



National interRAI Data Analysis Annual Report 2015/16

*A report to inform the continuous improvement of health
outcomes for New Zealanders as they age*



*interRAI stands for ‘**international Resident Assessment Instrument**’. As an organisation interRAI is a non-profit collaboration of clinicians and researchers from over 35 countries with the vision of promoting evidence based best practice in the care of the disabled or medically complex.*



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The Annual Report 2015/16 and data tables showing the
interRAI outcome scales and Clinical Assessment Protocols
(CAPs) can be downloaded from:

www.interRAI.co.nz

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Photography

*Our most sincere thanks to Ultimate
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foreword

interRAI New Zealand Governance Board Chair

It is my pleasure to release the National interRAI Data Analysis Annual Report 2015/16, the second publication in a series of annual reports. The report provides a national overview of interRAI assessments in New Zealand.

New Zealand is a world leader in the use of the interRAI Comprehensive Clinical Assessment suite, being the first country in the world to implement the Home Care and Long Term Care Facilities assessment tools nationwide.

The ability to speak a common language, use common assessment platforms and provide continuity across health care settings gives New Zealand the opportunity to gather useful information, enhance care and create a truly world class service for people in our community.

A single assessment platform ensures a consistent quality approach to support people as they transition across care settings.

The development of a national interRAI data warehouse to gather aggregated interRAI data provides an unprecedented opportunity to understand our population's needs, enhance services to support the vulnerable and target resources in an environment where value for investment is essential and supporting quality of life as we age is paramount.

The information presented in this report highlights some of the key risks and issues facing older people in their care journey, which can be used by policy makers, care providers and community support networks to develop more robust and focused services to meet need as demand rises.

Use of interRAI offers New Zealand health professionals an evidence based assessment platform to inform optimal care delivery.

The interRAI outcome measures and Clinical Assessment Protocols derived through the assessment process provide a roadmap for how best to care for an individual, highlight the risks, and offers the opportunity to respond at the right time for the best health outcome.

This report supports the vision of interRAI in New Zealand to ensure the continuous improvement of health outcomes for New Zealanders as they age, and the effectiveness and efficiency of our health system by guiding and leading the use of interRAI instruments and the dissemination and use of interRAI information.

I encourage all those interested in the health and wellbeing of our older people to consider the information in this report and use the opportunity it affords to develop the kind of quality services New Zealanders need and deserve as they age.

Ngā mihi

Cathy Cooney

Chair, interRAI New Zealand Governance Board



executive summary

This report provides a national overview of interRAI assessments for older people living in New Zealand during the financial year 1 July 2015 to 30 June 2016.

interRAI assessments represent about ten percent of the New Zealand population aged 65 years and over in 2015/16, the data presented in this report provides valuable insight into the health and general wellbeing of people across care settings in our communities.

The following summarises some of the key findings in this year's report:

1. In 2015/16, there were 19,600 interRAI Contact assessments (CA), 36,900 Home Care (HC) assessments and 54,800 Long Term Care Facilities (LTCF) assessments completed in New Zealand.
2. The number of Contact and Home Care assessments has plateaued but the number of LTCF assessments continues to rise sharply (from 27,200 in 2014/15 to 54,800 in 2015/16). This increase was expected as the LTCF tool became the primary assessment tool in the aged residential care sector in July 2015.
3. The percentage of completed assessments, as a share of total assessments, varied across District Health Boards (DHBs). Waitemata DHB completed the highest percentage of Contact assessments while Taranaki DHB was at the opposite side of the spectrum. Capital and Coast DHB completed the highest percentage of Home Care assessments while Waitemata DHB completed the lowest. Taranaki and MidCentral DHBs stood out as having completed the highest percentage of LTCF assessments while West Coast and South Canterbury DHBs had completed the lowest.
4. Similar to 2014/15, Home Care clients were more likely to report coronary heart disease, diabetes, cancer and chronic obstructive pulmonary disease as their primary diagnosis compared to LTCF residents. As expected, LTCF residents were more likely to report Alzheimer's disease and other dementia as their primary diagnosis than Home Care clients.
5. Nationally, the results for most of the interRAI outcome measures in 2015/16 were consistent with 2014/15. The main change over the last year was a decline in the percentage of Home Care clients with the highest Method of Assigning Priority Level (MAPLe) score from 25 percent to 21 percent. This may suggest a number of possibilities such as an increase in the number of Home Care clients moving to aged residential care or an increase in support for Home Care clients from family, friends and service providers.
6. Similar to the outcome measures, the national level results for the interRAI Clinical Assessment Protocols (CAPs) in 2015/16 were in line with 2014/15. The key change was a decline in the percentage of LTCF assessments that triggered the pressure ulcer CAP, at level 3, from 10 percent in 2014/15 to five percent in 2015/16.
7. Home Care clients (22 percent) were more likely to report feeling lonely compared to LTCF residents (8 percent). Just over a fifth (22 percent) of Home Care clients also reported informal carer stress such as feelings of distress, anger or depression.
8. LTCF residents (74 percent) were more likely to have an Enduring Power of Attorney (EPOA) in place compared to Home Care clients (58 percent). LTCF residents (30 percent) were also more likely to have an advance care plan in place compared to Home Care clients (3 percent).



scene setting

What is interRAI™?

The term ‘interRAI™’¹ refers to both the international organisation (www.interrai.org) responsible for developing comprehensive clinical assessment systems, and the suite of clinical assessment tools available. The acronym stands for International Resident Assessment Instrument.

interRAI is a not-for-profit organisation consisting of a collaborative network of clinicians and researchers in over 35 countries. interRAI international aims to promote evidence based clinical practice and policy decisions to improve care for persons who are disabled or medically complex.

Countries using interRAI include Canada, USA, Australia, Belgium, Spain, Jordan, Finland, France, Switzerland, Sweden, Poland, Germany, Netherlands, Italy, Hong Kong, India, Estonia, Japan, Iceland, South Korea, China, Taiwan, Lithuania, Czech Republic, Denmark, Norway, Singapore, South Africa, Brazil, Lebanon, the United Kingdom, Israel, South Korea, Qatar and New Zealand.

The interRAI comprehensive clinical assessment suite

interRAI is a suite of comprehensive clinical assessment tools. The suite of instruments is built on a core set of assessment items that are considered important in all care settings.

Each tool in the comprehensive clinical assessment interRAI suite has been developed for a specific population. The tools are standardised assessments designed to work together to form an integrated health information system, the primary purpose being to improve care planning for each individual.

interRAI tools share a common language, that is they refer to the same clinical concepts in the same way across different tools. Using common measures enables clinicians and providers in different care settings to improve continuity of care and integrate the care and support needed for each individual.

In New Zealand, the interRAI suite of assessments is mainly used to assess the health of older people in the home and community, hospital and residential care settings.

The tools currently used in New Zealand include the interRAI Contact Assessment, Home Care Assessment and Long Term Care Facilities (LTCF) Assessment. Work is underway to broaden the use of the interRAI suite across other healthcare settings. For example, a pilot of the Palliative Care assessment tool has taken place in three District Health Boards (DHBs) and a national roll out is planned over the next two years.

¹ For ease of reading, we have removed the ‘™’ symbol when referring to interRAI in the remainder of this report, however it is noted that interRAI™ is a registered trademark and appropriate use of the term applies.

interRAI in New Zealand

interRAI has had a long journey of evolution in New Zealand. The interRAI Home Care assessment tool was first piloted in five DHBs and then implemented nationally in all 20 DHBs between 2008 and 2012.

The interRAI LTCF tool was introduced in the aged residential care sector through a project which took place between 2011 and 2015.

In July 2015, interRAI became the primary assessment tool to inform a resident's care plan in aged residential care. New Zealand is the first country in the world to use the interRAI suite of assessment tools nationwide within a single national software platform.

In July 2015, the Central Region's Technical Advisory Services (TAS) became the national interRAI service provider. interRAI Services are established as a business unit within TAS.

In 2016, the delivery of interRAI education and support services across DHBs and aged residential care (ARC) sector was integrated into one national service to ensure consistency across the two sectors.

The interRAI New Zealand Governance Board

The interRAI New Zealand Governance Board (the Board) is a governance group with the authority to give direction and provide strategic governance for interRAI from a clinical, operational, and consumer perspective. The Board was appointed by the Director General of Health.

The primary purpose of the Board is "to ensure the continuous improvement of health outcomes for New Zealanders as they age, and the effectiveness and efficiency of our health system by guiding and leading the use of interRAI instruments and the dissemination and use of interRAI information".

The National interRAI Data Analysis and Reporting Centre

The National interRAI Data Analysis and Reporting Centre (the Centre) is part of interRAI Services in TAS and the author of this report.

The Centre is responsible for delivering a suite of interRAI data analysis, reports and insights to a large variety of stakeholders to assist them in their planning and decision making and ultimately to improve health outcomes for older people.

The Centre has built a national interRAI data warehouse which hosts the data collected from interRAI assessments. The Centre provides a number of benchmarking and accountability reports to meet the needs of DHBs and other stakeholders. From February 2017 onwards, ARC providers are able to access a standard suite of national interRAI reports to inform the delivery and development of services for older people.

The Centre also makes interRAI data available and accessible for use by any party for quality improvement, research, planning and service delivery. It has developed interRAI data access protocols that govern the access and use of interRAI data to any party. The aim of the interRAI data access protocols is to protect the privacy, security and confidentiality of interRAI data and at the same time facilitate its use and availability. The data access protocols can be accessed from www.interRAI.co.nz



introduction

Purpose of the report

The National interRAI Data Analysis Annual Report 2015/16 is the second publication in a series of annual reports. The previous report can be accessed from the interRAI New Zealand's website (www.interRAI.co.nz).

This report summarises key data collected from interRAI assessments over the year from July 2015 to June 2016 for a broad audience of service providers and users across the health sector in New Zealand.

The report aims to stimulate discussion and to provide data to inform individuals, organisations, policy makers, care providers, researchers and other interested groups, to develop and enhance services that improve health outcomes for older people in New Zealand.

While the report provides analysis and data interpretation for a range of stakeholders, it does not attempt to prescribe how stakeholders should use that data nor does it attempt to answer policy questions – that is for the stakeholders themselves to consider.

interRAI alignment with the New Zealand Health Strategy

The Ministry of Health updated the New Zealand Health Strategy² (the Strategy) in April 2016 and the Healthy Ageing Strategy³ in December 2016.

The refreshed New Zealand Health Strategy outlines the high level direction for New Zealand's health system over the ten years from 2016 to 2026.

The Strategy puts greater emphasis on maintaining health, health literacy and illness prevention to reduce future demands and allow New Zealanders to live well, stay well and get well.

'All New Zealanders live well, stay well, get well' is central to the New Zealand Health Strategy.

It also provides a "roadmap of actions" identifying 27 areas for action over five years to make the Strategy happen. The actions are organised under the five themes of the Strategy.

The Board takes strategic direction from the Strategy 2016 and the Healthy Ageing Strategy.

The interRAI NZ – Future Direction⁴ is a three year rolling strategic plan updated each year. The Future Direction is based on the five strategic themes of the refreshed Strategy and how interRAI can support the implementation of the strategy.

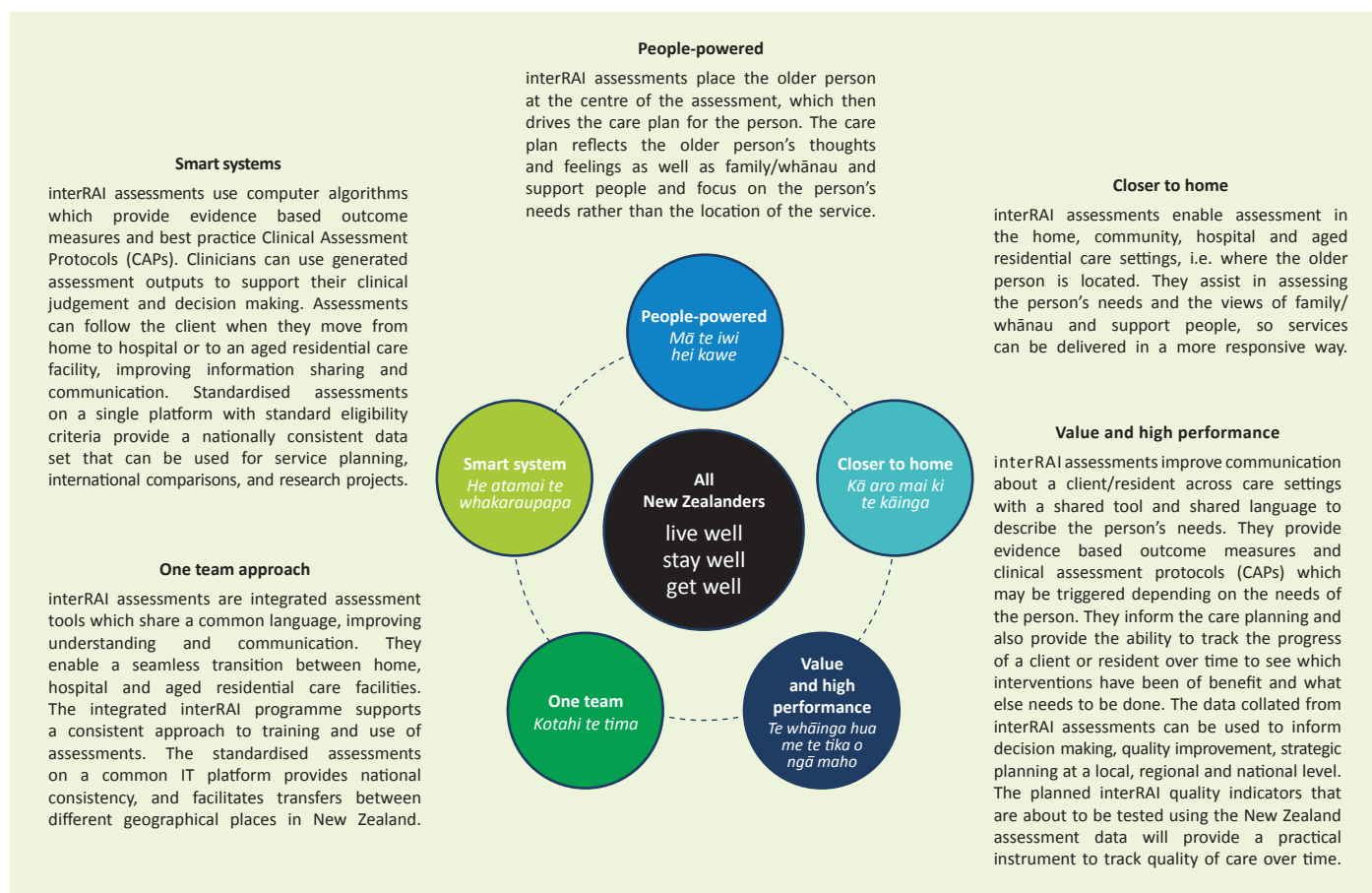
Figure 1 shows how interRAI assessments and the information presented in this report align with the five strategic themes of the Strategy.

² Ministry of Health (2016). New Zealand Health Strategy 2016. <http://www.health.govt.nz/publication/new-zealand-health-strategy-2016>

³ Ministry of Health (2016). Health of Older People Strategy update. <http://www.health.govt.nz/our-work/life-stages/health-older-people/healthy-ageing-strategy-update>

⁴ The interRAI New Zealand – Future Direction can be accessed at <http://www.interrai.co.nz/assets/Documents/Board-Minutes/interRAI-New-Zealand-Future-Direction-2016-2019.pdf>

Figure 1: Alignment of the information presented in this report with the New Zealand Health Strategy



Source: Image from New Zealand Health Strategy 2016

The Healthy Ageing Strategy is most pertinent to interRAI and its relationship to the health outcomes of older New Zealanders. It aims to provide a framework for the health and disability system to achieve equitable outcomes and be able to provide for the growing number of older New Zealanders in a sustainable way. The strategy encourages health and aged care providers to consider the way they deliver services so that they “add life to years, not just years to life” for older people.

The Action Plan in the Healthy Ageing Strategy sets out the steps that will be taken over the next two years and beyond towards the five outcome areas of the plan. The five outcome areas make up the substance of the plan and along with 26 specific actions, some of which are identified as priorities for the first two years of the Strategy:

- Ageing well
- Acute and restorative care
- Living well with long-term conditions
- Support for people with high and complex needs
- Respectful end of life.

In particular, under Action 8b⁵, aged care and health providers are tasked to use interRAI assessment data to identify quality indicators and service development over the next two years. The aim of this action is to improve the models of care for home and community support services and ultimately, to support older people to live well with long term conditions.

The ‘Future developments’ chapter provides more information on the development of interRAI quality indicators, a new project recently initiated by interRAI Services.

⁵ See page 54 of the Healthy Ageing Strategy.
<http://www.health.govt.nz/system/files/documents/publications/healthy-ageing-strategy.pdf>

Target audience

This publication series is aimed at a broad audience. This includes the following (in no particular order):

- The interRAI New Zealand Governance Board
- DHBs – This group consists of interRAI assessors, interRAI educators, interRAI systems clinicians, Needs Assessment and Service Co-ordination Service (NASC)⁶ assessors and managers, General Managers Planning and Funding and Health of Older People (HOP) Portfolio Managers
- The DHB HOP Steering group⁷
- ARC providers and managers of ARC facilities
- Representative groups of the aged residential care sector e.g. the Joint ARC Steering Group, the New Zealand Aged Care Association (NZACA), Care Association New Zealand (CANZ), New Zealand Council of Christian Social Services (NZCCSS)
- Social and health researchers
- Health professionals such as clinicians, geriatricians and general practitioners
- The Ministry of Health
- Other agencies such as the Accident Compensation Commission (ACC), the Ministry of Social Development (MSD), the Health Quality and Safety Commission (HQSC)
- Home and community support providers and their representative groups such as the Home and Community Health Association (HCHA)
- International users of interRAI data and information such as the Canadian Institute of Health Information (CIHI)
- TAS staff.



The data presented in this report relates to three interRAI assessment types: Contact assessments, Home Care and LTCF assessments...and refers to assessments rather than clients/residents unless specified.

⁶ NASC services are contracted by the Ministry, on behalf of the New Zealand Government, to assess the needs of, and coordinate support for children, older people or people with disabilities. DHB older people NASC teams conduct interRAI assessments for older people in the community. A general practitioner (GP) can also refer an older person to a NASC for access to support services.

⁷ The DHB HOP Steering Group is chaired by the Lead Chief Executive who has overall responsibility for national decisions about health of older people services. It includes regional representatives of DHB General Managers Planning and Funding, and DHB Health of Older People Portfolio Managers and the Ministry of Health.

About the data

The data presented in this report relates to three interRAI assessment types: Contact assessments, Home Care and LTCF assessments.

A Contact assessment is a brief standardised clinical assessment that provides information to support living at home and emergency department referral. It is used for people with short term or non-complex needs. The assessment can be done face to face or over the phone and takes about 30 minutes to complete.

A Home Care assessment is a comprehensive clinical assessment designed for people with more complex needs who are able to live at home. This tool can also help identify when a person needs to be referred to ARC.

An LTCF assessment is a comprehensive clinical assessment designed for people in residential care to inform their care plans.

All interRAI assessment data for the 2015/16 report⁸ is sourced from the National interRAI Software Service⁹ in New Zealand, unless stated otherwise. Where the data is sourced from other places such as census data provided by Statistics New Zealand or overseas data, the source is stated below the chart or table.

The data in this report refers to assessments rather than clients/residents unless specified.

Contact assessments are reported separately from interRAI Home Care assessments.

Home Care clients in this report refers to home care assessed clients, that is, those who have been assessed using an interRAI Home Care assessment tool. They are not necessarily those who are receiving home and community support services from home care providers.

While only a selected number of interRAI assessment outcomes and Clinical Assessment Protocols (CAPs) are discussed in the body of this report, data on all assessments outcomes and CAPs by DHB, region and nationally are available in Excel format from the interRAI NZ website (www.interRAI.co.nz).

Data for all assessment types is reported at the national, regional and DHB level^{10,11}. Figure 2 shows the geographical boundaries of the 20 DHBs and their four regional groupings in New Zealand.

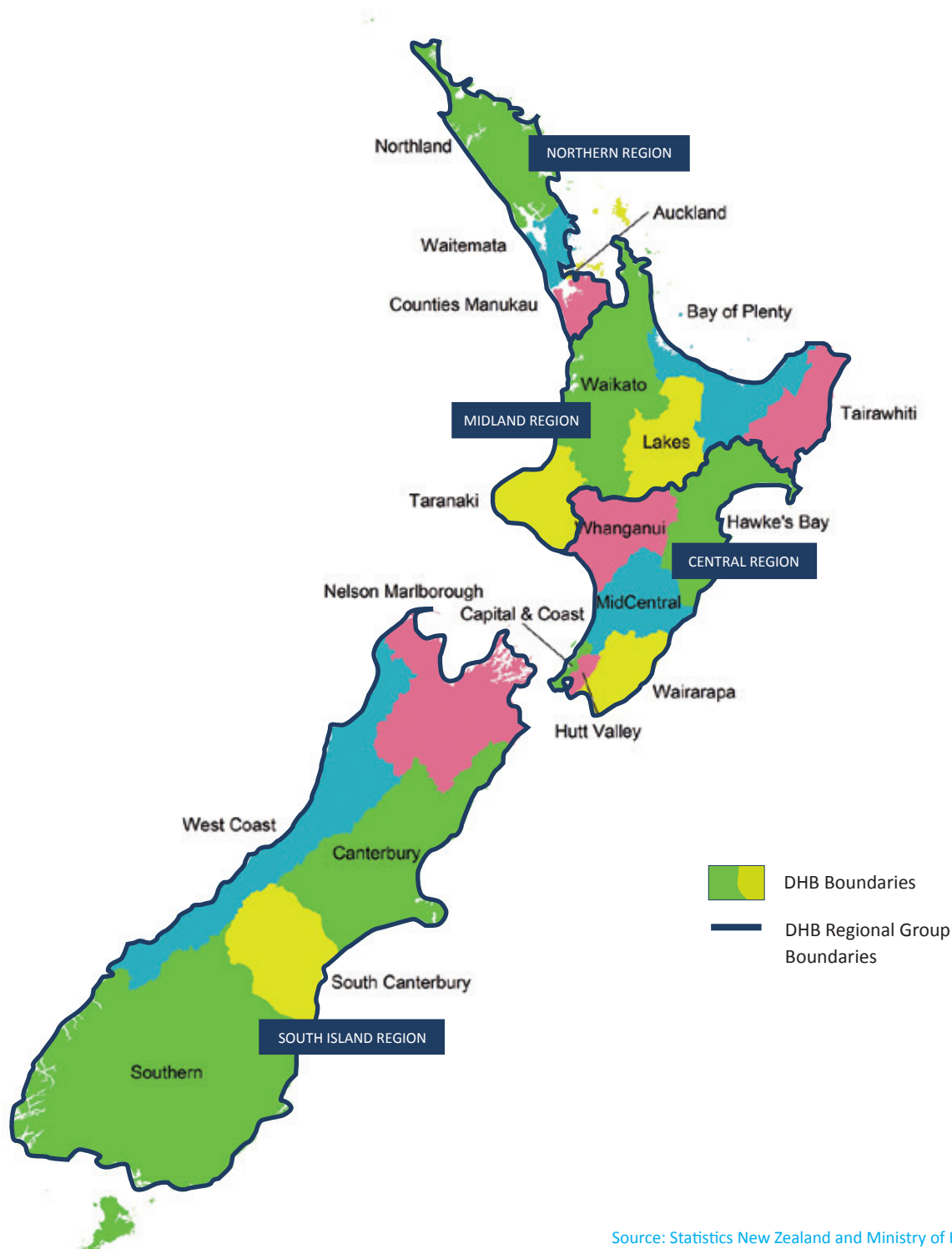
⁸ The data for the 2015/16 report was extracted in mid-September 2016. There may be slight differences in the numbers presented in this report and numbers from the interRAI operational database for 2015/16 due to the timing of extracting data. Differences are generally because some draft assessments in progress were completed at a later date after extraction.

⁹ The National interRAI Software Host Service is contracted by the Ministry to provide access to the national interRAI software assessment system for DHBs and their associated third party providers.

¹⁰ The HOP Steering group agreed for public reporting on Home Care assessment data at the DHB level (i.e. not just at the regional and national level) in December 2014.

¹¹ In its inaugural 2014/15 Annual Report, due to the data sharing agreement at the time, the Centre reported on LTCF assessment data at a regional and national level only, not at the DHB level. In August 2016, the Board agreed for the Centre to expand reporting on LTCF assessments at the DHB level in addition to reporting at the regional and national level. At the time of writing, there is no data sharing agreement to publicly report on aggregated interRAI assessment data finer than the DHB level.

Figure 2: The 20 District Health Boards and their four regional groupings in New Zealand



Source: Statistics New Zealand and Ministry of Health



“The ability to speak a common language, use common assessment platforms and provide continuity across health care, enhancing care and creating a truly world class service for people in our community.”

assessments

Introduction

In New Zealand, in the financial year 2015/16, the number of completed interRAI assessments was:

19,600

*Contact assessments
(CA)*

36,900

*Home Care assessments
(HC)*

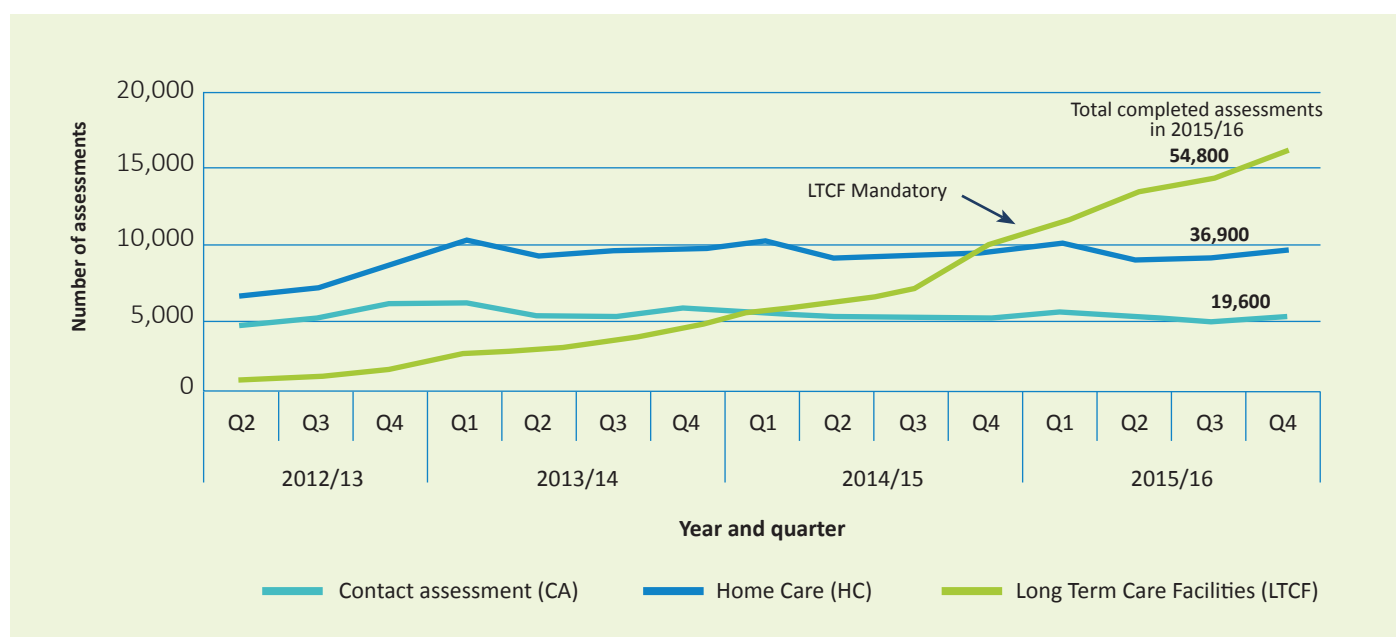
54,800

*Long Term Care Facilities
(LTCF) assessments*

The number of completed Contact and Home Care assessments has remained constant in the last two years. On the other hand, the number of completed LTCF assessments continues to increase (from 27,200 in 2014/15

to 54,800 in 2015/16). This increase is expected given the roll out of the interRAI LTCF assessment tool as being the primary assessment in aged residential care from July 2015.

Figure 3: Number of completed assessments by type over time



International comparison of assessments

Table 1 compares the proportion of completed Home Care and LTCF assessments in New Zealand and Canada relative to the total 65+ population. Readers are advised that neither the interRAI Home Care nor the interRAI LTCF tools are used in all the provinces and territories in Canada.

About 10 percent of New Zealanders had completed a Home Care or LTCF assessment in 2015/16, higher than in Canada (7.0 percent).

Table 1: Percentage of population who had an assessment by country, 2015/16

Indicator	New Zealand	Canada
Population 65+	687,663 ²	5,990,511 ³
Number of assessed clients /residents (HC and LTCF) ⁶	65,379 ⁴	421,008 ⁵
Percentage of population who had an assessment	9.5%	7.0%

Sources/Notes:

- 1 Contact assessments are not shown as there is no comparable data between Canada and New Zealand.
- 2 Statistics New Zealand. Census of Population and Dwellings 2013, 'medium' 2015/16 population projections, Ministry of Health assumptions, 2013 base (2014 update).
- 3 Statistics Canada. Annual estimates of population, by age group and sex for July 1 2016, Canada, provinces and territories.
- 4 Does not include clients or residents who are below 65 years old.
- 5 Home Care Reporting System (HCRS) and Continuing Care Reporting System (CCRS) 2015/16 Quick Stats, CIHI. Includes clients or residents who are below 65 years old.
- 6 Double counting of clients/residents is very likely in the numbers presented. Includes clients and residents regardless of the care setting, i.e. hospital, community or facility.
- 7 Readers are recommended to exercise caution when comparing data from the two countries.

Relative to the 65 and over population, more New Zealanders had completed a Home Care or LTCF assessment than Canadians.

The number and percentage of assessments by type and DHB

Service delivery models vary across DHBs and the interRAI assessment tool DHBs use to assess the health status of a client/resident can vary depending on the need of the client/resident and other factors.

Table 2 shows the number and percentage of completed interRAI assessments by type and DHB in 2015/16. At the national level, Contact assessments represented just under a fifth (18 percent) of completed assessments, Home Care assessments were a third (33 percent) and LTCF were nearly half (49 percent).

The largest variances above the national average are shown in blue while the largest variances below the national average are shown in green.

Table 2: Number and percentage of completed assessments by DHB and region, 2015/16

DHB and Region	CA	%	HC	%	LTCF	%	Grand Total
Northland	840	22%	1,248	33%	1,727	45%	3,815
Waitemata	3,612	35%	2,164	21%	4,458	44%	10,234
Auckland	2,870	27%	2,537	23%	5,395	50%	10,802
Counties Manukau	952	12%	3,130	40%	3,816	48%	7,898
Northern Region	8,274	25%	9,079	28%	15,396	47%	32,749
Waikato	1,135	12%	3,286	36%	4,766	52%	9,187
Lakes	438	17%	969	37%	1,187	46%	2,594
Bay of Plenty	910	14%	2,543	38%	3,178	48%	6,631
Tairāwhiti	120	14%	374	44%	364	42%	8,58
Taranaki	239	6%	1,395	37%	2,172	57%	3,806
Midland Region	2,842	12%	8,567	37%	11,667	51%	23,076
Hawke's Bay	1,190	24%	1,789	36%	2,050	41%	5,029
MidCentral	410	9%	1,496	33%	2,568	57%	4,474
Whanganui	215	10%	898	43%	973	47%	2,086
Capital and Coast	593	7%	3,696	46%	3,769	47%	8,058
Hutt Valley	1,049	26%	1,254	31%	1,705	43%	4,008
Wairarapa	109	9%	430	37%	617	53%	1,156
Central Region	3,566	14%	9,563	39%	11,682	47%	24,811
Nelson Marlborough	383	8%	2,018	42%	2,405	50%	4,806
West Coast	147	20%	317	42%	289	38%	753
Canterbury	2,313	19%	3,202	26%	6,980	56%	12,495
South Canterbury	668	23%	1,154	40%	1,052	37%	2,874
Southern	1,428	15%	3,005	31%	5,305	54%	9,738
South Island	4,939	16%	9,696	32%	16,031	52%	30,666
New Zealand	19,621	18%	36,905	33%	54,776	49%	111,302

Clients/residents by assessment type and age group relative to DHB population

To better understand the variation in the number and percentage of assessments across DHBs, the age profile of clients/residents who had had an interRAI assessment relative to the DHB population in that age group can offer some insight.

Table 3 shows the proportion of interRAI clients aged 65-74, 75-84 and 85+ who had completed an interRAI assessment by assessment type, as a percentage of the population in those age groups in 2015/16.

Table 3: Clients/residents by assessment type and age group, 2015/16

Clients by assessment type	65-74		75-84		85+		65+	
	N	%	N	%	N	%	N	%
CA	3,431	0.9	8,020	3.8	6,745	8.2	18,196	2.6
HC	5,327	1.3	12,748	6.1	14,277	17.5	32,352	4.7
LTCF	3,766	0.9	10,801	5.2	18,460	22.6	33,027	4.8
Total assessed clients/residents	12,524	3.2	31,569	15.2	39,482	48.3	83,575	12.2
Population*	397,530		208,353		81,780		687,663	

*The source for the DHB population by age group is the 'medium' 2015/16 population projections produced by Statistics New Zealand according to assumptions specified by the Ministry of Health, using the 2013 base (2014 update).

A total of 83,575 clients aged 65 and above had completed an interRAI assessment of some sort in 2015/16. This represented 12.2 percent of the New Zealand population aged 65 and above.

Close to half of clients/residents (48.3 percent) aged 85 and above had had an interRAI assessment.

As expected, there was a higher percentage of clients for each of the assessment types within the 85+ group compared to the 65-74 and the 75-84 age groups, indicating that older clients/residents are more likely to have greater needs.

While the majority of clients aged 85 and above were Home Care (17.5 percent) assessed clients and LTCF (22.6 percent) assessed residents, about 8 percent were Contact assessment clients. The latter may be due to a number of factors such as the service delivery model adopted by the DHB or the fact that some clients are stable and sufficiently independent to require only a Contact assessment.

A total of 83,575 clients aged 65 and above had completed an interRAI assessment of some sort in 2015/16.

Figures 4-6 show the variation across DHBs in the percentage of clients who had completed a Contact assessment relative to the DHB population in that age group.

At the national level, just under one percent of clients aged 65-74 had completed a Contact assessment. This percentage varied across DHBs. Auckland and Hutt Valley DHBs had the highest proportions while Nelson Marlborough and Capital and Coast DHBs had the lowest (Figure 4).

Nationally, 3.8 percent of clients aged 75-84 had completed a Contact assessment. Figure 5 shows that Hutt Valley and South Canterbury DHBs had the highest proportions while Whanganui and Taranaki had the lowest.

Nationally, 8.2 percent of clients aged 85 or above had completed a Contact assessment. Figure 6 shows that Auckland and Hutt Valley DHBs had the highest percentage of clients who had completed a Contact assessment in that age group while Wairarapa and Taranaki DHBs were in the other side of the spectrum.

Figures 7-9 show the variation in the percentage of clients who had completed a Home Care assessment by age group across DHBs relative to the DHB population in that age group.

Nationally, 1.3 percent of clients aged 65-74, 6.1 percent of clients aged 75-84 and 17.5 percent of clients aged 85 and above had completed a Home Care assessment.

South Canterbury and Capital and Coast DHBs had one of the highest percentages of clients who had completed a Home Care assessment across all the three sub age groups. Waitemata and Canterbury DHBs had one of the lowest percentages of clients aged 65-74 and 85+ who had completed a Home Care assessment. Waikato and Wairarapa DHBs had one of the lowest percentages of clients aged 75-84 who had completed a Home Care assessment.

Figure 4: Clients with a Contact assessment aged 65-74 relative to DHB population

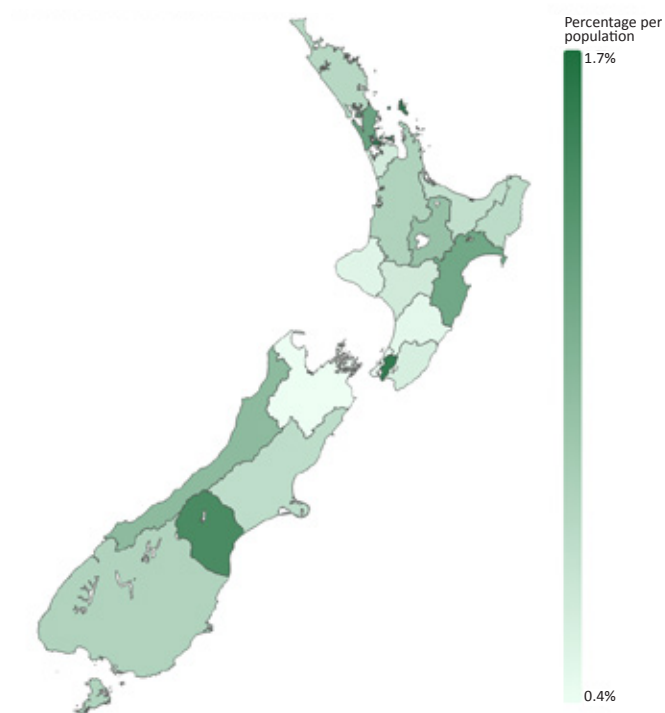


Figure 5: Clients with a Contact assessment aged 75-84 relative to DHB population

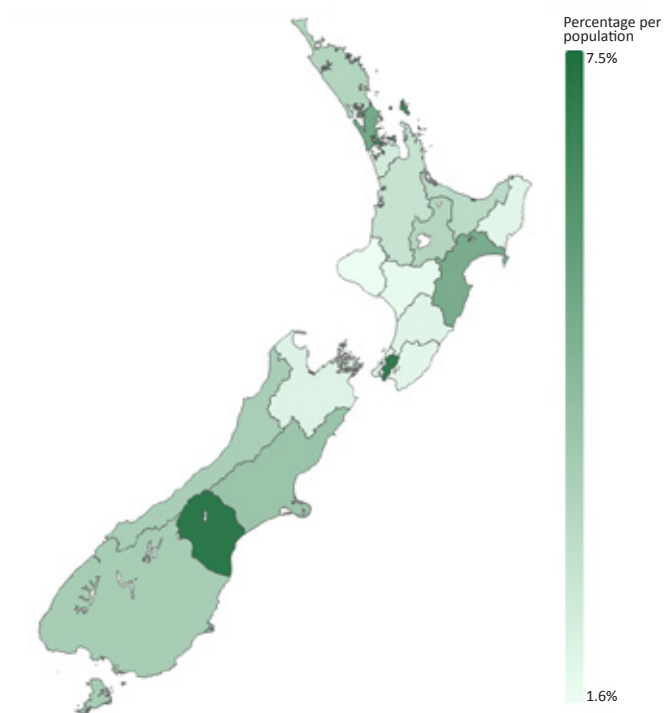
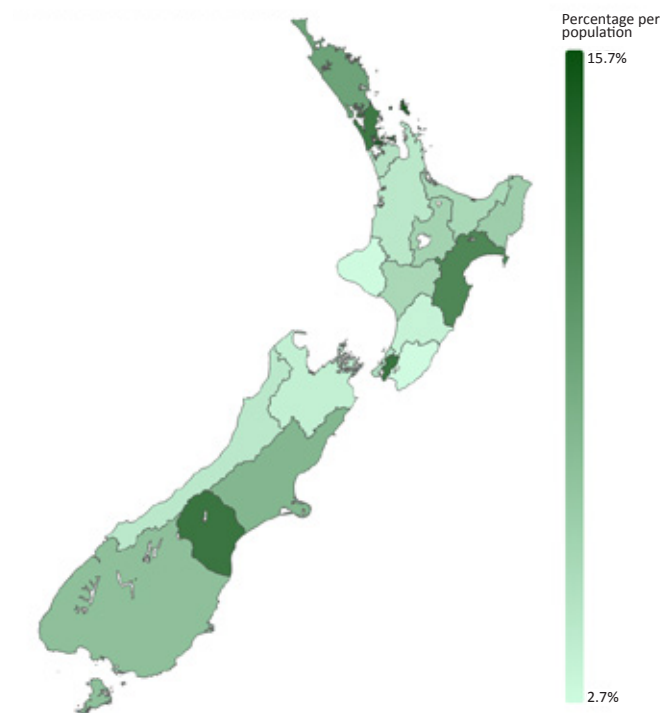


Figure 6: Clients with a Contact assessment aged 85 and above relative to DHB population



Nationally, 8.2% of clients aged 85 or above had completed a Contact assessment.

Figure 7: Clients with a HC assessment aged 65-74 relative to DHB population

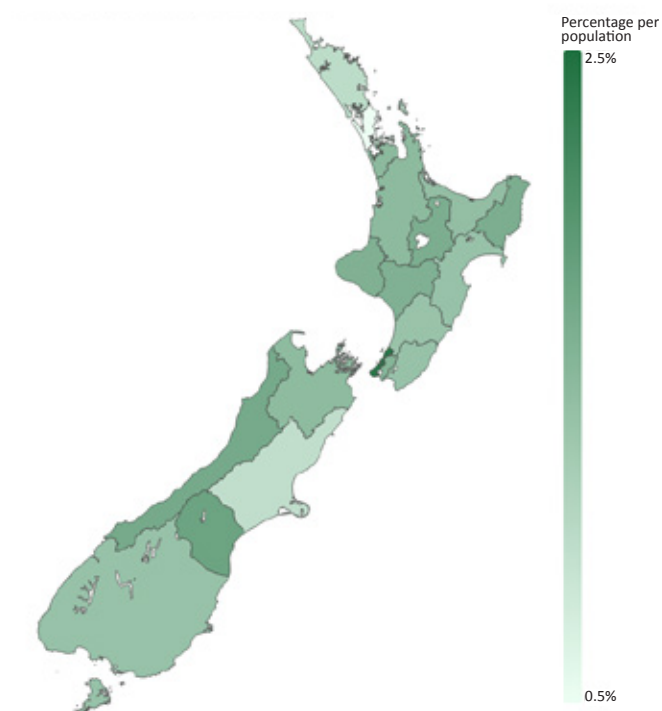


Figure 8: Clients with a HC assessment aged 75-84 relative to DHB population

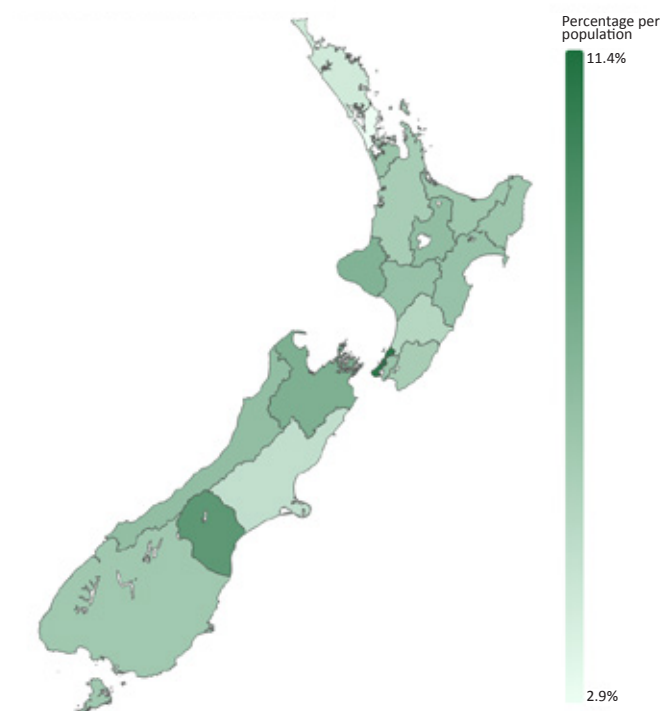
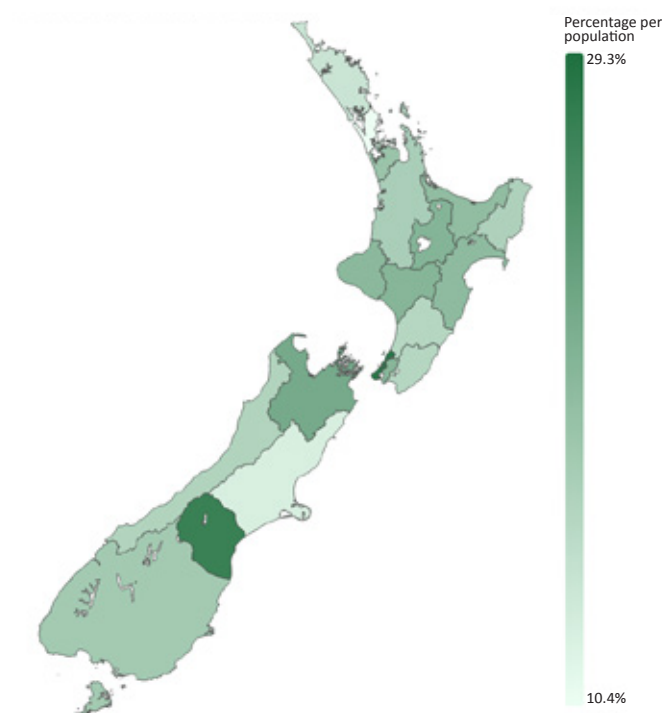


Figure 9: Clients with a HC assessment aged 85+ and above relative to DHB population



South Canterbury and Capital and Coast DHBs had the highest percentages of clients who had completed a Home Care assessment across all the three sub age groups.

Figure 10: Clients aged 65-74 with an LTCF assessment relative to DHB population

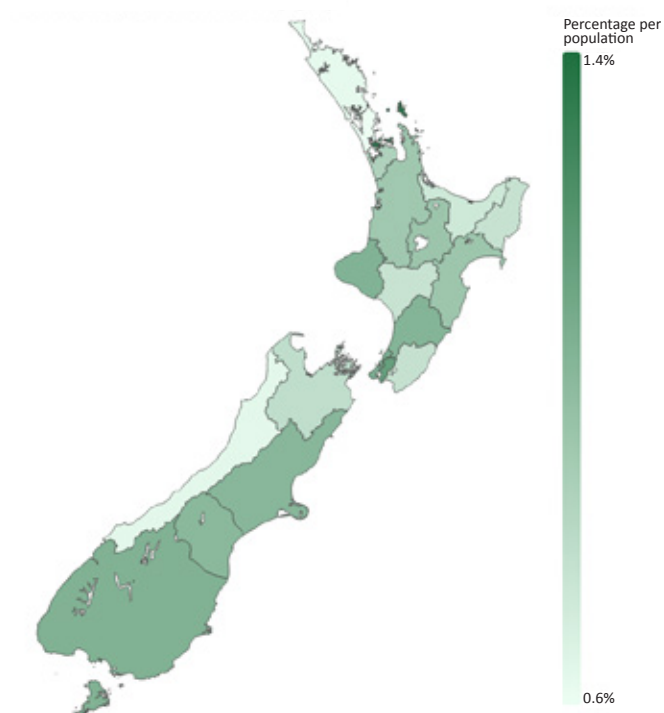
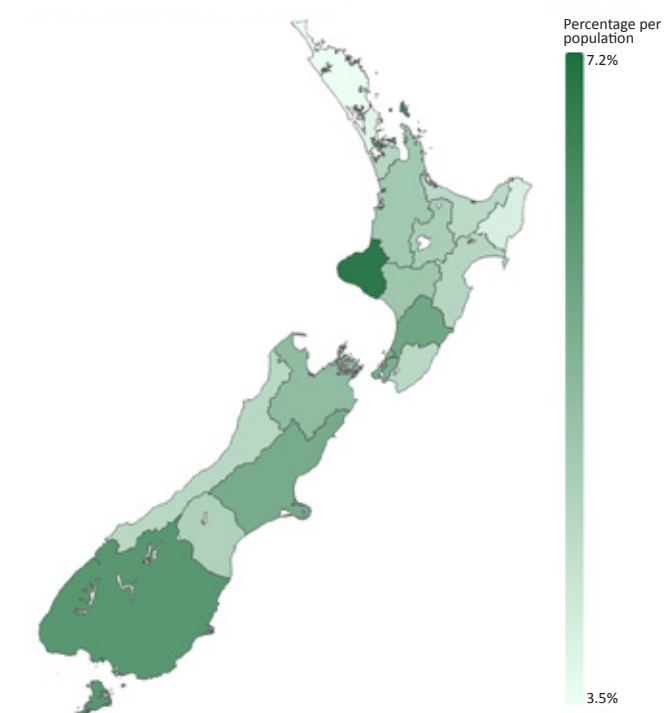


Figure 11: Clients aged 75-84 with an LTCF assessment relative to DHB population

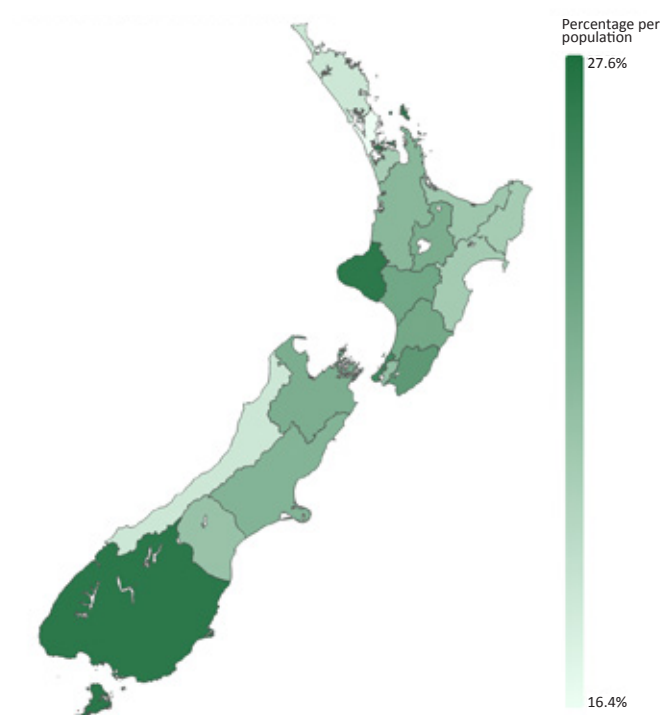


Nationally, just under one percent of clients aged 65-74, 5.2 percent aged 75-84 and 22.6 percent aged 85+ had completed an LTCF assessment.

Figures 10-12 show the variation in the percentage of clients by age group who had completed an LTCF assessment across DHBs relative to the DHB population in that age group.

Auckland DHB had one of the highest percentages of clients who had completed an LTCF assessment across all the three sub age groups while Waitemata DHB had one of the lowest percentages in all the three sub age groups. Southern DHB had the highest percentage of clients aged 85 and above who had completed an LTCF assessment. Taranaki DHB had the highest percentage of clients aged 75-84 while Hutt Valley DHB had the highest percentage of clients aged 65-74 who had completed an LTCF assessment.

Figure 12: Clients aged 85+ and above with an LTCF assessment relative to DHB population



Assessments per client/resident by type

According to the provisions of the Aged Related Residential Care (ARRC) Services Agreement 2016¹², ARC residents are expected to have an LTCF assessment within 21 days of being admitted into an ARC facility and at six monthly intervals thereafter, unless there are significant changes requiring more frequent assessments. It is acknowledged that not all ARC facilities have achieved this yet.

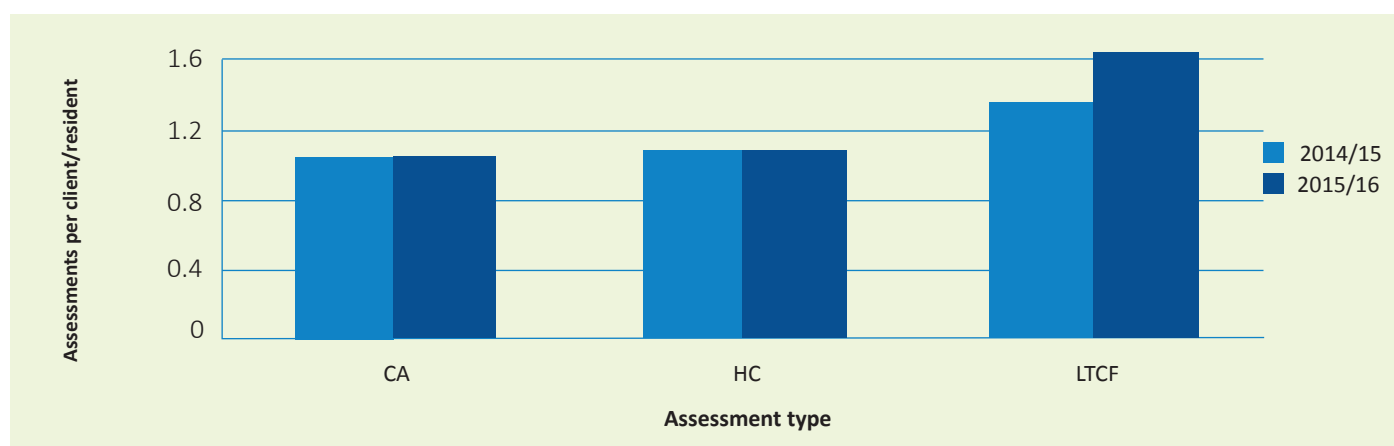
Contact and Home Care assessments are completed for clients in accordance with DHB protocols. For older people living in the home and the community, the frequency of assessments can vary from an annual reassessment to a three yearly assessment, and/or at the point of a significant change in health status.

The assessment per client ratio gives an indication of the frequency of assessments for a given client/resident. A higher assessment per client ratio suggests more frequent assessments for the same client/resident.

Figure 13 shows the ratio of LTCF assessments per resident has increased from 1.4 to 1.6 between 2014/15 and 2015/16. The increase was expected, particularly, since the LTCF tool was made the primary assessment tool in aged residential care in July 2015.

On the other hand, the ratio of assessments per client for Contact and Home Care assessments has remained the same, as expected over the last year.

Figure 13: Ratio of assessments per client/resident by assessment type



Assessments per client/resident by DHB and region

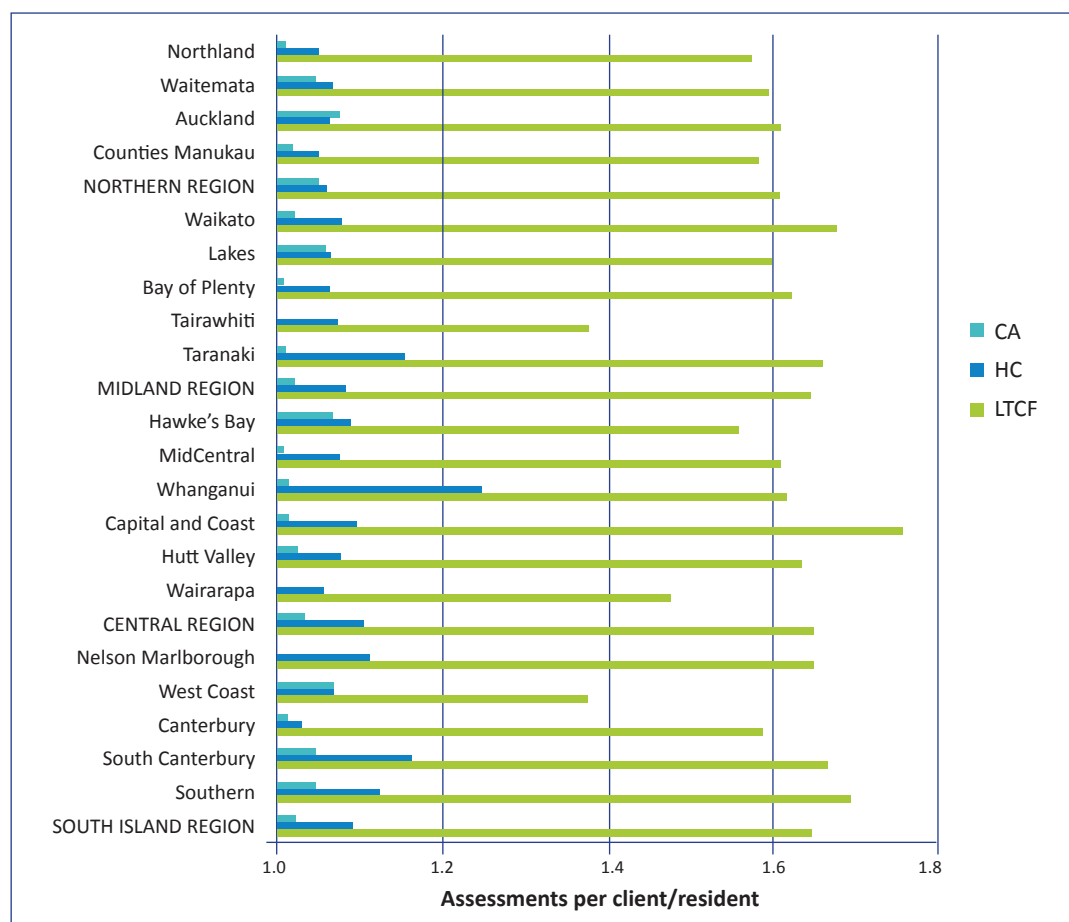
Figure 14 shows the breakdown of the ratio of assessments per client by DHB for 2015/16.

In 2015/16, for Home Care assessments, Whanganui DHB had the highest ratio of assessments per client while Canterbury DHB had the lowest.

For LTCF assessments, Capital and Coast DHB had the highest assessment per client ratio while West Coast DHB was at the opposite side of the spectrum.

¹² The ARRC Services agreement is a generic service level agreement between a DHB and an ARC facility in New Zealand. It provides the terms and conditions for the purchase of contracted care services by a DHB to ARC residents in an ARC facility. The 2016 agreement can be accessed from <http://www.centraltas.co.nz/assets/Health-of-Older-People/ARRC-agreement-2016-17-effective-1July2016-for-website-26May2016.pdf>

Figure 14: Ratio of assessment per client by DHB and region, 2015/16



Reason for assessment

An assessor conducts a first assessment for a Home Care client to determine if the client requires home based support services. A routine assessment is a follow-up assessment that can help service providers monitor the changes in the health of an older person over time to ensure that his/her care plan is appropriate and current.

A return assessment is conducted when the older person returns from the hospital or re-enters the home care system after a planned absence. A significant change in status reassessment occurs when the older person's status or condition changes significantly during the course of care.

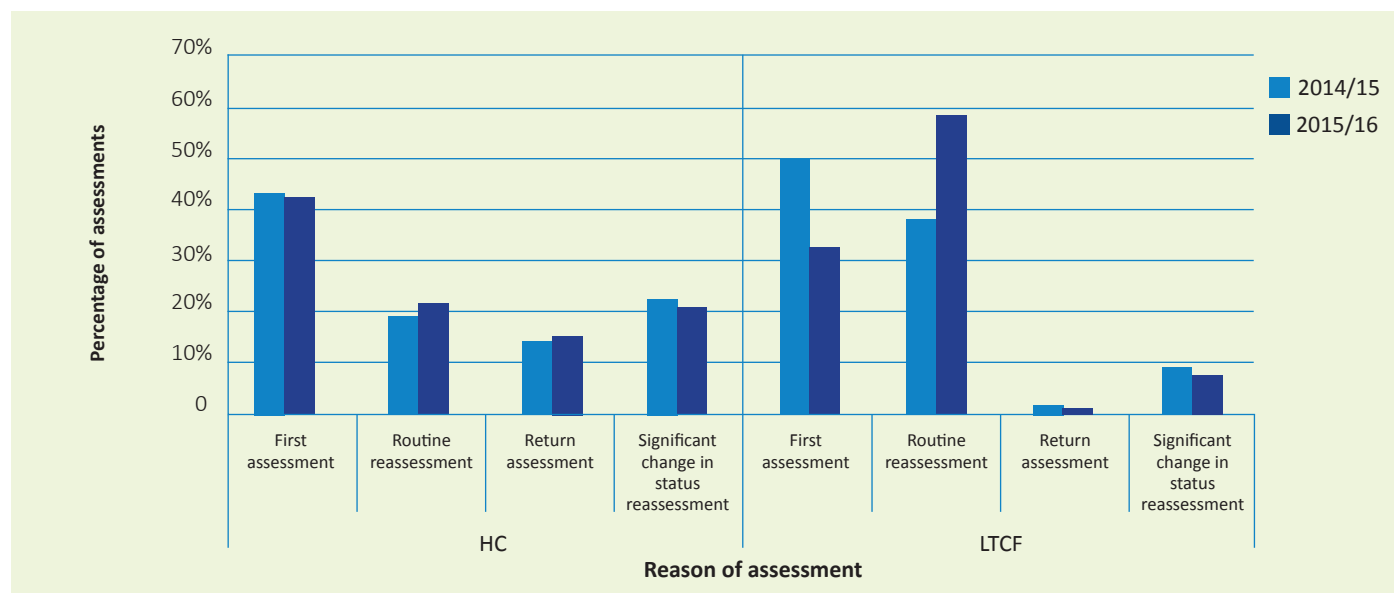
In aged residential care, a nurse assessor should conduct a first assessment within 21 days of the resident being admitted into the aged residential care facility¹³. A routine reassessment in a facility should occur broadly within six months of the first assessment¹⁴. Further routine assessments should continue to occur at six month intervals.

Figure 15 shows the reason for assessment by assessment type over the last year. There has not been much change in the percentage of Home Care first, routine, return assessments and 'significant change in status' reassessments since 2014/15.

However, as expected, in aged residential care, the percentage of first assessments declined from 50 percent to 33 percent between 2014/15 and 2015/16. This points to the progress made in the ARC sector in completing first assessments since the roll out of the LTCF assessment tool from 2011 as well as improvement in coding¹⁵. The percentage of routine LTCF assessments rose from 38 percent to 58 percent during this period, in line with expectations.

As expected, the percentage of routine LTCF assessments continues to increase.

Figure 15: Reason for assessment by type, 2014/15 and 2015/16



Note: The information gathered under “reason for assessment” is not always consistently recorded. Readers are recommended to exercise caution when using the results from this question. Other categories are excluded from the chart due to very small percentages.

Location of assessments

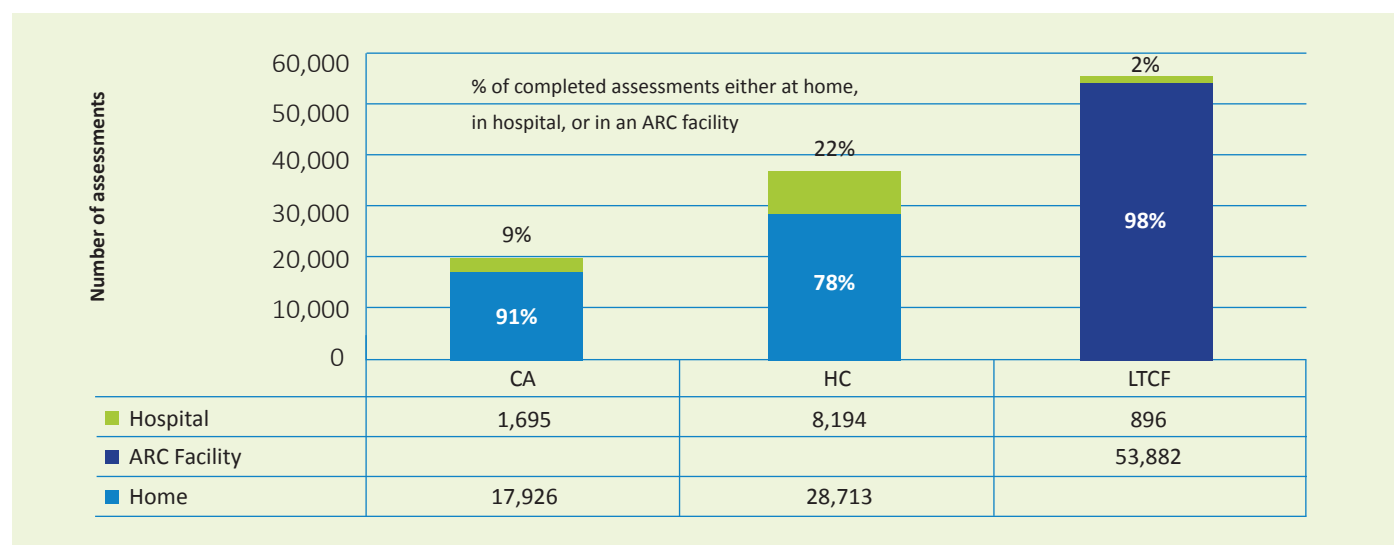
interRAI assessments can occur either in the private home of the older person, in a hospital or in an aged residential care facility.

An interRAI assessment completed in a hospital setting means the person has been admitted to hospital care, for example following a fall.

Figure 16 shows that the majority of Contact and Home Care assessments were completed in the person’s private home. Almost all of LTCF assessments were completed in an ARC facility except for two percent completed in a hospital.

A slightly larger portion (22 percent) of Home Care assessments were carried out in a hospital setting compared to other assessment types. These results were similar to 2014/15.

Figure 16: Assessments completed at home, ARC facility or in hospital, 2015/16



¹³ As per the terms and conditions stated in the ARRC agreement.

¹⁴ In aged residential care, it is expected that the admission care plan is informed by the transferred home care assessment of the recently admitted resident. The assessment reference date (ARD) refers to the last date of observation for a particular assessment. A second routine reassessment should occur within six months of the ARD.

¹⁵ Note that an LTCF resident has a first assessment when he/she is admitted to an ARC facility for the first time. If residents move between facilities, every subsequent assessment is coded as a routine re-assessment.



“Like many other countries, New Zealand’s population is ageing. According to the census, the 65 and over population was estimated to be 688,000 in 2015.”

demographics

Introduction

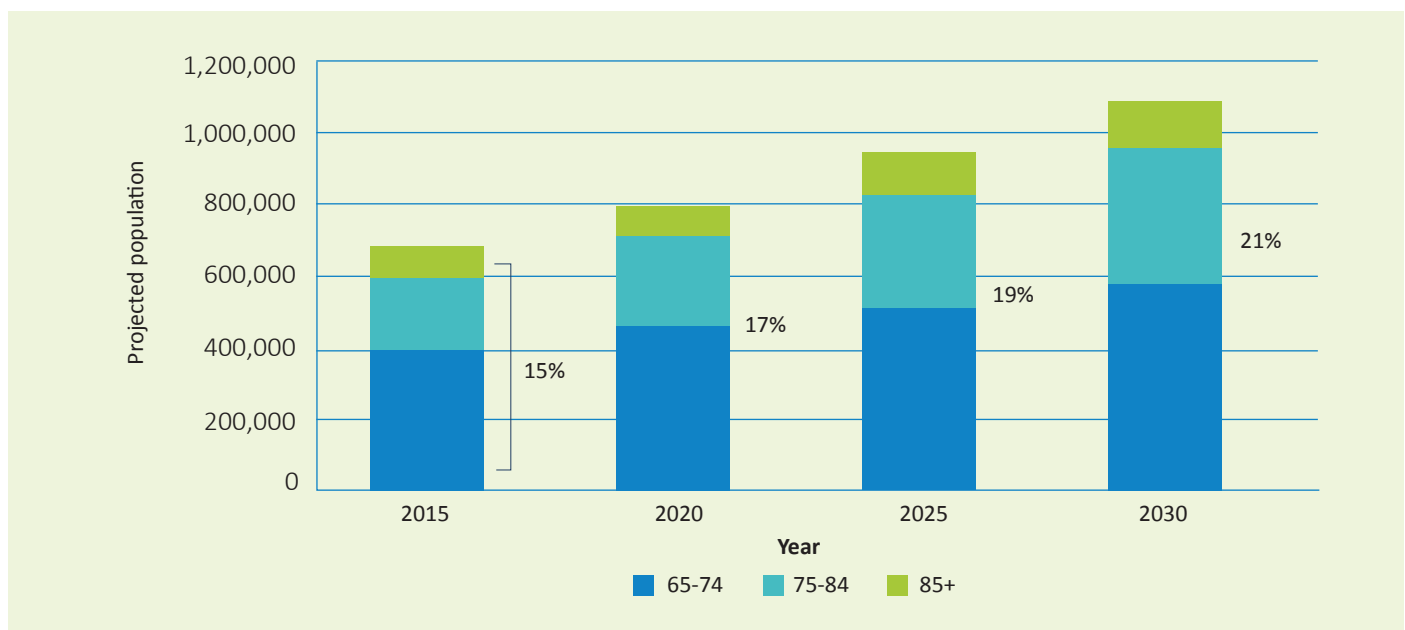
Like many other countries, New Zealand's population is ageing.

According to the census, the 65 and over population was estimated to be 688,000 in 2015. This represented 15 percent of the total New Zealand population and is projected to increase to 21 percent by the year 2030 as the last of the baby boomers' cohort (those born from 1946 to 1965) moves into the 65 years and over age group.

Figure 17 shows that by 2030, the number of people aged 85 years and over will increase from 80,100 to 137,000 (a 71 percent increase) while the number of people aged 75-84 will increase from 204,000 to 382,500 (an 88 percent increase).

This trend is likely to put increasing pressure on the demand for services to care for older people.

Figure 17: Population growth in New Zealand in the older age groups, 2015-2030



Source: Statistics New Zealand. Projections are 'medium' 2015/16 population projections according to assumptions specified by the Ministry of Health, using the 2013 base (2014 update)

International comparison with Canada

Table 4 (see over) compares a few key demographic characteristics between New Zealand and Canadian interRAI assessed clients and residents.

New Zealand Home Care clients were slightly older than their Canadian counterparts. There was a higher percentage of female Home Care clients in Canada than in New Zealand. Both countries had more or less similar percentage of interRAI female clients for LTCF assessments.

Table 4: Key demographic indicators by assessment type and country, 2015/16

Indicator	Home Care		LTCF	
	NZ ^{1,4}	Canada ^{1,2,4}	NZ ¹	Canada ^{1,2,3,5}
Number of assessed clients/residents	34,134	242,013	34,268	178,995
Average age	81.0	78.0	83.0	83.0
Percentage 85 years and over	41.8	39.7	53.7	55.2
Percentage of female	60.4	63.2	65.8	65.9

Sources/notes:

1. Includes assessed clients/residents who may be less than 65 years old.
2. Home Care Reporting System (HCRS) and Continuing Care Reporting System (CCRS) 2015/16 Quick Stats, Canadian Institute for Health Information (CIHI). Home Care data relates to clients assessed both in hospital and in the community.
3. LTCF data relates to residents assessed both in hospital and in a residential care setting.
4. Home Care indicators (i.e. average age, percentage 85 years and over, and percentage female) are based on assessed clients. These clients do not necessarily represent clients receiving home care and support services from home care providers.
5. Canadian LTCF indicators (i.e. average age, percentage 85 years and over, and percentage female) are based on all residents, not just assessed residents.
6. Comparable data is not available for Contact assessments between the two countries.
7. Readers are recommended to exercise caution when comparing data between the two countries. Note that neither the interRAI Home Care nor the interRAI LTCF tools are used in all the provinces and territories in Canada.

New Zealand Home Care clients were slightly older than their Canadian counterparts.

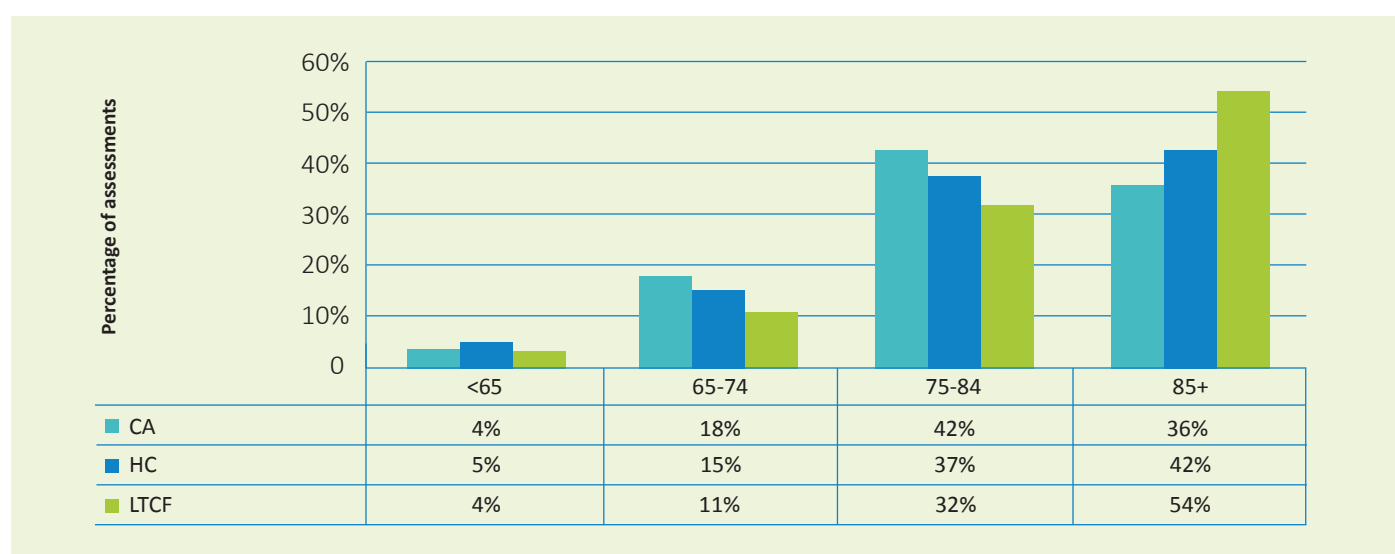
Age profile

Figure 18 shows the age profile of clients who had been assessed using a Contact assessment, Home Care or an LTCF assessment in 2015/16.

Most LTCF residents were aged 75-84 (32 percent) or 85 and above (54 percent). A small percentage of LTCF residents were under 65 years of age (4 percent).

About 42 percent of Contact assessment clients were aged 75-84 and another 36 percent were aged 85 and above, suggesting a number of possible reasons. For example, some of these clients may be low need clients or some DHBs may be using Contact assessments for relatively complex clients.

Figure 18: Percentage of assessments by type and age group, 2015/16



Ethnicity

Improved understanding of the ethnic makeup of clients/residents can lead to better provision of services.

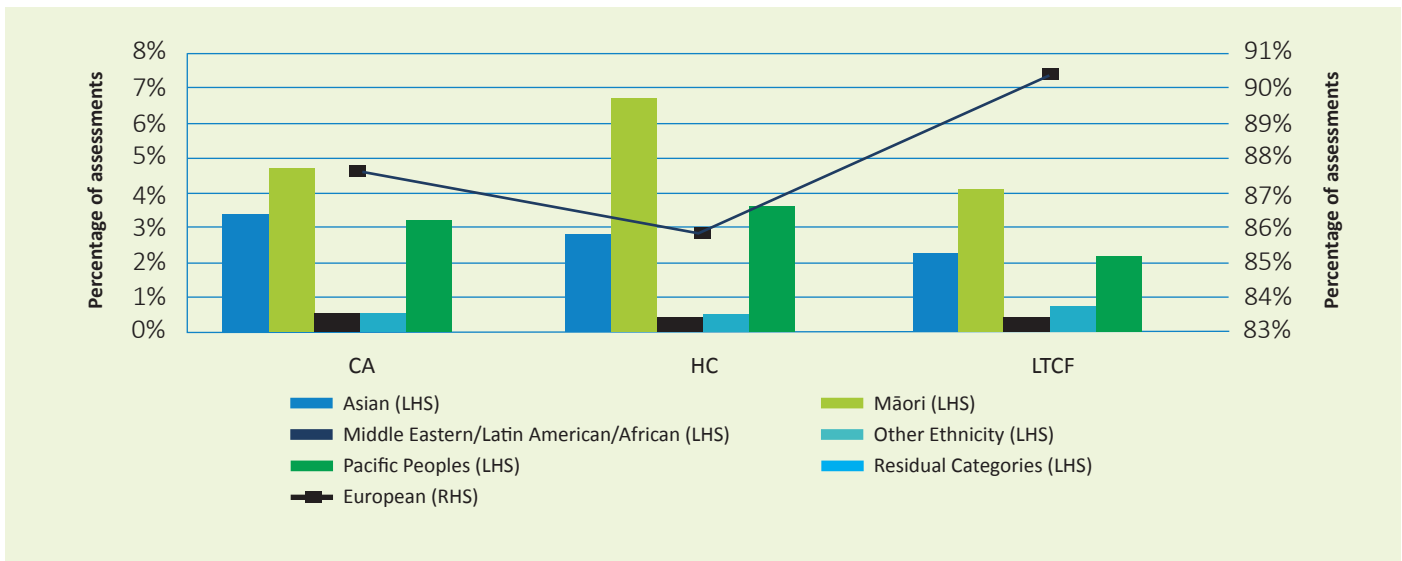
In 2015/16, the majority of assessments were for clients who identified as European. This is shown by the line graph using the right hand side scale in Figure 19.

Close to seven percent of Home Care clients were Māori. About another four percent were Pacific Peoples.

Among LTCF residents, four percent were Māori.

About 7 percent of Home Care clients were Māori compared to 4 percent of LTCF residents.

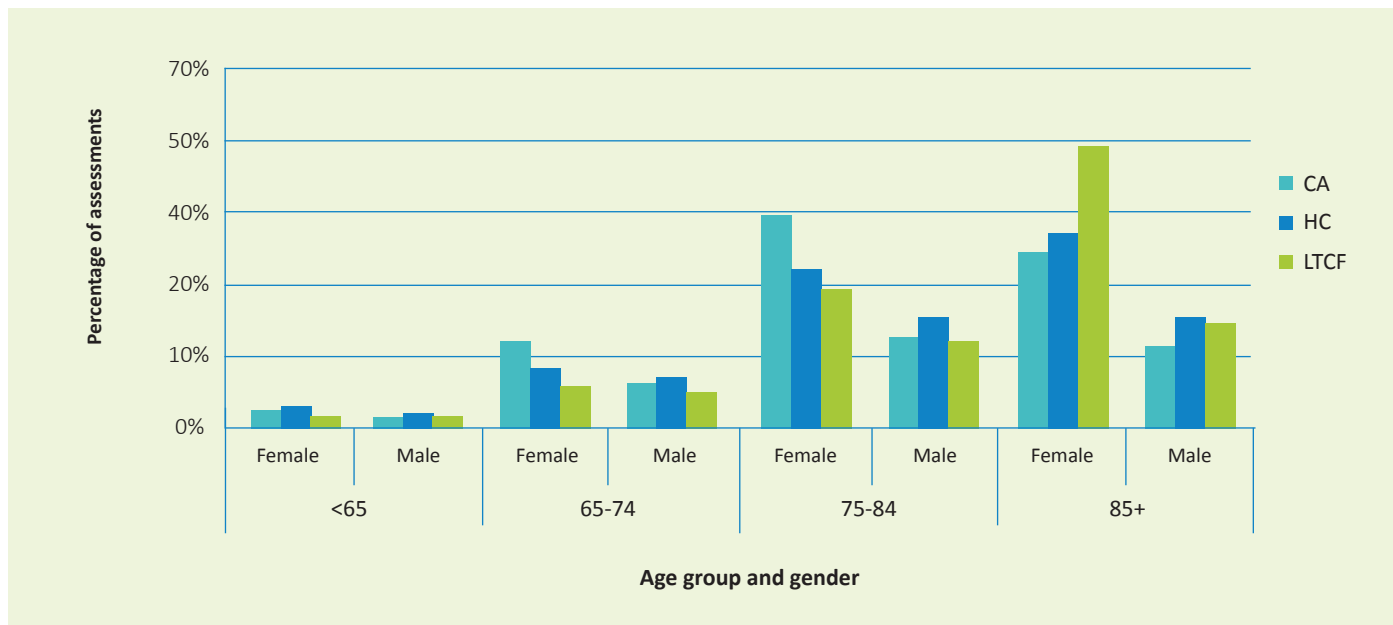
Figure 19: Percentage of assessments by type and ethnicity, 2015/16



Gender

There were more females assessed than males and this is more noticeable in the 85+ age group, consistent with the higher proportion of females in the general population over 85.

Figure 20: Percentage of assessments by type, age group and gender, 2015/16



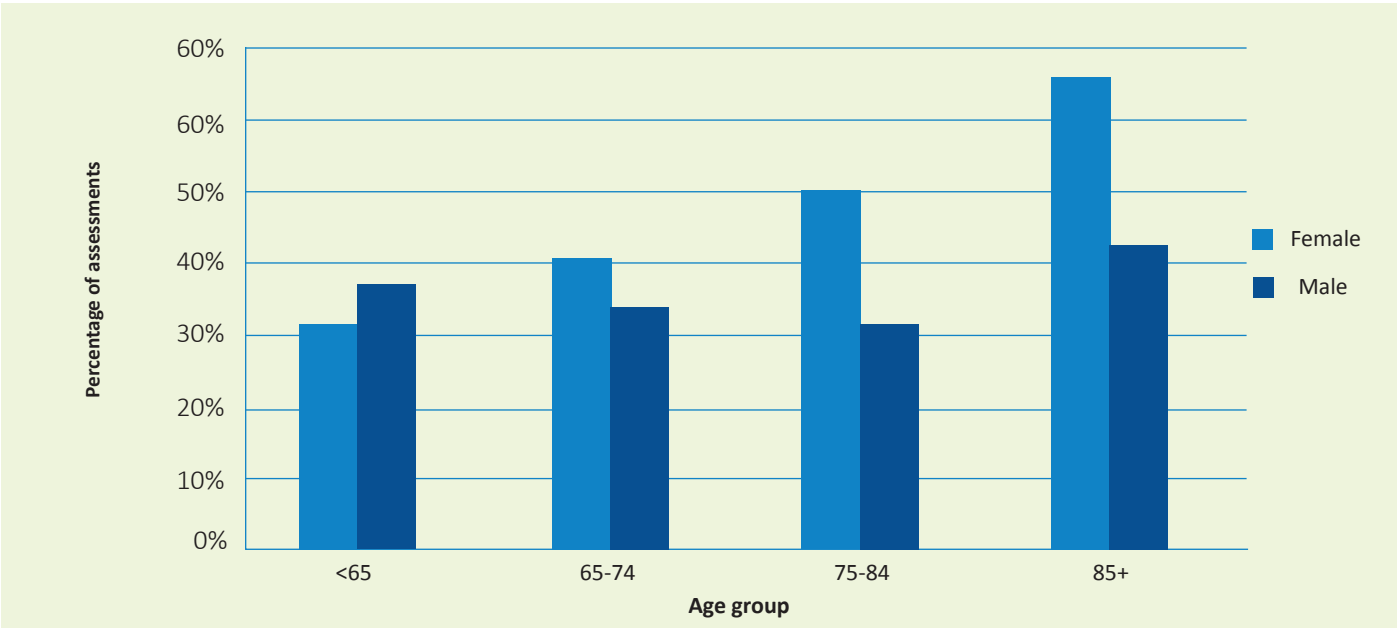
Across all age groups, females consisted of 68 percent of Contact assessments, 60 percent of Home Care assessments and 66 percent of LTCF assessments.

Living alone and living arrangement

Understanding the living arrangements of older people living at home or in the community can better inform service providers to help them access appropriate services that are relevant to their personal circumstances.

Figure 21 shows that female Home Care clients aged 85+ were more likely to be living alone compared to males. Male Home Care clients below 65 were more likely to be living alone compared to females in the same age group.

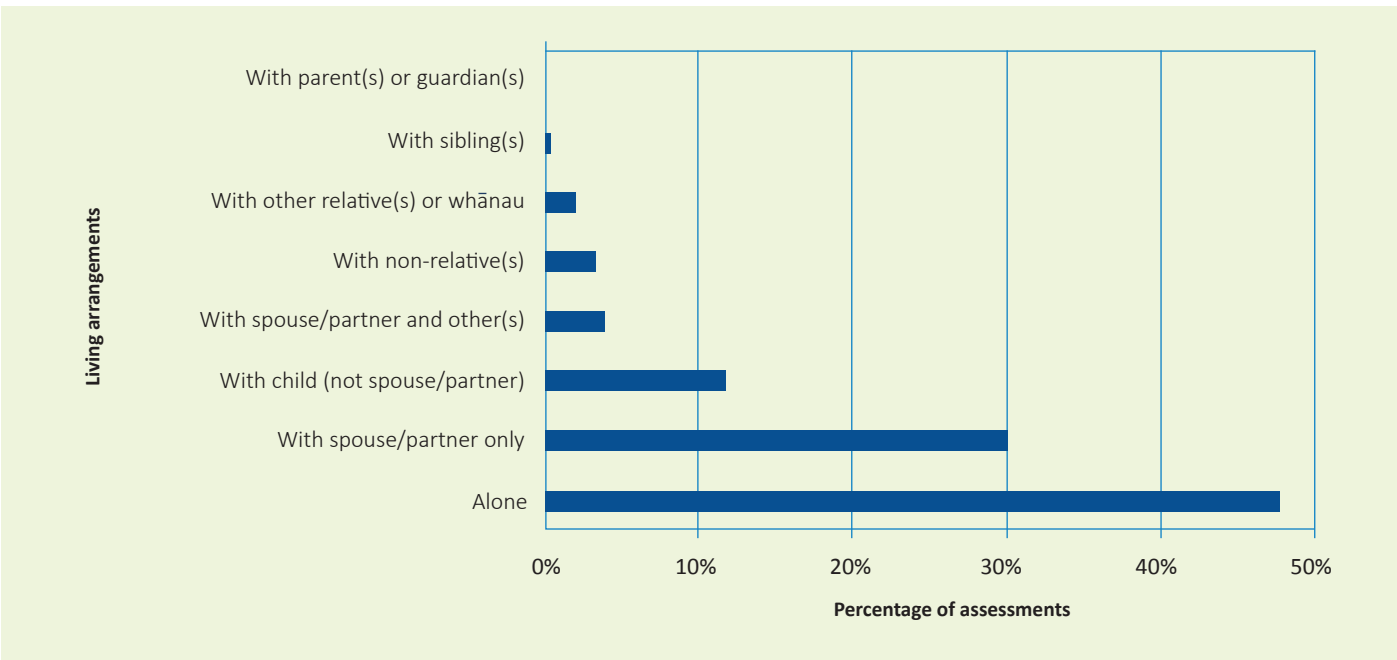
Figure 21: Percentage of Home Care assessments living alone by age and gender, 2015/16



The living situation of an older person can indicate the level of home support and social inclusion. Figure 22 shows the living arrangements of Home Care clients. Close to half (48 percent) of Home Care clients were living alone. Just under a third were living with a spouse or partner.

Home Care assessed female clients aged 85+ were more likely to be living alone compared to males. Close to half of Home Care clients were living alone.

Figure 22: Percentage of Home Care clients by living arrangement, 2015/16



Disease diagnoses

In general, people are living longer but many are also living longer in poor health¹⁶. Older people are likely to face chronic conditions and co-morbidities that will require interventions as they age.

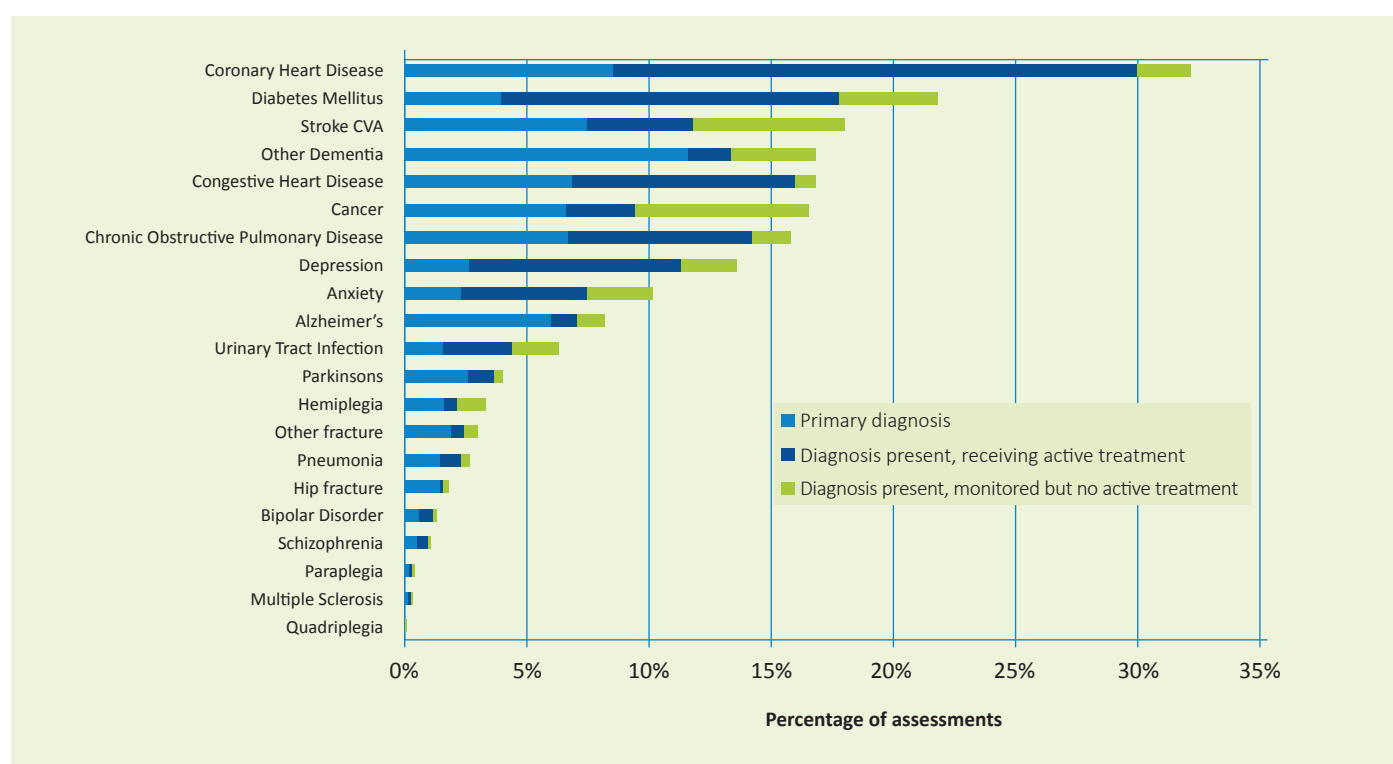
Figures 23 and 24¹⁷ show the diseases reported by Home Care clients and LTCF residents in 2015/16, respectively. The diseases are coded in three categories: (i) the primary diagnosis (ii) diagnosis present, receiving active treatment and (iii) diagnosis present, monitored but no active treatment. A full list of diseases and their definitions is included in the Appendix.

Similar to 2014/15, Home Care clients were more likely to report coronary heart disease, diabetes, cancer and chronic obstructive pulmonary disease as their primary diagnosis compared to LTCF residents¹⁸.

LTCF residents were more likely to report Alzheimer's disease and other dementia as their primary diagnosis than Home Care clients. The higher prevalence of Alzheimer's disease and other dementia for LTCF residents is expected given their enhanced care need identified as part of their need to enter long term residential care.

LTCF residents were also more likely to report the presence of depression and anxiety and receive active treatment or be monitored for these conditions compared to Home Care clients.

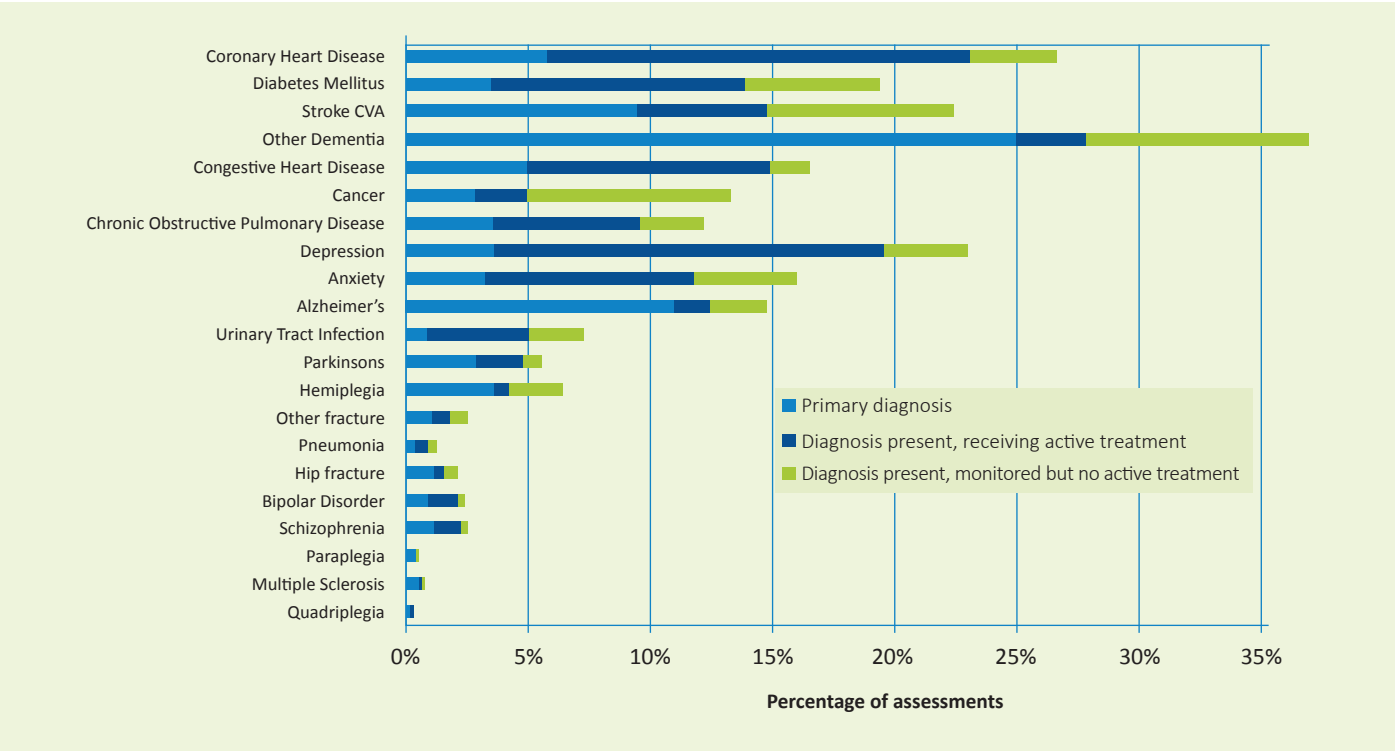
Figure 23: Diseases reported by Home Care clients, 2015/16



¹⁶ Ministry of Health (2016). Health Loss in New Zealand 1990-2013. A report from the New Zealand Burden of Diseases, Injuries and Risk Factors Study.

¹⁷ Figures 23 and 24 are drawn to scale to enable comparison between assessments completed by Home Care clients and LTCF residents.

Figure 24: Diseases reported by LTCF residents, 2015/16



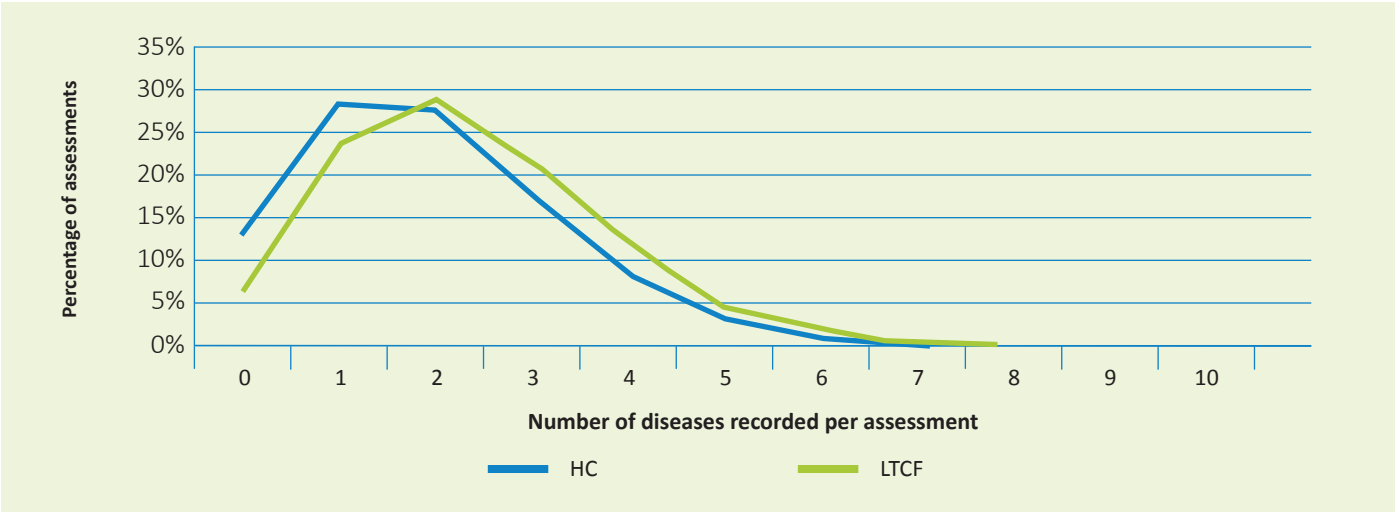
Co-morbidities

Understanding the complexities of multiple morbidities can assist the delivery of more effective health care.

In 2015/16, LTCF residents were more likely to report multiple diseases compared to Home Care clients. Figure

25 shows that 70 percent of Home Care assessments were for clients with nil to two diseases diagnosed compared to 60 percent of LTCF assessed residents. These results have remained fairly stable compared to 2014/15.

Figure 25: Number of diseases diagnosed and what proportion make up all assessments, 2015/16



selected social and wellbeing measures

Introduction

In this section, a few social and wellbeing measures are reported for the first time. The selection of these measures is based on stakeholder interest and feedback. Results are based on assessments not clients. Response to these items in the interRAI questionnaire is required.

Home Care clients were more likely to report feeling lonely than LTCF residents.

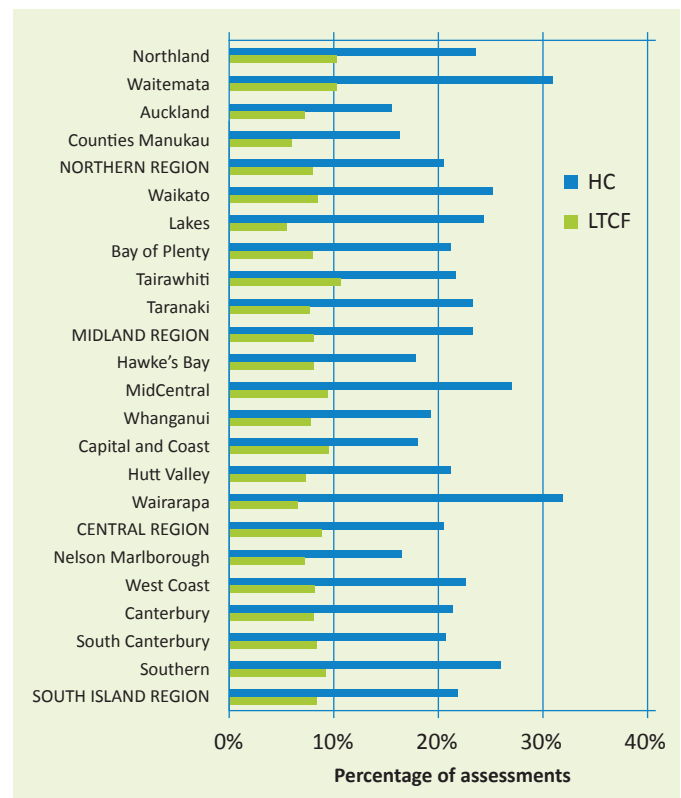
Loneliness

This measure shows the responses of interRAI clients and residents who reported feeling lonely.

In 2015/16, 20 percent of Home Care clients reported feeling lonely compared to eight percent of LTCF residents. These percentages remained almost unchanged over the last year.

Figure 26 shows the variability of this measure across DHBs. For assessments completed in the home and the community, Wairarapa DHB had the highest percentage of clients who reported feeling lonely while Auckland DHB was in the opposite end of the spectrum. For assessments completed in aged residential care, Tairawhiti DHB topped the list in terms of residents who reported feeling lonely.

Figure 26: Percentage of clients/residents who reported feeling lonely, 2015/16



Informal carer stress

This measure captures the feelings of distress, anger or depression of the primary informal helper. The measure is applicable to assessments completed in the home and the community only.

In 2015/16, just over a fifth (22 percent) of Home Care assessments reported the informal carer's feelings of distress, anger or depression. This percentage was similar (21 percent) in 2014/15.

On the other hand, 8 percent of completed Contact assessments reported on the primary informal helper's feelings of distress, anger or depression.

Figure 27 shows how this percentage varied across DHBs and regions. Waitemata DHB had the highest percentage of Home Care assessments reporting on informal carer stress while Whanganui DHB had the highest percentage for Contact assessments.

A higher percentage of LTCF residents had an EPOA in place compared to Home care clients.

Enduring Power of Attorney (EPOA)

An EPOA gives legal authority to someone to act on behalf of the older person in matters relating to property, personal care and welfare when he/she is not able to make decisions for himself/herself, or to communicate those decisions. For example, if he/she has a serious head injury, disease or mental illness.

This measure reports on the percentage of assessments that reported having an EPOA in place.

In 2015/16, a higher proportion of LTCF residents (74 percent) had an EPOA in place compared to Home Care clients (58 percent). This data is not comparable to 2014/15 due to changes in the assessment question.

Figure 28 shows the DHBs in terms of the percentage of assessments that reported having in place an EPOA. Southern and Whanganui DHB topped the list for Home Care assessments and LTCF assessments, respectively. On the other hand, Northland and Counties Manukau DHBs were at the bottom of the list for Home Care assessments and LTCF assessments, respectively.

Notes: 1. The 2015/16 data for the EPOA measure relates to 7 months of data, following the 9.3 upgrade of the interRAI operational software.

2. This data is not comparable to 2014/15.

Figure 27: Percentage of assessments reporting on informal carer stress by DHB and region, 2015/16

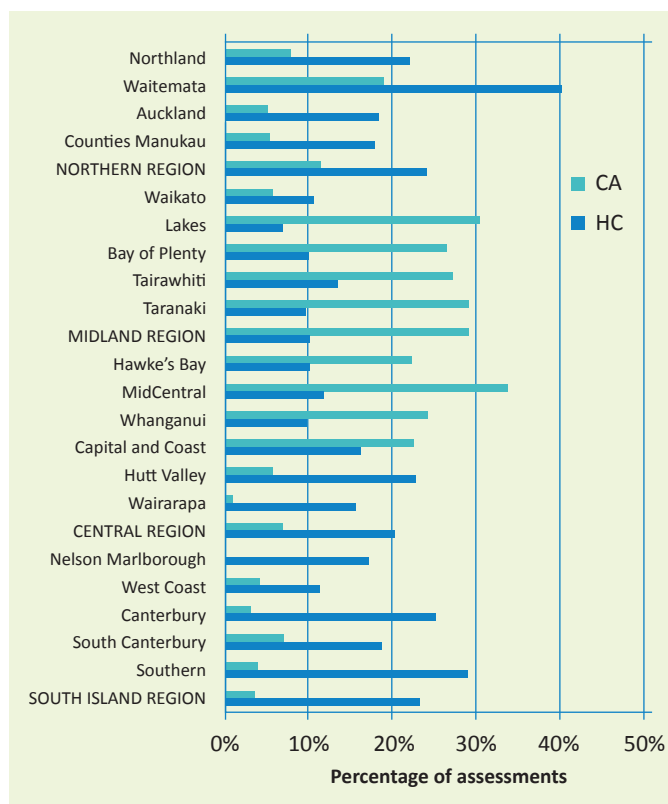
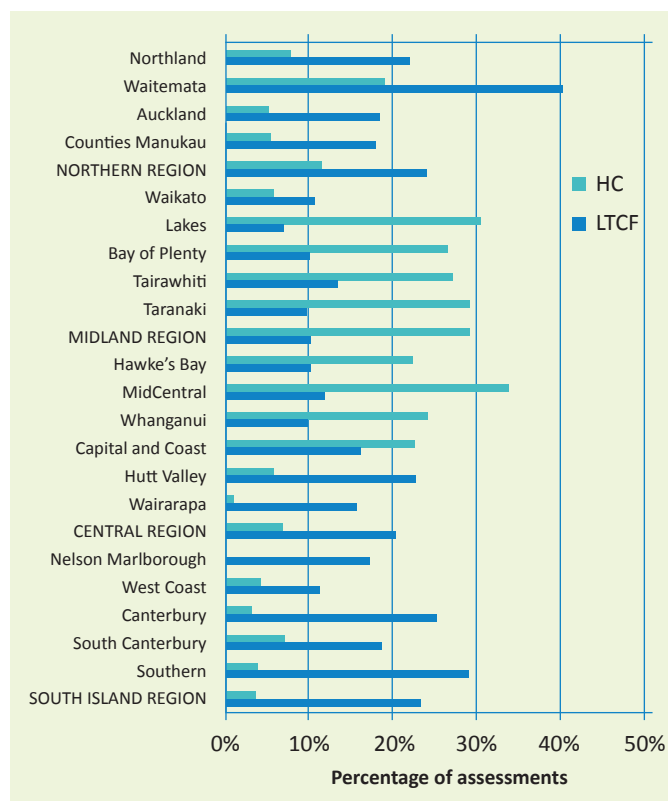


Figure 28: Percentage of assessments reported having an EPOA by DHB and region, 2015/16



Advance Care Plan (ACP)

Advance care planning is a process of discussion and shared planning for future health and end of life care. It is focused on the individual and involves both the person and the health care professionals responsible for their care. It may also involve the person’s family/whānau and/or carers if that is the person’s wish.

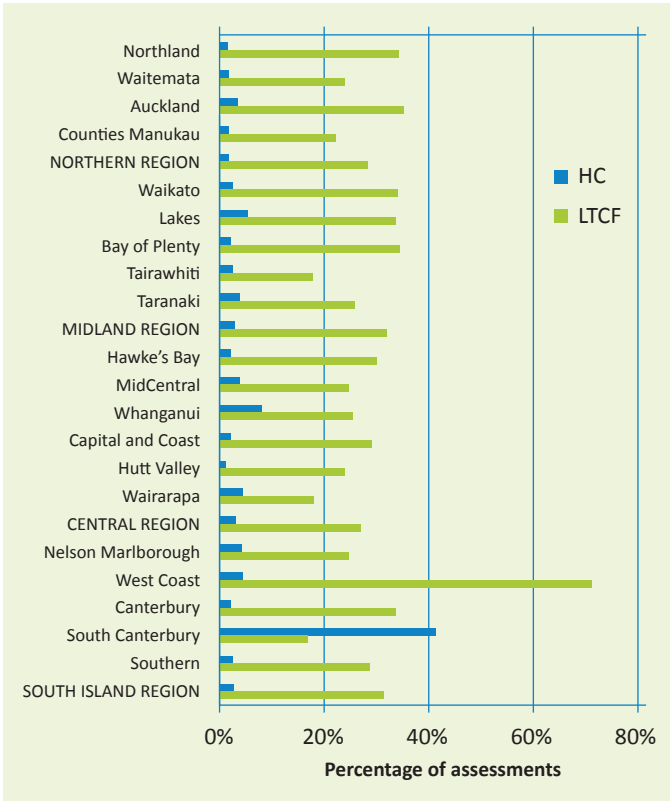
This measure reports on the percentage of assessments who reported having an advance care plan in place.

Nationally, in 2015/16, a higher proportion of LTCF residents (30 percent) had an advance care plan in place compared to Home Care clients (3 percent). This data is not comparable to 2014/15 due to changes in the assessment question.

Figure 29 shows the DHBs in terms of the percentage of assessments that reported an advance care plan in place. For assessments completed in aged residential care, West Coast DHB topped the list with 72 percent of assessments having in place an advance care plan. Tairawhiti and Wairarapa DHBs had the lowest percentage (19 percent of LTCF assessments) compared to the national average of 30 percent.

Nationally, in 2015/16, a higher proportion of LTCF residents (30 percent) had an advance care plan in place compared to Home Care clients (3 percent).

Figure 29: Percentage of assessments reported having an advance care plan in place by DHB and region, 2015/16



- Notes: 1. The 2015/16 data for the advance care plan measure relates to 7 months of data, following the 9.3 upgrade of the interRAI operational software.
- 2. This data is not comparable to 2014/15.



“Use of interRAI offers New Zealand health professionals an evidence based assessment platform to inform optimal care delivery.”

assessment outcomes

Introduction

interRAI assessment outcomes and Clinical Assessment Protocols (CAPs) are outputs from the interRAI assessment process. These are automatically generated using built in algorithms in the assessment. Both outcome measures and triggered CAPs can be used to plan appropriate and timely care and support.

The assessment outcomes can help identify areas to be included in the care plan for the client/resident. The standardised tool allows assessors, planners and researchers to look at the scores over time, and to consider the older person's response to change in location of care and service interventions.

The data for all outcome measures and CAPs are downloadable in Excel format from the interRAI NZ website (www.interRAI.co.nz).

Table 5 provides a summary of the outcome measures by assessment type at the national level.

Table 5: Summarised assessment outcomes by assessment type, 2015/16

Outcome Scales	Scores	Contact assessment	Home Care	LTCF
Assessment Urgency Algorithm (AUA) Scale (scores range 1-6)	Score of 4 Score of 5 Score of 6	21% 5% 14%	NA	NA
Method of Assigning Priority Level (MAPLe) (scores range 0-5)	Low priority Mild Moderate High Very high priority	NA	17% 5% 21% 36% 21%	NA
Changes in Health, End-Stage Disease, Signs, and Symptoms (CHESS) (scores range 0-5)	None/low (0-2) Moderate (3) High instability (4-5)	NA	69% 20% 11%	86% 8% 6%
Cognitive Performance Scale (CPS) (scores range 0-6)	Intact/mild (0-2) Moderate (3-4) Severe/very severe (5-6)	NA	79% 15% 6%	55% 24% 21%
Activities of Daily Living (ADL) Self-performance Hierarchy score (ADL) (scores range 0-6)	Independent/limited assistance (0-2) Extensive/maximal assistance (3-4) Very/total dependence (5-6)	NA	80% 14% 7%	56% 21% 23%
Depression Rating Scale (DRS) (scores range 0 to 14)	Scores (0-2) Scores (3-5) Scores (>5)	NA	83% 13% 4%	80% 15% 5%
Pain Scale (scores range 0-4)	No pain (0) Less than daily pain/daily but not severe (1-2) Daily severe/excruciating pain (3-4)	NA	39% 48% 13%	48% 49% 3%
Pressure Ulcer Risk Scale (PURS) (scores range 0-8)	Very low to low (0-2) Moderate (3) High to very high (4-8)	NA	86% 8% 6%	76% 14% 10%

Note: NA means that the outcome measure is not applicable to that assessment type.

Assessment Urgency Algorithm (AUA) Scale

The AUA scale is used in Contact assessments and is not applicable to Home Care or LTCF assessments.

A Contact assessment is a short, screening assessment suitable for people living in the community with short term or non-complex needs. Its main goals are to:

- support decision making related to the need and urgency for comprehensive assessment, support services and rehabilitation services
- provide the minimum clinical information needed for short term services that may be put in place prior to further assessment
- record basic clinical information on persons who are unlikely to need additional comprehensive assessment.

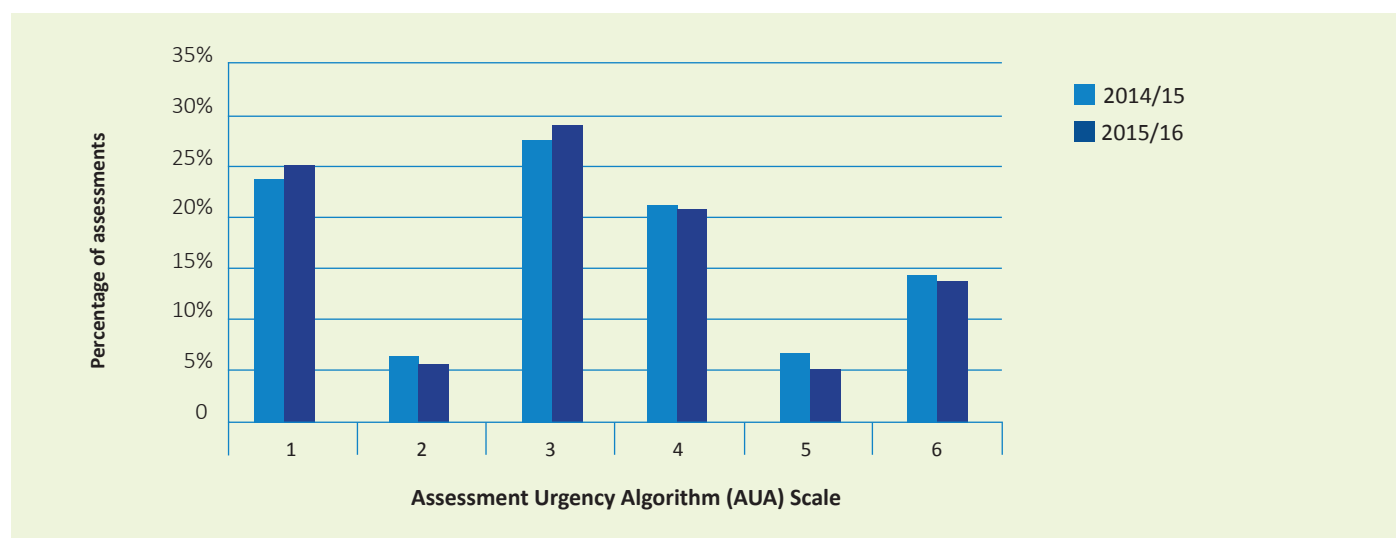
The purpose of the AUA scale is to determine whether or not the client needs further in-depth assessment.

This scale is calculated by referring to a number of elements in the assessment that relate to the person's physical health, mood, the family's ability to cope and the person's dependence with personal hygiene.

The scale ranges from 1-6 with higher scores indicating higher priority for a comprehensive assessment, that is, the interRAI Home Care assessment. Clients with an AUA scale of 4 or more must be followed up using an interRAI Home Care assessment¹⁹.

Figure 30 shows the percentage of Contact assessments for clients who were assigned an AUA scale in 2014/15 and 2015/16. Nationally, the percentage of Contact assessments with an AUA scale of 4 or more declined from 42 percent in 2014/15 to 40 percent in 2015/16, driven by a decline in the proportion of Contact assessments for clients who had scored an AUA scale of 5²⁰.

Figure 30: AUA scale for Contact assessments, 2014/15 and 2015/16



¹⁹Approved by HOP Steering Group. See TAS (July 2016), "Which interRAI assessment to use and when to use it, information for assessors". <http://www.interrai.co.nz/assets/Documents/ESS-Information-for-Assessors/Which-assessment-to-use-and-when-to-use-it.pdf>

²⁰The decline in the percentage of Contact assessment clients who had scored an AUA scale of 5 may be due to a change in the Assessment Urgency Algorithm that was implemented in the September 2014 upgrade of the operational software.

Figure 31 shows the breakdown of the 2015/16 AUA scale by DHB and region. Lakes, Waitemata and Whanganui DHBs had the highest percentage of Contact assessments with AUA scale of 4 and above while Wairarapa DHB was in the opposite side of the spectrum.

Figure 31: AUA scale for Contact assessments by DHB and region, 2015/16

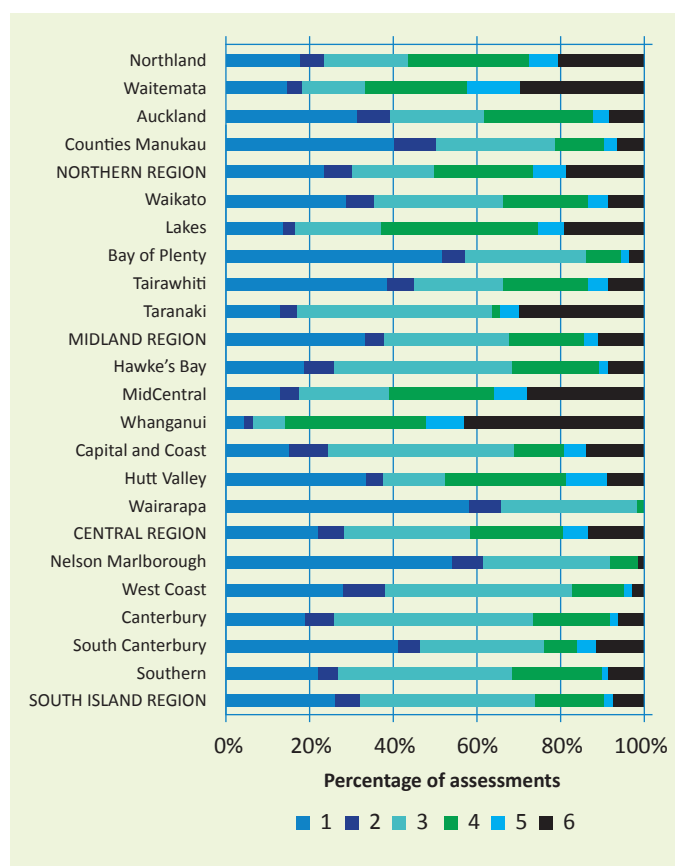


Table 6 (see over) looks at a subset of the Contact assessment clients in 2015/16, that is those who were assigned an AUA scale of 4 and above and who were subsequently assessed using a follow-up interRAI Home Care assessment, by region and DHB, within six months.

Out of a total of 7,859 Contact assessment clients who were assigned an AUA scale of 4 and above, 16 percent were assessed when they were in hospital, three percent died and another one percent moved to an aged residential care facility within six months of their assessment. These clients were, therefore, excluded from the analysis in Table 6, leaving a total of 6,301 clients.

Table 6 shows that, at the national level, 27 percent of Contact assessment clients who had been assigned an AUA scale of 4 or above, were followed up with a Home Care assessment within six months.

DHBs varied in terms of the percentage of Contact assessment clients who were followed up with a Home Care assessment within six months. DHBs in the Central Region had a high follow-up rate while DHBs in the Northern Region had a relatively lower follow-up rate.

Method of Assigning Priority Level (MAPLe)

The MAPLe score is only used in Home Care assessments and is not applicable for LTCF assessments. It is a priority indicator, with higher scores based on the presence of Activities of Daily Living (ADL) impairment, cognitive impairment, wandering, and behaviour problems.

The MAPLe score has components that can indicate carer stress. The higher the priority scores the greater the need for services to prevent hospitalisation or admission into residential care. Priorities for service planning and potential risk in institutionalisation can also be predicted using the MAPLe score.

Figure 32 (see over) shows the change in the percentage of Home Care clients with the lowest to highest MAPLe score in 2014/15 and 2015/16. The percentage of Home Care clients with the highest MAPLe score declined from 25 percent to 21 percent during this period.

This decline suggests a number of possibilities such as an increase in the number of Home Care clients moving to aged residential care or an increase in support for Home Care clients from family, friends and service providers.

The percentage of Home Care clients with the highest MAPLe score declined over the last year.

Table 6: Contact assessments completed in 2015/16 with an AUA scale of 4 and above and who had a Home Care assessment within six months, by DHB and region

DHB and Region	CA clients with an AUA scale of 4 or more		CA clients with an AUA scale of 4 or more and who had a HC assessment within 6 months	
	N	%	N	%
Northland	409	55%	42	10%
Waitemata	1,438	57%	225	16%
Auckland	1,042	37%	262	25%
Counties Manukau	155	18%	22	14%
Northern Region	3,044	44%	551	18%
Waikato	358	33%	69	19%
Lakes	179	57%	98	55%
Bay of Plenty	118	13%	18	15%
Tairāwhiti	32	29%	5	16%
Taranaki	42	22%	3	7%
Midland Region	729	28%	193	26%
Hawke's Bay	371	32%	199	54%
MidCentral	234	60%	62	26%
Whanganui	159	85%	119	75%
Capital and Coast	149	27%	90	60%
Hutt Valley	446	45%	155	35%
Wairarapa	2	2%	-	-
Central Region	1,361	40%	625	46%
Nelson Marlborough	29	8%	3	10%
West Coast	25	18%	5	20%
Canterbury	608	26%	140	23%
South Canterbury	78	14%	27	35%
Southern	427	31%	155	36%
South Island	1,167	25%	330	28%
Grand Total	6,301	36%	1,699	27%

DHBs in the Central Region had a relatively higher follow-up rate for Contact assessment clients who had scored an AUA scale of 4 or more.

- Notes: 1. Table excludes Contact assessment clients who were assessed in hospital, who died or who moved to an ARC facility within 6 months of their assessment.
2. The data for this table was extracted in December 2016.

Figure 32: MAPLe scores for Home care assessments, 2014/15 and 2015/16

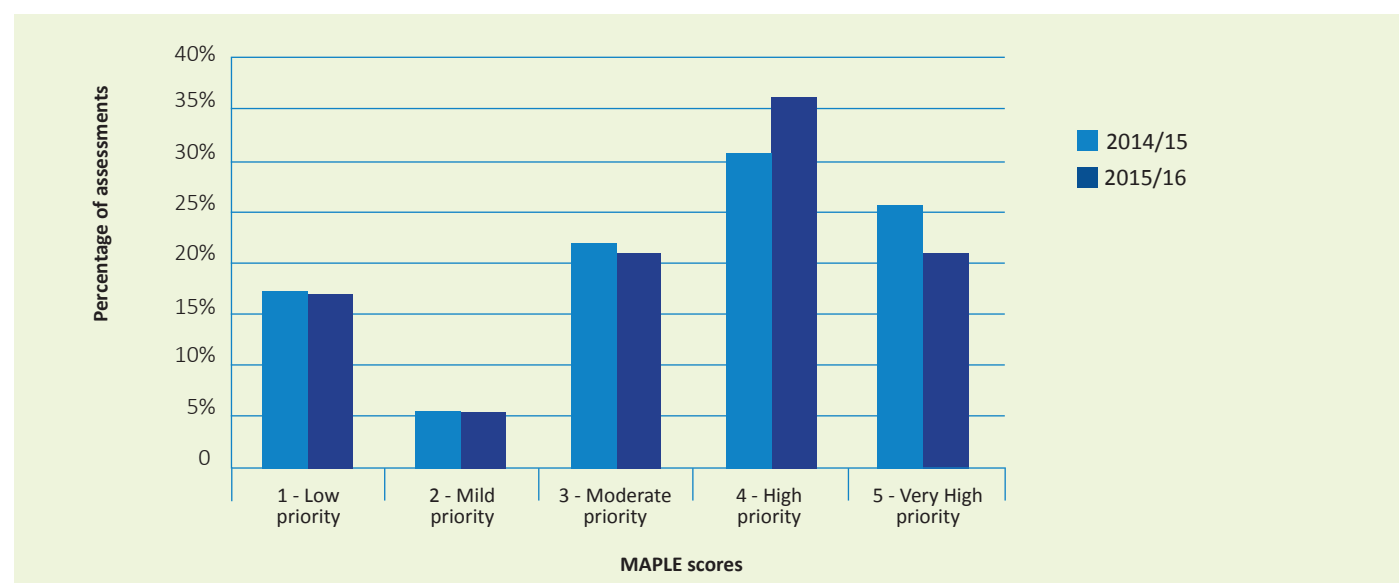


Figure 33: MAPLe scores for Home Care assessments by DHB and region, 2015/16

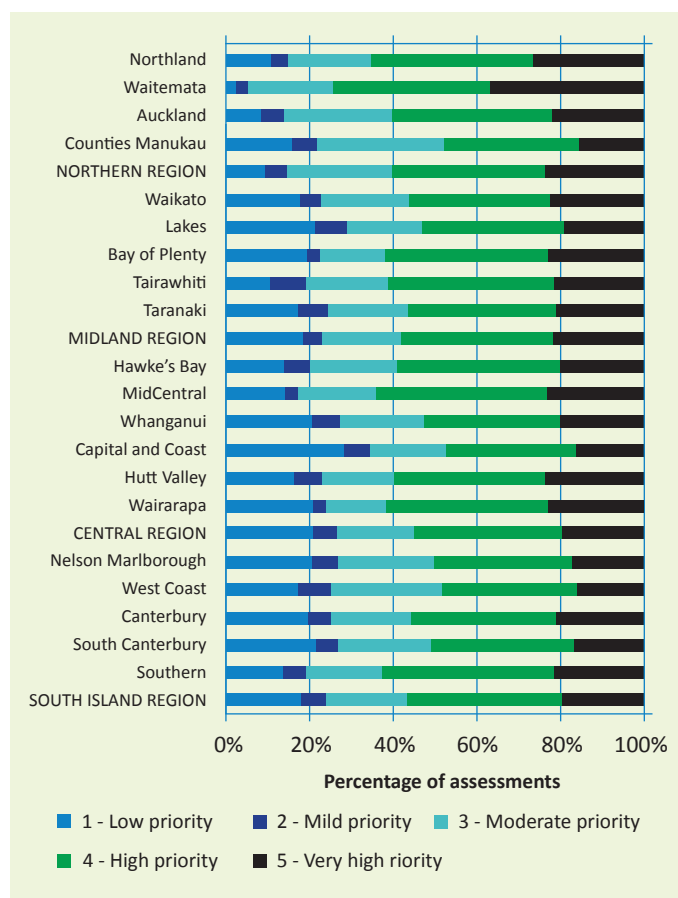


Figure 33 shows the MAPLe scores for Home Care assessed clients in 2015/16 by DHB.

Nationally, 21 percent of Home Care assessments were for clients who had scored the highest MAPLe score of 5. This percentage varied considerably across DHBs. At one end of the spectrum, Counties Manukau DHB had 15 percent of Home Care assessments with a MAPLe score of 5, while Waitemata DHB was at the opposite end of this spectrum with 37 percent of Home Care assessments.



The percentage of Home Care clients with the highest MAPLe score declined over the last year.

Changes in Health, End-Stage disease, Signs, and Symptoms (CHESS)

The CHESS scale detects frailty and health instability and was designed to identify people with unstable health conditions who are at risk of serious decline. It can also be used as an outcome measure to show whether a person has been stabilised following an intervention.

Higher CHESS scores are associated with adverse outcomes such as increased mortality, hospitalisation, pain, caregiver stress and poor self-rated health²¹.

Figure 34 shows that, on average, a higher portion of LTCF assessed residents (41 percent in 2015/16) scored no health symptoms than compared to Home Care assessments (15 percent in 2015/16), suggesting interventions in the long term care setting can make a positive difference. Having said that, there was a slight decline in the percentage of LTCF residents with no health symptoms from 43 percent in 2014/15 to 41 percent in 2015/16, indicating a slight increase in health instability.

Home Care assessed clients were also more likely to experience less stable health than their LTCF counterparts (CHESS scores 3-5).

Figure 35 shows the CHESS scores for Home Care and LTCF assessments by DHB and region.

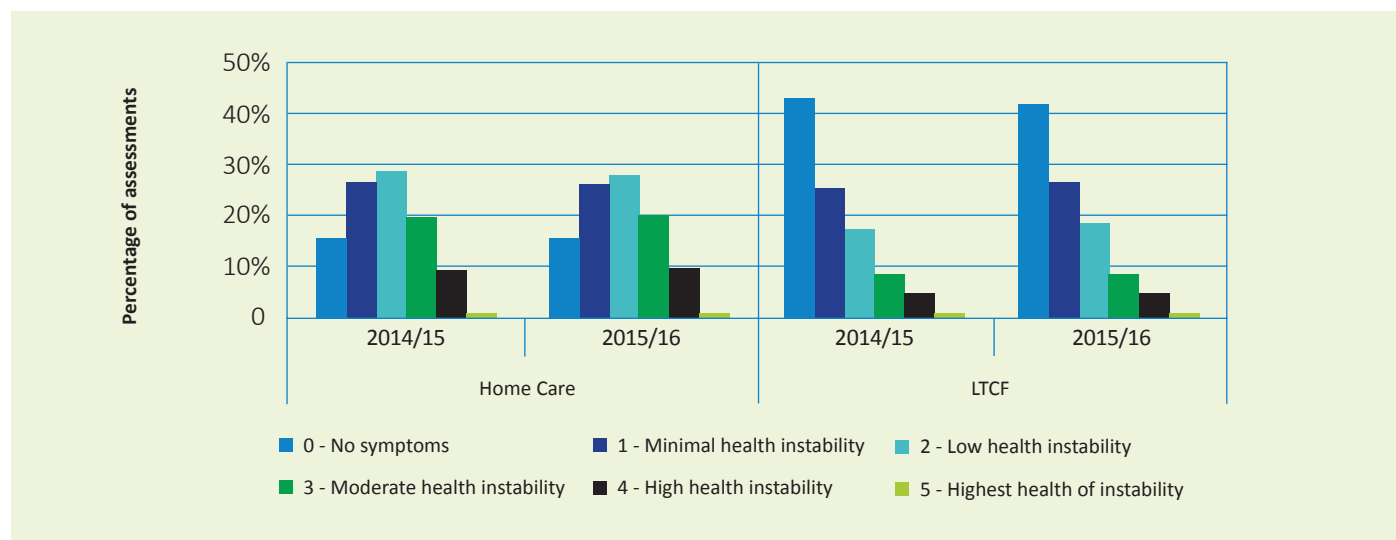
Focussing on the highest CHESS scores 4-5 can indicate where clients/residents could benefit from interventions.

In 2015/16, for Home Care assessments, Southern and Waitemata DHBs had the highest percentage of assessments with CHESS score 4 while Nelson Marlborough DHB topped the list for CHESS score 5.

For LTCF assessments, West Coast and Nelson Marlborough DHBs had the highest percentage of assessments with CHESS scores 4 and 5, respectively.

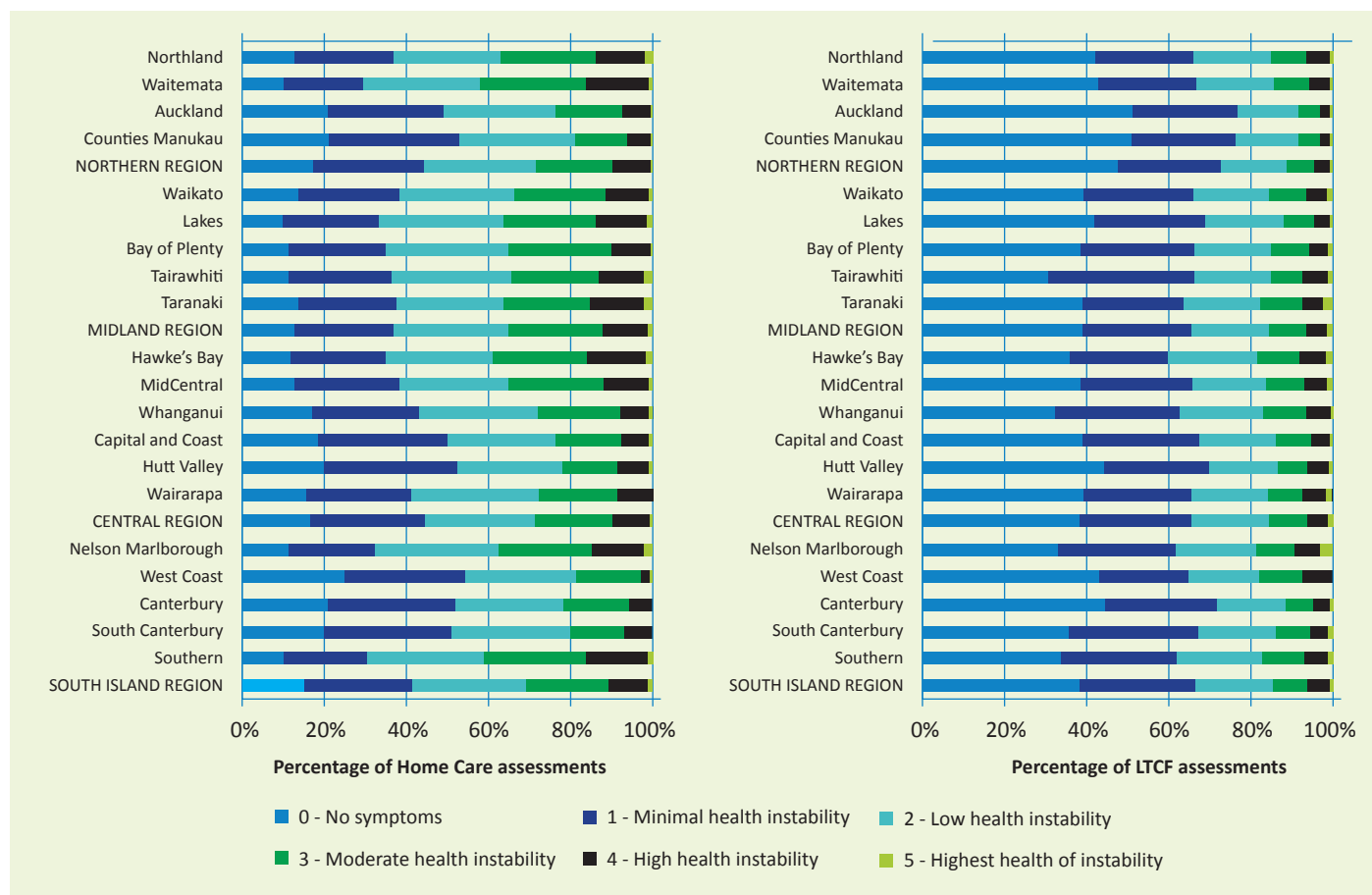
LTCF residents had better CHESS scores than Home Care clients, although the percentage of residents with no symptoms declined.

Figure 34: CHESS scores for Home Care and LTCF assessments, 2014/15 and 2015/16



²¹The CHESS scale has also been shown to predict mortality, health service use, and caregiver distress in the overall populations of persons receiving care in home care, post-acute, nursing home and palliative care settings. See Hirdes J.P., Frijters D.H., Teare G.F. (2003), "The MDS-CHESS scale: a new measure to predict mortality in institutionalized older people". Journal of the American Geriatrics Society 51: 96-100.

Figure 35: CHESS scores for Home Care and LTCF assessments by DHB and region, 2015/16



Cognitive Performance Score (CPS)

This scale combines information on memory impairment, level of consciousness and executive functioning. The scores range from zero to six with intact (0) and very severe impairment (6). The higher the score, the worse the cognitive impairment.

As expected, 24 percent of LTCF residents had moderate/severe to very severe cognitive impairment compared to 7 percent of Home Care clients.

Figure 36: CPS scores by assessment type, 2014/15 and 2015/16

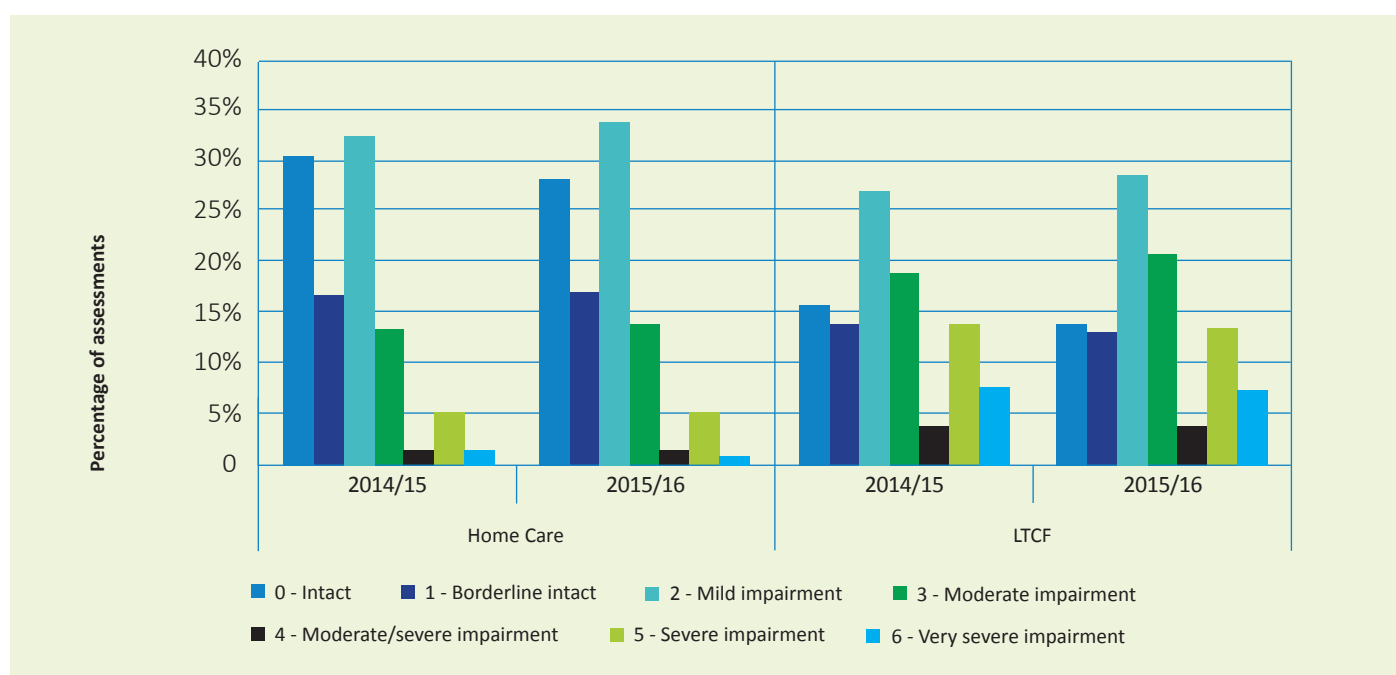


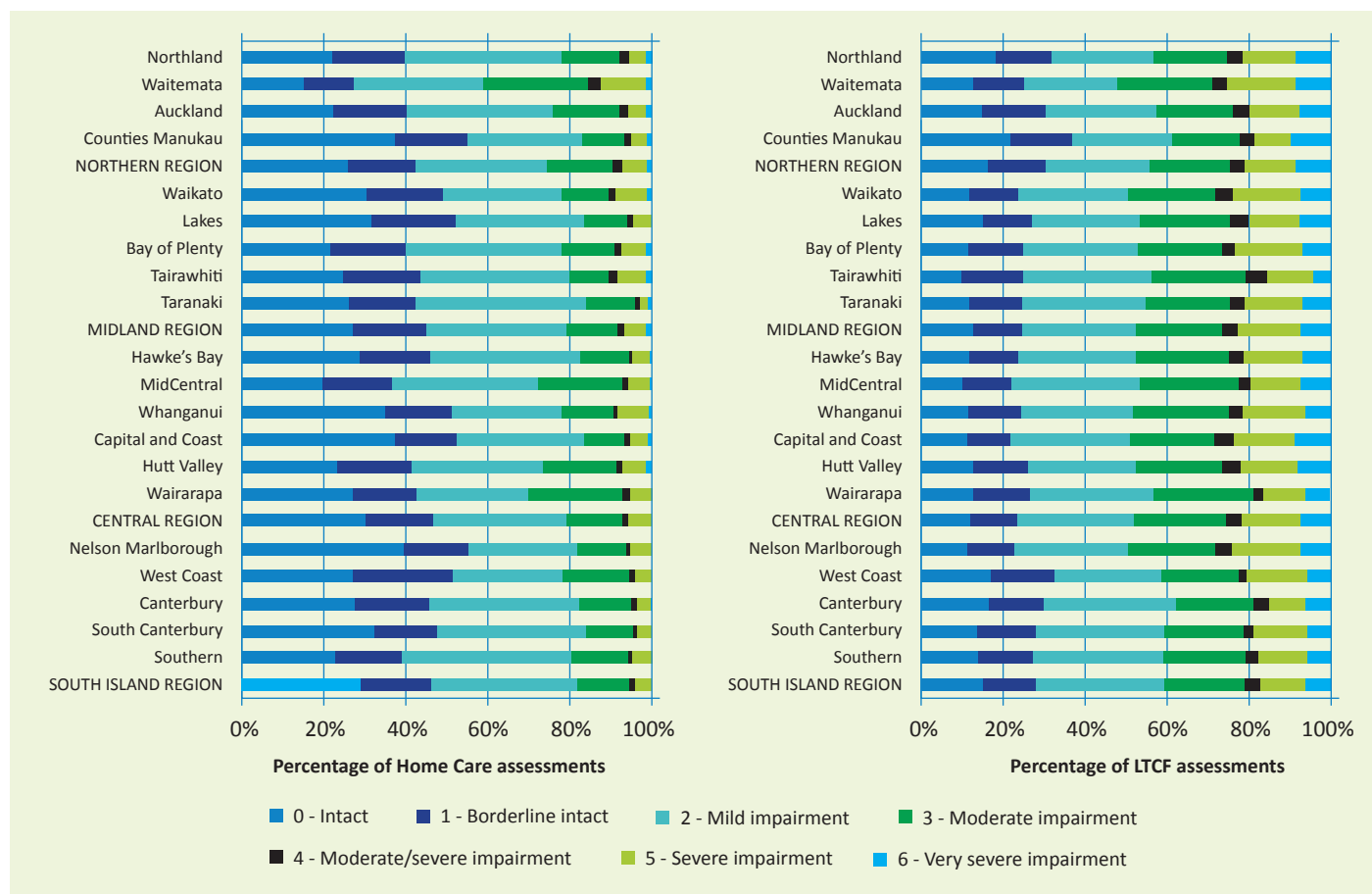
Figure 36 shows that in 2015/16, 24 percent of LTCF residents had moderate/severe to very severe cognitive impairment (CPS scores 4-6) compared to 7 percent of Home Care clients.

This result was similar in 2014/15 and is expected. Older people with cognitive impairment are more likely to be identified as high need clients as this is part of their need to enter long term residential care.

Figure 37 shows the CPS scores for Home Care and LTCF assessments by DHB and region.

Waitemata DHB had the highest proportion of assessments with moderate/severe to very severe cognitive impairment (CPS scores 4-6) compared to other DHBs, for both assessments completed in the home and the community, and in long term care.

Figure 37: CPS scores for Home Care and LTCF assessments by DHB and region, 2015/16



Pressure Ulcer Risk Scale (PURS)

The PURS screens for the risk of pressure ulcer injury. It combines information on the history of pressure ulcers, impaired walking, bowel incontinence, weight loss, shortness of breath, bed mobility and pain frequency.

Figure 38 shows that the PURS has remained fairly stable over the last year. This is also true for results at the DHB level.

As expected, a higher proportion of LTCF assessments (24 percent) had moderate to very high risk (PURS 3-6) of pressure ulcer injury than Home Care assessments (14 percent). While there were a higher proportion of LTCF residents with very low risk (PURS 0), Home Care clients were more prominent in the low risk category (PURS 1-2).

As expected, LTCF residents were more likely to have a moderate to high risk of pressure ulcer injury than Home Care.

Figure 38: PURS by assessment type, 2014/15 and 2015/16

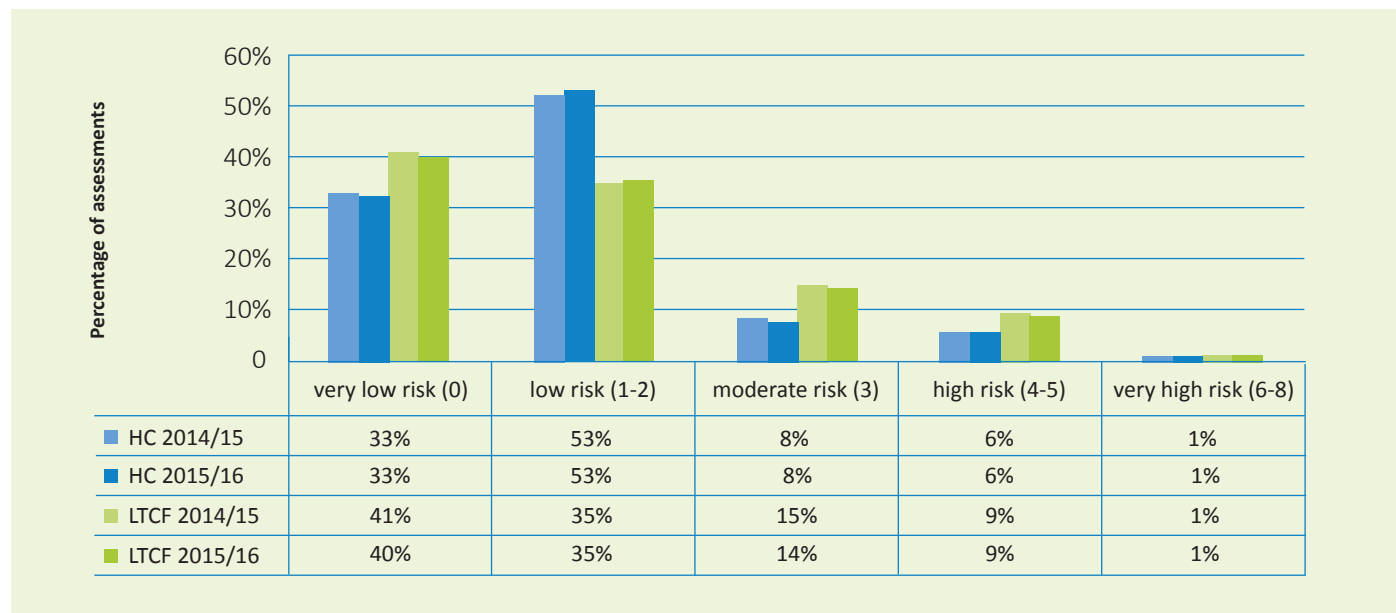


Figure 39: PURS by assessment type and DHB and region, 2015/16

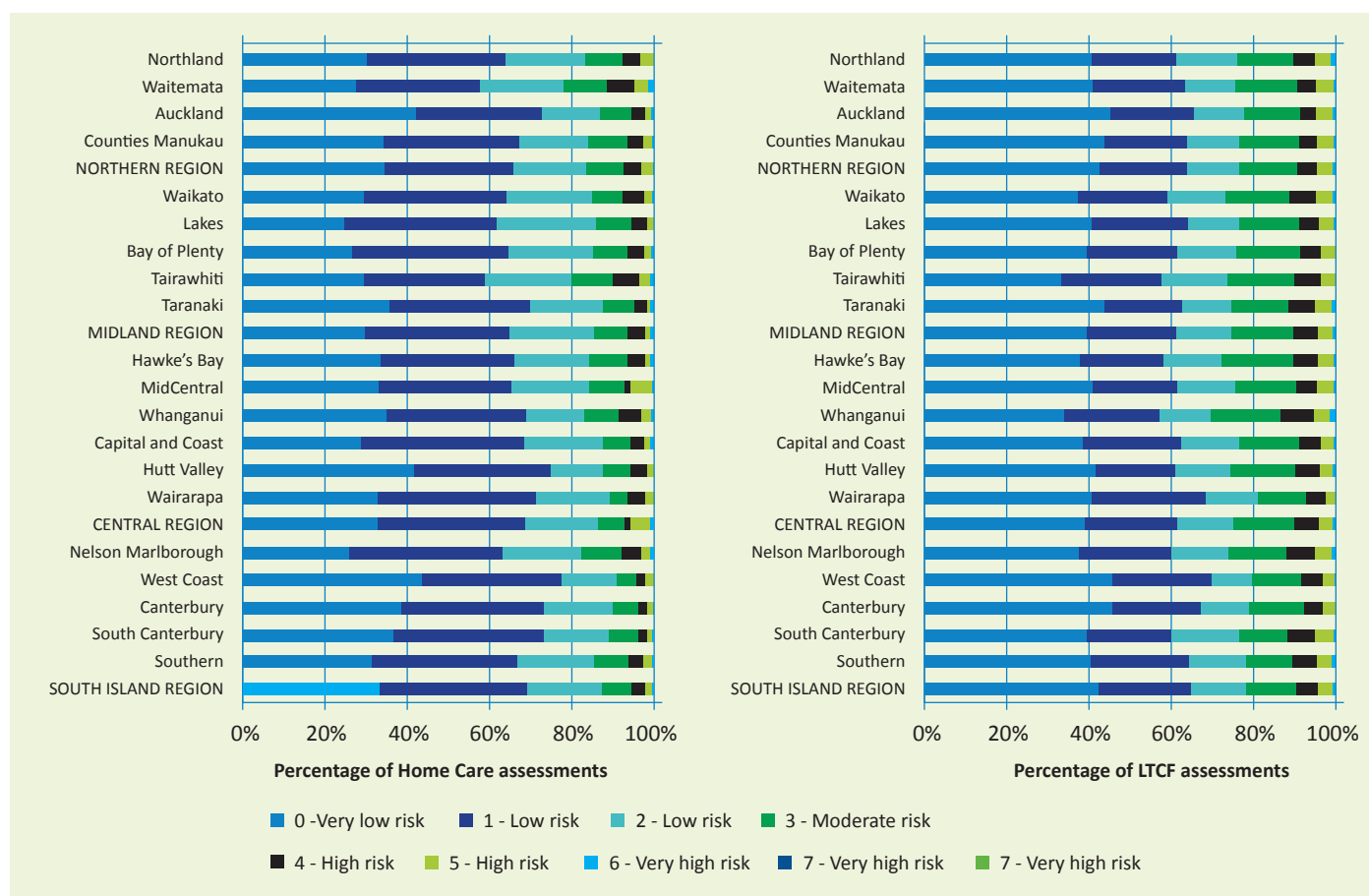


Figure 39 shows the PURS by DHB and region for each of the PURS categories for Home Care and LTCF assessments.

For Home Care assessments, Waitemata DHB had the highest percentage of assessments in the moderate to very high risk category (PURS 3-6) while Whanganui DHB stood out in that category for LTCF assessments.

Pain Scale

The pain scale screens for the frequency and intensity of pain. Figure 40 shows that, in 2015/16, a higher proportion of Home Care clients (13 percent) experienced daily severe and excruciating pain (scale 3-4) compared to LTCF assessments (3 percent). These results remained similar over the last year.

The higher level of pain in the home care setting compared to aged residential care warrants further investigation. One such possibility may be the higher mobility of home care clients relative to ARC residents.

Home care clients were more likely to experience daily severe to excruciating pain compared to LTCF residents.

The data also suggests that there may be better pain management in aged residential care which may be associated with the level of support provided to residents with all activities of daily living.

Figure 41 shows the pain scale for both Home Care and LTCF assessments by DHB and region. Bay of Plenty DHB had the highest percentage of Home Care assessments experiencing daily severe and excruciating pain.

Figure 40: Pain scale by assessment type, 2014/15 and 2015/16

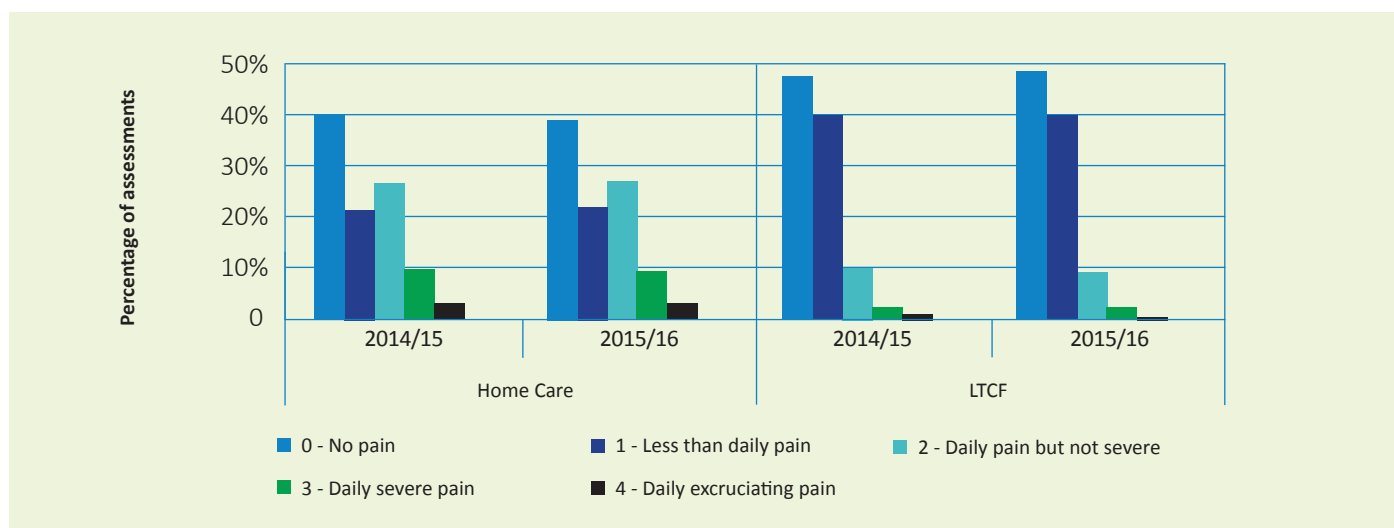
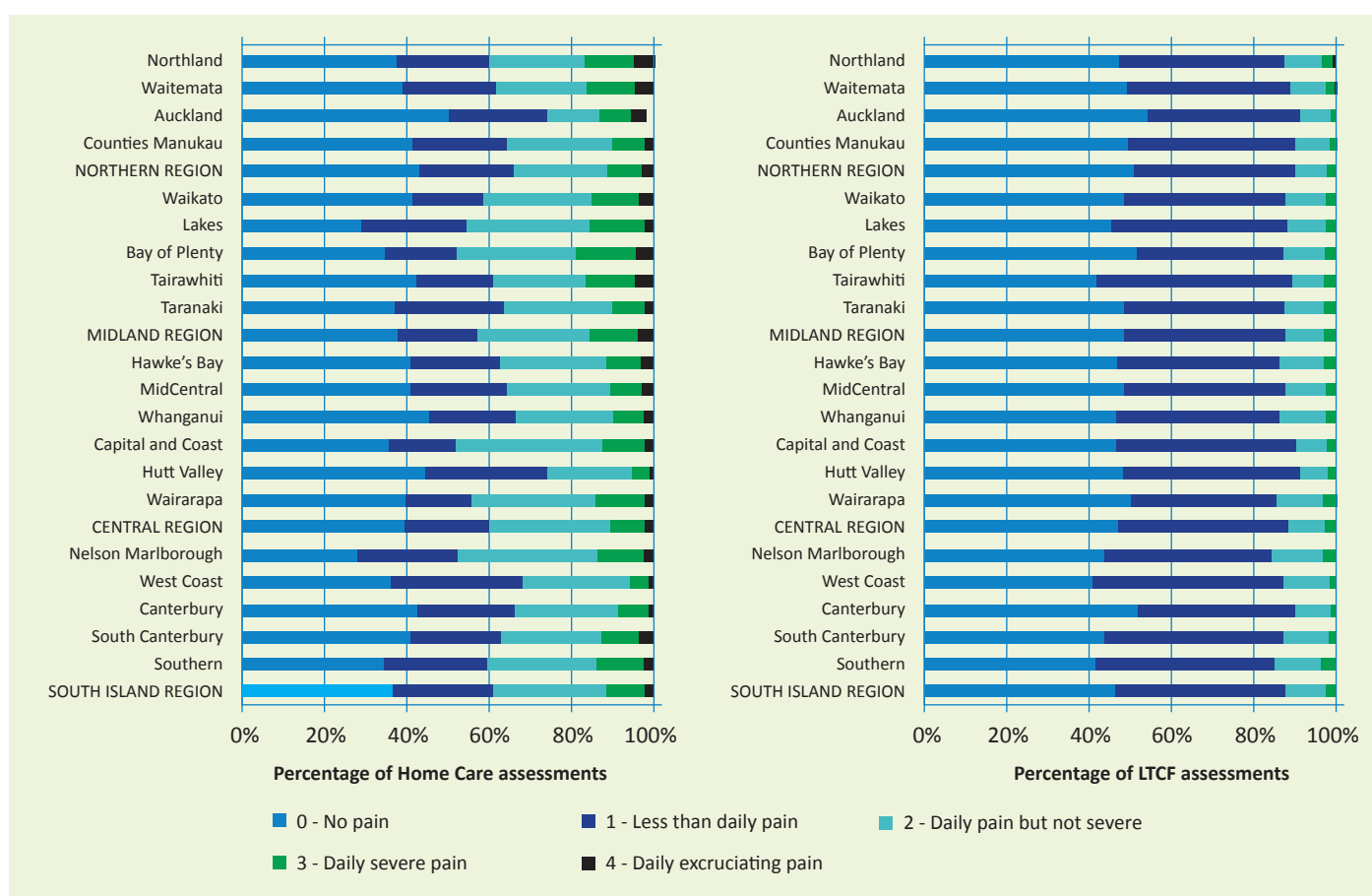


Figure 41: Pain scale by assessment type, DHB and region, 2015/16



Depression Rating Score (DRS)

This scale is used as a clinical screen for depression and includes levels of negativity, anger, fear, repetitive health complaints, anxiety, sadness and crying.

The scale ranges from 0 to 14 with the higher the score the greater the depression. Scores 3 or more may suggest symptoms of the person suffering from some degree of depressive disorder.

The majority of people assessed, regardless of the care setting, had low DRS scores (i.e. below 3), see Figure 42.

LTCF assessed residents were slightly more likely to have moderate (i.e. score 3-5) and high (i.e. score above 5) DRS scores than Home Care clients.

Over the last year, the DRS results for Home Care and LTCF assessments remained fairly consistent.

21 percent of LTCF residents had moderate to high depression scores compared to 16 percent of Home Care clients.

Figure 43 shows the DRS for both assessment types by DHB and region. For assessments completed in the home and in the community, Waitemata DHB stood out with the highest percentage of assessments scoring 3-5 and above 5 in the DRS. For assessments completed in aged residential care, Tairāwhiti DHB had the highest percentage of assessments scoring 3-5 while Whanganui and Northland DHBs had the highest percentage of assessments scoring above 5.

Figure 42: DRS by assessment type, 2014/15 and 2015/16

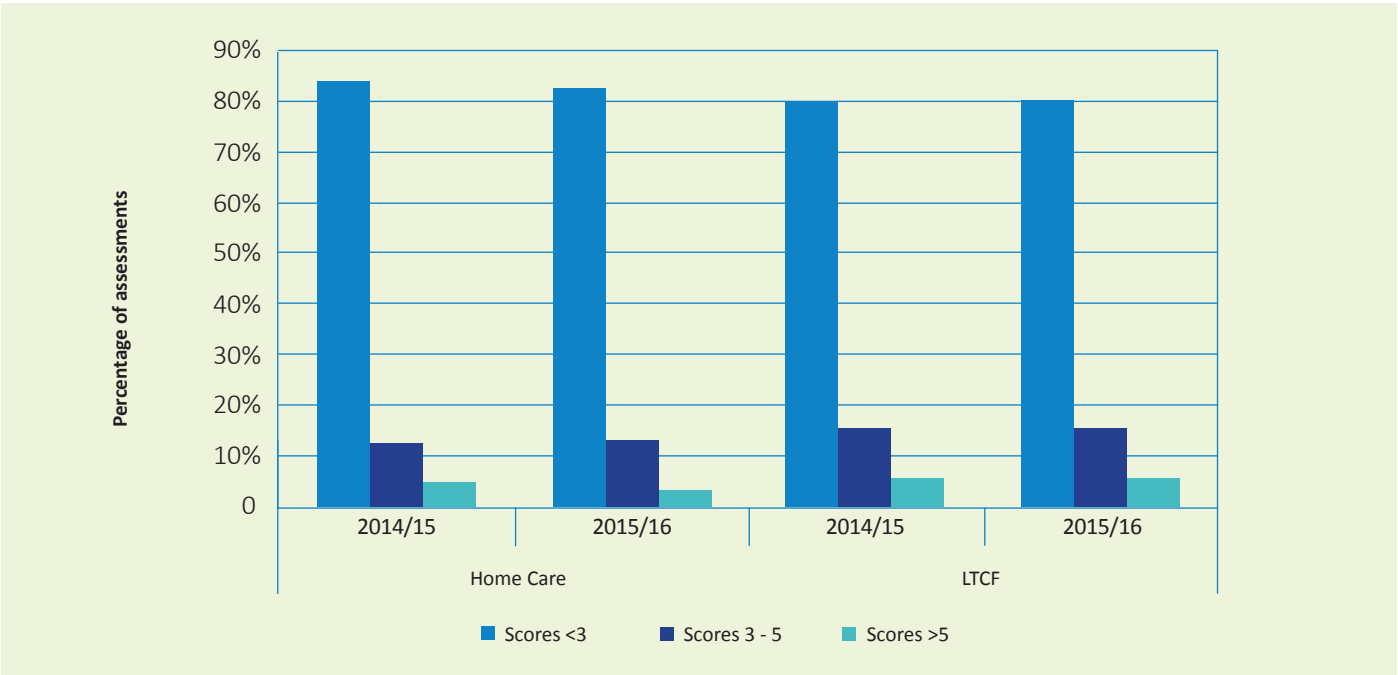
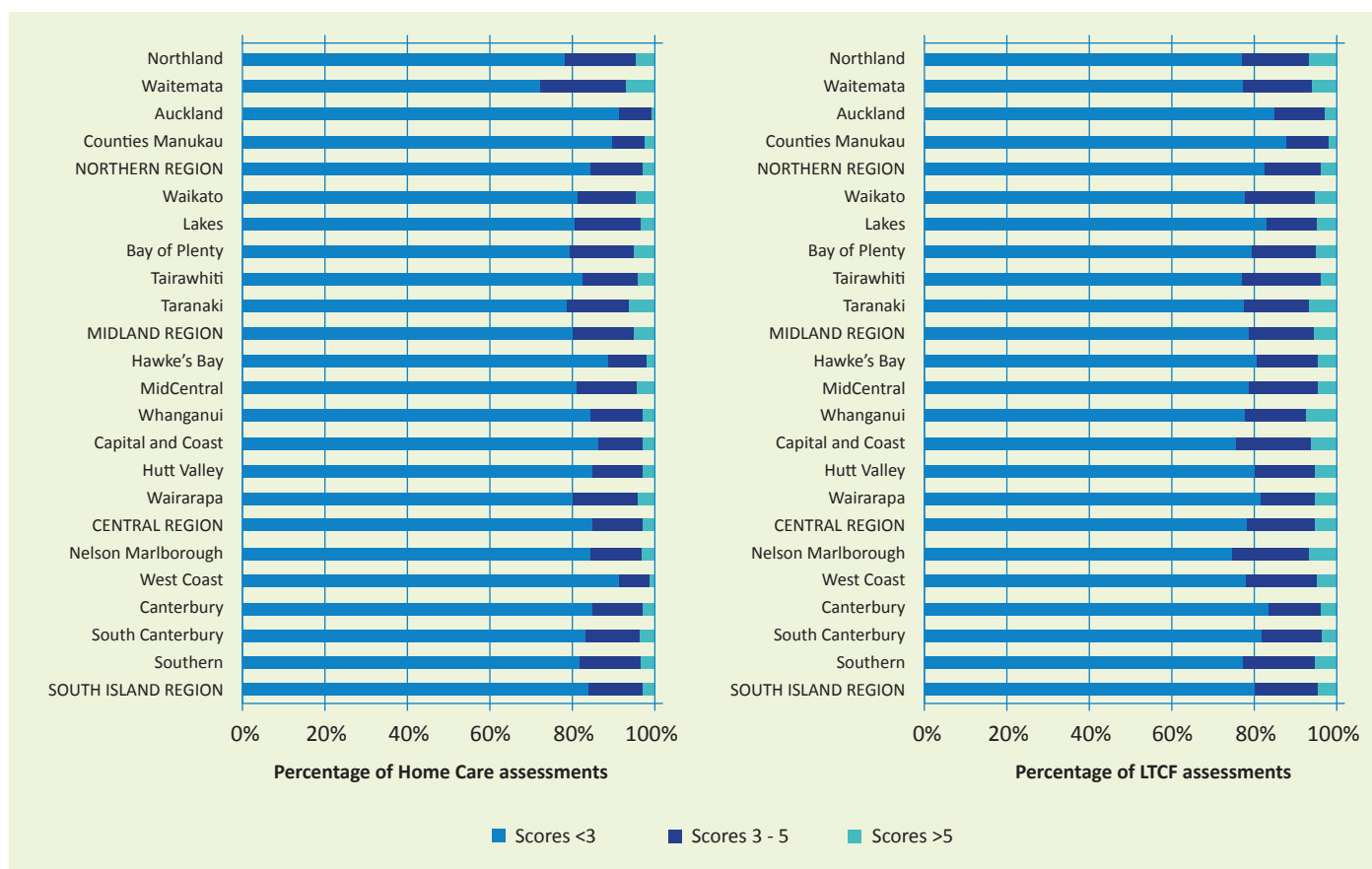


Figure 43: DRS by assessment type, DHB and region, 2015/16



Activities of Daily Living (ADL) Self-performance Hierarchy Scale

The ADL self-performance hierarchy scale is a measure of functional performance grouping activities of daily living according to the stages of the disablement process in which they occur.

The scale is based on four ADL items showing the level of difficulty in personal hygiene, locomotion, toilet use and eating. The higher the score the worse the health instability (0=independence, 6=total dependence).

Figure 44 shows the ADL self-performance scale for both Home Care and LTCF assessments in the last two years.

The noticeable differences between Home Care and LTCF assessments were the higher levels of independence for clients living in the home and the community and the increased level of dependence for residents in aged residential care. This observation remained the same in the last two years.

Regardless of the assessment type, nationally, there was little change in the ADL self-performance hierarchy scale between 2014/15 and 2015/16.

Home Care clients were more likely to be functionally independent compared to LTCF residents when performing daily activities such as personal hygiene, locomotion, toilet use and eating.

Figure 44: ADL Self-performance Hierarchy scale by assessment type, 2014/15 and 2015/16

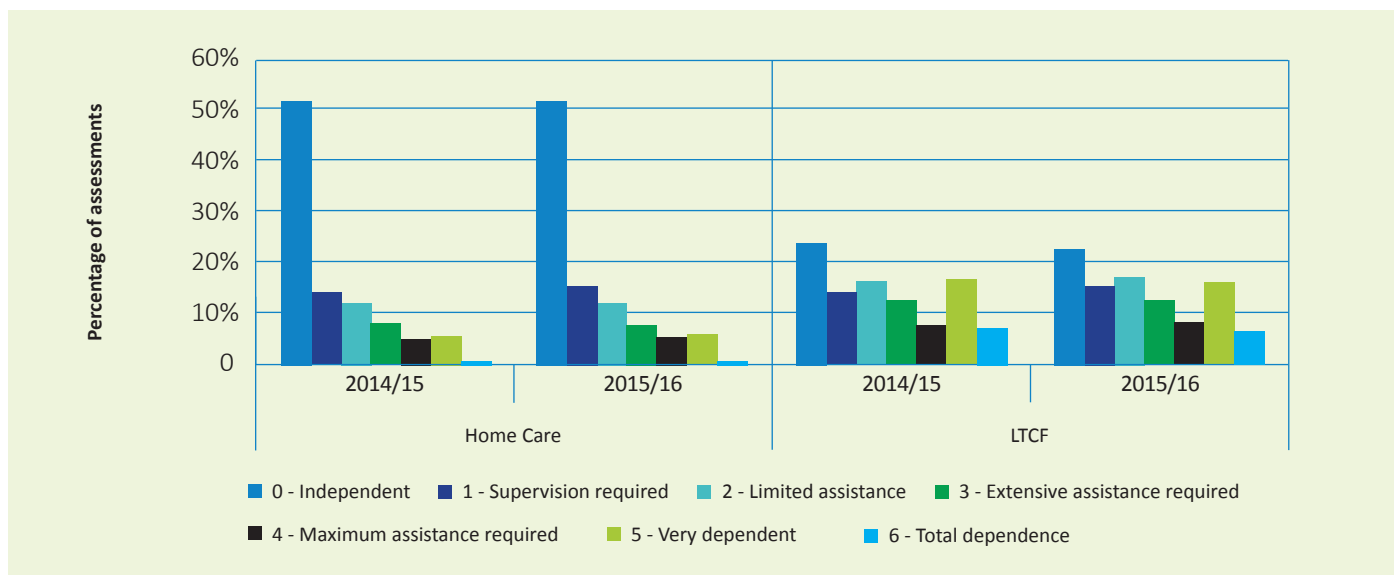
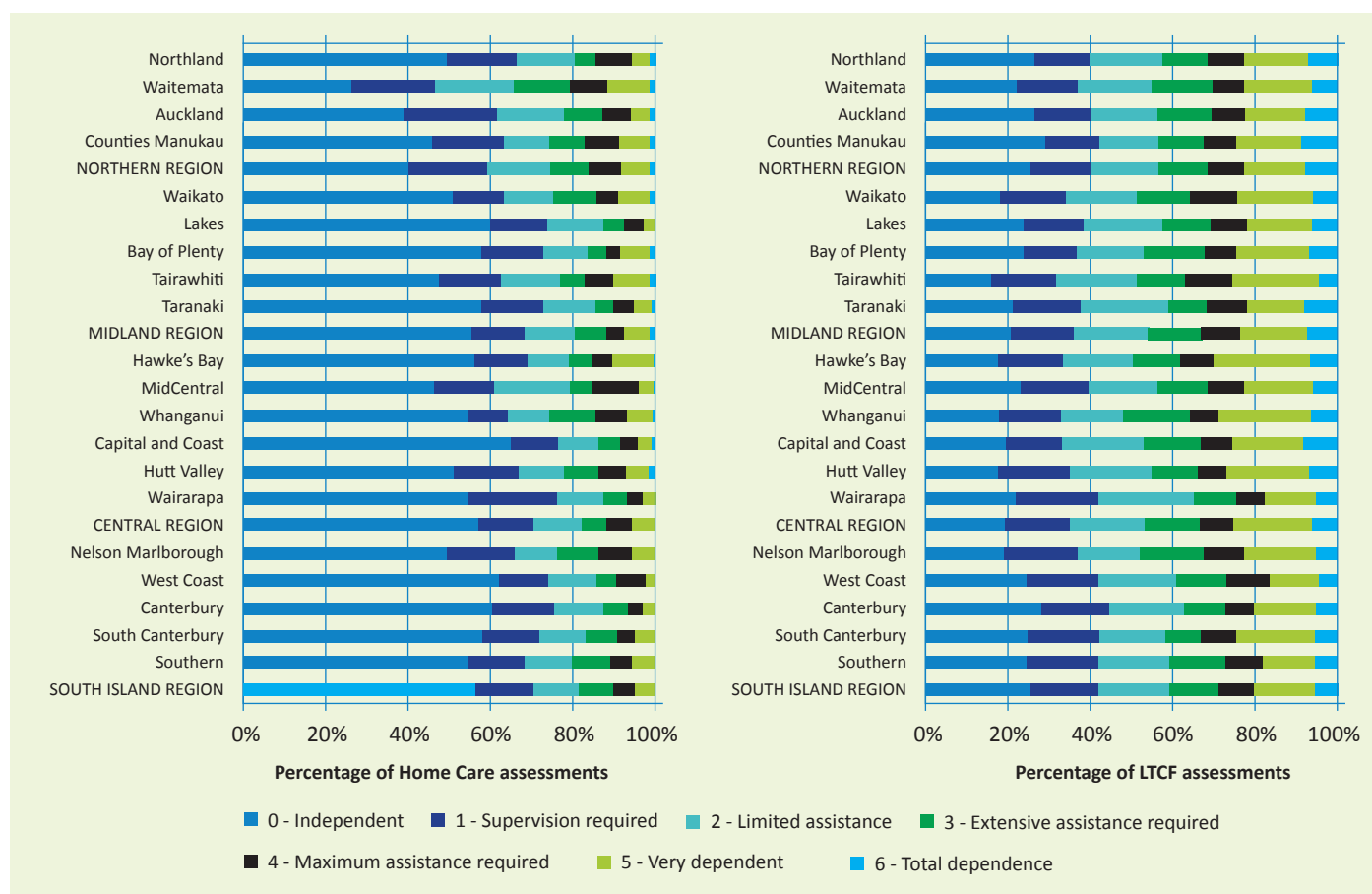


Figure 45 shows the ADL self-performance hierarchy scale by assessment type, DHB and region for 2015/16.

For Home Care assessments, Capital and Coast DHB had the highest percentage of clients who were independent while

Waitemata DHB had the lowest percentage in that category. In aged residential care, Counties Manukau DHB had the highest percentage of LTCF assessments for residents who were independent while Tairāwhiti DHB was at the opposite end of this spectrum.

Figure 45: ADL Self-performance Hierarchy scale by assessment type, DHB and region, 2015/16





“CAPs provide a roadmap for how best to care for an individual, highlight the risks, and offers the opportunity to respond at the right time for the best health outcome.”



Clinical Assessment Protocols (CAPs)

Introduction

CAPs focus on a person's function and quality of life, assessing need, strengths and preferences. Selected items in the assessment can trigger a CAP, indicating a person who may benefit from care and support in that area. There are a total of 27 individual CAPs; 22 of these are used in LTCF assessments and 25 in Home Care assessments in New Zealand.

Identifying the factors that clients/residents are presenting with, can assist with tailoring services to meet their needs.

A CAP is triggered to help identify areas in which the client/resident is either:

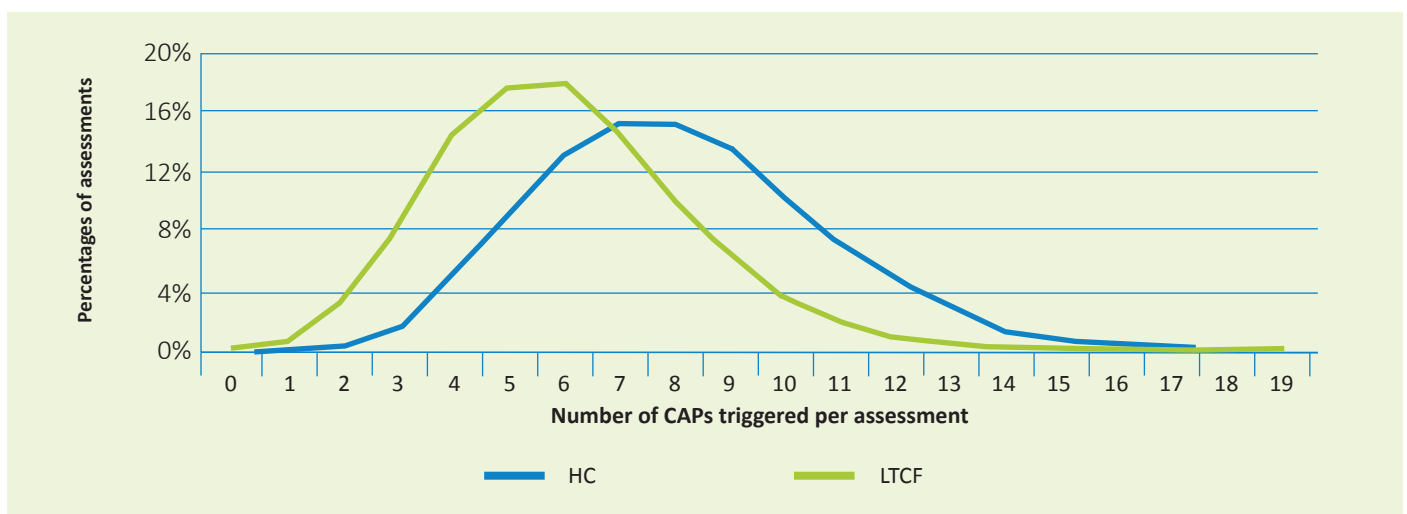
1. Is at a higher than expected rate of decline
2. Has an increased potential to improve
3. Has symptoms that could be alleviated if an identified problem is addressed.

A CAP will not trigger unless there is an opportunity for slowing the rate of decline, potential for improvement or for symptoms to be alleviated.

CAPs triggered in association with clinical expertise can together better inform a client/resident's care plan and lead to treatments, programmes or referrals.

On completing a Home Care or an LTCF assessment, most people would have multiple CAPs triggered. Figure 46 shows the distribution of the number of CAPs triggered per assessment in 2015/16, which showed a similar pattern to 2014/15.

Figure 46: Distribution of CAPs triggered per assessment for Home Care and LTCF assessments, 2015/16



The most common number of CAPs triggered per assessment in aged residential care was six compared to eight CAPs per assessment completed in the home and community.

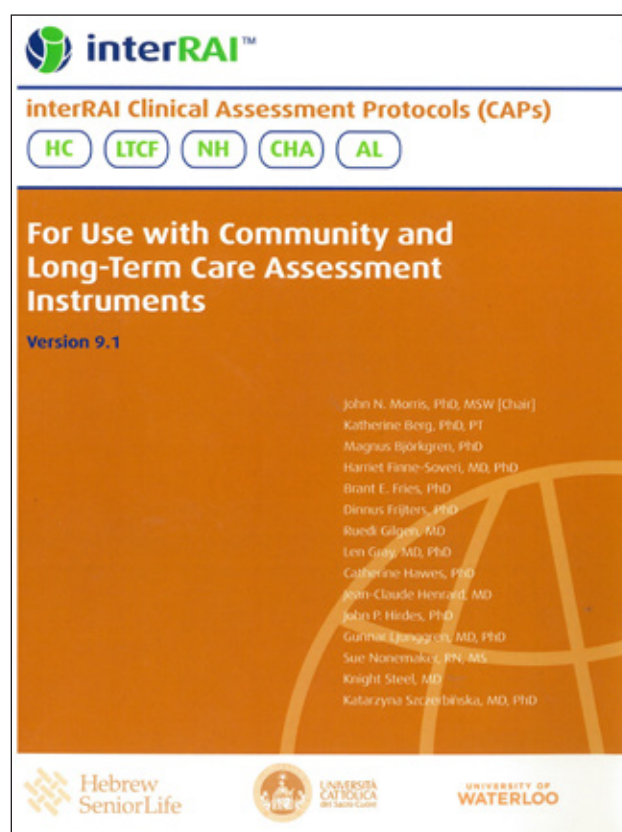
The wider shape of the curve for Home Care assessments in Figure 46 indicates that, on average, a Home Care assessment had more possible CAPs triggered compared to an LTCF assessment. Sixty percent of completed Home Care assessments triggered eight or fewer CAPs compared to six or fewer CAPs triggered by a similar percentage of LTCF assessments.

Different CAPs have different levels of trigger. Each CAP has a unique algorithm definition. The interRAI CAPs manual provides useful context for each CAP and the different trigger levels²².

The interRAI CAPs manual can provide useful explanation on each of the 27 CAPs.

Table 7 shows the percentage of CAPs triggered for Home Care and LTCF assessments by trigger level, in 2015/16.

The data for CAPs are downloadable in Excel format from the interRAI NZ website (www.interRAI.co.nz).



²² interRAI (2007-2010). 'interRAI Clinical Assessment Protocols (CAPs), for use with community and Long Term Care assessment instrument'. Version 9.1

Table 7: CAPs triggered by assessment type and trigger level, 2015/16

interRAI Clinical Assessment Protocols (CAPs)	Percentage of Home Care assessments				Percentage of LTCF assessments			
	Not Triggered	Trigger level 1	Trigger level 2	Trigger level 3	Not Triggered	Trigger level 1	Trigger level 2	Trigger level 3
Prevention*	0%	88%	12%		0%	44%	56%	
Cardiorespiratory	37%	63%			65%	35%		
Institutional risk	43%	57%			N/A	N/A	N/A	N/A
Cognitive loss**	79%		21%		92%		8%	
Physical activity	55%	45%			80%	20%		
Activities of Daily Living (ADL)	56%	9%	35%		33%	37%	31%	
Mood	56%	27%	17%		49%	31%	20%	
Falls	58%	30%	13%		64%	27%	8%	
Informal support	58%	42%			N/A	N/A	N/A	N/A
Pain	59%	26%	15%		86%	9%	5%	
Urinary incontinence***	6%	56%	20%	18%	21%	33%	34%	12%
Instrumental ADL	63%	37%			N/A	N/A	N/A	N/A
Communication	74%	7%	19%		70%	8%	22%	
Social relationships	79%	21%			87%	13%		
Undernutrition	79%	12%	8%		72%	17%	11%	
Bowel conditions	83%	7%	10%		80%	14%	6%	
Appropriate medications	85%	15%			93%	7%		
Behaviour	91%	4%	5%		77%	10%	13%	
Delirium	91%	9%			90%	10%		
Dehydration	93%	2%	6%		95%	1%	4%	
Pressure ulcer	93%	3%	3%	1%	89%	3%	3%	5%
Tobacco and alcohol use	93%	7%			96%	4%		
Home environment	95%	5%			N/A	N/A	N/A	N/A
Abusive relationship	97%	1%	2%		N/A	N/A	N/A	N/A
Feeding tube	100%	0%	0%		100%	0%	0%	
Activities	N/A	N/A	N/A	N/A	85%	15%		
Physical restraint	N/A	N/A	N/A	N/A	97%	2%	1%	

Notes: 1. Different CAPs have different levels of trigger. Blank cells indicate that a particular trigger level does not apply to that CAP.

2. NA means that the CAP is not applicable to that type of interRAI assessment.

3. The 2014/15 Annual Report showed the total triggered CAPs in the summary table rather than the CAPs by trigger level. Readers are recommended to exercise caution when comparing this table with the 2014/15 results.

4. *The prevention CAP is almost always triggered in New Zealand. This is because the time frame for a resident to be seen by a General Practitioner (GP) is longer than international standards. The prevention CAP is excluded from further analysis.

5. **The cognitive loss CAP, based on the 9.3 version of interRAI assessments, includes only levels 0 and 2.

6. ***The Urinary Incontinence CAP is only triggered at levels 2 and 3. Trigger level one is defined as "Not triggered".

Functional CAPs

Activities of Daily Living (ADL) CAP

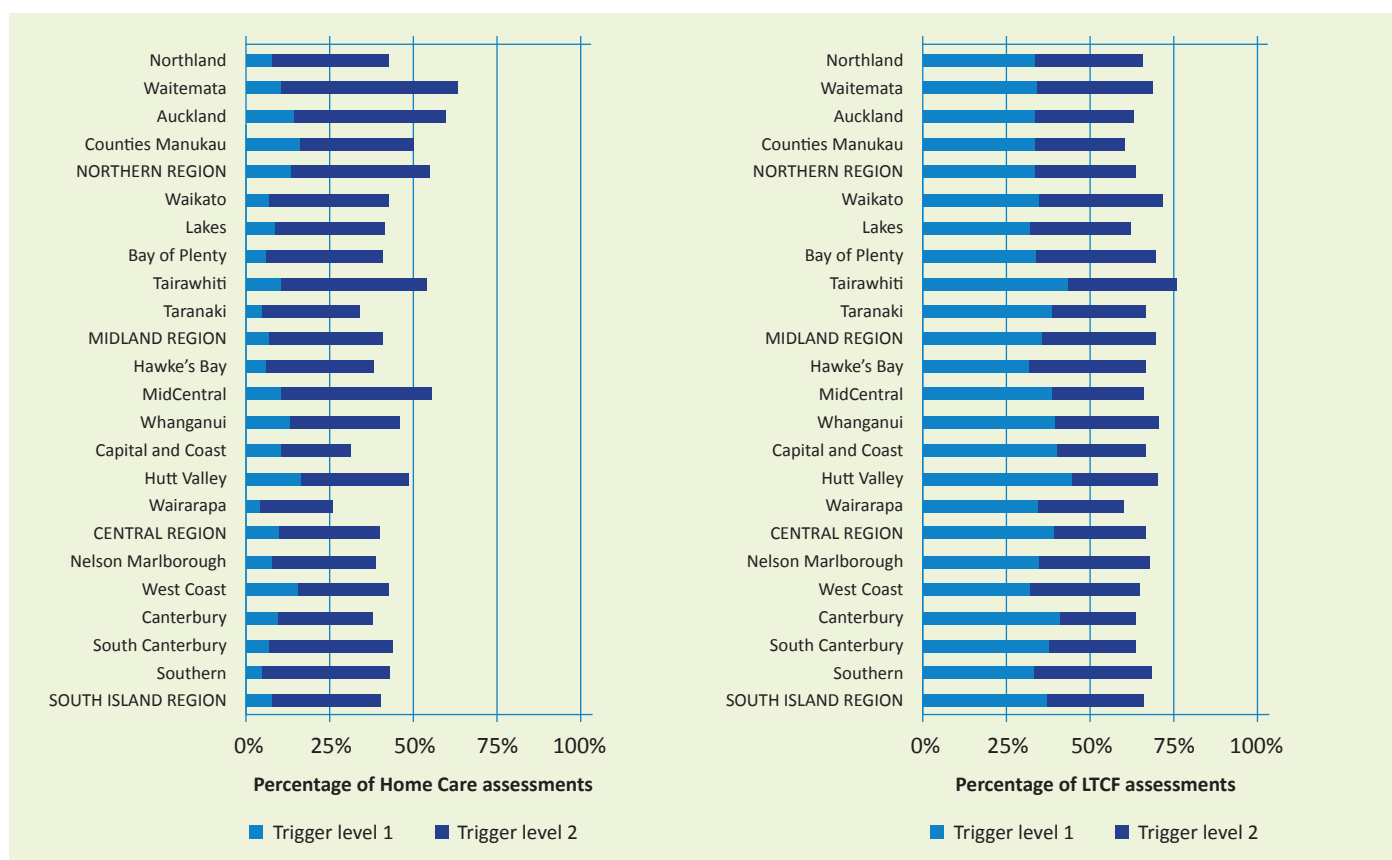
The ADL CAP addresses the person's ability to perform basic tasks such as getting dressed, personal hygiene, walking, toileting, changing position in bed, and eating. The goal is to improve performance or prevent functional decline in older people who already have some difficulty with their ADL.

The ADL CAP is triggered at level 1 to facilitate improvement while level 2 is triggered to prevent decline.

Figure 47 shows that the ADL CAP at level 1 was more likely to trigger for LTCF assessments than Home Care assessments (37 percent compared to 9 percent) while the situation was reversed for the CAP at level 2 (35 percent for Home Care assessments compared to 31 percent for LTCF assessments). These results were similar in 2014/15.

Figure 47 provides information on the level of intervention that could potentially benefit clients/residents in their care plan and DHBs from a resourcing perspective. Waitemata DHB had the highest percentage of Home Care assessments triggering the CAP at level 2 (59 percent compared to 35 percent nationally) while Hawke's Bay and Tairāwhiti DHBs had the highest percentage of LTCF assessments triggering the CAP at that level (36 percent compared to 31 percent nationally).

Figure 47: Triggered ADL CAP by assessment type, trigger level, DHB and region, 2015/16



Institutional Risk CAP

The institutional risk CAP identifies if the person has an increased risk of entering an aged care facility in the coming months.

This CAP is applicable to only Home Care assessments and can indicate issues with physical functioning, memory, decision making and health.

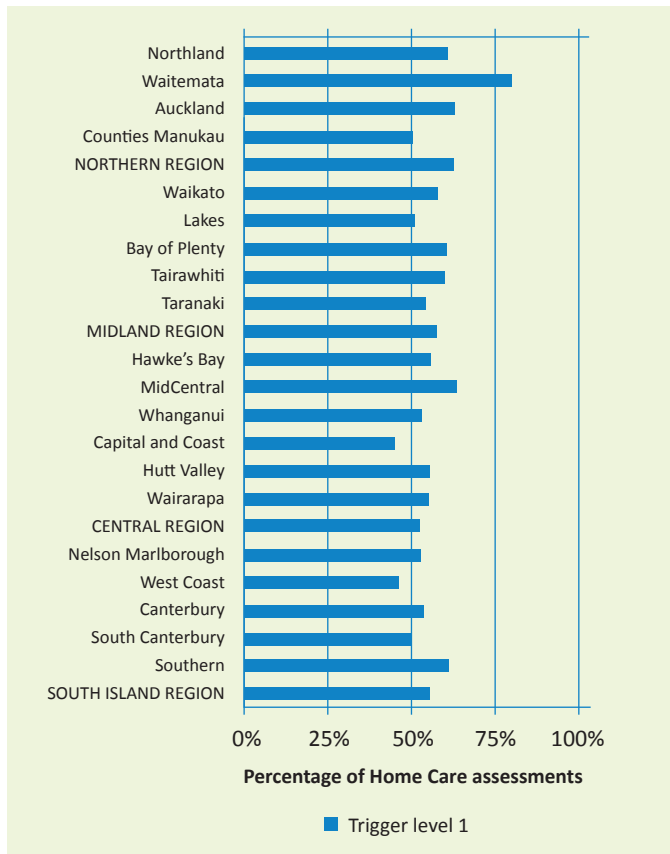
The institutional risk CAP is triggered at level 1 to avoid premature admission to a long term care facility by supporting family efforts and providing community intervention programmes.

The percentage of Home Care assessments that triggered this CAP increased slightly from 55 percent in 2014/15 to 57 percent in 2015/16.

Figure 48 shows that Waitemata DHB had the highest percentage of Home Care assessments, as last year, triggering this CAP at level 1. Capital and Coast DHB was in the opposite end of the continuum.

An increase in the percentage of Home Care assessments triggering the institutional risk CAP potentially indicates an increase in the demand for aged residential care.

Figure 48: Triggered institutional risk CAP by DHB and region, 2015/16



Cognition/Mental Health CAPs

Cognitive Loss CAP

This CAP is triggered to help a person who has mild to no cognitive impairment (a score of two or less on the Cognitive Performance Scale) so that he/she can be supported to remain as independent as possible, for as long as possible.

The cognitive loss CAP has been modified recently. In 2014/15, the cognitive loss CAP triggered at level 1 to monitor for risk of cognitive decline when an older person scored two or less on the CPS scale and had the presence of none or one of the risk factors for cognitive decline such as Alzheimer's disease, dementia other than Alzheimer's disease, wandering, repetitive questions, to name a few conditions.

In 2014/15, the CAP triggered at level 2 to prevent decline for individuals who scored two or less on the CPS scale and who had the presence of two or more clinical risk factors for cognitive decline, as explained above.

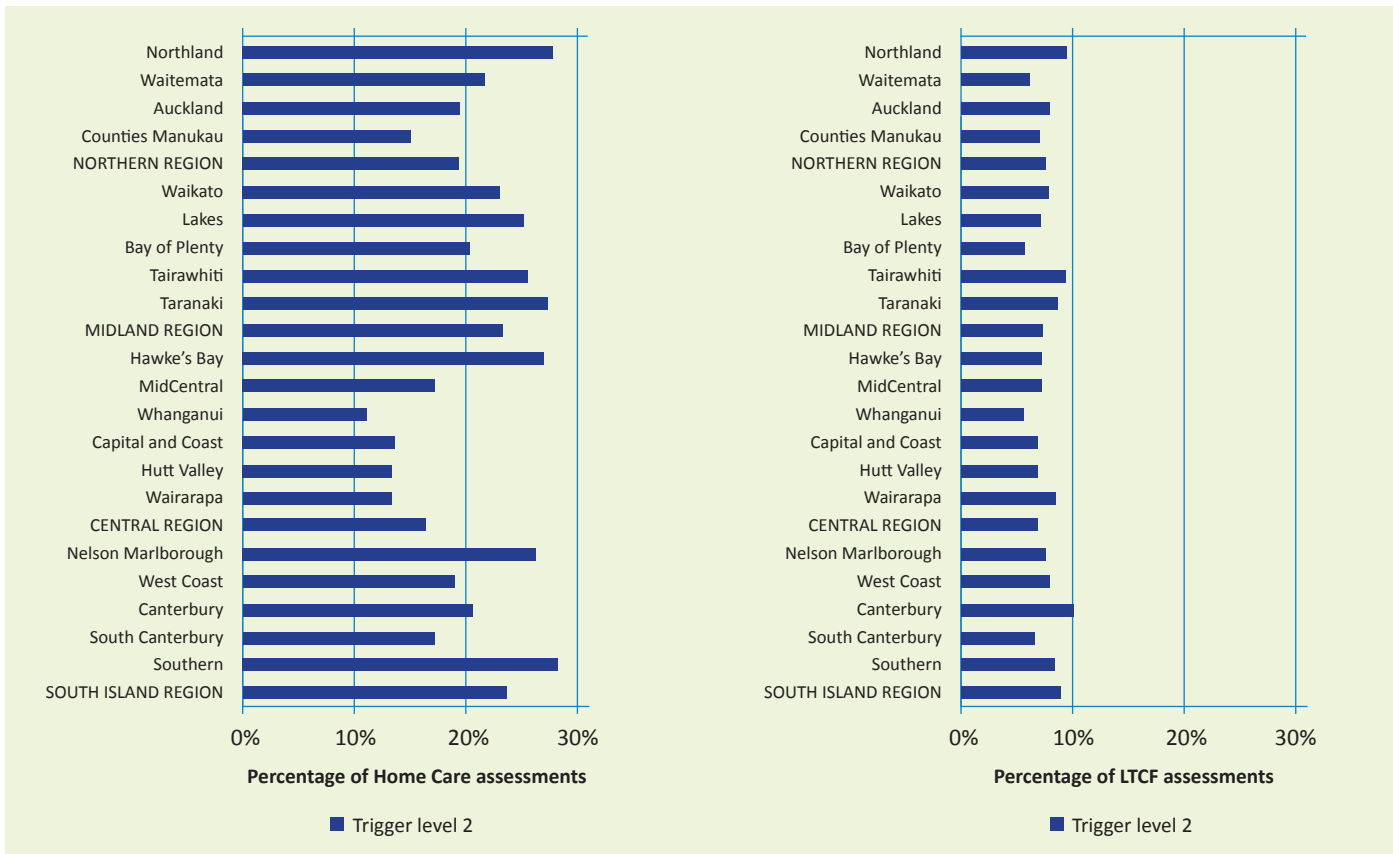
Following the upgrade of the interRAI operational software to the 9.3 version, the cognitive loss CAP now only triggers at level 2. Hence, the 2015/16 data for this CAP is not comparable to 2014/15.

On average, in 2015/16, this CAP was more likely to trigger at level 2 for assessments completed in the home and community (21 percent) than for assessments completed in aged residential care (8 percent).

Figure 49 shows the results by DHB. Southern DHB had the highest percentage of Home Care assessments that triggered this CAP at level 2 while Canterbury DHB stood out for LTCF assessments.

The cognitive loss CAP now triggers at level 2 only. It is not comparable with 2014/15 results.

Figure 49: Triggered cognitive loss CAP by DHB and region, 2015/16



Note that the 2015/16 data for the cognitive loss CAP relates to 7 months of data, following the 9.3 upgrade of the interRAI operational software. The data cannot be compared to 2014/15.

Mood CAP

The goal of the mood CAP is to identify and address any immediate threats to a person’s or other people’s safety that may be compromised due to the mood state.

Mood disorders (for example, depression, sadness and anxiety) are common problems in the community and in aged residential care, and are often under diagnosed.

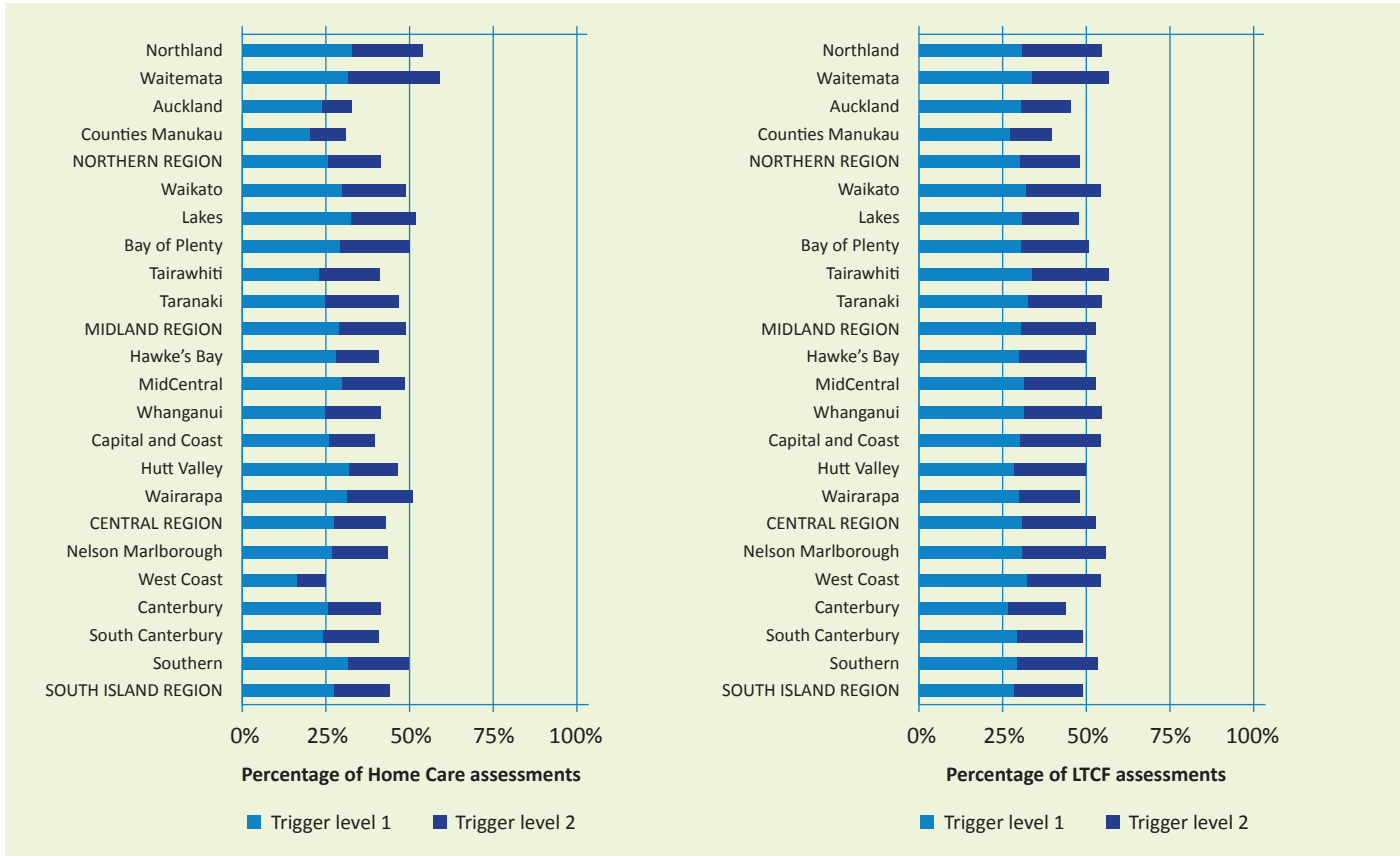
There are two trigger levels to the mood CAP. The triggers are based on the person’s Depression Rating Scale (DRS).

The level 1 trigger is for those who score 1 or 2 on the DRS. The level 2 trigger is for those people who score 3 or higher on the DRS.

In 2015/16, the mood CAP was more likely to trigger for assessments completed in aged residential care (31 and 20 percent for levels 1 and 2, respectively) than for assessments completed in the home and in the community (27 and 17 percent for levels 1 and 2, respectively). These results were similar in 2014/15.

Figure 50 shows the distribution of the percentage of assessments that triggered the mood CAP at levels 1 and 2 by DHB and region. The DHBs that stood out in 2015/16 were Northland, Lakes and Southern (highest level 1 trigger) and Waitemata (highest level 2 trigger) for Home Care assessments, and West Coast (highest level 1 trigger) and Nelson Marlborough (highest level 2 trigger) for LTCF assessments.

Figure 50: Triggered mood CAP by DHB and region, 2015/16



Behaviour CAP

The behaviour CAP focusses on reducing the frequency and intensity of daily troubling behaviours such as wandering, being verbally or physically abusive, inappropriate or disruptive social behaviour and resisting care. The CAP also aims to identify and possibly eliminate the conditions and factors that contribute to behavioural issues.

There is a strong link with declining cognitive ability or mental health issues so the underlying causes need to be understood and addressed.

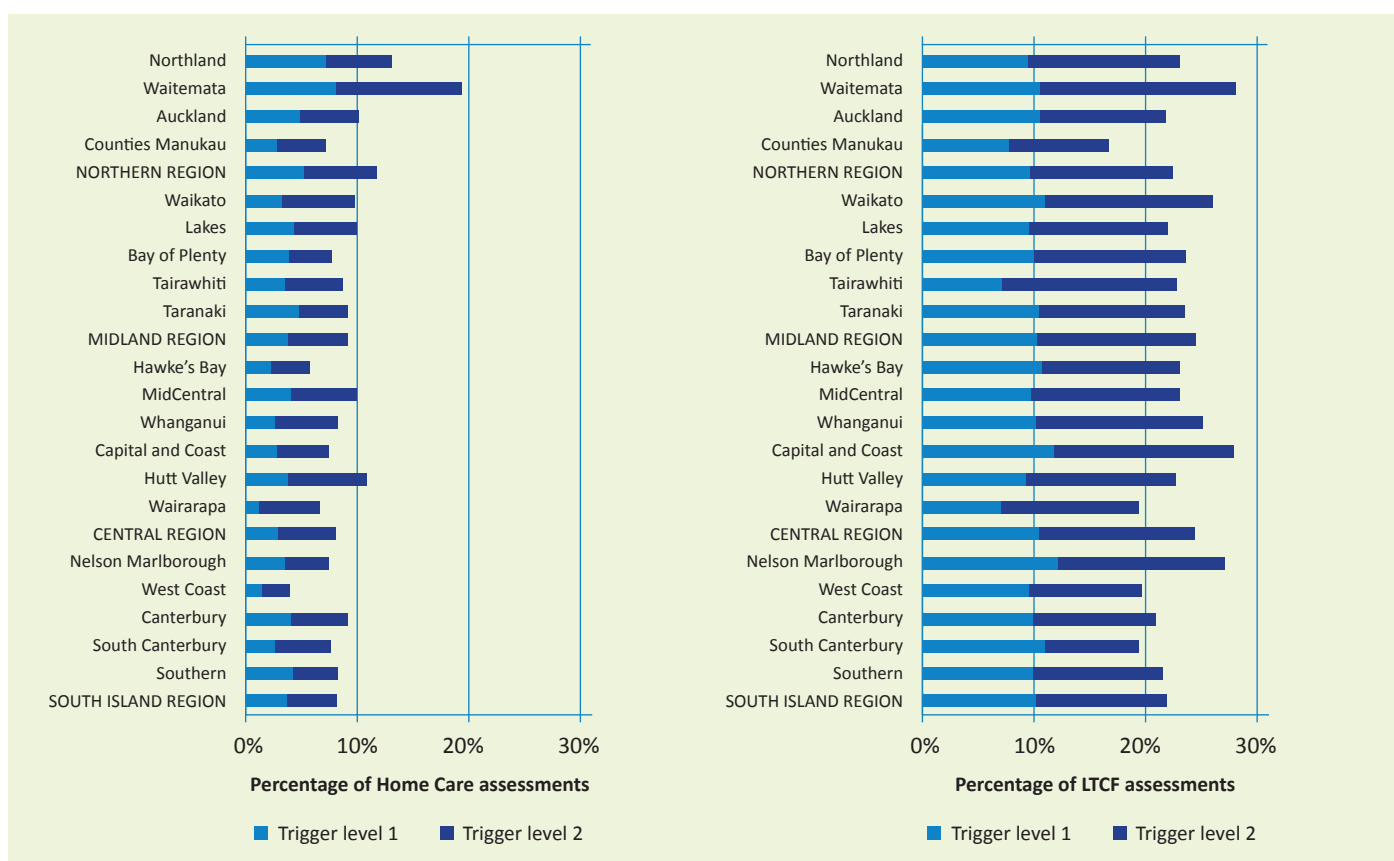
The behaviour CAP triggers at two levels. Level 1 triggers to prevent behaviour from occurring daily. Level 2 triggers to reduce the occurrence of daily behaviours such as wandering, verbally or physically abusing others, socially inappropriate or disruptive behaviours.

Figure 51 shows that the behaviour CAP is more likely to trigger in LTCF (10 percent and 13 percent for levels 1 and 2, respectively) than Home Care assessments (4 percent and 5 percent for levels 1 and 2, respectively). This result was the same in 2014/15.

Given the rate of Alzheimer's disease and other dementia in ARC facilities tends to be higher than in the home care setting, this result is as expected.

Figure 51 shows that, in 2015/16, Waitemata DHB had the highest percentage of Home Care assessments triggering at both levels and for LTCF assessments at level 2. Capital and Coast, and Nelson Marlborough DHBs had the highest percentage of LTCF assessments at trigger level 1.

Figure 51: Triggered behaviour CAP by DHB and region, 2015/16



Clinical issues

Falls CAP

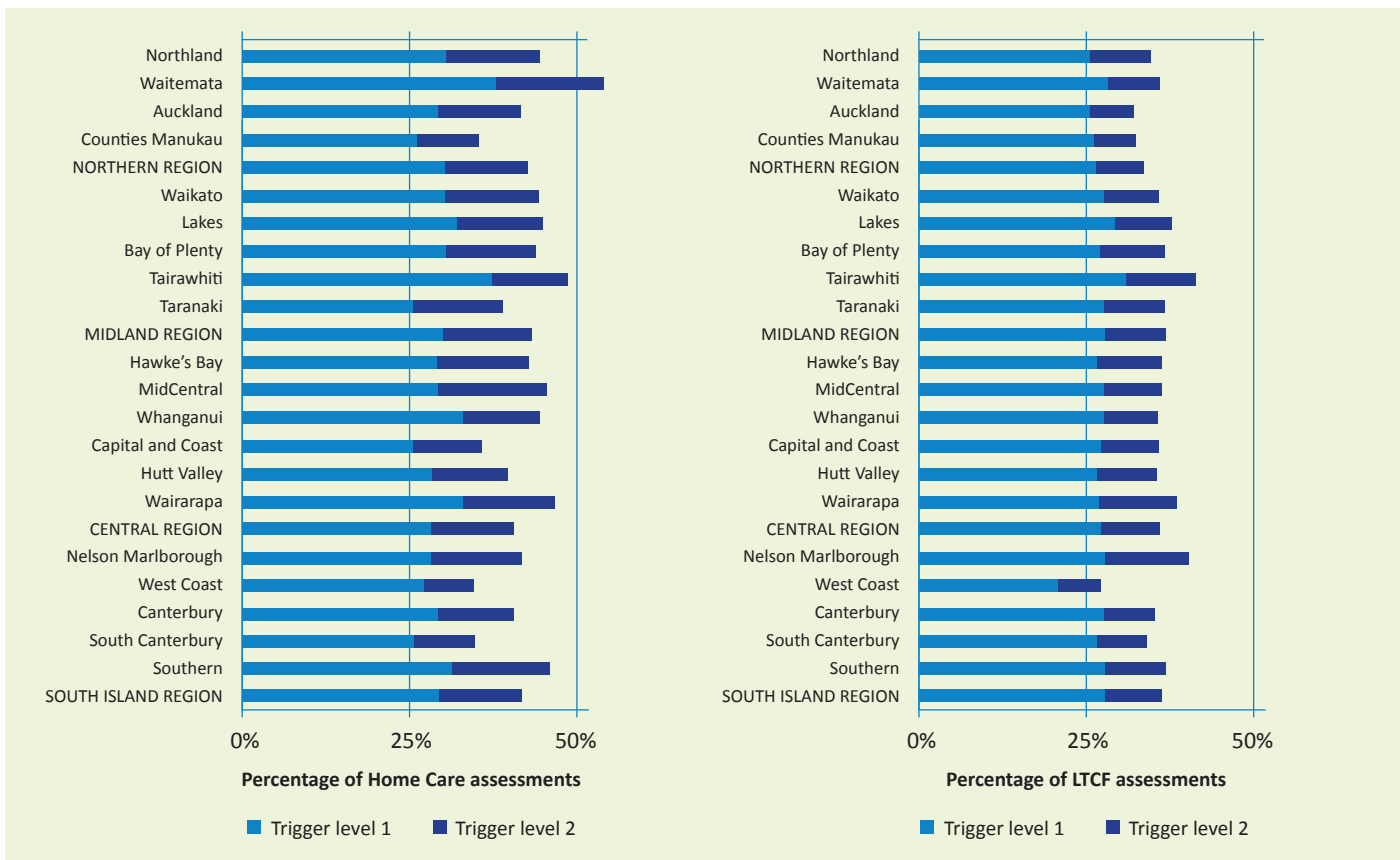
The falls CAP is triggered if the person has a history of falling, as they are at a higher risk of falling again. Preventing falls protects the person from injuries such as hip fracture which can reduce mobility, physical functioning and independence.

The falls CAP triggers at two levels. Level 1 triggers to identify a person as at the medium risk of future falls based on prior report of a single fall. Level 2 triggers to identify a person as at the high risk of future falls based on prior report of multiple falls.

Figure 52 shows that, in 2015/16, the falls CAP was more likely to trigger at both levels for Home Care assessments (30 percent at level 1 and 13 percent at level 2) than LTCF assessments (27 percent at level 1 and 8 percent at level 2). These results were similar in 2014/15.

In terms of the highest percentage of assessments that triggered the falls CAP at level 1, Waitemata and Tairāwhiti DHBs stood out for both Home Care and LTCF assessments. On the other hand, in terms of the highest percentage of assessments that triggered the falls CAP at level 2, MidCentral and Nelson Marlborough DHBs were the outliers for Home Care and LTCF assessments, respectively.

Figure 52: Triggered falls CAP by DHB and region, 2015/16



Pain CAP

The purpose of the pain CAP is to identify and treat underlying reasons for pain so that the older person can optimise his/her ability to perform activities of daily living, and to lead an active and healthy social life.

The pain CAP triggers at two levels. The medium priority, level 1, triggers to identify a person with daily pain described as mild or moderate. The high risk, level 2, triggers to identify a person with severe or excruciating pain either daily or less frequently.

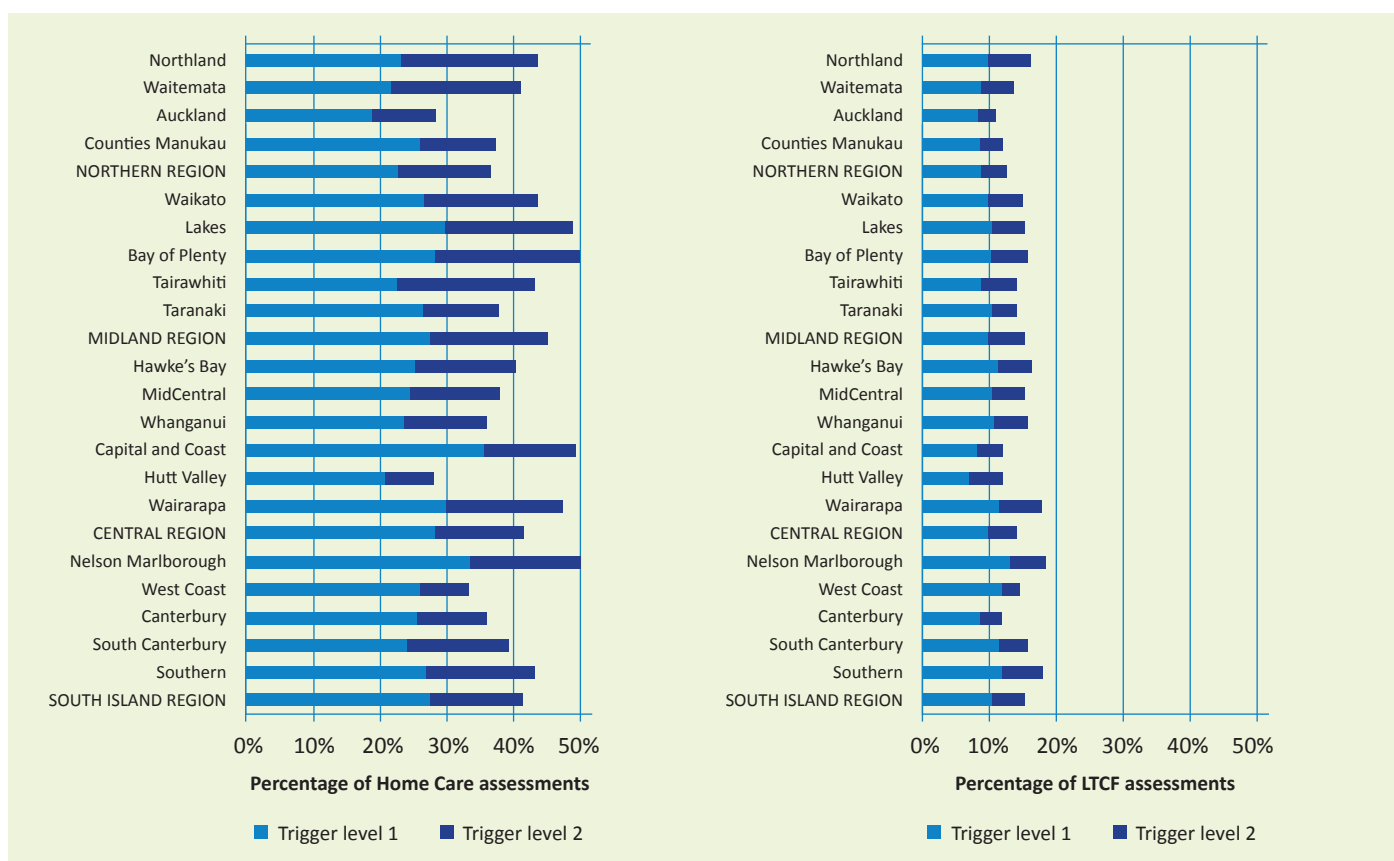
Figure 53 shows the levels 1 and 2 triggers of the pain CAP by DHB and region for Home Care and LTCF assessments.

The pain CAP was more likely to trigger at both levels for assessments completed in the home and community settings (26 percent for level 1 and 15 percent for level 2) compared to the long term care setting (9 percent for level 1 and 5 percent for level 2).

These results were consistent with 2014/15.

In 2015/16, Capital and Coast and Bay of Plenty DHBs had the highest percentage of Home Care assessments triggering the pain CAP at level 1 and 2, respectively.

Figure 53: Triggered pain CAP by DHB and region, 2015/16



As expected, clients assessed in the home and community were more likely to trigger the pain CAP than long term care residents.

Pressure Ulcer CAP

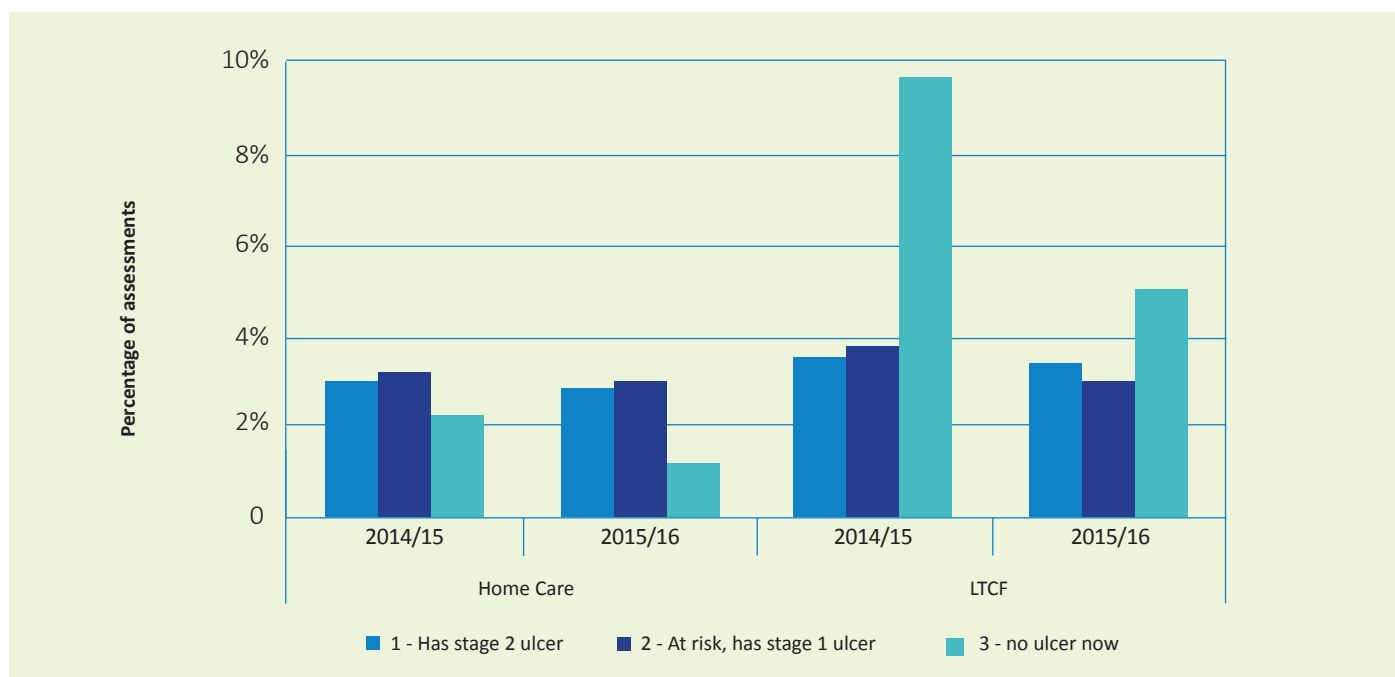
A pressure ulcer is defined as a localised injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction²³.

The purpose of the pressure ulcer CAP is to prevent pressure ulcers from occurring, to allow the local wound to heal, to monitor the healing process and to prevent the development of new pressure ulcers.

The CAP triggers at three levels. Level 1 triggers for a person who has stage 2 or higher pressure ulcer with the goal to support healing. Level 2 triggers for a person who has a stage 1 pressure ulcer but who is at risk of developing a stage 2 or higher pressure ulcer. Level 3 triggers for a person who does not have a pressure ulcer but is at risk of developing such a condition.

Figure 54 shows that, over the last year, the percentage of assessments that triggered the pressure ulcer CAP declined, more so at level 3 for assessments completed in the long term care setting (10 percent in 2014/15 to five percent in 2015/16).

Figure 54: Triggered pressure ulcer CAP by assessment type, 2014/15 and 2015/16



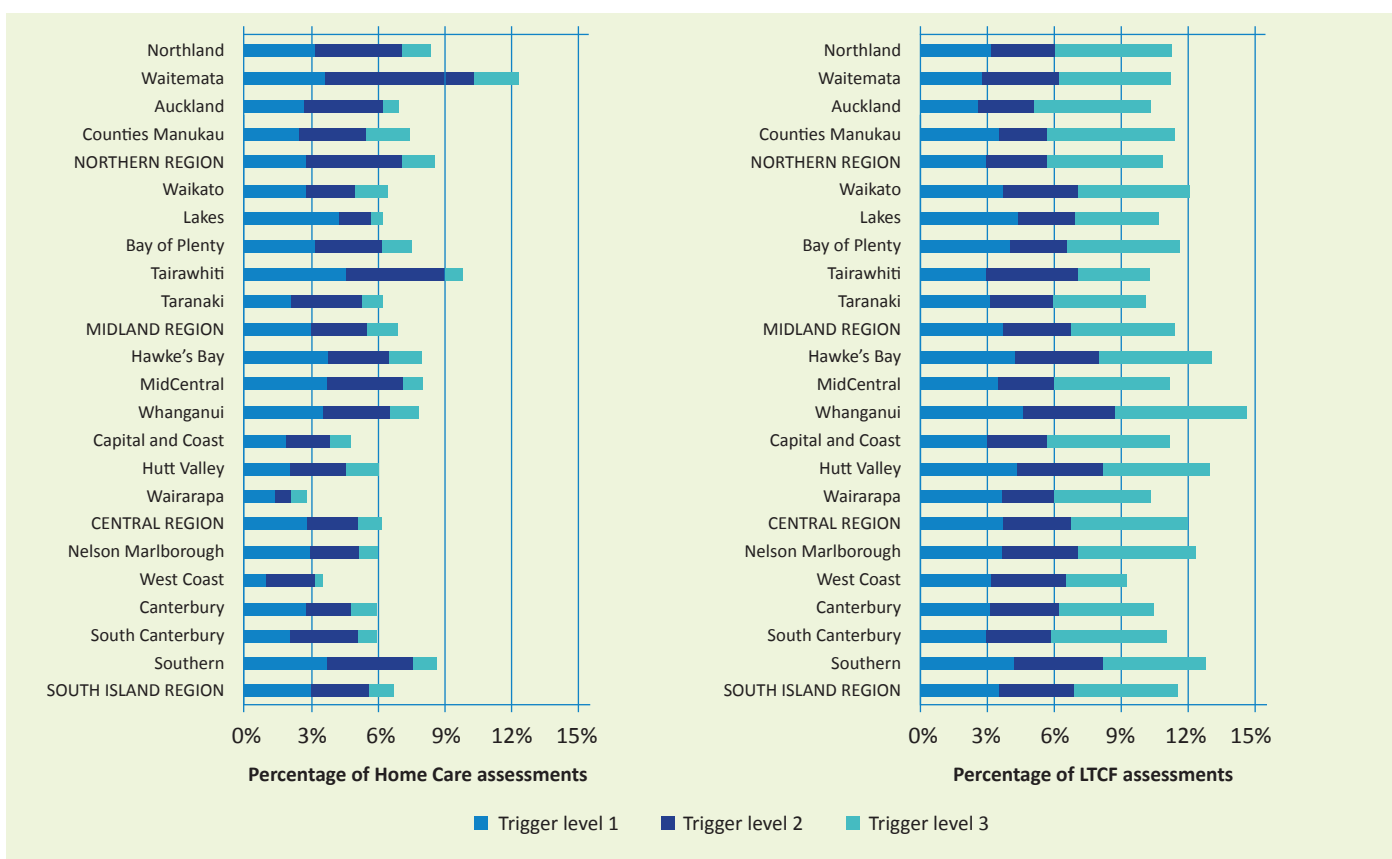
The percentage of assessments triggering the pressure ulcer CAP, at level 3, especially in long term care, declined over the last year.

²³ US National Pressure Ulcer Advisory Panel. <http://www.npuap.org/>

Figure 55 shows the breakdown of the 2015/16 results by DHB and region. Looking at level 1, which is the most acute trigger level of the pressure ulcer CAP, Tairawhiti DHB

stood out with the highest percentage of Home Care assessments while Whanganui DHB had the highest percentage of LTCF assessments.

Figure 55: Triggered pressure ulcer CAP by DHB and region, 2015/16



Communication CAP

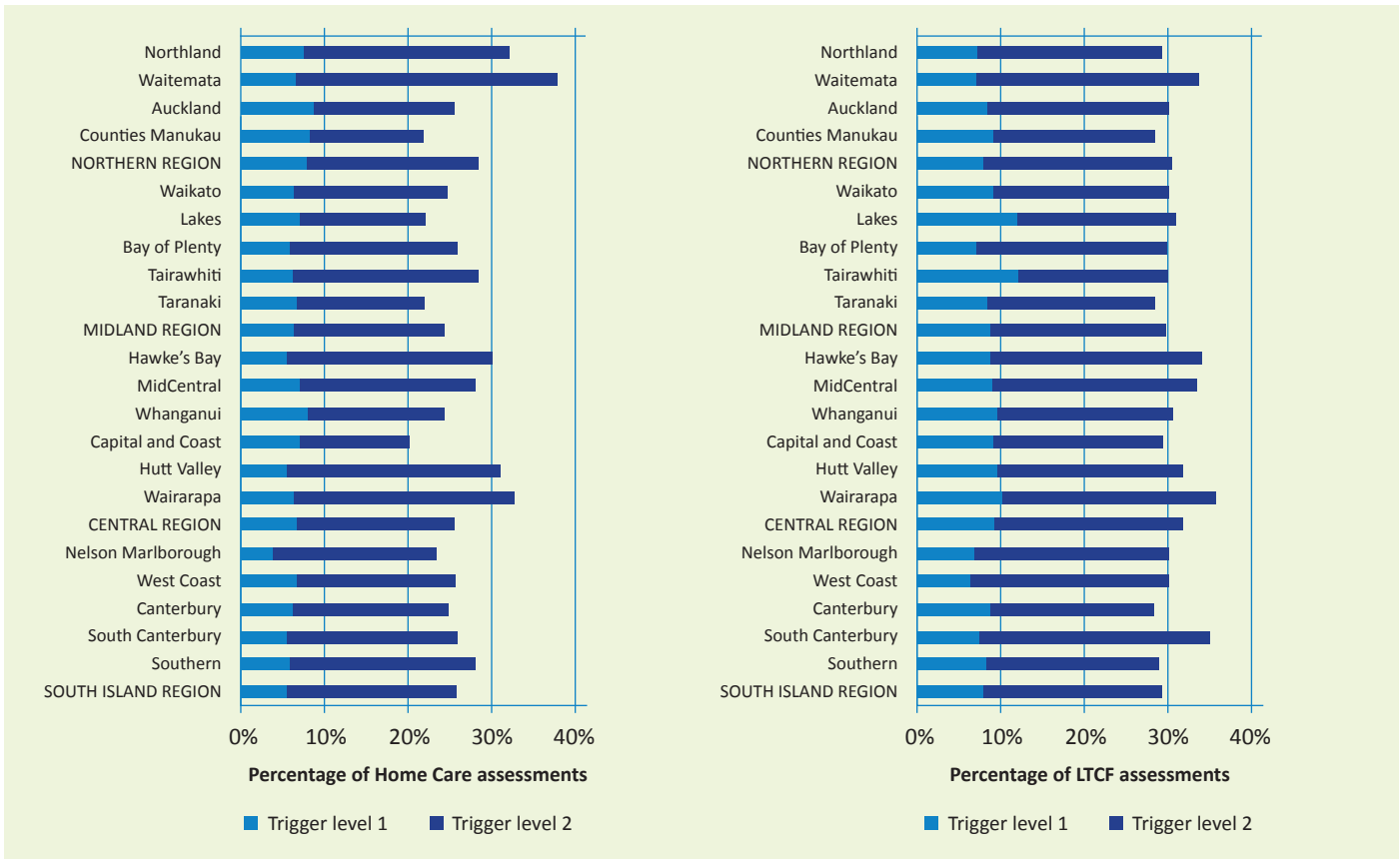
The purpose of the communication CAP is to prevent avoidable loss of communication skills and to improve communication for as long as possible.

The CAP triggers at two levels. Level 1 triggers to help facilitate a person's communication. Level 2 triggers to reduce the likelihood of a decline in communication.

In 2015/16, the communication CAP was slightly more likely to trigger for assessments completed in aged residential care (8 percent for level 1 and 22 percent for level 2) compared to assessments completed in the home and community (7 percent for level 1 and 19 percent for level 2). These results were consistent with last year.

Figure 56 shows the communication CAP by trigger level, DHB and region. At level 1, Auckland DHB had the highest percentage of assessments triggering the CAP for Home Care assessments while Lakes and Tairawhiti DHBs had the highest percentage for LTCF assessments. At level 2, Waitemata DHB had the highest percentage of assessments triggering the CAP for both assessments completed in the home and in long term care settings. South Canterbury DHB also had the highest percentage of assessments triggering the CAP at level 2 for LTCF assessments.

Figure 56: Triggered communication CAP by DHB and region, 2015/16





“New Zealand is a world leader in the use of the interRAI Comprehensive Clinical Assessment suite, being the first country in the world to implement the Home Care and Long Term Care Facilities assessment tools nationwide.”



future developments

In line with the strategic direction outlined in interRAI NZ – Future Direction, the New Zealand Health Strategy and the Healthy Ageing Strategy, the vision of the National interRAI Data Analysis and Reporting Centre (the Centre) is to make interRAI data more visible and accessible to stakeholders in the aged care and wider health sector.

The following projects are already underway in the 2016/17 financial year:

(1) A national standard suite of interRAI reports for Aged Residential Care (ARC) facilities and groups

In response to one of the recommendations of ‘Lessons learned from the introduction of the Comprehensive Clinical Assessment (interRAI) in Aged Residential Care (2011-2015) – a post project review’²⁴, the Centre is pleased to introduce a national standard suite of interRAI reports for ARC facilities and ARC groups.

The principle aim of this reporting is to add value to the sector by providing information to ARC facilities to enable better decision making and planning, to improve health outcomes for residents.

While ARC facilities can access their own resident and facility level data via the interRAI operational software, the standard suite of interRAI reports will add value by enabling facilities to benchmark themselves against their DHB, other similar sized facilities and nationally.

The reporting also aims to meet DHBs’ contractual obligation as set out in the 2016 ARRC Services agreement²⁵.

The national standard suite of interRAI reports has been developed in consultation with a selected ARC consultation group.

The reports provide the following information to each ARC facility from LTCF assessments completed in a relevant quarter, at a summarised level:

- Selected demographic information
- Outcome measures showing the health status of residents who were assessed in that quarter
- CAPs showing where there may be opportunities for interventions for assessed residents
- Disease diagnosis showing the diseases reported by the assessed residents.

The first quarterly suite of interRAI reports (quarter 2, 2016/17) was released to ARC facilities via a secure channel at the end of February 2017.

(2) An interRAI data visualisation tool

This is a project for planned from January to December 2017.

The purpose of this tool is to empower stakeholders and users of interRAI assessment data by enabling them to interactively interrogate the data for themselves, to assist them in their planning, decision making, quality improvement and service delivery, ultimately improving health outcomes for New Zealanders as they age.

Contact:

National interRAI Data Analysis
and Reporting Centre on
interRAI_Data@CentralTAS.co.nz

²⁴ Evaluationconsult (2017) - forthcoming report. “Post Project Review. Comprehensive Clinical Assessment (interRAI) in Aged Residential Care (2011-2015)”.

²⁵ See clause D15C.1 of the ARRC Services agreement at <http://www.centrautas.co.nz/assets/Health-of-Older-People/ARRC-agreement-2016-17-effective-1July2016-for-website-26May2016.pdf>

The interRAI data visualisation tool will have the following features. It will:

- make interRAI assessment data visible
- be accessible to everyone from a public facing website, that is the interRAI NZ website
- be interactive and freely available to a large variety of stakeholders in the health sector
- protect the integrity, security and privacy of interRAI assessments, clients, residents and ARC facilities
- showcase interRAI as the primary source of data on the health of older people
- report on key summary interRAI outcome measures and CAPs at the DHB, regional and national level
- be updated on a regular basis, subject to data availability
- be compatible for display on tablets and mobile devices.

At the time of writing, a project plan and high level business requirements have been developed. The next stage of the project is to engage with a selected user group and to begin testing the most appropriate software to host the data visualisation tool.

(3) interRAI quality indicators (QIs)

A project in response to the Healthy Ageing Strategy is currently underway to support the introduction of interRAI quality indicators in New Zealand using Home Care and LTCF assessment data.

While interRAI QIs are reported on a regular basis in other countries such as Canada and the USA, they are yet to be introduced and validated in New Zealand.

interRAI QIs are standardised, validated indicators that provide a basis for benchmarking care across time, populations and care settings. They provide a practical instrument to track quality of care over time at an organisation/facility level, DHB, regional or national level.

The purpose of the project is to use interRAI assessment data to understand the quality performance of services to older people provided by DHBs. The project aims to engage with the sector in the development and implementation of the QIs to validate their effectiveness as a measure of quality.

Given that the Centre now has a fully functional national interRAI data warehouse, the QI algorithms from interRAI international can be applied and tested using the New Zealand interRAI Home Care and LTCF assessment data.

A project plan has been developed and presented to the interRAI New Zealand Governance Board in December 2016. By early 2017, a project reference group will be established and engagement with the sector will commence. Following this, the interRAI New Zealand operational software will be tested to ensure that the interRAI QIs will be able to be derived using the New Zealand interRAI assessment data.

If you wish to find more information about any of these projects, you are welcome to contact the National interRAI Data Analysis and Reporting Centre on interRAI_Data@CentralTAS.co.nz

appendix

Glossary of Terms

ADL	Activities of daily living
ARC	Aged Residential Care
Assessor	A person who uses the interRAI tools to undertake care needs assessments
CAPs	Clinical Assessment Protocols
CHESS	Changes in Health, End-Stage Disease, Signs, and Symptoms
Contact assessment (CA)	An interRAI Contact assessment is a brief standardised clinical assessment that provides information to support the home care assessment intake and emergency department referral. It is not a substitute for a comprehensive interRAI assessment. The Contact assessment can be done face to face or over the phone and takes about 30 minutes to complete.
COPD	Chronic obstructive pulmonary disease
CPS	Cognitive Performance Scale
DHB	District Health Board
DRS	Depression Rating Scale
Home Care (HC) assessment	An interRAI Home Care assessment is a comprehensive clinical assessment designed for people with more complex needs who are able to live at home.
IADL	Instrumental activities of daily living
interRAI	International Resident Assessment Instrument
Long Term Care Facilities (LTCF) assessment	An LTCF assessment is a comprehensive clinical assessment designed for people in residential care to inform their care plans.
MAPLe	Method of Assigning Priority Level
NZ	New Zealand
PURS	Pressure Ulcer Risk Scale

Outcome Scale Definitions

Assessment Urgency Algorithm (AUA) Scale

The AUA scale is used in Contact assessments and is not applicable to Home Care or LTCF assessments. The AUA scale is used to determine whether or not the client needs further in-depth assessment. This scale is calculated by referring to a number of elements in the assessment that relate to the person's physical health, mood, the family's ability to cope and the person's dependence with personal hygiene.

Range of Values:
1-6

Activities of Daily Living (ADL) Self-Performance Hierarchy Scale

The ADL Self-Performance Hierarchy Scale aims to describe the disablement process rather than to simply provide a summary of functional impairment. The scale shows the level of difficulty of the client/resident in relation to personal hygiene, locomotion, toilet use and eating.

Range of Values:
0-6

Aggressive Behaviour Scale (ABS)

The Aggressive Behaviour Scale is a measure of aggressive behaviour based on the occurrence of verbal abuse, physical abuse, socially disruptive behaviour and resistance of care.

Scale scores range from 0-12 with higher scores indicative of greater frequency and diversity of aggressive behaviour.

A score of 1 to 4 on the ABS indicates mild to moderate aggressive behaviour, whereas scores of 5 or more represents the presence of more severe aggression. This scale has been validated against the Cohen Mansfield Agitation Inventory.

Range of Values:
0-12

Body Mass Index (BMI)

The Body Mass Index is a measurement which represents the ratio of a person's height to weight. In the interRAI assessment suite it is recorded to monitor nutrition, hydration status and weight stability over time. The Undernutrition CAP triggers (3 levels) are based on the BMI. It is defined as the weight in kilograms divided by the square of the height in metres (kg/m²).

Range of Values:
Usually 15-40

Changes in Health, End-Stage Disease, Signs, and Symptoms Scale (CHESS)

The CHESS scale is designed to identify individuals at risk of serious decline and their level of medical instability. It has a 6 point scale from 0 (not at all unstable) to 5 (highly unstable) with higher levels predictive of adverse outcomes such as mortality, hospitalisation, pain, caregiver stress, and poor self-rated health.

Range of Values:
0-5

Cognitive Performance Scale (CPS)

The Cognitive Performance Scale combines information on memory impairment, level of consciousness, and executive function, with scores ranging from 0 (intact) to 6 (very severe impairment). The CPS has been shown to be highly correlated with the Mini Mental Status Exam (MMSE) in a number of validation studies.

Range of Values:
0-6

Communication Scale

The higher the score on the communication scale, the poorer the communication. This scale is derived from expressive and receptive communication.

Range of Values:
0-8

Outcome Scale Definitions

Depression Rating Scale (DRS)

The Depression Rating Scale is used as a clinical screen for depression. The higher the score the stronger the clinical indicator. Validation studies were based on a comparison of the DRS with the Hamilton Depression Rating Scale and the Cornell Scale for Depression.

Range of Values:
0-14

Instrumental Activities of Daily Living (IADL) Capacity

The Instrumental ADL Scale is based on a sum of eight items: meal preparation, ordinary housework, managing finances, medications, phone use, stairs, shopping, and transportation. Individual items are summed to produce a scale that ranges from 0 to 48, with higher scores indicating a greater difficulty for a person to carry out an activity.

Range of Values:
0-48

Instrumental Activities of Daily Living (IADL) Performance

The Instrumental ADL Scale is based on a sum of eight items: meal preparation, ordinary housework, managing finances, medications, phone use, stairs, shopping, and transportation. Individual items are summed to produce a scale that ranges from 0 to 48, with higher scores indicating greater dependence on others for instrumental activities for daily living.

Range of Values:
0-48

Method of Assigning Priority Level (MAPLe)

The MAPLe score (1-5) is a priority indicator. Higher scores are based on the presence of ADL impairment, cognitive impairment, wandering, and behaviour problems. The MAPLe is also a predictor of carer stress. The higher the score the higher the priority for services to be commenced or increased in the community, to prevent hospitalisation or admission into residential care.

Range of Values:
1-5

Pain Scale

The Pain Scale attempts to define levels of pain. The scale is highly predictive of pain on the Visual Analogue Scale (Fries et al 2001). Pain that is adequately managed does not feature in the scale.

Range of Values:
0-4

Pressure Ulcer Risk Scale (PURS)

The PURS scores range from 0 (lowest risk) to 8 (highest risk) for development of pressure ulcers. This scale considers such things as any history of pressure ulcers, impaired bed mobility, impaired walking, bowel incontinence, weight loss and dyspnoea. This scale complements the Pressure Area CAP and should always be reviewed when that CAP is triggered.

Range of Values:
0-8

Clinical Assessment Protocols (CAPs) Definitions

Functional Performance	
<p>Physical Activities Promotion</p> <p>To increase levels of exercise and physical activity – person does <2 hours activity/day; moves and goes up/down stairs without help; increased independence possible.</p>	Range of Values: 0-1
<p>Instrumental Activities of Daily Living</p> <p>To improve IADL self-performance and capacity – decline in IADL function; increased independence possible.</p>	Range of Values: 0-1
<p>Home Environment Optimisation</p> <p>To improve safety of environment – problems with lighting, flooring, bathroom, toilet, kitchen, heating, disrepair, squalor and indicators of frailty.</p>	Range of Values: 0-2
<p>Activities of Daily Living</p> <p>To improve ADL performance or prevent avoidable functional decline – receive some ADL help; potential to improve self-performance.</p>	Range of Values: 0-1
<p>Institutional Risk</p> <p>To avoid premature admission to LTCF – identifies persons with impaired functioning who are at high risk of institutional placement.</p>	Range of Values: 0-1
<p>Physical Restraints</p> <p>This CAP identifies persons who are physically restrained.</p>	Range of Values: 0-2
Cognitive and Mental Health	
<p>Cognitive Loss</p> <p>To maintain independence, prevent and monitor cognitive decline – Identifies persons with CPS of 0,1,2 and associated clinical risk factors.</p>	Range of Values: 0-2
<p>Delirium</p> <p>To identify persons with active symptoms of delirium – acute change in mental status and behaviour appears different from usual functioning.</p>	Range of Values: 0-1
<p>Communication</p> <p>To improve communication ability and to prevent avoidable communication decline – moderate-severe communication issues in understanding/expression.</p>	Range of Values: 0-2
<p>Mood</p> <p>To identify, treat, monitor mood issues – negative statements, persistent anger, expressions of unrealistic fears, repetitive health complaints, repetitive anxious complaints, sad, crying, tearfulness. DRS score medium to high risk.</p>	Range of Values: 0-2
<p>Behaviour</p> <p>To prevent, manage behavioural problems – wandering, verbally abusing others, physically abusing others, socially inappropriate, disruptive behaviour, inappropriate disrobing or public sexual behaviour, resisting care.</p>	Range of Values: 0-2

Clinical Assessment Protocols (CAPs) Definitions

Social Life	
<p>Abusive Relationship</p> <p>To identify potential abuse/neglect situations – fearful of family member, caregiver, close acquaintance, unusually poor hygiene, unkempt appearance, neglected, abused, mistreated – plus stressors.</p>	Range of Values: 0-2
<p>Activities</p> <p>This CAP identifies persons with some cognitive reserve who have either withdrawn from activities or who are uneasy entering into activities and social relationships.</p>	Range of Values: 0-1
<p>Informal Support</p> <p>To identify where a person needs help – not independent with meals/housework/shopping/transport and alone for long periods or lives alone and no primary informal helper present.</p>	Range of Values: 0-1
<p>Social Relationship</p> <p>To identify reduced social relationships and facilitate engagement – feels lonely, cognition adequate, able to understand others.</p>	Range of Values: 0-1

Clinical Assessment Protocols (CAPs) Definitions

Clinical Issues	
<p>Falls</p> <p>To identify and change any underlying risk factors for falls – report of multiple falls/report of a single fall.</p>	Range of Values: 0-2
<p>Pain</p> <p>To identify and treat underlying reasons for pain – high risk trigger – severe, horrible or excruciating pain; medium risk trigger – daily mild/moderate pain.</p>	Range of Values: 0-2
<p>Pressure Ulcer</p> <p>To prevent, identify and treat pressure ulcers – has or is at risk of developing a pressure ulcer.</p>	Range of Values: 0-3
<p>Cardiorespiratory Conditions</p> <p>To assess and manage cardiorespiratory conditions – symptoms of chest pain, shortness of breath, irregular pulse, dizziness and test results – blood pressure, respiratory rate, heart rate, oxygen saturation.</p>	Range of Values: 0-1
<p>Undernutrition</p> <p>To address and manage under nutrition – based on a person's BMI score.</p>	Range of Values: 0-2
<p>Dehydration</p> <p>To identify and treat underlying causes of dehydration – insufficient fluid intake; and diarrhoea, vomiting, delirium, fever, dizziness, syncope, constipation, weight loss.</p>	Range of Values: 0-2
<p>Feeding Tube</p> <p>To identify persons with a feeding tube and manage – has feeding tube and some residual cognitive abilities/absence of cognitive abilities.</p>	Range of Values: 0-2
<p>Prevention</p> <p>To prevent illness and disability – blood pressure, colonoscopy, dental exam, hearing exam, flu vax, mammogram, pneumovax.</p>	Range of Values: 0-2
<p>Appropriate Medications</p> <p>To identify and promote appropriate medication management – 9+ medications and 2 of the following – chest pain, dizziness, oedema, shortness of breath, poor health, recent deterioration.</p>	Range of Values: 0-1
<p>Tobacco and Alcohol Use</p> <p>To identify strategies to help people cease smoking/ cut back on excessive drinking – daily smoker; alcohol intake, pressure to cut back.</p>	Range of Values: 0-1
<p>Urinary Incontinence</p> <p>To facilitate improvement and prevent decline in bladder function – reoccurring episodes of incontinence, minimal cognitive abilities, locomotion impaired; possibility of improvement.</p>	Range of Values: 0-3
<p>Bowel Conditions</p> <p>To facilitate improvement and prevent decline in bowel function – risk of decline and improvement in bowel continence.</p>	Range of Values: 0-2

Disease Diagnosis Descriptions

Hip Fracture

Includes any hip fracture that occurred during the past 30 days (or since the last assessment, if it was less than 30 days ago) that continues to have a relationship to current status, treatments, monitoring, etc. Hip fracture diagnoses also include femoral neck fractures, fractures of the trochanter, and subcapital fractures.

Other Fracture

Any fracture other than hip (for example, wrist) due to any condition, such as falls or weakening of the bone as a result of cancer. Fracture to have occurred during the past 30 days (or since the last assessment, if it was less than 30 days ago).

Alzheimer's Disease

A degenerative and progressive dementia that is diagnosed by ruling out other dementias and physiological reasons for the dementia.

Dementia other than Alzheimer's Disease

Includes diagnoses of organic brain syndrome (OBS) or chronic brain syndrome (CBS), senility, senile dementia, multi-infarct dementia, and dementia related to neurological diseases other than Alzheimer's (such as Pick's, Creutzfeldt-Jakob, Huntington's disease, etc.).

Hemiplegia

Paralysis (temporary or permanent impairment of sensation, function, motion) of both limbs on one side of the body. Usually caused by cerebral haemorrhage, thrombosis, embolism, or tumour. There must be a diagnosis of hemiplegia in the person's record to code this item.

Multiple Sclerosis

A disease in which there is demyelination throughout the central nervous system. Typical symptoms are weakness, incoordination, paraesthesia, speech disturbances, and visual complaints.

Paraplegia

Paralysis (temporary or permanent impairment of active motion) of the lower part of the body, including both legs.

Parkinson's Disease

A disorder of the brain characterised by tremor; muscle rigidity; and difficulty with walking, movement, and coordination.

Quadriplegia

Paralysis (temporary or permanent impairment of sensation, function, motion) of all four limbs and trunk.

Stroke/CVA

A sudden rupture or blockage of a blood vessel within the brain, causing serious bleeding or local obstruction.

Coronary Heart Disease

A chronic condition marked by thickening and loss of elasticity of the coronary artery, and caused by deposits of plaque containing cholesterol, lipoid material, and lipophages.

Chronic Obstructive Pulmonary Disease (COPD)

Any long-standing condition that impairs airflow in and out of the lungs.

Congestive Heart Failure

A condition in which the heart cannot pump out all of the blood that enters it, which leads to an accumulation of blood in the vessels, fluid in the body tissues, and lung congestion.

Anxiety

A non-psychotic mental disorder. There are five types, which include generalised anxiety disorder, obsessive-compulsive disorder, panic disorder, phobias and post-traumatic stress disorder.

Bipolar Disorder

Includes documentation of clinical diagnosis of either manic depression or bipolar disorder. "Bipolar disorder" is the current term for manic-depressive illness.

Depression

A mood disorder often characterised by a depressed mood (for example, the person feels sad or empty; appears tearful); decreased ability to think or concentrate; loss of interest or pleasure in usual activities; insomnia or hypersomnia; loss of energy; change in appetite; feelings of hopelessness, worthlessness, or guilt. May include thoughts of death or suicide.

Schizophrenia

A disturbance characterised by delusions, hallucinations, disorganised speech, grossly disorganised behaviour, disordered thinking, or flat affect. This category includes schizophrenia subtypes (for example, paranoid, disorganised, catatonic, undifferentiated, residual).

Pneumonia

Inflammation of the lungs, most commonly of bacterial or viral origin.

Urinary Tract Infection

Includes chronic and acute symptomatic infection(s) in the last 30 days. Code only if there is current supporting documentation and significant laboratory findings in the clinical record.

Cancer

Any malignant growth or tumour caused by abnormal and uncontrolled cell division. The malignant growth or tumour may spread to other parts of the body through the lymphatic system or the blood stream.

Diabetes Mellitus

Any of several metabolic disorders marked by persistent thirst and excessive discharge of urine. Includes insulin-dependent diabetes mellitus (IDDM) and diet-controlled diabetes mellitus (NIDDM or AODM).



