National Healthcare Agreement: PI 10-Prevalence of Type 2 diabetes, 2015 QS

Identifying and definitional attributes

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Relational attributes

Indicators linked to this Quality statement: National Healthcare Agreement: PI 10-Prevalence of Type 2 diabetes, 2015
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Data quality

Institutional environment: The Australian Health Survey (AHS) and Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS) were collected, processed, and published by the Australian Bureau of Statistics (ABS). The ABS operates within a framework of the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. These ensure the independence and impartiality from political influence of the ABS, and the confidentiality of respondents.

The interview components of AHS and AATSIHS were conducted under the *Census and Statistics Act 1905*. The biomedical components (National Health Measures Survey (NHMS) and National Aboriginal and Torres Strait Islander Health Measures Survey (NATSIHMS)) were collected under the *Privacy Act 1988* and were subject to ethics approval which at the national level was sought and gained from the (then) Australian Government Department of Health and Ageing's Departmental Ethics Committee.

Ethics approval for the NATSIHMS component was also required at the jurisdictional level for New South Wales, Western Australia, the Northern Territory and for Queensland Health Service Districts. Ethics approval was sought and gained from the following Ethics Committees:

- Aboriginal Health and Medical Research Council Ethics Committee in New South Wales
- Aboriginal Health Research Ethics Committee in South Australia
- Western Australian Aboriginal Health Ethics Committee in Western Australia
- Western Australian Country Health Service (WACHS) Research Ethics Committee in Western Australia
- Central Australian Human Research Ethics Committee in Northern Territory
- Human Research Ethics Committee of the Northern Territory Department of Health and Menzies School of Health Research in Northern Territory
- several Human Research Ethics Committees of Queensland Government Hospital and Health Services districts.

For more information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment on the ABS website, www.abs.gov.au.

Timeliness: The NHMS was conducted in 2011–12 with results released in August 2013.

The NATSIHMS was conducted in 2012–13 with results released in September 2014.

Accessibility: See *Australian Health Survey: Biomedical Results for Chronic Disease* (Cat. no. 4364.0.55.005). Other information from this survey is also available on request.

Interpretability:

Information to aid interpretation of the data is available from the *Australian Health Survey: Users' Guide* and the *Australian Aboriginal and Torres Strait Islander Health Survey: Users' Guide* (Cat. no. 4727.0.55.002) on the ABS website.

Many health-related issues are closely associated with age; therefore data for this indicator have been age-standardised to the 2001 total Australian population to account for differences in the age structures of the States and Territories. Age standardised rates should be used to assess the relative differences between groups, not to infer the rates that actually exist in the population.

Relevance:

The 2011–12 NHMS and 2012–13 NATSIMHS use a combination of blood test results for fasting plasma glucose and self-reported information on diabetes diagnosis and medication use to measure prevalence of Type 2 diabetes.

A respondent to the survey is considered to have known diabetes (type 2) if they had ever been told by a doctor or nurse that they have Type 2 diabetes and:

- They were taking diabetes medication (either insulin or tablets); or
- Their blood test result for fasting plasma glucose was greater than or equal to 7.0 mmol/L.

A respondent to the survey is considered to have newly diagnosed diabetes if they reported no prior diagnosis of diabetes, but had a fasting plasma glucose value greater than or equal to 7.0 mmol/L.

Note: The type of diabetes for newly diagnosed cases cannot be determined from a fasting plasma glucose test alone. However, as it is assumed that the vast majority of newly diagnosed cases would be Type 2, all newly diagnosed cases of diabetes have been included in this measure.

The estimates exclude persons who did not fast for 8 hours or more prior to their blood test. Excludes women with gestational diabetes.

The same definition for diabetes will be used in the NATSIHMS.

Accuracy:

The AHS was conducted in all States and Territories, excluding very remote areas. Non-private dwellings such as hotels, motels, hospitals, nursing homes and short-stay caravan parks were also not included in the survey. The exclusion of persons usually residing in very remote areas has a small impact on estimates, except for the Northern Territory, where such persons make up approximately 23 per cent of the population. The final response rate for the 'core' component of the AHS was 82 per cent.

All selected persons aged 5 years and over were invited to participate in the voluntary NHMS. Of all of those who took part in the AHS, 37 per cent went on to complete the biomedical component.

Analysis of the sample showed that the characteristics of persons who participated in the NHMS were similar with those for the AHS overall. The only significant difference was for smoking, where the NHMS sample had a lower rate of current smokers than the AHS sample (12.0 per cent compared with 17.6 per cent). For more information, see the Explanatory Notes in *Australian Health Survey: Biomedical Results for Chronic Disease* (Cat. no. 4364.0.55.005).

In order to get an accurate reading for the fasting plasma glucose test, participants were asked to fast for 8 hours before their test. The results presented for this indicator refer only to those people who did fast (approximately 79 per cent of adults who participated in the NHMS). Analysis of the characteristics of people who fasted compared with those who did not fast showed no difference between fasters and non-fasters.

The AATSIHS was conducted in all States and Territories, including very remote areas. Non-private dwellings such as hotels, motels, hospitals, nursing homes and short-stay caravan parks were excluded from the survey. The response rate for the Core component of the 2012–13 AATSIHS was 80 per cent.

All selected persons aged 18 years and over in the AATSIHS were invited to participate in the voluntary NATSIHMS. Of these, 40 per cent went on to complete the biomedical component.

Analysis of the sample showed that the characteristics of persons who participated in the NATSIHMS were similar to those for the AATSIHS overall. For more information, see the Explanatory Notes in *Australian Aboriginal and Torres Strait Islander Health Survey: Biomedical Results* (Cat. no. 4727.0.55.003).

In order to get an accurate reading for the fasting plasma glucose test, participants were asked to fast for 8 hours before their test. The results presented for this indicator refer only to those people who did fast (approximately 77.6% of adults who participated in the NATSIHMS). Analysis of the characteristics of people who fasted compared with those who did not fast showed no difference between fasters and non-fasters.

As they are drawn from a sample survey, data for the indicator are subject to sampling error. Sampling error occurs because only a small proportion of the population is used to produce estimates that represent the whole population. Sampling error can be reliably estimated as it is calculated based on the scientific methods used to design surveys. Rates should be considered with reference to their Relative Standard Error (RSE). Estimates with RSEs between 25 per cent and 50 per cent should be used with caution. Estimates with RSEs greater than 50 per cent are generally considered too unreliable for general use.

For the general and non-Indigenous populations, this indicator and the supplementary indicator generally have acceptable levels of sampling error for State/Territory by sex. However, rates for females in Victoria, males in the Australian Capital Territory, and males and females in the Northern Territory should be used with caution.

For the Aboriginal and Torres Strait Islander population, rates for males and females in Queensland, females in Western Australian and South Australia, and males in the Northern Territory should be used with caution. Additionally, the rate for total all persons in South Australia should be used with caution. The rate for males in South Australia is considered too unreliable for general use.

Coherence:

The methods used to construct the indicator are consistent and comparable with other collections. The AHS collected a range of other health-related information that can be analysed in conjunction with diabetes status.

Other non-ABS collections, such as the 1999–2000 Australian Diabetes, Obesity and Lifestyle Study (AusDiab) and the 2009–10 Victorian Health Monitor (VHM) have reported estimates of diabetes prevalence based on biomedical measures and self-reported diagnosis and medication use.

Results from the recent VHM were very similar to those from the NHMS. Results from AusDiab showed higher estimates of diabetes than the NHMS, however this difference is most likely due to the difference in test used to measure diabetes (AusDiab used an Oral Glucose Tolerance test, which is a more comprehensive test for diabetes than fasting plasma glucose).

For information on how these studies compare, see *Australian Health Survey: Biomedical Results for Chronic Disease* (Cat. no. 4364.0.55.005).

Relational attributes

Related metadata references:

Supersedes National Healthcare Agreement: PI 10-Prevalence of Type 2 diabetes, 2014 QS

- Health, Superseded 14/01/2015