National Healthcare Agreement: PI 23-Unplanned hospital readmission rates, 2017 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 diagnosis code from the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) 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 Western Australia 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.
- The Australian Institute of Health and Welfare (AIHW) has developed a revised peer grouping for analysing and interpreting hospitals statistics and performance information. (See *Australian Hospital Peer Groups*(AIHW 2015)). Peer group data calculated for this indicator for previous reports was calculated using the previous AIHW peer group classification. Peer group data for this report has been calculated using the current AIHW peer group classification. Data reported using the previous peer group classification is not comparable with data reported using the current AIHW peer group classification.
- 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 National Non-admitted Patient Emergency Department Care Database (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 2014–15.

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 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 2014–15 NHMD can be accessed on the AIHW website at: /content/index.phtml/itemId/638202
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 dental, 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% and 20% 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 4 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 Australian Classification of Health Interventions (ACHI) 8th edition), 35750-00—Laparoscopically assisted vaginal hysterectomy; 35753-02—Laparoscopically assisted vaginal hysterectomy with removal of adnexa; 35653-00—Subtotal abdominal hysterectomy; and 90448-00—Subtotal laparoscopic abdominal hysterectomy. For public hospitals, there were 6,274 separations in 2014–15 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 2014–15, almost all public hospitals provided data for the NHMD. The exception was a mothercraft hospital 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 2014–15 financial year had to be linked to an initial separation (which involved the specified surgery) that occurred within the 2014–15 financial year. 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 ACHI. 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.

| Coherence: | The information presented for this indicator is calculated using the same methodology as data published in *Admitted patient care 2014–15: Australian hospital statistics*(AIHW 2016). |

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.

The AIHW has developed a revised peer grouping for analysing and interpreting hospitals statistics and performance information. (See AIHW 2015.) Peer group data calculated for this indicator for previous reports was calculated using the previous AIHW peer group classification. Peer group data for this report has been calculated using the current AIHW peer group classification. Data reported using the previous peer group classification is not comparable with data reported using the current AIHW peer group classification. Data based on the current AIHW peer group classification has been backcast to 2007–08 for this report.

National-level data disaggregated by Indigenous status for 2007–08 included data from New South Wales, Queensland, Western Australia, South Australia and the Northern Territory. National-level data disaggregated by Indigenous status for 2008–09, 2009–10 and 2010–11 included data from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. 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 Australian Bureau of Statistics (ABS) updated the standard geography used in Australia for most data collections from the Australian Standard Geographical Classification to the Australian Statistical Geography Standard. Also updated at this time were remoteness areas and the SEIFA, based on the 2011 ABS Census of Population and Housing. The new remoteness areas are referred to as RA 2011, and the previous remoteness areas as RA 2006. The new SEIFA is referred to as SEIFA 2011, and the previous SEIFA as SEIFA 2006.

Data for 2007–08 through to 2011–12 reported by remoteness are reported for RA 2006. Data for 2012–13 and 2013–14 are reported for RA 2011. The AIHW considers the change from RA 2006 to RA 2011 to be a series break when applied to data supplied for this indicator, therefore remoteness data for 2011–12 and previous years are not directly comparable to remoteness data for 2012–13 and subsequent years.

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.

Source and reference attributes

| Reference documents: | Australian Institute of Health and Welfare (AIHW) 2015. Australian hospital peer groups. Cat. no. HSE 170. Canberra: AIHW. Visited 26 June 2017, http://www.aihw.gov.au/publication-detail/?id=60129553446. |

AIHW 2016. Admitted patient care 2014–15: Australian hospital statistics. Cat. no. HSE 172. Canberra: AIHW. Visited 26 June 2017, http://www.aihw.gov.au/publication-detail/?id=60129554702.

Relational attributes

Related metadata references:	Supersedes [National Healthcare Agreement: PI 23-Unplanned hospital readmission rates, 2016 QS](#) [Health](#), Superseded 31/01/2017 Has been superseded by [National Healthcare Agreement: PI 23-Unplanned hospital readmission rates, 2018 QS](#) [Health](#), Standard 30/01/2018
Indicators linked to this Data Quality statement:	[National Healthcare Agreement: PI 23–Unplanned hospital readmission rates, 2017](#) [Health](#), Superseded 30/01/2018