LA TROBE UNIVERSITY

Australian Institute for Primary Care & Ageing

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50+ in Nillumbik: A data story

Report for Nillumbik agencies

Part 2: Community Care

Commissioned by the North East Primary Care Partnership

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Suggested reference:

Wells, Y. (2016). *50+ in Nillumbik: A data story. Report for Nillumbik agencies. Part 2: Community Care.* Report commissioned by the North East Primary Care Partnership. Melbourne: NEPCP.

GLOSSARY

ABS	Australian Bureau of Statistics
CALD	Culturally and Linguistically Diverse
DHHS	Department of Health and Human Services
DHS	Department of Human Services
LGA	Local Government Area
MDS	Minimum Data Set
NEPCP	North East Primary Care Partnership
PAG	Planned Activity Group
PCP	Primary Care Partnership

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Thanks are also due to Hayden Brown, Social Planner, City of Greater Dandenong, for providing data for table 19.

Julie Watson, Executive Officer, North East Primary Care Partnership (NEPCP)

Executive Summary

AIM

The aim of this resource is to:

- Capture data specific to the population and local government area of Nillumbik.
- Provide Nillumbik services with a useful tool to support planning and change.
- Make available a resource that can be utilised to advocate for the services our communities require, to ensure its members are living life to the full.

METHOD

In this section of the report, data sources used were the HACC Minimum Data Set (2011 to 2014), population projections, and supplementary data provided by the Department of Health and Human Services on agencies funded to provide HACC in the area and the amount of state government funding allocated to each HACC services.

RESULTS

Summary of HACC clients

During the calendar year 2014, 1,669 clients were provided with a HACC service in the Nillumbik area. Nearly one-quarter of the population aged 70 years or over (24.5%) got a HACC service in 2014. The proportion of residents using HACC services increased with age, from 9.5 per 1000 in the age group under 50 to 517 per 1000 in the age group aged over 85.

The largest HACC program in Nillumbik in terms of hours of service was Planned Activity Groups, while the largest in terms of number of clients was Allied Health services. Over one-third of HACC clients (34%) were aged over 80 years, and 71% were aged over 65 years. Only 3% preferred to use a language other than English at home and the most common non-English languages used were Italian, Greek and Croatian.

When service provision (total hours or meals provided) was examined by age group and service type, it was clear that the steepest curve by age group was for Planned Activity Group hours. However, increase in the client-to-population ratio was particularly strong for Assessment, where provision per year per 1000 people aged 85 and over rose to 279.

Summary of HACC agencies and funding

A total of 27 different agencies were funded to provide HACC services to Nillumbik residents in 2015, four of which were funded to provide Allied Health services. Overall, funding for HACC in Nillumbik grew by 12% from 2013 to 2015. The biggest increases in terms of raw figures were for Allied Health and Nursing. However, the largest increase in funded outputs was for Volunteer coordination.

Projections of future demand/provision

Projections of future provision of HACC services depend on what is used to estimate change. Modelling using constant service-to-population and client-to-population ratios show strong growth in demand for all service types to 2019 and 2024, particularly for Case Management and Respite.

However, comparing changes in service use with population growth between 2011 and 2014 showed that service provision in some cases has been growing more strongly than the population, while provision of other services (hours and/or clients) fell between 2011 and 2014. If historical trends continued, the following services would grow more strongly than changes in the population would suggest:

- Domestic Assistance
- Personal Care
- Allied Health
- Planned Activity Groups
- Delivered Meals
- Respite
- Assessment
- Case Management
- Care Coordination
- Nursing Care (hours only)

The following services would decrease:

- Volunteer Social Support
- Nursing Care

The following service would increase in clients but decrease in hours (i.e., become less intensely focused):

- Property Maintenance

CONCLUSION

It is difficult to predict changes in service provision with any confidence. While changes in the population may cause parallel changes in service provision, this is not always the case. Ultimately, changes in provision of services depend on policy decisions and funding at all three levels of government. In addition, for smaller services, changes may be unpredictable and due to fluctuations in staffing.

Introduction and Methodology

ABOUT US

The North East Primary Care Partnership (NEPCP) is a voluntary alliance of service providers who come together to strengthen relationships across sectors in order to maximise health and wellbeing outcomes. We support activities at a local and network level that have potential to improve population health outcomes.

Our aim is to:

- Learn from leading-edge practice in health and care systems and other industries, and make that knowledge accessible to all
- Build the movement for improvement and safety, making connections across the system, and enthusing and exciting people to engage in change and transformation
- Provide easy access to the latest evidence base, knowledge and training programs
- Help make the most of investment of money and effort across the system, so we all work in alignment.

As part of this remit we seek to develop our work in partnership and co-production with others in the health and care system.

CURATE RATHER THAN CREATE KNOWLEDGE

One of the challenges for service providers and leaders in health and care is keeping up with the amount of information and data as they become available, in the face of multiple and competing demands. Finding the right information and making sense of it is taking an increasing amount of time, attention and focus[1], and the ability to filter and select appropriate information and shape it for a local context is essential. A key role the NEPCP can play is to bring partners together and curate knowledge: reviewing and filtering what is most relevant and connected to our members' experience. In this way we can offer value to others looking for high quality content.

The idea of curation is taken from the NHS White Paper **"The new era of thinking and practice in change and transformation; a call to action for leaders of health and care"** and is defined as "finding things out and determining what's valid from what's just noise . . . quality and coherence, not volume and mass". While this paper looks broadly at large-scale change and transformation in health and care, rather than at local trends, two ideas that really struck us were:

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[1] These ideas are expanded at this site: **http://www.nhsiq.nhs.uk/news-events/news/the-new-era-of-thinking-and-practice-in-change-and-transformation.aspx**

- With so much information and data available we do not need more, but we need information that is high quality and right for our context.
- While data are important for population health planning, large-scale change also depends on many partners: clients and families, communities, frontline health and community care providers, and leaders uniting around a common cause for client and population health.

We hope that this report provides our members with the quality and coherence required for future adaption to the reform agenda.

ABOUT THIS PROJECT

When considering how to best support our partner agencies in the context of change and growth in aged care, we were impressed by the work undertaken by the City of Whittlesea called *Living well 50+ … a data story*. This report brings together demographic, social, health and wellbeing data important for understanding life stages, population diversity, and social and environment influences on people as they age.

Given projected changes in the population aged 50+ years, we believed a similar project would strengthen our knowledge of people in this age group living in our catchment and give us information about their potential service requirements. Because the information we have collected is based on the original framework used for the Whittlesea Report, we now have consistent data across four local government areas.

WHAT IS DIFFERENT?

One of the great (and challenging) insights we gained with this project is that long-term projections are often unreliable and need to be used with caution. We have still included them but encourage our partners to use them carefully. We also realise that data can quickly become outdated, so have included links to assist partners to easily access information they may need in the future.

THIS REPORT

This report is Part 1 of a two-volume report, outlining the results of a series of data analyses conducted by the Australian Institute for Primary Care & Ageing at La Trobe University for the North East Primary Care Partnership (NEPCP). The report is intended to act as a resource that captures a population-based approach to planning healthy and active living for the population aged 50 years and over living in Banyule.

Part 1 of the report—this volume—is about the health status of people living in Banyule. Part 2 is about the Home and Community Care service use of people living in Banyule. The report is modelled on a similar project completed for the City of Whittlesea in February 2014.

This report is intended to provide key health and wellbeing characteristics of the 50+ population to inform service planning and opportunities for health promotion, positive ageing and preventative strategies.

METHODOLOGY

The analyses in Part 2 of the report rely on two sources:

- HACC Minimum Data Set (MDS) for the years 2010 to 2014, supplied by the Victorian Department of Human Services (DHS; now DHHS, Department of Health and Human Services).
- DHS expenditure on HACC services, 2015, provided by Victorian DHHS.
- Population data supplied by Profile.ID.[2]

[2] http://profile.id.com.au/Nillumbik/population

Quick statistics: HACC use 2014

Number of clients	1,669 This total does not include people for whom key details were missing.		
Service type		Hours/Meals	Clients
	Planned Activity Group	4,711	732
(Note: Clients may receive more than one service)	Domestic Assistance	2,397	656
	Personal Care	1,204	532
	Respite	11,153	409
	Allied Health services	5,210	258
	Nursing Care	662	228
	Volunteer Social Support	22,692	211
	Property Maintenance	8,542	164
	Assessment	9,022	112
	Case Management (Linkages)	3,462	56
	Client Care Coordination	1,653	36
	Delivered Meals	10,878	119
Age		N	%
	0–49 years	255	15.3
	50–59 years	133	8.0
	60–69 years	263	15.8
	70–79 years	446	26.7
	80+ years	659	34.1
Service age cohort	0–64 years	477	28.6
	65+ years	1,189	71.2
Language diversity	53 clients preferred to speak a language other than English (3.2%) The three most common non-English languages preferred were: Italian: 13 clients (0.8%) Greek: 5 clients (0.3%) 23 clients (1.4%) required an interpreter		
Indigenous	5 clients identified as Indigenous (0.3%)		
Accommodation and living arrangements	489 clients (29.3%) lived alone 1,241 clients (74.4%) owned or were purchasing their own home		
Carer availability	431 clients (25.8%) had an informal carer		
Income	817 clients (49.0%) received the Age pension		
Referral source (5 most common)		N	%
	Self	574	34.4
	Family/friend/significant other	208	12.5
	Hospital	154	9.2
Quick reference population statistics	50+ years	21,469	
	65+ years	7,189	
	0-64 years	55,346	
	85+ years	624	
	Total population	62,535	

HACC service system

Information on the HACC service system operating within the municipality, including a profile of service provider, program funding, and service levels, is presented below.

HACC services operate within a broader system that includes packaged care (Home Support Packages), assessment, and a range of medical services. The focus in this report is on HACC services.

HACC SERVICES

The HACC Program provides funding for community services to support frail older people, young people, and adults with a disability, and their carers. These services provide basic support and maintenance to people living at home whose capacity for independent living is at risk, or who are at risk of premature or inappropriate admission to long-term residential care.

In May 2013, the Victorian and Commonwealth governments announced an agreement to implement the National Disability Insurance Scheme from July 2019. Once fully implemented, DisabilityCare Australia will cover 100,000 Victorians aged under 65 years. As part of this agreement, management of the HACC Program will be split. Services for people aged 65 years and over will be directly managed by the Commonwealth Government. Services for people aged under 65 years will be funded and managed solely by the Victorian Government, until DisabilityCare Australia is in full operation. The HACC Program will continue to be funded jointly by the Commonwealth and Victorian Governments and managed by the Victorian Department of Health and Human Services until July 2016. For this reason, many tables in this report divide clients into two age groups: those aged under and over 65 years of age.

The provision of community services to older people is occurring in a context of major change in Australia and internationally, in terms of both the legislative framework in which services operate and underlying philosophical bases. National reforms are currently occurring in aged care, disability services, primary health and mental health. The Australian Government introduced a ten-year Aged Care Reform package in mid-2013, which involved amendments to the *Aged Care Act (1997).* The aim of the package is to provide sustainable funding, an expanded workforce capacity, higher quality of care, improved access to services, and strengthened protections for care recipients. These changes present an opportunity to adjust the ways in which services are evaluated to incorporate a more person-centred approach.

HACC SERVICE PROVIDERS IN NILLUMBIK

A total of 27 different agencies were funded to provide HACC services to Nillumbik LGA residents in 2015. Table 1 lists these agencies and indicates which HACC services they were funded to deliver.

It should be noted that some agencies may deliver HACC services to Nillumbik residents at delivery settings located outside the municipality.

Table 1: Agencies funded to provide HACC services to Nillumbik residents, 2015

	ALLIED HEALTH	ASSESSMENT	DELIVERED MEALS	DOMESTIC ASSISTANCE	FLEXIBLE SERVICE RESPONSE	LINKAGES PACKAGES	NURSING	PERSONAL CARE	PAG - CORE	PAG - HIGH	PROPERTY MAINTENANCE	RESPITE	SERVICE SYSTEM RESOURCING	VOLUNTEER CO-ORDINATION	RDNS ALLIED HEALTH
Aborigines Advancement League				✓											
Action On Disability Within Ethnic Communities									✓						
Annecto					✓										
arbias					✓										
Austin Health	✓						✓								
Bethlehem Community					✓										
Central Bayside Community Health Services														✓	
Darebin Community Health Service									✓						
Filipino Community Council of Victoria										✓					
Impact Support Services												✓			
Interchange Northern Region					✓					✓		✓		✓	
Link Community Transport													✓	✓	
MECWA							✓								
Melbourne City Mission									✓						
Merri Outreach Support Service					✓				✓	✓					
Mill Park Community Services Group									✓	✓					
Nillumbik Community Health Service Ltd	✓					✓				✓				✓	
Nillumbik Shire Council		✓	✓	✓				✓	✓		✓	✓	✓	✓	
Northern Health	✓					✓	✓			✓					
Peter MacCallum Cancer Institute							✓								
Royal District Nursing Service Limited[3]					✓		✓	✓							✓
Travellers Aid								✓							

[3] RDNS was not funded to provide assessment in 2014-15, though it was in 2012-13 and 2013-14.

	ALLIED HEALTH	ASSESSMENT	DELIVERED MEALS	DOMESTIC ASSISTANCE	FLEXIBLE SERVICE RESPONSE	LINKAGES PACKAGES	NURSING	PERSONAL CARE	PAG - CORE	PAG - HIGH	PROPERTY MAINTENANCE	RESPITE	SERVICE SYSTEM RESOURCING	VOLUNTEER CO-ORDINATION	RDNS ALLIED HEALTH
Victorian Indigenous Health Service Co-op.	✓				✓										
VincentCare Victoria					✓									✓	
Vision Australia	✓													✓	
Wesley Mission Victoria														✓	
Young Men's Christian Association of Whittlesea									✓						
Grand Total	**5**	**2**	**1**	**1**	**8**	**2**	**5**	**3**	**6**	**5**	**1**	**3**	**2**	**8**	**1**

In 2015, four agencies provided Allied Health services in Nillumbik LGA. These are listed in Table 2 below. (Other agencies also provided Allied Health services to people living in Nillumbik, including community health services in Banyule, Manningham and Plenty Valley.)

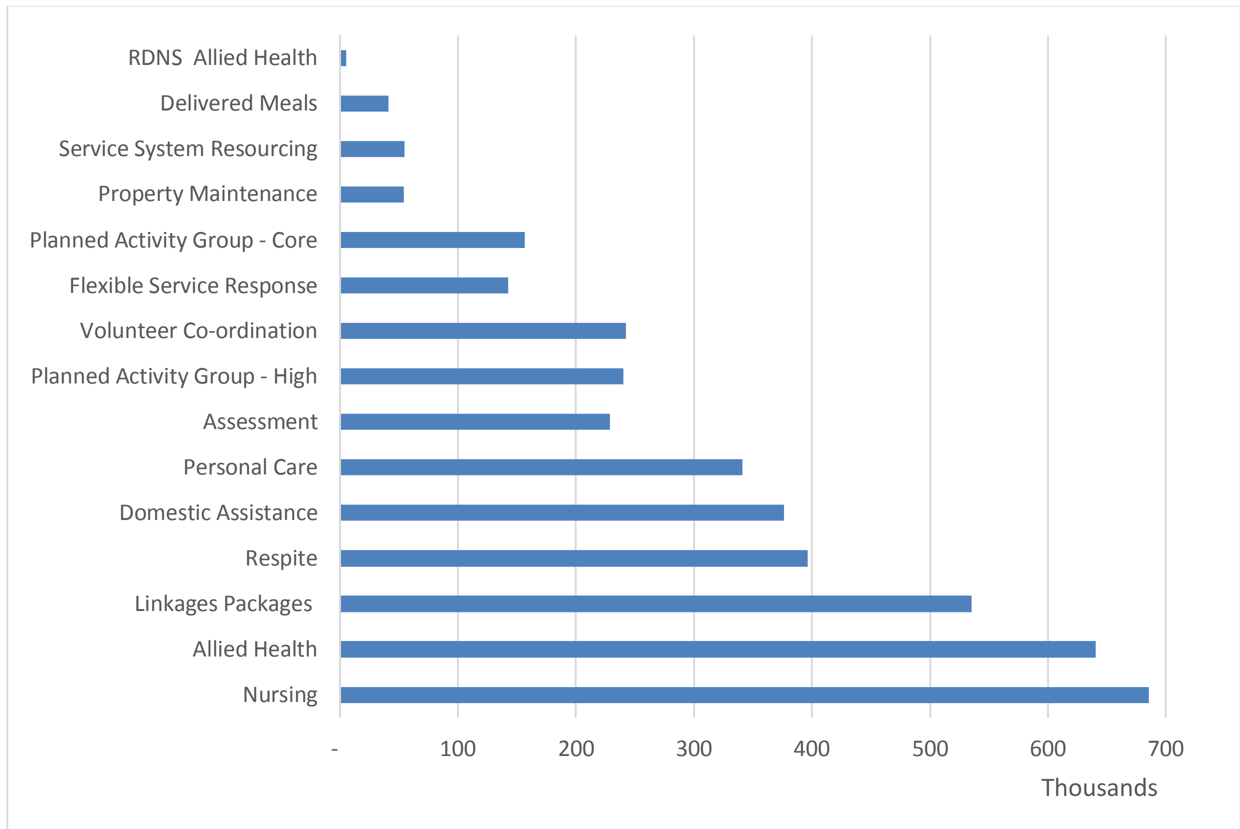
Table 2: Agencies funded to provide Allied Health services, 2015, and service provision 2013–14

AGENCY	**DIETETICS**	**OCCUPATIONAL THERAPY**	**PHYSIOTHERAPY**	**PODIATRY**	**SPEECH THERAPY**
Austin Health	✓	✓	✓	✓	✓
Nillumbik Community Health	✓	✓	✓	✓	✓
Northern Health	✓	✓	✓	✓	✓
Vision Australia Limited		✓			

HACC FUNDING

In 2014-15, the Victorian state government allocated $13,056,674 for HACC funding to Nillumbik residents. The service with the highest allocation was Nursing.[4]

Figure 1: State HACC funding ($, thousands) by service, Nillumbik 2014-15

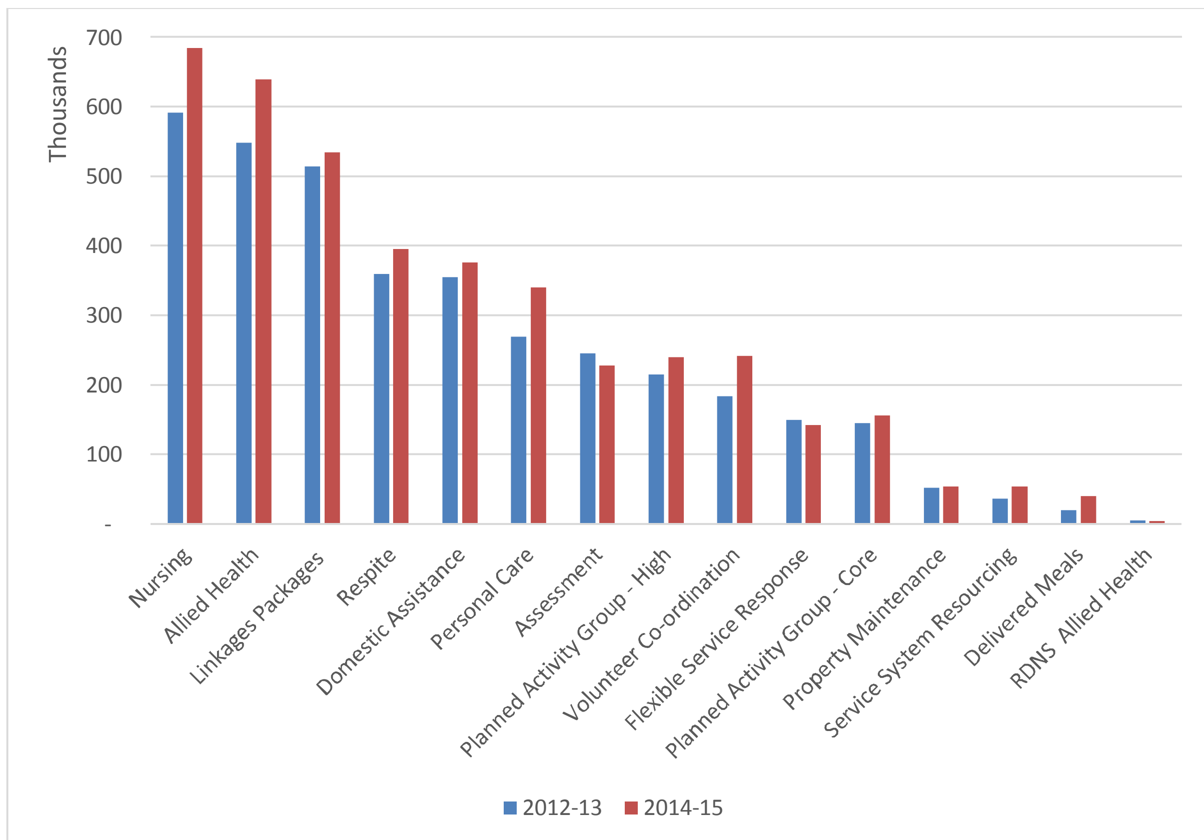


[4] Figures are comparable to those used in the Whittlesea report.

Victorian DHHS also provided figures for 2012-13 and 2013-14, which allows a comparison of growth in funding across two years. Overall, funding for HACC in Nillumbik grew by 12.0% from 2012-13 to 2014-15. The biggest increases in terms of raw figures (dollars) were for Allied Health and Nursing. However, in percentage terms, the largest increase in funding was for Delivered Meals,[5] funding for which more than doubled, from $19,916 to $40,840 (though the target number of meals did not change from 12,605). [6]

A few funding categories received lower funding in 2014-15 than in 2012-13 (Flexible service response and RDNS Allied Health).

Figure 1b: State HACC funding ($, thousands) by service, Nillumbik 2012-13 to 2014-15



These figures are reproduced in Table 3.

[5] In this report, Delivered Meals refers to both home-delivered meals and centre-based meals.
[6] The same pattern is evident for Banyule and Darebin, and may reflect government recognition of the real cost of providing delivered meals.

Table 3: State HACC funding ($) by service, 2012-13 to 2014-15.

SERVICE	2012-13	2013-14	2014-15	CHANGE $	CHANGE %
Allied Health	548,695	586,048	640,052	91,356	16.7
Assessment	246,027	250,980	228,455	-17,572	-7.1[7]
Delivered Meals	19,916	20,294	40,840	20,924	105.1
Domestic Assistance	355,019	350,423	376,245	21,226	6.0
Flexible service response	149,993	151,771	142,434	-7,559	-5.0
Linkages Packages	514,728	525,024	534,888	20,160	3.9
Nursing	591,787	640,507	685,056	93,270	15.8
Personal Care	269,998	334,486	340,779	70,781	26.2
Planned Activity Group - core	145,743	149,581	156,592	10,849	7.4
Planned Activity Group - high	215,307	219,335	240,140	24,833	11.5
Property Maintenance	52,017	53,060	54,055	2,038	3.9
Respite	359,800	367,019	395,955	36,155	10.1
Service System Resourcing	36,339	53,386	54,389	18,050	49.7
Volunteer Co-ordination	189,545	189,850	241,998	52,453	27.7
RDNS Allied Health	5,160	5,264	4,934	-227	-4.4
Total	3,694,508	3,897,025	4,136,813	442,305	12.0

Service providers are funded to deliver a specific number of outputs—the funding target. For most services, the target is based on the number of hours of service delivered. However, for delivered meals the funding target refers to the number of meals delivered, and for Linkages the target refers to the number of packages.

The following figure and table provide the funding targets by service for three years, 2012-13 to 2014-15. Assessment, Flexible service response, and Service System Resourcing were not assigned targets in 2013 so are not included in this figure.

The table and figure show that the largest increase in funded outputs was for Volunteer coordination, which increased by 23%.

[7] RDNS were no longer funded to provide HACC Assessment in 2014-15. Without this change, the pattern is of steadily increasing funding for HACC Assessment provided to two agencies: Nillumbik Shire Council and Aborigines Advancement League.

Figure 1c: State HACC funding (outputs) by service, Nillumbik 2012-13 to 2014-15

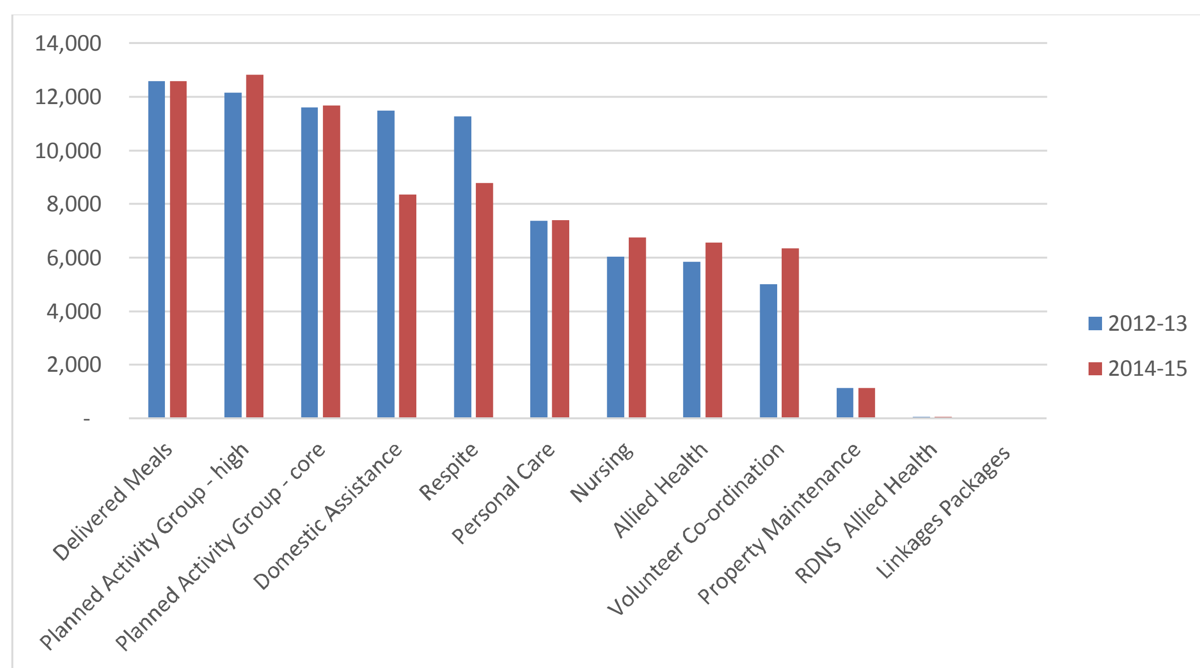


Table 4: State HACC funding (outputs) by service, 2012-13 to 2014-15.

SERVICE	2012-13	2013-14	2014-15	CHANGE N	CHANGE %
Allied Health	5,852	6,127	6,568	717	12.2
Delivered Meals	12,605	12,605	12,605	-	-
Domestic Assistance	11,493	11,121	8,361	-3,132	-27.3
Linkages Packages	36	36	36	-	-
Nursing	6,046	6,466	6,769	724	12.0
Personal Care	7,382	9,022	7,408	27	0.4
Planned Activity Group - core	11,613	11,686	11,686	73	0.6
Planned Activity Group - high	12,178	12,165	12,828	650	5.3
Property Maintenance	1,158	1,158	1,158	-	-
Respite	11,279	11,279	8,799	-2,480	-22.0
Volunteer Co-ordination	5,176	5,083	6,360	1,184	22.9
RDNS Allied Health	75	75	69	-6	-8.0
Total	84,892	86,823	82,647	-2,245	-2.6

SERVICES DELIVERED (ALL CLIENTS)

During the calendar year 2014, a total of 1,669 clients were provided with a HACC service in Nillumbik, the majority of whom (n = 1,015, 61%) were aged 70 years or over. Nearly one-quarter of the population aged 70 years or over (24.5%) got a HACC service in 2014.

The most accessed service (i.e., used by the greatest number of clients) during 2014 was Allied Health.

Table 5: Number of clients by service, 2014

SERVICE	NUMBER OF CLIENTS
Allied Health	732
Assessment	656
Domestic Assistance	532
Property Maintenance	409
Nursing Care	258
Planned Activity Group	228
Personal Care	211
Respite	164
Volunteer Social Support	119
Client Care Coordination	112
Delivered Meals	56
Case Management	36
Counselling/support, information and advocacy	0[8]

Individuals who received the same service from more than one agency were counted only once when determining the total number of clients per service.

[8] This category of service provision is not included further in this report.

The following table provides the total number of hours delivered by service for the 2014 year. The largest HACC services by number of hours/meals were Planned Activity Groups and Delivered Meals.

Table 6: Number of hours/meals delivered by service, 2014

SERVICE	NUMBER OF HOURS/MEALS
Planned Activity Group – total	22,692
Delivered Meals	11,153
Domestic Assistance	10,878
Nursing Care	9,022
Personal Care	8,542
Allied Health	5,210
Respite	4,711
Volunteer Social Support	3,462
Assessment	2,397
Property Maintenance	1,653
Case Management	1,204
Client Care Coordination	662

Hours of service are also provided for PAG core and PAG high separately in the table below; however, the figures in this table do not exactly sum to those in the table above because the period of reporting is slightly different. The table below is included here to give an indication of how PAG hours in Nillumbik are divided between core and high provision.

Table 6a: Number of hours core and high PAG, 2013–14

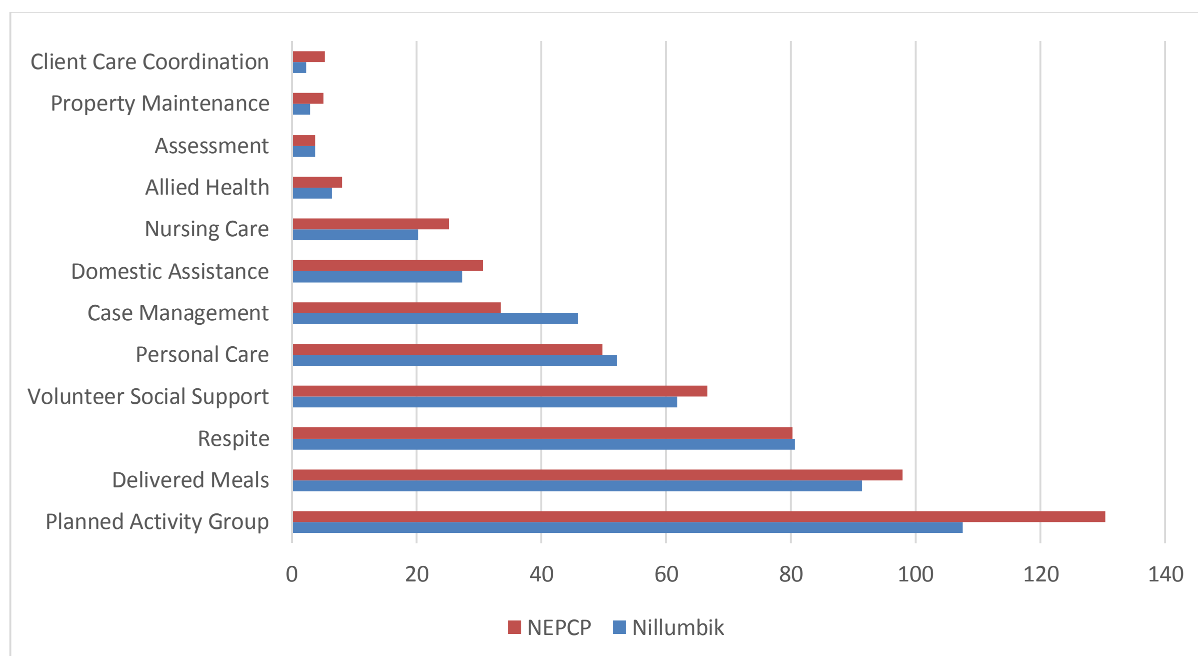
SERVICE	NUMBER OF HOURS	% OF TOTAL
Planned Activity Group – core	10,967	48.1
Planned Activity Group – high	11,838	51.9
Total	22,805	100.0

The following table provides the average number of hours/meals delivered to clients within the 12 months for 2014. Planned Activity Groups provided the highest number of hours per client. Table 6b (and Figure 2) also compare average provision per client within the year for Nillumbik with figures for the whole NEPCP.

Table 6b: Average number of hours/meals per client within the year delivered by service, Nillumbik and NEPCP, 2014

SERVICE	AVERAGE HOURS PER CLIENT, NILLUMBIK	AVERAGE HOURS PER CLIENT, NEPCP
Planned Activity Group	107.5	130.4
Delivered Meals	91.4	97.8
Respite	80.6	80.2
Volunteer Social Support	61.8	66.6
Personal Care	52.1	49.8
Case Management	45.9	33.5
Domestic Assistance	27.3	30.6
Nursing Care	20.2	25.2
Allied Health	6.4	8.0
Assessment	3.7	3.7
Property Maintenance	2.9	5.1
Client Care Coordination	2.3	5.3

Figure 2: Average number of hours/meals per client within the year delivered by service, Nillumbik and NEPCP, 2014



For most service types, average provision per client was lower in Nillumbik than elsewhere in the NEPCP. However, the opposite is true for Case Management (especially) and Personal Care, while average provision of respite and assessment was almost the same.

Counselling/support, information and advocacy is not included as a general HACC service type in any further analyses, because of its small size as a HACC service.

Occupational Therapy was the most frequent Allied Health service provided, followed by Physiotherapy and Podiatry. The majority of Allied Health services were delivered at a centre rather than at clients' homes (86%).[9] However, Speech Therapy was more likely to be delivered in clients' homes than at a centre.

Table 7: Hours of Allied Health services delivered by type and location, 2013–14

ALLIED HEALTH SERVICES	HOURS – HOME	HOURS – CENTRE	TOTAL HOURS
Occupational Therapy	193	2,018	2,211
Physiotherapy	242	1,083	1,35
Podiatry	15	667	682
Dietetics	108	225	333
Speech Therapy	31	17	48
Counselling	31	38	69
Audiology	0	0	0
Total specified	629	4,048	4,668
Not specified	48	2	50
Total	668	4,050	4,718

[9] This result is puzzling: anecdotal evidence suggest that the vast majority of one-to-one Occupational Therapy services are provided in clients' homes. Centre-based hours reflect follow-up for equipment and home modifications.

Client profile

A profile of HACC clients is presented including:

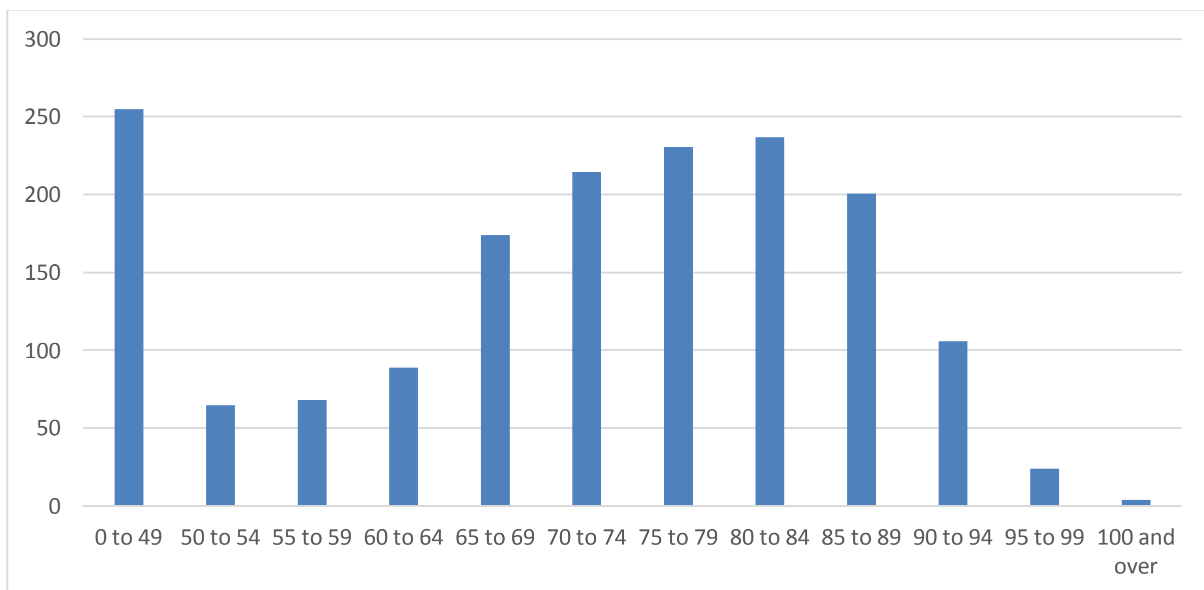
- Age
- Language diversity
- Indigenous status
- Living arrangements
- Carer availability
- Income source
- Usual accommodation

The data are examined by the number of clients, the number of service hours, average annual hours of service per client, and client-to-population ratio.

AGE

Although eligibility for HACC services does not depend on age, in 2014, most (76.8%) were over 60 years of age and a substantial proportion (34.3%) were over 80 years of age.

Figure 3: Number of HACC clients by age group



The client-to-population ratio by age (below) shows that the proportion of residents using HACC services increases with age, from 6.2 per 1000 in the 0–49 age group to nearly one-half (458.1 per 1000) in the age group 80 years and over.

Table 8: HACC clients per 1,000 residents by age (10 year cohorts), 2014

AGE GROUP	RESIDENTS N	RESIDENTS %	HACC CLIENTS N	HACC CLIENTS %	RATIO (HACC CLIENTS PER 1000 RESIDENTS)
0–49	41,066	65.7%	255[10]	15.3	6.2
50–59	10,302	16.5%	133	8.0	12.9
60–69	7,017	11.2%	263	15.8	37.5
70–79	2,908	4.7%	446	26.7	153.4
80+	1,242	2.0%	569	34.1	458.1
Unknown			3	0.2	
Total	62,535	100%	1669	100.0	26.7

In the future, the HACC service target group will be divided into two, with those aged 65 years and over provided with services through HACC and those under 65 years of age with disability through the state-based National Disability Insurance Scheme (NDIS). The following table examines service provision by these two age groups.

Table 9: HACC clients per 1,000 residents by age (0–64 years and 65+ years), 2014

AGE GROUP	RESIDENTS N	RESIDENTS %	HACC CLIENTS N	HACC CLIENTS %	RATIO (HACC CLIENTS PER 1000 RESIDENTS)
0–64	55,346	88.5%	477	28.6	8.6
65+	7,189	11.5%	1,189	71.2	165.4
Unknown			3	0.2	
Total	62,535	100%	1,669	100.0	26.7

[10] A higher than expected number of clients in younger age groups may be due to data entry errors. Nillumbik's records included 61 clients aged 1-to-18 years (3.7%) and a further 194 clients (11.6%) aged 19-to-49 years.

Age profile by service

The age profile of clients varies significantly by service. A relatively high proportion of clients aged under 50 years is evident for Respite (reflecting relatively young carers who access a service in their own right). In contrast, Delivered Meals services, Domestic Assistance and Property Maintenance have relatively old profiles, with over 80% aged 70 years or over.

Figure 4: Number of clients per service type, 0–49 years, and in 10-year age brackets

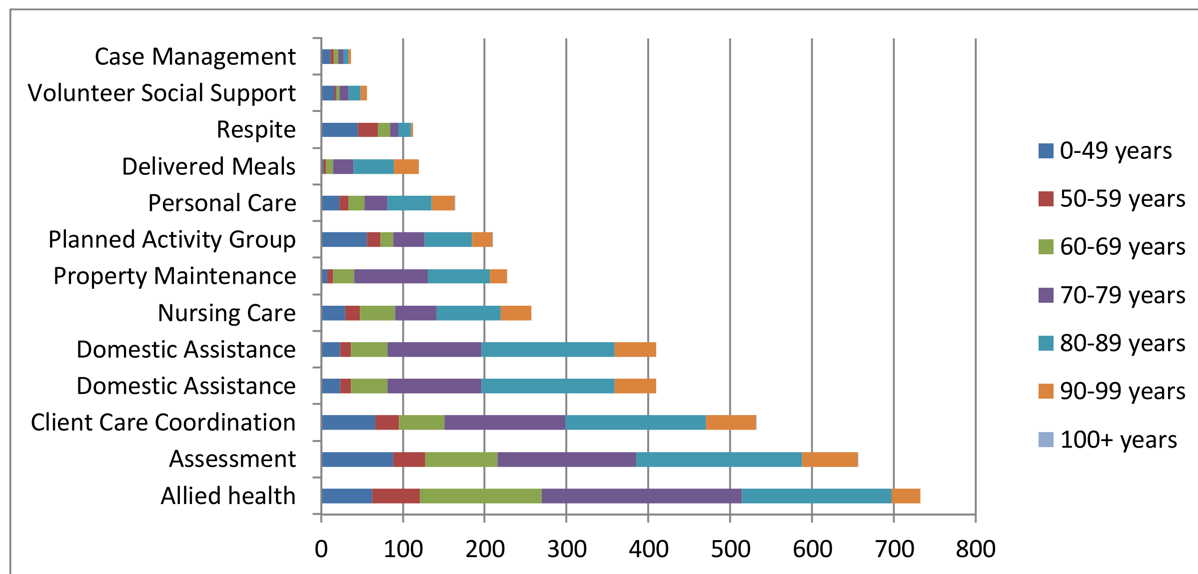


Table 10: Number of clients

SERVICE	0–49 YEARS	50–59 YEARS	60–69 YEARS	70–79 YEARS	80–89 YEARS	90–99 YEARS	100+ YEARS	TOTAL	% 50+ YEARS	% 70+ YEARS
Allied Health	62	59	148	245	183	35	0	732	91.5	63.3
Assessment	88	39	88	170	202	68	1	656	86.6	67.2
Client Care Coordination	66	29	55	148	172	61	1	532	87.6	71.8
Domestic Assistance	23	13	45	115	162	51	0	409	94.4	80.2
Nursing Care	29	18	43	51	78	38	0	257	88.7	65.0
Property Maintenance	7	7	26	90	76	21	0	227	96.9	82.4
PAG	56	16	16	38	58	25	1	210	73.3	58.1
Personal Care	22	11	20	28	54	28	1	164	86.6	67.7
Delivered Meals	3	3	8	25	50	30	0	119	97.5	88.2
Respite	45	24	15	10	16	2	0	112	59.8	25.0
Volunteer Soc. Support	16	2	4	11	15	8	0	56	71.4	60.7

Age profile by outputs

The number of outputs (hours or meals) delivered by age cohort shows that younger clients (aged under 50 years) accessed more Case Management and Respite hours than other age groups.

Figure 5: Number of outputs (hours/meals) per service type, 0–49 years, and in 10-year age brackets

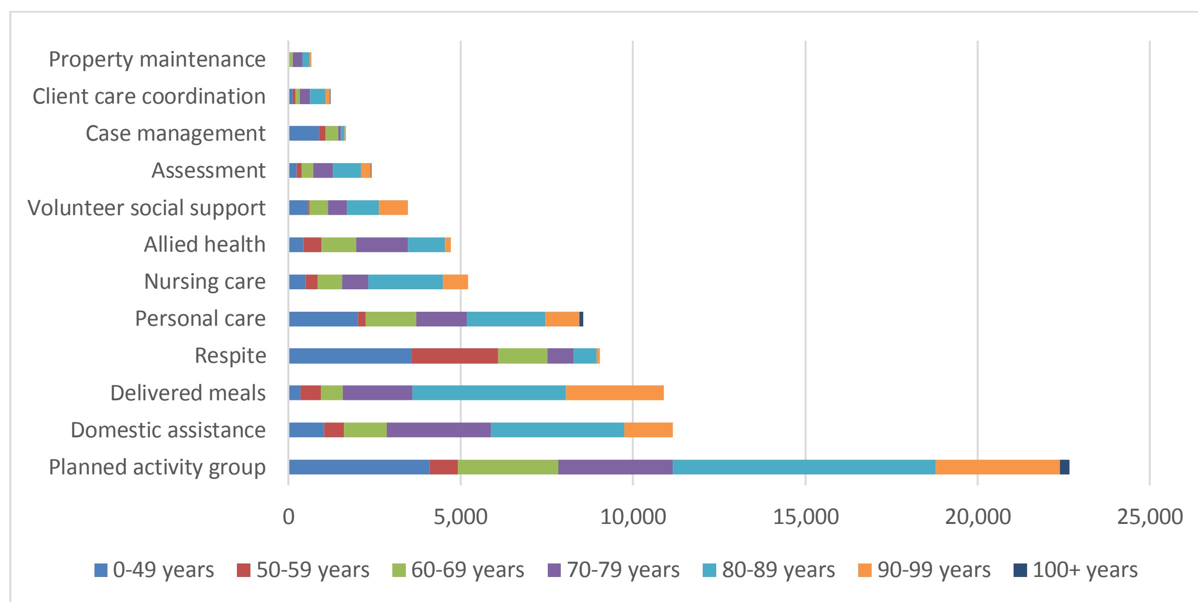


Table 11: Number of outputs (hours/meals)

SERVICE	0–49 YEARS	50–59 YEARS	60–69 YEARS	70–79 YEARS	80–89 YEARS	90–99 YEARS	100+ YEARS	TOTAL	% 50+ YEARS	% 70+ YEARS
Planned Activity Group	4,101	800	2,924	3,327	7,625	3,601	282	22,660	81.9	65.5
Domestic Assistance	1,023	587	1,230	3,025	3,879	1,409	-	11,153	90.8	74.5
Delivered Meals	351	580	639	2,023	4,455	2,830	-	10,878	96.8	85.6
Respite	3,578	2,493	1,428	767	674	82	-	9,022	60.3	16.9
Personal Care	2,020	219	1,468	1,458	2,290	982	106	8,543	76.4	56.6
Nursing Care	485	366	701	761	2,165	731	-	5,209	90.7	70.2
Allied Health	440	506	1,020	1,500	1,064	182	-	4,711	90.7	58.3
Volunteer Social Support	563	48	536	548	938	828	-	3,462	83.7	66.9
Assessment	239	150	323	572	824	284	6	2,397	90.1	70.3
Case Management	879	195	365	68	123	23	-	1,653	46.8	12.9
Client Care Coordination	118	70	130	298	458	128	3	1,204	90.2	73.6
Property Maintenance	13	11	99	279	209	49	-	660	98.0	81.4

The following table provides the number of hours of Allied Health delivered by age group for the five largest Allied Health services. The service with the oldest age profile was Speech therapy, while that with the youngest clients was Dietetics.

Table 12: Number of outputs (hours) by Allied Health Service, by age group

SERVICE	0–49	50–59	60–69	70–79	80–89	90+	TOTAL	50+ %	70+ %
Occupational therapy	232	217	419	652	590	102	2,212	89.5	60.7
Physiotherapy	31	132	403	455	231	22	1,275	97.5	55.6
Podiatry	19	76	116	261	171	40	682	97.2	69.1
Speech therapy	0	4	6	12	23	3	47	100.0	79.8
Dietetics	86	40	88	75	32	13	333	74.2	35.8

Service delivery by age

A comparison of the average number of hours/meals delivered per client across age groups provides an insight into key patterns in individual service across a year. These data do not represent typical service levels at a specific point in time, but service use within a 12-month period.

- Several service types allocated a large number of hours to people aged 0–49 years and/or 50–59 years age group. These service types include Allied Health, Assessment, Domestic Assistance, Property Maintenance, Nursing Care, Respite, Care Coordination, Delivered Meals, and Case Management (Linkages).
- Planned Activity Groups have a different pattern of allocation, with higher numbers of hours in the older age groups, particularly those aged 90 years and over.
- Volunteer Social Support also allocates more hours to older clients, especially those in the 90–99 years group.

Table 13: Average number of hours/meals delivered per client by service by age

SERVICE	0–49 YEARS	50–59 YEARS	60–69 YEARS	70–79 YEARS	80–89 YEARS	90–99 YEARS	100+ YEARS	TOTAL
Allied Health	7.1	8.6	6.9	6.1	5.8	5.2		6.4
Assessment	2.7	3.8	3.7	3.4	4.1	4.2	6.0	3.7
Domestic Assistance	44.5	45.2	27.3	26.3	23.9	27.6		27.3
Property Maintenance	1.9	1.6	3.8	3.1	2.8	2.3		2.9
Nursing Care	16.7	20.3	16.3	14.9	27.8	19.2		20.3
Planned Activity Group	73.2	50.0	182.7	87.6	131.5	144.1	282.0	107.9
Personal Care	91.8	19.9	73.4	52.1	42.4	35.1	106.0	52.1
Respite	79.5	103.9	95.2	76.7	42.1	41.0		80.6
Volunteer Social Support	35.2	24.0	134.0	49.9	62.6	103.5		61.8
Client Care Coordination	1.8	2.4	2.4	2.0	2.7	2.1	2.5	2.3
Delivered Meals	117.0	193.3	79.9	80.9	89.1	94.3		91.4
Case Management	79.9	48.8	60.8	11.3	20.5	7.7		45.9

CULTURAL AND LINGUISTIC DIVERSITY

Country of birth

Australia was the recorded country of birth for nearly two-thirds of clients in the Nillumbik area, while just over 12% were born in non-English-speaking countries.

Table 14: Number of clients by country of birth

COUNTRY OF BIRTH	NO. OF CLIENTS	% OF ALL CLIENTS*
Australia	1,077	64.5
Main English Speaking Countries	131	7.8
Non-English Speaking Countries	202	12.1
Missing Data	259	15.5
Total	1,669	100

*Missing data have been included in the denominator for these percentages

Overseas-born clients came from a range of countries (57 countries, not counting Australia). The largest number of clients came from England (7.7%) and Italy (5.0%).

Table 15: Top 10 Countries of Birth (other than Australia)

COUNTRY OF BIRTH	NO. OF CLIENTS	% OF ALL CLIENTS
England	84	7.7
Italy	48	5.0
Germany	28	1.7
Scotland	21	1.3
Greece	19	1.1
Netherlands	16	1.0
Croatia	11	0.7
India	11	0.7
New Zealand	10	0.6
Malta	9	0.3

Language

Most clients in the Nillumbik area preferred to speak English. Only 3% were known to prefer a language other than English.

Table 16: Language preferred

LANGUAGE PREFERRED	NO. OF CLIENTS	% OF ALL CLIENTS
English Preferred Language	1,328	79.6
Non-English Language Preferred	53	3.2
Missing	288	17.3
Total	1,669	100.0

The most common non-English language preferred by clients was Italian, followed by Greek.

Table 17: Top 10 preferred non-English languages

TOP 10 NON-ENGLISH LANGUAGES	NO. OF CLIENTS	% OF ALL CLIENTS
Italian	13	0.8
Greek	5	0.3
Croatian	4	0.2
Russian	3	0.2
Gaelic (Scotland)	2	0.1
Spanish	2	0.1
Somali	2	0.1
Maltese	1	0.1
Romanian	1	0.1
Turkish	1	0.1
Tamil	1	0.1

Twenty-three clients needed an interpreter (1.4%). Need for an interpreter was explored by preferred language for the four most common languages. While the numbers in the following table are not reliable, due to low numbers, it is clear that about 40% of people whose preferred language was not English required an interpreter.

Table 18: Need for an interpreter by preferred non-English language

PREFERRED LANGUAGE	INTERPRETER NEEDED	INTERPRETER NOT NEEDED	MISSING DATA	TOTAL
Italian	5	6	2	13
Greek	1	4	0	5
Croatian	3	1	0	4
Russian	1	1	1	3

Table 19 is not reproduced for Nillumbik because the numbers are too low to be reliable.

Some service types had a much higher proportion of clients whose preferred language is not English than others. Service types with particularly high proportions of clients whose preferred language is other than English included Volunteer Social Support, Respite, and Planned Activity Groups. On the other hand, relatively few clients of Delivered Meals and Property Maintenance prefer to use a language other than English.

Table 20: Number of clients by preferred language by service

	ENGLISH PREFERRED	NON-ENGLISH LANGUAGE PREFERRED	NOT SPECIFIED	TOTAL	% OF CLIENTS NON-ENGLISH LANGUAGE
Volunteer Social Support	42	5	9	56	10.6
Respite	76	6	30	112	7.3
Planned Activity Group	173	13	25	211	7.0
Case Management (Linkages)	28	2	6	36	6.7
Personal Care	119	8	37	164	6.3
Domestic Assistance	210	12	187	409	5.4
Nursing Care	216	12	30	258	5.3
Client Care Coordination	361	19	152	532	5.0
Assessment	491	20	145	656	3.9
Allied Health	637	21	74	732	3.2
Property Maintenance	132	2	94	228	1.5
Delivered Meals	99	1	19	119	1.0

When the largest language groups was analysed separately, it is clear that Italian-speaking HACC clients were most likely to use Allied Health and Assessment.

Table 21: Number of clients by top two preferred languages other than English

	ITALIAN		GREEK	
	N	%	N	%
Planned Activity Group	3	1.4	2	0.9
Personal Care	2	1.2	1	0.6
Domestic Assistance	2	0.5	1	0.2
Property Maintenance	1	0.4	0	0.0
Allied Health	5	0.7	2	0.3
Case Management (Linkages)	0	0.0	0	0.0
Volunteer Social Support	1	1.8	1	1.8
Assessment	5	0.8	1	0.2
Client Care Coordination	3	0.6	1	0.2
Nursing Care	2	0.8	1	0.4
Respite	0	0.0	0	0.0
Delivered Meals	0	0	0	0.0
Total N clients	13		5	

Some services types provided a higher proportion of service hours overall to people whose preferred language was not English than others. A relatively high proportion of Personal Care hours were provided to people whose preferred language was not English, whereas low service was provided to non-English speakers by Delivered Meals services.

Table 22: Number of outputs (hours/meals) by preferred language by service

	ENGLISH	NON-ENGLISH LANGUAGE	NOT SPECIFIED	TOTAL	% OF HOURS NON-ENGLISH LANGUAGE
Personal Care	5,013	662	2,867	8,542	11.7
Client Care Coordination	811	88	305	1,204	9.8
Respite	5,800	402	2,820	9,022	6.5
Planned Activity Group	18,908	1,121	2,664	22,692	5.6
Domestic Assistance	5,801	310	5,042	11,153	5.1
Assessment	1,846	71	481	2,397	3.7
Case Management	1,316	50	287	1,653	3.7
Volunteer Social Support	2,796	99	568	3,462	3.4
Allied Health	4,137	141	433	4,711	3.3
Nursing Care	4,710	129	371	5,210	2.7
Property Maintenance	373	5	284	662	1.3
Delivered Meals	9,672	10	1,196	10,878	0.1

Very tiny amounts of service are provided in Nillumbik to clients whose preferred language is not English. The only services worthy of note are provision of Personal Care to Italian-speaking clients and Planned Activity Group to Greek-speaking clients.

Table 23: Number of hours/meals delivered by preferred language (Italian and Greek) by service

	ITALIAN CLIENTS		GREEK CLIENTS		CROATIAN CLIENTS	
	N hours	% of all hours	N hours	% of all hours	N hours	% of all hours
Domestic Assistance	32	0.3	15	0.1	0	-
Volunteer Social Support	9	0.3	46	1.3	0	-
Personal Care	270	3.2	1	0.0	0	-
Nursing Care	46	0.9	3	0.1	5	0.1
Allied Health	23	0.5	5	0.1	0	-
Planned Activity Group	44	0.2	211	0.9	0	-
Delivered Meals	0	-	0	-	0	-
Respite	0	-	0	-	0	-
Assessment	20	0.8	5	0.2	1	-
Case Management	0	-	0	-	0	-
Client Care Coordination	7	0.6	2	0.2	3	0.2
Property Maintenance	2	-	0	-	0	-
Delivered Meals	0	-	0	-	0	-

The average number of hours per clients within the year for English and non-English speakers was also examined, and the difference was computed as a percentage (with English preferred language as the denominator). This shows that for most services, English-speakers were allocated more hours in the year than non-English speakers. The exceptions were Client Care Coordination, Personal Care, and Allied Health.

Table 24: Average number of hours/meals per client by preferred language

	ENGLISH	NON-ENGLISH LANGUAGE	DIFFERENCE	% DIFFERENCE
Client Care Coordination	2.2	4.6	2.4	106.2
Personal Care	42.1	82.8	40.6	96.4
Allied Health	6.5	6.7	0.2	3.6
Assessment	3.8	3.5	-0.2	-6.2
Domestic Assistance	27.6	25.8	-1.8	-6.5
Property Maintenance	2.8	2.5	-0.3	-11.7
Respite	76.3	67.0	-9.3	-12.2
Planned Activity Group	109.3	86.2	-23.1	-21.1
Case Management	47.0	25.0	-22.0	-46.8
Nursing Care	21.8	10.8	-11.1	-50.7
Volunteer Social Support	66.6	19.8	-46.8	-70.3
Delivered Meals	97.7	10.0	-87.7	-89.8

The analysis of average hours of service (or average number of meals) was repeated for the three main non-English speaking groups. This showed very different patterns for the three groups:

- Italian speakers had high use of Personal Care and Nursing Care but comparatively low levels of everything else.
- Greek speakers had relatively high use of Assessment, and similar amounts to the average client of Planned Activity Groups, but relatively low use of other services.

Table 25: Average hours/meals per client by preferred language (Italian and Greek)

	ITALIAN	GREEK	ALL CLIENTS
Domestic Assistance	16.0	15.0	27.3
Volunteer Social Support	8.9	46.0	61.8
Personal Care	135.0	1.0	52.1
Nursing Care	23.0	3.0	20.2
Allied Health	4.6	2.3	6.4
Planned Activity Group	14.7	105.5	107.5
Delivered Meals	0.0	0.0	91.4
Respite	0.0	0.0	80.6
Assessment	4.0	5.0	3.7
Case Management	0.0	0.0	45.9
Client Care Coordination	2.3	2.0	2.3
Property Maintenance	2.0	0.0	2.9

Indigenous clients

Both demographic and service use data for Aboriginal people may be unreliable, as they rely on individuals choosing to identify as Aboriginal. Figures presented in this section should be treated with caution. In the HACC MDS, five clients from Nillumbik (0.3%) identified as Aboriginal or Torres Strait Islander.

Thirty-six people aged 50 years or over living in Nillumbik identify as Aboriginal or Torres Strait Islander.

Indigenous clients do not form a large proportion of the clientele of any HACC services, but they were present to some extent among Allied Health and Nursing Care clients.

Table 26: Number of clients identified as Indigenous by service

	NO	YES	NOT SPECIFIED	TOTAL	% CLIENTS INDIGENOUS
Allied Health	671	4	57	732	0.5
Nursing Care	198	1	59	258	0.4
Domestic Assistance	259	0	150	409	0.0
Volunteer Social Support	42	0	14	56	0.0
Personal Care	131	0	33	164	0.0
Planned Activity Group	194	0	17	211	0.0
Delivered Meals	102	0	17	119	0.0
Respite	93	0	19	112	0.0
Assessment	532	0	124	656	0.0
Case Management	35	0	1	36	0.0
Client Care Coordination	429	0	103	532	0.0
Property Maintenance	166	0	62	228	0.0

The proportion of hours allocated to Indigenous clients within the year is also relatively low, but highest for Client Care Coordination and Property Maintenance.

Table 27: Number of hours/meals by Indigenous origin

	NO	YES	NOT SPECIFIED	TOTAL	% HOURS TO INDIGENOUS CLIENTS
Allied Health	4,295	94	322	4,711	2.0
Nursing Care	4,800	2	408	5,210	0.0
Domestic Assistance	7,239	-	3,914	11,153	0.0
Volunteer Social Support	3,033	-	430	3,462	0.0
Personal Care	7,205	-	1,337	8,542	0.0
Planned Activity Group	21,606	-	1,086	22,692	0.0
Delivered Meals	10,248	-	630	10,878	0.0
Respite	7,004	-	2,018	9,022	0.0
Assessment	2,010	-	387	2,397	0.0
Case Management	1,573	-	80	37	0.0
Client Care Coordination	1,037	-	167	1,204	0.0
Property Maintenance	483	-	179	662	0.0

Allocation of hours within a year to Aboriginal and Non-Aboriginal clients was not compared due to low numbers (Table 28 has been omitted).

OTHER CLIENT CHARACTERISTICS

Carer availability

Overall, the proportion of clients who had an informal carer was 25.8%.

The proportion of clients who had a carer was highest for Case Management and Planned Activity Groups, and lowest for Allied Health and Property Maintenance.

Respite is a service that is offered to carers and to people who have carers.[11] Clients said to be receiving respite but to have no carer (n = 75) may reflect carers in the dataset who are clients in their own right due to their own frailty or disability, or inaccurate coding of carer availability in the data set.

Table 29: Carer availability by service, number of clients

	HAS A CARER	HAS NO CARER	NOT STATED	TOTAL	% OF CLIENTS WITH A CARER
Case Management	23	13	0	36	63.9
Planned Activity Group	134	55	22	211	63.5
Nursing Care	158	98	2	258	61.2
Personal Care	83	67	14	164	50.6
Volunteer Social Support	26	19	11	56	46.4
Delivered Meals	42	77	0	119	35.3
Assessment	211	445	0	656	32.2
Client Care Coordination	149	383	0	532	28.0
Respite	30	75	7	112	26.8
Domestic Assistance	107	302	0	409	26.2
Allied Health	166	529	37	732	22.7
Property Maintenance	43	184	1	228	18.9

[11] http://www.myagedcare.gov.au/caring-someone/respite-care

A similar picture emerged when hours of service rather than number of clients was examined: service hours were most likely to be allocated to clients of Nursing Care and Planned Activity Groups if they had carers, but relatively few hours to clients of Property Maintenance and Respite.

Table 30: Number of hours/meals to clients with and without a carer

	HAS A CARER	HAS NO CARER	NOT STATED	TOTAL	% OF HOURS TO CLIENTS WITH A CARER
Nursing Care	4,040	1,163	7	5,210	77.5
Planned Activity Group	16,579	4,475	1,638	22,692	73.1
Case Management	1,103	550	-	1,653	66.7
Personal Care	5,538	2,997	7	8,542	64.8
Volunteer Social Support	1,457	1,337	668	3,462	42.1
Client Care Coordination	495	709	-	1,204	41.1
Assessment	969	1,428	-	2,397	40.4
Allied Health	1,767	2,813	132	4,711	37.5
Delivered Meals	3,424	7,454	-	10,878	31.5
Domestic Assistance	3,298	7,855	-	11,153	29.6
Property Maintenance	118	542	2	662	17.8
Respite	1,451	6,655	916	9,022	16.1

When the ratio of hours or meals per client (within 12 months) was compared for clients with and without carers,[12] clients received more hours of care if they had a carer for Nursing Care and Allied Health, and, to a lesser degree, this was also true of most other services.

However, clients received fewer hours of service if they had a carer for Property Maintenance, Delivered Meals, Volunteer Social Support, and Respite. (In other words, on average, fewer hours of respite were offered to clients **with** carers than to clients who **were** carers.)

Table 31: Average number of hours/meals per client by carer availability

	HAS A CARER	HAS NO CARER	DIFFERENCE	% DIFFERENCE
Nursing Care	25.6	11.9	13.7	115.5
Allied Health	10.6	5.3	5.3	100.2
Client Care Coordination	3.3	1.9	1.5	79.5
Planned Activity Group	123.7	81.4	42.4	52.1
Personal Care	66.7	44.7	22.0	49.2
Assessment	4.6	3.2	1.4	43.1
Domestic Assistance	30.8	26.0	4.8	18.5
Case Management	48.0	42.3	5.7	13.4
Property Maintenance	2.7	3.0	-0.2	-7.1
Delivered Meals	81.5	96.8	-15.3	-15.8
Volunteer Social Support	56.1	70.4	-14.3	-20.3
Respite	48.4	88.7	-40.4	-45.5

[12] The denominator for this analysis was allocation for clients with no carer.

Living arrangements

Over half of Nillumbik's HACC clients (55%) lived with family rather than alone or with others. This is likely to be an under-estimate because of the relatively high level of missing data on this item (13%).

Table 32: Living arrangements of HACC clients

LIVING ARRANGEMENT	NO. OF CLIENTS	% OF CLIENTS
Lives Alone	489	29.3
Lives with Family	921	55.2
Lives with Others	40	2.4
Not stated	219	13.1
Total	1,669	100.0

Examining the living arrangements of clients in comparison with the population aged 70 years and over living alone indicates that over one-half of the people aged 70 and over living alone in Nillumbik received a HACC service.

Table 33: Living arrangements of HACC clients aged 70 years and over

LIVING ARRANGEMENT	NO. OF POPULATION AGED 70+	% OF POPULATION AGED 70+	NO. OF CLIENTS AGED 70+	% OF CLIENTS AGED 70+	CLIENTS 70+ PER 1,000 POP AGED 70+
Lives alone	681	20.0	390	38.4	572

Living arrangements of clients differed by service type. Over half of the clients of Domestic Assistance, Delivered Meals and Property Maintenance lived alone. On the other hand, clients of respite services were unlikely to live alone.

Table 34: Living arrangements by service type

	LIVES ALONE	LIVES WITH FAMILY	LIVES WITH OTHERS	NOT STATED	TOTAL	% OF CLIENTS LIVE ALONE
Delivered Meals	80	36	1	2	119	67.2
Domestic Assistance	210	122	6	71	409	51.3
Property Maintenance	115	84	3	26	228	50.4
Client Care Coordination	261	255	8	8	532	49.1
Assessment	290	320	16	30	656	44.2
Personal Care	60	75	1	28	164	36.6
Volunteer Social Support	20	29	1	6	56	35.7
Nursing Care	85	126	9	38	258	32.9
Allied Health	225	472	16	19	732	30.7
Planned Activity Group	58	138	8	7	211	27.5
Case Management	9	27	0	0	36	25.0
Respite	9	76	1	26	112	8.0

When number of hours is examined rather than number of clients, the picture is similar. Overall, total number of Delivered Meals and hours of Property Maintenance and Client Care Coordination provided were weighted towards clients who lived alone rather than to those who lived with family or others. In contrast, Respite hours were relatively unlikely to be delivered to clients who lived alone.

Table 35: Number of hours by service type

	LIVES ALONE	LIVES WITH FAMILY	LIVES WITH OTHERS	NOT STATED	TOTAL	% OF HOURS TO CLIENTS WHO LIVE ALONE
Delivered Meals	8,217	2,568	1	92	10,878	75.5
Property Maintenance	339	246	8	69	662	51.2
Client Care Coordination	599	587	10	9	1,204	49.7
Assessment	1,178	1,096	56	67	2,397	49.1
Volunteer Social Support	1,670	1,584	76	132	3,462	48.2
Nursing Care	2,415	2,499	201	95	5,210	46.4
Domestic Assistance	5,021	4,355	1,296	1,648	11,153	45.0
Planned Activity Group	7,502	13,779	953	459	22,692	33.1
Allied Health	1,345	3,199	61	107	4,711	28.5
Personal Care	2,400	5,593	17	532	8,542	28.1
Case Management	125	1,528	-	-	1,653	7.6
Respite	348	6,173	29	2,472	9,022	3.9

When average number of hours per client (within the year) is examined, the biggest difference that living alone made to the allocated hours of service within a year was to clients receiving Nursing Care, who were given about 44% more hours on average than those who lived with family or others. For many services, more hours of service on average were allocated to clients who lived alone; this was especially true for Respite.

Table 36: Average number of hours/meals per client by living arrangement

	LIVES ALONE	LIVES WITH FAMILY OR OTHERS	DIFFERENCE	% DIFFERENCE
Nursing Care	35.2	19.7	15.4	43.9
Planned Activity Group	174.6	114.3	60.4	34.6
Delivered Meals	107.3	84.5	22.9	21.3
Client Care Coordination	8.7	7.0	1.7	19.1
Allied Health	9.2	7.6	1.6	17.0
Assessment	3.8	3.5	0.3	7.5
Domestic Assistance	31.8	29.4	2.4	7.4
Case Management	32.2	31.8	0.3	1.0
Property Maintenance	4.9	5.8	-0.9	-18.0
Personal Care	44.9	53.4	-8.5	-18.9
Volunteer Social Support	55.5	74.3	-18.8	-34.0
Respite	50.3	85.2	-34.8	-69.2

Accommodation

The majority of clients lived in a private residence that they owned or were purchasing (74%). The level of missing data on Accommodation setting was relatively high, at 16%.

Table 37: Usual accommodation setting

ACCOMMODATION	NO. OF CLIENTS	% OF CLIENTS
Private residence – owned/purchasing	1,241	74.4
Private residence – private rental	78	4.7
Private residence – public rental	28	1.7
Independent living unit within a retirement village	33	2.0
Boarding house/private hotel	0	0
Short term crisis, emergency or transitional accommodation facility	0	0
Supported accommodation or supported living facility	12	0.7
Institutional setting	1	0.1
Public place/temporary shelter	0	0
Private residence rented from Indigenous Community	0	0
Alcohol and drug treatment residence	1	0.1
Other	13	0.8
Not stated/inadequately described	262	15.7
Total	1,669	100.0

Income source

About one-half of clients were on the Age pension (49%). Level of missing data on Income source was relatively high, at 19%.

Table 38: Clients' main income source

INCOME SOURCE	NO OF CLIENTS	% OF CLIENTS
Age Pension	817	49.0
Veterans' Affairs Pension	47	2.8
Disability Support Pension	181	10.8
Carer Payment (Pension)	35	2.1
Unemployment related benefits	6	0.4
Other government pension or benefit	84	5.0
No government pension or benefit	180	10.8
Not stated/inadequately described	319	19.1
Total	1,669	100.0

Client referral source

The most common source of referrals to HACC was the person themselves (34%), followed by a family member, friend, or significant other (13%). Missing data on this item was high, at 18%.

Table 39: Client referral source

SOURCE OF REFERRAL	CLIENTS REFERRED N	CLIENTS REFERRED %
Self	574	34.4
Family, significant other, friend	208	12.5
Hospital	154	9.2
GP/medical practitioner – community based	125	7.5
Community nursing or health service	61	3.7
Aged Care Assessment Service	60	3.6
Other	50	3
Palliative care facility/hospice	44	2.6
Other community-based service	37	2.2
Extended care/rehabilitation facility	32	1.9
Other medical/health service	12	0.7
Disability support service	6	0.4
Psychiatric/mental health service or facility	4	0.2
Residential aged care facility	0	0
Accommodation provider	0	0
Indigenous health service	0	0
Missing	302	18.1
Total	1,669	100.0

Referral pathways differed across HACC service types. The three most common sources of referrals are listed in the table below, by HACC service type. (The denominator for percentages is the number of clients of each service.)

- Self-referral accounted for over half of referrals to Allied Health.
- Family, significant others, and friends were a relatively common referral source for Planned Activity Groups (27%).
- Hospitals were a significant source of referrals to Nursing Care (21%).

Table 40: Referral source (% of clients referred)

	SELF	FAMILY, SIGNIFICANT OTHER, FRIEND	HOSPITAL
Domestic Assistance	32.3	10.0	10.8
Volunteer Social Support	42.9	21.4	1.8
Personal Care	26.2	13.4	11.6
Nursing Care	19.8	12.0	20.9
Allied Health	54.0	9.2	10.0
Planned Activity Group	27.5	26.5	1.9
Delivered Meals	32.8	21.8	10.9
Respite	23.2	9.8	3.6
Assessment	32.6	14.2	11.3
Case Management	30.6	8.3	13.9
Client Care Coordination	35.0	15.0	10.7
Property Maintenance	39.0	9.6	10.5

Cessation of HACC services

During 2014, a valid reason for cessation was recorded for 388 clients. A further 1,039 clients were coded 99, Not stated/inadequately described. The validity of data on this item is questionable, and the numbers and proportions reproduced below are unlikely to be reliable.

Table 41: Reasons for cessation

REASON FOR CESSATION	N CLIENTS	% OF CLIENTS
Client no longer needs assistance – improved status	122	7.3
Client no longer needs assistance from agency – improved status	57	3.4
Client's needs have not changed but agency cannot or will no longer provide assistance	34	2.0
Care recipient moved to residential aged care	22	1.3
Care recipient moved to other institutional setting	19	1.1
Care recipient moved to other community-based service	6	0.4
Care recipient moved out of area	8	0.5
Care recipient terminated service	14	0.8
Client died	33	2.0
Other reason	73	4.4
Not stated/inadequately described	1,039	62.3

HACC service demand projections

The methodology for determining future service demand relies on several assumptions, including that change in provision of services relies on change in the population. This assumption is tested for each service later in this section. If change in service provision in the past (2011 through 2014) parallels change in the population, it may be valid to project service provision into the future. We have produced a series of projections, but would caution against their reliability.

1. Similar to the report prepared for Whittlesea, we have produced figures for the next five years and 10 years based on service provision ratios for 2014 and population growth rates in each five-year age group. These projections uniformly anticipate increase in service provision.
2. We have also produced demand estimates based on average change from 2011 to 2014, which "iron out" some of the year-to-year variation in service provision and allow for the fact that provision of some services has been growing faster than the population while others have decreased despite increases in the target population. The projections assume that changes in the recent past will continue into the future.
3. Given the wildly different projections produced by the two methods described above, we also produced "compromise" projections, which take an average of the change rates and apply them to 2014 provision.

HACC is operating in an environment of very rapid policy change, and it is unlikely to be valid to project service use beyond the next five years.

SERVICE-TO-POPULATION RATIO

The first step in examining future need for services is to calculate service levels by age group. The table below provides the following data by age cohort:

- Residential population of Nillumbik in 2014 (based on population projections)
- The service level for each service in 2014
- The service-to-population ratio for each service (number of hours or meals per 1,000 residents).

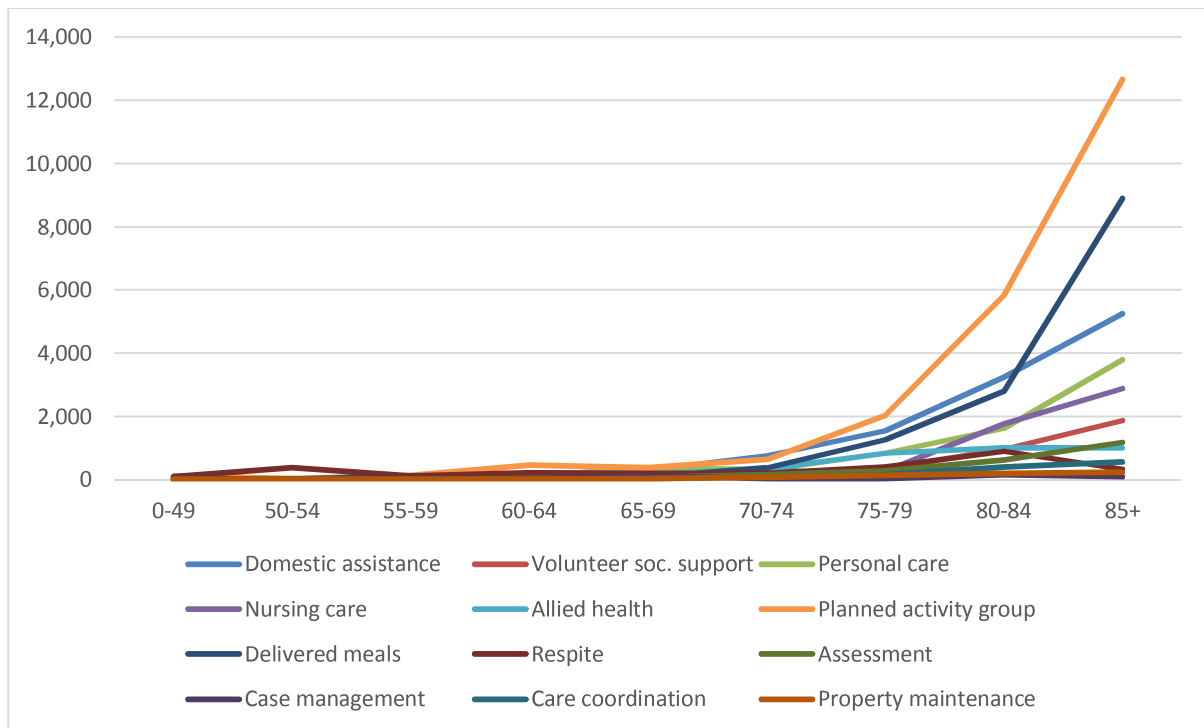
The service-to-population ratio increases significantly with age. The rate of increase in the service-to-population by age for a given service is impacted by both the increase in the number of clients and the increase in individual service levels with age.

Table 42: Residential population, service level and service-to-population ratio by age and service, 2014

	0–49	50–54	55–59	60–64	65–69	70–74	75–79	80–84	85+
Population 2014	41,066	5,340	4,962	3,978	3,039	1,850	1,058	618	624
N clients per age group	255	65	68	89	174	215	231	237	332
Age-specific provision (hours or meals)									
Domestic Assistance	1,023	111	476	326	904	1,396	1,629	2,009	3,279
Volunteer soc. support	563	44	4	470	66	177	371	596	1,171
Personal Care	2,020	197	21	415	1,053	565	893	1,002	2,375
Nursing Care	485	87	279	321	380	471	290	1,097	1,799
Allied Health	440	202	304	492	528	613	887	620	626
Planned Activity Group	4,101	175	624	1,809	1,115	1,165	2,162	3,608	7,900
Delivered Meals	351	0	580	420	219	692	1,331	1,727	5,558
Respite	3,578	1,948	545	830	598	351	416	553	203
Assessment	239	76	74	98	225	277	295	381	733
Case Management	879	60	135	44	321	40	28	91	55
Care Coordination	118	37	33	70	60	133	165	240	348
Property Maintenance	13	2	9	15	84	133	146	114	144
Service hours or meals to population ratio									
Domestic Assistance	24.9	20.8	95.9	82.0	297.5	754.6	1,539.7	3,250.8	5,254.8
Volunteer soc. support	13.7	8.2	0.8	118.1	21.7	95.8	350.8	964.3	1,876.1
Personal Care	49.2	37.0	4.3	104.4	346.4	305.4	844.0	1,621.9	3,806.6
Nursing Care	11.8	16.3	56.2	80.7	125.0	254.6	274.1	1,775.1	2,883.0
Allied Health	10.7	37.8	61.2	123.6	173.7	331.6	838.0	1,002.7	1,003.7
Planned Activity Group	99.9	32.8	125.8	454.8	366.8	629.9	2,043.5	5,838.9	12,660.6
Delivered Meals	8.5	0	116.9	105.6	72.1	374.1	1,258.0	2,794.5	8,907.1
Respite	87.1	364.8	109.8	208.6	196.8	189.7	393.2	894.8	325.3
Assessment	5.8	14.2	14.9	24.6	74.0	149.8	278.4	616.5	1,174.7
Case Management	21.4	11.2	27.2	11.1	105.6	21.6	26.5	147.2	88.1
Care Coordination	2.9	6.9	6.7	17.6	19.7	71.9	156.0	388.3	557.7
Property Maintenance	0.3	0.4	1.8	3.8	27.6	71.9	138.0	184.5	230.8

If the service provision (total hours or meals provided) is graphed by age group and service type, it is clear that the steepest curve by age group is for Planned Activity Group hours.

Figure 6: Service hours/meals per 1000 population by age group and service type, 2014



CLIENT-TO-POPULATION RATIO

The table below provides the following data by age cohort:

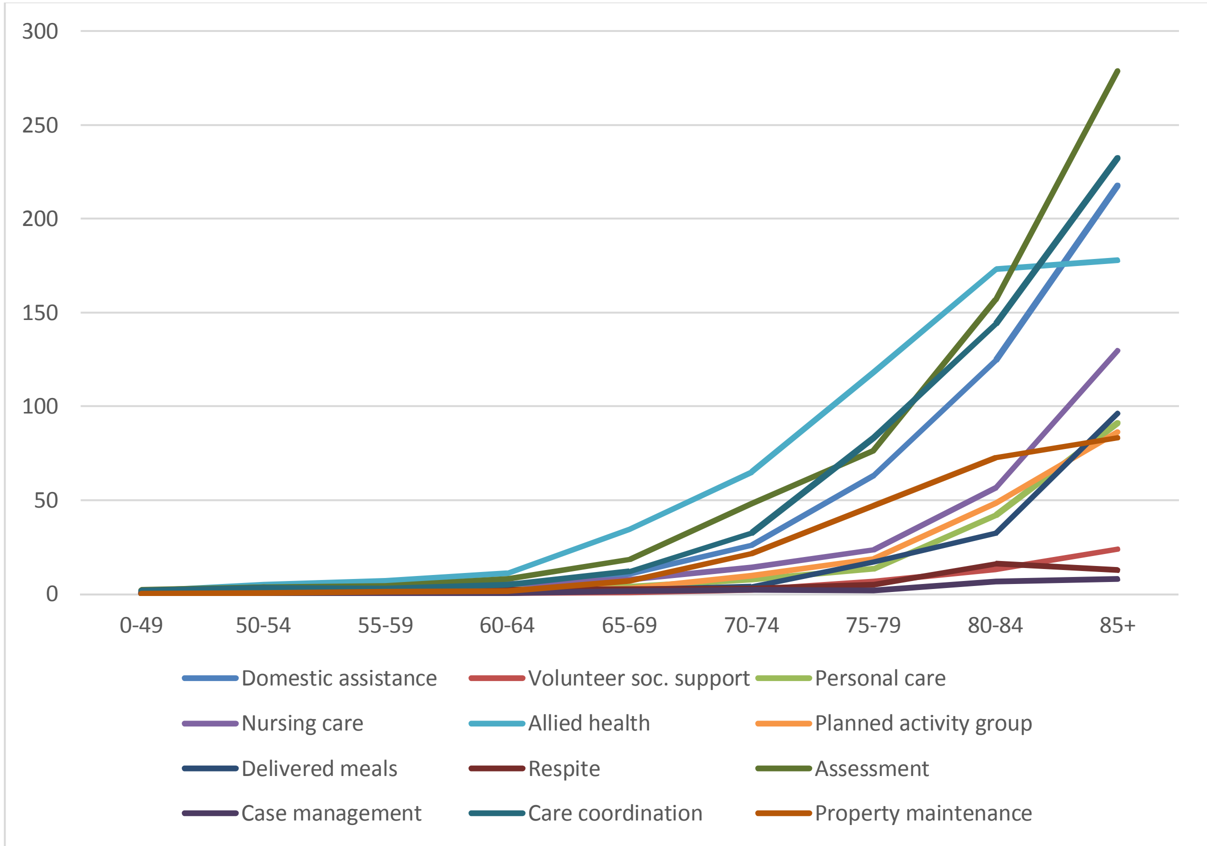
- Residential population 2014
- Number of clients by service
- Client-to-population ratio for each service (number of clients per 1,000 residents).

As expected, the client-to-population ratio increases with age for all HACC services. However, the rate of increase is much steeper for some service types than others (see figure 7 below). In Nillumbik, the trend is particularly strong for Assessment, where provision per year per 1000 people aged 85 and over rose to 279. Overall, provision rose from 9.5 per 1000 in the age group under 50 to 517 per 1000 in the age group aged over 85.

Table 43: Residential population, number of clients and clients-to-population ratio by age and service, 2014

	0–49	50–54	55–59	60–64	65–69	70–74	75–79	80–84	85+
Population 2014	81,418	8,195	7,775	7,023	6,446	4,695	3,534	2,807	3,212
N clients per age group	781	245	293	331	494	788	1,029	1,256	1,662
Age-specific provision (clients)									
Domestic Assistance	23	4	9	13	32	48	67	77	136
Volunteer soc. support	16	1	1	2	2	4	7	8	15
Personal Care	22	7	4	8	12	14	14	26	57
Nursing Care	29	8	10	20	23	26	25	35	81
Allied Health	62	25	34	43	105	120	125	107	111
Planned Activity Group	56	8	8	8	8	18	20	30	54
Delivered Meals	3	0	3	2	6	7	18	20	60
Respite	45	18	6	8	7	5	5	10	8
Assessment	88	19	20	32	56	89	81	97	174
Case Management	11	2	2	2	4	4	2	4	5
Care Coordination	66	16	13	19	36	60	88	89	145
Property Maintenance	7	2	5	5	21	40	50	45	52
Client-to-population ratio									
Domestic Assistance	0.6	0.7	1.8	3.3	10.5	25.9	63.3	124.6	217.9
Volunteer soc. support	0.4	0.2	0.2	0.5	0.7	2.2	6.6	12.9	24.0
Personal Care	0.5	1.3	0.8	2.0	3.9	7.6	13.2	42.1	91.3
Nursing Care	0.7	1.5	2.0	5.0	7.6	14.1	23.6	56.6	129.8
Allied Health	1.5	4.7	6.9	10.8	34.6	64.9	118.1	173.1	177.9
Planned Activity Group	1.4	1.5	1.6	2.0	2.6	9.7	18.9	48.5	86.5
Delivered Meals	0.1	-	0.6	0.5	2.0	3.8	17.0	32.4	96.2
Respite	1.1	3.4	1.2	2.0	2.3	2.7	4.7	16.2	12.8
Assessment	2.1	3.6	4.0	8.0	18.4	48.1	76.6	157.0	278.8
Case Management	0.3	0.4	0.4	0.5	1.3	2.2	1.9	6.5	8.0
Care Coordination	1.6	3.0	2.6	4.8	11.8	32.4	83.2	144.0	232.4
Property Maintenance	0.2	0.4	1.0	1.3	6.9	21.6	47.3	72.8	83.3

Figure 7: Client-to-population ratio by service



DEMAND PROJECTIONS

This section provides demand projections for each HACC service, assuming a constant service-to-population ratio, **based on changes in the population structure and service provision in 2014 only**.[13] (Later sections of this report take a different approach to forecasting demand.)

This modelling shows particularly strong growth in demand for all services to 2019 and 2024, particularly (in percentage terms) for Case Management and Respite.

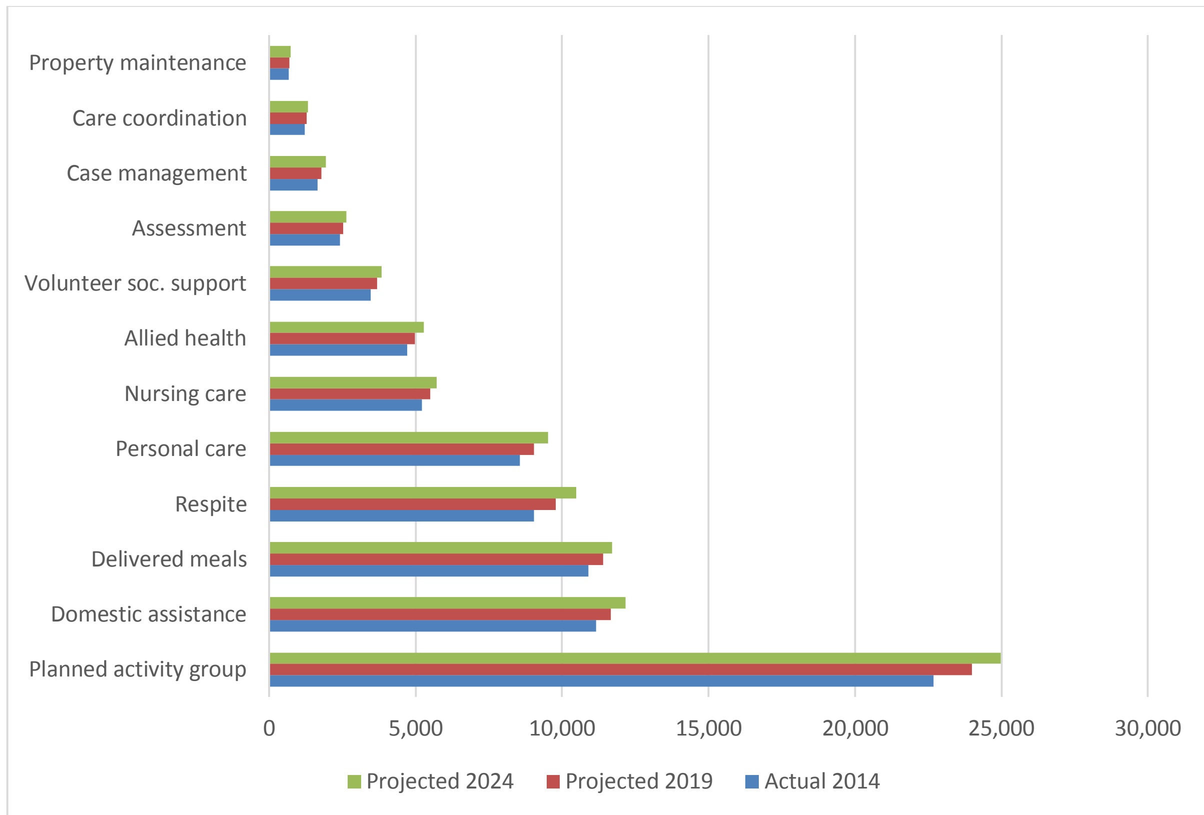
Table 44: Service level (hours or meals) by service, 2014, Projected 2019, and projected 2024

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
Case Management	1,653	1,784	1,924	131	7.9	271	16.4
Respite	9,022	9,773	10,466	751	8.3	1,444	16.0
Allied Health	4,711	4,970	5,268	259	5.5	557	11.8
Personal Care	8,542	9,036	9,507	494	5.8	964	11.3
Volunteer soc. support	3,462	3,674	3,820	212	6.1	358	10.3
Planned Activity Group	22,660	23,975	24,961	1,314	5.8	2,301	10.2
Assessment	2,397	2,516	2,629	119	4.9	232	9.7
Nursing Care	5,209	5,487	5,705	278	5.3	496	9.5
Care Coordination	1,204	1,262	1,315	58	4.9	111	9.2
Domestic Assistance	11,153	11,660	12,165	507	4.5	1,012	9.1
Property Maintenance	660	684	718	24	3.6	58	8.8
Delivered Meals	10,878	11,384	11,688	506	4.7	810	7.4

[13] This methodology is consistent with that used in the Whittlesea Data Story report.

The following graph illustrates this increase in service demand by service type

Figure 8: Service level, 2014, and projected 2019 and 2024

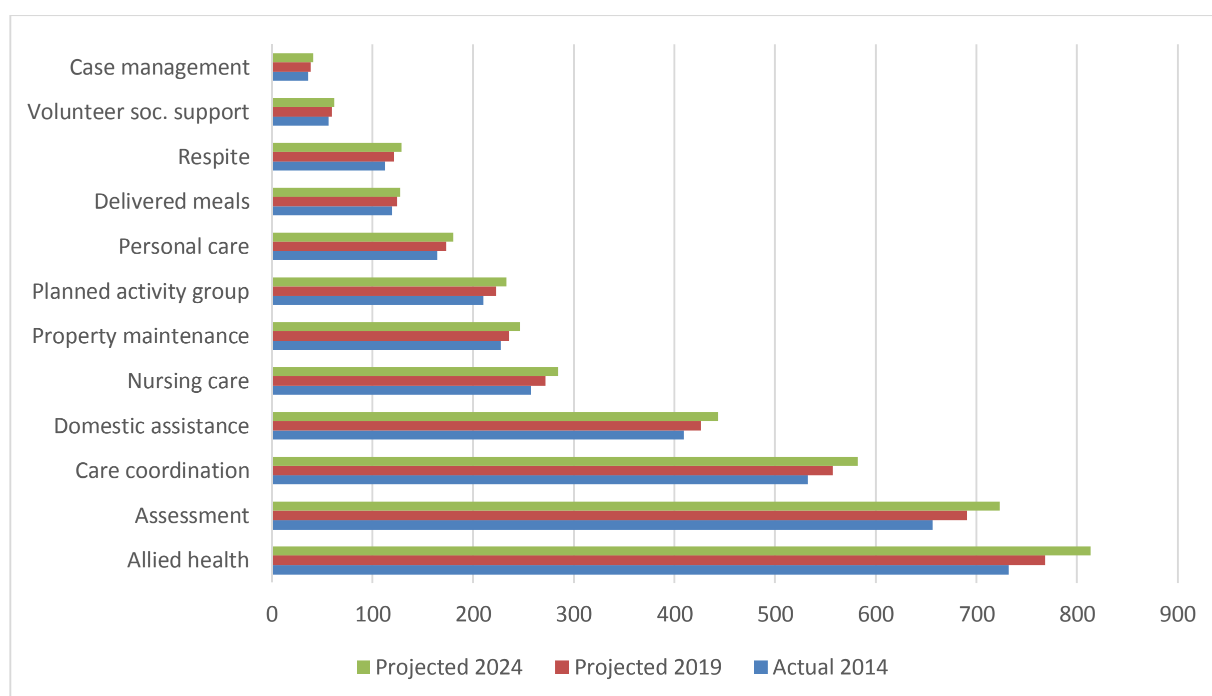


The number of clients is also likely to increase. The following table and graph illustrate projected increases in client numbers. Increases in numbers of clients are again particularly strong for Respite and Case Management.

Table 45: Number of clients by service, 2014, projected 2019, and projected 2024

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
Respite	112	121	129	9	7.8	17	14.9
Case Management	36	38	41	2	6.8	5	13.3
Allied Health	732	768	813	36	4.9	81	11.1
Planned Activity Group	210	223	233	13	6.0	23	10.9
Nursing Care	257	272	284	15	5.7	27	10.6
Volunteer soc. support	56	59	62	3	5.7	6	10.5
Assessment	656	690	723	34	5.2	67	10.2
Personal Care	164	173	180	9	5.4	16	9.8
Care Coordination	532	557	582	25	4.7	50	9.4
Domestic Assistance	409	426	443	17	4.2	34	8.4
Property Maintenance	227	235	246	8	3.6	19	8.4
Delivered Meals	119	124	127	5	4.1	8	7.0

Figure 9: Client numbers, 2014, and projected 2019 and 2024



DEMAND PROJECTIONS BY AGE FOR EACH SERVICE

In this section of the report, demand projections are provided by age for each service, firstly for service level and then by number of clients. Changes in demand are also calculated for people aged 0–64 and those aged 65+.

Each subsection of this part of the report does three things.

1. Projections are provided that rely on assumptions of invariant ratios of service provision by age group. Projected service demand is based on 2014 provision and changes in the population structure, consistent with the Whittlesea data story report. These projections assume that service provision in 2014 is a good basis from which to project future demand.
2. This section of the report examines those assumptions by looking at whether change over the previous four years (2011 to 2014) in service provision matches changes in the population for the population aged 70+.
   Generally, over the past few years, change in service provision has echoed change in the population aged 85 and over for some services (e.g., Domestic Assistance), but not others. Provision of services has fallen for Delivered Meals and Nursing Care.
3. A second set of projections is provided that averages out service provision from 2011 to 2014 and applies rates of change to service provision in 2014. This set of projections assumes that whatever happened from 2011 to 2014 will continue, but “irons out” yearly variation.
4. A third set of projections averages the results of the above two methods of estimating future service provision.

DOMESTIC ASSISTANCE

Table 46: Service level by age, 2014, and projected 2019 and 2024, Domestic Assistance

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019	% INCREASE TO 2019	INCREASE TO 2024	% INCREASE TO 2024
0–49	1,023	1123	1201	100	9.7	178	17.4
50–54	111	120	129	9	8.2	18	16.1
55–59	476	520	559	44	9.2	83	17.3
60–64	326	378	409	52	15.9	83	25.4
65–69	904	948	1080	44	4.9	176	19.4
70–74	1,396	1473	1543	77	5.5	147	10.6
75–79	1,629	1623	1725	-6	-0.4	96	5.9
80–84	2,009	2021	2064	12	0.6	55	2.7
85+	3,279	3454	3456	175	5.4	177	5.4
0–64	1,936	2,140	2,297	204	10.5	361	18.6
65+	9,217	9,520	9,868	303	3.3	651	7.1
Total	11,153	11,660	12,165	507		1,012	

Table 47: Number of clients by age, 2014, and projected 2019 and 2024, Domestic Assistance

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019	% INCREASE TO 2019	INCREASE TO 2024	% INCREASE TO 2024
0–49	23	25	27	2	9.7	4	17.4
50–54	4	4	5	0	8.2	1	16.1
55–59	9	10	11	1	9.2	2	17.3
60–64	13	15	16	2	15.9	3	25.4
65–69	32	34	38	2	4.9	6	19.4
70–74	48	51	53	3	5.5	5	10.6
75–79	67	67	71	-0	-0.4	4	5.9
80–84	77	77	79	0	0.6	2	2.7
85+	136	143	143	7	5.4	7	5.4
0–64	49	54	59	5	11.1	10	19.4
65+	360	372	385	12	3.3	25	6.9
Total	409	426	443	17		34	

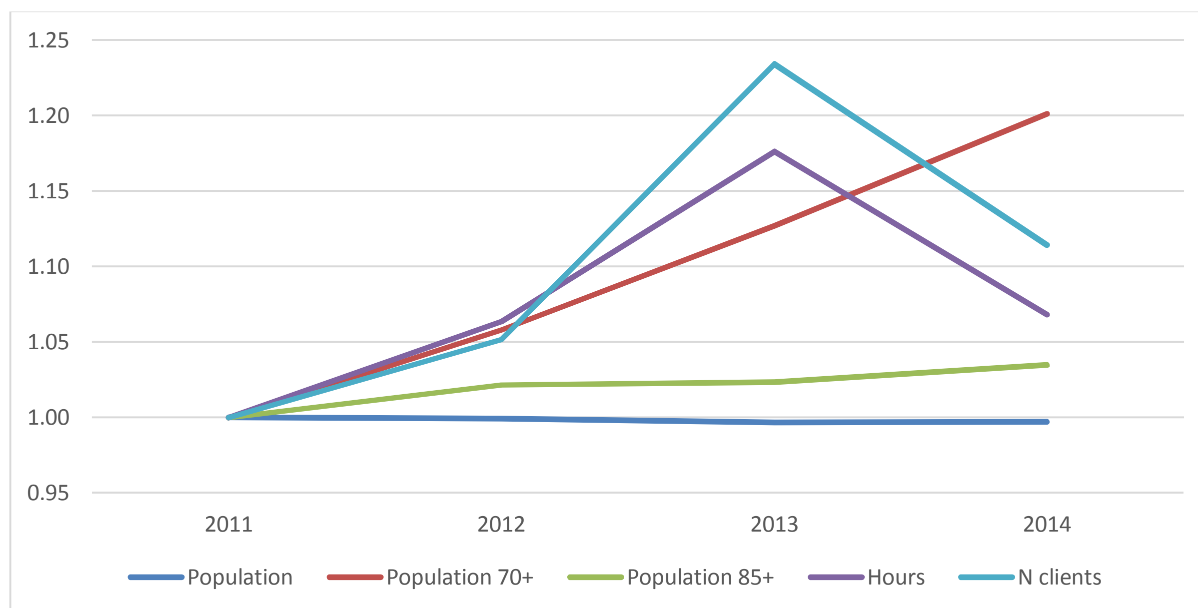
The figures in the following section of the report use growth curves to illustrate change from a pre-determined point—in this case, 2011. The numbers in the graph are ratios of the number for each year in comparison to the number in 2011. The purpose of constructing these figures is to test the assumption that changes in the population can be used to predict change in service demand.

The figure below illustrates growth curves for the years 2011 to 2014 for three populations and two measures of service demand. The population curves are for the whole Nillumbik population, the population aged 70 and over and the population aged 85 and over. The demand curves are for hours and numbers of clients.

This figure shows that from 2011 to 2014, overall, the numbers and hours of Domestic Assistance provided in Nillumbik grew (and increases in the population 70+ resembled population growth from 2011 to 2012), but there was variation year to year, and a reduction from 2013 to 2014.

The conclusion is that growth in the population aged 70 years and over may drive change in the numbers of Domestic Assistance clients, but estimates are likely to be inaccurate on a year-to-year basis.

Figure 10: Growth curves for population and service provision: Domestic Assistance, 2011-2014



The numbers on which this figure is based are provided below:

Table 47b: Hours and number of clients, Domestic Assistance, 2011– 2014

	2011	2012	2013	2014
Hours	10,440	11,105	12,283	11,153
N clients	367	386	453	409

The following table compares estimates of change in service provision to 2019 and 2025 based on (a) population growth only, (b) change from 2011 to 2014 only, and (c) a "compromise" solution. Estimates of future provision based on recent rates of growth in Domestic Assistance result in much higher estimates of growth than estimates based on population growth only.

Table 47c: Projected service provision, Domestic Assistance, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011–2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
Hours	11,660	12,165	12,676	14,406	12,168	13,286
Clients	426	443	504	622	463	529
% increase in hours	4.5	9.1	13.7	29.2	9.1	19.1
% increase in clients	3.3	6.9	23.3	52.0	13.3	29.4

VOLUNTEER SOCIAL SUPPORT

Table 48: Service level by age, 2014, and projected 2019 and 2024, Volunteer Social Support

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	563	618	661	55	9.7	98	17.4
50–54	44	48	51	4	8.2	7	16.1
55–59	4	4	5	0	9.2	1	17.3
60–64	470	545	589	75	15.9	119	25.4
65–69	66	69	79	3	4.9	13	19.4
70–74	177	187	196	10	5.5	19	10.6
75–79	371	370	393	-1	-0.4	22	5.9
80–84	596	600	612	4	0.6	16	2.7
85+	1,171	1,233	1,234	63	5.4	63	5.4
0–64	1,081	1,215	1,306	134	12.4	225	20.8
65+	2,381	2,459	2,514	78	3.3	133	5.6
Total	3,462	3,674	3,820	212		358	

Table 49: Number of clients by age, 2014, and projected 2019 and 2024, Volunteer Social Support

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019	INCREASE TO 2019 %	INCREASE TO 2024	INCREASE TO 2024 %
0–49	16	18	19	2	9.7	3	17.4
50–54	1	1	1	0	8.2	0	16.1
55–59	1	1	1	0	9.2	0	17.3
60–64	2	2	3	0	15.9	1	25.4
65–69	2	2	2	0	4.9	0	19.4
70–74	4	4	4	0	5.5	0	10.6
75–79	7	7	7	-0	-0.4	0	5.9
80–84	8	8	8	0	0.6	0	2.7
85+	15	16	16	1	5.4	1	5.4
0–64	20	22	24	2	10.3	4	18.1
65+	36	37	38	1	3.2	2	6.3
Total	56	59	62	3	5.7	6	10.5

The growth curves for provision of Volunteer Social Support bear little resemblance to those for change in the population. This is especially the case for client numbers, which have been decreasing since 2012. Change in hours of service have been broadly similar to changes in the population aged 80+ and over. This suggests that changes in the population aged 85 years and over may affect demand, in terms of numbers of clients, but projections for demand for this service are not reliable.

Figure 11: Growth curves for population and service provision: Volunteer Social Support, 2011-2014

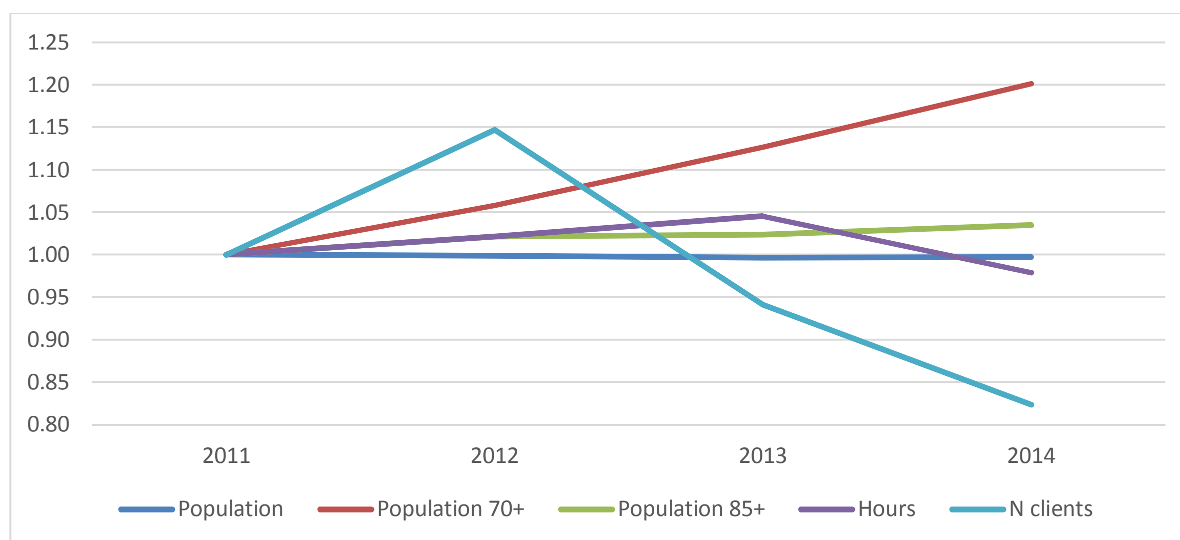


Table 49b: Hours and number of clients, Volunteer Social Support, 2011 to 2014

	2011	2012	2013	2014
Hours	3,538	3,613	3,698	3,462
N clients	68	78	64	56

The following table compares estimates of change in service provision to 2019 and 2025 based on (a) population growth only, (b) change from 2011 to 2014 only, and (c) a “compromise” solution. Estimates of future provision based on recent rates of growth in Volunteer Social Support result in decreases in hours and client numbers, rather than the increase suggested by population growth.

Table 49c: Projected service provision, Volunteer Social Support, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011-2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
Hours	3,674	3,820	3,354	3,250	3,514	3,535
Clients	59	62	43	33	33	30
% increase in hours	6.1	10.3	-3.1	-6.1	1.5	2.1
% increase in clients	5.7	10.5	-23.6	-41.7	-9.0	-15.6

PERSONAL CARE

Table 50: Service level by age, 2014, and projected 2019 and 2024, Personal Care

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	2,020	2,217	2,371	197	9.7	351	17.4
50–54	197	213	229	16	8.2	32	16.1
55–59	21	23	25	2	9.2	4	17.3
60–64	415	481	521	66	15.9	105	25.4
65–69	1,053	1,104	1,257	52	4.9	205	19.4
70–74	565	596	625	31	5.5	60	10.6
75–79	893	890	946	-3	-0.4	53	5.9
80–84	1,002	1,009	1,030	6	0.6	27	2.7
85+	2,375	2,502	2,504	127	5.4	128	5.4
0–64	2,654	2,935	3,146	281	10.6	492	18.5
65+	5,888	6,101	6,361	213	3.6	472	8.0
Total	8,542	9,036	9,507	494		964	

Table 51: Number of clients by age, 2014, and projected 2019 and 2024, Personal Care

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	22	24	26	2	9.7	4	17.4
50–54	7	8	8	1	8.2	1	16.1
55–59	4	4	5	0	9.2	1	17.3
60–64	8	9	10	1	15.9	2	25.4
65–69	12	13	14	1	4.9	2	19.4
70–74	14	15	15	1	5.5	1	10.6
75–79	14	14	15	-0	-0.4	1	5.9
80–84	26	26	27	0	0.6	1	2.7
85+	57	60	60	3	5.4	3	5.4
0–64	41	45	49	4	10.6	8	18.7
65+	123	128	131	5	3.7	8	6.8
Total	164	173	180	9		16	

The growth curves for provision of Personal Care are relatively erratic, with increases overall but decreases from 2013 to 2014. For Personal Care, there may be fluctuation from year-to-year in numbers of clients and hours of service provided. While growth in the population aged 70 years and over is the best predictor of change in demand, it is not a reliable indicator on a year-to-year basis.

Figure 12: Growth curves for population and service provision: Personal Care, 2011-2014

Table 51b: Hours and number of clients, Personal Care, 2011–2014

	2011	2012	2013	2014
Hours	7,893	7,134	9,219	8,542
N clients	132	137	168	164

The following table shows estimates of change in service provision based on (a) population growth only, (b) change from 2011 to 2014 only, and (c) a “compromise” solution. Estimates of future provision based on recent growth in Personal Care result in much higher estimates of hours than estimates based on population growth only, but lower estimates of client numbers.

Table 51c: Projected service provision, Personal Care, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011-2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
Hours	9,036	9,507	10,436	12,750	9,736	11,129
Clients	173	180	241	354	207	267
% increase in hours	5.8	11.3	22.2	49.3	14.0	30.3
% increase in clients	5.4	9.8	47.0	116.1	26.2	63.0

NURSING CARE

Table 52: Service level by age, 2014, and projected 2019 and 2024, Nursing

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	485	532	569	47	9.7	84	17.4
50–54	87	94	101	7	8.2	14	16.1
55–59	279	305	327	26	9.2	48	17.3
60–64	321	372	402	51	15.9	81	25.4
65–69	380	399	454	19	4.9	74	19.4
70–74	471	497	521	26	5.5	50	10.6
75–79	290	289	307	-1	-0.4	17	5.9
80–84	1,097	1,104	1,127	7	0.6	30	2.7
85+	1,799	1,895	1,896	96	5.4	97	5.4
0–64	1,172	1,303	1,400	131	11.2	228	19.5
65+	4,037	4,184	4,305	147	3.6	268	6.6
Total	5,209	5,487	5,705	278		496	

Table 53: Number of clients by age, 2014, and projected 2019 and 2024, Nursing

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	29	32	34	3	9.7	5	17.4
50–54	8	9	9	1	8.2	1	16.1
55–59	10	11	12	1	9.2	2	17.3
60–64	20	23	25	3	15.9	5	25.4
65–69	23	24	27	1	4.9	4	19.4
70–74	26	27	29	1	5.5	3	10.6
75–79	25	25	26	-0	-0.4	1	5.9
80–84	35	35	36	0	0.6	1	2.7
85+	81	85	85	4	5.4	4	5.4
0–64	67	75	80	8	11.3	13	19.6
65+	190	197	204	7	3.7	14	7.4
Total	257	272	284	15		27	

The growth curves for Nursing Care indicate that numbers of hours and clients have changed unpredictably between 2011 and 2014. Projections of demand based on changes in population are likely to be misleading in the case of Nursing Care.

Figure 13: Growth curves for population and service provision: Nursing Care, 2011-2014

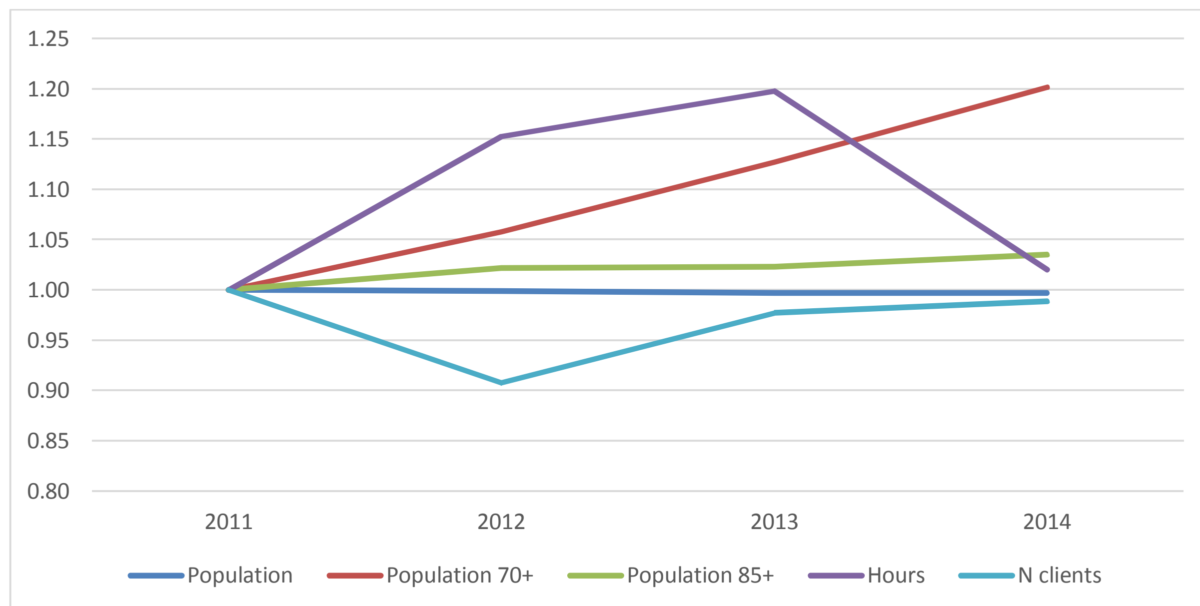


Table 53b: Hours and number of clients, Nursing Care, 2011–2014

	2011	2012	2013	2014
Hours	5,106	5,885	6,117	5,210
N clients	261	237	255	258

The following table compares estimates of change in Nursing Care provision to 2019 and 2025 based on (a) population growth only, (b) change from 2011 to 2014 only, and (c) a "compromise" solution. Estimates of future provision based on recent rates of change in Nursing Care result in increases in hours of service but slight decreases in client numbers, in contrast with increases based on population growth.

Table 53c: Projected service provision, Nursing Care, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011–2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
Hours	5,487	5,705	5,600	6,020	5,543	5,862
Clients	272	284	256	254	264	269
% increase in hours	5.3	9.5	7.5	15.6	6.4	12.5
% increase in clients	5.7	10.6	-0.3	-1.0	2.7	4.8

ALLIED HEALTH

Table 54: Service level by age, 2014, and projected 2019 and 2024, Allied Health

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	440	483	516	43	9.7	76	17.4
50–54	202	218	234	17	8.2	32	16.1
55–59	304	331	356	28	9.2	53	17.3
60–64	492	570	617	78	15.9	125	25.4
65–69	528	554	631	26	4.9	103	19.4
70–74	613	647	678	34	5.5	65	10.6
75–79	887	883	939	-3	-0.4	52	5.9
80–84	620	624	637	4	0.6	17	2.7
85+	626	660	660	34	5.4	34	5.4
0–64	1,437	1,603	1,724	165	11.5	286	19.9
65+	3,274	3,368	3,544	94	2.9	270	8.3
Total	4,711	4,970	5,268	259		557	

Table 55: Number of clients by age, 2014, and projected 2019 and 2024, Allied Health

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	62	68	73	6	9.7	11	17.4
50–54	25	27	29	2	8.2	4	16.1
55–59	34	37	40	3	9.2	6	17.3
60–64	43	50	54	7	15.9	11	25.4
65–69	105	110	125	5	4.9	20	19.4
70–74	120	127	133	7	5.5	13	10.6
75–79	125	125	132	-0	-0.4	7	5.9
80–84	107	108	110	1	0.6	3	2.7
85+	111	117	117	6	5.4	6	5.4
0–64	164	182	196	18	11.0	32	19.3
65+	568	586	617	18	3.2	49	8.7
Total	732	768	813	36		81	

Changes in provision of Allied Health—both hours and clients—outstripped changes in the population. Increases in demand for Allied Health may reflect policy, such as the Active Service Model, that encourages the use of restorative services in HACC. The figure below indicates that further changes in population may under-estimate growth in demand for Allied Health in the future.

Figure 14: Growth curves for population and service provision: Allied Health, 2011-2014

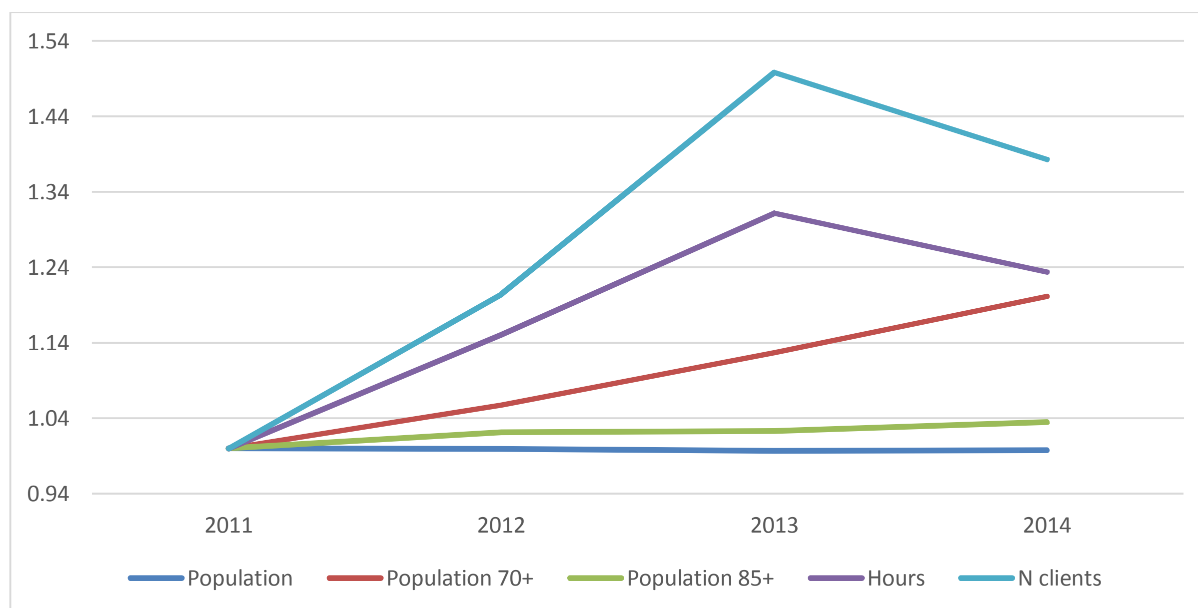


Table 55b: Hours and number of clients, Allied Health, 2011–2014

	2011	2012	2013	2014
Hours	3,816	4,394	5,007	4,711
N clients	529	637	793	732

The following table compares estimates of change in Allied Health provision to 2019 and 2025 based on (a) population growth only, (b) change from 2011 to 2014 only, and (c) a "compromise" solution. Estimates of future provision based on recent rates of change in Allied Health result in much sharper increases in both hours and client numbers than estimates based on population growth.

Table 55c: Projected service provision, Allied Health, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011–2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
Hours	4,970	5,268	6,835	9,917	5,903	7,592
Clients	768	813	1,313	2,357	1,041	1,585
% increase in hours	5.5	11.8	45.1	110.5	25.3	61.2
% increase in clients	4.9	11.1	79.4	222.0	42.2	116.5

PLANNED ACTIVITY GROUP (PAG)

Table 56: Service level by age, 2014, and projected 2019 and 2024, PAG

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	4,101	4,501	4,814	400	9.7	713	17.4
50–54	175	189	203	14	8.2	28	16.1
55–59	624	682	733	57	9.2	108	17.3
60–64	1,809	2,097	2,268	288	15.9	459	25.4
65–69	1,115	1,169	1,331	55	4.9	217	19.4
70–74	1,165	1,230	1,288	64	5.5	123	10.6
75–79	2,162	2,154	2,289	-8	-0.4	127	5.9
80–84	3,608	3,631	3,707	22	0.6	99	2.7
85+	7,900	8,323	8,327	423	5.4	427	5.4
0–64	6,710	7,468	8,018	759	11.3	1,308	19.5
65+	15,951	16,506	16,943	556	3.5	992	6.2
Total	22,660	23,975	24,961	1,314		2,301	

Table 57: Number of clients by age, 2014, and projected 2019 and 2024, PAG

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	56	61	66	5	9.7	10	17.4
50–54	8	9	9	1	8.2	1	16.1
55–59	8	9	9	1	9.2	1	17.3
60–64	8	9	10	1	15.9	2	25.4
65–69	8	8	10	0	4.9	2	19.4
70–74	18	19	20	1	5.5	2	10.6
75–79	20	20	21	-0	-0.4	1	5.9
80–84	30	30	31	0	0.6	1	2.7
85+	54	57	57	3	5.4	3	5.4
0–64	80	88	94	8	10.1	14	18.1
65+	130	134	138	4	3.4	8	6.4
Total	210	223	233	13		23	

Planned Activity Group hours grew steadily from 2011 to 2014. However, the numbers of clients have been more erratic. The pattern over time is broadly consistent with increases in the populations aged 70 years and over. The projections for demand of Planned Activity Groups in HACC may not be reliable on a year-to-year basis, though some growth may be anticipated.

Figure 15: Growth curves for population and service provision: Planned Activity Groups, 2011-2014

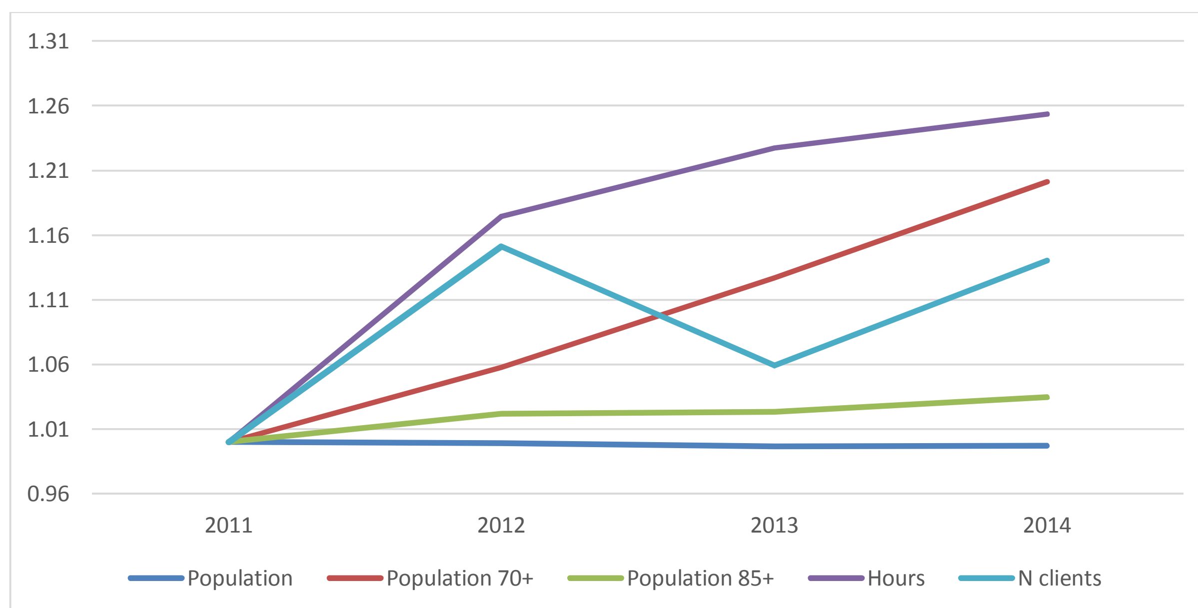


Table 57b: Hours and number of clients, Planned Activity Group, 2011–2014

	2011	2012	2013	2014
Hours	18,098	21,261	22,219	22,692
N clients	185	213	196	211

The following table compares estimates of change in PAG provision to 2019 and 2025 based on (a) population growth only, (b) change from 2011 to 2014 only, and (c) a “compromise” solution. Estimates of future provision based on recent change in PAG provision result in much sharper increases in both hours and client numbers than estimates based on population growth alone.

Table 57c: Projected service provision, Planned Activity Groups, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011–2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
Hours	23,975	24,961	33,400	49,160	28,687	37,060
Clients	223	233	268	342	245	287
% increase in hours	5.8	10.2	47.4	116.9	26.6	63.5
% increase in clients	6.0	10.9	27.8	62.7	16.9	36.8

DELIVERED MEALS

Table 58: Service level (N meals) by age, 2014, and projected 2019 and 2024, Delivered Meals

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	351	385	412	34	9.7	61	17.4
50–54	0	-	-	-		-	
55–59	580	633	681	53	9.2	101	17.3
60–64	420	487	526	67	15.9	106	25.4
65–69	219	230	262	11	4.9	43	19.4
70–74	692	730	765	38	5.5	73	10.6
75–79	1,331	1,326	1,409	-5	-0.4	78	5.9
80–84	1,727	1,738	1,774	11	0.6	47	2.7
85+	5,558	5,855	5,859	297	5.4	301	5.4
0–64	1,351	1,505	1,619	154	11.4	268	19.8
65+	9,527	9,879	10,069	352	3.7	542	5.7
Total	10,878	11,384	11,688	506		810	

Table 59: Number of clients by age, 2014, and projected 2019 and 2024, Delivered Meals

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	3	3	4	0	9.7	1	17.4
50–54	-	-	-	-		-	
55–59	3	3	4	0	9.2	1	17.3
60–64	2	2	3	0	15.9	1	25.4
65–69	6	6	7	0	4.9	1	19.4
70–74	7	7	8	0	5.5	1	10.6
75–79	18	18	19	-0	-0.4	1	5.9
80–84	20	20	21	0	0.6	1	2.7
85+	60	63	63	3	5.4	3	5.4
0–64	8	9	10	1	11.1	2	19.4
65+	111	115	118	4	3.6	7	6.1
Total	119	124	127	5		8	

The HACC MDS for 2011 shows that in Nillumbik, only six clients received Delivered Meals and only 321 meals were delivered. This seems to be an error. (In 2010, 12,394 meals were delivered in Nillumbik to 120 clients). Growth curves in this section focus only on 2012 to 2014. Numbers of meals and clients increased to 2013 but decreased again to 2014. Further increases in population may well not predict demand for the service.

Figure 16: Growth curves for population and service provision: Delivered Meals, 2011-2014

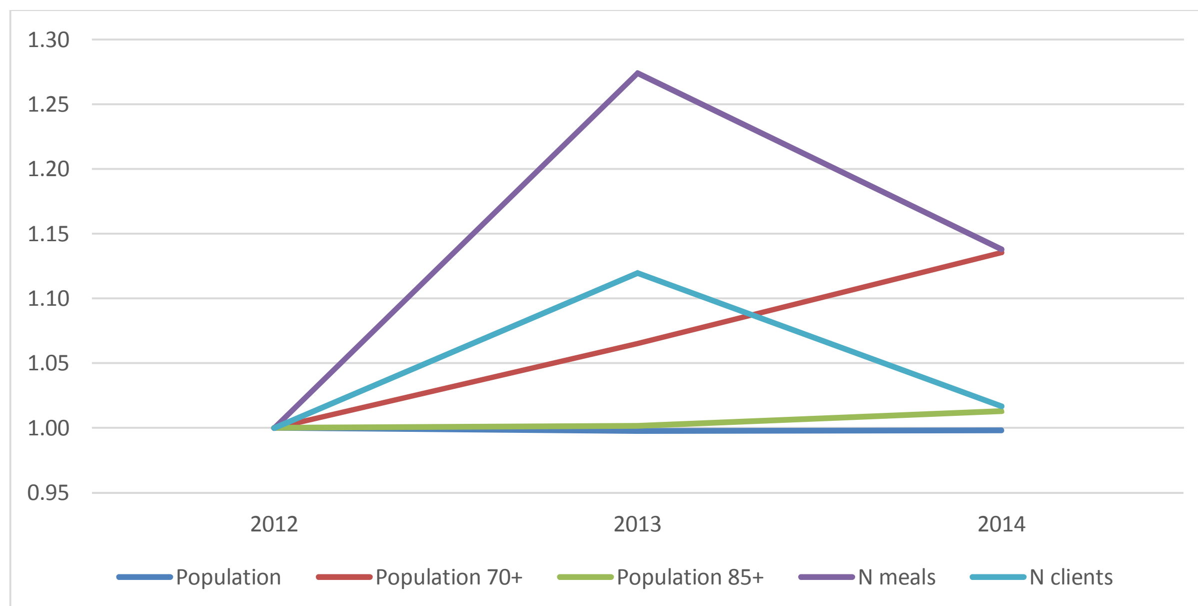


Table 59b: Meals and number of clients, Delivered Meals, 2011–2014

	2011	2012	2013	2014
N meals	321	9,559	12,180	10,878
N clients	6	117	131	119

The following table compares estimates of change in Delivered Meals provision based on (a) population growth only, (b) change from 2011 to 2014 only, and (c) a "compromise" solution. Estimates of future provision based on recent rates of change in Delivered Meals result in sharper increases in both hours and client numbers than those predicted by population growth alone.

Table 59c: Projected service provision, Delivered Meals, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011-2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
N meals	11,384	11,688	16,255	24,290	13,820	17,989
N clients	124	127	128	137	126	132
% increase in hours	4.7	7.4	49.4	123.3	27.0	65.4
% increase in clients	4.1	7.0	7.2	14.9	5.6	11.0

RESPITE

Table 60: Service level by age, 2014, and projected 2019 and 2024, Respite

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	3,578	3,927	4,200	349	9.7	622	17.4
50–54	1,948	2,108	2,261	160	8.2	313	16.1
55–59	545	595	640	50	9.2	95	17.3
60–64	830	962	1,040	132	15.9	210	25.4
65–69	598	627	714	29	4.9	116	19.4
70–74	351	370	388	19	5.5	37	10.6
75–79	416	414	440	-2	-0.4	24	5.9
80–84	553	556	568	3	0.6	15	2.7
85+	203	214	214	11	5.4	11	5.4
0–64	6,901	7,591	8,142	690	10.0	1,241	18.0
65+	2,121	2,182	2,325	61	2.9	204	9.6
Total	9,022	9,773	10,466	751		1,444	

Table 61: Number of clients by age, 2014, and projected 2019 and 2024, Respite

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	45	49	53	4	9.7	8	17.4
50–54	18	19	21	1	8.2	3	16.1
55–59	6	7	7	1	9.2	1	17.3
60–64	8	9	10	1	15.9	2	25.4
65–69	7	7	8	0	4.9	1	19.4
70–74	5	5	6	0	5.5	1	10.6
75–79	5	5	5	-	0.0	0	5.9
80–84	10	10	10	0	0.6	0	2.7
85+	8	8	8	0	5.4	0	5.4
0–64	77	85	91	8	10.0	14	17.9
65+	35	36	38	1	3.1	3	8.3
Total	112	121	129	9		17	

Provision of Respite in Nillumbik has increased hugely from 2011 to 2012, much more steeply than would have been predicted by changes in the population. Increases in population are not likely to be reliable predictors of use of respite in HACC.

Figure 17: Growth curves for population and service provision: Respite, 2011-2014

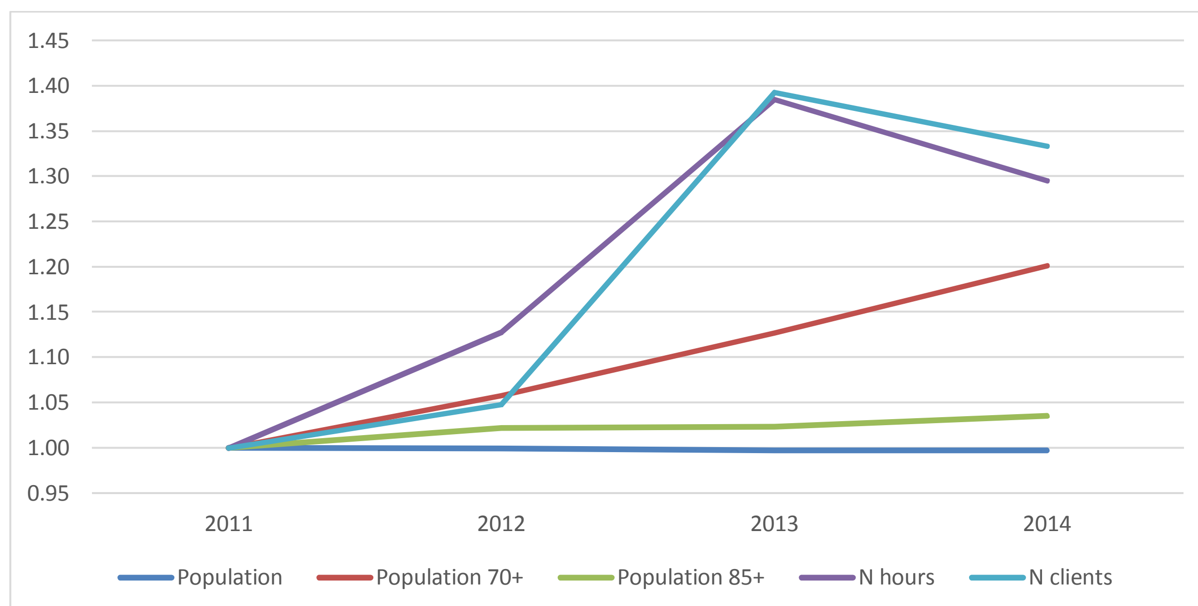


Table 61b: Hours and number of clients, Respite, 2011–2014

	2011	2012	2013	2014
Hours	6,966	7,858	9,647	9,022
N clients	84	88	117	112

The following table compares estimates of change in Respite provision to 2019 and 2025 based on (a) population growth only, (b) change from 2011 to 2014 only, and (c) a “compromise” solution. Estimates of future provision based on recent rates of change in Respite result in much sharper increases in both hours and client numbers than those predicted by population growth.

Table 61c: Projected service provision, Respite, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011–2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
N hours	9,773	10,466	14,331	22,765	12,052	16,616
N clients	121	129	190	322	155	225
% increase in hours	8.3	16.0	58.8	152.3	33.6	84.2
% increase in clients	7.8	14.9	69.6	187.7	38.7	101.3

ASSESSMENT

Table 62: Service level by age, 2014, and projected 2019 and 2024, Assessment

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	239	262	280	23	9.7	41	17.4
50–54	76	82	88	6	8.2	12	16.1
55–59	74	81	87	7	9.2	13	17.3
60–64	98	114	123	16	15.9	25	25.4
65–69	225	236	269	11	4.9	44	19.4
70–74	277	292	306	15	5.5	29	10.6
75–79	295	293	312	-1	-0.4	17	5.9
80–84	381	383	391	2	0.6	10	2.7
85+	733	772	773	39	5.4	40	5.4
0–64	487	538	578	52	10.7	91	18.8
65+	1,911	1,977	2,051	67	3.5	140	7.3
Total	2,397	2,516	2,629	119		232	

Table 63: Number of clients by age, 2014, and projected 2019 and 2024, Assessment

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	88	97	103	9	9.7	15	17.4
50–54	19	21	22	2	8.2	3	16.1
55–59	20	22	23	2	9.2	3	17.3
60–64	32	37	40	5	15.9	8	25.4
65–69	56	59	67	3	4.9	11	19.4
70–74	89	94	98	5	5.5	9	10.6
75–79	81	81	86	-	0.0	5	5.9
80n84	97	98	100	1	0.6	3	2.7
85+	174	183	183	9	5.4	9	5.4
0–64	159	176	189	17	10.7	30	18.8
65+	497	514	534	17	3.5	37	7.5
Total	656	690	723	34		67	

Provision of HACC assessment in Nillumbik has grown dramatically from 2011 to 2014, much more steeply than would have been predicted by population growth curves. Over time, demand for HACC assessment is likely to grow, but it is difficult to predict how much.

Figure 18: Growth curves for population and service provision: Assessment, 2011-2014

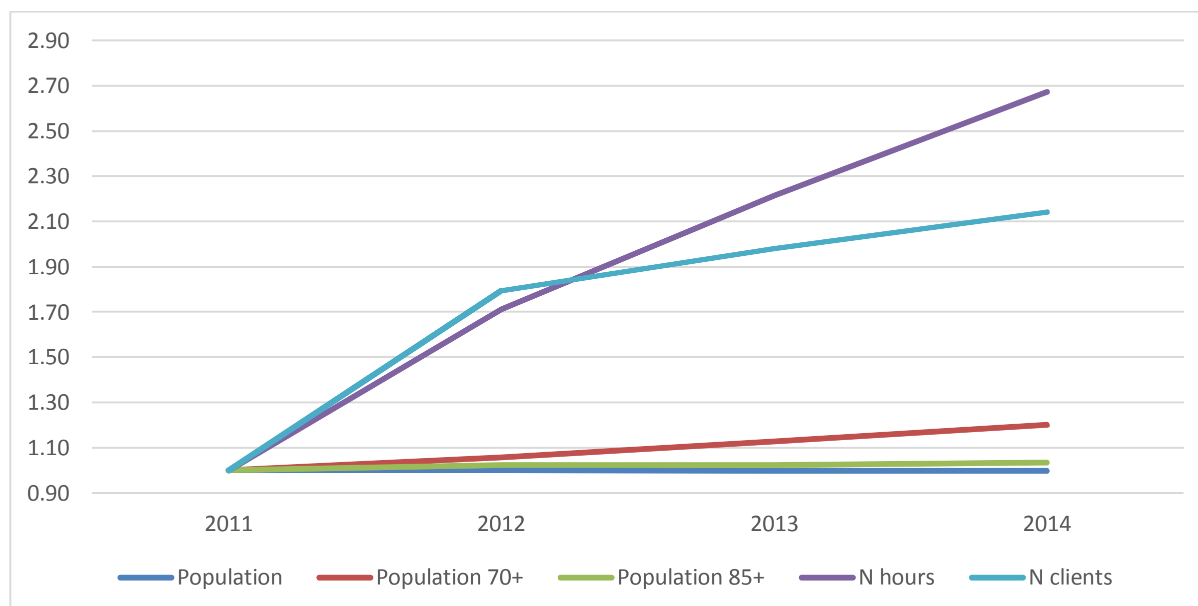


Table 63b: Hours and number of clients, Assessment, 2011–2014

	2011	2012	2013	2014
Hours	896	1,534	1,986	2,397
N clients	306	549	606	656

The following table compares estimates of change in Assessment to 2019 and 2025 based on (a) population growth only, (b) change from 2011 to 2014 only, and (c) a "compromise" solution. Estimates of future provision based on recent rates of change in Assessment result much sharper increases in both hours and client numbers than estimates based on population growth alone.

Table 63c: Projected service provision, Assessment, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011–2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
N hours	2,516	2,629	13,102	71,612	7,809	37,121
N clients	690	723	2,697	11,092	1,694	5,908
% increase in hours	4.9	9.7	446.6	2887.5	225.8	1448.6
% increase in clients	5.2	10.2	311.2	1590.9	158.2	800.5

CASE MANAGEMENT (LINKAGES)

Table 64: Service level by age, 2014, and projected 2019 and 2024, Case Management

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	879	965	1,032	86	9.7	153	17.4
50–54	60	65	70	5	8.2	10	16.1
55–59	135	147	158	12	9.2	23	17.3
60–64	44	51	55	7	15.9	11	25.4
65–69	321	337	383	16	4.9	62	19.4
70–74	40	42	44	2	5.5	4	10.6
75–79	28	28	30	-0	-0.4	2	5.9
80–84	91	92	93	1	0.6	2	2.7
85+	55	58	58	3	5.4	3	5.4
0–64	1,118	1,228	1,315	110	9.8	197	17.6
65+	535	556	609	21	4.0	74	13.8
Total	1,653	1,784	1,924	131	7.9	271	16.4

Table 65: Number of clients by age, 2014, and projected 2019 and 2024, Case Management

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	11	12	13	1	9.7	2	17.4
50–54	2	2	2	0	8.2	0	16.1
55–59	2	2	2	0	9.2	0	17.3
60–64	2	2	3	0	15.9	1	25.4
65–69	4	4	5	0	4.9	1	19.4
70–74	4	4	4	0	5.5	0	10.6
75–79	2	2	2	-	0.0	0	5.9
80–84	4	4	4	0	0.6	0	2.7
85+	5	5	5	0	5.4	0	5.4
0–64	17	19	20	2	10.2	3	18.2
65+	19	20	21	1	3.7	2	8.9
Total	36	38	41	2	6.8	5	13.3

Hours and clients of Case Management have increased from 2011 to 2014, and overall are similar to the increase in population aged 70 years and over. However, there have been erratic changes on a yearly basis. Demand for Case Management in Nillumbik are likely to continue to increase, but actual demand on a year-to-year basis are difficult to predict.

Figure 19: Growth curves for population and service provision: Case Management, 2011-2014

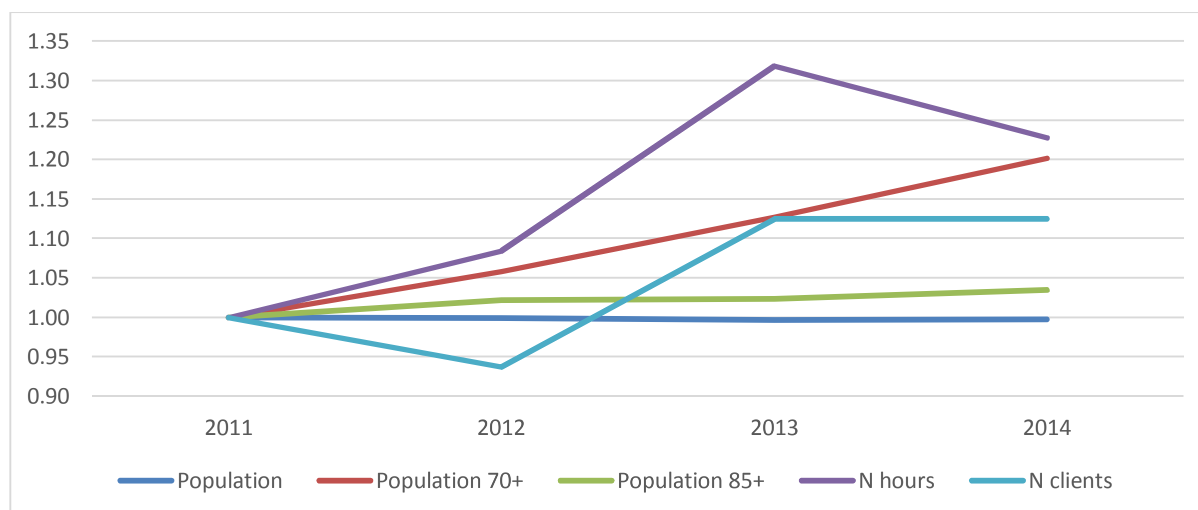


Table 65b: Hours and number of clients, Case Management, 2011–2014

	2011	2012	2013	2014
Hours	1,346	1,460	1,775	1,653
N clients	32	30	36	36

The following table compares estimates of change in Case Management to 2019 and 2025 based on (a) population growth only, (b) change from 2011 to 2014 only, and (c) a "compromise" solution. Estimates of future provision based on recent change in Case Management result in larger increases in hours and clients than would be predicted by population growth.

Table 65c: Projected service provision, Case Management, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011–2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
N hours	1,784	1,924	2,397	3,476	2,091	2,700
N clients	38	41	45	56	42	49
% increase in hours	7.9	16.4	45.0	110.3	26.5	63.3
% increase in clients	6.8	13.3	25.1	56.5	15.9	34.9

CARE COORDINATION

Table 66: Service level by age, 2014, and projected 2019 and 2024, Care Coordination

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	118	129	139	11	9.7	21	17.4
50–54	37	40	43	3	8.2	6	16.1
55–59	33	36	39	3	9.2	6	17.3
60–64	70	81	88	11	15.9	18	25.4
65–69	60	63	72	3	4.9	12	19.4
70–74	133	140	147	7	5.5	14	10.6
75–79	165	164	175	-1	-0.4	10	5.9
80–84	240	241	247	1	0.6	7	2.7
85+	348	367	367	19	5.4	19	5.4
0–64	258	287	308	29	11.1	50	19.4
65+	946	976	1,007	30	3.1	61	6.4
Total	1,204	1,262	1,315	58		111	

Table 67: Number of clients by age, 2014, and projected 2019 and 2024, Care Coordination

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	66	72	77	6	9.7	11	17.4
50–54	16	17	19	1	8.2	3	16.1
55–59	13	14	15	1	9.2	2	17.3
60–64	19	22	24	3	15.9	5	25.4
65–69	36	38	43	2	4.9	7	19.4
70–74	60	63	66	3	5.5	6	10.6
75–79	88	88	93	-	0.0	5	5.9
80–84	89	90	91	1	0.6	2	2.7
85+	145	153	153	8	5.4	8	5.4
0–64	114	126	135	12	10.5	21	18.5
65+	418	431	447	13	3.1	29	6.9
Total	532	557	582	25		50	

Growth curves for change in Care Coordination from 2011 to 2014 show that provision of this service grew steeply from 2011 to 2013, but has since contracted somewhat. Future projections for demand based on population growth may not be reliable.

Figure 20: Growth curves for population and service provision: Care Coordination, 2011-2014

Table 67b: Hours and number of clients, Care Coordination, 2011–2014

	2011	2012	2013	2014
Hours	891	1,360	2,042	1,204
N clients	290	569	752	532

The following table compares estimates of change in Care Coordination to 2019 and 2025 based on (a) population growth only, (b) change from 2012 to 2014 (2011 was ignored in this case), and (c) a "compromise" solution. Estimates of future provision based on recent rates of change in Care Coordination result in sharper increases in hours and client numbers than estimates based on population growth alone.

Table 67c: Projected service provision, Care Coordination, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011–2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
N hours	1,262	1,315	3,068	7,820	2,165	4,567
N clients	557	582	2,217	9,240	1,387	4,911
% increase in hours	4.9	9.2	154.8	549.5	79.8	279.3
% increase in clients	4.7	9.4	316.7	1636.8	160.7	823.1

PROPERTY MAINTENANCE

Table 68: Service level by age, 2014, and projected 2019 and 2024, Property Maintenance

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	13	14	15	1	9.7	2	17.4
50–54	2	2	2	0	8.2	0	16.1
55–59	9	10	11	1	9.2	2	17.3
60–64	15	17	19	2	15.9	4	25.4
65–69	84	88	100	4	4.9	16	19.4
70–74	133	140	147	7	5.5	14	10.6
75–79	146	145	155	-1	-0.4	9	5.9
80–84	114	115	117	1	0.6	3	2.7
85+	144	152	152	8	5.4	8	5.4
0–64	39	44	47	5	11.9	8	20.4
65+	621	640	671	19	3.1	50	8.0
Total	660	684	718	24		58	

Table 69: Number of clients by age, 2014, and projected 2019 and 2024, Property Maintenance

	ACTUAL 2014	PROJECTED 2019	PROJECTED 2024	INCREASE TO 2019 N	INCREASE TO 2019 %	INCREASE TO 2024 N	INCREASE TO 2024 %
0–49	7	8	8	1	9.7	1	17.4
50–54	2	2	2	0	8.2	0	16.1
55–59	5	5	6	0	9.2	1	17.3
60–64	5	6	6	1	15.9	1	25.4
65–69	21	22	25	1	4.9	4	19.4
70–74	40	42	44	2	5.5	4	10.6
75–79	50	50	53	-	0.0	3	5.9
80–84	45	45	46	0	0.6	1	2.7
85+	52	55	55	3	5.4	3	5.4
0–64	19	21	23	2	11.0	4	19.3
65+	208	214	223	6	2.9	15	7.3
Total	227	235	246	8		19	

The growth curves in service use for Property Maintenance show increases in the numbers of clients but decreases in hours. The number of clients broadly parallels changes in the population aged 70 years and over. Projected growth in the number of clients of Property Maintenance may be reliable, but change in numbers of hours are unlikely to be.

Figure 21: Growth curves for population and service provision: Property Maintenance, 2011-2014

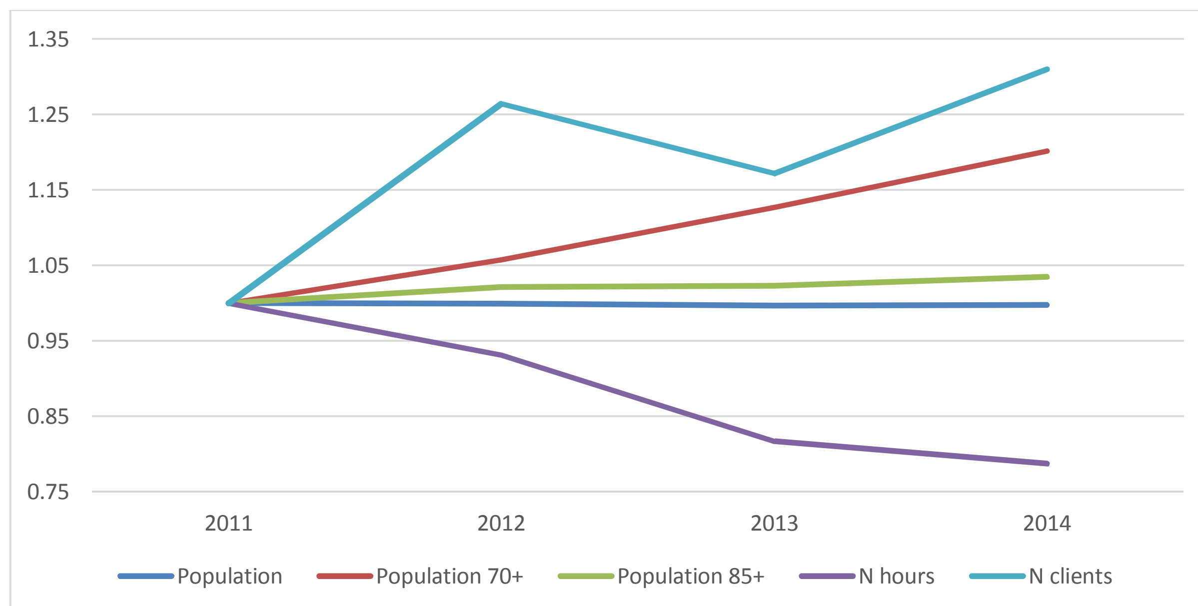


Table 69b: Hours and number of clients, Property Maintenance, 2011–2014

	2011	2012	2013	2014
Hours	841	783	687	662
N clients	174	220	204	228

The following table compares estimates of change in Property Maintenance based on (a) population growth only, (b) change from 2012 to 2014, and (c) a “compromise” solution. Estimates of future provision based on recent change in Property Maintenance result in sharper increases in client numbers than projected change based on population growth, but a decrease in hours.

Table 69c: Projected service provision, Property Maintenance, 2019 and 2015 (three methods)

	ESTIMATES BASED ON GROWTH IN POPULATION		ESTIMATES BASED ON GROWTH IN SERVICES 2011–2014		COMPROMISE ESTIMATES	
	2019	2024	2019	2024	2019	2024
N hours	684	718	446	300	565	509
N clients	235	246	372	608	304	427
% increase in hours	3.6	8.8	-32.4	-54.5	-14.4	-22.9
% increase in clients	3.6	8.4	64.0	167.9	33.8	88.1

HACC client-to-population ratio by suburb

In this report, we have chosen not to attempt to predict future demand for services by suburb, given the volatility in any demand projections at an LGA level. However, it is worth comparing HACC service provision by suburb. The following figure and table were compiled for each suburb from the number of HACC clients aged 60 and over and the population aged 60 and over. The number of clients was divided by the population to provide a ratio of number of clients per 100 people aged 60 and over in each suburb. The graph orders the suburbs from those with the highest client-to-population ratio to those with the lowest.

Greensborough is fully assigned to Banyule LGA in the HACC Minimum Data Set, but is included here consistent with Part 1 of this report. The terms Rural East and Rural North West are used by profile.id: Rural North West encompasses Arthur’s Creek, Nutfield, and parts of Doreen, and Kinglake/Kinglake West, whereas Rural East includes Strathewen, St Andrews, Smiths Gully, Panton Hill, Christmas Hills, and Bend of Islands.

Client-to-population ratio was highest for Diamond Creek, where 23% of clients aged over 60 years were receiving a service, and also relatively high for Eltham and Hurstbridge (19%). This value was lowest for Warrandyte North (7%).

A high proportion of the population receiving services would be expected in suburbs where older people have poorer health and are less able to pay for private services. Further, relatively high service densities for Diamond Creek, Greensborough and Eltham suggest that people living suburbs with larger populations may be more likely to receive more services than those in smaller townships. (Issues with the accuracy of these estimates may be caused by allocation of localities and postcodes to Local Government Areas within the HACC MDS.)

Figure 22: Client-to-population ratio by suburb for people aged 60 and over

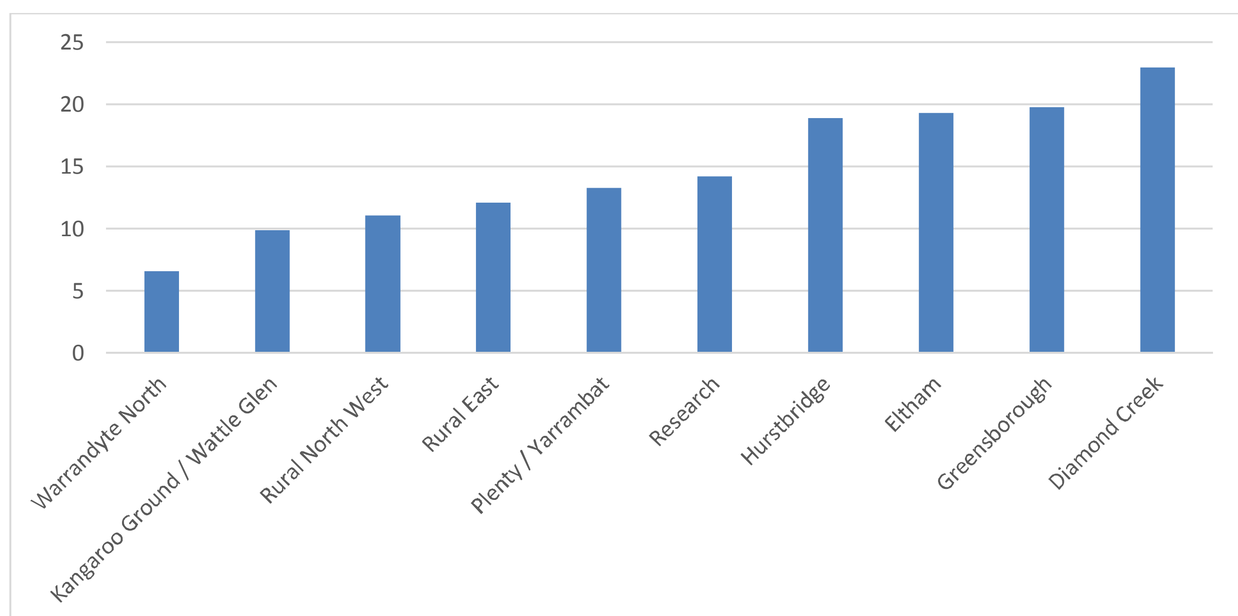


Table 70: Client-to-population ratio, 2014, by suburb

SUBURB	POPULATION AGED 60 AND OVER	N CLIENTS AGED 60 AND OVER	SERVICE DENSITY
Diamond Creek	1,628	374	23.0
Eltham	4,095	789	19.3
Greensborough	3,593	711	19.8
Hurstbridge	599	113	18.9
Kangaroo Ground / Wattle Glen	756	75	9.9
Plenty / Yarrambat	648	86	13.3
Research	473	67	14.2
Rural East	677	82	12.1
Rural North West	423	47	11.1
Warrandyte North	545	36	6.6

Discussion and conclusion

The current report focuses on HACC provision now and into the future in the Nillumbik area. The problem with having a mass of data and analyses to hand is how best to make sense of the information, some of which is contradictory or partial.

Summary of HACC clients

During the calendar year 2014, a total of 1,669 clients were provided with a HACC service in Nillumbik. Nearly one-quarter of the population aged 70 years or over (24.5%) got a HACC service in 2014.

The most accessed service (i.e., used by the greatest number of clients) during 2014 was Allied Health.

The proportion of residents using HACC services increased with age, from 9.5 per 1000 in the age group under 50 to 517 per 1000 in the age group aged over 85.

The largest HACC program in Nillumbik in terms of hours of service was Planned Activity Groups, while the largest in terms of number of clients was Allied Health services. Over one-third of HACC clients (34%) were aged over 80 years, and 71% were aged over 65 years. Only 3% preferred to use a language other than English at home and the most common non-English languages used were Italian, Greek and Croatian.

When service provision (total hours or meals provided) was examined by age group and service type, it was clear that the steepest curve by age group was for Planned Activity Group hours. However, increase in the client-to-population ratio was particularly strong for Assessment, where provision per year per 1000 people aged 85 and over rose to 279.

One-quarter of clients overall have a carer, and about one-half (55%) live with family rather than alone or with others. Three-quarters (74%) live in a private house they own or are purchasing. One-half (49%) are on the Age pension.

Summary of HACC agencies and funding

A total of 27 different agencies were funded to provide HACC services to Nillumbik residents in 2015, four of which were funded to provide Allied Health services. Overall, funding for HACC in Nillumbik grew by 12% from 2013 to 2015. The biggest increases in terms of raw figures were for Allied Health and Nursing. However, the largest increase in funded outputs was for Volunteer coordination.

Projections of future demand/provision

Projections of future provision of HACC services depend on what is used to estimate change.

Modelling using constant service-to-population and client-to-population ratios show strong growth in demand for all service types to 2019 and 2024, particularly for Case Management and Respite.

However, comparing changes in service use with population growth between 2011 and 2014 showed that service provision in some cases has been growing more strongly than the population, while provision of some services (hours and/or clients) fell between 2011 and 2014.

If historical trends continued, the following services would grow more strongly than changes in the population would suggest:

- Domestic Assistance
- Personal Care
- Allied Health
- Planned Activity Groups
- Delivered Meals
- Respite
- Assessment
- Case Management
- Care Coordination
- Nursing Care (hours only)

The following services would decrease:

- Volunteer Social Support
- Nursing Care

The following services would increase in clients but decrease in hours (i.e., become more intensely focused on fewer clients):

- Property Maintenance

Ultimately, changes in provision of services will depend on both what funding is made available at all three levels of government and, for smaller services, on unpredictable staffing changes (such as sick leave or maternity leave). Demand on local government will also depend on the extent to which private providers stimulate and are able to respond to demand in the community.

Conclusion

The report has provided a picture of current use of HACC services in Nillumbik, and provided a range of estimates of future demand in the municipality. Ultimately, the level of provision of services depends on policy decisions at all three levels of government. Demand on local government also depends on the extent to which private providers stimulate and are able to respond to demand in the community.

Appendix: HACC Minimum Data Set

Collection of data for the HACC MDS has occurred since January 2001. All service providers receiving HACC funding are required to collect and report data, whether they are small agencies delivering single types of service or larger agencies offering several services. HACC MDS Version 2 was introduced after a comprehensive evaluation and consultation process with state and territory stakeholders and collection of HACC MDS Version 2 commenced from 1 January 2006.

The Home and Community Care (HACC) Minimum Data Set (MDS) is provided to the Australian Department of Health. Some states (including Victoria) maintain a Data Repository that cleans the datasets before forwarding them to the Commonwealth. In other jurisdictions, data are forwarded by agencies directly to the Commonwealth.

HACC MDS data are collected by HACC-funded service providers either electronically or using paper forms. Data are collected progressively and aggregated for transmission on a quarterly basis. Aggregated data are transmitted during the collection months immediately following each quarterly activity period.

HACC MDS data reflect individual clients, their circumstances, and the types and level of assistance they receive from service providers. HACC MDS information is collected on the basis of informed client consent and clients may choose to opt out of the collection. All data in relation to individual clients is de-identified by service providers, ensuring the privacy of individuals is protected.

The **HACC MDS User Guide and Data Dictionary v2.01**[14] provides up-to-date information about individual data items and instructions on how to report them. The Data Dictionary contains definitions of individual data elements, data element concepts, and derived data elements that are required in Version 2.0 of the HACC National Minimum Data Set.

Persons receiving HACC services but who are not known to the Agency as individuals are not part of the HACC MDS collection. For example, individuals may be helped anonymously, or as if unknown to the Agency. This happens when an agency responds to general telephone enquiries, or conducts advocacy work on behalf of clients in general rather than a specific individual client. Similarly, individuals may participate anonymously in group activities, such as an information session.

A list of data elements in the national HACC MDS follows:

[14] https://www.dss.gov.au/our-responsibilities/ageing-and-aged-care/for-providers/guidance-for-providers/hacc-governance/hacc-minimum-data-set/hacc-mds-user-guide-and-data-dictionary-v201

A. Information about the care recipient—personal details

First given name[15]

Family/surname

Letters of name

Date of birth

Date of birth estimate flag

Sex

Australian state or territory identifier

Suburb/Town/Locality

Postcode

Country of birth

Main language spoken at home

Indigenous status.

B. Information about the care recipient—circumstances

Living arrangements

Accommodation setting

Government benefit/pension status

Department of Veterans' Affairs (DVA) card status

Functional status

Functional status—additional items.

C. Information about the carer (if one exists)

Carer—existence of

Carer residency status

Relationship of carer to care recipient

[15] The person's full name is not required for reporting, but selected letters are used to form the *Letters of name* for record linkage purposes.

Carer for more than one person

First given name

Family/surname*

Letters of name

Date of birth

Date of birth estimate flag

Sex

Country of birth

Main language spoken at home

Indigenous status

Australian state or territory identifier

Suburb/Town/Locality

Postcode

D. Information about the service episode

A HACC service episode is the period of time during which the care recipient and/or their carer receives HACC-funded assistance. A HACC service episode will always begin and end with an instance or occasion of HACC-funded assistance.

Source of referral

Date of entry into HACC service episode

Date of last update

Date of exit from HACC service episode

Main reason for cessation of services.

E. Information about the assistance provided

Total amount of type of assistance received (quantity)

Total amount of type of assistance received (time)

Total amount of type of assistance received (cost)

Total assistance with goods and equipment received.

Time is used to record amount of assistance for the following assistance types:

Domestic Assistance

Social Support

Nursing Care received at home

Nursing Care received at centre/other

Allied Health Care received at home

Allied Health Care received at centre/other

Personal Care

Assessment

Centre-based Day Care

Other Food Services

Respite Care

Home Maintenance

Client Care Coordination

Counselling/support, Information and Advocacy (care recipient)

Counselling/support, Information and Advocacy (carer).

Quantity is used to record amount of assistance for the following assistance types:

Meals received at home

Meals received at centre/other

Formal linen services

Transport

Goods and equipment (self-care aids, support and mobility aids, communication aids, aids for reading, medical care aids, car modifications, other goods/equipment).

Cost is used to record the amount of assistance for:

Home modification.

Definitions of key service types follow:

Table 71: Key HACC service types

SERVICE	***DESCRIPTION***
Domestic Assistance	Domestic Assistance is normally provided in the home, and includes services such as dishwashing, house cleaning, clothes washing, shopping (unaccompanied) and bill paying.
Social support	Social Support refers to assistance provided by a companion (paid worker or volunteer), either within the home environment or while accessing community services, which is primarily directed towards meeting the person's need for social contact and/or accompaniment in order to participate in community life. Social support includes friendly visiting.
Nursing Care at home	Nursing Care is defined as health care provided to a client by a registered or enrolled nurse.
Nursing Care at a centre or other setting	
Allied Health care at home	Allied Health consists of a wide range of specialist services, including podiatry, occupational therapy, physiotherapy, and social work.
Allied Health care at a centre or other setting	
Personal Care	Personal Care is normally provided in the home, and includes helping the client with daily self-care tasks (e.g. eating, bathing, grooming etc.). It may include medication monitoring.
Assessment	Assessment refers to assessment and re-assessment activities that are directly attributable to individual care recipients. Assessment includes activities associated with intake procedures and determination of eligibility for service provision, as well as more comprehensive assessments of a person's need for assistance.
Centre-based day care	Centre-based day care refers to assistance provided to the client to attend/participate in group activities and is conducted in a centre-based setting. It includes group excursions/activities conducted by centre staff but held away from the centre.
Meals provided at home	Meals are prepared and delivered to the client. It does not include meals prepared in the client's home.
Meals provided at a centre	Meals provided at centres are only counted in the MDS where they are the primary reason the client is there or they are the primary service the client receives while there.
Other food services	This means any assistance provided during preparation or cooking of a meal at the client's home. It also includes advice on nutrition, food storage, or preparation.
Formal linen service	A Formal linen service means that both the linen and the laundry services are provided to the client, and the cleaning of the linen is done elsewhere.

<table>
<tr><th>SERVICE</th><th>DESCRIPTION</th></tr>
<tr><td>Respite care</td><td>Respite care is assistance provided to carers so they may have relief from their caring role and pursue other activities or interests. Respite Care should only be recorded if there is a carer reported on the MDS record. If the care recipient has no carer then the service type is not respite but normally would be Social support.</td></tr>
<tr><td>Client Care Coordination</td><td>Client Care Coordination and Case Management are distinct activities on the same continuum of service delivery. Client Care Coordination is a less intensive form of Case Management.</td></tr>
<tr><td>Case Management</td><td>Case Management comprises active assistance received by a client from a formally identified agency worker (case manager or care coordinator) who coordinates the planning and delivery of a suite of services to the individual client. (Where service delivery involves more than one agency, only the activities of the agreed case manager should be recorded against this type of assistance.) Case Management is generally targeted on clients with complex needs.</td></tr>
<tr><td>Home maintenance</td><td>Home maintenance refers to assistance with the maintenance and repair of the person's home, garden or yard to keep their home in a safe and habitable condition. Home maintenance includes minor dwelling repairs and maintenance, such as changing light bulbs, carpentry and painting, or replacing tap washers as well as some more major dwelling repairs such as installing a new roof, replacing guttering or roof retiling. Home maintenance also includes garden maintenance, such as lawn mowing and the removal of rubbish.</td></tr>
<tr><td>Counselling/ support, information and advocacy (care recipient)</td><td rowspan="2">Counselling/support, information and advocacy covers a number of supportive services to help clients and carers deal with their situation. It includes dementia support and counselling and carer support and counselling, normally provided on a one-to-one basis.
Counselling/support, information and advocacy (care recipient) refers to assistance with understanding and managing situations, behaviours and relationships associated with the person's need for care, including advocacy and the provision of advice, information and training
Counselling/support, information and advocacy (carer) refers to assistance with understanding and managing situations, behaviours and relationships associated with the caring role, including advocacy and the provision of advice, information and training.</td></tr>
<tr><td>Counselling/ support, information and advocacy (carer)</td></tr>
</table>

VICTORIAN VERSION OF THE HACC MDS

The Victorian Government jointly funds the HACC program with the Australian Government. During 2005, the Victorian Department of Human Services (DHS) developed a Common Client Data Set (CCDS) in order to improve uniformity in data items collected on key DHS-funded services. To accommodate the CCDS, it has been necessary to make minor modifications to the national HACC MDS for use in Victoria. Some additional data items (service types) have been added.

Victorian HACC agencies submit their HACC MDS directly to the Victorian Government Department of Health and Human Services. The Victorian HACC MDS Transmission protocol[16] describes data elements that are present in the Victorian version of the HACC MDS. The main differences between the national HACC MDS v2 and the Victorian modifications are shown in the table below:

Table 72: Scope of Victorian modifications to the National HACC MDS v2

NATURE OF DIFFERENCE	NATIONAL HACC MDS V2	VICTORIAN MODIFICATION
Name changes	Main language spoken at home	Preferred language
	Carer—existence of	Carer availability
	Suburb/town/locality	Residential locality
Extra data elements		Name of software
		Need for interpreter
	Type of assistance	Up to 20 additional types, including seven types of Allied Health
Code set changes	Functional status	Items re-ordered
	Accommodation setting	Three extra codes
	Source of referral	Three extra codes
	Relationship of carer	Split by male/female

The seven types of Allied Health services (Podiatry, Occupational Therapy, Speech Pathology, Audiology, Physiotherapy, and Counselling) may each be provided at home or at a centre.

Other changes have been made to the Victorian HACC MDS.

- Social support has been re-labelled Volunteer Social Support, and refers to unpaid work done by volunteers, such as friendly visiting, providing transport, helping clients with paperwork, taking them shopping or to attend an appointment, and provide respite care.
- Centre-based day care has been re-labelled Planned Activity Group, and divided into Planned Activity Group—core and Planned Activity Group—high. 'Core' group clients are physically relatively independent and do not require specialist dementia care or Personal

[16] https://www2.health.vic.gov.au/ageing-and-aged-care/home-and-community-care/reporting-and-data

Care to participate in activities. 'High' Planned Activity Group clients require assistance with Personal Care and/or specially trained staff for moderate to severe dementia care, and/or have behaviour management problems.

- Other assistance types include:
    - HACC response service (HRS): this service provides a call-out home visit to a consumer of Personal Alert Victoria alarm service in cases where the consumer lacks a family member or other contact who can respond to a call-out. In cases where clients are HRS clients, other data items are recorded, such as whether a confirmation call was received and the time slots in which call-out home visits were made.
    - Aged Care Support for Carers Program (SCP): this program provides services to carers of older people that are similar to some of those funded by HACC, and include daytime respite, overnight respite, residential respite, counselling and support, and goods and equipment (coded in dollar amounts).

The Victorian HACC MDS does not transmit data on Other Food Services: instead, this is included in hours of Domestic Assistance. Finally, other services not included in the Victorian HACC MDS are Formal linen service and Transport.