

National Healthcare Agreement: PI 09-Incidence of heart attacks (acute coronary events), 2015 QS

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Identifying and definitional attributes

Metadata item type:	Data Quality Statement
METEOR identifier:	559125
Registration status:	Health! , Superseded 08/07/2016

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).
- The methodology for estimating the incidence of acute coronary events is based on AIHW analysis of hospital and mortality data, and has been validated using linked data from WA and NSW.
- 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.
- Comparisons between jurisdictions should not be made as variations in key variables (particularly in transfer rates between hospitals) are likely to impact on jurisdictional comparability. The validation study showed an underestimation of the incidence of acute coronary events in WA and NSW. The extent of this cannot be measured precisely for other jurisdictions without linked data sets for all states and territories.
- The estimates provided in Table 9.1, by age and sex, are derived using data from all jurisdictions.
- The estimates in Table 9.2 for each jurisdiction are derived using state/territory of usual residence.
- The estimates shown in Table 9.3 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 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 authoritative 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 2012).

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:NHMD

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 /content/index.phtml/itemId/568730 with further data quality information in Appendix 1 of *Australian hospital statistics 2012-13* or at <http://www.aihw.gov.au/publication-detail/?id=60129546922>

NMD

The AIHW NMD contains cause of death information for all deaths registered in Australia. Deaths data are provided to the AIHW by the Registries of Births, Deaths and Marriages and the National Coronial Information System and coded by the ABS. The data are maintained by the AIHW in the National Mortality Database.

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 (cat. no. 3303.0) www.abs.gov.au/ausstats/abs@.nsf/mf/3303.0/ and

ABS Quality declaration summary for Deaths, Australia (cat. no. 3302.0) www.abs.gov.au/ausstats/abs@.nsf/mf/3302.0/

Relevance:

The data provide an estimate of the incidence of acute coronary events in Australia and in each jurisdiction, 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. Each would be counted. Further, an individual may have one acute coronary event which resulted in multiple hospitalisations, due to transfers for treatment and on-going care. In the NHMD these are recorded as multiple unlinked hospital episodes. The method of estimation attempts to take account of duplicate events in the databases by excluding hospitalisations ending in a transfer to another acute hospital (so that each acute coronary syndrome (ACS) event is counted only once, regardless of the number of hospitalisation episodes per event) and by excluding hospitalisations for ACS ending in death in hospital (as these should be picked up in the NMD data).

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) <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=10737420971>, and validated using linked data from WA and NSW (AIHW 2014 Acute coronary syndrome: validation of the method used to monitor incidence in Australia. Cat. No. CVD 68. Canberra) <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129547560>.

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 usual residence of the person at the time of hospitalisation or death.

Variability across jurisdictions (particularly in hospital transfer rates) indicates that the method of estimation may lead to an underestimation of incidence in some jurisdictions. This variation may be due to differences in treatment and referral patterns. Rates 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 estimates reported by Indigenous status. Rates for Other Australians are calculated by subtracting Indigenous estimates from total estimates for the five jurisdictions 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: Recent validation work based on linked and unlinked data from WA and NSW has shown that the method underestimates the incidence of acute coronary events in at least those states. Nonetheless, these estimates provide a reasonable measure of the incidence of acute coronary events and may be useful for recording and monitoring each jurisdiction's progress over time.

Comparison between jurisdictions should not be made as the validation work suggested variations in the under-count of acute coronary event rates, as observed in WA and NSW (6% in WA and 11% in NSW in 2007). Factors such as differing treatment and referral patterns across states/territories are likely to have an impact on administrative records and affect jurisdictional comparability.

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 (the NHMD and the NMD) to estimate this indicator. 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.

Data for 2010 have been adjusted for the additional deaths arising from outstanding registrations of deaths in Queensland in 2010. 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. For more details please refer to Technical note 3 in *Causes of death, Australia, 2010* (ABS cat. no. 3303.0).

NMD data for 2010 and 2011 have been revised since the previous reporting cycle. In this reporting cycle, deaths registered in 2010 and earlier are based on the final version of cause of death data; deaths registered in 2011 and 2012 are based on revised and preliminary versions respectively and are subject to further revision by the ABS.

Coherence: This is the third year in which this indicator has been reported. This is the first year in which this indicator is reported for each jurisdiction.

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, 2014 QS](#)
[Health!](#), Superseded 14/01/2015

Has been superseded by [National Healthcare Agreement: PI 09-Incidence of heart attacks \(acute coronary events\), 2016 QS](#)
[Health!](#), Superseded 31/01/2017

Indicators linked to this Data Quality statement: [National Healthcare Agreement: PI 09-Incidence of heart attacks \(acute coronary events\), 2015](#)
[Health!](#), Superseded 08/07/2016