre-earthquake period of 2008 and 2009.

See footnote 7 above.
Figure 6: Number of apprehensions for serious assaults resulting in injury, by age, in the Canterbury Metro Area

*Canterbury Metro Area is a Policing boundary that most closely matches the greater Christchurch and Hurunui districts. It is made up of the Southern Canterbury, Northern Canterbury, and Christchurch Central Police boundaries.*
Figure 7 shows monthly proceedings data for assaults from Statistics New Zealand for the period from July 2014 to May 2016. Two points of note are that the 15-24 year age group accounts for the highest number of proceedings, and that the number of proceedings then decreases with each increase in 10-year age band. There are no apparent trends over time during the relatively short time period of the data.

**Figure 7: Number of proceedings for assaults, monthly, in the Canterbury Metro Area**

In 2014, apprehensions for burglary in Canterbury were 5 per cent lower than in 2013 and 31 per cent lower than the average for the 2008 and 2009 years. There was an increase in apprehensions in the youth (0–16) age group for 2013 (from 188 to 250 apprehensions), but this dropped back to 153 in 2014. All age groups apart from over 51 years old (the smallest category with 55 apprehensions), showed large drops in apprehensions for 2014 when compared with the two years pre-earthquakes.

*Assaults includes the following offence categories: Homicide and related offences; Acts intended to cause injury; Sexual assault and related offences; Dangerous or negligent acts endangering persons; and Abduction, harassment and other related offences against a person.

*Canterbury Metro Area is a Policing boundary that most closely matches the greater Christchurch and Hurunui districts. It is made up of the Southern Canterbury, Northern Canterbury, and Christchurch Central Police boundaries.
Figure 8: Number of apprehensions for burglary, by age, in the Canterbury Metro Area

Figure 9 shows monthly proceedings data for burglary from Statistics New Zealand for the period from July 2014 to May 2016. There are far fewer proceedings for burglary than proceedings for assaults (Figure 7). As with assaults, the 15-24 year age group accounts for the highest number of proceedings for burglaries. There are no apparent trends over time during the relatively short time period of the data; however, in recent months, for the 15-24 year age group there have been fewer monthly proceedings for burglaries than the peak of 45 in August 2014.

Canterbury Metro Area is a Policing boundary that most closely matches the greater Christchurch and Hurunui districts. It is made up of the Southern Canterbury, Northern Canterbury, and Christchurch Central Police boundaries.

The first type of legal action (court or non-court) initiated by police against a person as a result of an investigation of an offence(s).
Figure 9: Number of proceedings for robbery, burglary, and theft, monthly, in the Canterbury Metro Area.

Robbery, burglary, and theft includes the following offence categories: Robbery, extortion and related offences; Unlawful entry with intent/Burglary, break and enter; and Theft and related offences.
Re-offending rates

This is measured using the prisoner re-imprisonment rate and community offender reconviction rate from the Recidivism Index. From 2011 onwards the Recidivism Index yields figures for Canterbury specifically.

The Department of Corrections has reported re-offending rates as an indicator of its own performance in rehabilitating offenders. A wide range of factors external to the criminal justice system affect re-offending rates. Recent analysis by Corrections revealed that changes in re-offending rates since 2011 have been influenced by the following external factors: changes in policing priorities; reduced use by Police of ‘alternative resolution’ with apprehended offenders; an increase in the proportion of prosecuted offenders who are convicted in court; greater use of Corrections-administered sentences by courts, and reduced use of fines; and faster courts processing times.

In addition, the total number of offenders under management by Corrections has fallen in the last five years, with a resulting change in the composition of this population; those currently under management feature a higher proportion who are recidivists (rather than “first-timers”), and a greater proportion who are gang-affiliated (the re-offending rate of the latter is twice that of non-affiliated offenders).

Figure 10 shows that in 2011, 27.4 per cent of male prisoners released from Canterbury prisons were re-imprisoned within a year of their release. This proportion (known as the recidivism rate) decreased to a low of 23.8 per cent in 2012, before increasing to 29.2 per cent in 2014. In 2015, the rate was 27.9 per cent. Nationally the recidivism rate has not changed substantially during the period from 2008 to 2015. In 2015, the rate was 28.1 per cent, up from 25.9 per cent in 2014.

*Figure 10: Rate of re-imprisonment, men only, Christchurch Men’s Prison and Rolleston Prison

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1 ‘Alternative Resolutions’ include verbal or written warnings and diversion. For more detail, see www.police.govt.nz/about-us/publication/new-zealand-police-pre-charge-warnings-alternative-resolutions-evaluation

2 No significance testing has been done for the data in this figure.
Figure 11 outlines the rate of reconviction for people on community-based sentences (for example community work, home detention, and intensive and extended supervision).

In 2011, 31.5 per cent of community offenders in Canterbury were reconvicted within a year of their community sentence ending. This rate has dropped slightly to 28.4 per cent in 2015. Nationally, the community offender reconviction rate decreased from 30.4 per cent for 2011 to 26.4 per cent in 2014, and increased slightly to 27.4 per cent in 2015.¹

Figure 11: Rate of community offender reconviction, men and women, Christchurch Community Probation Service Area

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Find out more

Find out more about the Canterbury Wellbeing Index:  

Find out more about the Department of Corrections’ offender training and employment programmes:  
[www.corrections.govt.nz/working_with_offenders/community_sentences/employment_and_support_programmes.html](http://www.corrections.govt.nz/working_with_offenders/community_sentences/employment_and_support_programmes.html)

Find out more about New Zealand Police monthly statistics for the Canterbury region:  

Find out more about the Campaign for Action on Family Violence:  
[www.areyouok.org.nz](http://www.areyouok.org.nz)

Find out more about Police Safety Orders:  

Find out more about taking out a protection order:  

¹ Ibid.
Technical notes

Offences usually reported to the Police

**Data source:** New Zealand Police monthly statistical indicators

**Frequency:** Monthly

**Data complete until:** December 2014

**Notes:** Yearly figures presented are aggregated from monthly statistical indicators.

These monthly statistics are “provisional and drawn from a dynamic operational database. They are subject to change as new information is continually recorded.” The monthly provisional statistics are counted differently from the official statistics for recorded offences that are published each April and October. These figures should therefore not be compared with official statistics. For official statistics, see Statistics New Zealand crime and justice statistics at [www.stats.govt.nz/crime](http://www.stats.govt.nz/crime).

The monthly offence statistics presented here have been aggregated for the three Police districts closest to greater Christchurch: Southern Canterbury, Northern Canterbury, and Christchurch Central. This area is referred to as the Canterbury Metro area. A map of New Zealand Police districts is available from: [www.police.govt.nz/about-us/structure/districts](http://www.police.govt.nz/about-us/structure/districts).

**Note:** These Police indicators were released for the final time on 1 April 2015. They will not be updated in future. New official statistics published by Police still cover the key crime types reported in this section, and are likely to have better frequency, timeliness, and scope.

**Serious assaults resulting in injury:** This is a new category for reporting crime statistics in New Zealand and reflects a category in the Australian Standard Offence Classification (ASOC), which New Zealand adopted in July 2010. Offences reported here include ‘grievous assault’, ‘aggravated assault’, ‘male assaults female’, ‘assaults child’ and other serious assaults that resulted in physical injury. This category excludes common assaults and other assaults that did not result in injury. Serious assaults resulting in physical injury can occur in public places or dwellings. In such instances, the assault will be included in two indicators in this report.

**Public place assaults:** The number of recorded assaults that occurred in public places. This includes both serious and minor assaults. This indicator focuses on the type of location where the assault occurred.

**Dwelling assaults:** The number of assaults recorded that occurred in dwellings. This indicator includes both serious and minor assaults. This indicator focuses on the type of location where the assault occurred. Most assaults in New Zealand occur in either public places or dwellings. Dwelling assaults often occur in situations where family violence is a factor. Note that the New Zealand Police is changing the way it collects family violence statistics, but that many family violence incidents occur in dwellings. [www.police.govt.nz/news/release/31365.html](http://www.police.govt.nz/news/release/31365.html).

**Robbery:** The number of robbery offences recorded by Police. A robbery is a theft from a person that is accompanied by violence or threats of violence. Robbery offences have been included because they are serious offences that tend to be of public interest.

**Burglary:** The number of burglary offences recorded by Police. Unlike robbery, burglary does not necessarily involve violence or threats of violence. It does involve entering an enclosed space with the intention of committing an offence. Burglary offences have been reported here because they are serious offences that tend to be of public interest. Police has a strong focus on preventing and responding to burglaries. Burglaries include both household and business related offences.

**Vehicles stolen:** The number of offences Police recorded for theft or unlawful taking of a motor vehicle. This includes instances where a vehicle is taken for a joy ride and later recovered, as well as instances where vehicles are taken permanently. Such offences have been included because they are of public interest. Police has a strong focus on preventing and responding to these offences.
Recorded crime victims statistics - victimisations

Data source: Statistics New Zealand via NZ.Stat

Frequency: Monthly

Data complete until: May 2016

Notes: The data held in this collection is from July 2014. The area selected is the Canterbury Metro Area, formed by merging the previous Christchurch Central, Northern Canterbury, and Southern Canterbury New Zealand Police area boundaries. This collection counts victimisations recorded by NZ Police for the following offences: Murder, Attempted murder, Manslaughter, Assault, Sexual assault, Abduction and kidnapping, Robbery, Blackmail and extortion, Burglary, Theft. Victimisations counts each case of a victimisation from crime, not the number of individuals victimised by crime. One victim can be counted more than once if they are the victim of multiple instances of crime.

To protect the confidentiality of individuals, all figures are randomly rounded except for 'homicide and related offences' (including murder, manslaughter, and attempted murder). Figures are rounded to base 3, using a modified version of Statistics New Zealand's standard method. In the modified version, 1s and 2s are always rounded up to 3. Only zero counts are displayed as 0. In the standard method, all counts are randomly rounded up or down to multiples of 3 (for example a count of 5 would be displayed as 3 or 6, and a count of 1 would be displayed as 0 or 3).

Recorded crime offenders statistics - proceedings

Data source: Statistics New Zealand via NZ.Stat

Frequency: Monthly

Data complete until: May 2016

Notes: The data held in this collection is from July 2014. The area selected is the Canterbury Metro Area, formed by merging the previous Christchurch Central, Northern Canterbury, and Southern Canterbury New Zealand Police area boundaries.

In Figure 7, ‘Assaults’ includes: Homicide and related offences; Acts intended to cause injury; Sexual assault and related offences; Dangerous or negligent acts endangering persons; and Abduction, harassment and other related offences against a person.

In Figure 9, ‘Robbery, Burglary, and Theft’ includes: Robbery, extortion and related offences; Unlawful entry with intent/Burglary, break and enter; and Theft and related offences.

This collection counts proceedings against alleged offenders recorded by NZ Police, except for the following offences: offences that Police are able to deal with by issuing an infringement notice, such as liquor ban breaches and many traffic offences; offences that come under the authority of agencies other than NZ Police, such as Customs, WorkSafe NZ, Inland Revenue, ACC, Ministry for Primary Industries.

To protect the confidentiality of individuals, all figures are randomly rounded except for ‘homicide and related offences’ (including murder, manslaughter, and attempted murder). Figures are rounded to base 3, using a modified version of Statistics New Zealand’s standard method. In the modified version, 1s and 2s are always rounded up to 3. Only zero counts are displayed as 0. In the standard method, all counts are randomly rounded up or down to multiples of 3 (for example a count of 5 would be displayed as 3 or 6, and a count of 1 would be displayed as 0 or 3).

Data quality: RCOS data has been produced in accordance with the Official Statistics System principles and protocols for producers of Tier 1 statistics.
Protection orders

Data source: Ministry of Justice. Final Protection Orders Granted under the Domestic Violence or Sentencing Acts

Frequency: Monthly

Data complete until: January 2016

Notes: Protection Orders are either ‘Temporary Protection Orders’ lasting three months or ‘Final Protection Orders’ which are permanent until discharged, filed in Christchurch or Rangiora between 01 January 2010 and 29 February 2016. Applications are counted only after case activation. Prior to October 2009, Family Court proceedings related to applicants living in the Rangiora catchment area were filed and dealt with at Christchurch.

For privacy reasons, individual months with fewer than three orders have been excluded.

Final protection orders include orders made in the Family Court under the Domestic Violence Act 1995 and in the Criminal Court under the Sentencing Act 2002. The latter changes came into force July 2010. The change in July 2010 meant that more powers to make protection orders now exist than previously. However the number of protection orders made under the Sentencing Act (the new powers) in Christchurch is very small: 4 in 2010 (July–Dec), 5 in 2011 (Jan–Dec), and 11 in 2012 (Jan–Oct).

Rangiora District Court closed on 13 March 2014.

Application types included:

- S13 Without Notice Protection Order
- S7 On Notice Protection Order
- S123B Sentencing Act Protection Order: from July 2010 these “applications” are automatically created in the system when a protection order is granted in the Criminal court
- S124N Breach of Police Safety Order: from July 2010 these “applications” are automatically created in the system when a protection order is granted in the Criminal court.

Apprehensions for offences usually reported to Police

Data source: Statistics NZ apprehensions statistics for the most recent 24 months (calendar year)

Frequency: Yearly

Data complete until: December 2014

Notes: Apprehensions for two offence types are shown. These were chosen because there are comparable apprehensions data.

Note the apprehensions and offences data sets are not directly comparable because: 1) one is based on official statistics and one is based on monthly Police indicators which are counted differently; and 2) exact offence types included in each data set may vary.

The monthly offence statistics presented here have been aggregated for the three Police districts closest to greater Christchurch: Southern Canterbury, Northern Canterbury, and Christchurch Central. This area is referred to as the Canterbury Metro area. A map of NZ Police districts is available from Statistics New Zealand: http://www.stats.govt.nz/tools_and_services/nzdotstat/tables-by-subject/new-zealand-recorded-crime-tables/maps.aspx
Re-offending rates

**Data source:** Department of Corrections Recidivism Index

**Frequency:** Yearly

**Data complete until:** 2015

**Notes:** Rates are percentages: number reimprisoned/reconvicted as numerator, total releases/new starts as denominator. Rates are raw percentages: no adjustment has been made for risk. Reimprisonment sample includes all prisoners released from Christchurch Men’s and Rolleston prisons; as such will include a small number of prisoners who live outside of Christchurch and surrounding localities; women are excluded, as Christchurch Women’s Prison houses prisoners from throughout the South Island and some from the North Island.

Reconviction figures are for all offenders managed on community sentences within the Christchurch Community Probation Service area. Latest (2015) figures are for offenders released from prison, or new starts on community sentences, from 1 April 2013 to 31 March 2014. Follow-up period was 12 months from each individual offender’s date of release or date of community sentence start.

**Community-based sentences include:**

Community Work – unpaid work for non-profit organisations

Home Detention Sentences – offender to remain at an approved residence at all times under electronic monitoring and close supervision by a probation officer (sentence range 14 days to 1 year)

Supervision – rehabilitative community-based sentence (sentence range 6 months – 1 year)

Community Detention – community-based sentence with electronically-monitored curfew (sentence range up to 6 months)

Intensive Supervision – rehabilitative community-based sentence (sentence range 6 months to 2 years)

Extended Supervision – managing child sex offenders in the community (sentence range up to 10 years).
References


19. Information from New Zealand Police.


26. Personal communications.


The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why is reducing child abuse and neglect important?

Significant international evidence emphasises that it is important to have a safe, secure and attached childhood. If a child experiences repeated abuse or neglect, this harms their development, progression and functioning. Child abuse and neglect are risk factors for substance misuse, risky sexual behaviour, obesity, and criminal behaviour, and are associated with poorer child and adult mental health, educational achievement and employment outcomes.

Child abuse and neglect also add significant costs to the economy. In 2008 it was estimated that in New Zealand, child abuse and neglect accounts for a long term cost of around $2 billion each year. Based on international studies, roughly a third of this cost is from direct consequences of child abuse, such as health care, child welfare, and justice system costs. A further third is due to on-going health and education costs and the criminal consequences for some victims of child abuse in later life. The final third is due to the costs associated with child abuse victims not reaching their full potential.

Administrative data reflects service use more than the nature of child abuse, because only a small proportion of victims or perpetrators will be identified by government agencies. Regarding substantiated cases, New Zealand’s latest periodic report for the United Nations Convention Against Torture notes that for children aged 0-4 years, there were 6,750 substantiated cases of child abuse in 2011/12, equivalent to 215 cases per 10,000 children. The rate for Māori children was almost 400 cases per 10,000 children, which was 1.9 times higher than for Pacific children, and 3.1 times higher than for other children. For children aged 5-9 years, the rate of substantiated cases of child abuse for Māori was 333 per 10,000 children. This was 1.7 times higher than the rate for Pacific children and 3.5 times higher than the rate for other children.

Historical and contemporary structural stressors contribute to differences in rates of child abuse between Māori and non-Māori, such as poverty, unemployment, parenting, education, and colonisation’s effects on cultural and spiritual identity and it’s undermining of tikanga Māori.

Socioeconomic deprivation is strongly associated with increased rates of hospitalisations for child abuse. From 2010 to 2014 hospitalisation rates for injuries arising from the assault, neglect, or maltreatment for children aged 0-14 years were eight times higher for children living in the most deprived quintile of neighbourhoods compared to children living in the least deprived quintile of neighbourhoods. International research in high income countries has found that child abuse and neglect are associated with parental poverty, low educational achievement and mental illness, and has demonstrated an association between economic recession and a rise in child abusive head trauma.

There is little published research on whether child abuse increases after natural disasters. In the United States, child abuse rates were higher than expected for up to 6 months after some natural disasters, including the Loma Prieta Earthquake in California, Hurricane Hugo in South Carolina and Hurricane Floyd in North Carolina, but not after Hurricane Andrew in Louisiana.

How were child abuse and neglect impacted by the earthquakes?

No studies have been published on whether or not child abuse increased after the earthquakes in Christchurch. The administrative data presented in this chapter gives a picture of service use relating to child abuse.
What is happening now?

In March 2012 the Government announced a number of targets for the public services, including the reduction of assaults on children. The Government aims to halt the rise in children experiencing physical abuse and reduce current numbers by five per cent by 2017. The Chief Executive of the Ministry of Social Development is the lead Chief Executive for achieving this result, supported by the Secretary of Education, the Director-General of Health, the Secretary for Justice, and the Deputy Chief Executive Building and Housing, Ministry of Business, Innovation and Employment.

Actions were developed through the White Paper for Vulnerable Children and the Children’s Action Plan, released by the Government on 11 October 2012. July 2014 saw the passing of the Vulnerable Children Act which forms a significant part of comprehensive measures to protect and improve the wellbeing of vulnerable children and strengthen our child protection system. This Act responded to the White Paper and was based on nearly 10,000 submissions.

The White Paper for Vulnerable Children and the Children’s Action Plan proposed changes to:
- screen children for vulnerability more effectively
- fully assess the needs of vulnerable children
- help front-line workers and communities to communicate concerns about children, and
- focus services more clearly on results.

The Ministry of Social Development states that actions already underway include the introduction of social workers to more low-decile primary schools, establishment of the Canterbury Children’s Team, which covers the Christchurch metropolitan area, and changes to the Family Start programme to increase the focus on child abuse detection and prevention. In addition, the Ministry notes that an 'education assist' package is making it easier for teachers to communicate their concerns with Child, Youth and Family (CYF).

The Expert Advisory Panel, established by the Minister for Social Development and tasked to review the operating model of CYF, released an Interim Report in July 2015, which found “that the current system is failing to provide the safe, stable and loving care that children need, and is not supporting them to fulfil their potential as adults” (p. 5). The final report of the Expert Advisory Panel was released in April, 2016 and listed six objectives for a child-centred system:
1. Ensuring that children have the earliest opportunity for a loving and stable family
2. Addressing the full range of needs for each child
3. Preventing victimisation of children
4. Helping children to heal and recover
5. Supporting children to become flourishing adults
6. Helping children and young people to take responsibility for their actions and live crime-free lives.

The report acknowledged that the over-representation of Māori children in the CYF system needs to be addressed. Māori children are twice as likely to be notified to CYF compared to the total population. The report notes “potential causes of this over-representation include higher levels of deprivation in Māori families, conscious and unconscious bias in the system, and a lack of strong, culturally appropriate models for strengthening families and child development” (p. 7). Several of the 81 recommendations made by the Expert Advisory Panel specifically address improving outcomes for Māori children.
The then Children’s Commissioner, Dr Russell Wills agreed with the Expert Advisory Panel’s findings, and was pleased with the direction of the reforms. The findings of the ‘State of Care 2016’ report were that “CYF is not sufficiently child centred”, that CYF residences are moving “towards more child-centred and trauma-informed models of care”, and that “children and young people want to belong, be listened to, and be supported by social workers” (p. 6-7). The report made the following recommendations:

- Plan to reduce the risk to children and young people of a dip in performance during the transition period
- Clarify what child-centred practice means in the New Zealand care and protection and youth justice systems
- Empower and support staff now to strengthen their child-centred practice.

The Children, Young Persons and Their Families (Advocacy, Workforce, and Age Settings) Amendment Bill passed its first reading in June 2016. According to the Hon Anne Tolley, Minister for Social Development, the Bill:

- Extends the age of state care and protection to a young person’s 18th birthday
- Ensures the views of children and young people are taken into account as part of decision making at an individual level and in the development of services and policy
- Supports the establishment of an independent youth advocacy service, and
- Enables the broader range of professionals with specialist skills who will widen the expertise within the new model to perform some functions under the Act. Social workers would still be the main professionals responsible for carrying out these functions.

What are the indicators telling us?

Child abuse and neglect are measured in two ways in this report:

- the number of notifications to CYF where further action is required (child investigations)
- the number of these notifications that lead to substantiated (proven) findings of abuse and/or neglect.

It is important to note that the data displayed in Figures 1 and 2 are more affected by service access and use than by actual prevalence of child abuse in the community. The Ministry of Social Development note that changes in the data are a result of complex factors interacting together, and without specific research, it is not possible to give a definitive interpretation of the changes seen.

Child investigations are counted through notifications requiring further action which may be generated by concerns about child abuse, or the behaviour or mental wellbeing of a child or young person.

Figure 1 shows a three month rolling average for the number of CYF notifications requiring further action. The most prominent feature of Figure 1 is that the general pattern of notifications requiring further action in greater Christchurch is very similar to that of New Zealand. For both, the numbers of notifications increased from 2008 to 2011, decreased from 2013 to the start of 2015, and were higher at the end of 2015 than at the start of that year.

For the period from late 2011 to early 2012, Figure 1 shows a substantial decrease, then increase in notifications in greater Christchurch, compared to a proportionately smaller decrease then increase in New Zealand. This period corresponds with the February 2011 earthquake. Proportionately, there has been a similar sized decrease in notifications in 2015 compared with before the earthquakes in greater Christchurch compared to New Zealand. For greater Christchurch, the number of notifications for the year to December 2015 is 15 per cent lower than for the 24 months prior to the September 2010 earthquake, and for New Zealand, it is 16 per cent lower.
Figure 1: Three-month rolling average for number of CYF notifications requiring further action

Figure 2 shows that from 2008 to 2009, greater Christchurch experienced a decrease in substantiated findings of child abuse or neglect, compared to an increase overall for New Zealand. From 2009 to 2013, greater Christchurch and New Zealand both showed increasing numbers of substantiated findings of child abuse or neglect. From 2013 to 2015, there has been a decline of 19 per cent in greater Christchurch compared with a decline of 27 per cent in New Zealand. Numbers for greater Christchurch in 2015 are 5 per cent above the average for 2009 and 2010, the two years prior to the September 2010 earthquake. Numbers for New Zealand are 18 per cent lower in 2015 compared to the average for 2009 and 2010.

Figure 2: Number of substantiated findings of child abuse or neglect yearly

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* Figure 2 uses July to June yearly data, so 2010 data is from July 2009 to June 2010, prior to the September 2010 earthquake.
Find out more

Find out more about the Canterbury Wellbeing Index: www.cph.co.nz/your-health/canterbury-wellbeing-index/

Find out how to report child abuse and neglect: www.cyf.govt.nz/about-us/contact-us


Find out more about the Government’s White Paper on Vulnerable Children and Children’s Action Plan: www.childrensactionplan.govt.nz

Find out more about the Canterbury Children’s Team: www.childrensactionplan.govt.nz/childrens-teams/canterbury-childrens-team/

Technical notes

**Data source:** Child, Youth and Family (CYF) administrative data

**Data frequency:** Monthly

**Data complete until:** December 2015

**Notes:** The greater Christchurch area includes that serviced by four CYF sites, Christchurch, Papanui, Sydenham and Rangiora. This area captures all greater Christchurch data, including Waimakariri, and Selwyn districts. In addition to greater Christchurch, the CYF data also includes Hurunui District.

Numbers represent notifications requiring further action and substantiated findings, not clients. Some clients may have more than one notification requiring further action or substantiated findings in the period.

When further action is required following a notification, there are two types of response: a formal investigation and/or a child and family assessment.

The data presented for notifications requiring further action are three-month rolling averages, with data presented as the final of three months. That means that data for August 2010 are the average of June, July and August 2010. The effect is to smooth some of the month-to-month variability. Because a data point represents the end of the three-month period, the data points for three months after each dashed line representing an earthquake partially reflect an earthquake-affected collection period.

Data presented for substantiated findings of abuse are aggregated yearly, due to low numbers in the Canterbury region. The year is July to June.
References


People participate in and attend the arts

The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why is it important for people to be involved in the arts?

People attend and participate in the arts for pleasure, creative expression, personal growth, and learning. Through participation in the arts, people are able to establish social ties and connect with their own and other cultures.

When individuals gain such advantages, the wider public also benefits. For example, cultures have greater empathy and understanding towards each other and communities are more able to express and create common values and identity. In addition, the arts promote broad social, cultural and economic goals, such as economic growth and better academic performance.

New Zealanders support the arts strongly. In a 2014 survey, carried out by Creative New Zealand, 78 per cent of respondents agreed that arts help define who we are as New Zealanders and 74 per cent agreed that the arts contribute positively to our economy. Respondents agreed that their community would be poorer without the arts (69 per cent) and supported public funding of the arts (74 per cent).

Research in 2014 also found that 99 per cent of adults in Christchurch had been to at least one cultural event or place within the previous three years. This proportion is slightly higher than the national average of 98 per cent.

A literature review of research evaluating arts and cultural initiatives post-earthquakes in Christchurch found a number of positive impacts on community wellbeing, including on people’s physical and mental health, community resilience, and urban identity. Published in May 2016, the review was commissioned by the Ministry for Culture and Heritage and prepared by Life in Vacant Spaces Charitable Trust, Christchurch.

How did the earthquakes affect the arts?

The earthquakes were devastating for the arts infrastructure of greater Christchurch.

All areas of visual arts at professional and community levels were affected. The Christchurch Art Gallery was closed (only reopening in December 2015) and individual artists lost studio and exhibition spaces. The earthquakes damaged some art collections, such as those held in the Central City Library and the University of Canterbury. Many collections were either left without a permanent home or their building was damaged and closed indefinitely. Dealer galleries also closed or moved, reducing the ability of artists to generate income and exhibit works.

Earthquakes disrupted, damaged, or destroyed performing arts facilities including the Town Hall and Isaac Theatre Royal. Rehearsal spaces and community venues were lost and those that remained were oversubscribed. Key performing arts organisations and events, such as the Court Theatre, Christchurch Symphony Orchestra, kapa haka, and the Christchurch Arts Festival were disrupted. The contemporary popular music scene was also affected with the loss of live music venues such as pubs, the Octagon restaurant, and churches that previously hosted the annual Acoustic Church Tours.

In the Arts Centre, where many artists had studios and galleries, 22 of 23 buildings were closed because they required substantial repairs. The estimated repair, rebuild and restoration cost of the Arts Centre is $290 million and is expected to be completed in 2019.

Despite these challenges, 83 per cent of Christchurch residents agree that arts and culture have a vital role to play in rebuilding the city.
What is happening now?

The recovery of the arts and cultural sectors is generally being driven by both local and central government and by arts community organisations and practitioners, with support from funding agencies such as Creative New Zealand, territorial authorities, and the Rātā Foundation (formerly the Canterbury Community Trust). For example, between September 2010 and June 2016, Creative New Zealand provided $3.8 million in grants to artists, practitioners and organisations through its Earthquake Recovery Grants Fund. Over that period, a further $1 million was also provided to fund one-off arts initiatives.

The Arts and Culture Recovery Programme

In December 2014 the Ministry for Culture and Heritage released the Arts and Culture Recovery Programme for greater Christchurch. The programme sets out a vision for the arts and cultural sector and strategies for achieving that vision. It details what has been achieved to date, as well as current and planned projects for arts and cultural recovery.

The Christchurch City Council and Ōtākaro Ltd are co-leading the anchor project to develop a Performing Arts Precinct within central Christchurch. The new precinct is planned to provide permanent homes for the Court Theatre and the Music Centre of Christchurch (rebranded as The Piano: Centre for Music and the Arts), as well as accommodation for a range of other cultural and community activities. The Piano’s new facility, including a new 350-seat concert hall, opened in mid-August 2016.

A community consultation process has been undertaken as part of the development of plans for the Canterbury Earthquake Memorial to ensure that the voices and ideas of the affected families and community are captured in the memorial design process. The May 2015 selection of the successful Memorial Wall design followed extensive consultation with, and input from the community.

Community-led recovery of the arts and culture sectors

In the April 2016 Canterbury Wellbeing Survey, 42 per cent of respondents reported that they have had the opportunity to experience public events and spaces (e.g. memorial events and initiatives such as Gap Filler projects and Re:START Mall). Those living in Christchurch city were more likely to feel that there had been a moderate or major positive impact on their everyday lives from opportunities to experience public events and spaces (22 per cent) compared to residents in Selwyn (17 per cent) and Waimakariri districts (17 per cent).

The April 2016 Canterbury Wellbeing Survey also showed that 20 per cent of residents were positively impacted by more opportunities for individual creative expression. For 9 per cent, this is having a moderate or major positive impact on their everyday lives. This finding is consistent with previous surveys.

In the early recovery period, a number of temporary premises were opened to ensure that the arts and cultural sector could continue to operate. Examples included:

- The Canterbury Cultural Collection Recovery Centre was opened in 2012 at the Air Force Museum of New Zealand in Wigram to temporarily house collections and allow organisations to work on them. While this was primarily aimed at heritage collections, the centre has also supported arts-based collections such as the Christchurch City Choir’s music collection.

- In December 2011, the Court Theatre re-opened in temporary premises, providing a full range of performances.

Through the recovery, innovative transitional arts spaces have been developed through the leadership of the arts and culture community and many of these initiatives have provided the residents of greater Christchurch with opportunities to enjoy the arts in new and unique settings. Examples include:

- Gap Filler, Greening the Rubble, and Life in Vacant Spaces continue to offer innovative initiatives in vacant and temporary sites within Christchurch. These organisations support creative people and groups to bring interactive artworks into the city, ensuring that it remains an exciting and ever-changing art scape for visitors and locals to visit.
• The Pallet Pavilion (established in 2012) was a transitional community venue in the central city used to host markets, concerts and events. Organisers successfully used crowd-sourced funding to remain open until early 2014.

• RAD Bikes (Recycle a Dunger) opened in the central city on Labour Weekend 2013 as a Gap Filler project set up in collaboration with Inner City East Cycles. It is a volunteer-run community bike shed where anyone can build or repair bicycles and/or help restore bikes to give away. In March 2015 it became the RAD Bikes Charitable Trust.

• ArtBox was created by the Christchurch Polytechnic Institute of Technology (CPIT) in February 2013 to provide visual, installation and performance artists with an innovative and different venue to present their work. Over 31 exhibitions were held, giving Christchurch artists the opportunity to showcase and sell their work. It is estimated that nearly 30,000 people visited the ArtBox whilst it was situated in the Boxed Quarter.

• ArtBox made up part of the Boxed Quarter along with BeatBox, run by the Christchurch Music Industry Trust to provide studio and rehearsal spaces for Christchurch musicians. The ArtBox exhibition modules are now situated at Ara (formerly CPIT) on Madras Street. They will continue to be used as exhibition spaces for public and student work, as well as learning spaces.

• Street art has been harnessed to help regenerate areas hit hard by the earthquakes with the Oi You! street art festival and the From the Ground Up project creating around 30 large street artworks in the city centre and Sydenham. Similar innovative community-led projects are under way in the suburbs, such as the New Brighton Mural Madness project which is now in its second year and First Thursdays in Sydenham.

• The SCAPE Public Art programme is a contemporary art event which mixes new artworks with existing legacy works as well as education and public event programmes. The SCAPE 8 event ran between October and mid-November 2015, and saw artworks located around central Christchurch and linked via a public art walkway. All aspects of SCAPE 8 were free to view.

• XCHC was created to benefit the community by providing a place for creative practitioners to develop their practice, share ideas and knowledge, and connect with other creative practitioners. It was established in the post-earthquake context as a response to the loss of space to develop and showcase creative work, but also in recognition of the creative explosion that happened post-earthquake and the intention to foster its growth by providing a place for people to come together to develop their ideas.

• A number of festivals and events have continued to be held in greater Christchurch ensuring that people’s ability to participate in the arts and cultural sectors has been maintained and to support the economic recovery:

  • Christchurch residents were once again entertained in January 2016 by street and stage performers during the 10-day World Buskers Festival held in Hagley Park and in venues around the inner city.

  • In March 2015 another highlight for the city was Te Matatini a four-day national kapa haka event hosted by the Waitaha Cultural Council, CCC and Ngāi Tahu. The festival attracted huge audiences and media coverage throughout the world.

  • Between November 2014 and January 2015, the Christchurch Stands Tall public arts project installed 99 fibreglass giraffes reaching 2.5 metres high on the streets, parks, and public spaces of greater Christchurch. This installation by Wild in Art was to celebrate the city rising up and standing tall following the earthquakes. Artists, well-known and undiscovered, young and old, were invited to submit their designs with the best designs selected by sponsors. Schools also decorated 50 small giraffes. At the end of the exhibition, the giraffes were auctioned and the profits shared between local charities.

  • The corner of Lichfield, Manchester and High Streets came to life on 25 October 2014 with a panorama of fresh architecture, lights, forms, and animation. More than 10,000 people came into the city centre to regenerate the city’s heart at this free, urban-scale event and participate in a night out of colour and performance. Music came from all directions as crowds explored and interacted with students’ luminous, large-scale installations, which were supported by 12 metre high scaffolding.
More recently permanent premises have been repaired and rebuilt to enable the recovery and regeneration of the arts and cultural sectors. Examples include:

- In December 2015, Christchurch Art Gallery Te Puna o Waiwhetu reopened following a lengthy period of work and improvements. In the opening weekend, over 10,000 visitors returned to the gallery, with well over 100,000 visitors attending in the two months following its reopening.

- The Isaac Theatre Royal reopened in November 2014 after an extensive rebuild and restoration costing $40 million. Due to the complex and elaborate construction methods requiring a rebuild from façade to proscenium arch this was one of the most intricate building projects undertaken to date in the recovery. The repair of this premier performing arts venue was a significant milestone in the recovery of the city and region, especially in the performing arts sector.

- In January 2015 the Waimakariri District Council opened a new purpose-designed service centre and library with museum and art gallery space, replacing the former Kaiapoi Service Centre, library and museum. In March 2015 the Rangiora Town Hall was also opened and has been earthquake strengthened and extended to become a performing arts centre with a refurbished auditorium.

- Restoration work on the Arts Centre is proceeding. The Great Hall reopened in June 2016, and the registry and old gymnasium buildings have been completed and tenanted – the old gymnasium by the Free Theatre, an experimental theatre company. The University of Canterbury Schools of Music and Classics have recently signed leases to move in to the Arts Centre, along with the famous Logie collection of antiquities. It is hoped that the adaptation of the buildings will be completed by the end of the year and that the University will be operating from the Arts Centre in early 2017.

- The Christchurch School of Music (CSM) returned to its former home on the Catholic Cathedral site in the city centre in May 2016. A complex of four portable buildings was built by the Catholic diocese on land it purchased on the corner of Barbadoes Street and Ferry Road. The school, which has about 800 students, had not had a permanent home since the 2011 earthquakes destroyed its former building on Barbadoes Street. The new complex includes a classroom, staff room, storage room, and office space. Funding was contributed by Creative New Zealand.

- CoCA (Centre of Contemporary Art) gallery reopened in February 2016. The gallery sold some of its collection of about 180 artworks, worth about $100,000, to help fund the building restoration. The $4.1 million building project had been funded from the gallery’s reserves, insurance, private contributors, a $146,000 grant from the Christchurch City Council’s creative industries fund, and a $50,000 grant from Creative New Zealand. The reopened CoCA is no longer a dealer gallery, but now hosts four contemporary art exhibitions a year.

- Between 2011 and 2015, The Loons developed shows and ran community fund-raising events in temporary locations, including schools. A state-of-the-art dual facility school hall and theatre was built in partnership with Lyttelton Primary School and the Ministry of Education. It opened in May 2016. The Loons Theatre Trust now delivers a full programme of arts education, professional theatre and community events as it did before the earthquakes.

Memory projects are important for helping earthquake survivors move forward and for honouring the lives of those who died. Online projects include CEISMIC and Quake Stories. Archives, museums, and libraries are also collecting material on the earthquakes.

The innovation of the arts and cultural sectors in leading the recovery of the sector and in prioritising transitional activities within the central city has had a significant impact on the wellbeing of residents through the recovery.
What are the indicators telling us?

People’s involvement in the arts is measured as the proportion of all people who:

- attend arts events
- participate in arts events (i.e. are actively involved in arts events).

Figure 1 shows that the proportion of the Christchurch population who did not attend arts events in the previous year increased substantially from 2008 to 2011 (from 19 per cent to 30 per cent of the population). This decreased attendance in 2011 is likely due to the loss of many art spaces and places, and the impacts of the earthquakes on people both personally and financially.

In contrast, by 2014 there was a positive change with just 13 per cent of the population not attending arts events in the previous year (compared with 15 per cent across New Zealand), the lowest proportion since 2005. Two thirds of the population attended arts events a ‘medium’ or ‘high’ number of times. This improved attendance likely reflects the increased range of arts events and opportunities in the city appealing to a wide range of people.

Figure 1: Proportion of all people (aged 15 years and over) who attend arts events
Figure 2 shows that the proportion of the Christchurch population who did not participate in arts events increased to 59 per cent in 2011 compared with 57 per cent in 2008. Again this trend has since improved, and by 2014 only 41 per cent did not participate in arts events.

By 2014 38 per cent of the Christchurch population participated in 12 or more arts events compared with the national average of 34 per cent. Again this increase is likely to reflect the breadth of opportunities available.

*Figure 2: Proportion of all people (aged 15 years and over) who participate in arts events*
Find out more

Find out more about the Canterbury Wellbeing Index:  
www.cph.co.nz/your-health/canterbury-wellbeing-index/

Find out more about the New Zealanders and the Arts survey:  

Find out more about Christchurch Arts Festival:  
www.artsfestival.co.nz/

Find out more about Gap Filler:  
www.gapfiller.org.nz

Find out more about the Free Theatre:  
www.freetheatre.org.nz

Find out more about BeatBox:  
http://christchurchmusic.org.nz/beatbox

Find out more about ArtBox:  
www.cpit.ac.nz/industry-and-research/industry-and-partnerships/capabilities-and-technologies-for-industry/artbox

Find out more about The SCAPE 8 Public Art Christchurch Biennial:  
www.scapepublicart.org.nz/scape-8/

Find out more about CEISMIC:  
www.ceismic.org.nz

Find out more about Quake Stories:  
www.quakestories.govt.nz

Find out more about the Court Theatre:  
www.courtheatre.org.nz

Find out more about the Christchurch Art Gallery:  
www.christchurchartgallery.org.nz

Find out more about the Christchurch Symphony Orchestra:  
https://www.cso.co.nz/

Find out more about XCHC:  
www.xchc.co.nz/about/

Find out more about CoCA:  
www.coca.org.nz/

Find out more about FESTA:  
http://festa.org.nz/

Find out more about The Loons:  
www.theloonstheatretrust.com/

Find out more about the programme to rebuild and restore the Christchurch Arts Centre:  
www.artscentre.org.nz/history/rebuild/

Technical notes

Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey)

Data source:  
Canterbury Earthquake Recovery Authority,  
Canterbury District Health Board

Data frequency:  
Six-monthly September 2012, April 2013, September 2013, April 2014, September 2014, April 2015, September 2015 (all CERA) and April 2016 (CDHB)

Data complete until:  
April 2016

Notes:  
The April 2016 Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey) is the eighth survey in the series providing information about the residents of greater Christchurch. Respondents were randomly selected from the electoral roll. The survey was delivered online and by hard copy from 30 March to 18 May 2016. The response rate was 41 per cent. Weighting was used to correct imbalances in sample representation. The survey was originally developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. For results from the surveys, see:  
http://www.cph.co.nz/your-health/wellbeing-survey/
Attending and participating in arts events

Data source: New Zealanders and the Arts Survey, Creative New Zealand


Data complete until: 2014

Notes: Christchurch boundary defined by the local Christchurch telephone calling area. Because this survey is a sample survey, results are subject to sampling error.

Definitions:

The arts are defined as:

• visual arts: painting; photography; sculpture; web-based/digital art; ceramic-making; film-making

• performing arts (theatre, dance, music): ballet or contemporary dance performances; theatre; concerts; singing or musical performances or events; circuses

• literature: writers’ workshops or literary events; writing poetry, fiction or non-fiction

• Māori arts: art or craft; workshops, including carving, weaving or singing; kapa haka or other Māori dance or music activities

• Pacific arts: weaving and other Pacific handicrafts; workshops; carving; traditional dance; choir or other musical activities.

Attendance includes going to:

• art galleries (including online galleries), exhibitions and film festivals

• performances in theatre, contemporary dance, ballet, music concerts and circuses

• poetry or book readings, and literary festivals or events

• cultural performances and festivals and celebrations of Māori or Pacific arts.

Low attendance: did not attend anything or attended three or fewer events in the past 12 months

Medium attendance: attended more than three events and up to 10 events in the past 12 months

High attendance: attended more than 10 events in the past 12 months

Participation includes the active involvement of individuals, groups and/or communities in the making or presentation of art. It applies to professional, emerging and non-professional artists, including those involved in cultural and recreational activities.
References


Canterbury Wellbeing Index

Sports participation

The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why is participating in sport important?

When people participate in sport, there are significant benefits for themselves, their communities, and the economy.

Evidence suggests that people who participate in sports and recreation are more productive employees, enjoy better health, and have a better quality of life. When people are more productive and healthier, society benefits and savings are made in the health system.

The sport and recreation sectors (broadly defined) contributed an estimated $277.0 million to the GDP of Christchurch in the 2012/13 year, or 0.8 per cent of Christchurch City’s GDP. Nearly 4,500 people (4,227) work in sport and recreation industries in Christchurch and this represents 2.4 per cent of the city’s total employment (based on the 2013 Census).

The people of greater Christchurch appear to appreciate the advantages that sports offer. A 2015 survey indicated that 84.4 per cent of adults (94 per cent in 2011) and 89 per cent (96 per cent in 2011) of young people in the Canterbury/West Coast region participate in at least one sport or recreation activity over a year.

Volunteering for sport is also a popular activity in the Canterbury/West Coast region and the services produced by these volunteers are valuable to participants in sport and recreation. Sport New Zealand’s 2013/14 Active New Zealand Survey estimated that the total amount of volunteered time contributed to sport and recreation in 2013/14 in the Canterbury/West Coast region was 7.0 million hours (indicative only).

How did the earthquakes affect sports participation?

The earthquakes caused critical losses in the sport and recreation infrastructure. Some highly-valued facilities and spaces were closed indefinitely including QEII, Centennial Pool, AMI Stadium, and a number of mountain biking and walking tracks in the Port Hills (most tracks are now reinstated).

Sports have been affected in different ways. For example, rowing lost the flat water space at Kerr’s Reach (now reinstated), hockey lost access to artificial turfs, and athletics lost access to an all-weather track. Other sports such as basketball and netball had to operate across a reduced number of venues.

Almost half (47 per cent) of the respondents in the 2012 CERA Wellbeing Survey (now the Canterbury Wellbeing Survey) experienced the loss of usual access to the natural environment due to the earthquakes. Just under half the respondents (44 per cent) said they had experienced the loss of indoor sports and active recreation facilities, while 37 per cent had experienced the loss of outdoor sports and active recreation facilities.
What is happening now?

Sport Canterbury, as the Regional Sports Trust, is overseeing and providing leadership to the Sport and Recreation Recovery Programme and the Spaces, Places and People long-term online plan, launched in May 2014. The programme is working to recover sport and recreation infrastructure so that participation remains high and caters for the immediate and long-term needs of the community. The plan focuses on both formal and informal sports and recreation participation and sets out a long-term vision for the sports and recreation sector and guides decision-making through the recovery. The three priorities in the Spaces, Places and People plan - the Ngā Puna Wai Sports Hub, the Metro Sports Facility, and the Hagley Park Cricket Oval - indicate that the future for sport and recreation in greater Christchurch is promising.

Progress of sports recovery was demonstrated by New Zealand hosting the FIFA Under-20 World Cup between May and June 2015, and the completion of the Hagley Park Cricket Oval in September 2014 in time for the opening ceremony of the ICC Cricket World Cup. The opening of Te Whareora wellbeing and sports facility at Ara Institute of Canterbury (formerly Christchurch Polytechnic Institute of Technology) in March 2015 and the approval to proceed with the Ngā Puna Wai Southwest Sports Hub will also boost the sport and recreation landscape. Sport Canterbury, with the support of Sport New Zealand, moved to support leadership of regional sports associations through the Sport Canterbury Leadership programme for current or future leaders. This stimulated Sport Canterbury's workforce development initiative to grow and support sector capability to deliver sport and recreation in the current environment and into the future.

As part of its recovery programme, Sport Canterbury has led a number of events ranging from small localised events to large community-driven events, including: the UC Education Secondary schools Mud Run in June 2015, which attracted 1080 participants; the Pegasus Fun Run in October 2015 (1,481 participants); and the Mitre 10 MEGA – A Run to Remember in February 2016 (2,205 participants). Sport Canterbury also sponsored the Hororata Highlander Games in November 2015 which involved about 10,000 people for the whole event. School-based sport programmes, such as competitions, have been supported in the worst-affected areas. Three temporary pools were established in east Christchurch and Kaiapoi to increase capacity for those learning to swim. Other sporting events specifically organised for children and young people include: Tough Kid mini Mud Run for primary schools with 1,189 participants registered across Christchurch and Selwyn (however rain caused postponement and only 558 could attend on the back-up day); and Top Team, a mobile event delivered in schools with 12,468 young people taking part (1,200 entries lost to bad weather).

Despite infrastructure losses, Canterbury has benefited from efficient repairs to sporting facilities including the Christchurch School of Gymnastics, Hagley Park netball courts, Cowles Stadium, the tennis courts at Wilding Park and the rowing sheds at Kerr’s Reach. In addition, a number of new facilities have been opened and are now in full use. These include a new hockey turf at Nunweek Park, a refurbished Kaiapoi Aquatics Centre, and the Apollo High Performance Centre at Jellie Park. The Apollo Projects Centre is a government-funded $3.5 million purpose-built high performance training facility which opened in May 2013. The new centre includes a full-size netball court which is being used by the Canterbury Tactix for training, a high performance strength and conditioning gym, and a 40m long running straight where video analysis and electronic speed timing can be carried out. The building is owned by Sport New Zealand but has been built on land provided by Christchurch City Council within the Jellie Park Recreation and Sport Centre complex.

High performance rugby also has a new home following the 100 day upgrade of AMI Stadium by seat 18,000. The Crusaders are based there indefinitely and the stadium has also hosted All Blacks’ tests and the FIFA Under-20 World Cup Football matches in June 2015. These successes have helped to move sports participation back towards pre-earthquake levels.
Facility development — Places and Spaces

A number of large and significant sports facility projects are still in the planning and consultation stages. Progress on these projects over the last year includes:

- The Metropolitan Sports Facility — Planning progressed on the Metropolitan Sports Facility in 2015 with stakeholders and users given the opportunity to present their needs for the facility. Central Government also confirmed the high-level scope of the facility, to include a Sports House to accommodate more than 15 sports organisations.

- Ngā Puna Wai — Progress was also made on the Ngā Puna Wai Sports Hub with the master plan fully consulted and the Park Management Plan amended to accommodate the development. Council also approved the development as a project on 12 March 2015, and the funding and level of service was confirmed in Council’s 2015/2025 Long Term Plan on 26 June 2015.

- QEII Recreation and Sport Centre — The preferred site for the location of the QEII Recreation and Sport Centre was also determined (QEII Park) and a community consultation process was held on what sorts of structures would be preferred as part of the leisure component of the aquatic centre.

- Canterbury Adventure Park — Project planning for the Canterbury Adventure Park (downhill mountain bike park) also progressed and construction is now underway. Once complete, the Leisure Investments NZ Adventure Park will be the largest downhill mountain bike park in the Southern Hemisphere with over 120km of bike routes, and the facility will attract local riders and riders from outside the region.

What are the indicators telling us?

Sports participation is measured as the number of people who are members of clubs or school teams affiliated to the Canterbury regional sports body.*

Prior to 2011, a number of sports have missing data which makes plotting trends over time problematic. Organisations that did not have complete data prior to 2011 have been excluded.

Figure 1 shows that total membership numbers of regional sports organisations in Canterbury declined by about 3,300 people (~2.7 per cent) over the 2011 and 2012 period. However, latest figures indicate that overall sports participation is now above pre-earthquake levels, having increased by more than 4,500 members (~4 per cent) during 2013 and almost 1,000 (~1 per cent) in 2014. In 2008, regional sport organisations in Canterbury had 123,360 members compared with 135,152 in 2015 (both figures exclude the four clubs with incomplete data).

According to Sport New Zealand’s Young People’s Survey, in 2011/2012 many school children (years 1–13) in greater Christchurch remained involved in sport and recreation despite the challenges of the on-going earthquakes.10 Schools played an important role in providing sport and active recreation opportunities during this period, with 50 per cent of school children reporting that they belonged to a school sports team. Just over 57 per cent said they belonged to a sports club outside of school.

In addition, 55 per cent of children spent three hours or more each week taking part in training, practice, or competitions and 64 per cent reported spending three hours or more per week taking part in sport or active recreation when ‘mucking around’.11

Generally, males had greater involvement in sport both inside and outside school and spent more time participating.

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* This measure of ‘membership’ does not, however, capture the many people who participate in non-organised/recreational sports such as road cycling, mountain biking, running and swimming (all sports that have both club-based and recreation-based competitive and non-competitive participation). For example, the extensive network of dedicated mountain bike tracks on the Port Hills attracts large numbers of regular local riders.

* Canterbury Yachting (approximately 1,500 members) submitted no membership data for 2008–2010 or 2013 and GymSports (approximately 9,000 members) submitted no membership data for 2008–10, meaning total numbers would be artificially inflated by approximately 10,500 for 2011–12 if these data were included in the total calculated for Figure 1. Arawa Canoe (approximately 370 members) and Canterbury Triathlon (approximately 270 members) have also not been included in the total calculation for Figure 1 as they have no membership data for 2008–2011. For Canterbury Basketball and Peninsula and Plains Orienteering, which had missing data for 2010, the average of 2009 and 2011 data was substituted for 2010 in the calculation of total sports membership in Figure 1.

* The term ‘mucking around’ was specified in the survey as — Time spent on sport and active things in an informal setting — mucking around with friends, family or on own; not at training or practice with a coach, or taking part in competitions; not while doing extra training or practice without a coach (like running to get fit).
Figure 1: Total membership for Canterbury regional sports organisations, 2008-2015

Note: The above graph shows the trend for overall sports participation for Canterbury 2008-2015. However the total shown on the graph for 2015 (approximately 135,000) is less than the [actual/raw-data] total reported for 2015 (148,096), because sports that do not provide data for each time point in the series cannot be included in the graph. See footnote b, above.

In the years following the major earthquakes, sport organisations’ membership numbers fell for a number of sports. Overall, post-earthquake sports participation has continued to increase steadily over time and 2015 data show that 15 of the 21 regional sport organisations have higher or similar membership numbers than the previous year.

In the years following the major earthquakes, sport organisations’ membership numbers fell for a number of sports including swimming, squash, tennis, rugby, volleyball, and water polo. The loss of swimming pools and specialised facilities such as tennis and squash courts, volleyball courts, and bowling greens is likely to have caused this decrease. Overall, post-earthquake sports participation has continued to increase steadily over time and 2015 data show that 15 of the 21 regional sport organisations have higher or similar membership numbers than the previous year (reflecting the on-going repair of existing sports facilities and the construction of new facilities as the recovery progresses, and probably at least some degree of ‘post-acute’ psychosocial recovery as well). Of particular note are the steady increases in membership for rowing, hockey, and football over 2013-2015. Figure 2 shows the membership patterns within individual sports in recent years.

6 Also, there have been population shifts within the greater Christchurch area post-earthquakes — both a redistribution between suburbs/areas and an overall population increase. While Figure 2 does not specifically show these background changes, the general pattern suggests that the damage/recovery of facilities has likely been the main influence on sport participation.
Figure 2: Total memberships by specific regional sports organisations
Those living in the Selwyn and Waimakariri districts were less likely to say the loss of indoor and outdoor recreation facilities is still impacting negatively on their everyday lives. Across greater Christchurch, this issue is of least concern to residents aged 75 years or over.

Table 1: Proportion of respondents that indicated an issue continues to have a moderate or major negative impact on their everyday lives, over time (CERA Wellbeing Surveys 2012-2015 and the Canterbury Wellbeing Survey 2016)

<table>
<thead>
<tr>
<th>Issue</th>
<th>Extent that issue has had a moderate or major negative impact on everyday lives of residents (living in greater Christchurch)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sept 2012 (%)</td>
</tr>
<tr>
<td>Loss of indoor sport and recreation facilities</td>
<td>24</td>
</tr>
<tr>
<td>Loss of outdoor sport and recreation facilities</td>
<td>20</td>
</tr>
</tbody>
</table>

Youth Wellbeing Survey

CERA carried out the Youth Wellbeing Survey in late 2013 to measure the progress of earthquake recovery by collecting data on the self-reported wellbeing of those aged 12–24 years (however, this survey has not been repeated to date and there is no new data to report at this time).

The 2013 Youth Wellbeing Survey questions were adapted from the CERA Wellbeing Survey. The survey was undertaken online and was self-selected and therefore not considered representative. For this reason, the Youth Wellbeing Survey results cannot be directly compared to the Adult (CERA Wellbeing Survey) survey results.

The 2013 results showed that the loss of recreational places and spaces had a negative impact on respondents aged 12–24 years in the wider Christchurch region. Of this age group, 63 per cent of respondents continued to experience loss of sport and recreation facilities such as swimming pools and sports fields (at that time). For 18 per cent of respondents, this was still having a moderate or major negative impact on their wellbeing. Additionally, the loss of sport and recreation facilities was the second highest self-reported issue impacting respondents’ wellbeing. This was felt most strongly among those living in Christchurch city, where 22 per cent reported a moderate or major negative impact, compared with 12 per cent in Waimakariri district and 9 per cent in Selwyn district.

* The highest ranked issue was the loss of other places such as cafes, restaurants, libraries, places of worship, marae, arts and cultural centres (greater Christchurch, 29%; Christchurch, 29%; Selwyn district, 13%; Waimakariri district, 20% of respondents).
Find out more

Find out more about the Canterbury Wellbeing Index: www.cph.co.nz/your-health/canterbury-wellbeing-index/

Find out more about sport in Canterbury: www.sportcanterbury.org.nz

Find out more about Sport New Zealand: www.sportnz.org.nz

Find out more about Christchurch City Council recreation and sport: www.ccc.govt.nz/cityleisure/recreationsport/index.aspx

Find out more about Waimakariri District Council leisure and recreation: www.waimakariri.govt.nz/leisure_recreation/pools.aspx

Find out more about Selwyn District Council facilities and parks: www.selwyn.govt.nz/facilities-and-parks

Technical notes

Sports information

Data source: Sport Canterbury, drawn from the larger regional sports organisations. Note that other sports operate in the region but do not provide regional data to Sport Canterbury.

Data frequency: Annual

Data complete until: 2015/16

Notes: Regional sports organisations have different catchment regions and started reporting to Sport Canterbury in different years. See the table below. Some sports measure membership differently. The numbers are based on how that sport calculates its playing membership numbers. Data for Arawa Canoe, Canterbury Triathlon, Canterbury Yachting and GymSports are not included in Figure 1 or Figure 2 because only limited data were available.
<table>
<thead>
<tr>
<th>Regional sports organisation</th>
<th>Region(s) covered</th>
<th>Years data provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arawa Canoe</td>
<td>South Canterbury, Mid Canterbury, West Coast and Canterbury</td>
<td>2012–15</td>
</tr>
<tr>
<td>Athletics Canterbury</td>
<td>Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Badminton Canterbury</td>
<td>Canterbury</td>
<td>2009–15</td>
</tr>
<tr>
<td>Canterbury Basketball</td>
<td>Christchurch and Selwyn territorial authority regions</td>
<td>2008–09, 2011–15</td>
</tr>
<tr>
<td>Bowls Canterbury</td>
<td>Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Canterbury Cricket</td>
<td>South Canterbury, Mid Canterbury, West Coast and Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Mainland Football</td>
<td>Mid Canterbury, West Coast and Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Canterbury Golf</td>
<td>Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>GymSports</td>
<td>South Canterbury, Mid Canterbury, West Coast and Canterbury</td>
<td>2011–15</td>
</tr>
<tr>
<td>Canterbury Hockey</td>
<td>Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Canterbury Netball</td>
<td>South Canterbury, Mid Canterbury, West Coast and Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Canterbury Rowing</td>
<td>Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Canterbury Rugby</td>
<td>Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Canterbury Rugby League</td>
<td>South Canterbury, Mid Canterbury and Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Canterbury Softball</td>
<td>Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Squash Canterbury</td>
<td>West Coast and Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Surf Life Saving</td>
<td></td>
<td>2008–15</td>
</tr>
<tr>
<td>Swimming Canterbury</td>
<td>West Coast and Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Tennis Canterbury</td>
<td>Mid Canterbury, West Coast and Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Touch Canterbury</td>
<td>Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Canterbury Triathlon</td>
<td></td>
<td>2012–15</td>
</tr>
<tr>
<td>Canterbury Volleyball</td>
<td>Canterbury</td>
<td>2008–15</td>
</tr>
<tr>
<td>Canterbury Waterpolo</td>
<td>Canterbury</td>
<td>2009–15</td>
</tr>
<tr>
<td>Canterbury Yachting</td>
<td>Canterbury</td>
<td>2011–12, 2015</td>
</tr>
</tbody>
</table>
Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey)

Data source: Canterbury Earthquake Recovery Authority, Canterbury District Health Board

Data frequency: Six-monthly September 2012, April 2013, September 2013, April 2014, September 2014, April 2015, September 2015 (all CERA), and April 2016 (CDHB).

Data complete until: April 2016

Notes: The April 2016 Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey) is the eighth survey in the series providing information about the residents of greater Christchurch. Respondents were randomly selected from the electoral roll. The survey was delivered online and by hard copy from 18 March to 15 May 2016. The April 2016 response rate was 41 per cent. Weighting was used to correct imbalances in sample representation. The survey was originally developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, Canterbury District Health Board, Ngāi Tahu, and the Natural Hazards Research Platform. For results from the surveys, see: www.cph.co.nz/your-health/wellbeing-survey/

Data on impact of loss of indoor and outdoor space

- In September 2012, residents considered the extent their everyday lives had been impacted by an issue as a result of the earthquakes.
- In following surveys, residents considered the extent to which their everyday lives were still being impacted by each issue as a result of the earthquakes.
- Area for all surveys relates to greater Christchurch.
- The percentage shown is the sum of both ‘moderate negative impact’ and ‘major negative impact’.

CERA Youth Wellbeing Survey

Data source: Canterbury Earthquake Recovery Authority

Data frequency: One-time survey (unknown if survey will be repeated in future)

Data complete until: 2013

Notes: The aim of the CERA Youth Wellbeing Survey 2013 was to measure the progress of earthquake recovery by collecting data on the self-reported wellbeing of those aged 12–24 years. CERA worked with the Ministry of Education, Canterbury District Health Board, Ministry of Youth Development, Christchurch City Council, Waimakariri District Council, Selwyn District Council, Ngāi Tahu, Natural Hazards Research Platform, and The Collaborative for Research and Training in Youth Health and Development to develop and implement the Youth Wellbeing Survey.

Survey questions were adapted from the CERA Wellbeing Survey and were tested with panels of young people to ensure that the wording and content were relevant.

The Youth Wellbeing Survey was open between 23 September and 13 December 2013 for responses from young people aged 12–24 years, living in greater Christchurch.

Methodology

This was an online survey aiming to generate a sample of young people in greater Christchurch that, while self-selected and therefore not representative, was as large and diverse as possible. The survey was undertaken between September and December 2013. Advertising through greater Christchurch youth networks and targeted promotional activities were the main recruitment strategies. Some hard copy responses from targeted groups of young people were also received.

The survey period included high school and university exams, which meant that efforts to attract responses from different age groups needed to take the timing of study leave and exams into account. Recruitment during this period may also have had some impact on the responses given by students who may have been experiencing greater stress than usual due to exam pressure.
References


Note: Data are from Sport New Zealand’s Young People’s Survey which is a nationwide, school-based survey. The Christchurch schools that were unable to participate in 2011 (from August to September) due to the earthquakes were given the chance to participate in Term 3, 2012 (many did). Results were then combined with the original 2011 data set. National data and associated documentation have been updated (not publicly released as at May 2014).

The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why is being prepared important?
Being resilient after a disaster is a responsibility that individuals, households, businesses, communities, and governments share.

Individuals and households are expected to take responsibility for preparing for, responding to, and recovering from disasters. Authorities recommend that households are prepared to look after themselves for at least three days or more after an emergency.\(^1\)

Preparedness is considered a good indicator of community resilience.\(^2\) If people actively plan and prepare for protecting life and property, based on their awareness of the specific threats in their area, they can help their family and the wider community to re-establish stability after the event.\(^3\)

Researchers have found that people are more likely to be prepared if they believe that the next emergency is likely to occur within 12 months. Those who believe there will not be an emergency for several years are much less likely to be prepared.\(^4\)

How did the earthquakes affect households’ level of preparation?
Between 4 September 2010 and 7 June 2012 the residents of greater Christchurch experienced 41 earthquakes of magnitude 5.0 or over, including four over magnitude 6.0.\(^5\)

Residents experienced power outages, loss of sewer systems, closed shops and services, and damaged roads and public transport systems. In addition to significant support offered by government and non-government agencies, communities, households, and individuals banded together to share resources, survive, and even thrive in these difficult times.

It would therefore be expected that households in greater Christchurch would be more prepared after these earthquakes.

The Review of the Civil Defence Emergency Management response to the 22 February Christchurch earthquake found that “The resilience of the Christchurch community was demonstrated by the way so many households were able to care for themselves and also by the way in which community organisations stepped up and looked after their neighbourhoods”.\(^5\)

However, the review also noted that international experience has shown repeatedly that lower-income families struggling to survive from day to day do not have the ability to store food in advance or have the supplies recommended for survival.\(^7\)
**What is happening now?**

Preparedness is being promoted through a range of measures targeting individuals, communities, and businesses.

A number of national campaigns have encouraged households to be prepared for an emergency. Part of the Earthquake Commission’s role is to educate New Zealanders about being prepared in case of a natural disaster. Its ‘Fix. Fasten. Don’t Forget’ preparedness campaign aims to motivate people to make necessary changes in their homes (such as securing chimneys, tall furniture, and hot water cylinders) to help protect people, homes, and contents if an earthquake happens. This campaign was delivered differently within Canterbury in recognition that information requirements in this region differed from the rest of New Zealand.

In 2015 the annual Civil Defence ‘Get Ready Get Thru’ campaign focused on the Great New Zealand ShakeOut, the national ‘drop, cover, hold drill’, which took place on 15 October 2015. Over 1.3 million people participated nationally on the day.

The ‘Knowing Your Neighbour is a Piece of Cake’ campaign is a collaborative project between Christchurch City Council, the Council’s Civil Defence Emergency Management, All Right?, Te Raranga interchurch network, and The Neighbourhood Project. It has taken place annually on a weekend in March since 2014, and encourages neighbours to get to know one another over a piece of cake in order to create better connected neighbourhoods.

In partnership with the Canterbury Employers’ Chamber of Commerce, Christchurch City Council’s Civil Defence Emergency Management has been promoting the Resilient Business website. Launched in 2013, the website provides tools to make it simpler for businesses to maintain continuity through a crisis or emergency by adopting effective resilience strategies appropriately tailored to the size of their business.

**What are the indicators telling us?**

Household preparation for an emergency is measured in the New Zealand General Social Survey. The survey occurs bi-annually and was last conducted in 2014. The results of the 2016 survey will be available next year.

The extent to which households are prepared for an emergency is measured as the proportion of people who said their household has:

- all the items needed for basic preparation (a three-day supply of food and water and a household emergency plan), or
- all the items needed for better preparation (basic preparation, plus a torch, portable radio, spare batteries, first aid kit and essential medicines, as well as food and water for three days and a household emergency plan), or
- none of the items needed for basic preparation.

Figures 1 and 2 show that Canterbury residents have become better prepared for a civil emergency over time, however in 2014 there was a slight decrease in preparedness.

In 2008, basic and better levels of preparedness in Canterbury were comparable with the national average. However, following the 2010 and 2011 earthquakes, the proportion of people who said their household was prepared for a civil emergency increased notably both locally and across the country. In Canterbury, the proportion of people who said their household had basic preparation increased from 13 per cent in 2008 to 40 per cent in 2012, but dropped to 32 per cent by 2014. Nationally over the same period, the proportion of people who had the items needed for basic preparation increased from 14 per cent in 2008 to 22 per cent in both 2012 and 2014.

In Canterbury, the proportion of people with an emergency plan increased from 24 per cent in 2008 to 50 per cent in 2012 and 47 per cent in 2014. Nationally this figure increased from 24 per cent to 33 per cent in 2014.
Figure 1: Proportion of people who said their household has all the items needed for basic preparation

![Figure 1: Proportion of people who said their household has all the items needed for basic preparation](image)

Figure 2: Proportion of people who said their household has all the items needed for better preparation*

![Figure 2: Proportion of people who said their household has all the items needed for better preparation*](image)

* Note: better preparation was not asked in 2014.
Figure 3 shows that the proportion of Canterbury residents who said their household has none of the items needed for basic preparation fell from 9 per cent in 2008 to 4 per cent in 2012, but increased back to 9 per cent in 2014. Based on information from 2010, households with none of the basic preparations tend to be renters (rather than owner-occupiers) and tend not to hold contents insurance.\textsuperscript{11}

Figure 3: Proportion of people who said their household has none of the items needed for basic preparation
Find out more

Find out more about the Canterbury Wellbeing Index: www.cph.co.nz/your-health/canterbury-wellbeing-index/

Find out more about the New Zealand General Social Survey’s findings: www.stats.govt.nz/browse_for_stats/people_and_communities/Households/natural-disaster-how-prepared-nzers.aspx

Find out more about how to prepare your home and your business for disasters: www.civildefence.govt.nz/get-ready/

Find out more about Civil Defence Emergency Management Group: www.cdemcanterbury.govt.nz/Emergency-Status/

Find out more about how to be a Civil Defence volunteer in Waimakariri district: www.waimakariri.govt.nz/services/emergencies-and-recovery/civil-defence/volunteer-teams

Find out more about how to be a Civil Defence volunteer in Selwyn district: www.selwyn.govt.nz/services/civil-defence/community-response-volunteers

Find out more about how to be a Civil Defence volunteer in Christchurch city: www.ccc.govt.nz/services/civil-defence/council-role-in-emergencies/volunteering

Find out more about the Earthquake Commission’s Fix. Fasten. Don’t Forget campaign: www.eqc.govt.nz/fixfasten

Technical notes

Household preparedness

Data source: New Zealand General Social Survey, Statistics NZ (NZGSS)


Note: The criteria for basic preparation are a three-day supply of food and water, and a household emergency plan.

The criteria for better preparation (asked until 2012) are a torch, a portable radio, spare batteries, first aid kit and essential medicines, as well as food and water for three days and a household emergency plan.

A few respondents refused to answer the question, or did not know whether their household had an item; they were classified as not having the items. The NZGSS samples part of the population, so data are estimates only. Residual responses (‘don’t know’ or ‘refuse’) have been excluded from the denominator in this analysis. Person weights have been applied in this analysis so figures represent the proportion of people who said their household was prepared for an emergency.

In two previous reports, both the New Zealand General Social Survey 2008 Fact Sheet: Natural disaster preparation at home and How prepared are New Zealanders for a natural disaster? (2012), residual responses were included in the denominator but treated as a ‘no’ and household weights were applied to the analysis.


A household emergency plan documents a household’s preparation for natural disasters which may disrupt the ability of household members to communicate with each other and could affect essential services. It includes the following:

• where to shelter in an earthquake, flood or storm
• how and where to meet during and after a disaster
• the best place to store emergency survival items and who is responsible for checking essential items
• what items will be needed in a getaway kit and where it will be kept
• how to turn off the water, gas and electricity in the home or business
• how to contact local civil defence organisations for assistance during an emergency.
References


8. Information retrieved from: [www.eqc.govt.nz](http://www.eqc.govt.nz)


10. Information provided by Christchurch City Council.

Why is social connectedness important?

Social connectedness refers to the relationships people have with others and the benefits these relationships can bring to the individual as well as to society. High levels of social connectedness are thought to promote better health and psychological wellbeing. People who feel socially connected also contribute towards building communities and society. They help to create ‘social capital’ – the networks that help society to function effectively. Social connectedness is particularly important in building communities that can withstand adversity, whether caused by economic, social, or environmental shocks.

Social connectedness includes relationships with family, friends, colleagues, and neighbours, as well as connections people make through paid work, sport and other leisure activities, voluntary work or community service. Disasters are more likely to adversely affect social connectedness in groups that were vulnerable and had lower social connectedness before a disaster, such as people with ill health or disabilities. Providing adequate access to the built environment allows disabled people to be included in the economic and social life of the community, to make social connections and to contribute to society.

Volunteering

One strong indicator of high social connectedness is the degree to which community members volunteer. Over a million New Zealanders are involved in voluntary work. As volunteers they make a huge contribution to sports, recreation, arts, culture and heritage, emergency and social services, health, education, conservation and the environment.

Volunteering creates stronger communities by building social connections and networks of reciprocity and trust. Volunteers foster and maintain cultural identity through events and activities. They also maintain and improve our natural environment and provide services to families and those most vulnerable in communities.

Volunteering has a positive impact on the economy. Through their work, volunteers learn new skills that they can use in paid employment.

There are over 97,000 non-profit organisations in New Zealand. Ninety per cent of these rely entirely on voluntary labour.

Graffiti and noise complaints

If communities become less socially connected, signs of urban decay can grow. Post-disaster evidence of urban decay can include increased levels of graffiti or increasing social disruption. Monitoring and managing these incidents can help to rebuild social connectedness within the community.
How was social connectedness impacted by the earthquakes?

The community immediately responded to the earthquakes with spontaneous volunteering. People ‘pitched in’ and did whatever was necessary and possible to assist each other.

Noteworthy acts of altruism occurred in the hours after the earthquakes. Passers-by pulled people from rubble and saved animals from damaged buildings. Teachers and bus drivers looked after groups of school children for hours before their parents were able to reach them.

In the days and weeks after the earthquakes, people shared meals with neighbours, created community food kitchens, supplied water to elderly residents, towed strangers’ cars from holes in the roads, and teamed up to deconstruct damaged chimneys.

Response agencies such as the Red Cross, the Salvation Army, and churches immediately started organising volunteers to knock on doors to assess the wellbeing of residents and to ensure their immediate needs were met. New volunteering groups formed organically, such as the Student Volunteer Army and Farmy Army who mobilised university students and the rural community respectively to clear liquefaction and provide many other services.

Networks of professionals such as lawyers, accountants, and health professionals offered their time and expertise for free to assist affected people. Residents’ groups such as Canterbury Communities’ Earthquake Recovery Network (CanCERN) and Addington Action formed to support their communities.

In other parts of the country, individuals, groups, churches, and businesses also mobilised and established supply chains of items such as warm clothing, heaters and household items to distribute to affected people. Iwi representatives from around New Zealand arrived to volunteer their skills and provide support to Ngāi Tahu and other Māori communities.

People remaining in damaged areas developed new bonds with neighbours in similar predicaments. However, social connectedness was also weakened as people left their communities due to damage or concerns about aftershocks. In the 2012 CERA Wellbeing Survey, 26 per cent of respondents reported having to move house permanently or temporarily ‘because of the earthquakes’.

Whole communities were uprooted and some people felt their social networks had developed ‘holes’ due to people leaving. Children’s social networks were disturbed with some travelling to schools in other parts of town. Some people, particularly in the hard-hit eastern suburbs, had their lives and social connections severely disrupted.

Many facilities where people used to meet and connect were damaged or closed down. In the 2012 CERA Wellbeing Survey, 69 per cent of respondents reported the loss of recreational, cultural and leisure time facilities (cafes, restaurants, libraries, marae, arts and cultural centres) having a negative impact on their everyday lives.

What is happening now?

There are a range of informal and formal initiatives supporting volunteering in greater Christchurch. The Department of Internal Affairs, which oversees the distribution of lottery funds, the Community Organisation Grants Scheme and other funding programmes, continues to support volunteering through its funding and advisory role. This includes contributing funding to Volunteering Canterbury.

In addition, the Christchurch City Council through its various funding pools supports over 1.5 million volunteer hours across the city.

The Christchurch City Council also supports volunteering through its Graffiti Team, which coordinates over 1,000 community volunteers and contributed to a reduction in graffiti vandalism throughout the city over 2015. This collective community effort aims to help the community feel safe and enhances neighbourhood pride. The Graffiti Team works with many organisations and schools promoting, educating and encouraging the community to become more involved, which in turn helps promote social connectedness. The Red Cross continues to engage in community outreach to support social connection. The Community Transport initiative connects people with health and recreation support and continues to run at capacity. This service is being transitioned from a recovery service to one of the usual services provided by the Red Cross. Red Cross volunteers and other local volunteers also check on affected residents in the most vulnerable areas of greater Christchurch. In May 2016 alone, 19 volunteers spent 114 hours knocking on over 1,800 doors to find out more about issues people may be facing and connecting them with support where possible.
Another door-knocking initiative is the Christchurch Community Response (CCR) Team, a church-based partnership between organisations including the Ministry of Social Development, Christchurch City Council and St Christopher’s Trust. CCR volunteers have visited over 70,000 homes across the city to help connect isolated individuals with appropriate support services. CCR continues to work its way across the city, gathering volunteers from each suburb it visits.

As our communities change and grow, local responses have worked to support social connectedness. Selwyn District Council signed its Newcomers and Migrants Strategy in December 2015 and is developing a resource to familiarise new residents with the area and connect people with local activities. In line with its Community Strategy, Waimakariri District Council has adopted a range of strategies to facilitate connectedness across its rapidly growing communities, including support for the establishment of a Welcome Ambassador initiative, welcome bags for new residents, and a range of social networks to help people start connecting in their area. The ‘You Me We Us Kaiapoi’ programme, initiated shortly after the earthquakes, continues to organise events and projects to help create a thriving and unique community.

The Christchurch City Council also supports communities at a neighbourhood level, working closely with Neighbourhood Support to run its successful Neighbourhood Week. Neighbourhood Week encourages social connections by supporting neighbours to organise and get together. A total of 141 events were held in Neighbourhood Week 2014.

Creative groups such as Gap Filler, Greening the Rubble, Te Putahi (Christchurch Centre for Architecture and Citymaking) and Life in Vacant Spaces have created temporary creative projects in vacant spaces which enhance the physical environment by creating areas where people can reconnect.

Another activity increasing connectedness is the Phillipstown Hub, which opened in 2015 on the Phillipstown School site following the school’s closure after the earthquakes. The aim of the Hub is to provide a place for the community to engage in activities that strengthen relationships, enhance skills, and encourage potential. The hub encourages community led projects that support positive outcomes for Phillipstown and hosts groups who work across a range of areas including health, safety, art, services for children, services for young people and their families.

CERA and the Council played a role in facilitating a range of initiatives that encouraged existing connections and enabled creation of new connections across the community. These included:

Partnering with the Christchurch Earthquake Appeal Trust (CEAT) and the Methodist and Anglican churches to deliver the family-targeted Summer of Fun free event series in 2014, 2015 and 2016. Another initiative, ‘Piece of Cake,’ joined the Summer of Fun series in 2016. ‘Piece of Cake’ had previously encouraged neighbours to get to know each other by sharing cake and conversation over the weekend of 29-30 March 2014 and again on 28-29 March 2015.

Supporting Rotary to develop the Rotary Neighbourhood Project Fund, which provides small grants to assist community groups to host small neighbourhood and larger community events.

Working to improve accessibility through the rebuild by implementing Barrier Free Audits and accessibility checks in construction of the major projects in the city rebuild and ensuring all anchor projects are accessible.

‘Let’s Find & Fix’ was a community-led initiative launched in April 2014 which aimed to identify earthquake-damaged homes that needed temporary repairs to keep them safe, secure and weather-tight. This campaign was initiated by Canterbury Communities’ Earthquake Recovery Network (CanCERN) and supported by CERA, Red Cross, Community Energy Action, EQC and Insurance Council of New Zealand members. The Programme was later supported by CEAT and resulted in temporary repairs for nearly 700 homes.
What are the indicators telling us?

People and Places

In the April 2016 Canterbury Wellbeing Survey, six per cent of respondents reported that the loss of community meeting places is still having a strong (‘moderate’ or ‘major’) negative impact on their wellbeing. However these impacts are diminishing as the repair and rebuild of facilities continues. By April 2016 the loss of indoor sport and active recreation facilities had a strong negative impact on only 10 per cent compared with 24 per cent in September 2012. The loss of outdoor sport and active recreation facilities strongly negatively impacted only 8 per cent compared with 20 per cent in 2012. The proportion of people indicating that the loss of other recreational, cultural and leisure time facilities continued to have a strong negative impact reduced to 10 per cent in April 2016 compared with 34 per cent in September 2012.

Sense of community

In this report, sense of community is measured in the following ways:

• Sense of community with others in neighbourhood
• Levels of connectedness (having anyone you could turn to for help during a difficult time, such as during a serious illness, after an injury, or when needing emotional support).

Sense of community with others in neighbourhood

Prior to the earthquakes, Christchurch city residents reported lower levels of a sense of community (57 per cent) than the national average (60 per cent)\(^1\). The 2012 CERA Wellbeing Survey showed that in the year following the 2010 and 2011 earthquakes, over half of residents in greater Christchurch (55 per cent) agreed or strongly agreed that they felt a sense of community with others in their neighbourhood. This may have been because the earthquakes had engendered a greater spirit of social connectedness during a time of uncertainty and upheaval for many.

However, Figure 1 shows that since September 2012, the proportion feeling a sense of community (agree or strongly agree) has trended downwards to below 50 per cent (greater Christchurch, 49 per cent as at April 2016, Canterbury Wellbeing Survey). The downward trend in the proportion of residents who feel a sense of community with others in their neighbourhood from September 2012 to April 2016 is statistically significant.

Figure 1: Percentage of residents who felt a sense of community

In the year following the 2010 and 2011 earthquakes 55 per cent of survey respondents in greater Christchurch agreed or strongly agreed that they felt a sense of community with others in their neighbourhood. However, since September 2012, the proportion feeling a sense of community trended downwards to 49 per cent in April 2016.
Map 1 shows the proportion within each geographic area reporting that they felt (agree or strongly agree) a sense of community with others in their neighbourhood in the April 2016 Canterbury Wellbeing Survey. Only 32 per cent of those living in the East reported a sense of community, compared with 58 per cent in the South (down from 39 per cent and 64 per cent respectively in September 2015). Residents of Selwyn and Waimakariri districts continue to feel a stronger sense of community than people living in Christchurch city.

*Map 1: Proportion of people who agree that they feel a sense of community with others in their neighbourhood, zoned by residential address, Canterbury Wellbeing Survey April 2016 (see technical notes regarding geographic boundaries)*
In April 2016, the group most likely to agree they feel a sense of community with others in their neighbourhood were those aged 35-49 years (54 per cent), aged 75 years or over (62 per cent), those whose total dwelling claim was up to $15,000 (62 per cent), and those who have either not needed to make an insurance claim on their dwelling (56 per cent) or who have accepted an offer from their insurer (56 per cent).

Those less likely to report a sense of community were people living in rental accommodation (27 per cent) and young adults aged 18–24 years (31 per cent) or 25-34 years (23 per cent).

In the 2013 CERA Youth Wellbeing Survey of 12–24 year olds, 57 per cent of respondents agreed that they felt a sense of community with others in their neighbourhood. Those most likely to feel this way were those aged 12–15 years (64 per cent) and those at school (62 per cent). In contrast, the unemployed (38 per cent), young people living with a long-term health condition or disability and young people aged 19–24 years were less likely to feel a sense of community.

Levels of connectedness

Despite significant population movement as a result of the earthquakes, people in greater Christchurch appear to have maintained high levels of connectedness. Figure 2 shows the percentage of residents who agreed that they had someone to turn to for help during a difficult time. The figure shows two comparisons, because the survey methods employed changed between the period 2008 to 2010 (using computer assisted telephone interviewing) and the period 2012 to 2014 (using internet and hard copy questionnaires). Figure 2 shows that there were essentially no differences in the proportions of respondents reporting they had someone they could turn to for help: both between Christchurch city and non-Christchurch city residents and across the two time points. Levels of connectedness, as captured by this measure, remain high. In April 2016, 97 per cent of respondents to the Canterbury Wellbeing Survey indicated that they have someone to turn to. Family (91%) and friends (66%) continue to be the most common forms of support that residents use in times of need.

Figure 2: Proportion of residents reporting they had someone they could turn to for help during a difficult time

CATI = computer assisted telephone interviewing
SMM = Sequential Mixed Methodology

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*Data not available for 2016 (one-time survey, unknown if survey will be repeated in future).

*Important points about the methods used in the New Zealand Quality of Life Survey up until 2010 are that it used computer assisted telephone interviewing (CATI); it relied upon telematching from the electoral role, which excluded 60% of the population; it included ages 15-17 in the survey, by using an in-house database of named individuals who had indicated they were willing to participate in surveys in the future; and it included the following city councils: Auckland, Manukau, North Shore, Waitakere, Wellington, Christchurch, and the following territorial authorities: Rodney, Hamilton, Tauranga, Hutt, Porirua, and Dunedin. From 2012 onwards, the New Zealand Quality of Life Survey used Sequential Mixed Methodology (SMM), which uses internet and hard copy questionnaires and does not exclude 60% of the population; it only included 18 years and older, and it included the newly amalgamated Auckland City, Hutt City, Porirua, Wellington, Christchurch and Dunedin. Hamilton and Tauranga withdrew.

*Data since the April 2014 CERA Wellbeing Survey has been excluded from this analysis due to a change of question format.
Personal commitment to Greater Christchurch

In the 2012 CERA Wellbeing Survey 24 per cent of residents reported benefits from feeling a stronger personal commitment to Christchurch city or to Selwyn or Waimakariri districts as a result of the earthquakes. This positive impact has diminished over time with 18 per cent of respondents in April 2016 still reporting that it was having a strong (moderate or major) positive impact on their everyday life as a result of the earthquakes.

Other community indicators

Other indicators which indicate changes in levels of community connectedness include:

- volunteering rate
- graffiti complaints
- noise complaints

Volunteering

Data in Figure 3 shows rates of formal volunteering. This indicator is based on survey questions from the Nielsen CMI Survey, which only collects data on formal volunteering (i.e., that done for/through an organisation by persons 10 years and older). When comparing the rates between Canterbury and New Zealand, it must be remembered that a lot of informal volunteering in Canterbury since the earthquakes is not captured by this measure. Note that this survey is no longer conducted, hence data cannot be provided beyond this time point.

The volunteering rate in Canterbury increased in the period immediately following the February 2011 earthquake to 35 per cent in March 2011, from 28 per cent in March 2010. The rate has since fluctuated and despite increasing again to 34 per cent in June 2012, it has generally remained below the New Zealand rate. Since December 2009, 30 per cent of the population (on average) have spent time volunteering in New Zealand compared to 29 per cent in Canterbury. By late 2014 the Canterbury rate was similar to that before the earthquakes.

After the February 2011 earthquake people in Canterbury also volunteered more hours on average than before. However, time spent volunteering has generally remained below the New Zealand average since June 2011. However, Figure 3 shows that volunteering rates tend to fluctuate across time and for all of New Zealand.

Another source of information on volunteerism is the New Zealand Census (albeit using different criteria and methodology). Data for 2013 show that the proportion of greater Christchurch people 15 years and over who spent time helping or in other voluntary work through any organisation, group or marae (13 per cent) is very similar to that across New Zealand (14 per cent). This proportion has remained stable between the 2006 Census and the 2013 Census.13

Figure 3: Volunteering rate, Nielsen CMI Survey
Graffiti complaints

While the number of recorded complaints has increased in recent times, the number of physical tags (items of graffiti) has decreased substantially in Christchurch between 2011 and 2015, based on the Christchurch City Council’s Graffiti Scan programme. The Graffiti Scan programme recorded over 11 thousand tags (11,601) in 2011 but this number has declined dramatically to just over three thousand (3,061) in 2015 (Figure 4). In addition, the Council’s introduction of the ‘Snap Send Solve’ mobile phone app provides residents with a quick and easy way of notifying incidents within Christchurch. The app generated photo and GPS data helps the relevant Council department to isolate and investigate issues.

In 2015, 5,726 volunteer hours were applied to graffiti removal in Christchurch. In addition, 5,614 tags were removed through contractors’ proactive runs (graffiti removed without first being reported).

Figure 4: Tags counted during Graffiti Scans, 2011 to 2015, Christchurch City

Taken together, the data points to the effectiveness of the Christchurch City Council’s Graffiti Programme. In particular, the programme appears to be making a real contribution to reducing the incidents of graffiti vandalism. It is possible that this is contributing to a reduction in the incidence of other crime and may be improving perceptions of community safety.

*The Graffiti Scan is done every year in the last week of February. It is a physical count on any tagging sighted from the road. This year was the first year that a volunteer group Community Patrol undertook the count. The group drove down each street within the designated suburbs (21 sample areas in total) and physically counted the tagging on both sides of the road.*
Noise complaints

Total noise complaints reported to Christchurch City Council peaked at 14,152 complaints in 2010 and subsequently declined to 12,422 complaints in 2014 and 12,800 in 2015.

Typically, noise from radios, stereos, and televisions are the major source of complaints. However, Figure 5 shows that construction noise complaints have increased considerably as the rebuild has picked up pace and these are now the third most common type of complaint. The number of construction noise complaints has more than quadrupled between 2010 and 2015. Several factors (including temporary residential/industry displacements, and residential and commercial construction) may be driving the changes in the numbers and types of noise complaints.

Figure 5: Noise complaints due to construction

Find out more

Find out more about the Canterbury Wellbeing Index: www.cph.co.nz/your-health/canterbury-wellbeing-index/

Find out more about volunteering across New Zealand: www.volunteeringnz.org.nz/

Find out more about the Strengthening Communities Fund: www.ccc.govt.nz/culture-and-community/community-funding/strengthening-communities-fund/

Find out more about Volunteering Canterbury: www.facebook.com/pages/Volunteering-Canterbury/76308735321

Find out more about the Community Organisation Grants Scheme: www.communitymatters.govt.nz/Funding-and-grants---Crown-Funds---Community-Organisation-Grants-Scheme

Find out more about Red Cross assistance programmes and volunteering for the Red Cross: www.redcross.org.nz/what-we-do/in-new-zealand/disaster-management/canterbury-recovery-programme/

Find out more about Salvation Army assistance programmes and services and volunteering for the Salvation Army: www.salvationarmy.org.nz/need-assistance/welfare
Technical notes

Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey)

Data source: Canterbury Earthquake Recovery Authority, Canterbury District Health Board

Data frequency: Six-monthly September 2012, April 2013, September 2013, April 2014, September 2014, April 2015, September 2015 (all CERA) and April 2016 (CDHB)

Data complete until: April 2016

Notes: The April 2016 Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey) is the eighth survey in the series providing information about the residents of greater Christchurch. Respondents were randomly selected from the electoral roll. The survey was delivered online and by hard copy from 30 March to 18 May 2016. The response rate was 41 per cent. Weighting was used to correct imbalances in sample representation. The survey was originally developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. For results from the surveys, see: www.cph.co.nz/your-health/wellbeing-survey/

CERA Youth Wellbeing Survey

Data source: Canterbury Earthquake Recovery Authority

Data frequency: One-time survey (unknown if survey will be repeated in future)

Data complete until: 2013

Notes: The aim of the CERA Youth Wellbeing Survey 2013 is to measure the progress of earthquake recovery by collecting data on the self-reported wellbeing of those aged 12–24 years. CERA worked with the Ministry of Education, Canterbury District Health Board, the Ministry of Youth Development, Christchurch City Council, Waimakariri District Council, Selwyn District Council, Ngāi Tahu, the Natural Hazards Research Platform and The Collaborative for Research and Training in Youth Health and Development to develop and implement the Youth Wellbeing Survey. Survey questions were adapted from the CERA Wellbeing Survey and were tested with panels of young people to ensure that the wording and content were relevant. The Youth Wellbeing Survey was open between 23 September and 13 December 2013 for responses from young people aged 12–24 years, living in greater Christchurch.

Methodology

This was an online survey aiming to generate a sample of young people in greater Christchurch that, while self-selected and therefore not representative, was as large and diverse as possible. The survey was undertaken between September and December 2013. Advertising through greater Christchurch youth networks and targeted promotional activities were the main recruitment strategies. Some hard copy responses from targeted groups of young people were also received. The survey period included high school and university exams, which meant that efforts to attract responses from different age groups needed to take the timing of study leave and exams into account. Recruitment during this period may also have had some impact on the responses given by students who may have been experiencing greater stress than usual due to exam pressure.
Sense of community


**Data complete until:** October 2012 and 2014 (Quality of Life) and April 2016 (Canterbury Wellbeing Survey)

**Notes:** The Quality of Life Survey is a national survey run every two years. Computer assisted telephone interviews were conducted with New Zealand residents aged 15 years and older. Respondents were selected randomly from the Electoral Roll. The Christchurch sample size is 488 for 2014. For 2010, fieldwork was conducted between 19 November 2010 and 2 March 2011. All interviewing in Christchurch was undertaken before the 22 February 2011 earthquake (and after the first large quake in September 2010).

The questions were asked in the same fashion in the Quality of Life surveys and the Canterbury Wellbeing Survey. The question, “If you were faced with a serious illness or injury, or needed emotional support during a difficult time, is there anyone you could turn to for help?” was not asked in 2006.

The results of the Quality of Life Survey include residents of Christchurch city only, while the Canterbury Wellbeing Survey also includes residents of Waimakariri and Selwyn districts.

The ‘national’ total in 2012 and 2014 is the combined results of the six Quality of Life Project cities of Auckland, Porirua, Hutt, Wellington, Christchurch and Dunedin.

The ‘national’ total in 2010 is the combined results of the eight Quality of Life Project cities of Auckland, Hamilton, Tauranga, Porirua, Hutt, Wellington, Christchurch and Dunedin.

Prior to 2010, a further two cities were involved and the ‘national’ average included a number of people resident outside the main Quality of Life Project cities.

Volunteering

**Data source:** Nielsen CMI Survey via Department of Internal Affairs

**Data frequency:** Quarterly

**Data complete until:** September 2014

**Notes:** This indicator is based on survey questions from the Nielsen CMI Survey. This survey only collects data on formal volunteering (i.e., that done for/through an organisation). A negligible amount of informal volunteering (helping neighbours etc.) is also captured. Results are provided for the population aged 10 years and older, which is the standard measure used by the Department of Internal Affairs for volunteering data.

The rate of volunteering used is the number of people aged 10 years and older who have formally volunteered for a group or organisation in the last three months, as a proportion of all people aged 10 years or older.

The 22 February 2011 earthquake fell in the middle of the March 2011 quarter survey period. The March 2011 quarter results should be considered indicative only due to data quality issues, especially in the Canterbury region.

Note September 2014 data is the last data recorded in this data series.

Graffiti complaints

**Data source:** Christchurch City Council

**Data frequency:** Data collected monthly and aggregated annually in this report

**Data complete until:** February 2015
Noise complaints
Data source: Christchurch City Council
Data frequency: Data collected monthly and aggregated annually in this report
Data complete until: Jan 2015
References

1. Information retrieved from: socialreport.msd.govt.nz/social-connectedness.html


9. For information on the Canterbury Wellbeing Survey, refer to the technical notes.


The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why is civil participation important?
Civil participation in public decision-making gives people a way of contributing to their communities. This contribution is an important aspect of people’s wellbeing.

Participation can bring an ability to influence decisions, as well as opportunities to connect with others in the community, and to learn and understand what is going on. It can also build a sense of being valued by community leaders and others in the community. Experts agree that having a say in the rebuild helps people’s recovery.

Electoral participation is one way of measuring how much people feel engaged in, and responsible for, their community. If people believe strongly in their ability to be heard and to make a difference, they tend to enrol and to vote in elections.

Higher voter turnout rates also suggest that the population has confidence in government and believes that the government is responsive to the views of citizens.

General elections are held at least every three years, with the most recent held in September 2014 and the next general election to be held in 2017. Local government elections are also held every three years, most recently in October 2013, with the next elections to occur in September and October 2016.

There appears to be little research on the impact of natural disasters on voter turnout, but it is generally agreed that disasters are likely to reduce voter participation. For example, voter turnout overall decreased after Hurricane Katrina in New Orleans. However, the impact of the disaster was not straightforward: in some more heavily flooded areas, turnout actually increased while it fell in some of the less flooded areas.

How was civil participation impacted by the earthquakes?
The 2010 local government elections were held just one month after the September 2010 earthquake. Postal ballots were due by 9 October 2010.

The Christchurch City Council ran a campaign to raise voter awareness. Advertisements were placed on buses, in malls and in doctors’ surgeries, and radio advertising and interviews were undertaken. As noted in Figure 1 this campaign appeared successful as voter turnout in the city increased by 10 per cent between 2007 and 2010.

The 2011 general election was held nine months after the February 2011 earthquake and just five months after the major June 2011 aftershocks. In recognition that the earthquakes had caused significant infrastructure and communications obstacles, the Electoral Commission heavily promoted advance voting in Christchurch. Advance mobile services were provided via campervans which stopped at pre-advertised sites on the paths of local bus routes.
Subsequently, a survey of voter and non-voter experiences found that 80 per cent of Christchurch residents were aware of advance voting options, in contrast to 63 per cent of residents nationally.\(^8\) Advance voting in the badly damaged electorates of Christchurch East and Christchurch Central (19 per cent in each case) was higher than the national average of 15 per cent.\(^9\)

This same survey found that Christchurch residents typically knew more about aspects of the general election process and the associated referendum than New Zealanders as a whole.\(^9\)

In the 2014 general election, voter turnout across New Zealand as a percentage of those eligible to vote, increased 4 per cent to 77 per cent, almost equalling the levels of 2008 and 2005 after a dip in 2011. Voter turnout in Christchurch returned to levels very similar to those in 2008, with the exception of Christchurch East, Wigram, and Ilam electorates.

Declining voter turnout is a long-term global trend.\(^10\)

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**What is happening now?**

**Public engagement**

There have been a number of opportunities for communities to get involved with shaping the future of Greater Christchurch. ‘Canvas – your thinking for the red zone’ engagement was held in Waimakariri from 30 July 2014 and ran for six weeks until 12 September. During that time, nearly 600 people contributed their vision, from which more than 2,750 ideas and values were identified for the future use of the Waimakariri red zones. Themes drawn from this included people’s desire to see the natural environment restored so that community activities and new community facilities could be developed on the land. They also wanted a place to remember the earthquakes and what happened to the land.

The Visionarium (Future Christchurch) closed on 31 January 2016 in Cathedral Square after 18 months of touring the greater Christchurch region. It provided more than 70,000 people the opportunity to see what had occurred in the recovery and rebuild in both the suburban areas and the central city. It also provided visual demonstrations of what is proposed as the rebuild continues to encourage public feedback and ideas.

The ‘Ideas to Remember’ engagement informed the development of an earthquake memorial to honour the lives of those who died in Canterbury’s earthquakes and acknowledge the shared trauma experienced by the people of Canterbury. More than 330 design ideas from 37 countries were received. The submissions were shortlisted to six by an evaluation panel made up of arts professionals, experts in architecture and landscape architecture and a participant on behalf of the bereaved families. The shortlisted designs were shared with bereaved families, the seriously injured and those who survived the major building collapses. Their feedback was a very important part of the development of the designs. Feedback was also sought from the public with more than 2,000 comments received. On 13 May 2015, Minister for Canterbury Earthquake Recovery, Hon Gerry Brownlee, announced the winning design for the Canterbury Earthquake Memorial was *The Memorial Wall* by Slovenian architect Grega Vesjak.

Recovery plans such as the Natural Environment Recovery Plans and the Land Use Recovery Plan, which set the strategic direction for recovery and regeneration have sought public input as has the District Plan review.
Electoral participation

In 2013, the parliamentary electorate names and boundaries for the 2014 and 2017 general elections were reviewed by the Representation Commission to ensure that the number of people in each electorate reflects changes in the population following the 2013 Census of Population and Dwellings, and to ensure that electorate names remain relevant.

Major boundary changes in the Christchurch area were proposed because of significant population movement away from the Christchurch East, Christchurch Central, and Port Hills electorates. The Waimakariri, Wigram, and Selwyn electorates had increased beyond the permitted population limit.

The proposed boundaries were then notified to the general public and to members of Parliament, as well as being put forward for public discussion for appropriate modification or adjustment. In April 2014 the Representation Commission finalised the electorate names and boundaries, which are available on the Electoral Commission’s website. The next general election is scheduled to be held no later than 18 November 2017, and the next local government election is scheduled for 2016.

What are the indicators telling us?

This report measures civil participation in five ways.

- Confidence in earthquake recovery decision-making.
- Satisfaction with earthquake recovery communications and information.
- Satisfaction with opportunities to influence earthquake recovery decisions.
- Voter turnout in local elections for councillors.
- Voter turnout in general elections.

Decision-making and communication related to earthquake recovery

Figure 1 shows confidence in overall decision-making relating to the recovery between 2012 and 2016, as recorded in the Canterbury Wellbeing Survey* (formerly the CERA Wellbeing Survey).

In September 2014, 34 per cent of residents expressed confidence in overall decision-making. Another 34 per cent indicated they lacked such confidence. However, in April 2016, only 28 per cent of residents expressed confidence, 40 per cent lacked confidence, and the remaining 32 per cent were non-committal. The proportion expressing a lack of confidence was not statistically significantly different (from April 2016) in September 2015, at 39 per cent.

Figure 1: Confidence in earthquake recovery decision-making (Canterbury Wellbeing Survey)

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* Note that previous surveys asked about the agencies involved in the earthquake recovery in general. In April 2016, the wording was changed to ask specifically about the central and local government agencies involved. This change should be taken into account when interpreting the latest results.
Figure 2 shows respondents’ satisfaction with information from recovery agencies. Satisfaction peaked at 38 per cent in September 2014 and has been stable at 33 per cent since April 2015. In April 2016, 39 per cent were neither satisfied nor dissatisfied and the remaining 28 per cent were dissatisfied.

Figure 2: Satisfaction with earthquake recovery communications and information (Canterbury Wellbeing Survey)

Figure 3 shows the results from the April 2016 Canterbury Wellbeing Survey relating to satisfaction with opportunities for the public to influence earthquake recovery decisions. In April 2016, only 26 per cent of residents expressed satisfaction with opportunities for the public to influence decisions (very satisfied or satisfied), 39 per cent were dissatisfied (a statistically significant increase from 35 per cent in September 2015) and the remaining 35 per cent did not have a firm view. Satisfaction has either been stable or has fallen over time, with the exception of a statistically significant increase between April and September of 2014 (from 24 per cent to 29 per cent).

Figure 3: Satisfaction with opportunities to influence decisions (Canterbury Wellbeing Survey)

As for overall confidence in decision-making, wording for overall satisfaction with information was changed in April 2016 to ask specifically about the ‘central and local government’ agencies involved.
Local elections

Figure 4 shows that voter turnout for local elections increased in Christchurch City between 2004 and 2010, including after the September 2010 earthquake. Turnout grew from 39 per cent in 2004 to 42 per cent in 2007 and 52 per cent in 2010. However, local election voter turnout declined between 2010 and 2013 to 43 per cent. This is similar to the national figure of 41 per cent.

Voter turnout for local elections declined slightly in Waimakariri and Selwyn districts between the 2007 and 2010 elections. This pattern has continued in 2013.

Figure 4: Voter turnout in local government elections for councillors
General elections

Figure 5 shows that voter turnout for general elections in greater Christchurch declined from 2005 to 2011 but showed a marked improvement in 2014. Voter turnout in 2014 improved in all greater Christchurch electorates, consistent with voting trends in New Zealand overall.

In the 2011 election Christchurch East had the greatest decline, falling by 8 per cent from an 81 per cent turnout in 2008 to a 73 per cent turnout in 2011. This increased to 77 per cent in 2014.

In Te Tai Tonga Māori electorate, which covers a wider area than Canterbury alone, turnout fell by 7 per cent from 64 per cent in 2008 to 57 per cent in 2011. This returned to 64 per cent in 2014.

The Wigram turnout fell by 7 per cent from 79 per cent in 2008 to 72 per cent in 2011. This increased to 74 per cent in 2014.

The General Election Report 2014 identified some reasons behind why people did not vote. The most common reason given for not voting was ‘lack of interest’ in voting, which accounted for 27 per cent of non-voters, up from 21 per cent in 2011. Nine per cent of non-voters ‘can’t be bothered with politics or politicians’, 8 per cent ‘can’t be bothered voting’ and 6 per cent think ‘it makes no difference who the government is’. Almost a quarter of non-voters didn’t vote because of self-reported barriers to voting, including health reasons, religious reasons and other commitments (including work).

Figure 5: Voter turnout in general elections
Find out more

Find out more about the Canterbury Wellbeing Index: [www.cph.co.nz/your-health/canterbury-wellbeing-index/](http://www.cph.co.nz/your-health/canterbury-wellbeing-index/)

Find out more about elections in New Zealand: [www.elections.org.nz](http://www.elections.org.nz)

Find out more about electorate-level turnout information from 1996 onward: [www.electionresults.org.nz](http://www.electionresults.org.nz)


Technical notes

**Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey)**

**Data source:** Canterbury Earthquake Recovery Authority, Canterbury District Health Board

**Data frequency:** Six-monthly September 2012, April 2013, September 2013, April 2014, September 2014, April 2015, September 2015 (all CERA) and April 2016 (CDHB)

**Data complete until:** April 2016

**Notes:** The April 2016 Canterbury Wellbeing Survey is the eighth survey in the series providing information about the residents of greater Christchurch. Respondents were randomly selected from the electoral roll. The survey was delivered online and by hard copy from 30 March to 18 May 2016. The response rate was 41 per cent. Weighting was used to correct imbalances in sample representation. The survey was originally developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. For results from the surveys, see: [www.cph.co.nz/your-health/wellbeing-survey/](http://www.cph.co.nz/your-health/wellbeing-survey/)

**Voting information**

**Data source:** Electoral Commission. The Local Authority Election Statistics (Department of Internal Affairs)

**(Department of Internal Affairs)**

**Data frequency:** Each election

**Data complete until:** 2011, 2013 and 2014

**Notes:** Voter turnout is defined as the proportion of all enrolled electors who cast a vote in general elections (Voter turnout = Total votes cast / Electoral population).

Local government elections occur every three years, most recently in 2013. Territorial authority elections for councillors and for mayors have almost identical turnout rates for these electorates. For simplicity, we are reporting only on councillor elections.

**Electoral boundary review (general elections)**

The parliamentary electorate names and boundaries for the 2014 and 2017 general elections have been reviewed by a statutory body called the Representation Commission.

This will ensure that the number of people in each electorate reflects changes in the population and that electorate names remain relevant.
Statistics New Zealand calculates the number of general and Māori electorates and population size for each electorate following the Census. The Representation Commission used these electoral populations and other statutory criteria to decide the electorate boundaries.

The proposed electorate boundaries were released for public comment on 21 November 2013.

The Commission finalised the electorate names and boundaries in April 2014 for the 2014 and 2017 general elections.¹³

**Non-voters in 2008 and 2011 general elections**

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<tr>
<td>Data complete until</td>
<td>2012</td>
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This report produced in 2012 presents reasons people gave for not voting. It includes selected characteristics of the non-voters, including their age, feelings of income adequacy, labour force status and migrant status.

The report is based on self-reported voting behaviour from the NZGSS and findings can be different from administrative data or voter turnout data available from the Electoral Commission.
References


The Canterbury Wellbeing Index tracks the progress of social recovery in greater Christchurch following the earthquakes using indicators to identify emerging social trends and issues.

Why is population important?

Changes in the size of the population can have significant impacts on the natural, physical, economic, and social environments. Population size and make-up can change through births, deaths, and migration.

If a population grows, there is greater demand for cultural and recreational services such as libraries, art galleries, sports grounds and swimming pools. Social infrastructure must expand so that everyone has access to housing and important services such as schools, general practices, community halls, and emergency services. With population growth, demand also intensifies for natural resources such as land and energy, and greater pressure is placed on existing roads, water, and waste systems.\(^1\)

Under the right conditions, population growth can help drive economic growth, as people consume more goods and services. In turn, higher consumption can create employment and boost the economic wellbeing and quality of life in growing communities. However, for economic activity to increase there must be more supporting infrastructure such as roads, ports, and telecommunications infrastructure.

If a population declines, less money circulates in the economy and this can lead to businesses failing and people losing their jobs. Services such as hospitals and schools become less viable. In this way, long-term population decline reduces both economic and social wellbeing.

Before the earthquakes, the populations of Christchurch city and the Waimakariri and Selwyn districts were growing, and Statistics New Zealand projected that this trend would continue. Since the earthquakes, predictions of population changes in greater Christchurch have had to be adjusted.

Evidence from previous natural disasters in developed countries suggested that less than 2.5 per cent of the population would leave the region in the first year following the disaster and that this would be offset by natural population growth and migration into greater Christchurch.\(^2\) A long-term fall in the number of people in the region was considered unlikely.

International research also suggests that the people who experience the greatest dislocation tend to be those whose homes have been most damaged.\(^3\) In general, socioeconomically vulnerable populations are more likely to bear the burden of a natural disaster, to be displaced, and to be displaced for longer.

After disasters, displaced people tend to relocate near their previous homes rather than moving long distances.\(^2\) In this way, they retain links to their former communities and continue to work in their usual place of employment or attend their usual school.

The Census is the most comprehensive source of population data. The 2011 Census was due to be held on 8 March 2011, but was delayed due to the national state of emergency that followed the Canterbury earthquake on 22 February 2011.

The most recent Census was held on 5 March 2013 and results were available from late 2013. Census data in conjunction with other Statistics New Zealand population measures, including estimates made between Censuses, are presented in this section to show population changes.
How was the population impacted by the earthquakes?

In the immediate aftermath of the February 2011 earthquake there were reports of tens of thousands of people leaving the city. For most people this was a short-term response to an emergency, as residents wanted time out from the aftershocks and from the damage to their homes and workplaces. Most people returned over the following days, weeks, and months.

According to an analysis of cell phone data from Christchurch users, around 55,000 residents may have left the city in the week after the February 2011 earthquake (15 per cent of the population). Most calls were made from Otago, Auckland, or Wellington. A month later, records indicated that most people had returned to Christchurch.

New Zealand Post mail redirections showed that 8,632 households relocated in the six weeks after the February 2011 earthquake compared with 2,397 in the six weeks before. The majority (81 per cent) relocated within the Canterbury region, and 67 per cent of Christchurch city residents who relocated did so within the city. Based on Christchurch City Council rates data, it appears that in the first few months people tended to relocate near their former neighbourhood. The median distance between former and current residences was just 3.5 kilometres. The most common destinations for relocations outside Canterbury were Auckland, Otago and Wellington.

Within Waimakariri District, displaced households tended to relocate primarily within the district or to Christchurch city.

A national survey of 26,000 secondary students carried out in June 2011 asked if students had moved to a different home because of the earthquakes. In Canterbury, 8.2 per cent indicated they had moved, while in the rest of the country, on average, 1.8 per cent indicated they had moved out of Christchurch because of the earthquakes. The 2013 CERA Youth Wellbeing Survey found that 46 per cent of respondents aged 12–24 years had moved from the address they were living at on 4 September 2010 (the date of the first Canterbury earthquake). Of this group, 39 per cent had moved once and 29 per cent had moved twice.

Statistics New Zealand estimated that in the year from June 2010 to June 2011, the population of Christchurch city decreased by 14,000 people (3.7 per cent). Many were likely to have settled in other parts of Canterbury, as the total estimated loss to the Canterbury region was only 8,400 people. Estimates also indicate that between June 2011 and June 2012, Christchurch city’s population declined by a further 2.0 per cent to 355,100.

Between June 2010 and June 2011, the number of people leaving New Zealand permanently, or for the long term, increased by 22 per cent (to a total of 80,100). In the year to June 2012 there was a further 9 per cent increase in international migrant departures. One likely reason for this increase was that more residents of greater Christchurch were leaving because of the earthquakes.

Between June 2010 and June 2011, Selwyn District was the fastest-growing territorial authority in New Zealand with a 4.7 per cent increase in its population. Selwyn District remained the fastest-growing territorial authority area in the year to June 2012, when it increased a further 3.6 per cent (1,560). Waimakariri District increased by 3.9 per cent (1,560) in the year to June 2011 and 2.2 per cent (1,070) in the year to June 2012 (see What are the indicators telling us? below for the 2013 population estimate).

What is happening now?

Population movement across greater Christchurch has been substantial. Some of this movement is due to owners of property in the worst affected suburbs accepting the Crown’s offer to purchase their property.

In June 2011 the Government announced that, due to the scale of land damage, areas in greater Christchurch would be mapped into land zones, which were identified through geotechnical investigations.

Green zone areas are generally considered to be suitable for residential construction. Green zone land has been divided into three technical categories by the Ministry of Business, Innovation and Employment – TC1 (grey), TC2 (yellow) and TC3 (blue). Ministry of Business, Innovation and Employment guidelines for each technical category describe the foundation systems most likely to be
required if there is a need to repair or rebuild foundations. ‘Technical category not applicable’ applies to properties in urban areas, properties in rural areas or beyond the extent of land damage mapping and properties in parts of the Port Hills and Banks Peninsula. Normal consenting procedures apply to these.

Residential property in the flat land has been zoned red when the land has been so badly damaged by the earthquakes that it is unlikely it can be rebuilt on for a prolonged period. The criteria for defining areas as residential red zone are:

- there is significant and extensive area wide land damage
- the success of engineering solutions may be uncertain in terms of design, its success and possible commencement, given the ongoing seismic activity
- any repair would be disruptive and protracted for landowners.

In the Port Hills, properties affected by cliff collapse have been zoned red where they pose an immediate risk to life. Properties affected by rock roll have been zoned red where they pose an unacceptable risk to life (greater than 1 in 10,000 at 2016 risk levels) and an area-wide engineering solution to remediate them has been determined not to be practicable for a number of reasons including uncertainty around timeliness and costs.

Insured red-zone property owners who chose to accept the Crown offer had two options: either the Crown would purchase their property at the 2007 rateable valuation and undertake an assignment of their Earthquake Commission and private insurance claims; or the Crown would purchase their property at the 2007 rateable land valuation and undertake an assignment of the Earthquake Commission land claim only, with the property owner settling their house claim with the Earthquake Commission or their insurer.

As at July 2016, there were 8,060 residential red zone properties (including those on the Port Hills). Of these, 7,719 home owners (96 per cent) had settled with the Crown for the purchase of their properties.10

Other population movements are underway as people are temporarily displaced from homes in the green zone that are being repaired or rebuilt. In addition, the workforce for the rebuild grown, which includes workers arriving from other parts of New Zealand and overseas

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What are the indicators telling us?

This report examines population using the following indicators.

- Change in estimated resident population.
- Change in the number and proportion of usual residents.
- Change in the number and proportion of occupied and unoccupied private dwellings.
- Population movement to and from greater Christchurch.
- Cultural diversity – change in the ethnic makeup of the population.

Population estimates

Population estimates produced by Statistics New Zealand measure the estimated annual change in the resident population. They are the best available measure of how many people usually live in an area each year. Recent estimates indicate that Christchurch city’s population grew in the years to June 2013, June 2014, and June 2015 after two years of decline during the period following the earthquakes (see How was the population impacted by the earthquakes? above for earlier population estimates).11

Figure 1 shows that in the year to June 2015, Christchurch city’s estimated population increased by 5,900 (1.6 per cent). In contrast between 2010 and 2012, the population of Christchurch city decreased by about 21,100.8

The populations of Waimakariri and Selwyn districts also continued to grow in the year to June 2015, increasing by 3.7 per cent and 6.5 per cent respectively. This population increase in Selwyn District is the largest percentage increase recorded for any territorial authority since the June 2004 year.8

---

10
For greater Christchurch, the population decreased 14,700 between June 2010 and June 2012, but has since increased by 26,700 between June 2012 and June 2015.

Figure 1: Population estimates by territorial authority within greater Christchurch
Census usually-resident population change

The 2013 Census is the most detailed and accurate source of information about people who live in greater Christchurch. It shows that overall the region’s population grew between 2006 and 2013 despite the series of earthquakes from 2010. However, the change in population size varied within the three territorial authorities that make up greater Christchurch.

In 2013 there were 436,056 people living in greater Christchurch compared with 424,935 at the 2006 Census. Table 1 shows that the usually-resident population grew by 11,121 or 2.6 per cent overall during this seven-year period. Nationally the population increased by 5.3 per cent.

Of the three territorial authorities within greater Christchurch, Selwyn District experienced the highest population increase, growing by 32.6 per cent between 2006 and 2013. Waimakariri District increased by 16.7 per cent and Christchurch city’s population dropped by 2 per cent over the same period. However, these overall population changes followed a period of steady growth for all three areas between the previous two Census years (2001–2006).

Selwyn District was the fastest-growing territorial authority nationally while Waimakariri District had the third-fastest growth rate.

Map 1 shows the population change in the geographic areas which make up greater Christchurch. As mentioned, Waimakariri and Selwyn districts had the greatest percentage population increases in greater Christchurch between 2006 and 2013. Within Christchurch city, the strongest growth was felt in the South West (11 per cent) and Inner South (8 per cent). In contrast, the Central City (-36 per cent), the East (-12 per cent) and North East (-9 per cent) had the greatest declines in population size reflecting the considerable earthquake damage in these areas.

Table 1: Census usually resident population change by territorial authority within greater Christchurch 2001–2013

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Waimakariri district</td>
<td>36,903</td>
<td>42,834</td>
<td>49,989</td>
<td>5,931</td>
<td>16.1</td>
<td>7,155</td>
<td>16.7</td>
</tr>
<tr>
<td>Christchurch city</td>
<td>324,081</td>
<td>348,459</td>
<td>341,469</td>
<td>24,378</td>
<td>7.5</td>
<td>– 6,990</td>
<td>– 2.0</td>
</tr>
<tr>
<td>Selwyn district</td>
<td>27,291</td>
<td>33,642</td>
<td>44,595</td>
<td>6,351</td>
<td>23.3</td>
<td>10,953</td>
<td>32.6</td>
</tr>
<tr>
<td>Greater Christchurch</td>
<td>388,272</td>
<td>424,935</td>
<td>436,056</td>
<td>36,663</td>
<td>9.4</td>
<td>11,121</td>
<td>2.6</td>
</tr>
</tbody>
</table>
Map 1: Percentage change in population within greater Christchurch 2006-2013
Change in occupied and unoccupied dwellings (2013 Census)

Table 2 shows that between 2006 and 2013 the number of occupied private dwellings grew by 1.2 per cent in greater Christchurch from 162,207 to 164,229.

The number of occupied private dwellings increased substantially in Waimakariri District (17.2 per cent) and in Selwyn District (31.1 per cent), while numbers fell in Christchurch city (–3.2 per cent), reflecting the population movements and clearances of residential red zone properties in recent years. Notably, Selwyn District had the highest percentage increase of occupied private dwellings between 2006 and 2013 in New Zealand.

Table 2: Occupied private dwellings by territorial authority within greater Christchurch 2006–2013

<table>
<thead>
<tr>
<th>Area</th>
<th>Occupied private dwellings</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number in 2006</td>
<td>Number in 2013</td>
<td>Change number</td>
<td>Change %</td>
<td></td>
</tr>
<tr>
<td>Waimakariri district</td>
<td>15,918</td>
<td>18,651</td>
<td>2,733</td>
<td>17.2</td>
<td></td>
</tr>
<tr>
<td>Christchurch city</td>
<td>134,727</td>
<td>130,428</td>
<td>– 4,299</td>
<td>– 3.2</td>
<td></td>
</tr>
<tr>
<td>Selwyn district</td>
<td>11,559</td>
<td>15,150</td>
<td>3,591</td>
<td>31.1</td>
<td></td>
</tr>
<tr>
<td>Greater Christchurch</td>
<td>162,207</td>
<td>164,229</td>
<td>2,022</td>
<td>1.2</td>
<td></td>
</tr>
</tbody>
</table>

The latest Census also recorded a significant increase in the number of unoccupied dwellings in greater Christchurch. This reflects the large number of dwellings that were deemed uninhabitable, both in and outside the residential red zones, and those homes that had to be vacated for temporary repairs at the time of the 2013 Census. As Table 3 shows, between 2006 and 2013 unoccupied dwellings had increased by 81.1 per cent in greater Christchurch (from 11,568 to 20,949). The greatest increase was in Christchurch city (8,343 or 88.4 per cent).

Map 2 shows the change in unoccupied dwellings in greater Christchurch. Overall the greatest percentage increase in unoccupied dwellings occurred in the East (244 per cent) and North East (228 per cent) of Christchurch city.

Table 3: Unoccupied dwellings by territorial authority within greater Christchurch 2006–2013

<table>
<thead>
<tr>
<th>Area</th>
<th>Total unoccupied dwellings</th>
<th>Change 2006–2013</th>
<th>% change for unoccupied dwellings 2006–2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006</td>
<td>2013</td>
<td></td>
</tr>
<tr>
<td>Waimakariri district</td>
<td>927</td>
<td>1,647</td>
<td>720</td>
</tr>
<tr>
<td>Christchurch city</td>
<td>9,441</td>
<td>17,784</td>
<td>8,343</td>
</tr>
<tr>
<td>Selwyn district</td>
<td>1,200</td>
<td>1,515</td>
<td>315</td>
</tr>
<tr>
<td>Greater Christchurch</td>
<td>11,568</td>
<td>20,949</td>
<td>9,381</td>
</tr>
</tbody>
</table>
Population movement to and from greater Christchurch

As the rebuild has progressed, there has been a large inflow of people into greater Christchurch from both within New Zealand and overseas. This migration has significantly changed the ethnic composition of the population – for example, in the June 2014 year 29 per cent of migrants from Asia came from the Philippines, compared with an average of 8 per cent between 1996 and 2014.14

Prior to the earthquakes the main occupations of migrants to Canterbury were school teachers and hospitality and food trade workers. In the years 2011 to 2014 the main occupations of migrants were bricklayers, carpenters and joiners, and engineering professionals.

Figure 2 shows that before the earthquakes, net migration for greater Christchurch was quite stable, averaging a monthly inflow of 116 people between 2008 and 2010. In the month following the February earthquake, greater Christchurch had a net outflow of 810 people. Since mid-2012 arrivals have outweighed departures.

Arrivals have continued to increase and departures decrease, producing an all-time high of net migration for Canterbury of 7,100 people in the year to April 2016, the second largest net gain of migrants in New Zealand, behind Auckland.
Taking an annual view, in the year ended April 2011 greater Christchurch had a net outflow, which was followed by a significant inflow in 2012 when almost two thirds (66 per cent) of New Zealand’s migration was attributed to greater Christchurch. In 2013 this dropped to 42 per cent.
Table 4 shows that the main population movements in and out of greater Christchurch occurred between 2008 and 2013. In 2013, 89.2 per cent of those who lived in greater Christchurch in 2008 remained there. Of those who left greater Christchurch, most moved to Auckland (8,139), Dunedin (3,300) and Wellington (2,754). However, there were some other key South Island destinations including Ashburton (1,863), Timaru (1,593), and Nelson (1,560).

Auckland was also a contributor to greater Christchurch’s population between 2008 and 2013 with 5,454 people moving to greater Christchurch from Auckland. Other main sources of population for greater Christchurch include Dunedin (2,256), Wellington (1,752) and Ashburton (1,674). Notably the migration gains to greater Christchurch from these areas between 2008 and 2013 were less than the gains between the 2001 and 2006 Censuses.

Table 4: Migration of more than 1,000 people to and from territorial authority areas for greater Christchurch

<table>
<thead>
<tr>
<th>Destination territorial authority area of residence at 2013 Census</th>
<th>Moved from greater Christchurch</th>
<th>Source territorial authority area of residence in 2008</th>
<th>Moved to greater Christchurch</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auckland</td>
<td>8,139</td>
<td>Auckland</td>
<td>5,454</td>
<td></td>
</tr>
<tr>
<td>Dunedin</td>
<td>3,300</td>
<td>Dunedin</td>
<td>2,256</td>
<td></td>
</tr>
<tr>
<td>Wellington</td>
<td>2,754</td>
<td>Wellington</td>
<td>1,752</td>
<td></td>
</tr>
<tr>
<td>Ashburton district</td>
<td>1,863</td>
<td>Ashburton district</td>
<td>1,674</td>
<td></td>
</tr>
<tr>
<td>Timaru district</td>
<td>1,593</td>
<td>Timaru district</td>
<td>1,569</td>
<td></td>
</tr>
<tr>
<td>Nelson</td>
<td>1,560</td>
<td>Marlborough district</td>
<td>1,509</td>
<td></td>
</tr>
<tr>
<td>Hurunui district</td>
<td>1,533</td>
<td>Hurunui district</td>
<td>1,167</td>
<td></td>
</tr>
<tr>
<td>Marlborough district</td>
<td>1,485</td>
<td>Invercargill</td>
<td>1,116</td>
<td></td>
</tr>
<tr>
<td>Tasman district</td>
<td>1,389</td>
<td>Nelson</td>
<td>1,062</td>
<td></td>
</tr>
</tbody>
</table>

Cultural diversity

The population of greater Christchurch is largely of European ethnicity; however, the region is becoming more ethnically diverse. The European group includes people who have migrated to New Zealand from countries such as Australia, the United Kingdom and Europe as well as residents who were born in New Zealand and identify as European.
As Table 5 shows, 85.9 per cent of people living in greater Christchurch in 2013 identified as European, 8.2 per cent were Māori, 2.6 per cent identified with one or more Pacific peoples and 7.9 per cent were Asian.

Table 5: Ethnic group (grouped total responses)\(^a\) by New Zealand–born or overseas-born, for greater Christchurch 2013\(^16\)

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>New Zealand–born</th>
<th>Overseas-born</th>
<th>Total stated</th>
</tr>
</thead>
<tbody>
<tr>
<td>European</td>
<td>300,012</td>
<td>54,288</td>
<td>354,303</td>
</tr>
<tr>
<td>Māori</td>
<td>33,327</td>
<td>657</td>
<td>33,984</td>
</tr>
<tr>
<td>Pacific peoples</td>
<td>6,864</td>
<td>4,017</td>
<td>10,881</td>
</tr>
<tr>
<td>Asian</td>
<td>6,825</td>
<td>25,764</td>
<td>32,589</td>
</tr>
<tr>
<td>Middle Eastern, Latin American, African</td>
<td>798</td>
<td>2,895</td>
<td>3,693</td>
</tr>
<tr>
<td>Other ethnicity(^2)</td>
<td>7,647</td>
<td>537</td>
<td>8,184</td>
</tr>
<tr>
<td>Total stated</td>
<td>325,890</td>
<td>86,592</td>
<td>412,482</td>
</tr>
</tbody>
</table>

The proportion of people living in greater Christchurch who had been born overseas increased to 21.1 per cent of the population in 2013 from 19.6 per cent in 2006. Across New Zealand 25.2 per cent of the population in 2013 were born overseas, compared with 22.9 per cent in 2006.\(^17\)

\(^a\) Ethnicity is the ethnic group or groups that people identify with or feel they belong to. Ethnicity is self-identified and people can identify with more than one ethnic group. Ethnicity is different from ancestry, birthplace and nationality. This table includes all people who stated each ethnic group, whether as their only ethnic group or as one of several. Where a person reported more than one ethnic group, they have been counted in each applicable group. This table also includes responses for a number of small ethnic groups, including those who identified as ‘New Zealander’.
Table 6 shows that people from England made up the largest immigrant group in greater Christchurch in 2013 (24,750), followed by those from Australia (7,077) and the People’s Republic of China (6,717).

Table 6 also identifies growth in the migrant workforce population with those arriving after the earthquakes including people from England (2,085), the People’s Republic of China (1,320) the Philippines (1,080), India (942), Australia (915) and Ireland (867).

Table 6: Selected countries of birth by years since arrival in New Zealand for people whose area of usual residence is greater Christchurch 2013

<table>
<thead>
<tr>
<th>Country of birth</th>
<th>Total in greater Christchurch (those who did or did not state the number of years living in New Zealand)</th>
<th>Total in greater Christchurch (those who stated the number of years living in New Zealand)</th>
<th>Those living two years or less in New Zealand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Number</td>
<td>Number %</td>
</tr>
<tr>
<td>England</td>
<td>24,750</td>
<td>24,279</td>
<td>2,085 8.6</td>
</tr>
<tr>
<td>Australia</td>
<td>7,077</td>
<td>6,804</td>
<td>915 13.4</td>
</tr>
<tr>
<td>People’s Republic of China</td>
<td>6,717</td>
<td>6,423</td>
<td>1,320 20.6</td>
</tr>
<tr>
<td>Philippines</td>
<td>3,576</td>
<td>3,468</td>
<td>1,080 31.1</td>
</tr>
<tr>
<td>South Africa</td>
<td>3,435</td>
<td>3,378</td>
<td>450 13.3</td>
</tr>
<tr>
<td>India</td>
<td>2,634</td>
<td>2,544</td>
<td>942 37.0</td>
</tr>
<tr>
<td>Ireland</td>
<td>1,644</td>
<td>1,590</td>
<td>867 54.5</td>
</tr>
</tbody>
</table>
Find out more

Find out more about the Canterbury Wellbeing Index: www.cph.co.nz/your-health/canterbury-wellbeing-index/


Find out more about the land zones in greater Christchurch: www.linz.govt.nz

Find out what land zone your greater Christchurch property is in: http://cera.govt.nz/my-property/

Find out more about population movement from GNS Science: www.massey.ac.nz/massey/fms/Colleges/College%20of%20Humanities%20and%20Social%20Sciences/Psychology/Disasters/pubs/GNS/2012/Misc_Series_44.pdf

Find out more about Census information: www.stats.govt.nz/


Technical notes

CERA Youth Wellbeing Survey

Data source: Canterbury Earthquake Recovery Authority

Data frequency: One-time survey (unknown if survey will be repeated in future)

Data complete until: 2013

Notes: The aim of the CERA Youth Wellbeing Survey 2013 is to measure the progress of earthquake recovery by collecting data on the self-reported wellbeing of those aged 12–24 years.

CERA worked with the Ministry of Education, Canterbury District Health Board, the Ministry of Youth Development, Christchurch City Council, Waimakariri District Council, Selwyn District Council, Ngāi Tahu, the Natural Hazards Research Platform and The Collaborative for Research and Training in Youth Health and Development to develop and implement the Youth Wellbeing Survey.

Survey questions were adapted from the CERA Wellbeing Survey and were tested with panels of young people to ensure that the wording and content were relevant.

The Youth Wellbeing Survey was open between 23 September and 13 December 2013 for responses from young people aged 12–24 years, living in greater Christchurch.

Methodology

This was an online survey aiming to generate a sample of young people in greater Christchurch that, while self-selected and therefore not representative, was as large and diverse as possible. The survey was undertaken between September and December 2013. Advertising through greater Christchurch youth networks and targeted promotional activities were the main recruitment strategies. Some hard copy responses from targeted groups of young people were also received.

The survey period included high school and university exams, which meant that efforts to attract responses from different age groups needed to take the timing of study leave and exams into account. Recruitment during this period may also have had some impact on the responses given by students who may have been experiencing greater stress than usual due to exam pressure.
Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey)

Data source: Canterbury Earthquake Recovery Authority, Canterbury District Health Board

Data frequency: Six-monthly September 2012, April 2013, September 2013, April 2014, September 2014, April 2015, September 2015 (all CERA) and April 2016 (CDHB)

Data complete until: April 2016

Notes: The April 2016 Canterbury Wellbeing Survey (formerly the CERA Wellbeing Survey) is the eighth survey in the series providing information about the residents of greater Christchurch. Respondents were randomly selected from the electoral roll. The survey was delivered online and by hard copy from 30 March to 18 May 2016. The response rate was 41 per cent. Weighting was used to correct imbalances in sample representation. The survey was originally developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. For results from the surveys, see: www.cph.co.nz/your-health/wellbeing-survey/

Subnational population estimates

Data source: Statistics New Zealand, Subnational Population Estimates

Data frequency: Annual

Data complete until: 30 June 2015

Notes: Provisional estimates are published in October; final estimates are available in November; estimates are revised after each Census of Population and Dwellings. See www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/subnational-population-estimates-info-releases.aspx

Population and dwelling counts

Data source: Statistics New Zealand, Census of Population and Dwellings

Data frequency: 5 yearly (7 years for the 2013 Census)

Data complete until: 2013

Notes: The 2011 Census was not held on 8 March 2011 as planned, due to the Christchurch earthquake on 22 February 2011. At that time the 2011 Census could not have been successfully completed given the national state of emergency and the probable impact on Census results. The 2013 Census was held on 5 March 2013 and results were available from late 2013. See www.stats.govt.nz/Census/2013-census/info-about-the-census.aspx

Permanent and long term migration

Data source: Statistics New Zealand

Data frequency: Monthly

Data complete until: April 2016

Notes: Permanent and long-term arrivals include overseas migrants who arrive in New Zealand intending to stay for a period of 12 months or more (or permanently), plus New Zealand residents returning after an absence of 12 months or more.

Permanent and long-term departures include New Zealand residents departing for an intended period of 12 months or more (or permanently), plus overseas visitors departing New Zealand after a stay of 12 months or more. The country of residence for arrivals is the country where a person arriving in New Zealand last lived for 12 months or more (country of last permanent residence).

The country of residence for departures is the country where a person departing New Zealand intends to live for the next 12 months or more (country of next permanent residence).

Net migration is the difference between arrivals and departures.
References


5. Year 10 ASH Snapshot Survey unpublished data.


10. Personal communication (C. Turnbull), Land Information New Zealand (LINZ)


