

1 Introduction

Australian Hospital Statistics 1998–99 is the fourth in the Australian Institute of Health and Welfare's series of annual summary reports describing the characteristics and activity of Australia's hospitals. This report follows previous annual information for the years 1993–94 to 1997–98 (AIHW 1997a, 1997b, 1998, 1999a).

This series of reports has been based on data for the financial years 1993–94 to 1998–99 supplied to the Institute's hospital databases by the State and Territory health authorities. The National Public Hospital Establishments Database is a collation of the hospital-level data, and includes information about public hospitals, their resources, expenditure and revenue, and a summary of the services they provided to admitted and non-admitted patients. The National Hospital Morbidity Database collates the patient-level data on the diagnoses and other characteristics of admitted patients in both public and private hospitals, and on the hospital care they receive.

The collection and reporting of the data in this report were undertaken by the Institute under the auspices of the Australian Health Ministers' Advisory Council through the National Health Information Agreement. Most of the data collected were as specified in the National Minimum Data Set for Institutional Health Care and data element definitions were as specified for 1998–99 in the *National Health Data Dictionary* Version 7.0 (National Health Data Committee 1998).

This report

This report summarises 1998–99 data reported to the National Public Hospital Establishments Database and the National Hospital Morbidity Database. This chapter describes the two databases and briefly discusses their overall limitations.

Chapter 2 presents hospital performance indicator data, drawn from both the databases and a number of other sources. The indicators are nationally agreed, and based on indicators initially developed by the National Health Ministers' Benchmarking Working Group. In previous years they have been published in the Working Group's reports, and also adopted by the Steering Committee for the Review of Commonwealth/State Service Provision in their reports of government service provision.

Chapter 3 summarises other data on public hospitals, mainly from the National Public Hospital Establishments Database.

Chapter 4 uses both databases to provide an overview of activity in Australian hospitals based on establishment characteristics.

Chapters 5 to 10 present a range of patient-based information from the National Hospital Morbidity Database, including information on the diagnoses of the patients (Chapter 7), the procedures they underwent (Chapter 8) and the Australian Refined Diagnosis Related Groups for each hospital separation (Chapter 10).

In all chapters, unless otherwise specified:

- public acute hospitals and public psychiatric hospitals are included in the public hospital (public sector) category, and all public hospitals other than public psychiatric hospitals are included in the public acute hospital category.
- private psychiatric hospitals, private free-standing day hospital facilities and other private hospitals are included in the private hospital (private sector) category.

The appendixes provide more detailed technical notes on the data and analyses than are included in the chapters. In particular, Appendix 3 includes notes on the presentation of

data in the tables and Appendix 8 includes the population estimates used for population rate calculations.

Summary information from the Department of Health and Aged Care's 1998-99 National Hospital Cost Data Collection is provided in Appendix 10. This collection is the source of Australian Refined Diagnosis Related Group (AR-DRG) cost weight and average cost information used in Chapters 2, 4, 5 and 10.

The National Public Hospital Establishments Database

The National Public Hospital Establishments Database holds a record for each public hospital in Australia. It is collated from the routine administrative collections of public acute hospitals, psychiatric hospitals, drug and alcohol hospitals and dental hospitals in all States and Territories.

The collection only covers hospitals within the jurisdiction of the State and Territory health authorities. Hence, public hospitals not administered by the State and Territory health authorities (for example, some hospitals run by correctional authorities in some jurisdictions and those in off-shore territories) are not included. A list of the hospitals included in the database for 1998-99 is provided on the Internet (see Appendix 7).

Information is included on hospital resources (beds, staff and specialised services), recurrent expenditure, non-appropriation revenue and services to admitted and non-admitted patients. Data on capital expenditure and depreciation are also collected for each jurisdiction. The collection is based on the establishment-level activity and resource data elements, and the system-level data elements, of the National Minimum Data Set for Institutional Health Care.

Validation processes for 1998-99 data involved detailed consultation by the Institute with data providers in each State and Territory, to ensure data quality. Nevertheless, the collection does have some limitations and missing values. Although the data collections are based on national data item definitions, in some cases the actual definitions used vary among the States and Territories.

The National Hospital Morbidity Database

The National Hospital Morbidity Database is a compilation of electronic summary records collected in admitted patient morbidity data collection systems in Australian hospitals. Data relating to admitted patients in almost all hospitals are included: public acute hospitals, public psychiatric hospitals, private acute hospitals, private psychiatric hospitals and private free-standing day hospital facilities. Lists of the public and private hospitals included in the database for 1998-99 are provided on the Internet (see Appendix 7).

Public sector hospitals that were not included were 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 off-shore territories). In addition, data were not supplied for one small 'outpatient clinic' in Queensland, a forensic hospital in Tasmania, and a mothercraft hospital in the Australian Capital Territory.

Private sector hospitals that were not included were 12 private free-standing day hospital facilities and one other private hospital in Victoria, three private free-standing day hospital facilities in South Australia, one private free-standing day hospital facility and four other private hospitals in Tasmania, six private free-standing day hospital facilities and one private hospital in the Australian Capital Territory, and the one private hospital in the Northern Territory. In addition, about 5.6% of private hospital separations data for Western Australia were not included (mainly for hospitals other than free-standing day hospital facilities); the Western Australian data were provided as at 31 December 1999, and some

private hospitals had been unable to finalise their data by then due to system problems associated with the introduction of ICD-10-AM.

The data supplied for the National Hospital Morbidity Database were based on the patient-level data items of the National Minimum Data Set for Institutional Health Care. They include demographic, administrative and length of stay data, and data on the diagnoses of the patient, the procedures they underwent in hospital and external causes of injury and poisoning.

A process of validation of the morbidity database was jointly undertaken by the Institute and the data providers to ensure data quality. When data were supplied using non-standard definitions or classifications, the Institute mapped them to the *National Health Data Dictionary* definitions, where possible, in collaboration with the data providers. Further information on the mapping of data for newborn episodes of care (those for patients aged 9 days or less on admission) and of data for the area of usual residence of the patients is presented in Appendix 3.

Diagnosis, procedure and external cause data for 1998–99 were reported to the National Hospital Morbidity Database by Queensland, Western Australia, South Australia and Tasmania using the *Australian Version of the International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) (National Coding Centre 1996). The data were reported by New South Wales, Victoria, the Australian Capital Territory and the Northern Territory using the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification* (ICD-10-AM) (National Centre for Classification in Health 1998). The data reported in ICD-9-CM were mapped by the Institute to ICD-10-AM so that national data could be presented in a single classification in this report. Further information about the introduction of ICD-10-AM and this mapping is presented in Appendix 4.

Most data providers were able to supply records for separations of patients aged 9 days or less on admission (*Newborn episodes of care*) with no ‘qualified days’ (see Glossary); however, Tasmania was not able to provide data for most of these separations for both the public and private sectors and some other jurisdictions were unable to provide these data for all relevant private sector separations. These patients do not meet admission criteria for all purposes, so they have been excluded from this report, except as specified in Chapter 5. Records for hospital boarders were also removed from the database, in consultation with the data providers, as they are not admitted patients.

Records for 1998–99 are for hospital separations (discharges, transfers, deaths or changes in type of episode of care) in the period 1 July 1998 to 30 June 1999. Data on patients who were admitted on any date before 1 July 1998 are included, provided that they also separated between 1 July 1998 and 30 June 1999. A record is included for each separation, not for each patient, so patients who separated more than once in the year have more than one record in the database.

Limitations of the data

The major variations from the *National Health Data Dictionary* definitions, substantial differences in scope, the effects of different populations and other major impacts on data quality have been noted within appropriate sections of this report. These general notes should also be used to guide interpretation of the data.

- Although the *National Health Data Dictionary* definitions form the basis of the two databases, the actual definitions used may have varied among the data providers and from one year to another. In addition, fine details of the scope of the data collections may vary from one jurisdiction to another. Comparisons between the two databases, the States and Territories, reporting years and hospital sectors should therefore be made with reference to the accompanying notes.

- Not all private hospital separations are included in the National Hospital Morbidity Database so the counts of private hospital separations presented in this report are likely to be underestimates of the actual counts. In 1998–99, the National Hospital Morbidity Database reported 110,941 (5.6%) fewer separations than the Australian Bureau of Statistics' Private Health Establishments Collection, which has wider coverage. This discrepancy is described further in Appendix 3.
- Each State and Territory has a particular demographic structure that differs from other jurisdictions, and factors such as age and Aboriginal and Torres Strait Islander status can have a substantial effect on the nature of health care delivery amongst jurisdictions. For example, the average length of stay in hospital, or the frequency of different procedures, can be affected by the demographic composition of the population in a particular region or jurisdiction.
- Although data on separations from the National Hospital Morbidity Database can reflect an aspect of the burden of disease in the community, they do not usually provide measures of the incidence or prevalence of conditions. This is because not all persons with a type or degree of illness are treated in hospital and the number and pattern of hospitalisations can be affected by differing admission practices, differing levels and patterns of service provision, and multiple admissions for some chronic conditions, in addition to the differing patterns of morbidity in the population.

This report and additional data on the Internet

This report is available on the Internet at

<http://www.aihw.gov.au/publications/health/ahs98-9.html>

The text of the report is presented in PDF format and the tables as downloadable Excel spreadsheets.

This site also includes lists of hospitals that contributed to the databases for 1998–99 (see Appendix 7) and additional data from the National Hospital Morbidity Database, in Excel spreadsheets. The spreadsheets provide tables that present further detail on diagnoses, procedures and AR-DRGs, version 4.0/4.1 for admitted patients. A short time after this report is published, tables of data on the Australian National Diagnosis Related Groups (AN-DRGs), version 3.1 will also be available on the Internet site. More information about the Internet tables is in Chapters 7, 8 and 10 and Appendixes 1 and 7.