

# Housing experiences and suitability as determinants of health

Notes on the data

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## General information

### Geographical structures

Data in this report are available by Population Health Area, Local Government Area, Primary Health Network, Quintiles of Relative Socio-economic Disadvantage, and Remoteness Areas presented in [data workbooks](#) and [maps](#).

Homelessness estimates for populations of interest are provided at the SA3 level instead of Population Health Area and Local Government Area due to low cell counts at smaller geographic levels.

For information regarding the geographies available, refer to the [geographical structures](#) information.

### Statistical information

Except where otherwise stated, all age-standardised rates and ratios presented in the maps, data or graphs are indirectly standardised rates, based on the Australian standard. For further information on the statistics presented, refer to the [statistical information](#) available from the PHIDU website.

## Notes on the Data: Indicators and Data sources

### Introductory information

#### Counting units

##### *Household level*

A household is defined as one or more persons, at least one of whom is at least 15 years of age, usually resident in the same private dwelling. A private dwelling can be a house, flat or a room. It can also be a caravan, houseboat, tent, or a house attached to an office, or rooms above a shop.

Data exclude visitor only and other non-classifiable households. This includes those households which ABS Census Field Officers determined were occupied on Census night but where contact could not be made; households that contained only persons aged under 15 years; or households which could not otherwise be classified because there was insufficient information on the Census form.

##### *Person and family levels*

Housing data presented in this report were collected at the dwelling level. For person and family level indicators, dwelling characteristics have been allocated to persons or families, as appropriate, within dwellings to create *persons* and *families* as counting units. These counting units enable personal characteristics and family composition to be reported for analysis in relation to housing experiences. Person and family level data presented in this report therefore reflect common household characteristics. For example, children living with their parents in mortgaged dwellings are counted as living in a dwelling that is owned, despite not being the mortgage holder.

Data exclude persons and families in visitor only and other non-classifiable households. This includes those households which ABS Census Field Officers determined were occupied on Census night but where contact could not be made; households that contained only persons aged under 15 years; or households which could not otherwise be classified because there was insufficient information on the Census form.

#### Modelled estimates

In the absence of data from administrative data sets, modelled estimates were produced at the Population Health Area (PHA) level for selected health indicators from the 2014–15 National Health Survey (NHS) and the 2011-12 Australian Health Survey (AHS), conducted by the ABS. Estimates at the LGA and PHN levels were derived from the PHA estimates; estimates for Quintiles and Remoteness are direct estimates from the NHS and AHS, extracted using the ABS Survey TableBuilder.

The NHS and AHS surveys were conducted by personal interview and collected information about personal and household characteristics for people aged 15 years and over resident in private dwellings across Australia (excluding very remote and people living in discrete Aboriginal and Torres Strait Islander communities), from July 2014 to July 2015 for the NHS and March 2011 to March 2012 for the AHS.

Through the use of synthetic estimation techniques it is possible to produce estimates from survey data at the small area level. Synthetic estimation predicts a value for an area with a small population based on modelled survey data and known characteristics of the area. These modelled estimates can be interpreted as the likely value for a 'typical' area with those characteristics. The model used for predicting small area data is determined by analysing data at a higher geographic level, in this case Australia. The relationship observed at the higher geographic level between the characteristic of interest and known characteristics is assumed to also hold at the small area level. The estimates are made by applying

the model to data on the known characteristics that can be reliably estimated at the small area level. This modelling technique can be considered as a sophisticated prorating of Australian estimates to the small area level.

**Users of these modelled estimates should note that they do not represent data collected in administrative or other data sets. As such, they should be used with caution, and treated as indicative of the likely social dimensions present in an area with these demographic and socioeconomic characteristics.**

The numbers are estimates for an area, not measured events. The true value of the published estimates is also likely to vary within a range of values, as shown by the upper and lower limits published in the data workbooks and viewable in the bar chart in the single map atlases.

The estimates should be viewed as a tool that, when used in conjunction with local area knowledge and taking into consideration the prediction reliability, can provide useful information that can assist with decision-making for small geographic regions. By summarising the various demographic, socioeconomic and administrative information available for an area, the estimates indicate the expected social dimensions for a typical area in Australia with the same characteristics. In the absence of accurate, localised information about these indicators, such estimates can usefully contribute to policy and program development, service planning and other decision-making processes that require an indication of the geographic distribution of the social indicator.

The ABS data and these small area estimates differ in scope. The NHS and AHS covered people living in private dwellings in urban and rural areas and excluded people in very remote areas and people living in discrete Aboriginal and Torres Strait Islander communities. As such estimates were not produced for PHAs with more than 50% of their populations residing in Very Remote CDs. Due to the exclusion of people living in CDs in Very Remote areas of Australia, survey estimates for the majority of PHAs in the Northern Territory are unreliable.

This and other limitations of the method mean that estimates have not been published for areas:

- 1) with populations under 1,000;
- 2) in which 50% or more of the population lives in Very Remote areas, as determined by ABS;
- 3) in which Aboriginal people comprise 75% or more of the population; and
- 4) where the relative root mean square errors (RRMSEs) on the predictions was 1 or more.

**Note:** Estimates with RRMSEs from 0.25 and to 0.50 have been marked (~) to indicate that they should be used with caution; and those greater than 0.50 but less than 1 are marked (~~) to indicate that the prediction is considered too unreliable for general use.

## Population indicators

### Total persons

**Indicator detail:** The total population enumerated in households with the given characteristics.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Persons with a disability

**Indicator detail:** Persons reporting needing assistance with core activities (self-care, mobility or communication) enumerated in households with the given characteristics.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Persons aged 65 years and over

**Indicator detail:** Persons aged 65 years and over enumerated in households with the given characteristics.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Aboriginal persons

**Indicator detail:** Persons identifying as Aboriginal or Torres Strait Islander enumerated in households with the given characteristics. It is optional for individuals to identify as Aboriginal or Torres Strait Islander on the Census. These data may therefore represent an undercount.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Aboriginal persons aged 55 years and over

**Indicator detail:** Persons identifying as Aboriginal or Torres Strait Islander aged 55 years and over enumerated in households with the given characteristics. It is optional for individuals to identify as Aboriginal or Torres Strait Islander on the Census. These data may therefore represent an undercount.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Persons born in predominantly non-English speaking (NES) countries

**Indicator detail:** Persons born in countries designated as 'predominantly NES' (that is, all countries except Australia, Canada, Ireland, New Zealand, South Africa, United Kingdom and the United States of America) enumerated in households with the given characteristics.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Recent migrants born in predominantly non-English speaking (NES) countries

**Indicator detail:** Persons born in NES countries (see above) arriving from 2006 to 2016. The year 2016 is the period 1 January 2016 to 9 August 2016 (Census Night), therefore, the data presented represent a total time of approximately 9 years and 7 months.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Families with children aged less than 15 years

**Indicator detail:** Families with at least one child aged less than 15 years enumerated in households with the given characteristics. A family is defined by the ABS as two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering, and who are usually resident in the same household.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Single parent families with children aged less than 15 years

**Indicator detail:** Families with one parent and at least one child aged less than 15 years enumerated in households with the given characteristics.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Tenure type indicators

### Persons living in owned dwellings

**Indicator detail:** Persons living in occupied private dwellings that are owned outright or owned with a mortgage.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Persons living in rented dwellings

**Indicator detail:** Persons living in occupied private dwellings that are rented or being occupied rent-free.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Persons living in dwellings rented from state or territory housing authority

**Indicator detail:** Persons living in occupied private dwellings that are rented from state or territory housing authority.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Persons living in dwellings rented from a housing co-operative, community, or church group

**Indicator detail:** Persons living in occupied private dwellings that are rented from a housing co-operative, community, or church group.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Persons living in rented social housing dwellings

**Indicator detail:** Persons living in occupied private dwellings that are rented from state or territory housing authority or from a housing co-operative, community, or church group.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Persons living in lone person households

**Indicator detail:** Persons in lone person households living in occupied private dwellings.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Persons living in multi-family households

**Indicator detail:** Persons living in multi-family households. For the 2016 Census, a maximum of three families could be identified in one household. In cases where more than three families were identified in a household, the first three families were coded and other persons were classified as either related family members of the primary family or non-family members.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Financial stress and assistance indicators

### Low income households

**Indicator detail:** Households whose equivalised disposable income falls in the bottom 40% of state/territory income distribution. The threshold for low income households varies by state/territory: NSW, \$721; Vic, \$705; Qld, \$704; SA, \$631; WA, \$785; Tas, \$589; NT, \$1,004; ACT, \$1,093.

Income is equivalised in order to reflect the economic resources available to a standardised household. For a lone person household it is equal to household income. For a household comprising more than one person, it is an indicator of the household income that would be needed by a lone person household to enjoy the same level of economic wellbeing.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Mortgage stress

**Indicator detail:** Households whose equivalised disposable income falls in the bottom 40% of state/territory income distribution, that are spending more than 30% of income on mortgage repayments. See above for details of equivalised income and state/territory thresholds.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Rental stress

**Indicator detail:** Households whose equivalised disposable income falls in the bottom 40% of Australia's income distribution, that are spending more than 30% of income on rent. See *Low income households* above for details of equivalised income and state/territory thresholds.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Financial stress from mortgage or rent

**Indicator detail:** Households whose equivalised disposable income falls in the bottom 40% of state/territory income distribution, that are spending more than 30% of income on mortgage repayments or rent. See *Low income households* above for details of equivalised income and state/territory thresholds.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Households receiving rent assistance from the Australian Government

**Indicator detail:** Households in which residents receive Commonwealth Rent Assistance.

Data are provided for individual recipients, and there may be multiple individual recipients in a household: to the extent that this occurs, the proportion of households reported to receive rent assistance will be understated.

However, dwellings are the most appropriate denominator available for this dataset. In addition, some recipients live



in non-private dwellings, which are not included in the denominator: to the extent that this occurs, the proportion of households reported to receive rent assistance will be overstated.

**Source:** Compiled by PHIDU based on data from the Department of Human Services, June 2017.

## Aboriginal households receiving rent assistance from the Australian Government

**Indicator detail:** Aboriginal households in which residents receive Commonwealth Rent Assistance from the Australian Government.

Data are based on income units with Indigenous identifier receiving rent assistance. An income unit is classified as Aboriginal if at least one person in the unit has indicated to Centrelink that he/she identifies as Aboriginal or Torres Strait Islander. It is optional for individuals to identify as Aboriginal or Torres Strait Islander. These data may therefore represent an undercount.

An income unit comprises a single person (with or without dependent children) or a couple (with or without dependent children). Single social security recipients living together in the same household are regarded as separate income units. As such, the proportion of Aboriginal households reported to receive rent assistance may be understated in some areas. In addition, some recipients live in non-private dwellings, which are not included in the denominator: to the extent that this occurs, the proportion of Aboriginal households reported to receive rent assistance will be overstated.

**Source:** Compiled by PHIDU based on the data from the Department of Social Services, June 2016.

## Housing experience indicators

### Persons living in crowded dwellings

**Indicator detail:** Persons living in dwellings assessed as crowded according to the Canadian National Occupancy Standard. The measure assesses the bedroom requirements of a household, accounting for both household size and composition, specifying that:

- there should be no more than two persons per bedroom
- children less than five years of age of different sexes may reasonably share a bedroom
- children less than 18 years of age and of the same sex may reasonably share a bedroom
- single household members 18 years and over should have a separate bedroom, as should parents or couples and
- a lone person household may reasonably occupy a bed-sitter.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Persons living in severely crowded dwellings

**Indicator detail:** Persons living in dwellings assessed as needing four or more additional bedrooms to accommodate all persons currently living in the household, according to the Canadian National Occupancy Standard (see *Persons living in crowded dwellings* above).

Severely crowded households are one of the six Homeless Operational Groups developed by the ABS to estimate homelessness. This is because people living in severe overcrowding are considered to lack of control of and access to space for social relations (one of the key elements of the ABS definition of homelessness) and are considered not to have accommodation alternatives when remaining in such extreme living arrangements (ABS, 2012).

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Homeless persons

**Indicator detail:** Persons enumerated in one of the Homelessness Operational Groups, which are variables interpreted as proxies for likely homelessness in line with the ABS statistical definition of homelessness (ABS, 2012). Briefly, a person is considered by the ABS to be homeless when they do not have accommodation alternatives and their current living arrangement:

- is in a dwelling that is inadequate; or
- has no tenure, or if their initial tenure is short and not extendable; or
- does not allow them to have control of, and access to space for social relations.

As such, the six Homelessness Operational Groups used to define homelessness for statistical purposes are:

- Persons living in improvised dwellings, tents, or sleeping out
- Persons in supported accommodation for the homeless
- Persons staying temporarily with other households
- Persons living in boarding houses
- Persons in other temporary lodgings
- Persons living in 'severely' crowded dwellings

Census homelessness data are important for providing a prevalence of homelessness and the geographical distribution of those who were likely to have been homeless on Census night. However, collection of homelessness

data is complicated by the complexity and diversity of homeless experiences and the practical challenges of enumeration. As such, probable differential over- and under-estimation, as well as under-enumeration of certain population groups, should be taken into account when interpreting these data (ABS, 2012).

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Homeless youth

**Indicator detail:** Persons aged 12 to 18 years enumerated in one of the Homeless Operational Groups (see *Homeless persons* above).

Although youth are over-represented in the homelessness data, homelessness estimates for youth are likely to have been underestimated in the Census due to a usual address being reported for some homeless youth. See *Homeless persons* above for general caveats for homelessness data.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Homeless persons with a disability

**Indicator detail:** Persons reporting needing assistance with core activities (self-care, mobility or communication) enumerated in one of the Homeless Operational Groups (see *Homeless persons* above).

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Homeless persons aged 65 years and over

**Indicator detail:** Persons aged 65 years and over enumerated in one of the Homeless Operational Groups (see *Homeless persons* above).

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Homeless Aboriginal persons

**Indicator detail:** Persons identifying as Aboriginal or Torres Strait Islander enumerated in one of the Homeless Operational Groups (see *Homeless persons* above). It is optional for individuals to identify as Aboriginal or Torres Strait Islander on the Census. These data may therefore represent an undercount.

Additionally, Aboriginal and Torres Strait Islander persons are more likely than the general population to be both under-enumerated in the Census and overrepresented in the homeless population. While the ABS has developed strategies aimed at maximising the enumeration of Aboriginal and Torres Strait Islander persons, in the 2016 Census the net undercount rate for Aboriginal and Torres Strait Islander persons was 17.5%. This net undercount is adjusted for in the production of population estimates. However, those missed from the Census are likely to have different socioeconomic and demographic characteristics from those who were enumerated, including a higher likelihood of homelessness. It is therefore likely that under-enumeration has resulted in an undercount of homeless Aboriginal persons.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Homeless Aboriginal persons aged 55 years and over

**Indicator detail:** Persons identifying as Aboriginal or Torres Strait Islander enumerated in one of the Homeless Operational Groups (see *Homeless persons* above). It is optional for individuals to identify as Aboriginal or Torres Strait Islander on the Census. These data may therefore represent an undercount. Additionally, under-enumeration and overrepresentation of Aboriginal and Torres Strait Islander homelessness persons is likely (see *Homeless Aboriginal persons* above).

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Homeless persons born in predominantly non-English speaking (NES) countries

**Indicator detail:** Persons identifying as Aboriginal or Torres Strait Islander enumerated in one of the Homeless Operational Groups (see *Homeless persons* above). It is optional for individuals to identify as Aboriginal or Torres Strait Islander on the Census. These data may therefore represent an undercount. Additionally, under-enumeration and overrepresentation of Aboriginal and Torres Strait Islander homelessness persons is likely (see above).

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Internet access indicators

### Dwellings from which Internet was not accessed

**Indicator detail:** Dwellings from which Internet was not accessed on any device.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

### Aboriginal dwellings from which Internet was not accessed

**Indicator detail:** Dwellings with at least one Aboriginal or Torres Strait Islander resident from which Internet was not accessed on any device. It is optional for individuals to identify as Aboriginal or Torres Strait Islander on the Census. These data may therefore represent an undercount.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Owned dwellings from which Internet was not accessed

**Indicator detail:** Dwellings that are owned outright or owned with a mortgage from which Internet was not accessed on any device.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Rented dwellings from which Internet was not accessed

**Indicator detail:** Dwellings that are rented or being occupied rent-free from which Internet was not accessed on any device.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Rented social housing dwellings from which Internet was not accessed

**Indicator detail:** Dwellings that are rented from state or territory housing authority or from a housing co-operative, community, or church group from which Internet was not accessed on any device.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Children aged less than 15 years living in dwellings from which Internet was not accessed

**Indicator detail:** Children aged less than 15 years residing in dwellings from which Internet was not accessed on any device.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Aboriginal children aged less than 15 years living in dwellings from which Internet was not accessed

**Indicator detail:** Children identifying as Aboriginal or Torres Strait Islander aged less than 15 years residing in dwellings from which Internet was not accessed on any device. It is optional for individuals to identify as Aboriginal or Torres Strait Islander on the Census. These data may therefore represent an undercount.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Children aged less than 15 years living in owned dwellings from which Internet was not accessed

**Indicator detail:** Children aged less than 15 years residing in dwellings that are owned outright or owned with a mortgage from which Internet was not accessed on any device.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Children aged less than 15 years living in rented dwellings from which Internet was not accessed

**Indicator detail:** Children aged less than 15 years residing in dwellings that are rented or being occupied rent-free from which Internet was not accessed on any device.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Children aged less than 15 years living in rented social housing dwellings from which Internet was not accessed

**Indicator detail:** Children aged less than 15 years living in dwellings that are rented from state or territory housing authority or from a housing co-operative, community, or church group from which Internet was not accessed on any device.

**Source:** Compiled by PHIDU based on the ABS Census of Population and Housing, August 2016.

## Health risk factors and outcomes indicators

In the absence of data from administrative data sets, estimates were produced for selected health conditions and risk factors from the 2014–15 NHS and the 2011–12 AHS conducted by the ABS. For further details on the production of modelled estimates and caveats on these estimates, see *Modelled estimates* above.

## Estimated number of people aged 15 years and over with fair or poor self-assessed health

**Indicator detail:** Modelled estimates based on self-reported responses, assessing personal health on a scale of 'poor', 'fair', 'good', 'very good', or 'excellent'. The data reported are the sum of responses categorised as 'poor' or 'fair'.

**Detail of analysis:** Indirectly age-standardised rate per 100 population; and indirectly age-standardised ratio, based on the Australian standard.

**Source:** Estimates for PHAs are modelled estimates produced by the ABS based on the 2014–15 NHS; estimates at the LGA and PHN level were derived from the PHA estimates. Estimates for Quintiles of Relative Socio-economic Disadvantage and Remoteness Areas were compiled by PHIDU based on direct estimates from the 2014–15 NHS Survey TableBuilder.

## Estimated number of people aged 18 years and over who were obese

**Indicator detail:** The Body Mass Index (BMI) is a measure of relative weight based on an individual's mass and height. The height (cm) and weight (kg) of respondents, as measured during the NHS interview, were used to calculate the BMI by dividing weight (in kilograms) by height (in metres squared). Obesity is defined as BMI of 30 or greater.

The BMI is a useful tool at a population level for measuring trends in body weight and helping to define population groups who are at higher risk of becoming obese, and therefore at higher risk of developing long-term medical conditions associated with a high BMI such as type 2 diabetes and cardiovascular disease.

Note that the modelled estimates are based on the 73.2% of adults in the sample who had their height and weight measured.

**Detail of analysis:** Indirectly age-standardised rate per 100 population; and indirectly age-standardised ratio, based on the Australian standard.

**Source:** Estimates for PHAs are modelled estimates produced by the ABS based on the 2014–15 NHS; estimates at the LGA and PHN level were derived from the PHA estimates. Estimates for Quintiles of Relative Socio-economic Disadvantage and Remoteness Areas were compiled by PHIDU based on direct estimates from the 2014–15 NHS Survey TableBuilder.

## Estimated number of people aged 18 years and over who undertook no or low exercise in the previous week

**Indicator detail:** Modelled estimates based on self-reported responses, based on data for exercise undertaken for fitness, sport or recreation in the week prior to being interviewed. Exercise level was calculated according to the following formula: Duration of exercise (minutes) x Intensity factor (walking for fitness = 3.5, moderate = 5, vigorous = 7.5). The category 'No or low exercise' refers to scores of less than 800.

**Detail of analysis:** Indirectly age-standardised rate per 100 population; and indirectly age-standardised ratio, based on the Australian standard.

**Source:** Estimates for PHAs are modelled estimates produced by the ABS based on the 2014–15 NHS; estimates at the LGA and PHN level were derived from the PHA estimates. Estimates for Quintiles of Relative Socio-economic Disadvantage and Remoteness Areas were compiled by PHIDU based on direct estimates from the 2014–15 NHS Survey TableBuilder.

## Estimated number of people aged 18 years and over who were current smokers

**Indicator detail:** Modelled estimates based on self-reported responses. A current smoker is an adult who reported at the time of interview that they smoked manufactured (packet) cigarettes, roll-your-own cigarettes, cigars, and/or pipes at least once per week. It excludes chewing tobacco and smoking of non-tobacco products. Respondents aged 18 years and over were asked to describe their smoking status at the time of interview as:

1. current smokers: daily, weekly, other;
2. ex-smokers;
3. never smoked (those who had never smoked 100 cigarettes, nor pipes, cigars or other tobacco products at least 20 times, in their lifetime).

For the indicator in this report, data are for respondents aged 18 years and over who responded that they were 'a current, daily or at least once weekly smoker'.

**Detail of analysis:** Indirectly age-standardised rate per 100 population; and indirectly age-standardised ratio, based on the Australian standard.

**Source:** Estimates for PHAs are modelled estimates produced by the ABS based on the 2014–15 NHS; estimates at the LGA and PHN level were derived from the PHA estimates. Estimates for Quintiles of Relative Socio-economic Disadvantage and Remoteness Areas were compiled by PHIDU based on direct estimates from the 2014–15 NHS Survey TableBuilder.

## Estimated number of people aged 15 years and over who consumed more than two standard alcoholic drinks per day on average

**Indicator detail:** Modelled estimates based on self-reported responses. The National Health and Medical Research Council guidelines for lifetime risk state that, for healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.

**Detail of analysis:** Indirectly age-standardised rate per 100 population; and indirectly age-standardised ratio, based on the Australian standard.

**Source:** Estimates for PHAs are modelled estimates produced by the ABS based on the 2014–15 NHS; estimates at the LGA and PHN level were derived from the PHA estimates. Estimates for Quintiles of Relative Socio-economic

Disadvantage and Remoteness Areas were compiled by PHIDU based on direct estimates from the 2014–15 NHS Survey TableBuilder.

## Low birth weight babies

**Indicator detail:** The data comprise all live born babies weighing less than 2500 grams at birth, expressed as a proportion of all live births (data over 3 years).

Data are not shown for areas where there were fewer than 20 births.

As these data were collected from each State and Territory health agency, they may exclude people who live in one State/Territory and used a service in another. The main occurrences are for people living near State/Territory borders such as in Albury (NSW) and Wodonga (Vic), Tweed (NSW) and Gold Coast (Qld) and from the APY Lands (SA) using services in Alice Springs (NT).

**Source:** Compiled by PHIDU based on data from: NSW Department of Health; Consultative Council on Obstetric and Paediatric Mortality and Morbidity, Victoria; Perinatal Data Collection, Department of Health, Queensland; Department of Health and Ageing SA; WA Department of Health; Tasmanian Perinatal Database; NT Department of Health; ACT Health.

## Children fully immunised at 5 years of age

**Indicator detail:** The data presented are of registered\* children fully immunised at 5 years of age. For the purposes of reporting the data, fully immunised means a child receives the vaccinations due at or immediately prior to the age at which the measurement occurs. It is assumed that all previous vaccinations were received.

Full immunisation at 5 years means that a child aged 60 to less than 63 months received four doses of a diphtheria, tetanus and whooping cough-containing vaccine, four doses of polio vaccine, and two doses of a measles, mumps and rubella-containing vaccine, all prior to the age of 5 years.

Data are not shown for areas where there were fewer than 10 registered children or fewer than 10 children immunised.

Note: Data for the APY Lands (in the PHA and PHN atlases) and Anangu Pitjantjatjara (AC) (in the LGA atlas) are not provided due to concerns with the reliability of the data.

**Source:** Compiled by PHIDU based on data provided by the Australian Childhood Immunisation Register, Medicare Australia, 2017 calendar year.

\*Registered on the Australian Childhood Immunisation Register (ACIR). The ACIR is a national register that records vaccinations given to children under seven years old. It also provides immunisation history statements to parents or guardians.

## Early childhood development: AEDC, Developmentally vulnerable on two or more domains

**Indicator detail:** The AEDC reports on the number of children scoring in the following percentile ranges: 0 to 10th percentile (developmentally vulnerable), 11th to 25th percentile (developmentally at risk) and above the 25th percentile (developmentally on track). The data presented in this report are for children who were developmentally vulnerable (0 to 10th percentile) on two or more of the following domains:

- Physical health and wellbeing domain
- Social competence domain
- Emotional maturity domain
- Language and cognitive skills (school-based) domain
- Communication skills and general knowledge domain

Data were extracted from the AEDC data available online at the SA2 and LGA level. This method of data collection introduced a potential for error in the data through the employment of a concordance transforming the data from 'AEDC communities' back into their component SA2s, ahead of concordance to larger geographic areas.

Furthermore, some data had been suppressed according to the confidentiality rules detailed below. As a result, numbers for within-state/territory geographical areas will not add up to state/territory totals in many instances and proportions for vulnerable and at risk children are likely to be under-reported in areas with small populations.

Data are not shown for areas where one or more of the following criteria have been met:

- three or fewer children were assessed;
- fewer than fifteen children had valid AEDC scores;
- fewer than two teachers had completed the AEDC instrument for children in that location;
- the AEDC instrument was completed for fewer than 80% of all non-special needs children; and
- the number of vulnerable or at risk children represented at least 90% of valid AEDC scores.

Additional suppressions have occurred where necessary to preserve confidentiality of related suppressed cells.

**Source:** Compiled by PHIDU based on data from the 2015 Australian Early Development Census (an Australian Government Initiative) at <http://www.aedc.gov.au/resources/2015-aedc-results>.



## Estimated number of people aged 18 years and over with diabetes mellitus

**Indicator detail:** The prevalence of diabetes mellitus was measured by a glycosylated haemoglobin test (commonly referred to as HbA1c), derived from tests on blood samples from volunteering participants selected as part of the AHS: people with an HbA1c level of greater than or equal to 6.5% were recorded as having diabetes mellitus, in accordance with the World Health Organization's recommended diagnostic cut-off point for diabetes mellitus.

**Detail of analysis:** Indirectly age-standardised rate per 100 population; and indirectly age-standardised ratio, based on the Australian standard.

**Source:** Estimates for PHAs are modelled estimates produced by the ABS based on the 2011–12 AHS; estimates at the LGA and PHN level were derived from the PHA estimates. Estimates for Quintiles of Relative Socio-economic Disadvantage and Remoteness Areas were compiled by PHIDU based on direct estimates from the 2011–12 AHS Survey TableBuilder.

## Estimated number of people with respiratory system diseases

**Indicator detail:** Modelled estimates based on self-reported responses of whether respondents have ever been told by a doctor or nurse that they have asthma, bronchitis, emphysema or other respiratory system disease; or not diagnosed but who consider their condition to be current and long-term. A long-term condition is defined as a condition that is current and has lasted, or is expected to last, for 6 months or more.

**Detail of analysis:** Indirectly age-standardised rate per 100 population; and indirectly age-standardised ratio, based on the Australian standard.

**Source:** Estimates for PHAs are modelled estimates produced by the ABS based on the 2011–12 Australian Health Survey; estimates at the LGA and PHN level were derived from the PHA estimates. Estimates for Quintiles of Relative Socio-economic Disadvantage and Remoteness Areas were compiled by PHIDU based on direct estimates from the 2011–12 AHS Survey TableBuilder.

## Estimated number of people with musculoskeletal system diseases

**Indicator detail:** Modelled estimates based on self-reported responses of whether respondents have ever been told by a doctor or nurse that they have a disease of the musculoskeletal system and connective tissue; or not diagnosed but who consider their condition to be current and long-term. A long-term condition is defined as a condition that is current and has lasted, or is expected to last, for 6 months or more.

**Detail of analysis:** Indirectly age-standardised rate per 100 population; and indirectly age-standardised ratio, based on the Australian standard.

**Source:** Estimates for PHAs are modelled estimates produced by the ABS based on the 2011–12 Australian Health Survey; estimates at the LGA and PHN level were derived from the PHA estimates. Estimates for Quintiles of Relative Socio-economic Disadvantage and Remoteness Areas were compiled by PHIDU based on direct estimates from the 2011–12 AHS Survey TableBuilder.

## Estimated number of people aged 2 years and over with circulatory system diseases

**Indicator detail:** Modelled estimates based on self-reported responses of whether respondents aged two years and over had ever been told by a doctor or nurse that they had one or more heart or other circulatory system conditions, and if they considered they currently have one or more such conditions. All circulatory system diseases were deemed current and long-term; that is, a condition that is current and has lasted, or is expected to last, for 6 months or more.

- rheumatic heart disease;
- heart attack;
- heart failure;
- stroke;
- angina.

**Detail of analysis:** Indirectly age-standardised rate per 100 population; and indirectly age-standardised ratio, based on the Australian standard.

**Source:** Estimates for PHAs are modelled estimates produced by the ABS based on the 2011–12 AHS; estimates at the LGA and PHN level were derived from the PHA estimates. Estimates for Quintiles of Relative Socio-economic Disadvantage and Remoteness Areas were compiled by PHIDU based on direct estimates from the 2011–12 AHS Survey TableBuilder.

## Estimated number of people with mental and behavioural problems

**Indicator detail:** Modelled estimates based on self-reported responses of whether respondents over have ever been told by a doctor or nurse that they have a mental health or behavioural problem; or not diagnosed but who consider their condition to be current and long-term. Up to six long-term mental and behavioural problems could be recorded, defined as current conditions that have lasted, or are expected to last, for 6 months or more.

. Conditions included:

- behavioural or emotional disorders;
- dependence on drugs or alcohol;

- feeling anxious or nervous;
- depression,
- feeling depressed.

**Detail of analysis:** Indirectly age-standardised rate per 100 population; and indirectly age-standardised ratio, based on the Australian standard.

**Source:** Estimates for PHAs are modelled estimates produced by the ABS based on the 2011–12 AHS; estimates at the LGA and PHN level were derived from the PHA estimates. Estimates for Quintiles of Relative Socio-economic Disadvantage and Remoteness Areas were compiled by PHIDU based on direct estimates from the 2011–12 AHS Survey TableBuilder.

## Total hospital admissions – All hospitals

**Indicator detail:** The data presented are of the number of separations, or completions of the episode of care, of a patient in hospital. The completion can be the discharge, death or transfer of the patient, or a change in the type of care (e.g., from acute to rehabilitation). In this report the term ‘admission’ is used in place of the more technically correct term of ‘separation’. As these data relate to short-term episodes of care, and not to long-stay episodes, the number of admissions is similar to the number of separations in any year.

Note that the data are based on the count of all admissions. As such, repeat admissions for one person are counted as separate admissions. In addition, patients admitted to one hospital and transferred to another hospital are also counted as separate admissions. The impact of these hospital transfers is likely to result in a higher rate of admissions of people living in regional areas compared to the capital cities, as well as for certain conditions which are more likely to result in transfers.

For further information about data quality see the *National Healthcare Agreement: PI 18-Selected potentially preventable hospitalisations, 2016* QS at: <https://meteor.aihw.gov.au/content/index.phtml/itemId/600098>

**Exclusions:** The national data published by the Australian Institute of Health and Welfare exclude well babies (i.e., babies not admitted for acute care) who are nine days old or younger, other than the second or subsequent live born infant of a multiple birth whose mother is currently an admitted patient. For further information see Australian Institute of Health and Welfare. *Admitted Patient Care 2016-17: Australian Hospital Statistics*. Health Services Series No. 84. (Cat. No. HSE 201) Canberra: AIHW; 2018.)

Same-day admissions for dialysis for kidney disease have been excluded, as they represent many repeat visits by a relatively small number of patients, who may have multiple admissions in a week: their inclusion can dramatically alter the geographic distribution of other categories of admissions. All other same-day admissions are included.

**Confidentiality of data:** Counts of less than five admissions have been suppressed.

**Detail of analysis:** Indirectly age-standardised rate per 100,000 population; and indirectly age-standardised ratio, based on the average of the ABS Estimated Resident Population (ERP), 30 June 2014 and 2015.

**Source:** Compiled by PHIDU using data from the Australian Institute of Health and Welfare, supplied on behalf of State and Territory health departments for 2014/15.

## Admissions for potentially preventable conditions – All hospitals

**Indicator detail:** Data definitions for potentially preventable hospitalisations are in the *National Healthcare Agreement: PI 18-Selected potentially preventable hospitalisations, 2016* available at: <https://meteor.aihw.gov.au/content/index.phtml/itemId/598746>

For further information about data quality see the *National Healthcare Agreement: PI 18-Selected potentially preventable hospitalisations, 2016* QS at: <https://meteor.aihw.gov.au/content/index.phtml/itemId/600098>

**Confidentiality of data:** Counts of fewer than five admissions have been suppressed.

**Detail of analysis:** Indirectly age-standardised rate per 100,000 population; and indirectly age-standardised ratio, based on the average of the ABS Estimated Resident Population (ERP), 30 June 2014 and 2015.

**Source:** Compiled by PHIDU using data from the Australian Institute of Health and Welfare, supplied on behalf of State and Territory health departments for 2014/15.

## Premature mortality – Total deaths, 0 to 74 years

**Indicator detail:** Mortality rates per 100,000 population for persons aged 0 to 74 years.

The ABS applies a staged approach to the coding of cause of death, which affects the number of records available for release at any date: data are progressively released as ‘preliminary’, ‘revised’, or ‘final’. Data in this report comprise preliminary data for 2014, revised data for 2013, and final data for 2010, 2011 and 2012. For further information about the ABS revisions process, see:

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3303.0Explanatory%20Notes12015?OpenDocument>.

**Detail of analysis:** Indirectly age-standardised rate per 100,000 population; and indirectly age-standardised ratio, based on the Australian standard.

**Source:** Data compiled by PHIDU from deaths data based on the 2011 to 2015 Cause of Death Unit Record Files supplied by the Australian Coordinating Registry and the Victorian Department of Justice, on behalf of the Registries of Births, Deaths and Marriages and the National Coronial Information System.

## Socio-economic status indicator

### Socio-economic Index for Areas: Index of Relative Socio-economic Disadvantage (SEIFA IRSD)

**Indicator detail:** This is an area-level summary measure of disadvantage which aims to represent the socioeconomic status of Australian communities by summarising attributes of the population, such as low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations. It reflects the overall or average level of disadvantage of the population of an area. A score of 1000 represents the Australian average: scores above 1000 indicate relative lack of disadvantage and those below 1000 indicate relatively greater disadvantage.

For further information see the ABS website at: <http://www.abs.gov.au/websitedbs/censushome.nsf/home/seifa> or download the ABS *Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2011* (Cat. no. 2033.0.55.001) technical paper at: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/2033.0.55.001>.

**Source:** Compiled by PHIDU based on ABS Socio-economic Indexes for Areas (SEIFA), 2016.

## References

Australian Bureau of Statistics, 2012, *Information Paper – a Statistical Definition of Homelessness*, cat no. 4922.0

Australian Bureau of Statistics, 2017, Housing Suitability (HOSD), *Census of Population and Housing: Understanding the Census and Census Data, Australia, 2016*, cat. no. 2900.0