Long-term health conditions by type of condition: variations by socioeconomic disadvantage and remoteness

Findings

Background

The release by the Australian Bureau of Statistics of data from the 2021 Census of Population and Housing by type of long-term health condition provides the opportunity to examine variations by socioeconomic disadvantage. The data also provide, for the first time, information as to the prevalence of these conditions for all Australians in the most remote areas.

Overall

The most commonly reported long-term health conditions were mental health conditions, arthritis and asthma. Also, of note were the conditions of diabetes and heart disease.

By socioeconomic disadvantage

The widest difference in rates is evident for diabetes, with a rate 83% higher in the Most disadvantaged areas when compared with the Least disadvantaged areas. Rates for arthritis, mental health conditions and heart disease were also markedly higher in the Most disadvantaged areas.

By remoteness

When viewed by Remoteness Area, rates varied by type of condition, such that for:
- arthritis, asthma and mental health conditions, the lowest rates were in Very Remote and the highest in Inner Regional;
- heart disease, the rates generally increased with remoteness; and for
- diabetes, after a small drop from Major Cities to Inner Regional, rates increased to their highest level, in Very Remote.

The low levels at which some conditions were reported by people living in the Very Remote areas are in contrast with rates of admission to hospital for those same conditions. For example, the rate of admissions to a public hospital for mental health-related conditions of people living in the Very Remote areas is almost twice that of those living in Major Cities areas (a rate ratio of 1.98). In contrast, the rate of long-term mental health conditions reported by people living in the Very Remote areas was almost half that in the Major Cities areas (47% lower, a rate ratio of 0.53). For asthma, hospitalisations were 53% higher for people living in the Very Remote areas, compared with a rate of reporting of long-term mental health conditions that was some 29%lower (a rate ratio of 0.71).

Summary

The data for long-term health conditions provide an important measure of the extent of variation in health status across Australia. When analysed by type of condition, socioeconomic disadvantage and remoteness they provide a clear case for a population health approach, if the aim is to reduce inequalities in the prevalence of chronic conditions and health outcomes and reduce the burden on public health services.

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Long-term health conditions by type of condition: variations by socioeconomic disadvantage and remoteness

Background

The release by the Australian Bureau of Statistics (ABS) of data from the 2021 Census of Population and Housing for long-term health conditions provides the opportunity to examine variations by type of condition and socioeconomic disadvantage and remoteness. In addition to the caveats in the box, below, the ABS draw attention to the strong link between age and incidence of long-term health conditions; however, the data presented in this Fact sheet have been age-standardised to remove, as far as possible, the effects of differences in the age structure when comparing populations age[1].

Other influences on the rate of long-term health conditions, for example sex, family type, living arrangements and cultural diversity are also described at the previously-footnoted link.

Details as to the number and rates of and variations in long-term health conditions, by the number of conditions reported, are in the Fact sheet *Long-term health conditions: variations in the number of conditions by socioeconomic disadvantage and remoteness*, available [here](#).

Caveats

Self-reported data and quality of data

The data presented here were self-reported and, as such vary from other data about these conditions that the ABS collects. However, the value of the Census data are in providing data for small geographic areas. For more detail, see under the heading *Methodology* at https://www.abs.gov.au/articles/long-term-health-conditions#cultural-diversity-and-long-term-health-conditions. The ABS also advise that the use of a single question in the Census to collect information on the complex and sensitive topic of long-term health conditions likely results in some underestimation of the number and proportion of people with long-term health conditions. This was observed particularly for mental health conditions. For further details see the heading *Demographic characteristics and long-term health conditions* at https://www.abs.gov.au/articles/long-term-health-conditions#cultural-diversity-and-long-term-health-conditions.

Coverage

The statistics are of Australians, whether living in a private dwelling (a private dwelling can be a house, flat or even a room; it can also be a caravan, houseboat, tent, or a house attached to an office, or rooms above a shop) or non-private dwelling (hospitals, nursing homes, gaols, etc.). The proportion of those with one or more chronic conditions is higher for those living in non-private dwellings (43.7% compared to 28.6% in private dwellings), with much larger differences for those with two (almost double) or three (more than four times) conditions, and relatively large differences for some individual conditions (e.g., dementia (including Alzheimer's), 25.6 times higher; stroke, 3.57 times; kidney disease, 2.28 times; and heart disease, 1.95 times). However, as only 2.2% of the population lives in non-private dwellings, the proportions shown in this report (regardless of living arrangements) closely reflect those for the population living in private dwellings, with never more than a one percentage point difference*.

*Data extracted from ABS TableBuilder, 1 June 2023: table available on request.

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[1] Australian Bureau of Statistics (ABS). Demographic characteristics and long-term health conditions at https://www.abs.gov.au/articles/long-term-health-conditions#demographic-characteristics-and-long-term-health-conditions

Long-term health conditions by type of condition and quintile of socioeconomic disadvantage

The most commonly reported long-term health conditions at all ages were mental health conditions (including depression or anxiety, with an age-standardised rate of 8.8 per 100 population); arthritis (8.5) and asthma (8.1). Also of note were the conditions of diabetes (4.7 per 100 population) and heart disease (including heart attack or angina, 3.9 per 100 population).

For adults (those aged 15 years and over), rates were slightly higher, at 10.3 per 100 population for arthritis and mental health conditions, 8.5 for asthma, 5.7 for diabetes and 4.8 for heart disease.

Asthma (6.3 per 100 population) and mental health conditions (2.1) were the most prevalent long-term conditions reported for children aged 0 to 14 years.

Table 1: Population by selected long-term health condition by age, Australia 2021

Condition	0 to 14 years		15 years and over		All ages	
	Number	ASR[1]	Number	ASR[1]	Number	ASR[1]
Arthritis	..	..	2,146,391	10.3	2,150,397	8.5
Asthma	294,198	6.3	1,773,820	8.5	2,068,018	8.1
Diabetes	..	..	1,191,389	5.7	1,198,716	4.7
Heart disease	..	..	991,027	4.8	999,096	3.9
Mental health	99,538	2.1	2,133,008	10.3	2,231,546	8.8

[1]ASR is the (indirectly) age-standardised rate per 100 population

.. not applicable

There is no noticeable difference in the data for those with one long-term health condition, with only 4% more people in the Most disadvantaged areas than was the case in the Least disadvantaged areas; there were similar rates across the middle quintiles[2] (Table 2 and Figure 1). However, there is a clear social gradient, and a marked differential between the most and least disadvantaged areas, for those reporting two conditions (a rate ratio of 1.39, or a rate of people in the Most disadvantaged areas reporting two conditions that was 39% higher than in the Least Disadvantaged areas). A gradient was again evident for those with three or more long-term health conditions, with almost twice the rate in the Most disadvantaged areas, a rate ratio of 1.98.

The five individual long-term conditions most often reported all show rates increasing with increasing socioeconomic disadvantage (Table 2 and Figure 1). The widest difference in rates is evident for diabetes, with a rate 83% higher in the Most disadvantaged areas when compared with the Least disadvantaged areas. Rates for arthritis, mental health conditions and heart disease were also markedly higher in the Most disadvantaged areas. Although the age-standardised rate for stroke is only 0.9 per 100 population (and is not shown in the table), the variation is from 0.71 in the Least disadvantaged areas to 1.11 in the Most disadvantaged areas, a rate ratio of 1.56.

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[2] Details of the composition of Most disadvantaged and Least disadvantaged areas and definitions of quintiles, social gradient and rate ratios are available here.

Table 2: Population by selected long-term health condition and quintile of socioeconomic disadvantage of area, Australia 2021

Conditions: number and type	Quintile of socioeconomic disadvantage of area (ASR[1])					Rate ratio[2]
	Q1: Least disadvantaged	Q2	Q3	Q4	Q5: Most disadvantaged	
One condition	18.4	18.7	19.0	19.2	18.9	**1.03**
Two conditions	4.8	5.5	5.9	6.3	6.7	**1.39**
Three or more	2.0	2.6	3.0	3.4	4.1	**2.02**
One or more	25.2	26.8	27.9	29.0	29.7	**1.18**
Arthritis	7.0	7.9	8.6	9.1	9.6	**1.38**
Asthma	7.4	7.8	8.1	8.6	8.8	**1.19**
Diabetes	3.4	4.2	4.6	5.1	6.2	**1.83**
Heart disease	3.5	3.7	3.9	4.1	4.4	**1.25**
Mental health condition	7.5	8.2	8.8	9.5	9.8	**1.30**

[1]ASR is the (indirectly) age-standardised rate per 100 population

[2]Rate ratio is the rate in the Most disadvantaged areas to the rate in the Least disadvantaged areas

Figure 1: Population by type of long-term health condition and quintile of socioeconomic disadvantage of area, Australia 2021
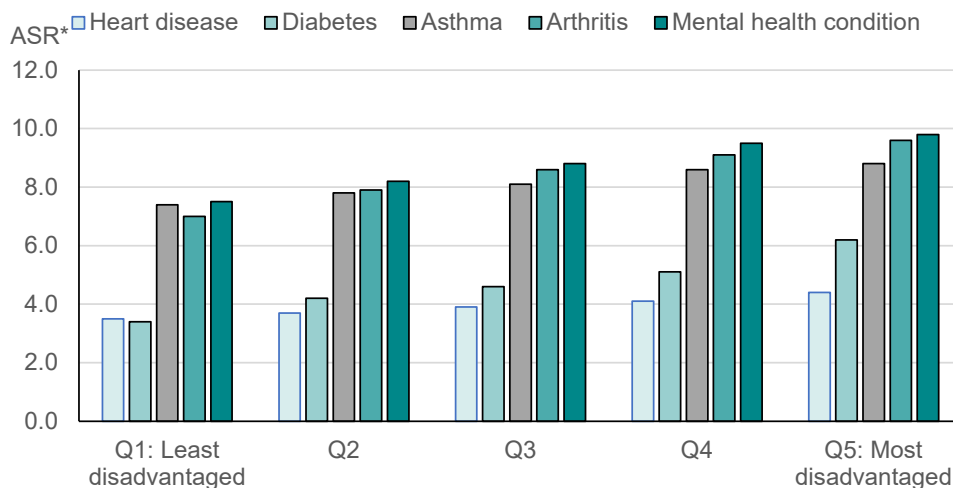
*ASR is the (indirectly) age-standardised rate per 100 population

To view similar charts by number of conditions for each State and Territory and by Greater Capital City and Rest of State/Territory area, as well as for individual conditions for adults and children, see under the heading *Long-term health conditions (ABS Census) data* here.

Long-term health conditions by type of condition and remoteness

These data from the 2021 Census provide, for the first time, information as to the prevalence of long-term health conditions for the whole Australian population across all of the remoteness categories. Data previously available from health surveys has not been able to capture prevalence for non-Indigenous people living in the sparsely settled Remote and Very Remote areas of Australia

The variation between the Very Remote and Major Cities areas was greatest for those reporting one or two conditions (Table 3).

When viewed by Remoteness Area, rates varied by type of condition, such that for:

- arthritis, asthma and mental health conditions, the lowest rates were in Very Remote and the highest in Inner Regional;
- heart disease, the rates generally increased with remoteness; and for
- diabetes, after a small drop from Major Cities to Inner Regional, rates increased to their highest level, in Very Remote (Table 3).

Table 3: Population by type of long-term health condition and Remoteness Area, Australia 2021

Number of long-term health conditions	ASR[1]	Remoteness Area (ASR[1])					Rate ratio[2]
		Major Cities	Inner Regional	Outer Regional	Remote	Very Remote	
One	15.8	18.5	20.4	18.8	17.0	15.0	**0.81**
Two	5.9	5.6	6.7	6.1	5.3	4.5	**0.80**
Three or more	3.0	2.8	3.6	3.4	2.9	2.5	**0.90**
One or more	27.7	26.9	30.7	28.4	25.2	22.1	**0.82**
Arthritis	8.5	8.0	9.8	9.1	7.6	5.8	**0.73**
Asthma	8.1	7.8	9.5	8.5	7.4	5.5	**0.71**
Diabetes	4.7	4.8	4.5	4.7	5.0	6.5	**1.36**
Heart disease	3.9	3.8	4.1	4.0	4.1	5.2	**1.35**
Mental health condition	8.8	8.3	10.8	9.1	6.7	4.4	**0.53**

[1]ASR is the (indirectly) age-standardised rate per 100 population

[2]Rate ratio is the rate in the Very Remote areas to the rate in the Major Cities areas

The low levels at which some conditions were reported by people living in the Very Remote areas are in contrast with rates of admission to hospital for those same conditions. For example, the rate of admissions to a public hospital for mental health-related conditions of people living in the Very Remote areas is almost twice that of those living in Major Cities areas (a rate ratio of 1.98). In contrast, the rate of long-term mental health conditions reported by people living in the Very Remote areas was almost half that in the Major Cities areas (47% lower, a rate ratio of 0.53). For asthma, hospitalisations were 53% higher for people living in the Very Remote areas, compared with a rate of reporting of long-term mental health conditions that was some 29%lower (a rate ratio of 0.71).

However, the high levels of reporting of diabetes and heart disease are consistent with rates of hospitalisation: for diabetes, rates of hospitalisation in Very Remote areas are 3.37 times those in Major Cities; for heart disease, the comparable rate ratio is 2.94.

Summary

The data for long-term health conditions provide an important measure of the extent of variation in health status across Australia. When analysed by type of condition, socioeconomic disadvantage and remoteness they provide a clear case for a population health approach, if the aim is to reduce inequalities in the prevalence of chronic conditions and health outcomes and reduce the burden on public health services.

Data sources

The data shown above are available from the PHIDU website, at the links above, or from https://phidu.torrens.edu.au/