

Only simple analyses have been presented above. However, using the linked data and more sophisticated analytical tools (for example, logistic regression or log linear modelling) a range of questions can be addressed. These include such matters as:

- How is the likelihood of transfer of older people from hospital to residential care instead of returning to the community associated with diagnosis, type of episode (acute care/non-acute care/rehabilitation), length of stay in hospital, marital status and usual accommodation, controlling for age and sex. Are there differences between regions (however defined) in the likelihood of transfer?
- How do people in aged care who have been transferred from hospital differ from those who came from the community with regard to sex, age and dependency levels. Are there differences between regions (however defined) in the variation between these two groups?
- How does length of stay in hospital for people who transfer to aged care vary with demographic factors, level of provision of residential aged care places, dependency levels, presence of dementia, diagnosis and episode type? Are there differences between regions (however defined) in length of stay after controlling for all these factors?
- How does length of stay in residential aged care vary with demographic factors, whether people come from hospital, level of provision of residential aged care places and dependency levels? Are there differences between regions (however defined) in length of stay after controlling for all these factors?

## 8 Data development

As stated in Section 5.4, revision of the current 'mode of separation' data item in the hospital morbidity collection, and the creation of a new variable in the residential aged care collection which indicates where the resident has come from would be an important first step towards improving national information on the movements of clients between the residential and acute care sectors. To this end, draft data definitions have been developed and are presented below. Development and implementation of these items would provide greatly improved information on the size of client flows between the two sectors, and facilitate statistical linkage by providing variables which would allow more accurate targeting of the linkage process.

The draft definitions given below are presented in the standard national template for data element specifications as used in national data dictionaries and national minimum data sets, for example, the *National Health Data Dictionary* (AIHW 2001a). Before the draft items are put forward for implementation, interested parties will need to be consulted to ensure that the new items are both useful and collectable.

## 8.1 Mode of separation (hospital)

The definition of this data element is currently included in the *National Health Data Dictionary* (NHDD). Currently, this data element is reported as part of the following National Minimum Data Sets (NMDS):

- Admitted patient care
- Admitted patient mental health care
- Admitted patient palliative care

This data element is collected at each hospital (including public and private acute and psychiatric hospitals and free standing day hospital facilities) from patient administrative and clinical record systems. Hospitals forward data to the relevant state or territory health authority on a regular basis (for example, monthly). State and territory health authorities provide the data to AIHW for national collation on an annual basis. The statistical unit is an episode of care for an admitted patient, rather than an individual patient. One person may have more than one episode of care during a continuous hospital stay.

*Mode of separation* as it is currently specified does not, however, identify all movements from hospital to residential aged care. Discharges to residential aged care are only separately identified where it is a new admission to residential aged care. Persons returning to a residential aged care service following a hospital admission are regarded as returning to their usual accommodation, and are therefore currently coded to Other (code 9). In the absence of further information on the person's usual accommodation prior to admission to hospital, it is not possible to identify whether persons have been discharged to a residential aged care service.

In order to identify all discharges to residential aged care it is necessary to identify separately persons whose usual accommodation is in a residential aged care service from all other discharges to usual accommodation. The suggested amendment to *Mode of separation* requires the addition of one code to the data domain, to identify persons returning to a residential aged care service where a residential aged care service was their usual residence prior to admission to hospital.

*Mode of separation* is suggested as the most appropriate data element for the collection of information on movements between hospital and residential aged care. It is an established data element in the three major admitted patient data collections, ensuring comprehensive coverage of the population of concern. It requires only a minor addition to the data domain in order to identify all discharges to residential aged care.

A further data item, Z75.11 of the ICD-10-AM Third Edition, was considered with regard to its potential to identify client flows between sectors of care. This data item identifies a 'Person awaiting admission to an(other) residential aged care service'. It is considered that, while this data item would facilitate analysis of the incidence of persons accommodated in hospital who are waiting to be admitted to residential aged care, it does not identify the destination of persons at discharge, and cannot therefore provide an accurate measure of direct client flows between hospital and residential aged care. That is, while a person may be identified as awaiting admission

to residential aged care, it does not necessarily follow that they will be directly admitted to residential aged care upon discharge from hospital.

## Mode of separation

**Admin. Status:** CANDIDATE

### Identifying and definitional attributes

**Data element type:** DATA ELEMENT

**Definition:** Status at separation of person (discharge/transfer/death) and place to which person is released (where applicable).

**Context:** Required for outcome analyses: for analyses of inter-sectoral patient flows and to assist in the continuity of care and classification of episodes into Diagnosis Related Groups.

### Relational and representational attributes

**Data type:** Numeric **Representational form:** Code

**Field size:** **Min:** 1 **Max:** 1 **Representational layout:** N

- Data domain:**
- 1 Discharge/transfer to an(other) acute hospital
  - 2 Discharge to a residential aged care service, where a residential aged care service is *not* the usual place of residence
  - 3 Discharge to a residential aged care service, where a residential aged care service *is* the usual place of residence
  - 4 Discharge/transfer to an(other) psychiatric hospital
  - 5 Discharge/transfer to other health care accommodation (includes mothercraft hospitals)
  - 6 Statistical discharge—type change
  - 7 Left against medical advice/discharge at own risk
  - 8 Statistical discharge from leave
  - 9 Died
  - 10 Other (includes discharge to usual residence/own accommodation/welfare institution (includes prisons, hostels and group homes providing primarily welfare services). Excludes residential aged care services).

**Guide for use:** For Code 5—In jurisdictions where mothercraft facilities are considered to be acute hospitals, patients separated to a mothercraft facility should have a mode of separation of Code 1.

**Related data:** is supplemented by Source of referral to public psychiatric hospital, version 3

is supplemented by Source of referral to acute hospital or private psychiatric hospital, version 3

supersedes Mode of separation, version 2

is used in the derivation of Diagnosis related group, version 1

## Administrative attributes

**Source organisation:** National Health Data Committee

**National minimum data sets:**

Admitted patient care	from 1/07/2000 to
Admitted patient mental health care	from 1/07/2000 to
Admitted patient palliative care	from 1/07/2000 to

**Comments:** This data element identifies all discharges to residential aged care. In addition, it separately identifies discharges which are new admissions to residential aged care and discharges which are persons returning to residential aged care.

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## Implementation

Any proposed changes to the current definition need to be considered by the National Health Data Committee (NHDC) and endorsed by the National Health Information Management Group (NHIMG). These two bodies have been established under the National Health Information Agreement. The Commonwealth Department of Health and Ageing and health departments in each State and Territory are signatories to the Agreement and are represented on both the NHDC and NHIMG. The ABS, the AIHW and the Health Insurance Commission are also signatories and are represented on both groups.

In the first instance, a proposal recommending changes to the current version of the definition needs to be put to the NHDC. This proposal needs to include a description of the source of the recommendation (in this case the AHMAC Care of Older Australians Working Group), and a detailed rationale for change that indicates the benefits to be gained and that justifies the inevitable cost of implementation. The proposal needs to be auspiced by one or more members of NHDC who will speak to the proposal at the NHDC meeting.

The NHDC will consider the merits of the proposal and the impact the recommended changes would have on the three NMDSs that use it. The NHDC also assesses the impact of the proposed changes on the definition of any other data elements in the NHDD to which *Mode of separation* is related to ensure that the coherence and internal consistency of the NHDD and NMDSs is not adversely affected. NHDC may suggest modifications to the proposed changes and refer the matter to the originating group (that is, the AHMAC Care of Older Australians Working Group) for their consideration. Once the proposed changes have been agreed by the NHDC, the new version of the data element definition is submitted to

NHIMG for their endorsement as part of a package of changes/additions for the next version of the NHDD.

Currently, the NHDD is released annually (usually around April). The NHDC recommends that any proposal for a change to the NHDD should be referred to it for consideration as early as possible. This allows time for adequate consideration by all jurisdictions. The NHDC usually meets three or four times a year and encourages those submitting proposals for changes to the NHDD to submit their proposal in time for consideration at their mid-year meeting (usually July/August). Final recommendations are made by the NHDC at their October meeting and decisions about the content of the next edition of the NHDD are usually made by NHIMG towards the end of the calendar year (November/December) for implementation from the following July.

Since the acceptance and implementation of a revision to the data item *Mode of separation* may take some time, it is suggested that in the meantime jurisdictions provide additional information and/or training to hospital staff with regards to coding patient transfers to residential aged care services.

## **8.2 Accommodation setting prior to admission to residential aged care**

To measure accurately client flows between sectors of care a reliable measure of a person's accommodation setting immediately prior to entering residential aged care is required. At present, there is no information collected within the residential aged care program on the setting in which a person is accommodated immediately preceding entry to residential aged care. The only information collected on a person's accommodation setting is the accommodation setting in which the ACAT assessment took place, and the person's usual accommodation setting during the past two years. Both these items are collected on the Aged Care Application and Approval Form (2624). As in the preceding analysis, accommodation setting in which the ACAT assessment took place has often been used as a proxy measure of a person's accommodation setting immediately prior to admission to residential aged care. In particular, ACAT assessments that occurred in a hospital setting have been taken as an indication that the person has been admitted from hospital. However, the setting in which the ACAT assessment took place is not a reliable indicator of accommodation setting immediately prior to admission. An ACAT assessment is valid for a period of 12 months, and the person may have moved during the period between assessment and admission, for example, from home to hospital. In addition, the person may have only been temporarily located in the accommodation setting in which the ACAT assessment took place.

Three data elements related to accommodation setting are currently included in the *National Health Data Dictionary*, Version 10, 2001, and the *National Community Services Data Dictionary*, Version 2, 2000 (AIHW 2000). *Type of accommodation* and *Type of usual accommodation* in the *National Health Data Dictionary* are used in the Admitted Patient Mental Health Care National Minimum Data Set. Both these data elements refer to the type of accommodation in which the person usually lives, rather than

immediately prior to admission to care. That is, as for the accommodation setting in which the ACAT assessment took place, the person may not be located in their usual accommodation setting immediately prior to admission to residential aged care. In addition, these data elements do not allow the separate identification of people located in an acute care setting or people located in another residential aged care service. *Residential setting*, included in the *National Community Services Data Dictionary*, is defined generally as the setting in which a person resides, and not necessarily immediately prior to admission. In addition, it only distinguishes between private settings, community-based settings and institutional settings and as such does not allow the separate identification of persons in acute care settings or in residential aged care.

The data element *Accommodation setting prior to admission to residential aged care* has been drafted to provide a reliable and useful measure of a person's accommodation setting immediately prior to admission to residential aged care and is suggested for inclusion in the residential aged care program data collection. The data element provides information not only on the type of accommodation but also on the type of care the person is receiving. The data element has been defined to be the setting in which the person was accommodated *immediately* prior to entry to a residential aged care service. The data domain is based on the data domain for the data element *Residential setting* in the NCSDD, and is consistent with this national standard. In addition, the data domain incorporates the data domain of the data element *First face-to-face contact setting* used in the Aged Care Assessment Program (ACAP), and this will facilitate the comparison of data and understanding of client movements between assessment and entry to residential care. However, in comparison to the data elements *Residential setting* and *First face-to-face contact setting*, the proposed data element *Accommodation setting prior to admission to residential aged care* further defines persons living in private settings, community-based settings and institutional settings, and additionally identifies whether persons accommodated in private settings are in receipt of formal care services. The type of care received by persons accommodated in institutional settings (Hospital (acute care), Other inpatient settings, Residential aged care service (Codes 4,5, and 6)) and in Supported community-based accommodation (Code 3) is implicit in the type of accommodation. To ensure comprehensive information on the residential aged care population and client flows between acute care and residential aged care, it is recommended that this data element be collected on the Resident Entry Record (Form 2721) which is completed by a residential aged care service for each new resident at admission. This includes persons who transfer from another residential aged care service and persons on leave from another service to receive temporary higher care. The only persons for whom this data element would not be collected are persons returning to the same residential aged care service after a period of leave, such as leave to receive care in hospital. However, information on persons returning to the same residential aged care service after a period of leave is available from the Residential Aged Care Payment Claim Form which records the beginning and end dates of the period of leave and the reason for the leave.

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## Accommodation setting prior to admission to residential aged care

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**Admin. Status:** CANDIDATE

### Identifying and definitional attributes

**Data element type:** DATA ELEMENT

**Definition:** The setting in which the person was accommodated immediately prior to admission to residential aged care.

**Context:** Permits analysis of the setting in which a person is accommodated immediately prior to admission to residential aged care. *Accommodation setting prior to admission* is distinct from *Type of accommodation* and *Type of usual accommodation* in the *National Health Data Dictionary*, Version 10, 2001, and from *Residential setting* in the *National Community Services Data Dictionary*, Version 2, 2000, as they record the type of accommodation in which a person usually resides. A person may not be accommodated in their usual place of residence immediately prior to admission.

Identification of accommodation setting immediately prior to admission to residential care facilitates analysis of movements between types of care.

### Relational and representational attributes

**Data type:** Numeric **Representational form:** Code

**Field size:** **Min:** 1 **Max:** 1 **Representational layout:** N

**Data domain:**

- 1 Private setting—receiving formal services
- 2 Private setting—not receiving formal services
- 3 Supported community-based accommodation
- 4 Hospital (acute care)
- 5 Other inpatient setting
- 6 Residential aged care service
- 7 None/homeless/public place
- 8 Other
- 9 Not stated/inadequately described (*not for use in primary data collections*)

**Guide for use:**

- 1 **Private setting—receiving formal services:** Includes private residences (such as houses, flats, units, caravans), boarding houses, private hotels, in which the person receives any support—regardless of the level of support received— from either staff or volunteers of formal support services, such as delivered meals, home help, personal care.
- 2 **Private setting—not receiving formal services:** Includes private residences (such as houses, flats, units, caravans), independent living in a retirement village, boarding houses, private hotels, in which the person does not receive any support from formal support services.

The person may receive informal care for which the informal carer does not receive payment other than a pension or benefit (excludes volunteers arranged by formal support services).

- 3 **Supported community-based accommodation:** Includes community living settings or accommodation facilities in which the person receives support—regardless of the level of support received— from either staff or volunteers of formal support services, such as delivered meals, home help, personal care, live-in or rostered support workers. Includes supported living in a retirement village, group homes and hostels for people with disabilities, cluster apartments where a support worker lives on site, community residential apartments, congregate care arrangements, and Supported Residential Services/Facilities (Victoria and South Australia only).
- 4 **Hospital (acute care):** Includes patients in hospital (public or private) classified by the hospital as 'acute care' patients.
- 5 **Other admitted patient setting:** Includes settings other than hospital acute care in which the person is an admitted patient receiving overnight care, admitted patients in extended care or rehabilitation facilities or other non-acute wards/beds in a hospital.
- 6 **Residential aged care service:** Includes all government funded residential aged care services (formerly nursing homes and aged care hostels), multi purpose services or multi purpose centres and Indigenous flexible pilots, regardless of the level of care received by the person or whether the person is a permanent or respite resident. Includes persons transferring from one Residential aged care service to another and persons on leave from another Residential aged care service for temporary provision of a higher level of care.
- 8 **Other:** Includes short-term crisis, emergency or transitional accommodation (such as night shelters, refuges, hostels for the homeless, halfway houses) which are not intended to function as permanent or ongoing accommodation options although some form of support may be provided.

**Collection methods:**

This data element should be recorded for all persons admitted to a residential aged care service, and for each admission to a service as a person may be admitted more than once in any period.

This data element is a proposed data element for the residential aged care program data collection. Currently, there is no data element in the residential aged care program data collection which records a persons accommodation setting immediately prior to admission to a residential aged care service.

The Resident Entry Record (Form 2721) is recommended as the most appropriate method to collect this data element. A Residential aged care service is required to complete a Resident Entry Record for all new persons entering a residential aged care service, including persons who transfer from another Residential aged care service, and persons on leave from another service to receive temporary higher care. Details from the Resident Entry Record are stored on the Aged and Community Care Management Information System held by the Department of Health and Ageing.

The only persons for whom this data element would not be collected are persons returning to the same Residential aged care service after a period of leave, such as leave to receive care in hospital. Information on persons returning to a Residential aged care service from a period of leave would be available from the Residential Aged Care Payment Claim Form which records the beginning and end dates of the period of leave and the reason for the leave.

**Related data:**

**Administrative attributes**

**Source document:**

**Source organisation:**

**Comments:** Currently, the only information collected on a persons accommodation setting is the setting in which the ACAT assessment occurred, and this has been used as a proxy measure of the persons accommodation setting immediately prior to admission to residential aged care. This is not a reliable indicator as the ACAT assessment is valid for a period of twelve months and the person may have been temporarily located in the setting where the ACAT assessment took place, or may have moved in the intervening period between assessment and admission.

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**Implementation**

This data element is not currently included in the NHDD. However, it could be a candidate for inclusion in future versions of either the NHDD or the *National Community Services Data Dictionary* (NCSDD), or both. The NCSDD is supported by structures and processes that parallel those in the health sector (that is, NCSDC, NCSIMG). At present, NCSIMG recognises and receives submissions from an established expert working group—Aged and Community Care Data Advisory Group (ACCDAG, Chaired by Warwick Bruen, Assistant Secretary, Community Care Branch, Department of Health and Ageing).

This data element is designed for inclusion on the Resident Entry Record (Form 2721) which is a Department of Health and Ageing form that is completed by a residential aged care service for each new resident at admission. This information would then be routinely entered onto the Department’s residential aged care system (SPARC) and stored on ACCMIS (Aged and Community Care Management Information System). Information on ACCMIS is made available to the AIHW, and the AIHW currently analyses the data and publishes annual reports on residential aged care.

Changes to the Resident Entry Record are within the control of the Department and can be made without reference to any other authority. However, given the significance of the work of the AHMAC Care of Older Australians Working Group and the relevance of the data beyond the processing of payments for residential aged care services, it is appropriate to submit this data element definition for inclusion as a national standard in the NHDD. This would add coherence to the inclusion of the revised version of *Mode of separation* in the NHDD. This data element would also be

of interest to the community services sector and could be submitted (possibly via ACCDAG) for inclusion in the next version of the NCSDD (Version 3 is due for release in 2003) which already includes many aged and community care definitions (for example, for the HACC minimum data set). As with the NHDC/IMG processes, the NCSDC considers the merits of proposed additions or changes to the National Community Services Data Dictionary. When agreed by NCSDC, the proposal is submitted to NCSIMG as part of a package of changes to the Data Dictionary.

### 8.3 Other developments

The data items described above will facilitate the analysis of flows between the hospital and residential aged care sectors. However, as always, there is room for further improvement within the data collections. The analysis in this report is based on 1999–00 data, and since that time there have been a number of data developments. For example, the data item ‘care type’ (called ‘episode type’ in the hospital morbidity data) was refined for the tenth edition of the *National Health Data Dictionary*. In addition, as stated before, the third edition of ICD–10–AM (in use from 1 July 2002) includes a new diagnosis code which indicates whether a patient is waiting to get into residential aged care (Z75.11). However, limitations still remain.

Consider the issue of total time spent in hospital as opposed to the length of stay for separate episodes of care within a hospital stay. With respect to the current analysis, within the hospital morbidity data it was not possible to identify which episodes were for a particular person as that person changed from, for example, an acute care episode to a rehabilitation episode during a continuous stay in hospital. Inability to link these episodes led to the deletion of all but the person’s last episode from the analysis. As a result, length of hospital stay derived for analyses such as those presented above does not reflect the total length of stay for people who changed episode type during their treatment in hospital. Across the jurisdictions included in this study, in 1999–00 around 2% of all hospital separations were statistical discharges (Table A35). The inclusion of a patient identifier which could be used to amalgamate episodes within a hospital stay would overcome this problem.

There may be other changes to the hospital and residential aged care data sets which would facilitate the examination of the interface between the two sectors. For example, the introduction of a variable in the hospital morbidity data which shows where people were admitted from could aid in studies of the movement of people from the community and residential aged care into hospital. Such an item could be modelled on the proposed data item *Accommodation setting prior to admission to residential aged care*. A more detailed review than has been possible in this study may point to further data developments that would improve the data sets’ capacity to report on program interfaces and on system level performance.