Indigenous Better Cardiac Care measure: 3.3-Hospitalised acute coronary syndrome events that included diagnostic angiography or definitive revascularisation procedures, 2016

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Indigenous Better Cardiac Care measure: 3.3-Hospitalised acute coronary syndrome events that included diagnostic angiography or definitive revascularisation procedures, 2016

Identifying and definitional attributes

Metadata item type:	Indicator
Indicator type:	Indicator
Short name:	3.3-Diagnostic angiography or a definitive revascularisation procedure for hospitalised acute coronary syndrome (ACS)
METEOR identifier:	657007
Registration status:	Health, Standard 17/08/2017
Description:	Proportion of hospitalised acute coronary syndrome (ACS) events among people aged 18 and over that included diagnostic angiography and/or a definitive revascularisation procedure—that is percutaneous coronary intervention (PCI) or coronary artery bypass graft (CABG—open heart surgery with grafting of vessels) —by Aboriginal and Torres Strait Islander status.
Rationale:	This measure falls within Priority area 3 of the Better Cardiac Care project— guideline-based therapy for acute coronary syndrome. This priority area is based on the premise that all Aboriginal and Torres Strait Islander people with ACS should receive guideline-based therapy.

ACS is a broad spectrum of acute clinical presentations, ranging from unstable angina to acute myocardial infarction (AMI).

Barriers to accessing timely ACS treatment can be explained, in part, by geographical disparity in services. Mapping of cardiac services suggests that 60% of Indigenous Australians cannot access a PCI-capable hospital within an hour's drive of their home (Clark et al. 2012). But differences in cardiac procedure rates can also be affected by other factors (for example, comorbid conditions) (Cunningham 2002; Randall et al. 2013).

measure reported for this indicator (as described in this specification) is different from the agreed measure (see AIHW 2016 for details). Specifically, the agreed measure for this indicator is:

- Proportion of people with ACS who received diagnostic angiography or a definitive revascularisation procedure (PCI or CABG) within the index admission and 30 days of the index admission, by Aboriginal and Torres Strait Islander status.

Full reporting against this indicator is not possible using available data. Data are not available on whether the procedures were received within 30 days of the index admission.

The reported measure excludes people aged under 18 due to small numbers.

Indicator set:	Better Cardiac Care measures for Aboriginal and Torres Strait Islander people (2016) Health, Standard 17/08/2017

Collection and usage attributes

Population group age from:	18 years

Computation description:	Number of hospitalised ACS events among people aged 18 and over that included diagnostic angiography or a definitive revascularisation procedure, divided by the number of hospitalised ACS events among people aged 18 and over, and multiplied by 100.

Data are presented as a percentage.

Crude rates are calculated for Indigenous Australians.

Age-standardised rates are calculated for comparisons between Indigenous and non-Indigenous Australians, and for analysis of change over time.

Data are based on financial years.

Definitions:

Hospitalised ACS event—in the context of this measure, refers to an episode of care for an admitted patient with a principal diagnosis of ACS (see definition below), a care type of 'acute care', an urgency of admission of 'emergency', and a separation mode not equal to 'transferred to (an)other acute hospital'.

*Hospitalisation (**separation**)*—an episode of care for an admitted patient that can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change of care type (for example, from acute care to palliative care).

Acute coronary syndrome (ACS)—describes an AMI (heart attack) and unstable angina. Identified as those separations with a principal diagnosis of STEMI (ICD-10-AM 8th edn. codes I21.0, I21.1, I21.2 or I21.3), non-ST-segment-elevation myocardial infarction (NSTEMI) (I21.4), unspecified AMI (I21.9) or unstable angina (I20.0).

Diagnostic angiography—a medical imaging technique used to visualise the inside of blood vessels. It allows the diagnosis of various disorders and injuries to the blood vessels. Relevant Australian Classification of Health Interventions (ACHI) procedure codes (8th edn.) are: 38215-00, 38218-00, 38218-01, 38218-02.

Definitive revascularisation—a procedure used to increase coronary artery blood flow (such as PCI and CABG). Relevant ACHI procedure codes (8th edn.) are listed below:

- PCI: 38300-00, 38300-01, 38303-00, 38303-01, 38306-00, 38306-01, 38306-02, 38306-03, 38306-04, 38306-05, 38312-00, 38312-01, 38315-00, 38309-00, 38318-00, 38318-01, 38505-00, 90218-00, 90218-01, 90218-02, 90218-03.
- 38497-00, 38497-01, 38497-02, 38497-03, 38497-04, 38497-05, 38497-06, 38497-07, 38500-00, 38500-01, 38500-02, 38500-03, 38500-04, 38500-05, 38503-00, 38503-01, 38503-02, 38503-03, 38503-04, 38503-05, 90201-00, 90201-01, 90201-02, 90201-03.

Computation:	Crude rate: (Numerator ÷ Denominator) x 100

Age-standardised rate: calculated using the direct method, and the Australian standard population as at 30 June 2001.

Numerator:	Number of admitted patient separations in the reference period among people aged 18 and over with a principal diagnosis of ACS (see 'Computation description' for definition), a care type of 'acute care', an urgency of admission of 'emergency', and separation mode not equal to 'transferred to (an)other acute hospital', with a procedure code for diagnostic angiography, PCI or CABG (see 'Computation description' for definition).

Numerator data elements:	**Data Element / Data Set**

Episode of admitted patient care—admission date, DDMMYYYY

Data Source

National Hospital Morbidity Database (NHMD)

NMDS / DSS

[Admitted patient care NMDS 2013-14](#)

Guide for use

Used together with date of birth for calculation of age.

Data source type: Administrative by-product data

Data Element / Data Set

[Episode of admitted patient care—admission urgency status, code N](#)

Data Source

[National Hospital Morbidity Database (NHMD)](#)

NMDS / DSS

[Admitted patient care NMDS 2013-14](#)

Guide for use

Data source type: Administrative by-product data

Data Element / Data Set

[Episode of admitted patient care—separation mode, code N](#)

Data Source

[National Hospital Morbidity Database (NHMD)](#)

NMDS / DSS

[Admitted patient care NMDS 2013-14](#)

Guide for use

Data source type: Administrative by-product data

Data Element / Data Set

[Person—date of birth, DDMMYYYY](#)

Data Source

[National Hospital Morbidity Database (NHMD)](#)

NMDS / DSS

[Admitted patient care NMDS 2013-14](#)

Guide for use

Used together with date of admission for calculation of age.

Data source type: Administrative by-product data

Data Element / Data Set

[Hospital service—care type, code N[N]](#)

Data Source

[National Hospital Morbidity Database (NHMD)](#)

NMDS / DSS

[Admitted patient care NMDS 2013-14](#)

Guide for use

Data source type: Administrative by-product data

Data Element / Data Set

[Episode of admitted patient care—procedure, code (ACHI 8th edn) NNNNN-NN](#)

Data Source

[National Hospital Morbidity Database (NHMD)](#)

NMDS / DSS

[Admitted patient care NMDS 2013-14](#)

Guide for use

Data source type: Administrative by-product data

Data Element / Data Set

[Episode of care—principal diagnosis, code (ICD-10-AM 8th edn) ANN{.N[N]}](#)

Data Source

[National Hospital Morbidity Database (NHMD)](#)

NMDS / DSS

[Admitted patient care NMDS 2013-14](#)

Guide for use

Data source type: Administrative by-product data

Denominator: Number of admitted patient separations in the reference period among people aged 18 and over with a principal diagnosis of ACS (see 'Computation description' for definition), a care type of 'acute care', an urgency of admission of 'emergency', and separation mode not equal to 'transferred to (an)other acute hospital'.

Denominator data elements:

Data Element / Data Set

[Episode of admitted patient care—admission date, DDMMYYYY](#)

Data Source

[National Hospital Morbidity Database (NHMD)](#)

NMDS / DSS

[Admitted patient care NMDS 2013-14](#)

Guide for use

Data source type: Administrative by-product data

Used together with date of birth for calculation of age

Data Element / Data Set

[Episode of admitted patient care—admission urgency status, code N](#)

Data Source

[National Hospital Morbidity Database (NHMD)](#)

NMDS / DSS

Admitted patient care NMDS 2013-14

Guide for use

Data source type: Administrative by-product data

Data Element / Data Set

Episode of admitted patient care—separation mode, code N

Data Source

National Hospital Morbidity Database (NHMD)

NMDS / DSS

Admitted patient care NMDS 2013-14

Guide for use

Data source type: Administrative by-product data

Data Element / Data Set

Person—date of birth, DDMMYYYY

Data Source

National Hospital Morbidity Database (NHMD)

NMDS / DSS

Admitted patient care NMDS 2013-14

Guide for use

Data source type: Administrative by-product data

Used together with date of admission for calculation of age.

Data Element / Data Set

Hospital service—care type, code N[N]

Data Source

National Hospital Morbidity Database (NHMD)

NMDS / DSS

Admitted patient care NMDS 2013-14

Guide for use

Data source type: Administrative by-product data

Data Element / Data Set

Episode of care—principal diagnosis, code (ICD-10-AM 8th edn) ANN{.N[N]}

Data Source

National Hospital Morbidity Database (NHMD)

NMDS / DSS

Admitted patient care NMDS 2013-14

Guide for use

Data source type: Administrative by-product data

Disaggregation:

Current period (2011–14) by:

- Indigenous status, and type of procedure (diagnostic angiography, PCI or CABG)
- Indigenous status, sex and age group (18–34, 35–44, 45–54, 55–64, 65+)
- Indigenous status and remoteness area
-

Time series (2004–05 to 2013–14), New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined by:

- Indigenous status.

Disaggregation data elements:

Data Element / Data Set

[Episode of admitted patient care—admission date, DDMMYYYY](#)

Data Source

[National Hospital Morbidity Database (NHMD)](#)

NMDS / DSS

[Admitted patient care NMDS 2013-14](#)

Guide for use

Used together with date of birth for calculation of age

Data source type: Administrative by-product data

Data Element / Data Set

[Person—date of birth, DDMMYYYY](#)

Data Source

[National Hospital Morbidity Database (NHMD)](#)

NMDS / DSS

[Admitted patient care NMDS 2013-14](#)

Guide for use

Used together with date of admission for calculation of age.

Data source type: Administrative by-product data

Data Element / Data Set

[Person—sex, code N](#)

Data Source

[National Hospital Morbidity Database (NHMD)](#)

NMDS / DSS

[Admitted patient care NMDS 2013-14](#)

Guide for use

Data source type: Administrative by-product data.

Data Element / Data Set

[Person—Indigenous status, code N](#)

Data Source

National Hospital Morbidity Database (NHMD)

NMDS / DSS

Admitted patient care NMDS 2013-14

Guide for use

Data source type: Administrative by-product data.

Data Element / Data Set

Person—area of usual residence, statistical area level 2 (SA2) code (ASGS 2011) N(9)

Data Source

National Hospital Morbidity Database (NHMD)

NMDS / DSS

Admitted patient care NMDS 2013-14

Guide for use

Used for disaggregation by remoteness area and state/territory.

Data source type: Administrative by-product data

Data Element / Data Set

Episode of admitted patient care—procedure, code (ACHI 8th edn) NNNNN-NN

Data Source

National Hospital Morbidity Database (NHMD)

NMDS / DSS

Admitted patient care NMDS 2013-14

Guide for use

Data source type: Administrative by-product data

Comments:	General:

The data for this measure are drawn from the Australian Institute of Health and Welfare (AIHW) NHMD. For 2016 reporting, the most recent data available are for 2013–14. With the exception of time trends, data are reported for the 3-year period 2011–14 to enable disaggregation of the data by the variables of interest. Single year data are reported for the time trend analysis. People aged under 18 were excluded from all analyses due to small numbers.

Indigenous identification:

While there is some under-identification of Indigenous Australians in the NHMD, data for all states and territories are considered to have adequate Indigenous identification from 2010–11 onwards (AIHW 2013).

Time series comparisons are based on data for the 6 jurisdictions that were assessed by the AIHW as having adequate identification of Indigenous hospitalisations from 2004–05 onwards—namely, New South Wales, Victoria, Queensland, Western Australia, South Australia and public hospitals in the Northern Territory (AIHW 2010). About 95% of the Australian Indigenous population live in these 6 jurisdictions (AIHW 2015b).

With the exception of data from hospitals in Western Australia, hospitalisations where the person's Indigenous status was not stated were excluded from analyses that compare Indigenous and non-Indigenous rates. For hospitals in Western Australia, records with an unknown Indigenous status are reported as non-Indigenous, so are included in the 'non-Indigenous' data in these analyses.

Comparisons by state/territory:

Due to differences in inter-hospital transfer rates across states and territories, interpreting differences in data by state and territory must be done with caution.

Estimation of hospitalised ACS events:

Each record in the NHMD represents an episode of care. Individuals may be hospitalised multiple times in a reference year and it is not possible to group multiple records for an individual together without data linkage. To reduce the double-counting of people with an ACS who were transferred to another hospital for further diagnosis or treatment, the analyses for the reported measure exclude hospitalisations ending in transfer to (an)other acute hospital. In this way, only the last hospitalisation for each ACS event is generally counted.

Representational attributes

Representation class:	Percentage
Data type:	Real
Unit of measure:	Episode
Format:	N[NN].N

Data source attributes

Data sources:	

Data Source

[National Hospital Morbidity Database (NHMD)](#)

Frequency

Annual

Data custodian

Australian Institute of Health and Welfare

Accountability attributes

Reporting requirements:	Annual reporting by the Australian Institute of Health and Welfare (AIHW 2015a, 2016).
Organisation responsible for providing data:	Australian Institute of Health and Welfare
Further data development / collection required:	Data development is required to fully report on the agreed measure. Data are not available on whether the procedures were undertaken within 30 days of the index admission. Also, there is no nationally agreed definition of 'index admission'.
	In addition, because individuals are not identified in the NHMD nor are associated hospitalisations able to be grouped together, it was necessary to estimate the number of hospitalised ACS events by excluding hospitalisations ending in transfer to (an)other acute hospital. However, the validity of this method has not been established for calculating procedures rates, and has a number of limitations. For example, among those events that involved multiple hospitalisations, if a relevant procedure was provided in an earlier hospitalisation but not in the last, that event will not be counted as having included that procedure.
Release date:	24/11/2016

Source and reference attributes

Submitting organisation:	Australian Institute of Health and Welfare
Origin:	AIHW 2016. Better Cardiac Care measures for Aboriginal and Torres Strait Islander people: second national report 2016. Cat. no: IHW 169. Canberra: AIHW.

Reference documents: ACCD (Australian Consortium for Classification Development) 2013a. The Australian Classification of Health Interventions (ACHI). 10th edn. Adelaide: Independent Hospital Pricing Authority, Lane Publishing.

ACCD 2013b. The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian modification (ICD-10-AM). 10th edn. Adelaide: Independent Hospital Pricing Authority, Lane Publishing.

AIHW (Australian Institute of Health and Welfare) 2010. Indigenous identification in hospital separations data: quality report. Health services series no. 35. Cat. no. HSE 85. Canberra: AIHW.

AIHW 2013. Indigenous identification in hospital separations data: quality report. Cat. no. IHW 90. Canberra: AIHW.

AIHW 2015a. Better Cardiac Care measures for Aboriginal and Torres Strait Islander people: first national report 2015. Cat. no. IHW 156. Canberra: AIHW.

AIHW 2015b. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2015. Cat. no. IHW 147. Canberra: AIHW.

AIHW 2016. Better Cardiac Care measures for Aboriginal and Torres Strait Islander people: second national report 2016. Cat. no: IHW 169. Canberra: AIHW.

Aroney C, Aylward P, Chew D, Huang N, Kelly A, White H et al. 2008. 2007 addendum to the National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand guidelines for the management of acute coronary syndromes 2006. Medical Journal of Australia 188:302–3.

Aroney C, Aylward P, Kelly A, Chew D & Clune E (on behalf of the Acute Coronary Syndrome Guidelines Working Group) 2006. Guidelines for the management of acute coronary syndromes 2006. Medical Journal of Australia 184:S2–9.

Chew D, Aroney C, Aylward P, Kelly A, White H, Tideman P et al. 2011. 2011 addendum to the National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand guidelines for the management of acute coronary syndromes (ACS) 2006. Heart, Lung and Circulation 20:487–502.

Clark R, Coffee N, Turner D, Eckert K, van Gaans A, Wilkinson D et al. 2012. Application of geographic modeling techniques to quantify spatial access to health services before and after an acute cardiac event: the Cardiac ARIA Project. Circulation 125:2006–14.

Cunningham J 2002. Diagnostic and therapeutic procedures among Australian hospital patients identified as Indigenous. Medical Journal of Australia 176:58–62.

Randall D, Jorm L, Lujic S, O'Loughlin A, Eades S & Leyland A 2013. Disparities in revascularization rates after acute myocardial infarction between Aboriginal and non-Aboriginal people in Australia. Circulation 127:811–9.

Relational attributes

Related metadata references: See also Indigenous Better Cardiac Care measure: 3.1-Hospitalised ST-segment-elevation myocardial infarction events treated by percutaneous coronary intervention, 2016
Health, Standard 17/08/2017

See also Indigenous Better Cardiac Care measure: 3.5-Hospitalised acute myocardial infarction events that ended with death of the patient, 2016
Health, Standard 17/08/2017