

# National Healthcare Agreement: PI 09-Incidence of heart attacks (acute coronary events), 2018 QS

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## Identifying and definitional attributes

<b>Metadata item type:</b>	Data Quality Statement
<b>METEOR identifier:</b>	681633
<b>Registration status:</b>	<a href="#">Health</a> , Standard 30/01/2018

## 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 Australian Institute of Health and Welfare (AIHW) analysis of hospital and mortality data, and has been validated using linked data from Western Australia and New South Wales.
- 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 assessment of validity showed an underestimation of the incidence of acute coronary events in Western Australia and New South Wales. 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.
- NMD data from 5 jurisdictions (New South Wales, Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the AIHW as having adequate Indigenous identification from 1998 onwards. The estimates shown in Table 9.3 for Indigenous and other Australians are derived using only data from these five jurisdictions because the quality of identification is considered reasonable in both the NHMD and the NMD.

**Institutional environment:** The 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](#).

**Timeliness:** This indicator reports the latest information available (for years 2012 to 2015).

**Accessibility:** The AIHW provides 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/>

<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 NHMD can be found in </content/index.phtml/itemId/638202>

with summary data quality information in Appendix A of [Admitted patient care 2015–16: Australian hospital statistics](#) (AIHW 2017).

**NMD**

Cause of Death Unit Record File data are provided to the AIHW by the Registries of Births, Deaths and Marriages and the National Coronial Information System (managed by the Victorian Department of Justice) and include cause of death coded by the ABS. The data are maintained by the AIHW in the NMD.

The data quality statements for the AIHW NMD can be found in the following ABS publications:

ABS Quality declaration summary for [Causes of death, Australia](#) (ABS 2017a) and ABS quality declaration summary for [Deaths, Australia](#) (ABS 2017b). For more information on the AIHW NMD, see [Deaths data at AIHW](#).

**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 NHMD and fatal events from the 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 transfers 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 hospital and deaths data validated using linked data from Western Australia and New South Wales ([AIHW 2014](#)).

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 but could also be due to differences in data recording practices. 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. NMD data from 5 jurisdictions (New South Wales, Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the AIHW as having adequate Indigenous identification from 1998 onwards and only these 5 jurisdictions 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:** Assessment of validity based on linked and unlinked data from Western Australia and New South Wales 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 assessment of validity suggested variations in the under-count of acute coronary event rates, as observed in Western Australia and New South Wales (6% in Western Australia and 11% in New South Wales in 2007). Factors such as differing treatment and referral patterns and data recording practices 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 data quality statements 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. NMD data from 5 jurisdictions (New South Wales, Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the AIHW as having adequate Indigenous identification from 1998 onwards and only these 5 jurisdictions are included in the estimates reported by Indigenous status. Since 2012, recording of Indigenous status in private hospitals in the Northern Territory has improved, resulting in the incidence of heart attacks being captured for both Indigenous and other Australians. Prior to 2012, private hospitals in the Northern Territory did not record information on Indigenous status, and as such all non-fatal heart attack events treated in the private hospital in the Northern Territory were included in the incidence counts for other Australians.

In this reporting cycle, deaths registered in 2012 and earlier are based on the final version of cause of death data; deaths registered in 2013 are based on the revised version and deaths registered in 2014 and 2015 are based on preliminary versions and are subject to further revision by the ABS.

**Coherence:** This is the sixth year in which this indicator has been reported. This is the fourth year in which this indicator is reported for each jurisdiction.

## Source and reference attributes

**Submitting organisation:** Australian Institute of Health and Welfare

**Reference documents:** ABS (Australian Bureau of Statistics) 2017a. Causes of death Australia. ABS cat. no. 3303.0. Canberra: ABS. Viewed 20 June 2017, [www.abs.gov.au/ausstats/abs@.nsf/mf/3303.0/](http://www.abs.gov.au/ausstats/abs@.nsf/mf/3303.0/)

ABS 2017b. Deaths, Australia, 2015. ABS cat. no. 3302.0. Canberra: ABS. Viewed 20 June 2017, [www.abs.gov.au/ausstats/abs@.nsf/mf/3302.0/](http://www.abs.gov.au/ausstats/abs@.nsf/mf/3302.0/)

AIHW (Australian Institute of Health and Welfare) 2014. Acute coronary syndrome: validation of the method used to monitor incidence in Australia. Cat. no. CVD 68. Canberra: AIHW. Viewed on 20 June 2017, <https://www.aihw.gov.au/reports/heart-stroke-vascular-disease/acute-coronary-syndrome-validation-of-the-method/contents/table-of-contents>.

AIHW 2017. Admitted patient care 2015–16: Australian hospital statistics. Cat. no. HSE 185. Canberra: AIHW. Viewed 9 August 2017, <https://www.aihw.gov.au/reports/hospitals/admitted-patient-care-ahs-2015-16/contents/table-of-contents>.

## Relational attributes

**Related metadata references:** Supersedes [National Healthcare Agreement: PI 09-Incidence of heart attacks \(acute coronary events\), 2017 QS Health, Standard 31/01/2017](#)

**Indicators linked to this  
Data Quality statement:**

[National Healthcare Agreement: PI 09—Incidence of heart attacks \(acute coronary events\), 2018](#)

[Health](#), Superseded 19/06/2019