

HEALTH SERVICES SERIES

Number 21

# **Report on the evaluation of the National Minimum Data Set for Admitted Patient Care**

**2003**

Australian Institute of Health and Welfare  
Canberra

and

National Health Information Management Group

AIHW cat. no. HSE 29

© Australian Institute of Health and Welfare 2003

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced without prior written permission from the Australian Institute of Health and Welfare. Requests and enquiries concerning reproduction and rights should be directed to the Head, Media and Publishing Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601.

This publication is part of the Australian Institute of Health and Welfare's Health Services Series. A complete list of the Institute's publications is available from the Media and Publishing Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601, or via the Institute's web site (<http://www.aihw.gov.au>).

ISSN 1036-613X

ISBN 1 74024 349 8

### **Suggested citation**

Australian Institute of Health and Welfare (AIHW) 2003. Report on the evaluation of the National Minimum Data Set for Admitted Patient Care. AIHW cat. no. HSE 29. Canberra: AIHW (Health Services Series no. 21).

### **Australian Institute of Health and Welfare**

Board Chair  
Dr Sandra Hacker

Director  
Dr Richard Madden

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

Hospitals and Mental Health Services Unit  
Australian Institute of Health and Welfare  
GPO Box 570  
Canberra ACT 2601

Phone: (02) 6244 1000  
Email: [hospitaldata@aihw.gov.au](mailto:hospitaldata@aihw.gov.au)

Published by Australian Institute of Health and Welfare  
Printed by Elect Printing

# Contents

List of tables .....	iv
Acknowledgments .....	vii
Abbreviations.....	viii
Summary and recommendations.....	1
1 Introduction .....	19
2 Methodology.....	23
3 Evaluation of utility .....	27
4 Compliance evaluation.....	38
5 Comments on data elements .....	143
Appendix 1: Survey of users and data collectors for the evaluation of the National Minimum Data Set for Admitted Patient Care.....	185
Appendix 2: Survey respondents.....	201
Appendix 3: Sex-procedure edits provided by Victorian Department of Human Services.....	203

# List of tables

Table 3.1:	Respondent types.....	27
Table 3.2:	Purposes for which the NMDS specifications and NMDS-based data are being used, by user group.....	30
Table 3.3:	Respondents' rating of overall knowledge of the NMDS specifications and NMDS-based data.....	31
Table 3.4:	Respondents' rating of their frequency of use of the NMDS specifications and NMDS-based data.....	31
Table 3.5:	Respondents' rating of the importance and usefulness of the NMDS and individual data elements and data element concepts.....	33
Table 4.1:	Coverage of hospitals in the National Hospital Morbidity Database, by hospital sector and state and territory, 2000-01.....	39
Table 4.2:	Differences between private hospital separations reported to the National Hospital Morbidity Database and the ABS Private Health Establishments Collection, 1993-94 to 2000-01.....	40
Table 4.3:	National summary of the use of the <i>National Health Data Dictionary</i> definition and domain values and NMDS scope.....	43
Table 4.4:	State and territory summary of the use of the <i>National Health Data Dictionary</i> definition and domain values and NMDS scope, all hospitals.....	45
Table 4.5:	State and territory summary of the use of the <i>National Health Data Dictionary</i> definition and domain values and NMDS scope, public hospitals.....	46
Table 4.6:	State and territory summary of the use of the <i>National Health Data Dictionary</i> definition and domain values and NMDS scope, private hospitals.....	46
Table 4.7:	Use of supplementary ASCCSS and SACC codes for inadequate data (codes commencing with '000').....	60
Table 4.8:	Use of the 'Not stated' data domain, by state and territory.....	64
Table 4.9:	Number of separations with invalid sex and diagnosis/procedure combinations, by state and territory.....	68
Table 4.10:	Separations for which an external cause code in the range V01-Y34 was not accompanied by an activity when injured code, by sector and state and territory.....	82
Table 4.11:	Separations with an external cause code in the range V01-Y34 and an activity when injured code of Y93.8 <i>Other specified activity</i> , by sector and state and territory.....	83

Table 4.12: Separations with an external cause code in the range V01–Y34 and an activity when injured code of Y93.9 <i>Unspecified activity</i> , by sector and state and territory .....	83
Table 4.13: The number of diagnosis codes provided, including the principal diagnosis code, by state and territory .....	85
Table 4.14: Use of the ‘ <i>Unknown</i> ’ data domain for care type, by state and territory .....	88
Table 4.15: Provision of linked external cause and diagnosis codes, by state and territory .....	92
Table 4.16: Separations for which there was a diagnosis of injury or poisoning but an external cause code was not reported, by sector and state and territory .....	93
Table 4.17: The maximum number of external cause codes (excluding place and activity codes) provided, by state and territory .....	94
Table 4.18: Separations where age was less than 365 days and/or Care type = 7.0 <i>Newborn</i> and ‘ <i>Infant weight, neonate, stillborn</i> ’ was missing, by state and territory .....	97
Table 4.19: Separations for which an external cause code in the range V01–Y89 was not accompanied by a place of occurrence code, by sector and state and territory .....	102
Table 4.20: Separations with an external cause code in the range V01–Y89 and a place of occurrence code of Y92.8 <i>Other specified place of occurrence</i> , by sector and state and territory .....	103
Table 4.21: Separations with an external cause code in the range V01–Y89 and a place of occurrence code of Y92.9 <i>Unspecified place of occurrence</i> , by sector and state and territory .....	103
Table 4.22: Separations for which a principal diagnosis was not reported, by sector and state and territory .....	106
Table 4.23: Separations for which there was no procedure or a procedure was not reported, by state and territory .....	108
Table 4.24: The maximum number of procedures reported, by state and territory .....	109
Table 4.25: Use of the ‘ <i>Unknown</i> ’ data domain for admitted patient election status, by state and territory .....	111
Table 4.26: Use of the ‘ <i>Unknown</i> ’ data domain for compensable status, by state and territory .....	113
Table 4.27: Use of the ‘ <i>Unknown</i> ’ data domain for Department of Veterans’ Affairs patient, by state and territory .....	115
Table 4.28: Use of the ‘ <i>Unknown</i> ’ data domain for hospital insurance status, by state and territory .....	117

Table 4.29: Use of the ' <i>Unknown</i> ' data domain for intended length of hospital stay, by state and territory .....	119
Table 4.30: Use of the ' <i>Not reported</i> ' data domain for inter- hospital contracted patients, by state and territory .....	121
Table 4.31: Use of the ' <i>Unknown</i> ' data domain for Medicare eligibility status, by state and territory .....	123
Table 4.32: Use of the ' <i>Unknown</i> ' data domain for mode of admission, by state and territory .....	127
Table 4.33: Use of the ' <i>Unknown</i> ' data domain for mode of separation, by state and territory .....	130
Table 4.34: Use of unique establishment identifiers/ person identifiers, by state and territory .....	134
Table 4.35: Use of the ' <i>Unknown/not reported</i> ' data domain for urgency of admission, by state and territory .....	141

# Acknowledgments

This report would not have been possible without the valued cooperation of survey respondents from public health authorities, health research facilities and providers of private health services. The Australian Institute of Health and Welfare thanks the Australian Hospital Statistics Advisory Committee for its assistance in the preparation of this report. Members of the Committee were:

- Ching Choi (AIHW) (Chair)
- John Agland (Department of Health, NSW)
- Paul Basso (Department of Human Services, SA)
- Jo Bothroyd (Australian Government Department of Health and Ageing's National Hospital Cost Data Collection)
- Ron Casey (ABS)
- Mike Clarke (Department of Health and Community Care, ACT)
- Paul Collins (Private Health Insurance Administration Council)
- Sue Cornes (Queensland Health)
- Stephen Duckett (invited expert)
- Indra Gajanayake (Department of Health and Ageing)
- Shannon Hewlett (National Centre for Classification in Health)
- Chris Kelman (Department of Health and Ageing)
- Amanda Lanagan (Department of Health and Community Services, NT)
- Lynette Lee (Clinical Casemix Committee of Australia)
- Paul Mackey (Australian Private Hospitals Association Limited)
- Ric Marshall (Department of Human Services, Vic)
- Tony Sansom (Department of Health and Human Services, Tas)
- Tony Satti (Department of Health, WA)
- Nick Shiraev (Department of Health, NSW)
- Bill Weir (Australian Government Department of Veterans' Affairs).

Within the Institute, the report was prepared by Bree Cook, Angela Frino and Jenny Hargreaves, with assistance from Alannah Smith. Ainsley Morrissey coordinated the printing and publication process.

# Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AHMAC	Australian Health Ministers Advisory Council
AHSAC	Australian Hospital Statistics Advisory Committee
AIHW	Australian Institute of Health and Welfare
AR-DRG	Australian Refined Diagnosis Related Group
ANZICS	Australian and New Zealand Intensive Care Society
APACHE	Acute Physiology And Chronic Health Evaluation
ASCCSS	Australian Standard Classification of Countries for Social Statistics
ASGC	Australian Standard Geographical Classification
BMI	Body mass index
DRG	Diagnosis Related Group
HITH	Hospital in the home
HUCS	Hospital Utilisation and Costs Study
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, 10th revision, Australian modification
ICU	Intensive care unit
MDC	Major Diagnostic Category
NAGATSIHID	National Advisory Group for Aboriginal and Torres Strait Islander Health Information and Data
NCCH	National Centre for Classification in Health
NHDC	National Health Data Committee
NHDD	<i>National Health Data Dictionary</i>
NHIMG	National Health Information Management Group
NMDS	National Minimum Data Set
NSW	New South Wales
NT	Northern Territory
OHS	Occupational health and safety
Qld	Queensland
SA	South Australia
SACC	Standard Australian Classification of Countries
SLA	Statistical Local Area
Tas	Tasmania
Vic	Victoria
WA	Western Australia

# Summary and recommendations

The evaluation of the National Minimum Data Set (NMDS) for Admitted Patient Care was funded by the Australian Health Ministers' Advisory Council (AHMAC), through the National Health Information Management Group (NHIMG). It has been conducted by the Australian Institute of Health and Welfare (AIHW) with the advice of the Institute's Australian Hospital Statistics Advisory Committee. This report was endorsed by NHIMG out of session during August 2003.

The aim of the evaluation was to assess the quality and utility of the NMDS to determine whether the data collection suits current requirements and to identify changes required to improve data quality and comparability.

The method used for the evaluation included:

- a review of compliance, that is the extent to which data for 2000–01 were collected and/or provided by states and territories in accordance with NMDS specifications as published in the *National Health Data Dictionary*;
- a review of utility, based on consultations with data collectors and users, using a survey tool designed with advice from the Australian Hospital Statistics Advisory Committee (AHSAC); and
- formulation of recommendations for future data development and the assignment of priorities, undertaken by the AIHW in consultation with AHSAC.

A summary of the recommendations compiled from the evaluation of utility and the compliance evaluation is presented below. Recommendations for modifications to existing data elements and proposals for new data elements are discussed. Priorities have been attached to each recommendation to guide the development of work programs that include implementation of the recommendations. Many recommendations are for further data development work to be undertaken. Any proposals for new or modified data elements that arise from such data development work would be submitted (with business cases) for approval to the National Health Data Committee (NHDC) and NHIMG (or their successors) before they are incorporated into the NMDS.

Further discussion relevant to the recommendations is included in Chapters 3 to 5 of this report.

## General recommendations

- That the NMDS continues. As a whole, it was considered highly important and highly useful by most survey respondents.

- That work continues to improve the completeness and accuracy of data reporting for all data elements but, in particular, those noted as of concern in the compliance evaluation.
- That work continues to improve the coverage of the data reporting for public hospitals within the jurisdiction of state and territory health authorities, and private hospitals.
- That the wording of the NMDS scope description should be clarified in the *National Health Data Dictionary* (NHDD), and to clarify that stillbirths, hospital boarders and organ procurement activity are not officially included.
- That the adequacy of the scope be investigated with respect to changes in the definition of hospitals, so that hospitals not currently included in the data collections may be included in the future.
- That it is noted that the compliance with NHDD definitions and domain values in 2000–01 was comparable with that of 1997–98, when the last compliance evaluation was undertaken. However, the proportion of data elements that were provided for all separations in all jurisdictions declined marginally. This may in part be because of the implementation of new data elements for 2000–01.
- That it is noted that, although survey respondent comments have been summarised in this report, they will be available in full to inform subsequent data development work.
- That the considerable efforts of the states and territories and other survey respondents in providing information for this evaluation are recognised and applauded.

## **Recommendations relating to existing and proposed new data elements and concepts**

### **Establishments-related data elements**

#### **State identifier**

It is recommended that this data element is not changed but that it be clarified in the NHDD to show that it only relates to establishments and not to the patient's state of usual residence.

*Priority:* Medium

*Recommendation:* That this is referred to AIHW for preparation of the necessary NHDC submission.

#### **Establishment sector**

It is recommended that informal collection of information on whether the hospital is a public psychiatric, other public, private freestanding day hospital facility or private hospital using this data element is replaced with either an appropriate revision of the data domain for 'Establishment sector', or the creation of a new data element on

'hospital type'. This new data element could include data domains as currently informally used, and should be informed by current NHDC work reviewing the 'Establishment type' data element.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Region code**

It is recommended that this data element be removed from the NMDS.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for preparation of the necessary NHDC submission.

### **Establishment number**

It is recommended that this data element is not changed.

*Recommendation:* Retain the data element unchanged.

### **Establishment identifier**

It is recommended that this data element is changed to reflect the recommended deletion of Region code, or deleted from the NMDS (as it is redundant).

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for preparation of the necessary NHDC submission.

### **Hospital**

It is recommended that the definition of what constitutes a hospital could be reviewed taking into account the increasing role of Multi-Purpose Service facilities and the creation of Medihotels, for example. However, the capacity to change the definition (given that it relies on state and territory legislation, for example) may be limited. Comparability issues among jurisdictions also need to be addressed; some of these issues can have solutions based on data analysis (for example, use of hospital type/peer group classifications).

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **State record identifier and Hospital geographical indicator**

These data elements are requested for the National Hospital Morbidity Database by the Institute. Consideration could be given to including them formally in the NMDS.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

## **Demographic data elements**

### **Date of birth**

It is recommended that this data element is not changed.

*Recommendation:* Retain the data element unchanged.

### **Area of usual residence**

Postcode data have been informally requested to be provided for the National Hospital Morbidity Database in recent years, as some analyses are more appropriate with postcodes and others with Statistical Local Areas (SLAs). It is therefore recommended that further review of postcode of usual residence as a potential data element be undertaken.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

Issues relating to timeliness of the publication of revisions of the Australian Standard Geographical Classification (ASGC) need to be investigated to facilitate reporting using the correct version of SLAs by all states and territories. The creation of a standard software product for assigning the ASGC should also be investigated.

In addition, the data cannot be reliably used to assess the use of hospitals by overseas residents. The usefulness of a separate category for overseas residents (or guidance on the use of any appropriate ASGC codes) should be assessed.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Country of birth**

It is recommended that clarification in relation to the use of codes when insufficient information is provided (e.g. 'Africa', 'Northern Europe') be included in the NHDD.

*Priority:* Low

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Indigenous status**

The National Advisory Group for Aboriginal and Torres Strait Islander Health Information and Data (NAGATSIHID) has improvement of the quality of Indigenous identification in hospital morbidity data as part of its work program. This component of the work program is being undertaken by the Institute. It is recommended that the suggestions in this report for improvement in the quality of these data be communicated to NAGATSIHID and the Institute for consideration. Other work on improving the quality of these data also needs to continue.

*Priority:* High

*Recommendation:* NHIMG notes the comments in this evaluation and refers them to NAGATSIHID and the AIHW for consideration.

## **Sex**

A range of issues have been identified in relation to the use of this data element for transsexual and transgender patients. It is recommended that the data element is reviewed to ensure that it provides appropriate guidance for coding of sex for admissions for these patients taking into consideration the ABS standard for recording sex. In particular, the statement in the NHDD that ‘to avoid problems with edits, transsexuals undergoing a sex change operation should have their sex at time of hospital admission recorded’ should be reviewed.

*Priority:* High

*Recommendation:* As the NHDC is considering this issue, it is recommended that the comments in this report on this data element are referred to those groups for consideration.

## **Live birth**

It is recommended that this data element concept is not changed.

*Recommendation:* Retain the data element concept unchanged.

## **Neonate**

It is recommended that this data element concept is not changed.

*Recommendation:* Retain the data element concept unchanged.

## **Length of stay—related data elements**

### **Admission date**

It is recommended that this data element is not changed. However, it is recommended that consideration be given to the addition of admission time to the NMDS (see below).

*Recommendation:* Retain the data element unchanged.

### **Separation date**

It is recommended that this data element is not changed. However, it is recommended that consideration be given to the addition of separation time to the NMDS (see below).

*Recommendation:* Retain the data element unchanged.

### **Number of leave periods**

‘Number of leave periods’ is reported very poorly by jurisdictions and there is little evidence that these data are necessary in the National Hospital Morbidity Database. Therefore it is recommended that this data element be deleted from the NMDS.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for preparation of the necessary NHDC submission.

### **Total leave days**

It is recommended that this data element be changed to total leave hours. It is possible for patients to only go on leave for a few hours, however, this would be reported as one whole leave day under the current definition. Changing this data element to leave hours would allow length of stay calculations to be more accurate, especially for short stays. This change could be accompanied by the introduction of data elements for time of admission, and time of separation, to allow yet more accurate measurement of length of stay (see below).

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Admission time and Separation time**

It is recommended that the addition of the data elements 'Admission time' and 'Separation time' to the NMDS should be considered. This has been proposed as an effective method of accurately measuring length of stay. In addition admission time could provide a useful validation tool for patients admitted subsequent to an emergency department presentation. The impact on the calculation of number of days of hospital in the home care, number of qualified days for newborns and total psychiatric care days would need to be taken into account.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

## **Clinical and related data elements**

### **Diagnosis**

It is recommended that this data element concept is not changed.

*Recommendation:* Retain the data element concept unchanged.

### **Principal diagnosis**

It is recommended that this data element is not changed for this NMDS. Its use in the NMDS for Community Mental Health Care may be a subject of separate review.

*Recommendation:* Retain the data element unchanged.

### **Additional diagnosis**

There are concerns about the definition of additional diagnoses, and the variation in its interpretation. These issues are dealt with by the National Centre for Classification in Health (NCCH) in its development of the Australia Coding Standards.

*Priority:* High

*Recommendation:* That the comments on this data element are referred to the NCCH for consideration.

As some states and territories are already collecting morphology of neoplasm codes as part of their morbidity collection, the Institute invited states and territories to include these as optional codes (in addition to additional diagnosis codes) in the National Hospital Morbidity Database for the 2001–02 collection period. The inclusion of these codes may enable an indication of severity of blood and haematopoietic neoplasms, for example, for development of Australian Refined Diagnosis Related Groups. The formal inclusion of these codes in the NMDS should be investigated. They could be specified as part of the additional diagnosis data to be provided in the string formats currently used by most states and territories. If morphology codes are included in the NMDS, consultation with NCCH and Coding Standards Advisory Committee would be required on appropriate changes to the Australian Coding Standards.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Diagnosis onset type**

This data element is already included in the NHDD. It is recommended that it be reviewed (in collaboration with NCCH) for possible inclusion in the NMDS. It may be useful as a mechanism to improve identification of some adverse events in the data.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **External cause – admitted patient**

External causes are reported in a variety of ways, with each jurisdiction reporting a varied number of external causes. For jurisdictions that report only a small number of external causes, it is possible that information is being lost (for example, adverse events may not be captured for patients admitted following a car accident). External cause information linked to the diagnosis to which it relates is provided to varying degrees by states and territories, making the interpretation of which conditions were attributed to the external causes difficult. This linking can be particularly useful for injury surveillance and other monitoring.

As noted below, it is recommended that work be undertaken towards improved linkage of external cause and diagnosis information.

### **Activity when injured**

There have been significant changes to the activity codes in ICD-10-AM, third edition. The data domain specified in versions 10 and 11 of the NHDD are no longer

in line with these changes. Therefore, the domain values for 'Activity when injured' specified in the NHDD should be updated in line with each edition of ICD-10-AM.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for preparation of the necessary NHDC submission.

### **Place of occurrence of external cause of injury**

There have been significant changes to the place of occurrence codes in ICD-10-AM, third edition. The data domain specified in versions 10 and 11 of the NHDD are no longer in line with these changes. Therefore, the domain values for 'Place of occurrence of external cause of injury' specified in the NHDD should be updated in line with each edition of ICD-10-AM.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for preparation of the necessary NHDC submission.

The possibility of including codes to identify forest and logging areas (which have very high work-related injury and fatality rates) should be further investigated in collaboration with the NCCH.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW and NCCH for data development work program planning.

### **Linkage of information relating to diagnoses**

Currently, despite huge coding efforts to code information on diagnoses (which can sometimes require more than one code to be described) and their accompanying cancer morphologies and external causes (with activity and place of occurrence), it is rare that this information is collected, stored and reported in a way in which the linkages between these pieces of information are unambiguously maintained. This means that the usefulness of these data becomes limited, and accurate analysis of the data (for example, in relation to adverse events) is hampered. It is therefore recommended that work be undertaken to move towards data systems and reporting arrangements that maintain these linkages. It is noted that such changes have the potential to impact on computerised coding packages.

*Priority:* Medium

*Recommendation:* That this is endorsed in principal as a direction for the future. AIHW is asked to prepare an information paper, in collaboration with NCCH, as a first step to further this work.

### **Procedure**

Comments on this data element have included that ICD-10-AM in its current form is of limited usefulness for admitted patient mental health care. It is recommended that the feasibility of developing an alternative or expanded set of procedure codes that are appropriate to admitted patient mental health care be investigated.

*Priority:* High

*Recommendation:* That this is referred to NCCH for consideration.

### **Date of procedure**

This data element is already included in the NHDD. It may be useful as a mechanism to identify day of surgery admissions, however, this is not viewed as a priority at present.

*Recommendation:* That this data element is not included in the NMDS at this time.

### **Major diagnostic category**

As this data element can be derived from Diagnosis Related Groups there was uncertainty as to its importance as an NMDS item. The Institute regroups the data provided by states and territories to the Australian Refined Diagnosis Related Group (AR-DRG) version effective from 1 July each year, regardless of what is provided. States and territories agreed that it is important that this is retained as it is a method of highlighting differences in calculations, data issues and grouper version used.

*Recommendation:* Retain the data element unchanged.

### **Diagnosis Related Group**

As this data element is derived and can be readily determined from other data elements in the NMDS there was uncertainty as to its importance as an NMDS item. The Institute regroups the data provided by states and territories to the AR-DRG version effective from 1 July each year, regardless of what is provided. States and territories agreed that it is important that this is retained as it a method of highlighting differences in calculations, data issues and Diagnosis Related Group (DRG) grouper version used.

*Recommendation:* Retain the data element unchanged.

### **Infant weight, neonate, stillborn**

It is recommended that the scope of this data element be reviewed. It needs to be clarified as to whether this data element should be collected for newborns aged 28 days or less or weighing less than 2,500 grams or for all infants aged less than 365 days. Currently these data are not collected routinely for all states and territories for all infants aged less than 365 days and it is believed the quality for infants between the ages of 28 and 365 days is questionable. The relevance of collecting weight for infants over 28 days of age or over 2,500 grams should be assessed with advice from relevant clinicians.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Number of qualified days for newborns (and data element concept 'Newborn qualification status')**

It is recommended that 'Number of qualified days for newborns' only be reported for separations with a *Newborn* 'Care type' and not for the remaining separations, as is the approach adopted by Queensland and Western Australia.

There were a number of comments from respondents regarding this data element and the data element concept to which it relates, 'Newborn qualification status' indicating that both may need to be modified. Concerns included the absence of guidance on the treatment of leave days, and on how to count periods of less than 24 hours. The range of issues raised should be further investigated.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Admitted patients and care type data elements**

#### **Admission and Admitted patient**

It is recommended that consideration be given to providing clearer guidelines on what an admission is, for incorporation into the NHDD. One of the major areas of work required for this NMDS is to define the boundaries between admitted overnight, same-day and non-admitted care more consistently and accurately. For example, a need was expressed for national standards for when a patient is admitted following a presentation to the emergency department. It is recommended that a comprehensive review of these boundaries be undertaken in consultation with a range of stakeholders. In relation to mental health-related care, it was suggested (but not agreed upon by all stakeholders) that some types of mental health admitted patient care be regarded as non-admitted, particularly non-procedural same-day admissions that had not been intended to be overnight admissions. This issue could be resolved through revision of this data element concept, or possibly use of a data analysis solution.

This consideration is also relevant to the definition of hospital in the home care, and the definition of hospitals.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

#### **Episode of care (the statistical unit for the NMDS)**

It is recommended that the concept of an episode of care be reviewed along with the data element 'Care type'. The possibility of expanding the concept of 'Episode of care' into other areas of health care should also be investigated. It has been suggested that this and related concepts need to be defined in such a way that is equally relevant to community settings as hospital ('admitted patient') settings.

Alternatively, this data element concept could be renamed 'Episode of admitted patient care'.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

It is also recommended that consideration be given to amending the NMDS data collection arrangements to change the statistical unit for longer term care, for selected analysis applications. This 'long stay' issue derives from the separation-based definition of the NMDS. A significant proportion of patient care in designated mental health units (and for 'extended stay' or nursing home type patients) is longer term care which remains invisible to the current NMDS approach. Acknowledging that the scope would be difficult to define in many cases, it was suggested that the concept of a 'statistical separation' should be extended to accommodate these groups of patients whereby a NMDS record of the ordinary kind is generated, but is separately identified. The options identified for generating such a record are (1) every 12 months from initial admission, or (2) on a census date of 30 June.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Acute care episode for admitted patients**

As this information is already defined under the 'Care type' data element it is recommended that this data element concept be reconsidered along with 'Care type'.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Patient**

It is recommended that this data element concept is not changed.

*Recommendation:* Retain the data element concept unchanged.

### **Separation**

See detailed comments under the 'Episode of care' data element concept above.

### **Number of days of hospital in the home care (and data element concept 'Hospital in the home care')**

Concerns have been expressed that this data element is not well recorded across jurisdictions, and that this may be due to the lack of clear definitions of hospital in the home care. It is believed that the delineation between hospital in the home care, on-campus hospital care and community care is not clear and that there is a need for clear national guidelines defining the concept. This issue could also be considered as part of any consideration of the definition of admitted patients (see above).

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

The data element and data element concept need to be included in the list of NMDS items in the front of the *National Health Data Dictionary* version 12.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for action.

### **Care type**

As there were a large number of issues raised in relation to this data element, it is recommended that it be more comprehensively reviewed with input by clinicians (such as the Clinical Casemix Committee of Australia). Even though data for this data element have now been collected for several years, there is evidence of significant inconsistencies among jurisdictions in the use and application of the various data domain values. The limitations of this data element for psychiatric care have been particularly noted. A number of new data domains including psychiatric care, intensive care, transitional care, convalescent care and acute psychiatric care have been suggested.

Another suggestion has been to replace this data element with two new data elements, one covering clinical intent and the other the type of service, as it is believed that decisions about 'Care type' confuse these two quite separate concepts. If a 'type of service' data element were to be developed, it could include a potentially wide range of 'bed types'. If it included a range of psychiatric service types, it could effectively replace 'Total psychiatric care days' and allow mainstreaming of some activity data currently collected in the National Survey of Mental Health Services. Ideally, service type categories would also align with expenditure categories in the NMDS for Public Hospital Establishments.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Total psychiatric care days**

It has been suggested that a separate 'Care type' should be introduced for patients admitted to designated psychiatric wards. It would be unnecessary to retain this data element if such a care type was to be introduced, as the length of stay of the psychiatric episodes of care could be easily calculated. This data element will need to be reviewed further along with 'Care type'.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

While this data element is maintained, it is recommended that psychiatric care days only be reported for separations with psychiatric care and left null for separations with no specialised psychiatric care, as is the approach taken by Queensland, Western Australia and the Australian Capital Territory. This in effect is a

recommendation to delete this data element from the NMDS for Admitted Patient Care while retaining it in the Admitted Patient Mental Health Care NMDS.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for preparation of the necessary NHDC submission.

It is also recommended that this data element be changed to hours of psychiatric care, as numbers of days (or even part days) is not accurate enough when most separations are 1–2 days long. It is possible for patients to remain in a psychiatric unit for a few hours only, however, this would be reported as a whole psychiatric care day under the current definition. If deleted from the NMDS for Admitted Patient Care this issue still needs to be considered for the Admitted Patient Mental Health Care NMDS.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

This change could be accompanied by the introduction of data elements for time of admission, and time of separation, to allow yet more accurate measurement of length of stay and length of specialised psychiatric care (see above).

### **Hospital boarder**

It is recommended that this data element concept and/or the scope description of the NMDS may need clarification, as they do not clearly specify whether boarders are not included in the scope of the NMDS.

*Recommendation:* That this is referred to the AIHW for preparation of the necessary NHDC submission.

### **Organ procurement – posthumous**

It is recommended that this data element concept is not changed.

*Recommendation:* Retain the data element concept unchanged.

### **Same-day patient**

It is recommended that the reference to procedure banding should be removed from the ‘Same-day patient’ definition.

### **Overnight stay patient**

It is recommended that this data element concept is not changed.

*Recommendation:* Retain the data element concept unchanged.

## **Administrative data elements**

### **Admitted patient election status**

It is recommended that this data element be reviewed to address the range of issues highlighted in this evaluation. These include the inclusion of a data domain for an

unknown patient election status, clarification of the status of reciprocal health care agreements patients and the status of patients who are not Medicare eligible but are not charged (at the discretion of the hospital), and the appropriate use of this data element for patients of public psychiatric hospitals.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Funding source for hospital patient**

As a number of comments from respondents indicate that this data element is poorly defined and further thought needs to be given to the data domain, it is recommended that this data element be more comprehensively reviewed.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Hospital insurance status**

The funding source data element, in version 10 of the NHDD, indicates whether insurance paid for the episode. However, the 'Hospital insurance status' data element indicates whether patients (particularly private patients) had insurance (and used/didn't use it). As this data element only captures the patient's 'reported' hospital insurance status, it has been suggested that it be so named accordingly.

It is also recommended that the applicability of this item for public psychiatric hospital patients be clarified in the NHDD definition.

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Medicare eligibility status**

Further review of this data element is recommended to address the range of concerns outlined in the utility review, including the applicability of this item for public psychiatric hospitals.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Inter-hospital contracted patient (and data element concept 'Contracted hospital care')**

As inter-hospital contracted patients are admitted patients of both the contracting and contracted hospital, these separations can represent double counting of hospital activity in the National Hospital Morbidity Database. It is important to understand the extent to which double counting occurs for contracted patients, therefore, the reporting and quality of this data element should be improved.

It is recommended that the label for category 3 *Other* should be amended to *Not contracted*.

*Priority:* High

*Recommendation:* Retain the data element concept unchanged. That the change to the data element is referred to the AIHW for preparation of the necessary NHDC submission.

### **Intended length of hospital stay**

A number of respondents commented that this data element is rarely requested or analysed, as there is a far greater interest in the actual length of stay. It is also no longer used for grouping to Diagnosis Related Groups. There were also questions raised over the quality of data for this data element.

However, this data element is seen as useful for reporting data for admitted patient mental health care. Suggestions were made in relation to this which would see some types of mental health admitted patient care regarded as non-admitted, particularly non-procedural same-day admissions that had not been intended to be overnight admissions. There could be either a definitional solution (see Admitted patient data element concept) or a data analysis solution for this issue.

It is therefore recommended that this data element be deleted from the NMDS, unless consultation with mental health information users indicates a continuing need for it (as part of an analysis solution for the issue described above).

*Priority:* Medium

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Mental health legal status**

The scope of this data item needs to be more clearly defined. It is recommended that 'Mental health legal status' only be reported for separations including care in a designated psychiatric unit (that is, those which have psychiatric care days reported), and not for the remaining separations, as is the approach adopted by Victoria, Queensland, Western Australia and the Australian Capital Territory. This in effect is a recommendation to delete this data element from the NMDS for Admitted Patient Care while retaining it in the Admitted Patient Mental Health Care NMDS.

If 'Mental health legal status' is only reported for separations with psychiatric care days, then the Institute requests that category 9 *Not applicable* be reported if 'Mental health legal status' was not known. It is proposed that this category be included in the data domain for this data element.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for preparation of the necessary NHDC submission.

## **Person identifier**

Person identifiers that are unique within an establishment or agency can be used to identify multiple separations by a distinct individual. Some respondents commented that it would be useful to be able to undertake this type of analysis at the national level reliably. There were mixed views as to whether 'Person identifier' should be reported in accordance with the NHDD definition for all jurisdictions.

A number of respondents commented on the need for the person identifiers to be transferable across hospitals (not just unique within a hospital) and to be able to track repeat hospitalisations. Many respondents expressed the need for a universal patient identifier. It is recommended that this be noted by the NHIMG, which is undertaking work towards the development and inclusion of appropriate identifiers and linkage infrastructures for these data, at the request of the AHMAC.

*Priority:* High

*Recommendation:* That the importance of developing unique person identifiers as communicated by survey respondents is noted.

## **Modes of admission and separation data elements**

### **Mode of admission**

As there were a large number of comments relating to the limitations of this data element it is recommended that it be more comprehensively reviewed. The possibility of including domains for transitions and substitutions between services, re-admissions and admissions, for example, from hospital emergency departments, booking offices, elective surgery waiting lists, general practitioner offices and residential aged care facilities should be assessed. It was suggested that this data element could be replaced by several data elements to identify the place the patient came from, who referred them and the point of admission into hospital. It was also suggested that the 'Source of referral to public psychiatric hospital' could be the basis of a revision for this data element. These options should all be reviewed, in the light of proposed changes to data element structures arising from the review of the Knowledgebase.

It is also recommended that the lack of consistency in terminology should be addressed, that is, the data domain *Statistical admission – episode type change* should be changed to *Statistical admission – care type change* in line with the change to the use of 'Care type' rather than 'Episode type'.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Mode of separation**

Further review of this data element is recommended given the variation in use and interpretation of particular data domains among states and territories and the large number of comments relating to the limitations and quality of this data element.

Issues in relation to the distinction between discharged to a residential aged care facility and discharged to usual place of residence and the lack of differentiation between the type of 'other' health care facility to which the patient is discharged/transferred to were raised. More information about transitions between services, re-admissions, and substitutions between services is also required.

It is also recommended that the lack of consistency in terminology should be addressed, that is, the data domain *Statistical discharge – type change* should be changed to *Statistical discharge – care type change* in line with the change to the use of 'Care type' rather than 'Episode type'. These options should all be reviewed, in the light of proposed changes to data element structures arising from the review of the Knowledgebase.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Source of referral to public psychiatric hospitals**

It is recommended that the feasibility of expanding this data element for collection across all sectors should be investigated. The inclusion of a data domain of 'referral from general practitioner or local medical officer' or similar requires consideration. Data reported for this data element seems to be quite variable, and the data domains probably require definitions to ensure more comparable data are collected.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Urgency of admission**

It was noted that there are serious data quality issues in relation to this data element that need to be resolved. It is recommended that the NHDD definition be clarified, especially for the identification of cases where 'Not assigned' is expected and for cases where the patient has been transferred from another hospital. Additional data domain values may be useful.

*Priority:* High

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

### **Other data elements relating to continuity of care**

These would include data elements to monitor re-admissions to hospital, to provide information on where patients are referred to from hospital, details of carer availability, and data elements for monitoring whether patients are ready for discharge and reasons for delay (or data elements for 'extended stay' patients). Some of these issues could be addressed via developments for mode of admission and mode of separation. AHMAC has provided funding to the NHIMG, which AIHW is using for data development in relation to 'extended stay' patients.

*Priority: Medium*

*Recommendation:* That AIHW continues its data development work in relation to 'extended stay' patients and considers these other issues in its data development work program planning.

### **Other new data elements**

#### **Data elements relating to intensive care**

It is recommended that consideration be given to including some data elements that relate to the activity of intensive care units, including time in intensive care units (in hours), level of severity (for example, as APACHE scores) and hours of mechanical ventilation. Intensive care was also suggested as a type of care that could be added to the 'care type' data element.

*Recommendation:* That such data elements are not investigated for inclusion in the NMDS at this stage.

#### **Data elements for the Hospital Casemix Protocol**

It is recommended that these data elements be included in the NHDD and then the NMDS in a formal manner.

*Priority: High*

*Recommendation:* That this is referred to the AIHW for its data development work program planning.

#### **Industry, occupation and employment status**

These data elements could be useful for analyses related to occupational health and safety. It is recommended that consideration be given to an expected submission in relation to them from the National Occupational Health and Safety Commission.

*Priority: Low*

*Recommendation:* That NHIMG consider any submission relating to this issue.

# 1 Introduction

This report presents the findings of an evaluation of the National Minimum Data Set (NMDS) for Admitted Patient Care conducted by the Australian Institute of Health and Welfare (AIHW). The evaluation was funded by the Australian Health Ministers' Advisory Council (AHMAC), through the National Health Information Management Group (NHIMG) and was conducted with the advice of the AIHW's Australian Hospital Statistics Advisory Committee (AHSAC). This report was endorsed by NHIMG out of session during August 2003.

The aim of the evaluation was to assess the quality and utility of the NMDS to determine whether the data collection suits current requirements and to take actions to improve data quality and comparability. As a core part of the evaluation, the AIHW developed a methodology which can be used to evaluate other National Minimum Data Sets. The methodology incorporates: a review of compliance, that is, the extent to which data are collected and/or provided by states and territories in accordance with NMDS specifications as published in the *National Health Data Dictionary*; a review of utility, based on consultations with data collectors and users; and formulation of recommendations for future data development.

## This report

This chapter describes the National Minimum Data Set for Admitted Patient Care and outlines the purpose of the evaluation.

Chapter 2 describes the methodology that was developed and used as the basis for the current evaluation.

Chapter 3 describes the results from the review of utility, a consultation process involving a survey of data collectors and users. Information is presented on the users and uses of the NMDS, the utility of the NMDS and individual data elements, that is, the extent to which they are perceived as important and useful, and possible areas for data development.

Chapter 4 describes the results of the compliance review, including information on the scope of the data provided by states and territories and the extent to which the data provided for each data element comply with *National Health Data Dictionary* (NHDD) definitions and domain values.

Chapter 5 presents comments on existing data elements obtained from both the utility and compliance evaluations. It also outlines suggestions for new data elements.

The appendices include the survey used as the basis of the review of utility\*, a list of survey respondents, and sex-procedure edits provided by the Victorian Department of Human Services.

## **The National Minimum Data Set for Admitted Patient Care**

A National Minimum Data Set is a core set of data elements agreed by the NHIMG for mandatory collection and reporting at a national level. An NMDS is contingent upon a national agreement to collect uniform data and to supply it as part of a national collection. The NMDS standards make data collection activities more efficient by reducing duplication of effort through the standardisation of core data items; more effective, by ensuring that information to be collected is relevant and appropriate to its purpose; and more comparable and consistent for reporting purposes.

A NMDS includes agreement on specified data elements (discrete items of information or variables) and supporting data element concepts as well as the scope of the application of those data elements and the statistical units for collection. Definitions of all data elements that are included in NMDS collections in the health sector are included in the NHDD.

The National Minimum Data Set for Admitted Patient Care (referred to from here on as 'the NMDS') is a specification for data that are collected on all episodes of care for admitted patients in Australian hospitals. The scope of the NMDS is episodes of care for admitted patients in all:

- public and private acute care hospitals,
- public and private psychiatric hospitals, and
- private freestanding day hospital facilities.

Episodes of care are the statistical units of the NMDS, with data being collected at each hospital from patient administrative and clinical record systems and forwarded to the relevant state or territory health authority on a regular basis. Data for each financial year ending 30 June are then provided to the Institute and the Department of Health and Ageing for national collation, on an annual basis.

The NMDS forms the basis for nationally comparable data, such as the AIHW National Hospital Morbidity Database and AIHW's annual report *Australian Hospital Statistics*; as well as state/territory-based hospital morbidity data collections and the Department of Health and Ageing's National Hospital Morbidity (Casemix) Database.

## **Purpose of the evaluation**

The NMDS for Admitted Patient Care was first specified in 1989 (as part of the Institutional Health Care NMDS) and has been amended in relatively minor ways

---

\* Explanatory notes accompanying the survey are available from the AIHW on request.

most years since then, in response to a range of different requirements. However, there have been relatively few attempts to date to assess the quality and utility of the NMDS-based data in a comprehensive manner. As considerable resources are used at the state and territory and national levels to collect it, a comprehensive evaluation of the NMDS was considered necessary to determine whether the data collection suits current requirements and to plan actions to improve data quality and consistency.

This evaluation builds on other recent attempts to assess the quality and utility of the data set including the Hospital Utilisation and Costs Study Review undertaken in 1996 (which incorporated some review of this NMDS) and the NHIMG compliance evaluation of the 1997–98 NMDS undertaken in 2000.

## **Hospital Utilisation and Costs Study Review**

The Hospital Utilisation and Costs Study (HUCS) Review was undertaken to determine its future role in the collection, analysis and dissemination of nationally comparable data on hospital costs and services. The review was commissioned by the NHIMG in response to a perceived lack of quality and timeliness in the HUCS, changes in health care delivery and financing arrangements, and the emergence of other national hospital-based collections.

Through a survey, views of data providers (state and territory health authorities) and data users were canvassed on the uses and users of the data, methods to improve timeliness and data quality, overlap with other hospital data collections and preferences for scope, data items, analysis and dissemination. Issues surrounding compliance with NHDD definitions and the collection of NMDS items were also considered. Items referred to the National Health Data Committee (NHDC) for definition development or review and/or consideration for the NMDS for Institutional Health Care included 'Hours of mechanical ventilation' (or time spent in intensive care), 'Employment status' and 'Occupation'. Responses from the review were used to develop recommendations to the NHIMG, which agreed to the institution of mechanisms to improve data quality and accelerate the timetable for data provision, processing and analysis to ensure timely dissemination.

## **NHIMG compliance evaluation of the 1997–98 NMDS**

At the NHIMG meeting on 5 March 1999 it was agreed that the Institute would undertake to develop a template for the evaluation of NMDS collections and complete this evaluation for one NMDS collection, Institutional Health Care (Admitted Patients). The Institute prepared the evaluation template in consultation with AHSAC and the NHDC.

The evaluation was based on documentation provided by the states and territories to the Institute with the 1997–98 hospital morbidity data and communications between the Institute and the jurisdictions during compilation of the 1997–98 National Hospital Morbidity Database.

The results of the evaluation were presented to the NHIMG at its meeting on 7 April 2000. The Institute outlined concerns over the collection and quality of some data elements and recommendations for change. Issues were raised concerning a number of data elements including 'Establishment number', 'Person identifier', 'Date of birth', 'Indigenous status', 'Area of usual residence', 'Hospital insurance status', 'Number of leave periods', as well as data elements relating to diagnoses, procedures and external causes.

## 2 Methodology

As part of the evaluation, the Institute developed an enhanced methodology for NMDS reviews. It was envisaged that this methodology could become a standard by which other National Minimum Data Sets could be evaluated. AHMAC has recently provided funding to the Institute for a further NMDS evaluation (of the Perinatal NMDS), which is utilising the methodology developed through this evaluation.

The methodology has been developed in consultation with the Australian Hospital Statistics Advisory Committee (AHSAC) which includes representatives from the:

- State and territory health authorities
- Australian Government Department of Health and Ageing
- Australian Bureau of Statistics
- Department of Veterans' Affairs
- Australian Healthcare Association
- Australian Private Hospitals Association
- Private Health Insurance Administration Council
- Clinical Casemix Committee of Australia
- National Centre for Classification in Health.

At its April 2002 meeting, the Institute presented a paper outlining a proposal for the enhanced methodology. Essentially the methodology has three components – a compliance evaluation (similar to that conducted in 2000 and described in Chapter 1), consultation with data collectors and users to evaluate utility of the data, and recommendations for data development.

The proposal for the enhanced methodology included:

1. assessing whether the data have been provided by states and territories and the extent to which the data were provided in accordance with the NMDS specifications as published in the *National Health Data Dictionary*, that is, use of the NHDD definitions and domain values (compliance evaluation);
2. a review of the utility of the components of the NMDS through a consultative process, that is, assessing whether the NMDS suits current requirements, including those for informing policy development and reporting on performance (evaluation of utility);
3. the development of comprehensive recommendations for future development.

### Compliance evaluation

The purpose of the compliance evaluation is to assess the quality and consistency of the data provided by states and territories. The NMDS is contingent upon a national

agreement to collect uniform data and to supply them as part of the national collection. This means that data elements should be collected or at least reported using standard definitions and domain values and reported for all separations within scope (essentially all hospitals in Australia). However, there tends to be some variation in the way in which data are reported among the states and territories.

Through assessing the ability of states and territories to comply with the NMDS specifications (data definitions, domain values and scope), actions can be taken to improve the data quality and consistency (such as data element development) where necessary.

This evaluation utilised the template developed in consultation with AHSAC and the NHDC for a previous evaluation of the then Institutional Health Care (Admitted Patients) NMDS conducted in 2000 on 1997–98 data, with a few modifications.

The latest data available for this evaluation were for 2000–01 and were based on the specifications in the *National Health Data Dictionary* version 9, whereas the data currently being collected in hospitals are based on the most recent version, the *National Health Data Dictionary* version 12. As the compliance evaluation is based on data provided by states and territories, assessments of compliance have been made according to the specifications in the *National Health Data Dictionary* version 9.

The compliance evaluation was based on documentation provided with the 2000–01 data provided by the states and territories to the Institute, and communications between the Institute and the jurisdictions during compilation of the 2000–01 National Hospital Morbidity Database and in association with preparation of this report.

The compliance evaluation involved assessing for each data element for 2000–01:

1. whether states and territories had provided it;
2. the extent to which it was provided in accordance with the NMDS specifications as published in the *National Health Data Dictionary* version 9, that is, whether the NHDD definition and domain values were used; and
3. whether it was reported for every separation (scope).

The overall scope of data provided by states and territories was also assessed, that is, whether data were provided for all public and private acute hospitals, public and private psychiatric hospitals, and freestanding day hospital facilities. Additional information on the inclusion of data for boarders, posthumous organ procurement activity, hospital in the home patients and on the counting of newborn episodes of care were also analysed.

## **Evaluation of utility**

In order for an NMDS to be effective, the information collected should be relevant and appropriate to its purpose. Therefore the aim of evaluating the utility of the NMDS is to get an understanding of whether the data collection suits current requirements such as informing policy development and reporting on performance.

If the NMDS does not suit the requirements of data collectors and/or data users then essentially data will not be collected in a consistent manner and will not be useable. If these stakeholders do not believe particular data elements are important and/or useful then these data elements could be removed from the NMDS. If a data element is considered highly important and highly useful, it should probably remain unchanged. However, if a data element is considered to be highly important, but not useful, it may be a function of the way it is defined, in which case it probably needs to be modified through data development.

In order to evaluate the utility of the NMDS, the Institute consulted with data collectors and users of the NMDS specifications and NMDS-based data as well as other stakeholders through a comprehensive survey developed for this purpose.

In September 2002 a flyer outlining the evaluation and requesting participation in the consultation was developed and circulated widely to a large number of identified stakeholders including:

- over 600 delegates at the 2002 Casemix Conference
- Australian Hospital Statistics Advisory Committee
- National Health Information Management Group
- National Health Data Committee
- AHMAC Mental Health Working Group Information Strategy Committee
- Clinical Casemix Committee of Australia
- Health Information Management Association of Australia
- Clinical Coders Society of Australia (in a mailout of their quarterly newsletter *Codelink*)
- recent users of the AIHW National Hospital Morbidity Data Service.

The evaluation was also advertised on the Institute website. People interested in participating in the evaluation were invited to contact the Institute to receive a copy of the survey.

The survey was developed in consultation with and piloted with members of AHSAC. It sought the views of users of the NMDS, either as a tool for collection of data or as a specification of data for analysis, on its usefulness and whether it suits their current requirements. Specific questions were asked about the users and uses of the NMDS specifications and NMDS-based data, including individual data elements and data element concepts; the utility of the NMDS as a whole and of individual data elements; and areas for development including modifications to data elements, new data elements or changes to scope. Although specific views were sought, additional comments and recommendations or any other input that could assist the evaluation were encouraged.

The survey sought comments on the *National Health Data Dictionary* version 11, the version current at the time that the evaluation was conducted (in contrast to the data assessed in the compliance evaluation, based on the *National Health Data Dictionary* version 9). It was thought essential that user comments be based on data elements

that were current and therefore any proposed revisions or data development would not duplicate that already done. For example, some inadequacies in version 9 data elements relating to identification of funding arrangements had been addressed in the development of the data element 'Funding source for hospital patient' in version 10.

Information on the National Health Information Agreement processes for changing NMDS items was attached to the survey so that respondents understood that changing the NMDS would not be a trivial exercise, and that, for example, business cases would be necessary for most proposed changes.

The survey was sent to AHSAC members to pilot in September 2002. About half the AHSAC members provided feedback on the survey, and the survey was modified in light of the comments received. The final survey was sent via email to all those who had expressed an interest in participating, as well as Institute users, AHSAC members (including state/territory data providers) and NHDC members in October 2002 for return by 15 November 2002. Reminders for non-responders were sent on 22 November 2002.

A copy of the survey is included in Appendix 1.

## **Recommendations for data development**

The results of the compliance evaluation and evaluation of utility has identified priorities for future development of the NMDS and forms the basis for the recommendations to the NHIMG presented in this report. Recommendations have been made in consultation with AHSAC and state and territory data providers, keeping in mind the assessment criteria for the development of National Minimum Data Sets approved by the NHIMG, such as the fit with national strategic directions and the likely benefits at the national level. Where recommendations involve the inclusion of new data elements or the revision of current data elements, the Institute, in consultation with the states and territories and other stakeholders, will consider them within data development work program planning and, as appropriate, work towards developing submissions including detailed background information to be considered by the NHDC and the NHIMG.

# 3 Evaluation of utility

This chapter describes the results from the review of utility, a consultation process involving a survey of data collectors and users. Information is presented on the users and uses of the NMDS, the utility of the NMDS and individual data elements, that is, the extent to which they are perceived as important and useful, and possible areas for data development. Comments provided by respondents on individual data elements are included in Chapter 5 of this report.

## Respondents

A total of 50 responses to the survey were received (Appendix 2). So that the results of the survey could be interpreted effectively, respondents were asked to indicate whether they were responding on behalf of themselves, on behalf of their unit or section within an organisation or on behalf of their organisation as a whole. The majority of respondents were responding on behalf of their unit or section within an organisation (Table 3.1).

**Table 3.1: Respondent types**

<b>Respondent</b>	<b>Number</b>
On behalf of themselves	18
On behalf of their unit or section within an organisation	26
On behalf of their organisation	6
<b>Total</b>	<b>50</b>

In order to gain an understanding of the types of organisations that use the NMDS specifications and NMDS-based data, respondents were asked to indicate from a list of 15 user groups (or identify additional user groups) the main user group to which they belonged. A list of the user groups is presented in Question 1.1 of the survey (Appendix 1).

The main user groups identified through the survey were the state and territory health authorities which collect and provide the NMDS data for national collation, the Australian Institute of Health and Welfare and the Department of Health and Ageing (Table 3.2). All state and territory health authorities provided responses to the survey and were able to provide comments from a data collection/provider perspective.

Responses were received from a number of sections within the Department of Health and Ageing.

Other user groups identified through the survey were the Australian Bureau of Statistics, AHMAC Mental Health Working Group Information Strategy Committee,

National Centre for Classification in Health, National Occupational Health and Safety Commission and the Productivity Commission.

Responses were received from a number of units within the Institute and two of the Institute's external collaborating units also responded.

Other respondents included pharmaceutical companies, universities and both public and private hospitals. Unfortunately the respondents did not represent the whole range of user groups who use the data. There are a number of other user groups that have been identified through the AIHW National Hospital Morbidity Data Service, including other government departments, clinical equipment/therapeutic device companies, interest groups and students.

## **Uses of the NMDS specifications and NMDS-based data**

The survey sought information from respondents about the way the NMDS specifications and NMDS-based data are currently being used. Respondents were asked questions relating to the purpose for which they use the NMDS specifications or NMDS-based data, how they access NMDS specifications and NMDS-based data, their overall knowledge of the NMDS specifications and NMDS-based data, and their frequency of use.

### **Purpose**

In order to gain an understanding of the way the NMDS specifications and NMDS-based data are being used, respondents were asked to indicate from a list of 11 purposes (or identify additional purposes) the three most common purposes for which they use the NMDS specifications and/or NMDS-based data. A list of common uses for the NMDS specifications and/or NMDS-based data is presented in Question 2.1 of the survey (Appendix 1).

The three most common purposes for using the NMDS specifications and/or the NMDS-based data identified by respondents were:

1. collection and reporting of NMDS-based data
2. statistical reporting
3. epidemiological research.

The purposes identified by respondents tended to vary depending on their user group (Table 3.2). State and territory health authorities reported the largest range of uses for the NMDS specifications and NMDS-based data including:

- planning and monitoring hospital resources
- comparisons and benchmarking
- health services research
- epidemiological research

- statistical reporting
- facility planning
- collection and reporting of NMDS-based data
- casemix and classification development
- information development including development of data sets, data dictionaries and standards
- responding to inquiries for data/information.

Other purposes for which the NMDS specifications and NMDS-based data are being used which had not been specified in the survey were:

- policy development
- teaching
- estimating product market size, share and growth.

## Level

The majority of respondents indicated that they used the NMDS-based data at the national level. Respondents from the Department of Health and Ageing and the Institute were the main users of national level data. State and territory health authorities most commonly used the data at the state/territory level, with some users indicating they also used data for a hospital group or for one hospital only.

## Access to NMDS specifications

The most common source used by respondents to access the NMDS specifications overall was the *National Health Data Dictionary*, followed by the *National Health Data Dictionary* online and the Knowledgebase. State and territory health authorities also identified state/territory data specifications as a common source for accessing the NMDS specifications, while Institute users also identified internal documentation and data dictionaries.

## Source of NMDS-based data

The most common sources of NMDS-based data that respondents use were largely dependent on their user group. State and territory health authorities identified a state or territory hospital database as the most common source of NMDS-based data they use, while the Department of Health and Ageing identified its databases, namely the National Hospital Morbidity (Casemix) Database, the National Hospital Cost Data Collection and the Hospital Casemix Protocol Data Collection as most common. Similarly, Institute users indicated that their most common source was the AIHW National Hospital Morbidity Database. The *Australian Hospital Statistics* publication and Internet tables were other common sources of NMDS-based data identified by respondents.

**Table 3.2: Purposes for which the NMDS specifications and NMDS-based data are being used, by user group**

User group	Plan/ monitor hospital resources	Compare/ benchmark	Manage/ purchase hospital services	Health services research	Epidemiological research	Statistical reporting	Facility planning	Planning by private industry suppliers	Collect/ report NMDS- based data	Casemix & classification development	Software develop- ment
State or territory health authority	✓	✓		✓	✓	✓	✓		✓	✓	
Other state or territory government department		✓				✓				✓	
Australian Government Department of Health and Ageing		✓		✓		✓			✓	✓	✓
Other Australian Government department				✓	✓	✓			✓		
Australian Institute of Health and Welfare		✓		✓	✓	✓			✓		
Public hospital		✓	✓	✓		✓			✓	✓	
Private hospital		✓	✓	✓		✓			✓	✓	
Other health service provider											
University or other research organisation						✓			✓	✓	✓
Private planning consultant						✓			✓		
Clinical equipment/therapeutic device company											
Pharmaceutical company		✓	✓								
Software developer											
Interest group											
Student											

## Knowledge and frequency of use

Most respondents indicated that they were either familiar or very familiar with the NMDS specifications and/or the NMDS-based data (Table 3.3). Respondents from the state and territory health authorities and the Department of Health and Ageing were more likely to indicate that they were very familiar with the NMDS specifications and/or the NMDS-based data, while those from the AIHW generally indicated they were familiar. Respondents were more likely to be unfamiliar with the NMDS specifications than the NMDS-based data, which may be related to the less frequent use of the NMDS specifications by respondents compared to the NMDS-based data.

**Table 3.3: Respondents' rating of overall knowledge of the NMDS specifications and NMDS-based data**

Knowledge	NMDS specifications	NMDS-based data
Very familiar	17	19
Familiar	21	23
Unfamiliar	9	4
Not answered	3	4
<b>Total</b>	<b>50</b>	<b>50</b>

Most respondents indicated that the NMDS specifications were used on an occasional basis, however, a large proportion also used the specifications on a daily or weekly basis. The NMDS-based data were most likely to be used on a daily basis (Table 3.4). The use of the NMDS specifications by respondents from the state and territory health authorities ranged evenly from daily to occasionally, while most respondents indicated that their use of the NMDS-based data tended to be on a daily basis. Respondents from the Department of Health and Ageing commonly indicated that they use both the NMDS specifications and the NMDS-based data on a daily basis, while AIHW users were more likely to use both on a weekly basis.

**Table 3.4: Respondents' rating of their frequency of use of the NMDS specifications and NMDS-based data**

Frequency	NMDS specifications	NMDS-based data
Daily	10	18
Weekly	12	9
Monthly	9	9
Occasionally	13	11
Never	4	1
Not answered	2	2
<b>Total</b>	<b>50</b>	<b>50</b>

## Utility

The main purpose of the survey was to gain an understanding of whether the NMDS is useful and whether it suits the current requirements of users. In order to assess the utility of the NMDS respondents were asked to rate the importance and usefulness of the NMDS overall and each individual data element, and to indicate which data elements should remain unchanged, which should be modified and which deleted.

When assessing importance, respondents were asked to think of how significant they believe the NMDS and each data element are to a national collection of data on admitted patient care. When assessing usefulness, respondents were asked to keep in mind whether the NMDS and each data element suit their current requirements. Importance could be rated as 'Not important', 'Important', 'Highly important' or 'Unsure' and usefulness could be rated as 'Not useful', 'Useful', 'Highly useful' or 'Unsure'.

If all respondents think a data element is 'Highly important' and 'Highly useful', it should probably remain unchanged. However, if respondents indicate that a data element is 'Highly important', but 'Not useful', it may be a function of the way it is defined, in which case it probably needs to be modified.

Table 3.5 provides respondents' ratings of the importance and usefulness of the NMDS and individual data elements and concepts. Not all respondents provided a rating for every data element, so the frequencies will not add to the total number of respondents (50) for every data element.

Seventy-nine per cent of respondents who provided a rating for the importance of the NMDS overall rated it as highly important and 81% rated it as highly useful. Concerns raised with the NMDS overall were in relation to the possible lack of consistency of the counting unit, that is, the episode of care, across states and territories and possibly between hospitals within states and territories, and the varying interpretation of individual data elements.

**Table 3.5: Respondents' rating of the importance and usefulness of the NMDS and individual data elements and data element concepts**

Data element	Importance				Usefulness			
	Not important	Important	Highly important	Unsure	Not useful	Useful	Highly useful	Unsure
<b>NMDS for Admitted Patient Care</b>	1	6	31	1	1	5	29	1
<b>Establishment data elements</b>								
Establishment identifier	6	15	21	3	6	16	15	5
Establishment number	2	12	19	9	5	12	13	10
Establishment sector	3	16	18	6	8	16	11	6
Region code	7	12	19	7	9	13	15	6
State identifier	3	13	30		3	19	20	1
<b>Demographic data elements</b>								
Area of usual residence	3	4	38		2	8	31	1
Country of birth	5	14	23	2	4	17	18	2
Date of birth	2	7	36	1	2	7	31	3
Indigenous status	4	8	34		5	13	24	1
Sex	1	7	38		1	8	33	1
<b>Length of stay data elements</b>								
Admission date	4	6	35		2	10	30	1
Number of days of hospital in the home care	2	19	10	11	7	17	7	9
Number of leave periods	13	15	6	10	14	13	6	9
Number of qualified days for newborns	4	15	16	9	8	16	10	8
Separation date	2	5	39		2	7	33	1
Total leave days	5	18	13	8	9	17	9	7
Total psychiatric care days	3	17	14	9	5	17	10	9
<b>Clinical and related data elements</b>								
Activity when injured	3	19	16	5	5	15	14	6
Additional diagnosis	2	8	34		2	10	28	1
Care type	2	11	29	2	6	11	22	2
Diagnosis related group	2	8	32	3	3	9	26	4
External cause—admitted patient	4	10	27	3	4	12	21	4
Infant weight, neonate, stillborn	3	11	25	5	6	8	19	6
Major diagnostic category	3	14	22	5	2	14	19	6
Place of occurrence of external cause of injury	6	14	19	3	6	14	14	5
Principal diagnosis		4	39			7	33	
Procedure	1	6	37		2	8	30	1

(continued)

**Table 3.5 (continued): Respondent's rating of the importance and usefulness of the NMDS and individual data elements and data element concepts**

Data element	Importance				Usefulness			
	Not important	Important	Highly important	Unsure	Not useful	Useful	Highly useful	Unsure
<b>Administrative data elements</b>								
Admitted patient election status	9	12	16	5	8	10	15	7
Funding source for hospital patient	4	15	20	3	6	12	17	5
Hospital insurance status	4	17	15	6	6	15	15	4
Intended length of hospital stay	12	15	8	8	13	12	8	8
Inter-hospital contracted patient	8	18	7	8	7	14	6	11
Medicare eligibility status	4	17	16	5	5	16	13	5
Mental health legal status	5	21	9	7	6	16	8	9
Mode of admission	3	17	20	3	6	18	11	5
Mode of separation	2	11	28	3	3	13	21	3
Person identifier	3	11	27	3	3	15	19	4
Source of referral to public psychiatric hospital	8	18	8	8	8	16	7	9
Urgency of admission	3	18	16	5	8	15	11	6
<b>Data element concepts</b>								
Acute care episode for admitted patient	3	13	22	4	5	15	17	3
Admission	2	13	23	3	4	16	16	3
Admitted patient	2	13	23	3	4	14	18	3
Contracted hospital care	4	15	9	12	5	13	7	13
Diagnosis	1	5	35	2	1	7	30	2
Episode of care	1	7	30	3	1	11	23	4
Hospital	2	13	22	5	3	13	15	8
Hospital boarder	7	9	15	10	6	10	11	11
Hospital in the home care	3	18	10	9	7	13	5	13
Live birth	5	11	21	4	5	11	17	6
Neonate	3	12	23	3	5	11	18	5
Newborn qualification status	5	12	17	6	8	11	12	8
Organ procurement—posthumous	5	13	9	12	6	11	7	12
Overnight stay patient	3	16	19	2	3	15	17	3
Patient	2	15	20	4	3	15	15	5
Same-day patient	2	13	26	1	3	16	20	1
Separation	2	8	30	2	1	12	23	3

## Data development

Respondents were asked their views on possible areas for development of the NMDS, including possible changes to the scope, or any other priorities for definitional development. The views of respondents (other than detailed comments on individual data element and data element concepts) are summarised in this section. Chapter 5 presents comments on individual data elements and data element concepts from this utility evaluation and the compliance evaluation.

### Scope

The scope of the NMDS for Admitted Patient Care as published in the *National Health Data Dictionary* is:

Episodes of care for admitted patients in all public and private acute and psychiatric day hospital facilities and alcohol and drug treatment centres in Australia. Hospitals operated by the Australian Defence Force, corrections authorities and in Australia's off-shore territories may also be included. Hospitals specialising in dental, ophthalmic aids and other specialised medical or surgical care are included.

A few respondents commented that the scope of the NMDS is unclear, and it is uncertain whether it includes all private and public hospitals in Australia, or whether some are excluded. It was suggested that given that there is a classification system for hospitals provided by the 'Establishment type' data element it may be better to write the scope statement using these hospital types. For example, all public and private hospitals (including acute and psychiatric, day centres/hospitals and freestanding day surgery centres, Veterans' Affairs, defence force and other Australian government hospitals). Alternatively the scope statement could be shortened to 'All hospitals in Australia'.

Although hospitals operated by the Australian Defence Force and corrections authorities are included in the scope of the NMDS, data for these hospitals are generally not provided for the national collection. It was suggested by one jurisdiction that these should probably be considered for inclusion in the scope (or rather collected and provided for the national collection).

There was a strong feeling by respondents that there needs to be a clear distinction between admitted and non-admitted patients and that the boundaries between admitted overnight, same-day and non-admitted need to be reviewed with clinical input to determine if more appropriate guidelines can be developed. It was suggested that areas such as chemotherapy and dialysis will continue to be a problem without clear guidelines and rules. It was also noted that the scope of this NMDS should not overlap with the scope of the recently endorsed NMDS for Non-Admitted Patient Emergency Department Care. One respondent commented that the usefulness of the NMDS would be greatly increased by expanding the scope to include more non-admitted care data items, community health in particular,

however, this would mean that the focus of the NMDS is no longer admitted patients. If an NMDS for non-admitted care were to be developed, data elements such as those may be better placed there.

Other concerns raised were that the scope may be incomparable across jurisdictions because of the flexible definition of 'hospital'.

The need to improve and rationalise the current NMDS and correct for some of the inconsistencies that already exist was raised as an issue. It was noted that while the NMDS is a great idea and concept it is clear that not all states and territories use this standard. A problem related to this is that the current version of the NHDD is not necessarily used, meaning that the usefulness of data elements in their first year of implementation/collection is questionable as they are either missing or not collected or miscoded in many cases. The need for improving national consistency was highlighted.

### **Other issues raised by respondents**

Other issues raised by respondents tended to be broader than comments on the NMDS as a whole or the individual data elements and are probably outside the scope of this evaluation. They are included here for completeness.

The accuracy of coding of ICD-10-AM diagnosis and procedure codes and external cause, place and activity codes was noted as needing improvement.

It was suggested that it would be useful if the NHDD were to include more background information, for example, history of the data element, early difficulties, and inconsistency in usage between states and territories, as was provided in earlier versions of the dictionary. It was noted that this would assist with trend analyses.

It was suggested that the NHDD version used for data submission should be available 12 months before the start of the data collection. The current arrangement is that changes to an NMDS are approved by the NHIMG in November for implementation in the following July.

It was also suggested that the NHDD should include common epidemiological terms and concepts that are not necessarily included in the NMDS. The examples given were self-rated health, blood pressure, incidence, prevalence, disability, infant mortality, perinatal mortality, life expectancy and potential years of life lost (PYLL).

Another comment related to the fact that the Knowledgebase is only available to users as an interactive Internet-based interface. It was noted that this is not the most efficient method for more complex inquiries or analysis of the NMDS metadata and that it would be very helpful if the Knowledgebase was also available as a stand-alone database, for example, in Microsoft Access format.

Also noted was the inconsistencies in reporting agreements apparent for mental health episodes between the NMDS and the National Hospital Cost Data Collection, the respective roles of the AR-DRGs and Mental Health Classification and Service Costs (MH-CASC) classes as casemix categories for mental health, and the associated need for improved casemix measures and costing information for these episodes.

## **Persons who should be consulted for future data development**

A number of respondents commented that they thought the current consultation process is appropriate, whereby submissions for data development go to the National Health Data Committee which then makes recommendations to the National Health Information Management Group.

Most respondents identified a wide range of stakeholders who should be consulted in relation to data development; however, it is seen as essential to consult especially with those who are involved in the collection of the data. It was noted that all state and territory health authorities must come to some agreement and consensus before introducing new data elements, as the data quality is at risk of becoming compromised if too much data is collected for the sake of a few.

Stakeholders identified by respondents included:

- hospitals and health care providers who will have to collect the data
- state and territory health authorities, including data providers
- expert data users
- health insurance funds.

More specific organisations and committees identified included:

- Australian Institute of Health and Welfare (including collaborating units)
- Department of Health and Ageing
- Australian Bureau of Statistics
- National Centre for Classification in Health
- National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data
- Steering Committee for the Review of Commonwealth/State Service Provision
- Australian Private Hospitals Association
- Australian Health Care Association
- National Health Performance Committee
- National Occupational Health and Safety Information Committee.

It was suggested that clinical advice is critical to many of the areas mentioned for review and that it may be worth considering convening a special group to look at the issues identified as part of this review. Alternatively, advice could be sought from existing groups such as the Clinical Casemix Committee of Australia.

# 4 Compliance evaluation

## National summary

### Scope

The National Minimum Data Set for Admitted Patient Care (referred to as 'the NMDS') is a specification for data that are collected on all episodes of care for admitted patients in Australian hospitals. The scope of the NMDS is episodes of care for admitted patients in all:

- public and private acute hospitals
- public and private psychiatric hospitals
- freestanding day hospital facilities
- alcohol and drug treatment centres.

Hospitals operated by the Australian Defence Force, corrections authorities and in Australia's off-shore territories may also be included.

Episodes of care are the statistical units of this data set, with data being collected at each hospital from patient administrative and clinical record systems and forwarded to the relevant state or territory health authority on a regular basis. Data for each financial year ending 30 June are then provided to the Australian Institute of Health and Welfare for national collation as the National Hospital Morbidity Database, on an annual basis.

Essentially all public hospitals and the large majority of private hospitals were included in the National Hospital Morbidity Database for 2000-01.

Public sector hospitals that were not included are those not within the jurisdiction of a state or territory health authority (hospitals operated by the Department of Defence or correctional authorities, for example, and hospitals located in offshore territories). In addition, for 2000-01, data were not supplied for one small 'outpatient clinic' in Queensland, a small rural hospital and a forensic hospital in Tasmania and a mothercraft hospital in the Australian Capital Territory.

Within the private sector, data were not provided for 2000-01 for 11 freestanding day hospital facilities in Victoria, all private freestanding day hospital facilities in the Australian Capital Territory, and the one private hospital in the Northern Territory. For South Australia, data were not available for one private freestanding day hospital facility and were missing for January to June 2001 for another, and for May to June 2001 for one private hospital (non-day only). Data have only been provided for the periods from August 2000 to June 2001, January 2001 to June 2001 and April

2001 to June 2001 respectively for three other South Australian private freestanding day hospital facilities.

Table 4.1 summarises this coverage information by state and territory and by hospital sector.

**Table 4.1: Coverage of hospitals in the National Hospital Morbidity Database, by hospital sector and state and territory, 2000–01**

	<b>Public acute hospitals</b>	<b>Public psychiatric hospitals</b>	<b>Private freestanding day hospital facilities</b>	<b>Other private hospitals</b>
NSW	Complete	Complete	Complete	Complete
Vic	Complete	Complete	Incomplete	Complete
Qld	Incomplete	Complete	Complete	Complete
WA	Complete	Complete	Complete	Complete
SA	Complete	Complete	Incomplete	Incomplete
Tas	Incomplete	Complete	Complete	Incomplete
ACT	Incomplete	Not applicable	Not included	Complete
NT	Complete	Not applicable	Not applicable	Not included

*Note: Complete*—all facilities in this sector reported data to the National Hospital Morbidity Database. *Incomplete*—some facilities in this sector for this state or territory did not provide data to the National Hospital Morbidity Database. See text for more details. *Not included*—there are facilities in this sector for this state or territory, however, no data were provided. *Not applicable*—there are no facilities in this sector for this state or territory.

### **Coverage estimates for private hospital separations**

As not all private hospital separations are included in the National Hospital Morbidity Database, the counts of private hospital separations are likely to be underestimates of the actual counts. Over recent years, there have been slightly fewer separations reported to the National Hospital Morbidity Database (particularly for private freestanding day hospital facilities) than to the Australian Bureau of Statistics' Private Health Establishments Collection (Table 4.2). The latter collection includes all private acute and psychiatric hospitals licensed by state and territory health authorities and all private freestanding day hospital facilities approved by the Department of Health and Ageing. In 2000–01, the difference was 81,809 separations (3.5%).

These discrepancies may have been due to the use of differing definitions or different interpretations of definitions, or differences in the quality of the data provided for different purposes. It is also likely to reflect the omission of some private hospitals from the National Hospital Morbidity Database and also some separations for some private hospitals that were otherwise included in the database.

**Table 4.2: Differences between private hospital separations reported to the National Hospital Morbidity Database and the ABS Private Health Establishments Collection, 1993–94 to 2000–01**

Year	Private freestanding day hospital facilities		Other private hospitals		Total	
	Separations	Per cent	Separations	Per cent	Separations	Per cent
1993–94	n.a.	n.a.	n.a.	n.a.	119,554	8.3
1994–95	n.a.	n.a.	n.a.	n.a.	76,274	5.0
1995–96	n.a.	n.a.	n.a.	n.a.	83,619	5.0
1996–97	4,868	2.2	75,850	4.9	80,718	4.6
1997–98	23,662	8.7	40,369	2.5	64,031	3.4
1998–99	40,980	13.6	69,961	4.2	110,941	5.6
1999–2001	68,907	19.7	53,247	3.0	122,154	5.7
2000–01	n.a.	n.a.	n.a.	n.a.	81,809	3.5

n.a. Not available.

Source for private hospital data: ABS, unpublished Private Health Establishments Collection data.

### Admission, separation and episodes of care

As mentioned above, episodes of care are the statistical units of this data set. An episode of care is the period of admitted patient care between admission and separation characterised by only one care type. This treatment and/or care provided to a patient during an episode of care can occur in hospital and/or in the person's home (for hospital in the home patients).

Admission is the process whereby the hospital accepts responsibility for the patient's care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same-day or overnight care or treatment. An admission may be formal or statistical. A formal admission is the administrative process by which a hospital records the commencement of treatment and/or care and/or accommodation of a patient. In contrast, a statistical admission is the administrative process by which a hospital records the commencement of a new episode of care, with a new care type, for a patient within one hospital stay.

Separation is the process by which an episode of care for an admitted patient ceases. Like admissions, a separation may be formal or statistical. A formal separation is the administrative process by which a hospital records the cessation of treatment and/or care and/or accommodation of a patient. A statistical separation is the administrative process by which a hospital records the cessation of an episode of care for a patient within the one hospital stay.

There is some difference in the approach states and territories and the public and private sectors take to the formal admission and separation for people attending hospital on a same-day basis, for example, for group therapy sessions or day programs. In jurisdictions such as Tasmania and the territories these attendances are recorded as non-admitted patient occasions of service. In other jurisdictions, including New South Wales, Queensland, Western Australia and South Australia, the majority of patients are formally admitted for this care and it is therefore

reported as same-day separations. Psychotherapy (and other allied health psychology interventions), for example, is provided on an admitted patient basis in New South Wales, Victoria, Queensland, South Australia and Western Australia, but not in the other jurisdictions.

In addition to the differing admission practices, the way jurisdictions count episodes of care may also differ. An example of this is in the way newborn episodes of care are counted. It is obvious from the review of utility that there is a need for clearer distinction between admitted and non-admitted patients and a review of the boundaries between admitted overnight, same-day and non-admitted as well as a review of the use of care types and counting episodes of care.

#### *Newborn episodes of care and the reporting of separations for patients aged less than 10 days*

The *Newborn* type of episode of care was introduced in 1998–99 to report a single episode of care for all patients aged 9 days or less at admission, regardless of their qualification status and whether they changed qualification status during their hospital stay. Thus these episodes can include qualified days only, a mixture of qualified days and unqualified days, or only unqualified days. Qualified days are considered to be the equivalent of acute care days and *Newborn* episodes with qualified days only are considered to be equivalent to *Acute care* episodes. *Newborn* episodes with no qualified days are considered to be equivalent to the previous category, *Unqualified neonate*. In this report, *Newborn* episodes with at least one qualified day have been included in all the tables reporting separations.

Tasmania and the Northern Territory did not implement this *Newborn* definition in 1998–99, 1999–2000 or 2000–01; therefore, for this state and territory, there are no *Newborn* separations with a mixture of qualified and unqualified days reported. New South Wales, Queensland and public hospitals in South Australia and Victoria implemented the new definition in 1998–99, the Australian Capital Territory in 1999–2000, and Western Australia in 2000–01. For the remaining jurisdictions, separations reported as *Acute care* for patients aged less than 10 days are included in the National Hospital Morbidity Database as *Newborn* episodes with qualified days only. Separations reported to the Database as *Unqualified neonates* are included as *Newborn* episodes with no qualified days.

Prior to 1998–99, New South Wales, Queensland and South Australia (public hospitals) had counted separate episodes of care within a hospital stay as individual separations. With the implementation of the *Newborn* definition, they began to count each hospitalisation of a patient admitted under the age of 10 days as one separation. This change is likely to have resulted in a slight reduction in the number of separations for these states in 1998–99, 1999–2000 and 2000–01, compared with 1997–98, and a slight increase in their average lengths of stay. Victoria had been reporting separations for these patients according to the *Newborn* definition (that is, using a single episode for these patients) prior to 1998–99, so this implementation is not likely to have markedly affected recent Victorian separation or average length of stay data.

In 1998–99 and 1999–2000 Western Australia counted separations for patients aged 10 days or less on admission as qualified (*Acute care*) if at least one day was qualified. For 2000–01 the implementation of the new definition may have resulted in a slight reduction in the number of separations reported with qualified days only and a reduction in the average length of stay for these separations. Tasmania and the Northern Territory continued to report a new episode of care for patients aged less than 10 days at admission with each change in qualification status. The reporting method used in Tasmania and the Northern Territory may mean that there were more separations for patients under the age of 10 days for these jurisdictions, relative to others, and that they had a lower average length of stay.

#### *Hospital in the home care*

Most states and territories have hospital in the home programs in which admitted patients are provided with hospital care in their (permanent or temporary) place of residence as a substitute for hospital accommodation. This care has been defined in the *National Health Data Dictionary* version 10 as occurring within an episode of care for an admitted patient, and days of hospital in the home care for each separation will be reported to the National Hospital Morbidity Database in 2001–02 data.

In 2000–01, there were no national definitions relating to hospital in the home care, and there was variation in the way in which states and territories reported it. In Victoria, Queensland (public hospitals), Tasmania, the Australian Capital Territory and the Northern Territory, hospital in the home care was provided in 2000–01 as defined above, and separations including this care were included in the National Hospital Morbidity Database. Queensland reported that hospital in the home care programs are currently very small, with a total of only a few hundred separations during the year, and that private hospitals in Queensland do not provide hospital in the home care. In New South Wales, hospital in the home care data were collected on an inconsistent basis for 2000–01. It is expected that data will be collected from 2003–04. Western Australia did not operate hospital in the home programs in 2000–01, except to a limited extent in public hospitals. In South Australia, hospital in the home care was defined as separate episodes of care, and reported as having *Other care* as the care type. This variation may have had the effect of slightly increasing the relative numbers of separations and reducing the average lengths of stay reported by South Australia compared with other states and territories.

#### *Hospital boarders*

A hospital boarder is a person who is receiving food and/or accommodation but for whom the hospital does not accept responsibility for treatment and/or care.

Hospital boarders are not admitted patients but it is requested that their information be included in the submission of data to the Institute for the National Hospital Morbidity Database. States and territories are requested to provide information on how they can be identified in the data, such as a principal diagnosis of Z76.3 *Healthy person accompanying sick person* or Z76.4 *Other boarder in health care facility* or as a value of '10.0' in the 'Care type' data element.

New South Wales, Queensland, Western Australia, Tasmania and the Northern Territory provided data for hospital boarders for 2000–01.

### *Organ procurement – posthumous*

Organ procurement – posthumous is an activity undertaken by hospitals in which human tissue is procured for the purpose of transplantation from a donor who has been declared brain dead.

Organ procurement – posthumous episodes can be identified using the ‘Care type’ data element, allowing records for this type of activity to be clearly flagged in data collections and counted and costed more accurately. As this activity is not regarded as care or treatment of an admitted patient, it is not included within the scope of the NMDS for admitted patient care. However, data for these episodes can be provided to the National Hospital Morbidity Database if desired by states and territories.

New South Wales, Queensland, Western Australia and the Northern Territory provided data for Organ procurement – posthumous episodes for 2000–01.

## **Use of national standard definition, domain values and NMDS scope**

This is a national summary of the information to be presented in more detail on the following pages. Of the 38 data elements in the NMDS, the national standard definition was used for 29 (76%) data elements by all states and territories for which the data elements were provided. The national standard domain values were used for 23 (61%) data elements by all jurisdictions for which the data elements were provided. For 13 (34%) of the data elements, data were provided for all reported separations. There were only 7 (18%) data elements for which all jurisdictions used the national standard definition and domain values and provided it for all reported separations.

**Table 4.3: National summary of the use of the *National Health Data Dictionary* definition and domain values and NMDS scope**

<b>Data element</b>	<b>NHDD definition used?</b>	<b>NHDD domain values used?</b>	<b>Provided for all* reported separations?</b>
<b>Establishment data elements</b>			
Establishment identifier—state identifier	Yes	Yes	Yes
Establishment identifier—Establishment number	No	No	Yes
Establishment identifier—Establishment sector	Yes	No	Yes
Establishment identifier—Region code	Yes	Yes	No
<b>Demographic data elements</b>			
Area of usual residence	Yes	No	No
Country of birth	Yes	No	No
Date of birth	Yes	Yes	No

(continued)

**Table 4.3 (continued): National summary of the use of the *National Health Data Dictionary* definition and domain values and NMDS scope**

<b>Data element</b>	<b>NHDD definition used?</b>	<b>NHDD domain values used?</b>		<b>Provided for all* reported separations?</b>
Indigenous status	Yes	Yes		No
Sex	No		No	Yes
<b>Length of stay data elements</b>				
Admission date	Yes	Yes		Yes
Number of leave periods	Yes or . .	Yes or . .		No
Number of qualified days for newborns	Yes or . .	Yes or . .		No
Separation date	Yes	Yes		Yes
Total leave days	Yes	Yes		Yes
Total psychiatric care days	Yes	Yes		Yes
<b>Clinical and related data elements</b>				
Activity when injured	Yes	Yes		No
Additional diagnosis	Yes	Yes		Yes
Care type	Yes		No	No
Diagnosis Related Group	Yes		No	Yes
External cause—admitted patient	Yes	Yes		No
Infant weight, neonate, stillborn	No	Yes		No
Major Diagnostic Category	Yes		No	Yes
Place of occurrence of external cause of injury	Yes	Yes		No
Principal diagnosis	Yes	Yes		No
Procedure	Yes	Yes		Yes
<b>Administrative data elements</b>				
Admitted patient election status	Yes	Yes		No
Compensable status	Yes	Yes		No
Department of Veterans' Affairs patient	Yes	Yes		No
Hospital insurance status	Yes		No	No
Intended length of hospital stay	No	Yes		No
Inter-hospital contracted patient	No or . .		No or . .	No
Medicare eligibility status	Yes	Yes		No
Mental health legal status	Yes or . .		No or . .	No
Mode of admission	Yes	Yes		No
Mode of separation	Yes		No	No
Person identifier	Yes or . .	Yes or . .		No
Source of referral to public psychiatric hospital	No or . .		No or . .	No or . .
Urgency of admission	No or . .		No or . .	No

\* More than about 99.5% of reported separations.

. . Not applicable.

The measure of whether the data element was provided for all reported separations has been reported as 'Yes' in the tables summarising this information in this section

of the report and on the sections on each data element, if the data were missing or reported as 'not reported' for no more than 0.5% of separations, or if the requirement for reporting of the data element was ambiguous. The text accompanying the summary tables in the sections on the data elements details situations in which the data were missing for more than 0.5% of records.

## State and territory summary

The state and territory summary (Tables 4.4, 4.5 and 4.6) provides information on the number and proportion of data elements for which the NHDD definition and domain values were used and the number and proportion of data elements which were reported for all separations. Out of all states and territories, Queensland had the highest use of the NHDD definition for reporting data elements and was the jurisdiction with the highest use of the NHDD domain values. Western Australia provided data elements according to the NMDS scope for almost all separations.

**Table 4.4: State and territory summary of the use of the *National Health Data Dictionary* definition and domain values and NMDS scope, all hospitals**

State/territory	NHDD definition used?		NHDD domain values used?		Provided for all* reported separations?	
	Number	Per cent	Number	Per cent	Number	Per cent
	(Number and % of data elements)					
NSW	36	95	33	87	30	79
Vic	35	92	32	84	32	84
Qld	37	97	35	92	31	82
WA	34	89	31	82	33	87
SA	34	89	32	84	26	68
Tas	34	89	31	82	22	58
ACT	35	92	33	87	27	71
NT	34	89	32	84	25	65
<b>Total</b>	<b>29</b>	<b>76</b>	<b>23</b>	<b>61</b>	<b>13</b>	<b>34</b>

\* More than 99.5% of reported separations.

Tasmania provided additional comments that many of their non-compliance issues relate to the private sector. Within Tasmania there is no legislative, or other requirement, for private hospitals to provide patient level data to the Department of Health and Human Services. Fortunately the majority of private hospitals and freestanding day facilities have voluntarily agreed to provide what information they can. As the private sector is not a signatory to the National Health Information Agreement, their data collection is based primarily on their business requirements, which do not necessarily conform to the NMDS. A further issue, which affects private sector data in Tasmania, is the small number of hospitals and freestanding day facilities. It would breach the 'commercial in confidence' agreement between the Department of Health and Human Services and the private sector to provide information at the individual hospital level. With the recent closure of one of the

freestanding day facilities, Tasmania has indicated that it can no longer separately identify these facilities in the data provided for the NMDS.

**Table 4.5: State and territory summary of the use of the *National Health Data Dictionary* definition and domain values and NMDS scope, public hospitals**

State/territory	NHDD definition used?		NHDD domain values used?		Provided for all* reported separations?	
	Number	Per cent	Number	Per cent	Number	Per cent
(Number and % of data elements)						
NSW	37	97	34	89	30	79
Vic	35	92	32	84	32	84
Qld	37	97	35	92	33	87
WA	34	89	32	84	34	89
SA	34	89	32	84	28	74
Tas	36	95	35	92	27	71
ACT	35	92	35	92	28	74
NT	34	89	32	84	25	65
<b>Total</b>	<b>29</b>	<b>76</b>	<b>23</b>	<b>61</b>	<b>13</b>	<b>34</b>

\* More than 99.5% of reported separations.

**Table 4.6: State and territory summary of the use of the *National Health Data Dictionary* definition and domain values and NMDS scope, private hospitals**

State/territory	NHDD definition used?		NHDD domain values used?		Provided for all* reported separations?	
	Number	Per cent	Number	Per cent	Number	Per cent
(Number and % of data elements)						
NSW	36	95	33	87	32	84
Vic	35	92	33	87	33	87
Qld	37	97	35	92	31	82
WA	34	89	31	82	33	87
SA	34	89	32	84	26	68
Tas	34	89	31	82	22	58
ACT	38	100	33	87	27	71
NT	..	..	..	..	..	..
<b>Total</b>	<b>29</b>	<b>76</b>	<b>23</b>	<b>61</b>	<b>15</b>	<b>39</b>

\* More than 99.5% of reported separations.

.. Not applicable.

## Assessment of individual data elements

This section reports on the assessment of compliance for each data element in the NMDS reported by states and territories for 2000–01. It details states' and territories' use of the national standard, domain values and NMDS scope and provides details of the use of non-standard NHDD definitions and domain values and non-standard use

of scope. Information is also provided on mapping required from state and territory data sets to comply with the national standard domain values, any additional information or comments from states and territories to assist in the evaluation and recommendations for change. The order of data elements in this section is according to how the data elements are presented in Table 4.3.

## Data element name: Establishment identifier—State identifier

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Admitted patient mental health care Admitted patient palliative care Alcohol and other drug treatment services Community mental health care Community mental health establishments Perinatal Public hospital establishments	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000050
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 2
<b>Definition:</b> Identifier for the establishment in which the episode or event occurred. Each separately administered health care establishment is to have a unique identifier at the national level. Establishment identifier is a composite data element and is a concatenation of State identifier, Establishment sector, Region code and Establishment number. State identifier An identifier for state or territory (Knowledgebase ID: 000380, version number 2).		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

**Details of use of non-standard NHDD definition and domain values:**

Not applicable, NHDD definition and domain values used by all states and territories.

**Details of use of non-standard NMDS scope:**

Not applicable, 'State identifier' provided for all reported separations in each state/territory.

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

Not applicable.

**Data element name: Establishment identifier—Establishment number**

<p><b>Evaluation NMDS:</b> Admitted patient care</p>	<p><b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care Alcohol and other drug treatment services Community mental health care Community mental health establishments Emergency Department waiting times Perinatal Public hospital establishments</p>	<p><b>Collection year:</b> 2000–01</p> <p><b>Knowledgebase ID:</b> 000050</p> <p><b>NHDD version:</b> 9.0</p>
<p><b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.</p>		<p><b>Version number:</b> 2</p>
<p><b>Definition:</b> Identifier for the establishment in which the episode or event occurred. Each separately administered health care establishment is to have a unique identifier at the national level. Establishment identifier is a composite data element and is a concatenation of State identifier, Establishment sector, Region code and Establishment number. Establishment number An identifier for establishment, unique within the state or territory (Knowledgebase ID: 000377, version number 2).</p>		

**Use of National Standard definition, domain values and NMDS scope:**

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW		No		No*	Yes	
Vic		No		No*	Yes	
Qld	Yes		Yes		Yes	
WA		No		No*	Yes	
SA	Yes		Yes		Yes	
Tas		No		No*	Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

\* Unique establishment identifier provided for public hospitals but not for private hospitals in NSW, Vic, WA, Tas.

**Details of use of non-standard NHDD definition and domain values:**

New South Wales, Victoria, Western Australia and Tasmania did not provide a unique 'Establishment number' for private hospitals. South Australia provided a unique establishment identifier for private hospitals, but the establishment identifiers were encrypted to ensure confidentiality.

**Details of use of non-standard NMDS scope:**

Not applicable, 'Establishment number' provided for all reported separations in each state/territory.

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

Private hospitals were assigned an establishment number of 300 in New South Wales, PRIV in Victoria, 999 in Western Australia and 000 in Tasmania.

**Data element name: Establishment identifier—Establishment sector**

<p><b>Evaluation NMDS:</b> Admitted patient care</p>	<p><b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care Alcohol and other drug treatment services Community mental health care Community mental health establishments Perinatal Public hospital establishments</p>	<p><b>Collection year:</b> 2000–01</p>
		<p><b>Knowledgebase ID:</b> 000050</p>
		<p><b>NHDD version:</b> 9.0</p>
<p><b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.</p>		<p><b>Version number:</b> 2</p>
<p><b>Definition:</b> Identifier for the establishment in which the episode or event occurred. Each separately administered health care establishment is to have a unique identifier at the national level. Establishment identifier is a composite data element and is a concatenation of State identifier, Establishment sector, Region code and Establishment number. Establishment sector A section of the health care industry (Knowledgebase ID: 000379, version number 2).</p>		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes*		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

\* See comments in text.

### Details of use of non-standard NHDD definition and domain values:

The *National Health Data Dictionary* version 9 specifies three domain values, 1 *Public*, 2 *Private* and 3 *Repatriation*. Data domain 3 *Repatriation* has been removed from the *National Health Data Dictionary* version 10. The Institute did not request data for this data domain, but requested that two additional categories be provided for 'Establishment sector', 4 *Public psychiatric* and 5 *Private freestanding day hospital facility*.

New South Wales, Victoria, Queensland, Western Australia and South Australia provided establishment sector as requested by the Institute.

Tasmania provided information for public acute and public psychiatric hospitals but did not distinguish between private freestanding day hospital facilities and other private hospitals due to confidentiality concerns regarding the small number of hospitals and freestanding day facilities. A data domain of 6 *Private, not further specified* was assigned by the AIHW for Tasmania. The Tasmanian Department of Health and Human Services reports that it would breach the 'commercial in confidence' agreement between the Department and the private sector to provide information at individual hospital level. With the recent closure of one of the freestanding day facilities, Tasmania has indicated that it can no longer separately identify these facilities in the data provided for the NMDS.

### Details of use of non-standard NMDS scope:

Not applicable, 'Establishment sector' provided for all reported separations in each state/territory.

### Was mapping required from state and territory data sets?

Not applicable.

## Data element name: Establishment identifier—Region code

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care Alcohol and other drug treatment services Community mental health care Community mental health establishments Perinatal Public hospital establishments	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000050
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 2
<b>Definition:</b> Identifier for the establishment in which the episode or event occurred. Each separately administered health care establishment is to have a unique identifier at the national level. Establishment identifier is a composite data element and is a concatenation of State identifier, Establishment sector, Region code and Establishment number. Region code An identifier for location of health services in an area. (Knowledgebase ID: 000378 version number 2).		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes			No
WA	Yes		Yes			No*
SA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes			No
NT	Yes		Yes			No

\* WA private hospitals did not provide region code.

**Details of use of non-standard NHDD definition and domain values:**

As domain values are as specified by the individual states and territories and there are no standard categories that have to be reported, it is difficult to assess each individual jurisdiction's compliance to the NHDD.

**Details of use of non-standard NMDS scope:**

Regions are not used in the Australian Capital Territory and the Northern Territory. Queensland did not provide 'Region code' for separations in either the public or private sector, while Western Australia did not provide 'Region code' for private hospital separations.

Western Australia has indicated that it does not provide region codes for private hospitals as this amounts to identifying the establishment in some cases. Western Australia does not wish to have private hospitals identified.

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

Queensland, the Australian Capital Territory and the Northern Territory used '00' for all separations, while Western Australia provided region codes for public hospitals and '00' for private hospitals. The Australian Capital Territory indicated that region is not a useful disaggregation for analysis.

## Data element name: Area of usual residence

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Admitted patient mental health care Admitted patient palliative care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000016
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 3
<b>Definition:</b> Geographical location of usual residence of the person – comprised of state or territory and Statistical Local Area (SLA). SLAs should be based on the Australian Standard Geographical Classification (ASGC) effective for the data collection reference year.		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes			No
Vic	Yes		Yes		Yes	
Qld	Yes			No	Yes	
WA	Yes			No	Yes	
SA	Yes			No	Yes	
Tas	Yes		Yes			No*
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

\* Some Tasmanian private hospitals did not report Area of usual residence.

### Details of use of non-standard NHDD definition and domain values:

Queensland and South Australia provided SLA codes according to the ASGC 2000 for patients usually resident in the jurisdiction and postcodes for patients usually resident elsewhere. Queensland used some additional codes (non-ASGC) for describing usual residence of *At sea*, *Australian External Territories*, *No fixed address* and *Not stated/unknown*.

Western Australia provided postcodes for patients usually resident in the jurisdiction and patients not usually resident in the jurisdiction. The postcode version was unknown. Western Australia will report SLA from 2002–03.

New South Wales, Victoria, Tasmania, the Australian Capital Territory and the Northern Territory were able to provide SLA codes for both patients usually resident in the jurisdiction and patients not usually resident in the jurisdiction. SLA codes were provided according to the current ASGC codes (2000) as per the NHDD definition for Tasmania, the Australian Capital Territory and the Northern Territory, while New South Wales and Victoria provided SLA codes according to 1999 boundaries. New South Wales, Victoria (public psychiatric hospitals only), Tasmania and the Australian Capital Territory also provided postcodes.

Postcode was invalid for 5,158 separations from New South Wales. New South Wales has indicated that this is due to an error in processing.

Tasmania provided SLA for all records, however, for most non-Tasmanian residents, the SLA was '9999' (Unknown). For Tasmanian residents, the SLA was '9999' for 16,942 separations (12.1%). Tasmania has indicated that suburb is not supplied by several private hospitals. Postcode was provided for all separations for Tasmanian and non-Tasmanian residents.

#### **Details of use of non-standard NMDS scope:**

Residence state was not reported for 7,056 separations from New South Wales. SLA was reported as '9099' (State/territory undefined, not stated for census purposes) for 7,954 separations, '9899' (Undefined) for 30 separations and was missing for 6 separations. New South Wales has indicated that this is due to system errors which are gradually being addressed.

Residence state was not reported for 891 separations from Victoria. SLA was missing for 3,128 separations, including those where the resident state was missing, and the remaining where resident state was *Not applicable (overseas, at sea, no fixed address)*.

Residence state was not reported and SLA was reported as '9999' (Not stated/unknown) for 515 separations from Queensland.

SLA was reported as '9999' (Unknown) for 17,785 (12.6%) separations from Tasmania. The majority of these separations were from private hospitals (17,265).

Residence state was not reported for 159 separations from the Australian Capital Territory. SLA was reported as '9099' (State/territory undefined, not stated for census purposes) for 10 separations, '9899' (Undefined) for 2 separations and '9999' for 3 separations.

#### **Was mapping required from state and territory data sets?**

Data provided as postcodes or using out-of-date SLA codes were mapped by the AIHW on a probabilistic basis to 2000 SLAs.

**Additional information:**

The Institute requested that if SLAs could not be reported for residents from other states then other data such as postcodes could be provided instead.

The Institute specifications state that where the residence state is unknown it should be left as null, and where the SLA is unknown the code 9999 should be used.

## Data element name: Country of birth

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care Alcohol and other drug treatment services Perinatal	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000035
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 2
<b>Definition:</b> The country in which the person was born.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes			No
Qld	Yes		Yes			No
WA	Yes		Yes			No
SA	Yes		Yes			No
Tas	Yes		Yes			No
ACT	Yes			No		No
NT	Yes		Yes			No

### Details of use of non-standard NHDD definition and domain values:

The data domain specified in the NHDD version 9 is the Australian Standard Classification of Countries for Social Statistics (ASCCSS). However, the NHDD comments that the ASCCSS has been superseded by the Standard Australian Classification of Countries (SACC), and that 'while not formally adopted by the National Health Data Committee, the use of SACC is consistent with the data domains described as there is a direct concordance between the two classifications'.

SACC has been specified as the data domain in the NHDD version 10, and the Institute requested that 2000–01 data be provided according to SACC.

New South Wales, South Australia, the Australian Capital Territory and the Northern Territory reported 'Country of birth' using SACC, while Victoria, Queensland, Western Australia and Tasmania reported 'Country of birth' using ASCCSS. Victoria indicated that it had used a modified version of ASCCSS.

The Australian Capital Territory reported a data domain value of 9999 for 774 separations, which is not valid in either ASCCSS or SACC, however, it is likely that this is a default value used where 'Country of birth' is unknown.

### **Details of use of non-standard NMDS scope:**

'Country of birth' was not reported at all for 55 separations from the Australian Capital Territory and as 9999 for 774 separations.

'Country of birth' was coded as 0 'Inadequately described' for 121,310 (86.2%) separations from Tasmania (74,218 public, 47,092 private).

In the initial supply of data from New South Wales there were 3,951 separations where 'Country of birth' was missing and 32,590 separations where 'Country of birth' was reported as 0003 *Unknown*. On advice from New South Wales these were recoded to Australia during the edit checking process.

**Table 4.7: Use of supplementary ASCCSS and SACC codes for inadequate data (codes commencing with '000')**

<b>State</b>	<b>Number</b>	<b>Per cent</b>
NSW	31	0
Vic	42,137	2.6
Qld	15,193	1.2
WA	16,620	2.5
SA	13,668	2.5
Tas	121,310	86.2
ACT	320	0.35
NT	2,911	4.4

### **Was mapping required from state and territory data sets?**

The Institute mapped the data provided in ASCCSS to SACC using the concordance between the two classifications.

### **Additional information:**

Not applicable.

**Data element name: Date of birth**

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care Alcohol and other drug treatment services Community mental health care Health labour force Perinatal	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000036
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 2
<b>Definition:</b> The date of birth of the person.		

**Use of National Standard definition, domain values and NMDS scope:**

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes			No
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

**Details of use of non-standard NHDD definition and domain values:**

Not applicable, NHDD definition and domain values used by all states and territories.

**Details of use of non-standard NMDS scope:**

Victoria provided age in years and age in days at time of admission for separations from public acute, private freestanding day hospital facilities and other private hospitals. 'Date of birth' was provided for separations from public psychiatric hospitals (0.02% of total separations).

'Date of birth' was missing for 2 separations from Tasmania and 12 separations from the Northern Territory.

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

Western Australia did not provide date of birth in 2001-02 data, and Victoria did provide these data in 2001-02.

## Data element name: Indigenous status

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Admitted patient mental health care Admitted patient palliative care Alcohol and other drug treatment services Community mental health care Perinatal	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000001
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 3
<b>Definition:</b> An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives.		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes			No*
WA	Yes		Yes		Yes	
SA	Yes		Yes			No*
Tas	Yes		Yes			No
ACT	Yes		Yes			No
NT	Yes		Yes		Yes	

\* QLD and SA private hospitals only.

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDS scope:

Almost 62% (40,954) of separations from Tasmanian private hospitals were *Not stated*.

Table 4.8: Use of the 'Not stated' data domain, by state and territory

State	Number	Per cent
NSW	3,690	0.2
Vic	0	0.0
Qld	129,651	10.3
WA	0	0.0
SA	16,277	2.9
Tas	45,772	32.5
ACT	1,998	2.2
NT	267	0.4

### Was mapping required from state and territory data sets?

Victoria and South Australia mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Indigenous status'. Public hospitals in Tasmania collect the data as per the NHDD domain values, however, where private hospitals do provide this information, mapping to NHDD domain values is required.

### Additional information:

The Department of Health and Ageing has indicated that the compliance evaluation of this data element may be misleading. This investigation looked at compliance against the NHDD definition. The Department suggested that a major potential problem with the data that was not investigated in this report is whether Indigenous patients were likely to be recorded as non-Indigenous. It recommend that future compliance evaluations should include a quality audit component to assess the accuracy of the responses.

The Institute requested that states and territories provide comments on the quality of their Indigenous status data. The following is an extract from *Australian Hospital Statistics 2000-01*.

For 2000-01, the New South Wales Health Department reports that its data were in need of improvement. To address this issue, the Department continues to be very active in the implementation of initiatives aimed at improving the quality of Aboriginal and Torres Strait Islander origin information in hospital separations data. Departmental publications and circulars continue to be used to encourage a uniform approach to the identification of Aboriginal and Torres Strait Islander patients in addition to providing a framework for continuous improvement in this data collection. To complement these strategies the Aboriginal Health Information

Strategy Unit has developed and implemented a training program and conducted a pilot study in relation to improving Indigenous origin information. The training program has been conducted across the state in most Area Health Services and is currently being reviewed and improved to support further training. Resources specific to New South Wales have been developed, including training manuals, videos and fact sheets. A 2000 New South Wales Health Department report of a pilot study, *Improving Aboriginal and Torres Strait Islander Origin Information in New South Wales* showed that data quality and consistency problems were affecting a number of patient registration details in addition to Aboriginal and Torres Strait Islander origin information.

The Victorian Department of Human Services reports that, despite data quality improvement in recent years, Aboriginal and Torres Strait Islander status data for 2000–01 should be treated with some caution. Studies in Victoria have shown that data are more accurate if the hospital employs a Koori Hospital Liaison Officer, particularly in regional hospitals, where the liaison officers are located in the main Koori communities. Aboriginal and Torres Strait Islander status data are considered less reliable in some tertiary hospitals drawing Indigenous patients from outside their local communities, and in private hospitals. Victoria is currently undertaking an Aboriginal and Torres Strait Islander Hospital Services Accreditation Project ultimately intended to lead to improved patient identification and the provision of more culturally appropriate services.

For 2000–01 data, Queensland Health notes that Aboriginal and Torres Strait Islander status was recorded as ‘not stated’ in about 2.5% of admitted patient records for public hospitals, and in 20% of admitted patient records for private hospitals, with the overall ‘not stated’ percentage being around 10%. It is not known whether these ‘not stated’ records reflect similar proportions of Indigenous/non-Indigenous separations as the ‘stated’ records. In general the available evidence suggests that the number of Aboriginal and Torres Strait Islander separations is still significantly understated, and that this under-counting occurs through mis-reporting as well as the non-reporting mentioned above. The Department continues to work on improving overall Aboriginal and Torres Strait Islander identification in all mainstream administrative data collections.

The Western Australian Department of Health regards its 2000–01 Aboriginal and Torres Strait Islander status data as being in need of improvement. Results of surveys conducted in Western Australian hospitals suggest that about 85% of Indigenous and 99% of non-Indigenous people are identified correctly. However, it appears that the category ‘Aboriginal and Torres Strait Islander origin’ is sometimes interpreted as ‘Aboriginal and/or Torres Strait Islander origin’, resulting in higher counts than expected in this category. In addition to these comments published in *Australian Hospital Statistics 2000–01*, Western Australia has noted that the survey only examined whether a patient was Indigenous or otherwise and still doesn’t consider its data reliable with respect to Indigenous subcategories, almost always collapsing categories 1–3 in data submissions. Western Australia has questioned whether this breakdown is essential.

The South Australian Department of Human Services regards its 2000–01 Aboriginal and Torres Strait Islander status data as being of acceptable quality. The Department conducts training courses in data collection every year and the courses in 2000–01 included training on how to ask and record the Indigenous status question, based on a training package produced by the Australian Bureau of Statistics. A 30% loading for casemix payments is applied to Aboriginal and Torres Strait Islander separations in South Australia, and this acts as an incentive for improved identification.

The Tasmanian Department of Health and Human Services reports that the quality of this data has continued to improve in 2000–01. A ‘whole of agency’ strategy has been developed to highlight the importance of these data across all data collections. The Australian Bureau of Statistics is assisting in this project.

The Australian Capital Territory Department of Health and Community Care considers that its 2000–01 data were much improved since 1999–2000. During 2000, the Department conducted training for both the Canberra Hospital and Calvary Hospital admission staff, and the collection of Aboriginal and Torres Strait Islander status attracts incentive payments for the hospitals.

The Northern Territory’s Department of Health and Community Services reports that the quality of its 2000–01 Aboriginal and Torres Strait Islander status data are considered to be acceptable. The Department retains historical reporting of Indigenous status and individual client systems receive a report of individuals who have reported their Indigenous status as Aboriginal on one occasion and as Torres Strait Islander on another. System owners will follow up on these clients. All management and statistical reporting, however, is based on a person’s currently reported Indigenous status.

## Data element name: Sex

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care Alcohol and other drug treatment services Community mental health care Perinatal	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000149
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 2
<b>Definition:</b> The sex of the person.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA		No		No	Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

### Details of use of non-standard NHDD definition and domain values:

NHDD definition and domain values used by all states and territories except South Australia.

South Australia does not use category 3 *Indeterminate*. South Australia has advised that it will fully comply with the NHDD from 1 July 2003 and a category of 3 *Indeterminate* will be introduced.

**Details of use of non-standard NMDS scope:**

Not applicable, 'Sex' provided for all reported separations in each state/territory. However, the NHDD domain value of 9 *Not stated/inadequately described* was used for 22 separations from New South Wales, 18 separations from Tasmania and 31 separations from the Northern Territory.

**Was mapping required from state and territory data sets?**

Each state/territory generally used the NHDD domain values for the collection of data on sex therefore mapping was not required.

**Additional information:**

Logical checks to check for inconsistencies between diagnosis and sex and procedure and sex revealed a number of separations with invalid sex and diagnosis/procedure combinations:

**Table 4.9: Number of separations with invalid sex and diagnosis/procedure combinations, by state and territory**

State	Invalid sex/diagnosis	Invalid sex/procedure
NSW	0	32
Vic	0	40
Qld	0	2
WA	0	2
SA	7	5
Tas	0	0
ACT	0	0
NT	10	7

Western Australia has indicated that it has checked the records with invalid sex/procedure combination and found them confirmed by the hospital.

## Data element name: Admission date

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000008
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 4
<b>Definition:</b> Date on which an admitted patient commences an episode of care.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDS scope:

Not applicable, 'Admission date' provided for all reported separations in each state/territory.

### Was mapping required from state and territory data sets?

Not applicable.

**Additional information:**

Not applicable.

## Data element name: Number of leave periods

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000107
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 3
<b>Definition:</b> Number of leave periods in a hospital stay (excluding one-day leave periods for admitted patients). Leave period is a temporary absence from hospital, with medical approval for a period no greater than seven consecutive days.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	..		..			No
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	..		..			No
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

.. Not applicable.

### Details of use of non-standard NHDD definition and domain values:

NHDD definition used by all states and territories, except Victoria and South Australia, who did not provide data for 'Number of leave periods'.

**Details of use of non-standard NMDS scope:**

Victoria and South Australia did not provide information on 'Number of leave periods'. Victoria and South Australia both indicated that they do not collect this information. However, in South Australia it is limited to a total of four periods with the last one being grossed up to take account of all the other periods of leave.

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

Not applicable.

## Data element name: Number of qualified days for newborns

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> None	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000346
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 2
<b>Definition:</b> The number of qualified newborn days occurring within a newborn episode of care.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported (newborn) separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	..		..			No
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

.. Not applicable.

### Details of use of non-standard NHDD definition and domain values:

According to the NHDD definition, the number of qualified days is only required for newborn episodes of care. All states and territories except Tasmania provided qualified days for this care type.

Tasmania originally reported 'Number of qualified days for newborns' as zero for all separations, indicating that all newborns were *unqualified*. Based on the principal diagnosis of the newborn, the Institute, in consultation with Tasmania, assessed which separations should be assigned qualified days. If the principal diagnosis

indicated that the newborn was sick or the second or subsequent live-born infant of a multiple birth then the number of patient days was taken as the number of qualified days, otherwise they were unqualified days. This meant that newborn separations in Tasmania could either have qualified days or unqualified days, but not a mixture of both. According to Tasmania this situation is not able to be improved in the near future.

**Details of use of non-standard NMDS scope:**

New South Wales and Victoria reported 'Number of qualified days for newborns' for all infants aged less than one year (and null for the remaining separations), while Queensland and Western Australia reported qualified days for all separations with a newborn care type (and null for the remaining separations). South Australia and the Northern Territory reported qualified days for all separations (except 11 boarder separations and 2 acute separations in the Northern Territory). For non-newborn episodes, however, the number of qualified days was reported as 0. The Australian Capital Territory only reported qualified days for newborns with at least one qualified day (and null for the remaining separations).

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

Not applicable.

## Data element name: Separation date

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000043
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 5
<b>Definition:</b> Date on which an admitted patient completes an episode of care.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDS scope:

Not applicable, 'Separation date' provided for all reported separations in each state/territory.

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

Not applicable.

## Data element name: Total leave days

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000163
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 3
<b>Definition:</b> Sum of the length of leave (date returned from leave minus date went on leave) for all periods within the hospital stay.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDS scope:

'Total leave days' was provided for all reported separations in every state and territory except for Victoria, where it was not reported for all separations from public psychiatric hospitals and for 4 separations from private hospitals. Victoria has indicated that this is a data extraction issue which will be addressed in the future.

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

Not applicable.

## Data element name: Total psychiatric care days

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care Community mental health care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000164
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 2
<b>Definition:</b> The sum of the number of days or part days of stay that the person received care as an admitted patient or resident within a designated psychiatric unit, minus the sum of leave days occurring during the stay within the designated unit.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations (where required)?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDS scope:

'Total psychiatric care days' is only relevant for persons receiving care as an admitted patient or resident within a designated psychiatric unit and not all

separations. States and territories varied in the way this data element was reported for patients not receiving psychiatric care in designated psychiatric units.

New South Wales, Victoria, South Australia, Tasmania and the Northern Territory report psychiatric care days for all separations. Where separations do not have psychiatric care the number of psychiatric care days is reported as 0. Queensland, Western Australia and the Australian Capital Territory only report psychiatric care days for separations with psychiatric care. Separations without psychiatric care are left null rather than reported as 0.

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

Not applicable.

## Data element name: Activity when injured

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Injury surveillance	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000002
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 2
<b>Definition:</b> The type of activity being undertaken by the person when injured.		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations*?	
NSW	Yes		Yes			No
Vic	Yes		Yes			No
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes			No
Tas	Yes		Yes			No
ACT	Yes		Yes			No
NT	Yes		Yes			No

\* Separations for which an external cause was reported.

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDs scope:

The NHDD and ICD-10-AM second edition specify that an 'Activity when injured' code should accompany an external cause code in the range V01–Y34.

New South Wales, Victoria, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory all provided data where an external cause code in the range V01–Y34 was not accompanied by an activity when injured code.

**Table 4.10: Separations for which an external cause code in the range V01–Y34 was not accompanied by an activity when injured code, by sector and state and territory**

State	Number			Proportion of separations with external causes (per cent)		
	Public	Private	Total	Public	Private	Total
NSW	61,366	13,186	74,552	49.5	63.7	51.5
Vic	622	159	781	0.8	0.8	0.8
Qld	0	0	0	0.0	0.0	0.0
WA	0	0	0	0.0	0.0	0.0
SA	211	88	299	0.8	1.1	0.9
Tas	84	84	168	1.4	3.1	1.9
ACT	58	28	86	1.4	7.6	2.0
NT	63	n.a.	63	1.2	..	1.2
<b>Total</b>	<b>62,404</b>	<b>13,545</b>	<b>75,949</b>	<b>17.8</b>	<b>15.9</b>	<b>17.4</b>

n.a. Not available.

.. Not applicable.

Although a relatively small proportion of separations with an external cause did not have an activity when injured code in most jurisdictions, a much greater proportion of separations had activity codes of *Other specified activity* or *Unspecified activity*, providing little valuable information on the activity when injured. About 24% of separations with an external cause code in the range V01–Y34 were accompanied by an activity when injured code of Y93.8 *Other specified activity*, ranging from 17.2% in New South Wales to 32.8% in Western Australia. Similarly, about 49% of separations with an external cause in the same range were accompanied by an activity when injured code of Y93.9 *Unspecified activity*, ranging from 42.9% in Western Australia to 61.2% in the Northern Territory.

**Table 4.11: Separations with an external cause code in the range V01–Y34 and an activity when injured code of Y93.8 *Other specified activity*, by sector and state and territory**

State	Number			Proportion of separations with external causes ( <i>per cent</i> )		
	Public	Private	Total	Public	Private	Total
NSW	11,098	936	12,034	17.7	12.5	17.2
Vic	23,213	1,882	25,095	29.1	9.9	25.4
Qld	21,358	2,678	24,036	29.5	11.1	24.9
WA	11,748	2,539	14,287	35.0	25.5	32.8
SA	5,966	336	6,302	23.5	4.1	18.8
Tas	1,259	285	1,544	20.9	10.8	17.8
ACT	866	26	892	21.9	7.7	20.8
NT	1,157	n.a.	1,157	22.1	n.a.	22.1
<b>Total</b>	<b>76,665</b>	<b>8,682</b>	<b>85,347</b>	<b>26.5</b>	<b>12.1</b>	<b>23.7</b>

n.a. Not available.

**Table 4.12: Separations with an external cause code in the range V01–Y34 and an activity when injured code of Y93.9 *Unspecified activity*, by sector and state and territory**

State	Number			Proportion of separations with external causes ( <i>per cent</i> )		
	Public	Private	Total	Public	Private	Total
NSW	34,157	4,727	38,884	54.6	63.0	55.5
Vic	37,753	11,773	49,526	47.3	62.0	50.1
Qld	30,733	11,951	42,684	42.5	49.6	44.3
WA	14,472	4,199	18,671	43.1	42.1	42.9
SA	13,038	5,196	18,234	51.4	63.5	54.3
Tas	3,092	1,217	4,309	51.3	46.0	49.7
ACT	1,985	130	2,115	50.3	38.3	49.3
NT	3,203	n.a.	3,203	61.2	n.a.	61.2
<b>Total</b>	<b>138,433</b>	<b>39,193</b>	<b>177,626</b>	<b>47.9</b>	<b>54.6</b>	<b>49.3</b>

n.a. Not available.

Western Australia has indicated that it is aware of the high proportion of ‘Unspecified’ values and is attempting to improve in this area.

### **Was mapping required from state and territory data sets?**

Not applicable.

### **Additional information:**

Not applicable.

## Data element name: Additional diagnosis

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Admitted patient mental health care Admitted patient palliative care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000005
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 4
<b>Definition:</b> A condition or complaint either coexisting with the principal diagnosis or arising during the episode of care or attendance at a health care facility.		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories. There were 1,881 separations with invalid ICD-10-AM additional diagnosis codes – 30 in New South Wales, 1 in Victoria, 18 in Tasmania and 1,832 in the Northern Territory. The bulk of Northern Territory invalid codes related to a mis-assignment of a principal procedure code to an additional diagnosis code. Tasmania also had 1,035 invalid morphology codes in the additional diagnosis fields.

### Details of use of non-standard NMDS scope:

Not applicable.

### Was mapping required from state and territory data sets?

Not applicable.

### Additional information:

Up to 30 additional diagnosis codes were requested for each separation. The NHDD recommends that a minimum of 20 codes be able to be reported. Queensland and Western Australia both reported 31 diagnosis codes, the maximum number requested by the Institute, and may have been restricted in the number of codes they could provide.

**Table 4.13: The number of diagnosis codes provided, including the principal diagnosis code, by state and territory**

State	Number		Mean diagnosis codes per separation	
	Public	Private	Public	Private
NSW	20	20	3.0	2.3
Vic	25	25	2.7	2.2
Qld	31	31	2.8	2.5
WA	31	31	2.8	2.3
SA	30	23	2.9	2.5
Tas	30	30	3.4	2.2
ACT	25	25	2.5	2.6
NT	27	n.a.	2.5	n.a.
<b>Total</b>	<b>..</b>	<b>..</b>	<b>2.8</b>	<b>2.3</b>

n.a. Not available.

.. Not applicable.

In 32% of public hospital separations and 39% of private hospital separations only one diagnosis code was reported, ranging from 23% in Tasmania to 41% in the Australian Capital Territory in the public sector, and from 31% in the Australian Capital Territory to 43% in Tasmania in the private sector. In a further 29% of public hospital separations and 30% of private hospital separations only two diagnosis codes were reported and only three diagnosis codes were reported in a further 14% of public hospital separations and 15% of private hospital separations. The average number of diagnosis codes per separation was 2.8 in the public sector and 2.3 in the private sector.

## Data element name: Care type

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Admitted patient mental health care Admitted patient palliative care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000168
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 4
<b>Definition:</b> The care type 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 posthumous organ procurement (other care).		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes			No*
ACT	Yes		Yes		Yes	
NT	Yes			No	Yes	

\*Tasmanian private hospitals only.

### Details of use of non-standard NHDD definition and domain values:

New South Wales, Victoria, Western Australia, South Australia, Tasmania and the Northern Territory used summary categories for the *Rehabilitation* (2.0) and *Palliative* (3.0) care types. Queensland and the Australian Capital Territory provided data for the more detailed categories for rehabilitation or palliative care delivered in a designated unit (2.1, 3.1), according to a designated program (2.2, 3.2) or as the principal clinical intent (2.3, 3.3). Note: The NHDD specifies that these more detailed

categories are optional. This reflects the original decision of the NHIMG which in turn (after much debate) reflects the fact that different jurisdictions use different definitions of these types of care and would be unable to modify their definitions without significant changes to their funding arrangements.

Victoria did not use the *Psychogeriatric care* (5.0) and *Maintenance care* (6.0) care types. Victoria indicated that it is currently unable to identify *Psychogeriatric care* and needs to review its mapping which appears to map nursing home type patients to *Other admitted patient care* (8.0) rather than to *Maintenance care* (6.0).

Western Australia did not use the *Geriatric evaluation and management* (4.0) or *Other admitted patient care* (8.0) care types (not collected). There were no separations in private hospitals with a care type of *Psychogeriatric care* (5.0). Western Australia has indicated that *Geriatric evaluation and management* has now been added and will be reported from 2001-02. Western Australia will continue to use the same care type domains otherwise.

In South Australia hospital at home records have been included in the *Other admitted patient care* (8.0) care type. In South Australia hospital at home episodes are recorded separately to admitted patient episodes.

Tasmania did not use the *Other admitted patient care* (8.0) care type across all hospitals or the *Rehabilitation care* (2.0) or *Palliative care* (3.0) care types in private hospitals. Tasmania has indicated that its mapping program needs to be updated to report the category *Other admitted patient care* (8.0) and this will be done for the 2001-02 data.

The Australian Capital Territory did not use the *Rehabilitation care* (2.0), *Palliative care* (3.0), *Psychogeriatric care* (5.0) and *Maintenance care* (6.0) care types in private hospitals. It is not clear whether the Australian Capital Territory does not collect this data in private hospitals or if there were no separations with these care types. The Australian Capital Territory is currently reviewing the use of care types in its hospitals and is likely to have several recommendations for modification and improvement which will be provided to the Institute when the review is complete.

The Northern Territory did not use the *Geriatric evaluation and management* (4.0) or *Psychogeriatric care* (5.0) care types. The Northern Territory provided an extra category (13) for 47 separations. The Northern Territory advised that these are instances where the care type was not filled in, and is therefore unknown. The Institute recoded this to *Unknown* (11.0).

Tasmania and the Northern Territory have not fully implemented the *Newborn care* definition and reported a new episode of care for patients aged less than 10 days at admission with each change in qualification status. Therefore there are no newborn separations with a mixture of qualified and unqualified days for these jurisdictions.

#### **Details of use of non-standard NMDS scope:**

The Institute requested that category 11.0 *Unknown* be reported if 'Care type' was not known. 'Care type' was reported as unknown for 44.4% of (29,495) separations from private hospitals in Tasmania.

**Table 4.14: Use of the 'Unknown' data domain for care type, by state and territory**

State	Number	Per cent
NSW	526	0.0
Vic	0	0.0
Qld	0	0.0
WA	0	0.0
SA	0	0.0
Tas	29,517	21.0
ACT	0	0.0
NT	50	0.1

### **Was mapping required from state and territory data sets?**

New South Wales, Victoria, Western Australia, South Australia, Tasmania and the Northern Territory all mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Care type'.

*Psychogeriatric care* (5.0) was reported for a large proportion of separations in Tasmanian private hospitals in comparison to Tasmanian public hospitals and other states and territories. Tasmania indicated that private hospitals do not collect information in any standard way. The data are mapped to the NHDD domain values as far as possible. The problem appears to be due to an error in the mapping process.

### **Additional information:**

State-level comparisons of the median length of stay and age/sex characteristics associated with each care type have demonstrated the apparent lack of consistency between the states in the allocation of maintenance, geriatric evaluation and management, and psychogeriatric care types. The relative proportions of separations across states vary markedly for each of these care types suggesting that the states/hospitals have difficulty in applying the definitions of these three closely aligned categories. As such the median length of stay figures for each of these three non-acute care types probably can't be satisfactorily compared across states. The median length of stay by care type and state for the rehabilitation care type seems to indicate different approaches by the states in relation to admitting people for same-day rehabilitation.

## Data element name: Diagnosis related group

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Admitted patient mental health care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000042
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 1
<b>Definition:</b> A patient classification scheme which provides a means of relating the number and types of patients treated in a hospital to the resources required by the hospital (AR-DRGs).		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes			No	Yes	
Vic	Yes			No	Yes	
Qld	Yes			No	Yes	
WA	Yes			No	Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes			No	Yes	
NT	Yes			No	Yes	

### Details of use of non-standard NHDD definition and domain values:

NHDD definition used by all states and territories, however, New South Wales, Victoria, Queensland, Western Australia, the Australian Capital Territory and the Northern Territory provided DRG information based on AR-DRG version 4.1 instead of AR-DRG version 4.2.

Western Australia indicated that it endeavours to abide by the national standard. However, the timing of software availability has not left sufficient time to suit the local providers (hospitals) and users, nor to undertake testing.

**Details of use of non-standard NMDS scope:**

Data for AR-DRG were missing for 599 separations from Victoria (across all sectors), 134 separations from the Northern Territory and were set to 0000 for 324 separations from private hospitals in Tasmania.

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

The NHDD specifies that the Australian Refined Diagnosis Related Groups version effective from 1 July each year should be used as the valid data domain. The version effective from 1 July 2000 (based on the ICD-10-AM version that was current then) was version 4.2. The Institute regrouped all data provided by states and territories to AR-DRG version 4.2.

## Data element name: External cause—admitted patient

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Injury surveillance	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000053
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 4
<b>Definition:</b> Environmental event, circumstance or condition as the cause of injury, poisoning and other adverse event.		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations*?	
NSW	Yes		Yes			No
Vic	Yes		Yes			No
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes			No**
ACT	Yes		Yes			No**
NT	Yes		Yes			No

\* For which an injury or poisoning was reported.

\*\* Tasmanian and South Australian private hospitals only.

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

According to the NHDD, an external cause code should be sequenced following the related injury or poisoning code, or following the group of codes, if more than one injury or condition has resulted from this external cause. However, most states and territories were unable to provide information about the relationship between

external cause codes and diagnosis codes, meaning that the interpretation of injury and external cause information is difficult.

In New South Wales and Queensland external causes are unable to be related to either the principal diagnosis or the additional diagnoses to which they relate. In Victoria and South Australia the first listed external cause can be related to the principal diagnosis (only where this is an injury or poisoning in Victoria), but the relationship between additional diagnoses and additional external cause codes is unknown. In Western Australia, the Australian Capital Territory and the Northern Territory external cause, place of occurrence and activity codes are to be recorded immediately after the diagnosis to which they relate. Western Australia indicated that this practice is not applied consistently and provided an index for each external cause group to identify the diagnosis that immediately precedes the external cause in the coding sequence. Although this index provides a potential link between diagnoses and external cause fields, it is not necessarily reliable. The Australian Capital Territory indicated that where an external cause, place and activity immediately follow a diagnosis code then the relationship is maintained. Otherwise, if the diagnosis code is an injury or poisoning and is not immediately followed by an external cause, place and activity code, then the first (and then subsequent) external cause codes in the record are applied to each injury or poisoning code.

Tasmania can only provide external cause codes as part of the string of additional diagnosis codes. It is not possible to indicate which injury code the external cause code applied to. Coders are directed to follow Australian Coding Standard 2001 'External Cause Code Use & Sequencing'.

**Table 4.15: Provision of linked external cause and diagnosis codes, by state and territory**

State	External cause known to be related to principal diagnosis	External causes known to be related to additional diagnoses
NSW	x	x
Vic	✓*	x
Qld	x	x
WA	x	x
SA	✓	x
Tas	x	x
ACT	x	x
NT	x	x

\* Only when the principal diagnosis is an injury or poisoning.

**Details of use of non-standard NMDS scope:**

The NHDD specifies that an external cause code *must* be used in conjunction with an injury or poisoning code and can be used with other disease codes. External cause codes, although not diagnosis or condition codes, should be sequenced together with

the additional diagnoses codes so that meaning is given to the data for use in injury surveillance and other monitoring activities.

New South Wales, Victoria, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory provided data where an injury or poisoning diagnosis code (S00–T99) was recorded but there was no external cause code. There were 592,672 separations for which an injury or poisoning diagnosis was reported and 582,073 of these separations also reported an external cause code. This means that 1.8% of the separations for which an external cause code should be reported do not have one reported. It is likely that most of these separations had an injury or poisoning reported as an additional diagnosis, rather than the principal diagnosis.

Please note that this is not an assessment of linkable data.

**Table 4.16: Separations for which there was a diagnosis of injury or poisoning but an external cause code was not reported, by sector and state and territory**

State	Number			Proportion of separations ( <i>per cent</i> )		
	Public	Private	Total	Public	Private	Total
NSW	2,519	815	3,334	1.6	2.4	1.8
Vic	3,354	2,025	5,379	3.0	5.9	3.7
Qld	0	0	0	0.0	0.0	0.0
WA	0	0	0	0.0	0.0	0.0
SA	50	94	144	0.1	0.7	0.3
Tas	23	693	716	0.3	14.4	5.1
ACT	86	889	75	1.5	54.6	12.9
NT	51	n.a.	51	0.8	n.a.	0.8
<b>Total</b>	<b>6,083</b>	<b>4,516</b>	<b>10,599</b>	<b>1.3</b>	<b>3.3</b>	<b>1.8</b>

n.a. Not available.

New South Wales commented that some or most of these cases may be a result of the bedding down of their new processing system. Victoria commented that many would be episodes with rehabilitation care type for which an injury may be reported (to explain why the rehabilitation is needed), and that the NHDD rule that an external cause code should be sequenced following the related injury or poisoning code or group of codes should be reviewed with a view to restricting it to acute episodes.

Queensland commented that every Queensland record with one or more injury/ poisoning diagnosis codes has at least one external cause code. The external cause code may relate to more than one injury/ poisoning code. For the 2000–01 financial year Queensland only reported 9,800 episodes that had more than one condition code requiring an external cause. These would be the only episodes where a condition code could not be accurately linked to an external cause code within an episode of care.

Western Australia commented that it encourages the inclusion of an external cause, place of occurrence and activity code for each injury diagnosis, but there are several logistical issues that mean that they are not always included. One major constraint is that the commercial encoder used at several Western Australian hospitals does not permit duplicate external cause codes to be recorded for a given separation. Additionally, there is considerable resistance from coders to duplicate the exact same series of external cause related codes for each injury diagnosis when multiple injuries are sustained. Consequently, coders are permitted to record one series of external cause, place of occurrence and activity codes only, immediately following all injury diagnosis codes to which they apply. This practice is not expected to change in the next few years.

### Was mapping required from state and territory data sets?

Not applicable.

### Additional information:

**Table 4.17: The maximum number of external cause codes (excluding place and activity codes) provided, by state and territory**

State	Number	
	Public	Private
NSW	9	7
Vic	8	7
Qld	7	7
WA	14	6
SA	6	4
Tas	7	6
ACT	18	12
NT	10	n.a.

n.a. Not available.

The *National Health Data Dictionary* version 9.0 guide for use in the 'External cause – admitted patient' data element specifies that external cause codes in the range W00–Y34 (except Y06 and Y07) must be accompanied by a place of occurrence code (p. 280). However, the guide for use in the 'Place of occurrence of external cause of injury' data element specifies that this data element should be used with all ICD-10-AM external cause codes V01–Y89 and assigned according to the Australian Coding Standards (p. 218). The guide for use in the 'External cause – admitted patient' data element appears to have been left over from *National Health Data Dictionary* version 8.0 (based on the first edition of ICD-10-AM) when place of occurrence was only required for a limited number of external cause codes. This error has also been repeated in versions 10 and 11 of the NHDD.

## Data element name: Infant weight, neonate, stillborn

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Perinatal	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000010
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 3
<b>Definition:</b> The first weight of the live born or stillborn baby obtained after birth, or the weight of the neonate or infant on the date admitted if this is different from the date of birth.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes			No
Vic	Yes		Yes		Yes	
Qld		No	Yes			No
WA		No	Yes			No
SA	Yes		Yes			No
Tas	Yes		Yes			No
ACT	Yes		Yes			No
NT		No	Yes			No

### Details of use of non-standard NHDD definition and domain values:

NHDD definition used by all states and territories, except Queensland, Western Australia and the Northern Territory.

In Queensland, infant weight is only required to be recorded for neonates who are under 29 days or weigh less than 2,500 grams at the time of admission. Therefore, for most separations aged 29 days or over infant weight was not reported (98.6%). In circumstances where babies have not been weighed a 'dummy' weight of 9,000

grams is currently being used by some hospitals (as this is much heavier than most babies less than one month).

In Western Australia, currently, weight is only collected for neonates (aged less than 29 days) and babies with a principal diagnosis of prematurity or low birth weight aged over 28 days. Therefore, for most separations aged over 28 days infant weight was not reported (98.5%). Western Australia noted that most neonates who are not weighed are boarders and the default weight is 2,500 grams in these instances. If a neonate boarder is weighed, the actual weight is recorded.

The Northern Territory only reported infant weight for newborns aged 0 days indicating that the NHDD definition was not used.

### **Details of use of non-standard NMDS scope:**

As indicated above, there appears to be some confusion about the actual scope for this data element, with some states only collecting the data for neonates aged under 29 days. This may stem from the history of the development of this data element.

The data element 'Admission weight (neonates)' was first introduced in the *National Health Data Dictionary*, version 2.0 in 1993 and was defined as 'The weight of the neonate on the day admitted unless this is the day of birth, in which case the admission weight is taken as the birth weight'. A patient is a neonate if on admission she or he is less than 29 days old.

This was superseded by the data element 'Stillborn, live born baby, infant weight' in the *National Health Data Dictionary* version 4.0 in 1995. The definition changed slightly to 'The first weight of the live born or stillborn baby obtained after birth, or the weight of the neonate or infant on the date admitted if this is different from the date of birth'. The guide for use states that 'Weight on the date the infant is admitted should be recorded if the weight is less than 10 kilograms and age is less than 365 days'. In this version there was also commentary included which appears contradictory to the guide for use:

This item has been modified to include the recording of birth weight for all births for purposes of the perinatal statistics collection and the requirement of AN-DRG version 3, which will treat all neonates less than 28 days old, infants with a weight on the date admitted of less than 2,500 grams, and patients with a specific neonatal principal diagnosis as neonates for grouping purposes. The assumption in the grouper logic is that, if the weight on the date admitted is blank, the infant's weight is greater than 2,499 grams. In future versions of AN-DRGs the assumption may change so that, if the weight on the date admitted is blank, the infant's weight is assumed to be greater than 10,000 grams. This change in the assumption of the grouper logic will cause all neonates with blank weights fields to be grouped to an ungroupable DRG.

At the National Health Information Management Group meeting held on 24 November 1994, this definition was endorsed for inclusion in this version of the *National Health Data Dictionary*. It was further agreed that infant weight would only be collected when an infant weighs less than 2,500 grams. An

understanding of the clinical value of this data item is required before collection of weight for all infants can be agreed.

'Infant weight, neonate, stillborn' superseded the data element 'Stillborn, live born baby, infant weight' in the *National Health Data Dictionary* version 6.0 in 1997. The definition remained the same, however, the guide for use changed slightly to 'Weight on the date the infant is admitted should be recorded if the weight is less than or equal to 9,000 grams and age is less than 365 days'.

The commentary discussed above was removed from the *National Health Data Dictionary* version 8.0 in 1999, but it is uncertain as to the background for this decision and whether the clinical value of collecting this data item for all infants was agreed.

According to the guide for use in the *National Health Data Dictionary* version 9 on which the data for 2000-01 is based, weight on the date the infant is admitted should be recorded if the weight is less than or equal to 9,000 grams and age is less than 365 days.

'Infant weight, neonate, stillborn' was missing for a number of separations where age was less than 365 days from all states and territories. Queensland, Western Australia and South Australia were the only states to report infant weight in the valid range for all newborns (Care type = 7). The Northern Territory only reported infant weight for newborns aged 0 days.

**Table 4.18: Separations where age was less than 365 days and/or Care type = 7.0 Newborn and 'Infant weight, neonate, stillborn' was missing, by state and territory**

State	Patients <1 year				Newborns (Care type = 7.0)			
	<29 days		≥29 days		Qualified		Unqualified	
	Number	%	Number	%	Number	%	Number	%
NSW	1,038	1.1	13,220	55.8	266	1.4	723	1.0
Vic	4	0.0	15	0.1	4	0.0	0	0.0
Qld	31	0.1	13,141	98.6	0	0.0	0	0.0
WA	0	0.0	8,502	98.5	0	0.0	0	0.0
SA	0	0.0	4,705	85.5	0	0.0	0	0.0
Tas	1,248	21.5	435	37.8	324	15.7	871	24.3
ACT	10	0.2	876	92.9	0	0.0	10	0.2
NT	491	13.8	1,897	100.0	165	13.6	152	7.0

New South Wales, Victoria, Western Australia, Tasmania and the Australian Capital Territory also reported 'Infant weight, neonate, stillborn' for a number of separations where age was greater than 365 days. According to Victoria, from 1 July 2002 a fault in the input editing has been rectified so that records for patients over 365 days will now be rejected if an admission weight is reported.

All states and territories except Queensland reported separations where infant weight was greater than 9,000 grams. Victoria used a value of '9999' for 1,059

separations and South Australia for 53 separations, which appears to be default for unknown infant weight.

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

Not applicable.

## Data element name: Major Diagnostic Category

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Admitted patient mental health care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000088
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 1
<b>Definition:</b> Major diagnostic categories are 23 mutually exclusive categories into which all possible principal diagnoses fall. The diagnoses in each category correspond to a single body system or aetiology, broadly reflecting the specialty providing care.  Each category is partitioned according to whether or not a surgical procedure was performed. This preliminary partitioning into Major Diagnostic Categories occurs before a Diagnosis Related Group is assigned.		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes			No	Yes	
Vic	Yes			No	Yes	
Qld	Yes			No	Yes	
SA	Yes			No	Yes	
WA	Yes			No	Yes	
Tas	Yes			No*	Yes	
ACT	Yes			No	Yes	
NT	Yes			No	Yes	

\* Private hospitals in Tasmania provided non-standard domain values.

### Details of use of non-standard NHDD definition and domain values:

NHDD definition used by all states and territories, however, New South Wales, Victoria, Queensland, Western Australia, the Australian Capital Territory and the Northern Territory provided DRG information based on AR-DRG version 4.1 instead

of AR-DRG version 4.2. South Australia used a value of 99 for 7 separations, while Tasmania used a value of 00 for 324 separations from private hospitals.

Western Australia has indicated that its non-compliance to the NHDD domain is related to DRG version. Although Western Australia endeavours to abide by the national standard, the timing of software availability has not left sufficient time to suit the local providers (hospitals) and users, nor to undertake testing.

**Details of use of non-standard NMDS scope:**

Data for Major Diagnostic Category were missing for 599 separations from Victoria (across all sectors) and 134 separations from the Northern Territory. The 324 separations from private hospitals in Tasmania which had an AR-DRG set to 0000 had an MDC of 00 assigned.

**Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

The NHDD specifies that the Australian Refined Diagnosis Related Groups version effective from 1 July each year should be used as the valid data domain. The version effective from 1 July 2000 (based on the ICD-10-AM version that was current then) was version 4.2. The Institute regrouped all data provided by states and territories to AR-DRG version 4.2.

New South Wales, Victoria, Western Australia, Tasmania and the Australian Capital Territory group Pre and Error AR-DRGs within MDCs 01 to 23, while Queensland and South Australia assign Pre and Error AR-DRGs their own MDC, 00 and 24, respectively. The Northern Territory generally uses the former method.

## Data element name: Place of occurrence of external cause of injury

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Injury surveillance	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000384
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 5
<b>Definition:</b> The place where the external cause or injury, poisoning or adverse effect occurred.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations*?	
NSW	Yes		Yes			No
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes			No
Tas	Yes		Yes			No
ACT	Yes		Yes			No
NT	Yes		Yes			No

\* For which an external cause was reported.

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDS scope:

The NHDD and ICD-10-AM second edition specify that a 'Place of occurrence of external cause of injury' code should accompany an external cause code in the range V01–Y89.

New South Wales, Victoria, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory all provided data where an external cause code in the range V01–Y89 was not accompanied by a place of occurrence code.

**Table 4.19: Separations for which an external cause code in the range V01–Y89 was not accompanied by a place of occurrence code, by sector and state and territory**

State	Number			Proportion of separations (per cent)		
	Public	Private	Total	Public	Private	Total
NSW	50,527	11,026	61,553	28.1	25.8	27.7
Vic	11	3	14	0.0	0.0	0.0
Qld	0	0	0	0.0	0.0	0.0
WA	0	0	0	0.0	0.0	0.0
SA	459	143	602	1.1	0.9	1.0
Tas	384	190	574	3.3	3.7	3.4
ACT	218	24	242	3.2	2.6	3.1
NT	97	n.a.	97	1.4	n.a.	1.4
<b>Total</b>	<b>51,696</b>	<b>11,386</b>	<b>63,082</b>	<b>9.7</b>	<b>6.8</b>	<b>9.0</b>

n.a. Not available.

Although a relatively small proportion of separations with an external cause did not have a place of occurrence code in most jurisdictions, a much greater proportion of separations had place of occurrence codes of *Other specified place* or *Unspecified place*, providing little valuable information on the place of occurrence. About 4% of separations with an external cause code in the range V01–Y98 were accompanied by a place of occurrence code of Y92.8 *Other specified place of occurrence*, ranging from 2.5% in South Australia to 6.6% in the Northern Territory. Similarly, about 31% of separations with an external cause in the same range were accompanied by a place of occurrence code of Y92.9 *Unspecified place of occurrence*, ranging from 25.2% in the Australian Capital Territory to 48.0% in the Northern Territory.

**Table 4.20: Separations with an external cause code in the range V01–Y89 and a place of occurrence code of Y92.8 *Other specified place of occurrence*, by sector and state and territory**

State	Number			Proportion of separations ( <i>per cent</i> )		
	Public	Private	Total	Public	Private	Total
NSW	4,344	597	4,941	3.4	1.9	3.1
Vic	3,689	685	4,374	2.9	1.8	2.6
Qld	5,900	1,418	7,318	5.6	3.2	4.9
WA	2,739	576	3,315	5.3	3.0	4.7
SA	1,260	222	1,482	2.9	1.4	2.5
Tas	412	126	538	3.7	2.5	3.3
ACT	303	25	328	4.6	2.8	4.4
NT	437	n.a.	437	6.6	n.a.	6.6
<b>Total</b>	<b>19,084</b>	<b>3,649</b>	<b>22,733</b>	<b>4.0</b>	<b>2.3</b>	<b>3.6</b>

n.a. Not available.

**Table 4.21: Separations with an external cause code in the range V01–Y89 and a place of occurrence code of Y92.9 *Unspecified place of occurrence*, by sector and state and territory**

State	Number			Proportion of separations ( <i>per cent</i> )		
	Public	Private	Total	Public	Private	Total
NSW	37,133	9,443	46,576	28.7	29.7	28.9
Vic	37,275	12,666	49,941	29.1	32.9	29.9
Qld	30,839	14,296	45,135	29.2	32.0	30.0
WA	21,112	8,467	29,579	41.2	43.8	41.9
SA	10,204	5,330	15,534	23.8	32.7	26.3
Tas	3,032	1,053	4,085	27.0	21.3	25.3
ACT	1,724	167	1,891	26.1	18.7	25.2
NT	3,163	n.a.	3,163	48.0	n.a.	48.0
<b>Total</b>	<b>144,482</b>	<b>51,422</b>	<b>195,904</b>	<b>30.0</b>	<b>32.9</b>	<b>30.7</b>

n.a. Not available.

Western Australia has indicated that it is aware of the high proportion of ‘Unspecified’ values and is attempting to improve in this area.

### **Was mapping required from state and territory data sets?**

Not applicable.

**Additional information:**

The NHDD version 9.0 guide for use in the 'External cause – admitted patient' data element specifies that external cause codes in the range W00–Y34 (except Y06 and Y07) must be accompanied by a place of occurrence code (p. 280). However, the guide for use in the 'Place of occurrence of external cause of injury' data element specifies that this data element should be used with all ICD-10-AM external cause codes V01–Y89 and assigned according to the Australian Coding Standards (p. 218). The guide for use in the 'External cause – admitted patient' data element appears to have been left over from *National Health Data Dictionary* version 8.0 (based on the first edition of ICD-10-AM) when place of occurrence was only required for a limited number of external cause codes. This error has also been repeated in versions 10 and 11 of the NHDD.

## Data element name: Principal diagnosis

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Admitted patient mental health care Admitted patient palliative care Community mental health care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000136
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 3
<b>Definition:</b> The diagnosis established after study to be chiefly responsible for occasioning the patient's episode of care in hospital (or attendance at the health care facility).		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes			No*
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes			No*
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

\* NSW public hospitals and Tasmanian private hospitals only.

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories. There were 72 separations with invalid ICD-10-AM principal diagnosis codes, all in Tasmania.

### Details of use of non-standard NMDS scope:

New South Wales, Victoria, Tasmania and the Northern Territory all reported separations without a principal diagnosis. New South Wales indicated that this was caused by a processing systems bug and it is to be addressed.

**Table 4.22: Separations for which a principal diagnosis was not reported, by sector and state and territory**

State	Number			Proportion of separations ( <i>per cent</i> )		
	Public	Private	Total	Public	Private	Total
NSW	8,394	10	8,404	0.6	0.0	0.4
Vic	81	495	576	0.0	0.1	0.0
Qld	0	0	0	0.0	0.0	0.0
WA	0	0	0	0.0	0.0	0.0
SA	0	0	0	0.0	0.0	0.0
Tas	11	329	340	0.0	0.5	0.2
ACT	0	0	0	0.0	0.0	0.0
NT	136	n.a.	136	0.2	n.a.	0.2
<b>Total</b>	<b>8,622</b>	<b>834</b>	<b>9,456</b>	<b>0.2</b>	<b>0.0</b>	<b>0.1</b>

n.a. Not available.

### Was mapping required from state and territory data sets?

Not applicable.

### Additional information:

Not applicable.

## Data element name: Procedure

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> None	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000137
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 5
<b>Definition:</b> A clinical intervention that: <ul style="list-style-type: none"> <li>• is surgical in nature; and/or</li> <li>• carries a procedural risk; and/or</li> <li>• carries an anaesthetic risk; and/or</li> <li>• requires specialised training; and/or</li> <li>• requires special facilities or equipment only available in an acute care setting.</li> </ul>		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories. There were only 46 separations with invalid ICD-10-AM procedure codes – 44 in Tasmania, and one each in the Australian Capital Territory and the Northern Territory.

### Details of use of non-standard NMDS scope:

There were a large number of separations for which there was no procedure or a procedure was not reported in each state and territory, however, it is not possible to determine whether there really was a procedure that was not reported, or there were actually no procedures. Although it is not unusual for a patient not to undergo any procedure whilst in hospital, information is presented below for separations for which there was no procedure or a procedure was not reported.

**Table 4.23: Separations for which there was no procedure or a procedure was not reported, by state and territory**

State	Number			Proportion of separations ( <i>per cent</i> )		
	Public	Private	Total	Public	Private	Total
NSW	430,027	58,316	488,343	33.3	8.9	25.0
Vic	292,361	69,243	361,604	27.4	11.9	22.0
Qld	239,335	74,857	314,192	33.0	13.9	24.9
WA	95,561	41,065	136,626	24.7	15.5	20.9
SA	97,784	19,129	116,913	26.6	10.4	21.2
Tas	19,195	13,549	32,744	25.8	20.4	23.3
ACT	11,199	2,965	14,164	17.4	11.5	15.7
NT	23,988	n.a.	23,988	36.0	n.a.	36.0
<b>Total</b>	<b>1,209,450</b>	<b>279,124</b>	<b>1,488,574</b>	<b>29.9</b>	<b>12.0</b>	<b>23.4</b>

n.a. Not available.

### Was mapping required from state and territory data sets?

Not applicable.

### Additional information:

Up to 31 procedure codes were requested for each separation. The NHDD recommends that a minimum of 20 codes be able to be reported. Queensland and Western Australia both reported 31 procedure codes, the maximum number requested by the Institute, and may have been restricted in the number of codes they could provide. Queensland indicated that it collects an unlimited number of procedures for each episode.

**Table 4.24: The maximum number of procedures reported, by state and territory**

State	Number		Mean procedure codes per separation	
	Public	Private	Public	Private
NSW	20	20	2.4	2.3
Vic	25	25	2.2	2.2
Qld	31	31	2.2	2.3
WA	31	31	2.2	2.2
SA	25	25	2.0	2.3
Tas	30	30	2.2	2.3
ACT	25	30	2.1	2.4
NT	25	n.a.	1.8	n.a.
<b>Total</b>	..	..	<b>2.2</b>	<b>2.3</b>

n.a. Not available.

.. Not applicable.

In 31% of public hospital separations and 24% of private hospital separations one procedure code was reported, ranging from 26% in New South Wales to 42% in the Australian Capital Territory in the public sector, and from 19% in Tasmania to 28% in South Australia in the private sector. In a further 20% of public hospital separations and 30% of private hospital separations two procedure codes were reported and three procedure codes were reported in a further 9% of public hospital separations and 16% of private hospital separations. The average number of procedure codes per separation was 2.2 in the public sector and 2.3 in the private sector.

## Data element name: Admitted patient election status

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000415
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 1
<b>Definition:</b> Accommodation chargeable status elected by patient on admission (public/private).		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes			No
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDS scope:

'Admitted patient election status' was not available for separations from public psychiatric hospitals in Victoria, and was missing for one separation from South Australia. In practice, this means that the item was not provided for patients of the Victorian forensic psychiatric service, most if not all of whom would not be able to elect to be treated as private patients. Victoria commented that the scope of this data

item should be clarified with a view to placing public psychiatric hospitals outside its scope; alternatively, it could default to 'public' for this type of hospital.

The Institute requested that category 9 *Unknown* be reported if the 'Admitted patient election status' of the patient was not known. However, it is expected that this category should only be used in a minimal number of cases, as this data element should be collected for all patients under the Australian Health Care Agreements.

**Table 4.25: Use of the 'Unknown' data domain for admitted patient election status, by state and territory**

State	Number	Per cent
NSW	1,583	0.1
Vic	4,252	0.3
Qld	0	0.0
WA	1,322	0.2
SA	0	0.0
Tas	23,344	16.6
ACT	53	0.1
NT	209	0.3

### Was mapping required from state and territory data sets?

New South Wales, Victoria, Western Australia and Tasmania all mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Admitted patient election status'. Queensland collects additional categories for this item but combines some of these to conform to the NHDD domain values.

Victoria supplied these data based on their data element 'Account class on separation', which had formed the basis of their data supply for 'Patient accommodation eligibility status' in previous years.

Western Australia does not collect 'Admitted patient election status', but derived the data element from payment classification categories. Unqualified newborns were assigned the election status of the mother where a mother-baby match could be readily identified. Western Australia has indicated that this data element will again be derived for 2001-02 and 2002-03. For 2003-04 onwards, it should be more reliable due to changes being introduced in July 2003.

### Additional information:

There were 555 records for the Northern Territory where patients were compensable, but 'Admitted patient election status' was 1 *Public* where it should be 2 *Private*. Similarly, there were 276 records where 'Department of Veterans' Affairs patient' status was 1 *Yes*, but 'Admitted patient election status' was 1 *Public* where it should be 2 *Private*. The Northern Territory indicated that a data quality program particularly focused on financial classification is currently being undertaken.

## Data element name: Compensable status

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Admitted patient mental health care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000026
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 3
<b>Definition:</b> A compensable patient is an individual who is entitled to receive or has received a compensation payment with respect to an injury or disease. A compensable patient is a person who: <ul style="list-style-type: none"> <li>• is entitled to claim damages under motor vehicle third party insurance; or</li> <li>• is entitled to claim damages under worker’s compensation; or</li> <li>• has an entitlement to claim under public liability or common law damages.</li> </ul>		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes			No
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDS scope:

'Compensable status' was provided for all reported separations in every state and territory except for Victoria, where it was not reported for separations from public psychiatric hospitals. In practice, this means that the item was not provided for the Victorian forensic psychiatric service. The applicability of this item for forensic patients needs to be clarified in the NHDD definition.

'Compensable status' was reported as unknown for 14% (19,890) of separations from Tasmania.

**Table 4.26: Use of the 'Unknown' data domain for compensable status, by state and territory**

State	Number	Per cent
NSW	1,583	0.1
Vic	341	0.0
Qld	0	0.0
WA	0	0.0
SA	0	0.0
Tas	19,890	14.1
ACT	55	0.1
NT	209	0.3

### Was mapping required from state and territory data sets?

New South Wales, Victoria, Western Australia, South Australia, Tasmania and the Northern Territory all mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Compensable status'. There are several compensable status categories collected by Queensland. These categories are combined for national reporting.

### Additional information:

In version 9 of the NHDD, the data elements 'Admitted patient election status', 'Medicare eligibility status', 'Compensable status' and 'Department of Veterans' Affairs patient' were collected in the admitted patient NMDS in order to determine from where funding for a patient was obtained. In version 10, the data elements 'Compensable status' and 'Department of Veterans' Affairs patient' are replaced with the data element 'Funding source for hospital patient'.

There were 788 records for the Northern Territory where patients were compensable, but not eligible for Medicare. As it is unlikely that all compensable patients would be ineligible for Medicare, the Institute queried this data. 'Medicare eligibility status' was changed to 1 *Eligible* for all these records. There were also 555 records where patients were compensable, but 'Admitted patient election status' was 1 *Public* where it should be 2 *Private*. The Northern Territory indicated that a data quality program particularly focused on financial classification is currently being undertaken.

## Data element name: Department of Veterans' Affairs patient

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000421
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 1
<b>Definition:</b> An eligible person whose charges for this hospital admission are met by the Department of Veterans' Affairs.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes			No

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDS scope:

'Department of Veterans' Affairs patient' was not provided for all reported separations from public hospitals in the Northern Territory.

The Institute requested that category 9 *Unknown* be reported if 'Department of Veterans' Affairs patient' was not known.

**Table 4.27: Use of the 'Unknown' data domain for Department of Veterans' Affairs patient, by state and territory**

State	Number	Per cent
NSW	1,583	0.1
Vic	0	0.0
Qld	0	0.0
WA	0	0.0
SA	0	0.0
Tas	0	0.0
ACT	0	0.0
NT	387	0.6

### **Was mapping required from state and territory data sets?**

New South Wales, Victoria, Western Australia, South Australia, Tasmania and the Northern Territory all mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Department of Veterans' Affairs patient'.

Queensland collects this item as a separate category within the compensable status item data domain. It is collected using the NHDD definition and is not mapped to conform to the NHDD domain values.

### **Additional information:**

In version 9 of the NHDD, the data elements 'Admitted patient election status', 'Medicare eligibility status', 'Compensable status' and 'Department of Veterans' Affairs patient' were collected in the admitted patient NMDS in order to determine from where funding for a patient was obtained. In version 10, the data elements 'Compensable status' and 'Department of Veterans' Affairs patient' are replaced with the data element 'Funding source for hospital patient'.

There were 276 records for the Northern Territory where 'Department of Veterans' Affairs patient' status was 1 *Yes*, but 'Admitted patient election status' was 1 *Public* where it should be 2 *Private*. The Northern Territory indicated that a data quality program particularly focused on financial classification is currently being undertaken.

## Data element name: Hospital insurance status

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000075
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 3
<b>Definition:</b> Hospital insurance under one of the following categories: <ul style="list-style-type: none"> <li>• registered insurance – hospital insurance with a health insurance fund registered under the <i>National Health Act 1953</i> (Cwlth);</li> <li>• general insurance – hospital insurance with a general insurance company under a guaranteed renewable policy providing benefits similar to those available under registered insurance;</li> <li>• no hospital insurance or benefits coverage under the above.</li> </ul>		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes			No
Vic	Yes		Yes		Yes	
Qld	Yes		Yes			No
WA	Yes			No	Yes	
SA	Yes		Yes			No
Tas	Yes		Yes			No
ACT	Yes		Yes			No
NT	Yes		Yes			No

### Details of use of non-standard NHDD definition and domain values:

Western Australia does not use a data domain for *Unknown* as per the NHDD. In Western Australia data for Insurance status is cross-checked against another data element Payment classification, so that if hospital insurance is not reported or

unknown (that is, blank), and Payment Classification is Private insured then the insurance status would be assigned to *Yes (Hospital insurance)*.

### Details of use of non-standard NMDS scope:

'Hospital insurance status' was not available for separations from public psychiatric hospitals in Victoria. In practice, this means that the item was not provided for the Victorian forensic psychiatric service. The applicability of this item for forensic patients needs to be clarified in the NHDD definition. 'Hospital insurance status' was reported as unknown for all separations from public hospitals in Tasmania, for a large proportion of separations from private hospitals in Tasmania (47.2%, 31,415) and a large proportion of separations from public hospitals in the Australian Capital Territory (76.3%, 49,085).

**Table 4.28: Use of the 'Unknown' data domain for hospital insurance status, by state and territory**

State	Number	Per cent
NSW	85,371	4.4
Vic	481	0.0
Qld	64,691	5.1
WA	0	0.0
SA	57,976	10.5
Tas	105,698	75.1
ACT	49,262	54.6
NT	1,083	1.6

### Was mapping required from state and territory data sets?

New South Wales, Victoria, Tasmania and the Northern Territory all mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Hospital insurance status'.

### Additional information:

Victoria reported that there were a significant number of patients with hospital insurance where the level of insurance is unknown, making the data on insurance difficult to use/unreliable.

The Tasmanian Department of Health and Human Services is currently reviewing how information on hospital insurance status can be collected and reported for the public sector in the future.

In *Australian Hospital Statistics 2000–01*, data for 'Hospital insurance status' were only reported for private patients other than compensable or Department of Veterans' Affairs patients (that is, for patients who could use their insurance to meet the hospital charges for the episode of care). These data are less likely to be accurate for other categories of patient.

## Data element name: Intended length of hospital stay

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> None	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000076
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 1
<b>Definition:</b> The intention of the responsible clinician at the time of the patient’s admission to hospital, to discharge the patient either on the day of admission or a subsequent date.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA		No	Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes			No
ACT	Yes		Yes			No*
NT	Yes		Yes		Yes	

\* ACT private hospitals only.

### Details of use of non-standard NHDD definition and domain values:

NHDD definition and domain values used by all states and territories except Western Australia, where if the intended length of stay is not known at admission, the value for intended overnight stay is assigned. Western Australia indicated that this approach has not changed.

### Details of use of non-standard NMDS scope:

Data were not provided for ‘Intended length of stay’ for 644 separations from New South Wales public hospitals. The Institute requested that category 9 *Unknown* be

reported if 'Intended length of hospital stay' was not known. Almost 29% (40,260) of separations from Tasmania were *Unknown*.

**Table 4.29: Use of the 'Unknown' data domain for intended length of hospital stay, by state and territory**

State	Number	Per cent
NSW	0	0.0
Vic	0	0.0
Qld	0	0.0
WA	0	0.0
SA	0	0.0
Tas	40,260	28.6
ACT	196	0.2
NT	30	0.0

### **Was mapping required from state and territory data sets?**

South Australia and Tasmania mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Intended length of hospital stay'.

### **Additional information:**

States and territories were asked to comment on whether this data element is used. Western Australia and South Australia both indicated that this data element is seldom used as actual length of stay is usually of more interest and New South Wales commented that it has not had a request for this data element in recent years. Queensland indicated that analysis of intended lengths of stay against actual lengths of stay is a useful indicator for quality management purposes, while Tasmania commented that while hospitals may require this information for bed planning purposes, its use at state or national level is questionable.

## Data element name: Inter-hospital contracted patient

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> None	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000079
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 2
<b>Definition:</b> An episode of care for an admitted patient whose treatment and/or care is provided under an arrangement between a hospital purchaser of hospital care (contracting hospital) and a provider of an admitted service (contracted hospital), and for which the activity is recorded for both hospitals.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW		No		No	Yes	
Vic		No		No	Yes	
Qld	Yes		Yes			No
WA	Yes		Yes		Yes	
SA	Yes		Yes			No
Tas	..		..			No
ACT	Yes		Yes			No
NT	Yes		Yes		Yes	

.. Not applicable.

### Details of use of non-standard NHDD definition and domain values:

New South Wales and Victoria did not specify the sector of the hospital purchasing the contracted care but were able to make the distinction between contracted and not contracted patients. New South Wales used a category of 1 for contracted and 2 for not contracted, while Victoria used a category of 1 for contracted and 3 for not contracted. According to Victoria the sector of the hospital purchasing the contracted

care could safely be imputed as public. It could also be imputed that patients of public psychiatric hospitals are not contracted.

**Details of use of non-standard NMDS scope:**

Tasmania did not provide ‘Inter-hospital contracted patient’ for any separations, while Victoria did not provide this data element for separations from public psychiatric hospitals and it was missing for 504 separations from public acute hospitals in New South Wales. Queensland did not report ‘Inter-hospital contracted patient’ for 1,261,148 (99.8%) separations across all sectors. It appears that there may be some confusion in relation to the scope of this data element and the use of the ‘Not reported’ and ‘Other’ categories. Queensland commented that it had reported all non-contracted patients as 9 *Not reported* whereas they should probably have been reported as 3 *Other*. The Australian Capital Territory also coded all non-contracted patients as 9 *Not reported*. To avoid further misinterpretation category 3 *Other* should be relabelled *Not contracted*.

**Table 4.30: Use of the ‘Not reported’ data domain for inter-hospital contracted patients, by state and territory**

State	Number	Per cent
NSW	0	0.0
Vic	0	0.0
Qld	1,261,148	99.8
WA	0	0.0
SA	5,904	1.1
Tas	140,778	100.0
ACT	90,253	99.95
NT	0	0.0

**Was mapping required from state and territory data sets?**

New South Wales, Victoria, Western Australia, South Australia and the Northern Territory all mapped the data collected at the jurisdiction level to conform to the NHDD domain values ‘Inter-hospital contracted patient’.

**Additional information:**

Queensland noted that the quality of this data item is suspected to be poor. Western Australia indicated that it is confident that the quality of this data item is reasonable and improving, noting that it now checks that each ‘contracted service’ has a matching ‘funding hospital’. The Tasmanian Department of Health and Human Services is currently reviewing how this information can be collected and reported for the public sector in future.

## Data element name: Medicare eligibility status

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> None	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000414
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 1
<b>Definition:</b> The patient's eligibility for Medicare as specified under the Commonwealth <i>Health Insurance Act 1973</i> .		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes			No*
WA	Yes		Yes			No
SA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes			No*
NT	Yes		Yes			No

\* Queensland and ACT private hospitals only.

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDS scope:

'Medicare eligibility status' was provided for all reported separations in every state and territory except for Victoria, where it was not reported for separations from

public psychiatric hospitals. In practice, this means that the item was not provided for the Victorian forensic psychiatric service.

'Medicare eligibility status' was reported as unknown for 70% (17,863) of separations from Australian Capital Territory private hospitals.

**Table 4.31: Use of the 'Unknown' data domain for Medicare eligibility status, by state and territory**

State	Number	Per cent
NSW	1,583	0.1
Vic	341	0.0
Qld	17,770	1.4
WA	22,736	3.5
SA	109	0.0
Tas	0	0.0
ACT	17,869	19.8
NT	387	0.6

Western Australia has indicated that 3.5% of cases are unknown simply because its variable used for mapping does not allow reliable assignment. A number of assumptions were also made in the mapping process. Western Australia has indicated that explicit collection of this variable is expected to commence in July 2003 (if possible) or 2004 (at the latest).

### **Was mapping required from state and territory data sets?**

New South Wales, Victoria, Western Australia, South Australia, Tasmania and the Northern Territory all mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Medicare eligibility status'.

### **Additional information:**

Victoria indicated that category 2 *Not eligible* may be an underestimate, as it is based only on cases where the Medicare suffix has been recorded as 'N-E' (Not eligible for Medicare) and the postcode of '8888' (Overseas) is reported in the Victorian Admitted Episode Dataset.

There were 788 records for the Northern Territory where patients were compensable, but not eligible for Medicare. As it is unlikely that all compensable patients would be ineligible for Medicare, the Institute queried this data. 'Medicare eligibility status' was changed to 1 *Eligible* for all these records.

## Data element name: Mental health legal status

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> Admitted patient mental health care Community mental health care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000092
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 5
<b>Definition:</b> Whether a person is treated on an involuntary basis under the relevant state or territory mental health legislation, at any time during an episode of care for an admitted patient or treatment of a patient/client by a community-based service during a reporting period. Involuntary patients are persons who are detained in hospital or compulsorily treated in the community under mental health legislation for the purpose of assessment or provision of appropriate treatment or care.		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations (with psychiatric care days)?	
NSW	Yes			No	Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	..		..			No

.. Not applicable.

**Details of use of non-standard NHDD definition and domain values:**

NHDD definition and domain values used by all states and territories, except New South Wales, which used an invalid domain value of 0 for 1 separation, and N for 4 separations.

**Details of use of non-standard NMDS scope:**

South Australia and Tasmania provided 'Mental health legal status' for all separations, regardless of whether patients had psychiatric care days. In South Australia patients who underwent psychiatric care and who were involuntary were coded as 1 *Involuntary*, while all other patients (those with and without psychiatric care days) were coded as 2 *Voluntary*. New South Wales reported 'Mental health legal status' in a similar way to South Australia, however, it wasn't reported for all separations. In Tasmania, only separations with psychiatric care days were coded as 1 *Involuntary* or 2 *Voluntary* and all other separations were coded as 9 *Unknown*. Victoria, Queensland, Western Australia and the Australian Capital Territory only reported 'Mental health legal status' for separations with psychiatric care days. The Northern Territory did not report 'Mental health legal status' for any separations.

**Was mapping required from state and territory data sets?**

South Australia and Tasmania mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Mental health legal status'.

**Additional information:**

In Victoria, private hospitals are directed to report a code of 9 *Not applicable* for all patients in private hospitals, as private hospitals are not proclaimed to provide services for involuntary patients. Therefore, 'Mental health legal status' for all separations in private hospitals in Victoria is 9 *Unknown*.

## Data element name: Mode of admission

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000385
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 4
<b>Definition:</b> Describes the mechanism by which a person begins an episode of care.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA	Yes		Yes			No
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

### Details of use of non-standard NHDD definition and domain values:

Not applicable, NHDD definition and domain values used by all states and territories.

### Details of use of non-standard NMDS scope:

The Australian Capital Territory did not report 'Mode of admission' for 11 separations from private hospitals. The Institute recoded missing 'Mode of admission' to 9 *Unknown*.

The Institute requested that category 9 *Unknown* be reported if 'Mode of admission' was not known. New South Wales initially used the *Unknown* category for 4,641

separations. However, on advice from New South Wales during the edit checking process these were recoded to 3 *Other*.

**Table 4.32: Use of the 'Unknown' data domain for mode of admission, by state and territory**

<b>State</b>	<b>Number</b>	<b>Per cent</b>
NSW	0	0.0
Vic	0	0.0
Qld	0	0.0
WA	0	0.0
SA	5,904	1.1
Tas	0	0.0
ACT	0	0.0
NT	30	0.0

### **Was mapping required from state and territory data sets?**

New South Wales, Victoria, Western Australia, South Australia, Tasmania and the Northern Territory all mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Mode of admission'. Queensland combines categories from the state 'source of admission' item to meet the NHDD domain values.

### **Additional information:**

Western Australia has indicated that the accuracy of this information is questionable, especially in relation to 'statistical' admissions, as compliance with the recording of care type changes needs improvement. Transfers from hospitals were also reported inconsistently, but changes from July 2003 should rectify this.

## Data element name: Mode of separation

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000096
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 3
<b>Definition:</b> Status at separation of person (discharge/transfer/death) and place to which person is released (where applicable).		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes			No*	Yes	
Qld	Yes		Yes		Yes	
WA	Yes			No	Yes	
SA	Yes		Yes			No
Tas	Yes			No	Yes	
ACT	Yes			No*	Yes	
NT	Yes		Yes		Yes	

\* Victorian public hospitals and ACT private hospitals used non-standard domain values.

### Details of use of non-standard NHDD definition and domain values:

Victoria includes discharges/transfers to psychiatric hospitals in category 1 *Discharge/transfer to an(other) acute hospital* rather than category 3 *Discharge/transfer to an(other) psychiatric hospital* as per NHDD specifications. Victoria has indicated that this reflects the fact that, except for the public psychiatric hospital, all public admitted patient services for mental health patients have now been mainstreamed into public acute hospitals and it may not be recorded whether a patient is transferred to a psychiatric unit or to the 'general' part of the hospital. Even when the

patient notes make it clear that the transfer is to the psychiatric ward of another hospital, the codes identifying hospitals do not differentiate between the various services of that hospital: the transferring hospital can indicate only the receiving hospital. Victoria has suggested that this NHDD specification needs to be reviewed. For Victoria discharges and transfers to mental health residential facilities are mapped to category 4 *Discharge/transfer to other health care accommodation*, while category 7 *Statistical discharge from leave* is not used.

Western Australia uses category 2 *Discharge/transfer to a residential aged care service, unless this is the usual place of residence* for all patients who are discharged or transferred to a residential aged care service, regardless of whether this is the patient's usual place of residence. The NHDD specifies that if the residential aged care service is the patient's place of usual residence then category 9 *Other (includes discharge to usual residence/own accommodation/welfare institution (includes prisons, hostels and group homes providing primarily welfare services))* should be used. Western Australia has indicated that it will be able to conform to the correct approach from 2001–02 reporting with regard to the use of '9 – Other' if the patient is being sent to a nursing home that is the usual place of residence. For Western Australia, category 4 *Discharge/transfer to other health care accommodation (includes mothercraft hospitals)* also includes patients who are discharged or transferred to all hostels (mostly aged care). Category 3 *Discharge/transfer to an(other) psychiatric hospital* is used for discharges or transfers to all psychiatric facilities, not just psychiatric hospitals. Western Australia has noted that several changes to its source item are planned for July 2003 to align categories with NHDD definitions. This affects categories 2 (residential aged care service rather than nursing home), 3 (psychiatric hospital rather than psychiatric facility) and 4 (aged care facilities that belong to category 2 will be excluded from this category while some psychiatric facilities and mothercraft hospitals will be included).

Tasmania did not use category 3 *Discharge/transfer to an(other) psychiatric hospital* or category 7 *Statistical discharge from leave*. Tasmania has indicated that its mapping process needs to be corrected to capture these domain values.

The Australian Capital Territory provided data for public hospitals for category 5 *Statistical discharge-type change* and category 7 *Statistical discharge from leave* in reverse. After this advice from the Australian Capital Territory the Institute reversed these categories on the database. Category 5 *Statistical discharge-type change* and category 7 *Statistical discharge from leave* were not used by private hospitals. It is uncertain as to whether the Australian Capital Territory does not collect these data or if there were no separations with these modes of separation.

#### **Details of use of non-standard NMDS scope:**

The Institute requested that category 0 *Unknown* be reported if 'Mode of separation' was not known.

**Table 4.33: Use of the 'Unknown' data domain for mode of separation, by state and territory**

State	Number	Per cent
NSW	0	0.0
Vic	0	0.0
Qld	0	0.0
WA	0	0.0
SA	3,222	0.6
Tas	0	0.0
ACT	11	0.0
NT	41	0.1

### **Was mapping required from state and territory data sets?**

New South Wales, Victoria, South Australia, Tasmania and the Northern Territory all mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Mode of separation'. Queensland derives this data element from two separate state data items.

Category 4 *Discharge/transfer to other health care accommodation (includes mothercraft hospitals)* and category 5 *Statistical discharge-type change* were reported for a large proportion of separations in Tasmanian private hospitals in comparison to Tasmanian public hospitals and other states and territories. In contrast, category 1 *Discharge/transfer to an acute hospital* was reported for a much smaller proportion of separations. Tasmania indicated that private hospitals do not collect information in any standard way. The data are mapped to the NHDD domain values as far as possible. Apparently one of the private hospitals in Tasmania uses the code 5 for discharge home, however, this was not picked up in the mapping process. This means that the majority of separations were coded to 5 *Statistical discharge-type change* instead of 9 *Other (includes discharge to usual residence/own accommodation/welfare institution (includes prisons, hostels and group homes providing primarily welfare services))*.

### **Additional information:**

States and territories were asked to provide comments on the discharge of patients to residential aged care services. That is, whether category 2 is used if the residential aged care service is the patient's usual place of residence, or whether category 9 is used in this instance as per the NHDD.

Queensland, South Australia, Tasmania and the Northern Territory all indicated that they conform to the NHDD definition, using category 9 when the residential aged care service is the patient's usual place of residence. The Northern Territory indicated that its policy was only changed just prior to commencement of 2000-01 to incorporate the NHDD definition that code 9 be used for discharge to residential aged care service if this is usual place of residence. Victoria and Western Australia indicated that they use category 2 *Discharge/transfer to a residential aged care service* when the residential aged care service is the patient's usual place of residence. In

Victoria category 9 *Other* is only used for separation to private accommodation or the patient's home. Western Australia has indicated that it will be able to conform to the NHDD definition from 2001-02.

States and territories were also asked to indicate what constitutes other health care accommodation, as in category 4 *Discharge/transfer to other health care accommodation (includes mothercraft hospitals)* in their jurisdiction.

Queensland assigns the *Discharge/transfer to other health care accommodation* category to patients who are transferred to alcohol and drug centres, independent living units, or other health care establishments.

In Western Australia category 4 includes mostly aged care hostels, but not psychiatric facilities or mothercraft hospitals.

In South Australia, 'Other health care accommodation' is defined as 'patient discharge to other health care accommodation not specified in other 'Nature of separation' categories'. South Australia has indicated that it is generally establishments that might give a very low level of nursing care.

Tasmania has indicated that 'Other health care facility' is the terminology used in the local data domain in Tasmania, therefore, without a specific survey being conducted, it is not possible to explain what this category actually represents.

In investigating what constituted 'other health care accommodation', the Northern Territory had a look at what users were selecting as the discharge destination in terms of actual agency or organisation, over the last 2 years. They discovered that selection of this code did not preclude users from selecting acute hospitals (3.7%), psychiatric hospitals (none selected in this time period), and aged care facilities (0.6%). The main destinations specified were hostels (24.0%), one hospital's self care centre (24.7%), or no destination specified. The Northern Territory indicated that it is doubtful that of those hostels selected, any of them had any relationship to 'health care', since they separated out those which might potentially be 'health care accommodation' from this group. In two regional centres, there exist hostels for women living on communities who come into town close to term in their pregnancy, stay at the hostel, are admitted at the time of birth of their baby, and may or may not spend time in the hostel following the birth. However, further investigation is needed as to whether they would be receiving any health care other than a standard visit by a community nurse after the birth, which is offered to all new parents. Also collected as a destination are rehabilitation hospitals, YMCA and YWCA, missions, and a range of other organisations that do not provide health care. The Northern Territory indicated that the quality of its data under 'Mode of Separation' is therefore somewhat questionable, and it will work towards improving its data collection.

States and territories were also asked to comment on the use of category 7 *Statistical discharge from leave* in their jurisdiction and if it is not used, why this is the case.

Victoria does not use category 7 *Statistical discharge from leave* commenting that the original NHDD definition was designed to accommodate practice in public psychiatric hospitals in other jurisdictions. Queensland, Western Australia and South Australia indicated that they do use equivalent data domains in their jurisdictions.

However, Western Australia indicated that it is unclear whether it is assigned consistently. The Northern Territory indicated that this category has not been used over the past 2 years of data, commenting that hospital information system analysts and Territory Health Services information analysts were unsure of the purpose of this particular category, indicating that it seemed not to relate to any particular practice. The Northern Territory indicated that it might expect a 'Statistical admission from leave', or a 'Statistical discharge to leave', but not this category.

## Data element name: Person identifier

<b>Evaluation NMDS:</b> Admitted patient care	<b>Other NMDSs:</b> Admitted patient mental health care Admitted patient palliative care Alcohol and other drug treatment services Community mental health care Perinatal	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000127
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 1
<b>Definition:</b> Person identifier unique within establishment or agency.		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD Definition used?		NHDD Domain Values used?		Provided for all reported separations?	
NSW	Yes		Yes			No*
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	..		..			No
SA	..		..			No
Tas	Yes		Yes		Yes	
ACT	Yes		Yes		Yes	
NT	Yes		Yes		Yes	

.. Not applicable.

\* NSW private hospitals only.

### Details of use of non-standard NHDD definition and domain values:

The NHDD definition appears to have generally been used by all states and territories, except Western Australia and South Australia, which did not provide data

for 'Person identifier'. Individual establishments or collection authorities may use their own alphabetic, numeric or alphanumeric coding systems as domain values.

The NHDD definition requires that the 'Person identifier' be unique to the patient within the relevant establishment. The supplied data were examined for the repeated use of the same person identifier for patients with different demographic characteristics, such as sex and date of birth. New South Wales, Queensland and the Australian Capital Territory had establishment identifier/person identifier combinations with more than one sex or date of birth, indicating that the person identifier is not truly unique within establishments in these jurisdictions. Tasmania also had establishment identifier/person identifier combinations with more than one sex or date of birth in private hospitals, however, as unique establishment numbers were not provided for private hospitals, it is uncertain whether the person identifiers are unique within an establishment. The repeated use of the same person identifier for patients with different dates of birth could not be examined in Victoria, as 'Date of birth' was not provided for the majority of separations within this state. Victoria had establishment identifier/person identifier combinations with more than one sex (mainly in private hospitals), however, the large number is due to the fact that unique establishment numbers were not provided for private hospitals.

**Table 4.34: Use of unique establishment identifiers/person identifiers, by state and territory**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Establishment id./ person id. combinations with 2 different sex values	139	15,520	119	n.a.	n.a.	19	7	0
Establishment id./ person id. combinations with more than one date of birth	1,200	n.a.	470	n.a.	n.a.	39	40	0
Establishment id./ person id. combinations with 2 different sex values and/or more than one date of birth	1,326	n.a.	586	n.a.	n.a.	39	47	0

n.a. Not available.

New South Wales commented that it does have medical record numbers that are unique to each patient in a hospital but the patient doesn't take that number with them when they go to another hospital. New South Wales indicated that the records in the table above would be 'bugs' in their new processing system. These glitches are gradually being fixed as they are identified.

#### **Details of use of non-standard NMDS scope:**

Western Australia and South Australia did not report 'Person identifier' for any separations. Western Australia does not provide person identifier in its data submission for confidentiality reasons and South Australia sets the 'Person identifier' to zero in order to protect the identity of individual patients. Western Australia indicated it is not intending to change this practice at this time. South Australia has recently provided an encrypted person identifier for 2000-01 data for a specific request and intends to continue to provide this information in future data supplies.

New South Wales did not report 'Person identifier' for 665,971 (34.2%) separations across all sectors. New South Wales indicated that these records are from mainly private hospitals which are processed in an old database. New South Wales commented that it can produce a unique identifier in the new but not the old database system. Currently all private hospitals are still processed in ISCOS, however, there are plans to process private hospitals in HIE, possibly from 2003–04.

### **Was mapping required from state and territory data sets?**

Not applicable.

### **Additional information:**

In its documentation accompanying the data request to states and territories the Institute asked a number of questions regarding 'Person identifier' including:

1. 'Is this identifier repeated for repeat admissions of individual patients?'
2. 'If so, does this apply within individual hospitals or throughout the state/territory?' and
3. 'Are the identifiers the same as those used for previous years (that is, can they be used to identify repeat admissions in previous years for the same patients)?'

New South Wales indicated that 'Person identifier' is different for every new data extract and cannot be used to identify repeat admissions in previous years for the same patients. Victoria and Queensland indicated that 'Person identifier' is repeated for repeat admissions of individual patients and is only unique within individual hospitals. Queensland also specified that it may not be possible for the person identifiers supplied in 2000–01 to be cross-referenced with person identifiers provided in previous or future data supplies. Tasmania has indicated that the identifier is not repeated for repeat admissions of individual patients. The Australian Capital Territory indicated that 'Person identifier' may be used for repeat admissions within a hospital and applies across periods for the same patients. The Northern Territory indicated that 'Person identifier' is repeated for repeat admissions of the same individual across the Territory, not just within a hospital.

### *Encryption*

States and territories were asked to comment on whether the actual unique record number assigned at the hospital is provided or is encrypted before supply to the Institute. If it is encrypted, states and territories were asked to indicate if the encryption is done in the same way each time so that the same encrypted number would stay with each patient each time they are re-admitted.

New South Wales indicated that a unique record number is provided for public hospital records but not for private hospital records. The record numbers for public hospitals are encrypted and traceable. For private hospitals the record numbers are also encrypted but not traceable. New South Wales commented that work on a unique personal identifier for the New South Wales Health system is in the development phase.

Victoria does not provide the unique record number assigned at the hospital, but provides an encrypted number. The encryption is done consistently so that the same encrypted number would stay with each patient each time they are re-admitted to the same hospital. The Northern Territory also provides an encrypted number, but it has a common numbering system for its five public hospitals, so each patient has the same encrypted number each time they are admitted to any of these hospitals. This consistency is necessary if multiple admissions are to be linked. South Australia has recently provided an encrypted person identifier for 2000-01 data for a specific request and intends to continue to provide this information in future data supplies. The number is unique for repeat patients within individual hospitals, but not across hospitals, or across data set years.

Queensland has indicated that for 2000-01 the actual patient number has been provided. It is not mapped or encrypted and is only unique within an individual hospital. Tasmania has indicated that the unique record number assigned at the hospital is provided. Tasmania indicated that the cost implications of encryption will need to be investigated before realistic comment can be made.

## Data element name: Source of referral to public psychiatric hospital

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> None	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000150
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 3
<b>Definition:</b> Source from which the person was transferred/referred to the public psychiatric hospital.		

### Use of National Standard definition, domain values and NMDs scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
	Yes	No	Yes	No	Yes	No
NSW	Yes		Yes		Yes	
Vic	..			No		No
Qld	Yes		Yes		Yes	
WA		No	Yes		Yes	
SA	Yes		Yes		Yes	
Tas	Yes		Yes		Yes	
ACT		No	Yes		..	
NT	..		..		..	

.. Not applicable.

### Details of use of non-standard NHDD definition and domain values:

New South Wales, Queensland and South Australia provided data for public psychiatric hospitals only, as outlined in the NHDD definition. Western Australia provided data for all separations with psychiatric care days, however, separations not in public psychiatric hospitals were assigned to 9 *Unknown*. Tasmania provided data for all separations, not just those in public psychiatric hospitals. Similarly, the Australian Capital Territory provided data for this data element even though it does not have any public psychiatric hospitals. Data were provided for separations with

psychiatric care days in public acute hospitals in the Australian Capital Territory. Northern Territory did not provide data for this data element as it does not have any public psychiatric hospitals.

**Details of use of non-standard NMDS scope:**

Victoria was unable to provide data for this data element, as it is not collected. According to Victoria the collection of this data element would not add value to the state's data because its public psychiatric hospitals are forensic services and all patients would be 'referred' as part of a legal process.

About 12% of separations within scope in New South Wales, 58% in Western Australia and over 60% in Tasmania were reported as 10 *Unknown*.

**Was mapping required from state and territory data sets?**

New South Wales, South Australia, Western Australia and Tasmania all mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Source of referral to public psychiatric hospital'. Queensland derives this item from two separate state data items.

**Additional information:**

Source of referral is collected for all separations in South Australia and Tasmania. The definition could potentially be modified and made applicable to all hospital types. However, Western Australia has indicated that even its public psychiatric hospitals are having difficulty reporting this data element. It will continue with the same approach to reporting as for 2000-01.

## Data element name: Urgency of admission

<b>Evaluation NMDs:</b> Admitted patient care	<b>Other NMDs:</b> None	<b>Collection year:</b> 2000–01
		<b>Knowledgebase ID:</b> 000425
		<b>NHDD version:</b> 9.0
<b>Scope:</b> Episodes of care for admitted patients in all public and private acute and psychiatric hospitals, freestanding day hospital facilities and alcohol and drug treatment centres in Australia.		<b>Version number:</b> 1
<b>Definition:</b> Whether the admission has an urgency status assigned and, if so, whether admission occurred on an emergency basis. An <i>emergency admission</i> is an admission of a patient for care or treatment which, in the opinion of the treating clinician, is necessary and admission for which should occur within 24 hours. An <i>elective admission</i> is an admission of a patient for care or treatment which, in the opinion of the treating clinician, is necessary and admission for which can be delayed for at least 24 hours. Admissions for which an urgency status is usually <i>not assigned</i> are: <ul style="list-style-type: none"> <li>• admissions for normal delivery (obstetric);</li> <li>• admissions that begin with the birth of the patient, or when it was intended that the birth occur in the hospital, commence shortly after the birth of the patient;</li> <li>• statistical admissions; and</li> <li>• planned re-admissions for the patient to receive limited care or treatment for a current condition, for example, dialysis or chemotherapy.</li> </ul>		

### Use of National Standard definition, domain values and NMDS scope:

State	NHDD definition used?		NHDD domain values used?		Provided for all reported separations?	
NSW	Yes		Yes		Yes	
Vic	Yes		Yes		Yes	
Qld	Yes		Yes		Yes	
WA	Yes		Yes		Yes	
SA		No		No	Yes	
Tas		No*		No*		No*
ACT	Yes			No**	Yes	
NT	..		..			No

.. Not applicable.

\* Tasmanian private hospitals only.

\*\* Australian Capital Territory private hospitals only.

### Details of use of non-standard NHDD definition and domain values:

South Australia did not use the domain value 3 *Urgency status not assigned* which would be expected to be applied to statistical admissions, scheduled re-admissions for treatment, admissions for normal deliveries, or admissions that include the birth of the patient. 'Urgency of admission' for South Australia was derived from an internal data element called 'Admission category', which only includes the data domains, elective – non-booking list, emergency and elective – booking list. South Australia indicated that statistical admissions could be assigned to data domain 3, but recordings of planned re-admissions is not accurate, while assigning admissions for normal deliveries or admissions that include the birth of the patient would require an examination of diagnosis codes. As the definition could not be fully adopted, South Australia did not provide data for this domain value. However South Australia has advised that the state will fully comply with the NHDD from 1 July 2003 and an urgency status of 'Not assigned' will be introduced.

Private hospitals in Tasmania do not collect 'Urgency of admission' data according to the NHDD, with only some private hospitals providing an 'Urgency of admission' of *Elective*. For 39.9% of private hospital separations the 'Urgency of admission' was *Unknown*.

The Australian Capital Territory indicated that private hospitals appeared to have used old data domains for 'Urgency of admission' resulting in the bulk of private separations showing an 'Urgency of admission' of *Emergency*, which is incorrect. Therefore, 'Urgency of admission' for Australian Capital Territory private hospitals cannot be reported.

### Details of use of non-standard NMDS scope:

The Northern Territory did not provide information on 'Urgency of admission' for any separations and Victoria did not provide it for separations from public psychiatric hospitals. Victoria has indicated that as these are forensic psychiatric services, this item could safely be imputed as 'emergency' for these separations, on the basis that immediate admission has been legally determined to be necessary. However, Victoria questioned whether this is the most appropriate way of measuring this concept in the mental health context.

New South Wales did not provide 'Urgency of admission' for 514 separations from public hospitals, while the Australian Capital Territory did not provide it for 8 separations from private hospitals.

**Table 4.35: Use of the 'Unknown/not reported' data domain for urgency of admission, by state and territory**

State	Number	Per cent
NSW	514	0.0
Vic	0	0.0
Qld	0	0.0
WA	92	0.0
SA	0	0.0
Tas	26,560	18.9
ACT	8	0.0
NT	66,551	100.0

### Was mapping required from state and territory data sets?

Victoria, Western Australia, South Australia and Tasmania all mapped the data collected at the jurisdiction level to conform to the NHDD domain values for 'Urgency of admission'.

Western Australia has indicated that it is not convinced of the accuracy of this field. The variable from which Western Australia mapped uses similar values to South Australia's (described earlier) except that Western Australia created definitions for the cases that should be 'Not assigned' and overwrote the mapped code accordingly. Western Australia has suggested that clearer NHDD definitions are certainly required, especially for the identification of cases where 'Not assigned' is expected.

### Additional information:

At the May 2002 NHDC meeting, Queensland questioned the relevance of assigning admitted patients transferred from another hospital an urgency of admission category. Instead they proposed that the admission should be handled in the same way as episode type changes (that is, be allocated an urgency of admission status of *Not assigned*). In response, NHDC decided to collect information from each jurisdiction on how it handles this data collection and to examine the national data available on urgency of admission. At the July 2002 NHDC meeting the Institute

presented a paper outlining the national statistics available on urgency of admission and the responses received from each jurisdiction.

The NHDC has requested that the Australian Hospital Statistics Advisory Committee develop an adequate definition for urgency of admission. The NHDC commented that:

- there is value in the data if the quality is adequate;
- the rules as to when urgency should be assigned need to be clarified and that data are needed on inter-hospital transfer as well as intra-hospital admission;
- the data need to be monitored to ensure their improvement when clarified descriptions are applied; and
- the data are not publishable in their present form and that it might be some time before they are publishable.

# 5 Comments on data elements

This chapter brings together summary information on utility and importance of the NMDS data elements, comments and suggestions from both the utility and compliance evaluations and other comments obtained throughout the NMDS evaluation.

## Existing data elements

This section provides summary statistics for each individual data element obtained from the utility survey, as well as comments and recommendations for change from both the utility and compliance evaluations. The order of data elements in this section is according to how the data elements are presented in Tables 3.5 and 4.3.

### Establishment data elements

#### Establishment identifier

Eighty per cent of respondents who provided a rating for the importance of this data element rated it as either important (33%) or highly important (33%), and 74% rated it as either useful (38%) or highly useful (36%). Thirteen per cent did not think the data element was important and 14% not useful.

A number of state and territory data providers commented that this data element is generally irrelevant, as it is a concatenation of other data elements (Establishment number, Establishment sector, Region code and State identifier) and that the individual components as separate data elements are more important/useful than the concatenation. However, it was noted that the Region code component, given it is defined at state level rather than nationally, would not have much national meaning.

#### Establishment number

Seventy-four per cent of respondents who provided a rating for the importance of this data element rated it as either important (29%) or highly important (45%), and 63% rated it as either useful (30%) or highly useful (33%). Twenty-one per cent were unsure of the importance, and 25% the usefulness of this data element.

Unique establishment numbers can be used by the Institute to assess numbers of private hospitals contributing to data aggregates and therefore assist in maintenance of confidentiality for these hospitals. The Institute recommends that 'Establishment number' be reported in detail for private hospitals for all jurisdictions. The names of these establishments are not required.

New South Wales has indicated that although this is technically feasible, it would need to be cleared on privacy grounds, as it would still be possible to potentially

disclose confidential information. Victoria has indicated that if the recommendation to exclude 'Region code' is accepted, it would be prepared to provide an establishment identifier which includes a unique encrypted establishment number for private hospitals. The current arrangement of not providing an establishment number for private hospitals has been adopted mainly to protect the identity of certain large and dominant private hospitals in rural regions of Victoria.

Western Australia has indicated that it does not wish to provide the establishment number for private hospitals, however, in assigning new establishment numbers, will attempt to adhere to the NHDD definition. Tasmania has also indicated that it would not be able to comply with the NHDD specification for private hospitals.

### **Establishment sector**

Seventy-nine per cent of respondents who provided a rating for the importance of this data element rated it as either important (37%) or highly important (42%), and 66% rated it as either useful (39%) or highly useful (27%). Seven per cent did not think the data element was important and 20% not useful.

There were few comments relating to this data element. However it was noted that, as private and public care have the potential to differ, this element would be needed to examine that, and it is useful for costing and other analysis. This data element is used informally in data provision to differentiate between public psychiatric and other public hospitals, and between private freestanding day hospital facilities and other private hospitals. These differentiations would be included formally in this data element. Alternatively, it could be included in a separate 'hospital type' data element recognising that the 'sector' and 'type' of hospital are two different concepts. This could be based on the categories currently requested, and/or on the 'Establishment type' data element (which is currently under review).

Comments from the compliance survey suggested that the data domains for 'Establishment sector' be expanded to include 4 *Public psychiatric* and 5 *Private freestanding day hospital facility* and appropriate definitions developed for these domains, and possibly also for the residual 'public' category noting that not all hospitals currently in that group would be regarded as acute.

The Tasmanian Department of Health and Human Services has indicated that the situation regarding private hospitals in Tasmania will not be overcome, and is likely to affect other smaller states and territories. Therefore a data domain of 6 *Private, not further specified* may also need to be included.

The Australian Capital Territory has noted that the specifications for 'Establishment identifier' in the request for data sent to states and territories contradicts the definition given in the NHDD. The file specification requests 'Establishment type' (using a 4-value code set that does not match the 32 data domains for 'Establishment type' in the NHDD) as a component of 'Establishment identifier', while the NHDD says this component should be 'Establishment sector', which has only 2 data domains. This needs to be clarified in both places.

## **Region code**

Sixty-nine per cent of respondents who provided a rating for the importance of this data element rated it as either important (27%) or highly important (42%), and 65% rated it as either useful (30%) or highly useful (35%). Sixteen per cent did not think the data element was important and 21% not useful. Another 16% were unsure of its importance and 14% of its usefulness.

For the purposes of the NMDS, the data element is generally only collected as part of the composite data element 'Establishment identifier'. It was stated that 'Region code' is a misleading title, as it doesn't adequately describe the context of the data element. Some of the comments received in relation to this data element tended to confirm this in that users thought that these data might be useful for epidemiological studies and looking at geographic distribution of hospitalisations. Presumably if the data element was collected according to the definition which states that it is 'An identifier for location of health services in an area', it may be possible to use the data element for this purpose. However, domain values are as specified by individual states/territories, meaning that there is no national standard and it cannot be compared nationally. Several states and territories do not provide data for this element.

Queensland considers that this data element should be removed from the NMDS as it is not useable for national comparisons. Victoria has indicated that if 'Region code' were to be removed, it would be prepared to provide an establishment identifier which includes a unique encrypted establishment number for private hospitals. The current arrangement of not providing an establishment number for private hospitals has been adopted mainly to protect the identity of certain large and dominant private hospitals in rural regions of Victoria. Presumably this information would be more useful than having a 'Region code'. Tasmania has indicated that as all private hospital and freestanding day facility data are sent as one (that is, sector 6), it would prefer not to provide a valid region code for the private sector in future. The value of maintaining the data element 'Region code' needs to be assessed.

## **State identifier**

Ninety-three per cent of respondents who provided a rating for the importance of this data element rated it as either important (28%) or highly important (65%), and 91% rated it as either useful (44%) or highly useful (47%). Only 7% rated it as not important or not useful.

Generally this would be seen as an essential data element at the national level. At the state/territory level this data element is not as useful, as it would be usual for one state/territory to access another state/territory's NMDS, except in the context of cross-border charging agreements. In that context it is vital.

It was suggested that it needs to be clarified in the NHDD that this data element only relates to establishments, rather than to the patient's state of usual residence, which is provided for in the data element 'Area of usual residence'.

## Demographic data elements

### Area of usual residence

Ninety-three per cent of respondents who provided a rating for the importance of this data element rated it as either important (9%) or highly important (84%), and 93% rated it as either useful (19%) or highly useful (74%). Only 7% rated it as not important and 5% as not useful.

Comments relating to this data element stated its importance for epidemiology nationally and at the state/territory level, for reporting, for example, on hospital catchment areas, cross-border charging arrangements and epidemiology at a state/territory level. It was also stated that this data element could also be very useful for confirming the accuracy of linkage work (if all states and territories were to comply with the specified data domains). However, there were a number of concerns raised. One related to the issue of not being able to produce reliable time series information based on Statistical Local Areas (SLAs – the data domain for this data element). The other related to the need for clearly stated standards for unknown address, address not further defined, no fixed abode, overseas, Norfolk Island, incomplete address (for example, state known but not SLA). The ASGC includes codes for most of these circumstances. Country of usual residence was suggested as a useful additional data element.

Victoria has indicated that it may be necessary to adopt a standard timetable for incorporating changes to both the ASGC classification for SLAs and for postcodes. Victoria uses a probabilistic algorithm to map locality name and postcode to SLA and there are resource and timing constraints imposed by this process. At present there are time lags associated with both the publication of the ASGC by ABS (sometimes six months after it comes into effect) and updating the mapping.

The preference of the Institute would be to receive data for both SLAs and postcodes for all separations, as some analyses are better with postcodes and others with SLAs. Postcodes can be particularly useful for comparing hospitalisation data with data from other sources.

South Australia does not collect SLA data on non-resident patients, however, postcodes can be provided for all patients. Tasmania has indicated that postcode information can also be provided for all patients.

The Institute requests a category of 0 *Not applicable* to be used where the patient is resident overseas, is at sea or has no fixed address. However, this makes it impossible to assess the use of hospitals by overseas residents. The usefulness of a separate category for overseas residents should be assessed.

New South Wales and Western Australia are supportive of this suggestion and Victoria has indicated that it would have no difficulty in providing separate codes for patients resident overseas, at sea or with no fixed address. Similarly, Queensland indicates that for interstate and overseas separations it allocates default SLA codes denoting the individual state/territory or whether the patient's usual residence was overseas.

The Department of Health and Ageing also supports this suggestion as the Federal Government has reciprocal agreements with different countries, therefore the ability to identify a patient's country of usual residence would be useful.

### **Country of birth**

Eighty-four per cent of respondents who provided a rating for the importance of this data element rated it as either important (32%) or highly important (52%), and 85% rated it as either useful (41%) or highly useful (44%). Eleven per cent rated it as not important and 10% as not useful.

Although this data element was seen as important for studying the access to services by different sub-populations, it was believed that the quality might be compromised because patients may be reluctant to state their country of birth for fear they might receive different treatment. Another comment in relation to quality was the fact that countries change and where people were born may not be included in the current code set in the hospital. Despite this, this data element was seen as useful for confirming the accuracy of linkage between data sets.

It was commented that the Standard Australian Classification of Countries (SACC) be adopted by all jurisdictions as the domain value for collection of data on 'Country of birth'. Queensland and Western Australia have both indicated they agree with this. Queensland is now using SACC and Western Australia will report SACC for 2002-03.

One modification that was suggested was the need for clearly stated standards for the use of supplementary ABS codes where insufficient information is provided (for example, 'Africa', 'Northern Europe'). While ABS issues supplementary codes for the SACC, there are many variations on which ones can be adopted. The NHDD merely refers to the SACC standard, without providing clarification on which supplementary codes should be used for national reporting.

### **Date of birth**

Ninety-three per cent of respondents who provided a rating for the importance of this data element rated it as either important (15%) or highly important (78%), and 88% rated it as either useful (16%) or highly useful (72%). Only 4% rated it as not important and 5% as not useful.

Many comments related to the fact that age is the important derivative of this data element and is a more useful data element for analysis. However, 'Date of birth' is seen as a critical data element for any linkage project. It was also stated that this data element might occasionally be used for clinical self-audit. Western Australia does not provide this data element and notes that it will only provide it when data linkage need is ratified by a higher body.

One issue that was raised was that is not clear how to report an unknown date of birth, for example, if only day is known, month is known or year is known. There is no estimated date of birth flag to indicate which part of the date was estimated. It was noted that this is a particular issue for mental health patients.

## **Indigenous status**

Ninety-one per cent of respondents who provided a rating for the importance of this data element rated it as either important (17%) or highly important (74%), and 86% rated it as either useful (30%) or highly useful (56%). Nine per cent rated it as not important and 12% as not useful.

Most respondents who commented on this data element thought it was very important, but raised concerns over its completeness and accuracy and lack of consistency across hospitals and states/territories. Although there have already been specific policies aimed at improving Indigenous identification, most agreed that the completeness of Indigenous status reporting needs improving and that further work on ensuring accuracy would be helpful. Suggestions for improving the accuracy included working jointly with the ABS to assess how the Indigenous status question can be better adapted to the hospital sector, and more education focused on the Indigenous population to encourage them to identify. It was thought that some Indigenous persons still decline to identify as Indigenous due to the belief they will get different treatment.

It was suggested that additional data domains for this data element could be 'Patient refused to respond' and 'Patient was not asked', which would currently be included under the 'Not stated' data domain. The Northern Territory supported the inclusion of 'Patient refused to respond', however, it is not supportive of the inclusion of 'Patient was not asked'. Comments from the Department of Health and Ageing indicate that it does not support the inclusion of these additional data domains. The Department believes that it is important to retain a standard question for Indigenous status across data collections and the ABS standard question currently in use is the most widely used and most appropriate for this purpose. It was suggested that rather than altering the Indigenous status data element in the NMDS, it would be more appropriate to use the additional domains in further evaluations of compliance.

The Institute has no information on whether Indigenous status is collected independently for each episode of care or if it is recorded only once and then replicated for repeat admissions. This issue should be investigated because, ideally, information should be collected at each admission.

## **Sex**

Ninety-eight per cent of respondents who provided a rating for the importance of this data element rated it as either important (15%) or highly important (83%), and 95% rated it as either useful (19%) or highly useful (77%). Only 2% rated it as not important or not useful.

One respondent commented on this data element, querying whether sex or gender should be collected. If the former, it was thought that there should be some guidance for assigning patients following sex change, and consideration of the impact on ICD-10-AM coding.

Victoria has indicated that the statement in the NHDD that 'to avoid problems with edits, transsexuals undergoing a sex change operation should have their sex at time

of hospital admission recorded' is confusing and should be reviewed. There are several problems with this statement:

- It does not clarify the situation or address the edit problems because in practice a change of sex often requires at least two hospital admissions, one involving a procedure on the male reproductive system and the other involving a procedure on the female reproductive system (not necessarily in that order).
- If, in a single episode, both types of procedure were performed, there would be editing problems regardless of what sex has been recorded.
- This also applies to patients, usually children, of ambiguous sex where the whole problem is that 'their sex at time of hospital admission' is unclear.
- For legal reasons the most important piece of information for hospitals to record is the gender at admission. This is because, at least in some jurisdictions, sex change procedures may only be performed if it can be demonstrated that the gender at admission is in fact the same as the intended sex at 'final' discharge.
- The problem is not limited to procedure codes: a patient may be admitted for a diagnosis appropriate to their original gender (for example, a now-female patient admitted for treatment of a prostate problem).
- To compound this, a patient can, in a single episode, undergo treatment for diagnoses appropriate to both their previous and current gender.

Victoria has suggested that there would seem to be only two satisfactory ways to deal with this situation – either change the definition to acknowledge that the male/female distinction is not appropriate when the admission is for the purpose of a sex change, or accept that the edits will not work for such admissions. It should also be noted that Victoria has adopted a deliberate practice of not asking hospitals for clarification of these edit queries because they are considered to be intrusive and time-wasting when an 'explanatory' diagnosis is reported. From 1 July 2002, Victoria has revised input edits to permit a range of sex-specific procedures to be reported for the 'wrong' sex if there is one of a set of 'explanatory' diagnosis codes present. Attached (Appendix 3) is the specification of these two sets of edits. It is apparent that additional procedures need to be added to these lists. Additional work is required to deal with 'wrong' sex diagnosis codes.

The Northern Territory has suggested that the data element should be renamed to 'Current sex status'. It also noted that there should be some national guidance on this issue and the legalities, such as in future the role of Registrars of Births, Deaths and Marriages being expanded to include gender.

Another area that needs consideration is how the AR-DRG logic deals with such cases. Even when extensive surgery has been performed, the principal diagnosis, F64.0 *Transsexualism*, leads to the mental disorders MDC that comprises only medical DRGs.

## **Length of stay data elements**

### **Admission date**

Ninety-one per cent of respondents who provided a rating for the importance of this data element rated it as either important (13%) or highly important (78%), and 93% rated it as either useful (23%) or highly useful (70%). Nine per cent rated it as not important and 5% as not useful.

It was stated that this data element is useful for deriving length of stay, consolidating newborn records, and for record linkage and has the potential to be used in the calculation of re-admission rates. There were a few suggestions for improvement. It was suggested that admission date needs to be combined with admission time, so that two admissions on one day can be determined to be duplicates or not. For emergency admissions, there needs to be national standards for when a patient is admitted (for example, following a presentation to the emergency department), which will affect the admission date.

In the compliance evaluation there were no recommendations for change for this data element, but the addition of the data element 'Admission time' to the NMDS was suggested (see 'Admission time, Separation time and Leave in hours and minutes' on page 158). This has been proposed as an effective method of monitoring the use of the data element concepts 'Overnight stay patient' and 'Same-day patient' for reporting and to provide a useful validation tool for patients admitted subsequent to an emergency department presentation.

### **Number of days of hospital in the home care**

Sixty-nine per cent of respondents who provided a rating for the importance of this data element rated it as either important (45%) or highly important (24%), and 60% rated it as either useful (43%) or highly useful (18%). Five per cent did not think the data element was important and 18% not useful. Another 26% were unsure of its importance and 23% of its usefulness.

Generally comments related to the fact that this data element is not well recorded across jurisdictions, and that further work on consistency is needed. Comments indicated that there are no clear national guidelines defining what a hospital in the home program is and, without such definitions, there is no point collecting this data element nationally. In New South Wales it is unclear what the difference is between an early discharge program, and hospital in the home. It appears the program can be delivered for either admitted or non-admitted patients. One respondent suggested that hospital in the home could be a separate care type.

### **Number of leave periods**

Only 48% of respondents who provided a rating for the importance of this data element rated it as either important (34%) or highly important (14%), and 45% rated it as either useful (31%) or highly useful (14%). Thirty per cent did not think the data

element was important and 33% not useful. Another 23% were unsure of its importance and 21% of its usefulness.

The Australian Capital Territory commented that the definition needs to exclude leave periods where the patient was back in hospital before midnight on the day they left. At present it conflicts with total leave day and length of stay calculation methodologies. This is an issue that needs to be resolved.

South Australia and New South Wales both commented that they do not tend to use this data element (South Australia is unable to report it accurately) and there appears to be no demand for it as it is rarely, if ever, requested.

'Number of leave periods' was reported very poorly, and as there is little evidence that these data are necessary in the National Hospital Morbidity Database, the Institute will propose that this data element be deleted from the NMDS.

Queensland, Western Australia and South Australia would support the recommendation to delete 'Number of leave periods' from the NMDS. Western Australia indicated that it is unaware of the use of this item and South Australia cited questions over quality.

### **Number of qualified days for newborns**

Seventy per cent of respondents who provided a rating for the importance of this data element rated it as either important (34%) or highly important (36%), and 62% rated it as either useful (38%) or highly useful (24%). Nine per cent did not think the data element was important and 19% not useful. Another 20% were unsure of its importance and 19% of its usefulness.

There were a number of comments from respondents regarding this data element and the data element concept to which it relates, 'Newborn qualification status', indicating that both may need to be modified. It was noted that the whole concept needs to be better defined for consistency purposes, for example, does one day or over 50% of days constitute a qualified baby? It was suggested that this data element may need to be retained for private health insurance reasons and a new field created to accommodate the concept or alternatively the whole concept could be dropped.

Tasmania indicated that due to system limitations it is unable to capture this information, while the Northern Territory indicated that it is not relevant in the Territory as yet, since newborn episodes are separated based on whether it is an acute newborn or non-acute newborn. According to New South Wales, the counting rules that currently apply mean that qualified time is going uncounted. For example, if a newborn goes to a neonate special care nursery for 23 hours but is not admitted to that ward at midnight, the national rules would count this as an unqualified day. It was suggested that this rule seems more to support health insurance company funding rather than measuring actual time the patient is qualified. It is believed that collecting unqualified days/hours would be better as it is limited to 9 days, not infinite days as qualified days are. Another suggestion was that only admitting qualified babies would make more sense and could be more easily captured.

Another problem that was raised as an issue to be resolved was that this data element does not deal with leave days, while the definition of number of acute care days does.

It is recommended that 'Number of qualified days for newborns' only be reported for separations with a *Newborn* 'Care type' and null for the remaining separations as is the approach adopted by Queensland and Western Australia.

### **Separation date**

Ninety-six per cent of respondents who provided a rating for the importance of this data element rated it as either important (11%) or highly important (85%), and 93% rated it as either useful (16%) or highly useful (77%). Only 4% did not think the data element was important and 5% not useful.

Comments relating to this data element were generally positive. Issues relating to the importance of this data element for linkage projects and to derive data components such as financial year of separation, calendar year of separation and separation month were raised. It was suggested, however, that this data element needs to be combined with separation time, so that two separations on one day can be determined to be duplicates or not.

See also issues raised in relation to the data element concept 'Separation' regarding the limitations of separation-based counting for describing longer term care (page 156).

In the compliance evaluation there were no recommendations for change for this data element, but a data element for the time of separation was suggested for inclusion in the NMDS (see 'Admission time, Separation time and Leave in hours and minutes' on page 158).

### **Total leave days**

Seventy per cent of respondents who provided a rating for the importance of this data element rated it as either important (41%) or highly important (30%), and 62% rated it as either useful (40%) or highly useful (21%). Eleven per cent did not think the data element was important and 21% not useful. Another 18% were unsure of its importance and 17% of its usefulness.

There appeared to be general agreement that this data element is required for the calculation of patient days/length of stay and associated measures such as average length of stay, but isn't generally used as a data element in its own right. There was a suggestion that this could be a supporting data element (concept).

The Australian Capital Territory commented that the definition needs to exclude leave periods where the patient was back in hospital before midnight on the day they left. At present it conflicts with total leave day and length of stay calculation methodologies. This is an issue which needs to be resolved. It is recommended that this data element be changed to total leave hours (see 'Admission time, Separation time and Leave in hours and minutes' on page 158). Western Australia agreed with

the idea but noted that there will be an issue in the hospitals regarding the time in hours because the calculation is not currently automated.

The Department of Health and Ageing commented that it supports the recommendation to change this data element to total leave hours as long as 'Admission date' and 'Separation date' also change accordingly. The Department has indicated that this should be trialed prior to implementation.

### **Total psychiatric care days**

Seventy-two per cent of respondents who provided a rating for the importance of this data element rated it as either important (40%) or highly important (33%), and 66% rated it as either useful (41%) or highly useful (24%). Seven per cent did not think the data element was important and 12% not useful. Another 21% were unsure of its importance and 22% of its usefulness.

It has been suggested that a separate 'Care type' should be introduced for patients admitted to designated psychiatric wards (see data element 'Care type' on page 137). The Northern Territory and Western Australia are supportive of this suggestion if reported correctly. It would be unnecessary to retain this data element if such a care type was to be introduced, as the length of stay of the psychiatric episodes of care could be easily calculated. This data element will need to be reviewed further along with 'Care type'.

The definition of psychiatric care should also be reviewed to determine whether it is based upon care in a designated psychiatric unit or care provided by staff of a specialised psychiatric service or both.

It is recommended that psychiatric care days should only be reported for separations with psychiatric care and left null for separations with no specialised psychiatric care as is the approach taken by Queensland, Western Australia and the Australian Capital Territory. In effect this is a recommendation for deleting this data element from the NMDS for Admitted patient care while retaining it in the Admitted Patient Mental Health Care NMDS.

It is also recommended that this data element be changed to hours of psychiatric care, as numbers of days (or even part days) is not accurate enough when most separations are 1-2 days long. It is possible for patients to only remain in a psychiatric unit for a few hours, however, this would be reported as a whole psychiatric care day under the current definition (see 'Admission time, Separation time and Leave in hours and minutes' on page 158).

It appears that a number of states and territories would be reluctant to implement this change at this time. Queensland has indicated that changing to hours of care could only be considered if admission time and separation time were also included as part of the NMDS. However, Queensland Health does not support the collection of admission and separation times as NMDS items at present. Western Australia has indicated that implementation of 'Hours of psychiatric care' would be quite difficult, as the computations are currently done manually at a number of hospitals. Tasmania

has noted that this would be a significant change which would require a business case to properly assess the implications for all jurisdictions.

## **Clinical and related data elements**

### **Activity when injured**

Eighty-one per cent of respondents who provided a rating for the importance of this data element rated it as either important (44%) or highly important (37%), and 73% rated it as either useful (38%) or highly useful (35%). Seven per cent did not think the data element was important and 13% not useful. Another 12% were unsure of its importance and 15% of its usefulness.

It was suggested that although this data element is not useful as an NMDS item for general reporting it is obviously important for specific purposes. Concerns surrounding this data element generally related to the unreliability of coding and under-reporting. It is believed that this data element would be very useful if it was reliable/complete. It was noted that the specificity has improved compared with previous years.

There have been significant changes to the activity codes in ICD-10-AM, third edition. The data domain specified in versions 10 and 11 of the NHDD are no longer in line with these changes. Therefore, the domain values for 'Activity when injured' specified in the NHDD should either be removed or updated in line with each edition of ICD-10-AM.

Queensland indicated that it agrees with the recommendation to update these in line with ICD-10-AM.

### **Additional diagnosis**

Ninety-five per cent of respondents who provided a rating for the importance of this data element rated it as either important (18%) or highly important (77%), and 93% rated it as either useful (24%) or highly useful (68%). Only 5% did not think the data element was important and/or not useful. Another 2% were unsure of its usefulness.

The importance of this data element is recognised for DRG assignment and for studying the prevalence of conditions. It was noted that it is highly relevant to monitoring asthma, as there is often diagnostic confusion with other conditions such as chronic obstructive pulmonary disease. It was noted, however, that it is unclear whether additional diagnoses are historical non-current conditions, secondary admission diagnoses, pre-existing and current co-morbidities, or complications of treatment. This distinction is important for epidemiological analysis. It was suggested that the usefulness of this data element could be improved if additional diagnoses were in order of importance for the episode of care; this suggestion was supported by the Northern Territory. One respondent commented that the coding of this data element is unreliable.

It was stated that an unlimited number of diagnosis codes should be able to be collected in hospital morbidity systems.

It appears that some states and territories may have been restricted in the number of diagnosis codes they could provide as the Institute requested a maximum of 31. Therefore, in future the Institute may request a larger number of diagnosis codes (maximum of 50). Although Queensland can support the provision of up to 50 condition codes for each episode, if required, it has questioned if this is worthwhile, given that:

- (a) not all jurisdictions can provide the number requested presently; and
- (b) only a very small proportion of episodes would have more than 30 condition codes.

Western Australia commented that it collects unlimited diagnosis codes so the provision of up to 31 is within capacity. Western Australia has suggested that should a greater number of codes be requested, a different submission format may be more appropriate, to minimise the size of data files.

As some states and territories are already collecting morphology of neoplasm codes as part of their morbidity collection, the Institute invited states and territories to include these as optional codes (in addition to additional diagnosis codes) in the National Hospital Morbidity Database for the 2001–02 collection period. The inclusion of these codes may enable an indication of severity of blood and haematopoietic neoplasms, for example, for development of AR-DRGs. A new data element, 'Morphology of cancer', has been introduced in version 11 of the NHDD specifically for use by cancer registries. It may be possible to modify this data element and include it as part of the NMDS for Admitted Patient Care.

Queensland and Western Australia both indicated that they do currently collect morphology of neoplasm codes. Tasmania indicated that it can only provide morphology codes as part of the string of additional diagnosis codes. Therefore it would be unable to comply with the recommendation for change to report morphology codes as a separate data element.

### **Care type**

Ninety-one per cent of respondents who provided a rating for the importance of this data element rated it as either important (25%) or highly important (66%), and 80% rated it as either useful (27%) or highly useful (54%). Five per cent did not think the data element was important and 15% not useful. Another 5% were unsure of its importance and/or its usefulness.

There were a number of comments in regard to this data element indicating it requires further review. This data element is seen as very important as it describes the actual phases of treatment, which serve to divide hospital stays into episodes of care, the counting units of the NMDS. It was noted that the data element is difficult to apply and poorly utilised, resulting from the fact it is multi-dimensional (it is measuring two different concepts) as well as being incompletely specified. One respondent indicated that hospitals are still encountering problems as to when to

close and re-open an episode of care for a patient. It is believed that the definition of 'Care type' needs to be refined and that this is one of the areas of the NMDS that requires a complete rethink and careful examination of the theory and application. It is believed that even though data for this data element have now been collected for several years we are still not close to having consistent data across jurisdictions.

An example of the inconsistency in the use of care types given by one respondent was for palliative care. Only three states use the optional codes for palliative care (3.1, 3.2 and 3.3), which give more detailed information about whether the palliative care episode occurred in a designated unit, according to a designated program, or where palliative care is the principal clinical intent. It would provide more meaningful and descriptive information if all the states used these optional codes, rather than reporting the general code 3.0 (palliative care – not further specified). Also, Victoria reported that it does not allow the use of code 3.3 (palliative care is the principal clinical intent) in public hospitals, as hospitals can only be funded for palliative care if they have a designated program or unit. Therefore, in some cases palliative care may be delivered in some Victorian hospitals as 'principal clinical intent', but would not be reported. It is uncertain whether this practice extends to other states. This is an example where funding issues drive the reporting of data, as opposed to what may actually happen 'on the ground'.

One respondent commented that most patient administration systems do not support the admission of a dead person, and thus can not report the 'Care type' Organ procurement – posthumous (see discussion on page 154). A number of jurisdictions are also unable to comply with the national definition for the Newborn 'Care type'. There are also concerns in Western Australia with the use of the Psychogeriatric care type.

Respondents suggested a number of new data domains including intensive care, transitional care, convalescent care and acute psychiatric care and that the newborn care type should be modified in line with AIHW and Department of Health and Ageing practices, that is, have greater detail in the data domain: 7.1 qualified newborn; 7.2 qualified newborn (some days qualified, some days unqualified); 7.3 unqualified newborn (all days unqualified). As noted elsewhere in this report there are already problems with jurisdictions calculating qualified days, which may affect the usefulness of these suggested data domains. However, splitting newborn episodes into these three categories can only be derived on separation and can not be selected on admission.

The limitations of this data element for psychiatric care have been noted, particularly the fact that the different intensity of a designated psychiatric unit, as against a general medical/surgical bed cannot be separated. For mental health there is a need to be able to identify the type of care being provided, across the spectrum from intensive through acute to rehabilitation and extended care and also forensic. It has been suggested that the potential extension of this data element for capturing within-separation changes in intensity should be investigated together with rules about the changes between types that generate different episodes.

Another suggestion has been to replace this data element with two new data elements, one covering clinical intent and the other the type of service, as it is believed that decisions about 'Care type' confuse these two quite separate criteria. These are emphasised in the definition and guide for use below.

Definition: The care type 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 posthumous organ procurement (other care).

Guide for use: ... Classification depends on the *principal clinical intent* of the care received.

For the *Acute care* data domain, only principal clinical intent is specified while for the majority of the remaining codes, examples are given for each of the clinical intent and type of service criteria. This leads to considerable confusion in, for example, the case of an acute psychogeriatric unit – episodes of care provided in such units may be equally coded as *Psychogeriatric care* or *Acute care*.

The following have been suggested as advantages for replacing 'Care type' with the two suggested data elements:

- It would allow options for introducing the service type classification that has been effectively implemented within the National Survey of Mental Health Services since 1994. This distinguishes services on the basis of main program type (acute, rehabilitation and extended care) and target population (general adult, aged, child and adolescent, forensic). The lack of capacity within the existing NMDS to accommodate such distinctions has been identified as a significant obstacle to the full 'mainstreaming' of mental health collections.
- It would allow scope for a fuller elaboration of the concept of clinical intent. For example, there could be value in distinguishing intensive psychiatric care as a subcategory of 'acute'.

It seems apparent by the range of issues raised by respondents that further review of this data element is required, perhaps by a panel of clinicians (for example, the Clinical Casemix Committee of Australia). It also seems that more guidance in the use of the data domains is required. The Australian Capital Territory is currently reviewing the use of care types in its hospitals, and it will be useful to see its recommendations for modification and improvement.

The Department of Health and Ageing has also recommended additional care types relating specifically to older people.

The Institute requested that category 11.0 *Unknown* be reported if 'Care type' was not known. It is suggested that this category be included in the data domain for this data element. There was mixed support for this recommendation.

### **Diagnosis Related Group**

Eighty-nine per cent of respondents who provided a rating for the importance of this data element rated it as either important (18%) or highly important (71%), and 83% rated it as either useful (21%) or highly useful (62%). Only 4% did not think the data

element was important and 7% not useful. Another 7% were unsure of its importance and 10% of its usefulness.

The usefulness of this data element for economic analysis and for comparing length of stay and resource use between groups was recognised. However, as this data element is derived and can be easily determined from other data elements in the NMDS there was uncertainty as to why this is required as an NMDS item. States and territories agreed that it is important that this is retained as it a method of highlighting differences in calculations, data issues and DRG grouper version used. Issues regarding timeliness were noted by a few jurisdictions. One commented that the DRG is using backward mapping every other year because of delays in releasing the Grouper logic to batch grouper product vendors. It was suggested that the usefulness would be improved if this timetable issue could be addressed. The NHDD states that the data domain for this data element is the 'version effective from 1 July each year'. This statement should be clarified. Another commented that if any jurisdiction has difficulty keeping up with ICD-10-AM editions, it should not be forced by the NMDS. It was also suggested that national level DRG data should be back-mapped to the latest version used by all, and that there are serious costing issues on the horizon due to the unavailability of national service weights updates.

### **External cause—admitted patient**

Eighty-four per cent of respondents who provided a rating for the importance of this data element rated it as either important (23%) or highly important (61%), and 80% rated it as either useful (29%) or highly useful (51%). Only 9% did not think the data element was important and 10% not useful. Another 7% were unsure of its importance and 10% of its usefulness.

It was suggested that although this data element is not useful as an NMDS item for general reporting it is obviously important for specific purposes. Concerns surrounding this data element related to unreliability of coding and under-reporting, particularly of domestic violence and other assault-related causes. Similarly, there is interest in being able to use this data element for identifying adverse events in hospitals.

External causes are reported in a variety of ways, with each jurisdiction reporting a varied number of external causes. For jurisdictions that report only a small number of external causes, it is likely that information is being lost (for example, adverse events may not be captured for patients admitted following a car accident). External cause information linked to the diagnosis to which it relates is provided to limited degrees by states and territories (as discussed above), making the interpretation of which conditions were attributed to the external causes difficult. This linking can be particularly useful for the analysis of external causes and injury surveillance and other monitoring.

Victoria has recommended that the NHDD rule that an external cause code should be sequenced following the related injury or poisoning code or group of codes should be reviewed with a view to restricting it to acute episodes.

A long-term goal could be that all information that relates to a condition (one or more diagnosis codes, morphology codes, external cause codes, place and activity codes) should be able to be stored and reported in a linked fashion, so the data remain interpretable. As most of these data are not in a linked format at present, the data can be very difficult to interpret, particularly at the aggregate level.

### **Infant weight, neonate, stillborn**

Eighty-two per cent of respondents who provided a rating for the importance of this data element rated it as either important (25%) or highly important (57%), and 69% rated it as either useful (21%) or highly useful (49%). Seven per cent did not think the data element was important and 15% not useful. Another 11% were unsure of its importance and 15% of its usefulness.

Generally comments were in relation to the scope of this data element. It needs to be clarified as to whether this data element should be collected for newborns aged 28 days or less or weighing less than 2,500 grams or for all infants aged less than 365 days. Currently these data are not collected routinely for all states/territories for all infants aged less than 365 days and it is believed the quality for infants between the ages of 28 and 365 days is questionable. The clinical relevance of collecting infant weight for infants greater than 28 days needs to be ascertained. Similarly data on weight for the Perinatal NMDS is only collected for neonates aged less than 29 days. The Department of Health and Ageing suggested that this data element be retained for infants weighing less than 2,500 grams.

It is believed that this data element is rarely requested in its own right, however, it is essential for grouping to DRGs for neonates.

### **Major Diagnostic Category**

Eighty-two per cent of respondents who provided a rating for the importance of this data element rated it as either important (32%) or highly important (50%), and 80% rated it as either useful (34%) or highly useful (46%). Seven per cent did not think the data element was important and 5% not useful. Another 11% were unsure of its importance and 15% of its usefulness.

Generally it was believed that this data element is not particularly useful as an NMDS item as it can be derived from Diagnosis Related Groups. It was suggested that the only reason this data element may be useful is for identifying the MDC for those cases that are assigned to a pre-MDC DRG. Some jurisdictions are no longer using MDCs, instead using Service Related Groups as a higher level grouping of DRG. States and territories agreed that it is important that this data element be retained as it a method of highlighting differences in calculations, data issues and groupers used.

### **Place of occurrence of external cause of injury**

Seventy-nine per cent of respondents who provided a rating for the importance of this data element rated it as either important (33%) or highly important (45%), and

72% rated it as either useful (36%) or highly useful (36%). Fourteen per cent did not think the data element was important and 15% not useful. Another 7% were unsure of its importance and 13% of its usefulness.

It was suggested that although this data element is not useful as an NMDS item for general reporting it is obviously important for specific purposes. Concerns surrounding this data element generally related to the unreliability of coding and under-reporting. It is believed that this data element would be very useful if it was reliable/complete. The National Occupational Health and Safety Commission uses the data element to study the aetiology of occupational injury and disease. It has suggested that this data element could be modified to identify forest and logging areas, which have very high work-related injury and fatality rates.

There have been significant changes to the place of occurrence codes in ICD-10-AM, third edition. The data domains specified in versions 10 and 11 of the NHDD are no longer in line with these changes. Therefore, the domain values for 'Place of occurrence of external cause of injury' specified in the NHDD should either be removed or updated in line with each edition of ICD-10-AM.

Queensland indicated that it agrees with the recommendation to update these in line with the ICD-10-AM.

### **Principal diagnosis**

All respondents who provided a rating for the importance of this data element rated it as either important (9%) or highly important (91%). Similarly, all rated it as either useful (18%) or highly useful (83%).

This data element is extremely important and requested often, however, it was noted that multiple diagnoses contribute to admissions. It was also suggested that the accuracy of coding is sometimes unclear, for example, there have been no cases of diphtheria since 1993 but over 20 hospitalisations recorded for it.

### **Procedure**

Ninety-eight per cent of respondents who provided a rating for the importance of this data element rated it as either important (14%) or highly important (84%), and 93% rated it as either useful (20%) or highly useful (73%). Only 2% did not think the data element was important and 5% not useful. Another 2% were unsure of its usefulness.

It was noted that this data element is extremely important and requested often, however, a number of respondents indicated that the usefulness of this data element is limited for particular conditions, for example, asthma and mental health diagnoses. It was suggested that the types of procedures relevant to asthma care are less likely to be recorded, for example, spirometry. It was also noted that there is broad recognition of the lack of utility of the current procedure coding system for admitted patient mental health care. From the national perspective, there has been little attention given to date to develop an alternative set of procedure codes that are appropriate to admitted patient mental health care, and it was suggested that an

appropriate set of procedure codes should be developed. To ensure data continuity, the Department of Health and Ageing does not support the development of an 'alternative' set of codes.

Queensland has indicated that there are several issues relating to procedures that need resolution, such as procedures performed for non-admitted patients who are subsequently admitted also being recorded against the episode of care.

It appears that some states and territories may have been restricted in the number of procedure codes they could provide as the Institute requested a maximum of 31. Therefore, in future the Institute may request a larger number of procedure codes (maximum of 50).

Although Queensland can support the provision of up to 50 procedure codes for each episode, if required, it has questioned if this is worthwhile, given that:

- (a) not all jurisdictions can provide the number requested presently; and
- (b) only a very small proportion of episodes would have more than 30 procedure codes.

Western Australia commented that it collects unlimited procedure codes so the provision of up to 31 is within capacity. Western Australia has suggested that should a greater number of codes be requested, a different submission format may be more appropriate, to minimise the size of data files.

## **Administrative data elements**

### **Admitted patient election status**

Only 67% of respondents who provided a rating for the importance of this data element rated it as either important (29%) or highly important (38%), and 63% rated it as either useful (25%) or highly useful (38%). Twenty-one per cent did not think the data element was important and 20% not useful. Another 12% were unsure of its importance and 18% of its usefulness.

One respondent commented that the guide for use – 'To be collected at time of separation' is a little confusing given that it goes on to say a patient must elect 'at the time of, or as soon as practicable after admission'. It was suggested that maybe it should be changed to 'to be collected before separation'. It has been noted that the correct way of reporting this data element is not clear so there is a need to clarify the definition in the NHDD.

The Institute requested that category 9 *Unknown* be reported if the 'Admitted patient election status' of the patient was not known. It is proposed that this category be included in the data domain for this data element. Clarification would be required that this category does not include Reciprocal health care agreements patients (see 'Funding source for hospital patient' below) (as they should be *Public*) and patients who are not Medicare eligible but are not charged (at the discretion of the hospital) (as they should be *Private*).

Queensland indicated that it would agree with this recommendation. However, the Department of Health and Ageing does not support this recommendation, as all hospitals should know how the patient was billed.

Victoria has also recommended that the scope of this data item should be clarified with a view to placing public psychiatric hospitals outside its scope; alternatively, it could default to 'public' for this type of hospital.

In Western Australia 'Funding source' is used to derive values for this data element. Therefore it has recommended that explicit notes in the NHDD are needed on how 'Funding source' relates to this field.

### **Funding source for hospital patient**

Eighty-three per cent of respondents who provided a rating for the importance of this data element rated it as either important (36%) or highly important (48%), and 73% rated it as either useful (30%) or highly useful (43%). Ten per cent did not think the data element was important and 15% not useful. Another 7% were unsure of its importance and 13% of its usefulness.

A number of comments from respondents indicate that the data element may need to be modified. It has been noted that the correct way of reporting this data element is not clear so there is a need to clarify the definition in the NHDD. It was suggested that the data element is poorly defined and further thought needs to be given to the data domain. Apparently hospital staff find it hard to understand and difficult to work with. It was also suggested that unqualified newborns do not fit well anywhere and a separate code for them would help to eliminate them from any analysis which relies on this variable. One respondent noted that as only the expected principal source of funds is collected, information might be lost regarding other sources of funding for the episode. An apparent inconsistency was also pointed out in the guide for use (where there are comments both that the major source of funding and the final payment class should be recorded).

### **Hospital insurance status**

Seventy-six per cent of respondents who provided a rating for the importance of this data element rated it as either important (40%) or highly important (36%), and 75% rated it as either useful (38%) or highly useful (38%). Ten per cent did not think the data element was important and 15% not useful. Another 14% were unsure of its importance and 10% of its usefulness.

It was suggested that this data element would be very useful if it were collected properly. Although the definition is very clear, it is believed that hospitals are not really interested in collecting it properly because it serves no purpose for them. It was noted that this might be collected more effectively in surveys. This data element could still be retained regardless of the addition of 'funding source for hospital patient' in version 10 of the NHDD as it indicates whether patients had insurance (and used/didn't use it). Another comment noted that the data element only captures the patient's 'reported' hospital insurance status, so perhaps should be

named accordingly. It has been noted also that data quality is likely to be good only for private patients.

Victoria has recommended that the applicability of this item for public psychiatric hospital patients needs to be clarified in the NHDD definition.

### **Intended length of hospital stay**

Only 53% of respondents who provided a rating for the importance of this data element rated it as either important (35%) or highly important (19%), and 49% rated it as either useful (29%) or highly useful (20%). Twenty-eight per cent did not think the data element was important and 32% not useful. Another 19% were unsure of its importance and 20% of its usefulness.

A number of respondents commented that this data element is rarely requested or analysed, as there is a far greater interest in the actual length of stay. It is also no longer used for grouping to Diagnosis Related Groups. There were also questions raised over the quality of data for this element. The Department of Health and Ageing has indicated that this data element should be retained as it is likely to provide a useful measure of hospital efficiency.

However, this data element is seen as useful for reporting data for admitted patient mental health care and it has been suggested that 'all future reporting of same-day patients derived from the NMDS for Admitted Patient Mental Health Care routinely distinguish the "intended same-day" from "other" same-day categories'. In addition, clarification should be made that only procedural same-day patients are to be counted within the Admitted Patient Mental Health Care NMDS. As a corollary, all non-procedural, intended same-day patients would be counted within the scope of the Community Mental Health Care NMDS. These are issues that could probably be dealt with during data analysis.

### **Inter-hospital contracted patient**

Only 61% of respondents who provided a rating for the importance of this data element rated it as either important (44%) or highly important (17%), and 53% rated it as either useful (37%) or highly useful (16%). Twenty per cent did not think the data element was important and 18% not useful. Another 20% were unsure of its importance and 29% of its usefulness.

A few respondents indicated that the data collected for this data element are of varied quality. Apparently hospitals are having difficulty in providing accurate information. It was also noted that many of these patients have just one admission – so it is not always possible for both hospitals to record the patient's episode, just the hospital that admitted them. These episodes may be able to be identified using the 'Funding source' data element. One respondent suggested that contracted care should be identified as a separate care type.

As inter-hospital contracted patients are admitted patients of both the contracting and contracted hospital, these separations can represent double counting of hospital activity in the National Hospital Morbidity Database. It is important to understand

the extent to which double counting occurs for contracted patients, therefore, the reporting and quality of this data element should be improved. Queensland suggested that companion data items such as contract role and contract procedure flag can be used to identify the hospital performing the procedure, the hospital purchasing the hospital care as well as procedures that have been performed under the contract.

The label for category 3 *Other* should be amended to *Not contracted*.

### **Medicare eligibility status**

Seventy-nine per cent of respondents who provided a rating for the importance of this data element rated it as either important (40%) or highly important (38%), and 74% rated it as either useful (41%) or highly useful (33%). Ten per cent did not think the data element was important and 13% not useful. Another 12% were unsure of its importance and 13% of its usefulness.

It was suggested by one respondent that as the definition seems to leave very few people out of category 1, the usefulness of this element is questionable. Both Queensland and the Department of Health and Ageing noted that this data element is useful as it is important to have the capacity to separately identify Medicare-eligible and -ineligible patients. It appears to have similar issues to hospital insurance status, where the hospital (particularly private hospitals) would be more interested in funding source and may not bother to collect this element properly. It may need to be clarified whether the status should relate to the episode, or to the status of the person more generally.

Victoria has recommended that the applicability of this item for public psychiatric hospital patients needs to be clarified in the NHDD definition.

### **Mental health legal status**

Seventy-one per cent of respondents who provided a rating for the importance of this data element rated it as either important (50%) or highly important (21%), and 62% rated it as either useful (41%) or highly useful (21%). Twelve per cent did not think the data element was important and 15% not useful. Another 17% were unsure of its importance and 23% of its usefulness.

It was noted that as this data element is used for grouping (to DRGs) it is essential that it be maintained. However, it is believed that this data element has been too narrowly defined in the NMDS for Admitted Patient Care and should be reviewed to ensure that its use in this NMDS does not prevent its application in ambulatory care services. It was also suggested that the use of data domain 3 *Not permitted to be reported under legislative arrangements in the jurisdiction* by states and territories should be assessed and that it may be useful to include a data domain for 'unknown'.

Victoria has indicated that the scope of this data item needs to be more clearly defined. It is recommended that 'Mental health legal status' only be reported for separations receiving care in a designated psychiatric unit (that is, those which have psychiatric care days reported and null for the remaining separations as is the

approach adopted by Victoria, Queensland, Western Australia and the Australian Capital Territory).

The Institute requested that category 9 *Unknown* be reported if 'Mental health legal status' was not known. This category could be included in the data domain for this data element. This category could be used for reporting when patients undergo specialised psychiatric care, but the mental health legal status is unknown. An additional category *Not applicable* could be included for reporting where patients do not undergo specialised psychiatric care and therefore mental health legal status is not applicable. In effect this is a recommendation for deleting this data element from the NMDS for Admitted Patient Care while retaining it in the Admitted Patient Mental Health Care NMDS.

Queensland has indicated that it does not agree to having an additional category of 'Not applicable' included in the mental health legal status item for reporting patients not undergoing specialised psychiatric care. Queensland has suggested that it is inappropriate to have a category within a data item simply for the purpose of recording information on episodes that do not fall within the scope of the item and is also inconsistent with the recommended practice used for other data items for which all episodes are not in scope (for example, Total psychiatric care days).

### **Mode of admission**

Eighty-six per cent of respondents who provided a rating for the importance of this data element rated it as either important (40%) or highly important (47%), and 73% rated it as either useful (45%) or highly useful (28%). Seven per cent did not think the data element was important and 15% not useful. Another 7% were unsure of its importance and 13% of its usefulness.

There were a large number of comments relating to the need to revise this data element, as it is not believed to be useful in its current format and the data domains are too limited. At present the data domain with the highest frequency count is *Other*.

Respondents thought it would be useful to know about transitions and substitutions between services, re-admissions, and planned versus unplanned admissions. Also, respondents thought the data element could be made much more useful by enabling the separate identification of admissions, for example, from hospital emergency departments, booking offices, elective surgery waiting lists, general practitioner offices and residential aged care facilities.

It was suggested that this data element probably needs to be replaced by several data elements to identify the place the patient came from, who referred them and the point of admission into hospital. Queensland is supportive of this development and if agreed upon then the 'Source of referral to public psychiatric hospitals' item should also be revised.

One respondent commented on the lack of consistency in terminology and suggested that the data domain *Statistical admission – episode type change* should be changed to *Statistical admission – care type change* in line with the change to the use of 'Care type' rather than 'Episode type'.

The Institute requested that category 9 *Unknown* be reported if 'Mode of admission' was not known. This category could be included in the data domain for this data element.

Queensland has indicated that it does not support this. If an *Unknown* category was to be included for this item then the guide for use for the *Other* category will have to be modified as it currently includes all planned and unplanned admissions to hospital (excluding hospital transfers and statistical admissions).

### **Mode of separation**

Eighty-nine per cent of respondents who provided a rating for the importance of this data element rated it as either important (25%) or highly important (64%), and 85% rated it as either useful (33%) or highly useful (53%). Five per cent did not think the data element was important and 8% not useful. Another 7% were unsure of its importance and 8% of its usefulness.

A number of comments were received indicating that this data element may need modification to improve its usefulness. It was noted by one respondent that it is not clear how well this data item is being collected, particularly the distinction between discharged to residential aged care facility and discharged to usual place of residence. Further work may be required to ensure accuracy of collected data and possible consideration of making a distinct category of 'Discharged to usual residence' as the first option. Another respondent commented that Mode of separation does not currently include to the data domain 'non-acute' hospital. Presumably a discharge/transfer to a non-acute hospital would be coded as 4, *Other health care facility*, which does not allow for any differentiation between the type of 'other' healthcare facility to which the patient is discharged/transferred to. It is also unclear how discharges to multi-purpose services should be treated. It was suggested by another respondent that to improve the admitted patient collection to facilitate integrated care development, inconsistencies between the data element 'Mode of separation' in this NMDS and 'Referral to further care (psychiatric patients)' in the Admitted Patient Mental Health Care NMDS need to be addressed. It was suggested that it would be useful to develop a common code set that maps to either of the NMDS data elements (as has been developed in New South Wales). Another respondent commented that they want to know more about transitions between services, re-admissions, and substitutions between services.

One respondent commented on the lack of consistency in terminology and suggested that the data domain *Statistical discharge – type change* should be changed to *Statistical discharge – care type change* in line with the change to the use of 'Care type' rather than 'Episode type'.

The Institute requested that category 0 *Unknown* be reported if 'Mode of separation' was not known. This category could be included in the data domain for this data element.

Queensland indicated that it does not support this. If an *Unknown* category was to be included for this item then the guides for use for the *Other* category will have to be

modified as it currently includes all mode of separations not outlined in the previous mode of separation categories.

Western Australia commented that NHDD definitions are ambiguous for this data element, especially in relation to establishment types.

Further review of this data element could be useful given the variation in use and interpretation of particular data domains among states and territories.

### **Person identifier**

Eighty-six per cent of respondents who provided a rating for the importance of this data element rated it as either important (25%) or highly important (61%), and 83% rated it as either useful (37%) or highly useful (46%). Seven per cent did not think the data element was important and/or useful. Another 7% were unsure of its importance and 10% of its usefulness.

A number of respondents commented on the need for the person identifiers to be transferable across hospitals (not just unique within a hospital) and to be able to track repeat hospitalisations. It is believed that this data element could be potentially very useful for linkage to determine actual length of stay over the whole period of the hospital stay, not just for the episode of care, and for more accurately determining population estimates. Many respondents have expressed the need for a 'Unique patient identifier' (see page 157).

Some respondents recommended that 'Person identifier' be reported in accordance with the NHDD definition for all jurisdictions. An encrypted person identifier would be satisfactory, provided that the encryption is done in the same way each time.

Victoria has recommended that person identifiers be encrypted consistently across other minimum data sets where appropriate; this is already done by Victoria for the Admitted Patient Care and Elective Surgery Waiting Times minimum data sets. Victoria's encryption methodology for keeping a unique number across years could be a useful resource for other states and territories.

### **Source of referral to public psychiatric hospital**

Only 62% of respondents who provided a rating for the importance of this data element rated it as either important (43%) or highly important (19%), and 58% rated it as either useful (40%) or highly useful (18%). Nineteen per cent did not think the data element was important and 20% not useful. Another 19% were unsure of its importance and 23% of its usefulness.

It was suggested that although this data element is useful for some analysis, it would be more useful if it included a domain 'referral from general practitioner or local medical officer or similar'. Not all jurisdictions collect this data element. There are no definitions for the data domains and it is unclear how they have been used.

The feasibility of expanding this data element for collection for all hospital types could be further investigated.

Queensland commented that if 'Mode of admission' is revised then this data element should also be revised accordingly.

### **Urgency of admission**

Eighty-one per cent of respondents who provided a rating for the importance of this data element rated it as either important (43%) or highly important (38%), and 65% rated it as either useful (38%) or highly useful (28%). Seven per cent did not think the data element was important and 20% not useful. Another 12% were unsure of its importance and 15% of its usefulness.

It was noted that there are serious data quality issues in relation to this data element that need to be resolved. One respondent also commented that the NHDD is not clear on what should be coded for transferees from other hospitals. Apparently there is a variety of practices in the hospitals. An increased number of data domain values (for example, for obstetrics, newborns, transfers, chemotherapy, dialysis) may be useful. Western Australia has suggested that clearer NHDD definitions are certainly required for this data element, especially for the identification of cases where 'Not assigned' is expected. South Australia suggested that the data domain of 'Not assigned' should be re-labelled 'Not applicable'.

## **Data element concepts**

### **Acute care episode for admitted patient**

Eighty-three per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (31%) or highly important (52%), and 80% rated it as either useful (38%) or highly useful (43%). Seven per cent did not think the data element concept was important and 13% not useful. Another 10% were unsure of its importance and 8% of its usefulness.

Most comments in relation to this data element concept noted that this information is already defined under the 'Care type' data element. It was suggested that this data element concept should be reconsidered along with 'Care type'.

### **Admission**

Eighty-eight per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (32%) or highly important (56%), and 82% rated it as either useful (41%) or highly useful (41%). Only 5% did not think the data element concept was important and 10% not useful. Another 7% were unsure of its importance and 8% of its usefulness.

It was suggested that one of the major areas of work required for this NMDS is to define more consistently and accurately the boundaries between admitted overnight, same-day and non-admitted care. It was also noted that the criteria for what constitutes a legitimate admission need to be reviewed, and there should be clearer guidelines in the NHDD on what an admission is, rather than just references to other documents/publications. For emergency admissions, there need to be national

standards for when a patient is admitted and when a patient is not admitted (for example, following a presentation to the emergency department). The Department of Health and Ageing may be addressing this issue.

### **Admitted patient**

Eighty-eight per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (32%) or highly important (56%), and 82% rated it as either useful (36%) or highly useful (46%). Only 5% did not think the data element concept was important and 10% not useful. Another 7% were unsure of its importance and 8% of its usefulness.

Similar to the comments for 'Admission', it was suggested that one of the major areas of work required for this NMDS is to define more consistently and accurately the boundaries between admitted overnight, same-day and non-admitted care, as well as to investigate the boundary between boarders and admitted patients, particularly for infants. It was noted that there needs to be a more definitive (clinically based) boundary between admitted and non-admitted patients. It was suggested by one respondent that it would be more useful if the definition included identification of admission to a hospital bed as opposed to being in the emergency department for an extended period and classified as 'admitted' although actually discharged before a bed becomes available. This varies with local policy and some patients may actually only be in the emergency department 4 hours before they are classified as an admission even though they are discharged from the emergency department.

### **Contracted hospital care**

Sixty per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (38%) or highly important (23%), and 53% rated it as either useful (34%) or highly useful (18%). Ten per cent did not think the data element concept was important and 13% not useful. Another 30% were unsure of its importance and 34% of its usefulness.

Only one comment was received in relation to this data element concept, noting that the definition is not particularly useful.

### **Diagnosis**

Ninety-three per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (12%) or highly important (81%), and 93% rated it as either useful (18%) or highly useful (75%). Only 2% did not think the data element concept was important and 5% not useful.

There were no comments from respondents in relation to this data element concept.

### **Episode of care**

Ninety per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (17%) or highly important (73%), and 87% rated it as either useful (28%) or highly useful (59%). Only 2% did not think the

data element concept was important and 3% not useful. Another 7% were unsure of its importance and 10% of its usefulness.

The consistency of the episode of care as the counting unit was one of the major concerns raised. One respondent indicated that hospitals are still encountering problems as to when to close and re-open an episode of care for a patient. As discussed under 'Care type', it is believed that the definition of care types need to be refined and that this is one of the areas of the NMDS that requires a complete rethink and careful examination of the theory and application. It is believed that even though data for the data element 'Care type' have now been collected for several years we are still not close to having consistent data across jurisdictions.

It was noted that many concepts developed for the NMDS have been defined specifically for admitted care without recognition that these also have relevance to other areas of health care. The episode of care concept is a particular example, defined in the NHDD as: 'The period of admitted patient care between a formal or statistical admission and a formal or statistical separation, characterised by only one care type'. The concept is pivotal to the NMDS for Admitted Patient Care because it serves as the statistical unit that governs the collection and organisation of all data. Concepts such as 'Admission', 'Separation' and 'Care type' work as subordinate concepts, operating beneath the definition. Difficulties arise when attempts are made to extend these concepts and terms to health care provided in community settings because the restrictive nature of the definition (and its subordinate concepts) ties the use of such terms exclusively to 'admitted patient care'. However, episodes of health care may occur outside the walls of the hospital, and entail processes directly equivalent to the concepts of 'Admission', 'Separation' ('Discharge') and so forth. It has been suggested that concepts such as these need to be defined in such a way that is equally relevant to community settings as hospital ('admitted patient') settings. If the concept were renamed 'Episode of admitted patient care', some of these issues would be resolved.

## **Hospital**

Eighty-three per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (31%) or highly important (52%), and 72% rated it as either useful (33%) or highly useful (38%). Only 5% did not think the data element concept was important and 8% not useful. Another 12% were unsure of its importance and 21% of its usefulness.

A number of comments suggested that this concept might need to be reviewed. It was suggested that what constitutes a hospital now is probably different to 10 years ago and therefore the definition may need to be reconsidered. Similarly it was suggested that the definition may need to be revised in light of the Federal Government's funding for a number of Multi-Purpose Service facilities. One respondent commented that this concept relies too much on state and territory legislation leading to comparability issues across jurisdictions.

Western Australia commented that it should be linked to a review of establishment types.

### **Hospital boarder**

Fifty-nine per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (22%) or highly important (37%), and 55% rated it as either useful (26%) or highly useful (29%). Seventeen per cent did not think the data element concept was important and 16% not useful. Another 24% were unsure of its importance and 29% of its usefulness.

A number of jurisdictions do not collect information on boarders and it is not within the scope of the NMDS. However, one respondent commented that it is unclear whether boarders are included in the NMDS and noted that the context might need further explanation.

### **Hospital in the home care**

Seventy per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (45%) or highly important (25%), and 47% rated it as either useful (34%) or highly useful (13%). Eight per cent did not think the data element concept was important and 18% not useful. Another 23% were unsure of its importance and 34% of its usefulness.

Generally comments related to the fact that data for hospital in the home (HITH) is not well recorded across jurisdictions, with some respondents commenting they are finding it difficult to collect. It was noted that the criteria in the guide for use need to be tightened so that HITH patients are being identified and data reported consistently. It is believed that the delineation between HITH and hospital care is blurred and confusing. Until there are clear national guidelines defining what a hospital in the home program is, it was thought that there is no point collecting data using this concept nationally.

### **Live birth**

Seventy-eight per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (27%) or highly important (51%), and 72% rated it as either useful (28%) or highly useful (44%). Twelve per cent did not think the data element concept was important and 13% not useful. Another 10% were unsure of its importance and 15% of its usefulness.

There were no comments from respondents in relation to this data element concept.

### **Neonate**

Eighty-five per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (29%) or highly important (56%), and 74% rated it as either useful (28%) or highly useful (46%). Seven per cent did not think the data element concept was important and 13% not useful. Another 7% were unsure of its importance and 13% of its usefulness.

One respondent commented that there is an inconsistency in the data element regarding whether the 28th day is included.

### **Newborn qualification status**

Seventy-three per cent of respondents who provided a rating for the importance of this data element rated it as either important (30%) or highly important (43%), and 59% rated it as either useful (28%) or highly useful (31%). Thirteen per cent did not think the data element was important and 21% not useful. Another 15% were unsure of its importance and 21% of its usefulness.

There were a number of comments from respondents regarding this data element concept and the data element to which it relates, 'Number of qualified days for newborns', indicating that both may need to be modified. Detailed comments are provided under the data element.

### **Organ procurement—posthumous**

Fifty-six per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (33%) or highly important (23%), and 50% rated it as either useful (31%) or highly useful (19%). Thirteen per cent did not think the data element concept was important and 17% not useful. Another 31% were unsure of its importance and 33% of its usefulness.

No comments were received regarding any changes to this data element concept, however, it was noted that a number of states and territories do not collect this information. It was noted that most patient administration systems do not support the 'admission' of a dead person, and thus can not report posthumous organ procurement. There is a strong feeling in New South Wales and Australian Capital Territory hospitals that organ procurement should be in the scope of admitted patient activity as it is unclear how the hospital gets funding for this activity. While it could be argued that it is in the Casemix payment for the patient receiving the organ, it does not take into consideration that the recipient of the donor organ could be in an interstate hospital or in another Area Health Service. It seems funding may not flow to the hospital doing the organ procurement.

### **Overnight stay patient**

Eighty-eight per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (40%) or highly important (48%), and 84% rated it as either useful (39%) or highly useful (45%). Only 8% did not think the data element concept was important and/or useful. Another 5% were unsure of its importance and 8% of its usefulness.

One respondent commented that although the concept is not useful, the guide for use is.

### **Patient**

Eighty-five per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (37%) or highly important (49%), and 79% rated it as either useful (39%) or highly useful (39%). Only 5% did not think

the data element concept was important and 8% not useful. Another 10% were unsure of its importance and 13% of its usefulness.

A comment made in relation to this data element concept was that the definition is not very useful, but also that it is difficult to see how this can be improved. Another was that 'extended stay patients' (for example, awaiting aged care residential placement) could be regarded as residents, rather than patients. Queensland commented that terminology should be standard, patients and hospitals, residents and residential aged care facilities. So patients in hospitals cannot be categorised as residents.

### **Same-day patient**

Ninety-three per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (31%) or highly important (62%), and 90% rated it as either useful (40%) or highly useful (50%). Only 5% did not think the data element concept was important and 8% not useful.

It was noted that the definition for this data element concept is not very useful, but that it is difficult to see how this can be improved. It was suggested that the reference to procedure banding should be removed from the definition. There is also some concern about possible ambiguity regarding the 'not intended to be overnight' part of the definition.

It was noted that the continued inclusion of same-day patients within the admitted patient data creates special problems for the mental health field as it misrepresents some of the care provided. Same day admissions usually have a different meaning in mental health than in general health. In the latter case, there are well-defined procedural events associated with such admissions which are covered in the NHDD definitional criteria for 'Same-day patient'. Based on those criteria, it is clear that most same-day admissions in mental health do not meet the definition. From the mental health perspective, some same-day separations are better considered as a series of treatment events occurring during a period of ambulatory care. Typically, they involve daily attendance by consumers at a variety of day and group-based programs that could otherwise be provided in community settings.

It was suggested that the solution to the confounding effect of same-day patients in the mental health data has at least two components. First, better definition and agreement within the mental health service industry is required as to what events should be classed as genuine same-day admissions. This is outside the scope of the current review. The second aspect of the solution was suggested to entail data development and reporting. A clear distinction was suggested to differentiate intended same-day patients from those who were discharged on the same-day when the original intent was an overnight admission. The data element 'Intended length of hospital stay' within the Admitted Patient NMDS provides the potential for this. However, the data element may need to be further developed to split intended same-day patients into procedural and non-procedural, with the former confined to a limited set of events where the patient's attendance at the hospital was necessary from a safety and quality perspective. Work to develop an agreed list of mental

health-specific same-day procedural codes would be required. When developed, clarification could be made that only procedural same-day patients are to be counted within the Admitted Patient (Mental Health) Care NMDS, and non-procedural, intended same-day patients could be counted within the scope of the Community Mental Health Care NMDS.

These could alternatively be treated as data analysis issues.

## **Separation**

Ninety per cent of respondents who provided a rating for the importance of this data element concept rated it as either important (19%) or highly important (71%), and 90% rated it as either useful (31%) or highly useful (59%). Only 5% did not think the data element concept was important and 3% not useful. Another 5% were unsure of its importance and 8% of its usefulness.

One issue that was raised in relation to this data element concept is the limitations of separation-based counting for describing longer term care.

The concept of a 'statistical' separation is currently limited to a change in 'Care type' that terminates an episode within a hospital stay, or statistical discharge from leave. The 'long stay' issue derives from the separation-based definition of the NMDS. A significant proportion of patient care in designated mental health units is longer term care which remains invisible to the current NMDS approach. Similarly, when such patients do enter separation statistics, they carry with them substantial days of care (often many years) and distort average length of stay estimates. This issue can also be significant for other longer stay patients, including 'extended stay' patients awaiting aged care placement.

It was suggested that the concept of a 'statistical separation' should be extended to accommodate this group of patients whereby a NMDS record of the ordinary kind is generated, but is separately identified. The options identified for generating such a record are (1) every 12 months from initial admission, or (2) on a census date of 30 June.

It was suggested that the concept of 'statistical separation' be pursued with jurisdictions to address this problem in a systematic way, with particular attention to the issues of:

- quarterly or annual cycle;
- census date versus time since admission/ last statistical separation; and
- whether in fact a formal discharge/re-admission process should be used on a 12-month cycle, rather than a statistical separation.

## **Proposed new data elements**

There were clearly some concerns raised by respondents about the idea of introducing new data elements (or modifying existing data elements) into the NMDS including, for users, the lack of consistent time series data and, for collectors, changes

to systems which costs time, effort and money. It was noted that changes to the NMDS would require an impact statement to determine the full effect on the system. In fact, a business case is now required for changes to NMDSs. A few respondents indicated that changing the NMDS each year is problematic and there should be a couple of years of consolidation.

Another respondent suggested that it would be useful to do a stocktake of all data items collected around the states and territories in addition to the NMDS to determine if there are additional items that could be collected at no cost to augment the existing collection. Concern was also raised that there are too many data sets in separate existence across Australia which has led to much redundancy. The example given was that mental health data sets, aged care data sets, Home and Community Care Minimum Datasets, all collect information of patients who are also being collected in the NMDS from time to time, as they cross all boundaries of health care. It was suggested that minimum data sets could be merged into one central maxi data set.

Despite these concerns raised by a number of respondents, a number of new data elements (or suites of data elements) were suggested.

### **Unique patient identifier**

As discussed under the data element 'Person identifier', a number of respondents have expressed the limitations with the requirement that this data element is only required to be unique within an individual establishment or agency.

The need for a unique patient identifier or statistical linkage key that can be used across all hospitals in Australia has been expressed as a priority by a number of respondents, to:

- enable analysis of hospitalisations data on a patient basis rather than an episode basis, including re-admissions, and allow more accurate estimation of hospitalisation rates, that is, as people hospitalised per 100,000 population rather than as hospitalisations per 100,000 population;
- be able to track an individual's separations across different care types and analyse the whole hospital stay to enable true length of stay to be determined ;
- enable more accurate linkage with other data sets;
- enable costing of patients through the Australian health system.

As there are a number of processes currently under way to investigate the use of unique patient identifiers and statistical linkage keys, it is unlikely that data development work in this area will be pursued independently as a result of this evaluation. The Australian Health Ministers' Advisory Council (AHMAC) has requested that the National Health Information Management Group (NHIMG) consider how best to enable hospital morbidity unit record data to be linked to a range of other unit record data for the purpose of enabling high priority research and analysis to improve health outcomes and health service delivery. NHIMG has considered this request and has developed a range of recommendations that

AHMAC has considered and which will provide a framework for moving this work through some first steps. The first steps will probably include consultation with appropriate stakeholders, description of appropriate governance arrangements in consideration of all relevant confidentiality and privacy requirements, and the development of a nationally consistent approach to applying linkage keys.

Another process that is under way is HealthConnect which is the proposed national health information network to facilitate the safe collection, storage and exchange of consumer health information between authorised health care providers. The Federal Government, in partnership with the states and territories, is currently undertaking two years of research and development work to design a model for the network and to test its value and long-term sustainability prior to any government decision to proceed on a national basis. The network will provide for the creation and storage of electronic health records as well as other health information and has enormous potential to improve the flow of information across the health sector. Access to this information will be only available to authorised users and participation will be voluntary. An important part of the HealthConnect research and development work is to explore the range of tools available for reliable identification, including exploring options for a health key that could be used to identify individuals participating in HealthConnect. Work is also under way to look at the safeguards that would need to be in place to ensure individuals' privacy is not compromised through the use of such identifiers, including such measures as legislation and penalties for misuse. The relationship between NMDS collections and HealthConnect data is yet to be determined.

### **Admission time, Separation time and Leave in hours and minutes**

As discussed under the data elements 'Admission date', 'Admission time' and 'Total leave days' a number of respondents have identified the need to also record the time of admission and time of separation and the periods of leave in hours and minutes. The data elements, 'Admission date', 'Separation date' and 'Total leave days' would be more useful if the time of admission, the time of separation and hours of leave days were also reported. This would enable the distinction between lengths of stay of, for example, 4 hours, 22 hours (same-day), 22 hours (overnight).

This would provide more accurate information on length of stay as it would enable the calculation of length of stay in minutes. The current calculation is based on whole days which is not appropriate for same-day patients. Given the fact that same-day separations now account for around 50% of all admitted patient separations, the length of same-day separations could be usefully expressed in hours and minutes. Some jurisdictions do currently collect this more precise time information. For the national collection these jurisdictions have to round leave hours to days, resulting in some calculations of negative lengths of stay and causing data validation issues.

It has also been noted that it would be useful for emergency department work to know the actual admission time of admitted patient episodes of care. This would support future analysis of data quality issues associated with admission from an

emergency department. 'Admission time' is a data element in the NHDD, however it is not currently a data element specified in the NMDS for Admitted Patient Care.

Queensland does not support the addition of admission time, separation time, hours of leave etc. to the NMDS and has suggested that before this issue can even be considered all resource and cost/benefit issues would need to be discussed and addressed. Tasmania has also indicated that this is a significant change which will require a business case to properly assess the implications for all jurisdictions. Although Western Australia recognises that there will be costs involved, it is supportive of the recommendation. South Australia has previously suggested including length of leave and length of stay in hours/minutes as well as days to prevent queries on negative derived length of stays. As such, South Australia would be happy to include admission and separation time as well as leave hours/minutes in the future. The Australian Capital Territory is also supportive of the recommendation and believes it will be useful to determine whether two separations on one day are duplicates or not.

## Diagnosis onset type

'Diagnosis onset type' is a new data element introduced in the *National Health Data Dictionary* version 11, however, it is not as yet included in any NMDS. It has been proposed that it should become a new data element in the NMDS for Admitted Patient Care, and the collection method specifies that it is to be recorded and coded upon completion of an episode of admitted patient care. 'Diagnosis onset type' is defined as a qualifier for each coded diagnosis to indicate the onset and/or significance of the diagnosis to the episode of care, that is, primary condition or post-admit condition. The primary condition is:

- a condition present on admission such as the presenting problem, a comorbidity, chronic disease, disease status; in the case of neonates, the condition(s) present at birth;
- a previously existing condition not diagnosed until the current episode of care;
- in delivered obstetric cases, all conditions which arise from the beginning of labour to the end of second stage.

A post-admit condition is a condition that arises during the current episode of care and would not have been present on admission.

The relevant diagnosis type flag would be assigned to all ICD-10-AM disease codes recorded in the hospital morbidity system. It is believed that this data element will allow improved analysis of diagnostic information, especially in relation to patient safety and adverse event monitoring. It would not, however, facilitate identification of adverse events that occurred prior to the admission.

Strengthening the identification of adverse events was raised as an area for development as it is an issue that continues to receive considerable state and national attention. There could be several types of data changes that could facilitate this,

including this one, but also strengthened linkage between diagnoses and external causes in data collections and improved activity and place coding.

New South Wales and Western Australia raised concern over the possible cost of implementation and resource load required. Queensland and the Department of Health and Ageing both commented that this item needs further development and the Department would also like the data element trialed and evaluated prior to inclusion in the NMDS.

## **Date of procedure**

'Date of procedure' is a new data element introduced in the *National Health Data Dictionary* version 11, however, it is not as yet included in any NMDS. It has been proposed that it should become a new data element in the NMDS for Admitted Patient Care. 'Date of procedure' is defined as the date on which a procedure commenced during an inpatient episode of care and is required to provide information on the timing of the procedure in relation to the episode of care.

This data element may be useful for analysis of surgery occurring on the day of admission (rather than later). It may be that it would be usefully restricted to a subset of procedures, such as surgical and invasive medical procedures. Western Australia commented that staff already record 'Date of procedure' in the hospitals' theatre management systems and reporting to the morbidity system would duplicate their work. Queensland noted that it is not appropriate to allocate procedure dates to all procedures and that exclusion lists would need to be developed before inclusion in the NMDS.

## **Data elements relating to intensive care**

A number of respondents identified the need to include data elements that provide information on intensive care. Data elements to measure time in intensive care units (ICUs) (in hours), level of severity in intensive care as well as details on the outcomes of intensive care were suggested. The idea of including intensive care as a 'Care type' was also raised. A data element concept for defining intensive care units ('Intensive care unit') is already included in the NHDD. The feasibility of including other intensive care data elements in the NMDS needs to be investigated.

The Northern Territory has indicated in some hospitals coronary care, high dependency and intensive care patients are combined into one unit called 'Intensive care'. Therefore the allocation of an intensive care 'care type' would need to be well defined to take into account these combined intensive care units. Western Australia also noted that there may be issues with consistency of approaches in ICU hospitals and interfaces with ICU systems may be an issue.

The Northern Territory also noted that the data elements mentioned are already collected for the Australian and New Zealand Intensive Care Society (ANZICS) Adult Patient Database. This is Commonwealth and State Government funded and is

a comprehensive system, and there may not be any value in duplicating any of the data elements that are already collected and reported by it.

### **Severity score for ICU**

A data element for assessing the level of severity in intensive care was one of the data elements relating to intensive care suggested. Through the ANZICS Paediatric Database and Adult Patient Database information is collected on severity of illness for intensive care patients. Acute Physiology and Chronic Health Evaluation (APACHE) II is the predominant severity of illness scoring system used by ICUs in Australia. APACHE scores enable the categorisation of patient loads in terms of severity of illness and predicted mortality and are based on current physiological measurements of the patient (such as mean arterial pressure and heart rate), the patient's age and any previous health conditions (such as organ insufficiency or immunocompromised state). An increasing score is associated with an increasing risk of hospital death. The possibility of including such scores as a new data element in the NMDS may need to be investigated.

### **Data elements relating to Diagnosis Related Groups**

A number of new data elements were suggested for inclusion in the NMDS which can be derived from DRGs. As a NMDS is a *minimum* set of data elements agreed by the NHIMG for mandatory collection and reporting at a national level, data elements that can be easily derived from those already collected in the NMDS should not form part of the NMDS. For completeness, these data elements are discussed below.

### **Service Related Groups**

As discussed under the data element 'Major diagnostic category' a number of jurisdictions are now using Service Related Groups to recode the large number of DRGs into a handful of groups for analysis. However, this would not necessarily have to be a NMDS data element if it can be derived from the DRG and other data already in the NMDS.

### **Hours of mechanical ventilation**

Hours of mechanical ventilation refers to the number of hours a patient was attached to a mechanical ventilation device. It is used for grouping data to DRGs, however, if it is not present, invalid or is empty it will be imputed from the ICD-10-AM procedure codes 13882-01 *Management of continuous ventilatory support, > 24 and < 96 hours* or 13882-02 *Management of continuous ventilatory support, ≥ 96 hours*. Although this is not an NMDS item, the Institute has requested that states and territories provide this item in previous years, but no longer does so, as it is not collected by all jurisdictions and it can be imputed from ICD-10-AM procedure codes for grouping.

### **Patient clinical complexity level**

Patient clinical complexity level is a one-digit field indicating the patient's clinical complexity level. It is a measure of the cumulative effect of a patient's complications and comorbidity, and is calculated for each episode. The value will be 0–4 for surgical patients and 0–3 for medical patients.

As this is a field which is an output of the AR-DRG grouper it would seem to be unnecessary to include this as a NMDS data element in its own right.

### **Data elements relating to continuity of care**

A number of respondents expressed the need to include data elements that would allow for the monitoring of continuity of care, particularly in relation to the acute/aged care or sub-acute interface. Suggestions were made for data elements to monitor re-admissions to hospital, to provide information on where patients are referred to from hospital, details of carer availability, and data elements for monitoring whether patients are ready for discharge and reasons for delay. A data element concept for transfers was also suggested as well as definitions for transitional care and convalescent care, however, such definitions may be better placed as data domains in the 'Care type' data element. The Northern Territory suggested that it may be helpful if some specific mental health continuity of care scenarios were considered for addition to this element. Western Australia commented that it may be difficult to collect some of these proposed elements at admission.

### **Re-admissions or Unplanned re-admissions**

A number of respondents identified the need to be able to identify re-admissions or unplanned re-admissions which may relate to issues in the continuity (or outcomes) of care or to more accurately study particular conditions such as asthma.

It was suggested that a data element for 'Unplanned re-admissions' could describe problems in continuity of care when patients of hospitals are discharged and then re-admitted because of poor arrangement of post-discharge services. This type of data element may enable monitoring of re-admissions that could have been prevented with improved hospital discharge planning and/or access to community or hospital 'transitional' or 'post-acute' services.

A few respondents also suggested that it would be useful to be able to distinguish clearly between admission for a newly experienced acute illness or injury and a secondary admission for a condition that was treated in a previous admission, for example, re-admission for asthma in 28 days.

It was noted that a patient identifier that is unique across all hospitals in Australia may be useful for monitoring re-admissions (see discussion of 'Unique patient identifier', page 157).

## **Referral to**

A patient may be discharged home/to their usual residence but may be concurrently referred to Home and Community Care, rehabilitation, outpatient clinics, etc. It is believed that hospitals routinely collect this information in their discharge plans, however, the availability of this information at the national level will need to be assessed.

## **Carer availability**

It was suggested that a data element for carer availability could allow the analysis of carer availability in relation to discharge destination, length of stay, etc.

## **Ready for discharge date and Reason for delay**

For some patients, including those waiting for a nursing home bed or suitable sub-acute services, there could be an appreciable difference between the date on which they are judged 'ready to go home' as opposed to the date they are actually discharged or transferred to another facility. Therefore it was suggested a data element such as 'ready for discharge date' and, to complement this, a 'reason for delay' data element would be useful for monitoring this issue. The Department of Health and Ageing has indicated that these are complex data elements and they would need to be developed with great care.

In a related suggestion, it was noted that it may be useful to develop a mechanism for linking relevant diagnostic information, for example, using the ICD-10-AM code *Z75.1 Person awaiting admission to adequate facility elsewhere* to Aged Care Assessment Team data to indicate whether persons waiting for aged care have actually been assessed and found to be in need of such care. A count of patient days in conjunction with this ICD-10-AM code may provide information on the number of days a person was waiting for placement.

It has already been recognised that the NMDS for Admitted Patient Care does not currently include data that can be accurately used to quantify or characterise the provision of care to 'extended stay' patients in acute care hospitals, possibly occurring due to unavailability of aged care beds or other forms of non-hospital care. Identification and characterisation of this type of use of acute care beds and/or hospitals could inform policy development in relation to the provision of residential aged care services, or community-based services, and in relation to the management of acute care admitted patient services.

Data are required to enable identification of such 'extended stay' hospitalisations and for characterisation of their length of stay, diagnoses recorded and the types of care provided. Data that could be used for identification of hospitalisations of patients transferred from hospitals to aged care homes, either temporarily or permanently, and vice versa have been identified as of use.

The Institute has undertaken some preliminary work in consultation with the Department of Health and Ageing and the states and territories through the NHDC, confirming that the currently collected data cannot be used to identify and

characterise the 'extended stay' hospitalisations, and clarifying some of the issues to be addressed. It is likely that a data element to identify patients who have been assessed as requiring high- or low-level care in a residential aged care facility, or other non-hospital care, will be developed. In addition, the data elements 'Mode of admission' and 'Mode of separation' may be revised so they can be used more accurately to identify transfers between hospitals and aged care homes and other non-hospital settings.

## **Data elements for the Hospital Casemix Protocol**

It was suggested that these all be included in the NMDS. This would ensure its better alignment with national standards. Queensland suggested that these data elements should be proposed for NHDD before they can be included in the NMDS.

## **Other specific-purpose data elements**

### **Patient weight and patient height**

Patient weight and patient height have been suggested as proposed new data elements for the NMDS. Weight and height are used in the calculation of Body Mass Index (BMI). BMI is calculated as a person's weight (body mass) relative to height. It is a measure of body mass corrected for height which is used to assess the extent of weight deficit or excess. In sedentary populations, BMI also provides an imprecise but practical indicator of the level of body fat. BMI is used as an indicator of both underweight and overweight and obesity in sedentary Western adults. On a population basis there is a strong association between BMI and health risk. 'Adult body mass index', 'Adult height – measured', 'Adult height – self-reported', 'Adult weight – measured', and 'Adult weight – self-reported' are already included as data elements in the NHDD. The relevance of including such data elements in the NMDS for Admitted Patient Care would need to be assessed, and whether it is appropriate and cost effective for hospitals to collect this for all acute episodes.

### **Industry, occupation and employment status**

The National Occupational Health and Safety (OHS) Strategy endorsed by the Workplace Relations Ministers' Council in May 2002 contains five occupational health and safety strategies and nine Action Plans to achieve the OHS objectives. Under the Data Action and Disease Action Plans, the National Occupational Health and Safety Commission is required to examine data sets such as the NHMD to assess their ability to provide information on occupational injury and disease in Australia. Consultations with the Commission stakeholders suggested that the NHMD could be improved for OHS purposes by the inclusion of data elements for industry, occupation and employment status. This would allow the NHMD to effectively complement other OHS databases in use at the Commission.

The Commission has indicated that it will prepare a business case for the National Health Information Management Group to include 'Industry of person', 'Occupation of person' and 'Employment status' in the NMDS.

## **Other data elements requested for the National Hospital Morbidity Database by the Institute**

### **State record identifier**

Although this is not a NMDS data element, the Institute requests that states and territories provide a unique state record identifier for each record to enable easier communication about individual records and to allow quicker updates of records from states/territories without total data re-supply. The state record identifier needs to be meaningful and stable in each jurisdiction's database and unique in the state/territory for this purpose.

### **Hospital geographical indicator**

The Institute also requests a hospital geographical indicator to identify and enable analyses on the level of access to hospital services. States and territories are requested to provide the indicator in the Accessibility/Remoteness Index of Australia and/or the ABS Remoteness Area format. The Department of Health and Ageing has also suggested the use of global positioning system coordinates as a measure of location. These coordinates provide raw data that can be classified into any remoteness index/format. Western Australia will have all hospitals geo-coded soon.

### **Postcode**

In addition to the reporting of SLA for a patient's area of usual residence, the Institute requests that states and territories report postcode as a separate data element. The year of postcode to be reported is the one that applies to the year at the start of the collection period, that is, 2001 for 2001-02 morbidity data.

Postcode has been recognised as a useful data element for improving the accuracy of data linkage, and for analysis that relates to geographical areas defined by postcodes. The Department of Health and Ageing has also suggested that 'Hospital postcode' be added as an establishment data element to the NMDS. This would enable mapping of hospital service provision alongside aged care service provision in geographically meaningful units.

### **Morphology of neoplasms codes**

As some states/territories are already collecting this information as part of their morbidity collection, states and territories are invited to include this as optional codes in the National Hospital Morbidity Database. The inclusion of these codes may enable an indication of severity of blood and haematopoietic neoplasms, for example, for development of AR-DRGs. Morphology codes are to be supplied as seven

characters – the first four digits preceded by the letter 'M' and the fourth and fifth digits separated by a '/', for example, M8120/0.

# **Appendix 1: Survey of users and data collectors for the evaluation of the National Minimum Data Set for Admitted Patient Care**

# Survey of users and data collectors of the National Minimum Data Set for Admitted Patient Care



## Contact details

The Australian Institute of Health and Welfare is interested in obtaining contact details for any follow-up queries and to gain an understanding of the types of organisations using the NMDS specifications and NMDS-based data. This information will also help us interpret responses to the more specific questions that follow.

Please note that the identifying details provided will NOT be used for any purpose other than that specified in the explanatory notes, nor will any individual be identified in the analysis and reporting of results.

<b>Name:</b> _____
<b>Position/job title:</b> _____
<b>Unit/section:</b> _____
<b>Organisation:</b> _____
<b>Address:</b> _____
<b>City/town:</b> _____ <b>State:</b> _____ <b>Postcode:</b> _____
<b>Telephone:</b> _____ <b>Fax:</b> _____
<b>E-mail address:</b> _____
<b>Date this survey was completed:</b> _____

For whom are you responding? Please indicate (X) all that apply.

Respondent	[X]
On behalf of yourself	[ ]
On behalf of your unit or section within an organisation	[ ]
On behalf of your organisation	[ ]
<i>Comments</i>	

## 1. Users of the NMDS specifications and NMDS-based data

The Australian Institute of Health and Welfare is interested in gaining an understanding of the types of organisations that use the NMDS specifications and NMDS-based data. For the purposes of this survey, a user is defined as any person who uses the NMDS specifications to either collect or to access and analyse NMDS-based data. In order for us to develop an understanding of who the main user groups are, please indicate the main user group to which you belong. This information will also help us interpret responses to the more specific questions that follow.

### 1.1. Please indicate (X) the main user group to which you belong.

User group	[X]
State or territory health authority	[ ]
Other state or territory government department	[ ]
Australian Government Department of Health and Ageing	[ ]
Other Australian Government department	[ ]
Australian Institute of Health and Welfare	[ ]
Public hospital	[ ]
Private hospital	[ ]
Other health service provider	[ ]
University or other research organisation	[ ]
Private planning consultant	[ ]
Clinical equipment/therapeutic device company	[ ]
Pharmaceutical company	[ ]
Software developer	[ ]
Interest group	[ ]
Student	[ ]
Other	[ ]
Please specify _____	

## 2. Use of the NMDS specifications and NMDS-based data

The Australian Institute of Health and Welfare is interested in obtaining information about the way the NMDS specifications and NMDS-based data are currently being used. This section includes questions on the purpose for which you use the NMDS specifications or NMDS-based data, how you access NMDS specifications and NMDS-based data, your overall knowledge of the NMDS specifications and NMDS-based data, and your frequency of use. This information will also help us interpret responses to the more specific questions that follow.

**2.1. For what purpose do you use the NMDS specifications and the NMDS-based data? Rate the three most common purposes, where 1 is the most common and 3 is the least common.**

<b>Purpose</b>	<b>[1,2,3]</b>
Planning and monitoring hospital resources	[ ]
Comparisons and benchmarking	[ ]
Management and purchasing of hospital services	[ ]
Health services research	[ ]
Epidemiological research (e.g. population health research)	[ ]
Statistical reporting	[ ]
Facility planning	[ ]
Planning by private industry suppliers of therapeutic devices and other hospital equipment or pharmaceuticals	[ ]
Collection and reporting of NMDS-based data	[ ]
Casemix and classification development	[ ]
Software development	[ ]
Other	[ ]
Please specify _____	

**2.2. Please indicate (X) at which level you use the data.**

<b>Level</b>	<b>[X]</b>
Data for one hospital only	[ ]
Data for hospital group (within state/territory or national)	[ ]
Data for state or territory	[ ]
National	[ ]
International	[ ]

**2.3. Please provide more detail about the purpose(s) for which you use the NMDS specifications or NMDS-based data (optional).**

*Example: Investigation of the number of hip replacements performed each year by state/territory.*

**2.4. Please rate the three most common sources you use to access the NMDS specifications, where 1 is the most common and 3 is the least common.**

Source	[1,2,3]
National Health Data Dictionary publication	[ ]
National Health Data Dictionary publication online	[ ]
The Knowledgebase	[ ]
State/territory data specifications	[ ]
Hospital-based data specifications	[ ]
Other	[ ]
Please specify _____	
Not applicable, do not access	[ ]

**2.5. Please rate the three most common sources of NMDS-based data you use, where 1 is the most common and 3 is the least common.**

Source	[1,2,3]
AIHW <i>Australian Hospital Statistics</i> publication + Internet tables	[ ]
Other AIHW publications	[ ]
AIHW National Hospital Morbidity Database (internal)	[ ]
AIHW National Hospital Morbidity Database unit record extract	[ ]
AIHW National Hospital Morbidity Database tabulated data (unpublished)	[ ]
AIHW National Hospital Morbidity Database online (COGNOS cubes)	[ ]
Hospital database	[ ]
State or territory hospital database	[ ]
State or territory publications	[ ]
Department of Health and Ageing National Hospital Morbidity (Casemix) Database	[ ]
Department of Health and Ageing National Hospital Cost Data Collection	[ ]
Department of Health and Ageing Hospital Casemix Protocol Data Collection	[ ]
Healthwiz	[ ]
Other	[ ]
Please specify _____	
Not applicable, do not use	[ ]

**2.6. Please rate (X) your overall knowledge of the NMDS specifications or the NMDS-based data.**

Knowledge	NMDS specifications	NMDS-based data
Very familiar	[ ]	[ ]
Familiar	[ ]	[ ]
Unfamiliar	[ ]	[ ]

**2.7. Please indicate (X) how often you use the NMDS specifications or the NMDS-based data.**

Frequency	NMDS specifications	NMDS-based data
Daily	[ ]	[ ]
Weekly	[ ]	[ ]
Monthly	[ ]	[ ]
Occasionally	[ ]	[ ]
Never	[ ]	[ ]

### 3. Utility

As outlined in the explanatory notes, the main purpose of this survey is to gain an understanding of whether the NMDS is useful and whether it suits your current requirements. In this section, respondents are asked to rate the importance and usefulness of the NMDS overall and each individual data element, and to indicate which data elements should remain unchanged, which should be modified and which deleted. Please note, the data elements are as specified in the *National Health Data Dictionary* version 11.

**3.1. Please indicate (X) the importance and usefulness of the NMDS overall and each individual data element and provide comments on whether you believe each data element should remain unchanged, be modified or deleted.**

When assessing importance, think of how significant you believe the NMDS and each data element are to a national collection of data on admitted patient care. When assessing usefulness, keep in mind whether the NMDS and each data element suit your current requirements. If a data element is highly important and highly useful, it should probably remain unchanged. However, if a data element is highly important, but not useful, it may be a function of the way it is defined, in which case it probably needs to be modified.

Within your comments please indicate why a data element should be modified or deleted and describe the proposed modifications, for example, changes to the name, definition, data domains or other aspects.

Please provide any other comments that will assist in the interpretation of your response.

Data element	Importance				Usefulness			
	Not important	Important	Highly important	Unsure	Not useful	Useful	Highly useful	Unsure
NMDS for Admitted Patient Care	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<b>Establishment data elements</b>								
<a href="#">Establishment identifier</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Establishment number</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Establishment sector</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Region code</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">State identifier</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<b>Demographic data elements</b>								
<a href="#">Area of usual residence</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Country of birth</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Data element	Importance				Usefulness			
	Not important	Important	Highly important	Unsure	Not useful	Useful	Highly useful	Unsure
<a href="#">Date of birth</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Indigenous status</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Sex</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<b>Length of stay data elements</b>								
<a href="#">Admission date</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Number of days of hospital in the home care</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Number of leave periods</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Number of qualified days for newborns</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Separation date</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Data element	Importance				Usefulness			
	Not important	Important	Highly important	Unsure	Not useful	Useful	Highly useful	Unsure
<a href="#">Total leave days</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Total psychiatric care days</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<b>Clinical and related data elements</b>								
<a href="#">Activity when injured</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Additional diagnosis</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Care type</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Diagnosis Related Group</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">External cause — admitted patient</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Infant weight, neonate, stillborn</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Data element	Importance				Usefulness			
	Not important	Important	Highly important	Unsure	Not useful	Useful	Highly useful	Unsure
<a href="#">Major diagnostic category</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Place of occurrence of external cause of injury</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Principal diagnosis</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Procedure</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<b>Administrative data elements</b>								
<a href="#">Admitted patient election status</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Funding source for hospital patient</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Hospital insurance status</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Intended length of hospital stay</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Data element	Importance				Usefulness			
	Not important	Important	Highly important	Unsure	Not useful	Useful	Highly useful	Unsure
<a href="#">Inter-hospital contracted patient</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Medicare eligibility status</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Mental health legal status</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Mode of admission</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Mode of separation</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Person identifier</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Source of referral to public psychiatric hospital</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Urgency of admission</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Data element	Importance				Usefulness			
	Not important	Important	Highly important	Unsure	Not useful	Useful	Highly useful	Unsure
<b>Data element concepts</b>								
<a href="#">Acute care episode for admitted patient</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Admission</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Admitted patient</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Contracted hospital care</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Diagnosis</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Episode of care</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Hospital</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Hospital boarder</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Data element	Importance				Usefulness			
	Not important	Important	Highly important	Unsure	Not useful	Useful	Highly useful	Unsure
<a href="#">Hospital in the home care</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Live birth</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Neonate</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Newborn qualification status</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Organ procurement — posthumous</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Overnight stay patient</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Patient</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Same-day patient</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
<a href="#">Separation</a>	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

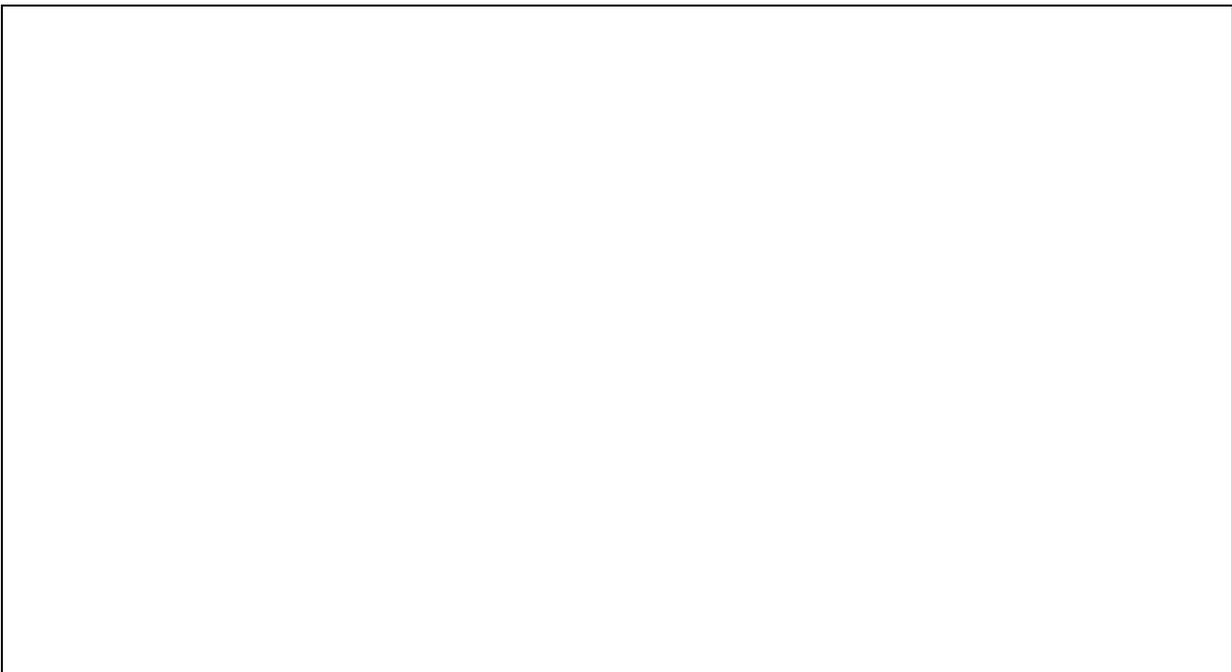
#### **4. Areas for development**

The Australian Institute of Health and Welfare is interested in obtaining your views on possible areas for development of the NMDS, including new data elements that you feel would make the NMDS more useful, possible changes to the scope, or any other priorities for definitional development.

##### **4.1. Are there any new data elements that should be included in the NMDS?**



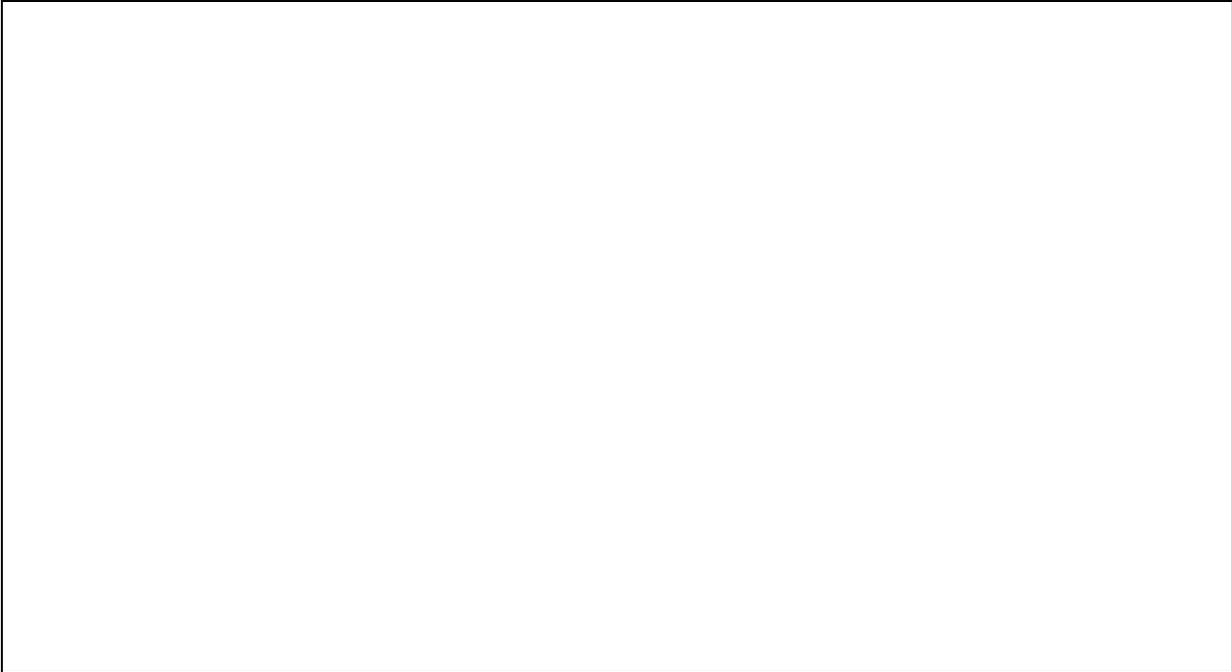
##### **4.2. Do you have any comments on the scope of the NMDS?**



**4.3. What do you see as the priorities for definitional development (data elements, data element concepts, scope)?**



**4.4. Who should be consulted about any proposed data development?**



## 5. Other comments

Please provide any additional views or comments you have that may assist the evaluation.

If you would like to provide more detail on any of the questions, please e-mail [Bree.Cook@aihw.gov.au](mailto:Bree.Cook@aihw.gov.au).

*Thank you for your time in completing this survey.*

# Appendix 2: Survey respondents

Aboriginal Health Information Strategy Unit, Department of Health, NSW  
Ageing and Aged Care, AIHW  
Australian Centre for Asthma Monitoring, AIHW  
Australian Health Care Agreement Task Force, Australian Government Department of Health and Ageing  
Australian Health Ministers' Advisory Council National Mental Health Working Group Information Strategy Committee  
Cardiovascular Disease, Diabetes and Risk Factor Monitoring Unit, AIHW  
Centre for Mental Health, Department of Health, NSW  
Children, Youth and Families Unit, AIHW  
Clinical Performance and Evaluation Unit, Calvary Health Care, ACT  
Corporate Information Services/Strategic Review & Information Services, Department of Health and Community Services, NT  
Costing and Ambulatory Classification Section (National Hospital Cost Data Collection), Department of Health and Ageing  
Costing and Ambulatory Classification Section, Acute and Coordinated Care Branch, Department of Health and Ageing  
Cypkom Pty Ltd  
Data Analysis and Consulting Unit, Department of Human Services, SA  
DRG Development, Department of Health and Ageing  
Health Data Collections, Department of Health, WA  
Health Economics and Data Management Unit, ACT Health Department  
Health Registers and Cancer Monitoring Unit, AIHW  
Health System Strategies, Department of Health and Ageing  
Hospitals and Ambulance Service Division, Department of Health & Human Services, Tas.  
Hospitals and Mental Health Services Unit, AIHW  
Housing Assistance Unit, AIHW  
Information Analysis and Dissemination Unit, Department of Health, NSW  
Information Development Unit, Department of Health, NSW  
Information Management Group, The Canberra Hospital  
Information Management Services, Department of Human Services, SA  
Labour Force and Rural Health Unit, AIHW  
Medical Products Group, Boots Healthcare Australia

Metropolitan Health and Aged Care Division, Department of Human Services, Vic.  
National Centre for Aboriginal and Torres Strait Islander Statistics, ABS  
National Centre for Classification in Health  
National Centre for Immunisation Research and Surveillance  
National Health Priorities and Environmental Health Unit, AIHW  
National Occupational Health and Safety Commission  
Patient Data Management Unit, Department of Health, NSW  
Population Health Unit, AIHW  
Procurement Strategy Unit, Queensland Health  
Social Infrastructure Branch, Productivity Commission

Don Bahr – Data Services Unit, Queensland Health  
Leanne Holmes – School of Public Health, La Trobe University, Melbourne  
Zarina Kahn – Clinical Strategy Team, Queensland Health  
David Muscatello – Centre for Epidemiology and Research, Department of Health, NSW  
Bill Nichol – Hospital Financing Section, Department of Health and Ageing  
Genevieve Roach – Medical Records, Longreach Hospital, Queensland  
Steve Turner – University of Aberdeen, Scotland

# Appendix 3: Sex-procedure edits provided by Victorian Department of Human Services

## 450 Code incompatible with female sex

Effect	REJECTION
Problem	<p>The E2 Episode Record's Sex is Female but the X2/Y2 Diagnosis Record has a Procedure Code that is normally only performed on a male patient and there is no Diagnosis Code that might explain why the procedure is performed on a patient recorded as female. Such procedures can be performed to reassign or clarify gender.</p> <p>Procedure codes:</p> <p>30641-00 [1184] <i>Orchidectomy, unilateral</i></p> <p>30641-01 [1184] <i>Orchidectomy, bilateral</i></p> <p>37309-00 [1120] <i>Repair of laceration/rupture of Prostatic/membranous segment of urethra</i></p> <p>37402-00 [1196] <i>Partial amputation of penis</i></p> <p>37405-00 [1196] <i>Complete amputation of penis</i></p> <p>37438-00 [1174] <i>Partial excision of scrotum</i></p> <p>37613-00 [1183] <i>Epididymectomy, unilateral</i></p> <p>37613-01 [1183] <i>Epididymectomy, bilateral</i></p> <p>37623-02 [1178] <i>Vasectomy, unilateral</i></p> <p>37623-03 [1178] <i>Vasectomy, bilateral</i></p> <p>55300-00 [1293] <i>Transrectal ultrasound of prostate, bladder base and urethra</i></p> <p>90405-00 [1202] <i>Other penile proc for sex transformation</i></p> <p>Explanatory diagnosis codes:</p> <p>E25.0 <i>Congenital adrenogenital disorders associated with enzyme deficiency</i> (includes Congenital adrenal pseudohermaphroditism)</p> <p>E25.8 <i>Other adrenogenital disorders</i> (includes Adrenal pseudohermaphroditism)</p> <p>E29.1 <i>Testicular hypofunction</i> (includes Pseudohermaphroditism, male, with 5-alpha-reductase deficiency)</p> <p>E34.5 <i>Androgen resistance syndrome</i> (includes Pseudohermaphroditism, male, with feminising testis)</p> <p>F64.0 <i>Transsexualism</i></p> <p>Q56 <i>Indeterminate sex and pseudohermaphroditism</i></p> <p>Q99.0 <i>Chimera 46,XX/46,XY</i> (hermaphrodite)</p> <p>Q99.1 <i>46,XX true hermaphrodite</i></p>
Remedy	<p>Check Sex (E2), Diagnosis Code(s) and Procedure Code(s)(X2/Y2), amend as appropriate and re-transmit the E2 and/or X2/Y2.</p> <p>The ICD Library File generates <i>Warning</i> Edit 354 for these procedures with sex female; however, because there is no explanatory diagnosis in this episode, <i>this</i> edit is a Rejection and requires correction.</p> <p>If Sex (<i>as submitted</i>, shown in X2/Y2 part of report) is incorrect, amend.</p> <p>If another diagnosis code is required, add this.</p>

## 451 Code incompatible with male sex

---

**Effect**      **REJECTION**

**Problem**      The E2 Episode Record's Sex is Male but the X2/Y2 Diagnosis Record has a Procedure Code that is normally only performed on a female but there is no Diagnosis Code that might explain why the procedure is performed on a patient recorded as male. Such procedures can be performed to reassign or clarify gender.

Procedure codes:

37845-00 [1298]      *Reduction clitoroplasty for ambiguous genitalia with urogenital sinus*

37848-00 [1298]      *Reduction clitoroplasty and vaginoplasty for ambiguous genitalia with urogenital sinus*

37851-00 [1298]      *Vaginoplasty for congenital adrenal hyperplasia, mixed gonadal dysgenesis or similar condition*

Explanatory diagnosis codes:

E25.0      *Congenital adrenogenital disorders associated with enzyme deficiency* (includes Congenital adrenal pseudohermaphroditism)

E25.8      *Other adrenogenital disorders* (includes Adrenal pseudohermaphroditism)

E29.1      *Testicular hypofunction* (includes Pseudohermaphroditism, male, with 5-alpha-reductase deficiency)

E34.5      *Androgen resistance syndrome* (includes Pseudohermaphroditism, male, with feminising testis)

F64.0      *Transsexualism*

Q56      *Indeterminate sex and pseudohermaphroditism*

Q99.0      *Chimera 46,XX/46,XY* (hermaphrodite)

Q99.1      *46,XX true hermaphrodite*

---

**Remedy**      Check Sex (E2), Diagnosis Code(s) and Procedure Code(s)(X2/Y2), amend as appropriate and re-transmit the E2 and/or X2/Y2.

The ICD Library File generates *Warning* Edit 354 for these procedures with sex male; however, because there is no explanatory diagnosis in this episode, *this* edit is a Rejection and requires correction.

If Sex (*as submitted*, shown in X2/Y2 part of report) is incorrect, amend.

If another Diagnosis Code is required, add this.

---