Australian Government
Australian Institute of Health and Welfare

Better information and statistics
for better health and wellbeing

AGED CARE STATISTICS SERIES
Number 32

Dementia among aged care residents

First information from the Aged Care Funding Instrument

May 2011

Australian Institute of Health and Welfare
Canberra
Cat. no. AGE 63

The Australian Institute of Health and Welfare is Australia's national health and welfare statistics and information agency. The Institute's mission is *better information and statistics for better health and wellbeing*.

This publication is part of the Australian Institute of Health and Welfare's Aged care statistics series. A complete list of the Institute's publications is available from the Institute's website <www.aihw.gov.au>.

ISSN 1329-5705
ISBN 978-1-74249-138-7

Suggested citation

Australian Institute of Health and Welfare 2011. Dementia among aged care residents: first information from the Aged Care Funding Instrument. Aged care statistics series no. 32. Cat. no. AGE 63. Canberra: AIHW.

Any enquiries about or comments on this publication should be directed to:
Communications, Media and Marketing Unit
Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601
Phone: (02) 6244 1032
Email: info@aihw.gov.au

Published by the Australian Institute of Health and Welfare
Printed by Bluestar Print

Please note that there is the potential for minor revisions of data in this report. Please check the online version at <www.aihw.gov.au> for any amendments.

Contents

Acknowledgments

The AIHW would like to acknowledge the contribution of Emily Haesler, Evon Bowler and especially Sam Topalidis who co-wrote the report. Evon Bowler made significant contributions to the report's intellectual content. Charles Hudson and Simon Margrie contributed to data extraction and validation. Rachelle Graham, Gail Brien, Ann Peut, Teresa Dickinson, Alison Verhoeven, Vicki Bennett and Brent Diverty provided critical and editorial comments. Valuable comments were gratefully received from Ellen Skladzien and Anne Eayrs from Alzheimer's Australia and staff from the Ageing and Aged Care Division of the Department of Health and Ageing.

The Department of Health and Ageing provided funding for this report. Thanks are due to our colleagues in the Analysis and Reporting Section of the Policy and Evaluation Branch, Ageing and Aged Care Division.

Abbreviations

ABS	Australian Bureau of Statistics
ACAP	Aged Care Assessment Program
ACAT	Aged Care Assessment Team
ACCMIS	Aged and Community Care Management Information System
ACFI	Aged Care Funding Instrument
ADL	Activities of Daily Living
AIHW	Australian Institute of Health and Welfare
ASGC	Australian Standard Geographical Classification
COAD	Chronic Obstructive Airways Disease
CSD	Cornell Scale for Depression
DoHA	Department of Health and Ageing
GP	General Practitioner
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems—Version 10—Australian Modification
PAS-CIS	Psychogeriatric Assessment Scales-Cognitive Impairment Scale
RCS	Resident Classification Scale

Symbols

. .	not applicable
—	nil or rounded to zero
n.p.	not published
<	less than
>	greater than
x–<y	from x to less than y
≥	greater than or equal to
+	plus

Summary

Dementia is estimated to be the leading cause of burden of disease in Australians aged 75 years and over. Residents living in aged care facilities with a diagnosis of dementia can be identified using data collected with the Aged Care Funding Instrument (ACFI). The ACFI is a resource allocation tool that was implemented in March 2008 to appraise the care needs of permanent residents in Australian Government subsidised aged care. The tool is used to determine the resident's care classification from which Australian Government care subsidy funding is calculated. Prior to the implementation of the ACFI there were only imprecise means of identifying residents with dementia.

This report, presenting data for 2008–09, is the first to examine the characteristics and care requirements of Australian aged care residents with a diagnosis of dementia. It will be useful for informing the allocation of future aged care funding and the development of aged care facilities to meet the needs of the ageing Australian population.

Key findings

- In 2008–09, over half (53%) of the permanent residents (more than 104,400) living in Australian Government subsidised aged care facilities who were appraised with an ACFI had a diagnosis of dementia.
- Around 87% (91,300) of residents with a diagnosis of dementia were appraised using the ACFI as high-level care compared with 68% (63,800) of 'other residents'.
- Almost 56% of residents with dementia had high needs for assistance in the behaviour care domain compared with approximately 17% of other residents. Almost 50% of residents with dementia required the highest level of care for activities of daily living (ADLs) compared with 27% of other residents.
- Females comprised 70% of residents with a diagnosis of dementia reflecting their overall proportion in residential care. Approximately 79% of residents with dementia were aged 80 years and over, reflecting that the great majority of people with dementia are older people.
- Compared with other Australians, more Indigenous aged care residents with a diagnosis of dementia were represented in the younger age groups with 16% of Indigenous residents with dementia being aged less than 65 years, compared with only 2% of other Australian residents with dementia.
- *Alzheimer disease* was the most common type of diagnosed dementia, affecting 76% of residents with dementia. *Vascular dementia* accounted for 10% of diagnosed dementia, and *Dementia in other diseases* (for example; *Parkinson disease* and *Huntington disease*) accounted for 4% of dementia diagnoses. *Other dementia* accounted for 8% and *Mixed dementia* accounted for 2% of the total.
- The average annual Australian Government subsidy (excluding supplements) paid in 2008–09 for a permanent resident with a diagnosis of dementia was $38,100. This was more than for 'other residents' whose average annual subsidy (excluding supplements) was $31,600.
- Generally, residents with diagnosed dementia who were appraised as high-level care prior to separation stayed longer in aged care than 'other residents' appraised as high-level care. The reverse was evident in low-level care.

1 Introduction

1.1 What is dementia?

Dementia can be described as a general and increasing impairment of brain functions such as memory, understanding and reasoning. It is not a specific disease but a syndrome associated with a range of diseases. Many diseases can cause dementia, the most common being *Alzheimer disease*. Other common forms include *Vascular dementia*, dementia with Lewy bodies, frontotemporal dementia (including *Pick disease*) and mixed forms of dementia. Dementia is not a natural part of ageing, although the great majority of people with dementia are older people. While dementia is not often fatal in itself, it is highly disabling and can result in a high need for care in the long term. Among those aged 75 years and over in Australia, dementia is estimated to be the leading cause of the burden of disease among both females and males in 2010 (AIHW 2010a).

Although a cure for dementia has not yet been developed, some risk factors for both *Vascular dementia* and *Alzheimer disease*—such as high blood pressure, smoking and diabetes—can be modified by changes to lifestyle and diet, and by medications where necessary (AIHW 2010a). Alzheimer's Australia recommends engaging in mentally challenging activities, exercise, having a balanced diet, and being socially active (Alzheimer's Australia 2009). Even if dementia cannot be prevented in many cases, the aim is to delay its symptoms by preserving and building up mental reserves (AIHW 2010a).

Australia has an ageing population that will require significantly greater residential aged care and community care places in forthcoming years. A key reason for this increase in demand will be the increasing prevalence of dementia, and the associated need for high-level care and support. The prevalence of people with dementia in Australia is estimated to increase from around 257,000 people in 2010 to just over 981,000 people by 2050 (Access Economics 2010).

1.2 What's in this report?

This report analyses data extracted from the Department of Health and Ageing's Aged and Community Care Management Information System (ACCMIS). This Management System holds administrative data on approved services to care recipients and residents and payment of funding to approved providers of community and residential care. (For more information on data sources and limitations see Appendix 1.)

This report outlines the demographic characteristics and care requirements of permanent residents with a diagnosis of dementia and other residents in Australian Government subsidised residential aged care facilities in 2008–09, as identified by information from the Aged Care Funding Instrument (ACFI). The report is structured as follows:

- Chapter 2 describes the background and purpose of the ACFI, how it is used and the information it collects.
- Chapter 3 examines how dementia is defined and described in the ACFI and what diagnostic sources are used.
- Chapter 4 discusses the characteristics and care needs of aged care residents with a diagnosis of dementia. It also includes data on the comorbidities of residents with a diagnosis of dementia and the completed length of stay of residents with a diagnosis of dementia compared with other residents.

- Chapter 5 presents some characteristics of residential aged care facilities that provide care to people with a diagnosis of dementia and information on the average amount of Australian Government subsidy (excluding supplements) provided to care for these people, as compared to other residents.

The information within the report provides a resource for program planners and funders and identifying needs for residential aged care, both now and in the future.

2 Aged Care Funding Instrument

2.1 Background

Prior to the introduction of the ACFI in March 2008, care subsidies for permanent residents of Australian Government subsidised aged care facilities paid to approved providers were allocated based on a funding instrument called the Resident Classification Scale (RCS). Under the RCS, which was introduced in conjunction with the *Aged Care Act 1997*, residents were assigned one of eight categories that reflected their care needs (DoHA 2009a).

Approved aged care providers were dissatisfied with the RCS assessment and funding tool due to the perceived administrative and documentation burden associated with its implementation (DoHA 2009a). The ACFI was designed primarily to overcome the RCS limitations that were identified in the *Review of pricing arrangements in residential aged care* (Hogan 2004) and the *RCS review* (ACEMA 2003). In 2005, nearly one in four Australian Government subsidised residential aged care facilities participated in a national trial of the ACFI. The focus was on improving levels of agreement between residential aged care staff and Department of Health and Ageing (DoHA) validators regarding the rating of each resident's care needs and the resulting category of care level. Feedback from aged care staff who participated in the national trial indicated that the ACFI provided an uncomplicated process that reduced potential controversy regarding resident assessment results and care needs classification (DoHA 2009a).

2.2 What is the Aged Care Funding Instrument?

Australian Government funding for the provision of residential aged care is made available through the *Aged Care Act 1997*, with approved providers paid a subsidy and a number of supplements in respect to each eligible resident. The majority of Australian Government funding is provided through the 'basic subsidy', the level payable for a permanent resident being determined by the resident's classification using the ACFI (DoHA 2009a). Residents receiving residential respite are not appraised under the ACFI.

The ACFI was implemented on 20 March 2008 for new permanent residents admitted into Australian Government subsidised residential aged care. Existing residents were subsequently appraised under the ACFI when their existing classification under the RCS expired after 12 months.

The ACFI is a resource allocation tool. Following admission to residential aged care, the ACFI is used to appraise the care needs of the resident to help determine the subsidy paid to the aged care provider (Box 2.1).

The ACFI is based on the resident's assessed need for care, rather than on care planning or care provided by an aged care facility. It was designed to reduce the documentation required by aged care providers to justify funding, and does not use ongoing care documentation as evidence to support funding claims. The ACFI is also intended to achieve higher levels of agreement between care staff and departmental review officers in review audits. Staff time spent appraising residents for the purpose of funding is decreased by the ACFI, which results in more time available for providing care, benefiting both residents and staff.

Box 2.1: When is a resident appraised?

To be eligible for entry into an Australian Government subsidised residential aged care facility for either low-level or high-level care a person has to be initially approved by an Aged Care Assessment Team (ACAT). After a person is admitted to a residential care facility as a permanent resident, he or she will then be appraised using the ACFI (residential respite residents are not appraised using the ACFI).

A 2-month period, starting the day the resident entered care, is allowed for appraisals to be completed and submitted to Medicare Australia[(a)]. However, appraisals cannot be conducted in the first 7 days after the resident enters aged care and can only be submitted to Medicare Australia after the resident has been in care for 28 days. Any appraisals received by Medicare Australia after 2 months will be considered late and a reduced subsidy may apply. The *Classification Principles 1997* (9.16) allow for a shorter period where the resident leaves care during this period.

ACFI classifications will not generally expire, except in the following circumstances:

- 6 months after a resident enters care directly from an inpatient hospital episode
- 6 months after a 'major change' in care needs
- upon return from extended hospital leave (of 30 days or more)
- 6 months after return from extended hospital leave
- upon departure from care (special rules apply to transfers[(b)]).

Reappraisals must be completed using the ACFI for all residents:

- when the classification expires (as listed above); and
- when DoHA specifies a reappraisal is required in a notice.

Reappraisals of residents' care needs may also be completed in the following circumstances:

- at any time 12 months or more after the existing classification took effect
- when the resident has a 'major change' in care needs
- at any time where the resident is classified at the lowest applicable classification level
- within 2 months after a resident transfers from a residential aged care facility (DoHA 2007).

(a) Medicare Australia is responsible for the processing and payment of residential care subsidies and supplements, community aged care subsidies and flexible aged care subsidies to approved providers of aged care.

(b) Classifications will not expire where a resident leaves an aged care facility and enters the care of another facility within 28 days. The new facility may submit a reappraisal within 2 months of the resident entering care. This rule also applies where the resident departs an aged care facility and returns to the same facility within 28 days.

Information from the ACFI is used to categorise a resident as having low, medium, or high-care needs in each funding domain. Twelve questions are used across these areas:

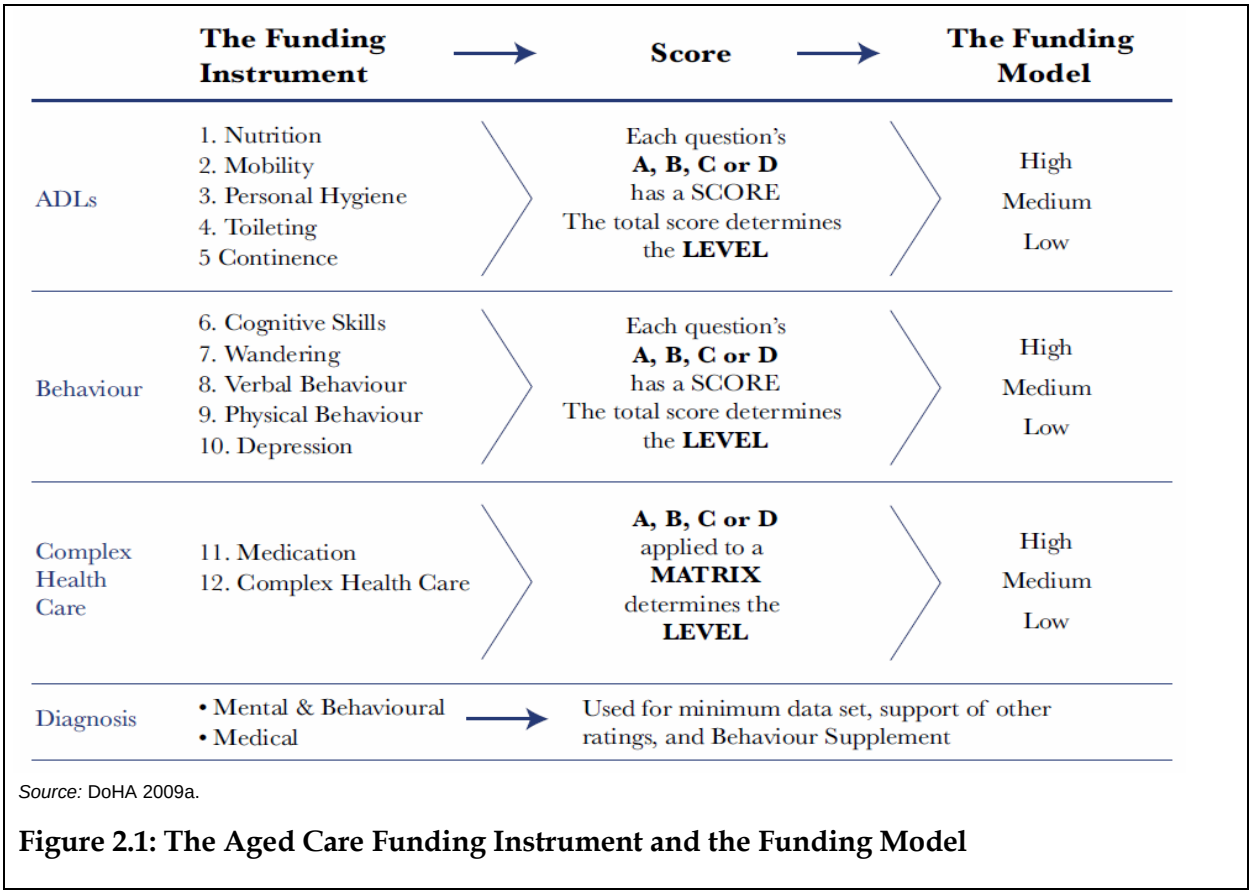
- Activities of daily living (ADL); 5 questions on care needs related to:
  - nutrition
  - mobility
  - personal hygiene
  - toileting
  - continence.
- Behaviour; 5 questions on care needs related to:
  - cognitive skills
  - wandering
  - verbal behaviour
  - physical behaviour
  - depression.

- Complex health-care needs; 2 questions on care needs relating to:
  - assistance needed with the administration of medications
  - the residents' need for management of complex health-care procedures.

In addition, information is recorded for up to three of the most significant medical diagnoses relating to mental and behavioural conditions, such as dementia, depression and mental disorders; and up to three of the most significant diagnoses for other medical conditions. This provides information on the health needs of residents and allows the sociodemographic characteristics and care needs of residents to be analysed by health condition, as well as by combinations of health conditions.

The outcome of each of the 12 questions is a rating of A, B, C, or D (with A as the lowest need and D the highest) and the outcome of questions in the two categories of medical diagnoses is a record of diagnosed disorders (Figure 2.1). This information is then used to categorise a resident's needs as low, medium, or high within each of the three care domains. These categories are used to determine the classification for funding and the overall classification as a low-care or high-care resident. If a resident has been assessed as nil or has minimal care needs in that domain, then no funding is provided for that domain (DoHA 2009a).

The ACFI data are a rich source of information on the residents' specific care needs as it includes the answers to detailed checklist questions used to determine the rating for each question. While the responses to the ACFI questions provide basic information that is related to fundamental care need areas, ACFI is not a comprehensive assessment package. A comprehensive assessment would consider a broader range of care needs than is necessarily required in a funding instrument (DoHA 2009b).



Source: DoHA 2009a.

Figure 2.1: The Aged Care Funding Instrument and the Funding Model

ACFI appraisal review program

With the introduction of the ACFI appraisal tool, DoHA developed a new process to review resident classification and ensure correct implementation of the ACFI appraisal (Box 2.1). Reviews of resident appraisals and care categorisation by the aged care facility using the ACFI are conducted based on the instructions provided in the ACFI User Guide (DoHA 2009a).

DoHA review officers check resident classification using ACFI to confirm that the aged care facility ACFI appraisals present an accurate reflection of the residents' care requirements. The approved provider must retain ACFI appraisal supporting documentation for accountability purposes and to help in the departmental auditing process (DoHA 2009a).

Reviews of ACFI appraisals are conducted in a proportion of residential aged care facilities each year. A sample of residents within these facilities is chosen for appraisal auditing to confirm the accuracy of the ACFI Answer Appraisal Packs. In an ACFI review, the DoHA review officer generally considers the accuracy and completeness of the ACFI tools, documentation provided to support the ACFI appraisal, observation of the resident, and interviews with aged care facility staff members (DoHA 2009a).

In most instances, the result of the ACFI appraisal review leads to no change in the resident's care classification. In some cases, a resident's classification may be upgraded or downgraded. Where a change in care classification is required, the adjustment is retrospective to a maximum of 6 months and appropriate adjustment payments are made to the approved provider (DoHA 2009a).

During 2008–09, 12,548 reviews of the RCS appraisals were completed; 30% (3,749) of these resulted in funding reductions, 350 reviews of these were appealed. Also, 7,480 ACFI reviews were completed of which 14% (1,057) resulted in a funding reduction and only 21 reviews were appealed (DoHA 2009c). These figures tend to indicate that under the ACFI there is an increased level of agreement between approved providers and DoHA review officers compared with the RCS.

3 Defining and describing dementia in ACFI

3.1 Dementia coding in ACFI

Data collected with ACFI are used to identify the number of residents with a diagnosis of dementia living in Australian Government subsidised aged care. Before the introduction of ACFI this was not possible. The introduction of ACFI has enabled a more detailed analysis of the number of residents with dementia living in aged care, their medical profiles and their care requirements, which in turn will facilitate appropriate planning and allocation of resources.

ACFI identifies a resident with dementia in residential aged care if the ACFI form contains a dementia diagnosis code based on the Aged Care Assessment Program (ACAP) dictionary code list (0500–0532) under the headings 'Mental and behavioural diagnoses'. The codes used from the ACAP data dictionary are based on the International Statistical Classification of Diseases and Related Health Problems—Version 10—Australian Modification (ICD-10-AM).

The full range of dementia diagnostic terms available in the ACAP data dictionary is not available in the ACFI diagnostic coding system. The ACFI diagnosis codes have been restricted to the higher-level dementia groups (see Table 3.1). This limits the ability to separately identify specific types of dementia such as *Pick disease*, *Alcoholic dementia* and *Lewy Body dementia*.

In ACFI, the Psychogeriatric Assessment Scales-Cognitive Impairment Scale (PAS-CIS) is the tool used to identify the extent of a resident's cognitive impairment. The PAS-CIS can be used as an indicator, but not an exclusive measure, of a resident with dementia. A high PAS-CIS score for the resident can trigger a medical referral to a general practitioner, geriatrician, psycho-geriatrician or psychologist. For the analyses contained in this report the PAS-CIS was used as a measure of cognitive function but only medical diagnoses were used to identify individuals with dementia. A medical assessment will identify if a resident has dementia and may identify the type of dementia. This type of assessment is usually performed before an ACFI appraisal, by an Aged Care Assessment Team (ACAT) member in the person's family home or in hospital. The ACAT assessment can then be used to identify a resident with dementia during an ACFI appraisal.

Medical diagnoses for residents are recorded on the ACFI form in two groups. The first group contains high-level mental and behavioural diagnoses such as *Alzheimer disease*, *Vascular dementia*, depression (including mood and affective disorders and bipolar disorder) and psychoses (which includes schizophrenia) (Table 3.1). The second group is for other medical diagnoses excluding the mental and behavioural diagnoses contained in the first group.

The ACFI permits up to three major medical and three major mental and behavioural diagnoses to be coded for each resident. This allows for more specific dementia diagnoses to be extrapolated with some analysis. (ACFI allows a code of 0 to be entered for mental and behavioural diagnosis to signify 'no diagnosed disorder currently impacting on functioning'.) For the purposes of this report, where there is a medical diagnosis of *Parkinson disease* or *Huntington disease* combined with a diagnosis under classification *520 Dementia in other diseases,* the dementia has been defined as *Dementia in Parkinson disease* and *Dementia in Huntington disease* respectively.

It is also noted that some residents who received an ACFI appraisal between 1 July 2008 and 30 June 2009 were recorded as having more than one type of dementia diagnosis (Table A3.1).

For the purposes of this report, these were grouped together for analysis under the *Mixed dementia* category (Table 3.2).

Table 3.1: Dementia diagnosis codes used in the ACFI compared with ACAP

ACAP diagnostic terms		Corresponding ACFI diagnostic codes	
0500	**Dementia in Alzheimer's disease**	⇨ **500**	**Dementia, Alzheimer's** disease including early onset, late onset. atypical or mixed type or unspecified
0501	Dementia in Alzheimer's disease with early onset (<65 yrs)		
0502	Dementia in Alzheimer's disease with late onset (>65 yrs)		
0503	Dementia in Alzheimer's disease, atypical or mixed type		
0504	Dementia in Alzheimer's disease, unspecified		
0510	**Vascular dementia**	⇨ **510**	**Vascular dementia** e.g. multi-subcortical, mixed
0511	Vascular dementia of acute onset		
0512	Multi-infarct dementia		
0513	Subcortical vascular dementia		
0514	Mixed cortical & subcortical vascular dementia		
0515	Other vascular dementia		
0516	Vascular dementia—unspecified		
0520	**Dementia in other diseases classified elsewhere**	⇨ **520**	**Dementia in other diseases**, e.g. Pick's disease, Creutzfeldt-Jakob, Huntington's, Parkinson's, HIV
0521	Dementia in Pick's disease		
0522	Dementia in Creutzfeldt-Jakob disease		
0523	Dementia in Huntington's disease		
0524	Dementia in Parkinson's disease		
0525	Dementia in human immunodeficiency virus (HIV) disease		
0526	Dementia in other specified diseases classified elsewhere		
0530	**Other dementia**	**530**	**Other dementia**, e.g. Lewy Body, alcoholic dementia, unspecified
0531	Alcoholic dementia	⇨	
0532	Unspecified dementia (includes pre-senile & senile dementia)		

Sources: AIHW 2002; DoHA 2009b.

Table 3.2: Dementia diagnoses used in this analysis

Dementia category
Alzheimer disease
Vascular dementia
Dementia in other diseases:
Dementia in Huntington disease
Dementia in Parkinson disease
Other dementia in other diseases
Other dementia
Mixed dementia

3.2 Dementia in residential aged care 2008–09

In a previous report, 59% of residents with an ACFI appraisal were recorded at 30 June 2009 as having a diagnosis of dementia. This did not include residents whose diagnosis codes were absent from their ACFI appraisal forms (AIHW 2010a). The current study identifies residents with a diagnosis of dementia during the entire 2008–09 financial year. Residents without diagnosis codes on the ACFI appraisal form are counted as not having a diagnosis of dementia.

During 2008–09, there were 211,500 permanent residents living in Australian Government subsidised residential aged care facilities at some time during the financial year. The ACFI was used to assess the care needs of approximately 94% of these permanent residents (Table 3.3). The remaining 6% of residents separated from residential care before they were required, or were able, to have an ACFI appraisal. Around 53% of residents with an ACFI appraisal were reported as having dementia with an appropriate dementia code entered on the ACFI appraisal form based on the advice of a clinician (Table 3.4). The rate was relatively consistent between states and territories, ranging from Tasmania reporting 50% of residents with a diagnosis of dementia to 56% of residents in the Northern Territory with dementia (Table 3.4).

Preliminary AIHW analysis of residents with a recorded dementia diagnosis across the 71 DoHA aged-care planning regions in Australia shows considerable variability. In the 67 planning regions where there were more than 100 residents with an ACFI appraisal in 2008–09, rates varied from a low of 37% up to 64% of residents with dementia. Among other things this may reflect difficulties in accessing assessments and diagnostic services in different regions. It also suggests that the national figure of 53% of permanent residents with a dementia diagnosis may be an underestimate.

In addition, there were almost 25,000 ACFI appraisals (13%) with no codes in the mental and behavioural diagnoses. However, 99% of these residents had at least one medical diagnosis code. Analysis comparing the care needs of these residents to residents with a diagnosis of dementia strongly suggests that the majority of these former residents did not have dementia. Further details can be found in Appendix 2 on potentially unreported dementia.

Table 3.3: Permanent aged care residents[(a)] appraised with an ACFI, 1 July 2008 to 30 June 2009

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Residents with an ACFI appraisal[(b)]	67,949	51,125	35,573	16,567	19,403	5,314	2,071	464	**198,466**
Residents with no ACFI appraisal	4,472	3,273	2,374	1,083	1,200	417	155	54	**13,028**
Total residents	**72,421**	**54,398**	**37,947**	**17,650**	**20,603**	**5,731**	**2,226**	**518**	**211,494**
Per cent of residents with an ACFI appraisal	*93.8*	*94.0*	*93.7*	*93.9*	*94.2*	*92.7*	*93.0*	*89.6*	***93.8***

(a) These numbers include any person who was a permanent resident at any time during the 2008–09 financial year.

(b) This includes residents with an ACFI appraisal conducted during or prior to the financial year 2008–09.

Note: Refers to the location of residents in their residential aged care facilities at their most recent admission.

Table 3.4: Diagnosed dementia status[a] of permanent aged care residents with an ACFI appraisal, 1 July 2008 to 30 June 2009

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Residents with a dementia diagnosis from an ACFI appraisal	36,591	25,970	18,138	9,062	10,604	2,656	1,139	260	**104,420**
Total residents with an ACFI appraisal[b]	**67,949**	**51,125**	**35,573**	**16,567**	**19,403**	**5,314**	**2,071**	**464**	**198,466**
Per cent of residents with a dementia diagnosis from an ACFI appraisal	*53.9*	*50.8*	*51.0*	*54.7*	*54.7*	*50.0*	*55.0*	*56.0*	***52.6***

(a) Residents' dementia status is based on the most recent ACFI appraisal conducted during or prior to the financial year 2008–09.

(b) These numbers include any person who was a permanent resident in the 2008–09 financial year and had an ACFI appraisal.

Note: Refers to the location of residents in their residential aged care facilities at their most recent admission.

A resident's ACFI classification can be reappraised at any time 12 months or more after the existing classification has taken effect (DoHA 2009a). In some situations permanent aged care residents are reappraised during the same 12–month period (see Box 2.1). Reasons for ACFI appraisals and reappraisals conducted in 2008–09 are summarised in Table A3.2. There were 185,066 ACFI appraisals and reappraisals performed in 2008–09 (Table A3.3). The majority of permanent residents received only one ACFI appraisal for this period.

Source of diagnosis

The source of a medical diagnosis (both mental and behavioural diagnosis and medical diagnosis) is recorded in the ACFI. Each diagnosis can have more than one source for each resident, and each resident can also have multiple diagnoses. Dementia cannot therefore be attributed to a particular source unless dementia is the only diagnosis recorded, or there is only one source recorded.

The most common source of dementia diagnosis was the Aged Care Client Record completed as part of the ACAT assessment (40% of residents with dementia). The next largest source of dementia diagnoses was 'general medical practitioner notes or letters' (28%), closely followed by 'GP comprehensive medical assessment' (25%) (Table A3.5).

Nearly half of residents with a diagnosis of dementia had two recorded diagnosis sources for mental and behavioural diagnoses (47%). Over a third of residents with dementia (37%) had only one diagnosis source for mental and behavioural diagnoses (Table A3.6).

4 Characteristics of permanent aged care residents with dementia

4.1 Sociodemographic characteristics

This section discusses a range of sociodemographic characteristics of permanent residents in residential aged care between 1 July 2008 and 30 June 2009 who have a dementia diagnosis. Demographic characteristics described in more detail include age and sex distribution and a breakdown by location, Indigenous status, birthplace and preferred language.

Throughout this section, the 'age' used is the resident's age at the time of their most current ACFI appraisal or reappraisal.

Age and sex

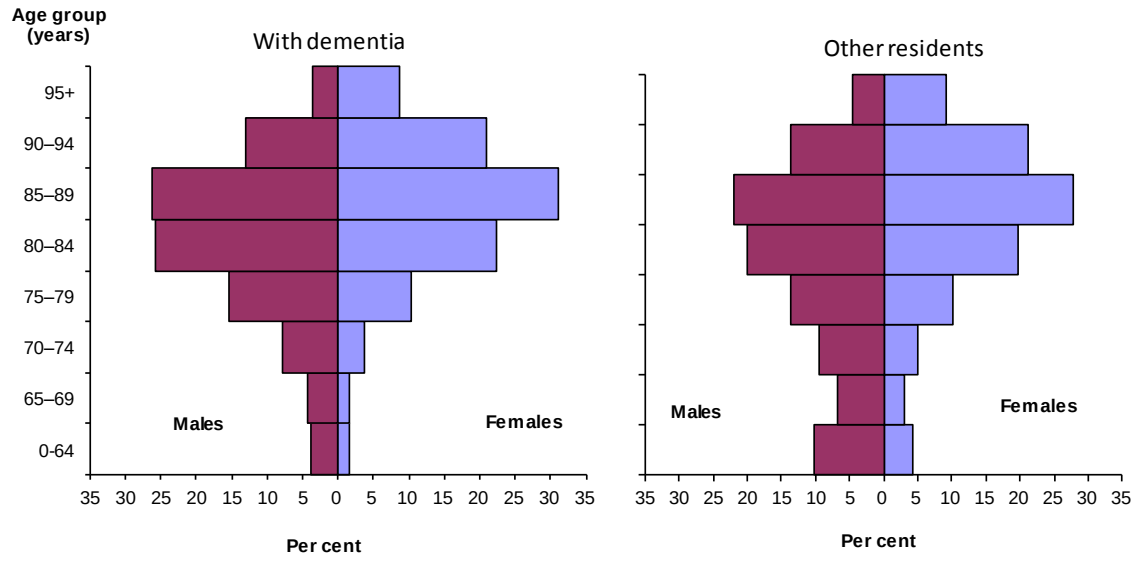
Of the nearly 198,500 permanent residents who occupied a residential care place at some time between 1 July 2008 and 30 June 2009 with an ACFI appraisal, 69% were female. Of these females, 54% had a diagnosis of dementia recorded in an ACFI appraisal. However, only 50% of all resident males were diagnosed with dementia (Table A4.1).

A total of 104,420 residents had a diagnosis of dementia, of these it was found that:

- They were more likely than other residents to be represented in older age groups (Figure 4.1).
- Approximately 79% of residents with dementia were aged 80 years and over. The age categories '80–84 years' and '85–89 years' accounted for large proportions of aged care residents with dementia (23% and 30% respectively) (Table A4.1).
- Only 2% of residents with dementia were aged under 65 years.
- The majority were females (7 in 10 residents), especially among those aged 70 years and over. However, males were more prominent in age groups under 70 years.

Most types of reported dementia in aged care residents were in older age categories (Figure 4.2; Table A4.2). Analysis of residents by type of diagnosed dementia indicates:

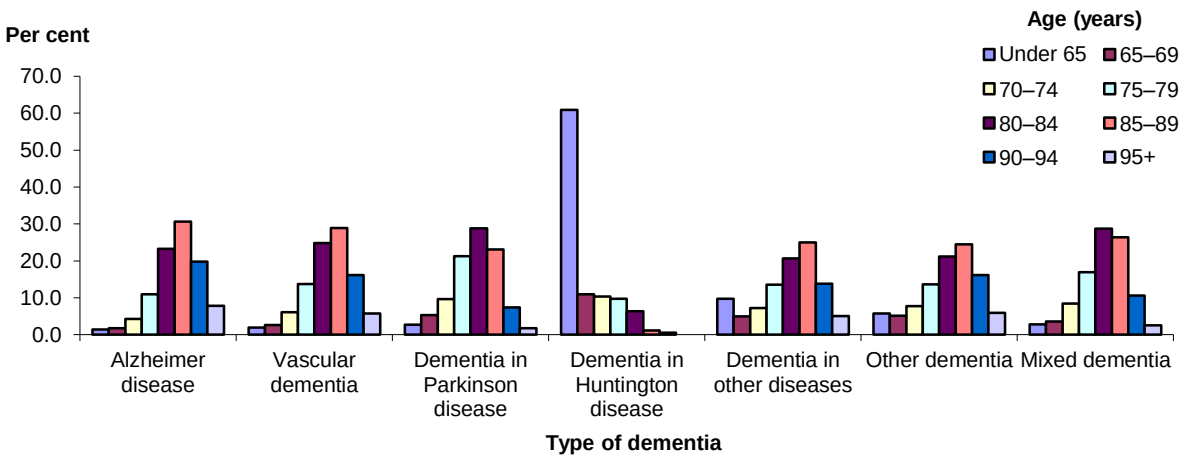
- *Alzheimer disease* was more common in residents aged 80 years and over with more than 2 in 10 with this disease aged 80–84 years (23%); 3 in 10 aged 85–89 years (31%); a further 2 in 10 aged 90–94 years (20%); and just under 1 in 10 aged 95 years and over (8%).
- *Vascular dementia*, *Mixed dementia*, *Other dementia* and *Dementia in other diseases* all had similar age distributions to that seen in *Alzheimer disease*, with the diagnosis becoming increasingly common in older age groups up to age 80–84 years for some dementia and 85–89 years for others.
- Among those with a diagnosis of *Dementia in Parkinson disease* there was a high percentage of residents aged 75–79 years (21%), 80–84 years (29%) and 85–89 years (23%).



Source: Table A4.1.

Figure 4.1: Age and sex of permanent aged care residents with dementia and other residents with an ACFI appraisal, 1 July 2008 to 30 June 2009

- The age group of those diagnosed with *Dementia in Huntington disease* was substantially younger with 61% aged under 65 years of age compared to residents with other types of dementia (Figure 4.2; Table A4.2). Due to disease complications, the life expectancy of adults with *Huntington disease* is about 20 years after their diagnosis (O Walker 2007), which is generally made from ages 30 to 50 years. In contrast, less than 2% of residents with *Alzheimer disease* were aged under 65 years.



Source: Table A4.2.

Figure 4.2: Age of aged care residents (years) with a diagnosis of dementia, 1 July 2008 to 30 June 2009, by type of dementia

Location

In all states and territories, females in permanent aged care diagnosed with dementia greatly outnumbered their male counterparts. Between 1 July 2008 and 30 June 2009, 7 out of 10 residents in aged care diagnosed with dementia Australia-wide, who received an ACFI appraisal, were female (70%) (Table 4.1). The percentage of females varied from 63% in Northern Territory to 72% in South Australia. Generally, this is because females live longer than males, but males and females have an equal chance of developing dementia. (ABS life tables for 2007–2009 indicate that life expectancy at birth for Australian males is 79.3 years and for females is 83.9 years.)

The sex distribution of aged care residents with a diagnosis of dementia does not alter substantially when presented according to remoteness (excluding the small number in *Very remote* locations) (Table 4.2).

Table 4.1: Permanent aged care residents with a diagnosis of dementia, by sex and state and territory[(a)], 1 July 2008 to 30 June 2009

Sex	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Number				
Females	25,638	18,401	12,553	6,427	7,622	1,854	782	165	73,442
Males	10,953	7,569	5,585	2,635	2,982	802	357	95	30,978
Persons	**36,591**	**25,970**	**18,138**	**9,062**	**10,604**	**2,656**	**1,139**	**260**	**104,420**
					Row per cent				
Females	34.9	25.1	17.1	8.8	10.4	2.5	1.1	0.2	100.0
Males	35.4	24.4	18.0	8.5	9.6	2.6	1.2	0.3	100.0
Persons	**35.0**	**24.9**	**17.4**	**8.7**	**10.2**	**2.5**	**1.1**	**0.2**	**100.0**
					Column per cent				
Females	70.1	70.9	69.2	70.9	71.9	69.8	68.7	63.5	70.3
Males	29.9	29.1	30.8	29.1	28.1	30.2	31.3	36.5	29.7
Persons	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Refers to the location of the residential aged care facilities.

Table 4.2: Permanent aged care residents with a diagnosis of dementia by sex and remoteness[(a)], 1 July 2008 to 30 June 2009

Sex	Major cities	Inner regional	Outer regional	Remote	Very remote	All regions
			Number			
Females	52,293	15,527	5,169	376	77	73,442
Males	21,443	6,873	2,411	184	67	30,978
Persons	**73,736**	**22,400**	**7,580**	**560**	**144**	**104,420**
			Row per cent			
Females	71.2	21.1	7.0	0.5	0.1	100.0
Males	69.2	22.2	7.8	0.6	0.2	100.0
Persons	**70.6**	**21.5**	**7.3**	**0.5**	**0.1**	**100.0**
			Column per cent			
Females	70.9	69.3	68.2	67.1	53.5	70.3
Males	29.1	30.7	31.8	32.9	46.5	29.7
Persons	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Refers to the location of the residential aged care facilities. The table uses the Australian Standard Geographical Classification (ASGC) Remoteness Structure developed by the ABS.

Residents appraised as high or low care

Of the 104,420 permanent residents with an ACFI appraisal or reappraisal in 2008–09 who were diagnosed with dementia, 87% were appraised as high care. This was much higher than the 68% of 94,050 other residents appraised as high care during the financial year (Table 4.3). This demonstrates that residents with dementia are more frequently appraised as high-level care than other residents.

The percentage of residents appraised as high care with dementia varied little by remoteness from *Major cities* to *Outer regional*, 88% to 86% respectively, but dropped for *Remote* and *Very remote* areas to 79% and 75% respectively.

In comparison, the distribution of residents appraised as high care or low care varied less by remoteness for other residents. The percentage of other residents appraised as high care varied from 69% in *Major cities* to 63% in *Remote* areas (Table 4.3).

Table 4.3: Appraised high care and low care permanent aged care residents[(a)] with a diagnosis of dementia and other residents by remoteness[(b)], 1 July 2008 to 30 June 2009

	Major cities	Inner regional	Outer regional	Remote	Very remote	All regions
With dementia			**Number**			
High care	64,896	19,380	6,488	442	108	91,314
Low care	8,840	3,020	1,092	118	36	13,106
Total	**73,736**	**22,400**	**7,580**	**560**	**144**	**104,420**
			Per cent			
High care	88.0	86.5	85.6	78.9	75.0	87.4
Low care	12.0	13.5	14.4	21.1	25.0	12.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Other residents			**Number**			
High care	42,620	15,536	5,228	369	91	63,844
Low care	19,461	7,798	2,674	221	48	30,202
Total	**62,081**	**23,334**	**7,902**	**590**	**139**	**94,046**
			Per cent			
High care	68.7	66.6	66.2	62.5	65.5	**67.9**
Low care	31.3	33.4	33.8	37.5	34.5	**32.1**
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Residents appraised with the ACFI. This may not correspond to the number of paid residents in high or low care.

(b) Refers to the location of the residential aged care facilities. The table uses the ASGC Remoteness Structure developed by the ABS.

Indigenous status

Dementia is a significant problem in Indigenous communities, with a number of Western Australian and Northern Territory Indigenous communities experiencing dementia at a rate four times as high as the general Australian population (12% of the Indigenous population compared with 3% of the general Australian population) (Broe et al. 2009).

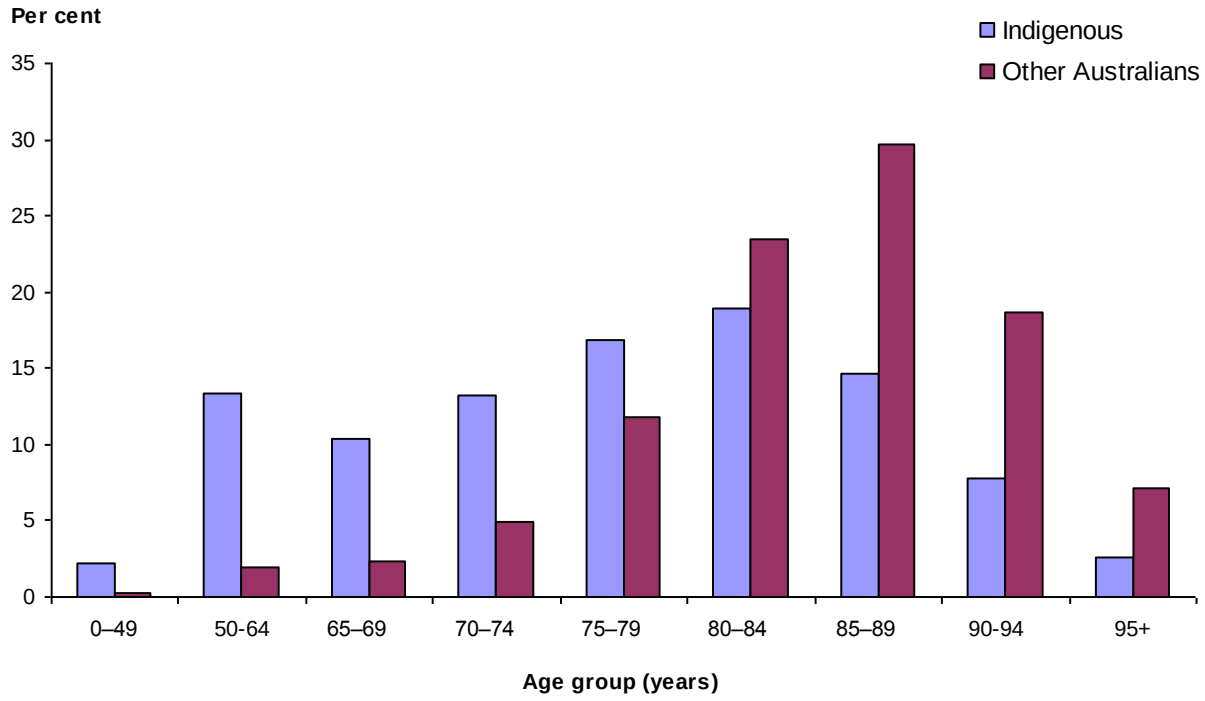
Relatively few Indigenous Australians with dementia access formal government support programs, including residential aged care. In *Remote* areas, availability of services influences access. In urban areas, reduced access is related to social isolation and difficulty accessing culturally appropriate services. Research also suggests that Aboriginal elders have a strong desire to be cared for within their communities (Broe et al. 2009).

Consistent with this, although they make up approximately 2.5% of the Australian population (Broe et al. 2009), people who are reported as having an Indigenous background accounted for less than 1% of all permanent residents with dementia in 2008–09 in mainstream aged care facilities in Australia. (This report does not include residential aged care places provided in a Multi-Purpose Service setting or under the National Aboriginal and Torres Strait Islander Flexible Aged Care Program where the ACFI is not required to be used in order to receive Australian Government funding.)

People with a diagnosis of dementia and with an unknown Indigenous status accounted for less than 1.7% of the total permanent residential aged care population with dementia.

Compared with other non-Indigenous Australians, more Indigenous aged care residents with dementia were represented in the younger age groups (Figure 4.3; Table A4.3). The data shows that:

- Around 16% of Indigenous residents with dementia were aged less than 65 years, compared with 2% of non-Indigenous Australians (and 3% of residents with an unknown Indigenous status).
- For other non-Indigenous Australians there was a clear trend for proportions of residents with a diagnosis of dementia to increase with age, the age distribution of Indigenous Australians with dementia was more evenly spread across the age categories.
- The age range 80–84 years had the highest percentage of all Indigenous residents with dementia (19%) while the highest proportion of other non-Indigenous Australians residents with dementia was in the 85–89 year age group (30%).



(a) This graph does not include 1,740 aged care residents with an unknown Indigenous status.

Source: Table A4.3.

Figure 4.3: Permanent aged care residents with a diagnosis of dementia by Indigenous status[(a)] and age, 1 July 2008 to 30 June 2009

Influence of Indigenous age on average age of remotely located residents

The average age of permanent residents with a dementia diagnosis who lived in an aged care facility in 2008–09 was lower in *Remote* and *Very remote* areas (82.0 years and 79.0 years respectively) compared with other more populated areas and the Australia-wide average (84.5 years). This reflects the higher percentage of Indigenous residents with dementia in these less populated areas (18% *Remote* and 60% *Very remote* respectively) and their younger age profile (Table 4.4). The lower average age of Indigenous residents with dementia in aged care reflects the findings of recent research that Indigenous people develop dementia at an earlier age than other Australians (Broe et al. 2009).

In the non-Indigenous population there was also a lower average age of residents with dementia observed in more remote areas that was not observed in the Indigenous population, possibly due to different service access patterns (Table 4.4).

Table 4.4: Average age of Indigenous and all permanent residents with a diagnosis of dementia, by remoteness[(a)], 1 July 2008 to 30 June 2009

	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
			Average age (years)			
Indigenous	78.0	75.2	73.6	75.9	77.5	76.2
Non-Indigenous	84.6	84.5	84.4	83.3	81.2	84.5
Unknown	85.1	85.3	83.7	83.7	—	85.0
All residents with dementia diagnosis	**84.6**	**84.5**	**84.1**	**82.0**	**79.0**	**84.5**
			Per cent			
Indigenous residents with dementia (per cent of total residents with dementia)	0.3	0.4	1.9	17.9	59.7	0.6
Total residents with dementia (number)	**73,736**	**22,400**	**7,580**	**560**	**144**	**104,420**

— Nil or rounded to zero.

(a) Refers to the location of the facility. The table uses the ASGC Remoteness Structure developed by the ABS.

Type of dementia by Indigenous status

For all permanent residents with a diagnosis of dementia, *Alzheimer disease* was the most common type of dementia, affecting 76% of all residents with dementia. *Vascular dementia* accounted for 10% of diagnosed dementia, *Other dementia* accounted for 8%, *Dementia in other diseases* accounted for 4% and *Mixed dementia* accounted for 2%. However, these percentages were different for the Indigenous population with a lower 62% for *Alzheimer disease*, a slightly higher 13% for *Vascular dementia*, a higher 20% for *Other dementia* and a similar 3% for *Dementia in other diseases* and 1% for *Mixed dementia* (Table 4.5).

Other dementia (the second most common category of dementia for the Indigenous population) were more prevalent in Indigenous males (30%) compared with Indigenous females (13%). The category of *Other dementia* includes *Lewy Body dementia* and *Alcoholic dementia*. People from an Aboriginal and Torres Strait Islander background are at increased risk of developing both these forms of dementia because they have a higher risk of head injury resulting in cognitive damage and of alcohol abuse, both of which increase the risk of *Other dementia* (Broe et al. 2009).

Although there are more Indigenous females with dementia living in permanent aged care than Indigenous males with dementia (Table 4.5), this is not reflective of the pattern of dementia seen in Indigenous communities but instead reflects patterns of service use. Currently, the rate of dementia is higher in Indigenous males compared with Indigenous females (Broe et al. 2009).

Table 4.5: Type of diagnosed dementia by sex and Indigenous status, 1 July 2008 to 30 June 2009 (per cent)

Type of dementia	Indigenous	Non-Indigenous	Unknown	Total
Females				
Alzheimer disease	69.4	79.4	81.6	79.4
Vascular dementia	12.4	8.8	7.6	8.8
Dementia in other diseases:				
Parkinson disease	n.p.	1.0	1.3	1.0
Huntington disease	—	0.1	0.2	0.1
Other diseases	2.5	2.1	2.0	2.1
Total	*3.0*	*3.3*	*3.5*	*3.3*
Other dementia	13.5	7.1	6.2	7.1
Mixed dementia	1.7	1.3	1.1	1.3
Any dementia	*100.0*	*100.0*	*100.0*	*100.0*
Any dementia (number)	*363*	*71,755*	*1,324*	*73,442*
Males				
Alzheimer disease	51.9	67.8	65.9	67.7
Vascular dementia	13.3	12.9	12.3	12.9
Dementia in other diseases:				
Parkinson disease	2.9	2.5	1.4	2.5
Huntington disease	—	0.2	0.2	0.2
Other diseases	n.p.	3.0	3.8	3.0
Total	*3.7*	*5.7*	*5.5*	*5.7*
Other dementia	29.9	10.8	13.2	11.0
Mixed dementia	n.p.	2.7	3.1	2.7
Any dementia	*100.0*	*100.0*	*100.0*	*100.0*
Any dementia (number)	*241*	*30,321*	*416*	*30,978*
Persons				
Alzheimer disease	62.4	76.0	77.9	76.0
Vascular dementia	12.7	10.0	8.7	10.0
Dementia in other diseases:				
Parkinson disease	1.5	1.5	1.3	1.5
Huntington disease	—	0.2	0.2	0.2
Other diseases	1.8	2.4	2.4	2.4
Total	*3.3*	*4.0*	*4.0*	*4.0*
Other dementia	20.0	8.2	7.9	8.3
Mixed dementia	1.5	1.7	1.6	1.7
Any dementia	**100.0**	**100.0**	**100.0**	**100.0**
Any dementia (number)	**604**	**102,076**	**1,740**	**104,420**

— Nil or rounded to zero.

n.p. Not published.

Note: Percentages have been rounded to one decimal place and may not add to 100%.

Birthplace and language

The majority of permanent aged care residents in 2008–09 with a diagnosis of dementia were born in Australia (70%). The most represented overseas country/region of birth was UK/Ireland (11%) followed by Southern/Eastern Europe (10%), particularly Italy, Poland and Germany (tables 4.6 and 4.7).

Comparing the country/region of birth of permanent residents with a diagnosis of dementia (Table 4.6) to the country/region of birth of the overall Australian population aged 65 years and over (ABS 2007; ABS 2010) showed:

- Approximately 59% of the Australian population aged 65 years and over were born in Australia, compared with 70% of permanent residents with dementia (98% of whom were aged 65 years and over). This could infer residents with dementia born outside of Australia may be less likely to access residential aged care than residents with dementia born in Australia.
- Almost 15% of the Australian population aged 65 years and over were born in North-West Europe (including UK/Ireland), which is similar to the percentage of residents with dementia (14%) who had a North-West European birthplace.

Table 4.6: Country/region of birth of permanent aged care residents with a diagnosis of dementia by sex, 1 July 2008 to 30 June 2009

Country/region of birth	Females	Males	Persons	Females	Males	Persons
		Number			Per cent	
Australia	52,565	20,843	73,408	71.6	67.3	70.3
Other Oceania/New Zealand/Antarctica	727	352	1,079	1.0	1.1	1.0
UK/Ireland	8,161	3,574	11,735	11.1	11.5	11.2
Other North-West Europe	2,289	1,033	3,322	3.1	3.3	3.2
Southern/Eastern Europe	6,449	3,719	10,168	8.8	12.0	9.7
North Africa/Middle East	536	298	834	0.7	1.0	0.8
Sub-Saharan Africa/South Africa	360	157	517	0.5	0.5	0.5
South-East Asia	584	222	806	0.8	0.7	0.8
North-East Asia	597	248	845	0.8	0.8	0.8
Southern Asia/Central Asia	564	235	799	0.8	0.8	0.8
North America	177	104	281	0.2	0.3	0.3
Other America/Caribbean	191	65	256	0.3	0.2	0.2
Other/Not stated/Not classified	242	128	370	0.3	0.4	0.4
Total	**73,442**	**30,978**	**104,420**	**100.0**	**100.0**	**100.0**

Note: Percentages have been rounded to one decimal place and may not add to 100%.

Comparing the main countries of birth (other than Australia) of permanent residents with a diagnosis of dementia (Table 4.7) with that of the overall Australian population aged 65 years and over (ABS 2007) showed:

- Italy, Poland, Germany, Netherlands and Greece were the most common non-English-speaking countries in which permanent residents with dementia were born.
- 3.2% of residents with dementia were born in Italy however, 3.9% of the Australian population aged 65 years and over were born in Italy.

Table 4.7: Top 10 non-English-speaking countries of birth of permanent residents with a diagnosis of dementia, by state, 1 July 2008 to 30 June 2009

Country of birth	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia[(a)]
Italy	954	1,313	295	364	372	11	25	6	3,340
Poland	415	534	134	118	180	22	16	<5	<1,430
Germany	424	385	195	93	194	27	23	<5	<1,350
Netherlands	328	384	205	138	134	42	13	<5	<1,250
Greece	400	515	62	56	152	<5	9	<5	<1,210
China[(b)]	437	144	47	26	6	7	<5	5	<680
Hungary	228	140	45	24	64	5	10	<5	<520
Former Federal Republic of Yugoslavia[(c)]	174	125	55	69	70	6	5	<5	<510
India	143	132	40	125	41	<5	9	<5	<500
Ukraine	165	152	43	31	75	<5	10	<5	<490

(a) In order to preserve confidentiality of residents in smaller states numbers less than 5 have been rounded up to 5 and totals have been rounded up to the next 10.

(b) Excludes SAR (Special Administration Region of the People's Republic of China) and Taiwan Province.

(c) Country of birth was not recorded to a more detailed level.

- 1.3% of residents with dementia were born in Germany, which was the same percentage for the overall Australian population aged 65 years and over who were born in Germany.
- 1.2% of residents with dementia were born in Greece compared with 1.9% of Greek-born people in the Australian population who were aged 65 years and over.
- 1.4% of residents with dementia were born in Poland, which is comparatively higher than the 0.7% of Polish-born people in the Australian population aged 65 years and over.

The majority of permanent residents with a diagnosis of dementia speak English (89%) as their preferred language. Southern European languages (5%) were the next most common preferred languages. Males were only slightly more likely than females to prefer a language other than English (Table 4.8). In comparison, approximately 78% of the overall Australian population speak only English in their homes (ABS 2007).

Of those residents with a diagnosis of dementia whose preferred language was not English, the most common preferred language reflected the most common countries of birth and settlement patterns for these immigrant groups across states and territories (Table 4.9). Some of the major findings by states/territories included:

- About 41% of residents with dementia who preferred to speak Italian were in Victorian aged care facilities. This figure rose to 70% if New South Wales facilities were included.
- About 42% of residents with dementia who preferred to speak Greek lived in Victorian aged care facilities. This figure rose to 79% if New South Wales facilities were included.
- Residents with dementia who nominated the 10 preferred languages (excluding English), prominently lived in Victorian facilities, except for Cantonese and Hungarian speakers who were more prevalent in New South Wales facilities.

Table 4.8: Preferred language of permanent aged care residents with a diagnosis of dementia, by sex, 1 July 2008 to 30 June 2009

Preferred language	Females	Males	Persons	Females	Males	Persons
		Number			Per cent	
Australian Indigenous	90	61	151	0.1	0.2	**0.1**
English	65,631	27,183	92,814	89.4	87.7	**88.9**
Other Northern European	981	368	1,349	1.3	1.2	**1.3**
Southern European	3,364	1,786	5,150	4.6	5.8	**4.9**
Eastern European	2,138	1,036	3,174	2.9	3.3	**3.0**
South West Asian and North African	236	121	357	0.3	0.4	**0.3**
Southern Asian	88	41	129	0.1	0.1	**0.1**
South-East Asian	196	76	272	0.3	0.2	**0.3**
Eastern Asian	541	229	770	0.7	0.7	**0.7**
African (excluding North African)	5	—	5	—	—	**—**
Oceanic	16	14	30	—	—	**—**
Other	49	22	71	0.1	0.1	**0.1**
Not stated	107	41	148	0.1	0.1	**0.1**
Total	**73,442**	**30,978**	**104,420**	**100.0**	**100.0**	**100.0**

— Nil or rounded to zero.

Note: Percentages have been rounded to one decimal place and may not add to 100%.

Table 4.9: Top 10 preferred languages (excluding English) for permanent residents with a diagnosis of dementia, by state/territory, 1 July 2008 to 30 June 2009

Preferred language	NSW	Vic	Qld	SA	WA	Tas	ACT	NT	Australia[(a)]
Italian	870	1,222	193	342	321	9	26	5	**2,988**
Greek	480	532	56	154	38	<5	8	<5	**<1,280**
Polish	250	302	71	137	78	16	11	<5	**<870**
German	229	241	61	122	44	20	14	<5	**<740**
Cantonese	301	102	15	8	24	<5	<5	<5	**<460**
Netherlandic	121	152	43	60	47	17	6	—	**446**
Croatian	128	131	18	36	45	<5	11	<5	**<380**
Russian	143	153	26	18	8	—	<5	—	**<360**
Hungarian	125	111	18	46	9	<5	7	—	**<320**
Maltese	125	154	<5	13	5	—	—	—	**<310**

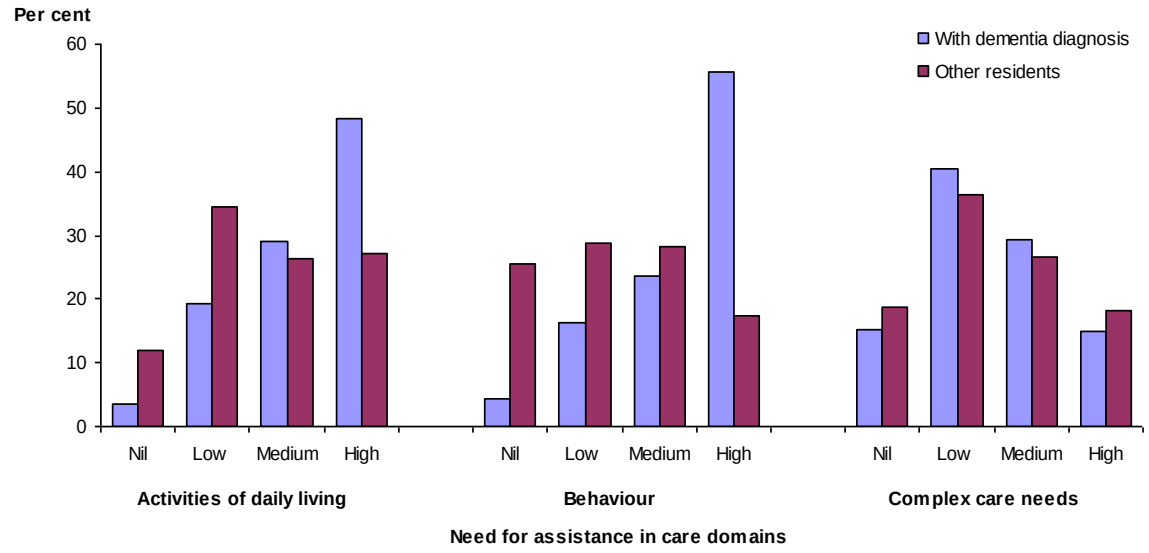
— Nil or rounded to zero.

(a) In order to preserve confidentiality of residents in smaller states numbers less than 5 have been rounded up to 5 and totals were rounded up to the next 10.

4.2 Care needs of aged care residents with dementia

Permanent residents in aged care with a diagnosis of dementia have higher care needs for activities of daily living (ADL) and behaviour than other residents (Figure 4.4).

- Almost 50% of residents with a diagnosis of dementia required the highest level of care for ADL compared with 27% of other residents.
- Almost 56% of residents with a diagnosis of dementia had high needs for assistance in the behaviour care domain compared with approximately 17% of other residents.
- However, complex care needs are similar with about 45% of residents with dementia and other residents requiring medium to high levels of assistance.

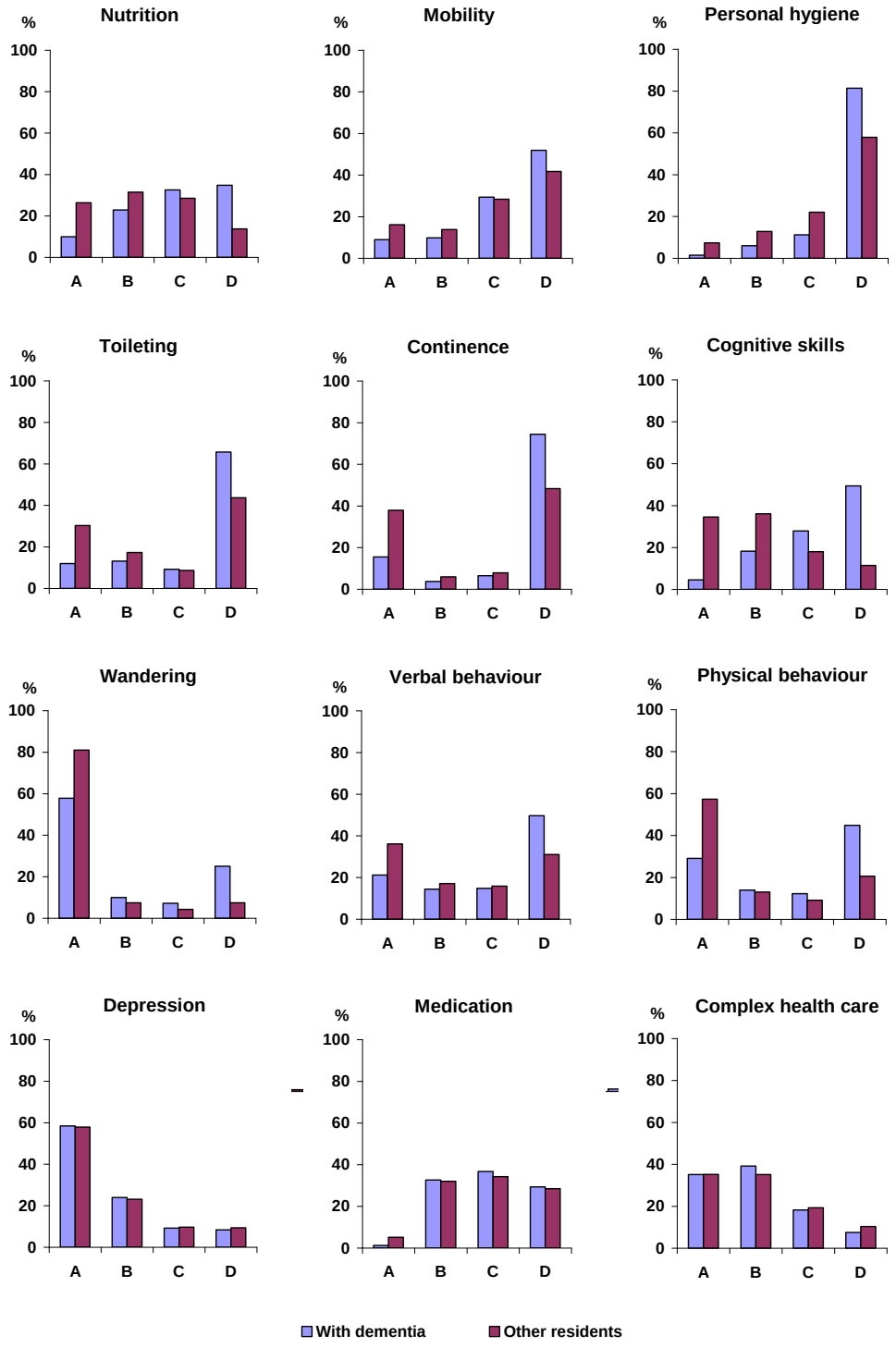


Note: Data are derived from the last ACFI appraisal in the period for each resident.

Source: Table A4.4.

Figure 4.4: Level of assistance needed in each ACFI care domain, by dementia status, for permanent residents in aged care, 1 July 2008 to 30 June 2009 (per cent)

The percentage of residents with a diagnosis of dementia with high-care needs (category D on the ACFI form) for individual ADLs, and for specific types of cognition and behaviour impairment is consistently greater than for other residents. However, for care needs associated with depression, medications and complex health care procedures, the care level ratings are similar for residents with a diagnosis of dementia and other residents (Figure 4.5).



Note: Rating shown is for the residents last ACFI appraisal for the period (A = lowest care need and D = highest care need).

Source: Table A4.5.

Figure 4.5: Ratings for 12 ACFI questions, by dementia status, for permanent aged care residents, 1 July 2008 to 30 June 2009 (per cent)

Activities of daily living (ADL)

This section provides a comprehensive picture of the care needs of permanent residents with a diagnosis of dementia in aged care focusing on ADL. In the ACFI the ADLs assessed include nutrition, mobility, personal hygiene and toileting.

Overall, the residents with a diagnosis of dementia require a relatively high level of assistance for ADLs (tables 4.10 and A4.4). These residents are most dependent in tasks associated with personal hygiene, with more than 83% requiring physical assistance for all personal hygiene tasks.

The rest of this section discusses the care requirements of residents with dementia, including needs according to type of dementia, for each ACFI ADL category.

Table 4.10: Level of assistance required for ACFI ADL care tasks by permanent residents with a diagnosis of dementia, 1 July 2008 to 30 June 2009 (per cent)

Level of assistance required	Independent	Supervision	Physical assistance	Mechanical lifting	All
Nutrition					
Readiness to eat	17.5	12.7	69.8	. .	**100.0**
Eating	16.0	48.4	35.7	. .	**100.0**
Mobility					
Transfers	16.6	22.7	33.7	27.0	**100.0**
Locomotion	11.7	35.5	52.8	. .	**100.0**
Personal hygiene					
Dressing and undressing	3.0	10.2	86.9	. .	**100.0**
Washing and drying	1.9	7.0	91.0	. .	**100.0**
Grooming	4.2	12.2	83.6	. .	**100.0**
Toileting					
Use of toilet	15.9	16.9	67.2	. .	**100.0**
Toilet completion	13.1	13.6	73.3	. .	**100.0**

. . Not aplicable.

Note: Percentages have been rounded to one decimal place and may not add to 100%.

ACFI 1: Nutrition

The ACFI section for nutrition (ACFI 1) assesses the resident's usual care requirements for oral nutrition, excluding physical assistance to prepare for eating (for example, assistance to move to the dining area or sit upright in bed) (DoHA 2009b). Residents with a diagnosis of dementia had an overall greater need for assistance with nutrition than other residents (Table A4.5). About 35% of residents with a dementia diagnosis require a high level of assistance with oral nutrition (rating D) compared with about 14% of other residents.

The ACFI 1 question includes two distinct care tasks—readiness to eat and eating (Appendix 4). Appraisal results showed that:

- Approximately 70% of residents with dementia needed physical assistance to be ready to eat (Table 4.10). Those with *Dementia in Huntington disease* and *Dementia in Parkinson disease* were the most likely to need physical assistance to be ready to eat (82%) (Table A4.6).
- About 48% of residents with dementia require supervision while eating, with an additional 36% needing full physical assistance (Table 4.10). Those with *Dementia in*

Huntington disease (65%) and *Dementia in Parkinson disease* (44%) required more physical assistance to eat than those with other types of dementia (Table A4.6).

The high level of assistance required by residents with *Dementia in Parkinson disease* and *Dementia in Huntington disease* for nutrition may be due to both cognitive impairments related to dementia, as well as physical symptoms (for example, dystonic posture, rigidity, sudden jerks) of their underlying disease.

ACFI 2: Mobility

The ACFI section for mobility (ACFI 2) assesses the level of assistance a resident usually requires to mobilise, including mobility required as part of other ADLs (DoHA 2009b). Residents with a diagnosis of dementia had slightly higher mobility care needs than other residents (Table A4.5) with 52% of residents with a diagnosis of dementia requiring high-level assistance with mobility compared with 42% of other residents.

The ACFI defines supervision for transfers (for example, moving from a bed to a chair) as providing help with wheelchairs (for example, locking brakes) to enable the resident to move (Appendix 4). Of the residents with diagnosed dementia:

- Over a third (34%) required physical assistance to transfer and an additional 27% required mechanical lifting (Table 4.10).
- Those with *Dementia in Parkinson disease* were more likely to require physical assistance to transfer (46%) compared to residents with other types of dementia (Table A4.7).

Locomotion describes moving from one place to another either by walking or in a wheelchair (DoHA 2009b). Of the residents with diagnosed dementia:

- More than half (52%) required physical assistance with locomotion (Table 4.10).
- Those with *Dementia in Parkinson disease* or *Dementia in Huntington disease* were the most dependent for locomotion, with 70% requiring physical assistance (Table A4.7).

As with ADLs related to nutrition, the high level of assistance required by residents with *Dementia in Parkinson disease* and *Dementia in Huntington disease* for mobility is likely to relate to physical symptoms (for example, dystonic posture, rigidity, sudden jerks) of their underlying disease.

ACFI 3: Personal hygiene

Personal hygiene is assessed in ACFI 3. Three distinct care tasks are included in personal hygiene—dressing and undressing; washing and drying; and grooming (Appendix 4). More than 81% of residents with a diagnosis of dementia required full assistance for personal hygiene tasks compared with 58% of other residents (Table A4.5). Approximately 95% of residents with a diagnosis of *Dementia in Parkinson disease* and 94% of residents with *Dementia in Huntington disease* required physical assistance with dressing and undressing and washing and drying because both conditions result in difficulties with movement and coordination (Table A4.8).

ACFI 4: Toileting

The ACFI Toileting question (ACFI 4) refers to the resident's usual daily care needs for toileting, including emptying catheters and ostomies (Appendix 4). Residents with a diagnosis of dementia were more dependent on assistance with toileting with 66% requiring the highest level of care for toileting tasks compared with 44% for other residents (Table A4.5).

There was little variability between residents diagnosed with different forms of dementia in levels of dependence for either of the toileting tasks, use of toilet or toilet completion (Table A4.9). It was observed that:

- Residents with *Dementia in Parkinson disease* were the most likely to need physical assistance for using the toilet (79%) and for toilet completion (83%).

ACFI 5: Continence

The ACFI continence question (ACFI 5) relates to the resident's usual needs regarding continence of urine and faeces based on a comprehensive continence assessment. The category does not include care of indwelling catheters or ostomies (DoHA 2009b).

Residents with a diagnosis of dementia (74%) had a higher level of dependency for continence than other residents (48%) (Table A4.5). Over 69% of residents with dementia had more than three urinary episodes daily of incontinence or scheduled toileting (Table 4.11).

Incontinence profiles varied little according to diagnosed dementia type (Table 4.11):

- Residents with *Dementia in other diseases* had a slightly lower percentage of no episodes of incontinence or self-manages devices (13%) than those with other types of dementia.
- Residents with *Mixed dementia* recorded the highest level (44%) of more than four faecal episodes weekly and more than three urinary episodes daily or scheduled toileting.

Table 4.11: Continence episodes of permanent residents by frequency and diagnosed dementia type, 1 July 2008 to 30 June 2009 (per cent)

	No episodes of incontinence (faecal or urinary) or self-manages devices	>3 urinary episodes daily or scheduled toileting	>4 faecal episodes weekly or scheduled toileting	>4 faecal episodes weekly and >3 urinary episodes daily or scheduled toileting	Total residents
Alzheimer disease	15.4	69.7	45.8	40.9	79,304
Vascular dementia	14.8	70.3	46.8	41.7	10,455
Dementia in other diseases	12.7	71.9	48.0	42.4	4,206
Other dementia	18.6	64.2	41.2	35.8	8,649
Mixed dementia	13.9	72.4	49.4	44.4	1,800
Any dementia	**15.5**	**69.4**	**45.7**	**40.7**	**104,414**

Notes

1. Table excludes missing and invalid responses.
2. This table presents a selection of combinations of urinary and faecal incontinence.
3. Some residents may not be included in this table and some may be in more than one category thus the total percentages will not add to 100%.
4. The full list of combinations is available on the index page for this publication on the AIHW website.

Cognition and behaviour

This section discusses cognition and behaviour of residents with diagnosed dementia, covering the ACFI categories of cognitive skills (ACFI 6), wandering (ACFI 7), verbal behaviour (ACFI 8) and physical behaviour (ACFI 9).

ACFI 6: Cognitive skills

Cognitive skills relate to the resident's usual cognition, and is assessed using the Psychogeriatric Assessment Scales–Cognitive Impairment Scale (PAS-CIS). Residents are classified as having no/minimal, mild, moderate or severe impairment.

Not surprisingly, residents with a diagnosis of dementia were more likely than other residents to be classified as having severe cognitive skills impairment (Table A4.5). For example:

- Almost half of residents with dementia (49%) were classified as severely impaired, compared with only 11% of other residents.
- Other residents were more likely to be categorised as having no/minimal (35%) cognitive impairment compared to residents with dementia (5%).

ACFI 7: Wandering

Wandering includes two distinct behaviours—'interfering while wandering' and 'trying to get to inappropriate places'. 'Interfering while wandering' is defined as interfering or disturbing other people, or interfering with the belongings of others, whilst engaging in wandering behaviour. 'Trying to get to inappropriate places' describes residents who attempt to abscond, attempt to enter locked areas, or trespass within the facility (for example, other residents' rooms) (DoHA 2009b).

Wandering is affected by mobility—with 52% of residents with dementia requiring a high level of assistance with mobility (Table A4.5). Residents with a diagnosis of dementia were more likely than other residents to exhibit frequent wandering behaviours (Table A4.5) with:

- one–quarter (25%) displaying the most severe frequency of wandering behaviour (wandering occurring twice a day or more, at least 6 days a week) compared to only 7% of other residents.
- over half (58%) were classified as displaying wandering 'not at all or less than once a week', compared with 81% of other residents.

Wandering frequency and behaviour overall differed little according to type of diagnosed dementia (tables 4.12 and 4.13):

- *Mixed dementia* displayed the most severe frequency of wandering behaviour (28%) compared with *Dementia in other diseases* (19%).
- 66% of residents with *Dementia in Parkinson disease* and 69% of those with *Dementia in Huntington disease* rarely or never wandered and as a result these residents were also least likely to display other wandering behaviours. But these results are affected by residents' low level of mobility (Table A4.7).
- Residents with *Other dementia* (8%) were the most likely to display interfering behaviour while wandering and residents with *Dementia in Parkinson disease* (15%) were most likely to wander to inappropriate places.
- 25% of residents with *Mixed dementia* exhibited both behaviours of wandering into inappropriate places and interfering while wandering, compared to 16% of residents with *Dementia in other diseases*.

Table 4.12: Wandering frequency for permanent residents, by diagnosed dementia type, 1 July 2008 to 30 June 2009 (per cent)

			Dementia in other diseases						
Wandering frequency	**Alzheimer disease**	**Vascular dementia**	**Parkinson disease**	**Huntington disease**	**Other diseases**	**All**	**Other dementia**	**Mixed dementia**	**Any dementia**
Not at all or less than once per week	56.9	61.5	66.4	69.0	64.4	65.3	57.8	55.2	57.8
At least once in a week	10.0	9.7	10.3	9.8	9.1	9.6	11.0	9.8	10.0
At least 6 days in a week	7.3	6.5	6.3	4.6	6.1	6.1	7.7	7.3	7.2
Twice a day or more, at least 6 days in a week	25.8	22.2	17.0	16.7	20.4	19.0	23.5	27.6	25.0
All	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Total number	**79,261**	**10,454**	**1,538**	**174**	**2,494**	**4,206**	**8,648**	**1,798**	**104,367**

Note: Table excludes 53 residents with missing data. Percentages have been rounded to one decimal place and may not add to 100%.

Table 4.13: Wandering behaviours for permanent residents, by diagnosed dementia type, 1 July 2008 to 30 June 2009 (per cent)

			Dementia in other diseases						
Wandering behaviours	**Alzheimer disease**	**Vascular dementia**	**Parkinson disease**	**Huntington disease**	**Other diseases**	**All**	**Other dementia**	**Mixed dementia**	**Any dementia**
No/minimal behaviours	56.9	61.5	66.1	68.4	64.3	65.1	57.7	55.5	57.7
Interfering while wandering (any frequency)	6.8	6.2	4.9	2.9	5.9	5.4	7.5	6.0	6.7
Trying to get to inappropriate places (any frequency)	12.6	12.3	15.2	10.9	12.3	13.3	12.2	13.2	12.6
Both behaviours (any frequency)	23.7	19.9	13.8	17.8	17.6	16.2	22.6	25.3	23.0
All	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Both behaviours/at least twice a day, at least 6 days per week	17.9	14.9	9.6	11.5	12.8	11.5	16.2	19.5	17.2
Total number	**79,261**	**10,454**	**1,538**	**174**	**2,494**	**4,206**	**8,648**	**1,798**	**104,367**

Note: Table excludes 53 residents with missing data. Percentages have been rounded to one decimal place and may not add to 100%.

ACFI 8: Verbal behaviour

Verbal behaviour refers to four different behaviours—refusing to participate in care or being uncooperative, being verbally disruptive (for example, loud noise, screaming, obscenities, verbal anger), having paranoid ideation that disturbs others (for example, suspiciousness, delusional thoughts) and verbal sexually inappropriate advances (DoHA 2009b).

Verbal behaviour was more frequent amongst residents with a diagnosis of dementia, 50% of these residents exhibited verbal behaviour on at least 6 days per week compared with other residents (31%) that exhibited this behaviour (Table A4.5).

Frequency and type of verbal behaviour exhibited by residents with a diagnosis of dementia were relatively consistent according to dementia type (tables 4.14 and A4.10) with:

- Residents with *Dementia in Parkinson disease* least likely to engage in verbally disruptive behaviour, with 29% displaying no/minimal verbal behaviour compared to 20% of residents with *Other dementia*.
- Half (50%) the residentswith dementia exhibited verbal behaviour at the highest frequency (at least twice daily on at least 6 days per week) while *Dementia in Parkinson diseases* exhibited the lowest frequency with 40% in this category.

ACFI 9: Physical behaviour

Physical behaviour includes physically threatening or harmful behaviour (for example, biting, hitting), socially inappropriate physical behaviour (for example, hoarding, inappropriate dressing, inappropriate sexual behaviour) and physical agitation (for example, repetitious or stereotypical behaviour) (DoHA 2009b). In the ACFI the highest category for physical behaviour is 'Physical behaviour occurs twice a day or more, at least 6 days a week'. The more severe cases of physical behaviour, which occur considerably more than twice a day each day, are not distinguished, but these residents require quite different levels of care.

Residents with a diagnosis of dementia exhibited significantly more physical behaviour (45%) at the highest frequency than other residents (21%) (Table A4.5). Conversely, 29% of residents with dementia were classified as 'no physical behaviour' or 'occurs less than once per week', compared with 57% of other residents.

Residents with different types of diagnosed dementia displayed variable physical behaviour profiles (tables 4.15 and A4.11):

- Residents with *Dementia in Huntington disease* were the most physically disruptive with 61% classified as displaying physical behaviour at the highest frequency (note the small sample size) compared to 43% of residents with *Other dementia*.
- The physical behaviour observed most frequently in residents with *Huntington disease* was constant physical agitation (36%).
- Residents with *Dementia in Parkinson disease* were the least physically disruptive with 34% of these residents displaying physical behaviour not at all or less than once a week.
- The physical behaviour most likely to be displayed by those with *Dementia in Parkinson disease* was constant physical agitation (28%).

Table 4.14: Frequency of verbal behaviours for permanent residents, by type of diagnosed dementia, 1 July 2008 to 30 June 2009 (per cent)

			Dementia in other diseases						
	Alzheimer disease	Vascular dementia	Parkinson disease	Huntington disease	Other diseases	All	Other dementia	Mixed dementia	Any dementia
Not at all or less than once per week	20.8	22.1	29.4	23.6	25.4	26.8	20.0	21.9	21.2
At least once in a week	14.4	13.6	17.3	18.4	14.1	15.5	15.2	13.8	14.4
At least 6 days in a week	14.9	13.7	13.6	9.2	14.0	13.7	15.7	14.4	14.8
Twice a day or more, at least 6 days in a week	49.9	50.7	39.6	48.9	46.5	44.0	49.1	49.8	49.7
All	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Total number	**79,307**	**10,457**	**1,539**	**174**	**2,494**	**4,207**	**8,649**	**1,800**	**104,420**

Note: Percentages have been rounded to one decimal place and may not add to 100%.

Table 4.15: Frequency of physical behaviours for permanent residents, by type of diagnosed dementia, 1 July 2008 to 30 June 2009 (per cent)

			Dementia in other diseases						
	Alzheimer disease	Vascular dementia	Parkinson disease	Huntington disease	Other diseases	All	Other dementia	Mixed dementia	Any dementia
Not at all or less than once per week	28.7	30.2	34.2	17.2	32.6	32.5	29.7	25.0	29.1
At least once in a week	13.9	13.9	11.8	11.5	12.2	12.0	15.1	14.2	13.9
At least 6 days in a week	12.3	11.8	10.3	10.3	11.9	11.3	12.4	12.0	12.2
Twice a day or more, at least 6 days in a week	45.1	44.1	43.7	60.9	43.3	44.2	42.8	48.8	44.8
All	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Total number	**79,307**	**10,457**	**1,539**	**174**	**2,494**	**4,207**	**8,649**	**1,800**	**104,420**

Note: Percentages have been rounded to one decimal place and may not add to 100%.

ACFI 10: Depression

ACFI 10 describes symptoms associated with depression and chronic mood disturbance. Assessment of residents under this category is more complex than other ACFI categories. Residents on the more severe end of the spectrum are required to have a formal diagnosis, and to also be assessed using the Cornell Scale for Depression (CSD). Symptoms are recorded if they occur regularly and persistently and are not related to day-to-day care environment events (DoHA 2009b).

The CSD is designed to be used for people with low cognition and is therefore appropriate to use for residents with dementia. The tool assesses mood-related symptoms, behavioural disturbance, physical signs (for example, appetite loss, weight loss), cyclic functions (for example, sleep disturbance) and ideational disturbance, such as suicide (Alexopoulos 2002).

Residents with a diagnosis of dementia were almost identical to other residents with respect to depression profiles (Table A4.5):

- The majority of residents, both with dementia and other residents were classified as having no or minimal symptoms of depression (both 58%).
- Few residents were classified as having either major (dementia 8%; other residents 9%) or moderate (dementia 9%; other residents 10%) interference in daily activities due to depressive symptoms.

Complex health care

ACFI 11: Medication

ACFI 11 covers assessment of assistance related to regular medication administration, excluding vitamins, food supplements or emollients. In assessing medication needs, assistance is defined as standing by to provide help or providing prompts to ensure the resident has taken medication. It does not include supervision of residents who self-administer from a dose administration aid or self-inject medication (DoHA 2009b).

The profile of resident needs for assistance with medication was almost identical between those with a diagnosis of dementia and other residents (Table A4.5). For both residents with a diagnosis of dementia and other residents, 29% required the highest level of assistance with medication. Only 1% of residents with dementia required no medication or self-managed their medication compared with 5% for other residents.

Over 67,200 (or 64%) of residents with a diagnosis of dementia required 6 minutes or more assistance daily with their medication (combined 6–11 minutes assistance daily and >11 minutes assistance daily in Table 4.16). 34,500 (or 33%) residents with dementia required less than 6 minutes assistance daily.

Need for assistance with medication varied according to type of diagnosed dementia (tables A4.12 and A4.13). Residents with *Dementia in Parkinson disease* had higher care needs overall than other residents with diagnosed dementia, with 43% requiring more than 11 minutes assistance daily, compared to 26% for residents with *Alzheimer disease*. This also reflects the varied nature of medication regimens for people with *Parkinson disease.*

Table 4.16: Residents with diagnosed dementia needing medication assistance, by type of assistance, 1 July 2008 to 30 June 2009

Type of medication assistance	Number
No medication	1,093
Self-manages	205
Patches at least weekly, but not daily	6,078
<6 minutes assistance daily	34,503
6–11 minutes assistance daily	39,476
>11 minutes assistance daily	27,748
Daily subcutaneous drug administration	3,892
Daily intramuscular drug administration	149
Daily intravenous drug administration	50
Total	**113,194**
Total number of residents	**104,420**

Note: Residents could have more than one type of assistance.

ACFI 12: Complex health care procedures

ACFI 12 relates to complex health care procedures that have been identified in an appraisal or ordered by an authorised health professional. Each task is rated by frequency and duration. Eligible complex care needs include nursing tasks such as:

- blood pressure or blood glucose monitoring
- complex pain management
- one-to-one feeding by a registered nurse
- catheter care or bowel management programs
- management of chronic wounds, infections or health conditions
- management of syringe devices, intravenous lines, dialysis and oxygen therapy
- complex palliative care
- suctioning, tracheotomy care, stoma care or ongoing tube feeding (DoHA 2009b).

Residents with a diagnosis of dementia were very similar to other residents in requiring complex health care procedures (Table A4.5) with:

- other residents (10%) slightly more likely than those with dementia (8%) to require the highest complex health care procedures (rating D).
- over a third (35%) of residents both with a diagnosis of dementia and other residents requiring no complex health care procedures (rating A).

There were some differences in the number of complex health care procedures according to type of dementia diagnosis (Table 4.17), for example:

- Residents with *Dementia in Parkinson disease* had the lowest percentage (25%) with no complex health-care procedures compared to residents with *Alzheimer disease* (37%).
- Residents with *Dementia in Parkinson disease* had the highest percentage with one or two complex health-care procedures (63%) compared to residents with *Huntington disease* (51%).

- Residents with *Dementia in Huntington disease* had the highest percentage of residents with three or more complex medical health-care procedures (18%) compared to residents with *Alzheimer disease* (9%).

Table 4.17: Number of complex medical health care procedures per resident with diagnosed dementia, by type of dementia, 1 July 2008 to 30 June 2009 (per cent)

	Number of procedures								
	0	1	2	3	4	5	6 or more	Total	Number of residents
Alzheimer disease	37.1	37.0	17.2	7.0	1.5	0.2	—	100.0	79,307
Vascular dementia	31.6	37.4	19.3	9.0	2.2	0.4	0.2	100.0	10,457
Dementia in other diseases									
Parkinson disease	25.0	40.2	22.4	9.9	1.9	0.4	0.1	100.0	1,539
Huntington disease	30.5	35.1	16.1	13.8	4.6	—	—	100.0	174
Other diseases	32.8	36.7	18.9	9.5	1.6	0.3	0.2	100.0	2,494
Total	*29.8*	*37.9*	*20.1*	*9.8*	*1.9*	*0.3*	*0.1*	*100.0*	*4,207*
Other dementia	36.2	37.3	17.3	7.4	1.6	0.2	0.1	100.0	8,649
Mixed dementia	35.2	36.9	17.6	7.8	1.9	0.4	0.2	100.0	1,800
Any dementia	**36.1**	**37.1**	**17.5**	**7.4**	**1.6**	**0.2**	**0.1**	**100.0**	**..**
Any dementia (number)	**37,717**	**38,765**	**18,289**	**7,704**	**1,633**	**249**	**63**	**..**	**104,420**

— Nil or rounded to zero.
.. Not applicable

Notes: Percentages were rounded to one decimal place and may not add to 100%.

4.3 Comorbidities

Comorbidity in a resident with a diagnosis of dementia is the co-occurrence of one or more diseases or disorders. The ACFI records comorbidities, allowing analysis to investigate the interaction between a diagnosis of dementia and a concurrent mental and behavioural or medical diagnosis.

Mental and behavioural diagnoses

The mental and behavioural concurrent diagnoses that are reported include:

- delirium
- depression, mood and affective disorders
- psychoses, for example schizophrenia, paranoid states
- neurotic, stress-related, anxiety and somatoform disorders
- intellectual and developmental disorders

- other mental and behavioural disorders; for example due to alcohol or psychoactive substances.

Of residents with a diagnosis of dementia, 19% had a concurrent mental and behavioural diagnosis listed in the first diagnosis field, 23% were in the second diagnosis field and 4% in the third diagnosis field (Table 4.18). Approximately 39% of residents with dementia had one or more concurrent mental and behavioural diagnoses. The majority (61%) of residents with dementia did not have other concurrent mental and behavioural conditions.

Table 4.18: Residents with diagnosed dementia with other concurrent mental and behavioural conditions, 1 July 2008 to 30 June 2009 (per cent)

Mental and behavioural condition	First diagnosis code	Second diagnoses codes	Third diagnoses codes	Any diagnosis code
Delirium	0.6	0.5	0.1	1.2
Depression, mood and affective disorders	14.8	15.3	0.7	30.8
Psychoses	1.3	2.2	0.8	4.4
Neurotic, stress-related, anxiety and somatoform disorders	1.5	3.3	1.8	6.5
Intellectual and developmental disorders	0.2	0.2	0.1	0.5
Other mental and behavioural disorders	0.7	1.1	0.4	2.2
Total (any of the above)	**19.0**	**22.7**	**3.8**	**..**
One or more mental and behavioural comorbidity	**..**	**..**	**..**	**38.7**
Number with dementia	**104,420**	**104,420**	**104,420**	**104,420**

Notes

1. Not all residents had any mental or behavioural diagnosis codes.
2. Residents may have more than one mental and behavioural condition in addition to dementia. Residents are counted only once in the row 'Number with one or more mental and behavioural comorbidity'.

.. Not applicable

Depression

Depression, mood and affective disorders were the most commonly listed concurrent mental and behavioural diagnoses for residents with dementia (31%) (tables 4.18 and A4.14).

- Depression, mood and affective disorders were more frequently listed as a concurrent diagnosis for residents with *Dementia in Parkinson disease* (37%) and *Dementia in Huntington disease* (38%).
- Depression, mood and affective disorders were lower for residents with *Mixed dementia* (24%), possibly indicating the difficulty of identifying mood or affective disorders in residents with complex mental illness. Alternatively, it could be because residents with *Mixed dementia* have used up two of the three available mental and behavioural diagnoses codes on the ACFI form and therefore are likely to have fewer co-morbidities recorded than other residents with dementia.

Estimates of prevalence of depression in Australian residential aged care have been inconsistent and method-dependent. In 2005, the prevalence of depression in high and low-level aged care was estimated to be 51% and 30% respectively (RACGP 2005). A 2008 study estimated the prevalence of depression in residential aged care as 35% (Haralambous et al. 2009).

Given that older adults with dementia have an increased risk of depression it is interesting that depression was recorded as a concurrent diagnosis less frequently than estimates of its prevalence. It has been reported that depression often goes undiagnosed due to symptoms being misinterpreted as related to the ageing process or dementia (RACGP 2005; Haralambous et al. 2009).

Intellectual and developmental disorders

Intellectual and developmental disorders were the least common concurrent mental and behavioural diagnoses, recorded for only 0.5% of residents with a diagnosis of dementia (Table 4.18). This is significantly lower than recent Australian estimates of intellectual disability in the over-85-year-old age group of 6% (AIHW 2008).

The link between *Alzheimer disease* and *Down syndrome* is well-established, with a reported prevalence of dementia in those diagnosed with *Down syndrome* of 50–65% by age 65 years (Torr & Davis 2007).

Given the estimated prevalence of intellectual disability in older Australian adults, and its relationship with dementia, the low frequency of concurrent diagnosis in the ACFI is unexpected. This may be a reflection of the challenging nature of diagnosing dementia in adults with an underlying intellectual or developmental disability (Torr & Davis 2007). It could also be that adults with intellectual disability are less likely to be admitted to residential aged care due to either strong pre-existing support within the community or placement in other care services that continue into older age.

Psychoses and neurotic, stress-related, anxiety and somatoform disorders

Psychoses (4%) and neurotic, stress-related, anxiety and somatoform disorders (7%) were not commonly reported for residents with dementia; and these concurrent diagnoses were not observed with much variation between dementia types (tables 4.18 and A4.14). It was observed that:

- residents diagnosed with *Dementia in Huntington disease* and *Dementia in other diseases* had the highest rate of concurrent diagnosis with a psychosis (11% and 7% respectively)
- residents diagnosed with any type of diagnosed dementia had a rate of concurrent diagnosis of a neurotic, stress-related, anxiety or somatoform disorder between 4% and 7% across dementia types.

Medical diagnoses

Analysis of concurrent medical diagnoses is by the organ system in which disease occurs, including both acute and chronic conditions. The data suggest that residents with dementia have complex medical health profiles (Table 4.19). It was observed that:

- Almost all residents with diagnosed dementia also had at least one medical diagnosis (99% or 102,805 of the 104,420 residents with a diagnosis of dementia).
- Almost all residents with dementia had a concurrent medical diagnosis listed in the first diagnosis code (98%) with 94% in the second diagnosis code and 81% in the third diagnosis code.

Circulatory system disease

Circulatory system conditions, including heart disease, angina, myocardial infarction, ischemic heart disease and congestive heart failure were the most frequently reported concurrent medical diagnoses with:

- over half (57%) of residents with a diagnosis of dementia having a circulatory system condition (Table 4.19)
- more than one concurrent circulatory system condition was recorded for 15% of residents with dementia (Table A4.15)
- about 22% of residents with a diagnosis of dementia had concurrent circulatory system and musculoskeletal diagnoses
- about 72% of residents with *Vascular dementia* had a concurrent circulatory system diagnosis compared with 38% of residents with *Dementia in Parkinson disease* and 14% of those with *Dementia in Huntington disease* (Table A4.16).

This reflects the high burden of cardiovascular disease within Australia. In 2007–08, 17% of the Australian population (excluding residents of aged care) had a cardiovascular diagnosis, including approximately 48% of those aged 65–74 years and 65% of those aged 75 years and over (AIHW 2010a).

The rate of multiple circulatory system diagnoses reflects the relationship between conditions classified in the circulatory system category, many of which stem from the same underlying pathological changes. Accordingly, residents with dementia resulting from vascular causes mostly had a concurrent circulatory system condition.

Musculoskeletal disease

Musculoskeletal disease including arthritis and muscle disorders was the second most commonly reported concurrent diagnosis. Approximately 43% of residents with a diagnosis of dementia had a musculoskeletal diagnosis. This ranged from 45% for residents with *Alzheimer disease* to 33% for residents with *Dementia in Parkinson disease* and 6% of those with *Dementia in Huntington disease* (Table A4.16).

In 2007–08 31% of Australians living in the community self-reported musculoskeletal problems (AIHW 2010a). As the disease category includes numerous conditions for which prevalence increases with age (for example, arthritis and osteoporosis) it is expected that aged care residents would have a higher prevalence of musculoskeletal disorders than the general Australian community.

Respiratory disease

Respiratory diagnoses include upper respiratory tract infection, influenza, pneumonia, and lower respiratory tract diseases such as chronic obstructive airways disease (COAD) and asthma.

Respiratory conditions were recorded as a concurrent diagnosis for 9% of residents with dementia (Table 4.19). This varied little by type of dementia from 12% of residents with *Other dementia* to 6% of residents with *Dementia in Parkinson disease*. Only 0.1% of residents with dementia had more than one concurrent respiratory diagnosis (Table A4.15).

The prevalence of respiratory conditions amongst residents with dementia is comparable to the prevalence of respiratory illness within the community. In 2007–08, approximately 10% of the Australian population reported a respiratory diagnosis compared to 9% of all residents with dementia (Table A4.16) (AIHW 2010a).

Table 4.19: Medical conditions[(a)] amongst residents with a dementia diagnosis, 1 July 2008 to 30 June 2009 (per cent)

Organ system	First diagnosis code	Second diagnosis code	Third diagnosis code	Any diagnosis code
Circulatory system	26.2	25.5	21.4	57.3
Musculoskeletal & connective tissue	16.6	17.6	13.9	43.3
Endocrine, nutritional and metabolic disorders	8.6	6.5	6.1	20.2
Nervous system	5.5	3.9	4.1	12.9
Eye and adnexa	5.1	5.0	4.0	13.8
Respiratory system	3.4	3.3	2.8	9.4
Genitourinary system	5.7	6.0	5.2	16.4
Neoplasms (tumours/cancers)	3.3	2.3	2.4	7.6
Digestive system	3.6	3.7	3.0	10.0
Injury, poisoning and certain external causes	3.0	2.6	2.6	8.0
Skin & subcutaneous tissue	1.4	1.2	1.2	3.8
Congenital malformations, deformations & chromosomal abnormalities	0.1	—	0.1	0.2
Ear and mastoid process	2.1	2.1	1.7	5.8
Certain infectious and parasitic diseases	0.1	0.1	0.1	0.4
Blood, blood-forming organs & immune mechanism	1.0	0.8	0.7	2.5
Symptoms or signs n.o.s or n.e.c	12.7	12.8	11.9	29.4
Total	**98.4**	**93.5**	**81.2**	**98.5**
Total (number)	**102,782**	**97,620**	**84,741**	**102,805**
Total (number with dementia)	**104,420**	**104,420**	**104,420**	**104,420**

— Nil or rounded to zero.

(a) Medical conditions by ICD-10-AM chapter.

Notes

1. Not all residents had a medical diagnosis code recorded.
2. If more than one diagnosis was recorded for the same organ system for a resident it is counted only once in the 'Any diagnosis code' column.

Endocrine disease

Endocrine disorders include diabetes mellitus, thyroid disorders, nutritional disease, obesity and high cholesterol. Endocrine disorders were recorded for approximately 20% of residents with dementia (Table 4.19). This varied for some types of dementia from 23% of residents with *Vascular dementia* to 11% of residents with *Dementia in Parkinson disease* and 10% of those with *Dementia in Huntington disease*. Around 12% of resident with dementia had concurrent endocrine and circulatory system diagnoses (Table A4.15).

The ABS 2007–08 National Health Survey reported a prevalence of 3.9% of diabetes within the Australian population, but provides no indication of the extent of other endocrine disorders, nor a breakdown of prevalence by age group (AIHW 2010a).

The high rate of concurrent endocrine and circulatory system diagnoses may reflect the estimated five times higher risk of stroke associated with diabetes.

4.4 Length of stay

Analysis was conducted on the completed length of stay in residential aged care facilities of all permanent residents with an ACFI appraisal who had separated at any time during 2008–09. The term 'separated' refers to residents leaving the residential aged care facility, usually due to admission to hospital, transfer to another facility, returning to the community or dying. This analysis does not take into account the date at which a resident was diagnosed with dementia or when he or she were appraised as high-level care. Nor does this analysis consider diagnosed comorbidities that could impact on a resident's length of stay. As such, it provides a general picture of completed length of stay for residents in care prior to their separation. It is planned to further explore these issues once there are further years of ACFI data available.

Of the 43,200 residents identified, 87% of separations were due to death and:

- nearly 4% were admitted to hospital
- nearly 4% returned to the family home
- nearly 4% transferred to another residential aged care facility.

The data on the completed length of stay for permanent residents with a diagnosis of dementia and other residents who separated in 2008–09 were analysed by level of care appraised at time of separation (Table 4.20). Important comparisons include:

- Of the 23,900 residents with diagnosed dementia, 96% were appraised as high-level care at time of separation.
- Of the 19,200 other residents, 86% were appraised as high-level care at time of separation.
- Residents appraised as high-level care with a diagnosis of dementia had longer lengths of stay than their other resident counterparts. For example, 33% of residents with dementia separated less than 12 months after admission compared with 48% for other residents.
- However, residents appraised as low-level care with a diagnosis of dementia had slightly shorter lengths of stay than their other resident counterparts. For example, 48% of residents with dementia separated less than 12 months after admission compared with 43% for other residents.
- Interestingly, residents with dementia appraised as low-level care had shorter lengths of stay than their counterparts appraised as high-level care (48% separating within 12 months compared with 33% respectively).

Of the nearly 43,200 residents who separated in 2008–09, 26,700 (62%) were females and 16,500 (38%) were males. For females and males there was no difference between their proportions appraised as high-level or low-level care (tables A4.17 and A4.18). Important additional comparisons based on sex include:

- Male residents with a diagnosis of dementia who were appraised as high-level care had shorter lengths of stays than their female counterparts, with 44% and 26% respectively residing for less than 12 months.

Table 4.20: Length of stay[(a)] for all separations from permanent residential care with diagnosed dementia[(b)] and other residents, 1 July 2008 to 30 June 2009 (per cent)

Length of stay	With dementia	Other residents	All
	Appraised high care		
Up to 6 months	24.4	39.5	30.7
6–<12 months	8.7	8.6	8.6
<12 months	*33.0*	*48.1*	*39.3*
1–<4 years	38.2	31.5	35.4
≥4 years	28.8	20.5	25.3
Total	*100.0*	*100.0*	*100.0*
Total (number)	**22,884**	**16,474**	**39,358**
	Appraised low care		
Up to 6 months	34.8	31.0	32.1
6–<12 months	12.8	11.9	12.1
<12 months	*47.6*	*42.9*	*44.2*
1–<4 years	39.5	38.0	38.4
≥4 years	13.0	19.0	17.4
Total	*100.0*	*100.0*	*100.0*
Total (number)	**1,049**	**2,756**	**3,805**

(a) Length of stay is defined as the time a resident was in aged care without separation to hospital or transfer to another residential facility, return to the community, or died.

(b) As recorded on the resident's latest ACFI appraisal at time of separation.

Note: Percentages have been rounded to one decimal place and may not add to 100%.

- Male residents with a dementia diagnosis appraised as low-level care prior to separation also had shorter lengths of stay than females with 54% and 43% respectively residing for less than 12 months.
- Males with a diagnosis of dementia who were appraised as high-level care prior to separation were also more likely to have longer stays than comparable other males, with 44% and 56% respectively separating less than 12 months after admission.
- A majority of males with diagnosed dementia appraised as low-level care prior to separation were slightly more likely to separate in less than 12 months (54%) compared with other males (47%) appraised as low-level care.

5 Aged care facilities and Australian Government subsidy

5.1 Residential aged care facility characteristics

Permanent residents in aged care facilities receive either low-level or high-level care according to need. At 30 June 2009, there were 2,782 Australian Government subsidised residential aged care facilities that provided permanent places across Australia, with around 66% of operational places providing high-level care (DoHA 2009c). As there is one residential aged care facility that only provides respite care, the number of facilities in this report will not equal those provided in the *Residential aged care in Australia 2008–09* report (AIHW 2010b).

After the introduction of the *Aged Care Act 1997*, all Australian Government subsidised residential aged care places have conditions of allocation related to aged care planning regions (for example, specifying priority of access for places targeted to provide dementia care). There is currently no complete record of the number of residential places with conditions of allocation targeting dementia care and other additional residential places targeting dementia care.

All residential aged care facilities were studied to determine how many permanent residents had a diagnosis of dementia from their latest ACFI appraisal (Table 5.1). As at 30 June 2009:

- More than half (52%) of all aged care facilities had over half of their places used by residents with a diagnosis of dementia (Table 5.1).
- There is a trend for larger aged care facilities to have a higher percentage of places used by residents with diagnosed dementia. For the smallest facilities group (0–20 places) 34% had over half of residents with dementia rising steadily to 62% of facilities with 101–120 places having over half of residents with dementia (Table 5.1).

Table 5.1: Australian residential aged care facilities by number of operational places with over half of permanent residents with diagnosed dementia[(a)], 30 June 2009 (per cent)

	Facilities by number of operational places								
	0–20	**21–40**	**41–60**	**61–80**	**81–100**	**101–120**	**121–150**	**>150**	**Total**
> half of residents with dementia[(a)] (per cent)	34.2	46.5	50.9	55.8	61.2	62.1	61.3	57.1	52.1
Total (number of facilities)	**184**	**626**	**823**	**484**	**294**	**177**	**124**	**70**	**2,782**

(a) Only includes residents with an ACFI appraisal.

The distribution of permanent residents diagnosed with dementia within residential care facilities was analysed by state/territory and remoteness. As at 30 June 2009:

- The percentage of facilities with more than half of their residents with dementia varied by state and territory, from 40% of facilities in Tasmania to 61% of facilities in South Australia (Table 5.2). As reported earlier, Tasmania had the lowest rate of residents diagnosed with dementia in residential care at 50% compared to South Australia with 55% (Table 3.4).

- In all *Major cities,* 58% of facilities provided care to residents with dementia more than half their operational places. This rate was lower at 42% of facilities in both *Inner regional* and *Outer regional* areas (Table 5.3).
- In *Remote* areas, only 38% of facilities had more than half their operational places filled by residents with dementia. This figure increased to 45% of facilities in *Very remote* areas (Table 5.3). But due to low absolute numbers, these rates should be interpreted with caution.

Table 5.2: Australian residential aged care facilities with over half of permanent residents with diagnosed dementia[(a)] by state/territory, 30 June 2009 (per cent)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
> half of residents with dementia[(a)] (per cent)	54.0	51.2	47.1	52.2	60.9	40.2	48.0	57.1	52.1
Total (number of facilities)	**888**	**780**	**477**	**245**	**271**	**82**	**25**	**14**	**2,782**

(a) Only includes residents with an ACFI appraisal.

Table 5.3: Australian residential aged care facilities with over half of permanent residents with diagnosed dementia[(a)], by remoteness, 30 June 2009 (per cent)

	Major cities	Inner regional	Outer regional	Remote	Very remote	Total
> half of residents with dementia[(a)] (per cent)	58.3	42.4	42.4	38.5	45.0	52.1
Total (number of facilities)	**1,699**	**696**	**328**	**39**	**20**	**2,782**

(a) Only includes residents with an ACFI appraisal.

Note: The table uses the ASGC Remoteness Structure developed by the ABS.

5.2 Average subsidy for residents with diagnosed dementia and other residents

The Australian Government provides approximately 70% of the total funding for residential aged care and subsidises approved providers for the provision of appropriate care for their residents. The payment for each resident consists of a basic subsidy plus any appropriate supplements. In addition to these paid Australian Government subsidies and supplements, residents who can afford to, contribute to their cost of care and accommodation to the approved provider (DoHA 2009c).

In the 2008–09 financial year:

- Australian Government funding for residential aged care reached $6.474 billion. The average annual Australian Government payment for permanent residents for high-care, low-care and all residents was $48,550, $17,750 and $40,100 respectively, including subsidies and supplements (DoHA 2009c).
- The basic subsidy amount was based on the ACFI which was introduced in March 2008 and gradually replaced the RCS. As at 30 June 2009, about 61% of all funding for permanent residents was paid using the ACFI rates (due to transition arrangements), and 39% made under the former RCS rates (DoHA 2009c).
- There were approximately 211,500 permanent residents living in Australian Government subsidised residential aged care facilities at some time. Of this total, only 136,734 residents were appraised with an ACFI and approved providers were paid using the ACFI rates. Of these 136,734 residents, 73,389 (54%) had a diagnosis of dementia (Table 5.4).
- The average annual Australian Government subsidy payment (excluding supplements) for permanent residents with a diagnosis of dementia was $38,100. Approximately 9 in 10 (89%) of all these residents with a diagnosis of dementia were appraised as high-level care (Table 5.4). Only 1 in 10 (11%) residents with a diagnosis of dementia were appraised as low-level care.
- Just under half of the total 136,734 permanent residents, 63,345 (46%) were classified as 'other residents'. The average annual subsidy payment (excluding supplements) to these residents was $31,600 per permanent resident. Three-quarters of these residents were appraised as high-level care. The other 25% of these residents were appraised as low-level care (Table 5.4).
- The average annual subsidy payments quoted here for permanent residents with a diagnosis of dementia and other residents do not take into account the impact of other comorbidities residents may have on the care levels and subsidy they receive.

Table 5.4: Average subsidy[(a)] payments for permanent aged care residents with diagnosed dementia[(b)] and other residents, 1 July 2008 to 30 June 2009

Appraised care level	Per cent of residents	Average annual subsidy ($)
	With dementia	
High	88.9	n.p.
Low	11.1	n.p.
Total	*100.0*	*. .*
Total (number)	**73,389**	**38,100**
	Other residents	
High	74.6	n.p.
Low	25.4	n.p.
Total	*100.0*	*. .*
Total (number)	**63,345**	**31,600**

n.p. Not published.

. . Not applicable.

(a) Australian Government subsidy excluding supplements.

(b) Only includes residents with an ACFI appraisal and paid the ACFI rates. As at 30 June 2009 about 61% of all funding per permanent residents was being paid using the ACFI rates (due to transition arrangements), with 39% made under the former RCS rates.

Source: Unpublished DoHA data.

Appendix 1: Data sources and limitations

The data presented in this report are from DOHA's Aged and Community Care Management Information System (ACCMIS). This data repository has information gathered through a number of instruments. Three are directly relevant to this report:

- The Aged Care Client Record (often called the ACAT form)—this form is used for the assessment and approval of a care recipient for residential aged care, a Community Aged Care Package, or flexible care (for example, an EACH or EACH Dementia package). This form is completed by a delegate of an Aged Care Assessment Team (ACAT) in consultation with the applicant, and signed either by the applicant or by someone on behalf of the applicant.
- The Provider Monthly Claim Form—this form is completed (electronically or paper based) by the residential aged care facility for claiming Australian Government subsidy as part of the monthly funding cycle.
- Application for Classification—an appraisal form containing information on permanent residents against the Aged Care Funding Instrument (ACFI). It is completed by residential aged care facilities to determine their residents' care needs. The ACFI was introduced on 20 March 2008 and replaced the Residential Classification Scale (RCS).

General population data are taken from the latest AIHW population databases supplied by the Australian Bureau of Statistics.

Application for classification

Data from the ACFI forms are sent either electronically or in paper form to Medicare Australia and processed as a part of the payment cycle. Although the previous instrument (RCS) would be reappraised annually for each resident there is no automatic annual reappraisal of residents with the ACFI.

Resident information

All permanent residents in aged care must have an Aged Care Client Record approved for permanent residential care. This record lapses after 12 months from the date of approval, except for people approved to receive high-level care. Approval of applications is the responsibility of ACATs and their delegates.

The information entered into ACCMIS from the Aged Care Client Record is the source of the following data items:

- sex
- date of birth
- Indigenous status
- country of birth
- preferred language.

Residents' admission and separation details

The Provider Claim Form is sent electronically or in paper form, from the residential aged care facility (or the approved provider) to Medicare Australia at the beginning of each month. This form contains details of existing residents under the care of the approved

provider in the previous month. It is the responsibility of the approved provider to accurately record new data and changes relating to admissions, separations and leave for their residents.

The provider's claim form is the original source for the following resident data items:

- date of admission
- date of separation
- separation mode
- length of stay (derived from date of admission and date of separation)
- any leave that may have been taken.

Residential aged care facility details

Details about residential aged care facilities are sent by the approved provider to DoHA on an approved form to request to make aged care places operational at a location. This data are the source for the following data items:

- Location of the residential facility (by both state/territory and geographical area)
- Number of operational aged care places in the residential facilities.

Limitations of the data

The following points should be noted when interpreting the data presented in this report. The data used for this report were those available in ACCMIS in November 2009. However, as ACCMIS is 'refreshed' periodically, minor differences in some data will occur, depending on the version used for reporting. Other data limitations include:

- Due to the non-compulsory nature of self-identified Indigenous status, the number of people presented in this report who identified themselves as having Aboriginal and Torres Strait Islander origin may be an underestimation of the true number using these programs.
- Completed length of stay for a resident is the time between the date of admission into the residential care facility and the date of separation from this facility. There are some instances where residents are discharged from the residential facility to hospital and then return to the original facility. In this small number of instances these residents were considered as having been discharged from their facility when they entered hospital.

Appendix 2: Potentially unreported dementia

The data presented throughout this report describe certain aspects of the care needs of permanent residents in aged care in 2008–09 who have a diagnosis of dementia, and how this compares with the needs of other residents. Diagnosed dementia has a significant impact on the care requirements of permanent aged care residents, which in turn significantly affects staffing requirements and funding needs.

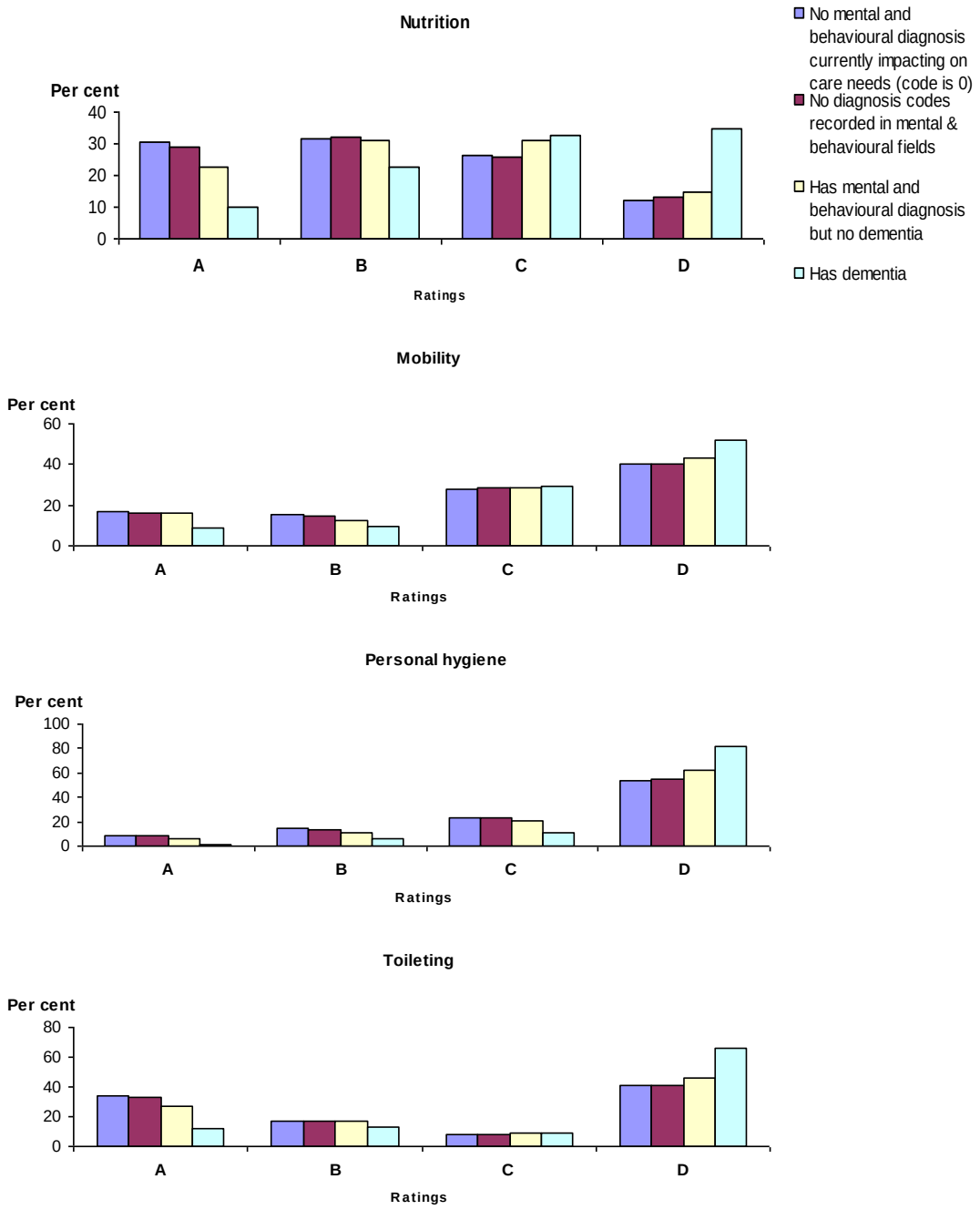
The reporting of mental and behavioural diagnoses had no codes entered on the ACFI form for almost 25,000 (approximately 13%) of residents with an ACFI appraisal. However, 99% of these residents had at least one medical diagnosis code. An analysis was undertaken to identify the likelihood of these residents having dementia. For this analysis, information about aged care residents was converted into categories reflecting their mental and behavioural status. The categories used in this analysis were:

- no diagnosis currently impacting on functioning
- a diagnosis of dementia
- another mental or behavioural diagnosis
- those for whom no data was recorded.

These categories were further analysed according to their care level category rating (A through D). Because other mental and behavioural diagnoses also affect care, it was important to consider this group within the analysis. The patterns of care level for these groups were compared to the pattern of care level of residents for whom the mental or behavioural diagnosis field code was not completed.

The pattern of care levels for residents with no codes entered on the ACFI form closely resembles the pattern for those residents with no mental or behavioural diagnosis (Figure A6.1). It was determined that:

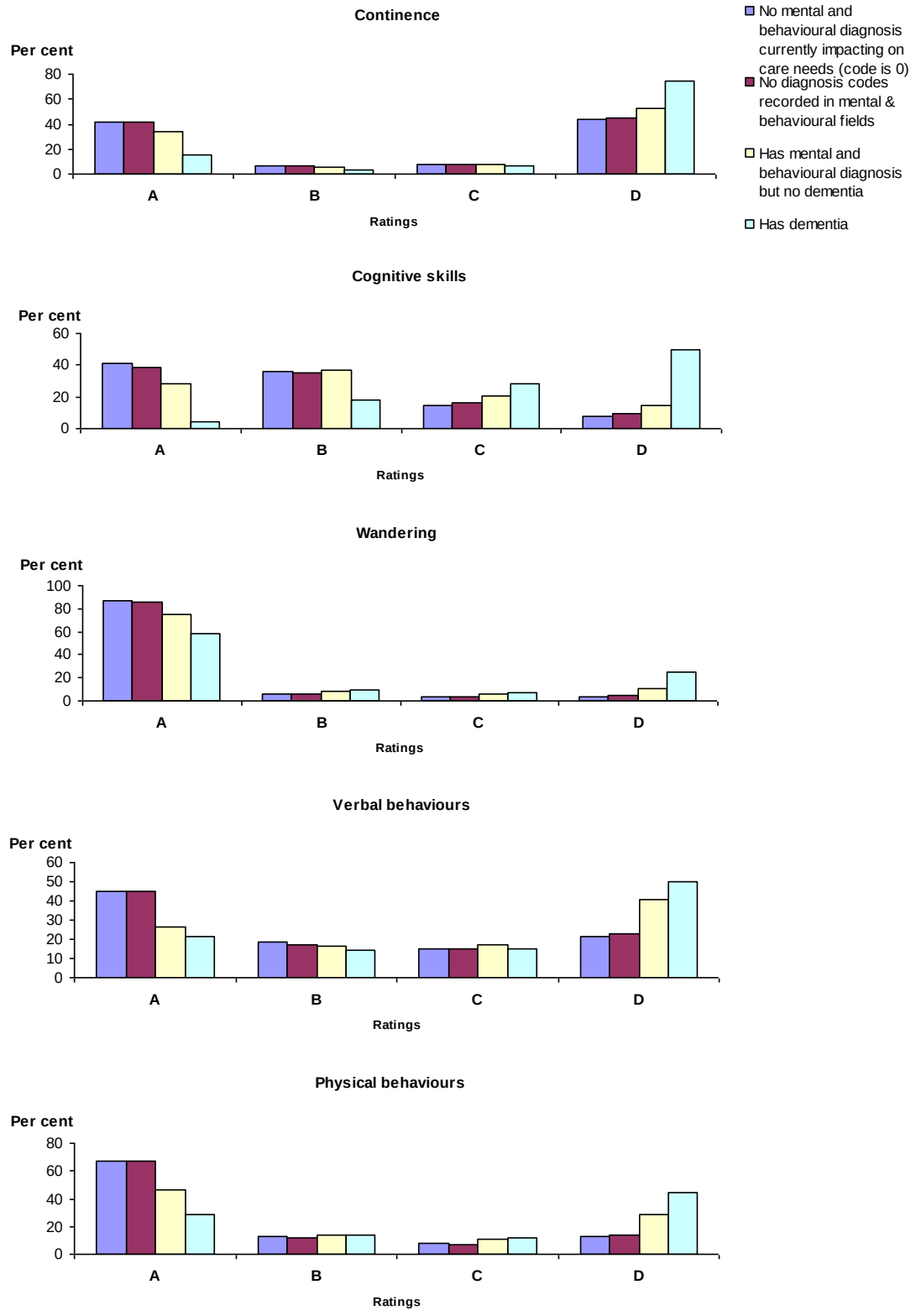
- For most care tasks, residents with diagnosed dementia had the highest proportion of high-level (category D) care needs.
- Residents who were known to have no mental or behavioural diagnosis affecting their care were more likely to be rated in low-level care categories (A and B).
- Greater proportions of residents without a recorded mental or behavioural diagnostic status were found in the lower care categories.
- Residents diagnosed with other mental or behavioural conditions generally had higher care needs than residents with no mental or behavioural diagnosis, but were in lower categories than residents diagnosed with dementia.



Source: Table A6.1.

Figure A6.1: Ratings for 12 ACFI questions, by mental and behavioural diagnosis, for permanent aged care residents, 1 July 2008 to 30 June 2009

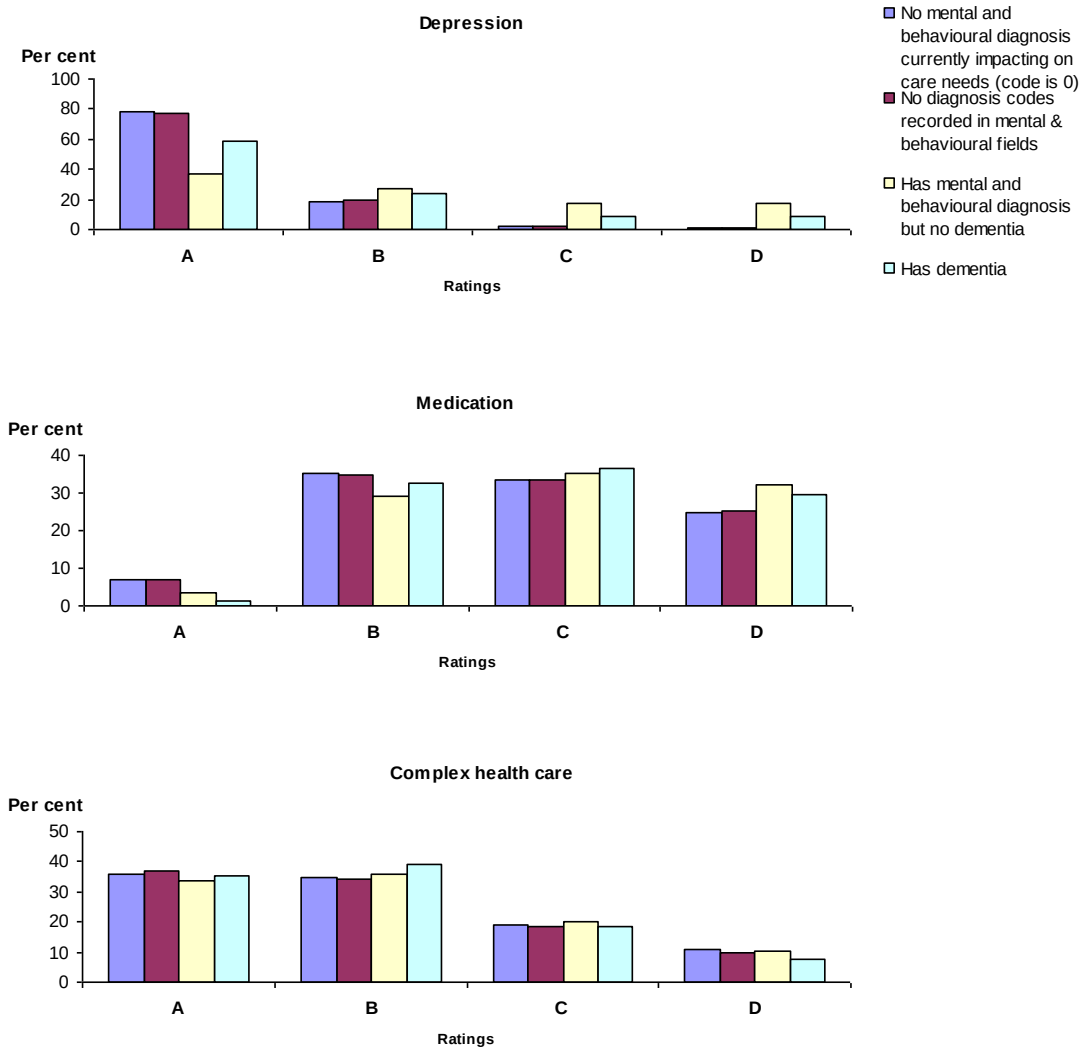
(continued)



Source: Table A6.1.

Figure A6.1: (continued): Ratings for 12 ACFI questions, by mental and behavioural diagnosis, for permanent aged care residents, 1 July 2008 to 30 June 2009

(continued)



Source: Table A6.1.

Figure A6.1 (continued): Ratings for 12 ACFI questions, by mental and behavioural diagnosis, for permanent aged care residents, 1 July 2008 to 30 June 2009

These data suggest that, for the majority of residents with an unreported mental or behavioural diagnostic status, it is likely that no mental or behavioural diagnosis affects their care needs. A more accurate indication of diagnosed dementia status for residents with an unrecorded status could be gained through conducting a regression analysis for specific individuals. Although such an analysis may be conducted in the future, the similarity in care categories between those with an unrecorded status and those with no dementia suggests it is unlikely that a large proportion of residents without mental or behavioural diagnostic information would have a diagnosis of dementia.

Table A6.1: Ratings for 12 ACFI questions, by mental and behavioural diagnosis, for permanent aged care residents, 1 July 2008 to 30 June 2009 (per cent)

Ratings	Nutrition	Mobility	Personal hygiene	Toileting	Continence	Cognitive skills
No mental and behavioural diagnosis currently impacting on care needs (N=23,993)						
A	30.7	16.7	8.7	33.9	41.9	41.1
B	31.3	15.2	14.1	17.2	6.1	36.4
C	26.1	28.1	23.2	8.0	8.2	14.8
D	11.9	40.1	53.9	40.9	43.8	7.7
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
No diagnosis codes recorded in mental & behavioural fields (N=24,736)						
A	29.2	16.2	8.6	33.4	41.4	38.9
B	32.0	14.9	13.7	17.3	6.1	35.2
C	25.7	28.7	23.2	7.9	7.7	16.1
D	13.2	40.2	54.5	41.5	44.9	9.8
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Has mental and behavioural diagnosis but no dementia (N=45,342)						
A	22.6	15.8	5.9	26.8	33.8	28.7
B	31.2	12.5	11.6	17.4	5.8	36.5
C	31.3	28.4	20.8	9.4	7.8	20.7
D	15.0	43.3	61.8	46.4	52.6	14.2
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Has dementia (N=104,420)						
A	9.9	9.0	1.4	12.0	15.5	4.5
B	22.8	9.8	6.0	13.2	3.7	18.2
C	32.5	29.4	11.2	9.2	6.5	27.9
D	34.8	51.9	81.4	65.7	74.4	49.4
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*

(continued)

Table A6.1: (continued) Ratings for 12 ACFI questions, by mental and behavioural diagnosis, for permanent aged care residents, 1 July 2008 to 30 June 2009 (per cent)

Ratings	Wandering	Verbal behaviours	Physical behaviours	Depression	Medication	Complex health care
No mental and behavioural diagnosis currently impacting on care needs (N=23,993)						
A	86.6	45.1	67.3	78.0	6.8	35.6
B	6.4	18.5	12.8	18.4	35.1	34.6
C	3.1	14.9	7.5	2.1	33.5	18.8
D	3.8	21.5	12.5	1.5	24.6	11.0
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
No diagnosis codes recorded in mental & behavioural fields (N=24,736)						
A	85.9	44.8	66.8	76.8	6.8	37.2
B	6.3	17.4	12.2	19.4	34.7	34.5
C	3.2	14.9	7.4	2.2	33.3	18.7
D	4.6	23.0	13.7	1.5	25.2	9.6
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Has mental and behavioural diagnosis but no dementia (N=45,342)						
A	75.3	26.6	46.8	36.9	3.4	34.0
B	8.5	16.2	13.6	27.6	29.0	35.8
C	5.4	16.8	10.9	17.7	35.2	19.9
D	10.8	40.4	28.6	17.8	32.4	10.4
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Has dementia (N=104,420)						
A	57.8	21.2	29.1	58.5	1.3	35.2
B	10.0	14.4	13.9	24.0	32.7	39.1
C	7.2	14.8	12.2	9.2	36.7	18.2
D	25.0	49.7	44.8	8.4	29.4	7.5
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*

Appendix 3: Additional tables

Table A3.1: Residents classified to a diagnosis of Mixed dementia, 1 July 2008 to 30 June 2009

Dementia diagnosis	Number of residents	Per cent
Alzheimer disease combined with Dementia in other diseases and/or Other dementia	837	46.5
Alzheimer disease combined with Vascular dementia (including those who also had Dementia in other diseases and/or Other dementia)	651	36.2
Vascular dementia combined with Dementia in other diseases and/or Other dementia	184	10.2
Other dementia combined with Dementia in other diseases (but no Alzheimer disease or Vascular dementia)	128	7.1
Total number of residents	**1,800**	**100.0**

Table A3.2: Reason for ACFI appraisal or reappraisal for permanent residents, by diagnosed dementia status, 1 July 2008 to 30 June 2009

Reason for appraisal or reappraisal	With dementia	Other residents	All residents[(a)]	With dementia	Other residents	All residents[(a)]
		Number			Per cent	
New appraisals						
Initial appraisal—new admission	16,339	16,149	32,488	16.8	18.4	17.6
Initial appraisal—previous admission under RCS	51,529	45,018	96,547	52.9	51.3	52.2
Entry from hospital	11,282	11,660	22,942	11.6	13.3	12.4
Total	*79,150*	*72,827*	*151,977*	*81.3*	*83.0*	*82.2*
Reappraisals						
Care needs reassessed	7,255	6,296	13,551	7.5	7.2	7.3
Major change appraisal	3,791	3,035	6,826	3.9	3.5	3.7
Major change reappraisal	1,296	854	2,150	1.3	1.0	1.2
Reappraisal of no funding	23	80	103	—	0.1	0.1
Return from hospital	698	1,196	1,894	0.7	1.4	1.0
Reappraisal on transfer	3,159	1,803	4,962	3.2	2.1	2.7
Reviews	1,945	1,658	3,603	2.0	1.9	1.9
Total	*18,167*	*14,922*	*33,089*	*18.6*	*17.2*	*17.9*
Total appraisals	**97,317**	**87,749**	**185,066**	**100.0**	**100.0**	**100.0**

— Nil or rounded to zero.

(a) These numbers include all permanent residents who received an ACFI appraisal during the financial year 2008–09.

Note: Percentages are rounded to one decimal place and may not add to 100%.

Table A3.3: Number of ACFI appraisals or reappraisals per permanent resident[(a)] by dementia status, 1 July 2008 to 30 June 2009

Appraisals per resident	With dementia	Other residents[(b)]	All residents[(b)]	With dementia	Other residents[(b)]	All residents[(b)]	Total appraisals[(c)]
		Number			Per cent		Number
0[(d)]	18,944	16,159	35,103	18.1	17.2	17.7	. .
1	74,385	68,638	143,023	71.2	73.0	72.1	143,023
2	10,368	8,650	19,018	9.9	9.2	9.6	38,036
3 or more	723	599	1,322	0.7	0.6	0.7	4,007
Total (residents)	**104,420**	**94,046**	**198,466**	**100.0**	**100.0**	**100.0**	**185,066**

. . Not applicable.

(a) These numbers include any person who was a permanent resident in 2008–09 financial year and had an ACFI appraisal.

(b) Since dementia could only be determined for residents with an ACFI appraisal, the number and percentage of Other residents and all residents excludes residents who had no ACFI appraisal during or prior to the 2008–09 financial year.

(c) Includes ACFI appraisals conducted in 2008–09 financial year for all permanent residents.

(d) These ACFI appraisals were conducted in the 2007–08 financial year.

Table A3.4: Number of ACFI appraisals or reappraisals per permanent resident with a diagnosis of dementia, by state and territory, 1 July 2008 to 30 June 2009[a]

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia	Australia
Appraisals per resident	**Number of residents with dementia**									**Number of appraisals[c]**
0[b]	6,639	4,723	3,128	1,669	2,047	478	211	49	**18,944**	. .
1	25,979	18,333	13,123	6,449	7,605	1,914	803	179	**74,385**	74,385
2	3,706	2,701	1,779	873	907	255	118	29	**10,368**	20,736
3 or more	267	213	108	71	45	9	7	3	**723**	2,196
Total (residents)	**36,591**	**25,970**	**18,138**	**9,062**	**10,604**	**2,656**	**1,139**	**260**	**104,420**	**97,317**

. . Not applicable.

(a) These numbers include any person with a dementia diagnosis who was a permanent resident in 2008–09 financial year.

(b) These ACFI appraisals were conducted in the 2007–08 financial year.

(c) Includes ACFI appraisals conducted during the financial year 2008–09 only.

Note: Refers to the location of the residential aged care facilities.

Table A3.5: Sources of diagnosis[a] for permanent residents with dementia, 1 July 2008 to 30 June 2009

Sources of diagnosis	Mental and behavioural diagnosis	Medical diagnosis
	Number	
Aged Care Client Record[b]	74,259	78,303
GP comprehensive medical assessment	46,635	47,814
General medical practitioner notes or letters	51,609	53,270
Geriatrician notes or letters	3,180	2,678
Psychogeriatrician notes or letters	2,043	1,255
Psychiatrist notes or letters	1,568	908
Other medical specialist notes or letters	5,632	6,905
Total number	**184,926**	**191,133**
	Per cent	
Aged Care Client Record[b]	40.2	41.0
GP comprehensive medical assessment	25.2	25.0
General medical practitioner notes or letters	27.9	27.9
Geriatrician notes or letters	1.7	1.4
Psychogeriatrician notes or letters	1.1	0.7
Psychiatrist notes or letters	0.8	0.5
Other medical specialist notes or letters	3.0	3.6
All	**100.0**	**100.0**

(a) The source of diagnosis 'Other—please describe' has been excluded due to data quality issues.

(b) The Aged Care Client Record can also contain GP comprehensive medical assessments, notes or letters from other clinicians.

Notes

1. More than one diagnosis source is possible for each resident.
2. Only diagnosis sources from the latest ACFI appraisal up to and including 30 June 2009 are counted.

Table A3.6: Number of diagnosis sources[(a)] for permanent residents with dementia from the ACFI, 1 July 2008 to 30 June 2009

	Number of diagnosis sources						
Diagnoses	**0**	**1**	**2**	**3**	**4**	**5–7**	**Total**
				Number			
Mental and behavioural	1,321	38,749	48,946	13,536	1,680	188	**104,420**
Medical	1,434	33,995	51,993	15,031	1,797	170	**104,420**
				Per cent			
Mental and behavioural	1.3	37.1	46.9	13.0	1.6	0.2	**100.0**
Medical	1.4	32.6	49.8	14.4	1.7	0.2	**100.0**

(a) The source of diagnosis 'Other–please describe' has been excluded due to data quality issues.

Notes
1. More than one diagnosis source is possible for each resident.
2. Only diagnosis sources from the latest ACFI appraisal up to and including 30 June 2009 are counted.
3. Percentages are rounded to one decimal place and may not add to 100%.

Table A4.1: Permanent aged care residents with diagnosed dementia and other residents with an ACFI appraisal, by age and sex, 1 July 2008 to 30 June 2009

	With dementia		Other residents		Total	
Sex/age	**Number**	**Per cent**	**Number**	**Per cent**	**Number**	**Per cent**
Females						
0–64	1,082	1.5	2,636	4.2	3,718	2.7
65–69	1,123	1.5	1,938	3.1	3,061	2.2
70–74	2,766	3.8	3,154	5.0	5,920	4.3
75–79	7,488	10.2	6,378	10.1	13,866	10.1
80–84	16,392	22.3	12,499	19.7	28,891	21.1
85–89	22,783	31.0	17,577	27.7	40,360	29.5
90–94	15,424	21.0	13,467	21.2	28,891	21.1
95+	6,384	8.7	5,808	9.2	12,192	8.9
Total	*73,442*	*100.0*	*63,457*	*100.0*	*136,899*	*100.0*
Males						
0–64	1,186	3.8	3,160	10.3	4,346	7.1
65–69	1,295	4.2	2,067	6.8	3,362	5.5
70–74	2,446	7.9	2,886	9.4	5,332	8.7
75–79	4,813	15.5	4,179	13.7	8,992	14.6
80–84	7,974	25.7	6,083	19.9	14,057	22.8
85–89	8,124	26.2	6,685	21.9	14,809	24.1
90–94	4,036	13.0	4,143	13.5	8,179	13.3
95+	1,104	3.6	1,386	4.5	2,490	4.0
Total	*30,978*	*100.0*	*30,589*	*100.0*	*61,567*	*100.0*
Persons						
0–64	2,268	2.2	5,796	6.2	8,064	4.1
65–69	2,418	2.3	4,005	4.3	6,423	3.2
70–74	5,212	5.0	6,040	6.4	11,252	5.7
75–79	12,301	11.8	10,557	11.2	22,858	11.5
80–84	24,366	23.3	18,582	19.8	42,948	21.6
85–89	30,907	29.6	24,262	25.8	55,169	27.8
90–94	19,460	18.6	17,610	18.7	37,070	18.7
95+	7,488	7.2	7,194	7.6	14,682	7.4
Total	**104,420**	**100.0**	**94,046**	**100.0**	**198,466**	**100.0**

Note: Percentages are rounded to one decimal place and may not add to 100%.

Table A4.2: Age and sex of permanent aged care residents, by type of diagnosed dementia, 1 July 2008 to 30 June 2009 (per cent)

Type of dementia	Under 65	65–69	70–74	75–79	80–84	85–89	90–94	95+	Total
	Years								
Females									
Alzheimer disease	1.1	1.3	3.4	9.7	22.3	31.4	21.7	9.1	100.0
Vascular dementia	1.2	1.6	4.4	11.3	22.9	31.6	19.1	7.8	100.0
Dementia in other diseases									
Parkinson disease	1.6	2.9	8.1	20.0	29.3	26.5	9.1	2.6	100.0
Huntington disease	57.0	11.0	9.0	13.0	7.0	2.0	1.0	—	100.0
Other diseases	7.9	3.1	5.7	11.2	19.9	29.1	16.9	6.3	100.0
Total	*7.9*	*3.3*	*6.6*	*14.0*	*22.3*	*27.2*	*13.8*	*4.8*	*100.0*
Other dementia	3.3	2.7	4.8	11.4	20.8	28.3	20.6	8.2	100.0
Mixed dementia	1.9	3.1	6.6	14.4	29.6	28.5	12.3	3.7	100.0
Any dementia	*1.5*	*1.5*	*3.8*	*10.2*	*22.3*	*31.0*	*21.0*	*8.7*	*100.0*
Any dementia (number)	*1,082*	*1,123*	*2,766*	*7,488*	*16,392*	*22,783*	*15,424*	*6,384*	*73,442*
Males									
Alzheimer disease	2.4	3.1	6.6	14.4	26.1	28.6	14.6	4.2	100.0
Vascular dementia	3.2	4.3	8.9	17.6	27.9	24.4	11.5	2.4	100.0
Dementia in other diseases									
Parkinson disease	3.9	7.8	11.3	22.5	28.3	19.6	5.7	0.9	100.0
Huntington disease	66.2	10.8	12.2	5.4	5.4	—	—	—	100.0
Other diseases	12.8	8.1	9.9	17.5	21.9	18.1	8.6	3.0	100.0
Total	*11.2*	*8.1*	*10.6*	*19.1*	*24.0*	*18.0*	*7.0*	*2.0*	*100.0*
Other dementia	9.4	8.9	12.4	17.2	21.6	18.7	9.3	2.4	100.0
Mixed dementia	4.0	4.1	10.6	19.9	27.7	23.9	8.7	1.1	100.0
Any dementia	*3.8*	*4.2*	*7.9*	*15.5*	*25.7*	*26.2*	*13.0*	*3.6*	*100.0*
Any dementia (number)	*1,186*	*1,295*	*2,446*	*4,813*	*7,974*	*8,124*	*4,036*	*1,104*	*30,978*
Persons									
Alzheimer disease	1.4	1.8	4.3	11.0	23.3	30.7	19.8	7.8	100.0
Vascular dementia	1.9	2.6	6.1	13.7	24.8	28.9	16.2	5.7	100.0
Dementia in other diseases									
Parkinson disease	2.7	5.3	9.7	21.2	28.8	23.1	7.4	1.8	100.0
Huntington disease	60.9	10.9	10.3	9.8	6.3	1.1	0.6	—	100.0
Other diseases	9.7	4.9	7.3	13.5	20.6	25.0	13.8	5.1	100.0
Total	*9.3*	*5.3*	*8.3*	*16.2*	*23.0*	*23.3*	*10.9*	*3.6*	*100.0*
Other dementia	*5.7*	*5.1*	*7.8*	*13.7*	*21.1*	*24.5*	*16.1*	*5.9*	*100.0*
Mixed dementia	*2.8*	*3.6*	*8.4*	*16.9*	*28.7*	*26.4*	*10.6*	*2.5*	*100.0*
Any dementia	**2.2**	**2.3**	**5.0**	**11.8**	**23.3**	**29.6**	**18.6**	**7.2**	**100.0**
Any dementia (number)	**2,268**	**2,418**	**5,212**	**12,301**	**24,366**	**30,907**	**19,460**	**7,488**	**104,420**

— Nil or rounded to zero.

Notes

1. Table includes only residents with an ACFI appraisal in effect between 1 July 2008 and 30 June 2009.
2. Percentages are rounded to one decimal place and may not add to 100%.

Table A4.3: Indigenous status of permanent aged care residents with diagnosed dementia, by age and sex, 1 July 2008 to 30 June 2009

	Indigenous		Non-Indigenous		Unknown		Total	
Sex/age	**Number**	**Per cent**	**Number**	**Per cent**	**Number**	**Per cent**	**Number**	**Per cent**
Females								
0–49	6	1.7	79	0.1	—	—	85	0.1
50–64	37	10.2	931	1.3	29	2.2	997	1.4
65–69	28	7.7	1069	1.5	26	2.0	1,123	1.5
70–74	55	15.2	2,663	3.7	48	3.6	2,766	3.8
75–79	56	15.4	7,317	10.2	115	8.7	7,488	10.2
80–84	73	20.1	16,071	22.4	248	18.7	16,392	22.3
85–89	60	16.5	22,321	31.1	402	30.4	22,783	31.0
90–94	34	9.4	15,100	21.0	290	21.9	15,424	21.0
95+	14	3.9	6,204	8.6	166	12.5	6,384	8.7
Total	*363*	*100.0*	*71,755*	*100.0*	*1,324*	*100.0*	*73,442*	*100.0*
Males								
0–49	<10	n.p.	88	0.3	n.p.	n.p.	<100	0.3
50–64	44	18.3	1026	3.4	20	4.8	1090	3.5
65–69	35	14.5	1,240	4.1	20	4.8	1,295	4.2
70–74	25	10.4	2,382	7.9	39	9.4	2,446	7.9
75–79	46	19.1	4,708	15.5	59	14.2	4,813	15.5
80–84	41	17.0	7,826	25.8	107	25.7	7,974	25.7
85–89	28	11.6	8,003	26.4	93	22.4	8,124	26.2
90–94	13	5.4	3,965	13.1	58	13.9	4,036	13.0
95+	n.p.	n.p.	1,083	3.6	19	4.6	<1,110	3.6
Total	*<245*	*100.0*	*30,321*	*100.0*	*<420*	*100.0*	*<30,990*	*100.0*
Persons								
0–49	<20	n.p.	167	0.2	n.p.	n.p.	<190	0.2
50–64	81	13.4	1,957	1.9	49	2.8	2,087	2.0
65–69	63	10.4	2,309	2.3	46	2.6	2,418	2.3
70–74	80	13.2	5,045	4.9	87	5.0	5,212	5.0
75–79	102	16.9	12,025	11.8	174	10.0	12,301	11.8
80–84	114	18.9	23,897	23.4	355	20.4	24,366	23.3
85–89	88	14.6	30,324	29.7	495	28.4	30,907	29.6
90–94	47	7.8	19,065	18.7	348	20.0	19,460	18.6
95+	<20	n.p.	7,287	7.1	185	10.6	<7,495	7.2
Total	**<610**	**100.0**	**102,076**	**100.0**	**<1,745**	**100.0**	**104,420**	**100.0**

— Nil or rounded to zero.

n.p. Not published.

Note: Percentages are rounded to one decimal place and may not add to 100%.

Table A4.4: Level of assistance needed in each ACFI care domain, by dementia status, for aged care residents, 1 July 2008 to 30 June 2009

	With dementia diagnosis	Other residents[(a)]	With dementia diagnosis	Other residents[(a)]
	Number		Per cent	
Activities of daily living				
Nil	3,665	11,308	3.5	12.0
Low	19,998	32,335	19.2	34.4
Medium	30,442	24,844	29.2	26.4
High	50,315	25,559	48.2	27.2
Behaviour				
Nil	4,567	24,111	4.4	25.6
Low	17,079	27,190	16.4	28.9
Medium	24,634	26,534	23.6	28.2
High	58,140	16,211	55.7	17.2
Complex health care				
Nil	15,931	17,744	15.3	18.9
Low	42,309	34,166	40.5	36.3
Medium	30,652	25,057	29.4	26.6
High	15,528	17,079	14.9	18.2
Total residents	**104,420**	**94,046**	**100.0**	**100.0**

(a) Includes residents where mental and behavioural diagnosis fields were not completed.

Notes

1. Data are derived from the last ACFI appraisal in the period for each resident
2. Percentages are rounded to one decimal place and may not add to 100%.

Table A4.5: Ratings[(a)] for 12 ACFI questions, for permanent aged care residents, by diagnosed dementia status, 1 July 2008 to 30 June 2009

	Ratings							
	A	B	C	D	A	B	C	D
	Number				Per cent			
With dementia (*n* = 104,420)								
Nutrition	10,335	23,836	33,934	36,315	9.9	22.8	32.5	34.8
Mobility	9,380	10,208	30,668	54,164	9.0	9.8	29.4	51.9
Personal hygiene	1,484	6,272	11,719	84,945	1.4	6.0	11.2	81.3
Toileting	12,477	13,744	9,619	68,580	11.9	13.2	9.2	65.7
Continence	16,140	3,836	6,746	77,698	15.5	3.7	6.5	74.4
Cognitive skills	4,729	19,001	29,149	51,541	4.5	18.2	27.9	49.4
Wandering	60,339	10,449	7,486	26,146	57.8	10.0	7.2	25.0
Verbal behaviour	22,087	15,030	15,444	51,859	21.2	14.4	14.8	49.7
Physical behaviour	30,336	14,528	12,760	46,796	29.1	13.9	12.2	44.8
Depression	61,033	25,012	9,620	8,755	58.4	24.0	9.2	8.4
Medication	1,313	34,109	38,339	30,659	1.3	32.7	36.7	29.4
Complex health care procedures	36,700	40,868	19,016	7,836	35.1	39.1	18.2	7.5
Other residents (*n* = 94,046)								
Nutrition	24,787	29,573	26,776	12,910	26.4	31.4	28.5	13.7
Mobility	15,152	12,967	26,716	39,211	16.1	13.8	28.4	41.7
Personal hygiene	6,906	12,025	20,723	54,392	7.3	12.8	22.0	57.8
Toileting	28,524	16,286	8,146	41,090	30.3	17.3	8.7	43.7
Continence	35,613	5,601	7,401	45,431	37.9	6.0	7.9	48.3
Cognitive skills	32,479	33,953	16,903	10,711	34.5	36.1	18.0	11.4
Wandering	76,155	6,947	3,981	6,963	81.0	7.4	4.2	7.4
Verbal behaviour	33,931	16,082	14,880	29,153	36.1	17.1	15.8	31.0
Physical behaviour	53,900	12,231	8,570	19,345	57.3	13.0	9.1	20.6
Depression	54,433	21,730	9,075	8,808	57.9	23.1	9.6	9.4
Medication	4,839	30,141	32,243	26,823	5.1	32.0	34.3	28.5
Complex health care procedures	33,137	33,056	18,139	9,714	35.2	35.1	19.3	10.3

(a) The ACFI ratings are defined in the ACFI User Guide.

Table A4.6: Need for assistance with activities related to nutrition, by type of diagnosed dementia, 1 July 2008 to 30 June 2009 (per cent)

			Dementia in other diseases						
	Alzheimer disease	Vascular dementia	Parkinson disease	Huntington disease	Other diseases	All	Other dementia	Mixed dementia	Any dementia
Readiness to eat									
Independent	17.6	17.2	8.1	12.6	15.3	12.6	19.7	14.1	17.5
Supervision	12.8	12.3	9.9	5.7	12.5	11.3	13.5	12.9	12.7
Physical assistance	69.6	70.6	82.0	81.6	72.3	76.2	66.9	73.0	69.8
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Eating									
Independent	15.7	16.4	10.3	12.6	15.4	13.4	19.1	14.5	16.0
Supervision	48.4	48.7	45.8	22.4	47.0	45.5	50.5	41.5	48.4
Physical assistance	35.9	34.9	43.9	64.9	37.6	41.1	30.5	44.0	35.7
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Total number	**79,307**	**10,457**	**1,539**	**174**	**2,494**	**4,207**	**8,649**	**1,799**	**104,419**

Notes

1. Excludes missing and invalid data.
2. Percentages are rounded to one decimal place and may not add to 100%.

Table A4.7: Need for assistance with activities related to mobility, by type of diagnosed dementia, 1 July 2008 to 30 June 2009 (per cent)

			Dementia in other diseases						
	Alzheimer disease	Vascular dementia	Parkinson disease	Huntington disease	Other diseases	All	Other dementia	Mixed dementia	Any dementia
Transfers									
Independent	17.0	14.6	4.9	9.8	12.8	9.8	18.6	15.1	16.6
Supervision	23.1	20.5	15.3	20.7	20.5	18.6	23.5	20.8	22.7
Physical assistance	33.4	34.7	46.2	27.6	37.4	40.2	32.8	32.4	33.7
Mechanical lifting	26.5	30.2	33.6	42.0	29.3	31.4	25.2	31.6	27.0
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Total number	**79,307**	**10,457**	**1,539**	**174**	**2,494**	**4,207**	**8,649**	**1,799**	**104,419**
Locomotion									
Independent	11.9	10.2	4.5	9.2	9.3	7.6	13.6	12.1	11.7
Supervision	36.2	32.9	25.8	21.3	31.4	29.0	35.9	31.9	35.5
Physical assistance	51.9	56.9	69.7	69.5	59.2	63.5	50.5	56.0	52.8
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Total number	**79,306**	**10,457**	**1,539**	**174**	**2,494**	**4,207**	**8,649**	**1,799**	**104,418**

Notes

1. Excludes missing and invalid data.
2. Percentages are rounded to one decimal place and may not add to 100%.

Table A4.8: Need for assistance with activities related to personal hygiene, by type of diagnosed dementia, 1 July 2008 to 30 June 2009 (per cent)

			Dementia in other diseases						
	Alzheimer disease	Vascular dementia	Parkinson disease	Huntington disease	Other diseases	All	Other dementia	Mixed dementia	Any dementia
Dressing and undressing									
Independent	2.9	3.1	0.8	2.9	2.8	2.1	4.3	2.5	3.0
Supervision	10.1	9.5	4.5	3.4	8.7	6.9	13.1	8.7	10.2
Physical assistance	87.0	87.4	94.7	93.7	88.5	91.0	82.7	88.8	86.9
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Washing and drying									
Independent	1.8	2.0	0.7	2.3	1.8	1.4	2.9	1.8	1.9
Supervision	7.0	6.7	4.0	3.4	5.9	5.1	9.3	6.6	7.0
Physical assistance	91.2	91.3	95.3	94.3	92.3	93.5	87.8	91.6	91.0
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Grooming									
Independent	4.1	4.2	3.0	2.9	4.0	3.6	5.6	4.0	4.2
Supervision	12.2	11.6	8.5	6.3	10.9	9.8	15.1	9.6	12.2
Physical assistance	83.8	84.2	88.5	90.8	85.1	86.6	79.3	86.4	83.6
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Total (number)	**79,307**	**10,457**	**1,539**	**174**	**2,494**	**4,207**	**8,649**	**1,800**	**104,420**

Note: Percentages are rounded to one decimal place and may not add to 100%.

Table A4.9: Need for assistance with activities related to toileting, by type of diagnosed dementia, 1 July 2008 to 30 June 2009 (per cent)

			Dementia in other diseases						
	Alzheimer disease	Vascular dementia	Parkinson disease	Huntington disease	Other diseases	All	Other dementia	Mixed dementia	Any dementia
Use of toilet									
Independent	15.8	15.7	8.4	14.9	14.4	12.2	19.3	13.7	15.9
Supervision	17.2	15.1	12.7	10.9	14.6	13.8	17.5	15.2	16.9
Physical assistance	67.0	69.2	78.9	74.1	70.9	73.9	63.1	71.1	67.2
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Toilet completion									
Independent	13.0	12.6	7.2	10.9	11.4	9.9	16.0	11.7	13.1
Supervision	13.7	12.9	10.3	8.6	13.6	12.2	14.9	12.2	13.6
Physical assistance	73.3	74.5	82.5	80.5	75.0	78.0	69.1	76.2	73.3
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Total number	**79,307**	**10,457**	**1,539**	**174**	**2,494**	**4,207**	**8,649**	**1,800**	**104,420**

Note: Percentages are rounded to one decimal place and may not add to 100%.

Table A4.10: Frequency of verbal behaviours for permanent residents with diagnosed dementia, by selected dementia type, 1 July 2008 to 30 June 2009 (per cent)

	No behaviours	Refusal of care	Disruption to others	Refusal of care & disruption	Refusal of care & paranoid	Disruption & paranoid	Refusal of care & disruption & paranoid	Other behaviour combinations	All	Total number
Not at all / less than once per week										
All dementia	20.9	0.1	0.1	—	—	—	—	—	21.1	22,074
Dementia in PD[(a)]	29.1	0.1	0.3	—	—	—	—	—	29.5	453
Dementia in HD[(b)]	23.0	—	—	—	—	—	—	0.6	23.6	41
At least once in a week										
All dementia	0.1	5.9	3.1	2.7	0.5	0.5	0.6	1.0	14.4	15,023
Dementia in PD[(a)]	0.1	6.6	4.0	2.7	1.2	0.8	0.4	1.7	17.4	267
Dementia in HD[(b)]	—	4.0	6.9	4.6	0.6	0.6	0.6	1.1	18.4	32
At least 6 days in a week										
All dementia	—	4.6	2.3	4.5	0.6	0.6	1.3	0.8	14.8	15,440
Dementia in PD[(a)]	0.1	4.5	1.8	3.8	0.7	0.8	0.9	1.0	13.7	210
Dementia in HD[(b)]	—	2.3	3.4	2.3	0.6	—	0.6	—	9.2	16
Twice a day or more, at least 6 days in a week										
All dementia	—	8.4	7.1	18.7	1.6	2.3	8.9	2.6	49.7	51,837
Dementia in PD[(a)]	0.2	6.2	6.4	11.9	1.6	2.9	7.6	2.7	39.5	608
Dementia in HD[(b)]	—	7.5	12.6	19.5	0.6	2.3	4.6	1.7	48.9	85
All										
All dementia	**21.1**	**19.1**	**12.6**	**26.0**	**2.7**	**3.4**	**10.8**	**4.3**	**100.0**	**104,374**
Dementia in PD[(a)]	**29.4**	**17.4**	**12.4**	**18.4**	**3.5**	**4.6**	**8.9**	**5.4**	**100.0**	**1,538**
Dementia in HD[(b)]	**23.0**	**13.8**	**23.0**	**26.4**	**1.7**	**2.9**	**5.7**	**3.4**	**100.0**	**174**

(a) Dementia in Parkinson disease.

(b) Dementia in Huntington disease.

— Nil or rounded to zero.

Notes

1. Percentages are rounded to one decimal place and may not add to 100%.
2. Table excludes 46 residents with missing data.

Table A4.11: Frequency of types of physical behaviours, for permanent residents with diagnosed dementia, by selected dementia type, 1 July 2008 to 30 June 2009 (per cent)

	No behaviours	Physically threatening or doing harm to self, others or property	Socially inappropriate behaviour impacts on other residents	Constant physical agitation	Physically threatening or doing harm and socially inappropriate behaviour	Other combinations	All	Total number
Not at all or less than once per week								
All dementia	28.8	0.1	0.1	0.1	—	—	29.0	30,313
Dementia in PD[(a)]	34.0	0.1	—	0.1	—	—	34.2	526
Dementia in HD[(b)]	16.7	—	—	0.6	—	—	17.2	30
At least once in a week								
All dementia	0.1	2.7	2.7	5.0	0.8	2.7	13.9	14,519
Dementia in PD[(a)]	—	1.8	1.8	5.5	0.4	2.3	11.8	181
Dementia in HD[(b)]	—	2.3	1.1	5.2	0.6	2.3	11.5	20
At least 6 days in a week								
All dementia	—	1.7	1.7	3.8	0.9	4.1	12.2	12,753
Dementia in PD[(a)]	—	1.2	0.9	3.8	0.4	4.0	10.3	159
Dementia in HD[(b)]	—	3.4	1.7	2.3	1.1	1.7	10.3	18
Twice a day or more, at least 6 days in a week								
All dementia	0.1	3.6	2.5	14.4	2.6	21.6	44.8	46,769
Dementia in PD[(a)]	0.2	2.5	2.3	18.5	1.3	18.9	43.7	672
Dementia in HD[(b)]	—	4.6	1.1	27.6	4.0	23.6	60.9	106
All								
All dementia	**29.0**	**8.0**	**6.9**	**23.3**	**4.3**	**28.4**	**100.0**	**104,354**
Dementia in PD[(a)]	**34.2**	**5.6**	**5.0**	**28.0**	**2.1**	**25.2**	**100.0**	**1,538**
Dementia in HD[(b)]	**16.7**	**10.3**	**4.0**	**35.6**	**5.7**	**27.6**	**100.0**	**174**

— Nil or rounded to zero.

(a) Dementia in Parkinson disease.

(b) Dementia in Huntington disease.

Notes

1. Table excludes 66 residents with missing data.
2. Percentages have been rounded to one decimal place and may not add to 100%.

Table A4.12: Residents requiring assistance with medication: low-level assistance by typeof diagnosed dementia, 1 July 2008 to 30 June 2009

Type of dementia	Number of residents with type of dementia	Medication assistance (per cent)			
		No medication	Self-manages	Patches at least weekly, but not daily	All
Alzheimer disease	79,307	1.1	0.2	5.9	7.2
Vascular dementia	10,457	0.6	0.2	5.8	6.6
Dementia in other diseases					
Parkinson disease	1,539	0.1	0.3	5.5	5.9
Huntington disease	174	1.1	—	4.0	5.2
Other diseases	2,494	0.8	0.4	5.3	6.5
Total	*4,207*	*0.6*	*0.3*	*5.3*	*6.3*
Other dementia	8,649	1.1	0.4	5.3	6.8
Mixed dementia	1,800	0.7	0.2	5.3	6.2
Any dementia	**104,420**	**1.0**	**0.2**	**5.8**	**7.1**

— Nil or rounded to zero.

Note: Percentages are rounded to one decimal place and may not add to the total due to rounding.

Table A4.13: Residents requiring assistance with medication: high-level assistance by type of diagnosed dementia, 1 July 2008 to 30 June 2009

Type of dementia	Number of residents with type of dementia	Medication assistance (per cent)			
		<6 minutes assistance daily	6–11 minutes assistance daily	>11 minutes assistance daily	All
Alzheimer disease	79,307	34.0	37.6	25.8	97.4
Vascular dementia	10,457	30.9	38.8	27.7	97.4
Dementia in other diseases					
Parkinson disease	1,539	17.4	38.4	42.8	98.6
Huntington disease	174	23.0	35.6	39.7	98.3
Other diseases	2,494	27.5	38.3	31.6	97.4
Total	*4,207*	*23.6*	*38.2*	*36.1*	*97.9*
Other dementia	8,649	32.8	37.9	26.5	97.2
Mixed dementia	1,800	28.2	37.5	32.2	97.9
Any dementia	**104,420**	**33.0**	**37.8**	**26.6**	**97.4**

Table A4.14: Residents with diagnosed dementia with mental and behavioural conditions, by type of dementia, 1 July 2008 to 30 June 2009 (per cent)

Type of dementia	Mental and behavioural conditions	Per cent
Alzheimer disease	Delirium	1.1
	Depression, mood and affective disorders	30.5
	Psychoses	4.2
	Neurotic, stress-related, anxiety, somatoform disorders	6.5
	Intellectual and developmental disorders	0.5
	Other mental and behavioural disorders	1.7
	Total (of the above)	*38.1*
	Total (number)	*79,307*
Vascular dementia	Delirium	1.3
	Depression, mood and affective disorders	32.9
	Psychoses	4.5
	Neurotic, stress-related, anxiety, somatoform disorders	6.5
	Intellectual and developmental disorders	0.4
	Other mental and behavioural disorders	2.6
	Total (of the above)	*40.7*
	Total (number)	*10,457*
Dementia in Parkinson disease	Delirium	1.4
	Depression, mood and affective disorders	36.5
	Psychoses	5.0
	Neurotic, stress-related, anxiety, somatoform disorders	7.4
	Intellectual and developmental disorders	0.3
	Other mental and behavioural disorders	1.7
	Total (of the above)	*43.6*
	Total (number)	*1,539*
Dementia in Huntington disease	Delirium	—
	Depression, mood and affective disorders	37.9
	Psychoses	10.9
	Neurotic, stress-related, anxiety, somatoform disorders	5.2
	Intellectual and developmental disorders	—
	Other mental and behavioural disorders	3.4
	Total (of the above)	*47.7*
	Total (number)	*174*
Dementia in other diseases	Delirium	1.1
	Depression, mood and affective disorders	36.4
	Psychoses	6.6
	Neurotic, stress-related, anxiety, somatoform disorders	7.4
	Intellectual and developmental disorders	0.7
	Other mental and behavioural disorders	2.6
	Total (of the above)	*45.8*
	Total (number)	*2,494*

(continued)

Table A4.14: (continued) Residents with diagnosed dementia with mental and behavioural conditions, by type of dementia, 1 July 2008 to 30 June 2009 (per cent)

Type of dementia	Mental and behavioural conditions	Per cent
Other dementia	Delirium	1.3
	Depression, mood and affective disorders	29.5
	Psychoses	5.4
	Neurotic, stress-related, anxiety, somatoform disorders	6.5
	Intellectual and developmental disorders	0.6
	Other mental and behavioural disorders	6.0
	Total (of the above)	*40.6*
	Total (number)	*8,649*
Mixed dementia	Delirium	1.3
	Depression, mood and affective disorders	24.2
	Psychoses	4.2
	Neurotic, stress-related, anxiety, somatoform disorders	3.8
	Intellectual and developmental disorders	0.3
	Other mental and behavioural disorders	3.1
	Total (of the above)	*36.8*
	Total (number)	*1,800*
Any dementia	Delirium	1.2
	Depression, mood and affective disorders	30.8
	Psychoses	4.4
	Neurotic, stress-related, anxiety, somatoform disorders	6.5
	Intellectual and developmental disorders	0.5
	Other mental and behavioural disorders	2.2
	Total	**38.9**
	Total (number)	**104,420**

— Nil or rounded to zero.

Notes

1. Not all residents had mental or behavioural diagnosis codes.
2. Residents with *Mixed dementia* by definition have used up two of the three available mental and behavioural diagnostic codes on the ACFI form. Therefore, they are likely to have less comorbidities recorded than other residents with dementia.

Table A4.15: Residents with diagnosed dementia with combinations of medical diagnoses, 1 July 2008 to 30 June 2009(per cent)

	Medical diagnoses													
Medical diagnoses	**Blood**	**Circulatory system**	**Digestive system**	**Ear**	**Endocrine**	**Genitourinary system**	**Injury/ poisoning /external**	**Musculo-skeletal**	**Neoplasms**	**Nervous system / Parkinson**	**Respiratory system**	**Skin**	**Vision**	**Symptoms or signs n.o.s or n.e.c**
Blood	—													
Circulatory system	1.1	14.6												
Digestive system	0.3	4.5	0.3											
Ear	0.1	2.4	0.4	0.1										
Endocrine	0.4	11.5	1.3	0.6	0.9									
Genitourinary system	0.3	7.3	1.2	0.6	2.4	0.5								
Injury/poisoning/external	0.1	3.3	0.5	0.3	1.0	1.0	0.3							
Musculoskeletal	0.8	22.3	3.9	2.2	6.3	5.9	2.9	4.6						
Neoplasms	0.2	3.4	0.5	0.3	1.1	0.8	0.4	2.2	0.4					
Nervous system/ Parkinson	0.2	5.7	0.9	0.4	1.8	1.6	0.7	4.0	0.7	0.6				
Respiratory system	0.2	4.7	0.7	0.4	1.3	1.0	0.5	3.4	0.6	0.8	0.1			
Skin	—	1.5	0.3	0.1	0.5	0.5	0.2	1.3	0.2	0.3	0.3	0.1		
Vision	0.2	6.3	1.0	1.2	2.0	1.5	0.8	5.3	0.7	1.1	0.8	0.3	0.4	
Symptoms or signs n.o.s or n.e.c	0.4	11.9	1.8	1.3	3.5	4.5	1.9	9.8	1.5	3.2	1.7	0.9	2.7	7.1

— Nil or rounded to zero.

Table A4.16: Residents with diagnosed dementia with medical conditions, by type of dementia, 1 July 2008 to 30 June 2009 (per cent)

Type of dementia	Medical conditions	First diagnosis code	Second diagnosis code	Third diagnosis code	Any diagnosis code
Alzheimer disease	Circulatory system	25.7	25.0	20.7	56.4
	Musculoskeletal & connective tissue	17.6	18.1	14.4	45.1
	Endocrine, nutritional and metabolic disorders	8.7	6.4	6.0	20.2
	Nervous system	4.4	3.2	3.2	10.4
	Eye and adnexa	5.3	5.2	4.1	14.3
	Respiratory system	3.4	3.4	2.8	9.4
	Genitourinary system	5.8	6.1	5.2	16.6
	Neoplasms (tumours/cancers)	3.3	2.3	2.4	7.7
	Digestive system	3.7	3.8	3.1	10.3
	Injury, poisoning and certain external causes	3.0	2.7	2.7	8.1
	Skin & subcutaneous tissue	1.4	1.3	1.3	3.8
	Congenital malformations, deformations & chromosomal abnormalities	0.1	—	0.1	0.2
	Ear and mastoid process	2.3	2.2	1.8	6.2
	Certain infectious and parasitic diseases	0.1	0.1	0.1	0.3
	Blood, blood forming organs & immune mechanism	1.0	0.8	0.8	2.6
	Symptoms or signs n.o.s or n.e.c	12.5	12.4	11.6	28.7
	Total	**98.3**	**93.0**	**80.2**	**98.3**
	Total (number)	**77,971**	**73,723**	**63,599**	**77,990**
	Total (number with dementia type)	**79,307**	**79,307**	**79,307**	**79,307**
Vascular dementia	Circulatory system	35.5	32.1	30.9	72.2
	Musculoskeletal & connective tissue	13.5	15.7	11.8	37.7
	Endocrine, nutritional and metabolic disorders	9.0	7.6	7.5	23.4
	Nervous system	4.7	5.3	4.0	13.3
	Eye and adnexa	4.4	4.2	3.7	12.0
	Respiratory system	3.2	3.4	2.8	9.3
	Genitourinary system	5.6	5.4	5.2	16.0
	Neoplasms (tumours/cancers)	2.7	2.4	2.2	7.0
	Digestive system	2.6	3.0	2.2	7.6
	Injury, poisoning and certain external causes	2.5	2.0	2.2	6.4
	Skin & subcutaneous tissue	1.3	1.2	1.1	3.5
	Congenital malformations, deformations & chromosomal abnormalities	0.1	—	—	0.1
	Ear and mastoid process	1.6	1.6	1.4	4.6
	Certain infectious and parasitic diseases	0.2	0.1	0.1	0.4

(continued)

Table A4.16: (continued) Residents with diagnosed dementia with medical conditions, by type of dementia, 1 July 2008 to 30 June 2009 (per cent)

Type of dementia	Medical conditions	First diagnosis code	Second diagnosis code	Third diagnosis code	Any diagnosis code
Vascular dementia (continued)	Blood, blood forming organs & immune mechanism	0.6	0.7	0.4	1.7
	Symptoms or signs n.o.s or n.e.c	11.7	12.2	12.1	28.7
	Total	**99.2**	**96.9**	**87.7**	**99.2**
	Total (number)	**10,372**	**10,132**	**9,175**	**10,372**
	Total (number with dementia type)	**10,457**	**10,457**	**10,457**	**10,457**
Dementia in Parkinson disease	Circulatory system	11.7	19.7	10.7	37.6
	Musculoskeletal & connective tissue	9.4	17.4	8.4	33.0
	Endocrine, nutritional and metabolic disorders	4.1	5.5	2.2	11.4
	Nervous system	45.3	21.2	40.8	100.0
	Eye and adnexa	1.9	3.7	2.1	7.5
	Respiratory system	1.9	1.9	1.7	5.5
	Genitourinary system	4.8	4.6	4.9	14.0
	Neoplasms (tumours/cancers)	1.6	2.0	2.0	5.7
	Digestive system	3.0	3.1	1.6	7.5
	Injury, poisoning and certain external causes	2.1	2.3	1.3	5.7
	Skin & subcutaneous tissue	0.9	0.5	1.0	2.5
	Congenital malformations, deformations & chromosomal abnormalities	—	—	0.1	0.1
	Ear and mastoid process	0.8	0.8	0.4	2.0
	Certain infectious and parasitic diseases	—	—	—	—
	Blood, blood forming organs & immune mechanism	0.3	0.5	0.3	1.1
	Symptoms or signs n.o.s or n.e.c	12.0	13.5	9.2	29.7
	Total	**100.0**	**96.6**	**86.7**	**1,539**
	Total (number)	**1,539**	**1,487**	**1,334**	**100.0**
	Total (number with dementia type)	**1,539**	**1,539**	**1,539**	**1,539**

(continued)

Table A4.16: (continued) Residents with diagnosed dementia with medical conditions, by type of dementia, 1 July 2008 to 30 June 2009 (per cent)

Type of dementia	Medical conditions	First diagnosis code	Second diagnosis code	Third diagnosis code	Any diagnosis code
Dementia in Huntington disease	Circulatory system	6.9	6.3	1.1	13.8
	Musculoskeletal & connective tissue	1.7	2.9	1.1	5.7
	Endocrine, nutritional and metabolic disorders	2.3	6.3	2.3	10.3
	Nervous system	55.7	20.1	29.3	100.0
	Eye and adnexa	0.6	0.6	1.7	2.9
	Respiratory system	2.9	3.4	1.1	6.9
	Genitourinary system	2.9	7.5	4.0	14.4
	Neoplasms (tumours/cancers)	1.7	—	0.6	2.3
	Digestive system	1.7	4.0	1.1	6.9
	Injury, poisoning and certain external causes	1.1	1.1	1.1	3.4
	Skin & subcutaneous tissue	—	2.3	—	2.3
	Congenital malformations, deformations & chromosomal abnormalities	—	—	—	—
	Ear and mastoid process	0.6	0.6	0.6	1.7
	Certain infectious and parasitic diseases	0.6	—	—	0.6
	Blood, blood forming organs & immune mechanism	0.6	—	—	0.6
	Symptoms or signs n.o.s or n.e.c	20.7	24.7	17.2	47.7
	Total	**100.0**	**79.9**	**61.5**	**100.0**
	Total (number)	**174**	**139**	**107**	**174**
	Total (number with dementia type)	**174**	**174**	**174**	**174**
Dementia in other diseases	Circulatory system	21.9	23.5	19.8	51.3
	Musculoskeletal & connective tissue	16.1	16.3	13.5	41.1
	Endocrine, nutritional and metabolic disorders	7.8	5.6	5.0	17.6
	Nervous system	4.5	3.2	3.4	10.6
	Eye and adnexa	5.1	5.2	3.3	13.4
	Respiratory system	3.1	2.6	2.7	8.3
	Genitourinary system	7.0	6.1	5.6	18.0
	Neoplasms (tumours/cancers)	3.8	2.8	3.0	8.8
	Digestive system	3.7	4.1	2.9	10.4
	Injury, poisoning and certain external causes	3.4	2.8	2.6	8.1
	Skin & subcutaneous tissue	1.3	1.1	0.9	3.2
	Congenital malformations, deformations & chromosomal abnormalities	0.1	0.2	—	0.3
	Ear and mastoid process	1.9	1.5	1.2	4.6
	Certain infectious and parasitic diseases	0.3	0.4	0.2	0.8

(continued)

Table A4.16: (continued) Residents with diagnosed dementia with medical conditions, by type of dementia, 1 July 2008 to 30 June 2009 (per cent)

Type of dementia	Medical conditions	First diagnosis code	Second diagnosis code	Third diagnosis code	Any diagnosis code
Dementia in other diseases (continued)	Blood, blood forming organs & immune mechanism	1.3	0.8	0.8	2.8
	Symptoms or signs n.o.s or n.e.c	16.2	16.4	14.0	34.1
	Total	**97.5**	**92.5**	**78.8**	**97.5**
	Total (number)	**2,431**	**2,306**	**1,966**	**2,432**
	Total (number with dementia type)	**2,494**	**2,494**	**2,494**	**2,494**
Other dementia	Circulatory system	24.1	23.9	19.8	54.0
	Musculoskeletal & connective tissue	13.5	16.4	13.1	39.0
	Endocrine, nutritional and metabolic disorders	8.4	6.0	5.9	19.6
	Nervous system	6.8	4.6	5.4	16.0
	Eye and adnexa	4.8	4.5	3.9	13.0
	Respiratory system	4.3	3.8	3.6	11.5
	Genitourinary system	5.4	5.7	4.8	15.6
	Neoplasms (tumours/cancers)	3.7	2.5	2.6	8.3
	Digestive system	3.8	4.1	3.1	10.6
	Injury, poisoning and certain external causes	3.7	2.9	2.9	9.1
	Skin & subcutaneous tissue	1.4	1.3	1.2	3.9
	Congenital malformations, deformations & chromosomal abnormalities	0.1	—	0.1	0.2
	Ear and mastoid process	2.2	2.2	1.5	5.8
	Certain infectious and parasitic diseases	0.2	0.2	0.1	0.4
	Blood, blood forming organs & immune mechanism	1.1	0.7	0.6	2.3
	Symptoms or signs n.o.s or n.e.c	15.1	15.6	13.6	34.6
	Total	**98.6**	**94.2**	**82.2**	**98.6**
	Total (number)	**8,525**	**8,151**	**7,110**	**8,526**
	Total (number with dementia type)	**8,649**	**8,649**	**8,649**	**8,649**
Mixed dementia	Circulatory system	25.3	25.6	20.8	55.3
	Musculoskeletal & connective tissue	14.0	14.3	13.3	37.4
	Endocrine, nutritional and metabolic disorders	8.4	5.5	5.6	18.6
	Nervous system	11.8	7.9	8.2	26.0
	Eye and adnexa	3.7	4.9	3.7	11.9
	Respiratory system	2.8	2.7	1.9	7.3
	Genitourinary system	5.3	5.9	4.2	15.0
	Neoplasms (tumours/cancers)	3.1	2.8	2.2	7.7
	Digestive system	3.0	3.6	3.0	9.3
	Injury, poisoning and certain external causes	2.9	1.8	1.9	6.5

(continued)

Table A4.16: (continued) Residents with diagnosed dementia with medical conditions, by type of dementia, 1 July 2008 to 30 June 2009 (per cent)

Type of dementia	Medical conditions	First diagnosis code	Second diagnosis code	Third diagnosis code	Any diagnosis code
Mixed dementia (continued)	Skin & subcutaneous tissue	1.8	1.3	1.2	4.3
	Congenital malformations, deformations & chromosomal abnormalities	0.1	0.1	0.1	0.2
	Ear and mastoid process	1.6	1.9	1.0	4.6
	Certain infectious and parasitic diseases	0.2	—	0.1	0.2
	Blood, blood forming organs & immune mechanism	0.7	0.9	0.5	2.1
	Symptoms or signs n.o.s or n.e.c	13.6	14.2	12.9	30.9
	Total	**98.3**	**93.4**	**80.6**	**98.4**
	Total (number)	**1,770**	**1,682**	**1,450**	**1,772**
	Total (number with dementia type)	**1,800**	**1,800**	**1,800**	**1,800**
Any dementia	Circulatory system	26.2	25.5	21.4	57.3
	Musculoskeletal & connective tissue	16.6	17.6	13.9	43.3
	Endocrine, nutritional and metabolic disorders	8.6	6.5	6.1	20.2
	Nervous system	5.5	3.9	4.1	12.9
	Eye and adnexa	5.1	5.0	4.0	13.8
	Respiratory system	3.4	3.3	2.8	9.4
	Genitourinary system	5.7	6.0	5.2	16.4
	Neoplasms (tumours/cancers)	3.3	2.3	2.4	7.6
	Digestive system	3.6	3.7	3.0	10.0
	Injury, poisoning and certain external causes	3.0	2.6	2.6	8.0
	Skin & subcutaneous tissue	1.4	1.2	1.2	3.8
	Congenital malformations, deformations & chromosomal abnormalities	0.1	—	0.1	0.2
	Ear and mastoid process	2.1	2.1	1.7	5.8
	Certain infectious and parasitic diseases	0.1	0.1	0.1	0.4
	Blood, blood forming organs & immune mechanism	1.0	0.8	0.7	2.5
	Symptoms or signs n.o.s or n.e.c	12.7	12.8	11.9	29.4
	Total	**98.4**	**93.5**	**81.2**	**98.5**
	Total (number)	**102,782**	**97,620**	**84,741**	**102,805**
	Total (number with dementia type)	**104,420**	**104,420**	**104,420**	**104,420**

— Nil or rounded to zero.

Note: Not all residents had medical diagnosis codes.

Table A4.17: Length of stay[(a)] for females separated from permanent residential care with diagnosed dementia[(b)] andother residents, 1 July 2008 to 30 June 2009 (per cent)

Length of stay	With dementia	Other residents	All
		Appraised high-care	
Up to 6 months	18.9	34.6	25.3
6–<12 months	7.5	8.2	7.8
<12 months	*26.4*	*42.8*	*33.1*
1–<4 years	38.3	33.0	36.2
≥4 years	35.2	24.2	30.7
Total	*100.0*	*100.0*	*100.0*
Total (number)	**14,470**	**9,979**	**24,449**
		Appraised low-care	
Up to 6 months	31.5	28.8	29.5
6–<12 months	11.9	11.1	11.3
<12 months	*43.4*	*39.9*	*40.9*
1–<4 years	42.3	37.7	39.0
≥4 years	14.3	22.4	20.1
Total	*100.0*	*100.0*	*100.0*
Total (number)	**631**	**1,620**	**2,251**

(a) Length of stay is defined as the time a resident was in aged care without separation to hospital or transfer to another residential facility, return to the community, or died.

(b) As recorded on the resident's latest ACFI appraisal at time of separation.

Note: Percentages are rounded to one decimal place and may not add to 100%.

Table A4.18: Length of stay[(a)] for males separated from permanent residential care with diagnosed dementia[(b)] and other residents, 1 July 2008 to 30 June 2009 (per cent)

Length of stay	With dementia	Other residents	All
		Appraised high care	
Up to 6 months	33.8	46.9	39.5
6–<12 months	10.6	9.3	10.0
<12 months	*44.4*	*56.2*	*49.5*
1–<4 years	37.8	29.1	34.0
≥4 years	17.8	14.7	16.5
Total	*100.0*	*100.0*	*100.0*
Total (number)	**8,414**	**6,495**	**14,909**
		Appraised low care	
Up to 6 months	39.7	34.2	35.7
6–<12 months	14.1	13.0	13.3
<12 months	*53.8*	*47.3*	*49.0*
1–<4 yrs	35.2	38.5	37.6
≥4 yrs	11.0	14.3	13.4
Total	*100.0*	*100.0*	*100.0*
Total (number)	**418**	**1,136**	**1,554**

(a) Length of stay is defined as the time a resident was in aged care without separation to hospital or transfer to another residential facility, return to the community, or died.

(b) As recorded on the resident's latest ACFI appraisal at time of separation.

Note: Percentages are rounded to one decimal place and may not add to 100%.

Appendix 4: Extracts from ACFI user guide

Explanation of meanings of ACFI checklist items for questions 1—4:

Independent ⇩Requires no supervision with the stated activities or is not applicable	**Supervision** ⇩ Requires supervision with the stated activities		**Physical Assistance** ⇩ Requires one-to-one physical assistance with the stated activities
	Setting-up	Stand by in the stated activities	Physical
ACFI 1 Nutrition			
Readiness to eat	Place utensils in the resident's hand	Not applicable	Cutting up food or vitamising food
Eating	Not applicable	Stand by to provide assistance (verbal and/ or physical) OR daily oral intake when instructed by a dietitian for person with a PEG tube	Placing or guiding food into mouth for most of the meal
ACFI 2 Mobility			
Transfers	Locking wheels to enable transfers AND adjusting/ removing foot plates or side arms	Stand by to provide assistance (verbal and/ or physical)	Physically assist moving to or from chairs, or wheelchairs, or beds OR use of mechanical lifting equipment
Locomotion	Hand resident the mobility aid OR fitting of calipers, leg braces or lower limb prostheses	Stand by to provide assistance (verbal and/ or physical)	Need for staff to push wheelchair OR assistance with walking on a one-to-one basis
ACFI 3 Personal Hygiene			
Dress / undress	Choosing and laying out appropriate clothing OR undoing and doing up zips, buttons or other fasteners including velcro	Stand by to provide assistance (verbal and / or physical)	One-to-one physical assistance for dressing AND undressing i.e. putting on or taking off clothing AND footwear (i.e. underwear, shirts, skirts, pants, cardigan, socks, stockings) OR fitting and removing of hip protectors, slings, cuffs, splints, medical braces and prostheses other than for the lower limb
Wash / dry	Set up toiletries within reach, organise taps	Stand by to provide assistance (verbal and / or physical)	Washing and drying body
Groom	Set up articles for grooming	Stand by to provide assistance (verbal and / or physical)	Dental care OR hair care OR shaving
ACFI 4 Toileting			
Use of a toilet	Setting up toilet aids, hand person the bedpan/ urinal, place ostomy articles in reach	Stand by to provide assistance (verbal and/ or physical)	Positioning resident for use of toilet or commode or bedpan or urinal
Toilet completion	Emptying of drainage or stoma bags or bedpans	Stand by to provide assistance (verbal and/ or physical)	Adjusting clothes AND wiping and cleaning of peri-anal area

References

ABS (Australian Bureau of Statistics) 2007. 2006 Census of population and housing: 2006 Census tables. Cat. no. 2068. Canberra: ABS.

ABS 2010. Migration, Australia, 2008–09. Cat. no. 3412.0. Canberra: ABS.

Access Economics 2010. Caring places: planning for aged care and dementia 2010–2050. Vol. 1. Report for Alzheimer's Australia.

ACEMA (Aged Care Evaluation & Management Advisors) 2003. Resident classification scale review. Prepared for the Department of Health and Ageing. Canberra: Commonwealth of Australia.

AIHW (Australian Institute of Health and Welfare) 2002. Aged Care Assessment Program data dictionary V1.0. AIHW Cat. no. AGE 26. Canberra.

AIHW 2008. Disability in Australia: intellectual disability. Bulletin no. 67. Cat. no. AUS 110. Canberra.

AIHW 2010a. Australia's health 2010. Australia's health series no. 12. Cat. no. AUS 122. Canberra.

AIHW 2010b. Residential aged care in Australia 2008–09: a statistical overview. Aged care statistics series no. 31. Cat. no. AGE 62. Canberra.

Alexopoulos GS 2002. The Cornell Scale for Depression in dementia: administration and scoring guidelines. New York: Cornell University. Viewed 5 July 2010, <http://scalesandmeasures.net/files/files/The%20Cornell%20Scale%20for%20Depression%20in%20Dementia.pdf>.

Alzheimer's Australia 2009. Mind your mind. Alzheimer's Australia.

Broe T, Jackson Pulver L, Arkles R, Robertson H, Kelso W, Chalkley S & Draper B 2009. Cognition, ageing and dementia in Australian Aboriginal and Torres Strait Islander peoples: A review of the literature. Dementia Collaborative Research Centres. Viewed 5 July 2010, <http://www.dementia.unsw.edu.au/DCRCweb.nsf/page/SpecialGroups>.

DoHA (Australian Government Department of Health and Ageing) 2007. Detailed business rules and scenarios for the Aged Care Funding Instrument. Version 1.2. Viewed 15 December 2010, <http://www.health.gov.au/internet/main/publishing.nsf/Content/ageing-acfi-using-businessrules.htm>.

DoHA 2009a. Review of the Aged Care Funding Instrument. Discussion paper. Canberra: DoHA.

DoHA 2009b. Aged Care Funding Instrument (ACFI) user guide. Publication no. 6281. Canberra: DoHA.

DoHA 2009c. Report on the Operation of the *Aged Care Act 1997*: 1 July 2008 – 30 June 2009. Canberra: DoHA.

Haralambous B, Lin X, Dow B, Jones C, Tinney J & Bryant C 2009. Depression in older age: a scoping study. Final peport. Melbourne: National Ageing Research Institute.

Hogan WP 2004. Review of pricing arrangements in residential aged care. Final report. Canberra: Commonwealth of Australia.

O Walker F 2007. Huntington's disease. The Lancet 369:218–28.

RACGP (Royal Australian College of General Practitioners Silver Book National Taskforce), 2005. Medical care of older persons in residential aged care, 4th edn. Melbourne: RACGP.

Torr J & Davis R 2007. Ageing and mental health problems in people with intellectual disability: dementia. Current Opinion Psychiatry. 20(5):467–471.

List of tables

List of figures

List of boxes