Appendix 6: National Hospital Morbidity Database

The National Hospital Morbidity Database (NHMD) is a source of data for 18 of the indicators. This appendix provides overview information in relation to the accuracy of the NHMD data.

Structures and processes relating to the NHMD

The National Hospital Morbidity Database (NHMD) is an annual compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals. Unit records of episodes of care are generated at the hospital level and the data are submitted to state hospital authorities. They include information on the characteristics of the patient and details of the hospital as well as comprehensive information relating to the health aspects of the episode of care, such as diagnoses, external causes of injury and poisoning and procedures.

The processes used to compile data for the NHMD can be summarised as follows:

- The data are supplied by hospitals to State health bodies, which aggregate the data and submit the data to the AIHW
- The National Minimum Data Set for Admitted Patient Care specifies the data to be supplied
- The data consist of details of the patient which are extracted from hospital records and information extracted from clinical records compiled by the doctors and other professional staff (for example, pathology staff)
- Clinical coding is the process used to generate the information from the clinical records in a pre-determined format
- Professionally trained clinical coders use the International Statistical Classification of Diseases and Related Health Problems, 10th edition, Australian Edition, which incorporates the Australian Coding Standards, to translate narrative descriptions of all significant diagnoses, external causes of injury and poisoning, and procedures
- The Classification is updated and published every 2 years by the National Centre for Classification in Health (NCCH).

The accuracy of clinical coding is a critical determinant of the accuracy of the data. There is a substantial investment in the training of clinical coders through Health Information Management undergraduate degrees at four universities and coding courses run by the Health Information Management Association of Australia and the Open Training and Education Network. Workshops are conducted by the states, the NCCH and individual hospitals.

Auditing of clinical coding is conducted by the states on hospital clinical records to test the quality of the data and provide feedback to coders (AIHW 2008c). Typically, such audits have a specific focus on the accuracy in coding of Diagnosis Related Groups (DRGs), which form part of a patient classification system relating the types of patient treated in a hospital to the resources required by the hospital to treat them. A nationally consistent audit of the quality and consistency of coded data has yet to be performed in Australia.
A potential weakness of the data capture arrangements relates to clinical records, which are the primary source for coding inpatient morbidity data. They include the discharge form, progress notes as well as all operation and anaesthetic reports and are supplemented with information on the outcomes of any diagnostic, pathology and imaging tests undertaken. Problems with coding arise when they are incomplete or are difficult to interpret.

**Analyses of the quality of NHMD data**

In recent years, the Australian Hospital Statistics (AHS) has included an appendix dealing with technical issues. It provides comments on and analyses of the quality of the ICD-10-AM coded data. One form of analysis is the average number of additional diagnoses coded for each episode of care.

Diagnoses additional to the principal diagnosis include co morbidities and complications of the patient that may contribute to longer lengths of stay, more intensive treatment or the use of greater resources. The number of additional diagnosis records for a patient relates to the person’s clinical condition and hence is not subject to administrative or technical limitations.

A study has assessed the variation among Australian states in the reporting and coding of additional diagnoses in public hospital data (Coory & Cornes 2005). It found variations amongst states and concluded that many patient records might have been documented or coded differently if the separation had occurred in another state (AIHW 2008c). Some state-specific coding standards exist to meet state reporting requirements. Such standards may be in addition to or instead of the relevant Australian Coding Standard, and may affect the comparability of ICD-10-AM coded data.

The methodology developed by the Coory and Cornes study has been used in the AHS to update the initial results obtained. The most recent results published in AHS (AIHW 2008c) confirm continuing variations between states but they are less than two years previously.
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