Movement from hospital to residential aged care

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Movement from hospital to residential aged care

Rosemary Karmel
Jonas Lloyd
Phil Anderson

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Any enquiries about or comments on this publication should be directed to:

Community Services Integration and Justice Health Unit

Australian Institute of Health and Welfare

GPO Box 570

Canberra ACT 2601

Phone: (02) 6244 1000

Email: rosemary.karmel@aihw.gov.au

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Preface

Every year in Australia almost 10% of the 1 million or so hospital discharges for older people are for people who then go into or return to residential aged care. Prior to this report, not only was the extent of this flow unknown but also little was known about why these people enter hospital, what health conditions they have, nor what happens to them after they move. It was not possible to follow individuals from their hospital discharge into residential care because the national hospital data were not linked to the residential care data.

During 2001 and 2002, the Australian Health Ministers' Advisory Council (AHMAC) Care of Older Australians Working Group supported the Australian Institute of Health and Welfare (AIHW) in trialling the linking of data in the National Hospital Morbidity Database with data collected by the Australian Department of Health and Ageing from residential aged care facilities. The AIHW method did not use the names of individuals or person identifiers to make the linkage as these are not available on both national data sets.

Between 2003 and 2005, the method was further tested and developed. In 2004–05, the Statistical Information Management Committee (SIMC) of the National Health Information Group assisted in funding a comparison between the AIHW method with a name-based linkage method using Western Australian data. The comparison, jointly undertaken by AIHW and the Health Information Linkage Branch in the Western Australian Department of Health, tested the accuracy and utility of the AIHW method. The comparison showed that the AIHW's method could be used to accurately link hospital and residential aged care data. The results of the comparison were published in *Comparing name-based and event-based strategies for data linkage: a study linking hospital and residential aged care data for Western Australia* (AIHW: Karmel & Rosman 2007).

In 2006–07, SIMC and AIHW jointly funded an investigation to see whether the AIHW method could address key policy issues associated with the movement from hospital care to residential aged care. This report is the outcome. It shows how the linked data can describe the characteristics of people moving from hospital to residential aged care and examine the factors that influence outcomes for people moving from hospital to residential care.

The AIHW receives national hospital separation data from the states and territories and the residential aged care data from the Commonwealth for national reporting purposes. The AIHW has a critical role in ensuring compatibility between data collections and consults widely with the states and territories to ensure compatible collection methods and standards that are acceptable to all jurisdictions. As a national institution, the AIHW is committed to better use of existing data to inform national policy and improve service delivery. Linking national data under a strong privacy and ethics regime is critical to that role.

I congratulate the authors on their innovative work in this important area.

Penny Allbon

November 2008

Acknowledgments

This resport was authored by Rosemary Karmel, Jonas Lloyd and Phil Anderson of the Community Services Integration and Justice Health Unit at the Australian Institute of Health and Welfare.

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The authors also thank the Department of Health and Ageing for permission to use their residential aged care data for this project, and Peter Braun (AIHW), who prepared the residential aged care data for use in the project. Thanks also go to the jurisdictional data custodians for permission to use their hospital data, and to Katrina Burgess and Christina Barry (AIHW), who prepared the hospital data for use in this project. Rachel Aalders (AIHW) provided valuable comment on the draft.

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Abbreviations

ACAT	Aged Care Assessment Team
ACCMIS	Aged and Community Care Management Information System
ACT	Australian Capital Territory
AHMAC	Australian Health Ministers' Advisory Council
AIHW	Australian Institute of Health and Welfare
COPD	chronic pulmonary obstructive disease
DOB	date of birth
EP	English proficiency
ICD-10-AM	International Classification of Diseases 10th revision Australian Modification, based on the World Health Organization's internationally accepted classification of diseases and related health conditions. NHMD data for 2001–02 uses edition 2 of the classification.
NDI	National Death Index
NHMD	National Hospital Morbidity Database
NSW	New South Wales
NT	Northern Territory
p	probability of result occurring by chance (p = 0.05 equates to a 5% probability)
PPV	positive predictive value
Qld	Queensland
RAC	residential aged care
RCS	Resident Classification Scale
SA	South Australia
Tas	Tasmania
Vic	Victoria
WA	Western Australia
YOB	year of birth

Symbols used in tables

–	nil or rounded to zero
. .	not applicable
N	number
n.p.	not published

Summary

Background

The movement of people between acute hospital care and residential aged care (RAC) has long been recognised as an important issue, but existing national data sets provide only limited information on such movement. Over recent years the Australian Institute of Health and Welfare has developed and tested an event-based data linkage method to link national hospital morbidity data and residential aged care data, with the aim of improving national reporting on the acute care/aged care interface.

National data were linked for 2001–02 using this linkage method. The linked database provides a useful resource for investigating key policy issues, including:

- What is the extent of movement between the two sectors?
- Are older people staying too long in hospital before admission into residential aged care?
- What influences admission into residential aged care on discharge from hospital?
- What happens to people after admission into residential aged care on discharge from hospital?

This report presents the first comprehensive statistical results from the linked database looking into these issues.

Movement from hospital to residential aged care

Across Australia during 2001–02 there were 948,000 discharges from hospital after stays lasting at least 1 night for people aged 65 years and over. Of these, an estimated 9% (82,500) were separations into RAC, of which just over one-third (30,400) were for people who were newly admitted and two-thirds (52,000) were for people already living in RAC. The remaining 51,400 discharges were for people who died in hospital.

In 2001–02, there were 99,900 admissions into RAC, of which 20,900 (21%) were for transfers within residential care. Among the non-transfer admissions, more older people were admitted for permanent care via hospitals (21,800) than from the community (16,600). For respite care, admissions from the community accounted for almost four times as many respite admissions as those from hospital (32,000 compared with 8,600). Of the 20,900 people who changed their care arrangements, 8,000 admissions were for people changing from respite to permanent care and 11,700 admissions involved permanent residents transferring between aged care facilities.

Length of stay in hospital

People who returned to their home—either in the community or in residential care—after hospitalisation were highly likely to have left following acute care in hospital (93%), and were unlikely to have had more than one hospital episode related to their stay in hospital (around 10% of their hospital episodes started with an admission from within the hospital

sector). These people also tended to have short hospital stays, with a median length of 4 days for the final hospital episode before discharge for those returning to the community and 6 days for those returning to RAC.

On the other hand, people who were admitted into RAC on discharge from hospital were less likely to have been discharged straight from acute care in hospital, were more likely to have received rehabilitation or maintenance care, and were more likely to have started their last hospital episode with an admission from within the hospital system. For example, for people admitted into permanent care, 51% of episodes just prior to discharge from hospital were for acute care, 22% were for maintenance care and 11% were for rehabilitation. Furthermore, just over half of hospital episodes followed by admission into permanent care started with an admission from within the hospital sector.

People entering RAC had relatively long hospital episodes—with a median of 24 days for the final hospital episode prior to admission to permanent care and 14 days for those going to respite care.

Whether hospital stays prior to admission to residential care were unnecessarily long is difficult to gauge from current data (see discussion on refining the methods below). The most common principal diagnosis for people moving into permanent RAC was 'Awaiting admission elsewhere' (21%). This group had a median length of stay below that for all such transitions (20 days versus 24 days), but many may have had a longer stay in total due to transfers between care type or hospitals. The wait implied by such a diagnosis could have been caused by a number of factors, including requiring time for the patient and their family to decide on the necessity for residential care, the identification of available residential care suitable for the patient—both in terms of care needs and familial needs—and the time required to make the final choice.

Propensity to enter residential aged care

Overall, an estimated 30,400 hospital discharges were for people who were admitted into RAC straight after leaving hospital and 814,300 were for people who returned to live in the community. The most significant predictors of entry into RAC rather than a return to the community from hospital were:

- length of stay in hospital (longer stays increased the probability of entering RAC)
- principal and additional diagnoses—in particular, diagnoses of 'Awaiting admission elsewhere' and 'Dementia and related disorders' increased the probability of entering RAC
- age (older age increased the probability of entering RAC)
- mode of hospital admission for exiting episode (admission from within the hospital system increased the probability of entering RAC)
- care type prior to hospital discharge (acute and rehabilitative care were associated with lower probabilities)
- marital status (being widowed or single increased the probability of entering RAC)
- English proficiency group (high English proficiency was associated with higher probabilities).

The most significant factors associated with admission into permanent rather than respite RAC from hospital were: receiving palliative or maintenance care, or geriatric evaluation and

management prior to hospital discharge; longer stays in hospital, a principal diagnosis of stroke, 'Awaiting admission elsewhere' or dementia; living in a major city and the state or territory of hospital admission. These last two indicate that regional aged care service provision and/or practices influenced the outcome.

Use of respite care

Overall, admission to residential care from hospital was about two and one half times as likely to be for permanent care as for respite care (a ratio of permanent to respite admissions from hospital of 2.6 to 1). However, this varied with region. Admissions in Tasmania and Victoria were more likely to be for permanent care than in other jurisdictions (ratios of permanent to respite admissions of 7.5 to 1 and 4.5 to 1, respectively) while the ratio of permanent to respite admissions was lowest in the two territories (under 1.5 to 1). Across all regions examined, transitions from hospital for people from remote and very remote regions had the lowest permanent to respite admission ratio, with a fairly even split between permanent and respite admissions.

Examination of outcomes for people who were admitted into respite care from hospital showed that, in 2001–02, residential respite care was being used as transition care by people leaving hospital. Over one-half of people who moved from hospital to respite care had returned to live in the community within 12 weeks, while just 1% had transferred to permanent care, 6% had died in care, 11% had been discharged to hospital and 23% remained in respite care. For people admitted into respite care, the likelihood of a successful return to the community was greater for those admitted to low-level care than for those admitted to high-level care.

Survival following admission to permanent residential aged care

Once admitted into permanent RAC, few people leave to return to living in the community. Consequently, it is of interest to examine how long people survive once admitted to permanent care. Using survival analysis it is estimated that, for 2001–02, one-quarter of people admitted into permanent RAC died within just over 7 months of entering RAC and one-half died within 14 months. Two-fifths of people were still alive after 3 years. The most significant variable for predicting survival time after RAC admission was level of care needs on admission to RAC, followed by age, sex and whether the person was admitted into RAC from hospital. In particular, people admitted to RAC from hospital had lower expected survival times than others: one-quarter of people admitted from hospital were expected to die within 4 months of admission compared to within just over 7 months for all people admitted into permanent RAC.

The influence of health conditions on survival was examined by considering the survival of people admitted to permanent RAC from hospital. As for all people entering permanent RAC, the most significant variable for predicting survival time for people admitted from hospital was level of care needs on admission to RAC. However, health conditions were also influential, with both principal and additional hospital diagnoses affecting survival times.

People with selected health conditions

Outcomes for people following hospital discharge were looked at for people who had a diagnosis of dementia or stroke reported while in hospital, or who were in hospital as the result of injury due to a fall. The first of these conditions provides an example of a chronic and increasingly debilitating disease, while the second and third illustrate conditions which begin with an acute event that can affect functioning.

The three selected conditions were individually reported in 2–3% of hospital episodes which ended with the patient returning to the community. In contrast, dementia was reported for 36% of hospital episodes that ended with admission to permanent care and stroke was reported for 13%. The prevalence of these conditions was less among discharges to respite care (22% for dementia and 5% for stroke). On the other hand, hospitalisation due to injury and a fall was more common among people who entered respite rather than permanent care after hospital (in 9% and 7% of such moves, respectively).

The prevalence of stroke among people returning to permanent care after hospital was similar to that among those who returned to the community. However, the prevalence of dementia was much higher, with 26% of hospital episodes for those returning to care reporting a diagnosis of dementia (compared with 3% for those returning to the community). Hospitalisation due to injury and a fall was most common among people who were returning to residential care (10%).

The relative use of permanent and respite care among people who were admitted to residential care after hospital was different for the three conditions. A diagnosis of either dementia or stroke was associated with greater use of permanent care, with permanent to respite admission ratios of 4.2 to 1 and 6.4 to 1, respectively. People who had been in hospital because of a fall were more likely than others to be admitted into respite care, with one third of their admissions being for respite care (admission ratio of 2 permanent to 1 respite).

Refining the methods

The analyses in this report provide considerable insight into the hospital/aged care interface. With data developments in several areas, the flexibility and accuracy of analyses from linked hospital and residential aged care data could be further improved:

- Linking contiguous hospital episodes for people to obtain whole-of-stay hospital data. This would allow better analysis of both hospital care and length of stay and would enhance the modelling of propensity to enter residential care. Methods similar to those used to link the hospital and RAC data for this study could be suitable and should be investigated.
- Including mortality data. Linking residential care data with national mortality data would both allow better identification of death among this cohort and result in availability of cause of death data for analyses. Inclusion of this data would improve the accuracy of survival analyses. Linking national hospital and mortality data is not generally feasible due to data limitations.
- Linking hospital and RAC data to identify moves from residential care into hospital. Methods very like those used to identify moves from hospital into RAC for this study could be used. This would allow bi-directional analyses, and would lead to a fuller picture of the interactions between hospitals and RAC.

1 Introduction

The interface between acute hospital care and residential aged care (RAC) has long been recognised as an important issue in aged care services research. Despite this, existing national data provide very poor information on the movement of clients between the residential and acute care sectors. Current national data sets on the two sectors are derived from routine administrative collections, and have been designed primarily to provide data on the specific program that they describe, rather than to examine program interfaces.

Over recent years, the Australian Institute of Health and Welfare (AIHW) has developed an event-based data linkage method to link national hospital morbidity data and RAC data, with the aim of improving national reporting on the acute care/aged care interface. For this report, national data were linked for 2001–02 to identify uni-directional movement straight from hospital to RAC. The resulting linked data provide a useful resource for investigating key policy questions, including:

- What is the extent of movement between the two sectors?
- Are older people staying too long in hospital before admission into residential aged care?
- What is leading to admission into residential aged care on discharge from hospital?
- What happens to people after admission into residential aged care on discharge from hospital?

Before data linkage was undertaken for this study, approvals for the project were obtained from required ethics committees, and permission to use the hospital morbidity and RAC data was obtained from all data custodians (national, state and territory).

The report is structured as follows. This section provides background information on the data being used, a summary of the linkage method and national estimates of flow from the hospital to the RAC sector. Section 2 examines regional differences in movement from hospital to RAC. A detailed examination of the characteristics of people leaving hospital, and their hospital stay, is given in Section 3, while in Section 4 the characteristics of people entering RAC are considered. Propensity to be discharged from hospital into RAC and outcomes for people moving into RAC are examined in Section 5. The interaction between health conditions and transition outcome is investigated in Section 6, focusing on people affected by dementia, stroke, or injury due to a fall. Further data developments that could improve the flexibility and accuracy of analyses from linked hospital and RAC data are discussed in Section 7. Appendix A contains additional tables for the states and territories and appendices B to F contain technical details concerning the linkage process and analyses.

1.1 Event data

In this study, hospital episodes which lasted at least one night and which ended with the patient either leaving hospital or dying were linked to RAC events in which the person was either admitted to or returned to RAC. A brief description of the data is presented below, with more detailed information given in Appendix B.

The hospital data used in this study came from the National Hospital Morbidity Database (NHMD), and included data for both public and private hospital separations (see Box 1.1 for key terms). Same-day hospital episodes, in which people are admitted and discharged on the

same day, were excluded as they are unlikely to be for transitions relating to either an admission into RAC or return to RAC following a period in hospital (although they could relate to a day procedure for a RAC resident).

If a patient transferred between hospitals or received more than one care type while they were in hospital, then their period of hospitalisation would have been reported as a number of contiguous episodes of care. Episodes that ended with the patient remaining in the hospital system were excluded from the analysis as they should not relate to movement from hospital into RAC. This meant that, even when a patient had more than one episode of care during a continuous period of care in hospital, only the characteristics of the last episode could be used for analysis. Whether or not a hospital stay is recorded as a single episode of care or as several episodes is affected by the implementation of casemix-based funding practices, which vary by state and territory and between urban and regional areas. The impact of this variation on reported care type and length of stay cannot be determined from the hospital data available for this report.

In 2001–02, across Australia there were almost 948,200 hospital separations for people aged 65 and over lasting at least one night and ending with the patient either dying (5.4%) or leaving the hospital (94.6%) (Table 1.1).

Box 1.1: Key terms in the hospital data

*An **episode** of care for an admitted patient (or inpatient) can be:*

- *a total hospital stay—from admission into hospital to discharge from hospital or death, or*
- *a portion of a hospital stay beginning and/or ending in a change of type of care (for example, from acute care to rehabilitation), or*
- *a portion of a hospital stay beginning and/or ending in a transfer from/to another hospital.*

*Accordingly, for two types of discharges the patient remains within the hospital system. In a **statistical discharge** a patient changes from one hospital episode care type to another (for example, from acute care to rehabilitation). A patient may also **transfer** from one hospital to another.*

*An episode of care ends with a **separation**. Consequently, the terms episode of care and separation are used interchangeably.*

*An episode of care starting and ending on the same day is called a **same-day** episode/separation. All other episodes of care are called **overnight** episodes/separations.*

***Length of stay** is derived for episodes of care. The length of stay of an overnight episode is calculated by subtracting the date the patient is admitted from the date of separation and deducting any days the patient was on leave. A same-day episode is allocated a length of stay of 1 day.*

*The **care type** of an episode of care defines the overall nature of a clinical service provided to an admitted patient during an episode of care (see Box 3.2 for details).*

*Both a **principal diagnosis** and **additional diagnoses** are assigned for each episode of care. The principal diagnosis is that diagnosis established after study to be chiefly responsible for occasioning the episode of admitted patient care. Other conditions that contribute to the complexity and cost of patient treatment are recorded in the NHMD as additional diagnoses; additional diagnoses may therefore not be inclusive of all comorbid conditions experienced by the patient.*

*Diagnosis codes are classified according to the ICD-10-AM Edition 2 diagnosis classification (see Appendix C). In this report, for ease of expression an ICD-10-AM chapter (which is a set of related diagnoses) is referred to as a **condition group**.*

Source: *AIHW 2003a, AIHW: Karmel et al. 2007b.*

Table 1.1: Hospital separations for people aged 65+, by state/territory, 2001–02

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All
					Number				
Died in hospital	17,874	13,740	9,048	4,297	4,636	1,074	591	105	51,365
Left hospital	290,841	230,361	170,749	79,392	88,941	23,839	10,625	2,048	896,796
Total	**308,715**	**244,101**	**179,797**	**83,689**	**93,577**	**24,913**	**11,216**	**2,153**	**948,161**
					Per cent				
Died in hospital	5.8	5.6	5.0	5.1	4.9	4.3	5.2	4.9	5.4
Left hospital	94.2	94.4	95.0	94.9	95.1	95.7	94.8	95.1	94.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Notes

1. Age is as at time of hospital admission.
2. Table excludes same-day hospital episodes, statistical discharges and transfers to other hospitals.

The RAC data were derived from the Department of Health and Ageing's Aged and Community Care Management Information System (ACCMIS). There are three main ways a client may enter or re-enter RAC (Box 1.2):

- as a new admission, for either permanent or respite care. A permanent admission may be preceded by pre-entry leave of up to 7 days
- returning from hospital leave after a permanent resident has had a period in hospital. Hospital leave is provided for hospital stays lasting at least one night
- returning from social leave after a permanent resident has had a period away from the RAC facility to visit family and/or friends.

The RAC data for this analysis included all RAC permanent and respite admissions and hospital and social leave events for the year of interest, totalling slightly more than 215,100 events for people aged 65 and over (Table 1.2). Nationally, less than half (46%) of the RAC events involved admissions, with the remainder being for people already in permanent care, that is the events were either hospital or social leave from RAC. However, this split varied across jurisdictions, ranging from 56% for admissions in the Northern Territory to 41% in Western Australia. The relative use of permanent and respite RAC also varied with jurisdiction.

Box 1.2: Key terms in RAC

*For a person to be able to access permanent and respite RAC, assessment by an Aged Care Assessment Team (**ACAT**) is required. An ACAT approval remains valid for 12 months. If a person's care needs change to the extent that a different level or type of care is required, they may be reassessed within that period.*

*A person may be admitted for **permanent care** in a RAC facility, with the RAC facility becoming the person's place of usual residence. A permanent admission may be preceded by **pre-entry leave** of up to 7 days. This leave gives a prospective resident time to make arrangements to enter an aged care home or to transfer from one home to another home in a distant location. Care is provided on a high-care or low-care basis, according to care needs appraised using the **Resident Classification Scale** (RCS), which is also used for determining the daily basic subsidy paid by the Australian Government. RCS categories 1–4 equate to high care and 5–8 equate to low care.*

*A person may be admitted for **respite care** in a RAC facility. Residential respite care is important both for people who need a higher level of care just for the short term and as a component of the carer support system, whether for emergency care or to provide a 'break' while carers attend to other affairs or take a holiday. A person can receive up to a total of 63 days of subsidised respite care in any financial year. This total covers respite admissions to all Australian Government-funded RAC services. However, if a person needs more than 63 days of respite care in the financial year, the ACAT may in some circumstances approve extension periods of 21 days at a time. Care is provided on a high-care or low-care basis, according to care needs appraised during the ACAT assessment.*

*A permanent RAC resident can take unlimited days of leave for the purpose of receiving hospital treatment, termed **hospital leave**. Hospital leave is provided for hospital stays lasting at least one night. **Extended hospital leave** is where a resident has hospital leave for a continuous period of 30 days or more. In this case, the daily basic subsidy paid to the RAC facility is reduced by two RCS categories.*

The Aged Care Act 1997 *provides **social leave** for residents of aged care homes of up to 52 days of overnight absences per financial year. This enables residents to spend each weekend, or 2 days plus one overnight absence per week, with their families if they wish to do so without losing their place at the RAC facility.*

Sources: *AIHW 2007a:chapter 3, DoHA 2005.*

Table 1.2: RAC events by event type for people aged 65+, by state/territory, 2001–02

RAC event type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All
					Number				
Permanent admission	20,961	14,644	10,084	4,739	5,470	1,337	559	100	57,894
Respite admission	15,385	9,986	7,228	3,190	3,813	1,471	740	200	42,013
Subtotal	*36,346*	*24,630*	*17,312*	*7,929*	*9,283*	*2,808*	*1,299*	*300*	*99,907*
Hospital leave, ending with:									
Return from hospital	19,299	13,390	11,712	5,732	6,330	1,083	557	98	58,201
Discharge to hospital	652	659	418	323	103	15	8	—	2,178
Death in hospital	2,270	1,543	1,288	598	622	110	63	16	6,510
Subtotal	*22,221*	*15,592*	*13,418*	*6,653*	*7,055*	*1,208*	*628*	*114*	*66,889*
Social leave	17,508	9,393	10,740	4,604	4,000	1,351	589	126	48,311
Total	**76,075**	**49,615**	**41,470**	**19,186**	**20,338**	**5,367**	**2,516**	**540**	**215,107**
					Per cent				
Permanent admission	27.6	29.5	24.3	24.7	26.9	24.9	22.2	18.5	26.9
Respite admission	20.2	20.1	17.4	16.6	18.7	27.4	29.4	37.0	19.5
Subtotal	*47.8*	*49.6*	*41.7*	*41.3*	*45.6*	*52.3*	*51.6*	*55.6*	*46.4*
Hospital leave, ending with:									
Return from hospital	25.4	27.0	28.2	29.9	31.1	20.2	22.1	18.1	27.1
Discharge to hospital	0.9	1.3	1.0	1.7	0.5	0.3	0.3	—	1.0
Death in hospital	3.0	3.1	3.1	3.1	3.1	2.0	2.5	3.0	3.0
Subtotal	*29.2*	*31.4*	*32.4*	*34.7*	*34.7*	*22.5*	*25.0*	*21.1*	*31.1*
Social leave	23.0	18.9	25.9	24.0	19.7	25.2	23.4	23.3	22.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Notes

1. Age is as at time of RAC entry.
2. Table includes admissions within the year, and RAC leave events (including those ending in death in hospital or discharge to hospital) with a leave end date during the period 1 July 2001 – 30 June 2002.
3. Outcome of hospital leave is based on event dates and reason of discharge from RAC.
4. State/territory relates to the RAC outlet entered by the client.

1.2 Linkage method

Data linkage is a statistical tool that can be used to link data from different sources, thereby expanding the types of statistical investigations that can be carried out (including analysis of movement over time) without increasing the reporting load of service providers or requiring special surveys. Data linkage of records for individuals is commonly carried out using detailed demographic data, including name and/or a person identification number. While neither name nor a common person identification number are available for linking data from the hospital and RAC sectors, some demographic data are available. In addition, information on transition dates, that is entry and exit dates, is available for all periods of hospitalisation and residential care. In recent years, the AIHW has developed and refined an event-based method that uses such information to link transition events (AIHW 2003b; AIHW: Karmel 2004; AIHW: Karmel & Rosman 2007; Karmel & Gibson 2007). The effectiveness of this

method has been established both through theoretical analysis and direct comparison with a well-established name-based linkage strategy (AIHW: Karmel 2004; AIHW: Karmel & Rosman 2007).

For this analysis, linkage was undertaken using an event-based matching strategy that identifies links between events using demographic variables in conjunction with relevant event date information and event descriptors available on the NHMD and ACCMIS databases. The linkage strategy matched hospital separations to the relevant RAC entries. Delays of up to 2 days between hospital exit and RAC entry were allowed when identifying transition events—with the exception of admissions with arranged RAC pre-entry leave, where gaps of up to 7 days were allowed (see Box 1.2).

To protect the privacy of individuals, the linkage was carried out by the AIHW using the Institute's protocol *Data linkage and protecting privacy: a protocol for linking between two or more data sets held within the Australian Institute of Health and Welfare* (AIHW 2006). Key aspects of this protocol are that data linkage is undertaken using purpose-specific linkage data sets that contain only the data required for establishing and validating links, and that analysis files do not contain identifying data. A detailed description of the linkage process, including an overview of the linkage protocols, is contained in Appendix B.

Comparisons with a name-based linkage method have shown that the event-based linkage strategy results in few false matches and that linkage sensitivities are consistent across RAC event types (around 90%; see Table B.3). Consequently, the linked data provides a strong basis for examining transitions between hospital and RAC. In addition, while event-based links understate the total number of transitions, the linked data can be used to measure relativities between the different types of transitions from hospital into RAC.

Using event-based linkage a total of 76,179 transitions from hospital to RAC were identified (Table 1.3). Nearly two-thirds of these links (63%) were for people returning to permanent RAC, with the overwhelming majority of these relating to people on RAC hospital leave. Among the remaining links, admissions to permanent care out-numbered those to respite care by more than two to one (26% versus 10% of links).

1.3 Approximate estimates of flow

Measures of link quality show that event-based linkage more often tends to miss matches than make false matches (Table B.3). As a consequence, event-based linkage underestimates the total number of transitions and so cannot be used without adjustment to measure the volume of flow from hospital to RAC. While the Western Australian project was a one-off study limited to one year and one state, it was felt important to produce some national estimates for the overall flow of older people from hospital to RAC. To this end, approximate estimates were calculated using adjustment factors based on the results from the Western Australian study (Table 1.3) (see Appendix B for method).

The flow of people can be examined from two viewpoints:

(a) looking at the destination of people who are leaving hospital (that is, hospital separations)

(b) looking at the source of people who are entering permanent or respite RAC (that is, RAc admissions).

As stated before, during 2001–02 there were nearly 948,200 hospital separations for stays lasting at least one night for people aged 65 years and older. Of these hospital separations, an estimated 8.7% (82,500) were discharges into RAC, either as returns to RAC or as new

admissions (Table 1.3). The majority of these transitions were due to people living in RAC having episodes of hospitalisation (approximately 52,000, or 5.5% of episodes), rather than the result of people being admitted into RAC (approximately 30,400 or 3.2% of episodes). An additional 5.4% of separations from hospital ended with the death of the patient, with people returning to the community or going to other care arrangements for the remaining 86% of hospital separations.

On the other hand, during 2001–02 there were just over 99,900 admissions into RAC, either from the community, from hospital or through within-RAC transfers. It is estimated that almost one-third (30%) of these admissions were from hospital, of which nearly three-quarters related to permanent care (21.8/30.4 = 72%). Almost one-half of admissions came from the community (49%), and among these about one-third (16.6/48.7 = 34%) were for permanent care. The remaining one-fifth (21%) of admissions related to transfers within RAC—predominantly into permanent care.

From the perspective of the residential aged care sector, the above results mean that more older people made the transition to residential care on a permanent basis via hospitals (21,800, or 57% of non-transfer permanent admissions) than from the community (16,600). A further 19,500 permanent admissions related to transfers within RAC. Quite a different pattern was seen for respite admissions, with admissions from the community accounting for almost four times as many respite admissions as those from hospital (32,000 compared with 8,600). Transfers into respite care were a relatively small group (1,375 admissions). Overall, 8,000 RAC transfer admissions were for people moving from respite to permanent care and 11,700 involved permanent residents transferring between aged care homes (Table 1.3, note f).

Table 1.3: Movement types for hospital separations and RAC entries, people aged 65+, 2001–02

Type of movement	Estimates					
	Unadjusted			Adjusted		
	Number	Per cent		Number	Per cent	
Hospital separations						
Return to permanent RAC[a][b]						
From hospital leave	47,011	5.0	61.7	50,600	5.3	61.4
From hospital while on social leave	1,309	0.1	1.7	1,400	0.1	1.7
Subtotal	*48,320*	*5.1*	*63.4*	*52,000*	*5.5*	*63.1*
To permanent RAC[a][b][c]	20,117	2.1	26.4	21,800	2.3	26.4
To respite RAC[b][c]	7,742	0.8	10.2	8,600	0.9	10.4
Subtotal to RAC	*76,179*	*8.0*	*100.0*	*82,500*	*8.7*	*100.0*
To community/other[d]	820,617	86.5	. .	814,300	85.9	. .
Died in hospital[d]	51,365	5.4	. .	51,365	5.4	. .
Total separations	**948,161**	**100.0**	**. .**	**948,161**	**100.0**	**. .**
RAC admissions						
Permanent admissions						
From hospital to permanent RAC[a][c]	20,125	20.1	. .	21,800	21.8	. .
From community into permanent RAC[e]	18,261	18.3	. .	16,600	16.6	. .
Transfer into permanent RAC[e][f]	19,508	19.5	. .	19,508	19.5	. .
Subtotal	*57,894*	*57.9*	. .	*57,894*	*57.9*	. .
Respite admissions						
From hospital to respite RAC[a][c]	7,744	7.8	. .	8,600	8.6	. .
From community into respite RAC[e]	32,894	32.9	. .	32,000	32.1	. .
Transfer into respite RAC[e][f]	1,375	1.4	. .	1,375	1.4	. .
Subtotal	*42,013*	*42.1*	. .	*42,013*	*42.1*	. .
Total admissions	**99,907**	**100.0**	**. .**	**99,907**	**100.0**	**. .**

(a) Links to a permanent admission on the same or next day as the end of a period of hospital leave for the same person have been reassigned as linking to the hospital leave. This affected 266 links to permanent admissions.

(b) Based on linked hospital and RAC records. Same-day and next-day re-admissions into permanent RAC are treated as transfers and so have been combined into a single period of care when identifying returns to RAC after hospital leave.

(c) Estimates of transitions between hospital and RAC vary slightly depending on whether movements from hospital or into RAC are being examined due to transitions occurring across either the beginning or end of the financial year.

(d) Unlinked hospital separations for people leaving the hospital system. Deaths are based on reported hospital mode of separation.

(e) Transfers between RAC facilities.

(f) 41% of transfers into permanent RAC were from respite RAC and 87% of transfers into respite RAC were from respite RAC.

Notes

1. Age is as at time of hospital admission or RAC admission.
2. Table excludes same-day hospital episodes, statistical discharges and transfers to other hospitals.
3. Adjusted numbers for movements from hospital are rounded to the nearest hundred (see Appendix B).

1.3.1 Approach to analysis of movements

In this report we analyse the movement of people from hospital in two ways:

- by looking at where people go following discharge from hospital
- by comparing the characteristics of people making the various transitions.

As seen above, the event-based linkage strategy underestimates the number of transitions from hospital to RAC by around 8% (see Table 1.3). Consequently, within any sub-population, the proportion of all hospital discharges identified as relating to a move to RAC is underestimated and is not directly comparable with that of another sub-population. Furthermore, movement between the two sectors can only occur if the patient has not died in hospital, and so transitions are only of interest for those that leave hospital alive. Therefore, to aid interpretation, for sub-populations of interest the proportion of hospital separations not ending in death that related to transitions into RAC is presented, using a range to indicate the level of accuracy in these estimates of flow. However, because similar proportions of the three types of transitions to RAC were identified (see Table B.3), the relative sizes of the three transition types into RAC are compared directly without adjustment.

Using the above approach, the movement of people from hospital is therefore examined by first identifying deaths in hospital. Approximate estimates of flow are then derived to obtain an estimated range of the proportion of live separations from hospital that resulted in the patient moving into RAC (minimum = unadjusted estimate, maximum = estimate obtained by applying the maximum adjustment in Table B.4 to all identified transition records). After that, the proportion of transitions into RAC relating to returns to care and new admissions are examined using unadjusted numbers (see sections 2, 3 and 6). This process is illustrated in Figure 1.1.

When looking at admissions into RAC, unadjusted estimates understate the relative importance of admissions from hospital compared with admissions from the community. Therefore, to better gauge the mix of admissions from hospital and from the community, adjusted estimates are presented for a small number of classifications only (see Section 4).

Comparisons of the characteristics of people making the various transitions are undertaken using distributions based on unadjusted figures. Results from the linkage comparison study using Western Australian data indicated that such analyses are unlikely to be affected by the level of misclassification of transition type present in the current study (see Table B.3 and AIHW: Karmel & Rosman 2007: sections 7 and 8).

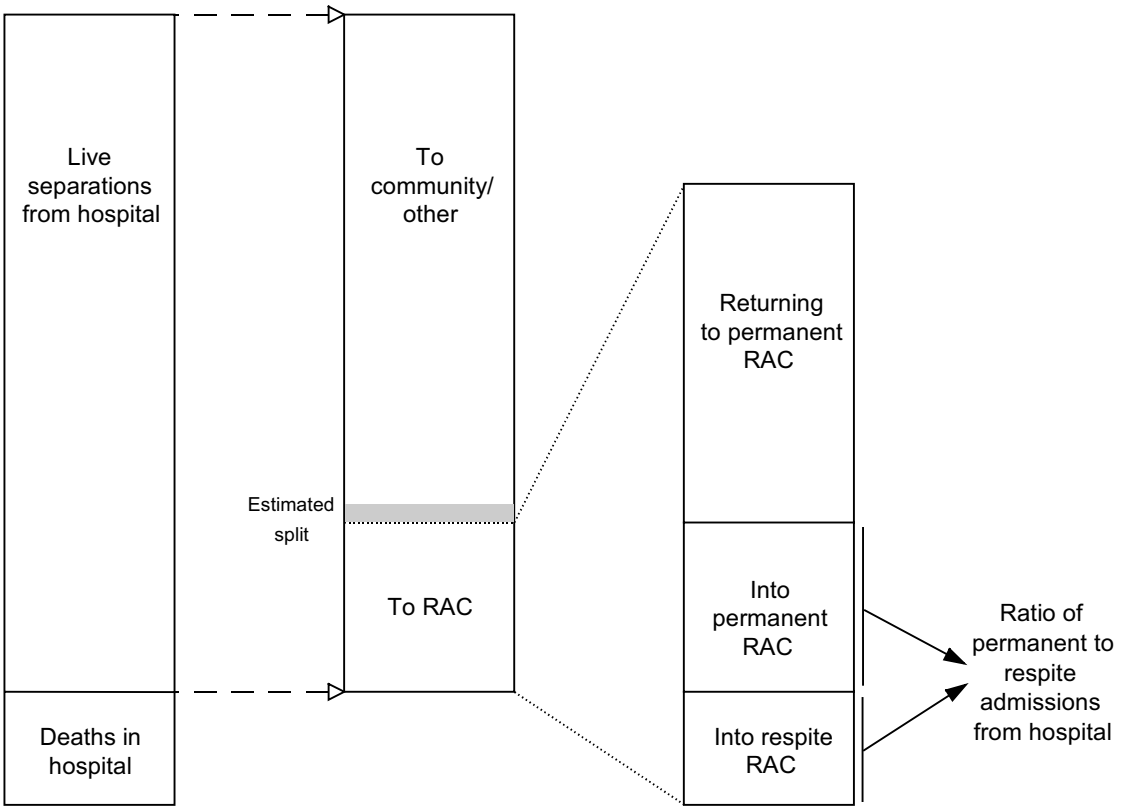


Figure 1.1: Schematic outlining the approach to analysis of movements

2 Regional movements

The numbers of hospital separations and RAC admissions for the states and territories largely reflected their population sizes (Table 2.1). However, closer inspection of the figures indicates that there were differences between the jurisdictions in the movement patterns from hospital to RAC.

As discussed previously, because the event-based linkage strategy underestimates the number of transitions from hospital to RAC, we present an estimated range for the proportion of all live hospital discharges that were transitions to RAC (see Section 1.3.1 and Box 2.1)**.** Tasmania and the Northern Territory had relatively few transitions into RAC from hospital—around 6% to 7% of all live separations from hospital (Table 2.2). On the other hand, New South Wales, Queensland, Western Australia and South Australia had relatively high proportions moving to RAC, with discharges to RAC estimated at around 9% to 10% of all live discharges from hospital. Victoria and the Australian Capital Territory had rates between these two groups.

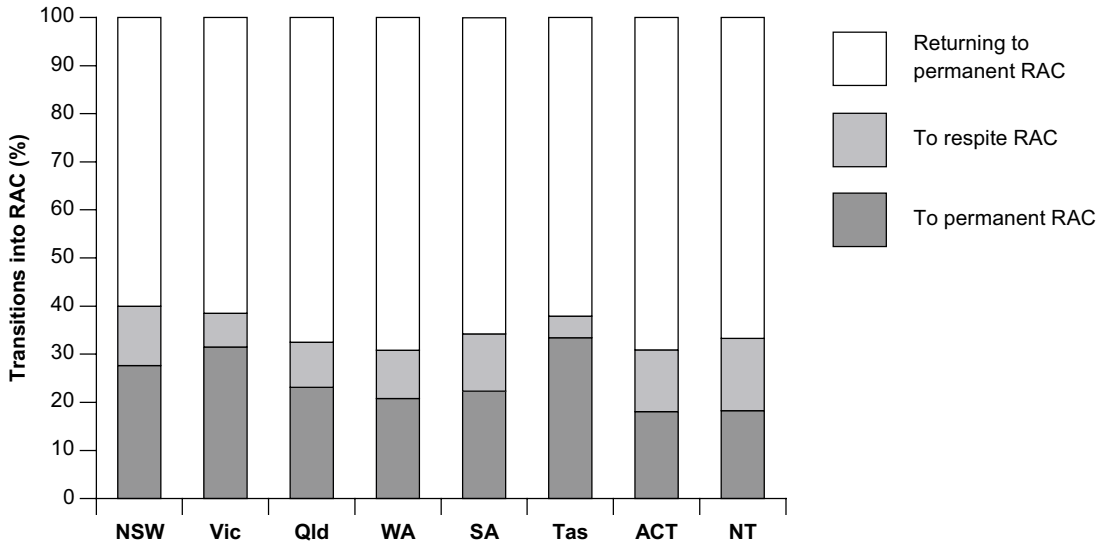
The mix of types of transitions to RAC also varied with jurisdiction (Figure 2.1). The split between returns and admissions showed some variation, with the percentage of admissions from hospital compared to returns to care ranging from around 31% for Western Australia and the Australian Capital Territory to 40% for New South Wales (Table 2.2). The ratio of permanent to respite admissions varied more widely with jurisdiction (Table 2.3), although for all states and territories there were more moves into permanent RAC than into respite care. For Tasmania and Victoria there was a relatively high use of permanent care: for every respite admission in Tasmania from hospital there were over 7 permanent care admissions from hospital while in Victoria there were over 4. For the other states and territories the ratio of permanent to respite admissions was below the national average of 2.6 to 1, with South Australia and the two territories having ratios of less than 2 to 1.

Box 2.1: Technical note on interpretation of unadjusted numbers of transitions

The event-based linkage strategy underestimates the number of transitions from hospital to RAC by around 8% (see Table 1.3). It is not currently possible to accurately adjust estimates of transition types for sub-populations, such as age groups. Consequently, within any sub-population of interest, the proportion of all hospital discharges identified as relating to a move to RAC is underestimated and is not directly comparable with that of another group. However, because similar proportions of the three types of transitions to RAC are identified (Table B.3), the relative sizes of the three transition types into RAC can be compared. Therefore, to aid interpretation, an estimated range of the proportion of hospital separations relating to all transitions to RAC is presented for sub-populations under discussion and, within sub-populations, the relativities of the three types of transitions into RAC are given (see, for example, tables 2.2 and 2.3).

When looking at admissions into RAC, unadjusted estimates understate the relative importance of admissions from hospital compared with admissions from the community. Therefore, to better gauge the mix of admissions from hospital and from the community, adjusted estimates are presented for a small number of classifications only (see Section 4).

Source: *Section 1.3.1.*



Source: Table 2.2.

Figure 2.1: Movement into RAC from hospital by jurisdiction

As expected from the results for the states and territories, the numbers of hospital separations by remoteness of region largely reflected the population size of each region (Table 2.4). However, people from more remote regions were less likely than those from less remote regions to end their stay in hospital with a discharge to RAC (Table 2.5). For example, around 10% of hospital episodes (excluding those ending in death) for people who lived in a major city before hospitalisation were discharged to RAC compared with under 6% for those from remote and very remote regions.

The variation in the mix of transitions into permanent and respite RAC was less across region types than between the states and territories (Table 2.6). People living in major cities before going into hospital had the highest relative transition into permanent care, with just over 3 permanent admissions from hospital for every respite admission. However, this ratio decreased with remoteness such that relatively high numbers of those from outer regional, remote and very remote areas moved into respite care.

Whether people were moving between regions to access appropriate hospital care can be gauged by comparing the region of usual residence of the patient with the region of the hospital (Table 2.7). Not unexpectedly, across all movement types, increasing remoteness of a person's usual residence was associated with an increased likelihood of being treated in a hospital in a less remote area. Nearly all (98%) hospital separations for people whose usual residence was in a major city were associated with treatment in a hospital in a major city. In contrast, approximately three-quarters of separations for people usually living in inner and outer regional areas were related to hospitals in those areas, and around 60% of separations for people who usually lived in remote and very remote areas were from hospitals in those regions.

Generally, inter-regional travel to get hospital care was less common for people moving into or returning to RAC than for people returning to the community (Table 2.7), particularly among people living in regional and remote areas (for people living in major cities, there was little difference). For example, among those who usually lived in inner regional areas, 85% of separations for people moving into or returning to RAC were from hospitals in the same

region, compared with 75% for people returning to the community. A similar difference was seen for people usually living in outer regional, remote and very remote areas.

Table 2.1: Movement from hospital and into RAC for people aged 65+, by movement type and state/territory, 2001–02 (unadjusted)

Movement type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Hospital separations				**Number (unadjusted)**					
To RAC									
Return to permanent RAC[(a)]	15,836	10,639	10,088	4,790	5,470	902	515	80	48,320
To permanent RAC	7,279	5,443	3,455	1,439	1,858	486	135	22	20,117
To respite RAC	3,265	1,203	1,410	693	993	65	95	18	7,742
Subtotal	*26,380*	*17,285*	*14,953*	*6,922*	*8,321*	*1,453*	*745*	*120*	*76,179*
To community/other	264,461	213,076	155,796	72,470	80,620	22,386	9,880	1,928	820,617
Died in hospital	17,874	13,740	9,048	4,297	4,636	1,074	591	105	51,365
Total separations	**308,715**	**244,101**	**179,797**	**83,689**	**93,577**	**24,913**	**11,216**	**2,153**	**948,161**
RAC admissions									
Permanent admissions									
From hospital to permanent RAC	7,275	5,470	3,442	1,440	1,858	487	133	20	20,125
From community into permanent RAC	5,966	4,877	3,424	1,742	1,498	529	181	44	18,261
Transfer into permanent RAC	7,720	4,297	3,218	1,557	2,114	321	245	36	19,508
Subtotal	*20,961*	*14,644*	*10,084*	*4,739*	*5,470*	*1,337*	*559*	*100*	*57,894*
Respite admissions									
From hospital to respite RAC	3,279	1,204	1,401	693	992	66	91	18	7,744
From community into respite RAC	11,551	8,520	5,575	2,390	2,690	1,369	619	180	32,894
Transfer into respite RAC	555	262	252	107	131	36	30	2	1,375
Subtotal	*15,385*	*9,986*	*7,228*	*3,190*	*3,813*	*1,471*	*740*	*200*	*42,013*
Total admissions	**36,346**	**24,630**	**17,312**	**7,929**	**9,283**	**2,808**	**1,299**	**300**	**99,907**
				Row per cent					
All hospital separations	**32.6**	**25.7**	**19.0**	**8.8**	**9.9**	**2.6**	**1.2**	**0.2**	**100.0**
All RAC admissions	**36.4**	**24.7**	**17.3**	**7.9**	**9.3**	**2.8**	**1.3**	**0.3**	**100.0**
Population 65+, 31 December 2001[(b)]	**35.2**	**25.6**	**17.4**	**8.6**	**9.0**	**2.7**	**1.1**	**0.3**	**100.0**

(a) Includes both links to RAC hospital leave (47,319) and links to RAC social leave (1,317).

(b) Total population excludes external territories (ABS 2001a).

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups.
2. Age is as at time of hospital admission or RAC event.
3. State/territory refers to hospital or RAC service.

Table 2.2: Summary of movements from hospital into RAC for people aged 65+, by movement type, Australia, 2001–02

	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
	Row per cent					Est'd min %	Est'd max %
New South Wales	60.0	27.6	12.4	100.0	26,380	9.1	10.1
Victoria	61.6	31.5	7.0	100.0	17,285	7.5	8.3
Queensland	67.5	23.1	9.4	100.0	14,953	8.8	9.7
Western Australia	69.2	20.8	10.0	100.0	6,922	8.7	9.7
South Australia	65.7	22.3	11.9	100.0	8,321	9.4	10.4
Tasmania	62.1	33.4	4.5	100.0	1,453	6.1	6.8
Australian Capital Territory	69.1	18.1	12.8	100.0	745	7.0	7.8
Northern Territory	66.7	18.3	15.0	100.0	120	5.9	6.5
All	**63.4**	**26.4**	**10.2**	**100.0**	**. .**	**8.5**	**9.4**
Total separations (number)	**48,320**	**20,117**	**7,742**	**. .**	**76,179**	**896,796**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.
3. State/territory refers to hospital.

Table 2.3: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, Australia, 2001–02 (unadjusted hospital separations)

	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
	Number (unadjusted hospital separations)			Ratio
New South Wales	7,279	3,265	10,544	2.2 : 1
Victoria	5,443	1,203	6,646	4.5 : 1
Queensland	3,455	1,410	4,865	2.5 : 1
Western Australia	1,439	693	2,132	2.1 : 1
South Australia	1,858	993	2,851	1.9 : 1
Tasmania	486	65	551	7.5 : 1
Australian Capital Territory	135	95	230	1.4 : 1
Northern Territory	22	18	40	1.2 : 1
All	**20,117**	**7,742**	**27,859**	**2.6 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. State/territory refers to hospital.

Table 2.4: Hospital separations for people aged 65+, by movement type and remoteness of usual residence prior to admission into hospital, 2001–02 (unadjusted)

Movement type	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
To RAC			Number (unadjusted)			
Return to permanent RAC	32,526	10,532	4,707	442	95	48,302
To permanent RAC	14,073	4,242	1,641	107	33	20,096
To respite RAC	4,510	2,027	1,042	112	37	7,728
Subtotal	*51,109*	*16,801*	*7,390*	*661*	*165*	*76,126*
To community/other	501,819	202,326	96,345	12,095	4,529	817,114
Died in hospital	32,927	11,681	5,761	664	220	51,253
Total separations	**585,855**	**230,808**	**109,496**	**13,420**	**4,914**	**944,493**
			Row per cent			
All hospital separations	**62.0**	**24.4**	**11.6**	**1.4**	**0.5**	**100.0**
Population 65+, 30 June 2002[(a)]	**64.7**	**23.3**	**10.5**	**1.2**	**0.4**	**100.0**

(a) Total population excludes external territories (ABS 2002).

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. The table uses the Australian Standard Geographical Classification Remoteness Structure as developed by the ABS (ABS 2001b).
4. 3,667 records were missing valid postcodes for remoteness coding (53 for movements into RAC, 112 for deaths in hospital and 3,502 for separations to the community).

Table 2.5: Summary of movements from hospital into RAC for people aged 65+, by movement type and remoteness of usual residence prior to admission into hospital, Australia, 2001–02

	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
		Row per cent				Est'd min %	Est'd max %
Major cities	63.6	27.5	8.8	100.0	51,109	9.2	10.3
Inner regional	62.7	25.2	12.1	100.0	16,801	7.7	8.5
Outer regional	63.7	22.2	14.1	100.0	7,390	7.1	7.9
Remote	66.9	16.2	16.9	100.0	661	5.2	5.8
Very remote	57.6	20.0	22.4	100.0	165	3.5	3.9
All	**63.5**	**26.4**	**10.2**	**100.0**	**. .**	**8.5**	**9.5**
Total separations (number)	**48,302**	**20,096**	**7,728**	**. .**	**76,126**	**893,240**	

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.
3. The table uses the Australian Standard Geographical Classification Remoteness Structure as developed by the ABS (ABS 2001b).
4. 53 records relating to movements into RAC were missing valid postcodes for remoteness coding.

Table 2.6: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by remoteness of usual residence prior to admission into hospital, Australia, 2001–02 (unadjusted hospital separations)

Remoteness area	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
	Number (unadjusted hospital separations)			Ratio
Major cities	14,073	4,510	18,583	3.1 : 1
Inner regional	4,242	2,027	6,269	2.1 : 1
Outer regional	1,641	1,042	2,683	1.6 : 1
Remote	107	112	219	1.0 : 1
Very remote	33	37	70	0.9 : 1
All	**20,096**	**7,728**	**27,824**	**2.6 : 1**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. The table uses the Australian Standard Geographical Classification Remoteness Structure as developed by the ABS (ABS 2001b).
4. 53 records relating to movements into RAC were missing valid postcodes for remoteness coding.

Table 2.7: Hospital separations for people aged 65+: remoteness of usual residence prior to admission into hospital, by remoteness of hospital and movement type, 2001–02 (unadjusted)

Movement type/remoteness of usual residence prior to hospital	Remoteness of hospital					
	Major cities	Inner regional	Outer regional	Remote and very remote	Total	N
Return to permanent RAC			**Row per cent**			
Major cities	99.0	0.9	—	—	100.0	24,139
Inner regional	14.1	84.6	1.3	—	100.0	7,389
Outer regional	2.8	13.3	83.3	0.5	100.0	4,128
Remote and very remote	2.7	3.1	15.4	78.7	100.0	512
All	*69.3*	*19.5*	*10.0*	*1.2*	*100.0*	*. .*
Total separations (number)	*25,069*	*7,045*	*3,625*	*429*	*. .*	*36,168*
To permanent RAC						
Major cities	98.7	1.2	0.1	—	100.0	11,157
Inner regional	13.6	83.8	2.5	—	100.0	3,295
Outer regional	2.6	16.3	80.2	0.9	100.0	1,507
Remote and very remote	<7.3	<3.6	29.9	64.2	100.0	137
All	*71.4*	*19.6*	*8.3*	*0.6*	*100.0*	*. .*
Total separations (number)	*11,500*	*3,149*	*1,344*	*103*	*. .*	*16,096*
To respite RAC						
Major cities	97.5	2.3	0.2	—	100.0	2,952
Inner regional	9.4	87.9	2.6	—	100.0	1,410
Outer regional	1.7	12.7	84.7	0.8	100.0	943
Remote and very remote	<3.5	<3.5	20.3	75.5	100.0	143
All	*55.6*	*26.3*	*16.0*	*2.1*	*100.0*	*. .*
Total separations (number)	*3,031*	*1,431*	*870*	*116*	*. .*	*5,448*
All to RAC						
Major cities	98.8	1.1	0.1	—	100.0	38,248
Inner regional	13.4	84.8	1.8	—	100.0	12,094
Outer regional	2.6	13.9	82.8	0.7	100.0	6,578
Remote and very remote	2.8	2.8	18.8	75.6	100.0	792
All	*68.6*	*20.1*	*10.1*	*1.1*	*100.0*	*. .*
Total separations (number)	*39,600*	*11,625*	*5,839*	*648*	*. .*	*57,712*

(continued)

Table 2.7 (continued): Hospital separations for people aged 65+: remoteness of usual residence prior to admission into hospital, by remoteness of hospital and movement type, 2001–02 (unadjusted)

Movement type/remoteness of usual residence prior to hospital	Remoteness of hospital					
	Major cities	Inner regional	Outer regional	Remote and very remote	Total	N
To community/other						
Major cities	98.2	1.4	0.3	0.1	100.0	290,477
Inner regional	22.9	75.0	2.0	0.2	100.0	121,867
Outer regional	9.0	19.2	70.5	1.4	100.0	72,884
Remote and very remote	10.0	5.0	20.1	65.0	100.0	14,044
All	*64.3*	*22.1*	*11.5*	*2.1*	*100.0*	*. .*
Total separations (number)	*321,047*	*110,175*	*57,464*	*10,586*	*. .*	*499,272*
Died in hospital						
Major cities	98.9	1.0	0.1	—	100.0	25,096
Inner regional	18.8	79.3	1.9	—	100.0	9,129
Outer regional	6.6	17.4	74.9	1.1	100.0	5,124
Remote and very remote	9.4	5.3	18.9	66.4	100.0	852
All	*67.0*	*20.9*	*10.4*	*1.6*	*100.0*	*. .*
Total separations (number)	*26,950*	*8,422*	*4,195*	*634*	*. .*	*40,201*
All						
Major cities	98.3	1.4	0.3	0.1	100.0	353,821
Inner regional	21.8	76.1	2.0	0.1	100.0	143,090
Outer regional	8.3	18.7	71.7	1.3	100.0	84,586
Remote and very remote	9.6	4.9	19.9	65.6	100.0	15,688
All	**64.9**	**21.8**	**11.3**	**2.0**	**100.0**	**. .**
Total separations (number)	**387,597**	**130,222**	**67,498**	**11,868**	**. .**	**597,185**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. The table uses the Australian Standard Geographical Classification Remoteness Structure as developed by the ABS (ABS 2001b).
4. Postcodes of private hospitals are not recorded on the NHMD. 350,976 records were excluded due mostly to missing hospital and, in a small number of records, missing postcode of usual residence.

3 Leaving hospital

In 2001–02, nearly two-thirds (63%) of separations from hospital for people aged 65 and over were from public hospitals (Table 3.1).[1] Proportionally fewer people were discharged from private hospitals into RAC than from public hospitals: 5–6% of discharges from private hospitals (excluding deaths) were associated with entry into RAC compared with just over 10% from public hospitals (Table 3.2). For people moving from a public hospital to RAC there were three times as many admissions into permanent RAC as into respite RAC; for moves from private hospital the ratio of permanent to respite care admissions was much lower at 1.7 to 1 (Table 3.3).

People who returned to the community on leaving hospital were less likely than those who went to residential care to have been in a public hospital, with 61% of returns to the community relating to discharges from a public hospital (Table 3.1). In contrast, three-quarters of hospital episodes ending with the patient returning to permanent RAC were in public hospitals, with 80% of transitions into permanent RAC originating from a public hospital and 70% of moves into respite care.

In the following discussion, a number of characteristics of patients and their hospital care are examined, including age and sex profiles, length of stay in hospital, type of care received and medical reason for hospital admission. Variation in movement patterns are also examined by remoteness of the patient's usual residence.

Table 3.1: Hospital separations for people aged 65+, by movement type and hospital sector, Australia, 2001–02 (unadjusted)

	Hospital sector			
Movement type	**Public**	**Private**	**Total**	**N**
To RAC	**Row per cent**			
Return to permanent RAC	74.9	25.1	100.0	48,320
To permanent RAC	80.1	19.9	100.0	20,117
To respite RAC	70.4	29.6	100.0	7,742
Subtotal	*75.8*	*24.2*	*100.0*	*76,179*
To community/other	61.0	39.0	100.0	820,617
Died in hospital	78.4	21.6	100.0	51,365
All	**63.2**	**36.8**	**100.0**	**. .**
Total separations (number)	**598,941**	**349,220**	**. .**	**948,161**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. Sector relates to hospital type, not admission status.
4. In 2001–02, 13% of separations in public hospitals were for private patients and 4% of separations in private hospitals were for public patients (AIHW 2003a).

[1] Note that people may be a private patient in a public hospital and vice versa—see note 4 to Table 3.1.

Table 3.2: Summary of movements from hospital into RAC for people aged 65+, by movement type and hospital sector, Australia, 2001–02

Hospital sector	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
	Row per cent					Est'd min %	Est'd max %
Public	62.7	27.9	9.4	100.0	57,729	10.3	11.5
Private	65.9	21.7	12.4	100.0	18,450	5.5	6.1
All	**63.4**	**26.4**	**10.2**	100.0	. .	8.5	9.4
Total separations (number)	**48,320**	**20,117**	**7,742**	. .	**76,179**	**896,796**	

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.
3. Sector relates to hospital type, not admission status.
4. In 2001–02, 13% of separations in public hospitals were for private patients and 4% of separations in private hospitals were for public patients (AIHW 2003a).

Table 3.3: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by hospital sector, Australia, 2001–02 (unadjusted hospital separations)

Hospital sector	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
	Number (unadjusted hospital separations)			Ratio
Public	16,108	5,451	21,559	3.0 : 1
Private	4,009	2,291	6,300	1.7 : 1
All	**20,117**	**7,742**	**27,859**	**2.6 : 1**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. Sector relates to hospital type, not admission status.
4. In 2001–02, 13% of separations in public hospitals were for private patients and 4% of separations in private hospitals were for public patients (AIHW 2003a).

3.1 Characteristics of patients leaving hospital

Among people aged 65 and over, hospital use increases with age (AIHW: Karmel et al. 2007b). Consequently, the age profile of patients leaving hospital is older than that of the general population, with people aged 80 and over making up 25% of the older population (65+) in 2001–02 but contributing 37% of hospital separations for this group (Table 3.6).

As would be expected, older hospital patients were more likely than younger patients to be associated with a move to RAC. For people aged 65–79, under 2% of hospital episodes (not including deaths) ended with discharge to RAC compared with over 40% of episodes for

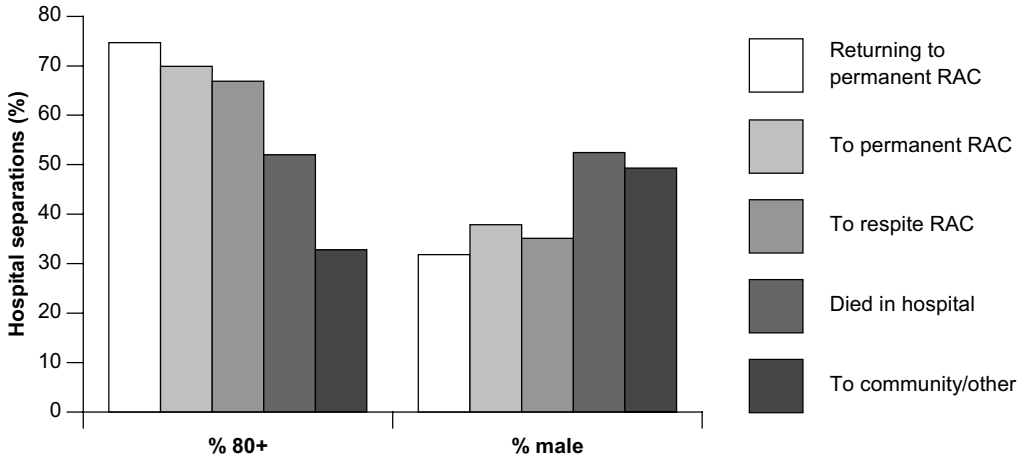
people aged 95 and over (Table 3.4). Overall, around 4% of live hospital separations for people aged 65–79 ended with the patient being discharged to RAC compared with 17% to 19% for people aged 80 and over (Table 3.4). For all age groups women were more likely than men to be discharged to RAC, with this difference being more marked at older ages.

Over the age of 80, as both men and women get older, movement from hospital to RAC was more and more likely to relate to a return to permanent RAC (Table 3.4). This trend was more prominent for women than for men, with the proportion of transitions relating to return to permanent care increasing from under 60% for women aged less than 80 up to 73% for women aged 95 and over. For men, again around 60%of transitions into RAC for men aged less than 80 were returns to permanent care, with the proportion rising to 67% for transitions for men aged 95 and over.

The ratio of permanent to respite admissions following a period in hospital increased with age for women aged 75 and over (Table 3.5). A similar but weaker trend was observed among admissions for men. For the oldest group (95+) the ratio of permanent to respite admissions was 4.1 to 1 for women and 3.6 to 1 for men.

Reflecting the above transition patterns, hospital separations ending with either the patient returning to the community or dying were more likely to be for younger people than other hospital episodes (Figure 3.1 and Table 3.6). Two-thirds (67%) of transitions back to the community and almost one-half (48%) of separations ending with the patient's death were for people aged 65–79 compared with 27% of all transitions into RAC. As expected, people returning to permanent RAC had an older age profile than those admitted into permanent RAC who, in turn, had an older profile compared with those going into respite care: 75%, 70% and 67% of such transitions, respectively, were for people aged 80 and over.

Reflecting the greater longevity of women, transition groups with high proportions of people aged 80 and over tended to have relatively few men (Table 3.6, Figure 3.1). The difference in the age profiles of men and women was particularly noticeable for people moving from hospital into RAC. For example, 16% of returns to permanent RAC for men were for people aged 90 and over compared with 26% of such transitions for women; the corresponding figures for admissions into permanent RAC were 13% for men and 22% for women.



Source: Table 3.6.

Figure 3.1: Age and sex profile by post-hospital destination

Table 3.4: Summary of movements from hospital into RAC for people aged 65+, by sex and age, Australia, 2001–02

Sex/age	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men		**Row per cent**				**Est'd min %**	**Est'd max %**
65–69	60.4	28.2	11.3	100.0	1,413	1.6	1.8
70–74	59.3	29.5	11.1	100.0	3,051	2.9	3.2
75–79	56.4	31.6	12.0	100.0	5,127	4.8	5.4
Subtotal 65–79	*57.9*	*30.5*	*11.6*	*100.0*	*9,591*	*3.2*	*3.6*
80–84	58.0	31.0	11.1	100.0	6,545	8.7	9.7
85–89	61.3	29.3	9.5	100.0	5,838	14.6	16.3
90–94	64.6	26.3	9.1	100.0	3,024	24.0	26.7
95+	67.3	25.6	7.1	100.0	703	32.1	35.7
Subtotal 80+	*60.8*	*29.2*	*10.0*	*100.0*	*16,110*	*12.4*	*13.8*
All	*59.7*	*29.7*	*10.6*	*100.0*	*. .*	*6.0*	*6.6*
Total (number)	*15,354*	*7,629*	*2,718*	*. .*	*25,701*		*430,224*
Women							
65–69	59.4	28.6	12.1	100.0	1,228	1.7	1.9
70–74	57.6	29.1	13.3	100.0	3,024	3.3	3.7
75–79	60.3	26.9	12.8	100.0	7,054	6.6	7.4
Subtotal 65–79	*59.5*	*27.7*	*12.8*	*100.0*	*11,306*	*4.2*	*4.6*
80–84	62.9	25.5	11.5	100.0	12,300	13.1	14.6
85–89	67.3	23.5	9.1	100.0	14,911	22.3	24.8
90–94	70.2	22.8	7.0	100.0	9,168	32.9	36.6
95+	72.5	22.1	5.4	100.0	2,793	42.9	47.7
Subtotal 80+	*67.0*	*23.9*	*9.1*	*100.0*	*39,172*	*20.1*	*22.3*
All	*65.3*	*24.7*	*10.0*	*100.0*	*. .*	*10.8*	*12.0*
Total (number)	*32,966*	*12,488*	*5,024*	*. .*	*50,478*		*466,572*
All							
65–69	59.4	28.6	12.1	100.0	2,641	1.6	1.8
70–74	57.6	29.1	13.3	100.0	6,075	3.1	3.4
75–79	60.3	26.9	12.8	100.0	12,181	5.7	6.4
Subtotal 65–79	*58.8*	*29.0*	*12.3*	*100.0*	*20,897*	*3.7*	*4.1*
80–84	62.9	25.5	11.5	100.0	18,845	11.1	12.4
85–89	67.3	23.5	9.1	100.0	20,749	19.4	21.6
90–94	70.2	22.8	7.0	100.0	12,192	30.1	33.5
95+	72.5	22.1	5.4	100.0	3,496	40.2	44.7
Subtotal 80+	*65.2*	*25.4*	*9.4*	*100.0*	*55,282*	*17.0*	*18.9*
All	**65.3**	**24.7**	**10.0**	**100.0**	**. .**	**8.5**	**9.4**
Total separations (number)	**48,320**	**20,117**	**7,742**	**. .**	**76,179**		**896,796**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.
3. State/territory tables are in Appendix A.

Table 3.5: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by sex and age, Australia, 2001–02 (unadjusted hospital separations)

Sex/age	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
Men	**Number (unadjusted hospital separations)**			**Ratio**
65–69	399	160	559	2.5 : 1
70–74	901	340	1,241	2.7 : 1
75–79	1,621	615	2,236	2.6 : 1
Subtotal 65–79	*2,921*	*1,115*	*4,036*	*2.6 : 1*
80–84	2,026	724	2,750	2.8 : 1
85–89	1,708	553	2,261	3.1 : 1
90–94	794	276	1,070	2.9 : 1
95+	180	50	230	3.6 : 1
Subtotal 80+	*4,708*	*1,603*	*6,311*	*2.9 : 1*
All	*7,629*	*2,718*	*10,347*	*2.8 : 1*
Women				
65–69	351	148	499	2.4 : 1
70–74	879	403	1,282	2.2 : 1
75–79	1,901	901	2,802	2.1 : 1
Subtotal 65–79	*3,131*	*1,452*	*4,583*	*2.2 : 1*
80–84	3,141	1,417	4,558	2.2 : 1
85–89	3,508	1,364	4,872	2.6 : 1
90–94	2,090	640	2,730	3.3 : 1
95+	618	151	769	4.1 : 1
Subtotal 80+	*9,357*	*3,572*	*12,929*	*2.6 : 1*
All	*12,488*	*5,024*	*17,512*	*2.5 : 1*
All				
65–69	750	308	1,058	2.4 : 1
70–74	1,780	743	2,523	2.4 : 1
75–79	3,522	1,516	5,038	2.3 : 1
Subtotal 65–79	*6,052*	*2,567*	*8,619*	*2.4 : 1*
80–84	5,167	2,141	7,308	2.4 : 1
85–89	5,216	1,917	7,133	2.7 : 1
90–94	2,884	916	3,800	3.1 : 1
95+	798	201	999	4.0 : 1
Subtotal 80+	*14,065*	*5,175*	*19,240*	*2.7 : 1*
All	**20,117**	**7,742**	**27,859**	**2.6 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. State/territory tables are in Appendix A.

Table 3.6: Hospital separations for people aged 65+, by movement type, age and sex, Australia, 2001–02 (unadjusted)

	Age at hospital admission								
Sex / movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
To RAC									
Return to permanent RAC	5.6	11.8	18.8	24.7	23.3	12.7	3.1	100.0	15,354
To permanent RAC	5.2	11.8	21.2	26.6	22.4	10.4	2.4	100.0	7,629
To respite RAC	5.9	12.5	22.6	26.6	20.3	10.2	1.8	100.0	2,718
Subtotal	*5.5*	*11.9*	*19.9*	*25.5*	*22.7*	*11.8*	*2.7*	*100.0*	*25,701*
To community/other	21.7	25.1	25.1	17.0	8.4	2.4	0.4	100.0	404,523
Died in hospital	12.1	18.7	23.7	21.2	16.2	6.5	1.6	100.0	26,989
All	*20.2*	*24.0*	*24.7*	*17.7*	*9.7*	*3.1*	*0.6*	*100.0*	*. .*
Total separations (number)	*92,381*	*109,646*	*112,887*	*80,991*	*44,322*	*14,374*	*2,612*	*. .*	*457,213*
Women				**Row per cent**					
To RAC									
Return to permanent RAC	2.2	5.3	12.9	23.5	30.5	19.5	6.1	100.0	32,966
To permanent RAC	2.8	7.0	15.2	25.2	28.1	16.7	4.9	100.0	12,488
To respite RAC	2.9	8.0	17.9	28.2	27.1	12.7	3.0	100.0	5,024
Subtotal	*2.4*	*6.0*	*14.0*	*24.4*	*29.5*	*18.2*	*5.5*	*100.0*	*50,478*
To community/other	17.4	21.2	23.9	19.6	12.5	4.5	0.9	100.0	416,094
Died in hospital	8.5	13.1	19.4	22.0	21.4	11.8	3.8	100.0	24,376
All	*15.4*	*19.3*	*22.7*	*20.2*	*14.7*	*6.3*	*1.5*	*100.0*	*. .*
Total separations (number)	*75,699*	*94,557*	*111,290*	*99,132*	*72,063*	*30,779*	*7,428*	*. .*	*490,948*
All				**Row per cent**					
To RAC									
Return to permanent RAC	3.3	7.4	14.8	23.9	28.2	17.4	5.2	100.0	48,320
To permanent RAC	3.7	8.8	17.5	25.7	25.9	14.3	4.0	100.0	20,117
To respite RAC	4.0	9.6	19.6	27.7	24.8	11.8	2.6	100.0	7,742
Subtotal	*3.5*	*8.0*	*16.0*	*24.7*	*27.2*	*16.0*	*4.6*	*100.0*	*76,179*
To community/other	19.5	23.1	24.5	18.3	10.5	3.4	0.6	100.0	820,617
Died in hospital	10.4	16.0	21.7	21.6	18.7	9.1	2.6	100.0	51,365
All	**17.7**	**21.5**	**23.6**	**19.0**	**12.3**	**4.8**	**1.1**	**100.0**	**. .**
Total separations (number)	**168,080**	**204,203**	**224,177**	**180,123**	**116,385**	**45,153**	**10,040**	**. .**	**948,161**
Population 65+, 31 December 2001[(a)]									
Men	31.2	27.9	21.1	12.1	7.7	. .	. .	100.0	1,088,715
Women	25.6	24.3	21.4	15.1	13.6	. .	. .	100.0	1,368,596
All	**28.1**	**25.9**	**21.3**	**13.8**	**11.0**	**. .**	**. .**	**100.0**	**2,457,311**

(a) Oldest age group includes people aged 85+. Total population excludes external territories (ABS 2001a).

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. State/territory tables are in Appendix A.

3.2 Length of stay

Two measures are commonly used to gauge length of stay: the arithmetic mean and the median (that is, that length of stay with half of the values being smaller and half larger). For all groups, the mean length of episodes can be affected by a relatively small number of very long episodes. Therefore, consideration of both measures is informative. Note, however, that for both methods the estimate resulting from the current NHMD data understates the total length of stay in hospital to the extent that people change care type or transfer within the hospital system (see Box 3.1).

Box 3.1: Technical note on estimates of length of stay in hospital

For two types of hospital separations the patient remains within the hospital system: when a patient changes from one hospital episode care type to another and when a patient transfers from one hospital to another (Box 1.1). Because a person identifier is not available on the NHMD it is not possible to string together a person's episodes of hospital care into a single stay. Consequently, measures of length of hospital episode understate the total length of stay in hospital to the extent that people change care type or transfer within the hospital system.

The effect of movement within the hospital system on estimates of length of stay for people leaving hospital is likely to be different for the different transition groups because the likelihood of the exit episode being the only one related to the period in hospital varies with transition group. Overall, in 2001–02, 12% of hospital separations for older people ending with discharge from the hospital system had started either with a transfer from another hospital (9%) or with a change in hospital care type (3%) (Table A.1). Within transition group:

- *around 10% of hospital separations ending with discharge from the hospital system for people returning to their home (either in the community or in permanent RAC) had more than one hospital episode during their period in hospital*
- *51% of the hospital episodes ending with the person being admitted into permanent RAC had begun with the person already in hospital (18% beginning with a transfer and 33% beginning with a change in care type)*
- *32% of the hospital episodes ending with the person being admitted into respite RAC had begun with the person already in hospital (17% beginning with a transfer and 15% beginning with a change in care type)*
- *23% of episodes ending with the death of the patient had previous contiguous episodes.*

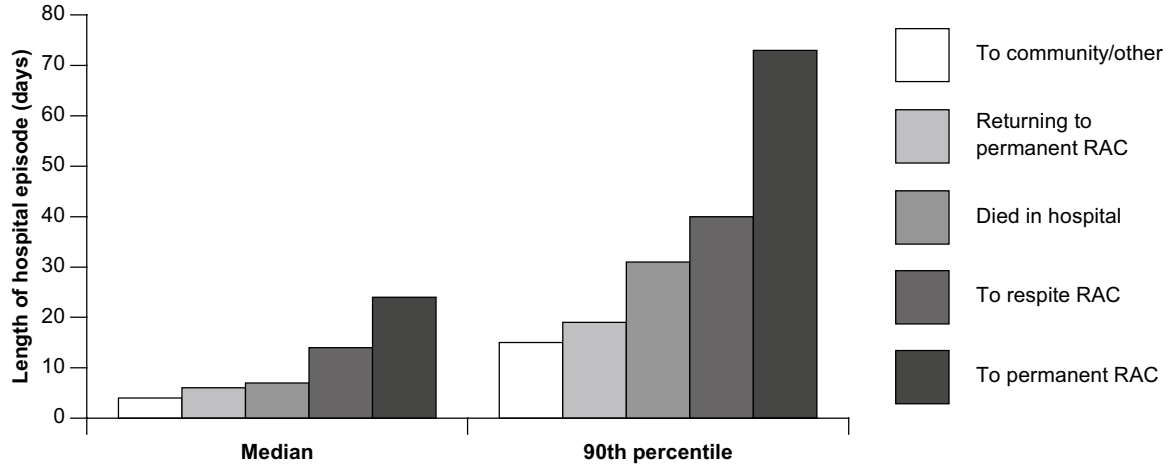
These figures indicate that estimates of length of stay for people who were admitted into RAC will be more affected by within-hospital changes than those who returned home. Consequently, actual differences were likely to have been greater than the estimated differences.

In addition, the implementation of casemix-based funding practices vary by state and territory and between urban and regional areas. This will affect whether or not a hospital stay is recorded as a single episode of care or as several episodes. The impact of this variation on reported care type and length of stay cannot be determined from the hospital data available for this report.

The time spent in hospital for people aged 65 and over varied considerably according to the type of transition from hospital (Figure 3.2). People returning to the community from hospital, on average, had the shortest lengths of stay, with a median time of 4 days in hospital (mean of 7.1 days), compared with 7 days for people who died in hospital (mean of 17.3 days) (tables 3.7 and 3.8). People making the transition from the community into RAC via hospital tended to spend more time in hospital, with people going into permanent RAC having longer stays

than those accessing respite care (median stay of 24 days compared with 14, and means of 38.2 and 19.5 days, respectively). People returning to permanent RAC had lengths of stay comparable with those for people who returned to the community following their period in hospital.

That some people spent much longer than others in hospital is reflected in the considerable differences between the mean and median length of stay for some transition groups. In particular, some people were admitted into RAC after long stays in hospital: in at least 10% of cases, people moving into permanent RAC stayed in hospital for 73 days or more while 90% of episodes for those returning to RAC after hospital leave lasted 19 days or less (tables 3.8 and 3.9, Figure 3.2).



Source: tables 3.8 and 3.9.

Figure 3.2: Length of stay by post-hospital destination

While there was some evidence that women tended to have longer hospital episodes than men (Table 3.7), the differences were not great. On the other hand, for some transition groups, length of stay varied with age. In particular, for people who were admitted into permanent RAC both the median and 90th percentile for length of stay decreased as age increased: people aged 65–69 years who moved into permanent RAC had a median length of stay of 26 days compared with 21 days for people aged 95 and over (90th percentiles of 91 days and 62 days) (tables 3.8 and 3.9). In contrast, among people who returned to the community, older people tended to have longer hospital episodes than younger people (medians of 3 days versus 6 days for the youngest and oldest age groups, respectively).

Table 3.7: Hospital separations for people aged 65+: mean length of stay, by movement type, age and sex, Australia, 2001–02 (unadjusted)

	Age at hospital admission							
Movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**All**
Men				**Mean (days)**				
Return to permanent RAC	8.5	8.4	8.1	8.3	7.8	7.6	7.4	8.1
To permanent RAC	45.1	43.1	41.6	40.2	34.9	33.3	32.2	39.0
To respite RAC	19.9	20.0	21.1	19.3	18.9	16.2	17.1	19.4
To community/other	5.8	6.2	6.7	7.3	7.8	8.5	8.4	6.6
Died in hospital	15.5	14.0	14.9	14.9	17.6	17.6	17.1	15.4
All	*6.4*	*7.0*	*7.8*	*8.8*	*10.0*	*11.0*	*11.4*	*7.8*
Total separations (number)	*92,381*	*109,646*	*112,887*	*80,991*	*44,322*	*14,374*	*2,612*	*457,213*
Women				**Mean (days)**				
Return to permanent RAC	9.4	9.3	8.9	8.8	8.5	8.4	8.0	8.6
To permanent RAC	57.4	47.5	42.0	37.6	35.8	31.2	33.7	37.8
To respite RAC	19.4	22.2	19.9	19.3	19.9	17.8	16.9	19.6
To community/other	6.1	6.9	7.5	8.3	8.9	9.8	10.3	7.6
Died in hospital	16.3	17.1	21.4	19.0	18.2	22.8	19.6	19.3
All	*6.7*	*7.7*	*8.8*	*10.0*	*11.0*	*12.3*	*12.9*	*9.1*
Total separations (number)	*75,699*	*94,557*	*111,290*	*99,132*	*72,063*	*30,779*	*7,428*	*490,948*
All				**Mean (days)**				
Return to permanent RAC	8.9	8.8	8.6	8.6	8.3	8.2	7.9	8.4
To permanent RAC	50.8	45.3	41.8	38.6	35.5	31.7	33.4	38.2
To respite RAC	19.7	21.2	20.4	19.3	19.6	17.4	17.0	19.5
To community/other	6.0	6.5	7.1	7.8	8.5	9.4	9.8	7.1
Died in hospital	15.8	15.2	17.6	16.9	17.9	20.8	18.8	17.3
All	**6.5**	**7.3**	**8.3**	**9.5**	**10.6**	**11.9**	**12.5**	**8.5**
Total separations (number)	**168,080**	**204,203**	**224,177**	**180,123**	**116,385**	**45,153**	**10,040**	**948,161**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. See technical note Box 3.1 on measuring length of stay.
2. Age is as at time of hospital admission.
3. State/territory tables are in Appendix A (by sex only).

Table 3.8: Hospital separations for people aged 65+: median length of stay, by movement type, age and sex, Australia, 2001–02 (unadjusted)

	Age at hospital admission							
Movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**All**
Men				**Median (days)**				
Return to permanent RAC	5.5	6	6	6	5	5	5	5
To permanent RAC	28	26	26	25	24	22	21	25
To respite RAC	14	13.5	15	14	13	12	12.5	14
To community/other	3	4	4	4	5	5	5	4
Died in hospital	7	7	8	8	8	7	7	8
All	*3*	*4*	*4*	*5*	*5*	*6*	*6*	*4*
Total separations (number)	*92,381*	*109,646*	*112,887*	*80,991*	*44,322*	*14,374*	*2,612*	*457,213*
Women				**Median (days)**				
Return to permanent RAC	6	6	6	6	6	6	6	6
To permanent RAC	24	23	24	23	23	22	21.5	23
To respite RAC	13.5	14	14	14	14	13.5	14	14
To community/other	4	4	5	5	6	6	6	5
Died in hospital	8	8	7	7	7	7	7	7
All	*4*	*4*	*5*	*5*	*6*	*7*	*7*	*5*
Total separations (number)	*75,699*	*94,557*	*111,290*	*99,132*	*72,063*	*30,779*	*7,428*	*490,948*
All				**Median (days)**				
Return to permanent RAC	6	6	6	6	6	6	5	6
To permanent RAC	26	25	25	24	23	22	21	24
To respite RAC	14	14	14	14	14	13	14	14
To community/other	3	4	4	5	5	6	6	4
Died in hospital	7	7	8	8	7	7	7	7
All	**4**	**4**	**5**	**5**	**6**	**6**	**6**	**5**
Total separations (number)	**168,080**	**204,203**	**224,177**	**180,123**	**116,385**	**45,153**	**10,040**	**948,161**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. See technical note Box 3.1 on measuring length of stay.
2. Age is as at time of hospital admission.
3. State/territory tables are in Appendix A (by sex only).

Table 3.9: Hospital separations for people aged 65+: 90th percentile of length of stay, by movement type, age and sex, Australia, 2001–02 (unadjusted)

	Age at hospital admission							
Movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**All**
Men				**90th percentile (days)**				
Return to permanent RAC	18	18	17	18	17	17	17	17
To permanent RAC	92	85	81	79	70	64	67.5	77
To respite RAC	43.5	44	41	42	36	35	36.5	40
To community/other	12	13	14	16	17	18	19	14
Died in hospital	30	29	31	30	31	31	32	30
All	*13*	*14*	*16*	*19*	*21*	*23*	*25*	*16*
Total separations (number)	*92,381*	*109,646*	*112,887*	*80,991*	*44,322*	*14,374*	*2,612*	*457,213*
Women				**90th percentile (days)**				
Return to permanent RAC	21	20	20	19	19	19	17	19
To permanent RAC	89	86	75	72	66	61	59	69
To respite RAC	43	47	40	40	40	36	32	40
To community/other	13	14	16	18	20	21	22	16
Died in hospital	33	33	32	32	31	30	29	32
All	*14*	*16*	*18*	*21*	*23*	*26*	*26*	*19*
Total separations (number)	*75,699*	*94,557*	*111,290*	*99,132*	*72,063*	*30,779*	*7,428*	*490,948*
All				**90th percentile (days)**				
Return to permanent RAC	20	19	19	19	18	19	17	19
To permanent RAC	91	85	78	75	67	62	62	73
To respite RAC	43	46	41	40	39	36	32	40
To community/other	12	14	15	17	19	20	21	15
Died in hospital	31	30	31.5	31	31	30.5	30	31
All	**13**	**15**	**17**	**20**	**22**	**25**	**26**	**18**
Total separations (number)	**168,080**	**204,203**	**224,177**	**180,123**	**116,385**	**45,153**	**10,040**	**948,161**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. See technical note Box 3.1 on measuring length of stay.
2. Age is as at time of hospital admission.
3. State/territory tables are in Appendix A (by sex only).

3.3 Hospital care type

People can receive a range of types of care while in hospital, depending on the main clinical intent of the hospital episode. These include acute care, rehabilitative care, palliative care, geriatric evaluation and management (GEM), psychogeriatric care and maintenance care (see Box 3.2 for descriptions).

Box 3.2: Care types for admitted patients

The care type of a hospital episode (see Box 1.1) defines the overall nature of a clinical service provided to an admitted patient during an episode of care (admitted care), or the type of service provided by the hospital for boarders or during posthumous organ procurement (other care). Care types of relevance to older patients include:

- ***Acute care**, where the clinical intent or treatment goal is either to cure illness or provide definitive treatment of injury, perform surgery, to relieve symptoms of illness or injury (non-palliative), reduce severity of an illness or injury, protect against exacerbation and/or complication of an illness or injury which could threaten life or normal function; and/or perform diagnostic or therapeutic procedures.*
- ***Rehabilitation care** occurs when a person with a disability is participating in a multidisciplinary program aimed at an improvement in functional capacity, retraining in lost skills and/or change in psychosocial adaptation.*
- ***Palliative care** occurs when a person's condition has progressed beyond the stage where curative treatment is effective and attainable, or where the person chooses not to pursue curative treatment. Palliation provides relief of suffering and enhancement of quality of life for such a person. Intervention such as radiotherapy, chemotherapy and surgery are considered to be part of the palliative episode if they are undertaken specifically to provide symptomatic relief.*
- ***Geriatric evaluation and management (GEM)**, where the clinical intent or treatment goal is to maximise health status and/or optimise the living arrangements for a patient with multi-dimensional medical conditions associated with disabilities and psychosocial problems, and who is usually (but not always) an older patient.*
- ***Psychogeriatric care**, in which the clinical intent or treatment goal is improvement in health, modification of symptoms and enhancement in function, behaviour and/or quality of life for a patient with an age-related organic brain impairment with significant behavioural or late onset psychiatric disturbance or a physical condition accompanied by severe psychiatric or behavioural disturbance.*
- ***Maintenance care**, in which the clinical intent or treatment goal is prevention of deterioration in the functional and current health status of a patient with a disability or severe level of functional impairment.*
- ***Other care**, in which the clinical intent does not meet the criteria for any of the above, and includes 'Organ procurement – posthumous' and 'Hospital boarder'.*

Source: *AIHW 2003a.*

Some hospital care types were more likely than others to be associated with a transition to RAC (Table 3.10). People discharged from acute care were the least likely to be discharged to RAC, with under 10% of such hospital episodes (excluding deaths) ending in this way. At the other extreme, around half of the patients discharged from maintenance care moved directly to RAC. Patients in GEM and psychogeriatric care also had high rates of transition to RAC (28%–31% and 34%–38%, respectively). Compared with these patients, those in rehabilitation or palliative care were considerably less likely to move to RAC (12%–14% of live separations).

Table 3.10: Summary of movements from hospital into RAC for people aged 65+, by hospital care type, Australia, 2001–02

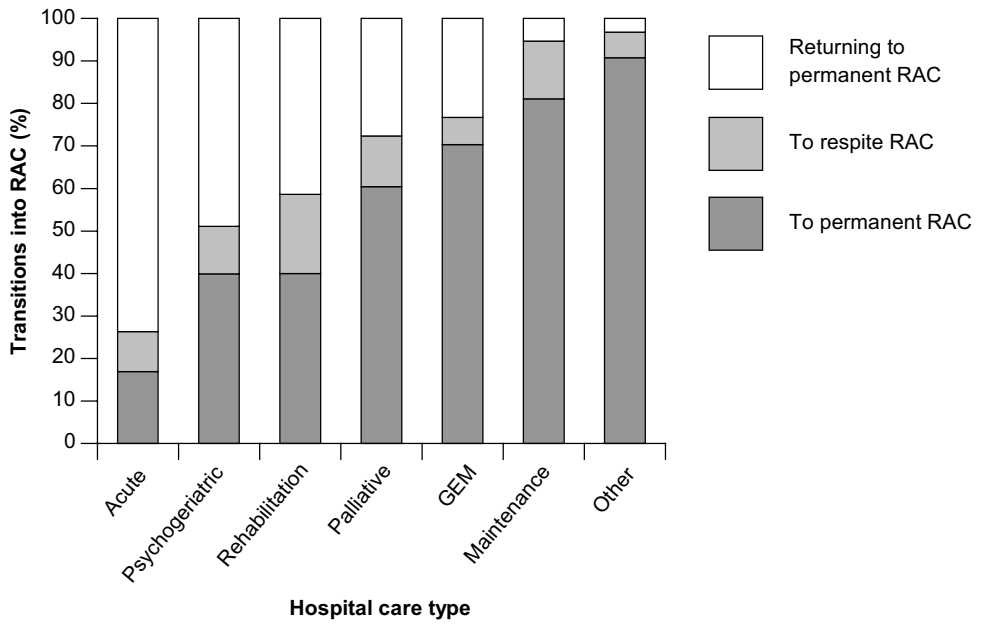
Hospital care type	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
	Row per cent					Est'd min %	Est'd max %
Acute	73.7	16.9	9.4	100.0	60,612	7.4	8.2
Rehabilitation	41.4	40.0	18.6	100.0	5,264	12.4	13.8
Palliative	27.7	60.4	12.0	100.0	618	12.4	13.7
GEM	23.3	70.3	6.4	100.0	2,367	28.2	31.4
Psychogeriatric	48.9	39.9	11.2	100.0	466	33.7	37.5
Maintenance	5.3	81.1	13.6	100.0	5,345	49.9	55.6
Other	3.3	90.8	6.0	100.0	1,277	35.3	39.2
All	**63.4**	**26.4**	**10.2**	**100.0**	**. .**	**8.5**	**9.5**
Total separations (number)	**48,152**	**20,064**	**7,733**	**. .**	**75,949**	**890,693**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.
3. Care types Newborn care, Organ procurement—posthumous and Hospital boarder were excluded from the table (1 case).
4. 230 records with unknown care type were excluded from the table. All of these records related to separations from Tasmanian hospitals; 226 of these were from private hospitals.

Nearly three-quarters (74%) of acute care episodes that ended with the patient going to RAC were for people returning to permanent care (Figure 3.3, Table 3.10). This proportion was much higher than that for any other care type, with psychogeriatric and rehabilitative care having the next highest proportions (49% and 41%, respectively). Only around one quarter of palliative care and GEM episodes involving transitions from hospital to RAC were for people already in permanent care. Very few episodes of maintenance care (5% of transitions to RAC) were for people returning to permanent RAC, with 81% of transitions from this care type relating to admissions into permanent care. Transitions into RAC from 'other' types of hospital care were predominantly for people going into permanent RAC (91%). Care types with a high ratio of permanent to respite admissions were GEM (11.0 to 1), maintenance care (6.0 to 1) and palliation (5.0 to 1) (Table 3.11).

People leaving hospital to return to the community or to permanent RAC had similar care type profiles, with 93% of their hospital episodes involving acute care and 5% being for rehabilitation (Table 3.12). However, reflecting the differing proportions that related to transitions to RAC seen above for the various care types, care profiles were quite different for the other transition groups. Acute care accounted for just over half (51%) of episodes ending with the patient entering permanent RAC, with maintenance care being the next most common care type (22%). Rehabilitative care was also quite common (11%). At 8%, GEM was at least four times more common among this transition group than for any other group. Hospital episodes ending with the patient going to RAC for respite care were more likely to have been for acute care (73%) and less likely to have been for maintenance care (9%) than those ending with admission to permanent RAC; slightly more received rehabilitative care (13%) before being discharged.



Source: Table 3.10.

Figure 3.3:Movement into RAC from hospital by hospital care type

Length of stay varied both with care type and with post-hospital destination within care type (Table 3.13). As expected, acute care episodes tended to be shorter than other types (mean 6.8 days, median 4 days), with palliative care also being relatively short (mean 13.8 days, median 8 days). Psychogeriatric and maintenance care episodes were, on average, much longer than other episodes, particularly the former with a mean length of 64.2 days and median of 28 days.

Within care type, there were two broad patterns of length of stay depending on post-hospital destination. For acute care, rehabilitation, palliative care and GEM episodes, those ending with admission into RAC tended to be longer than other episodes, with patients entering permanent care having had longer stays than those going for respite care (Table 3.13). For psychogeriatric and maintenance care (and, to a lesser extent, 'other' care), the longest episodes tended to be for those who died in hospital, with episodes ending in permanent RAC admission being the next longest. Episodes ending with the patient returning to their usual residence in the community or in RAC had similar length of stay patterns across hospital care type.

Table 3.11: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by hospital care type, Australia, 2001–02 (unadjusted hospital separations)

Remoteness area	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
	Number (unadjusted hospital separations)			Ratio
Acute	10,241	5,675	15,916	1.8 : 1
Rehabilitation	2,105	978	3,083	2.2 : 1
Palliative	373	74	447	5.0 : 1
GEM	1,665	151	1,816	11.0 : 1
Psychogeriatric	186	52	238	3.6 : 1
Maintenance	4,335	727	5,062	6.0 : 1
Other	1,159	76	1,235	15.3 : 1
All	**20,064**	**7,733**	**27,797**	**2.6 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. Care types Newborn care, Organ procurement—posthumous and Hospital boarder were excluded from the table (1 case).
4. 230 records with unknown care type were excluded from the table. All related to separations from Tasmanian hospitals; 226 of these were from private hospitals.

Table 3.12: Hospital separations for people aged 65+, by hospital care type and movement type, Australia, 2001–02 (unadjusted)

Hospital care type	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	N
			Column per cent				
Acute	92.8	51.0	73.4	93.1	77.6	91.2	858,930
Rehabilitation	4.5	10.5	12.6	4.6	1.2	4.6	43,121
Palliative	0.4	1.9	1.0	0.5	16.9	1.5	13,678
GEM	1.1	8.3	2.0	0.7	1.2	1.0	9,008
Psychogeriatric	0.5	0.9	0.7	0.1	0.1	0.2	1,439
Maintenance	0.6	21.6	9.4	0.7	2.5	1.3	12,004
Other	0.1	5.8	1.0	0.3	0.5	0.4	3,873
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total separations (number)	**48,125**	**20,064**	**7,733**	**814,744**	**51,360**	**. .**	**942,053**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. Care types Newborn care, Organ procurement—posthumous and Hospital boarder were excluded from the table (1 case).
4. 6,107 records with unknown care type were excluded from the table. All of these records related to separations from Tasmanian hospitals; 6,095 were from private hospitals.
5. State/territory tables are in Appendix A.

Table 3.13: Hospital separations for people aged 65+: mean, median and 90th percentile of length of stay, by hospital care type and movement type, Australia, 2001–02 (unadjusted)

Hospital care type	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	N
			Mean (days)				
Acute	7.6	28.6	16.4	6.1	11.7	6.8	858,930
Rehabilitation	19.4	39.7	28.1	19.7	24.0	20.9	43,121
Palliative	9.1	33.3	22.0	11.5	14.2	13.8	13,678
GEM	20.4	47.2	24.2	22.2	26.8	27.1	9,008
Psychogeriatric	31.8	129.4	47.0	46.6	291.6	64.2	1,439
Maintenance	10.6	50.5	27.0	28.5	176.4	51.9	12,004
Other	16.8	48.1	35.1	17.2	85.4	31.2	3,873
All	**8.4**	**38.2**	**19.5**	**7.1**	**17.3**	**8.5**	**. .**
			Median (days)				
Acute	5	21	12	4	7	4	858,930
Rehabilitation	17	30	23	15	16	15	43,121
Palliative	6	22	15	8	8	8	13,678
GEM	16	35	19.5	15	18	18	9,008
Psychogeriatric	25	51	35.5	26	60	28	1,439
Maintenance	7	22	14	9	31	14	12,004
Other	9	26	24.5	7	23	12	3,873
All	**6**	**24**	**14**	**4**	**7**	**5**	**. .**
			90th percentile (days)				
Acute	16	57	34	13	27	15	858,930
Rehabilitation	35	76	51	38	51	41	43,121
Palliative	20	77	59	23	34	31	13,678
GEM	39	99	49	46	55	57	9,008
Psychogeriatric	67	333	100	74	718	99	1,439
Maintenance	23	92	56	41	461	79	12,004
Other	n.p.	95	74	37	165	65	3,873
All	**19**	**73**	**40**	**15**	**31**	**18**	**. .**
Total hospital (number)	**48,152**	**20,064**	**7,733**	**814,744**	**51,360**	**. .**	**942,053**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. See technical note Box 3.1 on measuring length of stay.
2. Age is as at time of hospital admission.
3. Care types Newborn care, Organ procurement—posthumous and Hospital boarder were excluded from the table (1 case).
4. 6,107 records with unknown care type were excluded from the table. All of these records related to separations from Tasmanian hospitals; 6,095 were from private hospitals.

3.4 Hospital diagnosis

During a hospital episode, information about the health conditions that cause or contribute to admission, or which influence treatment, is recorded on the patient record. Of all the diagnoses recorded, the principal diagnosis is defined as that found to be chiefly responsible for the episode of care. However, where multiple complex health conditions are present, it may be difficult to identify one single condition that caused admission to hospital, and the interaction of multiple health conditions, medication use, and social factors can contribute significantly to the need for hospitalisation among older people and to the complexity and cost of treatment. In addition, the relatively high prevalence of multiple hospital episodes relating to a stay in hospital by people newly moving to residential care affects the examination of health conditions causing hospitalisation for these people. In some cases the initial reason for the hospitalisation of a person who was discharged into residential care may not be represented in the available data, with the principal diagnosis for the hospital episode immediately prior to the move either being different from that which caused the initial hospitalisation or indicating care needs rather than a specific health condition.

Noting these limitations, in the following discussion the principal diagnoses for older patients making various transitions are examined, with diagnoses combined into 18 groups corresponding to diagnosis chapters, or condition groups, in the International Classification of Diseases 10th revision Australian Modification (ICD-10-AM, 2nd edition). In the following analysis, groups of conditions are referred to using abbreviated names to aid the flow of discussion; names showing more fully the conditions included in the group are used in the tables (for example *Diseases of the musculoskeletal system and connective tissues* is referred as musculoskeletal diseases in the discussion). Appendix C contains a list of conditions included in the ICD-10-AM edition 2 chapters, and classification codes are provided in tables where appropriate (see Table 3.14 for an example).

Overall, the four most common condition groups (diseases of the circulatory, digestive and respiratory systems, and neoplasms, that is, tumours and cancers) accounted for 50% of overnight hospital episodes ending with the patient leaving hospital (Table 3.16). The proportion of hospital separations (excluding deaths) that ended with discharge to RAC varied considerably across groups of conditions, ranging from under 5% (for example, for patients in hospital with a principal diagnosis of neoplasm) to over 70%—for patients with a principal diagnosis of awaiting admission elsewhere (Table 3.14). Apart from this latter group, only principal diagnoses among mental and behavioural disorders were associated with more than 15% of live hospital separations ending with discharge to RAC (21%–24%).

Among people moving from hospital to RAC, some condition groups were more likely than others to be associated with admission into residential care as opposed to return to permanent care (Table 3.14). As expected, nearly all hospital–RAC transition episodes for people awaiting admission elsewhere related to an admission into RAC (96%); the remaining 4% (191 transitions) were for people already in RAC who moved to a different RAC facility on leaving hospital. Hospital episodes for patients with a principal diagnosis related to factors influencing health status, to mental and behavioural disorders or to the nervous system (the last two of which include dementia conditions) were commonly associated with admission into RAC, with less than half of these transition hospital episodes being for people already in permanent RAC. On the other hand, over 85% of transition episodes with a principal diagnosis related to the digestive system, blood disorders or eye problems were for people already in permanent residential care.

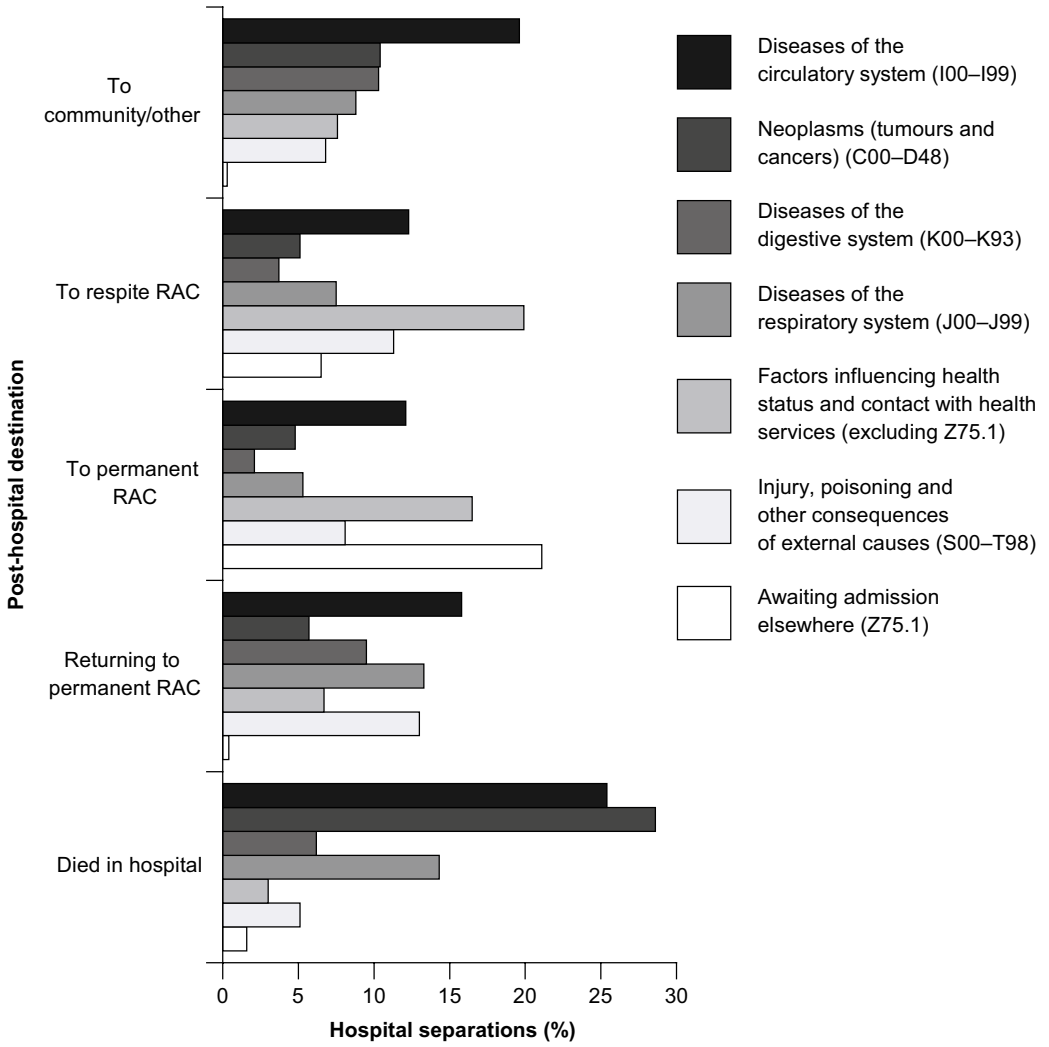
Patients waiting for admission elsewhere had the highest ratio of permanent to respite care admissions (8.5 to 1) (Table 3.15). Conditions associated with an above average ratio of permanent to respite care admissions included mental and behavioural disorders and diseases of the nervous system (3.1 and 3.2 to 1, respectively).

Reflecting both the overall prevalence of diagnoses and propensity to be associated with a move to RAC, the frequency of particular disease groups varied considerably with post-hospital destination (Figure 3.4). For example, principal diagnoses in the four most common condition groups overall accounted for 75% of episodes ending with the death of the patient, compared with about one-quarter (24%) for patients admitted to permanent RAC on leaving hospital.

There were several key differences in the principal diagnosis profiles of the transition groups (Table 3.16, Figure 3.4). Of particular interest is the high proportion of episodes that ended with a permanent admission to RAC which had 'Awaiting admission elsewhere' as their principal diagnosis (21%). This diagnosis was next most common among patients who later moved to respite care (7% of episodes). Other factors influencing health status were also commonly given as the principal diagnosis for hospital episodes ending with admission to RAC (17–20%). Diagnoses in this group include health services for examinations, investigations and specific procedures and 'persons with potential hazards' (see Appendix C). Relatively high proportions of hospital episodes for people who returned to permanent RAC or who moved to respite care (13% and 11%, respectively, compared with 7% overall) were admitted to hospital primarily as the result of injury or poisoning.

The average length of hospital episode varied with the principal diagnosis on hospital admission (tables 3.17, 3.18 and 3.19). For example, in 2001–02 patients with an eye condition as the principal diagnosis tended to have very short stays (mean 1.8 days, median 1 day) while those in hospital with mental or behavioural disorders had long stays (mean 26.0 days, median 12 days). However, in general, irrespective of the condition leading to hospital admission, people who were admitted to RAC after leaving hospital had longer hospital episodes than others, while those who either returned to the community or to permanent RAC had similar length of stay patterns. Those who died in hospital on average had a length of stay between these two groups. There were, however, some exceptions. Patients with a principal diagnosis of 'Awaiting admission elsewhere' who either returned to the community or died in hospital tended to have similar or longer hospital episodes than those who were admitted into RAC.

For a number of condition groups the 90th percentile was similar or higher for people who died in hospital as that for those who moved to RAC; that is, a significant proportion had long stays in hospital before dying. Condition groups where this pattern occurred were factors influencing health status (including awaiting admission elsewhere), musculoskeletal and nervous system diseases and mental and behavioural disorders (Table 3.19).



Note: The selected principal diagnoses accounted for at least 10% of separations for at least one post-hospital destination. Note that hospital separations with a principal diagnosis of 'Awaiting admission elsewhere (Z75.1)' have been removed from the ICD-10-AM chapter (Ed.2) 'Factors influencing health status and contact with health services' and presented separately.

Source: Table 3.16.

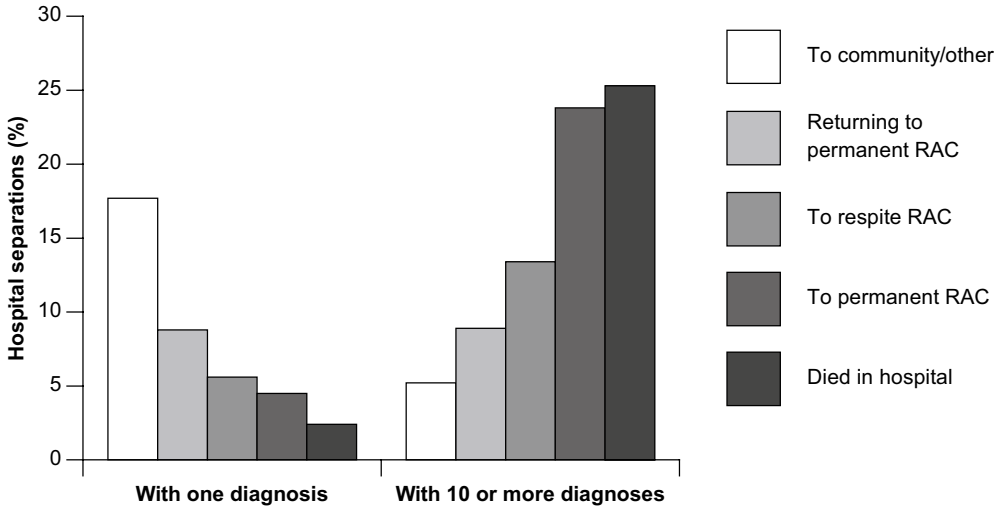
Figure 3.4:Selected principal diagnoses by post-hospital destination

As noted previously, where multiple complex health conditions were present, it may have been difficult to identify one single condition that caused admission to hospital. Overall, 16% of hospital episodes of one or more nights in hospital had only one diagnosis recorded and 7% had 10 or more (Table 3.22). Nearly half (46%) reported two to four diagnoses. The likelihood of discharge to RAC increased with the number of diagnoses recorded for the hospital episode: around 4% of hospital episodes with only a principal diagnosis reported (excluding those ending in death) resulted in a transition to RAC compared with around 20% of those with 10 or more reported diagnoses (Table 3.20).

For people moving from hospital to RAC, as the number of reported diagnoses increased the hospital episode was increasingly less likely to be for a person who was already a permanent aged care resident (Table 3.20). Around three-quarters of episodes with fewer than 5 recorded diagnoses were for people returning to permanent care compared with only 43% of episodes

with 10 or more reported diagnoses. In general, the likelihood of being admitted into permanent rather than respite care increased with the number of recorded diagnoses. People admitted into RAC with 10 or more diagnoses reported for their transition hospital episode were nearly five times as likely to be admitted into permanent rather than respite care (Table 3.21). For those with five to nine reported diagnoses the ratio of permanent to respite admissions was 2.8 to 1.

The average number of diagnoses varied considerably with post-hospital destination (Figure 3.5). People who returned to the community or to permanent RAC were more likely to have only one diagnosis reported (18% and 9%, respectively) than others, with episodes ending with the death of the patient least likely to have only one recorded diagnosis (2%). Almost one quarter of episodes ending with the patient moving to permanent RAC or dying had 10 or more diagnoses recorded (24% and 25%, respectively); 13% of episodes for people moving into respite care had 10 or more reported diagnoses compared with 9% for people returning to permanent care and 5% for people going back to the community. The relationship between number of diagnoses and transition into permanent RAC is likely to be inter-related with the tendency to long hospital stays of this group: the longer a person with multiple conditions was in hospital the more likely it is that those conditions were recorded as additional diagnoses.



Source: Table 3.22.

Figure 3.5: Reported co-morbidity by post-hospital destination

Table 3.14: Summary of movements from hospital into RAC for people aged 65+, by principal diagnosis, Australia, 2001–02 (in order of decreasing prevalence)

Principal diagnosis (ICD-10-AM Ed. 2 chapter)[(a)]	Returning to permanent RAC	To perm-anent RAC	To respite RAC	Total	Un-adjusted number	As per cent of all live hospital separations: estimated range	
	Row per cent					Est'd min %	Est'd max %
Diseases of the circulatory system (I00–I99)	69.3	22.1	8.6	100.0	11,010	6.4	7.1
Injury, poisoning and other consequences of external causes (S00–T98)	71.7	18.4	9.9	100.0	8,799	13.6	15.2
Factors influencing health status and contact with health services (excluding Z75.1)	40.0	40.9	19.0	100.0	8,115	11.5	12.8
Diseases of the respiratory system (J00–J99)	79.6	13.1	7.2	100.0	8,043	10.0	11.2
Diseases of the digestive system (K00–K93)	86.7	7.9	5.5	100.0	5,304	5.9	6.6
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	69.8	20.6	9.6	100.0	5,209	7.6	8.4
Awaiting admission elsewhere (Z75.1)	3.9	86.0	10.1	100.0	4,938	70.3	78.1
Neoplasms (tumours and cancers) (C00–D48)	67.0	23.4	9.7	100.0	4,101	4.6	5.1
Mental and behavioural disorders (F00–F99)	39.6	45.6	14.8	100.0	3,965	21.2	23.5
Diseases of the genitourinary system (N00–N99)	78.1	15.7	6.3	100.0	3,754	7.0	7.8
Diseases of the nervous system (G00–G99)	49.4	38.5	12.1	100.0	2,851	11.4	12.6
Diseases of the musculoskeletal system and connective tissue (M00–M99)	61.0	21.6	17.4	100.0	2,519	3.7	4.2
Endocrine, nutritional and metabolic diseases (E00–E89)	74.7	17.1	8.2	100.0	2,289	9.8	10.9
Diseases of the skin and subcutaneous tissue (L00–L99)	79.2	13.6	7.2	100.0	2,073	12.3	13.7
Blood, blood-forming organs and immunological disorders (D50–D89)	89.1	6.6	4.3	100.0	1,234	9.9	11.0
Infectious and parasitic diseases (A00–B99)	80.9	11.9	7.2	100.0	1,009	10.3	11.4
Diseases of the eye and adnexa (H00–H59)	91.6	3.9	4.5	100.0	690	3.4	3.8
Other/unknown	82.1	14.3	3.6	100.0	196	9.0	10.0
Diseases of the ear and mastoid process (H60–H95)	70.3	>17.2	<12.5	100.0	64	1.8	2.0
Congenital malformations (Q00–Q99)	75.0	<25.0	<25.0	100.0	16	2.9	3.2
All	**63.4**	**26.4**	**10.2**	**100.0**	**. .**	**8.5**	**9.4**
Total separations (number)	**48,320**	**20,117**	**7,742**	**. .**	**76,179**	**896,796**	

(a) Diagnosis relates to that recorded during the last hospital episode before discharge from the hospital system (see Box 1.1). See Appendix C for a list of conditions included in ICD-10-AM chapters. Note that hospital separations with a principal diagnosis of 'Awaiting admission elsewhere (Z75.1)' have been removed from the ICD-10-AM chapter (Ed.2) 'Factors influencing health status and contact with health services' and presented separately.

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.

Table 3.15: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by principal diagnosis, Australia, 2001–02 (unadjusted, in order of decreasing prevalence)

Principal diagnosis (ICD-10-AM Ed. 2 chapter)[(a)]	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
	Number (unadjusted hospital separations)			Ratio
Factors influencing health status and contact with health services (excluding Z75.1)	3,323	1,543	4,866	2.2 : 1
Awaiting admission elsewhere (Z75.1)	4,247	500	4,747	8.5 : 1
Diseases of the circulatory system (I00–I99)	2,431	950	3,381	2.6 : 1
Injury, poisoning and other consequences of external causes (S00–T98)	1,623	871	2,494	1.9 : 1
Mental and behavioural disorders (F00–F99)	1,808	585	2,393	3.1 : 1
Diseases of the respiratory system (J00–J99)	1,057	583	1,640	1.8 : 1
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	1,073	498	1,571	2.2 : 1
Diseases of the nervous system (G00–G99)	1,099	345	1,444	3.2 : 1
Neoplasms (tumours and cancers) (C00–D48)	958	397	1,355	2.4 : 1
Diseases of the musculoskeletal system and connective tissue (M00–M99)	545	438	983	1.2 : 1
Diseases of the genitourinary system (N00–N99)	588	236	824	2.5 : 1
Diseases of the digestive system (K00–K93)	417	290	707	1.4 : 1
Endocrine, nutritional and metabolic diseases (E00–E89)	392	187	579	2.1 : 1
Diseases of the skin and subcutaneous tissue (L00–L99)	282	149	431	1.9 : 1
Infectious and parasitic diseases (A00–B99)	120	73	193	1.6 : 1
Blood, blood-forming organs and immunological disorders (D50–D89)	82	53	135	1.5 : 1
Diseases of the eye and adnexa (H00–H59)	27	31	58	0.9 : 1
Other/unknown	28	7	35	4.0 : 1
Diseases of the ear and mastoid process (H60–H95)	>10	<9	19	n.p. : 1
Congenital malformations (Q00–Q99)	<5	—	<5	. . : 1
All	**20,117**	**7,742**	**27,859**	**2.6 : 1**

(a) Diagnosis relates to that recorded during the last hospital episode before discharge from the hospital system (see Box 1.1). See Appendix C for a list of conditions included in ICD-10-AM chapters. Note that hospital separations with a principal diagnosis of 'Awaiting admission elsewhere (Z75.1)' have been removed from the ICD-10-AM chapter (Ed.2) 'Factors influencing health status and contact with health services' and presented separately.

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table 3.16: Hospital separations for people aged 65+, by principal diagnosis and movement type, Australia, 2001–02 (column per cent) (unadjusted, in order of decreasing prevalence)

Principal diagnosis (ICD-10-AM Ed. 2 chapter)[(a)]	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	N
			Column per cent				
Diseases of the circulatory system (I00–I99)	15.8	12.1	12.3	19.6	25.4	19.5	185,315
Neoplasms (tumours and cancers) (C00–D48)	5.7	4.8	5.1	10.4	28.6	11.0	104,410
Diseases of the digestive system (K00–K93)	9.5	2.1	3.7	10.3	6.2	9.8	92,849
Diseases of the respiratory system (J00–J99)	13.3	5.3	7.5	8.8	14.3	9.2	87,452
Factors influencing health status and contact with health services (excluding Z75.1)	6.7	16.5	19.9	7.6	3.0	7.6	72,178
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	7.5	5.3	6.4	7.7	2.2	7.4	69,762
Diseases of the musculoskeletal system and connective tissue (M00–M99)	3.2	2.7	5.7	7.9	1.1	7.2	67,987
Injury, poisoning and other consequences of external causes (S00–T98)	13.0	8.1	11.3	6.8	5.1	7.1	67,170
Diseases of the genitourinary system (N00–N99)	6.1	2.9	3.0	6.1	3.4	5.8	55,423
Diseases of the nervous system (G00–G99)	2.9	5.5	4.5	2.7	1.2	2.7	25,712
Endocrine, nutritional and metabolic diseases (E00–E89)	3.5	1.9	2.4	2.6	2.1	2.6	24,425
Diseases of the eye and adnexa (H00–H59)	1.3	0.1	0.4	2.4	0.0	2.2	20,431
Mental and behavioural disorders (F00–F99)	3.3	9.0	7.6	1.8	0.9	2.0	19,221
Diseases of the skin and subcutaneous tissue (L00–L99)	3.4	1.4	1.9	1.8	0.8	1.8	17,215
Blood, blood-forming organs and immunological disorders (D50–D89)	2.3	0.4	0.7	1.4	0.5	1.4	12,803
Infectious and parasitic diseases (A00–B99)	1.7	0.6	0.9	1.1	3.3	1.2	11,504
Awaiting admission elsewhere (Z75.1)	0.4	21.1	6.5	0.3	1.6	0.8	7,860
Diseases of the ear and mastoid process (H60–H95)	0.1	0.1	0.1	0.4	—	0.4	3,646
Other/unknown	0.3	0.1	0.1	0.2	0.1	0.2	2,239
Congenital malformations (Q00–Q99)	—	—	—	0.1	—	0.1	559
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total separations (number)	**48,320**	**20,117**	**7,742**	**820,617**	**51,365**	**. .**	**948,161**

(a) Diagnosis relates to that recorded during the last hospital episode before discharge from the hospital system (see Box 1.1). See Appendix C for a list of conditions included in ICD-10-AM chapters. Note that hospital separations with a principal diagnosis of 'Awaiting admission elsewhere (Z75.1)' have been removed from the ICD-10-AM chapter (Ed.2) 'Factors influencing health status and contact with health services' and presented separately.

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. State/territory tables are in Appendix A.

Table 3.17: Hospital separations for people aged 65+: mean length of stay, by principal diagnosis and movement type, Australia, 2001–02 (days) (unadjusted, in order of decreasing prevalence)

Principal diagnosis (ICD-10-AM Ed. 2 chapter)[(a)]	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	N
			Mean (days)				
Diseases of the circulatory system (I00–I99)	7.5	36.1	17.5	6.1	10.8	6.9	185,315
Neoplasms (tumours and cancers) (C00–D48)	7.0	30.6	19.3	6.8	15.0	8.2	104,410
Diseases of the digestive system (K00–K93)	6.3	27.9	12.6	4.9	11.3	5.3	92,849
Diseases of the respiratory system (J00–J99)	8.2	28.1	14.9	7.4	11.7	8.1	87,452
Factors influencing health status and contact with health services (excluding Z75.1)	16.2	44.1	25.0	15.5	78.4	18.4	72,178
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	5.7	28.3	13.5	4.1	13.1	4.7	69,762
Diseases of the musculoskeletal system and connective tissue (M00–M99)	9.4	35.2	16.8	7.0	17.7	7.4	67,987
Injury, poisoning and other consequences of external causes (S00–T98)	8.5	33.2	17.8	7.8	13.4	8.8	67,170
Diseases of the genitourinary system (N00–N99)	6.8	26.8	15.3	4.9	12.0	5.5	55,423
Diseases of the nervous system (G00–G99)	8.5	49.6	17.6	5.7	32.4	8.6	25,712
Endocrine, nutritional and metabolic diseases (E00–E89)	8.0	27.5	19.3	7.2	15.4	8.0	24,425
Diseases of the eye and adnexa (H00–H59)	2.3	64.3	4.9	1.7	25.8	1.8	20,431
Mental and behavioural disorders (F00–F99)	18.8	62.3	26.6	19.5	111.5	26.0	19,221
Diseases of the skin and subcutaneous tissue (L00–L99)	10.2	31.1	17.9	9.3	18.0	10.0	17,215
Blood, blood-forming organs and immunological disorders (D50–D89)	4.7	26.0	14.6	4.8	13.2	5.1	12,803
Infectious and parasitic diseases (A00–B99)	9.2	23.7	19.3	8.1	10.4	8.7	11,504
Awaiting admission elsewhere (Z75.1)	10.0	35.3	24.1	38.0	96.4	41.1	7,860
Diseases of the ear and mastoid process (H60–H95)	4.8	16.8	30.8	3.5	n.p.	3.6	3,646
Other/unknown	4.3	25.2	16.0	4.4	13.7	4.7	2,239
Congenital malformations (Q00–Q99)	5.9	n.p.	—	4.8	11.9	5.3	559
All	**8.4**	**38.2**	**19.5**	**7.1**	**17.2**	**8.5**	**. .**
Total separations (number)	**48,320**	**20,117**	**7,742**	**820,617**	**51,365**	**. .**	**948,161**

(a) Diagnosis relates to that recorded during the last hospital episode before discharge from the hospital system (see Box 1.1). See Appendix C for a list of conditions included in ICD-10-AM chapters. Note that hospital separations with a principal diagnosis of 'Awaiting admission elsewhere (Z75.1)' have been removed from the ICD-10-AM chapter (Ed.2) 'Factors influencing health status and contact with health services' and presented separately.

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.

2. Age is as at time of hospital admission.

Table 3.18: Hospital separations for people aged 65+: median length of stay, by principal diagnosis and movement type, Australia, 2001–02 (days) (unadjusted, in order of decreasing prevalence)

Principal diagnosis (ICD-10-AM Ed. 2 chapter)[(a)]	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	N
			Median (days)				
Diseases of the circulatory system (I00–I99)	6	26	13	4	5	4	185,315
Neoplasms (tumours and cancers) (C00–D48)	4	22	14	4	9	5	104,410
Diseases of the digestive system (K00–K93)	4	20	9	3	6	3	92,849
Diseases of the respiratory system (J00–J99)	6	20	11	6	6	6	87,452
Factors influencing health status and contact with health services (excluding Z75.1)	14	30	20	11	17	12	72,178
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	4	20	9	2	7	2	69,762
Diseases of the musculoskeletal system and connective tissue (M00–M99)	7	23	12	6	11	6	67,987
Injury, poisoning and other consequences of external causes (S00–T98)	6	25	14	5	8	5	67,170
Diseases of the genitourinary system (N00–N99)	5	20	11.5	3	7	4	55,423
Diseases of the nervous system (G00–G99)	5	25	11	2	10	3	25,712
Endocrine, nutritional and metabolic diseases (E00–E89)	6	21	14	4	9	5	24,425
Diseases of the eye and adnexa (H00–H59)	1	3	1	1	12	1	20,431
Mental and behavioural disorders (F00–F99)	13	26	17	10	17	12	19,221
Diseases of the skin and subcutaneous tissue (L00–L99)	7	23.5	14	6	11	7	17,215
Blood, blood-forming organs and immunological disorders (D50–D89)	3	18	13	3	8	3	12,803
Infectious and parasitic diseases (A00–B99)	7	18.5	15	6	6	6	11,504
Awaiting admission elsewhere (Z75.1)	7	20	14	18	23	19	7,860
Diseases of the ear and mastoid process (H60–H95)	4	14	n.p.	2	n.p.	2	3,646
Other/unknown	3	17	n.p.	3	10	3	2,239
Congenital malformations (Q00–Q99)	3	n.p.	—	3	n.p.	3	559
All	**6**	**24**	**14**	**4**	**7**	**5**	**. .**
Total separations (number)	**48,320**	**20,117**	**7,742**	**820,617**	**51,365**	**. .**	**948,161**

(a) Diagnosis relates to that recorded during the last hospital episode before discharge from the hospital system (see Box 1.1). See Appendix C for a list of conditions included in ICD-10-AM chapters. Note that hospital separations with a principal diagnosis of 'Awaiting admission elsewhere (Z75.1)' have been removed from the ICD-10-AM chapter (Ed.2) 'Factors influencing health status and contact with health services' and presented separately.

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. Table excludes same-day hospital episodes, statistical discharges and transfers to other hospitals.

Table 3.19: Hospital separations for people aged 65+: 90th percentile of length of stay, by principal diagnosis and movement type, Australia, 2001–02 (days) (unadjusted, in order of decreasing prevalence)

Principal diagnosis (ICD-10-AM Ed. 2 chapter)[(a)]	Returning to permanent RAC	To permanent RAC	To respite RAC	To community /other	Died in hospital	All	N
	90th percentile (days)						
Diseases of the circulatory system (I00–I99)	15	64	36	13	23	14	185,315
Neoplasms (tumours and cancers) (C00–D48)	17	66	40	15	34	18	104,410
Diseases of the digestive system (K00–K93)	13	59	28	11	27	11	92,849
Diseases of the respiratory system (J00–J99)	16	55	30	14	23	16	87,452
Factors influencing health status and contact with health services (excluding Z75.1)	32	81	48	32	101	36	72,178
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	13	58	30	9	27	10	69,762
Diseases of the musculoskeletal system and connective tissue (M00–M99)	21	71	34	14	42	14	67,987
Injury, poisoning and other consequences of external causes (S00–T98)	18	64	35	18	31	20	67,170
Diseases of the genitourinary system (N00–N99)	14	55	31	10	26	11	55,423
Diseases of the nervous system (G00–G99)	20	100	36	13	42	17	25,712
Endocrine, nutritional and metabolic diseases (E00–E89)	17	59	36	16	36	18	24,425
Diseases of the eye and adnexa (H00–H59)	5	n.p.	n.p.	2	n.p.	2	20,431
Mental and behavioural disorders (F00–F99)	42	107	49	41	157	47	19,221
Diseases of the skin and subcutaneous tissue (L00–L99)	21	65	35	19	37	21	17,215
Blood, blood-forming organs and immunological disorders (D50–D89)	11	n.p.	n.p.	11	32	12	12,803
Infectious and parasitic diseases (A00–B99)	18	50.5	n.p.	17	26	19	11,504
Awaiting admission elsewhere (Z75.1)	21	76	50	75	198	77	7,860
Diseases of the ear and mastoid process (H60–H95)	n.p.	n.p.	n.p.	8	n.p.	8	3,646
Other/unknown	9	n.p.	n.p.	9	27	10	2,239
Congenital malformations (Q00–Q99)	n.p.	n.p.	—	11	n.p.	11	559
All	**19**	**73**	**40**	**15**	**31**	**18**	**. .**
Total separations (number)	**48,320**	**20,117**	**7,742**	**820,617**	**51,365**	**. .**	**948,161**

(a) Diagnosis relates to that recorded during the last hospital episode before discharge from the hospital system (see Box 1.1). See Appendix C for a list of conditions included in ICD-10-AM chapters. Note that hospital separations with a principal diagnosis of 'Awaiting admission elsewhere (Z75.1)' have been removed from the ICD-10-AM chapter (Ed.2) 'Factors influencing health status and contact with health services' and presented separately.

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table 3.20: Summary of movements from hospital into RAC for people aged 65+, by movement type and number of diagnoses, Australia, 2001–02

Number of diagnoses	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
		Row per cent				Est'd min %	Est'd max %
One diagnosis	76.2	16.0	7.8	100.0	5,609	3.7	4.1
2–4 diagnoses	73.1	17.0	9.9	100.0	27,850	6.6	7.3
5–9 diagnoses	59.5	29.8	10.8	100.0	32,558	12.1	13.5
10 or more diagnoses	42.5	47.2	10.3	100.0	10,115	19.1	21.2
All	**63.4**	**26.4**	**10.2**	**100.0**	**. .**	**8.5**	**9.5**
Total separations	**48,294**	**20,099**	**7,739**	**. .**	**76,132**	**895,923**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. The number of diagnoses recorded relates to those recorded during the last hospital episode before discharge from the hospital system (see Box 1.1).
3. Age is as at time of hospital admission.
4. 47 records were excluded due to missing diagnosis codes.

Table 3.21: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by movement type and number of diagnoses, Australia, 2001–02 (unadjusted hospital separations)

Number of diagnoses	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
	Number (unadjusted hospital separations)			Ratio
One diagnosis	900	436	3,661	2.1 : 1
2–4 diagnoses	4,736	2,761	8,240	1.7 : 1
5–9 diagnoses	9,687	3,504	10,725	2.8 : 1
10 or more diagnoses	4,776	1,038	12,515	4.6 : 1
All	**20,099**	**7,739**	**27,838**	**2.6 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. The number of diagnoses recorded relates to those recorded during the last hospital episode before discharge from the hospital system (see Box 1.1).
3. Age is as at time of hospital admission.
4. 47 records were excluded due to missing diagnosis codes.

Table 3.22: Hospital separations for people aged 65+, by movement type, age and number of diagnoses, Australia, 2001–02 (unadjusted)

Age/number of diagnoses	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	N
			Column per cent				
One diagnosis	8.8	4.5	5.6	17.7	2.4	16.0	151,905
2–4 diagnoses	42.1	23.6	35.7	48.3	24.8	46.1	436,889
5–9 diagnoses	40.1	48.2	45.3	28.7	47.5	30.9	292,498
10 or more diagnoses	8.9	23.8	13.4	5.2	25.3	7.0	65,952
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total separations (number)	**48,294**	**20,099**	**7,739**	**819,791**	**51,321**	**. .**	**947,244**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. The number of diagnoses recorded relates to those recorded during the last hospital episode before discharge from the hospital system (see Box 1.1).
3. Age is as at time of hospital admission.
4. 917 records were excluded due to missing diagnosis codes.

3.5 Regional profile

The type of care received in hospital varied with the remoteness of the patient's usual residence and movement type (Table 3.23). Across all movement types except death, the percentage of acute care episodes increased with remoteness. For example, one-half of hospital episodes for people from major cities who moved into permanent RAC were for acute care, compared with 58% of episodes for those from remote and very remote areas. Rehabilitative hospital episodes were far more common for people who usually lived in major cities than in other regions for all movement types. For example, 17% of hospital episodes for people from a major city who moved into respite RAC were for rehabilitation, compared with 6–7% for people from inner and outer regional areas and 3% for those from remote and very remote areas (Table 3.23). Maintenance episodes were more frequent amongst people who moved from regions outside of major cities into permanent RAC (26%–31% for regional and remote areas versus 19% for major cities).

The time spent in hospital varied according to the post-hospital destination and the remoteness of the person's usual residence (Table 3.24). Generally, hospital episodes for people moving either temporarily into or returning to RAC were shorter for people from more remote areas. For example, hospital episodes for people returning to RAC in major cities lasted a median length of 6 days (mean of 8.9 days), compared with a median of 4 days (mean of 5.9 days) for those from remote areas and a median of 3 days (mean of 6.7 days) for those from very remote areas. Hospitals episodes for people moving into respite RAC from hospital were shorter for people from more remote areas, with a median of 14 days for people who usually lived in major cities and inner regional areas, compared with medians of 10 and 5.5 days for people from remote and very remote areas, respectively. Mean lengths of stay followed a similar pattern.

The association of hospital episode length and remoteness for people moving into permanent RAC from hospital was more complex. Median episode length for these hospital episodes decreased with increasing remoteness of usual residence, with a median of 24 days in major cities and 20 days for people from very remote areas. In contrast, for people who moved into permanent RAC the mean length of hospital episode generally increased with remoteness, with a mean of 35.8 days for people from major cities and 54.3 and 46.7 days for those who usually lived in remote and very remote areas, respectively. This indicates that among people moving into permanent RAC from hospital, some people from remote areas stayed in hospital a great deal longer than those who came from major cities. In particular, at least 10% of episodes for people from outer regional areas who were discharged into permanent RAC lasted 94 days or more compared with 69 days for people from major cities. For people from remote areas the 90th percentile for length of stay was 104 days. These differences could either reflect a greater need to ensure medical stability before discharging people from more remote regions (due to greater difficulty in accessing health services quickly) or could indicate difficulties in accessing permanent RAC suited to the person's needs in more remote areas.

While the median lengths of hospital episodes for people who died in hospital were similar across all regions (7–8 days), the mean and 90th percentile increased with remoteness of usual residence. Episodes for people from major cities who died in hospital had a mean of 13.6 days compared with 50.1 for people from very remote regions. Similarly, at least 10% of people from major cities and inner regional areas who died in hospital spent more than 30 days in hospital, compared with 76 days for people from very remote areas.

Table 3.23: Hospital separations for people aged 65+, by movement type, hospital care type and remoteness of person prior to admission into hospital, 2001–02 (unadjusted)

Movement type/hospital care type	Major cities	Inner regional	Outer regional	Remote and very remote	Australia	N
Return to permanent RAC			**Column per cent**			
Acute	91.6	94.8	96.6	97.9	92.8	44,679
Rehabilitation	5.4	3.0	2.2	0.9	4.5	2,180
Palliative	0.4	0.4	0.2	<0.9	0.4	171
GEM	1.3	1.0	0.4	—	1.1	551
Psychogeriatric	0.7	0.1	<0.1	—	0.5	228
Maintenance	0.6	0.7	0.4	<0.9	0.6	283
Other	0.1	0.1	<0.1	<0.9	0.1	42
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
Total separations (number)	*32,526*	*10,386*	*4,686*	*536*	*. .*	*48,134*
To permanent RAC						
Acute	50.0	53.1	54.1	57.9	51.0	10,226
Rehabilitation	12.4	6.3	5.4	7.9	10.5	2,104
Palliative	1.9	1.9	<1.8	<4.0	1.9	373
GEM	9.9	5.5	2.2	—	8.3	1,664
Psychogeriatric	1.1	0.6	<0.3	—	0.9	186
Maintenance	19.1	26.1	30.6	30.7	21.6	4,332
Other	5.6	6.4	6.1	<4.0	5.8	1,158
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
Total separations (number)	*14,073*	*4,197*	*1,633*	*140*	*. .*	*20,043*
To respite RAC						
Acute	71.6	75.4	75.3	83.2	73.4	5,662
Rehabilitation	17.1	7.0	6.0	3.4	12.7	978
Palliative	0.8	0.9	1.5	<3.4	1.0	74
GEM	2.0	2.3	1.2	—	2.0	151
Psychogeriatric	1.0	0.2	<0.5	<3.4	0.7	52
Maintenance	7.1	11.7	14.9	10.7	9.4	726
Other	0.4	2.4	<1.0	<3.4	1.0	76
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
Total separations (number)	*4,510*	*2,018*	*1,042*	*149*	*. .*	*7,719*

(continued)

Table 3.23 (continued): Hospital separations for people aged 65+, by movement type, hospital care type and remoteness of person prior to admission into hospital, 2001–02 (unadjusted)

Movement type/hospital care type	Major cities	Inner regional	Outer regional	Remote and very remote	Australia	N
To community/other			Column per cent			
Acute	91.8	94.8	95.7	95.1	93.1	755,596
Rehabilitation	5.8	3.0	1.9	1.3	4.6	37,189
Palliative	0.5	0.6	0.5	0.4	0.5	4,367
GEM	0.9	0.7	0.3	0.1	0.7	6,008
Psychogeriatric	0.2	—	—	—	0.1	911
Maintenance	0.4	0.8	1.4	2.9	0.7	5,344
Other	0.4	0.1	0.1	0.2	0.3	2,336
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
Total separations (number)	*501,819*	*198,025*	*95,390*	*16,517*	*. .*	*811,751*
Died in hospital						
Acute	77.6	77.7	77.5	74.7	77.5	39,744
Rehabilitation	1.4	0.9	0.8	<1.1	1.2	607
Palliative	17.8	16.1	14.0	14.1	16.9	8,666
GEM	1.4	1.1	0.3	—	1.2	623
Psychogeriatric	0.1	—	0.1	—	0.1	56
Maintenance	1.3	3.3	6.7	10.2	2.5	1,301
Other	0.3	0.9	0.7	<0.6	0.5	253
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
Total separations (number)	*32,927*	*11,681*	*5,758*	*884*	*. .*	*51,250*
All						
Acute	89.9	93.0	93.9	93.8	91.2	855,907
Rehabilitation	5.8	3.0	2.0	1.3	4.6	43,058
Palliative	1.5	1.4	1.2	1.1	1.5	13,651
GEM	1.2	0.8	0.3	0.1	1.0	8,997
Psychogeriatric	0.2	0.1	0.1	—	0.2	1,433
Maintenance	0.9	1.5	2.2	3.5	1.3	11,986
Other	0.5	0.3	0.2	0.2	0.4	3,865
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total separations (number)	**585,855**	**226,307**	**108,509**	**18,226**	**. .**	**938,897**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. The table uses the Australian Standard Geographical Classification Remoteness Structure as developed by the ABS (ABS 2001b).
4. Newborn care types, organ procurement and hospital boarders were excluded from the table (1 case).
5. 6,107 records with unknown care type were excluded from the table. All of these records related to separations from Tasmanian hospitals; 6,095 were from private hospitals.
6. 3,667 records were excluded due to missing valid postcodes for remoteness coding. One further record was excluded due to missing hospital care type.

Table 3.24: Hospital separations for people aged 65+: mean, median and 90th percentile of length of stay, by movement type and remoteness of person prior to admission into hospital, 2001–02 (unadjusted)

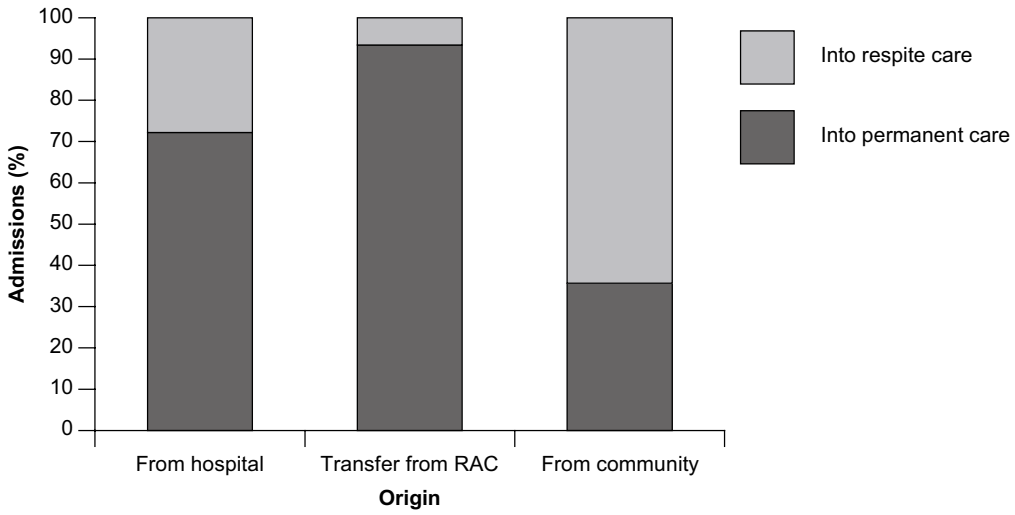
Movement type	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia	N
			Mean (days)				
Return to permanent RAC	8.9	7.6	7.1	5.9	6.7	8.4	48,302
To permanent RAC	35.8	41.0	51.1	54.3	46.7	38.2	20,096
To respite RAC	19.7	19.8	18.7	14.8	9.8	19.5	7,728
To community/other	7.4	6.7	6.9	6.2	7.1	7.1	817,114
Died in hospital	13.6	18.4	30.5	49.2	50.1	17.3	51,253
All	**8.6**	**8.1**	**8.9**	**8.8**	**9.3**	**8.5**	**. .**
			Median (days)				
Return to permanent RAC	6	5	5	4	3	6	48,302
To permanent RAC	24	23	23	20	21	24	20,096
To respite RAC	14	14	11	10	5.5	14	7,728
To community/other	4	4	4	4	4	4	817,114
Died in hospital	8	7	7	8	7	7	51,253
All	**5**	**4**	**4**	**4**	**4**	**5**	**. .**
			90th percentile (days)				
Return to permanent RAC	20	17	16	13	12	19	48,302
To permanent RAC	69	79	97	104	n.p.	73	20,096
To respite RAC	41	40	37	34	n.p.	40	7,728
To community/other	16	14	14	13	14	15	817,114
Died in hospital	30	30	38	43	76	31	51,253
All	**19**	**16**	**16**	**14**	**15**	**18**	**. .**
Total separations (number)	**585,855**	**230,808**	**109,496**	**13,420**	**4,914**	**. .**	**944,493**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. The table uses the Australian Standard Geographical Classification Remoteness Structure as developed by the ABS (ABS 2001b).
4. 3,667 records were missing valid postcodes for remoteness coding.

4 Moving into residential aged care

As stated earlier, the majority (72%) of admissions into RAC from hospital were for permanent care. However, the reverse was true for admissions from the community, with 36% of such admissions being into permanent care (Figure 4.1, Table 4.2). Relatively few people transferred into respite RAC, with transfers into permanent care being 14 times more common.



Source: Table 4.2.

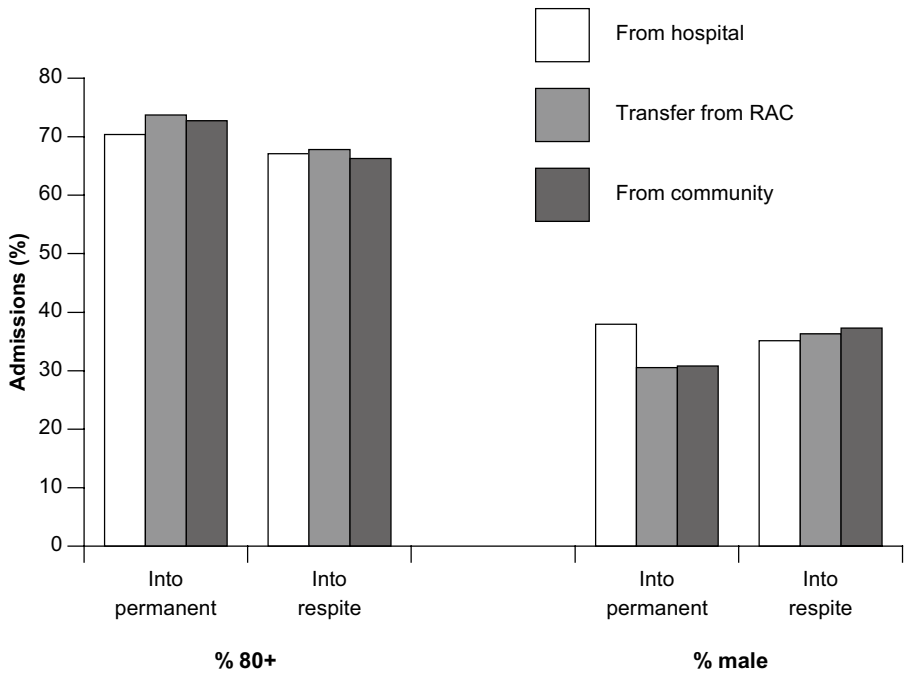
Figure 4.1: Profile of admissions into RAC

4.1 Characteristics of people admitted into residential aged care

Overall, almost 60% of non-transfer admissions into permanent care were from hospital, as were 20% of non-transfer admissions into respite care (Table 4.1). Women admitted into permanent care were less likely than men to have been admitted from hospital (54% for women versus 62% for men). However, for admissions into respite RAC similar proportions of men and women came as discharges from hospital. There was some evidence that older people were less likely to be admitted into permanent care from hospital than younger people, but the differences were small (Table 4.1).

People admitted into permanent residential care—whether from hospital, from the community or as a transfer within RAC—had a slightly older age profile than those admitted for respite care (Table 4.2, Figure 4.2). For example, in 2001–02, 70% of the permanent admissions for people coming from hospital were for people aged 80 and over (45% aged 85+) compared with 67% of respite admissions (40% aged 85+). As expected, for all movement groups less than half the transitions were for men, and the women were, on average, older than the men.

The differences in age profiles across the transition groups were not the same for men and women (Table 4.2). Men moving from hospital into permanent RAC tended to be younger than men admitted from the community (48% aged less than 80 years compared with 44%), while there was little difference for women (75% versus 76%). On the other hand, among men moving into respite care, those coming from hospital had a slightly older age profile than those coming from the community (59% aged 80+ versus 56%, $p<0.01$). The reverse was true for women moving into respite care, with those entering from hospital tending to be slightly younger than those coming from the community (71% aged 80+ and 43% aged 85+ compared with 72% and 47%).



Source: Table 4.2.

Figure 4.2: Age and sex profile of admissions into RAC

Table 4.1: Origin of non-transfer admissions into RAC for people aged 65+, admission type by age, sex and location of ACAT assessment, Australia, 2001–02 (adjusted)

	Into permanent RAC				Into respite RAC			
Movement type/sex	From hospital	From the community	Total	Non-transfer admissions	From hospital	From the community	Total	Non-transfer admissions
Age	**Per cent (adjusted)**			**Number**	**Per cent (adjusted)**			**Number**
65–69	60	40	100	1,337	17	83	100	1,988
70–74	59	41	100	3,183	20	80	100	4,039
75–79	59	41	100	6,413	22	78	100	7,597
Subtotal 65–79	*59*	*41*	*100*	*10,933*	*21*	*79*	*100*	*13,624*
80–84	56	44	100	9,925	22	78	100	10,527
85–89	55	45	100	10,348	21	79	100	10,296
90–94	56	44	100	5,674	21	79	100	5,026
95+	59	41	100	1,506	19	81	100	1,165
Subtotal 80+	*56*	*44*	*100*	*17,528*	*21*	*79*	*100*	*16,487*
Sex								
Men	62	38	100	13,260	20	80	100	14,980
Women	54	46	100	25,126	22	78	100	25,658
Location of ACAT assessment								
Aged care facility	44	56	100	2,651	18	82	100	1,953
At home	24	76	100	13,730	9	91	100	28,145
Hospital	83	17	100	20,343	63	37	100	8,587
Other	30	70	100	1,639	12	88	100	1,943
Missing/ Unknown	57	43	100	23	—	100	100	10
All admissions (per cent adjusted)	**57**	**43**	**100**	**. .**	**21**	**79**	**100**	**. .**
Total admissions (adjusted number)	**21,800**	**16,600**	**. .**	**38,386**	**8,600**	**32,000**	**. .**	**40,638**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of adjusted numbers.
2. Age is as at time of RAC admission.
3. Per cents are based on adjusted numbers and so have been rounded to the nearest percentage point to reflect accuracy of the adjusted figures (see Box 2.1).
4. Number of non-transfer admissions is an observed number and does not require adjustment.

Table 4.2: RAC admissions for people aged 65+, by movement type, age and sex, Australia, 2001–02 (unadjusted)

	Age at RAC admission/transfer								
Sex/movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	5.2	11.5	21.1	26.5	22.5	10.6	2.4	100.0	7,636
From community into permanent RAC	5.2	11.1	18.0	25.2	25.4	12.6	2.6	100.0	5,624
Transfer into permanent RAC	5.4	10.7	19.4	25.0	23.8	12.8	2.9	100.0	5,961
Subtotal	*5.3*	*11.2*	*20.0*	*25.7*	*23.4*	*11.8*	*2.6*	*100.0*	*19,221*
Respite admissions									
From hospital to respite RAC	5.9	12.2	22.8	26.4	20.7	10.1	1.9	100.0	2,720
From community into respite RAC	7.7	13.5	22.6	25.5	19.7	9.2	1.9	100.0	12,260
Transfer into respite RAC	7.8	10.4	22.6	24.6	24.0	9.0	1.4	100.0	499
Subtotal	*7.7*	*11.4*	*22.6*	*24.9*	*22.6*	*9.1*	*1.6*	*100.0*	*15,479*
All	*6.2*	*12.1*	*21.0*	*25.6*	*22.1*	*10.7*	*2.3*	*100.0*	*. .*
Total admissions (number)	*2,153*	*4,186*	*7,285*	*8,890*	*7,665*	*3,730*	*791*	*. .*	*34,700*
Women				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	2.7	6.9	15.0	25.1	28.3	16.9	5.1	100.0	12,489
From community into permanent RAC	2.4	6.4	15.2	26.5	29.0	16.1	4.3	100.0	12,637
Transfer into permanent RAC	2.0	6.2	14.2	24.5	29.4	18.1	5.7	100.0	13,547
Subtotal	*2.4*	*6.5*	*14.8*	*25.4*	*28.9*	*17.1*	*5.0*	*100.0*	*38,673*
Respite admissions									
From hospital to respite RAC	2.9	7.9	17.8	28.1	27.3	13.0	3.0	100.0	5,024
From community into respite RAC	3.6	8.0	16.0	25.6	28.8	14.4	3.6	100.0	20,634
Transfer into respite RAC	3.0	7.4	16.9	29.1	27.9	13.1	2.6	100.0	876
Subtotal	*3.4*	*8.0*	*16.4*	*26.2*	*28.5*	*14.1*	*3.4*	*100.0*	*26,534*
All	*2.8*	*7.1*	*15.4*	*25.7*	*28.7*	*15.9*	*4.4*	*100.0*	*. .*
Total admissions (number)	*1,825*	*4,628*	*10,062*	*16,750*	*18,738*	*10,349*	*2,855*	*. .*	*65,207*
All				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	3.7	8.7	17.3	25.6	26.1	14.6	4.1	100.0	20,125
From community into permanent RAC	3.3	7.9	16.1	26.1	27.9	15.0	3.7	100.0	18,261
Transfer into permanent RAC	3.0	7.6	15.8	24.7	27.7	16.5	4.8	100.0	19,508
Subtotal	*3.3*	*8.0*	*16.4*	*25.5*	*27.2*	*15.4*	*4.2*	*100.0*	*57,894*
Respite admissions									
From hospital to respite RAC	4.0	9.4	19.5	27.5	25.0	12.0	2.6	100.0	7,744
From community into respite RAC	5.1	10.1	18.5	25.5	25.4	12.5	2.9	100.0	32,894
Transfer into respite RAC	4.7	8.5	19.0	27.5	26.5	11.6	2.2	100.0	1,375
Subtotal	*4.9*	*9.9*	*18.7*	*26.0*	*25.4*	*12.3*	*2.8*	*100.0*	*42,013*
All	**4.0**	**8.8**	**17.4**	**25.7**	**26.4**	**14.1**	**3.6**	**100.0**	**. .**
Total admissions (number)	**3,978**	**8,814**	**17,347**	**25,640**	**26,403**	**14,079**	**3,646**	**. .**	**99,907**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of RAC admission/transfer.
3. State/territory tables are in Appendix A.

4.2 Place of assessment

Assessment by an Aged Care Assessment Team (ACAT) provides a single point of entry to a range of government-funded aged care services, including permanent and respite RAC (AIHW 2007a:chapter 3). An ACAT approval remains valid for 12 months. If a person's care needs change to the extent that a different level or type of care is required, they may be reassessed within that period. Prior to 1 July 2004 residents needed an ACAT recommendation to move between low and high care, even within the same aged care home. After 1 July 2004 this requirement was removed for residents moving between low and high care within the same facility. People moving into RAC directly from hospital would have received an ACAT assessment either in hospital or before entering hospital.

As expected, people assessed in hospital were much more likely than others to be admitted into RAC directly from hospital (Table 4.1). However, the effect was more marked for permanent than for respite admissions: for people assessed in hospital 83% of admissions into permanent care were from hospital compared with 63% of admissions into respite care. In contrast, for people assessed at home about one-quarter (24%) of permanent admissions and one tenth (9%) of respite admissions were from hospital.

As the above figures foreshadow, assessment was more likely to have taken place in hospital for people admitted to RAC from hospital than for others, with assessment in hospital being associated with 77% of admissions to permanent care from hospital compared with 26% for admissions into permanent care from the community (Table 4.3). Irrespective of their pre-admission sector, people admitted for respite care were less likely than those admitted for permanent care to have been assessed in hospital and more likely to have been assessed at home. For example, for 30% of respite admissions from hospital the associated assessment had been at home compared with 15% of permanent admissions from hospital.

While the patterns for place of assessment were generally similar for men and women, there were some differences: women transferring into permanent RAC were more likely than men to have been assessed at a RAC facility and less likely to have been assessed in hospital or at home.

Table 4.3: RAC entries for people aged 65+, by movement type, sex and location of most recent ACAT assessment prior to move, Australia, 2001–02 (unadjusted)

	Location of most recent ACAT assessment prior to move						
Sex movement type	Aged care facility	At home	Hospital	Other	Missing/ Unknown	Total	N
Men			**Row per cent**				
Permanent admissions							
From hospital to permanent RAC	4.1	15.5	78.0	2.3	—	100.0	7,636
From community into permanent RAC	8.8	55.1	29.3	6.8	—	100.0	5,624
Transfer into permanent RAC	23.7	28.2	41.6	4.3	2.3	100.0	5,961
Subtotal	*11.6*	*31.0*	*52.4*	*4.2*	*0.7*	*100.0*	*19,221*
Respite admissions							
From hospital to respite RAC	3.8	31.7	61.7	2.8	—	100.0	2,720
From community into respite RAC	4.9	78.9	11.5	4.7	—	100.0	12,260
Transfer into respite RAC	13.2	52.9	27.5	6.4	—	100.0	499
Subtotal	*4.9*	*69.8*	*20.8*	*4.5*	*0.0*	*100.0*	*15,479*
All	*8.6*	*48.3*	*38.3*	*4.3*	*0.4*	*100.0*	*. .*
Total admissions (number)	*2,987*	*16,761*	*13,303*	*1,505*	*144*	*. .*	*34,700*
Women			**Row per cent**				
Permanent admissions							
From hospital to permanent RAC	6.2	14.8	76.7	2.2	0.1	100.0	12,489
From community into permanent RAC	8.4	60.1	25.0	6.4	0.1	100.0	12,637
Transfer into permanent RAC	30.0	26.4	36.1	4.1	3.4	100.0	13,547
Subtotal	*15.3*	*33.7*	*45.6*	*4.2*	*1.2*	*100.0*	*38,673*
Respite admissions							
From hospital to respite RAC	4.2	29.8	63.5	2.5	—	100.0	5,024
From community into respite RAC	5.1	78.1	11.2	5.6	—	100.0	20,634
Transfer into respite RAC	15.2	46.3	33.6	4.8	0.1	100.0	876
Subtotal	*5.2*	*67.9*	*21.8*	*5.0*	*0.0*	*100.0*	*26,534*
All	*11.2*	*47.6*	*35.9*	*4.5*	*0.7*	*100.0*	*. .*
Total admissions (number)	*7,290*	*31,039*	*23,429*	*2,966*	*483*	*. .*	*65,207*
All			**Row per cent**				
Permanent admissions							
From hospital to permanent RAC	5.4	15.1	77.2	2.2	0.1	100.0	20,125
From community into permanent RAC	8.6	58.5	26.3	6.5	0.1	100.0	18,261
Transfer into permanent RAC	28.1	26.9	37.8	4.2	3.0	100.0	19,508
Subtotal	*14.0*	*32.8*	*47.9*	*4.2*	*1.1*	*100.0*	*57,894*
Respite admissions							
From hospital to respite RAC	4.1	30.4	62.8	2.6	—	100.0	7,744
From community into respite RAC	5.0	78.4	11.3	5.3	—	100.0	32,894
Transfer into respite RAC	14.5	48.7	31.3	5.4	0.1	100.0	1,375
Subtotal	*5.1*	*68.6*	*21.5*	*4.8*	*0.0*	*100.0*	*42,013*
All	**10.3**	**47.8**	**36.8**	**4.5**	**0.6**	**100.0**	**. .**
Total admissions (number)	**10,277**	**47,800**	**36,732**	**4,471**	**627**	**. .**	**99,907**

Notes

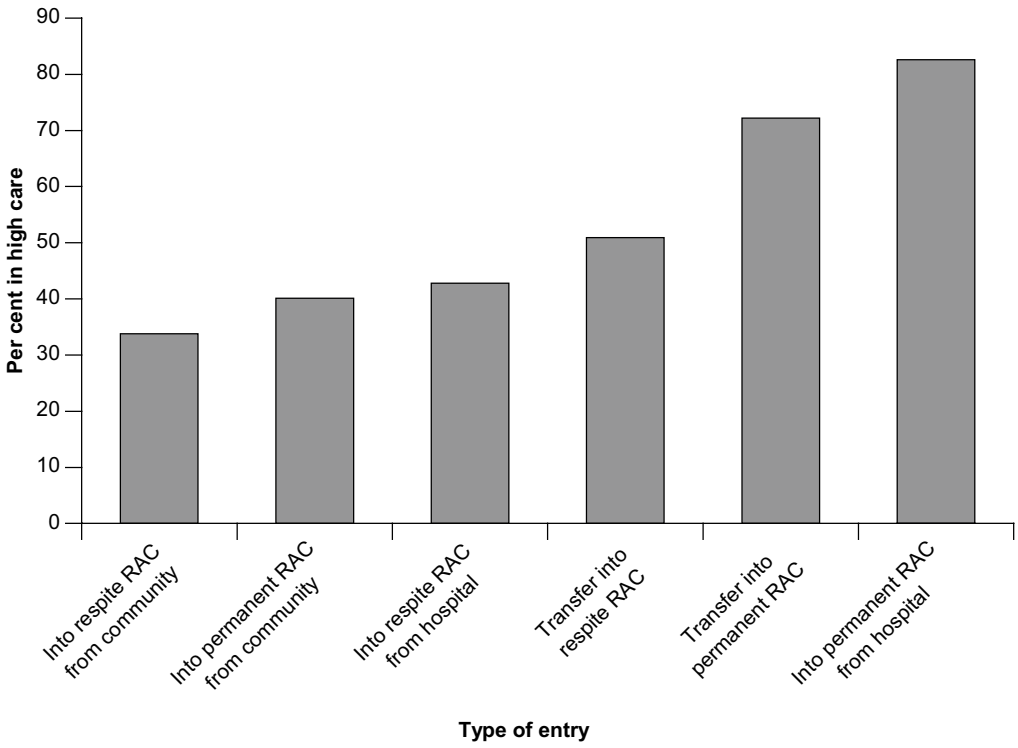
1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.

2. Age is as at time of RAC admission.

4.3 Care needs

People admitted to permanent RAC have their care needs assessed soon after entering the facility. In 2001–02, the tool used for this assessment was the Resident Classification Scale (RCS) (see Box 1.2). People with needs placing them in RCS categories 1 to 4 were classified as high-care residents and those meeting the criteria for RCS categories 5 to 8 were classified as low-care residents. People admitted for respite care were classified as either high- or low-care clients as part of their ACAT assessment.

The proportion of people with high-care needs on admission to RAC varied considerably with the type of transition, ranging from 34% for people entering respite care from the community to 83% for people admitted to permanent care from hospital (Figure 4.3). People admitted from the community tended to have lower care needs than both those transferring within RAC and those admitted from hospital. In general, within transition and age group, on average women had lower care needs than men. Within most transition groups, until around the 85–89 age group the percentage of entries related to people with high-care needs either decreased as age increased or was fairly stable; the percentage then increased with age among the older age groups (Table 4.4).



Source: Table 4.4.

Figure 4.3: Per cent of admissions to RAC for people with high-care needs, 2001–02

Table 4.4: RAC entries for people aged 65+: care level on transition, by movement type, age and sex, Australia, 2001–02 (% high care) (unadjusted)

	Age at RAC admission/transfer								
Movement type/sex	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**All**	**N**
Men				**Per cent at high care**					
Permanent admissions									
From hospital to permanent RAC	84.3	84.1	85.7	85.9	85.3	84.7	92.5	85.5	7,636
From community into permanent RAC	55.0	56.0	51.4	46.7	42.2	41.3	56.3	47.4	5,624
Transfer into permanent RAC	73.5	71.7	74.9	74.8	74.5	74.6	81.1	74.5	5,961
Subtotal	*72.4*	*72.2*	*73.2*	*71.3*	*68.5*	*67.9*	*78.3*	*71.0*	*19,221*
Respite admissions									
From hospital to respite RAC	45.3	49.2	48.3	47.0	51.3	51.8	64.7	49.2	2,720
From community into respite RAC	47.7	46.0	45.2	38.1	35.1	32.8	40.5	40.5	12,260
Transfer into respite RAC	53.8	50.0	60.2	60.2	57.5	44.4	57.1	56.5	499
Subtotal	*47.6*	*46.7*	*46.3*	*40.4*	*38.9*	*36.8*	*45.3*	*42.5*	*15,479*
All	*59.3*	*59.8*	*60.2*	*57.5*	*56.5*	*55.8*	*66.4*	*58.3*	*. .*
Total admissions (number)	*2,153*	*4,186*	*7,285*	*8,890*	*7,665*	*3,730*	*791*	*. .*	*34,700*
Women									
Permanent admissions									
From hospital to permanent RAC	81.3	81.6	80.1	80.1	78.7	83.8	88.2	80.9	12,489
From community into permanent RAC	47.4	41.9	38.4	34.6	33.3	37.2	54.5	36.9	12,637
Transfer into permanent RAC	69.7	70.7	67.5	67.4	70.4	76.5	85.2	71.2	13,547
Subtotal	*66.6*	*65.1*	*61.8*	*60.2*	*60.9*	*66.7*	*77.7*	*63.1*	*38,673*
Respite admissions									
From hospital to respite RAC	49.3	40.6	36.4	37.0	37.1	46.2	56.9	39.4	5,024
From community into respite RAC	48.5	40.8	33.1	27.9	23.4	30.0	34.9	29.8	20,633
Transfer into respite RAC	50.0	49.2	43.2	49.8	41.4	59.1	56.5	47.7	876
Subtotal	*48.7*	*41.0*	*34.2*	*30.5*	*26.5*	*33.7*	*39.1*	*32.2*	*26,533*
All	*57.6*	*54.1*	*49.9*	*47.9*	*47.0*	*54.8*	*65.4*	*50.5*	*. .*
Total admissions (number)	*1,825*	*4,628*	*10,062*	*16,750*	*18,737*	*10,349*	*2,855*	*. .*	*65,206*
All									
Permanent admissions									
From hospital to permanent RAC	82.9	82.8	82.7	82.4	80.9	84.1	89.2	82.6	20,125
From community into permanent RAC	51.1	48.1	42.9	38.2	35.8	38.3	54.9	40.1	18,261
Transfer into permanent RAC	71.8	71.1	70.3	69.7	71.5	76.0	84.4	72.2	19,508
Subtotal	*69.7*	*68.4*	*66.4*	*63.9*	*63.1*	*67.0*	*77.8*	*65.7*	*57,894*
Respite admissions									
From hospital to respite RAC	47.2	44.5	41.3	40.4	41.2	47.9	58.8	42.8	7,744
From community into respite RAC	48.1	43.4	38.6	31.7	26.8	30.8	36.2	33.8	32,893
Transfer into respite RAC	52.3	49.6	50.6	53.2	46.7	55.0	56.7	50.9	1,375
Subtotal	*48.1*	*43.8*	*39.6*	*34.1*	*30.1*	*34.6*	*40.6*	*36.0*	*42,012*
All	**58.5**	**56.8**	**54.2**	**51.3**	**49.8**	**55.1**	**65.6**	**53.2**	**. .**
Total admissions (number)	**3,978**	**8,814**	**17,347**	**25,640**	**26,402**	**14,079**	**3,646**	**. .**	**99,906**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of RAC admission/transfer.
3. 1 record excluded due to missing RCS level.

4.4 Regional profile

When people were admitted into residential care they did not always stay within their region of usual residence. In particular, people who lived outside major cities tended to move into RAC facilities in less remote locations than where they had previously resided, although moves in the other direction did occur. Fewer than 90% of admissions for people from outside a major city were into a RAC facility of the same region type as the person's usual residence (Table 4.5). This percentage varied both with the person's region and type of transition. For example, 87% of hospital to permanent care transitions for people from an inner regional area were into RAC facilities in a similar area; 10% involved moving into a facility in a major city and in 3% of cases the RAC facility was in an outer regional area. In comparison, for people living in remote and very remote areas admitted into respite care from the community 83% of admissions were into similarly remote RAC facilities, 11% were into facilities in an outer regional area and the remaining 6% involved moves into a major city or an inner regional area. A similar shift towards less remote regions was also evident for admissions into permanent RAC from the community.

Table 4.5: RAC entries for people aged 65+: remoteness of person prior to admission into RAC, by remoteness of RAC facility and movement type, 2001–02 (unadjusted)

	Remoteness of RAC facility					
Movement type/remoteness of usual residence prior to move	Major cities	Inner regional	Outer regional	Remote and very remote	Total	N
Into permanent RAC from hospital			Row per cent			
Major cities	96.5	3.2	0.3	—	100.0	14,172
Inner regional	9.7	87.0	3.1	0.1	100.0	4,243
Outer regional	3.0	11.6	85.1	0.3	100.0	1,497
Remote and very remote	13.4	6.3	15.2	65.2	100.0	112
All	*70.7*	*21.6*	*7.3*	*0.4*	*100.0*	. .
Total admissions (number)	*14,148*	*4,324*	*1,465*	*87*	. .	*20,024*
Into permanent RAC from community						
Major cities	95.3	3.9	0.6	0.1	100.0	12,369
Inner regional	11.0	86.0	2.8	0.2	100.0	4,150
Outer regional	4.9	9.2	85.4	0.5	100.0	1,458
Remote and very remote	8.3	7.0	12.1	72.6	100.0	157
All	*68.0*	*23.1*	*8.0*	*0.8*	*100.0*	. .
Total admissions (number)	*12,335*	*4,196*	*1,459*	*144*	. .	*18,134*
Transfer into permanent RAC						
Major cities	95.0	4.4	0.6	0.1	100.0	13,606
Inner regional	10.1	86.8	3.0	0.1	100.0	3,963
Outer regional	3.2	7.8	88.6	0.4	100.0	1,690
Remote and very remote	5.2	3.5	12.1	79.2	100.0	173
All	*68.9*	*21.5*	*8.9*	*0.8*	*100.0*	. .
Total admissions (number)	*13,383*	*4,173*	*1,721*	*155*	. .	*19,432*
All into permanent RAC						
Major cities	95.6	3.8	0.5	0.1	100.0	40,147
Inner regional	10.3	86.6	3.0	0.2	100.0	12,356
Outer regional	3.7	9.5	86.5	0.4	100.0	4,645
Remote and very remote	8.4	5.4	12.9	73.3	100.0	442
All	*69.2*	*22.0*	*8.1*	*0.7*	*100.0*	. .
Total admissions (number)	*39,866*	*12,693*	*4,645*	*386*	. .	*57,590*

(continued)

Table 4.5 (continued): RAC entries for people aged 65+: remoteness of person prior to admission into RAC, by remoteness of RAC facility and movement type, 2001–02 (unadjusted)

Movement type/remoteness of usual residence prior to move	Remoteness of RAC facility					
	Major cities	Inner regional	Outer regional	Remote and very remote	Total	N
Into respite RAC from hospital			Row per cent			
Major cities	95.8	3.8	0.4	0.1	100.0	4,554
Inner regional	7.6	88.6	3.7	<0.2	100.0	2,019
Outer regional	<2.0	8.8	89.1	<0.5	100.0	992
Remote and very remote	<8.1	<4.1	11.4	82.9	100.0	123
All	*59.0*	*26.7*	*12.9*	*1.4*	*100.0*	*. .*
Total admissions (number)	*4,537*	*2,052*	*988*	*111*	*. .*	*7,688*
Into respite RAC from community						
Major cities	94.8	4.7	0.5	—	100.0	20,244
Inner regional	8.5	88.3	3.1	0.1	100.0	8,850
Outer regional	2.1	13.0	84.5	0.4	100.0	3,133
Remote and very remote	5.9	3.7	14.9	75.5	100.0	404
All	*61.4*	*28.2*	*9.4*	*1.0*	*100.0*	*. .*
Total admissions (number)	*20,026*	*9,191*	*3,077*	*337*	*. .*	*32,631*
Transfer into respite RAC						
Major cities	>92.6	6.4	0.5	<0.5	100.0	944
Inner regional	15.4	79.6	5.0	—	100.0	319
Outer regional	16.5	11.0	72.5	—	100.0	91
Remote and very remote	<31.3	—	—	>68.8	100.0	16
All	*68.8*	*23.6*	*6.4*	*1.2*	*100.0*	*. .*
Total admissions (number)	*943*	*324*	*87*	*16*	*. .*	*1,370*
All into respite RAC						
Major cities	94.9	4.6	0.5	—	100.0	25,742
Inner regional	8.5	88.1	3.2	0.1	100.0	11,188
Outer regional	2.3	12.0	85.3	0.4	100.0	4,216
Remote and very remote	5.5	3.1	13.6	77.7	100.0	543
All	*61.2*	*27.7*	*10.0*	*1.1*	*100.0*	*. .*
Total admissions (number)	*25,506*	*11,567*	*4,152*	*464*	*. .*	*41,689*
All movements						
Major cities	95.3	4.1	0.5	0.1	100.0	65,889
Inner regional	9.5	87.3	3.1	0.1	100.0	23,544
Outer regional	3.0	10.7	85.9	0.4	100.0	8,861
Remote and very remote	6.8	4.2	13.3	75.7	100.0	985
All	**65.8**	**24.4**	**8.9**	**0.9**	**100.0**	**. .**
Total admissions (number)	**65,372**	**24,260**	**8,797**	**850**	**. .**	**99,279**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of RAC admission/transfer.
3. The table uses the Australian Standard Geographical Classification Remoteness Structure as developed by the ABS (ABS 2001b).
4. 628 records were excluded due to missing postcodes for remoteness coding.

5 Analysis of person outcomes

5.1 Factors affecting entry into RAC from hospital

Of particular interest is whether personal characteristics and a person's experience in hospital can help predict whether they will be admitted to RAC when they are discharged from hospital. Identifying whether a range of factors influence the outcome can be done using logistic regression models. Fitting such models allows us to bring together the various elements considered individually in Section 3 so that factors underlying observed differences in entry into RAC from hospital can be identified.

Two logistic regression models were fitted to identify, firstly, factors associated with whether a person was admitted to RAC on leaving hospital, and, secondly, if they were admitted to RAC whether they went into permanent or respite care. The two models are:

- Model A for people who returned to the community or were admitted into RAC following discharge from hospital. This model estimates the probability that a person in hospital would be admitted to RAC rather than return to the community.
- Model B for people who were admitted into RAC following discharge from hospital. This model estimates the probability that a person in hospital would be admitted into permanent rather than respite RAC, given that it was known that the person would be moving into RAC from hospital.

Note that as we are interested only in people who could possibly be admitted into RAC, people identified as either dying in hospital or returning to RAC from hospital were excluded from both models. Variables used in the analysis were:

- age at hospital admission
- sex
- state/territory of hospital
- remoteness of usual residence (prior to hospitalisation)
- marital status
- English proficiency (EP) group, which is based on reported country of birth using the 2001 classification of countries into English Proficiency Groups (see Appendix D)
- hospital sector
- care type in hospital prior to discharge
- hospital mode of admission
- length of hospital episode
- principal diagnosis
- presence or absence of specific diseases as additional diagnoses.

Results from fitting the above models are summarised below. An explanation of logistic regression models, interpretation of results, specifications of the variables used for models A

and B and the final fitted models are given in Appendix E. Models were fitted using unadjusted data.

5.1.1 Propensity to be discharged to RAC

An estimated 845,000 people aged 65 years and over were discharged from hospital either to be admitted into RAC (respite and permanent) or to return to the community. Of these, 3.6% were admitted into RAC directly following discharge from hospital.

When fitting Model A, the most significant predictors of entry into RAC rather than a return to the community from hospital were:

- principal diagnosis
- an additional diagnosis of 'Awaiting admission elsewhere'
- the duration of the hospital episode before discharge
- age
- an additional diagnosis of dementia and related disorders
- hospital mode of admission (that is, from within the hospital system or from the community)
- state or territory of hospital admission
- hospital care type prior to discharge.

Marital status and EP group also had statistically significant effects (see Table E.1 for fitted Model A).

A summary of the main results from the logistic regression model is given below. The effects of particular variables can be seen by comparing predicted probabilities of being admitted into RAC (as opposed to the community). Such comparisons are most easily understood in reference to a person with specific characteristics. The probabilities then relate to a person with characteristics the same as those of the 'reference' person except for the difference in the single variable whose effect is being considered.

The characteristics of the reference person used for the following discussion are described in Box 5.1. These values were chosen because in most cases for each variable they were the most common. The traits of this person (in particular that she was aged 75, was discharged from acute care after a short stay for treatment for a tumour or cancer) mean that she was unlikely to have been admitted into RAC on discharge from hospital: the predicted probability of this happening is 0.4%, compared with an observed rate of discharge to RAC across all discharges of 3.6%. In the discussion below, the effect of a particular variable on the predicted probability of discharge to RAC is illustrated by comparing the predicted probability for the reference person (0.4%) with that for an adjusted reference person, where the adjusted reference person differs from the reference person in only the single characteristic being discussed.

If a person differs from the reference person in several characteristics much larger differences in the predicted probabilities would be observed. For example, a person who was different from the reference person by being aged 85, widowed, with a principal diagnosis of dementia, in hospital for 8 to 12 weeks in GEM after changing care type (that is, a statistical admission), has a predicted probability of 83% and so would have been highly likely to have been discharged to RAC.

Model A reflects the relationships seen in other analyses in this report between principal diagnosis and transition into RAC (see tables 3.16 and 6.2). People with a principal diagnosis of 'Awaiting admission elsewhere' or 'Dementia and related disorders' have the highest predicted probabilities of admission into RAC (5.2% and 3.9%for reference person adjusted with respect to principal diagnosis to these two categories respectively) (Table E.1). Not surprisingly, given the effect of principal diagnosis upon RAC admission, additional diagnoses of 'Awaiting admission elsewhere' and 'Dementia and related disorders' were also associated with an increased likelihood of being admitted to RAC from hospital rather than returning to the community—by nearly 12 times and just over 3 times, respectively (Table E.1).

Box 5.1:Reference person for comparison for Model A (discharge to community or RAC admission)

For this analysis the reference person used for comparing predicted probabilities has the following characteristics:

- *75 years old at admission into hospital*
- *female*
- *married/de facto*
- *born in Australia*
- *usual residence in a major city*
- *admitted to a hospital in New South Wales*
- *in a public hospital*
- *hospital mode of admission was not a transfer from another hospital or the result of a change in care type*
- *receiving acute care in hospital*
- *hospital episode duration of less than 1 week*
- *a principal diagnosis of neoplasm.*

These values were chosen because in most cases within each variable they were the most common.

The predicted probability of this person being admitted to RAC from hospital is low at 0.4%. Therefore the predicted probability of this person returning to the community is 99.6%. Details of how to calculate predicted probabilities of admission into RAC for other combinations of variable values are given in Appendix E.

Longer hospital episodes were associated with an increased likelihood of admission into RAC rather than a return to the community (Table E.1). The reference person, with a hospital episode prior to discharge lasting for less than 1 week, has a 0.4% predicted probability of entering RAC. This compares with a predicted probability of 1.5% if the episode had lasted for 1–4 weeks, 4.3% if it had been for 4–8 weeks and rising to 7% if the episode had been for 12 weeks or more. These results are consistent with the analysis of length of stay by movement type (Table 3.5), where the median length of stay in hospital was 24 days for people moving into permanent RAC, 14 days for people moving into respite RAC, and 4 days for people returning to the community.

As expected, older age was associated with an increased likelihood of entering RAC from hospital rather than returning to the community (Table E.1). A 65 year-old was nearly half as likely to be discharged to RAC (0.2% predicted probability for adjusted reference person) as a 75 year old, while a 95 year-old was over four times as likely to have this destination (1.8% predicted probability for adjusted reference person). This ties in well with earlier analysis (Table 3.6), which indicated that people moving into RAC from hospital had an older age profile than those returning to the community.

People whose final episode in hospital began with a change in care type or a hospital transfer were more likely to be admitted into RAC following discharge than people with a final episode which began with admission from outside the hospital system (Table E.1). For example, if the discharge episode for our reference person had begun with a transfer between hospitals rather than with entry into the hospital system, her predicted probability of discharge to RAC would be 1.5 times higher (0.6% versus 0.4%), while if it had begun with a change in care type the predicted probability would be 2.4 times greater (0.9%).

Care type in hospital prior to discharge was associated with the likelihood of entering RAC from hospital (Table E.1). People who received palliative care, maintenance care or other/unknown care prior to discharge were more likely to be admitted to RAC than people who received acute care prior to discharge. On the other hand, people receiving rehabilitation care were less likely than those receiving acute care to be admitted to RAC. Consequently, our reference person, who had received acute care prior to discharge, has a 0.4% predicted probability of entering permanent RAC, compared with 1.1% for an adjusted reference person receiving palliative care and 0.6% for someone receiving maintenance or other/unknown care. People receiving rehabilitation care prior to discharge were nearly half as likely to be admitted to RAC as people receiving acute care (see also Table 3.16).

The probability of admission to RAC also varied with state or territory of hospital admission (Table E.1). For example, our reference person using a hospital in New South Wales or South Australia has the highest predicted probability of being admitted into RAC (0.4%) when compared with her counterparts in hospitals in Victoria (0.3%) and the other states and territories (0.2%). This result suggests that jurisdictional differences in care services provision and/or practices could be affecting post-hospital destination.

Whether or not a person has a partner provides an indication of the availability of care at home on return from hospital (although, for older people, partners themselves may need assistance). People who were married or in a de facto relationship were less likely than other people to be admitted to RAC (Table E.1), with people who had never married being the most likely to be discharged to RAC (predicted probability of 0.7% for adjusted reference person).

People with the highest levels of English proficiency were more likely than others to be admitted to RAC (Table E.1). In particular, people born in countries in the lowest EP group (EP 4) have the lowest predicted probability of RAC admission (0.2% for adjusted reference person).

5.1.2 Discharge to permanent rather than respite RAC

An estimated 30,400 people aged 65 years and over moved into RAC from hospital (excluding returns to RAC) (Table 1.3). Of these, nearly three-quarters (72%) moved into permanent RAC.

When fitting Model B the most significant predictors of admission into permanent rather than respite RAC from hospital were:

- hospital care type prior to discharge
- the duration of the hospital episode before discharge
- principal diagnosis
- an additional diagnosis of 'Awaiting admission elsewhere'
- region of usual residence prior to hospital admission
- state or territory of hospital admission
- an additional diagnosis of dementia and related disorders.

Although important for the prediction of entry into RAC as opposed to return to the community, a patient's marital status, sex and EP group were not significant predictors of entry into permanent rather than respite RAC.

A summary of the main results from the logistic regression model is given below; details of Model B as fitted are given in Table E.2. As before, predicted probabilities based on a 'reference' person are used to aid the discussion, with the probability relating to being admitted into permanent rather than respite RAC. The characteristics chosen for the reference person, again selected because they were the most common, are given in Box 5.2. Someone with the same characteristics as the reference person has a predicted probability of 63% of entering permanent rather than respite residential care, compared with the observed rate of 72% across all admissions from hospital. As when discussing Model A, the effect of a particular variable on the predicted probability is illustrated by comparing the predicted probability for the reference person with that for an adjusted reference person, where the adjusted reference person differs from the reference person in only the single characteristic being discussed.

The probability of being admitted into permanent rather than respite care varied considerably with a person's circumstances. This can be seen by considering two people who differed from the reference person in several characteristics. For example, an 85 year old woman in hospital in Tasmania for a stroke who was in rehabilitative care for 10 weeks before being admitted into RAC was highly likely to have gone into permanent care, with a predicted probability of over 95% for being admitted into permanent rather than respite care. On the other hand, a 75 year old man living in an outer regional area prior to admission to a Queensland hospital because of a fall and who had 4 weeks in rehabilitative care prior to discharge to RAC was more likely to go into respite rather than permanent care, having a predicted probability of 34% for having a permanent RAC admission.

The results from Model B show that care type in hospital prior to discharge was associated with the likelihood of entering permanent RAC from hospital (Table E.2). People who received palliative care, GEM or maintenance care prior to discharge were more likely to enter permanent RAC than people who received acute care prior to discharge. Consequently, at 63% the reference person has a relatively low predicted probability of entering permanent RAC, compared with 71% for an adjusted reference person discharged from maintenance care, and 77% and 80% for adjusted reference persons discharged from GEM and palliative care, respectively. These higher probabilities reflect earlier results: GEM and palliative care both have higher ratios of permanent to respite admissions than acute care (Table 3.11).

Box 5.2: Reference person for comparison for Model B (discharge to permanent or respite RAC admission)

For this analysis the reference person has the following characteristics:

- *85 years old at admission*
- *female*
- *married/de facto*
- *born in Australia*
- *usual residence in a major city*
- *admitted to a hospital in New South Wales*
- *in a public hospital*
- *hospital admission was not a change in care type or transfer*
- *receiving acute care in hospital*
- *hospital episode duration of more than 1 week and less than 4 weeks*
- *a principal diagnosis of neoplasm.*

These values were chosen because in most cases within each variable they were the most common among people in the analysis.

Given that this reference person is being discharged to RAC, the predicted probability of them being admitted to permanent RAC from hospital is 62.5%. Hence, the predicted probability of this person being admitted into respite RAC is 37.5%. Details of how to calculate predicted probabilities of admission into permanent RAC for other combinations of variable values are given in Appendix E.

The longer a person's last hospital episode before RAC admission, the greater the likelihood was that he or she would be admitted to permanent RAC rather than respite RAC (Table E.2). For example, an adjusted reference person whose final hospital episode lasted for less than a week has a 50% predicted probability of entering permanent RAC and so is predicted to be just as likely to enter respite as permanent RAC. The predicted probability increases to 86% for an adjusted reference person who was discharged following a hospital episode lasting longer than 12 weeks. This result is as expected given that people admitted into permanent RAC had a median length of stay in hospital of 24 days compared with 14 days for people admitted into respite RAC (Table 3.13).

People with a principal diagnosis among stroke, dementia and related disorders or 'Awaiting admission elsewhere' have relatively high predicted probabilities of permanent RAC admission (adjusted reference person probabilities of 75%, 74% and 73%, respectively). Principal diagnoses for which people have relatively low predicted probabilities of permanent RAC admission (and therefore a relatively high probability of entering respite RAC) include injury caused by a fall (53% for adjusted reference person), other mental and behavioural disorders (excluding dementia and related disorders) (52%) and factors influencing health status (excluding 'Awaiting admission elsewhere') (48%).

A person with an additional diagnosis of 'awaiting admission elsewhere' had an increased probability of being admitted into permanent rather than respite RAC. For example, an adjusted reference person with this additional diagnosis has a 78% predicted probability of being admitted to permanent RAC compared with 63% for the reference person.

A person with an additional diagnosis of dementia and related disorders was more likely than someone without this diagnosis to be admitted into permanent RAC. Thus an adjusted reference person with this additional diagnosis has a 74% predicted probability of being admitted to permanent RAC.

A person living in an inner regional, outer regional or remote area before going to hospital was less likely to be admitted into permanent RAC than someone living in a major city prior to hospitalisation (Table E.2). As a result, the estimated probability drops from 63% to less than 50% for an adjusted reference person coming from an inner regional, outer regional or remote area.

State or territory of the hospital plays a significant role in predicting someone's admission into permanent RAC (Table E.2). For example, people discharged from a hospital in the Australian Capital Territory have the lowest predicted probability of being admitted into permanent RAC (45% for adjusted reference person), while people using Tasmanian hospitals have the highest (88%). This is consistent with the data regarding ratios of permanent to respite admissions presented in Table 2.3. These last two results indicate that variation in jurisdictional and regional aged care service provision and/or practices may influence the outcome.

5.2 Short-term use of residential aged care following a period in hospital

A question of particular interest from a policy perspective is what happens to people who enter RAC from hospital: do they remain in aged care or do they return to the community? If they return to the community, do they remain there, or are they re-admitted into RAC soon after? The answers to these questions provide information on whether RAC episodes following hospitalisation, particularly in respite care, are to aid recovery following hospitalisation or to facilitate a transition into permanent residential care.

To provide insight into these issues, transitions following a person's first move from hospital to RAC in 2001–02 were analysed using the following framework:

- People were said to have returned to the community if they did so within 12 weeks of their admission from hospital into RAC. A time of 12 weeks was used to set the cut-off because in general over 90% of respite stays are shorter than this (AIHW 2005:table A4.4). In addition, 12 weeks allows for one extension period following the initial approval for up to 63 days of residential respite care in a financial year (Box 1.2).
- If a person returned to the community within 12 weeks, a further assessment of the success of this move was made by seeing whether they returned to RAC within the following 4 weeks. Note that people may have died during the 4-week period but it was not possible to determine the number of such cases. In addition, some people also reported that they were moving to another aged care service yet were not identified in the ACCMIS data as having been re-admitted to any service within the 4 weeks.
- For people who did not return to the community within 12 weeks, their status at the 12-week mark was identified as:
  - being in respite RAC
  - being in permanent RAC

- discharged to hospital within the 12 weeks, or
- died in RAC within the 12 weeks.

Some examples of transition events are illustrated in Figure 5.1. Because a 16-week window was required to identify a successful return to the community, only hospital–RAC transition events occurring in the first 36 weeks of 2001–02 could be used to analyse returns and non-returns to the community.

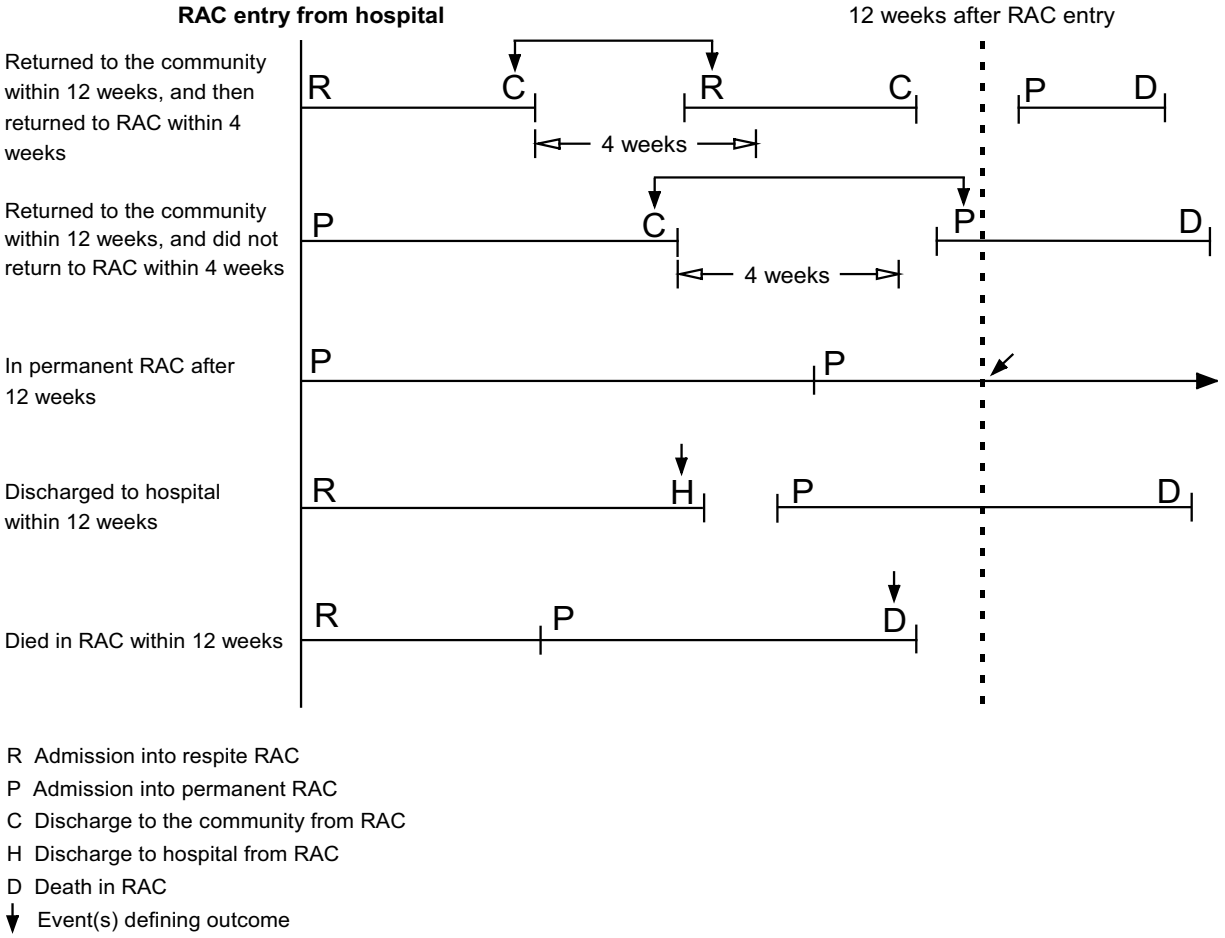


Figure 5.1: Short-term use of RAC: example pathways

5.2.1 Type of RAC admission

As expected, the situation of people 12 weeks after their admission to RAC from hospital differed according to whether they were admitted into respite or permanent care (Table 5.1, Figure 5.2). Over one-half (59%) of people who were admitted into respite care returned to the community within 12 weeks; 10% of this group (that is, 6% of all with respite admissions) were re-admitted into RAC within 4 weeks of returning to the community. Of those not re-admitted within 4 weeks, one-fifth (22%, or 11% of all respite admissions) left RAC reporting they were going to another RAC service but had not been re-admitted within 4 weeks of returning to the community.

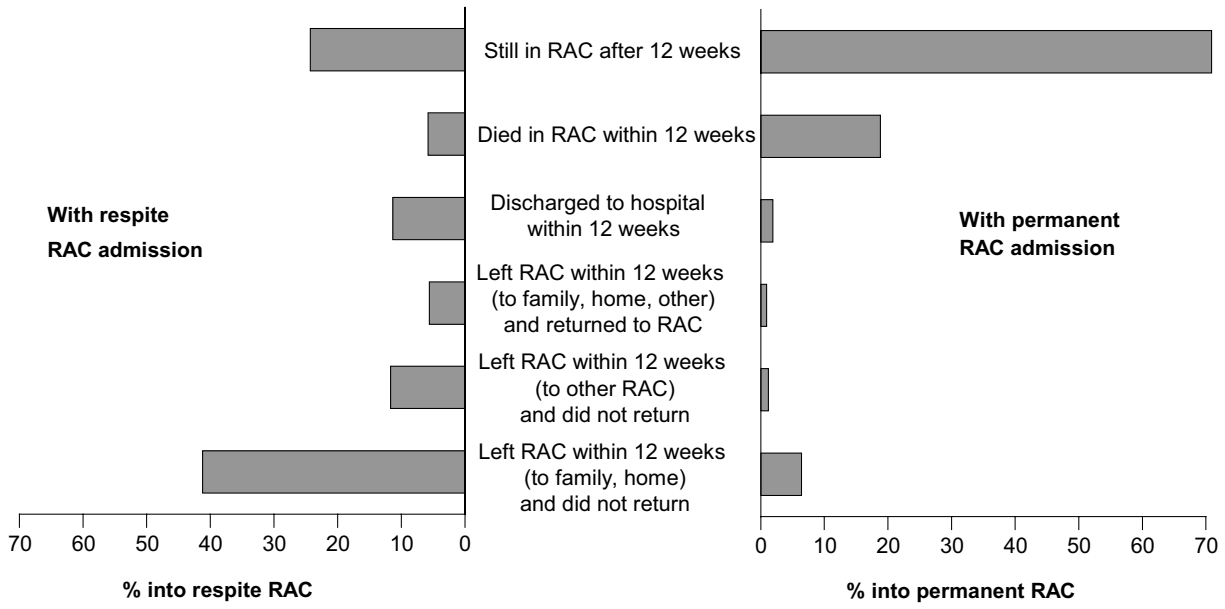
Just 9% of people who were admitted into permanent care returned to the community within 12 weeks, and about 11% of this group (129 of 1,190) were re-admitted into RAC within 4 weeks (Table 5.1). Around 14% of those who returned to the community within 12 weeks also reported they were going to another RAC service but had not been re-admitted within 4 weeks of returning to the community.

More than two-thirds (71%) of people admitted to permanent care were still living in RAC after 12 weeks, compared with 24% of people admitted to respite care (Table 5.1). In addition, 4% of this latter group (56 people) had transferred into permanent care within the 12 weeks. People admitted into respite care from hospital were less likely to die but more likely to be discharged to hospital within 12 weeks than those admitted into permanent care (6% versus 19% and 11% versus 2%, respectively; both differences statistically significant with $p<0.01$).

Of particular interest are the within-RAC transfer rates for people who were admitted to respite care from hospital and who were still in RAC after 12 weeks. Analysis of the RAC data has shown that among RAC admissions in 2001–02, the level of respite and permanent RAC non-transfer admissions were about equal (48% and 52%, respectively) (AIHW 2003c). In addition, approximately 20% of all respite admissions during 2001–02 subsequently resulted in a transfer to permanent care (unpublished AIHW analysis). However, Table 5.1 shows that among all respite admissions from hospital only 1% resulted in a transfer to permanent care within 12 weeks, and for those people entering RAC from hospital, far fewer people were admitted into respite care than permanent care (28% versus 72%, Table 5.1). That is, nearly three-quarters of people entering RAC from hospital were admitted into permanent RAC, compared with just over half for all non-transfer admissions. These differences suggest that people moving into respite care from hospital have different care needs and characteristics from people entering residential respite care from the community.

This tendency for people from hospital to be admitted into permanent rather than respite care is supported by data from the Aged Care Assessment Program Minimum Data Set annual report. Among 2003–04 assessments, clients were twice as likely to be recommended to permanent RAC if assessed in hospital than if assessed elsewhere (Aged Care Assessment Program National Data Repository 2005); that is, people were less likely to be assessed as having the capacity to return home when assessed in hospital. Whether this assessment is accurate is unknown, but it is possible that the deconditioning that can occur in hospital affects assessment outcomes (see references in AIHW: Karmel et al. 2007b).

The small percentage of people entering respite care who transferred to permanent care within 12 weeks (1%) and the high percentage returning to the community within 12 weeks (59%) suggests that, in 2001–02, for people leaving hospital respite RAC was being used at least to some extent as transition care before going back to the community. In addition, the relatively high proportion still in care at 12 weeks indicates that rehabilitative care can require long stays in respite care.



Source: Table 5.1.

Figure 5.2: Movement of people after admission to RAC from hospital, 2001–02

5.2.2 Regional differences

The pattern of returns to the community varied with state and territory (Table 5.1). The proportion of people with a post-hospital respite admission who returned to the community within 12 weeks ranged from 51% for South Australia to around 70% for Victoria and Tasmania. However, there was less variation in the proportion of these community returns with a re-admission into RAC within 4 weeks, with re-admission rates varying between 7% and 13% of community returns (excluding the Northern Territory). Rates of discharge to hospital and death while in respite care also varied with jurisdiction.

As seen previously, the proportion of admissions from hospital which were for permanent care fluctuated across the states and territories. Tasmania had the highest proportion of people moving into permanent rather than respite care: 89% compared with 56% for the Australian Capital Territory. However, there was less variation across the jurisdictions in the proportion of people returning to the community after permanent admissions than there was after respite admissions. After permanent admission from hospital, people returned to the community for between 7% and 12% of cases. Similar to respite admissions, and depending on the jurisdiction, re-admission into RAC within 4 weeks occurred for between 9% and 15% of those who had left, which in each case was about 1% of all people with a permanent admission. There was little variation in the proportion of permanent admissions ending with discharge to hospital. However, death in RAC within 12 weeks of permanent admission from hospital ranged from 16% in Victoria to 22% in South Australia (25% in the Australian Capital Territory, based on 93 cases). Overall, the proportion of people still in RAC 12 weeks after a permanent admission from hospital varied within four percentage points around 70% across all states and territories.

Differences in patterns of return to the community were more marked between jurisdictions than between remoteness regions (tables 5.1 and 5.2). The most striking difference was the decreasing relative use of permanent admissions as the remoteness of the RAC facility increased: for facilities in major cities 75% of people admitted from hospital went into permanent care compared with under 50% for those in remote and very remote regions (see also Table 2.6). On the other hand, the proportion of people who returned to the community within 12 weeks of being admitted to respite care from hospital was relatively low for facilities in remote and very remote areas (53% compared to 59% overall). The models on discharge into RAC discussed in Section 5.1 also pointed to this pattern, showing that people from more remote regions were less likely than others to be discharged into RAC, and that the resulting admission into care was even less likely to be for permanent RAC as remoteness increased. This pattern could result from a number of factors, including the availability of residential care in a person's local region, the availability of community care and the need to ensure that a person can cope once they return to a home that may be a long way from emergency services.

Table 5.1: People aged 65+ returning to the community following RAC admission from hospital, by admission type and state/territory of usual residence, 2001–02 (unadjusted)

Admission type/movement following admission to RAC	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All	N
Transition into respite RAC					Column per cent					
Returned to the community within 12 weeks										
Did not return to RAC within 4 weeks										
Left reported going to RAC	14.5	9.1	8.0	14.1	10.2	n.p.	9.5	n.p.	11.7	633
Other	37.7	53.1	42.7	38.3	35.7	n.p.	51.4	n.p.	41.2	2,238
Subtotal	*52.2*	*62.2*	*50.7*	*52.4*	*45.9*	*>58.1*	*60.8*	*n.p.*	*52.9*	*2,871*
Returned to RAC within 4 weeks										
Readmission into respite RAC	3.4	7.1	5.9	4.2	3.9	n.p.	n.p.	n.p.	4.7	253
Readmission into permanent RAC	0.9	1.3	1.4	—	0.7	n.p.	n.p.	n.p.	1.0	52
Subtotal	*4.3*	*8.3*	*7.4*	*4.2*	*4.6*	*<11.6*	*6.8*	*n.p.*	*5.6*	*305*
Total returners to the community	*56.4*	*70.5*	*58.0*	*56.6*	*50.5*	*69.8*	*67.6*	*>64.3*	*58.5*	*3,176*
Did not return to the community										
In respite RAC after 12 weeks	26.1	15.1	18.9	26.9	28.6	23.3	18.9	n.p.	23.3	1,264
In permanent RAC after 12 weeks	1.1	0.9	1.0	1.1	1.2	—	—	n.p.	1.0	56
Discharged to hospital within 12 weeks	11.0	9.0	15.2	11.2	10.7	n.p.	n.p.	n.p.	11.3	615
Died in RAC within 12 weeks	5.4	4.4	6.8	4.2	9.0	n.p.	n.p.	n.p.	5.8	316
Total non-returners to the community	*43.6*	*29.5*	*42.0*	*43.4*	*49.5*	*30.2*	*32.4*	*<35.7*	*41.5*	*2,251*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total (people)	**2,274**	**865**	**993**	**475**	**689**	**43**	**74**	**14**	**. .**	**5,427**
Transition into permanent RAC										
Returned to the community within 12 weeks										
Did not return to RAC within 4 weeks										
Left reported going to RAC	2.0	0.8	0.6	0.8	0.6	n.p.	n.p.	n.p.	1.2	163
Other	6.2	6.6	6.5	6.1	5.8	n.p.	n.p.	n.p.	6.4	898
Subtotal	*8.2*	*7.4*	*7.1*	*6.9*	*6.4*	*>10.7*	*7.5*	*n.p.*	*7.6*	*1,061*
Returned to RAC within 4 weeks										
Readmission into respite RAC	—	—	—	—	—	n.p.	—	n.p.	—	—
Readmission into permanent RAC	0.8	0.7	1.3	1.2	0.8	n.p.	—	n.p.	0.9	129
Subtotal	*0.8*	*0.7*	*1.3*	*1.2*	*0.8*	*<1.4*	*—*	*n.p.*	*0.9*	*129*
Total returners to the community	*9.0*	*8.1*	*8.4*	*8.1*	*7.3*	*12.1*	*7.5*	*n.p.*	*8.5*	*1,190*
Did not return to the community within 12 weeks										
In respite RAC after 12 weeks	—	—	—	—	—	—	—	n.p.	—	—
In permanent RAC after 12 weeks	67.6	74.4	72.3	72.4	69.2	70.2	66.7	n.p.	70.9	9,897
Discharged to hospital within 12 weeks	1.8	1.7	2.0	3.0	1.4	<1.4	<5.4	n.p.	1.9	260
Died in RAC within 12 weeks	21.5	15.7	17.2	16.4	22.1	>16.2	>20.4	n.p.	18.8	2,621
Total non-returners to the community	*91.0*	*91.9*	*91.6*	*91.9*	*92.7*	*87.9*	*92.5*	*n.p.*	*91.5*	*12,788*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total (people)	**4,955**	**3,853**	**2,393**	**997**	**1,321**	**346**	**93**	**10**	**. .**	**13,968**
Per cent transitions into permanent RAC (% people with transition)	**68.5**	**81.7**	**70.7**	**67.7**	**65.7**	**88.9**	**55.7**	**41.7**	**. .**	**72.0**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of initial RAC admission from hospital.
3. Table is based on first admission from hospital during the first 36 weeks of 2001–02 to allow a 12-week window to identify returns to the community followed by a 4-week window to identify unsuccessful returns.

Table 5.2: People aged 65+ returning to the community following RAC admission from hospital, by admission type and region of RAC facility, 2001–02 (unadjusted)

Admission type/Movement following admission to RAC	Major cities	Inner regional	Outer regional	Remote and very remote	Australia	N
Transition into respite RAC			**Column per cent**			
Returned to the community within 12 weeks						
Did not return to RAC within 4 weeks						
Left reported going to RAC	12.4	9.1	13.8	11.4	11.7	633
Other	42.0	40.7	39.5	36.4	41.2	2,237
Subtotal	*54.4*	*49.8*	*53.3*	*47.7*	*52.9*	2,870
Returned to RAC within 4 weeks						
Readmission into respite RAC	3.9	6.4	4.7	n.p.	4.7	253
Readmission into permanent RAC	0.7	1.5	0.9	n.p.	1.0	52
Subtotal	*4.6*	*7.8*	*5.6*	*5.7*	*5.6*	*305*
Total returners to the community	*59.0*	*57.6*	*58.9*	*53.4*	*58.5*	*3,175*
Did not return to the community within 12 weeks						
In respite RAC after 12 weeks	24.0	22.1	21.4	31.8	23.3	1,263
In permanent RAC after 12 weeks	1.1	0.8	1.5	—	1.0	56
Discharged to hospital within 12 weeks	10.7	13.2	11.3	6.8	11.3	615
Died in RAC within 12 weeks	5.3	6.3	7.0	8.0	5.8	316
Total non-returners to the community	*41.0*	*42.4*	*41.1*	*46.6*	*41.5*	*2,250*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total (people)	**3,220**	**1,443**	**674**	**88**	**. .**	**5,425**
Transition into permanent RAC						
Returned to the community within 12 weeks						
Did not return to RAC within 4 weeks						
Left reported going to RAC	1.2	1.0	1.2	n.p.	1.2	163
Other	6.3	7.4	5.6	n.p.	6.4	898
Subtotal	*7.5*	*8.4*	*6.8*	*n.p.*	*7.6*	*1,061*
Returned to RAC within 4 weeks						
Readmission into respite RAC	—	—	—	—	—	—
Readmission into permanent RAC	0.8	1.2	1.1	n.p.	0.9	129
Subtotal	*0.8*	*1.2*	*1.1*	*n.p.*	*0.9*	*129*
Total returners to the community	*8.3*	*9.6*	*7.9*	*<5.7*	*8.5*	*1,190*
Did not return to the community within 12 weeks						
In respite RAC after 12 weeks	—	—	—	—	—	—
In permanent RAC after 12 weeks	70.7	71.2	71.0	82.0	70.9	9,896
Discharged to hospital within 12 weeks	2.0	1.3	2.2	n.p.	1.9	260
Died in RAC within 12 weeks	19.0	17.9	19.0	n.p.	18.8	2,621
Total non-returners to the community	*91.7*	*90.4*	*92.1*	*>94.3*	*91.5*	*12,777*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total (people)	**9,866**	**3,024**	**1,016**	**61**	**. .**	**13,967**
Per cent transitions into permanent RAC (% people with transition)	**75.4**	**67.7**	**60.1**	**40.9**	**. .**	**72.0**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of initial RAC admission from hospital.
3. Table is based on first admission from hospital during the first 36 weeks of 2001–02 to allow a 12-week window to identify returns to the community followed by a 4-week window to identify unsuccessful returns.
4. The table uses the Australian Standard Geographical Classification Remoteness Structure as developed by the ABS.
5. Three records were excluded due to missing valid postcodes for remoteness coding.

5.2.3 Age and sex differences

While not large, there were some differences in patterns in returns to the community by sex and age (Table 5.3). The proportion of people admitted to respite care from hospital who returned to the community was very similar for men and women (58% and 59%, respectively). However, women were slightly less likely than men either to have been discharged to hospital or to have died while in care (11% versus 13% and 6% versus 7%, respectively). There were also some age differences evident, with older people being less likely to return to the community than younger people (57% for men aged 65–79 compared with 60% for men aged 80+, and 57% and 63%, respectively, for women in the two age groups).

For admissions into permanent care, there were only minor differences by sex and age in the proportions of admissions followed by a return to the community. However, while men were slightly more likely than women to return to the community within 12 weeks of a permanent admission from hospital (9.4% versus 8.5%, $p<0.01$), the women who returned to the community were more likely to be re-admitted to RAC within 4 weeks (14% of women who left were re-admitted compared with 7% of men). Women were less likely to die within 12 weeks of admission (16% of women versus 23% of men) and overall were more likely to still be in permanent RAC than men at the 12 week point (74% versus 65%).

5.2.4 Care needs

As seen before in Section 4.3, people admitted into respite care on average had lower care needs than those admitted into permanent care: 44% of people admitted into low care from hospital went into permanent care compared with 82% of those admitted into high care (Table 5.4). People admitted into respite care with low-care needs from hospital were much more likely to return to the community than those with high-care needs (68% versus 48% of admissions). In addition, those who returned to the community were less likely to return within 4 weeks (8% compared with 12%). Furthermore, those with low-care needs were less likely either to die while in care (9% compared with 14%) or to be discharged to hospital (3% versus 10%).

Among people admitted permanently into RAC from hospital, the rate of returning to the community was not significantly different for people with low- and high-care needs. The main difference between the outcomes for low and high-care residents was in the proportion dying within 12 weeks: 21% of people admitted from hospital with high-care needs died within 12 weeks compared with 6% of those for people admitted with low-care needs.

Table 5.3: People aged 65+ returning to the community following RAC admission from hospital, by age, sex and admission type, 2001–02 (unadjusted)

Admission type/movement following admission to RAC	Male			Female				
	65–79	80+	All	65–79	80+	All	All	N
Transition into respite RAC				**Column per cent**				
Returned to the community within 12 weeks								
Did not return to RAC within 4 weeks								
Left reported going to RAC	12.4	11.0	11.6	9.3	12.6	11.7	11.7	633
Other	42.2	40.5	41.2	47.7	38.7	41.3	41.2	2,238
Subtotal	*54.6*	*51.6*	*52.8*	*57.0*	*51.4*	*53.0*	*52.9*	*2,871*
Returned to RAC within 4 weeks								
Readmission into respite RAC	4.4	4.4	4.4	4.8	4.8	4.8	4.7	253
Readmission into permanent RAC	0.7	1.0	0.9	1.0	1.0	1.0	1.0	52
Subtotal	*5.1*	*5.5*	*5.3*	*5.8*	*5.8*	*5.8*	*5.6*	*305*
Total returns to the community	*59.7*	*57.0*	*58.1*	*62.9*	*57.1*	*58.8*	*58.5*	*3,176*
Did not return to the community within 12 weeks								
In respite RAC after 12 weeks	19.5	21.7	20.8	21.2	26.0	24.6	23.3	1,264
In permanent RAC after 12 weeks	1.0	1.3	1.2	0.8	1.0	0.9	1.0	56
Discharged to hospital within 12 weeks	12.9	12.3	12.6	10.0	10.9	10.7	11.3	615
Died in RAC within 12 weeks	6.9	7.6	7.3	5.1	5.0	5.0	5.8	316
Total non-returners to the community	*40.3*	*43.0*	*41.9*	*37.1*	*42.9*	*41.2*	*41.5*	*2,251*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total (people)	**766**	**1,150**	**1,916**	**996**	**2,515**	**3,511**	**. .**	**5,427**
Transition into permanent RAC				**Column per cent**				
Returned to the community within 12 weeks								
Did not return to RAC within 4 weeks								
Left reported going to RAC	1.5	1.1	1.2	1.1	1.1	1.1	1.2	163
Other	7.9	7.1	7.4	5.9	5.8	5.8	6.4	898
Subtotal	*9.5*	*8.2*	*8.7*	*7.0*	*6.9*	*6.9*	*7.6*	*1,061*
Returned to RAC within 4 weeks								
Readmission into respite RAC	—	—	—	—	—	—	—	—
Readmission into permanent RAC	0.9	0.6	0.7	1.4	0.9	1.0	0.9	129
Subtotal	*0.9*	*0.6*	*0.7*	*1.4*	*0.9*	*1.0*	*0.9*	*129*
Total returns to the community	*10.4*	*8.8*	*9.4*	*8.3*	*7.8*	*8.0*	*8.5*	*1,190*
Did not return to the community within 12 weeks								
In respite RAC after 12 weeks	—	—	—	—	—	—	—	—
In permanent RAC after 12 weeks	66.7	64.6	65.4	74.7	74.0	74.2	70.9	9,897
Discharged to hospital within 12 weeks	2.0	2.1	2.1	1.9	1.7	1.7	1.9	260
Died in RAC within 12 weeks	20.8	24.5	23.1	15.1	16.4	16.1	18.8	2,621
Total non-returners to the community	*89.6*	*91.2*	*90.6*	*91.7*	*92.2*	*92.0*	*91.5*	*12,788*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total (people)	**2,017**	**3,294**	**5,311**	**2,108**	**6,549**	**8,657**	**. .**	**13,968**
Per cent transitions into permanent RAC (% people with transition)	**72.5**	**74.1**	**73.5**	**67.9**	**72.3**	**71.1**	**. .**	**72.0**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of initial RAC admission from hospital.
3. Table is based on first admission from hospital during the first 36 weeks of 2001–02 to allow a 12-week window to identify returns to the community followed by a 4-week window to identify unsuccessful returns.

Table 5.4: People aged 65+ returning to the community following RAC admission from hospital, by care level and admission type, 2001–02 (unadjusted)

Admission type/movement following admission to RAC	Transition into respite RAC			Transition into permanent RAC				
	Low care	High care	All	Low care	High care	All	All	N
Returned to the community within 12 weeks				**Column per cent**				
Did not return to RAC within 4 weeks								
Left reported going to RAC	14.5	8.6	11.7	1.2	1.2	1.2	4.1	796
Other	48.2	33.6	41.2	6.7	6.4	6.4	16.2	3,136
Subtotal	*62.6*	*42.2*	*52.9*	*7.8*	*7.5*	*7.6*	*20.3*	*3,932*
Returned to RAC within 4 weeks								
Re-admission into respite RAC	4.9	4.3	4.7	—	—	—	1.3	253
Re-admission into permanent RAC	0.6	1.4	1.0	1.2	0.9	0.9	0.9	181
Subtotal	*5.5*	*5.7*	*5.6*	*1.2*	*0.9*	*0.9*	*2.2*	*434*
Total returners to the community	*68.2*	*47.9*	*58.5*	*9.0*	*8.4*	*8.5*	*22.5*	*4,366*
Did not return to the community within 12 weeks								
In respite RAC after 12 weeks	20.1	26.8	23.3	—	—	—	6.5	1,264
In permanent RAC after 12 weeks	0.5	1.6	1.0	82.9	68.6	70.9	51.3	9,953
Discharged to hospital within 12 weeks	9.0	13.9	11.3	2.2	1.8	1.9	4.5	875
Died in RAC within 12 weeks	2.2	9.8	5.8	5.9	21.2	18.8	15.1	2,937
Total non-returners to the community	*31.8*	*52.1*	*41.5*	*91.0*	*91.6*	*91.5*	*77.5*	*15,029*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total (people)	**2,851**	**2,576**	**5,427**	**2,218**	**11,750**	**13,968**	**. .**	**19,395**
Per cent of care type	**56.2**	**18.0**	**. .**	**43.8**	**82.0**	**. .**	**. .**	**. .**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of initial RAC admission from hospital.
3. Table is based on first admission from hospital during the first 36 weeks of 2001–02 to allow a 12-week window to identify returns to the community followed by a 4-week window to identify unsuccessful returns.

5.3 Survival of people admitted into permanent residential aged care

It is of interest to examine how long people survive once admitted to permanent care. The linked data provide the opportunity to estimate the time from entry into permanent RAC until death, taking into account whether they were admitted from hospital and, if so, the effect of various health conditions. For this study, this was done through a statistical technique called survival analysis which uses available variables to predict time to an event—in this case death following admission into permanent RAC.

A useful characteristic of survival models is their ability to include censored observations in the analysis. Censored observations occur when the event is not observed during the period studied, so that a minimum survival time is known for the individual but the final survival time is not. A capacity to deal with censored data was needed for this analysis because not all deaths were recorded in the RAC data. For example, in 2001–02, 6% discharges from permanent RAC (excluding transfers) were for people reported as going to hospital and 4% were for people reported as going to live in the community (AIHW 2003c:56).

To perform the survival analysis, Cox proportional hazards regression models were fitted to the linked data. Cox proportional hazards regression models estimate the effect of explanatory variables on time to death by estimating their effect on the *hazard ratio,* also known as the *relative risk* (see Appendix F). The *hazard ratio* compares the risk of someone with a particular characteristic dying within the next time period with the risk of someone with a different (reference) characteristic. For example, if being male has a hazard ratio of 1.3, it means that men are 30% more likely to die in the next time period than women.

One way to represent the results of survival analysis is by plotting the *survival distribution function*, which estimates the proportion of people who have not had the event (in this case, death) by a certain time. The average survival distribution function provides us with a population view of the survival times of people entering permanent RAC. This is estimated by fitting a hazard function to survival times without including any explanatory variables.

Two Cox proportional hazards regression models were fitted for people entering permanent RAC:

- Model C for all people moving into permanent RAC
- Model D for people entering permanent RAC from hospital.

Model C allows comparisons of survival times by whether the person was admitted from hospital or not. However, because data on health conditions were not available for people entering RAC from the community the effect of particular health conditions could not be examined via this model. Therefore, model D, which incorporates hospital-specific variables, was fitted to investigate the effect of health conditions on survival. In both cases, the models considered survival from the time of first admission into permanent RAC in the period of interest. Appendix F contains details of the models, including a complete list of variables used and results.

Date of death information came from ACCMIS and may not have been available (and therefore may have given rise to censored dates) for two reasons:

- Death outside RAC: date of death is only available from the RAC data if the person died while in RAC. Therefore if the person died elsewhere we do not have their date of death,

but have a date of their last discharge from RAC. This 'last seen' date is the censored date used in the survival analysis.

- Currency of date of death data: in the data for this study date of death within RAC was only known for people who had died before 30 June 2004. People in RAC who had not died by 30 June 2004 were therefore known to have been alive on 30 June 2004. For these people, 30 June 2004 was used as the censored date.

People who were admitted into permanent RAC between 1 July 2001 and 31 December 2001 were included in the analysis. Admissions resulting from a transfer from respite RAC to permanent RAC were included as admissions into permanent care, while those arising from transfers from permanent care in one RAC facility to permanent care in another were not.

5.3.1 All people entering permanent RAC

Overall, during 2001–02, there were an estimated 38,400 non-transfer admissions for people aged 65 and over into permanent RAC and 8,000 transfers from respite into permanent residential care (Table 1.3). During July–December 2001, a total of 23,089 people aged 65 years and over were identified as entering permanent RAC. Of these people 11,378 (49%) had a censored survival date as they had an unknown date of death. More than one-half (56%) of these people were known to be still living in RAC at the time of censoring (that is, were still in RAC on 30 June 2004), just over one-quarter (28%) had reportedly left to move to another RAC facility but were not subsequently identified as returning, 9% were recorded as returning to their home or family and 7% had been discharged to hospital.

From the average survival distribution function (Figure 5.3), we see that one-quarter of all people entering permanent RAC between 1 July 2001 and 31 December 2001 died within just over 7 months (225 days) of admission and one-half died within 2 years and 2 months (774 days). Two-fifths of people in the analysis were still alive after 3 years.

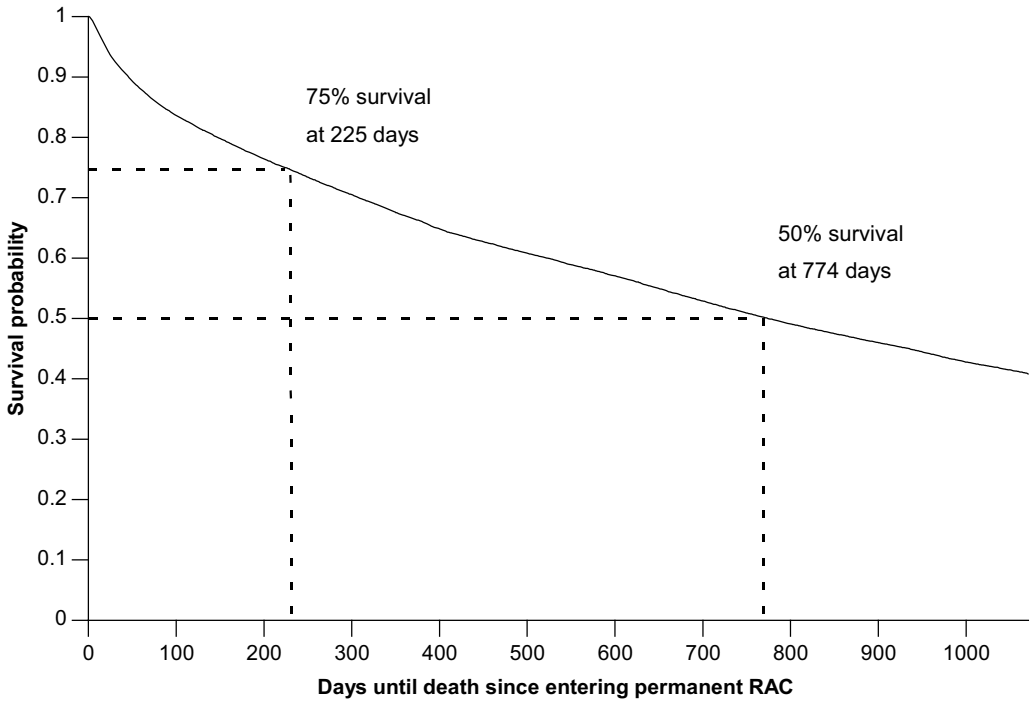


Figure 5.3: Average survival function for people entering permanent RAC during July–December 2001

Model C was fitted to identify factors associated with survival after entry into permanent care. Variables used in the model were sex, age at admission into RAC, marital status, state or territory of RAC admission, RCS category on admission (see Box 1.2), EP group, region of RAC facility, location of ACAT assessment, whether the person was admitted into RAC from hospital and whether the person had been in RAC before. Forward stepwise selection was used to enable identification of significant variables. Except for marital status, all of the variables were found to be significantly associated with survival time after admission into permanent RAC (Table F.1).

The effects of the variables included in the model can be seen by comparing estimated survival times following RAC admission. As with logistic regression, such comparisons are most easily understood with respect to a person with specific characteristics, or 'reference' person. Comparisons of survival times then relate to people with characteristics the same as those of the reference person except for the difference in the single variable whose effect is being considered.

The reference person for this analysis is described in Box 5.3; again common characteristics were used. Model C estimates that the reference person—an 85 year old woman born in an English speaking country, in the highest care needs category, and admitted from the community for the first time into a facility in a major city in New South Wales after an ACAT assessment in hospital—had a 75% chance of surviving at least 4 months (121) days and 50% likelihood of surviving at least 14 months (425) days following admission into permanent RAC. These survival times are considerably shorter than those observed across all people

entering permanent RAC (Figure 5.3). This is because the characteristics of the reference person overall result in a high relative risk of dying on any day.

Box 5.3: Reference person for comparison for survival analysis Model C (all persons to permanent RAC)

For this analysis the reference person has the following characteristics:

- *85 years old at admission*
- *female*
- *admitted to a RAC facility in New South Wales*
- *admitted to a RAC facility in a major city*
- *classified in RCS category 1 – the highest care needs category – on admission*
- *admitted to RAC from the community*
- *first time in RAC*
- *highest English proficiency level (Australian-born and EP1)*
- *ACAT assessment in hospital.*

These values were chosen because within each variable they were the most common among the people in the analysis. Marital status is not included as it did not contribute significantly to the model. Among people admitted to permanent RAC with these characteristics, Model C estimates that 75% survived at least 121 days and half survived at least 425 days.

The most significant variables for predicting survival time after RAC admission were RCS care needs category on admission, sex, age at RAC admission and whether the person was admitted into RAC from hospital.

As expected, having high care needs at the time of admission into permanent RAC were associated with an increased likelihood of death (Table F.1). Residents classified as RCS category 2 on admission were 22% less likely than residents classified as RCS category 1 to die on a given day (hazard ratio of 0.78), while RCS category 4 and category 5 residents were 56% and 66% less likely to die on a given day than RCS category 1 residents. Consequently, while it is estimated that the reference person—who is in RSC category 1—had a 25% chance of surviving at least 4 months (121 days) after admission, an adjusted reference person in RCS category 4 had a 25% chance of living at least 13 months (394 days). This estimated 75% survival time increased to 2 years and 7 months (944 days) for RCS category 7 (Figure 5.4a).

RAC residents who had a missing RCS category—particularly those who had received an ACAT approval for high-level care—were more likely to die than other residents (Table F.1). This finding reflects data collection practices: because RCS classifications may take several months to complete following admission into RAC, people with missing RCS categories are most likely those who died shortly after admission.

Men were 53% more likely than women to die on any day (Table F1, Figure 5.4c). For example, if the reference person were male, the model estimates that this person had a 50% chance of surviving 8 months (245 days) after admission into permanent RAC, compared with 14 months for the female reference person.

As would be expected, older age at admission into RAC was associated with an increased probability of death (Table F.1, Figure 5.4b). With each additional year of age, a person was

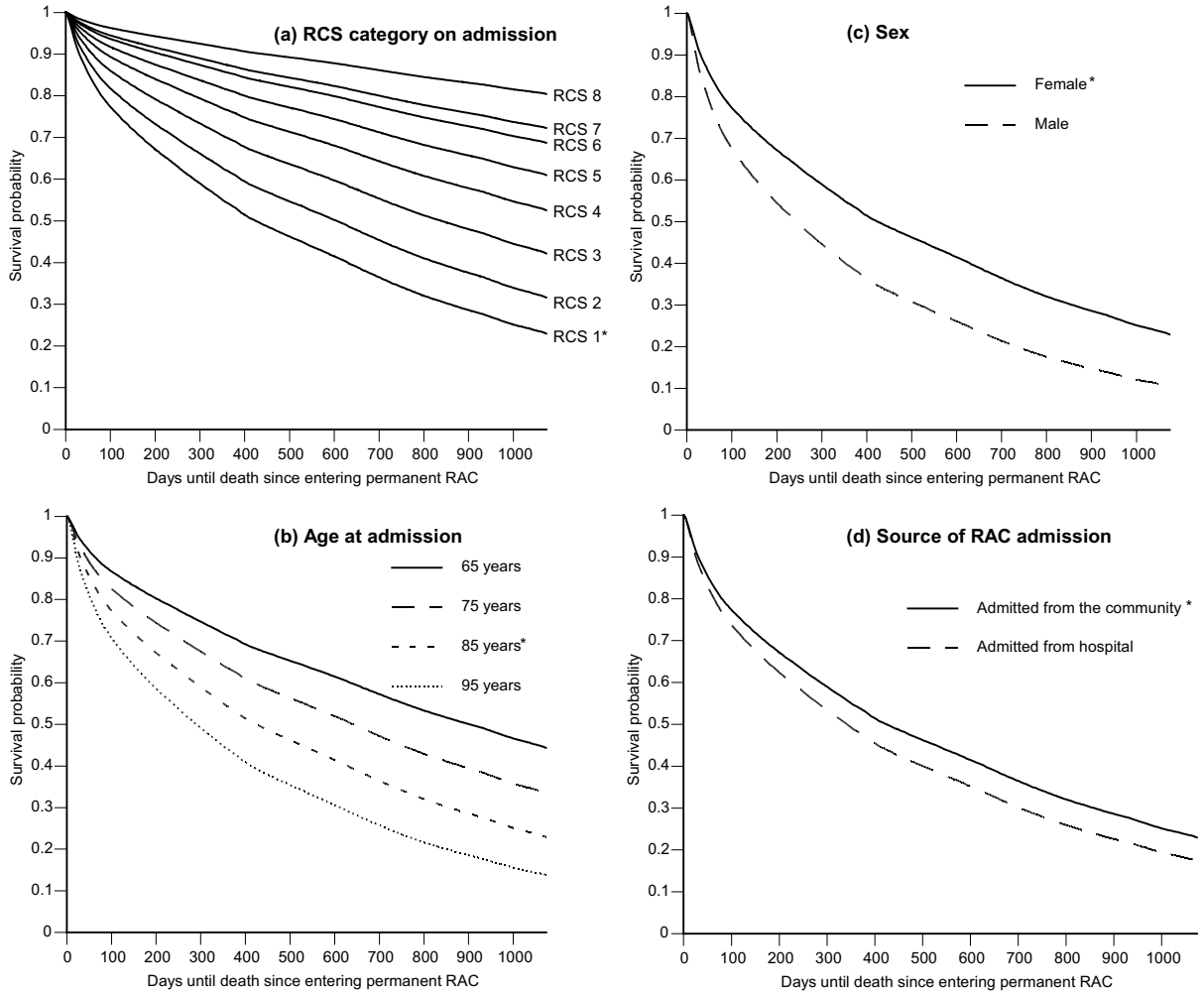
3% more likely to die on any given day. This equates to a 16% increase in the chance of dying with each 5 year increase in age. For example, in terms of survival times, an adjusted reference person admitted at age 65 had a 25% chance of surviving nearly 10 months (294 days) and 50% chance of surviving 2 years and 6 months (902 days) after admission. The comparable figures for someone admitted at age 95 were 11 weeks (76 days) and slightly under 10 months (290) days, respectively.

People admitted into RAC from hospital were 19% more likely to die on any day than those admitted from the community (Table F.1, Figure 5.4d). Thus, it is estimated that a person admitted from hospital had a 25% chance of dying within 3 months (92 days) after admission and 50% chance of dying within 11 months (342 days), compared with 4 months and 14 months, respectively, for the reference person admitted from the community.

Lower levels of English proficiency were associated with a lower probability of dying (Table F.1). People classified as being in EP groups 2, 3 and 4 were respectively 9%, 16% and 36% less likely to die on a given day than people born in Australia or another English-speaking country. Consequently, the estimated median survival time increased from 1 year and 2 months for the reference person (EP group 1) to 1 year and 4 months (490 days) for an adjusted reference person in EP group 2, and to 2 years and 3 months (761 days) for someone in EP group 4.

The location of a person's ACAT assessment was associated with survival time following admission to permanent RAC (Table F.1). There was no difference in likelihood of death between people assessed in hospital and in permanent RAC. However, people assessed in their own home, or in another setting (including with missing location) were 10% and 16% less likely, respectively, to die on a given day than people who were assessed in hospital. For example, an adjusted reference person assessed at home had a 50% chance of surviving nearly 1 year and 5 months (503 days); the corresponding figure for someone assessed in another setting (but not in hospital) or with a missing place of assessment was 1 year and 6 months (551 days)—just over 4 months longer than the reference person assessed in hospital.

People who were admitted into a RAC facility in an inner or outer regional area had a higher probability of dying on any day than those admitted into a RAC facility in a major city (8% and 13% more, respectively) (Table F.1). For example, the median survival time is estimated at 1 year and 3 weeks (386 days) for an adjusted reference person admitted to an inner regional RAC facility, and 1 year (364 days) for someone admitted to an outer regional RAC facility. This pattern may reflect the observed movement of people from remote and very remote regions into RAC facilities in less remote regions (Section 4.4). A reluctance of people to move away from their region of usual residence is suggested by the relatively low likelihood of people from remoter areas to be discharged from hospital into permanent RAC (Section 5.1.2). Such reluctance could mean that people who need to change region when they enter permanent RAC delay the move compared with those who remain in their region of usual residence, leading to shorter survival times. This hypothesis is supported by the low hazard ratios for the remote and very remote categories of the variable indicating region of RAC facility.



Note: Survival functions are based on reference person characteristics given in Box 5.3. Reference person is indicated by *.

Figure 5.4: Survival functions for people entering permanent RAC during July–December 2001, by RCS category, sex, age and source of admission, controlling for all other variables

5.3.2 People entering permanent RAC from hospital

An estimated 21,800 admissions into permanent RAC for people aged 65 and over were associated with discharge from hospital (Table 1.3). For the investigation into the association of particular health conditions with survival, a total of 13,185 people were identified as entering permanent RAC from hospital between 1 July and 31 December 2001. Of these people, 41% were either known to be alive at 30 June 2004 or had left RAC and not returned, and so had censored survival dates. Of the people with censored survival dates, nearly one-half (47%) were still living in RAC at the time of censoring, over one-quarter (29%) had been reported as going to another nursing home or hostel but had not been identified as subsequently re-entering RAC, while 7% had returned to their home or family and 7% had been discharged to hospital.

Overall, one-quarter of people admitted to permanent RAC from hospital between 1 July 2001 and 31 December 2001 died within 4 months (122 days) of entering RAC and a futher 25% died within the next 14 months (that is, within 542 days) (Figure 5.5). Less than one-third (31%) of people in the analysis were still alive after 3 years.

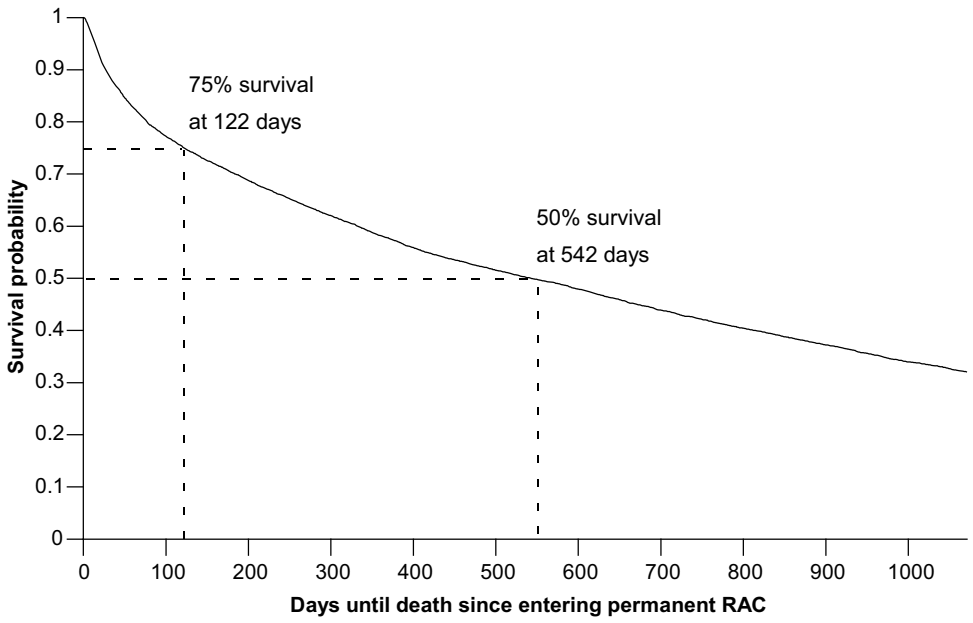


Figure 5.5: Average survival function for people entering permanent RAC from hospital during July–December 2001

Model D was fitted to identify factors associated with survival after entry into permanent care from hospital. Variables were entered into the model using a forward stepwise process. Explanatory variables included in the model were sex, age at RAC admission, marital status, EP group, state or territory of RAC admission, RCS category on admission, region of RAC facility, location of ACAT assessment, whether the person had been in RAC before, hospital sector (public/private), care type of hospital episode before discharge, length of hospital episode prior to discharge and a range of information on principal and additional diagnoses. Particular diagnoses were included in the modelling based on both their relevance to health priority areas and the number of people with the diagnosis (see Table C.1). Several of the variables were found to have no significant effect and were therefore excluded from the final model, including: marital status, EP group, location of ACAT assessment, whether the person had been in RAC before, hospital sector, number of hospital diagnoses and presence of certain medical conditions as an additional diagnosis (see Table F.2 for details of the final model). The state and territoriry and region variables also had no statistically significant effect but were included in the final model to control for variations in provision of RAC services.

A summary of the main results is below. The 'reference' person used to aid the discussion of this analysis is described in Box 5.4. The reference person for Model D is similar to that for Model C, with the addition of several hospital episode characteristics: the reference person was admitted from hospital after less than 1 week in acute care and had a principal diagnosis of stroke. Model D estimates that this reference person was more likely to die on any given day than the average person entering permanent RAC from hospital, having a 25% chance of dying within 3 months (95 days) and 50% chance of dying within a year (357 days) of admission into permanent RAC, compared with the population survival times of 4 and 18 months, respectively.

Box 5.4: Reference person for comparison for survival analysis Model D (persons to permanent RAC from hospital)

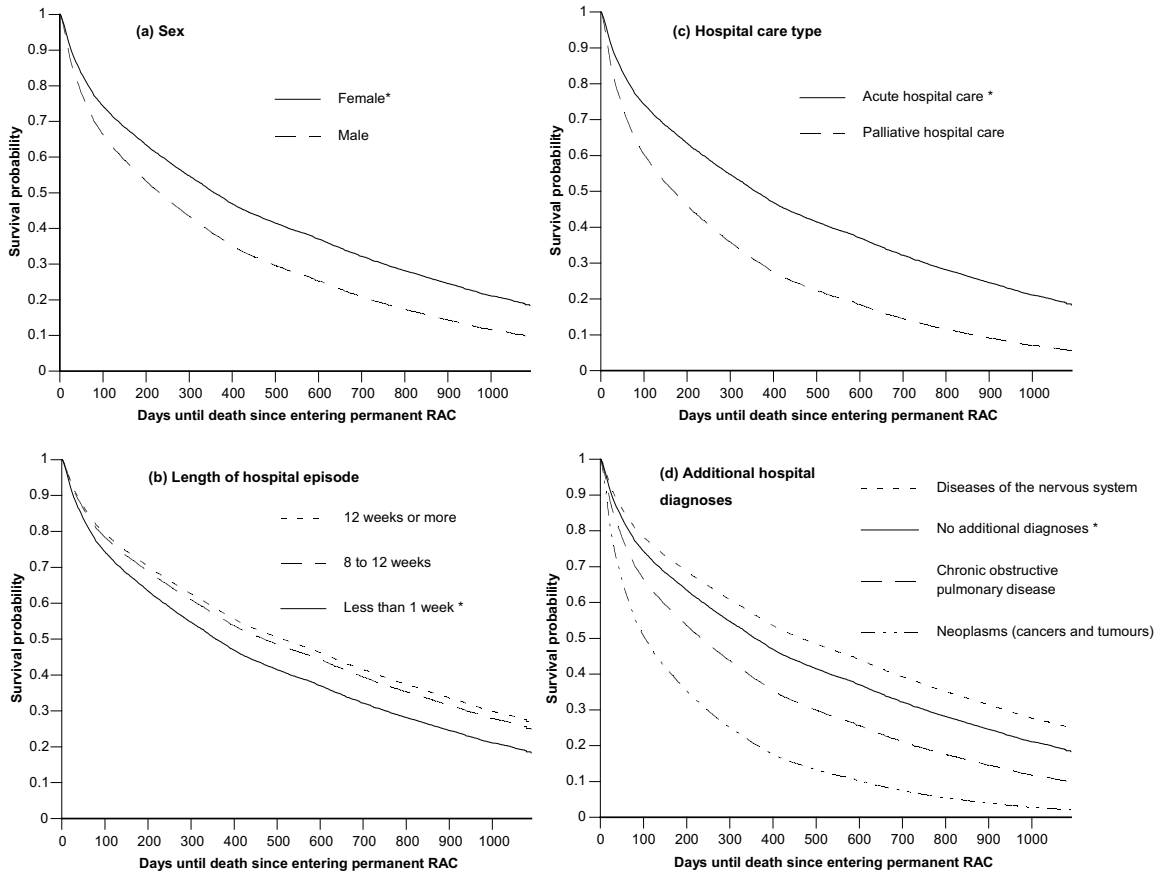
For this analysis the reference person has the following characteristics:

- *85 years old at admission*
- *female*
- *admitted to a RAC facility in New South Wales*
- *admitted to a RAC facility in a major city*
- *classified in RCS category 1 on admission*
- *hospital episode prior to admission to RAC was less than 1 week*
- *with a principal diagnosis of stroke*
- *care type in hospital before discharge was acute care*
- *no additional diagnoses in any of the 6 (out of 30 possible condition groups) found to have significant effects in the model (see Table F.2).*

These values were chosen because within each variable either they were the reference category in the model or they were the most common for people in the analysis – except for principal diagnosis for which stroke was chosen because it is a readily understood diagnosis with sufficient numbers for parameter estimation. Variables not included in the final model are not specified. Among people admitted to permanent RAC from hospital with these characteristics, Model D estimates that 75% survived at least 95 days and half survived at least 357 days.

As with Model C, the most significant variable for predicting survival time for people admitted from hospital was RCS category on admission. However, the principal diagnosis while in hospital was also influential, with other significant variables being the presence of certain additional diagnoses, age at admission, sex, and hospital care type and length of hospital episode before discharge.

While the effects of RCS category and age at admission were very similar to those seen for all people admitted to permanent care (Model C), the effect of sex was smaller. Men were 38% more likely to die on a given day than women (compared with 53% for Model C). Thus, while it is estimated that the reference person had a 50% likelihood of surviving almost 1 year after admission into RAC from hospital, an equivalent male had a 50% chance of dying within 8 months (231 days) (Table F.2, Figure 5.6a).



Note: Survival functions are based on reference person characteristics given in Box 5.4. Reference person is indicated by *, noting that the survival function by length of hospital episode is the same for all episodes under 8 weeks long.

Figure 5.6: Survival functions for people entering permanent RAC from hospital during July–December 2001, by sex, length of hospital episode, hospital care type and additional hospital diagnoses, controlling for all other variables

People with a principal diagnosis of neoplasm (cancer or tumour) had shorter survival times than others, with an adjusted reference person median survival time of just over 2 months (68 days) (Figure 5.7, Table 5.5). Only the uncommon principal diagnosis of cirrhosis and other diseases of the liver was associated with a similar probability of death. For other principal diagnoses, median survival times ranged from 4 months (120 days) for someone with chronic pulmonary obstructive disease (COPD) to just over 18 months (558 days) for someone with a principal diagnosis among mental and behavioural disorders excluding dementia (adjusted reference persons).

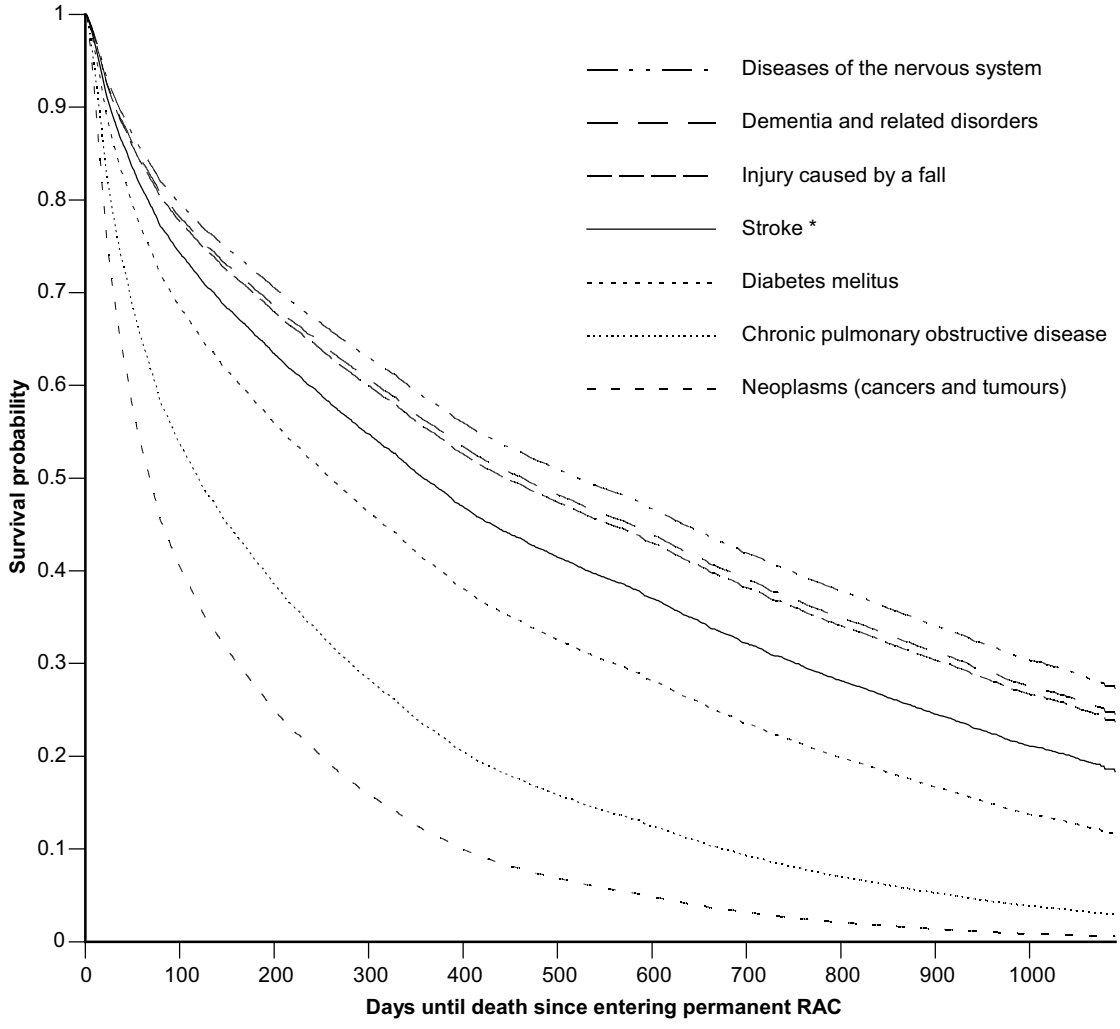
In addition to the principal diagnosis, comorbidities, as indicated by additional diagnoses reported for the hospital episode, were also associated with likelihood of death (Table F.2, Figure 5.6d):

- People with an additional diagnosis of neoplasm were more than twice as likely to die on any day as people without such a diagnosis.
- People with an additional diagnosis of kidney disease, COPD or a disease of the artieries were 30%–50% more likely to die on any day than people without such a diagnosis.

- Having an additional diagnosis among diseases of the nervous system was associated with an 18% decrease in the probability of death when compared with the absence of such a diagnosis.

Spending more than 8 weeks in hospital before being admitted into permanent RAC was associated with a decreased probability of dying (Table F.2, Figure 5.6b). Thus the estimated 50% survival time for an adjusted reference person who had an 8 to 12 week hospital episode before RAC admission was just over 15 months (470 days), compared with 1 year for the reference person who spent under 1 week in hospital before RAC admission. For hospital episodes longer than 12 weeks the median survival time following RAC admission was almost 17 months (514 days). Under 8 weeks, the length of the hospital episode before discharge to permanent RAC had no significant effect on likelihood of death.

People who were in palliative care in hospital were much more likely to die on a given day than people who were in acute care in hospital (Table F.2, Figure 5.6c). An adjusted reference person in palliative care before entering RAC had a 25% chance of dying within 7 weeks (46 days) and 50% chance of dying within 6 months (170 days), compared with 3 months and 1 year, respectively, for our reference person in acute care before RAC admission.



Note: Survival functions are based on reference person characteristics given in Box 5.4. Reference person is indicated by *.

Figure 5.7: Survival functions for people entering permanent RAC from hospital during July–December 2001, by selected principal diagnoses, controlling for all other variables

Table 5.5: Survival times for people entering RAC from hospital, by principal diagnosis (sorted by decreasing hazard ratio, derived using adjusted reference person)

Principal diagnosis	Estimated survival times[(a)]		
	75% still alive	50% still alive	25% still alive
	Days		
Neoplasms (cancers and tumours) (reference)	23	68	201
Diseases of the respiratory system: COPD	35	120	340
Diseases of the digestive system: cirrhosis and other diseases of the liver	35	119	337
Diseases of the genitourinary system: kidney failure	37	126	353
Diseases of the circulatory system (excluding stroke and other cerebrovascular disease, ischaemic heart disease and diseases of the arteries)	50	190	496
Endocrine, nutritional and metabolic diseases (excluding diabetes mellitus)	56	212	564
Diseases of the respiratory system (excluding COPD and influenza and pneumonia)	59	228	597
Diseases of the blood and blood-forming organs and immunological disorders	60	231	608
Diseases of the circulatory system: ischaemic heart disease	62	239	623
Endocrine, nutritional and metabolic diseases : diabetes mellitus	67	260	667
Diseases of the respiratory system: influenza and pneumonia	69	270	692
Diseases of the digestive system (excluding cirrhosis and other diseases of the liver)	72	279	709
Infectious and parasitic diseases	82	323	803
Diseases of the circulatory system: cerebrovascular disease (excl stroke)	84	328	811
Diseases of the circulatory system: stroke	95	357	888
Diseases of the circulatory system: diseases of the arteries	95	357	888
Symptoms, signs and abnormal findings n.e.c.	100	374	921
Diseases of the musculoskeletal system and connective tissue	102	383	936
Diseases of the skin and subcutaneous tissue	105	387	946
Factors influencing health status (excluding 'Awaiting admission elsewhere)	111	403	976
Diseases of the genitourinary system (excluding kidney failure)	112	407	985
Other (including diseases of the ear and eye)/unknown	113	407	986
Factors influencing health status: 'Awaiting admission elsewhere'	115	416	1,009
Injury, poisoning and other consequences of external causes (excluding injury caused by fall)	117	420	1,016
Injury, poisoning and other consequences of external causes: injury caused by fall	123	446	1,058
Mental and behavioural disorders: dementia and related disorders	129	464	1,078
Diseases of the nervous system	147	522	>1,090
Mental and behavioural disorders (excluding dementia and related disorders)	158	558	>1,090

(a) Survival functions are based on reference person characteristics given in Box 5.4.

6 People with selected health conditions

In Section 3 it was seen that the prevalence of disease groups varied considerably with post-hospital destination, while the analyses in Section 5 showed that certain condition groups were associated with discharge to RAC and/or survival following admission to permanent RAC. In this section, outcomes for hospital patients with three conditions are examined in more detail: people in hospital with dementia, stroke, or as the result of injury due to a fall (Box 6.1). The first two conditions contribute significantly to the burden of disease among both men and women aged 75 (15% and 23%, respectively), while falls are significant particularly among older women (2% of burden of disease) (AIHW 2007b:65). In addition, unlike episodes of care for many other health conditions, in many cases hospitalisations for injury due to external causes may be avoidable through injury prevention practices (see also AIHW: Karmel et al. 2007b:16–18).

Box 6.1: Definition of selected diseases using ICD-10-AM Ed. 2 codes

Dementia	*F00–F03, G30–G32*
Stroke	*I60–I64*
Injury from a fall	*principal diagnosis S00–T98, with external cause W00–W19*

In the following discussion it needs to be remembered that the diagnosis information available for hospital episodes relates to conditions that contribute to the complexity and cost of patient treatment (see Box 1.1). Consequently, a patient may have a health condition that was not reported for a specific hospital episode if it was not seen as affecting treatment. This is particularly relevant for people with dementia, so that the prevalence of dementia as a reported diagnosis is considerably less than the underlying prevalence in the patient population.

For people returning to or entering permanent care from hospital we can compare the hospital diagnosis for dementia with a RAC dementia index (derived from RCS information) which has three categories of no dementia, possible dementia and probable dementia. Such comparisons show that many more people were classified in RAC as possibly or probably having dementia than had a diagnosis of dementia recorded in the hospital data (Table 6.1). Only 29% of transitions from hospital to permanent RAC had an associated hospital diagnosis of dementia whereas 50% of these transitions were for people identified as possibly having dementia using the RAC dementia index and 25% were for people who probably had dementia. For those without a hospital diagnosis of dementia about two-thirds (68%) were for people classified by the RAC index as possibly or probably having dementia. A small proportion of people (8%) who did not have dementia according to the RAC index had a hospital diagnosis of dementia.

Table 6.1: Transitions from hospital into RAC for people aged 65+: hospital diagnosis of dementia compared with the RAC dementia index, 2001–02 (unadjusted)

	With any hospital dementia diagnosis			
RAC dementia index	**No**	**Yes**	**Total**	**N**
		Row per cent		
No dementia	91.8	8.2	100.0	16,710
Possible dementia	70.7	29.3	100.0	33,772
Probable dementia	50.6	49.4	100.0	16,693
All	**71.0**	**29.0**	**100.0**	**. .**
		Column per cent		
No dementia	32.2	7.1	24.9	16,710
Possible dementia	50.1	50.7	50.3	33,772
Probable dementia	17.7	42.3	24.9	16,693
Total	**100.0**	**100.0**	**100.0**	**. .**
Total admissions/returns (number)	**47,668**	**19,507**	**. .**	**67,175**

Notes

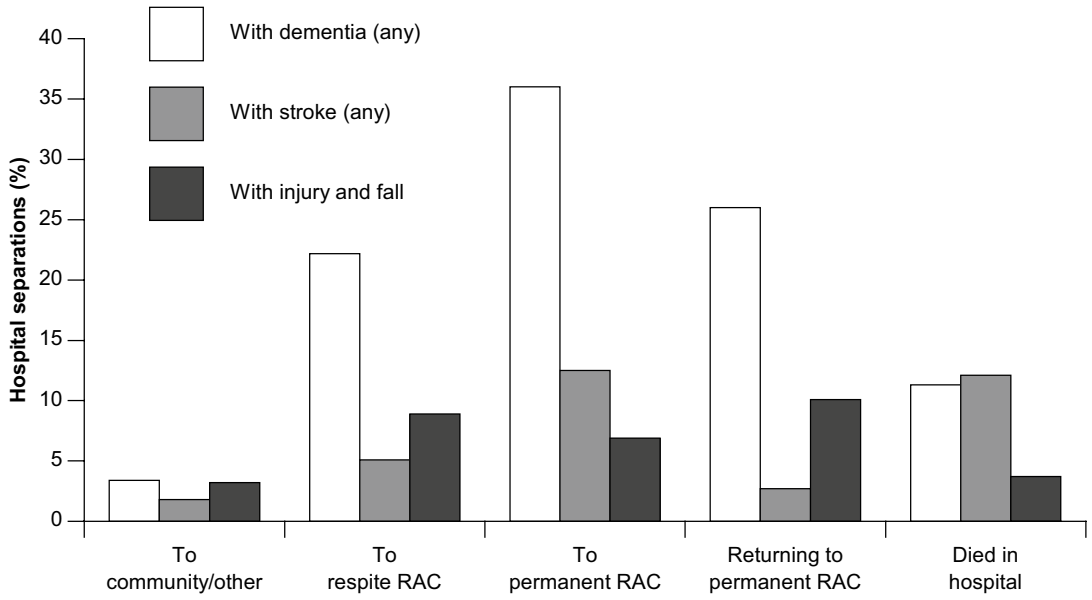
1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Table includes linked admissions into permanent RAC from hospital and returns to permanent RAC following a period in hospital.
3. Diagnosis relates to that recorded during the last hospital episode before discharge from the hospital system (see Box 1.1). See Appendix C for a list of conditions included in ICD-10-AM chapters.
4. RAC dementia index is derived from the Resident Classification Scale questions on communication (question 1) and understanding (question 8)—see AIHW 2004:Table 3.23 for derivation.
5. Age is as at time of hospital admission.

6.1 Prevalence of selected conditions

Overall, among hospital episodes lasting at least one night and ending with the patient leaving hospital 6% had dementia reported among the diagnoses, 3% included a diagnosis of stroke and 4% had a principal diagnosis of injury caused by a fall (tables 6.2, 6.5 and 6.8). The prevalence of the three conditions was different in the various post-hospital destination groups, with the patterns across these groups varying with condition (Figure 6.1). However, all three were individually reported in 2%–3% of hospital episodes which ended with the patient returning to the community.

Dementia was most commonly reported among patients who were admitted to permanent RAC following their period in hospital (in 36% of separations), followed by 26% of those returning to permanent care and 22% of those moving to respite RAC (Table 6.2, Figure 6.1). A diagnosis of stroke was also most prevalent among people moving into permanent RAC (13%), but unlike the other two conditions, had a similarly high prevalence among deaths in hospital (Table 6.5). Injury caused by a fall as the principal diagnosis was most common among people returning to permanent RAC and people admitted to respite care following

their hospital separation (10% and 9% of such transitions, p>0.05) (Table 6.8).[2] Injury from a fall was a little less common as the principal diagnosis among people admitted into permanent RAC (7%). As expected, for all conditions prevalence was lowest among episodes ending with a return to the community (3% for both dementia and injury from a fall, and 2% for stroke).



Source: tables 6.2, 6.5 and 6.8.

Figure 6.1: Prevalence of selected health conditions by post-hospital destination

Overall, dementia was more commonly recorded as a diagnosis in a hospital episode as age increased and more often for women than for men (Table 6.2). Similar patterns were evident for people in hospital as a result of injury caused by a fall (Table 6.8), but while age differences were apparent, the proportion of hospital episodes with a reported diagnosis of stroke was similar for men and women (Table 6.5).

The patterns of prevalence of the selected conditions by age and sex differed noticeably across the post-hospital destination groups. Among people either returning or moving to permanent care from hospital, similar proportions of men and women had a hospital diagnosis of dementia (25% and 26% of transitions, respectively) (Table 6.2). In contrast, a slightly greater proportion of admissions to respite care for men were associated with a hospital diagnosis of dementia than those for women: 25% compared with 21% (p<0.01). Furthermore, while the prevalence of dementia increased with age both for hospital episodes ending with death or a return to the community, among transitions to RAC prevalence peaked in the 85–89 age group.

The main difference observed between prevalence of stroke for men and women was among hospital episodes in which the patient died: stroke was reported as a diagnosis in 14% of hospital episodes in which women died compared with 10% for men, and this difference was

[2] Unless stated otherwise, discussed differences between percentages are statistically significant at the 5% level at least; that is, p<0.05).

seen for all age groups except the oldest (95+) where the difference was not statistically significant (Table 6.5). In contrast, men who moved to respite RAC were slightly more likely to have a diagnosis of stroke than women. As seen for dementia, the age pattern of prevalence of stroke was different for the various transition groups, with prevalence generally decreasing as age increased among people moving into permanent or respite residential care, but generally increasing with age among episodes ending in death or a return to the community.

As expected, there was a strong association between sex and age and being in hospital as the result of a fall (Table 6.8). For all transitions groups, the prevalence of a principal diagnosis of injury with an external cause of fall increased with age and was greater for women than for men.

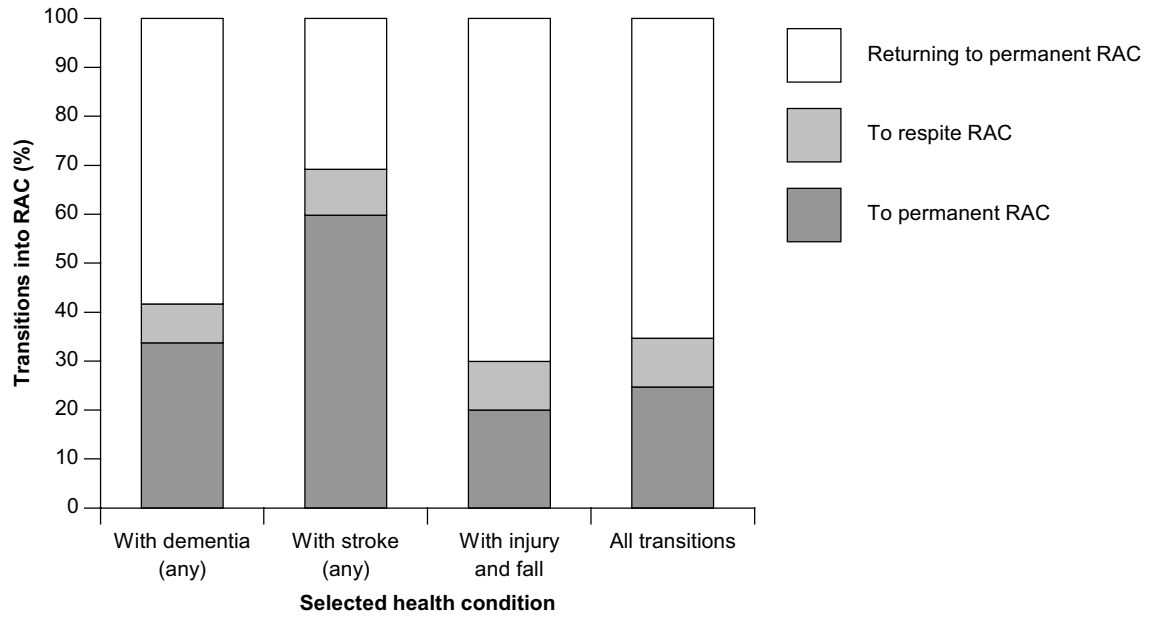
6.2 Characteristics of people leaving hospital

The proportion of hospital separations (excluding deaths) associated with a transition to RAC was higher for older than for younger patients for all three health conditions (tables 6.3, 6.6 and 6.9). For people with a hospital diagnosis of dementia or stroke, in all age groups women were more likely than men to be discharged to RAC. However, among those in hospital because of a fall, this was the case only for people aged 80 and over.

For hospital separations with a diagnosis of dementia recorded, 58% of transitions to RAC were for people already in permanent care (Table 6.3), while for stroke the corresponding figure was just 31% (Table 6.6). On the other hand, a high proportion of hospital separations with stroke reported as a diagnosis and which were followed by admission into RAC were for permanent care, with permanent admissions being more than six times as common as admissions for respite care (Table 6.7). Dementia was less likely to be associated with a permanent admission (Table 6.4); however, permanent admissions were still four times more common than respite admissions where a diagnosis of dementia was reported for the hospital episode.

People who had been in hospital due to injury from a fall were more likely to be returning to RAC than people who had been in hospital because of other health conditions (tables 6.3, 6.6 and 6.9). In particular, 70% of transitions into RAC in which the principal diagnosis was injury resulting from a fall were for people already living in RAC, compared with 65% across all health conditions (Figure 6.2, Table 6.9). In addition, among admissions into RAC for this group, a relatively low proportion were for permanent care, with a permanent to respite care admission ratio of 2.0 to 1 (compared with an overall rate of 2.6 to 1—see Table 2.3).

Among transitions to RAC where there was a diagnosis of dementia, the proportion relating to people already in permanent care increased with age, and consequently the proportion being admitted into permanent care decreased with increasing age (Table 6.3). In addition, the ratio of permanent to respite care admissions increased with age for people aged 75 and over (Table 6.4). These patterns were evident for both men and women.



Source: tables 3.4, 6.3, 6.6 and 6.9.

Figure 6.2: Movement into RAC from hospital

Women entering RAC from hospital with a diagnosis of stroke were more likely than men to be returning to care (34% versus 25%; Table 6.3). The likelihood of a transition to RAC being for a person who was already a permanent resident increased with age, and for people aged over 75, the ratio of permanent to respite admissions was also higher for older people (Table 6.4). However, for people with stroke, while the proportion of transitions associated with people returning to permanent care increased with age (Table 6.6), there did not seem to be a consistent association between age and the relative rate of permanent and respite care admissions (Table 6.7).

For men moving from hospital to RAC after a fall, increasing age did not seem to be consistently associated with the type of transition being made (Table 6.9). However, for women aged 75 years and older, as age increased the transitions were more likely to be a return to permanent care and less likely to be for respite care. As age increased, admissions were increasingly more likely to be for permanent care rather than respite care (Table 6.10).

Table 6.2: Hospital separations for people aged 65+ with any diagnosis of dementia, by sex and movement type, 2001–02 (unadjusted)

Sex/age	Returning to perm-anent RAC	To perm-anent RAC	To respite RAC	To comm-unity/ other	Died in hospital	All	With dementia	All
Men			**Per cent with dementia**				**Number**	
65–69	15.4	28.8	13.1	0.8	2.4	1.2	1,063	92,306
70–74	23.0	29.1	21.2	1.5	4.7	2.3	2,517	109,564
75–79	23.9	33.4	26.5	2.6	8.0	4.1	4,579	112,804
80–84	27.3	38.6	27.8	4.5	12.4	7.2	5,826	80,936
85–89	28.2	38.7	27.7	7.1	17.7	11.3	5,001	44,296
90–94	25.0	38.2	23.6	9.5	18.5	14.6	2,095	14,363
95+	22.8	30.6	18.0	8.8	22.9	15.3	400	2,609
All	*25.3*	*35.7*	*25.2*	*2.8*	*10.1*	*4.7*	*. .*	*. .*
With dementia (number)	*3,876*	*2,718*	*684*	*11,475*	*2,728*	*. .*	*. .*	*. .*
Total separations (number)	*15,346*	*7,621*	*2,718*	*404,223*	*26,970*	*. .*	*21,481*	*456,878*
Women								
65–69	15.6	24.9	8.1	0.7	2.5	1.0	772	75,568
70–74	19.2	28.7	15.4	1.5	4.5	2.2	2,114	94,437
75–79	24.4	35.7	19.5	3.2	8.1	4.9	5,499	111,145
80–84	26.7	38.8	22.9	5.5	13.9	8.9	8,809	99,037
85–89	28.2	39.1	22.6	8.4	18.4	13.7	9,828	71,994
90–94	27.5	34.8	20.5	10.8	21.1	17.1	5,266	30,760
95+	25.9	31.8	14.6	12.7	20.8	18.9	1,406	7,424
All	*26.3*	*36.3*	*20.6*	*3.9*	*12.7*	*6.9*	*. .*	*. .*
With dementia (number)	*8,673*	*4,526*	*1,036*	*16,377*	*3,082*	*. .*	*. .*	*. .*
Total separations (number)	*32,948*	*12,478*	*5,021*	*415,567*	*24,351*	*. .*	*33,694*	*490,365*
All								
65–69	15.5	27.0	10.7	0.8	2.5	1.1	1,835	167,874
70–74	21.1	28.9	18.0	1.5	4.6	2.3	4,631	204,001
75–79	24.2	34.6	22.4	2.9	8.1	4.5	10,078	223,949
80–84	26.9	38.7	24.6	5.0	13.1	8.1	14,635	179,973
85–89	28.2	38.9	24.1	7.9	18.0	12.8	14,829	116,290
90–94	27.0	35.7	21.4	10.4	20.1	16.3	7,361	45,123
95+	25.3	31.5	15.4	11.6	21.5	18.0	1,806	10,033
All	**26.0**	**36.0**	**22.2**	**3.4**	**11.3**	**5.8**	**. .**	**. .**
With dementia (number)	**12,549**	**7,244**	**1,720**	**27,852**	**5,810**	**. .**	**. .**	**. .**
Total separations (number)	**48,294**	**20,099**	**7,739**	**819,790**	**51,321**	**. .**	**55,175**	**947,243**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. 878 records were excluded due to missing diagnosis information.

Table 6.3: Summary of movements from hospital into RAC for people aged 65+ with any diagnosis of dementia, by movement type, Australia, 2001–02 (unadjusted)

Sex/age	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men with dementia		**Row per cent**				**Est'd min %**	**Est'd max %**
65–69	49.1	43.1	7.9	100.0	267	27.2	30.2
70–74	55.4	35.0	9.6	100.0	749	32.8	36.5
75–79	49.5	38.8	11.7	100.0	1,394	34.3	38.1
80–84	51.3	38.7	10.0	100.0	2,018	39.4	43.8
85–89	55.3	36.3	8.4	100.0	1,821	43.0	47.9
90–94	57.1	35.4	7.6	100.0	857	48.4	53.9
95+	62.8	32.0	5.2	100.0	172	56.8	63.1
All	*53.3*	*37.3*	*9.4*	*100.0*	*. .*	*38.8*	*43.2*
Total separations (N)	*3,876*	*2,718*	*684*	*. .*	*7,278*	*18,753*	
Women with dementia							
65–69	53.5	40.8	5.6	100.0	213	29.6	32.9
70–74	51.6	38.8	9.6	100.0	649	32.9	36.6
75–79	54.8	35.8	9.3	100.0	1,889	36.9	41.1
80–84	57.2	33.8	9.0	100.0	3,607	44.7	49.7
85–89	62.8	30.4	6.8	100.0	4,506	50.8	56.5
90–94	67.4	27.6	5.0	100.0	2,630	56.5	62.8
95+	70.6	26.5	3.0	100.0	741	61.0	67.9
All	*60.9*	*31.8*	*7.3*	*100.0*	*. .*	*46.5*	*51.7*
Total separations (N)	*8,673*	*4,526*	*1,036*	*. .*	*14,235*	*30,612*	
All with dementia							
65–69	51.0	42.1	6.9	100.0	480	28.2	31.4
70–74	53.6	36.8	9.6	100.0	1,398	32.9	36.6
75–79	52.6	37.1	10.3	100.0	3,283	35.8	39.8
80–84	55.1	35.5	9.4	100.0	5,625	42.7	47.5
85–89	60.6	32.1	7.3	100.0	6,327	48.3	53.7
90–94	64.8	29.5	5.6	100.0	3,487	54.3	60.4
95+	69.1	27.5	3.4	100.0	913	60.2	66.9
All	**58.3**	**33.7**	**8.0**	**100.0**	**. .**	**43.6**	**48.5**
Total separations (number)	**12,549**	**7,244**	**1,720**	**. .**	**21,513**	**49,365**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. 67 records were excluded due to missing diagnosis information.

Table 6.4: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+ with any diagnosis of dementia, by movement type, Australia, 2001–02 (unadjusted hospital separations)

Sex/age	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
Men with dementia	**Number (unadjusted hospital separations)**			**Ratio**
65–69	115	21	136	5.5 : 1
70–74	262	72	334	3.6 : 1
75–79	541	163	704	3.3 : 1
80–84	781	201	982	3.9 : 1
85–89	661	153	814	4.3 : 1
90–94	303	65	368	4.7 : 1
95+	55	9	64	6.1 : 1
All	*2,718*	*684*	*3,402*	*4.0 : 1*
Women with dementia				
65–69	87	12	99	7.3 : 1
70–74	252	62	314	4.1 : 1
75–79	677	176	853	3.8 : 1
80–84	1,218	325	1,543	3.7 : 1
85–89	1,369	308	1,677	4.8 : 1
90–94	727	131	858	5.5 : 1
95+	196	22	218	8.9 : 1
All	*4,526*	*1,036*	*5,562*	*4.4 : 1*
All with dementia				
65–69	202	33	235	6.1 : 1
70–74	514	134	648	3.8 : 1
75–79	1,218	339	1,557	3.6 : 1
80–84	1,999	526	2,525	3.8 : 1
85–89	2,030	461	2,491	4.4 : 1
90–94	1,030	196	1,226	5.3 : 1
95+	251	31	282	8.1 : 1
All	**7,244**	**1,720**	**8,964**	**4.2 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. 67 records were excluded due to missing diagnosis information.

Table 6.5: Hospital separations for people aged 65+ with any diagnosis of stroke, by sex and movement type, 2001–02 (unadjusted)

Sex/Age	Returning to perm-anent RAC	To perm-anent RAC	To respite RAC	To comm-unity/ other	Died in hospital	All	With stroke	All
Men			**Per cent with stroke**				**Number**	
65–69	1.5	16.8	8.1	1.6	8.9	1.9	1,796	92,306
70–74	2.6	15.5	8.2	1.8	9.0	2.3	2,530	109,564
75–79	3.0	13.5	6.0	2.0	9.9	2.6	2,967	112,804
80–84	2.5	12.5	6.6	2.3	10.9	3.2	2,577	80,936
85–89	2.1	12.1	4.3	2.3	12.2	3.7	1,639	44,296
90–94	2.6	9.0	4.7	2.2	11.8	3.9	558	14,363
95+	1.5	8.3	n.p.	1.6	11.6	3.7	96	2,609
All	*2.4*	*12.7*	*6.1*	*1.9*	*10.3*	*2.7*	. .	. .
With stroke (number)	*373*	*969*	*165*	*7,865*	*2,791*	. .	. .	. .
Total separations (number)	*15,346*	*7,621*	*2,718*	*404,223*	*26,970*	. .	*12,163*	*456,878*
Women								
65–69	3.3	14.9	n.p.	1.1	8.6	1.4	1,078	75,568
70–74	2.7	14.7	5.2	1.4	10.4	1.9	1,774	94,437
75–79	2.9	14.1	4.9	1.8	13.0	2.6	2,851	111,145
80–84	2.9	13.5	5.1	2.1	15.1	3.2	3,204	99,037
85–89	2.9	11.9	4.8	2.3	16.5	3.9	2,812	71,994
90–94	2.6	10.0	2.7	2.0	17.4	4.1	1,275	30,760
95+	2.4	7.0	4.0	2.0	13.7	4.0	298	7,424
All	*2.8*	*12.4*	*4.6*	*1.7*	*14.1*	*2.7*	. .	. .
With stroke (number)	*919*	*1,542*	*230*	*7,179*	*3,422*	. .	. .	. .
Total separations (number)	*32,948*	*12,478*	*5,021*	*415,567*	*24,351*	. .	*13,292*	*490,365*
All								
65–69	2.3	15.9	5.5	1.4	8.8	1.7	2,874	167,874
70–74	2.6	15.1	6.6	1.6	9.5	2.1	4,304	204,001
75–79	2.9	13.8	5.3	1.9	11.2	2.6	5,818	223,949
80–84	2.7	13.1	5.6	2.2	13.0	3.2	5,781	179,973
85–89	2.7	12.0	4.7	2.3	14.6	3.8	4,451	116,290
90–94	2.6	9.7	3.3	2.1	15.3	4.1	1,833	45,123
95+	2.2	7.3	4.0	1.9	13.0	3.9	394	10,033
All	**2.7**	**12.5**	**5.1**	**1.8**	**12.1**	**2.7**	**. .**	**. .**
With stroke (number)	**1,292**	**2,511**	**395**	**15,044**	**6,213**	**. .**	**. .**	**. .**
Total separations (number)	**48,294**	**20,099**	**7,739**	**819,790**	**51,321**	**. .**	**25,455**	**947,243**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. 878 records were excluded due to missing diagnosis information.

Table 6.6: Summary of movements from hospital into RAC for people aged 65+ with any diagnosis of stroke, by movement type, Australia, 2001–02

Sex/age	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men with stroke		**Row per cent**				**Est'd min %**	**Est'd max %**
65–69	14.0	>64.5	<21.5	100.0	93	6.2	6.9
70–74	22.0	65.0	13.1	100.0	214	10.3	11.5
75–79	25.7	63.6	10.8	100.0	343	14.7	16.3
80–84	23.7	64.1	12.2	100.0	393	20.1	22.4
85–89	24.5	67.6	7.8	100.0	306	27.6	30.7
90–94	37.3	53.0	9.7	100.0	134	38.4	42.7
95+	29.2	>50.0	<20.8	100.0	24	51.1	56.8
All	*24.8*	*64.3*	*10.9*	*100.0*	*. .*	*16.1*	*17.9*
Total separations (N)	*373*	*969*		*. .*	*1,507*	*9,372*	
Women with stroke							
65–69	30.0	>63.8	<6.3	100.0	80	8.9	9.9
70–74	23.9	65.5	10.7	100.0	197	13.7	15.2
75–79	28.1	61.8	10.1	100.0	434	19.4	21.6
80–84	31.2	58.8	10.0	100.0	719	30.0	33.4
85–89	37.4	54.1	8.6	100.0	771	39.5	44.0
90–94	42.2	53.4	4.3	100.0	393	50.8	56.5
95+	49.5	>40.2	<10.3	100.0	97	56.4	62.7
All	*34.2*	*57.3*	*8.5*	*100.0*	*. .*	*27.3*	*30.3*
Total separations (N)	*919*	*1,542*		*. .*	*2,691*	*9,870*	
All with stroke							
65–69	21.4	68.8	9.8	100.0	173	7.2	8.0
70–74	22.9	65.2	11.9	100.0	411	11.7	13.0
75–79	27.0	62.5	10.4	100.0	777	17.0	18.9
80–84	28.5	60.7	10.8	100.0	1,112	25.6	28.5
85–89	33.7	57.9	8.4	100.0	1,077	35.2	39.2
90–94	41.0	53.3	5.7	100.0	527	46.9	52.2
95+	45.5	47.9	6.6	100.0	121	55.3	61.5
All	**30.8**	**59.8**	**9.4**	**100.0**	**. .**	**21.8**	**24.3**
Total separations (number)	**1,292**	**2,511**	**395**	**. .**	**4,198**	**19,242**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. 67 records were excluded due to missing diagnosis information.

Table 6.7: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+ with any diagnosis of stroke, by movement type, Australia, 2001–02 (unadjusted hospital separations)

Sex/age	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
Men with stroke	**Number (unadjusted hospital separations)**			**Ratio**
65–69	>60	<20	80	n.p. : 1
70–74	139	28	167	5.0 : 1
75–79	218	37	255	5.9 : 1
80–84	252	48	300	5.3 : 1
85–89	207	24	231	8.6 : 1
90–94	71	13	84	5.5 : 1
95+	>12	<5	17	n.p. : 1
All	*969*	*165*	*1,134*	*5.9 : 1*
Women with stroke				
65–69	>51	<5	56	n.p. : 1
70–74	129	21	150	6.1 : 1
75–79	268	44	312	6.1 : 1
80–84	423	72	495	5.9 : 1
85–89	417	66	483	6.3 : 1
90–94	210	17	227	12.4 : 1
95+	>39	<10	49	n.p. : 1
All	*1,542*	*230*	*1,772*	*6.7 : 1*
All with stroke				
65–69	119	17	136	7.0 : 1
70–74	268	49	317	5.5 : 1
75–79	486	81	567	6.0 : 1
80–84	675	120	795	5.6 : 1
85–89	624	90	714	6.9 : 1
90–94	281	30	311	9.4 : 1
95+	58	8	66	7.3 : 1
All	**2,511**	**395**	**2,906**	**6.4 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. 67 records were excluded due to missing diagnosis information.

Table 6.8: Hospital separations for people aged 65+ with principal diagnosis of injury and external cause of fall, by sex and movement type, 2001–02 (unadjusted)

Sex/Age	Returning to perm-anent RAC	To perm-anent RAC	To respite RAC	To comm-unity/ other	Died in hospital	All	With injury caused by fall	All
Men	**Per cent with injury caused by fall**						**Number**	
65–69	4.6	2.8	3.8	1.5	1.1	1.5	1,386	92,306
70–74	5.5	2.4	4.7	1.4	1.1	1.5	1,637	109,564
75–79	5.6	4.0	4.7	1.6	2.1	1.8	2,021	112,804
80–84	6.0	3.8	5.0	2.2	2.8	2.5	1,996	80,936
85–89	7.7	5.5	5.8	3.1	4.4	3.7	1,635	44,296
90–94	8.5	6.8	8.7	4.4	6.2	5.4	776	14,363
95+	10.8	7.8	n.p.	6.2	10.6	7.9	206	2,609
Total	*6.6*	*4.4*	*5.4*	*1.8*	*2.7*	*2.1*	. .	. .
With injury caused by fall (number)	*1,019*	*337*	*147*	*7,422*	*732*	. .	. .	. .
Total separations (number)	*15,346*	*7,621*	*2,718*	*404,223*	*26,970*	. .	*9,657*	*456,878*
Women								
65–69	7.5	4.3	6.1	2.8	0.9	2.8	2,090	75,568
70–74	8.0	5.1	6.9	3.3	1.8	3.3	3,147	94,437
75–79	9.2	5.1	10.3	4.0	2.6	4.2	4,674	111,145
80–84	10.9	8.2	10.8	5.3	4.9	5.9	5,836	99,037
85–89	12.1	9.9	10.7	6.7	6.4	7.6	5,503	71,994
90–94	13.6	10.8	13.3	9.0	8.3	10.1	3,107	30,760
95+	16.9	11.5	16.6	11.3	11.8	13.0	966	7,424
Total	*11.7*	*8.4*	*10.7*	*4.5*	*4.7*	*5.2*	. .	. .
With injury caused by fall (number)	*3,862*	*1,054*	*539*	*18,725*	*1,143*	. .	. .	. .
Total separations (number)	*32,948*	*12,478*	*5,021*	*415,567*	*24,351*	. .	*25,323*	*490,365*
All								
65–69	5.9	3.5	4.9	2.1	1.0	2.1	3,476	167,874
70–74	6.7	3.8	5.9	2.3	1.4	2.3	4,784	204,001
75–79	7.8	4.6	8.0	2.8	2.3	3.0	6,695	223,949
80–84	9.3	6.5	8.8	3.9	3.8	4.4	7,832	179,973
85–89	11.0	8.4	9.3	5.2	5.5	6.1	7,138	116,290
90–94	12.4	9.7	11.9	7.4	7.5	8.6	3,883	45,123
95+	15.7	10.7	14.4	9.9	11.5	11.7	1,172	10,033
Total	**10.1**	**6.9**	**8.9**	**3.2**	**3.7**	**3.7**	**. .**	**. .**
With injury caused by fall (number)	**4,881**	**1,391**	**686**	**26,147**	**1,875**	**. .**	**. .**	**. .**
Total separations (number)	**48,294**	**20,099**	**7,739**	**819,790**	**51,321**	**. .**	**34,980**	**947,243**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. 878 records were excluded due to missing diagnosis information.

Table 6.9: Summary of movements from hospital into RAC for people aged 65+ with principal diagnosis of injury and external cause of fall, by movement type, Australia, 2001–02

Sex/age	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men with injury and fall		**Row per cent**				**Est'd min %**	**Est'd max %**
65–69	69.6	>16.1	<14.3	100.0	56	4.2	4.6
70–74	72.3	16.1	11.7	100.0	137	8.7	9.6
75–79	63.3	25.4	11.3	100.0	256	13.6	15.1
80–84	66.9	22.6	10.6	100.0	341	18.6	20.7
85–89	68.5	23.5	8.0	100.0	400	27.7	30.8
90–94	68.0	22.1	9.8	100.0	244	36.6	40.7
95+	73.9	>18.8	<7.2	100.0	69	42.9	47.7
All	*67.8*	*22.4*	*9.8*	*100.0*	*. .*	*16.8*	*18.7*
Total separations (number)	*1,019*	*337*	*147*	*. .*	*1,503*	*8,925*	
Women with injury and fall							
65–69	69.6	>17.7	<12.7	100.0	79	3.8	4.2
70–74	65.6	21.2	13.2	100.0	212	6.9	7.6
75–79	67.5	16.5	16.0	100.0	581	12.8	14.2
80–84	67.4	20.4	12.2	100.0	1,254	22.5	25.0
85–89	71.2	20.2	8.5	100.0	1,709	33.1	36.8
90–94	73.8	19.0	7.2	100.0	1,183	41.3	45.9
95+	78.0	>15.1	<6.9	100.0	437	51.0	56.7
All	*70.8*	*19.3*	*9.9*	*100.0*	*. .*	*22.6*	*25.1*
Total separations (number)	*3,862*	*1,054*	*539*	*. .*	*5,455*	*24,180*	
All with injury and fall							
65–69	69.6	19.3	11.1	100.0	135	3.9	4.4
70–74	68.2	19.2	12.6	100.0	349	7.5	8.3
75–79	66.2	19.2	14.6	100.0	837	13.0	14.5
80–84	67.3	20.9	11.8	100.0	1,595	21.5	23.9
85–89	70.7	20.9	8.4	100.0	2,109	31.9	35.5
90–94	72.8	19.6	7.6	100.0	1,427	40.4	44.9
95+	77.5	16.8	5.7	100.0	506	49.7	55.3
All	**70.1**	**20.0**	**9.9**	**100.0**	**. .**	**21.0**	**23.4**
Total separations (number)	**4,881**	**1,391**	**686**	**. .**	**6,958**	**33,105**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. 67 records were excluded due to missing diagnosis information.

Table 6.10: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+ with any diagnosis of injury and external cause of fall, by movement type, Australia, 2001–02 (unadjusted hospital separations)

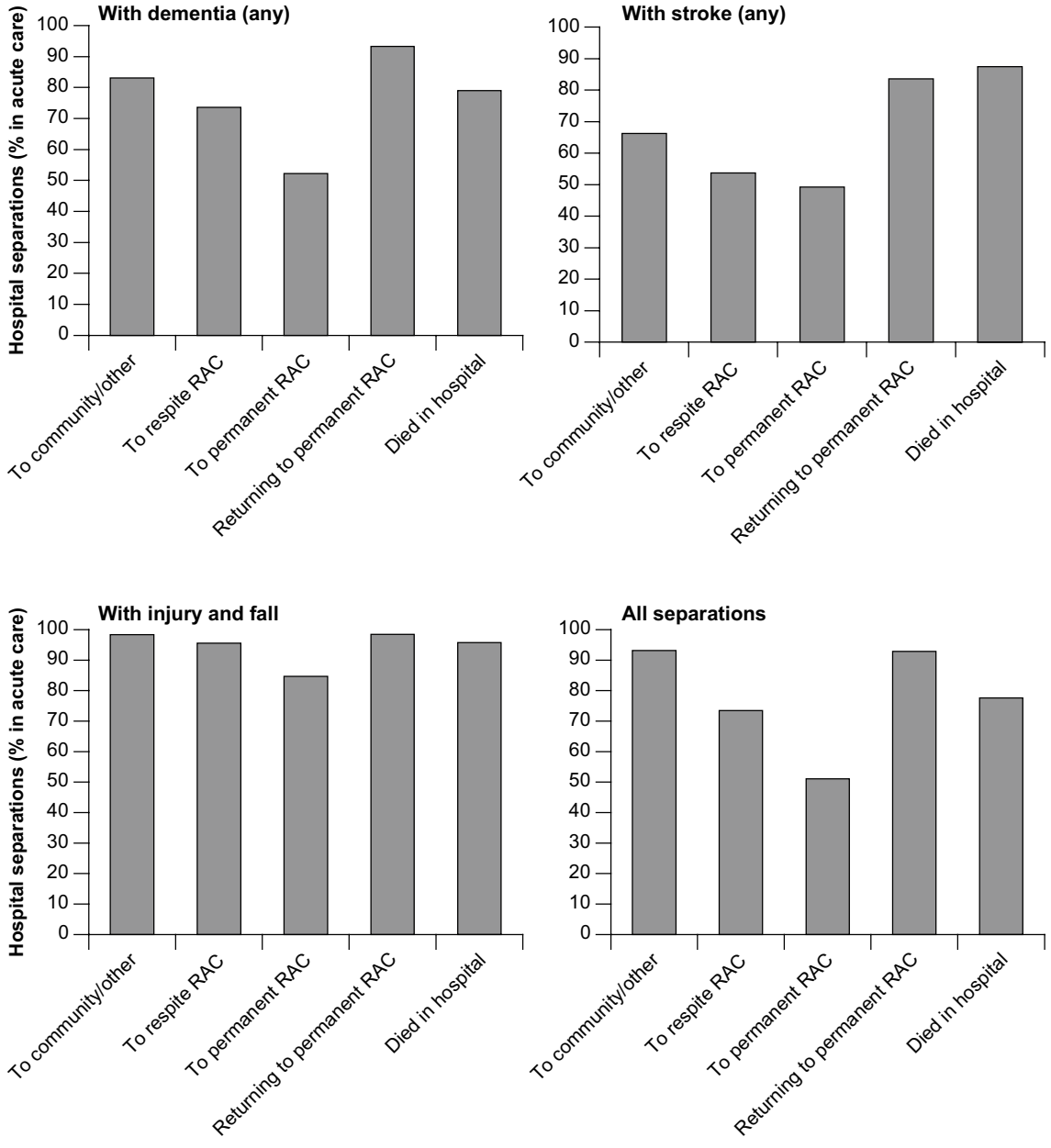
Sex/age	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
Men with injury and fall	**Number (unadjusted hospital separations)**			**Ratio**
65–69	>9	<8	17	n.p. : 1
70–74	22	16	38	1.4 : 1
75–79	65	29	94	2.2 : 1
80–84	77	36	113	2.1 : 1
85–89	94	32	126	2.9 : 1
90–94	54	24	78	2.3 : 1
95+	>13	<5	18	n.p. : 1
All	*337*	*147*	*484*	*2.3 : 1*
Women with injury and fall				
65–69	>14	<10	24	n.p. : 1
70–74	45	28	73	1.6 : 1
75–79	96	93	189	1.0 : 1
80–84	256	153	409	1.7 : 1
85–89	346	146	492	2.4 : 1
90–94	225	85	310	2.6 : 1
95+	>66	<30	96	n.p. : 1
All	*1,054*	*539*	*1,593*	*2.0 : 1*
All with injury and fall				
65–69	26	15	41	1.7 : 1
70–74	67	44	111	1.5 : 1
75–79	161	122	283	1.3 : 1
80–84	333	189	522	1.8 : 1
85–89	440	178	618	2.5 : 1
90–94	279	109	388	2.6 : 1
95+	85	29	114	2.9 : 1
All	**1,391**	**686**	**2,077**	**2.0 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. 67 records were excluded due to missing diagnosis information.

6.3 Hospital care characteristics

Overall, exiting hospital episodes with a recorded diagnosis of stroke or dementia were less likely than others to have been for acute care (71% and 81% of separations for all such hospital episodes, respectively, compared with the average of 91%). This was true irrespective of movement type. On the other hand, those episodes with a principal diagnosis of injury from a fall were highly likely to have been for acute care (over 85% for all movement groups, and 98% overall) (Figure 6.3, tables 6.11, 6.12 and 6.13).



Source: tables 3.12, 6.11, 6.12 and 6.13.

Figure 6.3: Relative use of acute care for selected health conditions, by post-hospital destination

Generally, people with a diagnosis of dementia were more likely to be receiving maintenance care before discharge from hospital (7%) than people without this diagnosis (1%) (Table 6.11). Among transition groups, the difference in patterns of care type between people with and without dementia was greatest among the group of people returning to the community. For this group 83% of people with dementia were discharged from acute care compared with 93% of those without dementia.

People with stroke were less likely to be in acute care prior to leaving hospital and more likely to be in rehabilitation than others, whether they moved to RAC or to the community (Table 6.12). The largest differences were for those who moved to respite care (54% with stroke were in acute care compared to 74% of those without a diagnosis of stroke) or back to the community (66% compared with 94%).

For all transition groups, people with a diagnosis of injury due to a fall were more likely to be receiving acute care prior to leaving hospital and less likely to be in rehabilitation, with the largest differences observed among those entering RAC (Table 6.13). For those moving into permanent RAC, 85% of those in hospital due to a fall were discharged from acute care compared with 49% in hospital for other reasons. For those moving into respite care the corresponding figures were 96% and 71%.

For people who died in hospital, those with a diagnosis of dementia or who had a principal diagnosis of injury as a result of a fall were less likely to be receiving palliative care than other people (9% compared with 18% and 2% compared with 17%, respectively).

People moving to RAC following a period in hospital with any of the three conditions under consideration had relatively high care needs once in RAC (Table 6.14). The largest difference was for dementia with 79% of people with a hospital diagnosis of dementia being high care compared with 54% of people without such a diagnosis. The comparative proportions for diagnoses of stroke and fall were 79% versus 60%, and 74% versus 60%, respectively.

For each condition the smallest difference in care needs was for people admitted into RAC for permanent care. For example, 87% of admissions for those with a diagnosis of dementia were for high care compared with 80% of admissions for people without. In comparison, when dementia was recorded as a diagnosis in hospital, high care was needed for 56% of respite admissions while among similar transitions without such a diagnosis 39% of admissions were for high care. Although the differences were not as large, similar patterns were seen for people with a hospital diagnosis of stroke or in hospital because of a fall. The highest differences in care needs were for people returning to RAC from hospital leave with a diagnosis of dementia or who were in hospital because of a fall. For dementia, 77% of people returning to RAC with a diagnosis of dementia were high care compared with 48% without this diagnosis; for injury the comparable proportions were 73% and 53%.

Table 6.11: Hospital separations for people aged 65+, by any diagnosis of dementia, movement type and hospital care type, 2001–02 (unadjusted)

Sex/hospital care type	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	All
With dementia			**Per cent**				**Number**
Acute	93.3	52.2	73.6	83.1	79.0	80.6	44,363
Rehabilitation	3.3	7.7	7.9	7.2	1.7	5.8	3,214
Palliative	0.2	0.6	0.3	0.5	8.8	1.3	728
GEM	1.2	8.8	2.6	3.0	2.1	3.2	1,779
Psychogeriatric	1.0	2.1	1.5	1.1	0.7	1.2	668
Maintenance	0.8	23.4	13.1	4.4	6.6	6.6	3,627
Other	0.1	5.1	1.0	0.7	1.1	1.2	649
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
Total separations (N)	*12,525*	*7,233*	*1,719*	*27,741*	*5,810*	*. .*	*55,028*
Without dementia							
Acute	92.7	50.4	73.3	93.4	77.4	91.8	814,567
Rehabilitation	4.9	12.1	14.0	4.5	1.1	4.5	39,907
Palliative	0.4	2.6	1.1	0.5	17.9	1.5	12,950
GEM	1.1	8.0	1.8	0.7	1.1	0.8	7,229
Psychogeriatric	0.3	0.2	0.4	0.1	—	0.1	771
Maintenance	0.5	20.6	8.3	0.5	2.0	0.9	8,377
Other	0.1	6.1	1.0	0.3	0.4	0.4	3,224
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
Total separations (N)	*35,627*	*12,831*	*6,014*	*787,003*	*45,550*	*. .*	*887,025*
All			**Per cent with dementia**				
Acute	26.1	36.9	22.3	3.0	11.5	5.2	858,930
Rehabilitation	19.2	26.5	13.8	5.4	15.8	7.5	43,121
Palliative	17.5	12.1	8.1	3.1	5.9	5.3	13,678
GEM	26.5	38.2	29.8	13.8	19.2	19.7	9,008
Psychogeriatric	57.5	82.8	48.1	34.4	76.8	46.4	1,439
Maintenance	36.0	39.1	30.9	22.8	29.5	30.2	12,004
Other	33.3	32.0	23.7	7.9	24.4	16.8	3,873
All	**26.0**	**36.0**	**22.2**	**3.4**	**11.3**	**5.8**	**. .**
With dementia (number)	**12,525**	**7,233**	**1,719**	**27,741**	**5,810**	**. .**	**. .**
Total separations (number)	**48,152**	**20,064**	**7,733**	**814,744**	**51,360**	**. .**	**942,053**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. Newborn care types, organ procurement and hospital boarders were excluded from the tables (1 case).
5. 6,107 records with unknown care type were excluded from the table. All of these records related to separations from Tasmanian hospitals; 6,095 were from private hospitals.

Table 6.12: Hospital separations for people aged 65+, by any diagnosis of stroke, movement type and hospital care type, 2001–02 (unadjusted)

Sex/hospital care type	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	All
With stroke			**Per cent**				**Number**
Acute	83.6	49.2	53.7	66.3	87.5	70.5	17,864
Rehabilitation	12.3	16.5	30.9	29.2	1.9	20.5	5,185
Palliative	0.5	0.5	0.3	0.2	6.1	1.7	429
GEM	2.1	6.4	2.3	2.3	1.0	2.4	605
Psychogeriatric	0.3	—	—	0.1	0.1	0.1	19
Maintenance	1.2	20.9	11.1	1.4	2.6	3.8	959
Other	0.1	6.4	1.8	0.5	0.7	1.1	287
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
Total separations (N)	*1,288*	*2,502*	*395*	*14,951*	*6,212*	*. .*	*25,348*
Without stroke							
Acute	93.1	51.3	74.4	93.6	76.2	91.7	841,066
Rehabilitation	4.3	9.6	11.7	4.1	1.1	4.1	37,936
Palliative	0.4	2.1	1.0	0.5	18.4	1.4	13,249
GEM	1.1	8.6	1.9	0.7	1.2	0.9	8,403
Psychogeriatric	0.5	1.1	0.7	0.1	0.1	0.2	1,420
Maintenance	0.6	21.7	9.3	0.6	2.5	1.2	11,045
Other	0.1	5.7	0.9	0.3	0.5	0.4	3,586
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
Total separations (N)	*46,864*	*17,562*	*7,338*	*799,793*	*45,148*	*. .*	*916,705*
All			**Per cent with stroke**				
Acute	2.4	12.0	3.7	1.3	13.6	2.1	858,930
Rehabilitation	7.2	19.6	12.5	11.7	19.8	12.0	43,121
Palliative	3.5	3.2	1.4	0.7	4.4	3.1	13,678
GEM	4.9	9.6	6.0	5.8	9.9	6.7	9,008
Psychogeriatric	1.8	0.5	—	0.9	10.7	1.3	1,439
Maintenance	5.3	12.1	6.1	4.0	12.5	8.0	12,004
Other	2.4	13.9	9.2	3.1	17.7	7.4	3,873
All	**2.7**	**12.5**	**5.1**	**1.8**	**12.1**	**2.7**	**. .**
With stroke (number)	**1,288**	**2,502**	**395**	**14,951**	**6,212**	**. .**	**. .**
Total separations (number)	**48,152**	**20,064**	**7,733**	**814,744**	**51,360**	**. .**	**942,053**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. Newborn care types, organ procurement and hospital boarders were excluded from the tables (1 case).
5. 6,107 records with unknown care type were excluded from the table. All of these records related to separations from Tasmanian hospitals; 6,095 were from private hospitals.

Table 6.13: Hospital separations for people aged 65+, by principal diagnosis of injury caused by fall, movement type and hospital care type, 2001–02 (unadjusted)

Sex/hospital care type	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	All
With injury and fall			**Per cent**				**Number**
Acute	98.4	84.7	95.5	98.3	95.7	97.6	33,956
Rehabilitation	0.1	0.3	0.3	0.1	0.1	0.1	47
Palliative	0.1	0.1	0.1	0.1	2.3	0.2	62
GEM	1.2	8.4	2.2	1.2	1.2	1.5	528
Psychogeriatric	0.0	0.1	—	—	—	—	5
Maintenance	0.1	4.2	1.7	0.2	0.4	0.4	141
Other	0.0	2.2	0.1	0.1	0.2	0.2	68
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
Total separations (N)	*4,870*	*1,390*	*686*	*25,986*	*1,875*	*. .*	*34,807*
Without injury and fall							
Acute	92.2	48.5	71.2	92.9	76.9	90.9	824,974
Rehabilitation	5.0	11.3	13.8	4.7	1.2	4.7	43,074
Palliative	0.4	2.0	1.0	0.6	17.4	1.5	13,616
GEM	1.1	8.3	1.9	0.7	1.2	0.9	8,480
Psychogeriatric	0.5	1.0	0.7	0.1	0.1	0.2	1,434
Maintenance	0.6	22.9	10.1	0.7	2.6	1.3	11,863
Other	0.1	6.0	1.1	0.3	0.5	0.4	3,805
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
Total separations (N)	*43,282*	*18,674*	*7,047*	*788,758*	*49,485*	*. .*	*907,246*
All			**Per cent with injury and fall**				
Acute	10.7	11.5	11.5	3.4	4.5	4.0	858,930
Rehabilitation	0.2	0.2	0.2	0.1	0.3	0.1	43,121
Palliative	1.8	0.3	1.4	0.3	0.5	0.5	13,678
GEM	10.7	7.0	9.9	5.2	3.7	5.9	9,008
Psychogeriatric	0.9	0.5	—	0.2	—	0.3	1,439
Maintenance	2.1	1.4	1.7	1.0	0.6	1.2	12,004
Other	2.4	2.7	1.3	1.4	1.2	1.8	3,873
All	**10.1**	**6.9**	**8.9**	**3.2**	**3.7**	**3.7**	**. .**
With injury and fall (number)	**4,870**	**1,390**	**686**	**25,986**	**1,875**	**. .**	**. .**
Total separations (number)	**48,152**	**20,064**	**7,733**	**814,744**	**51,360**	**. .**	**942,053**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.
4. Newborn care types, organ procurement and hospital boarders were excluded from the tables (1 case).
5. 6,107 records with unknown care type were excluded from the table. All of these records related to separations from Tasmanian hospitals; 6,095 were from private hospitals.

Table 6.14: People aged 65+ entering RAC from hospital, by hospital diagnosis, movement type and RCS care level, 2001–02 (unadjusted)

Hospital diagnosis	Returning from hospital leave	To permanent RAC from hospital	To respite RAC from hospital	All
Any dementia				
With dementia: per cent high care	77.4	87.1	55.8	78.9
Without dementia: per cent high care	47.6	80.1	39.1	54.3
All with dementia (number)	*12,549*	*7,244*	*1,720*	*21,513*
All without dementia (number)	*35,770*	*12,873*	*6,022*	*54,665*
Any stroke				
With stroke: per cent high care	66.6	89.7	54.7	79.3
Without stroke: per cent high care	55.0	81.6	42.2	60.2
All with stroke (number)	*1,292*	*2,511*	*395*	*4,198*
All without stroke (number)	*47,027*	*17,606*	*7,347*	*71,980*
Principal diagnosis of Injury and fall				
With injury and fall: per cent high care	73.4	87.0	49.7	73.8
Without injury and fall: per cent high care	53.3	82.3	42.2	60.0
All with injury and fall (number)	*4,881*	*1,391*	*686*	*6,958*
All without injury and fall (number)	*43,438*	*18,726*	*7,056*	*69,220*
All				
Per cent high care	**55.3**	**82.6**	**42.8**	**61.2**
Total (number)	**48,319**	**20,117**	**7,742**	**76,178**

Notes

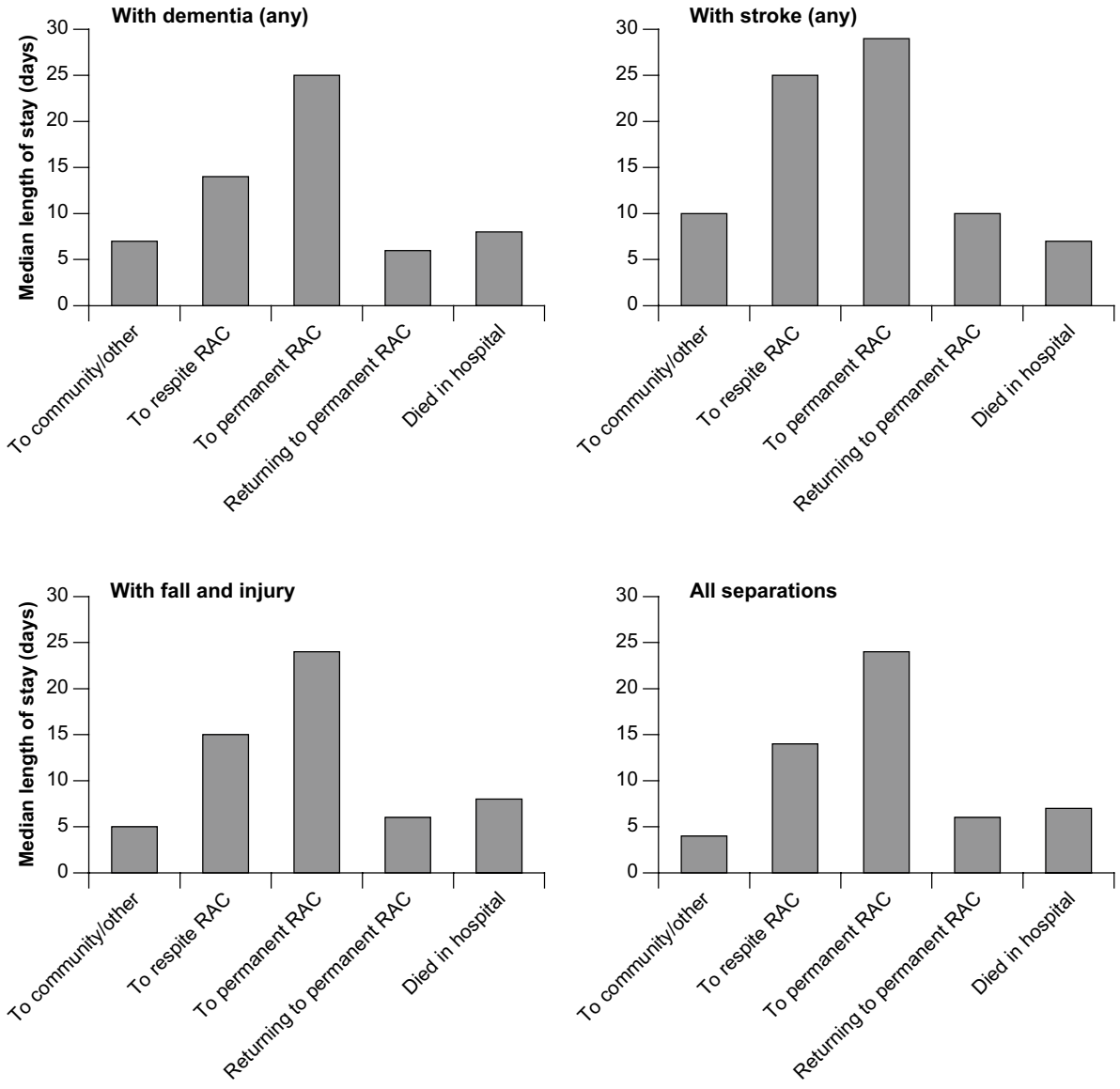
1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of RAC admission.
4. One record was excluded due to missing RCS care level.

6.4 Length of stay in hospital

Of the three conditions being examined, the presence of stroke had the greatest effect on length of stay in hospital (Figure 6.4). Excluding hospital episodes ending in death, episodes for people with a diagnosis of stroke were on average 4 to 10 days longer than those for people without such a diagnosis, depending on movement type. The greatest difference in median length of stay was seen for people moving to residential respite care: those with a diagnosis of stroke had a median length of hospital episode of 25 days compared with a median of 14 days for those without such a diagnosis (Table 6.16).

For people returning to permanent care, average length of stay was the same whether or not a diagnosis of dementia was recorded for the hospital episode (median of 6 days for both men and women and nearly all age groups) (Table 6.15). Whether or not the hospitalisation of the RAC resident was caused by a fall also did not affect the median length of stay (Table 6.17).

However, for other transition groups both these conditions were associated with slightly longer average stays. While length of stay varied with age and post-hospital destination (as seen earlier in Section 3.2), of the three conditions examined, only injury from a fall seemed to be associated with different patterns across the age groups.



Source: tables 6.15, 6.16 and 6.17.

Figure 6.4: Median length of stay for selected health conditions, by post-hospital destination

Table 6.15: Hospital separations for people aged 65+: median length of stay in hospital, by any dementia diagnosis, age and movement type, 2001–02 (unadjusted)

Dementia diagnosis/age	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All
With dementia			**Median (days)**			
65–69	6	28	10	8	10	9
70–74	6	29	17	7	9	8
75–79	6	25	14	7	9	8
80–84	6	25	16	7	8	8
85–89	6	24	14	7	8	8
90–94	6	22	15	7	8	8
95+	5	23	11	6	8	7
All with dementia	*6*	*25*	*14*	*7*	*8*	*8*
Without dementia						
65–69	6	26	14	3	7	4
70–74	6	23	13	4	7	4
75–79	6	25	15	4	7	4
80–84	6	23	14	5	8	5
85–89	6	23	13.5	5	7	6
90–94	6	22	13	5	7	6
95+	6	21	15	5	7	6
All without dementia	*6*	*23*	*14*	*4*	*7*	*4*
All						
65–69	6	26	14	3	7	4
70–74	6	25	14	4	7	4
75–79	6	25	14	4	8	5
80–84	6	24	14	5	8	5
85–89	6	23	14	5	7	6
90–94	6	22	13	6	7	6
95+	5	21	14	6	7	6
All separations	**6**	**24**	**14**	**4**	**7**	**5**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. See technical note Box 3.1 on measuring length of stay.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.

Table 6.16: Hospital separations for people aged 65+: median length of stay in hospital, by any stroke diagnosis, age and movement type, 2001–02 (unadjusted)

Stroke diagnosis/age	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All
With stroke			**Median (days)**			
65–69	8	38	25	9	5	9
70–74	11	33.5	29	10	6	10
75–79	9	31	28	10	7	11
80–84	10	30	24.5	11	8	12
85–89	10	28	25.5	12	7	12
90–94	10	27	21	12	7	11
95+	11	22	17.5	10	7	10
All with stroke	*10*	*29*	*25*	*10*	*7*	*11*
Without stroke						
65–69	6	25	13	3	8	3
70–74	6	23	13	4	7	4
75–79	6	24	14	4	8	4
80–84	6	23	14	5	8	5
85–89	6	23	13	5	7	6
90–94	6	21	13	6	7	6
95+	5	21	14	6	7	6
All without stroke	*6*	*23*	*14*	*4*	*7*	*4*
All						
65–69	6	26	14	3	7	4
70–74	6	25	14	4	7	4
75–79	6	25	14	4	8	5
80–84	6	24	14	5	8	5
85–89	6	23	14	5	7	6
90–94	6	22	13	6	7	6
95+	5	21	14	6	7	6
All separations	**6**	**24**	**14**	**4**	**7**	**5**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. See technical note Box 3.1 on measuring length of stay.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.

Table 6.17: Hospital separations for people aged 65+: median length of stay in hospital, by principal diagnosis of injury caused by a fall, age and movement type, 2001–02 (unadjusted)

Principal diagnosis injury with fall/age	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All
With injury and fall			**Median (days)**			
65–69	6	21.5	20	3	6	4
70–74	6	23	15.5	4	8	4
75–79	6	26	15	5	8	6
80–84	6	22	15	6	8	6
85–89	6	25	14	7	7	7
90–94	6	25	14	6	8	7
95+	6	24	15	6	8	7
All with injury and fall	*6*	*24*	*15*	*5*	*8*	*6*
Without injury and fall						
65–69	6	27	13	3	7	4
70–74	6	25	14	4	7	4
75–79	6	25	14	4	8	5
80–84	6	24	14	5	8	5
85–89	6	23	14	5	7	6
90–94	6	22	13	6	7	6
95+	5	21	14	6	7	6
All without injury and fall	*6*	*23*	*14*	*4*	*7*	*5*
All						
65–69	6	26	14	3	7	4
70–74	6	25	14	4	7	4
75–79	6	25	14	4	8	5
80–84	6	24	14	5	8	5
85–89	6	23	14	5	7	6
90–94	6	22	13	6	7	6
95+	5	21	14	6	7	6
All separations	**6**	**24**	**14**	**4**	**7**	**5**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. See technical note Box 3.1 on measuring length of stay.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of hospital admission.

6.5 Short-term use of residential aged care

People moving from hospital to respite RAC with a hospital diagnosis of dementia were more likely than those without such a diagnosis to return to the community within 12 weeks of admission (66% of people admitted to respite care with a hospital diagnosis of dementia compared with 52% of those without) (Table 6.18). However, a relatively large proportion (19% versus 11%) left respite care reporting that they were going to another RAC service—a move that was not identified as occurring within 4 weeks. As a result of the lower rate of returning to the community, people without a diagnosis of dementia were much more likely to be still in respite care at the 12 week mark (25% of those without a hospital diagnosis of dementia compared with 4% of those with such a diagnosis).

Among people moving into permanent care, the differences in short-term outcomes for those with and without a diagnosis of dementia were small: people with a hospital diagnosis of dementia were slightly more likely than others to end with a return to the community within 12 weeks (10% compared with 8%), and less likely to have died within that period (17% versus 20%).

Few people with a diagnosis of stroke moved from hospital to RAC for respite care (Table 6.19). Those that did were more likely than others to return to the community within 12 weeks (75% compared with 58%). Few people entering respite care from hospital with a diagnosis of stroke were still in RAC at 12 weeks. For people admitted to permanent care from hospital, relatively few with a hospital diagnosis of stroke returned to the community within 12 weeks (6% versus 9%). There was no significant difference between the proportions that were discharged to hospital or died in care within 12 weeks for those with and without stroke. As a result, more people with a stroke diagnosis were still in permanent care at the 12 week point than those without such a diagnosis.

As with stroke, relatively few people in hospital because of a fall moved from hospital to RAC for respite care, and those that did were more likely than others to return to the community within 12 weeks (77% compared with 58%) (Table 6.20). Consequently, few were still in residential care after 12 weeks. Similarly, among transitions to permanent care from hospital, relatively few residents who were in hospital due to a fall returned to the community within 12 weeks (7% versus 9%, $p<0.05$). There were no other significant differences in the short-term outcomes for people according to whether they had been in hospital because of a fall.

Table 6.18: People aged 65+ returning to the community following RAC admission from hospital: any diagnosis of dementia, by admission type, 2001–02 (unadjusted)

Movement following admission to RAC	Transition into respite RAC			Transition into permanent RAC			All into RAC	
	Any diagnosis of dementia			Any diagnosis of dementia				
	Yes	No	All	Yes	No	All	All	N
Returned to the community within 12 weeks				Column per cent				
Did not return to RAC within 4 weeks								
Left reported going to RAC	19.4	10.9	11.7	1.2	1.1	1.2	4.1	796
Other	46.6	40.7	41.2	7.3	6.0	6.4	16.2	3,136
Subtotal	*66.0*	*51.5*	*52.9*	*8.5*	*7.1*	*7.6*	*20.3*	*3,932*
Returned to RAC within 4 weeks								
Re-admission into respite RAC	1.6	5.0	4.7	—	—	—	1.3	253
Re-admission into permanent RAC	4.1	0.6	1.0	1.0	0.9	0.9	0.9	181
Subtotal	*5.6*	*5.6*	*5.6*	*1.0*	*0.9*	*0.9*	*2.2*	*434*
Total returns to the community	*71.7*	*57.1*	*58.5*	*9.5*	*8.0*	*8.5*	*22.5*	*4,366*
Did not return to the community within 12 weeks								
In respite RAC after 12 weeks	3.5	25.4	23.3	—	—	—	6.5	1,264
In permanent RAC after 12 weeks	2.5	0.9	1.0	71.4	70.6	70.9	51.3	9,953
Discharged to hospital within 12 weeks	15.0	11.0	11.3	2.3	1.7	1.9	4.5	875
Died in RAC within 12 weeks	7.4	5.7	5.8	16.7	19.7	18.8	15.1	2,937
Total non-returners to the community	*28.3*	*42.9*	*41.5*	*90.5*	*92.0*	*91.5*	*77.5*	*15,029*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100**	**. .**
Total (people)	**515**	**4,912**	**5,427**	**4,553**	**9,415**	**13,968**	**. .**	**19,395**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of initial RAC admission from hospital.
4. Table is based on first admission from hospital during the first 36 weeks of 2001–02 to allow a 12-week window to identify returns to the community followed by a 4-week window to identify unsuccessful returns.

Table 6.19: People aged 65+ returning to the community following RAC admission from hospital: any diagnosis of stroke, by admission type, 2001–02 (unadjusted)

Movement following admission to RAC	Transition into respite RAC			Transition into permanent RAC			All into RAC	
	Any diagnosis of stroke			Any diagnosis of stroke				
	Yes	No	All	Yes	No	All	All	N
Returned to the community within 12 weeks				Column per cent				
Did not return to RAC within 4 weeks								
Left reported going to RAC	22.6	11.4	11.7	0.5	1.3	1.2	4.1	796
Other	48.9	41.0	41.2	4.3	6.7	6.4	16.2	3,136
Subtotal	*71.5*	*52.4*	*52.9*	*4.8*	*7.9*	*7.6*	*20.3*	*3,932*
Returned to RAC within 4 weeks								
Re-admission into respite RAC	n.p.	4.7	4.7	—	—	—	1.3	253
Re-admission into permanent RAC	n.p.	0.9	1.0	0.8	0.9	0.9	0.9	181
Subtotal	*3.6*	*5.7*	*5.6*	*0.8*	*0.9*	*0.9*	*2.2*	*434*
Total returns to the community	*75.2*	*58.1*	*58.5*	*5.6*	*8.9*	*8.5*	*22.5*	*4,366*
Did not return to the community within 12 weeks								
In respite RAC after 12 weeks	<3.6	23.8	23.3	—	—	—	6.5	1,264
In permanent RAC after 12 weeks	<3.6	1.0	1.0	73.1	70.6	70.9	51.3	9,953
Discharged to hospital within 12 weeks	8.0	11.4	11.3	1.2	1.9	1.9	4.5	875
Died in RAC within 12 weeks	10.9	5.7	5.8	20.2	18.6	18.8	15.1	2,937
Total non-returners to the community	*24.8*	*41.9*	*41.5*	*94.4*	*91.1*	*91.5*	*77.5*	*15,029*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total (people)	**137**	**5,290**	**5,427**	**1,552**	**12,416**	**13,968**	**. .**	**19,395**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of initial RAC admission from hospital.
4. Table is based on first admission from hospital during the first 36 weeks of 2001–02 to allow a 12-week window to identify returns to the community followed by a 4-week window to identify unsuccessful returns.

Table 6.20: People aged 65+ returning to the community following RAC admission from hospital: principal diagnosis of injury external cause of fall, by admission type, 2001–02 (unadjusted)

Movement following admission to RAC	Transition into respite RAC			Transition into permanent RAC			All into RAC	
	Principal diagnosis of injury caused by a fall			Principal diagnosis of injury caused by a fall				
	Yes	No	All	Yes	No	All	All	N
Returned to the community within 12 weeks				**Column per cent**				
Did not return to RAC within 4 weeks								
Left reported going to RAC	16.3	11.4	11.7	0.8	1.2	1.2	4.1	796
Other	58.2	40.3	41.2	5.1	6.5	6.4	16.2	3,136
Subtotal	*74.5*	*51.7*	*52.9*	*5.9*	*7.7*	*7.6*	*20.3*	*3,932*
Returned to RAC within 4 weeks								
Re-admission into respite RAC	n.p.	4.9	4.7	—	—	—	1.3	253
Re-admission into permanent RAC	n.p.	0.9	1.0	0.9	0.9	0.9	0.9	181
Subtotal	*2.8*	*5.8*	*5.6*	*0.9*	*0.9*	*0.9*	*2.2*	*434*
Total returns to the community	77.3	57.5	58.5	6.8	8.6	8.5	22.5	4,366
Did not return to the community within 12 weeks								
In respite RAC after 12 weeks	<1.8	24.4	23.3	—	—	—	6.5	1,264
In permanent RAC after 12 weeks	<1.8	1.0	1.0	72.3	70.8	70.9	51.3	9,953
Discharged to hospital within 12 weeks	14.2	11.2	11.3	1.4	1.9	1.9	4.5	875
Died in RAC within 12 weeks	5.0	5.9	5.8	19.5	18.7	18.8	15.1	2,937
Total non-returners to the community	*22.7*	*42.5*	*41.5*	*93.2*	*91.4*	*91.5*	*77.5*	*15,029*
Total	100.0	100.0	100.0	100.0	100.0	100.0	**100.0**	..
Total (people)	**282**	**5,145**	**5,427**	**847**	**13,121**	**13,968**	**..**	**19,395**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Diagnoses relate to those recorded during the last hospital episode before discharge from the hospital system (see boxes 1.1 and 6.1).
3. Age is as at time of initial RAC admission from hospital.
4. Table is based on first admission from hospital during the first 36 weeks of 2001–02 to allow a 12-week window to identify returns to the community followed by a 4-week window to identify unsuccessful returns.

7 Refining the methods

In the course of undertaking this study, a number of areas where improvements in data availability or structure could enhance the utility and accuracy of analyses were identified. These are discussed below.

1. Data items included in the analysis

When obtaining permissions to use the NHMD and ACCMIS data sets in data linkage studies, the specific data items to be included have to be specified. For this project, a parsimonious approach was taken to selecting data items for inclusion in the analysis. Since analysis of linked NHMD and RAC data had not previously been carried out a number of data items were omitted which, in hindsight, could have enhanced the analysis. For example, in the hospital data only hospital sector (public versus private) was included in the analysis data set whereas analysis by sector of both the hospital and the patient (that is, patient election status) is of interest. Also, in the RAC data, living arrangements prior to admission could have proved useful in the analysis of propensity to move from hospital into permanent RAC.

The experience from this study therefore suggests that a more inclusive approach should be taken when specifying data items to be included in analysis data sets from the NHMD and ACCMIS. Such an approach would make the linked data set useful for a wider range of investigations.

2. History of use of RAC

In the current analysis, data on the use of RAC was restricted to the year of interest (2001–02). However, information on prior and later use of RAC would both improve data available for modelling behaviour and improve data quality for looking at short-term and medium-term outcomes. For example, having data on later use of RAC would allow a full year's data to be used when investigating short-term use of RAC (Section 5.2), and would reduce the level of censoring in the data for the survival analysis (Section 5.3).

3. Mortality data

In analysis of person outcomes, knowledge of whether a person has died can be important. For example, in the analysis of short-term use of RAC presented in Section 5.2, a number of people 'Left reported going to RAC' but were not identified as later returning to RAC. Knowing whether or not these people had died would add a further dimension to the story. In addition, in the analysis of survival following admission into permanent RAC, better death information—in particular, for those who were discharged to hospital—would increase the quality of the data for analysis (by reducing the level of censored data) and so would lead to more reliable models.

Better identification of death could be achieved by linking the National Death Index (NDI) with the RAC data on ACCMIS. As name and date of birth information are on both data sets the linkage would be name based. As well as identifying date of death, such linkage would allow cause of death data to be included in the analysis data set. Note, that such name-based linkage could only be undertaken for people using RAC as the NHMD does not contain name information. While, it may be feasibile to link deaths in hospital with the NDI using event-based linkage, date of death and reason of death data could not be obtained for people

who returned to the community after their period in hospital as there are insufficient data to link the NHMD and NDI data sets for these people.

4. Identification of complete hospital stay

In the current NHMD, a person can have several hospital episodes relating to the one hospitalisation. Using episodic data means that for some people their total length of stay in hospital is underestimated and their in-hospital care history incomplete. For the current analysis of transitions, hospital episodes that ended with a movement within the hospital system were excluded from the analysis as they should not have related to movement from hospital to RAC. Consequently, the information for analysis was, of necessity, that associated with the final episode before discharge from hospital. This shortcoming can only be overcome if data on all episodes relating to a single period in hospital can be combined.

Currently, in the NHMD there is neither a name nor a person identifier, nor even some sort of hospital stay identifier, to facilitate joining together contiguous episodes in hospital for the same person. However, such linkage within the hospital data may be possible using event-based linkage similar to that used for this project. The effectiveness of this approach has yet to be investigated, but is expected to be high—especially when linking episodes within the same hospital. Undertaking this within-NHMD linkage before linking to the RAC data would both increase the accuracy of the between-sector data linkage and provide improved information on the period in hospital for analysis.

5. Identification of bi-directional movement

The linkage process used for this publication allows the identification of uni-directional movement from hospital into RAC. While this analysis has provided some information on the use of hospital by people living in RAC, a fuller investigation could be undertaken if transitions in both directions could be identified. To do this, both the data preparation and linkage processes would have to be adjusted to enable identification of:

- discharge from RAC directly into hospital
- discharge from RAC into hospital while on hospital leave from RAC.

In particular, hospital episodes starting with an admission into the hospital system, irrespective of whether they ended with discharge from the sector, would need to be included in the NHMD data set for linkage. For identification of uni-directional movements from RAC to hospital, data linkage could be undertaken using a similar approach to that taken here, except that episodes starting—rather than ending—with a statistical admission or transfer would be excluded. If integrated analysis of movements in both directions were to be required, linkage of contiguous hospital episodes (as above) to obtain hospitalisation dates covering the total period in hospital would be necessary.

Of the above developments, the first two are the most readily achievable, with the remaining three requiring considerable investment in linking—either between or within data sets.

Appendix A: Additional tables

Table A.1: All hospital separations by hospital admission mode and care type, people aged 65+, 2001–02 (unadjusted)

Movement type/hospital admission mode	Acute	Rehabil-itation	Pallia-tive	GEM	Psycho-geriatric	Mainten-ance	Other	All	Total separations
Returning to permanent RAC				Per cent within movement and care type					Number
Transfer from another hospital	4.9	47.9	9.9	36.3	14.0	9.9	4.8	7.3	3,506
Change in care type	0.3	42.1	16.4	42.5	7.0	79.9	47.6	3.2	1,559
Total	*5.1*	*90.0*	*26.3*	*78.8*	*21.1*	*89.8*	*52.4*	*10.5*	*5,065*
Total separations (number)	*44,655*	*2,181*	*171*	*551*	*228*	*283*	*42*	*. .*	*48,111*
To permanent RAC									
Transfer from another hospital	12.9	46.7	28.8	39.5	27.4	10.0	9.2	18.3	3,659
Change in care type	3.5	43.6	19.6	41.6	25.3	81.5	83.5	32.9	6,585
Total	*16.4*	*90.3*	*48.4*	*81.1*	*52.7*	*91.5*	*92.8*	*51.1*	*10,244*
Total separations (number)	*10,208*	*2,104*	*372*	*1,665*	*186*	*4,334*	*1,159*	*. .*	*20,028*
To respite RAC									
Transfer from another hospital	11.7	49.6	21.6	30.5	19.2	9.8	10.5	16.8	1,301
Change in care type	1.5	40.6	24.3	45.7	25.0	75.2	75.0	15.3	1,185
Total	*13.2*	*90.2*	*45.9*	*76.2*	*44.2*	*85.0*	*85.5*	*32.2*	*2,486*
Total separations (number)	*5,669*	*978*	*74*	*151*	*52*	*727*	*76*	*. .*	*7,727*
To community/other									
Transfer from another hospital	5.3	58.8	13.5	33.8	22.1	8.1	5.9	8.0	65,157
Change in care type	0.2	28.7	12.4	37.1	14.5	46.0	59.4	2.4	19,195
Total	*5.5*	*87.5*	*25.9*	*70.8*	*36.6*	*54.1*	*65.3*	*10.4*	*84,352*
Total separations (number)	*757,516*	*37,242*	*4,379*	*6,017*	*916*	*5,356*	*2,341*	*. .*	*813,767*
Died in hospital									
Transfer from another hospital	11.2	41.7	29.3	45.4	39.3	14.1	9.8	15.1	7,761
Change in care type	1.6	50.4	18.6	37.3	21.4	70.9	78.3	7.6	3,908
Total	*12.7*	*92.1*	*47.9*	*82.7*	*60.7*	*85.0*	*88.2*	*22.7*	*11,669*
Total separations (number)	*39,818*	*607*	*8,671*	*624*	*56*	*1,301*	*254*	*. .*	*51,331*
All									
Transfer from another hospital	5.7	57.2	23.9	35.7	22.0	9.6	7.2	8.6	81,384
Change in care type	0.3	30.7	16.7	38.4	15.4	64.1	68.0	3.4	32,432
Total	**6.0**	**87.9**	**40.6**	**74.1**	**37.4**	**73.7**	**75.3**	**12.1**	**113,816**
Total separations (number)	**857,866**	**43,112**	**13,667**	**9,008**	**1,438**	**12,001**	**3,872**	**. .**	**940,964**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Per cent of hospital separations starting with admission into the hospital system are not explicitly given, but may be obtained by subtraction.
3. 7,197 records excluded due to missing care type and/or admission mode.

Table A.2: Hospital separations for people aged 65+, by movement type, age and sex, New South Wales, 2001–02 (unadjusted)

	Age at hospital admission								
Sex/movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
To RAC									
Return to permanent RAC	6.3	13.4	20.4	24.6	22.3	10.3	2.7	100.0	5,041
To permanent RAC	5.1	12.0	21.6	27.0	21.4	10.2	2.8	100.0	2,795
To respite RAC	6.5	12.3	25.2	26.5	17.9	9.6	2.0	100.0	1,118
Subtotal	*6.0*	*12.8*	*21.4*	*25.6*	*21.5*	*10.2*	*2.6*	*100.0*	*8,954*
To community/other	21.6	25.5	24.9	17.2	8.1	2.3	0.3	100.0	129,667
Died in hospital	12.1	18.9	24.4	21.4	15.6	6.2	1.5	100.0	9,412
All	*20.1*	*24.3*	*24.7*	*18.0*	*9.4*	*3.0*	*0.6*	*100.0*	*. .*
Total separations (number)	*29,743*	*36,013*	*36,554*	*26,595*	*13,864*	*4,449*	*815*	*. .*	*148,033*
Women				**Row per cent**					
To RAC									
Return to permanent RAC	2.5	5.7	12.9	23.5	30.2	19.2	6.0	100.0	10,795
To permanent RAC	3.0	7.3	14.5	24.6	28.3	17.3	5.0	100.0	4,484
To respite RAC	3.3	8.3	18.0	27.5	26.0	13.7	3.1	100.0	2,147
Subtotal	*2.7*	*6.5*	*13.9*	*24.3*	*29.2*	*18.1*	*5.4*	*100.0*	*17,426*
To community/other	17.1	21.4	24.1	19.7	12.4	4.5	0.9	100.0	134,794
Died in hospital	8.9	13.1	19.9	22.2	20.9	11.4	3.6	100.0	8,462
All	*15.1*	*19.4*	*22.8*	*20.3*	*14.6*	*6.3*	*1.5*	*100.0*	*. .*
Total separations (number)	*24,240*	*31,106*	*36,603*	*32,616*	*23,516*	*10,190*	*2,411*	*. .*	*160,682*
All				**Row per cent**					
To RAC									
Return to permanent RAC	3.7	8.2	15.3	23.8	27.7	16.4	4.9	100.0	15,836
To permanent RAC	3.8	9.1	17.2	25.5	25.7	14.5	4.1	100.0	7,279
To respite RAC	4.4	9.7	20.5	27.1	23.2	12.3	2.7	100.0	3,265
Subtotal	*3.8*	*8.6*	*16.5*	*24.7*	*26.6*	*15.4*	*4.4*	*100.0*	*26,380*
To community/other	19.3	23.4	24.5	18.5	10.3	3.4	0.6	100.0	264,461
Died in hospital	10.6	16.1	22.3	21.8	18.1	8.7	2.5	100.0	17,874
All	**17.5**	**21.7**	**23.7**	**19.2**	**12.1**	**4.7**	**1.0**	**100.0**	**. .**
Total separations (number)	**53,983**	**67,119**	**73,157**	**59,211**	**37,380**	**14,639**	**3,226**	**. .**	**308,715**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.

2. Age is as at time of hospital admission.

Table A.3: Summary of movements from hospital into RAC for people aged 65+, by sex and age, New South Wales, 2001–02 (unadjusted)

Sex/age	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men		**Row per cent**				**Est'd min %**	**Est'd max %**
65–69	59.7	26.6	13.7	100.0	534	1.9	2.1
70–74	58.8	29.2	12.0	100.0	1,149	3.4	3.7
75–79	53.7	31.5	14.7	100.0	1,915	5.6	6.2
Subtotal 65–79	*56.3*	*30.0*	*13.7*	*100.0*	*3,598*	*3.7*	*4.1*
80–84	54.1	32.9	12.9	100.0	2,289	9.3	10.4
85–89	58.4	31.2	10.4	100.0	1,921	15.5	17.2
90–94	57.0	31.2	11.8	100.0	909	23.5	26.1
95+	58.2	32.5	9.3	100.0	237	35.2	39.1
Subtotal 80+	*56.3*	*32.0*	*11.7*	*100.0*	*5,356*	*12.9*	*14.3*
All	*56.3*	*31.2*	*12.5*	*100.0*	. .	*6.5*	*7.2*
Total sep's (N)	*5,041*	*2,795*	*1,118*	. .	*8,954*	*138,621*	
Women							
65–69	56.7	28.2	15.1	100.0	471	2.0	2.2
70–74	54.9	29.2	15.9	100.0	1,127	3.8	4.2
75–79	57.3	26.8	15.9	100.0	2,428	7.0	7.7
Subtotal 65–79	*56.6*	*27.6*	*15.8*	*100.0*	*4,026*	*4.6*	*5.1*
80–84	60.0	26.1	13.9	100.0	4,230	13.8	15.3
85–89	64.1	25.0	11.0	100.0	5,089	23.4	26.0
90–94	66.0	24.6	9.4	100.0	3,147	34.1	37.9
95+	69.0	23.9	7.2	100.0	934	44.3	49.3
Subtotal 80+	63.6	25.2	11.3	100.0	13,400	21.0	23.4
All	61.9	25.7	12.3	100.0	. .	11.4	12.7
Total sep's (N)	10,795	4,484	2,147	. .	17,426	*152,220*	
All							
65–69	58.3	27.4	14.3	100.0	1,005	1.9	2.1
70–74	56.9	29.2	13.9	100.0	2,276	3.5	3.9
75–79	55.7	28.9	15.4	100.0	4,343	6.3	7.0
Subtotal 65–79	56.4	28.8	14.8	100.0	7,624	4.1	4.6
80–84	57.9	28.5	13.6	100.0	6,519	11.8	13.1
85–89	62.5	26.7	10.8	100.0	7,010	20.5	22.8
90–94	64.0	26.1	9.9	100.0	4,056	31.0	34.5
95+	66.8	25.6	7.6	100.0	1,171	42.1	46.9
Subtotal 80+	61.5	27.1	11.4	100.0	18,756	17.8	19.8
All	**60.0**	**27.6**	**12.4**	**100.0**	**. .**	**9.1**	**10.1**
Total separations (number)	**15,836**	**7,279**	**3,265**	**. .**	**26,380**	**290,841**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.

Table A.4: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by sex and age, New South Wales, 2001–02 (unadjusted hospital separations)

Sex/age	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
Men	**Number (unadjusted hospital separations)**			**Ratio**
65–69	142	73	215	1.9 : 1
70–74	335	138	473	2.4 : 1
75–79	604	282	886	2.1 : 1
Subtotal 65–79	*1,081*	*493*	*1,574*	*2.2 : 1*
80–84	754	296	1,050	2.5 : 1
85–89	599	200	799	3.0 : 1
90–94	284	107	391	2.7 : 1
95+	77	22	99	3.5 : 1
Subtotal 80+	*1,714*	*625*	*2,339*	*2.7 : 1*
All	*2,795*	*1,118*	*3,913*	*2.5 : 1*
Women				
65–69	133	71	204	1.9 : 1
70–74	329	179	508	1.8 : 1
75–79	651	386	1,037	1.7 : 1
Subtotal 65–79	*1,113*	*636*	*1,749*	*1.8 : 1*
80–84	1,103	590	1,693	1.9 : 1
85–89	1,270	559	1,829	2.3 : 1
90–94	775	295	1,070	2.6 : 1
95+	223	67	290	3.3 : 1
Subtotal 80+	*3,371*	*1,511*	*4,882*	*2.2 : 1*
All	*4,484*	*2,147*	*6,631*	*2.1 : 1*
All				
65–69	275	144	419	1.9 : 1
70–74	664	317	981	2.1 : 1
75–79	1,255	668	1,923	1.9 : 1
Subtotal 65–79	*2,194*	*1,129*	*3,323*	*1.9 : 1*
80–84	1,857	886	2,743	2.1 : 1
85–89	1,869	759	2,628	2.5 : 1
90–94	1,059	402	1,461	2.6 : 1
95+	300	89	389	3.4 : 1
Subtotal 80+	*5,085*	*2,136*	*7,221*	*2.4 : 1*
All	**7,279**	**3,265**	**10,544**	**2.2 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table A.5: Hospital separations for people aged 65+, by movement type, age and sex, Victoria, 2001–02 (unadjusted)

	Age at hospital admission								
Sex/movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
To RAC									
Return to permanent RAC	6.1	10.5	18.8	22.6	24.0	14.3	3.6	100.0	3,346
To permanent RAC	5.3	11.0	20.4	26.1	24.2	10.9	2.1	100.0	1,956
To respite RAC	5.4	10.2	19.9	27.9	22.7	11.6	2.4	100.0	423
Subtotal	*5.8*	*10.7*	*19.4*	*24.2*	*24.0*	*12.9*	*3.0*	*100.0*	*5,725*
To community/other	21.3	25.3	25.0	16.8	8.6	2.6	0.4	100.0	104,266
Died in hospital	11.4	19.1	23.7	20.5	16.3	7.5	1.5	100.0	7,129
All	*20.0*	*24.2*	*24.6*	*17.4*	*9.8*	*3.4*	*0.6*	*100.0*	*. .*
Total separations (number)	*23,370*	*28,379*	*28,844*	*20,414*	*11,461*	*3,964*	*688*	*. .*	117,120
Women				**Row per cent**					
To RAC									
Return to permanent RAC	2.1	4.8	13.0	22.4	30.7	19.9	7.2	100.0	7,293
To permanent RAC	2.4	6.6	16.0	24.4	27.8	17.4	5.4	100.0	3,487
To respite RAC	2.9	7.2	17.1	29.7	30.3	9.9	2.9	100.0	780
Subtotal	*2.2*	*5.5*	*14.2*	*23.5*	*29.8*	*18.5*	*6.3*	*100.0*	*11,560*
To community/other	16.9	20.6	23.7	19.6	13.3	4.9	1.0	100.0	108,810
Died in hospital	7.9	12.9	19.3	21.8	22.1	12.0	4.0	100.0	6,611
All	*15.1*	*18.9*	*22.6*	*20.0*	*15.3*	*6.5*	*1.7*	*100.0*	*. .*
Total separations (number)	*19,134*	*23,938*	*28,739*	*25,447*	*19,382*	*8,235*	*2,106*	*. .*	*126,981*
All				**Row per cent**					
To RAC									
Return to permanent RAC	3.3	6.6	14.8	22.5	28.6	18.2	6.0	100.0	10,639
To permanent RAC	3.5	8.2	17.6	25.0	26.5	15.1	4.2	100.0	5,443
To respite RAC	3.8	8.2	18.0	29.1	27.6	10.5	2.7	100.0	1,203
Subtotal	*3.4*	*7.2*	*15.9*	*23.7*	*27.9*	*16.7*	*5.2*	*100.0*	*17,285*
To community/other	19.0	22.9	24.3	18.2	11.0	3.8	0.7	100.0	213,076
Died in hospital	9.7	16.1	21.6	21.2	19.1	9.6	2.7	100.0	13,740
All	**17.4**	**21.4**	**23.6**	**18.8**	**12.6**	**5.0**	**1.1**	**100.0**	**. .**
Total separations (number)	**42,504**	**52,317**	**57,583**	**45,861**	**30,843**	**12,199**	**2,794**	**. .**	**244,101**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.

2. Age is as at time of hospital admission.

Table A.6: Summary of movements from hospital into RAC for people aged 65+, by sex and age, Victoria, 2001–02

Sex/age	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men		**Row per cent**				**Est'd min %**	**Est'd max %**
65–69	61.7	31.3	6.9	100.0	332	1.5	1.6
70–74	57.8	35.2	7.0	100.0	611	2.3	2.5
75–79	56.6	35.8	7.5	100.0	1,113	4.1	4.6
Subtotal 65–79	*57.8*	*34.9*	*7.3*	*100.0*	*2,056*	*2.7*	*3.0*
80–84	54.7	36.8	8.5	100.0	1,385	7.3	8.1
85–89	58.5	34.5	7.0	100.0	1,372	13.3	14.8
90–94	64.6	28.8	6.6	100.0	740	21.6	24.0
95+	69.8	24.4	5.8	100.0	172	29.7	33.0
Subtotal 80+	*58.8*	*33.7*	*7.4*	*100.0*	*3,669*	*11.0*	*12.3*
All	*58.4*	*34.2*	*7.4*	*100.0*	*. .*	*5.2*	*5.8*
Total sep's (N)	*3,346*	*1,956*	*423*	*. .*	*5,725*	*109,991*	
Women							
65–69	58.3	32.8	8.9	100.0	259	1.4	1.5
70–74	54.9	36.2	8.9	100.0	632	2.7	3.0
75–79	57.8	34.1	8.1	100.0	1,638	6.0	6.6
Subtotal 65–79	*57.1*	*34.5*	*8.4*	*100.0*	*2,529*	*3.7*	*4.1*
80–84	60.1	31.4	8.5	100.0	2,716	11.3	12.6
85–89	65.1	28.1	6.9	100.0	3,445	19.2	21.4
90–94	68.0	28.4	3.6	100.0	2,138	28.7	31.9
95+	71.3	25.5	3.1	100.0	732	39.7	44.2
Subtotal 80+	*64.8*	*28.9*	*6.3*	*100.0*	*9,031*	*17.6*	*19.6*
All	*63.1*	*30.2*	*6.7*	*100.0*	*. .*	*9.6*	*10.7*
Total sep's (N)	*7,293*	*3,487*	*780*	*. .*	*11,560*	*120,370*	
All							
65–69	60.2	32.0	7.8	100.0	591	1.4	1.6
70–74	56.3	35.7	8.0	100.0	1,243	2.5	2.8
75–79	57.3	34.8	7.9	100.0	2,751	5.0	5.6
Subtotal 65–79	*57.4*	*34.7*	*7.9*	*100.0*	*4,585*	*3.1*	*3.5*
80–84	58.3	33.2	8.5	100.0	4,101	9.5	10.6
85–89	63.2	29.9	6.9	100.0	4,817	17.1	19.0
90–94	67.1	28.5	4.4	100.0	2,878	26.5	29.4
95+	71.0	25.3	3.7	100.0	904	37.3	41.5
Subtotal 80+	*63.0*	*30.3*	*6.6*	*100.0*	*12,700*	*15.0*	*16.7*
All	**61.6**	**31.5**	**7.0**	**100.0**	**. .**	**7.5**	**8.3**
Total separations (number)	**10,639**	**5,443**	**1,203**	**. .**	**17,285**	**230,361**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.

Table A.7: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by sex and age, Victoria, 2001–02 (unadjusted hospital separations)

Sex/age	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
Men	**Number (unadjusted hospital separations)**			**Ratio**
65–69	104	23	127	4.5 : 1
70–74	215	43	258	5.0 : 1
75–79	399	84	483	4.8 : 1
Subtotal 65–79	*718*	*150*	*868*	*4.8 : 1*
80–84	510	118	628	4.3 : 1
85–89	473	96	569	4.9 : 1
90–94	213	49	262	4.3 : 1
95+	42	10	52	4.2 : 1
Subtotal 80+	*1,238*	*273*	*1,511*	*4.5 : 1*
All	*1,956*	*423*	*2,379*	*4.6 : 1*
Women				
65–69	85	23	108	3.7 : 1
70–74	229	56	285	4.1 : 1
75–79	559	133	692	4.2 : 1
Subtotal 65–79	*873*	*212*	*1,085*	*4.1 : 1*
80–84	852	232	1,084	3.7 : 1
85–89	968	236	1,204	4.1 : 1
90–94	607	77	684	7.9 : 1
95+	187	23	210	8.1 : 1
Subtotal 80+	*2,614*	*568*	*3,182*	*4.6 : 1*
All	*3,487*	*780*	*4,267*	*4.5 : 1*
All				
65–69	189	46	235	4.1 : 1
70–74	444	99	543	4.5 : 1
75–79	958	217	1,175	4.4 : 1
Subtotal 65–79	*1,591*	*362*	*1,953*	*4.4 : 1*
80–84	1,362	350	1,712	3.9 : 1
85–89	1,441	332	1,773	4.3 : 1
90–94	820	126	946	6.5 : 1
95+	229	33	262	6.9 : 1
Subtotal 80+	*3,852*	*841*	*4,693*	*4.6 : 1*
All	**5,443**	**1,203**	**6,646**	**4.5 : 1**

Notes

1. Table is based on linked hospital and RAC records. See See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table A.8: Hospital separations for people aged 65+, by movement type, age and sex, Queensland, 2001–02 (unadjusted)

	Age at hospital admission								
Sex/movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
To RAC									
Return to permanent RAC	5.4	11.2	16.8	27.1	22.4	13.9	3.2	100.0	3,332
To permanent RAC	5.1	12.0	21.7	25.9	22.7	10.7	2.0	100.0	1,381
To respite RAC	5.1	11.9	20.1	29.7	21.8	9.5	1.9	100.0	528
Subtotal	*5.3*	*11.5*	*18.4*	*27.0*	*22.4*	*12.6*	*2.7*	*100.0*	*5,241*
To community/other	22.2	24.2	25.3	17.6	8.3	2.2	0.3	100.0	79,488
Died in hospital	12.5	17.9	24.2	21.5	15.8	6.3	1.7	100.0	4,897
All	*20.6*	*23.1*	*24.8*	*18.3*	*9.5*	*3.1*	*0.6*	*100.0*	*. .*
Total separations (number)	*18,505*	*20,685*	*22,232*	*16,443*	*8,523*	*2,739*	*499*	*. .*	*89,626*
Women				**Row per cent**					
To RAC									
Return to permanent RAC	2.2	5.6	13.2	25.7	30.5	17.5	5.3	100.0	6,756
To permanent RAC	3.0	8.0	14.9	27.4	26.9	15.8	4.0	100.0	2,074
To respite RAC	2.7	9.4	18.9	30.3	23.7	11.6	3.4	100.0	882
Subtotal	*2.5*	*6.5*	*14.1*	*26.5*	*29.1*	*16.6*	*4.9*	*100.0*	*9,712*
To community/other	18.4	21.8	23.8	19.7	11.5	4.0	0.8	100.0	76,308
Died in hospital	8.6	13.4	18.9	22.2	20.7	12.2	4.0	100.0	4,151
All	*16.2*	*19.8*	*22.6*	*20.6*	*13.8*	*5.7*	*1.4*	*100.0*	*. .*
Total separations (number)	*14,602*	*17,839*	*20,344*	*18,540*	*12,434*	*5,147*	*1,265*	*. .*	*90,171*
All				**Row per cent**					
To RAC									
Return to permanent RAC	3.3	7.5	14.4	26.1	27.8	16.3	4.6	100.0	10,088
To permanent RAC	3.8	9.6	17.6	26.8	25.2	13.8	3.2	100.0	3,455
To respite RAC	3.6	10.4	19.4	30.1	23.0	10.8	2.8	100.0	1,410
Subtotal	*3.5*	*8.2*	*15.6*	*26.7*	*26.8*	*15.2*	*4.1*	*100.0*	*14,953*
To community/other	20.3	23.0	24.6	18.6	9.8	3.1	0.6	100.0	155,796
Died in hospital	10.7	15.9	21.8	21.8	18.1	9.0	2.7	100.0	9,048
All	**18.4**	**21.4**	**23.7**	**19.5**	**11.7**	**4.4**	**1.0**	**100.0**	**. .**
Total separations (number)	**33,107**	**38,524**	**42,576**	**34,983**	**20,957**	**7,886**	**1,764**	**. .**	**179,797**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table A.9: Summary of movements from hospital into RAC for people aged 65+, by sex and age, Queensland, 2001–02

Sex/age	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men		Row per cent				Est'd min %	Est'd max %
65–69	65.1	25.2	9.7	100.0	278	1.6	1.7
70–74	61.9	27.6	10.5	100.0	601	3.0	3.4
75–79	58.0	31.0	11.0	100.0	965	4.6	5.1
Subtotal 65–79	*60.4*	*29.0*	*10.6*	*100.0*	*1,844*	*3.1*	*3.5*
80–84	63.7	25.2	11.1	100.0	1,417	9.2	10.2
85–89	63.5	26.7	9.8	100.0	1,176	15.2	16.9
90–94	70.0	22.4	7.6	100.0	661	27.2	30.2
95+	74.1	18.9	7.0	100.0	143	34.2	38.1
Subtotal 80+	*65.3*	*24.9*	*9.8*	*100.0*	*3,397*	*13.1*	*14.5*
All	*63.6*	*26.3*	*10.1*	*100.0*	*. .*	*6.2*	*6.9*
Total sep's (N)	*3,332*	*1,381*	*528*	*. .*	*5,241*		*84,729*
Women							
65–69	63.6	26.4	10.0	100.0	239	1.7	1.9
70–74	60.5	26.3	13.2	100.0	628	3.6	4.0
75–79	65.2	22.6	12.2	100.0	1,366	7.0	7.8
Subtotal 65–79	*63.7*	*24.0*	*12.3*	*100.0*	*2,233*	*4.4*	*4.9*
80–84	67.5	22.1	10.4	100.0	2,569	14.6	16.2
85–89	72.9	19.7	7.4	100.0	2,824	24.4	27.1
90–94	73.3	20.3	6.3	100.0	1,613	34.8	38.7
95+	76.1	17.5	6.3	100.0	473	43.0	47.8
Subtotal 80+	*71.3*	*20.6*	*8.1*	*100.0*	*7,479*	*21.4*	*23.8*
All	*69.6*	*21.4*	*9.1*	*100.0*	*. .*	*11.3*	*12.6*
Total sep's (N)	*6,756*	*2,074*	*882*	*. .*	*9,712*		*86,020*
All							
65–69	64.4	25.7	9.9	100.0	517	1.6	1.8
70–74	61.2	26.9	11.9	100.0	1,229	3.3	3.7
75–79	62.2	26.1	11.7	100.0	2,331	5.7	6.4
Subtotal 65–79	*62.2*	*26.3*	*11.5*	*100.0*	*4,077*	*3.7*	*4.1*
80–84	66.1	23.2	10.6	100.0	3,986	12.1	13.4
85–89	70.1	21.8	8.1	100.0	4,000	20.7	23.0
90–94	72.4	20.9	6.7	100.0	2,274	32.2	35.8
95+	75.6	17.9	6.5	100.0	616	40.6	45.1
Subtotal 80+	*69.4*	*21.9*	*8.6*	*100.0*	*10,876*	*17.9*	*19.9*
All	**67.5**	**23.1**	**9.4**	**100.0**	**. .**	**8.8**	**9.7**
Total separations (number)	**10,088**	**3,455**	**1,410**	**. .**	**14,953**		**170,749**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.

Table A.10: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by sex and age, Queensland, 2001–02 (unadjusted hospital separations)

Sex/age	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
Men	**Number (unadjusted hospital separations)**			**Ratio**
65–69	70	27	97	2.6 : 1
70–74	166	63	229	2.6 : 1
75–79	299	106	405	2.8 : 1
Subtotal 65–79	*535*	*196*	*731*	*2.7 : 1*
80–84	357	157	514	2.3 : 1
85–89	314	115	429	2.7 : 1
90–94	148	50	198	3.0 : 1
95+	27	10	37	2.7 : 1
Subtotal 80+	*846*	*332*	*1,178*	*2.5 : 1*
All	*1,381*	*528*	*1,909*	*2.6 : 1*
Women				
65–69	63	24	87	2.6 : 1
70–74	165	83	248	2.0 : 1
75–79	309	167	476	1.9 : 1
Subtotal 65–79	*537*	*274*	*811*	*2.0 : 1*
80–84	569	267	836	2.1 : 1
85–89	557	209	766	2.7 : 1
90–94	328	102	430	3.2 : 1
95+	83	30	113	2.8 : 1
Subtotal 80+	*1,537*	*608*	*2,145*	*2.5 : 1*
All	*2,074*	*882*	*2,956*	*2.4 : 1*
All				
65–69	133	51	184	2.6 : 1
70–74	331	146	477	2.3 : 1
75–79	608	273	881	2.2 : 1
Subtotal 65–79	*1,072*	*470*	*1,542*	*2.3 : 1*
80–84	926	424	1,350	2.2 : 1
85–89	871	324	1,195	2.7 : 1
90–94	476	152	628	3.1 : 1
95+	110	40	150	2.8 : 1
Subtotal 80+	*2,383*	*940*	*3,323*	*2.5 : 1*
All	**3,455**	**1,410**	**4,865**	**2.5 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table A.11: Hospital separations for people aged 65+, by movement type, age and sex, Western Australia, 2001–02 (unadjusted)

	Age at hospital admission								
Sex/movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
To RAC									
Return to permanent RAC	4.3	12.2	19.7	24.4	24.7	12.0	2.7	100.0	1,435
To permanent RAC	5.3	12.0	20.3	23.4	22.8	13.6	2.6	100.0	492
To respite RAC	7.6	17.3	24.1	19.8	19.4	>9.7	<2.1	100.0	237
Subtotal	*4.9*	*12.7*	*20.3*	*23.7*	*23.7*	*12.2*	*2.5*	*100.0*	*2,164*
To community/other	22.6	25.4	24.4	15.5	9.2	2.5	0.5	100.0	35,396
Died in hospital	13.0	17.7	22.3	20.9	17.7	6.3	2.1	100.0	2,181
All	*21.1*	*24.2*	*24.1*	*16.3*	*10.4*	*3.2*	*0.7*	*100.0*	*. .*
Total separations (number)	*8,380*	*9,635*	*9,568*	*6,465*	*4,141*	*1,283*	*269*	*. .*	*39,741*
Women				**Row per cent**					
To RAC									
Return to permanent RAC	1.8	5.2	12.4	20.6	30.8	22.5	6.7	100.0	3,355
To permanent RAC	2.3	5.8	15.0	23.8	29.8	17.6	5.7	100.0	947
To respite RAC	2.0	7.2	17.5	29.6	28.5	12.9	2.2	100.0	456
Subtotal	*1.9*	*5.5*	*13.4*	*22.1*	*30.4*	*20.6*	*6.1*	*100.0*	*4,758*
To community/other	18.6	21.7	23.1	18.3	12.5	4.9	0.9	100.0	37,074
Died in hospital	7.5	12.4	18.7	20.8	22.7	13.7	4.3	100.0	2,116
All	*16.3*	*19.5*	*21.8*	*18.9*	*14.9*	*7.0*	*1.7*	*100.0*	*. .*
Total separations (number)	*7,156*	*8,557*	*9,595*	*8,289*	*6,543*	*3,077*	*731*	*. .*	*43,948*
All				**Row per cent**					
To RAC									
Return to permanent RAC	2.5	7.3	14.6	21.8	29.0	19.4	5.5	100.0	4,790
To permanent RAC	3.3	7.9	16.8	23.6	27.4	16.3	4.7	100.0	1,439
To respite RAC	3.9	10.7	19.8	26.3	25.4	12.3	1.7	100.0	693
Subtotal	*2.8*	*7.8*	*15.6*	*22.6*	*28.3*	*18.0*	*4.9*	*100.0*	*6,922*
To community/other	20.6	23.5	23.7	17.0	10.8	3.7	0.7	100.0	72,470
Died in hospital	10.3	15.1	20.5	20.9	20.2	10.0	3.2	100.0	4,297
All	**18.6**	**21.7**	**22.9**	**17.6**	**12.8**	**5.2**	**1.2**	**100.0**	**. .**
Total separations (number)	**15,536**	**18,192**	**19,163**	**14,754**	**10,684**	**4,360**	**1,000**	**. .**	**83,689**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table A.12: Summary of movements from hospital into RAC for people aged 65+, by sex and age, Western Australia, 2001–02

Sex/age	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men		**Row per cent**				**Est'd min %**	**Est'd max %**
65–69	58.1	24.8	17.1	100.0	105	1.3	1.4
70–74	63.6	21.5	14.9	100.0	275	3.0	3.3
75–79	64.3	22.7	13.0	100.0	440	4.8	5.4
Subtotal 65–79	*63.3*	*22.6*	*14.1*	*100.0*	*820*	*3.1*	*3.5*
80–84	68.4	22.5	9.2	100.0	512	8.5	9.5
85–89	69.2	21.8	9.0	100.0	513	13.7	15.2
90+	66.1	25.1	8.8	100.0	319	23.3	25.9
Subtotal 80+	*68.2*	*22.8*	*9.0*	*100.0*	*1,344*	*12.1*	*13.4*
All	*66.3*	*22.7*	*11.0*	*100.0*	*. .*	*5.8*	*6.4*
Total sep's (N)	*1,435*	*492*	*237*	*. .*	*2,164*	*37,560*	
Women							
65–69	65.9	24.2	9.9	100.0	91	1.3	1.4
70–74	66.4	21.0	12.6	100.0	262	3.2	3.5
75–79	65.1	22.3	12.6	100.0	637	6.9	7.7
Subtotal 65–79	*65.6*	*22.1*	*12.3*	*100.0*	*990*	*4.0*	*4.5*
80–84	65.8	21.4	12.8	100.0	1,052	13.4	14.9
85–89	71.5	19.5	9.0	100.0	1,446	23.8	26.5
90+	77.2	17.4	5.4	100.0	1,270	37.1	41.2
Subtotal 80+	*71.8*	*19.3*	*8.9*	*100.0*	*3,768*	*21.7*	*24.2*
All	*70.5*	*19.9*	*9.6*	*100.0*	*. .*	*11.4*	*12.7*
Total sep's (N)	*3,355*	*947*	*456*	*. .*	*4,758*	*41,832*	
All							
65–69	61.7	24.5	13.8	100.0	196	1.3	1.4
70–74	65.0	21.2	13.8	100.0	537	3.1	3.4
75–79	64.8	22.5	12.7	100.0	1,077	5.9	6.6
Subtotal 65–79	*64.5*	*22.3*	*13.1*	*100.0*	*1,810*	*3.6*	*4.0*
80–84	66.6	21.7	11.6	100.0	1,564	11.3	12.6
85–89	70.9	20.1	9.0	100.0	1,959	20.0	22.2
90–94	74.4	18.8	6.8	100.0	1,247	31.7	35.3
95+	76.9	19.6	3.5	100.0	342	39.6	44.0
Subtotal 80+	*70.9*	*20.2*	*8.9*	*100.0*	*5,112*	*18.0*	*20.0*
All	**69.2**	**20.8**	**10.0**	**100.0**	**. .**	**8.7**	**9.7**
Total separations (number)	**4,790**	**1,439**	**693**	**. .**	**6,922**	**79,392**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.

Table A.13: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by sex and age, Western Australia, 2001–02 (unadjusted hospital separations)

Sex/age	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
Men	**Number (unadjusted hospital separations)**			**Ratio**
65–69	26	18	44	1.4 : 1
70–74	59	41	100	1.4 : 1
75–79	100	57	157	1.8 : 1
Subtotal 65–79	*185*	*116*	*301*	*1.6 : 1*
80–84	115	47	162	2.4 : 1
85–89	112	46	158	2.4 : 1
90–94	80	28	108	2.9 : 1
Subtotal 80+	*307*	*121*	*428*	*2.5 : 1*
All	*492*	*237*	*729*	*2.1 : 1*
Women				
65–69	22	9	31	2.4 : 1
70–74	55	33	88	1.7 : 1
75–79	142	80	222	1.8 : 1
Subtotal 65–79	*219*	*122*	*341*	*1.8 : 1*
80–84	225	135	360	1.7 : 1
85–89	282	130	412	2.2 : 1
90–94	221	69	290	3.2 : 1
Subtotal 80+	*728*	*334*	*1,062*	*2.2 : 1*
All	*947*	*456*	*1,403*	*2.1 : 1*
All				
65–69	48	27	75	1.8 : 1
70–74	114	74	188	1.5 : 1
75–79	242	137	379	1.8 : 1
Subtotal 65–79	*404*	*238*	*642*	*1.7 : 1*
80–84	340	182	522	1.9 : 1
85–89	394	176	570	2.2 : 1
90–94	234	85	319	2.8 : 1
95+	67	12	79	5.6 : 1
Subtotal 80+	*1,035*	*455*	*1,490*	*2.3 : 1*
All	**1,439**	**693**	**2,132**	**2.1 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table A.14: Hospital separations for people aged 65+, by movement type, age and sex, South Australia, 2001–02 (unadjusted)

	Age at hospital admission								
Sex/movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
To RAC									
Return to permanent RAC	3.3	10.9	18.1	23.3	25.7	15.3	3.3	100.0	1,729
To permanent RAC	5.3	12.6	22.1	28.6	21.4	8.0	2.0	100.0	748
To respite RAC	4.5	12.6	21.6	25.4	23.1	11.1	1.8	100.0	334
Subtotal	*4.0*	*11.6*	*19.6*	*25.0*	*24.3*	*12.9*	*2.8*	*100.0*	*2,811*
To community/other	20.4	24.5	25.6	17.5	9.3	2.4	0.4	100.0	38,551
Died in hospital	12.0	17.5	22.1	22.3	18.4	6.3	1.5	100.0	2,451
All	*18.9*	*23.3*	*25.0*	*18.2*	*10.7*	*3.3*	*0.6*	*100.0*	*. .*
Total separations (number)	*8,275*	*10,200*	*10,950*	*7,982*	*4,703*	*1,448*	*255*	*. .*	*43,813*
Women				**Row per cent**					
To RAC									
Return to permanent RAC	1.8	4.5	13.2	23.5	29.5	21.6	5.9	100.0	3,741
To permanent RAC	3.1	6.9	16.7	26.9	27.7	13.9	4.9	100.0	1,110
To respite RAC	2.3	7.0	17.0	25.8	30.5	14.6	2.9	100.0	659
Subtotal	*2.1*	*5.3*	*14.4*	*24.5*	*29.2*	*19.2*	*5.4*	*100.0*	*5,510*
To community/other	16.2	20.8	24.2	20.5	12.9	4.5	0.8	100.0	42,069
Died in hospital	8.3	13.3	19.0	22.2	21.4	12.4	3.5	100.0	2,185
All	*14.3*	*18.7*	*22.9*	*21.0*	*15.1*	*6.5*	*1.4*	*100.0*	*. .*
Total separations (number)	*7,126*	*9,315*	*11,394*	*10,471*	*7,524*	*3,225*	*709*	*. .*	*49,764*
All				**Row per cent**					
To RAC									
Return to permanent RAC	2.3	6.5	14.8	23.5	28.3	19.6	5.1	100.0	5,470
To permanent RAC	4.0	9.2	18.8	27.6	25.1	11.5	3.7	100.0	1,858
To respite RAC	3.0	8.9	18.5	25.7	28.0	13.4	2.5	100.0	993
Subtotal	*2.8*	*7.4*	*16.1*	*24.7*	*27.5*	*17.1*	*4.5*	*100.0*	*8,321*
To community/other	18.2	22.6	24.9	19.1	11.2	3.5	0.6	100.0	80,620
Died in hospital	10.3	15.5	20.6	22.2	19.8	9.1	2.4	100.0	4,636
All	**16.5**	**20.9**	**23.9**	**19.7**	**13.1**	**5.0**	**1.0**	**100.0**	**. .**
Total separations (number)	**15,401**	**19,515**	**22,344**	**18,453**	**12,227**	**4,673**	**964**	**. .**	**93,577**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table A.15: Summary of movements from hospital into RAC for people aged 65+, by sex and age, South Australia, 2001–02

Sex/age	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men		**Row per cent**				**Est'd min %**	**Est'd max %**
65–69	50.9	35.7	13.4	100.0	112	1.4	1.6
70–74	58.2	28.9	12.9	100.0	325	3.3	3.7
75–79	56.9	30.0	13.1	100.0	550	5.3	5.9
Subtotal 65–79	*56.6*	*30.3*	*13.1*	*100.0*	*987*	*3.5*	*3.9*
80–84	57.4	30.5	12.1	100.0	702	9.4	10.5
85–89	65.2	23.5	11.3	100.0	682	16.0	17.8
90–94	73.2	16.6	10.2	100.0	362	28.0	31.1
95+	73.1	19.2	7.7	100.0	78	35.6	39.6
Subtotal 80+	*64.1*	*24.6*	*11.2*	*100.0*	*1,824*	*13.8*	*15.4*
All	*61.5*	*26.6*	*11.9*	*100.0*	*. .*	*6.8*	*7.6*
Total sep's (N)	*1,729*	*748*	*334*	*. .*	*2,811*	*41,362*	
Women							
65–69	58.1	29.1	12.8	100.0	117	1.7	1.9
70–74	57.6	26.6	15.9	100.0	290	3.2	3.6
75–79	62.5	23.4	14.2	100.0	791	7.2	8.0
Subtotal 65–79	*60.9*	*24.7*	*14.4*	*100.0*	*1,198*	*4.4*	*4.9*
80–84	65.3	22.1	12.6	100.0	1,350	13.5	15.0
85–89	68.4	19.1	12.5	100.0	1,610	22.8	25.4
90–94	76.3	14.6	9.1	100.0	1,057	35.8	39.8
95+	75.3	18.3	6.4	100.0	295	46.6	51.8
Subtotal 80+	*69.9*	*18.9*	*11.3*	*100.0*	*4,312*	*20.9*	*23.2*
All	*67.9*	*20.1*	*12.0*	*100.0*	*. .*	*11.6*	*12.9*
Total sep's (N)	*3,741*	*1,110*	*659*	*. .*	*5,510*	*47,579*	
All							
65–69	54.6	32.3	13.1	100.0	229	1.5	1.7
70–74	57.9	27.8	14.3	100.0	615	3.3	3.6
75–79	60.2	26.1	13.7	100.0	1,341	6.3	7.0
Subtotal 65–79	*58.9*	*27.2*	*13.8*	*100.0*	*2,185*	*4.0*	*4.4*
80–84	62.6	25.0	12.4	100.0	2,052	11.8	13.1
85–89	67.5	20.4	12.1	100.0	2,292	20.3	22.5
90–94	75.5	15.1	9.4	100.0	1,419	33.4	37.1
95+	74.8	18.5	6.7	100.0	373	43.8	48.7
Subtotal 80+	*68.2*	*20.6*	*11.3*	*100.0*	*6,136*	*18.1*	*20.2*
All	**65.7**	**22.3**	**11.9**	**100.0**	**. .**	**9.4**	**10.4**
Total separations (number)	**5,470**	**1,858**	**993**	**. .**	**8,321**	**88,941**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.

Table A.16: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by sex and age, South Australia, 2001–02 (unadjusted hospital separations)

Sex/age	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
Men	**Number (unadjusted hospital separations)**			**Ratio**
65–69	40	15	55	2.7 : 1
70–74	94	42	136	2.2 : 1
75–79	165	72	237	2.3 : 1
Subtotal 65–79	*299*	*129*	*428*	*2.3 : 1*
80–84	214	85	299	2.5 : 1
85–89	160	77	237	2.1 : 1
90–94	60	37	97	1.6 : 1
95+	15	6	21	2.5 : 1
Subtotal 80+	*449*	*205*	*654*	*2.2 : 1*
All	*748*	*334*	*1,082*	*2.2 : 1*
Women				
65–69	34	15	49	2.3 : 1
70–74	77	46	123	1.7 : 1
75–79	185	112	297	1.7 : 1
Subtotal 65–79	*296*	*173*	*469*	*1.7 : 1*
80–84	299	170	469	1.8 : 1
85–89	307	201	508	1.5 : 1
90–94	154	96	250	1.6 : 1
95+	54	19	73	2.8 : 1
Subtotal 80+	*814*	*486*	*1,300*	*1.7 : 1*
All	*1,110*	*659*	*1,769*	*1.7 : 1*
All				
65–69	74	30	104	2.5 : 1
70–74	171	88	259	1.9 : 1
75–79	350	184	534	1.9 : 1
Subtotal 65–79	*595*	*302*	*897*	*2.0 : 1*
80–84	513	255	768	2.0 : 1
85–89	467	278	745	1.7 : 1
90–94	214	133	347	1.6 : 1
95+	69	25	94	2.8 : 1
Subtotal 80+	*1,263*	*691*	*1,954*	*1.8 : 1*
All	**1,858**	**993**	**2,851**	**1.9 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table A.17: Hospital separations for people aged 65+, by movement type, age and sex, Tasmania, 2001–02 (unadjusted)

	Age at hospital admission			
Sex/movement type	**65–79**	**80+**	**Total**	**N**
Men		**Row per cent**		
To RAC				
Return to permanent RAC	29.9	70.1	100.0	271
To permanent RAC	40.9	59.1	100.0	193
To respite RAC	55.6	44.4	100.0	27
Subtotal	*35.6*	*64.4*	*100.0*	*491*
To community/other	72.6	27.4	100.0	10,943
Died in hospital	57.5	42.5	100.0	562
All	*70.3*	*29.7*	*100.0*	*. .*
Total separations (number)	*8,438*	*3,558*	*. .*	*11,996*
Women		**Row per cent**		
To RAC				
Return to permanent RAC	*19.5*	*80.5*	*100.0*	631
To permanent RAC	*22.9*	*77.1*	*100.0*	293
To respite RAC	*28.9*	*71.1*	*100.0*	38
Subtotal	*20.9*	*79.1*	*100.0*	*962*
To community/other	*63.8*	*36.2*	*100.0*	11,443
Died in hospital	*45.9*	*54.1*	*100.0*	512
All	*59.9*	*40.1*	*100.0*	*. .*
Total separations (number)	*7,742*	*5,175*	*. .*	*12,917*
All		**Row per cent**		
To RAC				
Return to permanent RAC	*22.6*	*77.4*	*100.0*	902
To permanent RAC	*30.0*	*70.0*	*100.0*	486
To respite RAC	*40.0*	*60.0*	*100.0*	65
Subtotal	*25.9*	*74.1*	*100.0*	*1,453*
To community/other	*68.1*	*31.9*	*100.0*	22,386
Died in hospital	*52.0*	*48.0*	*100.0*	1,074
All	***64.9***	***35.1***	***100.0***	***. .***
Total separations (number)	***16,180***	***8,733***	***. .***	**24,913**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission. Age groups have been combined due to small numbers.

Table A.18: Summary of movements from hospital into RAC for people aged 65+, by sex and age, Tasmania, 2001–02

Sex/age	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men		**Row per cent**				**Est'd min %**	**Est'd max %**
65–79	46.3	45.1	8.6	100.0	175	2.2	2.4
80+	60.1	36.1	3.8	100.0	316	9.5	10.6
All	*55.2*	*39.3*	*5.5*	*100.0*	*. .*	*4.3*	*4.8*
Total sep's (N)	*271*	*193*	*27*	*. .*	*491*	*11,434*	
Women							
65–79	61.2	33.3	5.5	100.0	201	2.7	3.0
80+	66.8	29.7	3.5	100.0	761	15.5	17.3
All	*65.6*	*30.5*	*4.0*	*100.0*	*. .*	*7.8*	*8.6*
Total sep's (N)	*631*	*293*	*38*	*. .*	*962*	*12,405*	
All							
65–79	54.3	38.8	6.9	100.0	376	2.4	2.7
80+	64.8	31.6	3.6	100.0	1,077	13.1	14.6
All	**62.1**	**33.4**	**4.5**	**100.0**	**. .**	**6.1**	**6.8**
Total separations (number)	**902**	**486**	**65**	**. .**	**1,453**	**23,839**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.

Table A.19: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by sex and age, Tasmania, 2001–02 (unadjusted hospital separations)

Sex/age	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
Men	**Number (unadjusted hospital separations)**			**Ratio**
65–79	79	15	94	5.3 : 1
80+	114	12	126	9.5 : 1
All	*193*	*27*	*220*	*7.1 : 1*
Women				
65–79	67	11	78	6.1 : 1
80+	226	27	253	8.4 : 1
All	*293*	*38*	*331*	*7.7* : 1
All				
65–79	146	26	172	5.6 : 1
80+	340	39	379	8.7 : 1
All	**486**	**65**	**551**	**7.5 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table A.20: Hospital separations for people aged 65+, by movement type, age and sex, Australian Capital Territory, 2001–02 (unadjusted)

	Age at hospital admission			
Sex/movement type	**65–79**	**80+**	**Total**	**N**
Men		**Row per cent**		
To RAC				
Return to permanent RAC	32.5	67.5	100.0	157
To permanent RAC	32.1	67.9	100.0	53
To respite RAC	20.5	79.5	100.0	39
Subtotal	*30.5*	*69.5*	*100.0*	*249*
To community/other	75.9	24.1	100.0	5,144
Died in hospital	58.1	41.9	100.0	303
All	*72.9*	*27.1*	*100.0*	*. .*
Total separations (number)	*4,155*	*1,541*	*. .*	*5,696*
Women		**Row per cent**		
To RAC				
Return to permanent RAC	16.2	83.8	100.0	358
To permanent RAC	24.4	75.6	100.0	82
To respite RAC	32.1	67.9	100.0	56
Subtotal	*19.4*	*80.6*	*100.0*	*496*
To community/other	66.5	33.5	100.0	4,736
Died in hospital	44.8	55.2	100.0	288
All	*61.2*	*38.8*	*100.0*	*. .*
Total separations (number)	*3,376*	*2,144*	*. .*	*5,520*
All		**Row per cent**		
To RAC				
Return to permanent RAC	21.2	78.8	100.0	515
To permanent RAC	27.4	72.6	100.0	135
To respite RAC	27.4	72.6	100.0	95
Subtotal	*23.1*	*76.9*	*100.0*	*745*
To community/other	71.4	28.6	100.0	9,880
Died in hospital	51.6	48.4	100.0	591
All	**67.1**	**32.9**	**100.0**	**. .**
Total separations (number)	**7,531**	**3,685**	**. .**	**11,216**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission. Age groups have been combined due to small numbers.

Table A.21: Summary of movements from hospital into RAC for people aged 65+, by sex and age, Australian Capital Territory, 2001–02

Sex/age	Returning to permanent RAC	To permanent RAC	To respite RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men		**Row per cent**				**Est'd min %**	**Est'd max %**
65–79	67.1	22.4	10.5	100.0	76	1.9	2.1
80+	61.3	20.8	17.9	100.0	173	12.2	13.6
All	*63.1*	*21.3*	*15.7*	*100.0*	*. .*	*4.6*	*5.1*
Total sep's (N)	*157*	*53*	*39*	*. .*	*249*	*5,393*	
Women							
65–79	60.4	20.8	18.8	100.0	96	3.0	3.3
80+	75.0	15.5	9.5	100.0	400	20.2	22.4
All	*72.2*	*16.5*	*11.3*	*100.0*	*. .*	*9.5*	*10.5*
Total sep's (N)	*358*	*82*	*56*	*. .*	*496*	*5,232*	
All							
65–79	63.4	21.5	15.1	100.0	172	2.4	2.6
80+	70.9	17.1	12.0	100.0	573	16.9	18.8
Total	**69.1**	**18.1**	**12.8**	**100.0**	**. .**	**7.0**	**7.8**
Total separations (number)	**515**	**135**	**95**	**. .**	**745**	**10,625**	

Notes

1. Table is based on linked hospital and RAC records. See notes Table 1.3 for information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.

Table A.22: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by sex and age, Australian Capital Territory, 2001–02 (unadjusted hospital separations)

Sex/age	To permanent RAC	To respite RAC	Total	Permanent : respite admissions
Men	**Number (unadjusted hospital separations)**			**Ratio**
65–79	17	8	25	2.1 : 1
80+	36	31	67	1.2 : 1
All	*53*	*39*	*92*	*1.4 : 1*
Women				
65–79	20	18	38	1.1 : 1
80+	62	38	100	1.6 : 1
All	*82*	*56*	*138*	*1.5 : 1*
All				
65–79	37	26	63	1.4 : 1
80+	98	69	167	1.4 : 1
All	**135**	**95**	**230**	**1.4 : 1**

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.

Table A.23: Hospital separations for people aged 65+, by movement type, age and sex, Northern Territory, 2001–02 (unadjusted)

	Age at hospital admission			
Sex/movement type	**65–79**	**80+**	**Total**	**N**
Men		**Row per cent**		
To RAC				
Return to permanent RAC	46.5	53.5	100.0	43
To permanent RAC	65.2	34.8	100.0	23
To respite RAC	*53.0*	*47.0*	*100.0*	*66*
Subtotal	85.3	14.7	100.0	1,068
Died in hospital	77.8	22.2	100.0	54
All	*83.2*	*16.8*	*100.0*	*. .*
Total separations (number)	*988*	*200*	*. .*	*1,188*
Women		**Row per cent**		
To RAC				
Return to permanent RAC	56.8	43.2	100.0	37
To permanent RAC	70.6	29.4	100.0	17
To respite RAC	*61.1*	*38.9*	*100.0*	*54*
Subtotal	79.1	20.9	100.0	860
Died in hospital	52.9	47.1	100.0	51
All	*76.7*	*23.3*	*100.0*	*. .*
Total separations (number)	*740*	*225*	*. .*	*965*
All		**Row per cent**		
To RAC				
Return to permanent RAC	51.3	48.8	100.0	80
To permanent RAC	67.5	32.5	100.0	40
To respite RAC	*56.7*	*43.3*	*100.0*	*120*
Subtotal	82.5	17.5	100.0	1,928
Died in hospital	65.7	34.3	100.0	105
All	**80.3**	**19.7**	**100.0**	**. .**
Total separations (number)	**1,728**	**425**	**. .**	**2,153**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers. Links to admissions into permanent and respite RAC have been combined due to small numbers (55% of entries to RAC were permanent).
2. Age is as at time of hospital admission. Age groups have been combined due to small numbers.

Table A.24: Summary of movements from hospital into RAC for people aged 65+, by sex and age, Northern Territory, 2001–02

Sex/age	Returning to permanent RAC	To RAC	Total	Unadjusted number	As per cent of all live hospital separations: estimated range	
Men		**Row per cent**			**Est'd min %**	**Est'd max %**
65–79	57.1	42.9	100.0	35	3.7	4.1
80+	74.2	25.8	100.0	31	16.5	18.3
All	*65.2*	*34.8*	*100.0*	*. .*	*5.8*	*6.5*
Total sep's (N)	*43*	*23*	*. .*	*66*	*1,134*	
Women						
65–79	63.6	36.4	100.0	33	4.6	5.1
80+	76.2	23.8	100.0	21	10.4	11.6
All	*68.5*	*31.5*	*100.0*	*. .*	*5.9*	*6.6*
Total sep's (N)	*37*	*17*	*. .*	*54*	*914*	
All						
65–79	60.3	39.7	100.0	68	4.1	4.6
80+	75.0	25.0	100.0	52	13.4	14.9
All	**66.7**	**33.3**	**100.0**	**. .**	**5.9**	**6.5**
Total separations (number)	**80**	**40**	**. .**	**120**	**2,048**	

Notes

1. Table is based on linked hospital and RAC records. See notes to Table 1.3 For information on identification of transition groups. Estimated minimum per cent to RAC is based on unadjusted figures; estimated maximum per cent to RAC is derived by applying the maximum adjustment to all identified transition records (see Box 2.1).
2. Age is as at time of hospital admission.

Table A.25: Ratio of permanent to respite admissions from hospital into RAC for people aged 65+, by sex and age, Northern Territory, 2001–02

No data presented for the Northern Territory due to small numbers

Table A.26: Hospital separations for people aged 65+: mean length of stay, by movement type, sex and state/territory, 2001–02 (days) (unadjusted)

Sex/movement type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All
Men					**Mean (days)**				
Return to permanent RAC	8.2	8.3	7.8	8.7	7.3	7.5	7.5	7.3	8.0
To permanent RAC	32.8	44.1	40.1	50.3	35.7	53.5	34.5	29.4	39.0
To respite RAC	20.1	15.0	20.3	20.8	21.1	12.3	14.4	8.7	19.3
To community/other	6.8	6.6	6.4	6.6	6.3	7.7	6.6	7.2	6.6
Died in hospital	15.0	14.2	15.0	15.0	21.3	15.6	13.3	18.4	15.4
All	*8.0*	*7.8*	*7.5*	*7.8*	*7.8*	*8.8*	*7.3*	*7.9*	*7.8*
Total separations (number)	*148,033*	*117,120*	*89,626*	*39,741*	*43,813*	*11,996*	*5,696*	*1,188*	*457,213*
Women					**Mean (days)**				
Return to permanent RAC	8.8	9.0	8.3	8.9	8.1	8.1	9.2	8.2	8.6
To permanent RAC	32.2	40.4	43.3	43.4	34.4	45.5	35.9	47.1	37.7
To respite RAC	19.5	19.2	19.2	20.8	20.5	10.6	16.8	6.7	19.5
To community/other	7.8	7.8	7.2	7.3	7.0	9.0	7.7	8.0	7.6
Died in hospital	21.8	15.3	17.0	22.1	26.3	16.0	14.1	13.2	19.4
All	*9.4*	*9.2*	*8.7*	*9.0*	*8.7*	*10.1*	*8.6*	*8.7*	*9.1*
Total separations (number)	*160,682*	*126,981*	*90,171*	*43,948*	*49,764*	*12,917*	*5,520*	*965*	*490,948*
All					**Mean (days)**				
Return to permanent RAC	8.6	8.8	8.1	8.8	7.8	7.9	8.7	7.7	8.4
To permanent RAC	32.5	41.7	42.0	45.7	34.9	48.7	35.4	38.2	38.2
To respite RAC	19.7	17.7	19.6	20.8	20.7	11.3	15.8	8.0	19.5
To community/other	7.3	7.2	6.8	7.0	6.7	8.4	7.1	7.6	7.1
Died in hospital	18.2	14.7	15.9	18.5	23.7	15.8	13.7	15.9	17.3
All	**8.7**	**8.5**	**8.1**	**8.4**	**8.3**	**9.5**	**8.0**	**8.3**	**8.5**
Total separations (number)	**308,715**	**244,101**	**179,797**	**83,689**	**93,577**	**24,913**	**11,216**	**2,153**	**948,161**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. See technical note Box 3.1 on measuring length of stay.
2. Age is as at time of hospital admission.

Table A.27: Hospital separations for people aged 65+: median of length of stay, by movement type, sex and state/territory, 2001–02 (days) (unadjusted)

Sex/movement type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All
Men					**Median (days)**				
Return to permanent RAC	6	5	5	5	5	5	6	5	5
To permanent RAC	21	31	23	30	24	28	29	18	25
To respite RAC	14	10	14	15	15	7	11	7	14
To community/other	4	4	4	4	4	4	4	4	4
Died in hospital	7	8	8	7	8	7	8	10	8
All	*4*	*4*	*4*	*4*	*4*	*5*	*4*	*5*	*4*
Total separations (number)	*148,033*	*117,120*	*89,626*	*39,741*	*43,813*	*11,996*	*5,696*	*1,188*	*457,213*
Women					**Median (days)**				
Return to permanent RAC	6	6	6	6	5	6	7	6	6
To permanent RAC	20	28	22	29	20	27	28	29	23
To respite RAC	14	13	14	15	16	8	13	7	14
To community/other	5	5	4	4	4	5	5	5	5
Died in hospital	7	7	7	8	8	8	8	8	7
All	*5*	*5*	*5*	*5*	*5*	*5*	*6*	*5*	*5*
Total separations (number)	*160,682*	*126,981*	*90,171*	*43,948*	*49,764*	*12,917*	*5,520*	*965*	*490,948*
All					**Median (days)**				
Return to permanent RAC	6	6	6	6	5	6	6	6	6
To permanent RAC	20	29	22	29	22	28	28	27	24
To respite RAC	14	12	14	15	16	7	12	7	14
To community/other	4	4	4	4	4	5	5	5	4
Died in hospital	7	8	7	8	8	7	8	9	7
All	5	5	4	4	4	5	5	5	5
Total separations (number)	**308,715**	**244,101**	**179,797**	**83,689**	**93,577**	**24,913**	**11,216**	**2,153**	**948,161**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. See technical note Box 3.1 on measuring length of stay.

2. Age is as at time of hospital admission.

Table A.28: Hospital separations for people aged 65+: 90th percentile of length of stay, by movement type, sex and state/territory, 2001–02 (days) (unadjusted)

Sex/movement type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All
Men					**90th percentile (days)**				
Return to permanent RAC	17	19	16	20	16	16	14	17	17
To permanent RAC	60	90	80	99	78	141	72	75	77
To respite RAC	40	32	41	41	46	21	35	13	40
To community/other	14	14	14	14	14	16	14	16	14
Died in hospital	29	32	31	30	32	34	32	47	30
All	*17*	*17*	*16*	*16*	*15*	*18*	*16*	*18*	*16*
Total separations (number)	*148,033*	*117,120*	*89,626*	*39,741*	*43,813*	*11,996*	*5,696*	*1,188*	*457,213*
Women					**90th percentile (days)**				
Return to permanent RAC	20	20	18	20	17	17	19	17	19
To permanent RAC	55	82	70	84	65	82	81	123	69
To respite RAC	40	40	40	46	38	23	30	13	40
To community/other	17	17	15	16	15	18	16	17	16
Died in hospital	30	32	30	35	35	35	34	35	32
All	*19*	*20*	*18*	*19*	*17*	*20*	*18*	*19*	*19*
Total separations (number)	*160,682*	*126,981*	*90,171*	*43,948*	*49,764*	*12,917*	*5,520*	*965*	*490,948*
All					**90th percentile (days)**				
Return to permanent RAC	19	20	17	20	17	17	18	17	19
To permanent RAC	57	84	75	89	70	99	81	108	73
To respite RAC	40	38	40	44	42	21	34	13	40
To community/other	15	16	15	15	14	17	15	17	15
Died in hospital	29	32	30	32	33	35	32	41	31
All	**18**	**19**	**17**	**18**	**16**	**19**	**17**	**18**	**18**
Total separations (number)	**308,715**	**244,101**	**179,797**	**83,689**	**93,577**	**24,913**	**11,216**	**2,153**	**948,161**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups. See technical note Box 3.1 on measuring length of stay.
2. Age is as at time of hospital admission.

Table A.29: RAC entries for people aged 65 and over, by movement type, sex and age, New South Wales, 2001–02 (unadjusted)

	Age at RAC admission/transfer								
Sex/movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	5.1	11.7	21.6	27.0	21.6	10.3	2.7	100.0	2,806
From community into permanent RAC	5.7	10.9	18.5	26.7	24.9	11.2	2.2	100.0	1,855
Transfer into permanent RAC	5.5	12.1	20.5	25.7	21.7	11.7	2.8	100.0	2,403
Subtotal	*5.4*	*11.6*	*20.4*	*26.5*	*22.5*	*11.0*	*2.6*	*100.0*	*7,064*
Respite admissions									
From hospital to respite RAC	6.7	12.2	25.2	26.4	18.1	9.5	2.0	100.0	1,121
From community into respite RAC	7.9	13.1	22.5	25.6	20.5	9.0	1.5	100.0	4,088
Transfer into respite RAC	10.7	<10.7	19.8	25.7	25.1	<10.7	<2.7	100.0	187
Subtotal	*7.7*	*12.8*	*22.9*	*25.8*	*20.1*	*9.1*	*1.6*	*100.0*	*5,396*
All	*6.4*	*12.1*	*21.5*	*26.2*	*21.5*	*10.2*	*2.2*	*100.0*	*. .*
Total admissions (number)	*795*	*1,509*	*2,682*	*3,262*	*2,677*	*1,266*	*269*	*. .*	*12,460*
Women				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	2.9	7.2	14.3	24.5	28.5	17.3	5.1	100.0	4,469
From community into permanent RAC	2.7	6.9	16.0	26.4	28.5	15.4	4.1	100.0	4,111
Transfer into permanent RAC	1.9	6.6	14.7	25.2	28.2	17.8	5.6	100.0	5,317
Subtotal	*2.4*	*6.9*	*15.0*	*25.4*	*28.4*	*17.0*	*5.0*	*100.0*	*13,897*
Respite admissions									
From hospital to respite RAC	3.4	8.1	17.7	27.8	26.1	13.8	3.2	100.0	2,158
From community into respite RAC	3.1	7.9	16.8	26.1	27.8	14.5	3.8	100.0	7,463
Transfer into respite RAC	1.9	7.1	20.1	29.6	26.6	12.0	2.7	100.0	368
Subtotal	*3.1*	*7.9*	*17.1*	*26.6*	*27.4*	*14.2*	*3.6*	*100.0*	*9,989*
All	*2.7*	*7.3*	*15.9*	*25.9*	*28.0*	*15.8*	*4.4*	*100.0*	*. .*
Total admissions (number)	*653*	*1,750*	*3,787*	*6,178*	*6,683*	*3,779*	*1,056*	*. .*	*23,886*
All				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	3.7	8.9	17.1	25.5	25.9	14.6	4.2	100.0	7,275
From community into permanent RAC	3.6	8.1	16.8	26.5	27.4	14.1	3.5	100.0	5,966
Transfer into permanent RAC	3.0	8.3	16.5	25.4	26.2	15.9	4.7	100.0	7,720
Subtotal	*3.4*	*8.5*	*16.8*	*25.7*	*26.4*	*14.9*	*4.2*	*100.0*	*20,961*
Respite admissions									
From hospital to respite RAC	4.5	9.5	20.3	27.3	23.4	12.3	2.8	100.0	3,279
From community into respite RAC	4.8	9.8	18.8	25.9	25.2	12.5	3.0	100.0	11,551
Transfer into respite RAC	4.9	7.7	20.0	28.3	26.1	11.0	2.0	100.0	555
Subtotal	*4.7*	*9.6*	*19.1*	*26.3*	*24.9*	*12.4*	*2.9*	*100.0*	*15,385*
All	**4.0**	**9.0**	**17.8**	**26.0**	**25.8**	**13.9**	**3.6**	**100.0**	**. .**
Total admissions (number)	**1,448**	**3,259**	**6,469**	**9,440**	**9,360**	**5,045**	**1,325**	**. .**	**36,346**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of RAC admission/transfer.

Table A.30: RAC entries for people aged 65 and over, by movement type, sex and age, Victoria, 2001–02 (unadjusted)

	Age at RAC admission/transfer								
Sex/movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	5.3	10.9	19.9	26.0	24.1	11.6	2.2	100.0	1,968
From community into permanent RAC	5.0	11.3	17.0	25.6	25.2	13.2	2.6	100.0	1,474
Transfer into permanent RAC	5.8	11.4	17.9	22.2	24.6	14.6	3.5	100.0	1,304
Subtotal	*5.3*	*11.2*	*18.4*	*24.9*	*24.6*	*12.9*	*2.7*	*100.0*	*4,746*
Respite admissions									
From hospital to respite RAC	5.2	9.9	20.5	27.8	22.8	11.5	2.4	100.0	425
From community into respite RAC	8.1	15.0	23.4	23.8	19.0	8.6	2.1	100.0	3,251
Transfer into respite RAC	<8.8	9.7	26.5	23.9	20.4	<8.8	<4.4	100.0	113
Subtotal	*7.7*	*14.3*	*23.1*	*24.3*	*19.5*	*8.9*	*2.2*	*100.0*	*3,789*
All	*6.4*	*12.6*	*20.5*	*24.6*	*22.3*	*11.1*	*2.4*	*100.0*	*. .*
Total admissions (number)	*546*	*1,073*	*1,752*	*2,100*	*1,906*	*950*	*208*	*. .*	*8,535*
Women				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	2.4	6.5	15.6	24.5	27.8	17.7	5.5	100.0	3,502
From community into permanent RAC	2.1	5.6	14.8	26.2	29.7	17.1	4.5	100.0	3,403
Transfer into permanent RAC	1.7	5.5	13.6	24.6	29.1	18.8	6.6	100.0	2,993
Subtotal	*2.1*	*5.9*	*14.7*	*25.1*	*28.8*	*17.8*	*5.5*	*100.0*	*9,898*
Respite admissions									
From hospital to respite RAC	2.7	7.1	17.1	28.9	30.9	10.4	3.0	100.0	779
From community into respite RAC	3.7	8.5	16.0	25.8	27.7	14.1	4.3	100.0	5,269
Transfer into respite RAC	<3.4	6.7	14.8	36.2	27.5	10.7	<3.4	100.0	149
Subtotal	*3.5*	*8.3*	*16.1*	*26.4*	*28.1*	*13.6*	*4.0*	*100.0*	*6,197*
All	*2.6*	*6.8*	*15.3*	*25.6*	*28.6*	*16.2*	*4.9*	*100.0*	*. .*
Total admissions (number)	*423*	*1,097*	*2,456*	*4,124*	*4,597*	*2,605*	*793*	*. .*	*16,095*
All				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	3.4	8.1	17.1	25.1	26.5	15.5	4.3	100.0	5,470
From community into permanent RAC	3.0	7.4	15.5	26.0	28.3	16.0	3.9	100.0	4,877
Transfer into permanent RAC	3.0	7.3	14.9	23.9	27.8	17.5	5.6	100.0	4,297
Subtotal	*3.1*	*7.6*	*15.9*	*25.0*	*27.5*	*16.2*	*4.6*	*100.0*	*14,644*
Respite admissions									
From hospital to respite RAC	3.6	8.1	18.3	28.5	28.1	10.8	2.7	100.0	1,204
From community into respite RAC	5.3	11.0	18.8	25.1	24.4	12.0	3.4	100.0	8,520
Transfer into respite RAC	5.0	8.0	19.8	30.9	24.4	9.5	2.3	100.0	262
Subtotal	*5.1*	*10.6*	*18.8*	*25.6*	*24.8*	*11.8*	*3.3*	*100.0*	*9,986*
All	**3.9**	**8.8**	**17.1**	**25.3**	**26.4**	**14.4**	**4.1**	**100.0**	**. .**
Total admissions (number)	**969**	**2,170**	**4,208**	**6,224**	**6,503**	**3,555**	**1,001**	**. .**	**24,630**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of RAC admission/transfer.

Table A.31: RAC entries for people aged 65 and over, by movement type, sex and age, Queensland, 2001–02 (unadjusted)

	Age at RAC admission/transfer								
Sex/movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	5.2	11.5	21.6	26.1	22.7	10.8	2.1	100.0	1,373
From community into permanent RAC	5.6	10.6	19.0	24.0	25.4	12.1	3.2	100.0	1,046
Transfer into permanent RAC	5.4	8.3	17.9	25.4	27.7	13.2	2.3	100.0	1,041
Subtotal	*5.4*	*10.3*	*19.7*	*25.2*	*25.0*	*11.9*	*2.5*	*100.0*	*3,460*
Respite admissions									
From hospital to respite RAC	5.3	11.7	19.7	29.5	22.0	9.8	1.9	100.0	528
From community into respite RAC	6.9	12.3	22.5	25.2	22.2	9.1	1.8	100.0	2,124
Transfer into respite RAC	<5.6	14.4	23.3	20.0	32.2	6.7	<5.6	100.0	90
Subtotal	*6.5*	*12.3*	*22.0*	*25.9*	*22.5*	*9.2*	*1.8*	*100.0*	*2,742*
All	*5.9*	*11.1*	*20.7*	*25.5*	*23.9*	*10.7*	*2.2*	*100.0*	*. .*
Total admissions (number)	*364*	*691*	*1,283*	*1,583*	*1,482*	*664*	*135*	*. .*	*6,202*
Women				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	2.9	7.8	14.8	27.0	27.3	16.0	4.2	100.0	2,069
From community into permanent RAC	2.5	7.1	15.5	28.0	28.1	15.3	3.5	100.0	2,378
Transfer into permanent RAC	2.1	6.6	14.9	23.8	29.8	17.4	5.4	100.0	2,177
Subtotal	*2.5*	*7.1*	*15.1*	*26.3*	*28.4*	*16.2*	*4.3*	*100.0*	*6,624*
Respite admissions									
From hospital to respite RAC	2.9	9.6	18.9	29.7	23.7	11.8	3.4	100.0	873
From community into respite RAC	3.2	7.2	14.7	25.4	30.2	16.4	2.9	100.0	3,451
Transfer into respite RAC	<6.2	8.6	11.7	28.4	24.7	16.7	<6.2	100.0	162
Subtotal	*3.2*	*7.7*	*15.4*	*26.4*	*28.7*	*15.5*	*3.0*	*100.0*	*4,486*
All	*2.8*	*7.4*	*15.2*	*26.3*	*28.5*	*15.9*	*3.8*	*100.0*	*. .*
Total admissions (number)	*309*	*820*	*1,689*	*2,926*	*3,171*	*1,772*	*423*	*. .*	*11,110*
All				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	3.8	9.3	17.5	26.6	25.5	13.9	3.4	100.0	3,442
From community into permanent RAC	3.4	8.1	16.6	26.8	27.3	14.4	3.4	100.0	3,424
Transfer into permanent RAC	3.2	7.1	15.8	24.3	29.1	16.0	4.4	100.0	3,218
Subtotal	*3.5*	*8.2*	*16.7*	*25.9*	*27.3*	*14.7*	*3.7*	*100.0*	*10,084*
Respite admissions									
From hospital to respite RAC	3.8	10.4	19.2	29.6	23.1	11.1	2.9	100.0	1,401
From community into respite RAC	4.6	9.1	17.7	25.4	27.1	13.7	2.5	100.0	5,575
Transfer into respite RAC	4.8	10.7	15.9	25.4	27.4	13.1	2.8	100.0	252
Subtotal	*4.4*	*9.4*	*17.9*	*26.2*	*26.3*	*13.1*	*2.6*	*100.0*	*7,228*
All	**3.9**	**8.7**	**17.2**	**26.0**	**26.9**	**14.1**	**3.2**	**100.0**	**. .**
Total admissions (number)	**673**	**1,511**	**2,972**	**4,509**	**4,653**	**2,436**	**558**	**. .**	**17,312**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of RAC admission/transfer.

Table A.32: RAC entries for people aged 65+, by movement type, age and sex, Western Australia, 2001–02 (unadjusted)

	Age at RAC admission/transfer								
Sex/movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	5.1	12.4	20.1	23.1	22.9	13.4	3.0	100.0	493
From community into permanent RAC	5.6	13.7	18.4	21.6	23.3	14.3	3.2	100.0	533
Transfer into permanent RAC	6.0	11.0	21.2	21.5	24.8	11.7	3.8	100.0	419
Subtotal	*5.5*	*12.5*	*19.8*	*22.1*	*23.6*	*13.2*	*3.3*	*100.0*	*1,445*
Respite admissions									
From hospital to respite RAC	7.6	16.9	24.5	19.0	20.3	<12.7	<2.1	100.0	237
From community into respite RAC	8.4	15.8	21.5	26.6	16.5	9.5	1.7	100.0	896
Transfer into respite RAC	5.9	17.6	17.6	35.3	11.8	11.8	0.0	100.0	34
Subtotal	*8.1*	*16.1*	*22.0*	*25.3*	*17.1*	*9.9*	*1.5*	*100.0*	*1,167*
All	*6.7*	*14.1*	*20.8*	*23.5*	*20.7*	*11.7*	*2.5*	*100.0*	*. .*
Total admissions (number)	*175*	*368*	*543*	*614*	*541*	*306*	*65*	*. .*	*2,612*
Women				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	2.4	5.6	14.7	23.8	29.7	18.2	5.7	100.0	947
From community into permanent RAC	2.2	5.7	13.6	24.6	29.2	19.4	5.5	100.0	1,209
Transfer into permanent RAC	2.5	5.5	13.4	23.2	32.5	18.9	4.0	100.0	1,138
Subtotal	*2.4*	*5.6*	*13.8*	*23.9*	*30.5*	*18.9*	*5.0*	*100.0*	*3,294*
Respite admissions									
From hospital to respite RAC	<4.4	7.2	17.3	29.6	28.5	13.2	<4.4	100.0	456
From community into respite RAC	6.3	7.6	14.8	24.9	30.3	13.7	2.4	100.0	1,494
Transfer into respite RAC	<6.8	6.8	15.1	31.5	31.5	12.3	<6.8	100.0	73
Subtotal	*5.2*	*7.5*	*15.4*	*26.2*	*30.0*	*13.5*	*2.3*	*100.0*	*2,023*
All	*3.4*	*6.3*	*14.4*	*24.8*	*30.3*	*16.8*	*4.0*	*100.0*	*. .*
Total admissions (number)	*183*	*336*	*766*	*1,316*	*1,610*	*895*	*211*	*. .*	*5,317*
All				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	3.3	7.9	16.5	23.5	27.4	16.5	4.8	100.0	1,440
From community into permanent RAC	3.2	8.2	15.0	23.7	27.4	17.8	4.8	100.0	1,742
Transfer into permanent RAC	3.5	7.0	15.5	22.7	30.4	17.0	3.9	100.0	1,557
Subtotal	*3.3*	*7.7*	*15.6*	*23.3*	*28.4*	*17.1*	*4.5*	*100.0*	*4,739*
Respite admissions									
From hospital to respite RAC	3.9	10.5	19.8	26.0	25.7	12.4	1.7	100.0	693
From community into respite RAC	7.1	10.7	17.3	25.5	25.1	12.1	2.1	100.0	2,390
Transfer into respite RAC	<4.7	10.3	15.9	32.7	25.2	12.1	<4.7	100.0	107
Subtotal	*6.3*	*10.6*	*17.8*	*25.9*	*25.3*	*12.2*	*2.0*	*100.0*	*3,190*
All	**4.5**	**8.9**	**16.5**	**24.3**	**27.1**	**15.1**	**3.5**	**100.0**	**. .**
Total admissions (number)	**358**	**704**	**1,309**	**1,930**	**2,151**	**1,201**	**276**	**. .**	**7,929**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of RAC admission/transfer.

Table A.33: RAC entries for people aged 65+, by movement type, age and sex, South Australia, 2001–02 (unadjusted)

	Age at RAC admission/transfer								
Sex/movement type	**65–69**	**70–74**	**75–79**	**80–84**	**85–89**	**90–94**	**95+**	**Total**	**N**
Men				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	5.2	12.2	22.1	28.6	21.6	8.2	2.0	100.0	745
From community into permanent RAC	1.9	9.9	16.3	25.4	30.7	13.3	2.5	100.0	473
Transfer into permanent RAC	4.0	9.5	19.4	27.8	22.8	13.6	2.9	100.0	623
Subtotal	*4.0*	*10.7*	*19.7*	*27.5*	*24.3*	*11.4*	*2.4*	*100.0*	*1,841*
Respite admissions									
From hospital to respite RAC	4.5	12.5	21.5	25.1	23.6	10.7	2.1	100.0	335
From community into respite RAC	6.5	13.2	20.0	29.3	18.3	10.8	1.8	100.0	1,103
Transfer into respite RAC	<9.4	<9.4	28.3	22.6	20.8	11.3	<9.4	100.0	53
Subtotal	*6.0*	*12.9*	*20.7*	*28.1*	*19.6*	*10.8*	*1.9*	*100.0*	*1,491*
All	*4.9*	*11.7*	*20.1*	*27.8*	*22.2*	*11.1*	*2.2*	*100.0*	*. .*
Total admissions (number)	*163*	*389*	*671*	*925*	*740*	*370*	*74*	*. .*	*3,332*
Women				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	3.0	6.8	16.2	26.7	28.3	14.0	5.0	100.0	1,113
From community into permanent RAC	2.1	6.2	14.5	27.2	30.5	15.2	4.1	100.0	1,025
Transfer into permanent RAC	1.8	5.6	13.3	23.5	31.5	18.0	6.2	100.0	1,491
Subtotal	*2.3*	*6.2*	*14.5*	*25.5*	*30.3*	*16.0*	*5.3*	*100.0*	*3,629*
Respite admissions									
From hospital to respite RAC	2.6	8.8	15.8	23.9	32.7	12.8	3.5	100.0	1,587
From community into respite RAC	2.3	6.7	16.6	26.2	30.6	14.8	2.9	100.0	657
Transfer into respite RAC	<6.4	9.0	20.5	17.9	33.3	15.4	<6.4	100.0	78
Subtotal	*2.5*	*8.2*	*16.1*	*24.3*	*32.1*	*13.4*	*3.3*	*100.0*	*2,322*
All	*2.4*	*7.0*	*15.2*	*25.1*	*31.0*	*15.0*	*4.5*	*100.0*	*. .*
Total admissions (number)	*140*	*414*	*902*	*1,492*	*1,844*	*892*	*267*	*. .*	*5,951*
All				**Row per cent**					
Permanent admissions									
From hospital to permanent RAC	3.9	9.0	18.6	27.4	25.6	11.7	3.8	100.0	1,858
From community into permanent RAC	2.1	7.4	15.1	26.6	30.6	14.6	3.6	100.0	1,498
Transfer into permanent RAC	2.5	6.8	15.1	24.8	28.9	16.7	5.3	100.0	2,114
Subtotal	*2.8*	*7.7*	*16.3*	*26.2*	*28.3*	*14.4*	*4.3*	*100.0*	*5,470*
Respite admissions									
From hospital to respite RAC	3.0	8.7	18.2	25.8	28.2	13.4	2.6	100.0	992
From community into respite RAC	4.2	10.6	17.5	26.1	26.8	12.0	2.8	100.0	2,690
Transfer into respite RAC	<3.8	8.4	23.7	19.8	28.2	13.7	<3.8	100.0	131
Subtotal	*3.9*	*10.0*	*17.9*	*25.8*	*27.2*	*12.4*	*2.8*	*100.0*	*3,813*
All	**3.3**	**8.7**	**16.9**	**26.0**	**27.8**	**13.6**	**3.7**	**100.0**	**. .**
Total admissions (number)	**303**	**803**	**1,573**	**2,417**	**2,584**	**1,262**	**341**	**. .**	**9,283**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of RAC admission/transfer.

Table A.34: RAC entries for people aged 65+, by movement type, age and sex, Tasmania, 2001–02 (unadjusted)

	Age at RAC admission/transfer			
Sex/movement type	**65–79**	**80+**	**Total**	**N**
Men		**Row per cent**		
Permanent admissions				
From hospital to permanent RAC	40.9	59.1	100.0	193
From community into permanent RAC	34.1	65.9	100.0	170
Transfer into permanent RAC	21.5	78.5	100.0	79
Subtotal	*34.8*	*65.2*	*100.0*	*442*
Respite admissions				
From hospital to respite RAC	n.p.	n.p.	100.0	27
From community into respite RAC	42.7	57.3	100.0	499
Transfer into respite RAC	n.p.	n.p.	100.0	8
Subtotal	*43.1*	*56.9*	*100.0*	*534*
All	*39.3*	*60.7*	*100.0*	*. .*
Total admissions (number)	*384*	*592*	*. .*	*976*
Women		**Row per cent**		
Permanent admissions				
From hospital to permanent RAC	22.8	77.2	100.0	294
From community into permanent RAC	20.9	79.1	100.0	359
Transfer into permanent RAC	21.5	78.5	100.0	242
Subtotal	*21.7*	*78.3*	*100.0*	*895*
Respite admissions				
From hospital to respite RAC	<38.5	>61.5	100.0	39
From community into respite RAC	30.3	69.7	100.0	870
Transfer into respite RAC	n.p.	n.p.	100.0	28
Subtotal	*29.9*	*70.1*	*100.0*	*937*
All	*25.9*	*74.1*	*100.0*	*. .*
Total admissions (number)	*474*	*1,358*	*. .*	*1,832*
All		**Row per cent**		
Permanent admissions				
From hospital to permanent RAC	30.0	70.0	100.0	487
From community into permanent RAC	25.1	74.9	100.0	529
Transfer into permanent RAC	21.5	78.5	100.0	321
Subtotal	*26.0*	*74.0*	*100.0*	*1,337*
Respite admissions				
From hospital to respite RAC	39.4	60.6	100.0	66
From community into respite RAC	34.8	65.2	100.0	1,369
Transfer into respite RAC	19.4	80.6	100.0	36
Subtotal	*34.7*	*65.3*	*100.0*	*1,471*
All	**30.6**	**69.4**	**100.0**	**. .**
Total admissions (number)	**858**	**1,950**	**. .**	**2,808**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of RAC admission/transfer. Age groups have been combined due to small numbers.

Table A.35: RAC entries for people aged 65+, by movement type, age and sex, Australian Capital Territory, 2001–02 (unadjusted)

	Age at RAC admission/transfer			
Sex/movement type	**65–79**	**80+**	**Total**	**N**
Men		**Row per cent**		
Permanent admissions				
From hospital to permanent RAC	36.7	63.3	100.0	49
From community into permanent RAC	29.4	70.6	100.0	51
Transfer into permanent RAC	34.6	65.4	100.0	78
Subtotal	*33.7*	*66.3*	*100.0*	*178*
Respite admissions				
From hospital to respite RAC	<28.6	>71.4	100.0	35
From community into respite RAC	40.4	59.6	100.0	230
Transfer into respite RAC	n.p.	n.p.	100.0	13
Subtotal	*37.1*	*62.9*	*100.0*	*278*
All	*35.7*	*64.3*	*100.0*	*. .*
Total admissions (number)	*163*	*293*	*. .*	*456*
Women		**Row per cent**		
Permanent admissions				
From hospital to permanent RAC	21.4	78.6	100.0	84
From community into permanent RAC	35.4	64.6	100.0	130
Transfer into permanent RAC	22.2	77.8	100.0	167
Subtotal	*26.5*	*73.5*	*100.0*	*381*
Respite admissions				
From hospital to respite RAC	<35.7	>64.3	100.0	56
From community into respite RAC	27.0	73.0	100.0	389
Transfer into respite RAC	n.p.	n.p.	100.0	17
Subtotal	*27.9*	*72.1*	*100.0*	*462*
All	*27.3*	*72.7*	*100.0*	*. .*
Total admissions (number)	*230*	*613*	*. .*	*843*
All		**Row per cent**		
Permanent admissions				
From hospital to permanent RAC	27.1	72.9	100.0	133
From community into permanent RAC	33.7	66.3	100.0	181
Transfer into permanent RAC	26.1	73.9	100.0	245
Subtotal	*28.8*	*71.2*	*100.0*	*559*
Respite admissions				
From hospital to respite RAC	26.4	73.6	100.0	91
From community into respite RAC	32.0	68.0	100.0	619
Transfer into respite RAC	33.3	66.7	100.0	30
Subtotal	*31.4*	*68.6*	*100.0*	*740*
All	**30.3**	**69.7**	**100.0**	**. .**
Total admissions (number)	**393**	**906**	**. .**	**1,299**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of RAC admission/transfer. Age groups have been combined due to small numbers.

Table A.36: RAC entries for people aged 65+, by movement type, age and sex, Northern Territory, 2001–02 (unadjusted)

	Age at RAC admission/transfer			
Sex/movement type	**65–79**	**80+**	**Total**	**N**
Men		**Row per cent**		
From hospital to RAC	61.9	38.1	100.0	21
Transfer within RAC	46.7	53.3	100.0	23
From community into permanent RAC	45.5	54.5	100.0	22
From community into respite RAC	62.3	37.7	100.0	69
All	*57.5*	*42.5*	*100.0*	*. .*
Total admissions (number)	*73*	*54*	*. .*	*135*
Women		**Row per cent**		
From hospital to RAC	70.6	29.4	100.0	17
Transfer within RAC	39.1	60.9	100.0	15
From community into permanent RAC	50.0	50.0	100.0	22
From community into respite RAC	48.6	51.4	100.0	111
All	*49.7*	*50.3*	*100.0*	*. .*
Total admissions (number)	*86*	*87*	*. .*	*165*
All		**Row per cent**		
From hospital to RAC	65.8	34.2	100.0	38
Transfer within RAC	42.1	57.9	100.0	38
From community into permanent RAC	47.7	52.3	100.0	44
From community into respite RAC	53.9	46.1	100.0	180
All	**53.0**	**47.0**	**100.0**	**. .**
Total admissions (number)	**159**	**141**	**. .**	**300**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.Respite and permanent admissions from hospital have been combined due to small numbers. Transfers into permanent and respite RAC have been combined due to small numbers.
2. Age is as at time of RAC admission/transfer. Age groups have been combined due to small numbers.

Table A.37: Hospital separations for people aged 65+, by movement type and hospital care type, by state/territory, 2001–02 (unadjusted)

State/territory hospital care type	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	N
New South Wales			**Column per cent**				
Acute	91.2	55.9	67.8	92.4	78.2	90.4	278,985
Rehabilitation	6.2	13.7	17.7	5.5	1.4	5.6	17,353
Palliative	0.4	2.7	0.8	0.6	17.2	1.6	4,837
GEM	0.3	1.6	1.2	0.4	0.3	0.4	1,200
Psychogeriatric	0.8	1.1	1.0	0.2	0.1	0.2	734
Maintenance	1.0	24.8	11.4	0.9	2.9	1.7	5,246
Other	0.1	0.2	0.2	0.1	—	0.1	360
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total separations (number)	**15,836**	**7,279**	**3,265**	**264,461**	**17,874**	**. .**	**308,715**
Victoria							
Acute	90.5	43.8	77.0	91.0	76.7	89.0	217,364
Rehabilitation	4.4	6.8	8.8	6.1	0.8	5.8	14,069
Palliative	0.3	1.1	0.6	0.4	16.8	1.3	3,227
GEM	4.5	27.5	8.3	2.3	4.0	3.1	7,506
Psychogeriatric	—	—	—	—	—	—	—
Maintenance	—	—	—	—	—	—	—
Other	0.2	20.8	5.3	0.2	1.7	0.8	1,935
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total separations (number)	**10,639**	**5,443**	**1,203**	**213,076**	**13,740**	**. .**	**244,101**
Queensland							
Acute	95.7	45.8	76.7	95.6	77.8	93.6	168,369
Rehabilitation	2.7	8.0	6.6	2.4	0.9	2.4	4,403
Palliative	0.3	2.1	1.4	0.7	16.5	1.5	2,662
GEM	0.2	1.0	0.5	0.1	0.2	0.1	236
Psychogeriatric	0.2	0.7	<0.4	0.1	0.1	0.1	152
Maintenance	0.7	42.3	14.0	1.0	4.5	2.1	3,745
Other	0.1	0.2	<0.7	0.1	0.1	0.1	230
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total separations (number)	**10,088**	**3,455**	**1,410**	**155,796**	**9,048**	**. .**	**179,797**

(continued)

Table A.37 (continued): Hospital separations for people aged 65+, by movement type and hospital care type, by state/territory, 2001–02 (unadjusted)

State/territory hospital care type	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	N
Western Australia			**Column per cent**				
Acute	90.9	41.6	64.8	93.8	71.5	91.4	76,453
Rehabilitation	6.3	21.8	18.8	3.5	2.8	4.1	3,404
Palliative	0.6	1.3	2.5	1.0	21.9	2.0	1,695
GEM	—	—	—	—	—	—	7
Psychogeriatric	1.7	5.5	2.2	0.4	0.5	0.6	515
Maintenance	0.5	29.9	11.8	1.3	3.4	1.9	1,615
Other	—	—	—	—	—	—	—
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total separations (number)	**4,790**	**1,439**	**693**	**72,470**	**4,297**	**. .**	**83,689**
South Australia							
Acute	97.0	70.2	85.6	94.0	83.2	93.1	87,103
Rehabilitation	2.5	6.5	6.8	3.7	0.5	3.6	3,323
Palliative	0.1	1.3	<0.5	0.3	12.0	0.9	839
GEM	—	0.4	<0.5	—	—	—	32
Psychogeriatric	—	<0.3	<0.5	0.0	0.4	—	36
Maintenance	0.3	21.4	6.5	0.3	3.8	1.0	905
Other	—	<0.3	<0.5	1.6	0.1	1.4	1,338
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total separations (number)	**5,470**	**1,858**	**993**	**80,619**	**4,636**	**. .**	**93,576**
Tasmania							
Acute	97.8	48.5	87.5	97.1	80.4	95.1	17,878
Rehabilitation	1.5	4.8	—	1.9	1.1	1.9	360
Palliative	<0.7	<1.2	—	0.3	12.7	1.0	192
GEM	—	<1.2	—	—	<0.5	—	<5
Psychogeriatric	—	—	—	—	<0.5	—	<5
Maintenance	<0.7	45.7	12.5	0.6	5.5	2.0	372
Other	—	—	—	—	—	—	—
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total separations (number)	**734**	**433**	**56**	**16,514**	**1,069**	**. .**	**18,806**

(continued)

Table A.37 (continued): Hospital separations for people aged 65+, by movement type and hospital care type, by state/territory, 2001–02 (unadjusted)

State/territory hospital care type	Returning to permanent RAC	To permanent RAC	To respite RAC	To community/ other	Died in hospital	All	N
Australian Capital Territory			**Column per cent**				
Acute	97.1	63.0	92.6	97.3	68.4	95.4	10,695
Rehabilitation	2.1	<3.7	<5.3	1.7	0.8	1.7	190
Palliative	<1.0	—	—	0.4	29.6	1.9	217
GEM	—	<7.4	<5.3	0.1	<0.8	0.2	24
Psychogeriatric	—	—	—	—	—	—	<5
Maintenance	<1.0	28.9	<5.3	0.4	0.8	0.8	88
Other	—	—	—	—	<0.8	—	<5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
Total separations (number)	**515**	**135**	**95**	**9,880**	**591**	**. .**	**11,216**
Northern Territory							
Acute	100.0	54.5	94.4	97.1	96.2	96.7	2,083
Rehabilitation	—	n.p.	n.p.	<0.3	—	0.9	19
Palliative	—	—	—	<0.3	<4.8	0.4	9
GEM	—	—	—	—	—	—	—
Psychogeriatric	—	—	—	—	—	—	—
Maintenance	—	n.p.	n.p.	1.1	<4.8	1.5	33
Other	—	—	—	0.5	—	0.4	9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**..**
Total separations (number)	**80**	**22**	**18**	**1,928**	**105**	**..**	**2,153**

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. Newborn care types, organ procurement and hospital boarders were omitted from the tables (1 case).
4. 6,107 records with unknown care type were omitted from the table. All of these records related to separations from Tasmanian hospitals; 6,095 were from private hospitals.
5. See Table 3.7 for national figures.

Table A.38: Hospital separations for people aged 65+, by principal diagnosis, movement type and state/territory, 2001–02 (unadjusted, by national rank)

Movement type/principal diagnosis ICD-10-AM Ed. 2 chapter[(a)]	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All	N
Return to permanent RAC					**Column per cent**					
Diseases of the circulatory system (I00–I99)	15.5	15.2	17.3	15.4	15.6	16.0	13.0	11.3	15.8	7,629
Diseases of the respiratory system (J00–J99)	14.1	13.1	12.4	12.7	13.4	11.0	14.0	17.5	13.3	6,403
Injury, poisoning and other consequences of external causes (S00–T98)	13.5	12.6	13.0	12.4	12.1	17.6	16.1	16.3	13.0	6,305
Diseases of the digestive system (K00–K93)	9.2	8.9	10.2	10.0	9.7	9.3	10.3	22.5	9.5	4,597
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	7.0	8.4	7.7	7.4	7.8	5.0	6.4	6.3	7.5	3,638
Factors influencing health status and contact with health services (excluding Z75.1)	8.1	7.3	4.9	7.6	5.1	3.2	2.9	<6.3	6.7	3,249
Diseases of the genitourinary system (N00–N99)	5.6	5.7	6.4	6.9	6.7	5.5	8.3	<6.3	6.1	2,930
Neoplasms (tumours and cancers) (C00–D48)	4.9	5.8	6.4	5.5	6.3	7.6	4.9	<6.3	5.7	2,746
All other diagnoses	22.1	22.9	21.6	22.2	23.3	24.7	24.1	21.3	22.4	10,823
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
					Diagnosis rank					
Diseases of the circulatory system (I00–I99)	1	1	1	1	1	2	3	4	1	7,629
Diseases of the respiratory system (J00–J99)	2	2	3	2	2	3	2	2	2	6,403
Injury, poisoning and other consequences of external causes (S00–T98)	3	3	2	3	3	1	1	3	3	6,305
Diseases of the digestive system (K00–K93)	4	4	4	4	4	4	4	1	4	4,597
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	6	5	5	6	5	7	6	5	5	3,638
Factors influencing health status and contact with health services (excluding Z75.1)	5	6	8	5	8	12	12	n.p.	6	3,249
Diseases of the genitourinary system (N00–N99)	7	8	7	7	6	6	5	n.p.	7	2,930
Neoplasms (tumours and cancers) (C00–D48)	8	7	6	8	7	5	7	n.p.	8	2,746
Total separations (number)	*15,836*	*10,639*	*10,088*	*4,790*	*5,470*	*902*	*515*	*80*	*. .*	*48,320*

(continued)

Table A.38 (cont'd): Hospital separations for people aged 65+, by principal diagnosis, movement type and state/territory, 2001–02 (unadjusted, by national rank)

Movement type/principal diagnosis ICD-10-AM Ed. 2 chapter[(a)]	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All	N
To permanent RAC					**Column per cent**					
Awaiting admission elsewhere (Z75.1)	15.7	19.5	35.2	17.5	19.3	41.8	7.4	31.8	21.1	4,247
Factors influencing health status and contact with health services (excluding Z75.1)	20.0	14.8	10.1	27.8	13.6	11.5	<3.7	n.p.	16.5	3,323
Diseases of the circulatory system (I00–I99)	12.2	12.8	10.3	9.8	14.1	8.6	29.6	n.p.	12.1	2,431
Mental and behavioural disorders (F00–F99)	8.9	9.7	7.9	9.5	9.4	8.0	4.4	—	9.0	1,808
Injury, poisoning and other consequences of external causes (S00–T98)	8.2	9.4	6.6	6.0	8.1	4.9	19.3	—	8.1	1,623
Diseases of the nervous system (G00–G99)	5.0	5.7	5.3	7.4	5.8	4.7	<3.7	n.p.	5.5	1,099
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	4.8	7.5	4.2	4.0	4.6	3.3	6.7	n.p.	5.3	1,073
Diseases of the respiratory system (J00–J99)	6.3	4.9	4.1	4.2	5.2	3.7	9.6	—	5.3	1,057
Neoplasms (tumours and cancers) (C00–D48)	5.7	3.2	4.9	2.4	8.0	2.5	6.7	n.p.	4.8	958
Diseases of the genitourinary system (N00–N99)	3.2	2.9	2.3	2.9	3.1	1.9	5.2	n.p.	2.9	588
All other diagnoses	10.0	9.7	9.1	8.4	8.9	9.1	6.7	n.p.	9.5	1,910
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
					Diagnosis rank					
Awaiting admission elsewhere (Z75.1)	2	1	1	2	1	1	4	1	1	4,247
Factors influencing health status and contact with health services (excluding Z75.1)	1	2	3	1	3	2	n.p.	n.p.	2	3,323
Diseases of the circulatory system (I00–I99)	3	3	2	3	2	3	1	n.p.	3	2,431
Mental and behavioural disorders (F00–F99)	4	4	4	4	4	4	8	—	4	1,808
Injury, poisoning and other consequences of external causes (S00–T98)	5	5	5	6	5	5	2	—	5	1,623
Diseases of the nervous system (G00–G99)	8	7	6	5	7	6	n.p.	n.p.	6	1,099
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	9	6	8	8	9	8	5	n.p.	7	1,073
Diseases of the respiratory system (J00–J99)	6	8	9	7	8	7	3	—	8	1,057
Neoplasms (tumours and cancers) (C00–D48)	7	9	7	11	6	10	5	n.p.	9	958
Diseases of the genitourinary system (N00–N99)	10	11	11	10	11	12	7	n.p.	10	588
Total separations (number)	*7,279*	*5,443*	*3,455*	*1,439*	*1,858*	*486*	*135*	*22*	*. .*	*20,117*

(continued)

Table A.38 (cont'd): Hospital separations for people aged 65+, by principal diagnosis, movement type and state/territory, 2001–02 (unadjusted, by national rank)

Movement type/principal diagnosis ICD-10-AM Ed. 2 chapter[(a)]	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All	N
To respite RAC			**Column per cent**							
Factors influencing health status and contact with health services (excluding Z75.1)	23.8	19.6	11.5	23.4	19.3	10.8	6.3	n.p.	19.9	1,543
Diseases of the circulatory system (I00–I99)	11.2	12.2	13.2	12.0	14.1	16.9	16.8	n.p.	12.3	950
Injury, poisoning and other consequences of external causes (S00–T98)	11.7	10.6	13.2	7.9	10.7	7.7	9.5	n.p.	11.3	871
Mental and behavioural disorders (F00–F99)	7.2	7.5	7.7	8.1	8.2	10.8	6.3	n.p.	7.6	585
Diseases of the respiratory system (J00–J99)	7.3	8.8	6.9	7.5	6.7	n.p.	17.9	n.p.	7.5	583
Awaiting admission elsewhere (Z75.1)	6.4	5.5	9.4	5.2	5.1	n.p.	—	n.p.	6.5	500
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	5.5	7.8	7.1	7.9	6.1	n.p.	n.p.	n.p.	6.4	498
Diseases of the musculoskeletal system and connective tissue (M00–M99)	5.6	5.2	6.5	5.5	4.9	n.p.	10.5	n.p.	5.7	438
Neoplasms (tumours and cancers) (C00–D48)	4.5	5.1	5.4	6.5	6.2	n.p.	5.3	—	5.1	397
Diseases of the nervous system (G00–G99)	4.2	3.8	5.6	4.2	5.0	n.p.	n.p.	—	4.5	345
Diseases of the digestive system (K00–K93)	3.8	3.7	3.8	3.0	3.4	7.7	5.3	n.p.	3.7	290
Diseases of the genitourinary system (N00–N99)	2.6	3.0	4.0	4.0	2.5	n.p.	5.3	—	3.0	236
Endocrine, nutritional and metabolic diseases (E00–E89)	2.2	2.7	2.6	1.3	2.5	n.p.	6.3	n.p.	2.4	187
Diseases of the skin and subcutaneous tissue (L00–L99)	1.7	1.7	1.7	1.9	2.9	9.2	n.p.	—	1.9	149
All other diagnoses	2.5	2.7	1.4	1.6	2.1	n.p.	n.p.	—	2.2	170
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
			Diagnosis rank							
Factors influencing health status and contact with health services (excluding Z75.1)	1	1	3	1	1	2	5	n.p.	1	1,543
Diseases of the circulatory system (I00–I99)	3	2	1	2	2	1	2	n.p.	2	950
Injury, poisoning and other consequences of external causes (S00–T98)	2	3	1	4	3	5	4	n.p.	3	871
Mental and behavioural disorders (F00–F99)	5	6	5	3	4	2	5	n.p.	4	585
Diseases of the respiratory system (J00–J99)	4	4	7	6	5	n.p.	1	n.p.	5	583
Awaiting admission elsewhere (Z75.1)	6	7	4	9	8	n.p.	—	n.p.	6	500
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	8	5	6	4	7	n.p.	n.p.	n.p.	7	498
Diseases of the musculoskeletal system and connective tissue (M00–M99)	7	8	8	8	10	n.p.	3	n.p.	8	438
Neoplasms (tumours and cancers) (C00–D48)	9	9	10	7	6	n.p.	8	—	9	397
Diseases of the nervous system (G00–G99)	10	10	9	10	9	n.p.	n.p.	—	10	345
Diseases of the digestive system (K00–K93)	11	11	12	12	11	5	8	n.p.	11	290
Diseases of the genitourinary system (N00–N99)	12	12	11	11	13	n.p.	8	—	12	236
Endocrine, nutritional and metabolic diseases (E00–E89)	13	13	13	14	13	n.p.	5	n.p.	13	187
Diseases of the skin and subcutaneous tissue (L00–L99)	14	14	14	13	12	4	n.p.	—	14	149
Total separations (number)	*3,265*	*1,203*	*1,410*	*693*	*993*	*65*	*95*	*18*		*7,742*

(continued)

Table A.38 (cont'd): Hospital separations for people aged 65+, by principal diagnosis, movement type and state/territory, 2001–02 (unadjusted, by national rank)

Movement type/principal diagnosis ICD-10-AM Ed. 2 chapter[(a)]	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All	N
To community/other			**Column per cent**							
Diseases of the circulatory system (I00–I99)	19.4	19.6	21.1	18.1	18.5	21.3	22.0	16.9	19.6	161,245
Neoplasms (tumours and cancers) (C00–D48)	9.8	10.7	11.0	11.1	10.0	11.0	13.0	5.6	10.4	85,637
Diseases of the digestive system (K00–K93)	10.4	9.8	10.8	10.6	10.1	9.5	9.8	8.0	10.3	84,363
Diseases of the respiratory system (J00–J99)	9.0	8.4	8.7	8.6	9.1	9.1	8.0	16.2	8.8	72,063
Diseases of the musculoskeletal system and connective tissue (M00–M99)	7.7	7.0	8.0	10.1	7.9	9.1	10.5	4.8	7.9	64,878
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	7.5	8.1	8.4	6.8	7.8	6.3	6.0	8.0	7.7	63,407
Factors influencing health status and contact with health services (excluding Z75.1)	8.4	9.4	4.8	6.3	8.2	5.4	4.1	5.2	7.6	62,542
Injury, poisoning and other consequences of external causes (S00–T98)	7.1	6.4	7.0	7.0	6.1	7.4	7.1	9.8	6.8	55,741
Diseases of the genitourinary system (N00–N99	6.1	5.7	6.4	6.2	6.3	5.7	7.3	7.3	6.1	49,913
Endocrine, nutritional and metabolic diseases (E00–E89)	2.4	2.8	2.3	2.5	2.9	2.5	3.3	5.0	2.6	21,064
All other diagnoses	12.2	12.1	11.5	12.7	13.0	12.6	8.9	13.3	12.2	99,764
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
			Diagnosis rank							
Diseases of the circulatory system (I00–I99)	1	1	1	1	1	1	1	1	1	161,245
Neoplasms (tumours and cancers) (C00–D48)	3	2	2	2	3	2	2	7	2	85,637
Diseases of the digestive system (K00–K93)	2	3	3	3	2	3	4	4	3	84,363
Diseases of the respiratory system (J00–J99)	4	5	4	5	4	4	5	2	4	72,063
Diseases of the musculoskeletal system and connective tissue (M00–M99)	6	7	6	4	6	5	3	10	5	64,878
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	7	6	5	7	7	7	8	4	6	63,407
Factors influencing health status and contact with health services (excluding Z75.1)	5	4	9	8	5	9	9	8	7	62,542
Injury, poisoning and other consequences of external causes (S00–T98)	8	8	7	6	9	6	7	3	8	55,741
Diseases of the genitourinary system (N00–N99)	9	9	8	9	8	8	6	6	9	49,913
Endocrine, nutritional and metabolic diseases (E00–E89)	12	10	11	11	10	11	10	9	11	21,064
Total separations (number)	*264,461*	*213,076*	*155,796*	*72,470*	*80,620*	*22,386*	*9,880*	*1,928*	*. .*	*820,617*

(continued)

Table A.38 (cont'd): Hospital separations for people aged 65+, by principal diagnosis, movement type and state/territory, 2001–02 (unadjusted, by national rank)

Movement type/principal diagnosis ICD-10-AM Ed. 2 chapter[(a)]	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All	N
Died in hospital			**Column per cent**							
Neoplasms (tumours and cancers) (C00–D48)	28.3	28.2	28.9	28.0	30.2	28.2	33.2	18.1	28.6	14,672
Diseases of the circulatory system (I00–I99)	25.6	24.7	25.7	24.4	26.4	28.9	25.2	27.6	25.4	13,060
Diseases of the respiratory system (J00–J99)	15.5	13.7	13.9	13.9	13.3	12.1	13.5	12.4	14.3	7,346
Diseases of the digestive system (K00–K93)	6.1	6.6	6.1	6.5	5.5	5.4	6.8	5.7	6.2	3,182
Injury, poisoning and other consequences of external causes (S00–T98)	4.7	5.3	5.7	5.8	4.5	3.9	6.8	8.6	5.1	2,630
Infectious and parasitic diseases (A00–B99)	3.9	2.9	3.1	2.9	2.8	2.7	1.5	9.5	3.3	1,679
All other diagnoses	15.9	18.6	16.5	18.6	17.4	18.8	13.0	18.1	17.1	8,796
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*. .*
			Diagnosis rank							
Neoplasms (tumours and cancers) (C00–D48)	1	1	1	1	1	2	1	2	1	14,672
Diseases of the circulatory system (I00–I99)	2	2	2	2	2	1	2	1	2	13,060
Diseases of the respiratory system (J00–J99)	3	3	3	3	3	3	3	3	3	7,346
Diseases of the digestive system (K00–K93)	4	4	4	4	4	4	4	6	4	3,182
Injury, poisoning and other consequences of external causes (S00–T98)	5	5	5	5	5	7	4	5	5	2,630
Infectious and parasitic diseases (A00–B99)	6	8	7	8	8	8	9	4	7	1,679
Total separations (number)	*17,874*	*13,740*	*9,048*	*4,297*	*4,636*	*1,074*	*591*	*105*	*. .*	*51,365*

(continued)

Table A.38 (cont'd): Hospital separations for people aged 65+, by principal diagnosis, movement type and state/territory, 2001–02 (unadjusted, by national rank)

Movement type/principal diagnosis ICD-10-AM Ed. 2 chapter[(a)]	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All	N
All movements from hospital			**Column per cent**							
Diseases of the circulatory system (I00–I99)	19.3	19.5	20.8	18.1	18.6	21.2	21.8	17.1	19.5	185,315
Neoplasms (tumours and cancers) (C00–D48)	10.4	11.2	11.5	11.4	10.7	11.5	13.5	6.0	11.0	104,410
Diseases of the digestive system (K00–K93)	9.9	9.3	10.3	10.2	9.6	9.2	9.5	8.4	9.8	92,849
Diseases of the respiratory system (J00–J99)	9.6	8.8	9.0	9.0	9.5	9.2	8.7	15.9	9.2	87,452
Factors influencing health status and contact with health services (excluding Z75.1)	8.5	9.1	4.8	6.8	8.0	5.3	3.9	5.1	7.6	72,178
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	7.0	7.8	7.9	6.6	7.4	6.0	5.7	7.6	7.4	69,762
Diseases of the musculoskeletal system and connective tissue (M00–M99)	6.9	6.4	7.3	9.2	7.2	8.4	9.7	4.6	7.2	67,987
Injury, poisoning and other consequences of external causes (S00–T98)	7.4	6.7	7.3	7.2	6.5	7.6	7.7	9.8	7.1	67,170
Diseases of the genitourinary system (N00–N99)	5.8	5.5	6.1	6.0	6.1	5.6	7.1	6.9	5.8	55,423
All other diagnoses	15.1	15.6	14.8	15.6	16.4	16.2	12.4	18.5	15.4	145,615
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**. .**
			Diagnosis rank							
Diseases of the circulatory system (I00–I99)	1	1	1	1	1	1	1	1	1	185,315
Neoplasms (tumours and cancers) (C00–D48)	2	2	2	2	2	2	2	7	2	104,410
Diseases of the digestive system (K00–K93)	3	3	3	3	3	4	4	4	3	92,849
Diseases of the respiratory system (J00–J99)	4	5	4	5	4	3	5	2	4	87,452
Factors influencing health status and contact with health services (excluding Z75.1)	5	4	9	7	5	9	9	8	5	72,178
Symptoms, signs and abnormal findings n.e.c. (R00–R99)	7	6	5	8	6	7	8	5	6	69,762
Diseases of the musculoskeletal system and connective tissue (M00–M99)	8	8	6	4	7	5	3	10	7	67,987
Injury, poisoning and other consequences of external causes (S00–T98)	6	7	7	6	8	6	6	3	8	67,170
Diseases of the genitourinary system (N00–N99)	9	9	8	9	9	8	7	6	9	55,423
Total separations (number)	**308,715**	**244,101**	**179,797**	**83,689**	**93,577**	**24,913**	**11,216**	**2,153**	**. .**	**948,161**

(a) Diagnosis relates to that recorded during the last hospital episode before discharge from the hospital system (see Box 1.1). See Appendix C for conditions included in ICD-10-AM chapters. Hospital separations with a principal diagnosis of 'Awaiting admission elsewhere (Z75.1)' have been removed from the ICD-10-AM chapter 'Factors influencing health status and contact with health services' and shown separately.

Notes

1. Table is based on linked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of hospital admission.
3. Within a movement type a diagnosis was selected if it contributed to at least 5 per cent of hospital separations for any of the jurisdictions.

Table A.39: RAC entries for people aged 65+: per cent high care by movement type by care level on transition by state/territory, 2001–02 (unadjusted)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All	N
Movement type					**Per cent at high care**					
Return from hospital	59.5	44.6	60.5	61.7	45.0	66.6	54.4	86.5	55.4	47,004
Return from social leave	36.8	29.7	30.9	39.9	23.4	52.6	45.2	69.0	33.7	48,304
Into permanent RAC from hospital	88.1	76.5	81.4	86.0	74.7	87.5	88.7	85.0	82.6	20,125
Into respite RAC from hospital	49.6	26.7	47.5	51.7	17.9	31.8	37.4	61.1	42.8	7,744
Transfer into permanent RAC	74.7	70.2	73.5	78.0	53.6	81.0	70.2	77.8	72.2	19,508
Transfer into respite RAC	57.5	46.2	50.8	52.7	29.0	36.1	60.0	n.p.	50.9	1,375
Into permanent RAC from community	47.0	34.3	35.0	38.5	41.7	49.5	32.6	72.7	40.1	18,261
Into respite RAC from community	40.3	29.1	35.8	26.7	19.3	35.8	30.5	64.4	33.8	32,893
All	**53.7**	**43.3**	**48.6**	**53.8**	**37.4**	**54.9**	**47.1**	**71.2**	**48.9**	**. .**
Total admissions (number)	**69,336**	**44,334**	**37,892**	**18,598**	**17,172**	**5,042**	**2,340**	**500**	**. .**	**195,214**

Notes

1. Table is based on linked and unlinked and unlinked hospital and RAC records. See notes to Table 1.3 for information on identification of transition groups; see Box 2.1 concerning interpretation of unadjusted numbers.
2. Age is as at time of RAC event.
3. 'Return from social leave' excludes those linked to a hospital separation. Linked social leave events are included in 'Return from hospital'.

Appendix B: Data linkage

B.1 Transition events

In linking hospital and RAC data to investigate movement from hospital into RAC, the aim of the linkage strategy is to match hospital separations by people who then go directly (or almost directly) into RAC.

In general, an episode in hospital may end with the patient either:

a returning home in the community or going to live temporarily with family and friends

b going to live temporarily with family and friends before returning to a RAC service

c going into a RAC service

d returning to their home in permanent RAC

e transferring to another hospital

f transferring to residential health care services

g changing episode type within the hospital

h dying.

Similarly, a person may enter RAC in a number of ways. An entry may be for a person:

A being admitted into RAC for permanent care

B being admitted into RAC for respite care

C transferring between RAC services (for either permanent or respite care)

D returning to permanent RAC following an episode in hospital (termed 'hospital leave')

E returning to permanent RAC following a stay with family or friends (termed 'social leave')

F In addition, a RAC permanent resident may die while on hospital leave or die in hospital while on social leave.

In terms of the events described above, the linkage strategy aims to match hospital separations of type *c* to the relevant RAC entries of types *A* and *B*; separations of type *d* to entries of type *D* (or occasionally *E*); separations of type *b* to the relevant entries of type *E,* and separations of type *h* to deaths of aged care residents while in hospital (type *F*).

B.2 Data

The hospital data used in this study came from the NHMD, and included data for both public and private hospital separations. Two sets of records were excluded:

- *Statistical discharges and transfers:* for two types of separations the person remains within the hospital system. In a 'statistical discharge' the person in question changes from one hospital episode care type to another (for example, from acute care to rehabilitation). A person may also transfer from one hospital to another. As these people do not leave the

hospital system, trying to link to a RAC entry is not appropriate. Consequently, separation records relating to statistical discharges and transfers were excluded.

- *Same day hospital separations*: people admitted and discharged on the same day are unlikely to be discharged to a RAC facility unless they have come from a RAC facility to hospital for a day procedure. In this case the person is unlikely to be recorded as being on hospital leave by the RAC facility (analysis of recorded RAC hospital leave revealed only events with at least one night in hospital). Therefore to avoid spurious matches between aged care admissions and hospital separations into the community, records with the same admission and separation dates were excluded. The effect of excluding same-day hospital separations on the links made is negligible: during 2004–05, just 0.4% of same-day hospital separations for people aged 65 and over were reported as discharges to RAC or other health care (AIHW: Karmel et al. 2007b).

The RAC data were derived from the Department of Health and Ageing's ACCMIS database. As seen in Section B.1, there are three ways a client may enter or re-enter RAC:

- As a new admission, for either permanent or respite care. A permanent admission may be preceded by pre-entry leave of up to 7 days.
- Returning from hospital leave after a permanent resident has had a period in hospital.
- Returning from social leave after a permanent resident has had a period away from the RAC facility visiting family and/or friends.

The RAC data used in the analysis included all RAC permanent and respite admissions and hospital and social leave events for the year of interest. Pre-entry leave associated with a permanent admission was identified but not included as a separate event.

B.3 Linkage protocol

To protect the privacy of individuals, the linkage was carried out by the Institute using the Institute's protocol *Data linkage and protecting privacy: a protocol for linking between two or more data sets held within the Australian Institute of Health and Welfare* (AIHW 2006). The principles underlying this protocol are that:

- Data linkage is not carried out directly between original complete data sets
- Data linkage is undertaken using purpose-specific linkage data sets that contain only the data required for establishing and validating links
- Links between data sets are recorded using project specific unique record identifiers so that links identified for a particular project (including longitudinal analyses) cannot be used to establish links between data sets outside the scope of the project using a chain of links ('consequential' linking)
- Analysis files do not contain identifying data (such as name, date of birth and address, or the record number from the original data set)
- Intermediate data sets and the project specific record identifiers are deleted following completion of the final linked analysis data sets. (AIHW 2006).

B.4 Linkage process: constrained event-based matching

While neither name nor a common person identification number are available for linking data from the hospital NHMD and RAC data sets, sufficient demographic and event data are available to connect hospital–RAC transition events using event-based matching (see Karmel & Gibson 2007 and AIHW: Karmel & Rosman 2007 for development of the method). In this linkage process matching is based on date of birth, sex, region of usual residence, and hospital separation and RAC entry event dates and characteristics.

In a comparative analysis a number of event-based linkage strategies were compared with the Western Australian Department of Health's name-based approach. Results from that work identified a constrained version of the linkage strategy as the most appropriate for national analyses (AIHW: Karmel & Rosman 2007 and further unpublished analysis). The purpose of constrained event-based matching is to find the best match using all relevant event date information and event descriptors on the national NHMD and ACCMIS data. To achieve this, matching procedures are specified separately for comparisons between different subsets of RAC and hospital events, defined in terms of their type and/or admission and separation characteristics. Because two dates are available for RAC hospital leave, and the related hospital episode may end in a number of ways, match procedures for these events are the most complicated. The specific information used in the matching process is:

- date of birth
- sex
- postcode of usual residence
- postcode of hospital
- postcode of RAC facility
- hospital episode start and end dates
- RAC event start and end dates (including pre-entry leave dates for associated permanent admissions)
- whether an aged care assessment occurred in hospital
- aged care assessment date (if in hospital)
- reported hospital mode of admission and separation
- RAC event type.

Event information may suggest that some matches are more likely to be correct than others (for example, a link of *hospital discharge reported as to RAC – RAC admission* has greater face validity than a link of *hospital discharge reported as to usual residence – RAC admission*). Thus, data set partitioning based on event characteristics not only minimises coincident records within data sets (with respect to variables used when matching) by reducing the number of records being compared at a time, but also allows link priorities to be set later in the matching process. Consequently, matching within partitioned data sets facilitates selection of the most likely match if duplicate links occur when the links from the partitioned data sets are combined. For this project 12 such partitioned data set pairs were used (Table B.1).

Table B.1: Data set partitioning and event date match rules for event-based constrained match selection

Partition code	Link priority	Reported hospital mode of separation	RAC type	RAC exit : hospital entry dates	Hospital exit : RAC entry dates
8ADM	11	To death, using person region[(a)]	Admissions	. .	
9ADM	8	To usual residence (for matching using person region)	Admissions		|RAC entry – Hospital exit | ≤ 2 days
0ADM	7	To other (for matching using person region)	Admissions		or
H9ADM	10	To usual residence (for matching using hospital region)	Admissions with ACAT in hospital	(also Hospital entry ≤ ACAT date ≤ Hospital exit)	|RAC pre-entry – Hospital exit | ≤ 2 days
H0ADM	9	To other (for matching using hospital region)	Admissions with ACAT in hospital		
9SOC	12	All	Social leave	RAC exit ≤ Hospital entry	Hospital exit ≤ RAC entry
NST8H	2	With non-statistical admission, to death	Hospital leave		
NST9H	1	With non-statistical admission, to usual residence	Hospital leave	|Hospital entry – RAC exit | = 0, 1, 2 days	(RAC entry – Hospital exit) ≤ 2 days[(b)]
NST0H	3	With non-statistical admission, to other	Hospital leave		
ST8H	5	With statistical admission, to death	Hospital leave		(RAC entry – Hospital exit) ≤ 2 days[(b)]
ST9H	4	With statistical admission, to usual residence	Hospital leave	(Hospital entry – RAC exit) ≥ –2	(RAC entry – Hospital exit) = 0, 1, 2 days[(c)]
ST0H	6	With statistical admission, to other	Hospital leave		

(a) For this analysis, regions were defined by postcode.

(b) Allows for discharge to hospital (negative difference).

(c) Stricter rules on end-date because it is difficult to allow consistently for death in hospital for a statistical admission, and to compensate for the poorer match event start date.

Source: AIHW: Karmel & Rosman 2007.

Constrained event-based matching was carried out in two stages. Initial matches for each partitioned data set pair were selected using 1:1 probabilistic matching via the matching software *Websphere*® (previously known as *Automatch*® and *Integrity*®). In this stage, relatively broad match criteria were used to identify possible matches between RAC and hospital partitioned data sets. While the matching was probabilistic, at least partial matches were required on each of date of birth, sex, region and event dates. Some variation was allowed in exactness of match, particularly for event dates where allowable date differences between the RAC and hospital events were specified according to the types of events being matched (see Table B1). In terms of event dates, delays of up to 2 days between hospital exit and RAC entry

were allowed when identifying transition events (with the exception of cases with arranged RAC pre-entry leave where gaps of up to 9 days were allowed). Some variation in date of birth (matching on two out of day, month and year of birth) and region was also allowed.

The extent of variation allowed in the *Websphere*® matching process is shown in Table B.2 which summarises the general approach taken to blocking (required match) and match variable (probabilistic match) specifications, with the particular specifications depending on the two data sets being compared (as per Table B.1).

Table B.2: Blocking variables and matching description used in *Websphere*® passes for constrained event-based linkage strategy

	***Websphere*® pass**						
	1	**2**	**3**	**4**	**5**	**6**	**7**
Matching between hospital separations and RAC admissions							
Match description	Exact match	Exact match	1-sided event date variation	2-sided event date variation	Year of birth variation	Month and/or day of birth variation	Exact match using RAC outlet 3 digit postcode
Blocking variables	–postcode[(a)] –sex –DOB –event date[(b)]	–3 digit postcode –sex –DOB –event date	–3 digit postcode –sex –DOB	–3 digit postcode –sex –DOB	–3 digit postcode –sex –day of birth –month of birth –event date	–3 digit postcode –sex –year of birth –event date	–3 digit postcode –sex –DOB –event date
Matching between hospital separations and RAC leave events							
Match description	Exact match	Exact match	1-sided event date(s) variation	2-sided event date(s) variation	Year of birth variation	Variation in month of birth	Variation in day of birth
Blocking variables	–postcode[(c)] –sex –DOB –event date(s)	–3 digit postcode –sex –DOB event date(s)	–3 digit postcode –sex –DOB	–3 digit postcode –sex –DOB	–3 digit postcode –sex –day of birth –month of birth –event date(s)	–3 digit postcode –sex –day of birth –year of birth –event date(s)	–3 digit postcode –sex –month of birth –year of birth –event date(s)

(a) Matching used NHMD postcode as specified in Table B.1. RAC postcode relates to client's usual residence prior to RAC admission except in pass 7.

(b) Dates were only used as blocking variables if an exact date match was appropriate for the particular partitioned data set pair being matched. This depended on whether RAC leave events or admissions were being compared, and whether a death/discharge to hospital was involved (see Table B.1, see also diagrams in AIHW: Karmel & Rosman 2007:Appendix 2 for more detail). When exact date matches were not appropriate, event dates were used as match variables.

(c) Matching used client postcode on NHMD and RAC facility postcode as the RAC facility is the usual residence for a person on RAC leave.

Notes

1. Pass 6 (month or day of birth variation) was not used when matching partition pair codes 9ADM and H9ADM in Table B.1. In addition, passes 3 and 4 (date variation) and pass 5 (year of birth variation) were not used for partition pair H9ADM.

2. Only pass 1 was used when matching to RAC social leave, where an exact match for RAC social leave means that the hospital episode dates were contained within the leave event dates (see partition code 9SOC Table B.1).

3. '3 digit postcode' indicates that the first three digits of the postcode were used for region matching.

In the second stage of match selection, the results from matching within the 12 partitioned data set pairs were checked for compliance with the rules for acceptable variation (Table B.1). In addition, any links for permanent residents who did not return to RAC following a period of hospitalisation, due to either RAC discharge into hospital or death in hospital, were identified and excluded as they did not involve movement from hospital into RAC. The 12 data sets were then combined.

Combining the 12 linked sets resulting from the above process resulted in a number of many-to-many matches; this was because there was overlap across the partitioned data set pairs; for example, all RAC admissions were compared with the three data sets containing hospital separations to death, separations to usual residence/other and other separations. These duplicate links were reduced to a 1:1 match using priority ratings which ranked matches based on RAC event type, reliability of region information and hospital separation mode (see Table B.1). Overall, links to RAC hospital leave were given top priority, followed by those to RAC admissions and finally those to RAC social leave. RAC social leave was given low priority because of the less reliable event date data available for these matches, and because people who go on social leave are likely to be the more robust RAC residents and so less likely to use hospital (the better health of people who use social leave is confirmed in Table A.39). More details concerning match specifications and priorities for constrained event-based linkage are given in AIHW: Karmel & Rosman 2007.

The processes outlined above were tailored to identify uni-directional moves from hospital to RAC. Both data set preparation and match strategies would need to be adjusted to be able to identify all moves in both directions.

B.4.1 Data quality for matching

The quality of the final linked data set depends largely on the quality of the data in the input data sets. The quality of the NHMD and RAC data sets has been assessed previously in some detail with respect to the following:

- duplicates in the data sets based on match variables
- missing data relating to match variables
- over-occurrence of certain birth dates (AIHW: Karmel et al. 2007a:section 5.1).

The presence of high numbers of duplicates within a data set for a given date of birth, sex, postcode and transition date combination would lead to an increased chance of an incorrect link being made. However, exact duplicates based on these match variables were rare, with duplicate rates of under 0.02% for both data sets. Consequently duplicates have a negligible effect on the quality of the final linked data set.

In general, missing data for match variables was uncommon, and across all match variables RAC data had very low levels of missing data. The data most affected by missing values was postcode on the NHMD, with client postcode missing for 0.4% of hospital separations. A seemingly major quality issue with the NHMD data set was that more than one-third of all records were missing the hospital postcode (based on data for six jurisdictions). These records represent separations from private hospitals, for which postcodes are not recorded on the NHMD. However, because hospital postcodes were used to identify just over 1% of the total links in the comparative linkage study (AIHW: Karmel & Rosman 2007), it is estimated that the large numbers of missing hospital postcodes in the present study would have resulted in

only a relatively small number of missed links (that is, approximately 1% of the final number of links).

Previous analysis has shown that 1 January and 1 July dates of birth are over-represented in both the hospital and RAC data sets (AIHW: Karmel et al. 2007a:section 5.1). This suggests that these dates are commonly used as proxy missing value codes when a person's date of birth is unknown. It is expected that linked records with these birth dates have a high probability of being correct links, given that linkage was performed using other criteria such as location and event dates, and duplicate records were rare. Based on the Western Australian experience a very small number of links are likely to have been missed as a result of the over-occurrence of 1 January and 1 July birth dates. However, the over-reporting of 1 January and 1 July birth dates is more pronounced for Indigenous than non-Indigenous clients. The consequence of this is that there will be a greater percentage of missed links among Indigenous Australians than other Australians, with the Northern Territory being particularly affected because of its large Indigenous population.

B.5 Link accuracy

When linking records four outcomes are possible: a true link, no link, a mis-link (false positive) and a missed link (false negative). The correspondence between two strategies can be gauged by seeing how many of the links are the same and how many are different. In the comparative study using Western Australian data, transition links from event-based linkage were compared directly with those from a name-based approach. Although subject to some constraints imposed by the data providers, the Health Information Linkage Branch in the Western Australian Department of Health was able to use name and address to link transition events in Western Australian RAC and hospital data, supported by the availability of name and address reporting history across a range of health service events. This resulted in this linkage being highly reliable and, consequently, it served as the reference standard against which the event-based linkage results were compared; that is, to determine whether an event-based link was 'true' or 'false'. Note, however, that no linkage system is error proof, and a number of cases were identified where manual inspection indicated that an event-based linkage match was the preferred link. In addition, event-based linkage identified a small number of valid person links that had previously been missed using name and address information.

Two key measures were used when comparing matches:

- Positive predictive value (PPV): the percentage of event-based links that were true links
  = event-based true links/event-based links
- Sensitivity: the percentage of all links that were identified by the event-based linkage strategy
  = event-based true links/name-based links.

As seen from the linkage comparison using Western Australian data (Table B.3), event-based linkage more often tends to miss matches than make false matches (sensitivity < PPV). As a consequence, the volume of flow from hospital to RAC is underestimated when using event-based linkage. However, given that the event-based linkage strategy results in few false matches (PPVs between 95% and 99% depending on the event type) and linkage sensitivities are reasonably consistent (88%–92%), the linked data set provides a strong basis for examining transitions between hospital and RAC. The comparative study also confirmed the utility of the linked data for analyses of transition events (AIHW: Karmel & Rosman 2007:chapter 8).

Table B.3: PPV and sensitivity of preferred event-based linkage strategy, using Western Australian name-based linkage as the reference standard, linkage comparative study for 2000–01

	Links to RAC event type:				
	Permanent admission	Respite admission	Hospital leave	Social leave	Total
PPV (per cent)	95.3	97.9	98.7	99.3	97.9
Sensitivity (per cent)	88.0	88.0	91.7	90.7	90.5
Relative size (per cent)	92.3	89.9	92.9	91.3	92.4

Note: Relative size is the ratio of the number of links identified by event-based linkage with the number identified using the name-based system, irrespective of correctness of link.

B.6 Estimates of total flow

Although the consistent sensitivities and relative size seen in Table B.3 indicate that the linked data can be used to measure relativities between different types of transitions from hospital into RAC, as stated above event-based linkage underestimates the total number of transitions and so cannot be used without adjustment to measure the volume of flow from hospital to RAC. While the Western Australian project was a one-off study limited to one year and one state, it is felt important to produce some estimates for the overall flow of older people from hospital to RAC. To this end, approximate estimates were derived using adjustments based on the results from the Western Australian study.

The approach taken when developing the adjustments was to find a broad cross-classification within which simple multiplicative factors, derived from the Western Australian study, could be applied to the event-based links. After investigation, a system based on adjustment at the RAC event type by hospital care type level was derived and used for preliminary results using data from six jurisdictions (for details see AIHW: Karmel et al. 2007a:section 5.3). However, further investigation of national data indicated that in 2001–02 jurisdictions classified some care types differently (affecting particularly the categories GEM and maintenance care). Therefore, to avoid possible biases caused by varying reporting practices and given that analysis of propensity to miss links did not suggest any other suitable adjustment variables (AIHW: Karmel & Rosman 2007:50–3), adjustments for this report were based solely on transition type. The final factors applied to hospital–RAC links relating to specified RAC entry event types are presented in Table B.4. Adjusted estimates of numbers in the various transition groups were then derived as follows:

Step 1: Using the adjustment factors, derive adjusted estimates of separations from hospital to RAC for those:

- returning to permanent RAC
- admitted to permanent RAC
- admitted to respite RAC.

Step 2: For transitions from hospital:

- identify deaths in hospital—these figures remain unadjusted
- estimate transitions from hospital to the community by subtracting deaths in hospital and adjusted estimates of separations to RAC from the total number of separations.

Step 3: For admissions into RAC:

- identify permanent and respite admissions which relate to transfers between RAC services—these figures remain unadjusted
- estimate admissions into RAC from the community by subtracting within-RAC transfers and adjusted estimates of admissions to RAC from hospital (from Step 1) from the total number of admissions (for permanent and respite care separately).

It needs to be remembered that the factors in Table B.4 were derived using Western Australian data for the 2000–01 financial year and are now being applied to other jurisdictions for the 2001–02 financial year. As a result, they provide estimates only for adjustments factors for the present study, and are used in this report solely to provide approximate estimates of the volume of flow at the national level. Future projects may adopt different methodologies.

Table B.4: Final adjustments for estimates of flow by RAC event type and hospital care type of link, from Western Australian linkage study for 2000–01

RAC event type	Number of name-based links	Number of event-based links	Adjustment factor
Admitted to permanent RAC	1,723	1,590	1.08
Admitted to respite RAC	852	766	1.11
Return from RAC leave	5,531	5,135	1.08

Appendix C: ICD-10-AM Edition 2 chapters

Chapter I: Certain infectious and parasitic diseases (A00–B99)

A00–A09 Intestinal infectious diseases
A15–A19 Tuberculosis
A20–A28 Certain zoonotic bacterial diseases
A30–A49 Other bacterial diseases
A50–A64 Infections with a predominantly sexual mode of transmission
A65–A69 Other spirochaetal diseases
A70–A74 Other diseases caused by chlamydiae
A75–A79 Rickettsioses
A80–A89 Viral infections of the central nervous system
A90–A99 Arthropod-borne viral fevers and viral haemorrhagic fevers
B00–B09 Viral infections characterised by skin and mucous membrane lesions
B15–B19 Viral hepatitis
B20–B24 Human immunodeficiency virus [HIV] disease
B25–B34 Other viral diseases
B35–B49 Mycoses
B50–B64 Protozoal diseases
B65–B83 Helminthiases
B85–B89 Pediculosis, acariasis and other infestations
B90–B94 Sequelae of infectious and parasitic diseases
B95–B97 Bacterial, viral and other infectious agents
B99 Other infectious diseases
Includes: Diseases generally recognised as communicable or transmissible
Excludes: Carrier or suspected carrier of infectious disease (Z22.-)
Certain localised infections — see body system-related chapters infectious and parasitic diseases complicating pregnancy, childbirth and the puerperium [except obstetrical tetanus and human immunodeficiency virus [HIV] disease] (O98.-)
Infectious and parasitic diseases specific to the perinatal period [except tetanus neonatorum, congenital syphilis, perinatal gonococcal infection and perinatal human immunodeficiency virus [HIV] disease] (P35–P39)
Influenza and other acute respiratory infections (J00–J22)

Chapter II: Neoplasms (C00–D48)

C00–C96 Malignant neoplasms
D00–D09 In situ neoplasms
D10–D36 Benign neoplasms
D37–D48 Neoplasms of uncertain or unknown behaviour

Chapter III: Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)

D50–D53 Nutritional anaemias

D55–D59 Haemolytic anaemias
D60–D64 Aplastic and other anaemias
D65–D69 Coagulation defects, purpura and other haemorrhagic conditions
D70–D77 Other diseases of blood and blood-forming organs
D80–D89 Certain disorders involving the immune mechanism
Excludes: Exclusion groups a, c, d, e, f, g and h (see below)
Autoimmune disease (systemic) NOS (M35.9)
Human immunodeficiency virus [HIV] disease (B20–B24)

Chapter IV: Endocrine, nutritional and metabolic diseases (E00–E90)

E00–E07 Disorders of thyroid gland
E10–E14 Diabetes mellitus
E15–E16 Other disorders of glucose regulation and pancreatic internal secretion
E20–E35 Disorders of other endocrine glands
E40–E46 Malnutrition
E50–E64 Other nutritional deficiencies
E65–E68 Obesity and other hyperalimentation
E70–E90 Metabolic disorders
Excludes: Exclusion groups c and h (see below)
Transitory endocrine and metabolic disorders specific to fetus and newborn (P70–P74)

Chapter V: Mental and behavioural disorders (F00–F99)

F00–F09 Organic, including symptomatic, mental disorders
F10–F19 Mental and behavioural disorders due to psychoactive substance use
F20–F29 Schizophrenia, schizotypal and delusional disorders
F30–F39 Mood [affective] disorders
F40–F48 Neurotic, stress-related and somatoform disorders
F50–F59 Behavioural syndromes associated with physiological disturbances and physical factors
F60–F69 Disorders of adult personality and behaviour
F70–F79 Mental retardation
F80–F89 Disorders of psychological development
F90–F98 Behavioural and emotional disorders with onset usually occurring in childhood and adolescence
F99 Unspecified mental disorder
Includes: Disorders of psychological development
Excludes: Exclusion group h (see below)

Chapter VI: Diseases of the nervous system (G00–G99)

G00–G09 Inflammatory diseases of the central nervous system
G10–G13 Systemic atrophies primarily affecting the central nervous system
G20–G26 Extrapyramidal and movement disorders
G30–G32 Other degenerative diseases of the nervous system
G35–G37 Demyelinating diseases of the central nervous system
G40–G47 Episodic and paroxysmal disorders

G50–G59 Nerve, nerve root and plexus disorders
G60–G64 Polyneuropathies and other disorders of the peripheral nervous system
G70–G73 Diseases of myoneural junction and muscle
G80–G83 Cerebral palsy and other paralytic syndromes
G90–G99 Other disorders of the nervous system
Excludes: Exclusion groups a, b, c, d, e, f, g and h (see below)

Chapter VII: Diseases of the eye and adnexa (H00–H59)

H00–H06 Disorders of eyelid, lacrimal system and orbit
H10–H13 Disorders of conjunctiva
H15–H22 Disorders of sclera, cornea, iris and ciliary body
H25–H28 Disorders of lens
H30–H36 Disorders of choroid and retina
H40–H42 Glaucoma
H43–H45 Disorders of vitreous body and globe
H46–H48 Disorders of optic nerve and visual pathways
H49–H52 Disorders of ocular muscles, binocular movement, accommodation and refraction
H53–H54 Visual disturbances and blindness
H55–H59 Other disorders of eye and adnexa
Excludes: Exclusion groups a, b, c, d, e, f, g and h (see below)

Chapter VIII: Diseases of the ear and mastoid process (H60–H95)

H60–H62 Diseases of external ear
H65–H75 Diseases of middle ear and mastoid
H80–H83 Diseases of inner ear
H90–H95 Other disorders of ear
Excludes: Exclusion groups a, b, c, d, e, f, g and h (see below)

Chapter IX: Diseases of the circulatory system (I00–I99)

I00–I02 Acute rheumatic fever
I05–I09 Chronic rheumatic heart diseases
I10–I15 Hypertensive diseases
I20–I25 Ischaemic heart diseases
I26–I28 Pulmonary heart disease and diseases of pulmonary circulation
I30–I52 Other forms of heart disease
I60–I69 Cerebrovascular diseases
I70–I79 Diseases of arteries, arterioles and capillaries
I80–I89 Diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified
I95–I99 Other and unspecified disorders of the circulatory system
Excludes: Exclusion groups a, b, c, d, e, f, g and h (see below)
Systemic connective tissue disorders (M30–M36)
Transient cerebral ischaemic attacks and related syndromes (G45.-)

Chapter X: Diseases of the respiratory system (J00–J99)

J00–J06 Acute upper respiratory infections
J10–J18 Influenza and pneumonia
J20–J22 Other acute lower respiratory infections
J30–J39 Other diseases of upper respiratory tract
J40–J47 Chronic lower respiratory diseases
J60–J70 Lung diseases due to external agents
J80–J84 Other respiratory diseases principally affecting the interstitium
J85–J86 Suppurative and necrotic conditions of lower respiratory tract
J90–J94 Other diseases of pleura
J95–J99 Other diseases of the respiratory system
Excludes: Exclusion groups a, b, c, d, e, f, g and h (see below)

Chapter XI: Diseases of the digestive system (K00–K93)

K00–K14 Diseases of oral cavity, salivary glands and jaws
K20–K31 Diseases of oesophagus, stomach and duodenum
K35–K38 Diseases of appendix
K40–K46 Hernia
K50–K52 Noninfective enteritis and colitis
K55–K63 Other diseases of intestines
K65–K67 Diseases of peritoneum
K70–K77 Diseases of liver
K80–K87 Disorders of gallbladder, biliary tract and pancreas
K90–K93 Other diseases of the digestive system
Excludes: Exclusion groups a, b, c, d, e, f, g and h (see below)

Chapter XII: Diseases of the skin and subcutaneous tissue (L00–L99)

L00–L08 Infections of the skin and subcutaneous tissue
L10–L14 Bullous disorders
L20–L30 Dermatitis and eczema
L40–L45 Papulosquamous disorders
L50–L54 Urticaria and erythema
L55–L59 Radiation-related disorders of the skin and subcutaneous tissue
L60–L75 Disorders of skin appendages
L80–L99 Other disorders of the skin and subcutaneous tissue
Excludes: Exclusion groups a, b, c, d, e, f, g and h (see below)
Lipomelanotic reticulosis (I89.8)
Systemic connective tissue disorders (M30–M36)

Chapter XIII: Diseases of the musculoskeletal system and connective tissue (M00–M99)

M00–M25 Arthropathies
M30–M36 Systemic connective tissue disorders
M40–M54 Dorsopathies
M60–M79 Soft tissue disorders

M80–M94 Osteopathies and chondropathies

M95–M99 Other disorders of the musculoskeletal system and connective tissue

Excludes: Exclusion groups a, b, c, d, e, f, g and h (see below)

Compartment syndrome (T79.6)

Chapter XIV: Diseases of the genitourinary system (N00–N99)

N00–N08 Glomerular diseases

N10–N16 Renal tubulo-interstitial diseases

N17–N19 Renal failure

N20–N23 Urolithiasis

N25–N29 Other disorders of kidney and ureter

N30–N39 Other diseases of urinary system

N40–N51 Diseases of male genital organs

N60–N64 Disorders of breast

N70–N77 Inflammatory diseases of female pelvic organs

N80–N98 Noninflammatory disorders of female genital tract

N99 Other disorders of genitourinary tract

Excludes: Exclusion groups a, b, c, d, e, f, g and h (see below)

Chapter XV: Pregnancy, childbirth and the puerperium (O00–O99)

Not applicable

Chapter XVI: Certain conditions originating in the perinatal period (P00–P96)

Not applicable

Chapter XVII: Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)

Q00–Q07 Congenital malformations of the nervous system

Q10–Q18 Congenital malformations of eye, ear, face and neck

Q20–Q28 Congenital malformations of the circulatory system

Q30–Q34 Congenital malformations of the respiratory system

Q35–Q37 Cleft lip and cleft palate

Q38–Q45 Other congenital malformations of the digestive system

Q50–Q56 Congenital malformations of genital organs

Q60–Q64 Congenital malformations of the urinary system

Q65–Q79 Congenital malformations and deformations of the musculoskeletal system

Q80–Q89 Other congenital malformations

Q90–Q99 Chromosomal abnormalities, not elsewhere classified

Excludes: Inborn errors of metabolism (E70–E90)

Chapter XVIII: Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)

This chapter includes symptoms, signs, abnormal results of clinical or other investigative procedures, and ill-defined conditions regarding which no diagnosis classifiable elsewhere is recorded.

Signs and symptoms that point rather definitely to a given diagnosis have been assigned to a category in other chapters of the classification.

R10–R19 Symptoms and signs involving the digestive system and abdomen

R20–R23 Symptoms and signs involving the skin and subcutaneous tissue

R25–R29 Symptoms and signs involving the nervous and musculoskeletal systems

R30–R39 Symptoms and signs involving the urinary system

R40–R46 Symptoms and signs involving cognition, perception, emotional state and behaviour

R47–R49 Symptoms and signs involving speech and voice

R50–R69 General symptoms and signs

R70–R79 Abnormal findings on examination of blood, without diagnosis

R80–R82 Abnormal findings on examination of urine, without diagnosis

R83–R89 Abnormal findings on examination of other body fluids, substances and tissues, without diagnosis

R90–R94 Abnormal findings on diagnostic imaging and in function studies, without diagnosis

R95–R99 Ill-defined and unknown causes of mortality

Excludes: Exclusion group a (see below)

Abnormal findings on antenatal screening of mother (O28.-)

Chapter XIX: Injury, poisoning and certain other consequences of external causes (S00–T98)

S00–S09 Injuries to the head

S10–S19 Injuries to the neck

S20–S29 Injuries to the thorax

S30–S39 Injuries to the abdomen, lower back, lumbar spine and pelvis

S40–S49 Injuries to the shoulder and upper arm

S50–S59 Injuries to the elbow and forearm

S60–S69 Injuries to the wrist and hand

S70–S79 Injuries to the hip and thigh

S80–S89 Injuries to the knee and lower leg

S90–S99 Injuries to the ankle and foot

T00–T07 Injuries involving multiple body regions

T08–T14 Injuries to unspecified part of trunk, limb or body region

T15–T19 Effects of foreign body entering through natural orifice

T20–T31 Burns

T33–T35 Frostbite

T36–T50 Poisoning by drugs, medicaments and biological substances

T51–T65 Toxic effects of substances chiefly nonmedicinal as to source

T66–T78 Other and unspecified effects of external causes

T79 Certain early complications of trauma

T80–T88 Complications of surgical and medical care, not elsewhere classified

T89 Other complications of trauma not elsewhere classified

T90–T98 Sequelae of injuries, of poisoning and of other consequences of external causes

Excludes: Birth trauma (P10–P15)

Obstetric trauma (O70–O71)

Note: The chapter uses the S-section for coding different types of injuries related to single body regions and the T-section to cover injuries to multiple or unspecified body regions as well as poisoning and certain other consequences of external causes.

Chapter XX: External causes of morbidity and mortality (V01–Y98)

V01–X59 Accidents

- V01–V99 Transport accidents
- W00–X59 Other external causes of accidental injury

X60–X84 Intentional self-harm

X85–Y09 Assault

Y10–Y34 Event of undetermined intent

Y35–Y36 Legal intervention and operations of war

Y40–Y84 Complications of medical and surgical care

Y85–Y89 Sequelae of external causes of morbidity and mortality

Y90–Y98 Supplementary factors related to causes of morbidity and mortality classified elsewhere

Chapter XXI: Factors influencing health status and contact with health services (Z00–Z99)

Z00–Z13 Persons encountering health services for examination and investigation

Z20–Z29 Persons with potential health hazards related to communicable diseases

Z30–Z39 Persons encountering health services in circumstances related to reproduction

Z40–Z54 Persons encountering health services for specific procedures and health care

Z55–Z65 Persons with potential health hazards related to socioeconomic and psychosocial circumstances

Z70–Z76 Persons encountering health services in other circumstances

- Z75 Problems related to medical facilities and other health care
  - Z75.1 Person awaiting admission to adequate facility elsewhere

Z80–Z99 Persons with potential health hazards related to family and personal history and certain conditions influencing health status

Exclusion groups:

a. Certain conditions originating in the perinatal period (P00–P96)
b. Certain infectious and parasitic diseases (A00–B99)
c. Complications of pregnancy, childbirth and the puerperium (O00–O99)
d. Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)
e. Endocrine, nutritional and metabolic diseases (E00–E90)
f. Injury, poisoning and certain other consequences of external causes (S00–T98)
g. Neoplasms (C00–D48)
h. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)

Source: NCCH 2000.

Table C.1: Disease classifications used in regression modelling

Disease description	ICD-10 codes
Infectious and parasitic diseases	A00–B99
Neoplasms (cancers and tumours)	C00–D48
Diseases of the blood and blood-forming organs and immunological disorders	D50–D89
Endocrine, nutritional and metabolic diseases (excluding diabetes mellitus)	E00–E07, E15–E90
Endocrine, nutritional and metabolic diseases : diabetes mellitus	E10–E14
Mental and behavioural disorders: dementia and related disorders	F01–F03, G30–G32
Mental and behavioural disorders (excluding dementia and related disorders)	F04–F99
Diseases of the nervous system	G00–G26, G35–G99
Diseases of the eye and adnexa	H00–H59
Diseases of the ear and mastoid process	H60–H95
Diseases of the circulatory system (excluding stroke and other cerebrovascular diseases, ischaemic heart diseases and diseases of the arteries)	I00–I15, I30–I52, I80–I99
Diseases of the circulatory system: ischaemic heart diseases	I20–I25
Diseases of the circulatory system: stroke	I60–I64
Diseases of the circulatory system: cerebrovascular diseases (excluding stroke)	I65–I69
Diseases of the circulatory system: diseases of the arteries	I70–I79
Diseases of the respiratory system (excluding COPD and influenza and pneumonia)	J00–J06, J20–J40, J45–J99
Diseases of the respiratory system: influenza and pneumonia	J10–J18
Diseases of the respiratory system: COPD	J41–J44
Diseases of the digestive system (excluding cirrhosis and other diseases of the liver)	K00–K67, K80–K93
Diseases of the digestive system: cirrhosis and other diseases of the liver	K70–K76
Diseases of the skin and subcutaneous tissue	L00–L99
Diseases of the musculoskeletal system and connective tissue	M00–M99
Diseases of the genitourinary system (excluding kidney failure)	N00–N16, N20–N99
Diseases of the genitourinary system: kidney failure	N17–N19
Symptoms, signs and abnormal findings n.e.c.	R00–R09
Injury caused by fall	S00–T98 and external cause of morbidity and mortality is in W00–W19
Injury, poisoning and other consequences of external causes (excluding injury caused by fall)	S00–T98, except when external cause of morbidity and mortality is in W00–W19
Factors influencing health status (excluding ‘Awaiting admission elsewhere’)	Z00–Z99 (excluding Z75.1)
Factors influencing health status: awaiting admission elsewhere	Z75.1

Appendix D: English proficiency groups

The English Proficiency (EP) Groups classification is used to indicate a migrant's level of English proficiency using an English proficiency index, the person's country of birth and the number of that country's immigrants living in Australia (DIMA 2003). The EP index is defined as the percentage of recent immigrants (those entering in the 5 years before the Census) who speak English only or another language and good English. Good English is defined as those who reported at the Census that they spoke 'English Only' or spoke English 'Very Well' or 'Well' (DIMA 2003). The 2001 English proficiency groups are given in Table D.1 and were defined such that:

EP1 = All countries rating 98.5% or higher with at least 10,000 residents in Australia

EP2 = Countries rating 84.5% or higher on the EP index, other than those in EP1

EP3 = Countries rating 57.5% to less than 84.5%

EP4 = Countries rating less than 57.5%.

Table D.1: English proficiency group classification

English proficiency group	Countries		
EP Group 1	Canada	United Kingdom	Zimbabwe
	Ireland	United States of America	
	New Zealand	South Africa	
EP Group 2	Americas [nfd]	Brunei Darussalam	Dominica
	Andorra	Bulgaria	Dominican Republic
	Angola	Burkina Faso	Eastern Europe [nfd]
	Antigua and Barbuda	Burundi	Equatorial Guinea
	Aruba	Cameroon	Faeroe Islands
	At Sea	Cape Verde	Falkland Islands
	Australian ext. territories [nec]	Caribbean [nfd]	Fiji
	Austria	Cayman Islands	Finland
	Bahamas	Central African Republic	France
	Bahrain	Central America [nfd]	French Guiana
	Bangladesh	Chad	French Polynesia
	Barbados	Chilean Antarctic Territory	Gabon
	Belgium	Comoros	Gambia
	Belize	Congo, Democratic Republic of	Germany
	Benin	Cook Islands	Ghana
	Bermuda	Costa Rica	Gibraltar
	Bhutan	Cote D'Ivoire	Greenland
	Botswana	Czech Republic	Grenada
	Brazil	Denmark	Guadeloupe

(continued)

Table D.1 (continued): English proficiency group classification

English proficiency group	Countries		
EP Group 2 (continued)	Guam	Nauru	Slovakia
	Guatemala	Nepal	Slovenia
	Guinea-Bissau	Netherlands	Solomon Islands
	Guyana	Netherlands Antilles	South America [nec]
	Haiti	New Caledonia	Southern and East Africa [nec]
	Holy See	Niger	Southern and East Africa [nfd]
	Iceland	Nigeria	Southern and Eastern Europe [nfd]
	India	Niue	Southern Asia [nfd]
	Indonesia	Norfolk Island	Spain
	Israel	North Africa [nec]	Sri Lanka
	Jamaica	North Africa [nfd]	St Helena
	Kenya	Northern America [nfd]	St Kitts and Nevis
	Kiribati	Northern Europe [nfd]	St Lucia
	Latvia	Northern Mariana Islands	St Pierre and Miquelon
	Lesotho	Norway	St Vincent and the Grenadines
	Liberia	Oceania and Antarctica [nfd]	Suriname
	Liechtenstein	Oman	Swaziland
	Luxembourg	Pakistan	Sweden
	Madagascar	Palau	Switzerland
	Malawi	Panama	Tajikistan
	Malaysia	Papua New Guinea	Tanzania
	Maldives	Philippines	Tokelau
	Mali	Polynesia (excludes Hawaii) [nec]	Tonga
	Malta	Polynesia (excludes Hawaii) [nfd]	Trinidad and Tobago
	Maritime South-East Asia [nfd]	Puerto Rico	Tunisia
	Marshall Islands	Qatar	Turks and Caicos Islands
	Martinique	Reunion	Tuvalu
	Mauritania	Rwanda	Uganda
	Mauritius	Samoa	United Arab Emirates
	Melanesia [nfd]	Samoa, American	Vanuatu
	Mexico	San Marino	Venezuela
	Micronesia, Federated States of	Sao Tome and Principe	Virgin Islands, British
	Monaco	Saudi Arabia	Virgin Islands, United States
	Montserrat	Senegal	Wallis and Futuna
	Morocco	Seychelles	Western Sahara
	Mozambique	Sierra Leone	Zambia
	Namibia	Singapore	

(continued)

Table D.1 (continued): English proficiency group classification

English proficiency group	Countries		
EP Group 3	Afghanistan	Fmr Yugoslav Rep Macedonia (FYROM)	Moldova
	Albania	Gaza Strip and West Bank	Mongolia
	Algeria	Georgia	North Africa and the Middle East nfd
	Argentina	Greece	Paraguay
	Armenia	Honduras	Peru
	Belarus	Hong Kong (SAR of China)	Poland
	Bolivia	Hungary	Portugal
	Bosnia and Herzegovina	Iran	Romania
	Burma (Myanmar)	Iraq	Russian Federation
	Central and West Africa nfd	Italy	Somalia
	Chile	Japan	South Eastern Europe nfd
	China (excl. SARs and Taiwan Province)	Jordan	South-East Asia nfd
	Colombia	Kazakhstan	Sudan
	Croatia	Korea, Democratic People's Rep of (North)	Syria
	Cuba	Korea, Republic of (South)	Taiwan
	Cyprus	Kuwait	Thailand
	Djibouti	Kyrgyz Republic	Togo
	Ecuador	Lebanon	Turkmenistan
	Egypt	Libya	Ukraine
	El Salvador	Lithuania	Uruguay
	Eritrea	Macau (SAR of China)	Uzbekistan
	Estonia	Micronesia nfd	Yemen
	Ethiopia	Middle East nfd	Yugoslavia, Federal Republic of
EP Group 4	Antarctica nfd	East Timor	Southern Europe nfd
	Azerbaijan	Guinea	Turkey
	Cambodia	Japan and the Koreas nfd	Viet Nam
	Central Asia nfd	Laos	
	Chinese Asia (includes Mongolia) nfd	Mainland South-East Asia nfd	

nfd not further defined.

nec not elsewhere classified.

SAR special administrative region.

Source: DIMA 2003.

Appendix E: Logistic regression models for factors affecting admission into RAC from hospital

In this study, logistic regression models were used to determine which personal characteristics and hospital care and diagnostic information were important in predicting entry into RAC following discharge from hospital. In particular, we were interested in modelling the probability of:

- RAC admission (rather than return to the community) following discharge from hospital (Model A), and
- permanent RAC admission (rather than respite RAC admission) following discharge from hospital, given that the person will be entering RAC (Model B).

Both models used the following variables:

- age at admission
- sex
- state/territory of hospital admission
- remoteness of usual residence
- marital status (largely not reported for Queensland hospitals)
- English Proficiency group, which is based on reported country of birth using the 2001 classification of countries into english proficiency groups (see Appendix D)
- hospital sector
- care type in hospital prior to discharge
- hospital admission mode
- length of hospital episode
- principal diagnosis
- presence or absence of specific diseases as additional diagnoses.

For this analysis, to identify factors associated with admission into RAC versus return to the community, hospital episodes that ended with either the death of the patient or a return to permanent RAC were excluded from the model fitting process. Models were fitted using unadjusted data.

It should be noted that there may be other factors associated with RAC admission for which we did not have information and so could not include these in the model. Further, it is not possible to infer causation from the results of the regression model, and this can only be done on the basis of other knowledge.

For both models, an overall Type I error rate of 5% was maintained by using a Bonferroni adjustment for multiple comparisons (Anderson et al. 1994). Consequently, only variables for which the statistical test had a p-value of less than 0.125% were included in the model.

Results for these models are presented in tables E.1, E.2 and E.3. A brief technical discussion of logistic regression and interpretation of results follows.

E.1 The model

The logistic regression model is expressed as an equation that estimates the probability of the event of interest and is of the form:

$$\text{logit}(p) = \boldsymbol{\beta}^{\mathbf{T}}\mathbf{x}$$

where $\text{logit}(p) = \ln\left(\frac{p}{1-p}\right)$

p = probability of observing the event of interest (entering RAC for Model A and entering permanent RAC for model B)

$\boldsymbol{\beta}$ is the vector of m parameter coefficients (one coefficient for each level of each categorical variable, one for each continuous variable and one for the intercept, minus the number of categorical variables); and

$\mathbf{x}$ is the vector of covariates.

The regression analysis provides estimates of the effects of each of the variables included in the model while controlling for the effects of the other variables included in the model (Hosmer & Lemeshow 2000).

E.2 Predicted probabilities

The predicted probability of the event occurring can be calculated for a person with a particular set of characteristics by using the parameter estimates obtained from the logistic regression model in the equation

$$p\left[\text{Event}|\mathbf{x}=\mathbf{Z}\right] = \frac{\exp\left[\sum_{k=1}^{m}\boldsymbol{\beta}_k\mathbf{Z}_k\right]}{1+\exp\left[\sum_{k=1}^{m}\boldsymbol{\beta}_k\mathbf{Z}_k\right]}$$

where p = probability of observing the event of interest (entering RAC for Model A and entering permanent RAC for model B)

$\boldsymbol{\beta}$ is the vector of m parameter coefficients; and

$\mathbf{Z}$ is the vector of covariate values for the person of interest.

The following example demonstrates how to calculate the predicted probability of a person entering RAC using the parameter estimates from Model A in Table E.3. Suppose we wish to calculate the predicted probability of admission into RAC from hospital for a person (Mary, say) with the following personal and hospital episode characteristics:

- female
- 84 years old at admission into hospital
- widowed
- born in Australia
- usual residence in a major city
- admitted to a public hospital in Victoria
- receiving maintenance care

- episode began with a statistical admission (change in care type)
- episode lasted between 1 and 4 weeks
- principal diagnosis in dementia and related disorders
- additional diagnosis in diseases of the nervous system.

To calculate the predicted probability we use the relevant parameter estimates (Table E.3) and enter them into the above equation. Note that the intercept estimate must also be included. Variables whose value is the reference group in the model fitting process have a parameter value equal to 0, and age at admission in years is multiplied by the parameter estimate for age. If the parameter estimate for a variable is not significantly different to the reference group then the parameter is set to 0.

The equation above then becomes

$$p\left[\text{Mary being admitted into RAC}\right] = \frac{\exp(-11.45+0+0.08\times 84+0+0.34+0+0+0.88+0.45+1.35+2.36+0.43)}{1+\exp(-11.45+0+0.08\times 84+0+0.34+0+0+0.88+0.45+1.35+2.36+0.43)}$$

$$= \frac{\exp(1.08)}{1+\exp(1.08)} = \frac{2.95}{3.95} = 0.75$$

Therefore, a person like Mary with the above personal and hospital episode characteristics has a 75% predicted probability of being admitted to RAC on discharge from hospital. Consequently, she has a 25% predicted probability of returning to the community. This means that Mary's odds of entry into RAC are 3 (0.75/0.25). Predicted probabilities for any other set of covariate values can be calculated in a similar manner.

E.3 Odds ratios

Odds ratios are calculated for each variable in the logistic regression model (Table E.1 and Table E.2). The odds ratio is a relative measure which compares the odds of people in a particular group (for example, men) experiencing an event, for example admission into RAC, with the odds of people in another group (for example, women) experiencing the event. The odds of an event occurring are defined as:

$$\text{Odds} = \frac{\text{Probability of event occuring}}{\text{Probability of event not occurring}} = \frac{p}{1 - p}$$

The odds ratio is then defined as:

$$\text{Odds ratio} = \frac{\text{Odds for people in group 2}}{\text{Odds for people in group 1}}$$

with group 1 being the reference group.

Returning to our example with Mary above, if someone else, say John, had an odds of RAC entry of 1.5 (0.6/0.4), then the odds ratio for Mary compared with John is 2 (3/1.5).

An odds ratio of 1 means that the odds of the event occurring is equal in both groups. An odds ratio of greater than 1 means that the odds of the event occurring is higher for people in group 2 than in group 1. Conversely, an odds ratio of less than 1 means that odds of the event occurring is less for people in group 2 than in group 1. More specifically, an odds ratio of 1.3 means that the odds for people in group 2 are 30% higher than the odds for people in group 1.

An odds ratio of 0.6 means that the odds for people in group 2 are 40% lower than the odds for people in group 1.

If the probability of the event happening is small, say less than 10%, the odds ratio is approximately equal to the relative risk. That is, an odds ratio of 1.25 can be interpreted as meaning that the probability of the event occurring for people in group 2 is 25% more than the probability of the event occurring for people in group 1.

In logistic regression, we obtain the odds ratio for a variable relative to the reference group, controlling for the presence of all other variables. For example, men discharged from hospital have an odds ratio of entering RAC of 0.91 (Table E.1). This means that the odds of RAC admission for men are 9% lower than the odds for women. Since the probability of people admitted to RAC from hospital is small (3%), we can also say that the probability of men being admitted to RAC from hospital is approximately 9% lower than the probability of women being admitted to RAC.

For integer variables (for example, age) the interpretation of odds ratios is slightly different, with the odds ratio comparing the odds of the event occurring for a unit increment in the variable. For example, an odds ratio for age at hospital admission of 1.08 indicates that with each extra year of age at hospital admission, the odds of entering RAC increases by 8%.

Odds ratios are a commonly presented result from logistic regression. Our discussion of the logistic regression concentrates on predicted probabilities, and this explanation of odds ratios is presented for completeness.

Table E.1: Logistic regression results: factors affecting admission into RAC, 2001–02 (Model A)

Variable[a]	Level	Order of entry into model	Odds ratio (95% confidence interval)		Predicted probability of entering RAC rather than returning to the community, based on reference person[b]
					Per cent
Sex	Female (reference)	18	1.00	. .	0.4
	Male		0.91 ***	(0.88–0.94)	0.3
Age	Increments of one year		1.08 ***	(1.08–1.08)	65 years: 0.2
					75 years: 0.4
					85 years: 0.8
		4			95 years: 1.8
State/territory of hospital admission	New South Wales (reference)	7	1.00	. .	0.4
	Victoria		0.66 ***	(0.63–0.69)	0.3
	Queensland		0.60 ***	(0.55–0.65)	0.2
	Western Australia		0.63 ***	(0.60–0.67)	0.2
	South Australia		0.98	(0.93–1.03)	‡0.4
	Tasmania		0.49 ***	(0.44–0.55)	0.2
	Australian Capital Territory		0.65 ***	(0.55–0.76)	0.2
	Northern Territory		0.63 *	(0.42–0.91)	0.2
Region of usual residence	Major cities (reference)	22	1.00	. .	0.4
	Inner regional		0.98	(0.94–1.02)	‡0.4
	Outer regional		0.95	(0.90–1.00)	‡0.4
	Remote		0.78 **	(0.67–0.91)	0.3
	Very remote		0.79	(0.60–1.01)	‡0.4
	Missing/unknown		0.41 ***	(0.27–0.59)	0.2
Marital status	Married/de facto (reference)	9	1.00	. .	0.4
	Never married		1.91 ***	(1.80–2.04)	0.7
	Widowed		1.40 ***	(1.35–1.46)	0.5
	Divorced		1.61 ***	(1.47–1.75)	0.6
	Separated		1.46 ***	(1.28–1.66)	0.6
	Missing/Unknown		1.70 ***	(1.57–1.83)	0.6
EP group	Australia/EP 1 (reference)	14	1.00	. .	0.4
	EP group 2		0.86 ***	(0.81–0.93)	0.3
	EP group 3		0.72 ***	(0.68–0.76)	0.3
	EP group 4		0.62 **	(0.46–0.83)	0.2
	EP group unknown		0.70 ***	(0.63–0.78)	0.3
Hospital sector	Public (reference)	13	1.00	. .	0.4
	Private		0.74 ***	(0.72–0.77)	0.3

(continued)

Table E.1 (cont'd): Logistic regression results: factors affecting admission into RAC, 2001–02 (Model A)

Variable[(a)]	Level	Order of entry into model	Odds ratio (95% confidence interval)		Predicted probability of entering RAC rather than returning to the community, based on reference person[(b)]
					Per cent
Care type in hospital	Acute (reference)	8	1.00	. .	0.4
	Rehabilitation		0.55 ***	(0.51–0.60)	0.2
	Palliative		2.79 ***	(2.47–3.15)	1.1
	GEM		0.97	(0.89–1.06)	‡0.4
	Psychogeriatric		0.95	(0.79–1.13)	‡0.4
	Maintenance		1.56 ***	(1.43–1.71)	0.6
	Other/unknown		1.68 ***	(1.50–1.87)	0.6
Admission mode	Other (reference)	6	1.00	. .	0.4
	Transfer from another hospital		1.56 ***	(1.49–1.64)	0.6
	Statistical admission		2.40 ***	(2.26–2.55)	0.9
	Unknown		0.53 ***	(0.38–0.72)	0.2
Length of hospital episode	Less than one week(reference)	3	1.00	. .	0.4
	1–<4 weeks		3.87 ***	(3.71–4.03)	1.5
	4–<8 weeks		11.65 ***	(11.05–12.28)	4.3
	8–<12 weeks		17.42 ***	(16.00–18.98)	6.2
	12 weeks or more		19.66 ***	(17.72–21.81)	7.0
Principal diagnosis in hospital	Neoplasms (cancers and tumours) (reference)	1	1.00	. .	0.4
	Factors influencing health status: awaiting admission elsewhere		14.27 ***	(12.8–15.91)	5.2
	Mental and behavioural disorders: dementia and related disorders		10.55 ***	(9.48–11.73)	3.9
	Diseases of the nervous system		3.73 ***	(3.41–4.07)	1.4
	Diseases of the circulatory system: Stroke		3.06 ***	(2.78–3.37)	1.2
	Mental and behavioural disorders (excluding dementia and related disorders)		2.04 ***	(1.84–2.25)	0.8
	Injury caused by fall		2.03 ***	(1.87–2.21)	0.8
	Symptoms, signs and abnormal findings n.e.c.		1.67 ***	(1.53–1.82)	0.6
	Endocrine, nutritional and metabolic diseases (excluding diabetes mellitus)		1.58 ***	(1.35–1.83)	0.6
	Diseases of the circulatory system: cerebrovascular disease (excluding stroke)		1.43 **	(1.11–1.81)	0.5
	Factors influencing health status (excl. 'Awaiting admission elsewhere')		1.37 ***	(1.25–1.49)	0.5

(continued)

Table E.1 (cont'd): Logistic regression results: factors affecting admission into RAC, 2001–02 (Model A)

Variable[(a)]	Level	Order of entry into model	Odds ratio (95% confidence interval)		Predicted probability of entering RAC rather than returning to the community, based on reference person[(b)]
					Per cent
Principal diagnosis in hospital (continued)	Diseases of the genitourinary system: kidney failure		1.34 **	(1.10–1.63)	0.5
	Diseases of the respiratory system: COPD		1.30 ***	(1.17–1.44)	0.5
	Diseases of the digestive system: Cirrhosis and other diseases of the liver		1.21	(0.84–1.71)	‡0.4
	Diseases of the skin and subcutaneous tissue		1.14 *	(1.01–1.29)	0.4
	Diseases of the genitourinary system (excluding kidney failure)		1.12 *	(1.01–1.24)	0.4
	Endocrine, nutritional and metabolic diseases: diabetes mellitus		1.10	(0.96–1.27)	‡0.4
	Diseases of the respiratory system (excluding COPD and influenza and pneumonia)		1.06	(0.94–1.19)	‡0.4
	Diseases of the respiratory system: Influenza and pneumonia		1.01	(0.90–1.14)	‡0.4
	Diseases of the musculoskeletal system and connective tissue		1.00	(0.91–1.10)	‡0.4
	Diseases of the circulatory system (excluding stroke and other cerebrovascular disease, ischaemic heart disease and diseases of the arteries)		0.96	(0.88–1.04)	‡0.4
	Infectious and parasitic diseases		0.88	(0.74–1.04)	‡0.4
	Injury, poisoning and other consequences of external causes (excluding injury caused by fall)		0.82 ***	(0.72–0.92)	0.3
	Diseases of the blood and blood-forming organs and immunological disorders		0.77 **	(0.63–0.92)	0.3
	Diseases of the digestive system (excluding cirrhosis and other diseases of the liver)		0.68 ***	(0.61–0.75)	0.3
	Diseases of the circulatory system: diseases of the arteries		0.65 ***	(0.54–0.78)	0.2
	Other/unknown		0.62	(0.33–1.07)	‡0.4
	Diseases of the ear and mastoid process		0.58 *	(0.35–0.90)	0.2
	Diseases of the eye and adnexa		0.55 ***	(0.42–0.72)	0.2
	Diseases of the circulatory system: ischaemic heart disease		0.55 ***	(0.49–0.62)	0.2

(continued)

Table E.1 (cont'd): Logistic regression results: factors affecting admission into RAC, 2001–02 (Model A)

Variable[(a)]	Level	Order of entry into model	Odds ratio (95% confidence interval)		Predicted probability of entering RAC rather than returning to the community, based on reference person[(b)]
					Per cent
Additional diagnosis: Factors influencing health status: awaiting admission elsewhere	Absent (reference)	2	1.00	. .	0.4
	Present		11.90 ***	(11.19–12.66)	4.3
Additional diagnosis: Mental and behavioural disorders: dementia and related disorders	Absent (reference)	5	1.00	. .	0.4
	Present		3.21 ***	(3.08–3.35)	1.2
Additional diagnosis: Mental and behavioural disorders (excluding dementia and related disorders)	Absent (reference)	11	1.00	. .	0.4
	Present		1.75 ***	(1.66–1.84)	0.7
Additional diagnosis: Diseases of the nervous system	Absent (reference)	10	1.00	. .	0.4
	Present		1.54 ***	(1.47–1.60)	0.6
Additional diagnosis: Symptoms, signs and abnormal findings n.e.c.	Absent (reference)	12	1.00	. .	0.4
	Present		1.44 ***	(1.39–1.49)	0.5
Additional diagnosis: Diseases of the skin and subcutaneous tissue	Absent (reference)	15	1.00	. .	0.4
	Present		1.36 ***	(1.29–1.43)	0.5
Additional diagnosis: Diseases of the genitourinary system (excluding kidney failure)	Absent (reference)	16	1.00	. .	0.4
	Present		1.24 ***	(1.18–1.30)	0.5
Additional diagnosis: Diseases of the circulatory system: stroke	Absent (reference)	20	1.00	. .	0.4
	Present		1.23 ***	(1.13–1.34)	0.5
Additional diagnosis: Diseases of the respiratory system: COPD	Absent (reference)	19	1.00	. .	0.4
	Present		1.21 ***	(1.14–1.28)	0.5
Additional diagnosis: Diseases of the genitourinary system: kidney failure	Absent (reference)	21	1.00	. .	0.4
	Present		1.19 ***	(1.12–1.26)	0.5
Additional diagnosis: Infectious and parasitic diseases	Absent (reference)	23	1.00	. .	0.4
	Present		1.11 ***	(1.06–1.16)	0.4
Additional diagnosis: Diseases of the circulatory system (excluding stroke and other cerebrovascular disease, ischaemic heart disease and diseases of the arteries)	Absent (reference)	24	1.00	. .	0.4
	Present		0.93 ***	(0.89–0.96)	0.4
Additional diagnosis: Unknown/other	Absent (reference)	17	1.00	. .	0.4
	Present		0.78 ***	(0.73–0.83)	0.3

* Statistically significantly different from reference group at 5% level.

** Statistically significantly different from reference group at 1% level.

*** Statistically significantly different from reference group at 0.1% level.

‡ Not significantly different to reference group and therefore predicted probability is the same as for the reference group.

. . Not applicable to the model.

(a) To achieve an overall Type I error rate of 5%, variables were included in the final model if they had a p-value less than 0.125%, which was calculated using a Bonferroni adjustment for 40 multiple comparisons. All principal diagnosis diseases were tested for inclusion in the final model as additional diagnoses. Several interactions (for example, age by sex) were tested but found to be not significant at the 0.125% level.

(b) The predicted probabilities relate to a person with characteristics the same as those of the 'reference' person except for the differences in the single variable whose effect is being analysed. The 'reference' person for Model A is 75 years old years old at admission, female, married/de facto, living in New South Wales, born in Australia or an EP group 1 country, usually residing in a major city, admitted to a public hospital with a non-statistical and non-transfer admission, receiving acute hospital care, in hospital for less than 1 week with a principal diagnosis of neoplasms (see Box 5.1).

Table E.2: Logistic regression results: factors affecting admission into permanent RAC, 2001–02 (Model B)

Variable[a]	Level	Order of entry into model	Odds ratio (95% confidence interval)		Predicted probability of entering permanent rather than respite RAC, based on reference person[b]
					Per cent
Sex	. .	. .	. .	. .	. .
Age at admission	Increments of one year		1.02 ***	(1.02–1.03)	65 years: 51.1
					75 years: 56.9
					85 years: 62.5
		10			95 years: 67.7
State/territory of hospital admission	New South Wales (reference)	6	1.00	. .	62.5
	Victoria		1.62 ***	(1.48–1.77)	73.0
	Queensland		1.21 ***	(1.10–1.32)	66.7
	Western Australia		0.78 ***	(0.70–0.88)	56.6
	South Australia		0.85 **	(0.77–0.94)	58.6
	Tasmania		4.42 ***	(3.33–5.94)	88.0
	Australian Capital Territory		0.49 ***	(0.36–0.66)	44.7
	Northern Territory		1.07	(0.53–2.22)	‡62.5
Region of usual residence	Major cities (reference)	5	1.00	. .	62.5
	Inner regional		0.56 ***	(0.52–0.60)	48.2
	Outer regional		0.47 ***	(0.43–0.52)	44.0
	Remote		0.43 ***	(0.32–0.58)	41.6
	Very remote		0.44 **	(0.26–0.73)	42.0
	Missing/unknown		0.70	(0.33–1.51)	‡62.5
Hospital sector	Public (reference)	9	1.00	. .	62.5
	Private		0.69 ***	(0.64–0.74)	53.3
Care type in hospital	Acute (reference)	1	1.00	. .	62.5
	Rehabilitation		0.93	(0.80–1.09)	‡62.5
	Palliative		2.33 ***	(1.78–3.10)	79.5
	GEM		1.99 ***	(1.64–2.43)	76.8
	Psychogeriatric		1.06	(0.76–1.51)	‡62.5
	Maintenance		1.48 ***	(1.27–1.72)	71.1
	Other/unknown		2.17 ***	(1.68–2.83)	78.3
Admission mode	Other (reference)	12	1.00	. .	62.5
	Transfer from another hospital		1.19 ***	(1.08–1.30)	69.8
	Statistical admission		1.39 ***	(1.24–1.56)	72.4
	Unknown		1.58	(0.75–3.74)	‡62.5

(continued)

Table E.2 (continued): Logistic regression results: factors affecting admission into permanent RAC, 2001–02 (Model B)

Variable[a]	Level	Order of entry into model	Odds ratio (95% confidence interval)		Predicted probability of entering permanent rather than respite RAC, based on reference person[b]
					Per cent
Length of hospital episode	Less than one week(reference)	2	1.00	. .	49.5
	1–<4 weeks		1.70 ***	(1.56–1.84)	62.5
	4–<8 weeks		2.91 ***	(2.64–3.22)	74.1
	8–<12 weeks		4.30 ***	(3.65–5.08)	80.8
	12 weeks or more		6.39 ***	(5.21–7.90)	86.2
Principal diagnosis in hospital	Neoplasms (cancers and tumours) (reference)	3	1.00	. .	62.5
	Diseases of the digestive system: cirrhosis and other diseases of the liver		2.09	(0.90–5.74)	‡62.5
	Diseases of the circulatory system: stroke		1.79 ***	(1.45–2.23)	74.9
	Mental and behavioural disorders: dementia and related disorders		1.70 ***	(1.39–2.07)	73.8
	Factors influencing health status: awaiting admission elsewhere		1.66 ***	(1.36–2.03)	73.4
	Diseases of the nervous system		1.26 *	(1.04–1.52)	67.6
	Diseases of the ear and mastoid process		1.18	(0.42–3.70)	‡62.5
	Diseases of the genitourinary system (excluding kidney failure)		1.01	(0.81–1.27)	‡62.5
	Diseases of the circulatory system: cerebrovascular disease (excluding stroke)		0.91	(0.57–1.50)	‡62.5
	Endocrine, nutritional and metabolic diseases (excluding diabetes mellitus)		0.91	(0.67–1.24)	‡62.5
	Diseases of the genitourinary system: kidney failure		0.90	(0.60–1.39)	‡62.5
	Diseases of the respiratory system: COPD		0.88	(0.71–1.09)	‡62.5
	Diseases of the circulatory system: diseases of the arteries		0.88	(0.58–1.34)	‡62.5
	Symptoms, signs and abnormal findings n.e.c.		0.86	(0.72–1.03)	‡62.5
	Diseases of the eye and adnexa		0.80	(0.45–1.41)	‡62.5
	Diseases of the respiratory system (excluding COPD and influenza and pneumonia)		0.80	(0.62–1.02)	‡62.5
	Diseases of the skin and subcutaneous tissue		0.73 *	(0.57–0.95)	55.0
	Diseases of the respiratory system: influenza and pneumonia		0.73 **	(0.57–0.92)	54.7
	Endocrine, nutritional and metabolic diseases : diabetes mellitus		0.70 *	(0.52–0.93)	53.7
	Injury caused by fall		0.68 ***	(0.57–0.80)	53.0
	Diseases of the blood and blood-forming organs and immunological disorders		0.65 *	(0.44–0.96)	52.0
	Mental and behavioural disorders (excluding dementia and related disorders)		0.64 ***	(0.52–0.78)	51.5

(continued)

Table E.2 (continued): Logistic regression results: factors affecting admission into permanent RAC, 2001–02 (Model B)

Variable[a]	Level	Order of entry into model	Odds ratio (95% confidence interval)		Predicted probability of entering permanent rather than respite RAC, based on reference person[b]
					Per cent
Principal diagnosis in hospital (continued)	Diseases of the circulatory system (excluding stroke and other cerebrovascular disease, ischaemic heart disease and diseases of the arteries)		0.63 ***	(0.53–0.76)	51.3
	Infectious and parasitic diseases		0.59 **	(0.42–0.83)	49.6
	Diseases of the digestive system (excluding cirrhosis and other diseases of the liver)		0.59 ***	(0.47–0.73)	49.4
	Factors influencing health status (excluding 'Awaiting admission elsewhere')		0.55 ***	(0.46–0.66)	47.8
	Diseases of the musculoskeletal system and connective tissue		0.52 ***	(0.43–0.63)	46.3
	Diseases of the circulatory system: ischaemic heart disease		0.49 ***	(0.38–0.63)	44.7
	Injury, poisoning and other consequences of external causes (excluding injury caused by fall)		0.47 ***	(0.37–0.61)	44.1
	Other/unknown		0.45	(0.13–1.59)	‡62.5
Additional diagnosis: Factors influencing health status: awaiting admission elsewhere	Absent (reference)	4	1.00	. .	62.5
	Present		2.15 ***	(1.96–2.37)	78.2
Additional diagnosis: Mental and behavioural disorders: dementia and related disorders	Absent (reference)	7	1.00	. .	62.5
	Present		1.72 ***	(1.59–1.85)	74.1
Additional diagnosis: Diseases of the circulatory system: stroke	Absent (reference)	14	1.00	. .	62.5
	Present		1.60 ***	(1.36–1.89)	72.7
Additional diagnosis: Diseases of the genitourinary system: kidney failure	Absent (reference)	15	1.00	. .	62.5
	Present		1.37 ***	(1.22–1.54)	69.5

(continued)

Table E.2 (continued): Logistic regression results: factors affecting admission into permanent RAC, 2001–02 (Model B)

Variable[a]	Level	Order of entry into model	Odds ratio (95% confidence interval)		Predicted probability of entering permanent rather than respite RAC, based on reference person[b]
					Per cent
Additional diagnosis: Symptoms, signs and abnormal findings n.e.c.	Absent (reference)	8	1.00	. .	62.5
	Present		1.34 ***	(1.26–1.43)	69.1
Additional diagnosis: Diseases of the circulatory system: Cerebrovascular disease (excluding stroke)	Absent (reference)	16	1.00	. .	62.5
	Present		1.29 ***	(1.13–1.47)	68.2
Additional diagnosis: Diseases of the genitourinary system (excluding kidney failure)	Absent (reference)	17	1.00	. .	62.5
	Present		1.28 ***	(1.17–1.39)	68.0
Additional diagnosis: Diseases of the nervous system	Absent (reference)	11	1.00	. .	62.5
	Present		1.26 ***	(1.16–1.37)	67.7
Additional diagnosis: Diseases of the skin and subcutaneous tissue	Absent (reference)	18	1.00	. .	62.5
	Present		1.21 ***	(1.10–1.34)	66.9

* Statistically significantly different from reference group at 5% level.

** Statistically significantly different from reference group at 1% level.

*** Statistically significantly different from reference group at 0.1% level.

‡ Not significantly different to reference group and therefore predicted probability is the same as for the reference group.

. . Not applicable to the model.

(a) To achieve an overall Type I error rate of 5%, variables were included in the final model if they had a p-value less than 0.125%, which was calculated using a Bonferroni adjustment for 40 multiple comparisons. All principal diagnosis diseases were tested for inclusion in the final model as additional diagnoses. Variables indicating marital status and EP group were tested for inclusion in the final model but were not statistically significant at the 0.125% level. Several interactions (for example, age by sex) were tested but found to be not significant at the 0.125% level. Sex was included in the final model, despite having a significance level higher than 0.125%, in order to control for the effects of sex.

(b) The predicted probabilities relate to a person with characteristics the same as those of the 'reference' person except for the differences in the single variable whose effect is being analysed. The 'reference' person for Model B is 85 years old years old at admission, female, living in New South Wales, usually residing in a major city, admitted to a public hospital with a non-statistical and non-transfer admission, receiving acute hospital care, in hospital for more than 1 week and less than 4 weeks with a principal diagnosis of neoplasms (see Box 5.2).

Table E.3: Logistic regression results: parameter estimates for Model A and Model B

Variable[(a)]	Level	Model A Admitted to RAC rather than return to community	Model B Admitted to permanent rather than respite RAC
		Parameter estimates	
Intercept	. .	–11.45 ***	–1.99 ***
Sex	Female (reference)	0.00	0.00
	Male	–0.09 ***	0.08 *
Age	Increments of one year	0.08 ***	0.02 ***
State/territory of hospital admission	New South Wales (reference)	0.00	0.00
	Victoria	–0.42 ***	0.48 ***
	Queensland	–0.52 ***	0.19 ***
	Western Australia	–0.46 ***	–0.24 ***
	South Australia	–0.02	–0.16 **
	Tasmania	–0.71 ***	1.49 ***
	Australian Capital Territory	–0.44 ***	–0.72 ***
	Northern Territory	–0.46 *	0.07
Region of usual residence	Major cities (reference)	0.00	0.00
	Inner regional	–0.02	–0.58 ***
	Outer regional	–0.05	–0.75 ***
	Remote	–0.24 **	–0.85 ***
	Very remote	–0.23	–0.83 *
	Missing/unknown	–0.90 ***	–0.36
Marital status	Married/de facto (reference)	0.00	. .
	Never married	0.65 ***	. .
	Widowed	0.34 ***	. .
	Divorced	0.47 ***	. .
	Separated	0.38 ***	. .
	Missing/Unknown	0.53 ***	. .
EP group	Australia/EP 1 (reference)	0.00	. .
	EP group 2	–0.15 ***	. .
	EP group 3	–0.33 ***	. .
	EP group 4	–0.47 **	. .
	EP group unknown	–0.35 ***	. .
Hospital sector	Public (reference)	0.00	0.00
	Private	–0.30 ***	–0.38 ***
Admission mode	Other (reference)	0.00	0.00
	Transfer from another hospital	0.45 ***	0.17 ***
	Statistical admission	0.88 ***	0.33 ***
	Unknown	–0.64 ***	0.46

(continued)

Table E.3 (continued): Logistic regression results: parameter estimates for Model A and Model B

Variable[(a)]	Level	Model A Admitted to RAC rather than return to community	Model B Admitted to permanent rather than respite RAC
		Parameter estimates	
Care type in hospital	Acute (reference)	0.00	0.00
	Rehabilitation	–0.60 ***	–0.07
	Palliative	1.03 ***	0.85 ***
	GEM	–0.03	0.69 ***
	Psychogeriatric	–0.05	0.06
	Maintenance	0.45 ***	0.39 ***
	Other/unknown	0.52 ***	0.77 ***
Length of hospital episode	Less than one week(reference)	0.00	0.00
	1–<4 weeks	1.35 ***	0.53 ***
	4–<8 weeks	2.46 ***	1.07 ***
	8–<12 weeks	2.86 ***	1.46 ***
	12 weeks or more	2.98 ***	1.85 ***
Principal diagnosis in hospital	Neoplasms (cancers and tumours) (reference)	0.00	0.00
	Factors influencing health status: awaiting admission elsewhere	2.66 ***	0.51 ***
	Mental and behavioural disorders: dementia and related disorders	2.36 ***	0.53 ***
	Diseases of the nervous system	1.32 ***	0.23 *
	Diseases of the circulatory system: stroke	1.12 ***	0.58 ***
	Mental and behavioural disorders (excluding dementia and related disorders)	0.71 ***	–0.45 ***
	Injury caused by fall	0.71 ***	–0.39 ***
	Symptoms, signs and abnormal findings n.e.c.	0.51 ***	–0.15
	Endocrine, nutritional and metabolic diseases (excluding diabetes mellitus)	0.45 ***	–0.10
	Diseases of the circulatory system: cerebrovascular disease (excluding stroke)	0.36 **	–0.09
	Factors influencing health status (excluding 'Awaiting admission elsewhere')	0.31 ***	–0.60 ***
	Diseases of the genitourinary system: kidney failure	0.29 **	–0.10
	Diseases of the respiratory system: COPD	0.26 ***	–0.13
	Diseases of the digestive system: Cirrhosis and other diseases of the liver	0.19	0.74
	Diseases of the skin and subcutaneous tissue	0.13 *	–0.31 *
	Diseases of the genitourinary system (excluding kidney failure)	0.11 *	0.01
	Endocrine, nutritional and metabolic diseases : diabetes mellitus	0.10	–0.36 *

(continued)

Table E.3 (continued): Logistic regression results: parameter estimates for Model A and Model B

Variable[(a)]	Level	Model A Admitted to RAC rather than return to community	Model B Admitted to permanent rather than respite RAC
		Parameter estimates	
Principal diagnosis in hospital (continued)	Diseases of the respiratory system (excluding COPD and influenza and pneumonia)	0.06	–0.23
	Diseases of the respiratory system: influenza and pneumonia	0.01	–0.32 **
	Diseases of the musculoskeletal system and connective tissue	0.00	–0.66 ***
	Diseases of the circulatory system (excluding stroke and other cerebrovascular disease, ischaemic heart disease and diseases of the arteries)	–0.05	–0.46 ***
	Infectious and parasitic diseases	–0.13	–0.53 **
	Injury, poisoning and other consequences of external causes (excluding injury caused by fall)	–0.20 ***	–0.75 ***
	Diseases of the blood and blood-forming organs and immunological disorders	–0.27 **	–0.43 *
	Diseases of the digestive system (excluding cirrhosis and other diseases of the liver)	–0.39 ***	–0.53 ***
	Diseases of the circulatory system: diseases of the arteries	–0.43 ***	–0.13
	Other/unknown	–0.47	–0.80
	Diseases of the ear and mastoid process	–0.55 *	0.17
	Diseases of the eye and adnexa	–0.59 ***	–0.22
	Diseases of the circulatory system: ischaemic heart disease	–0.60 ***	–0.72 ***
Additional diagnosis: Factors influencing health status: awaiting admission elsewhere	Absent (reference)	0.00	0.00
	Present	2.48 ***	0.77 ***
Additional diagnosis: Mental and behavioural disorders: dementia and related disorders	Absent (reference)	0.00	0.00
	Present	1.17 ***	0.54 ***
Additional diagnosis: Mental and behavioural disorders (excluding dementia and related disorders)	Absent (reference)	0.00	. .
	Present	0.56 ***	. .
Additional diagnosis: Diseases of the nervous system	Absent (reference)	0.00	0.00
	Present	0.43 ***	0.23 ***
Additional diagnosis: Symptoms, signs and abnormal findings n.e.c.	Absent (reference)	0.00	0.00
	Present	0.36 ***	0.29 ***
Additional diagnosis: Diseases of the skin and subcutaneous tissue	Absent (reference)	0.00	0.00
	Present	0.30 ***	0.19 ***

(continued)

Table E.3 (continued): Logistic regression results: parameter estimates for Model A and Model B

Variable[(a)]	Level	Model A Admitted to RAC rather than return to community	Model B Admitted to permanent rather than respite RAC
		Parameter estimates	
Additional diagnosis: Diseases of the genitourinary system (excluding kidney failure)	Absent (reference)	0.00	0.00
	Present	0.21 ***	0.24 ***
Additional diagnosis: Diseases of the circulatory system: stroke	Absent (reference)	0.00	0.00
	Present	0.21 ***	0.47 ***
Additional diagnosis: Diseases of the circulatory system: cerebrovascular disease (excluding stroke)	Absent (reference)	. .	0.00
	Present	. .	0.25 ***
Additional diagnosis: Diseases of the respiratory system: COPD	Absent (reference)	0.00	. .
	Present	0.19 ***	. .
Additional diagnosis: Diseases of the genitourinary system: kidney failure	Absent (reference)	0.00	0.00
	Present	0.17 ***	0.31 ***
Additional diagnosis: Infectious and parasitic diseases	Absent (reference)	0.00	. .
	Present	0.11 ***	. .
Additional diagnosis: Diseases of the circulatory system (excluding stroke and other cerebrovascular disease, ischaemic heart disease and diseases of the arteries)	Absent (reference)	0.00	. .
	Present	–0.08 ***	. .
Additional diagnosis: Unknown/other	Absent (reference)	0.00	. .
	Present	–0.25 ***	. .

* Statistically significantly different from reference group at 5% level.

** Statistically significantly different from reference group at 1% level.

*** Statistically significantly different from reference group at 0.1% level.

. . Not applicable to the model.

(a) To achieve an overall Type I error rate of 5%, variables were included in the final model if they had a p-value less than 0.125%, which was calculated using a Bonferroni adjustment for 40 multiple comparisons. Variables indicating marital status, location of ACAT assessment, English proficiency group, first time in RAC, hospital sector and presence of specific diseases as additional diagnoses were tested for inclusion in the final model but were not statistically significant at the 0.125% level. Several interactions (for example, age by sex) were tested but found to be not significant at the 0.125% level.

Appendix F: Survival analysis of people entering permanent RAC

In this study, survival analysis techniques were used to determine which personal characteristics and hospital diagnostic history were associated with time until death since entering permanent RAC. To be included in the analysis, admissions to permanent RAC had to occur between 1 July and 31 December 2001 inclusive. The survival time was calculated as the time from entry into permanent RAC until the time of death (determined from RAC records). A person's date of death information may not have been available (and was therefore right censored) for two reasons:

- The person had left RAC, for example when discharged to hospital, and so may have died while not in RAC: we do not have any information on the date of death of these people, but have a 'last seen' date—their date of discharge from RAC. This censored date was used in the survival analysis.
- The person was still living in RAC: the RAC data was derived from a 2004 snapshot of ACCMIS, and, consequently, date of death was generally available only for people who had died in RAC before 30 June 2004. People who had not died in RAC by 30 June 2004 were therefore known to have been alive on 30 June 2004, so their survival data was censored at this date.

A Cox proportional hazards regression model was fitted to the survival times. This investigates the effect of variables upon the time taken for an event to occur. In our model, the event is death. An outline of the theory behind the Cox proportional hazards regression model can be found in Klein & Moeschberger 1997.

The Cox proportional hazards regression model fits a *hazard function*, $h(t)$, for any individual case at time *t*, such that

$$h(t) = h_0(t)\exp(\boldsymbol{\beta}^{\mathrm{T}}\mathbf{x})$$

where

$h_0(t)$ is the baseline hazard function

$\boldsymbol{\beta}$ is the vector of parameter coefficients, and

$\mathbf{x}$ is the vector of covariates.

The hazard function approximates the probability of the individual dying in the next time interval. The *survival function*, $S(t)$, gives the probability of an individual surviving beyond time *t*, and is related to the hazard function such that

$$S(t) = \exp\left[-\int_0^t h(u)du\right].$$

The Cox proportional hazards regression model allows the estimation of *hazard ratios*, which compare the hazard functions of two individuals with covariate values $\mathbf{Z}$ and $\mathbf{Z}^*$, such that

$$\frac{h(t|\mathbf{Z})}{h\left(t|\mathbf{Z}^*\right)} = \frac{h_0(t)\exp\left[\sum_{k=1}^{p}\boldsymbol{\beta}_k\mathbf{Z}_k\right]}{h_0(t)\exp\left[\sum_{k=1}^{p}\boldsymbol{\beta}_k\mathbf{Z}_k^*\right]} = \exp\left[\sum_{k=1}^{p}\boldsymbol{\beta}_k\left(\mathbf{Z}_k - \mathbf{Z}_k^*\right)\right].$$

This measure is a constant and is known as the *hazard ratio* or *relative risk*. That is, it is the relative risk of an individual with covariate values $\mathbf{Z}$ having the event (in our case, death) in the next time period compared with an individual with covariate values $\mathbf{Z}^*$. For example, if the hazard ratio of men versus women is 1.3, this means that men are 30% more likely to die during the next time interval than women.

Covariates used in Cox proportional hazards regression models can be quantitative or categorical. When categorical variables are used, a reference group must be specified and this is the group to which all other levels of the categorical variable are compared. For the current study, the reference group was generally selected because it was the most common group (for example, female was the reference group for sex). However, in a number of cases a reference group was selected because it had the shortest or longest survival times (for example, neoplasms had the shortest survival times amongst principal diagnoses). For integer variables (for example, age at admission) the interpretation of the hazard ratio is slightly different, with the hazard ratio comparing the hazard functions for a unit increment in the variable. For example, a hazard ratio of 1.05 for age at admission indicates that with each year increase in age at admission, there is an associated 5% increase in the probability of dying on a given day.

The estimated hazard ratios obtained from the regression model estimate the relative risk of death between two levels of the variable specified, while controlling for the presence of all other variables in the model. It should be noted that, as with all modelling, there may be other factors associated with survival following RAC admission for which we did not have information and so could not include in the model. Further, it is not possible to infer causation from the results of the model, and this can only be done on the basis of other knowledge.

Two models were used to examine differences in the relative risk of death for people entering permanent RAC:

- Model C: All people admitted to permanent RAC between 1 July and 31 December 2001 inclusive, using the variables state/territory of admission, age at admission, sex, marital status, EP group, region of RAC facility, source of admission (hospital or community), first time in RAC, RCS category on admission and location of ACAT assessment. Because we were testing 10 variables for inclusion into the model, an overall Type I error rate of 5% was maintained by using a Bonferroni adjustment (a Type I error is the probability of obtaining a statistically significant result when in fact, it is a non-significant result). Consequently, variables for which the statistical test had a p-value of less than 0.5% were included in the model.
- Model D: People entering permanent RAC from hospital between 1 July and 31 December 2001 inclusive, using the variables state/territory of admission, age at admission, sex, marital status, EP group, region of RAC facility, first time in RAC, RCS category on admission, location of ACAT assessment, hospital care type prior to discharge, length of hospital episode prior to discharge, principal diagnosis disease category and presence of other disease diagnoses. As in Model A, an overall Type I error rate of 5% was maintained by using a Bonferroni adjustment. Variables for which the statistical test had a p-value of less than 0.12% were therefore included in the model.

Results for these models are presented in Table F.1 and Table F.2. The models were fitted using unadjusted data.

Table F.1:Survival analysis results Model C: all people entering permanent RAC, 1 July–31 December 2001

Variable[(a)]	Level	Order of entry into model	Hazard ratio (95% confidence interval)			Number in group	Censored observations
						N	Per cent
Sex	Female (reference)	2	1.00		. .	15,508	53.0
	Male		1.53	***	(1.47 – 1.59)	7,581	41.7
Age	Year	3	1.03	***	(1.03 – 1.03)	23,089	49.3
Entry into RAC	Moving from community (including from respite RAC) (reference)	4	1.00		. .	13,498	54.9
	Moving from hospital		1.19	***	(1.13 – 1.24)	9,591	41.3
State/territory of RAC admission	New South Wales (reference)	9	1.00		. .	8,087	48.0
	Victoria		0.93	**	(0.89 – 0.97)	6,110	50.9
	Queensland		0.97		(0.92 – 1.02)	3,967	50.2
	Western Australia		0.95		(0.88 – 1.02)	1,958	51.1
	South Australia		0.99		(0.93 – 1.06)	2,187	46.7
	Tasmania		0.92		(0.81 – 1.03)	557	46.3
	Australian Capital Territory		0.91		(0.73 – 1.11)	193	52.8
	Northern Territory		1.95	**	(1.23 – 3.08)	30	33.3
RCS Category	RCS 1 (reference)	1	1.00		. .	4,301	30.3
	RCS 2		0.78	***	(0.75 – 0.82)	6,681	36.4
	RCS 3		0.59		(0.55 – 0.62)	3,921	47.3
	RCS 4		0.44	***	(0.39 – 0.49)	982	60.1
	RCS 5		0.34	***	(0.31 – 0.37)	2,048	68.8
	RCS 6		0.26	***	(0.23 – 0.28)	2,065	74.3
	RCS 7		0.22	***	(0.20 – 0.24)	2,593	76.4
	RCS 8		0.15	***	(0.11 – 0.20)	230	83.5
	RCS Missing–Low ACAT approval		1.45	**	(1.11 – 1.88)	113	48.7
	RCS Missing–High ACAT approval		9.58	***	(8.00 – 11.47)	155	15.5
First time in RAC	First time in RAC (reference)	8	1.00		. .	12,704	51.9
	Most recently in RAC permanent		0.93	**	(0.88 – 0.97)	7,120	41.2
	Most recently in RAC respite		0.92	**	(0.86 – 0.97)	3,265	56.9
EP group	Australia/EP1 (reference)	5	1.00		. .	19,911	48.6
	EP group2		0.91	*	(0.84 – 0.99)	1,166	53.6
	EP group3		0.84	***	(0.78 – 0.90)	1,847	53.5
	EP group4		0.64	*	(0.43 – 0.95)	61	60.7
	EP group unknown		1.08		(0.83 – 1.39)	104	43.3
Region of RAC facility	Major cities (reference)	7	1.00		. .	16,255	49.8
	Inner regional		1.08	**	(1.03 – 1.13)	4,954	47.6
	Outer regional		1.13	***	(1.05 – 1.21)	1,743	48.4
	Remote		0.99		(0.74 – 1.33)	108	55.6
	Very remote		0.54		(0.27 – 1.09)	29	72.4
Location of ACAT assessment	ACAT in hospital (reference)	6	1.00		. .	11,721	43.8
	ACAT at home		0.90	***	(0.85 – 0.94)	6,696	61.2
	ACAT in RAC		1.02		(0.97 – 1.09)	3,288	42.2
	ACAT Other/Missing		0.84	***	(0.77 – 0.91)	1,384	55.3
N	. .	. .	. .		. .	**23,089**	**49.3**

* Statistically significantly different from reference group at 5% level.

** Statistically significantly different from reference group at 1% level.

*** Statistically significantly different from reference group at 0.1% level.

. . Not applicable to the model.

(a) To achieve an overall Type I error rate of 5%, the significance level for each of the tests on the 10 variables included in the model building process was set to 0.5% using a Bonferroni adjustment. Marital status and several interactions (for example, age by sex) were tested for inclusion in the final model but were not statistically significant at the 0.5% level.

Table F.2: Survival analysis results Model D: people entering permanent RAC from hospital, 1 July–31 December 2001

Variable[(a)]	Level	Order of entry into model	Hazard ratio (95% confidence interval)		Number in group	Censored ob's
					N	%
	Female (reference)		1.00	. .	5,972	45.2
Sex	Male	1	1.38 ***	(1.31 – 1.46)	3,619	34.9
Age	Increments of 1 year	5	1.03 ***	(1.02 – 1.03)	9,591	41.3
State/territory of RAC admission	. .	. .	. .	. .	9,591	41.3
Region of RAC facility	. .	. .	. .	. .	9,591	41.3
RCS Category	RCS 1 (reference)	2	1.00	. .	2,157	28.0
	RCS 2		0.73 ***	(0.68 – 0.78)	3,410	34.5
	RCS 3		0.55 ***	(0.51 – 0.60)	1,846	43.6
	RCS 4		0.38 ***	(0.33 – 0.45)	393	57.5
	RCS 5		0.33 ***	(0.29 – 0.38)	622	64.8
	RCS 6		0.26 ***	(0.22 – 0.31)	518	68.3
	RCS 7		0.19	(0.16 – 0.23)	472	73.9
	RCS 8		0.12 ***	(0.05 – 0.33)	21	81.0
	RCS Missing–Low ACAT approval		1.65 *	(1.08 – 2.52)	35	37.1
	RCS Missing–High ACAT approval		5.74 ***	(4.65 – 7.08)	117	13.7
Care type in hospital	Acute (reference)	9	1.00	. .	4,789	38.3
	Rehab		0.88	(0.76 – 1.02)	1,005	53.7
	Palliative		1.70 ***	(1.41 – 2.05)	181	8.8
	GEM		0.93	(0.83 – 1.04)	866	47.0
	Psychogeriatric		1.22	(0.90 – 1.63)	101	51.5
	Maintenance		1.01	(0.91 – 1.11)	2,107	42.3
	Other/Unknown		1.03	(0.89 – 1.19)	542	40.8
Length of hospital episode	Less than one week (reference)	10	1.00	. .	951	41.4
	[1,4) weeks		1.03	(0.94 – 1.13)	4,401	39.9
	[4,8) weeks		1.00	(0.91 – 1.10)	2,628	40.9
	[8,12) weeks		0.82 ***	(0.72 – 0.93)	857	45.6
	12 weeks or more		0.78 ***	(0.68 – 0.89)	754	45.9

(continued)

Table F.2 (continued): Survival analysis results Model D: people entering permanent RAC from hospital, 1 July–31 December 2001

Variable[(a)]	Level	Order of entry into model	Hazard ratio (95% confidence interval)	Number in group	Censored ob's
				N	%
Principal diagnosis in hospital	Neoplasms (cancers and tumours) (reference)	3	1.00 . .	458	14.4
	Diseases of the circulatory system (excluding stroke and other cerebrovascular disease, ischaemic heart disease and diseases of the arteries)		0.52 *** (0.44 – 0.62)	384	31.5
	Diseases of the circulatory system: stroke		0.33 *** (0.28 – 0.39)	634	40.4
	Diseases of the circulatory system: cerebrovascular disease (excl stroke)		0.36 *** (0.23 – 0.54)	40	40.0
	Diseases of the circulatory system: ischaemic heart disease		0.44 *** (0.34 – 0.57)	114	33.3
	Diseases of the circulatory system: diseases of the arteries		0.33 *** (0.23 – 0.48)	52	38.5
	Mental and behavioural disorders (excluding dementia and related disorders)		0.24 *** (0.20 – 0.30)	309	58.9
	Mental and behavioural disorders: dementia and related disorders		0.27 *** (0.23 – 0.32)	553	43.2
	Injury, poisoning and other consequences of external causes (excluding injury caused by fall)		0.29 *** (0.22 – 0.39)	110	46.4
	Injury, poisoning and other consequences of external causes: injury caused by fall		0.28 *** (0.24 – 0.33)	686	41.7
	Diseases of the nervous system		0.25 *** (0.21 – 0.30)	529	45.6
	Diseases of the respiratory system (excluding COPD and influenza and pneumonia)		0.46 *** (0.36 – 0.59)	126	34.1
	Diseases of the respiratory system: COPD		0.69 *** (0.57 – 0.84)	213	23.0
	Diseases of the respiratory system: Influenza and pneumonia		0.41 *** (0.33 – 0.50)	187	32.6
	Diseases of the genitourinary system (excluding kidney failure)		0.30 *** (0.24 – 0.37)	200	40.5
	Diseases of the genitourinary system: Kidney failure		0.66 * (0.47 – 0.94)	45	20.0
	Diseases of the musculoskeletal system and connective tissue		0.31 *** (0.26 – 0.38)	275	44.0
	Diseases of the digestive system (excluding cirrhosis and other diseases of the liver)		0.40 *** (0.32 – 0.50)	175	36.0
	Diseases of the digestive system: cirrhosis and other diseases of the liver		0.69 (0.36 – 1.35)	15	40.0
	Diseases of the skin and subcutaneous tissue		0.31 *** (0.24 – 0.40)	130	41.5
	Infectious and parasitic diseases		0.36 *** (0.25 – 0.52)	47	29.8

(continued)

Table F.2 (continued): Survival analysis results Model D: people entering permanent RAC from hospital, 1 July–31 December 2001

Variable[(a)]	Level	Order of entry into model	Hazard ratio (95% confidence interval)					Number in group	Censored ob's
								N	%
Principal diagnosis in hospital (cont.)	Diseases of the blood and blood-forming organs and immunological disorders		0.45	***	(0.30	–	0.68)	32	18.8
	Endocrine, nutritional and metabolic diseases (excluding diabetes mellitus)		0.48	***	(0.36	–	0.64)	92	33.7
	Endocrine, nutritional and metabolic diseases: diabetes mellitus		0.42	***	(0.32	–	0.55)	87	24.1
	Factors influencing health status (excluding 'Awaiting admission elsewhere')		0.30	***	(0.25	–	0.35)	1,592	49.9
	Factors influencing health status: awaiting admission elsewhere		0.29	***	(0.25	–	0.34)	1,986	43.7
	Symptoms, signs and abnormal findings n.e.c.		0.32	***	(0.27	–	0.38)	492	43.3
	Other (including diseases of the ear and eye)/unknown		0.30	***	(0.18	–	0.50)	28	46.4
Additional diagnosis of neoplasms	Present	4	2.29	***	(2.08	–	2.52)	616	20.9
	Absent (reference)		1.00		. .			8,975	42.7
Additional diagnosis of kidney	Present	6	1.49	***	(1.36	–	1.630	758	27.2
	Absent (reference)		1.00		. .			8,833	42.5
Additional diagnosis of COPD	Present	7	1.37	***	(1.25	–	1.51)	670	27.3
	Absent (reference)		1.00		. .			8,921	42.4
Additional diagnosis of diseases of nervous system	Present	8	0.82	***	(0.77	–	0.88)	2,588	45.8
	Absent (reference)		1.00		. .			7,003	39.7
Additional diagnosis of the skin and subcutaneous tissue	Present	11	1.15	***	(1.07	–	1.23)	1,460	36.1
	Absent (reference)		1.00		. .			8,131	42.3
Additional diagnosis of diseases of arteries	Present	12	1.28	***	(1.12	–	1.45)	383	32.4
	Absent (reference)		1.00		. .			9,208	41.7
Total	. .							**9,591**	**41.3**

* Statistically significantly different from reference group at 5% level.

** Statistically significantly different from reference group at 1% level.

*** Statistically significantly different from reference group at 0.1% level.

. . Not applicable to the model.

(a) To achieve an overall Type I error rate of 5%, variables were included in the final model if they had a p-value less than 0.12%. This p-value was calculated using a Bonferroni adjustment for 42 multiple comparisons. Other model building information includes:

- State/territory and region of RAC facility were included in the final model, despite having a significance level higher than 0.12%, in order to control for variations in the provision of RAC services. The results of individual states and territories or regions are not presented.
- Variables indicating marital status, location of ACAT assessment, English proficiency group, first time in RAC, hospital sector, number of hospital diagnoses and presence of specific diseases as additional diagnoses were tested for inclusion in the final model but were not statistically significant at the 0.12% level. Several interactions (for example, age by sex) were tested but found to be not significant at the 0.12% level.

Appendix G: Suppression of small cells

Suppression of cell values based on a small number of cases can be required to:

a) maintain data confidentiality, and/or

b) avoid publishing statistics of very low accuracy.

In the current context, suppression of small cells is primarily required because of the second reason. Identification of individuals from the tabular data is extremely unlikely due to the limited information presented in the tables, and the known incompleteness of the identification of people moving from hospital to residential aged care.

Different suppression strategies are required depending on the type of information being presented and the number of small cells in the table. These are discussed below.

G.1 Derived statistics within table cells

Some tables contain statistics that relate only to the particular subgroup defined by the table cell (for example, mean length of stay). In this situation it is not possible to derive the value of one cell from other cells in the table. Examples include percentile values (for example, tables 3.18 and 3.19), ranks (diagnosis rank in table A.38) and prevalence estimates (for example, tables 6.5 and 6.8). Consequently, suppression is achieved by simply not publishing the affected cell's statistic.

For this publication, cells containing derived statistics based on fewer than 5 records are replaced by 'n.p.' Note that publication of a percentile value required at least 5 records above and below the percentile. The publication of a median, for example, therefore required at least 10 records, while the publication of a 90th percentile required at least 50 records.

G.2 Small cells within totals or subtotals > 1,000

G.2.1 A single small cell within totals

In some cases only a single cell in a set showing the distribution across subgroups (as in row per cents or totals and column per cents or totals) is based on a small number of cases. In this situation it is possible to derive the value of one cell from other cells in the table (for example, Table 3.23), and so suppressing the single cell does not achieve the required result. In this case, either:

- The small cell is combined with a larger cell if such combination is logical and does not lead to losing important information. This is done by collapsing two categories into one within the table.
- The two smallest cells are suppressed.

For this publication, where sensible, the first of the above approaches is taken (for example, for tabulations involving age group or region type such as tables 2.7 and A.17). If this is not possible, an upper limit for the percentages or numbers is presented (for example, in Table 3.23 for psychogeriatric care for people from outer regional areas moving to permanent

RAC). For numbers, that for the smallest cell is published as '<5', with that for the larger of the two smallest cells being rounded up to lose 1 significant figure and presented as an upper limit (for example, '14' would be published as '<20'). For percentages, that for the smallest cell is presented as an upper limit and published as '<x%', where x is the percentage if there were 5 records. The percentage for the larger of the two smallest cells is based on the adjusted rounded number and also presented as an upper limit, published as '<y%'.

G.2.2 Several small cells within totals

When several cells in a set showing the distribution across subgroups (as in row per cents or totals and column per cents or totals) are based on a small number of cases, suppressing all the affected cells achieves both a) and b) above. In this case, published percentages for all the small cells are based on 5 records, and the resulting common percentage is presented as an upper limit (published as '<x%'). For numbers, these cells are all published as '<5'. Table 3.23 provides several examples of this scenario.

Note that in extreme cases, the majority of cells in a row or column in a table may be affected by small numbers so that suppression of these cells would lead to leaving very little useful information (see, for example, the 'NT' column in Table 5.1). As a consequence, the entire row or column is suppressed and replaced by 'n.p.'. Row and/or column suppression in such tables is treated on a case-by-case basis.

G.3 Small cells within totals or subtotals ≤ 1,000

G.3.1 Percentages for small cells

When a subtotal or total is less than or equal to 1,000 and percentages are rounded to 1 decimal point, the exact size of all cells is able to be derived when column or row totals are also presented. The following suppression methods are used when a table contains at least one small cell based on totals (or subtotals) of less than 1,000 records:

- Two small cells (<5 records) and at least one other non-zero cell — the two small cells are set to 5 and the corresponding percentages are presented as '<x%', where x is the percentage if there were 5 records (for example, Table 3.23) (as above in Section G.2.2).
- Two non-zero cells only, with one small cell — the small cell is set to 5 and presented as '<x%', where x is the percentage if there were 5 records. The larger cell is rounded down by the same amount that the small cell is adjusted up to reach 5 and is presented as a lower limit '>y%'. This method is also used to prevent small cell size calculation by subtraction (for example, in Table 3.15, values for diseases of the ear and mastoid process are affected by values for congenital malformations).
- Two non-zero cells with one small cell and at least one null cell contributing to a total or subtotal— the small cell and one of the null cells are adjusted to 5 and presented as '<x%', where x is the percentage if there were 5 records. The larger cell remains unchanged. Even if the number of records across the two adjusted cells is equal to 1, the uncertainty of which cell contains the record is sufficient to achieve suppression (no examples in this publication).

When one small cell within a row or column with subtotals or totals of 1,000 records or less is adjusted, the value of the next smallest group within that total is also suppressed to prevent calculation of the small cell by subtraction. In these cases, the above rules regarding suppression are used to determine the particular approach (see Table 3.14 for an example).

G.3.2 Totals or subtotals based on less than 20 records

When a total or subtotal is less than 20 records and contains one or several small cells (<5), it may not be sensible to present adjusted percentages. If only two cells are non-zero and one of them is small, then a decision to suppress is based on whether there is a statistically significant difference between the two percentages. In the case of two non-zero cells only, the smaller percentage is tested for statistical significance against a percentage of 50% using the cumulative binomial distribution function. Table G.1 shows the maximum cell size allowed in the smaller of the two groups for the split to be statistically significant. For example, if a population of 15 is split into two groups, there would need to be no more than 3 in the smaller group for the split to be considered unlikely to have happened purely due to chance. For totals and subtotals of less than 20, cells of less than 5 can occur by chance even when there is a 50:50 chance of being in either category. Data for samples of between 20 and 50 are also given in Table G.1 to illustrate the cell sizes required for splits to be significantly different from 50:50 in such cases.

For totals and subtotals under 20, if the smaller proportion is statistically significantly different to 50% at the 5% level, the cells are adjusted and presented as '<x%' and '>y%' as described above (for example, see the Transfer into respite: remote and very remote group in Table 4.5). Otherwise, both cells are presented as 'n.p.'. There is, however, an exception: if the total or subtotal is 10 or fewer, even an adjusted split cannot be published as this would imply that the smaller cell had a single contributor. The application of these rules is shown in the last two columns in Table G.1.

Where more than two cells are non-zero and at least one cell is small (<5) (for example, Table 5.1), suppression is achieved on a case-by-case basis by rounding subtotal percentages and presenting small cell values as 'n.p.' as necessary, starting from the most aggregated level to decide whether a cell value is publishable.

Table G.1: Identifying significant two-way splits when total is based on less than 50 records

Population size	95% cut-off[(a)]: maximum observed number with characteristic in the smaller group	Closest significant split (95% significance) per cent : per cent	If one cell is small, then publish as:	
			Smaller cell	Larger cell
10	1	10.0 : 90.0	n.p.	n.p.
11	2	18.2 : 81.8	<45.5	>54.5
12	2	16.7 : 83.3	<41.7	>58.3
13	3	23.1 : 76.9	<38.5	>61.5
14	3	21.4 : 78.6	<35.7	>64.3
15	3	20.0 : 80.0	<33.3	>66.7
16	4	25.0 : 75.0	<31.3	>68.8
17	4	23.5 : 76.5	<29.4	>70.6
18	5	27.8 : 72.2	<27.8	>72.2
19	5	26.3 : 73.7	<26.3	>73.7
20	5	25.0 : 75.0	<25.0	>75.0
25	7	28.0 : 72.0	<20.0	>80.0
30	10	33.3 : 66.7	<16.7	>83.3
35	12	34.3 : 65.7	<14.3	>85.7
40	14	35.0 : 65.0	<12.5	>87.5
45	16	35.6 : 64.4	<11.1	>88.9
50	28	36.0 : 64.0	<10.0	>90.0

(a) The 95% cut-off is the number of observed records within a particular population size at or below which the binomial cumulative distribution function is less than 5% when the population probability of having a characteristic is assumed to be 50%. That is, observed numbers at or below the cut-off level indicate that the observed proportion is statistically significantly less than 50%. Note that there will always be a statistically significant difference at the 95% level when small cells (<5) occur within a population size of 18 or more.

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