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**Family &
Community Services**
Ageing, Disability & Home Care

**Evaluation of the national and NSW HACC
- funded home modification and home maintenance
service usage as reported by the
2001/2002 – 2005/2006 HACC MDS**

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Glossary

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ARIA	Accessibility and Remoteness Index of Australia
CALD	Culturally and Linguistically Diverse
CHAID	Chi-square Automatic Interaction Detection
DADHC	Department of Ageing, Disability and Home Care
HACC	Home and Community Care
MDS	Minimum Data Set
NSW	New South Wales
NT	Northern Territory
QLD	Queensland
SA	South Australia
TAS	Tasmania
VIC	Victoria
WA	Western Australia

Executive Summary

Introduction

This report examines and analyses both in snap shot and time series the reported client usage and client information pertaining to Home and Community Care (HACC) Program for HACC-funded home modification and home maintenance services. The report utilises data from The HACC Minimum Data Set (MDS) to do so. The report considers data from NSW in relation to other jurisdictions and Nationally aggregated data. Under the HACC program these two service types are distinct: the Home Maintenance service assists eligible clients who need maintenance and repairs to their homes, gardens, and yards (NSW Department of Ageing Disability and Home Care, 2007); the Home Modification service assists clients who need structural changes ranging from replacing cabinet doorknobs with pull handles to full-scale construction projects such as wheelchair ramps, wider doorways, or bathroom modifications (NSW Department of Ageing Disability and Home Care, 2006).

Project aims

The project aimed to inform policy regarding service provision and administrative issues. It looked to achieve this by addressing the following research questions:

- Who is accessing HACC-funded home modification and home maintenance services across states and over time?
- Are links to other HACC-funded services evident in the data pertaining to home modification and home maintenance?
- How complete are HACC MDS data records?
- Is client reported data accurate in logic and coding?

Overview of results

Who is accessing HACC-funded home modification and home maintenance services?

In order to better understand the demographics of service users it is helpful to examine relevant defining characteristics such as age, gender, carer status and Culturally and Linguistically Diverse (CALD) identifiers. Overall, the demographics of recipients of these two service types indicate a growing population of older service users. For instance, in most of the country, the most common age group to receive HACC-funded home maintenance services were people 75 years and over; the Northern Territory, however, recorded that people aged 18 to 64 had the highest level of service use. All states and territories that provide HACC-funded home modifications data noted a similar age distribution; however, it should be noted neither the Northern Territory nor Victoria provided such data for all periods in relation to Home Modification and Maintenance services.

New South Wales accounted for the greatest proportion (49%) of HACC-funded home modifications, as recorded by the 2005/2006 HACC MDS, whereas both Victoria (33.8%) and Western Australia (20.6%) accounted for a greater percentage of HACC-funded home maintenance than New South Wales (16%), as recorded in the 2005/2006 HACC MDS.

Service users who identified themselves as Indigenous were recorded as home modification and home maintenance clients at a percentage close to what the jurisdictional populations would have predicted. In most jurisdictions, however, a greater proportion of home maintenance service users identified themselves as Indigenous than would be expected from population distribution.

Those who were recorded as speaking a language other than English and those who were born in a country other than Australia were both proportionally underrepresented in the home modification client population when compared with the Australian population. The same was generally true of the home maintenance clients, although to a lesser extent.

Links to other services evident in the home modification and home maintenance data

Secondary data analysis of the 2005/2006 HACC MDS suggested that the use of other HACC-funded services could predict the use of HACC-funded home modification and home maintenance services. Home modification was best predicted by the use of “other goods/equipment” (see the HACC Data Dictionary (Home and Community Care, 1998)). If other goods/equipment was absent, the use of mobility aids also predicted the use of home modification, particularly in conjunction with assessment activities. Home maintenance service use was predicted by the use of domestic assistance, particularly in conjunction with assessment activities. If the client did not receive domestic assistance, the absence of home nursing care predicted home maintenance use. This does not mean that the use or non-use of these other services conclusively predicted home modification or home maintenance, only that there was a correlation between these services.

Completion of required reporting

All service providers who receive HACC funding are contractually required to report via the HACC MDS if they are an output producing service type and have identifiable clients. Services exempt include some types of information services, HACC Development officers etc; The HACC MDS guidelines and data dictionary define what data is to be collected, how it is to be coded and transmitted to data repository. Services are required to report data quarterly and this data is ultimately stored in the HACC National Data Repository, from which National reports are drawn. The annual Report on Government Services indicates the percentage of HACC-funded service providers who submit the required MDS reports of HACC-funded work varies across time and across states/territories, ranging from 56% to 100% (Steering Committee for the Review of Government Service Provision, 2003, 2004, 2005, 2006, 2007).

Compliance with reporting requirements in New South Wales is consistently at the lower end, while compliance in ACT was consistently at the higher end. The rate of compliance in New South Wales has, however, increased over time.

Privacy and confidentiality

The National Service Standards (Home and Community Care, 1991) and the New South Wales state guidelines (Home and Community Care, 2007a) emphasize and protect the privacy and confidentiality of the HACC service user. The current method of data collection preserves privacy and confidentiality by requiring permission from the client before recording personal demographic information and by de-identifying the data by way of a 'probabilistic linkage key', which maintains the individuality of each client record. This de-identification occurs at the time of initial data input as the software generates a coded ID at the time of data entry. The code is derived from the gender and date of birth plus three characters from known positions within the surname and a further two from known positions within the first given name.

Conclusion

The HACC MDS can provide a great deal of information about who is accessing HACC-funded home modifications and home maintenance. At a policy level, however, fine-tuning the cohesion of data collection between jurisdictions could only serve to paint a more detailed picture and provide more comparable data sets.

Contextual Background of the research

Introduction to the Home and Community Care (HACC) Program

The Home and Community Care (HACC) Program is a joint Commonwealth and State and Territory Government initiative that provides funding for services that support people who live at home and who are either at risk of no longer living independently or of being prematurely or inappropriately admitted into long-term residential care (Home and Community Care, 2002). The program funds an array of services, such as domestic assistance, nursing care, respite care, home maintenance, and home modification (Home and Community Care, 1998).

Seven objectives of the HACC Program were compiled to become National Service Standards (Home and Community Care, 1991). They ensure that the HACC-funded service user has:

- Access to services decided only on the basis of need
- Information about available services and service user responsibilities and rights, including the right to consultation regarding any changes.
- The benefit of efficient, effective, and accountable management

- Coordinated, planned, and reliable service delivery that addresses the ongoing needs of the individual
- Privacy and confidentiality respected by service providers and access to their personal information
- Access to fair and equitable procedures for dealing with complaints and disputes
- Access to an advocate of his or her choice.

Home modification and home maintenance

Home maintenance and home modification are two of the services types that HACC Program funds to support people to remain living independently at home or to prevent the premature or inappropriate admission into long term residential care.

Generally, home modification refers to:

“structural changes to the client’s home so they can continue to live and move safely about the house” (p.1, Home and Community Care, 2007c).

Although home modifications do not include general repairs, explicit changes to improve accessibility and safety for the client are considered home modifications (Home and Community Care, 2007c). Home modifications include ramps, shower rails, grab rails, and appropriate tap sets (Home and Community Care, 1998). Home maintenance, on the other hand, refers to:

“assistance by the agency with the maintenance and repair of the person’s home, garden or yard to keep their home in a safe and habitable condition” (p.1, Home and Community Care, 2007b).

This maintenance includes minor and major repairs and maintenance to the dwelling, ranging from changing light bulbs to repairing roofs (Home and Community Care, 2007b).

HACC in New South Wales

Commonwealth Government provides 60% of funding to the HACC programs while the States and Territories provide the remaining 40%. Commonwealth States and Territories conjointly manage program policy and planning. While the States and Territories manage the day-to-day operations of program within each of their own jurisdictions, within the Framework of the HACC National Service Agreement. As a consequence, the HACC program varies slightly in its day-to-day operation between jurisdictions.

The New South Wales HACC program, while guided by the National Service Standards discussed above (Home and Community Care, 1991), has produced additional guidelines pertaining to the HACC-funded services in New South Wales (Home and Community Care, 2007a).

These guidelines include:

- Service type guidelines,
- Comprehensive assessment type guidelines,
- Elder abuse guidelines, and
- Additional NSW HACC MDS reporting requirements
- These differences are reflected in varying contractual and service provision models across Australia.

Introduction to the HACC Minimum Data Set (MDS)

Service providers who receive HACC funding, are contractually required to report via the HACC MDS if they are an output producing service type, and have identifiable clients. Services exempt include some types of information services, HACC Development officers; The HACC MDS guidelines and data dictionary define what data is to be collected, to be coded and transmitted to data repository. Services are required to report data quarterly and this data is ultimately stored in the HACC National Data Repository, from which National reports are drawn.

The current method of data collection preserves privacy and confidentiality by requiring permission from the client before recording personal demographic information and by de-identifying the data by way of a 'probabilistic linkage key', which maintains the individuality of each client record. This de-identification occurs at the time of initial data input as the software generates a coded ID at the time of data entry. The code is derived from the gender, date of birth plus three characters from known positions within the surname and a further two from known positions within the first given name. Each individual client record is identified by a linkage key rather than identifiable information. Thus service provision can be measured at individual level, and if derived properly across individual HACC services.

Thus HACC MDS can provide information as to which static unit, i.e., linkage key is using which service types, where and quantum. The HACC MDS also provides some indication about whether the National Service Standards Objectives 1 (access to services decided only on the basis of need) and 4 (Coordinated, planned, and reliable service delivery that addresses the ongoing needs of the individual) are being met across states and territories and over time. To date, the information pertaining to home modifications and home maintenance has not been analysed at a national level or over time.

Aims of the study

This project aims to explore the HACC MDS pertaining to home modification and home maintenance services at a national and state level and to examine the results in the context of the New South Wales service guidelines and the National Service Standards. The project will do so by obtaining all HACC MDS pertaining to home

modification and home maintenance services from the time the MDS records began in 2001/2002 to the most recent data available (2005/2006) and to examine trends pertaining to use of such services over time and across states and territories. To address the aim of the study, the authors will seek to answer the following research questions.

Key research questions

- Who is accessing HACC-funded home modification and home maintenance services across states and over time?
- Are links to other HACC-funded services evident in the data pertaining to home modification and home maintenance?
- How complete are HACC MDS data records?
- Is client reported data accurate in logic and coding?

Outputs

- Information about the characteristics and locations of people who are recorded as accessing HACC-funded home modification and home maintenance services, paying particular attention to the highlighted target groups.
- Determination of whether relationships exist between the use of home modification and home maintenance and the use of other HACC-funded services.
- Determination of whether service providers are reporting the required information and assessment of the quality and validity of the data that have been provided
- Indication of whether data are reported in such away as to preserve client confidentiality.
- Recommendations that may help New South Wales HACC services meet the National Standard Objectives.

Relevant variables and definitions

What is ‘accessibility’?

Accessibility can have multiple meanings. In terms of HACC service standards, accessibility refers to service users:

“access to needed services based on their relative need”
(Australian Government, 2006).

In the context of home modification:

“*accessibility* refers to a quality that provides the client safe mobility around the home and property, allowing for continued independent living within the home.”
(Home and Community Care, 2007c)

While the focus of this report concerns home modification and maintenance services, accessibility is discussed only in relation to access to services as the HACC MDS contains no data that would allow measurement of improved accessibility of homes before and after service provision.

What is ‘access’ to HACC-funded services?

In this report, access to HACC-funded services refers solely to the availability of services that address the individual needs of service users in their specific circumstances. Access includes the availability of services in a geographic locale to meet specific service user needs.

What is coordinated, planned, and reliable service delivery?

This pertains to the notion that service users benefit from coordinated services that are planned, reliable and tailored to their individual needs and that allow future needs to be met.

What variables are critical to outcome?

Identifying and understanding differences between states and across time is critical to addressing the aims of the study. Differences may be due to differing population needs and improvements in effective service provision; however, they may also be due to differing policies, data collection techniques, or even differing definitions of services.

What is a ‘target group’

The target group for HACC services is those persons who, without the support provided by basic maintenance and support services, would no longer be able to reside independently in the community or would face inappropriate long-term residential care (Home and Community Care, 2007a). This target group includes people with a disability that is moderate, severe, or profound and includes frail older people, younger people with a disability and their carers.

What is a ‘special needs group’

In the context of HACC services, special needs groups are those that may find access to HACC services more difficult than others in the target group. These people include, but are not limited to, Aboriginal or Torres Straight Islanders, people from culturally or linguistically diverse backgrounds, and people living in remote or isolated areas (Home and Community Care, 2007a).

How might funding levels be compared across regions and programs?

Within NSW the Home Modification Services are segmented according to three levels of service level expenditure for Home Modifications, details how levels of expenditure within the home modification services might be compared nationally.

Table 1. Segmentation of Home Modification Services based on funding levels

Level 3	High level	Greater than \$20,000
Level 2	Medium Level	Between \$20,000 and \$5,000
Level 1	Low level	Less than \$5,000

Statistical analysis of the 2001/2002 to 2005/2006 HACC MDS

Methodology

Obtaining data

Permission was sought to access each individual state's or territory's data pertaining to home modification and home maintenance services and service users. All states and territories provided data related to home maintenance across all years (2001/2002 to 2005/2006), but Queensland declined to make its home modification data available from 2002/2003-2003/2004 because of concerns regarding data quality; the Northern Territory and Victoria did not provide any home modification data.

The data that was provided was in varying formats across the years. For example, the 2001/2002 data was provided as a whole HACC MDS with information pertaining to all HACC-funded services in one data set. The 2003/2004 data, on the other hand, was provided as two data sets (one with home modification data and the other with home maintenance data) without a common linkage key. As a consequence, it was not possible to compare and contrast home maintenance and home modification data across all years. The 2004/2005 and 2005/2006 data, however, were provided in a format that permitted analysis of relationships between home modification and home maintenance services and between these two services and other HACC services.

Following an initial analysis, the researchers learned that the original 2005/2006 MDS doubled up on the reporting of some home modification data. Consequently, a revised data set was obtained and the new data analysed. Although both the original and revised data sets indicated limitations as to the quality of the data, the revised set was deemed the most reliable. The variability between the two data sets provided for the 2005/2006 period appeared to significantly impact only the data pertaining to the Northern Territory with a variance of 15.48, while all other territories displayed a variance of 2.91 or below. Although the Northern Territory does not collect data

pertaining to home modifications, both data pertaining to home modifications and home maintenance were re-run with the revised 2005/2006 MDS data to ensure consistency.

State and territory differences that impact analysis

Policy and management pertaining to home modification and home maintenance vary across states and territories, which impacted the analysis of the HACC MDS. For example, in New South Wales, both home modifications and home maintenance are administered by the NSW Department of Ageing and Disability, but in Victoria and the Northern Territory this is not the case. Instead, in the Northern Territory, the Office of Housing administers Home Maintenance and the Department of Health and Community Services administer Home Modifications. Whereas in Victoria, Home Modifications are not a HACC funded service and Local Government administers the Home Maintenance Services. Home modification data from Victoria and the Northern Territory were not collected in the HACC MDS and could not be analysed.

The current data collection standard also impacted data analysis. The current standard provides information in the form dollar values for home modification services and in the form of hours for home maintenance services, making it impossible to compare the two directly. In addition, there is some overlap between these two types of services around the area of minor works. For example, rails could be classified as either home maintenance or home modification, depending on the service provider and the State/Territory service guidelines. Given this overlap, specification of the type of modification or maintenance that was provided would yield more useful information for evaluation of service effectiveness and efficiency and would better allow identification of jurisdictional variance in definitions and data collection procedures.

Potential variability in data collection procedures across jurisdictions could impact on data quality and coding. In New South Wales and Victoria collected the data into a State data repository prior to forwarding the data to the National Data Repository (NDR); other jurisdictions sent the data straight to the NDR.

Data Manipulation

Please see Appendix A for full details as to manipulation of data for analysis.

Data analyses

Data from the HACC MDS pertaining to home modification and home maintenance was examined with particular focus on New South Wales. The descriptive analyses of the NSW HACC MDS (from 2001/2002 to 2005/2006) were achieved by comparison with the available HACC MDS data from other states and territories and with the 2001 Australian Census data. These analyses permitted comparison of the most recently available national HACC MDS data with those of New South Wales HACC MDS data, comparisons of national and New South Wales HACC MDS records with the expectations created by the 2001 Australian census, and comparison of the New South Wales HACC MDS records with those of other states and territories. Analysing all available years of the HACC MDS data permitted examination of changes over time.

Key research questions addressed

Who is accessing home modification and home maintenance services?

The study examined the demographic characteristics of recipients of HACC-funded home modification and home maintenance services. Special attention was paid to Aboriginal or Torres Strait Islanders, people from culturally or linguistically diverse backgrounds and people living in remote areas because the New South Wales guidelines for HACC-funded services (Home and Community Care, 2007a) indicated that these three groups may experience greater difficulties in accessing HACC services.

Exploratory analyses yielded much demographic information concerning who was accessing HACC-funded home modification and home maintenance services nationally and in New South Wales. Client age, gender, postcode, and indigenous status were examined and are discussed below. Comparisons between New South Wales and other states and territories suggest that New South Wales has recorded relatively stable proportions when examining the first HACC MDS records and the 2005/2006 HACC MDS records. When all data from 2001/2002 to 2005/2006 was combined, New South Wales accounted for the greatest proportion of HACC-funded home modification services nationally and the third highest percentage of HACC-funded home maintenance hours nationally. As in most other states and territories, females and people aged 75 and over accounted for the greatest proportion of both HACC-funded home modification and home maintenance services in New South Wales. The percentage of New South Wales service users, of both HACC-funded home modification and home maintenance services, who identified themselves as indigenous decreased between the reporting periods of 2001/2002 to 2005/2006.

Home modification variable

The Home Modification dataset is small when compared to data sets from other programs. For example, there are approximately 94,000 records for home modification services provided from 2001/2002 through 2005/2006; in contrast, there are 430,000 records pertaining to home maintenance services for the same period.

The 2005/2006 data set includes information pertaining to all HACC-funded services and permitted a comparison of the percentage of HACC clients who received HACC-funded home modifications with the percentage of HACC clients who received any other HACC-funded services that year. Figure 1 illustrates that only 3% of HACC-funded services pertained to home modification over the 2005/2006 period. This analysis could not be done across all years examined in the study as HACC provided an extract pertaining to home modifications and home maintenance only for many of these years.

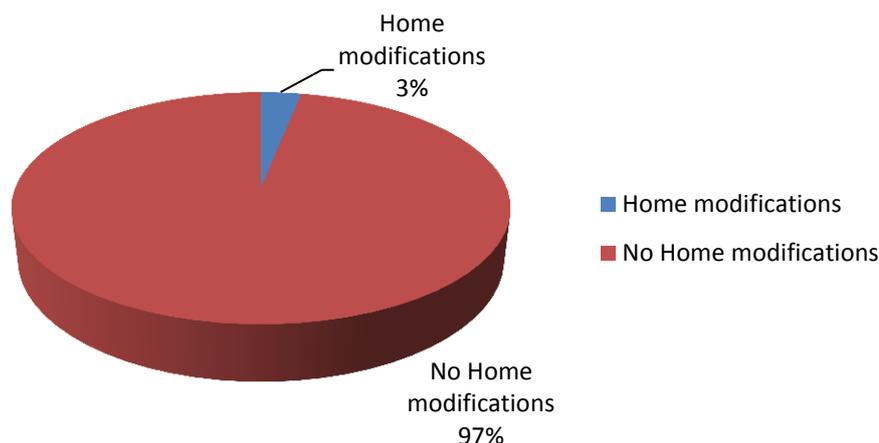


Figure 1. HACC-funded home modifications compared with all HACC-funded services (based on the 2005/2006 HACC MDS)

State or territory of home modification clients

The contractual arrangements and guidelines regarding home modifications vary between jurisdictions. For example, Victoria does not have a HACC-funded home modification service type. Rather a HACC-funded home maintenance program and a program that provides loans for home renovations to people who are frail aged or living with a permanent disability. The home renovation loan program is funded through the Program of Aids for Disabled People (State Government of Victoria: Office of Housing, 2007). Loan proceeds may be used to pay for of home modifications to enable the individual to remain living independently within the community. Although the goal of this program is essentially the same as that of HACC's home modification programs, no data has been collected in the HACC-MDS regarding home modification in Victoria.

HACC home modification spending policies also vary across the states and territories. For example, in Tasmania a modification is classified as a Major Modification (Home and Community Care, 2003) if its estimated cost exceeds \$10,000. In New South Wales, however, a high level modification is one estimated to cost over \$20,000 (Home and Community Care, 2007c). Such differences in policy and definition may account for some of the differences in usage and expenditure identified below.

In 2005/2006, 23,980 clients were recorded nationwide as receiving HACC-funded home modification services. Of these, New South Wales recorded 11,808 (49%) (see Figure 2).

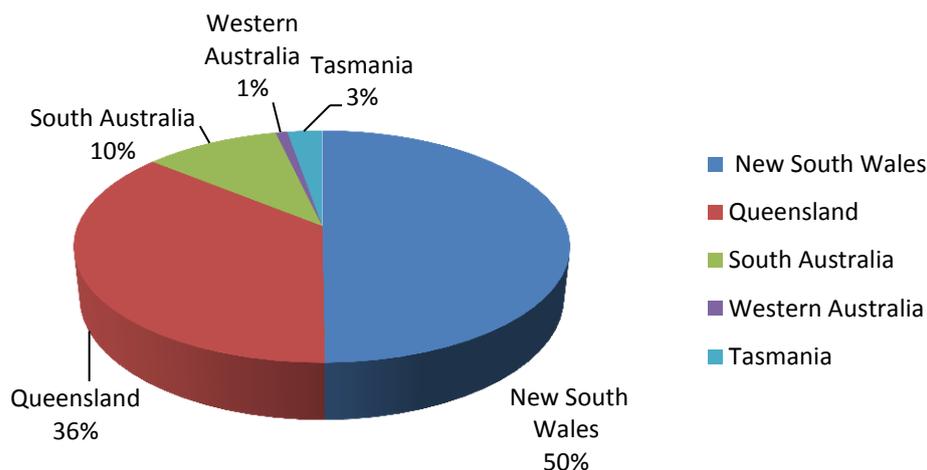


Figure 2. Distribution of HACC-funded home modifications across jurisdictions as recorded by the 2005/2006 HACC MDS.

Table 2 reports the distribution of service users of each home modification service level across jurisdictions and time. To permit comparison, the New South Wales service level definitions were used (See table 1 for NSW segmentation of service level expenditure for Home Modifications).

The number of recipients of HACC-funded modifications varied greatly across states with New South Wales and Queensland having many more home modification service users than the other jurisdictions. The overwhelming majority of work completed in each state was in the lowest financial category. South Australia and Western Australia did not have any HACC-funded home modifications allocated to the higher financial categories, and New South Wales and Queensland were the only states to have HACC-funded home modifications allocated to funding levels greater than \$20,000.00.

Table 2. HACC-funded home modification service user for each service level across jurisdictions and time (based on the 2001/2002-2005-2006 HACC MDS using New South Wales service level definitions / segmentation by cost of service)

		2001/2002	2002/2003	2003/2004	2004/2005	2005/2006
New South Wales	<\$5,000	10838	11057	10730	9428	11602
	\$5,000-20,000	131	200	160	243	189
	>\$20,000	5	27	23	27	17
Queensland	<\$5,000	6423			7704	8472
	\$5,000-20,000	43			82	73
	>\$20,000				5	8
South Australia	<\$5,000	1110	1626	1791	1948	2469
Western Australia	<\$5,000	129	305	295	152	216
Tasmania	<\$5,000	388	1071	1011	982	630
	\$5,000-20,000		6	10	1	9
Australian Capital Territory	<\$5,000	166	161	149	309	284
	\$5,000-20,000	6	3	14	16	11

The HACC Data dictionary and service guidelines have some ambiguity about what is included in the cost of home modification or home maintenance, and the data suggest that states may define and report costs differently. Table 3 reports the mean expenditure per service user in each jurisdiction spent at each service level. There is a great discrepancy between some jurisdictions. For example, in 2005/2006, New South Wales spent an average of \$207.58 per service user in the lowest financial band, while, on average, South Australia spent \$89.15, and the Australian Capital Territory spent \$406.05 per service user at the under \$5,000.00 band. These discrepancies suggest that jurisdictions may vary in how they define the covered cost of a home modification. From the available data it is not possible to discern what those differences are, but it is possible that some jurisdictions cover the cost of labour and materials while other cover one or the other. In addition, jurisdictions may vary in whether take client contributions into account.

Table 3. Average dollars spent on HACC-funded home modifications for each service level across datasets and jurisdictions (based on the 2001/2002-2005/2006 HACC MDS)

Region and value range		2001/2002	2002/2003	2003/2004	2004/2005	2005/2006
NSW	<\$5,000	\$219.27	\$239.55	\$241.09	\$228.12	\$207.58
	\$5,000-20,000	\$9,445.89	\$10,342.84	\$10,593.51	\$10,369.66	\$10,111.65
	>\$20,000	\$25,445.80	\$25,711.63	\$28,451.52	\$25,059.52	\$24,470.94
	Mean	\$340.90	\$479.57	\$452.33	\$551.37	\$401.04
QLD	<\$5,000	\$133.18	No data	No data	\$144.53	\$157.93
	\$5,000-20,000	\$8,788.09	No data	No data	\$8,989.56	\$9,868.01
	>\$20,000	0	No data	No data	\$29,555.60	\$24,496.50
	Mean	\$190.74	No data	No data	\$256.50	\$263.57
SA	<\$5,000	\$46.40	\$50.67	\$39.11	\$68.96	\$89.15
	<i>Total</i>	<i>\$46.40</i>	<i>\$50.67</i>	<i>\$39.11</i>	<i>\$68.96</i>	<i>\$89.15</i>
WA	<\$5,000	\$29.82	\$41.32	\$235.22	\$495.85	\$338.08
	Mean	\$29.82	\$41.32	\$235.22	\$495.85	\$338.08
TAS	<\$5,000	\$14.64	\$113.84	\$93.86	\$68.35	\$162.70
	\$5,000-20,000	0	\$6,986.83	\$7,260.20	\$5,200.00	\$7,199.22
	Mean	\$14.64	\$152.13	\$164.05	\$73.57	\$261.80
ACT	<\$5,000	\$821.75	\$964.35	\$731.09	\$505.37	\$406.05
	\$5,000-20,000	\$6,324.00	\$6,768.33	\$7,075.14	\$8,328.13	\$8,355.27
	Mean	\$1,013.69	\$1,070.52	\$1,275.98	\$890.49	\$702.46

As Table 3 and Figure 3 show, the mean HACC monies for each level also varied greatly between data sets. Expenditures in South Australia, New South Wales, and Queensland were relatively consistent over time, while Western Australia and Tasmania reflected a jump in the yearly mean cost. The Australian Capital Territory appeared to be in decline, but still recorded the highest average expenditure per service user of all states and territories each year.

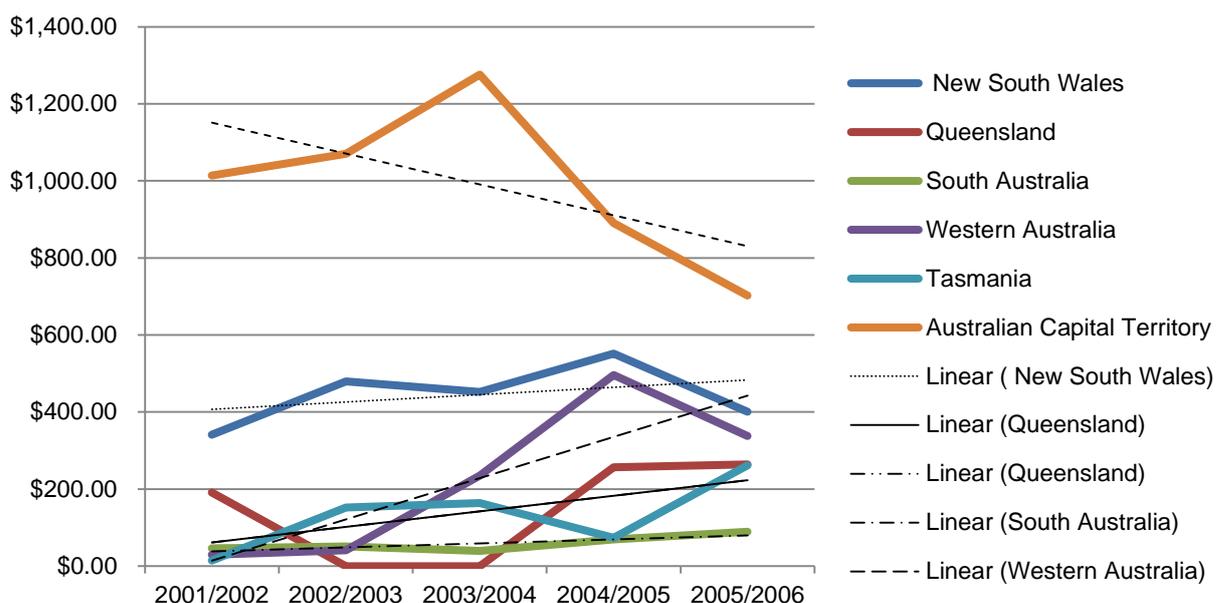


Figure 3. Mean HACCFunded home modification expenditure by jurisdiction across time (as recorded by the 2001/2002-2005/2006 HACCFunded MDS)

Home Maintenance Variable

From 2001/2002 to 2005/2006, 430,000 HACCFunded MDS records pertaining to home maintenance were made available for analysis. HACCFunded provided a full HACCFunded MDS for 2005/2006. This full set included information pertaining to all HACCFunded services and permitted a comparison of the percentage of service users who received HACCFunded home maintenance services with the percentage of service users who received any HACCFunded service that year. Figure 4 illustrates that 15% of HACCFunded services provided in 2005/2006 were home maintenance services.

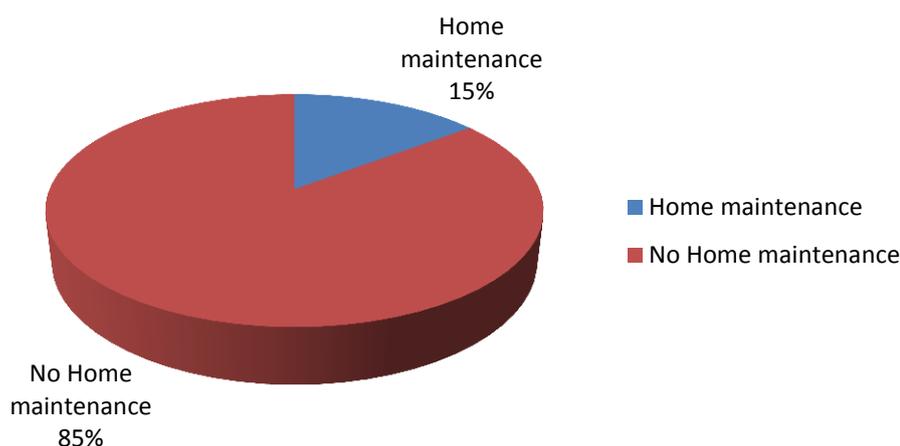


Figure 4. Home maintenance as a proportion of HACCFunded services in 2005/2006 (as recorded by the HACCFunded MDS 2005/2006)

State or territory of home maintenance clients

In 2005/2006, 114,576 clients received HACC-funded home maintenance services. Of these, New South Wales recorded 18,343 clients (15%).

Figure 5 illustrates the percentage of the Australian population aged 60 and over in each jurisdiction according to the Australian Census 2001 and the total hours of HACC-funded home maintenance services provided in each jurisdiction as recorded in the 2005/2006 HACC MDS. In contrast to HACC-funded home modifications, New South Wales provided less HACC-funded home maintenance than the 2001 Australian Census predicted based on the percentage of the population aged 60 and over. The Northern Territory also recorded less home maintenance than its population distribution predicted. Conversely, Victoria, Queensland, South Australia, and Western Australia all recorded more HACC-funded home maintenance than predicted by their respective proportions of the national aged Australian population. Tasmania and the Australian Capital Territory recorded a number of HACC-funded maintenance hours in line with their population distributions.

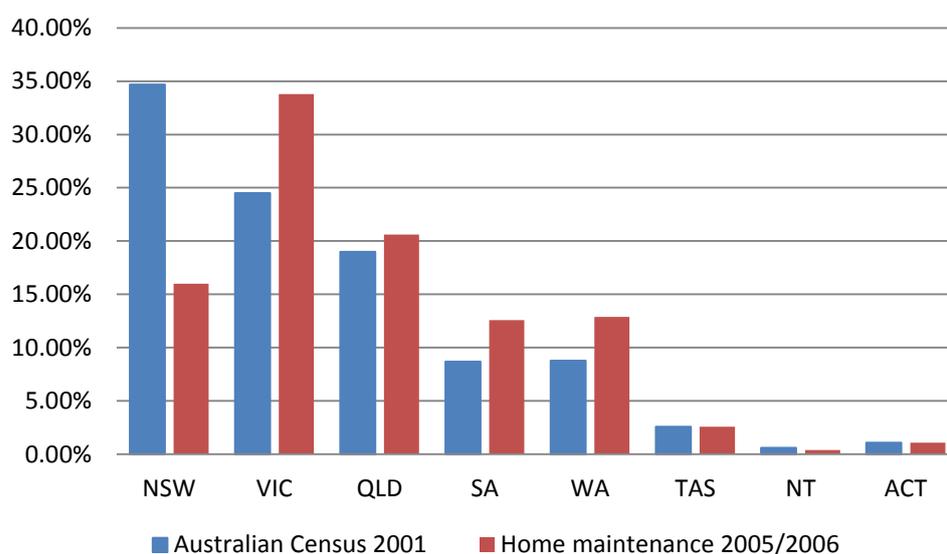


Figure 5. Breakdown across jurisdictions of the Australian population of those over 60 years according to the Australian Census 2001 compared with those who received HACC funded home modifications (based on the 2005/2006 HACC MDS)

The recorded mean hours of HACC-funded home maintenance per job varied across jurisdictions (see Figure 6). The mean hours per job ranged from five in South Australia to twenty-two hours in the Northern Territory. New South Wales recorded a mid-range mean of ten hours.

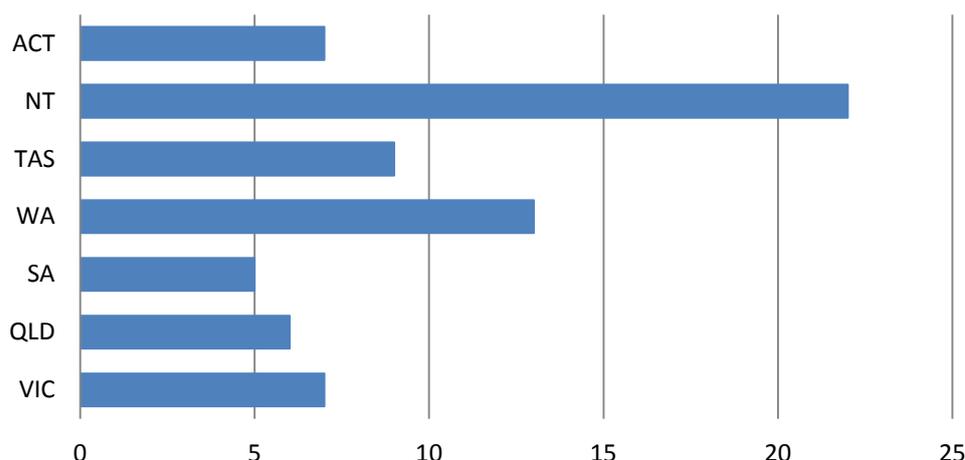


Figure 6. Mean hours per job of HACC-funded home maintenance across states and territories (based on the 2001/2002-2005/2006 HACC MDS)

Table 4 reports the distribution of HACC- funded home maintenance hours across time. There was an overall increase in each jurisdiction from 2001/2002 to 2005/2006, and each year Victoria recorded significantly more hours of HACC-funded home maintenance than any other jurisdiction. The category of work that made up the total home maintenance hours varied across jurisdictions. New South Wales, Victoria, Queensland, South Australia, and Tasmania, reported the highest proportion of jobs in the 4 or fewer hours per job category. In contrast, Western Australia and the Australian Capital Territory reported the highest proportion of jobs in the 9 or more hours per job category, as was the case in the Northern Territory for all but one year. This difference was generally consistent across time, but the reason for the difference is not clear; it could be due to a difference in data coding or entry or home maintenance tasks could take longer to complete in these jurisdictions.

Table 4. Percentage of home maintenance hours by jurisdiction and job category across time (as recorded by the HACC MDS 2001/2002-2005/2006)

		2001/2002	2002/2003	2003/2004	2004/2005	2005/2006
NSW	4 or fewer hrs	53.6%	50.3%	44.1%	47.4%	41.3%
	5 to 8 hrs	17.4%	18.8%	16.6%	16.2%	19.7%
	9 or more hrs	29.0%	30.9%	39.4%	36.4%	39.0%
	Total hrs	12,552	12,701	12,832	13,264	18,343
VIC	4 or fewer hrs	69.5%	69.2%	66.6%	66.6%	66.7%
	5 to 8 hrs	15.9%	15.6%	16.4%	15.8%	16.1%
	9 or more hrs	14.6%	15.2%	17.0%	17.6%	17.2%
	Total hrs	23,613	29,695	32,249	35,981	38,714
QLD	4 or fewer hrs	68.3%			63.0%	59.9%
	5 to 8 hrs	14.3%			17.6%	19.0%
	9 or more hrs	17.4%			19.5%	21.1%
	Total hrs	13,730			21,617	23,654

		2001/2002	2002/2003	2003/2004	2004/2005	2005/2006
SA	4 or fewer hrs	78.1%	72.7%	74.1%	69.8%	68.8%
	5 to 8 hrs	12.3%	15.3%	15.0%	17.3%	18.3%
	9 or more hrs	9.6%	12.0%	11.0%	12.9%	12.9%
	Total hrs	7,450	9,680	10,755	12,147	14,448
WA	4 or fewer hrs	34.3%	29.8%	27.6%	25.4%	25.4%
	5 to 8 hrs	22.5%	20.2%	19.3%	19.1%	17.6%
	9 or more hrs	43.2%	50.0%	53.1%	55.5%	57.1%
	Total hrs	7,309	9,758	11,459	12,848	14,767
TAS	4 or fewer hrs	59.8%	54.5%	55.8%	57.7%	58.0%
	5 to 8 hrs	16.6%	16.7%	18.1%	16.0%	16.1%
	9 or more hrs	23.6%	28.8%	26.1%	26.3%	25.8%
	Total hrs	1,178	2,055	2,554	2,331	3,022
NT	4 or fewer hrs	52.6%			37.5%	35.7%
	5 to 8 hrs	23.7%			15.8%	17.5%
	9 or more hrs	23.7%			46.8%	46.8%
	Total hrs	173			419	412
ACT	4 or fewer hrs	19.4%	23.3%	33.0%	30.6%	32.8%
	5 to 8 hrs	27.8%	34.2%	22.0%	24.5%	30.0%
	9 or more hrs	52.8%	42.5%	45.0%	44.9%	37.2%
	Total hrs	1,124	1,188	1,200	1,358	1,216

Table 5 and Figure 7 illustrate that, although the average amount of time spent on HACC-funded home maintenance varied between jurisdictions at the category level across years, Western Australia consistently recorded a higher overall average time per job than the other states and the Australian Capital Territory. This was not so, however, when compared with the Northern Territory for two of the three years for which Northern Territory data was available. The comparatively few jobs recorded by the Northern Territory allowed a few jobs that took an unusual amount of time (i.e., abnormal or outlier values) to have greater weight to influence the average. For jobs that lasted more than one day, Victoria, Tasmania, and the Northern Territory consistently recorded more average hours per home maintenance job than did New South Wales. South Australia also reported more average per job in this category for all years except 2005/2006. In contrast, the Australian Capital Territory recorded consistently fewer hours per job in this category. These differences could reflect the performance of different maintenance tasks in these jurisdictions or might be due to differences in data coding or entry.

Table 5. Mean hours per job of home maintenance by jurisdiction across time (as recorded by the HACC MDS 2001/2002-2005/2006)

		2001/2002	2002/2003	2003/2004	2004/2005	2005/2006
NSW	4 or fewer hours	2.2	2.1	2.2	2.2	2.2
	5 to 8 hours	6.4	6.4	6.5	6.5	6.5
	9 or more hours	18.9	18.7	20.1	20.5	20.6
	Total	7.8	8.1	9.9	9.5	10.2
VIC	4 or fewer hours	2.0	2.1	2.1	2.1	2.1
	5 to 8 hours	6.2	6.2	6.2	6.2	6.2
	9 or more hours	37.3	32.7	29.1	26.9	27.9
	Total	7.8	7.4	7.4	7.1	7.2
QLD	4 or fewer hours	1.9	.	.	2.0	2.1
	5 to 8 hours	6.2	.	.	6.3	6.2
	9 or more hours	31.3	.	.	19.2	18.5
	Total	7.6	.	.	6.1	6.3
SA	4 or fewer hours	1.9	2.0	2.1	2.1	2.1
	5 to 8 hours	6.1	6.1	6.2	6.2	6.1
	9 or more hours	27.3	21.1	22.9	20.9	20.5
	Total	4.9	4.9	5.0	5.2	5.2
WA	4 or fewer hours	2.4	2.5	2.4	2.5	2.5
	5 to 8 hours	6.4	6.4	6.4	6.4	6.5
	9 or more hours	20.2	19.7	19.6	19.3	19.4
	Total	11.0	11.9	12.3	12.6	12.8
TAS	4 or fewer hours	2.4	2.3	2.6	2.5	2.5
	5 to 8 hours	6.0	6.3	6.4	6.6	6.5
	9 or more hours	30.2	28.9	32.8	27.9	25.8
	Total	9.6	10.6	11.2	9.8	9.1
NT	4 or fewer hours	2.4	.	.	2.4	2.4
	5 to 8 hours	6.0	.	.	6.1	6.5
	9 or more hours	22.0	.	.	35.7	42.7
	Total	7.9	.	.	18.6	22.0
ACT	4 or fewer hours	2.4	2.4	2.3	2.4	2.2
	5 to 8 hours	6.9	6.9	6.5	6.6	6.6
	9 or more hours	15.4	14.1	13.9	14.5	12.7

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006
Total	10.5	8.9	8.4	8.9	7.4

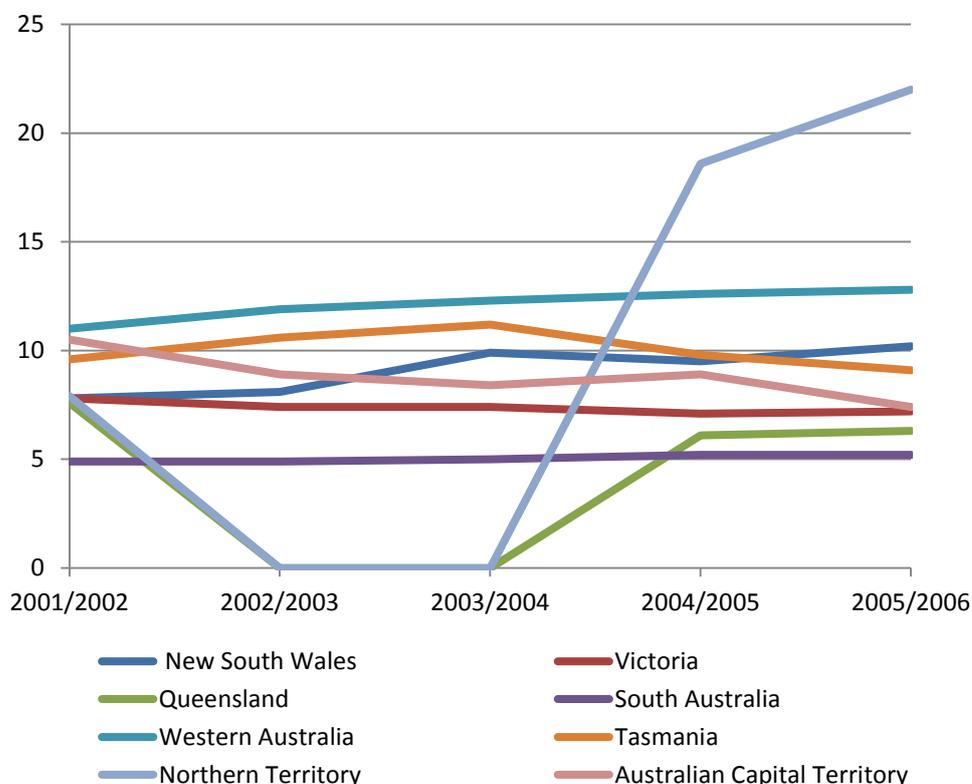


Figure 7. Mean hours of home maintenance by jurisdiction across time (as recorded by the HACC MDS 2001/2002-2005/2006)

Age of home modification clients

As recorded by the 2005/2006 HACC MDS, the great majority of clients who accessed HACC-funded home modification services in each state or territory were 75 years or older (see Figure 10). Like other states and territories, the 0 to 17 years category comprises a relatively small proportion of the total service users for New South Wales in the 2005/2006 recording period.

Analyses of the age of HACC-funded home modification clients across the years by state and territory revealed a general shift from the younger to older age categories, except in Western Australia and Tasmania. As noted above, Queensland data was not available for some years, so for all jurisdictions data from 2001/2002 was compared with data from 2005/2006 to identify any major change. As the population of Australia is growing (ABS, 2005), an increase in the number of clients was to be expected, which could make changes in raw numbers misleading with respect to age distribution. Therefore, the proportion of total service users in each age group also is reported (See Table 6). In each jurisdiction, the distribution of service users by age appears to have changed over time; however, New South Wales does not appear to demonstrate

change in any one age category that is as large as differences reported in the other states and territories. Overall, New South Wales HACC MDS data has demonstrated a relatively stable distribution of services by age category over time.

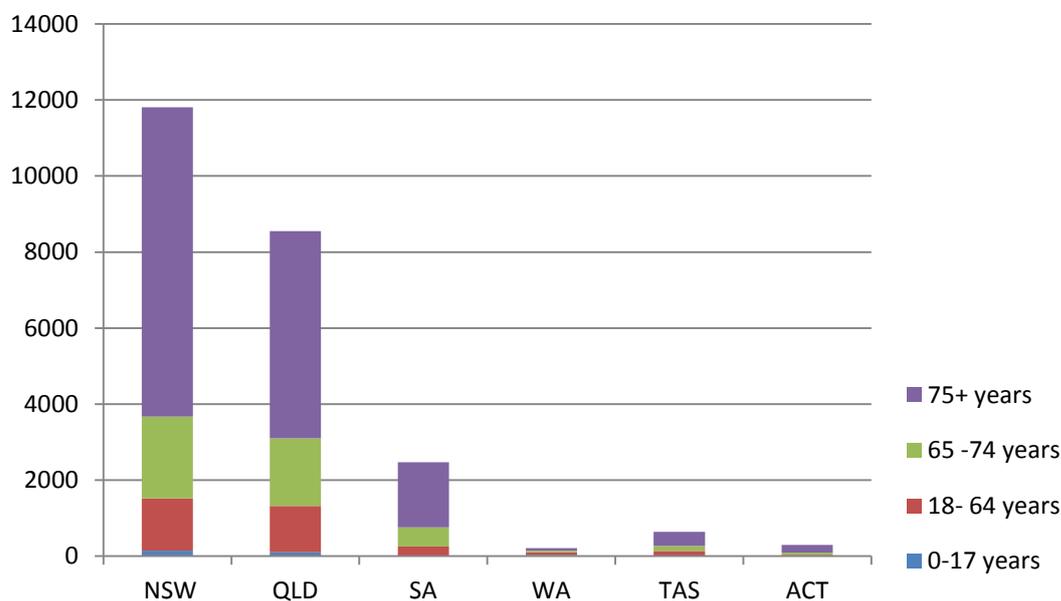


Figure 8. HACC-funded home modification clients by age category (as recorded by the 2005/2006 HACC MDS)

Table 6. Number and percent of HACC-funded home modification clients by age category and jurisdiction for 2001/2002 and 2005/2006 (based on the 2001/2002-2005/2006 HACC MDS)

	Age group	2001/2002 Number of clients	2001/2002 Percent of total clients	2005/2006 Number of clients	2005/2006 Percent of total clients
NSW	0 to 17	139	1.3	143	1.2
	18 to 64	1366	12.4	1382	11.9
	65 to 74	2237	20.4	2148	18.2
	75+	7232	65.9	8135	68.9
QLD	0 to 17	58	0.9	104	1.2
	18 to 64	977	15.1	1219	14.2
	65 to 74	1616	25.0	1775	20.8
	75+	3815	59.0	5452	63.8
SA	0 to 17	12	1.1	5	0.2
	18 to 64	133	12.0	247	10
	65 to 74	247	22.2	510	20.7
	75+	718	64.7	1707	69.1

	Age group	2001/2002 Number of clients	2001/2002 Percent of total clients	2005/2006 Number of clients	2005/2006 Percent of total clients
WA	0 to 17	0	0	35	16.2
	18 to 64	41	31.8	71	32.8
	65 to 74	40	31	43	20
	75+	48	37.2	67	31
TAS	0 to 17	0	0	10	1.6
	18 to 64	69	17.8	127	19.9
	65 to 74	90	23.2	135	21.1
	75+	229	59.0	367	57.4
ACT	0 to 17	3	1.7	4	1.4
	18 to 64	40	23.3	35	11.9
	65 to 74	48	27.9	60	20.3
	75+	81	47.1	196	66.4

The dollar amount spent on home modifications appears to vary between age groups and, to a smaller extent, across jurisdictions. The difference in expenditures for age categories from one jurisdiction to another appeared to increase as the level of expenditure increased. Figure 9 illustrates the variation between mean HACC monies spent in 2005/2006 on Level 1 home modifications across jurisdictions grouped by age category. The mean cost of Level 1 HACC-funded home modifications varied across jurisdiction in all age groups. The Australian Capital Territory had the highest mean cost for each age group except 0 to 17 years, for which Tasmania had the highest mean.

As a group, the 0 to 17 years category had a higher mean expenditure than any other age category in all jurisdictions, except South Australia (where expenditures for all age groups were relatively low) and the Australian Capital Territory. Generally, the average expenditures declined as age increased except in South Australia and the Australian Capital Territory where the 0 to 17 years category had the lowest average expenditures. The biggest differential between age categories appeared to be in Tasmania, which displayed the greatest difference between the 0 to 17 years category and the other age categories.

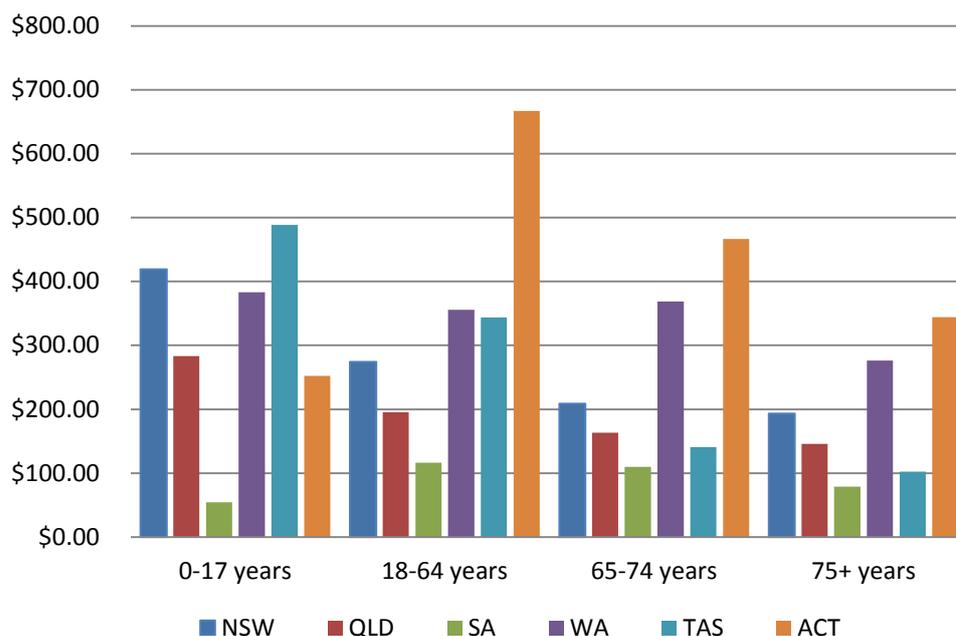


Figure 9. Average expenditure on Level 1 home modifications by age category across jurisdictions (as recorded by the HACC MDS 2005/2006)

Figure 10 illustrates the variation between mean HACC monies spent in 2005/2006 on Level 2 (\$5,000 and above) home modifications across jurisdictions grouped by age category. No Level 2 modifications were recorded in South Australia or Western Australia. As with Level 1 expenditures, the general trend across jurisdictions was a reduction of mean expenditures as age increased. The data from Tasmania, however, reflect a general increase in average expenditure with increased age with the exception of the 65 to 74 years category. In comparison with other jurisdictions, New South Wales had the highest mean expenditures in the 0 to 17 years and the 18 to 64 years age categories; Queensland had the highest mean for the 65 to 74 years category; and Tasmania had the highest mean expenditures in the 75 and over years category.

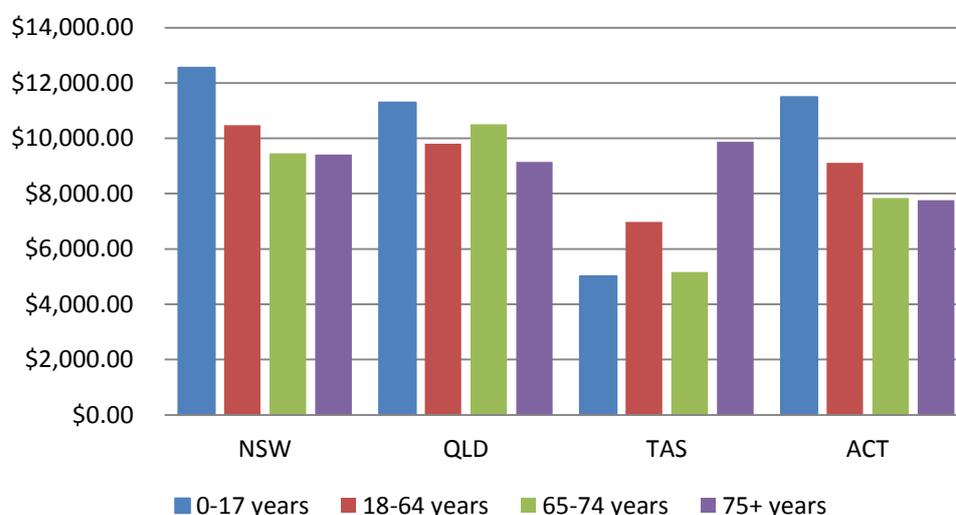


Figure 10. Average expenditure on Level 2 home modifications by age category across jurisdictions (as recorded by the HACC MDS 2005/2006)

Figure 11 illustrates the variation between mean HACC monies spent in 2005/2006 on Level 3 (over \$20,000) home modifications across jurisdictions grouped by age category. Only New South Wales and Queensland recorded Level 3 HACC-funded home modifications in 2005/2006. The distribution of expenditures across age categories is similar in both states; Queensland, however, did not record any Level 3 expenditures for the 65 to 74 years category. The highest mean expenditure in Queensland was in the 0 to 17 years category (\$28,042), followed by the 18 to 64 years group and the 75 and over years group. In New South Wales the highest mean expenditure also was in the 0 to 17 years group (\$28,146.60), but the next highest was in the 75 and over years, followed by 18 to 64 years and 65 to 74 years groups.

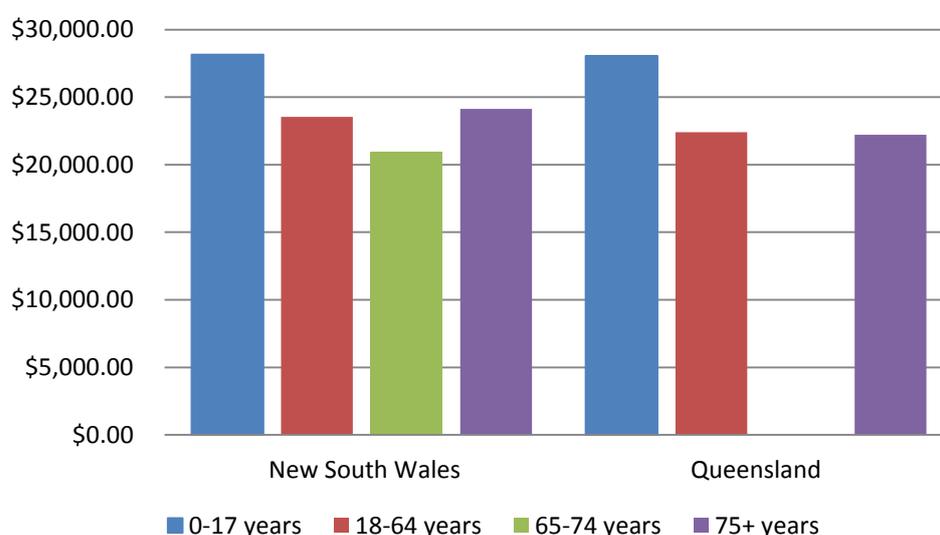


Figure 11. Average expenditure on Level 3 home modifications by age category across jurisdictions (as recorded by the HACC MDS 2005/2006)

Age of home maintenance clients

Like home modification clients, the majority of home maintenance clients recorded in the 2005/2006 HACC MDS were in the 75 years and above category with most states or territories servicing this age category more than any other (see Figure 12). The Northern Territory, however, recorded the highest number of home maintenance clients in the 18 to 64 years category, followed by the 65 to 74 years category and then the 75 years and over category (see Table 7). The difference in age distribution of home maintenance clients in the Northern Territory may be due to the greater proportion of indigenous Australians in the Northern Territory population compared with other states and territories (ABS, 2001b) because the average age of mortality in the indigenous Australian population is lower than that of the non-indigenous Australian population (ABS, 2001b).

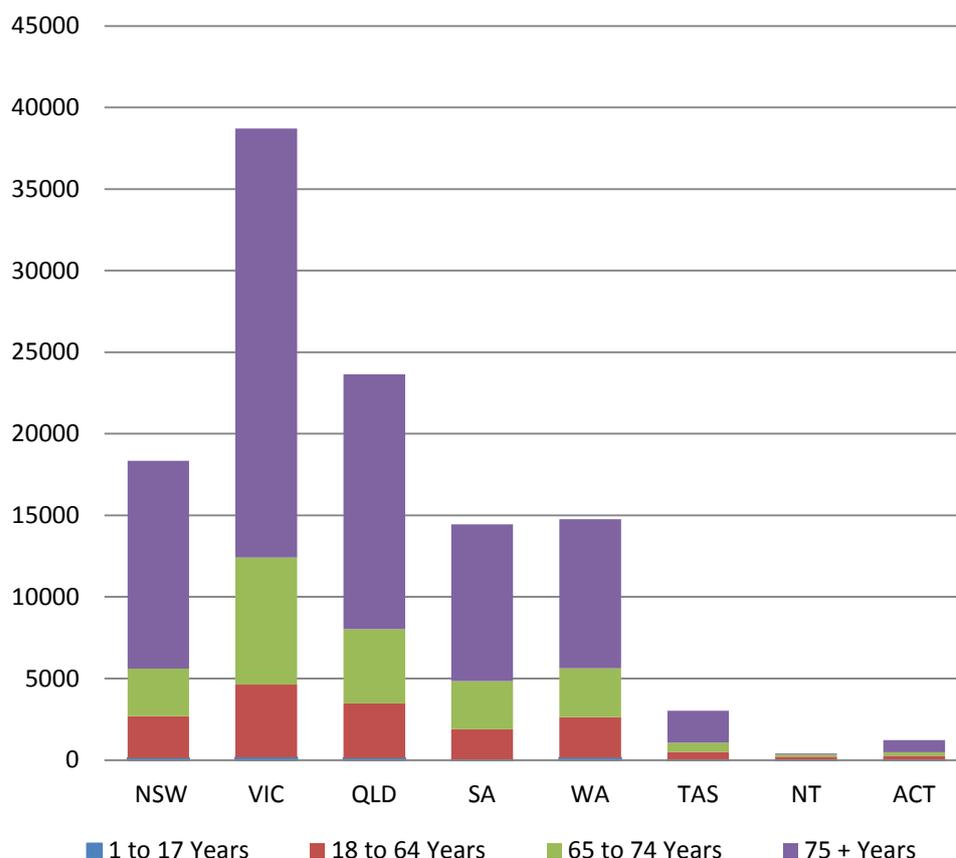


Figure 12. Home maintenance clients by age category across jurisdictions (as recorded by the 2005/2006 HACC MDS)

Table 7 reports the growth in each age group from 2001/2002 through 2005/2006. New South Wales recorded an increase in the number of individuals in all age categories, but when the increase in total number of clients was taken into account, the proportion of the total number of clients represented by each age group remained relatively stable. All jurisdictions noted an increase in most age categories across time with the exception of the 0 to 17 years category in Queensland, South Australia, and Tasmania. The most dramatic changes in proportional representation of age groups occurred in the Northern Territory and are likely due to the relatively small numbers recorded.

Table 7. Number and percent of HACC-funded home maintenance clients by age category and jurisdiction for 2001/2002 and 2005/2006 (based on the HACC MDS)

	Age group	2001/2002	2001/2002	2005/2006	2005/2006
		Number of Clients	Percent of Total Clients	Number of Clients	Percent of Total Clients
NSW	0 to 17	102	0.8	116	0.6
	18 to 64	1994	15.9	3007	15.7
	65 to 74	2275	18.1	3179	16.6
	75+	8178	65.2	12800	67.0
VIC	0 to 17	176	0.7	179	0.5
	18 to 64	2975	12.6	5022	13.4
	65 to 74	5269	22.3	8109	21.7
	75+	15187	64.3	24124	64.4
QLD	0 to 17	120	0.9	119	0.5
	18 to 64	2230	16.2	3866	16.0
	65 to 74	3051	22.2	4877	20.1
	75+	8324	60.6	15366	63.4
SA	0 to 17	31	0.4	24	0.2
	18 to 64	1117	15.0	2113	14.6
	65 to 74	1695	22.8	3108	21.6
	75+	4601	61.8	9172	63.6
WA	0 to 17	27	0.4	156	1.0
	18 to 64	1136	15.5	2922	18.5
	65 to 74	1735	23.7	3324	21.0
	75+	4410	60.3	9410	59.5
TAS	0 to 17	13	1.0	3	0.1
	18 to 64	233	19.8	571	18.9
	65 to 74	262		615	20.3
	75+	670	22.2	1839	60.7
NT	0 to 17	1	57.0	5	0.9
	18 to 64	65	0.5	287	51.7

Age group	2001/2002		2005/2006	
	Number of Clients	Percent of Total Clients	Number of Clients	Percent of Total Clients
65 to 74	56	37.6	166	29.9
75+	51	32.4	97	17.5
ACT				
0 to 17	2	29.5	6	0.4
18 to 64	208	0.2	321	20.0
65 to 74	226	18.5	293	18.3
75+	688	20.1	984	61.3

Gender of home modification clients

Figure 13 reflects the gender of all home modification clients from 2001/2002 through 2005/2006 based on available data from all jurisdictions: 68% were female, and 32% were male. Tasmania's 2005/2006 MDS was missing a significant number of codes, but gender distribution was relatively stable over time and across jurisdictions. Interestingly, while females accounted for the higher proportion of clients, males accounted for the higher proportion of expenditures: representing only 32% of the clients, males received home modifications accounting for 57% of the money spent (see Figure 14).

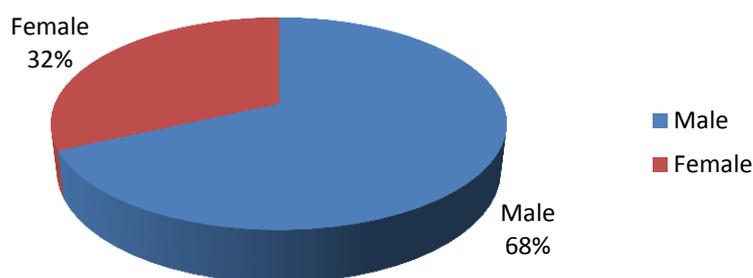


Figure 13. Gender distribution of home modification clients
(as recorded by the 2001/2002 to 2005/2006 HACC MDS)

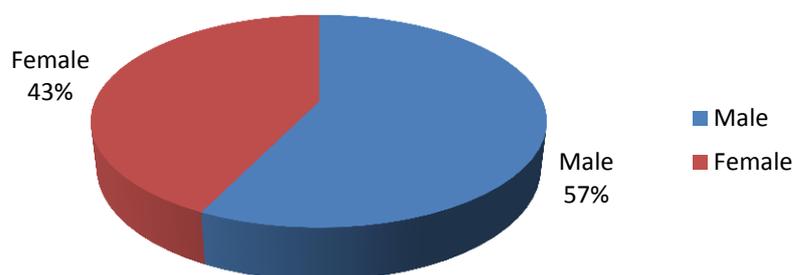


Figure 14. Mean value of home modifications (as recorded by the 2001/2002-2005/2006 HACC MDS)

Gender of home maintenance clients

Seventy-two percent of all home maintenance clients from 2001/2002 through 2005/2006 were female (see Figure 15), and females accounted for 70% of the mean hours of home maintenance service (see Figure 16). Females both received more HACC-funded home maintenance provided to them and received work that took longer than males on average. Thus, in contrast to the distribution of home modification dollar expenditures, home maintenance hours were distributed among males and females in a manner comparable to the proportions males and females represented in the total home maintenance client population.

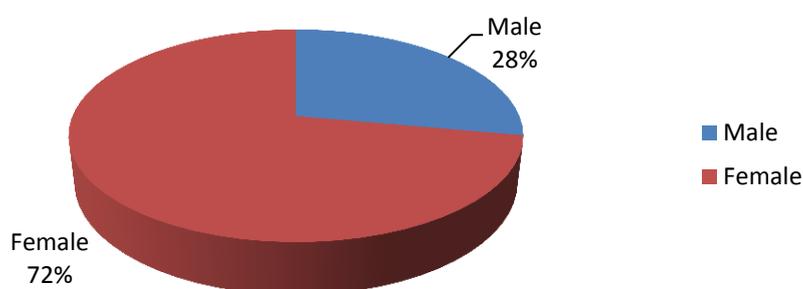


Figure 15. Gender distribution of home maintenance clients (as recorded by the 2001/2002 to 2005/2006 HACC MDS)

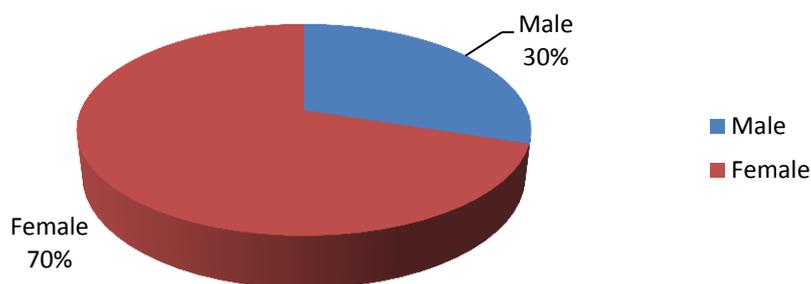


Figure 16. Percentage of mean hours of home maintenance (as recorded by the 2001/2002-2005/2006 HACC MDS)

Access to home modifications by people of Indigenous status

The Indigenous status of home modification service users was examined by comparing data from the states and territories from 2001/2002 and 2005/2006. Figure 17 illustrates that, from 2001/2002 through 2005/2006, the recorded proportion of HACC service users who identified as Indigenous Australians declined across all states and territories with the exception of South Australia, where the proportion rose (although the actual counts were small). New South Wales recorded a slight drop in the percentage of clients who identified as Indigenous (2.2 to 0.8%). Western Australia recorded a drop from 30.2 to 3.7% of clients identifying as Indigenous; as the Indigenous population of Western Australia was 3.2% in 2001 (Australian Census, 2001), this proportion is comparable to the population of Western Australia.



Figure 17. Percentage of HACC funded home modification clients and Australians with an indigenous status (based on the 2001/2002-2005-2006 HACC MDS and the 2001 Australian Census)

Access to home maintenance by people of Indigenous status

The indigenous status of home maintenance service users was examined by comparing data from the states and territories from 2001/2002 and 2005/2006.

Figure 18 illustrates that from 2001/2002 to 2005/2006 the recorded proportion of HACC service users who identified as Indigenous Australians remained relatively static across all jurisdictions with the exception of New South Wales, which recorded a drop in the percentage of clients who identified as Indigenous (11.6 to 4.0%), and the Australian Capital Territory, the Northern Territory which both recorded rises in the number who identified as Indigenous (0.5 to 2.0% and 53 to 81%, respectively). Although New South Wales recorded a decline between 2001/2002 and 2005/2006, the percentage of home maintenance clients who identified as Indigenous was comparable with the state's Indigenous population.

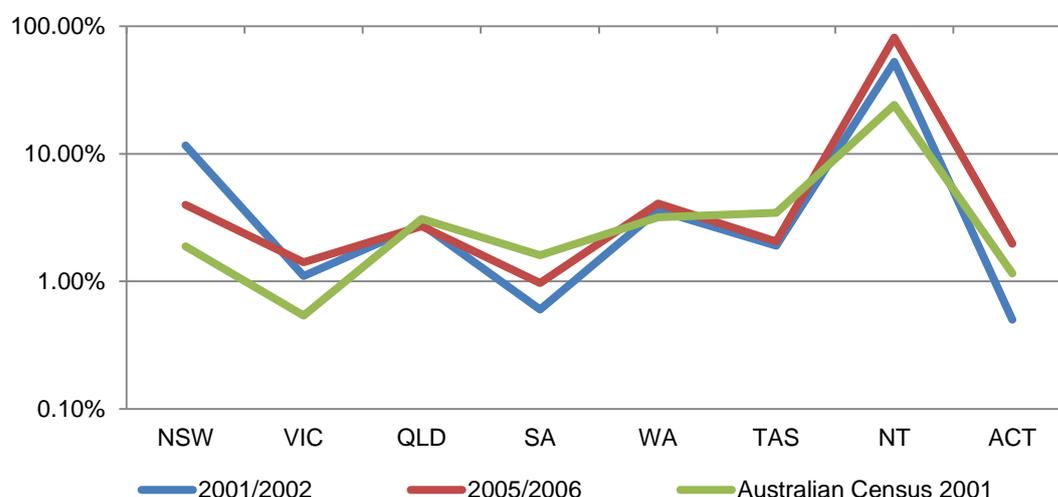


Figure 18. Percentage of HACC-funded home maintenance clients and Australians who identified as Indigenous (based on the 2001/2002-2005-2006 HACC MDS and the 2001 Australian Census)

Access to home modifications by people from culturally or linguistically diverse backgrounds

As noted above, the New South Wales guidelines stated that people from culturally or linguistically diverse backgrounds may be faced with greater barriers to accessing home modifications than the majority of the target group (Home and Community Care, 2007a). Analysis of the HACC MDS suggests this assertion is correct, indicating that the proportion of clients who were born outside of Australia and clients who spoke a language other than English was lower than the proportion of the New South Wales population represented by such groups.

The 2001 Australian Census indicated that 36% of people in New South Wales were born outside of the country, but only 7% of the home modification clients in New South Wales were born outside of Australia in 2001/2002. In 2005/2006, however, the proportion of New South Wales home modification clients born outside of Australia rose

to 24.9% (see Figure 19). Likewise, all other jurisdictions who recorded data pertaining to HACC-funded home modifications noted a rise in the proportion of clients born outside Australia, with South Australia just surpassing the expectation set by the 2001 Australian Census.

The proportion of clients who spoke a language other than English fell short of expectations created by the proportions reflected in the 2001 Australian Census in all jurisdictions except Western Australia in 2001/2002 (which might be explained by the inflated number of Indigenous clients). The proportions in some jurisdictions were closer to expected proportions than in others (see Figure 20). New South Wales showed a relatively small increase between 2001/2002 and 2005/2006 in the proportion of clients who spoke a language other than English, but both years fell short of the proportion predicted by the Australian Census (ABS, 2001a).

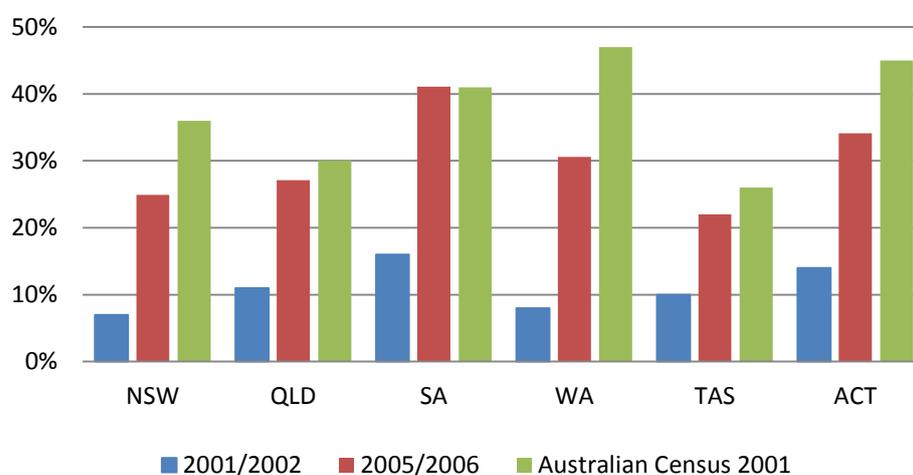


Figure 19. HACC-funded home modification clients who were born in a country other than Australia (based on the 2001/2002-2005-2006 HACC MDS)

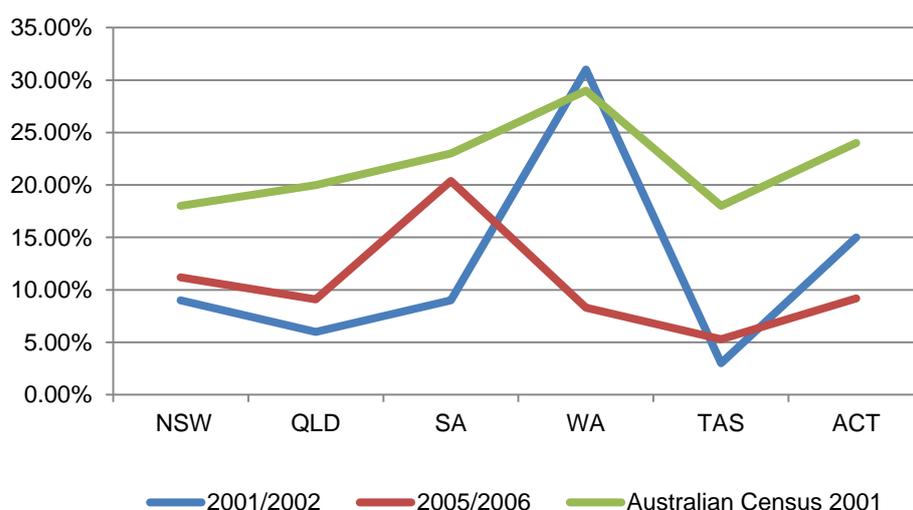


Figure 20. Percentage of HACC-funded home modification clients who spoke a language other than English (based on the 2001/2002-2005-2006 HACC MDS)

Access to home maintenance by people from culturally or linguistically diverse backgrounds

Most states and territories did not record a proportion of clients who were born outside of Australia than reflected in the Australian population; however, the difference between actual and expected proportions was not as great as that found with home modification clients. All states except Tasmania narrowed the gap in 2005/2006; the actual proportions of clients born outside Australia fell in the territories (see Figure 21).

Generally, all states and territories recorded a lower proportion of home maintenance clients who spoke a language other than English reflected in the Australian population (see Figure 22). The Northern Territory, however, noted a much higher proportion than expected of those who spoke an indigenous language in both 2001/2002 and 2005/2006.

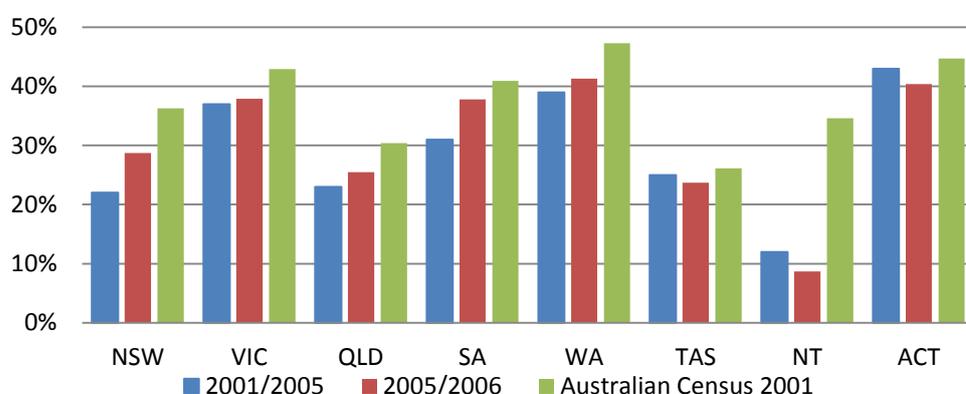


Figure 21. HACC-funded home maintenance clients who were born in a country other than Australia (based on the 2001/2002-2005-2006 HACC MDS)

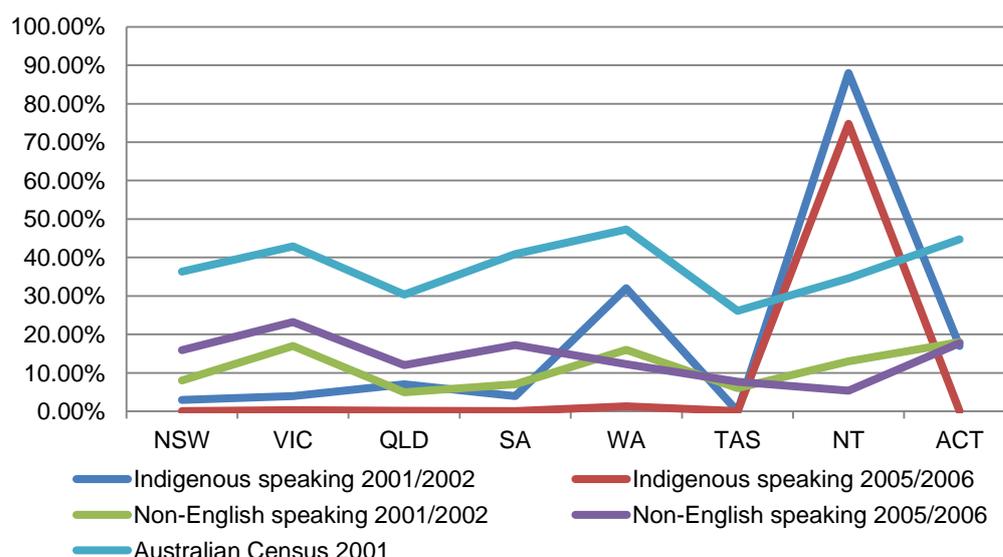


Figure 22. Percentage of HACC-funded home maintenance clients who spoke a language other than English (based on the 2001/2002-2005-2006 HACC MDS)

Completion of required reporting

All service providers who receive HACC funding are contractually required to report via the HACC MDS if they are an output producing service type and have identifiable clients. Services exempt, include some types of information services, HACC Development officers and administrative positions. The HACC MDS guidelines and data dictionary define what data is to be collected, how it is to be coded and transmitted to data repository either at State or National level. Services are required to report data quarterly to their State or National repository as determined by the jurisdiction the service is located. State repositories are responsible for transmitting all collected data from their respective State to National repository. All data is ultimately stored in the HACC National Data Repository, a site which is jointly managed and owned by Commonwealth, States and territories and from which National reports are drawn.

Monitoring and evaluation of HACC services

The National Service Standards in the Guidelines for the Home and Community Care program (Guidelines) indicate that one of the service user outcomes for Objective 3 is that:

“service users receive appropriate services provided through the process of on-going planning, monitoring and evaluation” (p.15, Home and Community Care, 1991).

The Guidelines argue that the collection of service user data via the MDS aids in monitoring service provision, distribution, and gaps in service provision.

However, the real importance of the HACC MDS is at a administrative level. As the HACC MDS underpins the core accountability measure within the program as specified within the HACC agreement. That is, did the State produce / deliver the required number of out puts as specified in the annual HACC State Plan, when measured against the State Annual Business report. This data also underpins key measure of accountability to Productivity Commissions Annual Report on Government Services.

The Report on Government Services (Steering Committee for the Review of Government Service Provision, 2003, 2004, 2005, 2006, 2007) annually produces a list of HACC-funded service providers that submitted HACC MDS data and those who did not. In most instances, these figures are grouped by the state or territory of the agency (see Figure 23). The percentage of HACC-funded service providers that submitted MDS data within a given jurisdiction varied across time and ranged from 56% to 100%. New South Wales was consistently at the lower end of percentage of services that submitted MDS data, while the Australian Capital Territory and Western Australia were at the higher end. New South Wales did, however, see an increase in the percentage of MDS submissions across all years for which data was available.

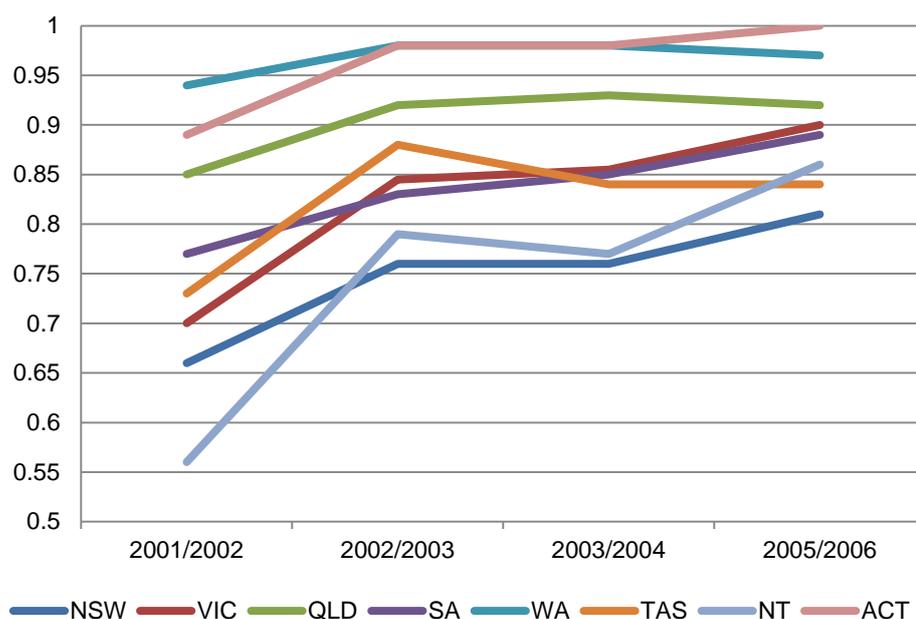


Figure 23. Percentage of HACF-funded service providers that submitted MDS data in each state or territory as reported by Report on Government Services (Steering Committee for the Review of Government Service Provision, 2003, 2004, 2005, 2007) (NB: jurisdictions were not named in 2004/2005)

Another service user outcome in the Guidelines is that “service users receive services from agencies which adhere to sound management practice” (p.17, Home and Community Care, 1991). This outcome could be supported by ensuring that agency staff has adequate support and supervision. The inconsistency with which the HACF MDS data is entered (evidenced by the data quality issues discussed above) suggests that either adequate support (i.e., training and resource materials) or supervision is absent.

Links to other services evident in the data pertaining to home modification and home maintenance

Because the HACF MDS reports individual client data via a linkage key, it is possible to identify the services types an individual uses and the volume of care. Thus, the monitoring system within the HACF MDS reports more thoroughly on client needs (as measured by proxy via service usage) than would single service access reported in isolation. For example, the 2005/2006 HACF MDS permits exploration of the relationships that home modification and home maintenance services may have with other HACF-funded service types. This technique facilitates monitoring and evaluation of related services while maintaining client anonymity (an integral component of Objective 5 discussed below).

A Chi-square Automatic Interaction Detection (CHAID)¹ analysis of the relationship between recorded HACC-funded home modification and other service types was undertaken. A CHAID allows for the analysis of categorical data sets and is particularly well suited to the analysis of larger data sets (Statistica, 2003). Further, CHAID provides a more efficient tool of analysis than other more traditional analytical approaches, including regression or ANOVA, when primarily categorical data is the input (Statistical Packages for the Social Sciences, 1999). The CHAID analysis from the 2005/2006 HACC MDS suggested that the use of home modifications can be predicted by the use or non-use of other service types (see Figure 24). Services categorised as “other equipment” were the HACC-funded services with the greatest impact on the use of home modification, with 24.3% of those of who received other equipment also receiving home modification. If, however, no other equipment was provided, use of mobility supports had the next greatest impact on the use of home modification. Where other equipment was not provided but mobility aids were, 13.3% of clients also received home modifications. Where neither other equipment nor mobility aids were provided, the use of Allied Health Care at home was a significant indicator of the use of home modifications (with 7% of those receiving allied health care at home also receiving home modifications) as was the absence of case management (20.4%). If other equipment was provided and assessment activities were present, 17.4% of clients received home modifications in contrast to the 36.2% who received home modifications in the presence of assessment activities.

Home maintenance was predicted by the use of domestic assistance; 21% of those who received domestic assistance also received home maintenance. If domestic assistance was not provided, 13.8% of those who did not receive nursing care at home also received home maintenance. If domestic assistance was not provided, but home nursing care was provided, 5.2% also received home maintenance (see Figure 25). Of those who did not receive home nursing care or domestic assistance, 25.7% of those who received home modifications also received home maintenance. Of those who received domestic assistance, but no assessment activities, 43.6% of those who also received home modifications also received home maintenance. In contrast, of those who received domestic assistance, but did not receive home modifications or assessments, only 17.7% received home maintenance.

The correlations between service usages in the 2005/2006 HACC MDS indicate that a pattern of usage does exist between certain HACC-funded services.

¹ The output from a CHAID analysis is a tree-like structure built from the most statistically significant socio-demographic variables associated with the focus variable.

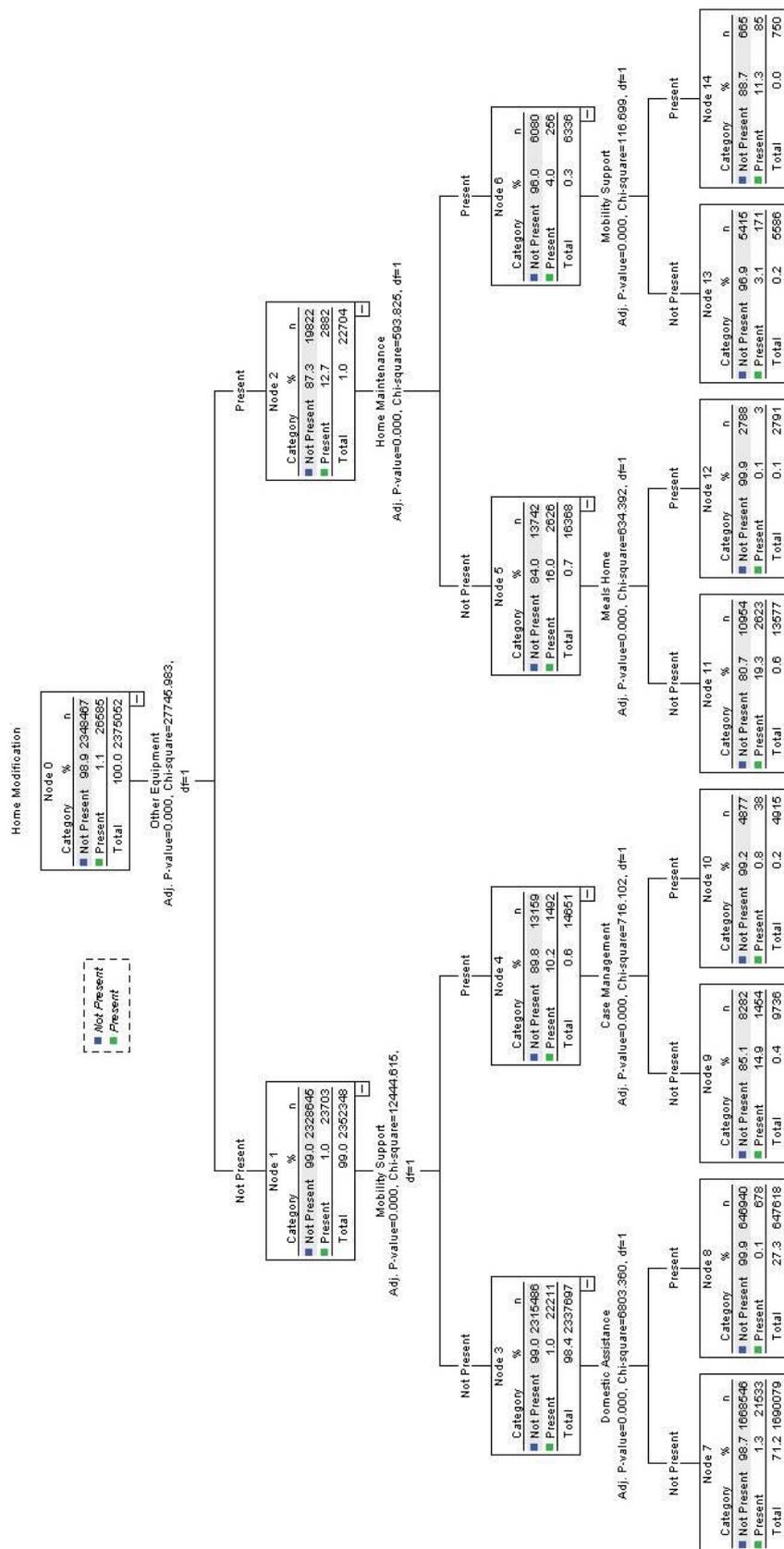


Figure 24. HACC-funded services that predict home modification usage (as recorded by the 2005/2006 HACC MDS)

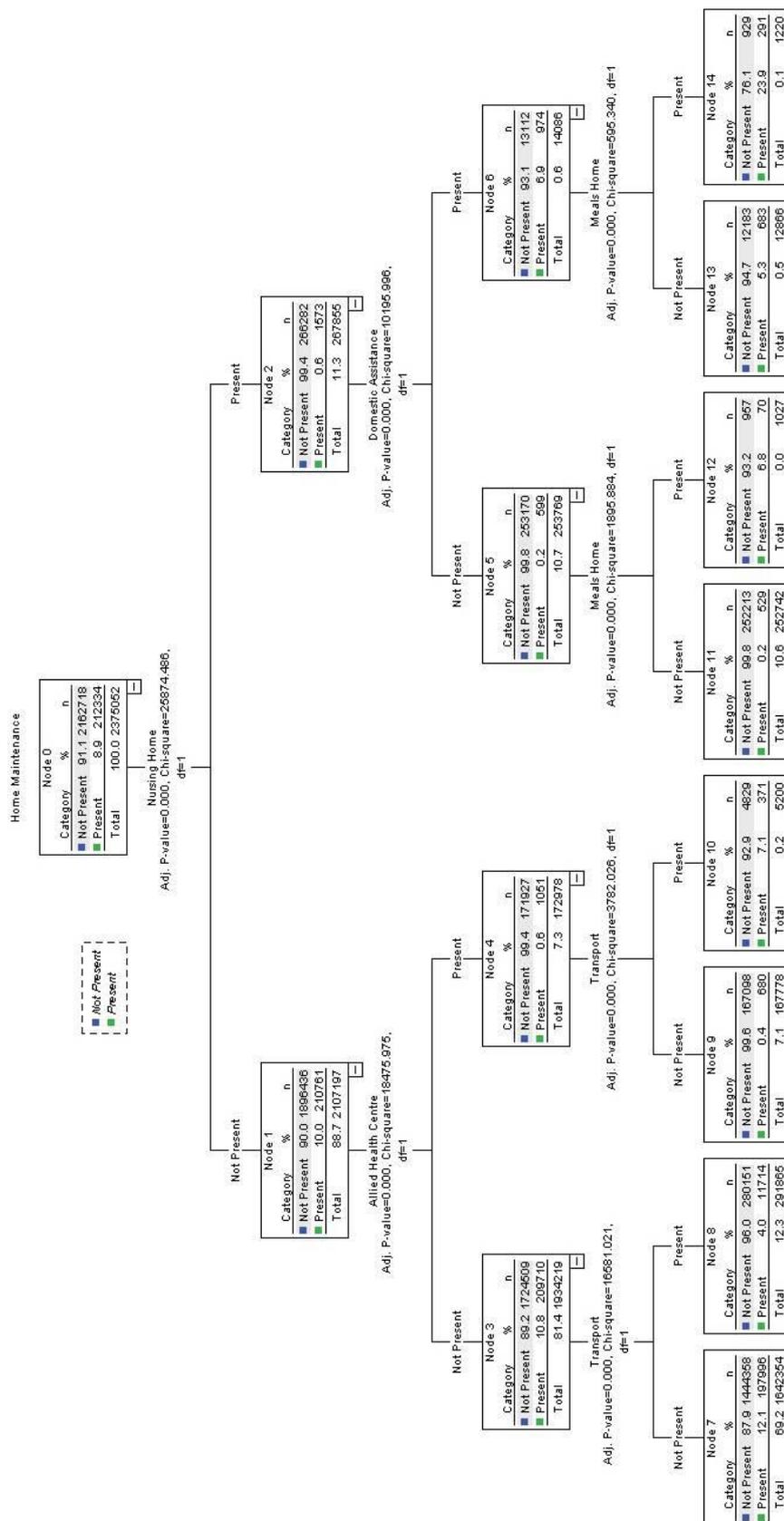


Figure 25. HACC-funded services that predict home maintenance usage (as recorded by the 2005/2006 HACC MDS)

The privacy and confidentiality of the client

Objective 5 of the National Service Standards emphasizes the importance of client privacy and confidentiality. A measure of the progress toward obtaining this objective is “the extent to which staff are trained and implement the policy on privacy and confidentiality” (p.32, Home and Community Care, 1991). The HACC MDS data dictionary (Home and Community Care, 1998) indicates that the clients’ first and surnames should be recorded when entering data into the MDS. However, the client information is de-identified in the National Depository using a “data linkage key” (Home and Community Care, 2001). This key is a precaution taken by the administrators of the data collection to ensure the privacy of clients’ data once it is reported.

The privacy and confidentiality of the HACC service user is emphasized and protected in both the National Service Standards (Home and Community Care, 1991) and in the New South Wales state guidelines (Home and Community Care, 2007a). The current method of data collection upholds the privacy and confidentiality of the service user by requiring permission from the client before recording personal demographic information and again by de-identifying the data by way of a ‘probabilistic linkage key’, which maintains the individuality of each client record. This de-identification occurs at the time of initial data input as the software generates a coded ID at the time of data entry. The code is derived from the gender and date of birth plus three characters from known positions within the surname and a further two from known positions within the first given name.

Recommendations and conclusions

The analysis has reflected that both nationally and in New South Wales, people aged 75 years and over access home modification services more than those in any other age category and that more females than males use home modification services. People who identified themselves as indigenous received services at rates either near or beyond the rate expected based on general population data. People from culturally and linguistically diverse backgrounds did not, for the most part, access home modification services at a rate expected base on the general population.

Currently, the HACC MDS can provide a great deal of information about who is accessing HACC-funded home modifications and home maintenance. At a policy level, however, fine tuning the cohesion of data collection between jurisdictions could only serve to paint a more detailed picture that would allow better comparisons. The issues of data quality and completeness and the possibility of inconsistent definitions and procedures across states and territories could be minimised by producing nationwide guidelines for definitions, coding, data entry, and data handling and by providing thorough training about data entry and management. At the service provider level, ensuring that all requested data is obtained and correctly coded and entered, will help ensure that the HACC MDS is accurately informing policy makers about what is occurring in the field.

Recommendations:

- Provide greater accessibility to those from culturally and linguistically diverse backgrounds
- Universal protocol for data entry
- Universal data and service definitions
- Universal protocol for data management
- Cross-checking of data
- Thorough training in data entry and management techniques
- User-friendly software
- Accountability of services who do not submit MDS data

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Appendix A: Manipulation of HACC MDS variables

‘State’ variable

The areas listed within HACC MDS were New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania, Northern Territory, Australian Capital Territory and Other Territories. ‘Other Territories’ is defined by the HACC Data Dictionary V 1.0 (Home and Community Care, 1998) as locations such as Christmas Island, Jervis Bay, etc. Initial exploration of the data, however, revealed that this definition was not always followed; rather, many postcodes that belong to another state or territory were often placed in the Other Territories category (see Appendix B). Consequently, the Other Territories jurisdiction was excluded from analysis. In addition, the Northern Territory declined to make any of its 2001/2002-2005/2006 home modification data available for the study, while Queensland declined to make its 2002/2003-2003/2004 home modification data available. To avoid skewing results, the data pertaining to Queensland was excluded from analysis when examining trends across time that included years for which data were missing. The only exceptions to this practice were when there was no risk of skewing counts, such as when the analysis referred to trends within states or when all time frames compared included data from Queensland (such as comparisons between 2001/2002 and 2005/2006 HACC MDS).

‘Date of birth’ variable

The age of HACC service users was calculated using the ‘date of birth’ variable of the 2001/2002-2005/2006 HACC MDS. The date of birth, however, was not presented consistently in the data sets across years. In the 2001/2002 data sets, the date of birth was an eight character string with no delimiters; in the 2004/2005 data it was presented as a year only; in all other data sets the date of birth was presented as a ten character string with delimiters. Because of these inconsistencies in the data, the calculation of age varied according to how the date of birth variable was presented. All dates were ultimately transformed into whole years, which were then used to calculate the age of the service user as of 30 June of the concluding year of the data set. Age was calculated when month and day of birth, were missing by using an SPSS syntax to extract the last four digits as per the description provided in Bridge and Goppalan (2006).

HACC service users were then grouped into four distinct age categories: ‘0 to 17 years’ (children), ‘18 to 64 years’ (pre-retirement age adults), ‘65 to 74’ years (post-retirement age adults) and ‘75 years and above’ (aged adults).

Manipulation of HACC MDS home modification variables

Age

The calculated age of 2001/2002-2005/2006 HACC-funded home modification service users ranged from -18 to 171 years. It is of course impossible that there were service users that were 171 years old or with a negative age, and the appearance of such ages in the data sets is most likely due to data entry errors. As the oldest person in Australia died at the age of 114 years (The Age, 2002), all service users less than 0 years and more than 114 years from all data sets in order to create the most comparable populations. These excluded service users were recoded as being outside the acceptable age range. Once these outlying years were excluded, there were 95,952 HACC-funded home modification service users with ages ranging from 1 to 106 years, a modal age of 79 years, a mean age of 75.73 years, and a standard deviation of 14.03 years (see Figure 26). The analysis suggests that 95 % of service users were between 61.7 and 89.76 years. This supports the cut off point of 60 years used by the Australian Bureau of Statistics and adopted by the study to define “older persons”.

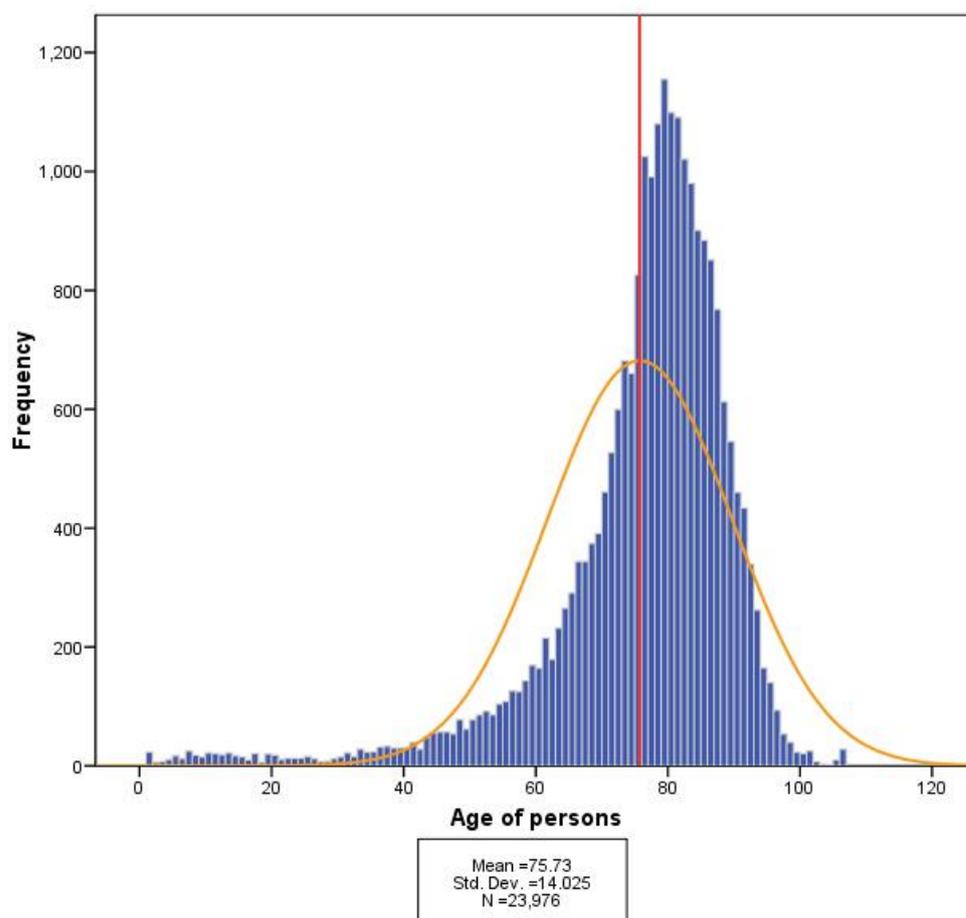


Figure 26. Age in years of HACC funded home modification clients (based on the 2005-2006 HACC MDS)

Age groups

According to the 2005-2006 HACC MDS, 66% (15,938) of the home modification were aged adults (75 and over years); 20% (4,373) were post-retirement age adults (65 to 74 years); 13% (3,084) were pre-retirement age adults (18 to 64 years); and 1% (301) were children (0 to 17 years) (Figure 27).

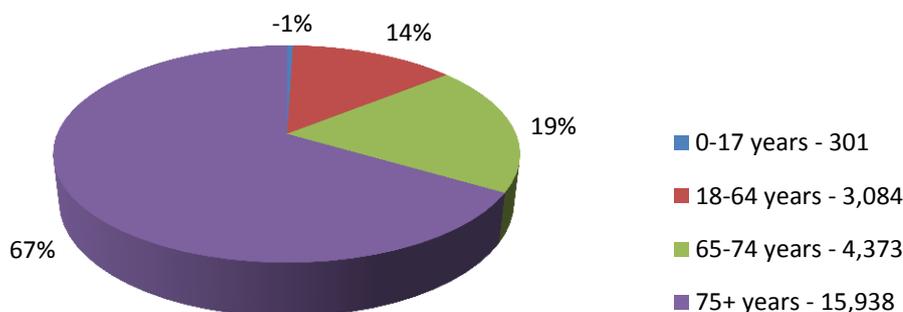


Figure 27. HACC home modification service clients according to age categories (based on the 2005/2006 HACC MDS)

'Home modification' variable

HACC-funded home modifications were recorded in the HACC MDS as a monetary value to the nearest whole dollar. For the ease of comparison, HACC monies spent on home modifications over the period of 2001/2002-2005/2006 were grouped into the categories used by New South Wales to describe allocation level:

Level 1= work to a cost of \$5,000

Level 2= work costing between \$5,000 and \$20,000

Level 3= work costing over \$20,000

Manipulation of HACC MDS home maintenance variables

Age

The mean age of HACC-funded home maintenance service users as recorded by the 2001/2002 to 2005/2006 HACC MDSs ranged from -23 to 361 years. As these age recordings were obviously a result of data entry errors, the highly improbable age records were removed from the data set before analysis. As the oldest Australian over the period pertaining to the data collection was 114 (The Age, 2002), any cases below 0 and above 114 years were excluded. After that adjustment, the recorded ages included for analysis ranged from 1 to 110 years with a mean age of 76.06 years and a standard deviation of 12.96, suggesting that 95% of service users were between 63.10 and 89.02 years (see Figure 28). The modal age was 81 years, which indicated that

people 81 years of age received HACC-funded home maintenance more than people of any other age.

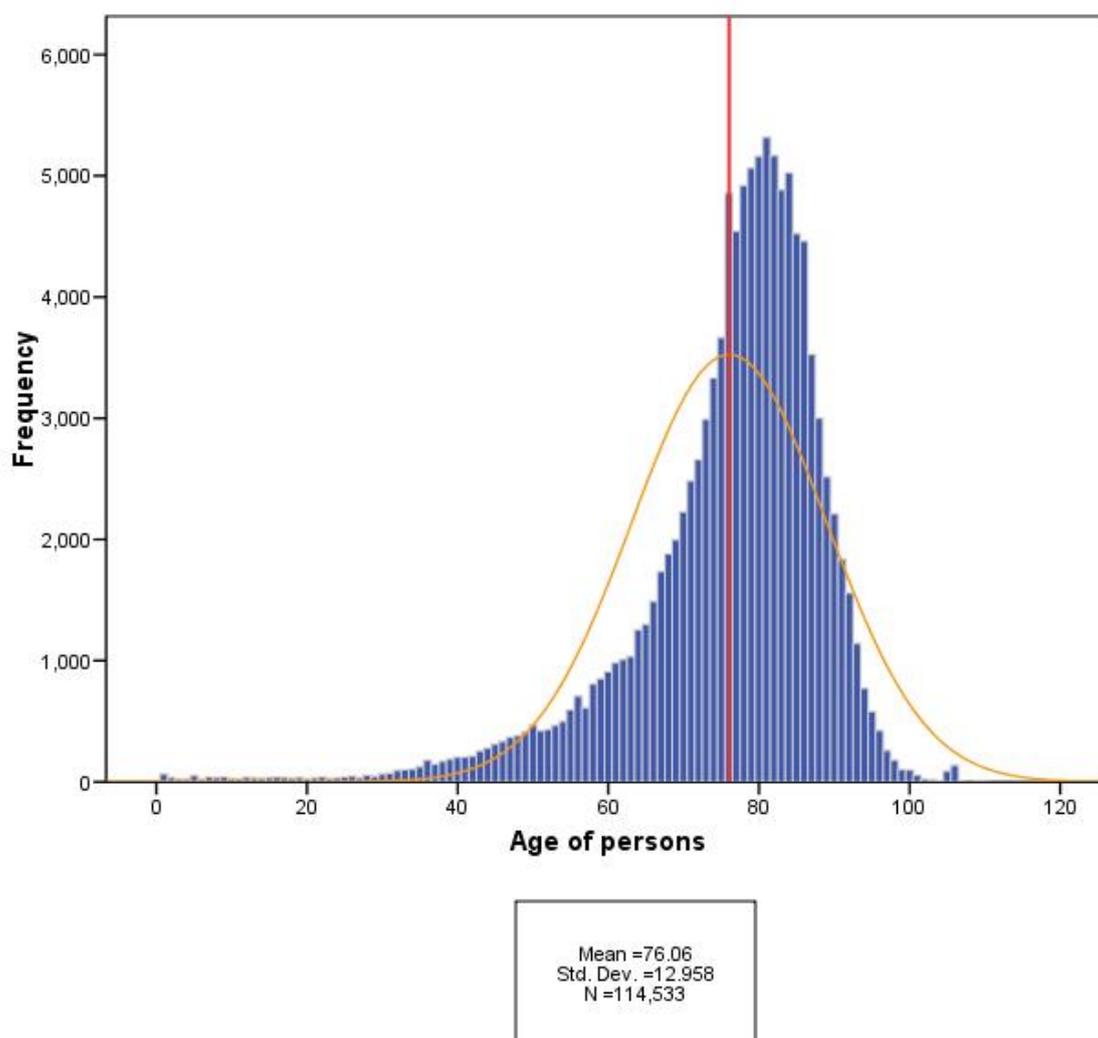


Figure 28. Age in years of HACC-funded home maintenance clients (based on the 2005-2006 HACC MDS)

Age groups

As discussed above, the HACC service service users were grouped into four distinct age categories. According to the 2005/2006 HACC MDS, two thirds (66%, 76,138) of the home maintenance clients were aged adults (75 and over years); 19% (22,098) were post-retirement age adults (65 to 74 years); 15% (15,701) were pre-retirement age adults (18 to 64 years); and 1% (619) were children (0 to 17 years) (Figure 29).

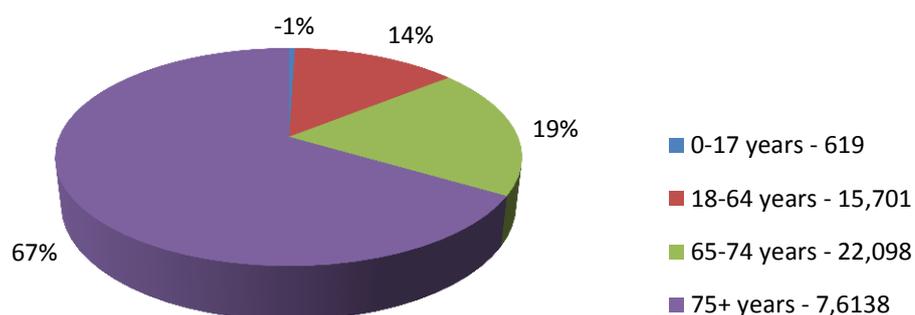


Figure 29. HACC home maintenance service clients according to age categories (based on the 2005/2006 HACC MDS)

‘Home maintenance’ variable

Home maintenance was recorded in the HACC MDS in whole hours. For ease of comparison, the hours spent on each job were grouped into categories:

half a day’s work or less = 4 or less hours

more than half a day to a full day’s work = 5 to 8 hours

more than a day’s work = 9 or more hours

Appendix B: Miscoding of ‘Other Territories’ jurisdiction

Table 8. Postcodes listed as ‘Other Territories’ that were also listed in the MDS as belonging to another jurisdiction

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other Territories
0					1				
275	1								
294	1								
2000	9		1						
2015	6								1
2019	39								1
2020	47								1
2021	42								2
2023	35								3
2025	47								6
2026	246								1
2027	52								2
2028	29								2
2029	73								2
2030	91								2
2031	182								1
2036	204								1
2037	57								2
2057	1								1
2060	7								13
2061	4								1
2062	19								11
2063	19								9
2064	9								6
2065	38								32
2066	99								71
2067	35								28
2068	45								32
2069	42								9
2071	40								1
2072	33								1
2073	84								2
2074	128								3

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other Territories
2075	73								2
2076	119								1
2077	136								4
2078									2
2079	26								4
2086	59								1
2087	55								2
2088	42								23
2089	13								18
2090	8								16
2093	113								4
2098									2
2099	213								5
2100	111								1
2101	67								2
2103	61								2
2107	67								3
2110	65								1
2111	107								4
2112	249								3
2113	126								3
2114	155								3
2115	35								5
2116	22								7
2117	74								15
2118	52								7
2120	81								5
2121	97								8
2122	170								3
2127	2								2
2128	4								1
2141	99								17
2142	65								11
2143	38								10
2144	93								16
2145	292								32
2146	82								2
2147	187								1

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other Territories
2150	31								8
2151	42								3
2153	120								1
2154	78								1
2155	36								1
2160	172								26
2161	135								15
2162	113								8
2163	54								2
2164	134								2
2170	254								1
2190	127						1		19
2192	32								3
2193	62								3
2194	41								2
2195	39								2
2196	124								4
2197	44								6
2198	28								4
2199	114								12
2200	164								23
2203	33								2
2204	77								1
2205	30								2
2206	91								7
2207	107								2
2208	80								4
2209	96								2
2210	104								1
2211	100								15
2212	101								15
2213	136								20
2214	16								1
2216	76								4
2218	40								2
2219	72								1
2220	78								1
2221	59								2

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other Territories
2224	52								2
2227	78								2
2229	151								2
2230	125								3
2233	72								1
2234	46								1
2250	147								1
2256	116								1
2264	56								1
2265	12								1
2281	85								1
2283	107								1
2284	72								1
2285	108								2
2290	105								4
2298	32								2
2299	54								1
2300	10								1
2304	52								2
2305	83								1
2306	14								1
2315	72								2
2320	102								1
2323	103								1
2330	92	1							
2335	6	1							
2340	52								1
2440	181								4
2446	47								1
2485	108		3						
2486	205		1						
2500	196								1
2502	92		1						1
2516	34								1
2517	64		1						
2518	128		1						
2519	93		1						2
2528	116		3						

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other Territories
2529	54		1						1
2530	127		2						1
2533	87		2						
2536	62								1
2540	47								126
2550	105								3
2566	41								1
2594	25								1
2611								108	1
2619								8	4
2620	65							4	49
2621	4								2
2623									1
2640	44								76
2641	31								26
2642	10								1
2643	10								2
2650	285								5
2663	30								1
2666	30	1							
2705	51								1
2710	135								2
2711	2								1
2743									1
2756	29								1
2770	162								1
2773	14								6
2774	46								13
2776	12								6
2777	84								32
2778	10								1
2779	37								4
2780	71								28
2782	55								15
2783	25								5
2784	3								1
2785	25								6
2786	4								1

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other Territories
2900	1							3	
2902	3							69	
2903	4							45	
2904	1							28	
2905	8							80	
2906	4							22	
2912								2	
2913	10							33	
2914	2							5	
3021		260							1
3043		152							1
3044		239							87
3046		317							92
3054		92							1
3055		85							28
3056		131							46
3057		50							14
3058		292							49
3060		160							20
3068		192							1
3084		209							1
3104		142							1
3175		332							3
3194		196						1	
3195		283							1
3230		45							1
3458		18							1
3460	1	36							
3498	1	60							
3500	1	519	1						
3523	1	86							
3644	4	67							
3659	1	1							
3677	1	309							
3737		39	1						
3756	1	15							
3818		168							1
3821	1	14							

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other Territories
3911		9	8						
3912		20	18						
3913		7	3						
3915		35	42						
3916		1	1						
3918		4	4						
3919		4	6						
3926		11	9						
3927		3	6						
3928			1						
3930		48	57						
3931		120	148						
3934		41	49						
3936		28	55						
3938		6	19						
3939		69	98						
3940		17	37						
3941		29	45						
3942		8	9						
3943		2	6						
3944		1	2						
4014	1		172						
4018		1	140						
4068	2		170						
4073	1		20						
4074	3		64						
4075	15		123						
4076	6		18						
4077	9		89						
4078	3		29						
4101	5		70						
4102	6		46						
4103	4		78						
4104	1		23						
4105	6		64						
4106	3		12						
4107	4		39						
4108	3		21						

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other Territories
4109	13		220						
4110	3		21						
4112	1		19						
4113	6		109						
4115	2		37						
4120	4		68						
4121	16		174						
4122	10		329						
4151	23		171						
4152	54		475						
4169	13		49						
4170	23		225						
4171	10		108						
4172	5		37						
4179			197						2
4225	2		47						
4415	1		46						
4505	1		98						
4551	1		259						
4565			148	1					
4671	1		25						
4700			299						5
4701			403						4
4871	1		59						
4878			35						1
5000	1			89					
5038				213	2				
5043				279	1				
5044				267	1				
5048				364	1				
5112				354	2				
5411			1						
5646	1								
5759	1								
6022					27	1			
6076		1			328				
6320		1							
7015			1			88			

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other Territories
7050	1					73			
7250	1					528			
7310				1		332			
8538		1							
8733									1
9990									7
9999	120	115	1			1		1	198

Appendix C: Limitations

Validity of HACC data

Reports of HACC service use effectively inform policy when the reports are accurate. The analysis of the HACC MDS suggests that there may be data quality issues that could affect the quality of the information and conclusions gleaned from the data. Miscoded or absent information renders the HACC MDS less accurate and therefore a less informative tool. One example of miscoding was identified in the gender codes. Most jurisdictions recorded the gender of some clients as “not stated or inadequately described” across all years of the HACC MDS (see Table 9). In many jurisdictions there was an increase in the number of clients with gender coded as “not stated or inadequately described” in either 2004/2005 or 2005/2006 or both when compared to previous years. For example, Tasmania recorded the gender of 895 clients as “not stated or inadequately described” in 2005/2006, having only done so in four cases previously. This is possibly caused by a data coding error or data handling error, but it is not possible to determine the precise source of the error. Overall, data entry, coding, and management errors could be attributable to variations in definitions across jurisdictions, inadequate information and training, and lack of cross checking.

Table 9. Client gender by jurisdiction over time (as recorded by the 2001/2002-2005/2006 HACC MDS)

	Period	Male	Female	Not Stated
New South Wales	2001/2002	7899	16262	65
	2002/2003	8152	16378	17
	2003/2004	8199	15977	21
	2004/2005	8136	16209	28
	2005/2006	9603	18867	39
Victoria	2001/2002	6940	21016	66
	2002/2003	8189	23780	43
	2003/2004	8947	25656	36
	2004/2005	10157	28308	164
	2005/2006	10287	28297	143
Queensland	2001/2002	5292	10153	8
	2002/2003	22	10	0
	2003/2004	2862	5039	0
	2004/2005	7978	15343	4
	2005/2006	9852	18753	50
South Australia	2001/2002	2661	7161	29
	2002/2003	3204	8774	37
	2003/2004	3449	9672	51
	2004/2005	3205	9652	33

	Period	Male	Female	Not Stated
	2005/2006	4131	11427	188
Western Australia	2001/2002	2107	6036	15
	2002/2003	2806	7716	5
	2003/2004	3328	8881	10
	2004/2005	3652	9690	206
	2005/2006	3993	10679	193
Tasmania	2001/2002	705	1583	0
	2002/2003	961	2192	0
	2003/2004	1085	2547	3
	2004/2005	663	1788	1
	2005/2006	746	1902	895
Northern Territory	2001/2002	83	101	2
	2004/2005	155	269	10
	2005/2006	150	261	2
Australian Capital Territory	2001/2002	356	989	0
	2002/2003	368	1001	0
	2003/2004	463	1073	0
	2004/2005	409	974	0
	2005/2006	437	1027	