National Indigenous Reform Agreement: PI 13-Tobacco smoking during pregnancy, 2012

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National Indigenous Reform Agreement: PI 13-Tobacco smoking during pregnancy, 2012

Identifying and definitional attributes

Metadata item type:	Indicator
Indicator type:	Indicator
Short name:	PI 13-Tobacco smoking during pregnancy, 2012
METEOR identifier:	438635
Registration status:	Indigenous, Superseded 13/06/2013
Description:	Proportion of mothers who smoked during pregnancy, by Indigenous status.
Rationale:	Smoking during pregnancy can affect the growth and development of the foetus and infant and can carry though to childhood.
Indicator set:	National Indigenous Reform Agreement (2012) Indigenous, Superseded 13/06/2013
Outcome area:	Indigenous children are born and remain healthy Indigenous, Standard 21/07/2010
Data quality statement:	National Indigenous Reform Agreement: PI 13-Tobacco smoking during pregnancy, 2012 QS Indigenous, Superseded 13/06/2013

Collection and usage attributes

Computation description:	Crude rates are calculated for Indigenous Australians. Age-standardised rates are calculated for Indigenous and non-Indigenous Australians. Rate ratios and rate differences are calculated for Indigenous: non-Indigenous. For variability bands: More work is to be undertaken by the AIHW regarding the use of variability bands for perinatal data for COAG reporting. For trends: percentage change and statistical significance of change is to be calculated (required for CRC reporting). Presentation: Number, rate per 100 mothers (percentage), rate ratios, and rate differences. Excludes Australian non-residents of external territories and where state/territory of residence was not stated. Excludes multiple births, still births and births with unknown birthweight.

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

Age-standardised rate: calculated using the direct method, using five year age groups from 15-19 to 40-44 using the Australian female population who gave birth in the current reporting period as the standard. Age-standardisation should be done in accordance with the NIRAPIMG agreed principles for direct age-standardisation (see Comments section. Note that Principle 1 is not applicable for this indicator).

Rate ratio: Indigenous age-standardised rate divided by non-Indigenous age-standardised rate

Rate difference: Indigenous age-standardised rate minus non-Indigenous age-standardised rate.

Percentage change: Calculated by multiplying the average annual change over the period by the number of data points less 1. This is then divided by the rate for the first year in the series and multiplied by 100.

The average annual change in rates, rate ratios and rate differences are calculated using linear regression which uses the least squares method to calculate a straight line that best fits the data and returns an array that best describes the line. The simple linear regression line, $Y = a + bX$, or 'slope' estimate was used to determine the average annual change in the data over the period. The formula used to calculate the slope estimate and standard error of the slope in Microsoft Excel is:

LINEST (known_y's, known_x's, true) entered as an array formula (Ctrl, Shift, Enter).

Statistical significance of change: More work to be undertaken by the AIHW regarding the use and methodology for statistical significance of change for perinatal data.

Numerator: Number of mothers who smoked during pregnancy

Numerator data elements:

Data Element / Data Set

Mother's smoking status during pregnancy.

Data Source

AIHW National Perinatal Data Collection (NPDC)

NMDS / DSS

Perinatal NMDS 2008-2010

Guide for use

Administrative by-product data

Denominator: Total number of mothers

Denominator data elements:

Data Element / Data Set

Mother's smoking status during pregnancy.

Data Source

AIHW National Perinatal Data Collection (NPDC)

NMDS / DSS

Perinatal NMDS 2008-2010

Guide for use

Data source type: Administrative by-product data.

Includes 'not stated' mother's smoking status during pregnancy.

Disaggregation:	Current Period (2009):
	For Indigenous only (numbers and crude rates):
	• National and state/territory by smoking status
	Time series – 2007, 2008 (previously supplied); 2009 (required for 2012 reporting):
	For Indigenous and non-Indigenous (numbers, age-standardised rates, rate ratio, rate difference, and percentage change. Variability bands and statistical significance of change to be advised by the AIHW):
	• National and state/territory, by Indigenous status, by smoking status.

Disaggregation data elements:

Data Element / Data Set

[Person—Indigenous status, code N](#)

Data Source

[AIHW National Perinatal Data Collection (NPDC)](#)

NMDS / DSS

[Perinatal NMDS 2008-2010](#)

Guide for use

Data source type: Administrative by-product data

Data Element / Data Set

[Person—area of usual residence, geographical location code (ASGC 2008) NNNNN](#)

Data Source

[AIHW National Perinatal Data Collection (NPDC)](#)

NMDS / DSS

[Perinatal NMDS 2008-2010](#)

Guide for use

Data source type: Administrative by-product data

Comments:	Most recent data available for 2012 CRC report is 2009.
	Data are available for 2012 reporting for all states and territories. For the 2010 and 2011 CRC reports, data were available for NSW, Queensland, WA, SA, Tasmania, NT and ACT.
	There is currently no data element in the Perinatal National Minimum Data Set for smoking during pregnancy, however some information is obtained as part of the National Perinatal Data Collection (NPDC).
	Information is included in the NPDC for all live births and still births of at least 400 grams birthweight or at least 20 weeks gestation. A program for national data development was completed in 2009 to add nationally agreed data items on smoking during pregnancy to the Perinatal NMDS from 1 July 2010.
	Analysis by state/territory is based on usual residence of the mother.
	Maternal age is the age at the time of giving birth.
	To report trends, the COAG Reform Council will separately request percentage change and statistical significance testing for this indicator directly from the data provider (AIHW).

More work is to be undertaken by the AIHW regarding the use of variability bands for perinatal data for COAG reporting.

Baseline year for NIRA target (Halve the child mortality gap within a decade) is 2008; baseline year for this indicator is 2008; target year is 2018.

NIRAPIMG agreed Principles for reporting directly age-standardised rates for administrative data

Overarching principle: Before undertaking age-standardisation, analysts must investigate the data being used to understand the age-specific distribution and any limitations that may impact on the results.

Principle 1: The standard population used should be the Australian Estimated Resident Population as at 30 June 2001 from the 2001 Census until population estimates from the 2011 Census become available.

The population used as the denominator for the calculation of Indigenous age-standardised rates should be SERIES B of Indigenous experimental estimates and projections 2006 to 2021 based on the 2006 Census until population estimates from the 2011 Census become available.

Principle 2: If the denominator is less than 30 in any one age group, then do not attempt to produce age-standardised rates.

Age-groups may be collapsed to obtain a denominator of 30 or more (provided that this is in accordance with principle 3 and 4).

Principle 3: If the total number of Indigenous events (eg deaths, hospital separations) is less than 20, then do not attempt to produce age-standardised rates.

Combining several years of data, or aggregating jurisdictions should be considered to obtain a total of 20 or more events.

If this does not meet the purpose (i.e. data are required for time series or jurisdictional comparisons), or does not result in greater than 20 events in total, then other measures and contextual information should be reported instead of age-standardised rates which could include total number of events, crude rates, age-specific rates, age-specific rate ratios and median age at death.

Principle 4: Age-standardised rates should be calculated using the five year age groupings of 0-4 to 75+ (provided Principles 2 and 3 for denominator and numerator are met).

10-year age groups may be used to overcome small numbers (20 year age groups are too wide and should not be used).

Principle 5: Additional contextual information (most importantly age-specific rates and ratios) should be provided in addition to age-standardised rates when:

a) the age-standardised rates and rate ratios lie largely outside the range of the age-specific rates and rate ratios.

b) the pattern of age-specific rates of the Indigenous and non-Indigenous populations differ substantially (e.g. deaths from a certain cause concentrate on younger ages for Indigenous population while for non-Indigenous they may occur at older ages).

c) the age-specific rates depart from the assumption of a uniform increase in death with age (e.g. injury which peaks in the young adult to middle-ages and certain cancers amenable to treatment for some age groups).

d) the condition of interest is largely confined to a specific age range (e.g. STIs and women who give birth). In such instances, age-standardisation could be restricted to include the age groups within this age range only.

Principle 6: For conditions restricted to a specific age group (e.g. conditions originating in the perinatal period and SIDS), it is recommended to report the age-specific rate for the age-group of interest instead of the age-standardised rate.

Representational attributes

Representation class:	Percentage
Data type:	Real
Unit of measure:	Person
Format:	NN.N

Indicator conceptual framework

Framework and dimensions: [Health Behaviours](#)

Data source attributes

Data sources:

> **Data Source**
>
> [AIHW National Perinatal Data Collection (NPDC)](#)
>
> **Frequency**
>
> Calendar years ending 31 December each year
>
> **Data custodian**
>
> Australian Institute of Health and Welfare

Accountability attributes

Reporting requirements:	National Indigenous Reform Agreement.
Organisation responsible for providing data:	Australian Institute of Health and Welfare.
Further data development / collection required:	Specification: Long-term.

Source and reference attributes

Steward: [National Indigenous Reform Agreement Performance Information Management Group](#)

Relational attributes

Related metadata references:

Supersedes [National Indigenous Reform Agreement: PI 13-Tobacco smoking during pregnancy, 2011](#)
> [Health!](#), Superseded 31/10/2011
> [Indigenous](#), Superseded 01/07/2012

Has been superseded by [National Indigenous Reform Agreement: PI 08-Tobacco smoking during pregnancy, 2013](#)
> [Indigenous](#), Superseded 13/12/2013