National Healthcare Agreement: PI 23-Unplanned hospital readmission rates, 2015 QS

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Identifying and definitional attributes

Metadata item type: Data Quality Statement

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Data quality

Data quality statement summary:

- The National Hospital Morbidity Database (NHMD) is a comprehensive data set that has records for all separations of admitted patients from essentially all public and private hospitals in Australia.
- The indicator is an underestimate of all possible unplanned/unexpected readmissions because:
  - it could only be calculated for public hospitals and for readmissions to the same hospital.
  - episodes of non-admitted patient care provided in outpatient clinics or emergency departments which may have been related to a previous admission are not included.
  - the unplanned and/or unexpected readmissions are limited to those having a principal diagnosis of a post-operative adverse event for which a specified International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) diagnosis code has been assigned. This does not include all possible unplanned/unexpected readmissions.
- Calculation of the indicator for Western Australia was not possible using data from the NHMD. Data for Western Australia were supplied by WA Health and Australian rates and numbers do not include Western Australia.
- Variations in admission practices and policies lead to variation among providers in the number of admissions for some conditions.
- Remoteness data for 2011–12 and previous years are not directly comparable to remoteness data for 2012–13 and subsequent years.
- SEIFA data for 2010–11 and previous years are not directly comparable with SEIFA data for 2011–12, and SEIFA data for 2011–12 and previous years are not directly comparable with SEIFA data for 2012–13 and subsequent years.

Institutional environment: The Australian Institute of Health and Welfare (AIHW) is a major national agency set up by the Australian Government under the *Australian Institute of Health and Welfare Act 1987* to provide reliable, regular and relevant information and statistics on Australia's health and welfare. It is an independent corporate Commonwealth entity governed by a management board, and accountable to the Australian Parliament through the Health portfolio.

The AIHW aims to improve the health and wellbeing of Australians through better health and welfare information and statistics. It collects and reports information on a wide range of topics and issues, ranging from health and welfare expenditure, hospitals, disease and injury, and mental health, to ageing, homelessness, disability and child protection.

The Institute also plays a role in developing and maintaining national metadata standards. This work contributes to improving the quality and consistency of national health and welfare statistics. The Institute works closely with governments and non-government organisations to achieve greater adherence to these standards in administrative data collections to promote national consistency and comparability of data and reporting.

One of the main functions of the AIHW is to work with the states and territories to improve the quality of administrative data and, where possible, to compile national datasets based on data from each jurisdiction, to analyse these datasets and disseminate information and statistics.

The *Australian Institute of Health and Welfare Act 1987*, in conjunction with compliance to the *Privacy Act 1988 (Commonwealth),* ensures that the data collections managed by the AIHW are kept securely and under the strictest conditions with respect to privacy and confidentiality.

For further information see the AIHW website www.aihw.gov.au.

Data for the NNAPEDCD were supplied to the AIHW by state and territory health authorities under the terms of the National Health Information Agreement (see the following links):

http://www.aihw.gov.au/nhissc/

/content/index.phtml/itemId/182135

The state and territory health authorities received these data from public hospitals. States and territories use these data for service planning, monitoring and internal and public reporting. Hospitals may be required to provide data to states and territories through a variety of administrative arrangements, contractual requirements or legislation.

Timeliness: The reference period for this data set is 2012–13.

Accessibility: The AIHW provides a variety of products that draw upon the NHMD. Published products available on the AIHW website are:

- *Australian hospital statistics* with associated Excel tables
- interactive data cubes for Admitted patient care (for Principal diagnoses, Procedures and Diagnosis Related Groups).

These products may be accessed on the AIHW website at: http://www.aihw.gov.au/hospitals/.

Interpretability:

Supporting information on the quality and use of the NHMD are published annually in *Australian hospital statistics* (technical appendixes), available in hard copy or on the AIHW website. Readers are advised to note caveat information to ensure appropriate interpretation of the performance indicator. Supporting information includes discussion of coverage, completeness of coding, the quality of Indigenous data, and changes in service delivery that might affect interpretation of the published data. Metadata information for the National Minimum Data Set (NMDS) for Admitted patient care is published in the AIHW's online metadata repository, METeOR, and the *National health data dictionary*.

The *National health data dictionary* can be accessed online at:

/content/index.phtml/itemId/268110

The Data Quality Statement for the 2012–13 NHMD can be accessed on the AIHW website at:

/content/index.phtml/itemId/546749

Relevance:

The purpose of the NMDS for Admitted patient care is to collect information about care provided to admitted patients in Australian hospitals. The scope of the NMDS is episodes of care for admitted patients in essentially all hospitals in Australia, including public and private acute and psychiatric hospitals, free-standing day hospital facilities, alcohol and drug treatment hospitals and dental hospitals. Hospitals operated by the Australian Defence Force, corrections authorities and in Australia's off-shore territories are not included. Hospitals specialising in ophthalmic aids and other specialised acute medical or surgical care are included.

The hospital separations data do not include episodes of non-admitted patient care provided in outpatient clinics or emergency departments.

The analyses by remoteness and socioeconomic status are based on the Statistical Area level 2 (SA2) of usual residence of the patient. The Socio-Economic Indexes for Areas (SEIFA) categories for socioeconomic status represent approximately the same proportion of the national population, but do not necessarily represent that proportion of the population in each state or territory (each SEIFA decile or quintile represents 10 per cent and 20 per cent respectively of the national population). The SEIFA scores for each SA2 are derived from 2011 Census data and represent the attributes of the population in that SA2 in 2011.

Separations are reported by jurisdiction of hospitalisation, regardless of the jurisdiction of usual residence. Hence, rates represent the number of separations for patients living in each remoteness area or SEIFA population group (regardless of their jurisdiction of residence) divided by the total number of separations for people living in that remoteness area or SEIFA population group and hospitalised in the reporting jurisdiction. This is relevant if significant numbers of one jurisdiction's residents are treated in another jurisdiction.

The unplanned and/or unexpected readmissions counted in the computation for this indicator have been limited to those having a principal diagnosis of a post-operative adverse event for which a specified ICD-10-AM diagnosis code has been assigned. Unplanned and/or unexpected readmissions attributable to other causes have not been included.

With regard to hysterectomy, there are three related procedures that are not defined for the indicator, and therefore have not been included in any *National Healthcare Agreement* (NHA) reporting (all years). These are (in ICD-10-AM 7th edition), 35750-00—Laparoscopically assisted vaginal hysterectomy; 35753-02—Laprascopically assisted vaginal hysterectomy with removal of adnexa; and 35653-00—Subtotal abdominal hysterectomy. For public hospitals, there were 1,692 separations in 2012–13 that involved one of these procedures.

The calculation of the indicator is limited to public hospitals and to readmissions to the same hospital.

Other Australians includes separations for non-Indigenous people and those for whom Indigenous status was not stated.

Accuracy:

For 2012–13, almost all public hospitals provided data for the NHMD. The exception was a mothercraft hospital in the Australian Capital Territory.

The majority of private hospitals provided data, with the exception of the private day hospital facilities in the Australian Capital Territory.

States and territories are primarily responsible for the quality of the data they provide. However, the AIHW undertakes extensive validations on receipt of data. Data are checked for valid values, logical consistency and historical consistency. Where possible, data in individual data sets are checked against data from other data sets. Potential errors are queried with jurisdictions, and corrections and resubmissions may be made in response to these edit queries. The AIHW does not adjust data to account for possible data errors or missing or incorrect values.

The AIHW report *Indigenous identification in hospital separations data: quality report* (AIHW 2013) found that nationally, about 88% of Indigenous Australians were identified correctly in hospital admissions data in the 2011–12 study period, and the 'true' number of separations for Indigenous Australians was about 9% higher than reported. The report recommended that the data for all jurisdictions are used in analysis of Indigenous hospitalisation rates, for hospitalisations in total in national analyses of Indigenous admitted patient care. However, these data should be interpreted with caution as there is variation among jurisdictions in the quality of the Indigenous status data.

For this indicator, the linkage of separations records is based on the patient identifiers which are reported for public hospitals. As a consequence, only readmissions to the same public hospital are in scope; and readmissions to different public hospitals and readmissions involving private hospitals are not included.

For Western Australia the indicator was calculated and supplied by Western Australia Health.

To calculate this indicator, readmissions within the 2012–13 financial year had to be linked to an initial separation (which involved the specified surgery) that occurred within the 2012–13 financial year. The 19 May was specified as the cut-off date for the initial separation to exclude initial separations from the denominator for which a readmission may occur in the following financial year. The use of the cut-off date ensures that the numerator and denominator for this indicator are consistent.

Data on procedures are recorded uniformly using the Australian Classification of Health Interventions. Data on diagnoses are recorded uniformly using the ICD-10-AM.

Cells have been suppressed to protect confidentiality where the presentation could identify a patient or a service provider or where rates are likely to be highly volatile, for example where the denominator is very small. The following rules were applied:

- Rates were suppressed where the numerator was less than 5 and/or the denominator was less than 200.
- Rates were suppressed where the numerator was zero and the denominator was less than 200.
- Counts were suppressed when the number was less than 5.

Data for private hospitals in Tasmania, Australian Capital Territory and the Northern Territory were suppressed.

Coherence:

The information presented for this indicator is calculated using the same methodology as data published in *Australian hospital statistics 2012–13* and the *National healthcare agreement: performance report 2012–13*.

The data can be meaningfully compared across reference periods for all jurisdictions.

However, caution is required when analysing SEIFA over time for the reasons outlined above (see Relevance section). Methodological variations also exist in the application of SEIFA to various data sets and performance indicators. Any comparisons of the SEIFA analysis for this indicator with other related SEIFA analysis should be undertaken with careful consideration of the methods used, in particular the SEIFA Census year, the SEIFA index used and the approach taken to derive quintiles and deciles.

National level data disaggregated by Indigenous status for 2007–08 included data from NSW, Qld, WA, SA and NT. National level data disaggregated by Indigenous status for 2008–09, 2009–10 and 2010–11 included data from NSW, Victoria, Qld, WA, SA and NT. National level data disaggregated by Indigenous status for 2011–12 and subsequent years includes data from all eight states and territories. Therefore, data disaggregated by Indigenous status from 2007–08 is not comparable to 2008–09, 2009–10 and 2010–11, and data for 2011–12 and subsequent years are not comparable with data for 2010–11 and prior years.

In 2011, the ABS updated the Socio-Economic Indices for Areas (SEIFA), based on the 2011 ABS Census of Population and Housing. The new SEIFA will be referred to as SEIFA 2011, and the previous SEIFA as SEIFA 2006. Data for 2007–08 through to 2010–11 reported for SEIFA quintiles are reported using SEIFA 2006 at the Statistical Local Area (SLA) level. Data for 2011–12 are reported using SEIFA 2011 at the SLA level. Data for 2012–13 are reported using SEIFA 2011 at the Statistical Area level 2 (SA2). The AIHW considers the change from SEIFA 2006 to SEIFA 2011, and the change from SLA to SA2 to be series breaks when applied to data supplied for this indicator. Therefore, SEIFA data for 2010–11 and previous years are not directly comparable with SEIFA data for 2011–12, and SEIFA data for 2011–12 and previous years are not directly comparable with SEIFA data for 2012–13 and subsequent years.

Relational attributes

Related metadata references:

Supersedes National Healthcare Agreement: PI 23-Unplanned hospital readmission rates, 2014 QS
Health, Superseded 14/01/2015

Has been superseded by National Healthcare Agreement: PI 23-Unplanned hospital readmission rates, 2016 QS
Health, Superseded 31/01/2017

Indicators linked to this Data Quality statement:

National Healthcare Agreement: PI 23-Unplanned hospital readmission rates, 2015
Health, Superseded 08/07/2016