National Healthcare Agreement: PI 09-Incidence of heart attacks, 2014 QS

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Identifying and definitional attributes

Metadata item type: Data Quality Statement

METEOR identifier: 517754

Registration status: Health!, Superseded 14/01/2015

Data quality

Data quality statement summary:

- This indicator estimates the incidence of acute coronary events from the National Hospital Morbidity Database (NHMD) and the National Mortality Database (NMD).
- It is an interim indicator while validation work is underway.
- The accuracy of the estimates is reliant on the accuracy and consistency of coding of the principal diagnosis and underlying cause of death in each jurisdiction. It also relies on the accuracy of coding of transfers to another acute hospital and of death in hospital.
- Variations in key variables (particularly in transfer rates in hospitals) across jurisdictions indicate that the method of estimation may lead to an under-estimate of incidence in some jurisdictions and an over-estimate in others. The extent of this cannot be measured until the algorithm is validated. As a result, State and Territory estimates are not presented.
- The estimates provided in Table 9.1 (Table NHA.9.1: Rate of heart attacks, by age and sex, people aged 25 years and over, 2007 to 2011 (rate per 100,000 population); Steering Committee for the Review of Government Service Provision, 2013, *National Agreement performance information 2012–13: National Healthcare Agreement*, Producivity Commission, Canberra), by sex, are derived using data from all jurisdictions. The estimates shown in Table 9.2 (Table NHA.9.2: Age standardised rate of heart attacks, by State and Territory, people 25 years and over, by Indigenous status, 2007 to 2011 (rate per 100,000 population); Steering Committee for the Review of Government Service Provision, 2013, *National Agreement performance information 2012–13: National Healthcare Agreement, Producivity Commission*, Canberra) for Indigenous and Other Australians are derived using only data from the five jurisdictions where the quality of identification is considered reasonable in both the NHMD and the NMD (NSW, Qld, WA, SA and NT).

Institutional environment: The Australian Institute of Health and Welfare (AIHW) has calculated this indicator using data extracted from the AIHW NHMD, the NMD and Australian Bureau of Statistics (ABS) population data.

The AIHW is a 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 statutory authority established in 1987, 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.

Timeliness: This indicator reports the latest information available (for years 2007 to 2011).

Accessibility:

The AIHW provide a variety of products that draw upon the NMD and NHMD including online data cubes and reports.

These products may be accessed on the AIHW website:

http://www.aihw.gov.au/hospitals-data/

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

Interpretability:

The NHMD data were supplied to the AIHW by state and territory health authorities. The state and territory health authorities received these data from public and private 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 administrative arrangements, contractual requirements or legislation.

The scope of the NHMD 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.

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

States and territories supplied these data to the AIHW under the terms of the National Health Information Agreement.

The data quality statement for the AIHW National Hospital Morbidity Database can be found in Appendix 1 of Australian hospital statistics 2011-12 or at http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129543822

Year specific data quality statements for the National Hospital Morbidity Database 2010-11 and 2011-12 can be found at /content/index.phtml/itemId/511338 and

/content/index.phtml/itemId/529483

NMD

The AIHW NMD contains cause of death information for all deaths registered in Australia. Information is provided to the AIHW by the Registrars of Births, Deaths and Marriages and coded nationally by the Australian Bureau of Statistics (ABS).

The data quality statements for the AIHW National Mortality Database can be found in the following ABS publications:

ABS Quality declaration summary for Causes of death, Australia, 2011 (cat. no. 3303.0)http://www.abs.gov.au/Ausstats/abs@.nsf/0/D4A300EE1E04AA43CA2576E800156A24?OpenDocument and

ABS Quality declaration summary for Deaths, Australia, 2011 (cat. no. 3302.0)http://www.abs.gov.au/Ausstats/abs@.nsf/0/9FD0E6AAA0BB3388CA25750B000E3CF5?OpenDocument

Relevance:

The data provide an estimate of the incidence of acute coronary events in Australia, based on administrative data currently available. Non-fatal events are estimated from the National Hospital Morbidity Database (NHMD) and fatal events from the National Mortality Database (NMD).

It is an estimate of 'events', not individuals. It should be noted that an individual may have multiple events in the one year or in different years. An algorithm is used to take account of duplicates across the two data sets and multiple episodes for the one event within the NHMD. To capture each heart attack event, and to capture it only once, the algorithm relies on the accurate coding of hospital and deaths data in each jurisdiction and consistency between the two. This is a reasonable approach as it assumes that all heart attack events will result either in hospitalisation or death.

The method of estimation has been developed based on an analysis of current hospital and deaths data (AIHW 2011. Monitoring acute coronary syndrome using national hospital data: an information paper on trends and issues. Cat. No. CVD 57. Canberra). This method has not yet been validated and should therefore be considered interim. The AIHW is currently undertaking work to validate the algorithm.

The accuracy of the estimates rely on the accuracy of coding of the principal diagnosis (as either AMI or UA) in the NHMD and of the underlying cause of death (as acute coronary heart disease) in the NMD. It also relies on the accuracy of coding of transfers to another acute hospital and of death in hospital.

One acute coronary event may involve multiple hospitalisations, due to transfers for treatment and on-going care. In the NHMD these are recorded as multiple unlinked hospital episodes. Therefore, to estimate the number of non-fatal events only those episodes that did not end in a transfer to another acute hospital or end in a death in hospital are counted.

The coding of principal diagnosis and the coding of death in hospital in the NHMD are likely to be of reasonable quality. However, the coding of transfers may vary across hospitals and jurisdictions.

It is possible that the method underestimates the number of fatal acute coronary deaths by only counting those deaths coded as International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10) I20-I24. This excludes chronic coronary heart disease (ICD-10 I25). It is possible that some deaths from heart attacks are coded as chronic heart disease, especially in older people. However, the extent of this is unknown until validation is undertaken.

The year in which the event occurred is determined from the separation date for hospitalisations, and from the year of registration of death.

Data are reported by the state or territory of residence of the person at the time of hospitalisation or death.

Variations in key variables (particularly in transfer rates) across jurisdictions indicate that the method of estimation may lead to an under-estimate of incidence in some jurisdictions and an over-estimate in others. This variation may be due to differences in treatment patterns but could also be due to differences in coding practices. As the extent of this cannot be measured until the algorithm is validated estimates are not reported at a jurisdictional level.

Estimates for Indigenous and Other Australians, are based on data from those jurisdictions where the quality of identification is considered reasonable in both the NHMD and the NMD. Only NSW, Qld, WA, SA and the NT are included in the national estimates reported by Indigenous status. Estimates for Other Australians are calculated by subtracting Indigenous estimates from total estimates for the five jurisdictions and divided by the population of Other Australians in those jurisdictions. Other Australians therefore includes non-Indigenous people and people whose Indigenous status was not stated or inadequately described.

Accuracy:

The method of estimation has not yet been validated and possible errors are not able to be calculated at this time. Estimates should be treated with caution until the method is validated. The AIHW is currently undertaking work to validate the method with results expected in 2013.

The accuracy of the estimates will depend on the accuracy of coding in the NHMD and the NMD (see data sources for DQS for each data source). In particular the accuracy of coding of principal diagnosis, hospital transfers, deaths in hospital and underlying cause of death are central to the accuracy of the estimates.

The accuracy of Indigenous estimates is also reliant on the appropriate identification of Indigenous people in the NHMD and the NMD. Only five jurisdictions are considered to have reasonable quality Indigenous identification in both datasets required to estimate this indicator (the NHMD and the NMD). The five jurisdictions are NSW, QLD, WA, SA and the NT. Indigenous counts for the NT exclude acute coronary events treated in the private hospital in the NT. All non-fatal events treated in the private hospital in the NT are therefore included in the incidence counts for Other Australians.

The computation method for age-standardisation of data reported by Indigenous status has been refined since the previous reporting cycle.

Deaths occurring between 1992 and 2006 but registered in 2010 by the Queensland Registry of Births, Deaths and Marriages are excluded from the estimates for Indigenous and Other Australians.

NMD data for 2009 and 2010 has been revised since the previous reporting cycle. NMD data for 2010 and 2011 may be subject to further revisions.

Coherence:

This is the second year in which this indicator has been reported. The method should be considered as interim until validation is complete.

Source and reference attributes

Submitting organisation: Australian Institute of Health and Welfare

Relational attributes

Related metadata references:

Supersedes National Healthcare Agreement: PI 09-Incidence of heart attacks, 2013 QS Health!, Superseded 14/01/2015

Has been superseded by National Healthcare Agreement: PI 09-Incidence of heart attacks (acute coronary events), 2015 QS Health!, Superseded 08/07/2016

Indicators linked to this Data Quality statement:

National Healthcare Agreement: PI 09-Incidence of heart attacks, 2014 Health!, Superseded 14/01/2015