

Part I: Background information

Chapter 1: Introduction and data issues

Chapter 2: Population characteristics

1. Introduction and data issues

This is the second national statistical report on the health and wellbeing of Australian children, and follows an initial report published in 1998. This second report reflects the structure of the National Child Health Information Framework (Figure 1.1), a conceptual framework for the organisation of national child health information, which was developed at a workshop convened by the AIHW in 1998 and was subsequently endorsed by the Australian Health Ministers' Advisory Council (AHMAC).

At the core of the information framework is a set of indicators measuring the health and wellbeing of children. An indicator is a summary statistic which facilitates concise, comprehensive and balanced judgments about a health condition, a determinant of health or progress towards a healthier society.

The AIHW has developed a set of criteria that can be used to guide the definition and development of indicators (AIHW: Moon et al. 1998). Indicators should:

- be national in scope, or applicable to a regional or subpopulation scope of national importance;
- be as aggregated as possible;
- have clear links with improvements in health outcomes;
- be reliable and valid, with values that are meaningful to child health and wellbeing;
- be consistent and comparable with other indicators used in the States and Territories;
- be easy to understand;
- be capable of being monitored easily, and in a way that will provide a statistically verifiable time series; and
- be responsive to change.

The National Child Health Information Framework consists of three broad groups of indicators of child health: health status; risk and protective factors; and delivery of health services and interventions. Within these three groups, a number of broad subgroups have been identified. Health status has four subgroups: health and wellbeing; growth and development; mortality, morbidity and disability; and safety and security. The risk and protective factors group has three subgroups: biological and behavioural factors; social, cultural and environmental factors; and health knowledge and skills. While the delivery of services and interventions group is not divided into any subgroups in the current framework, some of the areas covered within this group include health programs and health promotion and intervention.

This report presents national data that measure indicators of child health and wellbeing developed within the different subgroups of the National Child Health Information Framework. It will be apparent to the reader that some of the subgroups outlined above have more indicators (and national data to measure these indicators) than others. Many of the indicators reported on here are in the 'mortality, morbidity and disability' subgroup. National indicators of these 'health outcomes' are highly developed and good quality national data to measure them have been available for some years. In contrast, indicators in the 'risk and protective factors group' are in the early stages of development and even where indicators exist, national data to measure them are not always available.

While the National Child Health Information Framework is used as a guideline for the report, the following need to be taken account when reading the report:

- The report presents data on 'other communicable diseases' and 'other chronic diseases' (mortality, morbidity and disability subgroup) for which indicators have

not yet been developed but which are important in determining the health status of children.

- No indicators of child abuse and neglect ('safety and security' subgroup) have yet been developed. Data on children who come to the attention of community services departments as in need of protection from abuse, neglect or harm are examined in the section on 'social, cultural, and environmental risk and protective factors'. This is because they are a population having multiple family and social risk factors.
- 'Carer's wellbeing' (health and wellbeing subgroup) has also been included in the section on 'social, cultural and environmental risk and protective factors'. This is because research has shown that carer's wellbeing is an important risk/protective factor for children.

The indicator data examined in this report enable specific child health and health-related conditions to be monitored. An overview of mortality, morbidity (consultations with general practitioners and hospitalisations), disability and burden of disease in children is also included to provide a more comprehensive picture of the health status of children.

Throughout this report and for every indicator, data are presented for children under 15 years in the population. The population of children aged 0–14 years is further subdivided into infants (children aged less than 1 year), and children aged 1–4, 5–9 and 10–14 years. Wherever possible, boys are distinguished from girls, and Aboriginal and Torres Strait Islander children from other Australian children, and distinctions are made between children who live in metropolitan, rural and remote areas.

The first part of the report contains demographic information about children aged 0–14 years. Part 2 provides an overview of mortality, morbidity, disability and burden of disease for children aged 0–14 years. Parts 3, 4, 5, 6 and 7 have information on various aspects of 'health status' – maternal, perinatal and infant conditions; vaccine-preventable and other communicable diseases; chronic diseases; oral health; and injury. 'Risk and protective factors' in the areas of 'family environment' and 'biological and behavioural factors' are examined in Part 8. The report concludes with an examination of 'health services' in Part 9.

All data presented graphically are sourced to tables within this report or to appendix tables. The latter are available on the AIHW website.

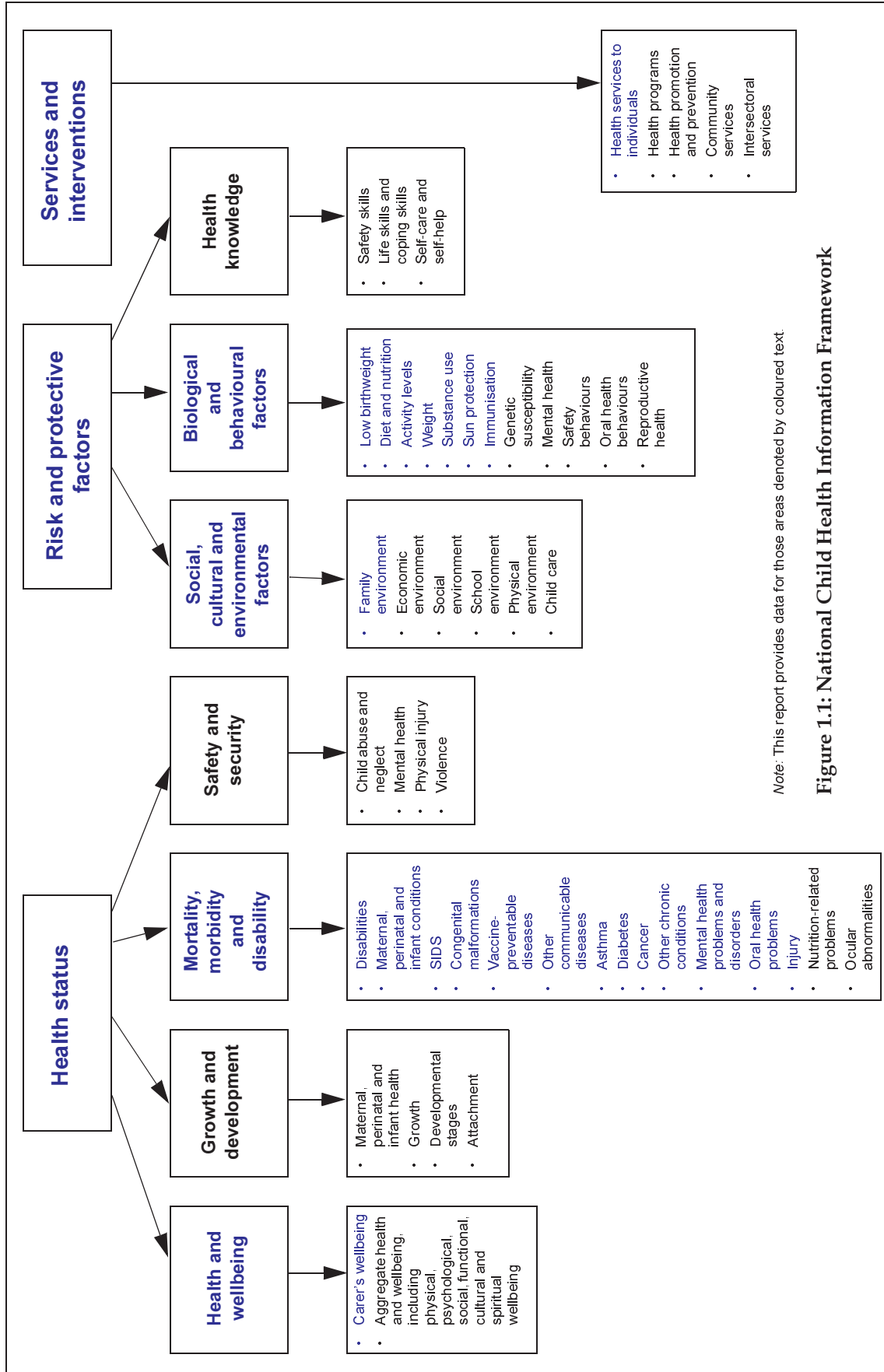


Figure 1.1: National Child Health Information Framework

Data issues

With any report it is important to be aware of the need for caution in interpreting the findings, due to limitations of the data. This section explores some of the issues the reader should be aware of while interpreting the data presented in this report. Some of these issues relate to data sources, while others relate to population groups.

AIHW Mortality Database

The AIHW Mortality Database was used to extract data on the number and causes of deaths of children. Death certificates contain information on conditions which initiate the sequence of events that leads to death (underlying causes of death), as well as other information on conditions that contribute to death, but do not lead to it directly. Causes of death data presented in this report refer to the underlying causes of death only. In addition, when extracting causes of death data for particular years, the year in which the death was registered was used rather than the year in which it occurred.

Approximately 6% of deaths in a particular calendar year are registered in subsequent years, most being deaths that occur in December of the preceding year.

When extracting causes of death for deaths occurring between 1991 and 1996, the International Classification of Diseases, 9th Revision (ICD-9) was used, while for deaths occurring from 1997 onwards, the 10th Revision (ICD-10) was used. To account for any artificial increase or decrease in mortality data as a result of changes in coding systems, the Australian Bureau of Statistics recommends the application of factors or weights which have a smoothing effect, making time series analysis more accurate. However, it is not appropriate to use comparability factors with population sub-groups, such as age- and sex-breakdowns, and thus comparability factors were not applied to the data in this report. Throughout this report, when records were missing relevant variables, such as sex, age or Indigenous status, mortality rates were calculated minus the missing cases.

AIHW National Hospital Morbidity Database

The AIHW National Hospital Morbidity Database was used to obtain information on the extent of and reason for hospitalisations of children. In this report, only information on the principal diagnosis – the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital – is presented. Four main types of information are presented: ICD-10-AM chapters, diagnosis blocks, 'diagnosis groups' (equivalent to ICD-10-AM 'categories') and 'specific diagnoses' (ICD-10-AM 'subcategories'). While other associated diagnoses may also be recorded for each hospital episode, these data are not presented in this report.

Hospital records are for 'separations' and not individuals, and as there can be multiple admissions for the same individuals, hospitalisation rates do not usually reflect the incidence or prevalence of the disease or condition in question. Hospitalisation numbers can also be affected by admission practices and access, as well as the incidence or prevalence of the disease or condition.

For hospitalisation data for 1993–94 to 1997–98, the clinical modification of the International Classification of Diseases, 9th Revision (ICD-9-CM), was used. For hospitalisations occurring from 1998–99 onwards, the 10th Revision, Australian modification (ICD-10-AM), was used. Throughout this report, when records were missing relevant variables, such as sex, age or Indigenous status, hospitalisation rates were calculated minus the missing cases.

Health status of Aboriginal and Torres Strait Islander children

The availability and quality of data about the Aboriginal and Torres Strait Islander child population are significantly limited by a number of factors.

First, the precision of population estimates, which form the denominator for all Indigenous rates, is not high. Estimating the size and composition of the Aboriginal and Torres Strait Islander populations is difficult for a number of reasons. One of the main reasons is the uncertainty about Indigenous population counts from the 5-yearly ABS Census of Population and Housing, which provides the basis for estimating the total population. Indigenous status is defined by the person completing the census form and it is not possible to estimate how this status may change over time. In addition, accurate births and deaths data, required to estimate the natural growth in the Indigenous population between censuses, are not available nationally. These uncertainties affect the comparison of rates from year to year and severely limit the assessment of trends over time.

Second, there is under-identification of Aboriginal and Torres Strait Islander people in routinely collected data, such as hospitalisations and births and deaths registrations. Therefore, the accuracy of current data is questionable, although significant work on improving the quality of data on the Indigenous population is underway (ABS & AIHW 2001).

As a result, some of the national Aboriginal and Torres Strait Islander statistics are derived from a limited number of jurisdictions. Data on causes of death, for example, are drawn from only four jurisdictions (Queensland, Western Australia, South Australia and Northern Territory). In these jurisdictions the extent to which the identification of Indigenous people occurs is sufficiently high to produce reliable statistics on deaths (ABS & AIHW 2001).

Children in metropolitan, rural and remote areas

'Area of residence' is used throughout this report to compare children living in rural and remote areas with children living in metropolitan areas. Information about area of residence presented here relates to children's usual area of residence. The substantially higher proportion of Aboriginal and Torres Strait Islander children who reside in remote zones and their generally lower health status mean that the health status of children in remote zones is affected by the health of Indigenous children.

