Australian Government
Australian Institute of Health and Welfare

Neurological conditions in Australia

Web report | Last updated: **05 Dec 2025** | Topic: Neurological conditions | Media release

About

Neurological conditions are diseases of the nervous system affecting the brain, spinal cord and/or the nerves connecting these to the rest of the body. There are over 600 different neurological conditions with a variety of causes, though some causes remain unknown. This report provides key statistics about the prevalence of neurological conditions in Australia, hospitalisations, emergency department presentations, health system costs, burden of disease, mortality and aged care.

Cat. no: NEU 2

Key findings

- About 2.2 million (1 in 12) Australians were estimated to be living with long-term neurological conditions in 2022
- In 2021–22, 60% of Australians in permanent residential aged care had neurological conditions affecting their care
- Migraine accounted for over three-quarters (1.7 million) of Australians living with neurological conditions
- Dementia was the leading cause of total burden of disease for neurological conditions in 2024

Summary

Associated articles on specific neurological conditions

- Cerebral palsy
- Epilepsy
- Functional neurological disorder
- Guillain-Barré syndrome
- Huntington's disease
- Migraine and headaches
- Motor neurone disease
- Multiple sclerosis
- Myalgic encephalomyelitis / chronic fatigue syndrome
- Myasthenia gravis
- Parkinson's disease

About 2.2 million Australians were living with long-term neurological conditions in 2022, and over three-quarters (1.7 million) of these were living with migraine.

Females were almost twice as likely as males to be living with a long-term neurological condition (about 11% of females compared with about 6.1% of males) in 2022.

Neurological conditions were the 5th leading cause of disease burden in 2024, accounting for 8.4% of the total disease burden in Australia.

In 2021–22, 60% of Australians in permanent residential aged care had neurological conditions listed as a condition affecting care.

Rates and population differences

This report presents both crude and age-standardised rates, where available.

Crude rates are based on unadjusted data and indicate whether there is a difference between populations without accounting for differences in the age structures of the populations.

Age-standardised rates are based on data that are adjusted to account for differences in the age structures of the populations.

Therefore, a difference between 2 populations in crude rates indicates that the rate differs between them. The differences may be due to any number of factors, including different age structures of the populations. In contrast, a difference between 2 populations in age-standardised rates indicates that the rate differs between them but that this difference is not due to different age-structures.

For example, a difference in the prevalence rate between males and females indicates that prevalence differs between them, and this difference in prevalence could be due to any number of risk factors, including age. A difference in the age-standardised prevalence rate between males and females indicates that prevalence differs between them and, furthermore, that this difference in prevalence is *not* due to age.

For more information on rate calculations, see the Technical notes in this report.

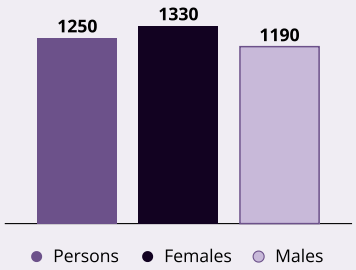
How common are neurological conditions?

- About 8.7% of all Australians (2.2 million people) in 2022 and 9.3% of Aboriginal and Torres Strait Islander (First Nations) people in 2022–23 were living with at least one long-term neurological condition.
- A higher percentage of females than males were living with a long-term neurological condition – the sex difference has been present since at least 2001.
- The most common long-term neurological condition was migraine, accounting for more than three-quarters of Australians living with neurological conditions and affecting 6.6% of all Australians and 7.4% of First Nations people.
- Tasmania (12%) had the highest percentage of people living with a neurological condition in 2022, whereas the Northern Territory (6.1%) had the lowest percentage.

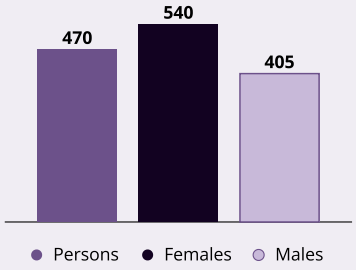
About 8.7% of all Australians (2.2 million people) were living with long-term neurological conditions in 2022, with females almost twice as likely as males to be living with neurological conditions (11% compared with 6.1%, respectively).

What health services are used to treat and manage neurological conditions?

- There were almost 365,000 hospitalisations (1,350 per 100,000 population, or 1,250 per 100,000 population age-standardised) and over 132,000 emergency department (ED) presentations (about 490 per 100,000 population, or about 470 per 100,000 population age-standardised) with a neurological condition as the principal diagnosis, in 2023–24.
- Migraine accounted for almost 1 in 4 ED presentations for neurological conditions, and epilepsy accounted for more than 1 in 5.
- Females were hospitalised and presented at ED for neurological conditions at a higher rate than males (even after accounting for age differences).

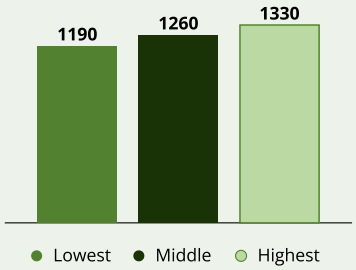


The **age-standardised rate of hospitalisations** (per 100,000 population) due to neurological conditions was **higher for females** compared with males.

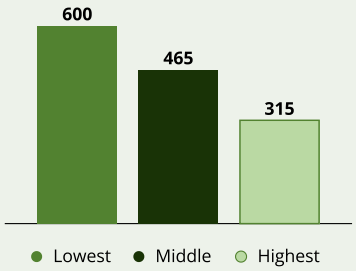


The **age-standardised rate of ED presentations** (per 100,000 population) due to neurological conditions was **higher for females** as compared with males.

- The lowest socioeconomic areas had the lowest age-standardised rate of hospitalisations due to neurological conditions but the highest rate of ED presentations; the highest socioeconomic areas had the highest age-standardised rate of hospitalisations but the lowest rate of ED presentations.
- *Remote and very remote* areas had the lowest age-standardised rate of hospitalisations due to neurological conditions but the highest age-standardised rate of ED presentations when compared with *Outer regional* areas, *Inner regional* areas and *Major cities*.



The **age-standardised rate of hospitalisations** (per 100,000 population) was **highest for the highest socioeconomic areas** and lowest for the lowest socioeconomic areas.



The **age-standardised rate of ED presentations** (per 100,000 population) was **highest for the lowest socioeconomic areas** and lowest for the highest socioeconomic areas.

Hospitalisations and ED presentations by socioeconomic and remoteness areas

The opposite patterns for hospitalisations as compared with ED presentations, between different socioeconomic and remoteness areas, may suggest that people in lower socioeconomic areas and in *Remote and very remote* areas may have poorer access to care systems, compared with people in higher socioeconomic areas and Major cities, respectively. Such care systems may include better navigation of health services including planned hospital visits, more availability of quality care at home and better social supports for informal at home care. This might increase planned hospital visits but reduce the need for going to emergency departments.

Further investigation is required to better understand the differences in patterns of hospitalisations and ED presentations.

Impact: health-system costs, burden of disease and mortality

- An estimated $6.6 billion of health-system costs were for neurological conditions, representing 3.6% of all health system costs.
- Neurological conditions were the 5th leading cause of disease burden in Australia, accounting for 8.4% of the total disease burden.
- Neurological conditions were the underlying cause of 6.5% of all deaths in Australia (44 deaths per 100,000 population, or 32 deaths per 100,000 population age-standardised).

Key data gaps and data improvement activities

Underestimating statistics for neurological conditions

For prevalence, hospitalisations, emergency department presentations and mortality statistics, this report uses the conditions listed under the category of "Diseases of the nervous system" in the International Statistical Classification of Diseases and Related Health Problems 10th revision (and its Australian modification), or ICD-10(-AM). This means that some neurological conditions are not included in the prevalence, hospitalisations, emergency department and mortality statistics reported here.

For example, only 3 types of dementia are classified under "Diseases of the nervous system" by the ICD-10(-AM), with other types of dementia classified under various other condition categories. Therefore, the numbers reported here do not account for all the different types of dementia. For prevalence, hospitalisations and mortality statistics that include all of the variants of dementia as a combined category, see AIHW's *Dementia in Australia* report.

See the Data sources section of this report for more details on the condition codes used for reporting from the National Health Survey, National Hospital Morbidity Database, National Non-admitted Patient Emergency Department Care Database and the National Mortality Database.

Data development works in progress

1. Epidemiology of Parkinson's disease and motor neurone disease (including estimating prevalence) using linked data from the National Health Data Hub (NHDH), a collaboration between AIHW and researchers at the University of Tasmania.
2. Epidemiology of Huntington's disease (including estimating prevalence) using linked data from the NHDH, a project by researchers at Monash University with AIHW as discussants.

Data development work for future updates

1. Ensuring that all the different types of dementia are included in the estimates for prevalence, hospitalisations, emergency department presentations and mortality.
2. Establishing a *consistent* standard for classifying neurological conditions across the different data sources (such as aligning to the Australian Burden of Disease Study). This will make the estimates for prevalence, hospitalisations, emergency department presentations and mortality more consistent with the estimates for burden of disease and health-system expenditure.

Background

Neurological conditions are diseases of the nervous system affecting the brain, spinal cord and the nerves connecting these to every other part of the body (WHO 2023).

There are over 600 different neurological conditions (Department of Health, Disability and Ageing 2025) with a variety of causal pathways that include infection, immune response and genetic factors. Many causes remain unknown. However, some neurological conditions can be prevented (WHO 2023). Some examples of neurological conditions are on the Australian Government Department of Health, Disability and Ageing website.

The World Health Organisation's *Intersectoral global action plan on epilepsy and other neurological disorders* (WHO 2023) includes actions with the aims of improving access to treatment and care and the quality of life for people with neurological conditions. The action plan's 'Strategic objective 4: Foster research and innovation and strengthen information systems', includes prioritising implementation research to facilitate the monitoring of interventions (item 122), and developing robust, standardised and accessible data on neurological conditions that address existing data gaps (item 125).

This report is part of the actions undertaken in Australia to address the components of the *Intersectoral global action plan on epilepsy and other neurological disorders*.

References

Department of Health, Disability and Ageing (2025) *What we're doing about neurological conditions*, Department of Health, Disability and Ageing website, Australian Government, accessed 24 January 2025.

WHO (World Health Organization) (2023) *Intersectoral global action plan on epilepsy and other neurological disorders*, WHO website, accessed 1 April 2025.

How common are neurological conditions in Australia?

The best current estimates for how common neurological conditions are in Australia come from self-reported data from the National Health Survey (NHS) 2022 (ABS 2023a) conducted by the Australian Bureau of Statistics (ABS).

Underestimating prevalence of neurological conditions and the prevalence of dementia in Australia

For prevalence estimates, this report uses the NHS condition codes listed under the category of "Diseases of the nervous system", in line with the International Statistical Classification of Diseases 10th Revision (ICD-10). This means that some neurological conditions are not included in the prevalence statistics reported here.

For example, only 3 types of dementia are categorised by the NHS and the ICD-10 under "Diseases of the nervous system", with other types of dementia categorised elsewhere. Therefore, the numbers reported here do not account for all the different types of dementia. For prevalence estimates that include all of the variants of dementia as a combined category, see AIHW's *Dementia in Australia* report. See the dropdown box below, labelled "Limitations of prevalence estimates from NHS", for more details on how prevalence is underestimated.

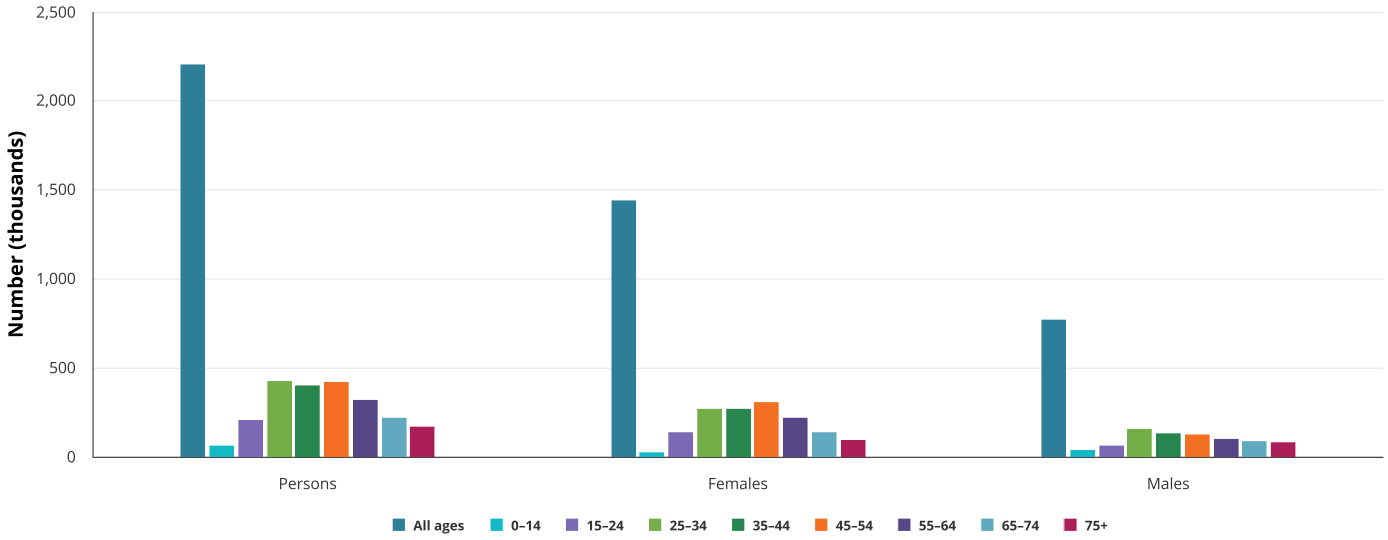
See the Data sources section of this report for more details on the condition codes used for reporting from the National Health Survey.
Based on self-reported data from the NHS 2022 (ABS 2023a):

- an estimated 2.2 million (8.7%) Australians were living with long-term neurological conditions (Figure 1) – almost 1 in 11 Australians
- the most common neurological condition was migraine, with 1.7 million (6.6%) Australians estimated to be living with it as a long-term condition
- females (about 11%) were almost twice as likely as males (6.1%) to be living with a long-term neurological condition (Figure 1), equating to about 1 in 9 females and 1 in 16 males
  - in almost every age-group, a higher percentage of females than males were living with neurological conditions (Figure 1)
  - the sex difference is predominantly due to migraine, with females (9.2%) being more than twice as likely as males (4.1%) to be living with this as a long-term condition
- Tasmania (12%) had the highest percentage of people living with a neurological condition, whereas the Northern Territory (6.1%) had the lowest percentage – out of all the states and territories of Australia in 2022, Tasmania had the oldest population (median age of 41.8 years, with 20.9% of the population being 65 years or older) and the Norther Territory had the youngest population (median age of 33.5 years, with 9% of the population being 65 years or older) (ABS 2023c)

an estimated 84% of people living with a neurological condition are living with multimorbidity (defined as living with 2 or more chronic conditions at the same time) (AIHW 2025).

Figure 1: Percentage and number of Australians living with neurological conditions, by sex and age-group

Measure: Number



Notes:

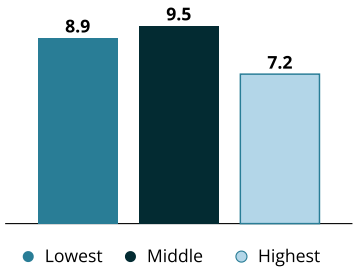
1. You can select whether the chart shows the percentage or number of Australians living with neurological conditions by changing the "measure" option at the top of the chart.
2. Persons includes people whose sex at birth was neither male nor female. See National Health Survey methodology, 2022 for more information.

Socioeconomic and remoteness areas

Based on self-reported data from the NHS 2022 (ABS 2023b):

- the highest socioeconomic areas had the lowest percentage (7.2%) of people living with neurological conditions (percentages for the other 4 socioeconomic areas ranged between 8.0% and 9.5%) – age-standardisation did not change the relative positions of the different socioeconomic areas
- *Major cities* had a lower percentage (8.4%) of people living with neurological conditions than *Outer regional and remote* areas (10%), with *Inner regional* areas (9%) falling in between these – age-standardisation did not change the relative positions of the different remoteness areas.

Even after age-standardisation, the **highest socioeconomic areas had the lowest percentage** of people living with neurological conditions.



Data tables on socioeconomic and remoteness figures are available for download under the Data section of this report.

Trends over time

The current prevalence estimates are higher than estimates from previous comparable surveys. Past estimates from previous NHSs range from 7.1% to 8% for all Australians (ABS 2002, 2006, 2009, 2012, 2015, 2018). The questions have not changed substantially across the surveys, and so the higher estimates in the most recent NHS may reflect either that in this particular sample there were more people who had been diagnosed or that more people in Australia are being diagnosed with neurological conditions.

Sex differences have been present in all previous comparable surveys, with females being about twice as likely as males to be living with a neurological condition. Past estimates for all Australians range from 9.3% to 11% for females and from 4.7% to 5.3% for males (ABS 2002, 2006, 2009, 2012, 2015, 2018).

Sex differences have remained stable over time, with **females about twice as likely as males to be living with neurological conditions since at least 2001**, both among all Australians and among First Nations people.

Contextualising prevalence: Estimates for other countries

Canada and England also use national household surveys to estimate prevalence of some neurological conditions.

Canada (Statistics Canada 2012)

- An estimated 11% of the population of Canada were living with long-term (at least 6 months) neurological conditions in 2010–11, compared with 7.4% of Australians in 2011–12 (ABS 2012).
- Females (over 14%) were almost twice as likely as males (7.6%) to be living with a long-term neurological condition in 2010–11, similar to findings in Australia.

England (NHS England 2024)

- About 4.5% of the population were living with long-term (at least 12 months) neurological conditions in 2022.
- Females (5.3%) were more likely than males (3.6%) to be living with a long-term neurological condition.

The lower estimate for England may be due to the survey asking about conditions lasting at least 12 months rather than 6 months. Other factors such as differences in self-reporting, survey design, diagnostic awareness and ages of the populations may also contribute to variation and should be considered when interpreting international comparisons.

Limitations of prevalence estimates from NHS

The NHS will underestimate the prevalence of neurological conditions in Australia for 4 main reasons.

First, the NHS does not include information about people living in non-private dwellings, such as residential aged care facilities, hospitals or prisons. The prevalence estimates will therefore exclude people living with some long-term health conditions. For example, AIHW's *Dementia in Australia* report estimated that in 2021–22, about 54% of Australians or 131,000 people in permanent residential aged care were living with dementia. These people would be excluded in the prevalence estimates from the NHS.

Second, for prevalence estimates, this report uses the NHS condition codes listed under the category of "Diseases of the nervous system", in line with the International Statistical Classification of Diseases 10th Revision (ICD-10), which differs from the WHO classification of neurological conditions (see Intersectoral global action plan on epilepsy and other neurological disorders). For example, whereas the WHO includes autism spectrum disorder among neurological conditions, the NHS classifies this condition (condition code 140501) under mental and behavioural conditions. As another example, the WHO classifies stroke as a neurological condition, whereas the NHS classifies stroke (condition code 180401) as a disease of the circulatory system. Similarly, the NHS includes only 3 specific types of dementia (frontotemporal dementia, dementia with Lewy bodies and Alzheimer's disease, condition codes 150401, 150402 and 150403, respectively) under the category of neurological conditions, with dementia more generally (condition code 140101) listed under mental and behavioural conditions. Therefore, most Australians living with dementia, estimated by the *Dementia in Australia* report to be about 411,100 people in 2023, would be excluded from the NHS prevalence estimates for neurological conditions. For more information on the NHS condition codes used to estimate prevalence in this report, see Table 6 in the Data sources section of this report. For more information on the NHS condition codes and classifications, see the 'Health Conditions' sheet of the Data item list, downloadable from National Health Survey, 2022.

Third, the NHS defines long-term conditions as those that have lasted or are likely to last at least 6 months. This means that neurological conditions that are episodic and where the episodes occur less frequently than every 6 months may not be included in the prevalence estimates. For example, people who have a migraine episode every 7 or more months would not be counted as having a long-term neurological condition. (Though people whose

conditions are being managed by medication are included in the prevalence estimates.)

Fourth, the self-reported nature of the NHS data relies on survey respondents providing accurate information. Although self-reported data may lead to either over-reporting or under-reporting, under-reporting may be more likely. This is because conditions that are not specifically prompted for, that are undiagnosed or asymptomatic in early stages are likely to be under-reported. People may also misreport their condition. For example, people with migraine may mistake their condition for some other type of headache and not report having migraine.

As such, the NHS will underestimate the true prevalence of neurological conditions in Australia.

Furthermore, an individual's tendency to self-report a condition can differ based on characteristics such as their age and cultural background and will influence results. Whether a condition is self-reported may also be influenced by characteristics of the condition, such as whether it is episodic or persistent in nature.

Moreover, most neurological conditions are rare (for example, Huntington's disease and motor neurone disease) and household surveys such as NHS are unlikely to capture rarer conditions in their sampling strategies.

These data gap issues regarding neurological conditions need to be addressed to provide more accurate prevalence estimates. For example, future work can be done to classify conditions from the NHS in a way that is consistent with the Australian Burden of Disease Study, which includes the different types of dementia as neurological conditions.

Notwithstanding the data gap issues, the NHS provides recent data from Australian households considered to be representative of most of the Australian population. The use of recent Australian data with such a large coverage of the Australian population makes this the most reliable source for estimating the prevalence of long-term neurological conditions in Australia.

Moreover, using data from the NHS has further advantages. It allows for comparisons of prevalence over time and across different conditions given that they are recurring surveys which collect data for 72 conditions using similar methods. This further allows for an examination of co- and multi-morbidity. For example, the *Multimorbidity in Australia* report found that 84% of people with a neurological condition were living with more than one long-term condition (multimorbidity).

Prevalence estimates from GBD 2021

A systematic analysis of the Global Burden of Disease Study (GBD) 2021 estimated that about 43% of people, globally, were living with a neurological condition in 2021 (Steinmetz et al. 2024).

The GBD 2021 (IHME 2025) estimated that almost 41% of Australians were living with a neurological condition in 2021.

However, although GBD 2021 uses data inputs from Australia for some neurological conditions, for several neurological conditions data inputs from Australia are not included due to limited availability or compatibility of national datasets. For example, for migraine and headaches, which are some of the most common neurological conditions, GBD 2021 relies on data from other countries and mathematical modelling strategies to estimate prevalence for Australia.

Moreover, part of the large discrepancy between the Australian estimates from GBD 2021 (41%) and NHS 2022 (8.7%) is likely due to the latter being focused on long-term conditions that have lasted or are likely to last at least 6 months, whereas GBD 2021 includes episodic conditions. This means that people who have had a migraine or headaches in the past year but lasting less than 6 months would be included in the GBD 2021 prevalence estimate but not in the NHS estimate.

References

ABS (Australian Bureau of Statistics) (2002) National Health Survey: Summary of Results, 2001, ABS website, accessed 5 May 2025.

ABS (2006) *National Health Survey: Summary of Results*, ABS, Australian Government, accessed 5 May 2025.

ABS (2009) *Table 3: Long-term conditions* [data set], National Health Survey: Summary of Results, 2007-2008 (Reissue), ABS website, accessed 5 May 2025.

ABS (2012) *Table 3: Long-term conditions by age then sex – Australia* [data set], Australian Health Survey: First Results, 2011-12, ABS website, accessed 5 May 2025.

ABS (2015) *Table 3: Long-term health conditions - Australia* [data set], National Health Survey: First Results, 2014-15, ABS website, accessed 5 May 2025.

ABS (2018) *Table 3: Long-term health conditions - Australia* [data set], National Health Survey: First results, 2017-18 financial year, ABS website, accessed 5 May 2025.

ABS (2023a) *Table 3: Long-term health conditions, by age and sex* [data set], National Health Survey, 2022, ABS website, accessed 1 April 2025.

ABS (2023b) Microdata: National Health Survey, 2022, AIHW analysis of detailed microdata, accessed May 2025.

ABS (2023c) *Median age, sex ratio and broad age groups, by SA2 and above, 2022* [data set], Regional population by age and sex, 2022, ABS website, accessed 10 November 2025.

AIHW (Australian Institute of Health and Welfare) (2025) Multimorbidity in Australia, AIHW website, accessed 15 July 2025.

IHME (Institute for Health Metrics and Evaluation) (2025). *GBD Results* [data set], IHME website, accessed 5 May 2025.

National Health Service (NHS) England (2024) *HSE 2022 Adult health tables (Table 2)* [data set], Health Survey for England 2022, Part 2: Data tables - NHS England Digital, NHS England website, accessed 5 May 2025.

Statistics Canada (2012) *Table 13-10-0467-01 Neurological conditions in household population* [data set], Statistics Canada website, accessed 5 May 2025.

Steinmetz JD et al. (2024) 'Global, regional, and national burden of disorders affecting the nervous system, 1990–2021: a systematic analysis for the Global Burden of Disease Study 2021', *The Lancet Neurology*, 23(4):344–381, doi:10.1016/S1474-4422(24)00038-3.

What health services are used to treat and manage neurological conditions in Australia?

In this report, health service usage is broadly measured through hospital admissions, presentations to emergency departments, registrations with the National Disability Insurance Scheme (NDIS) and aged care services.

Access to recent reliable primary care data was not available for this report and it is noted that general practitioners (GPs) and other primary care services play a critical role in diagnosis, prevention, early intervention, treatment and management of neurological conditions. For more information on neurological conditions in primary care settings, see RACGP - Neurological presentations.

The National Hospital Morbidity Database (NHMD) records information on admitted patient care (hospitalisations) in essentially all hospitals in Australia, and includes demographic, administrative and length-of-stay data, as well as data on the diagnoses of the patients and the procedures they underwent in hospital.

The National Non-admitted Patient Emergency Department Care Database (NAPEDC) is a compilation of episode-level records (including waiting times for care) for non-admitted patients registered for care in emergency departments in selected public hospitals. It includes information on the demographics and diagnoses of the patients. This report uses the NAPEDC to present information on the number of emergency department presentations for neurological conditions, including demographic characteristics of the presentations.

NDIS data is used in this report to show the number of people registered with plans involving a neurological condition.

This report presents information based on aged care data from the National Aged Care Data Clearinghouse (NACDC), specifically data from the Aged Care Funding Instrument (ACFI) – which reports on admission data that indicates whether a neurological condition currently affects a person's care needs.

Hospitalisations

Undercounting of hospitalisations due to neurological conditions and dementia

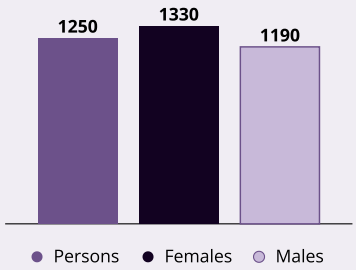
For hospitalisations data, apart from the condition codes for functional neurological disorder, this report uses the International Statistical Classification of Diseases 10th Revision Australian Modification (ICD-10-AM) condition codes listed under the category of "Diseases of the nervous system". This means that people hospitalised for some neurological conditions are not included in the hospitalisations statistics reported here.

For example, only 3 types of dementia are categorised in the ICD-10-AM under "Diseases of the nervous system", with other types of dementia categorised elsewhere. Therefore, the numbers reported here do not account for all the different types of dementia that people may be hospitalised for. For hospitalisations of people due to all of the variants of dementia as a combined category, see AIHW's *Dementia in Australia* report.

See the Data sources section of this report for more details on the condition codes used for reporting from the National Hospital Morbidity Database. Based on the National Hospital Morbidity Database (NHMD), in 2023–24:

- there were 365,000 hospitalisations (1,350 per 100,000 population, or 1,250 per 100,000 population age-standardised) due to neurological conditions (principal diagnosis), representing 29 out of every 1,000 hospitalisations in Australia
  - there were over 310,000 hospitalisations with neurological conditions as an additional diagnosis (1,150 per 100,000 population, or 970 per 100,000 population age-standardised)
- females accounted for more than half (53%) of hospitalisations due to neurological conditions (males 47%), equating to a rate of about 1,400 per 100,000 females and 1,300 per 100,000 males

The **age-standardised rate of hospitalisations** (per 100,000 population) due to neurological conditions was **higher for females** compared with males.



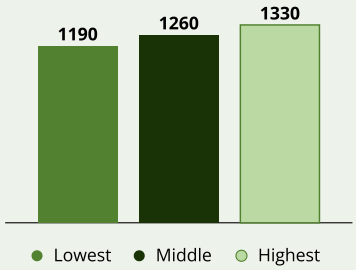
- females were hospitalised for neurological conditions (principal diagnosis) at a younger age than males (median ages of 52 and 59 years respectively)
- the average length of hospital stay due to neurological conditions was 2.7 days
- almost half (45%) of hospitalisations due to neurological conditions resulted in overnight hospital stays, the average length of stay for these was 4.9 days.

Socioeconomic and remoteness areas

In 2023–24:

- people living in higher socioeconomic areas had higher rates of hospitalisations (per 100,000 population) due to neurological conditions than people living in lower socioeconomic areas, even after age-standardisation
- people living in *Remote and very remote* areas had the lowest age-standardised rate of hospitalisations (950 per 100,000 population) due to neurological conditions, people living in *Major cities* and *Inner regional* areas had the highest rate (both with 1,300 per 100,000 population).

The **age-standardised rate of hospitalisations** (per 100,000 population) was **highest for the highest socioeconomic areas** and lowest for the lowest socioeconomic areas.



Data tables on socioeconomic and remoteness figures are available for download under the Data section of this report.

Trends over time

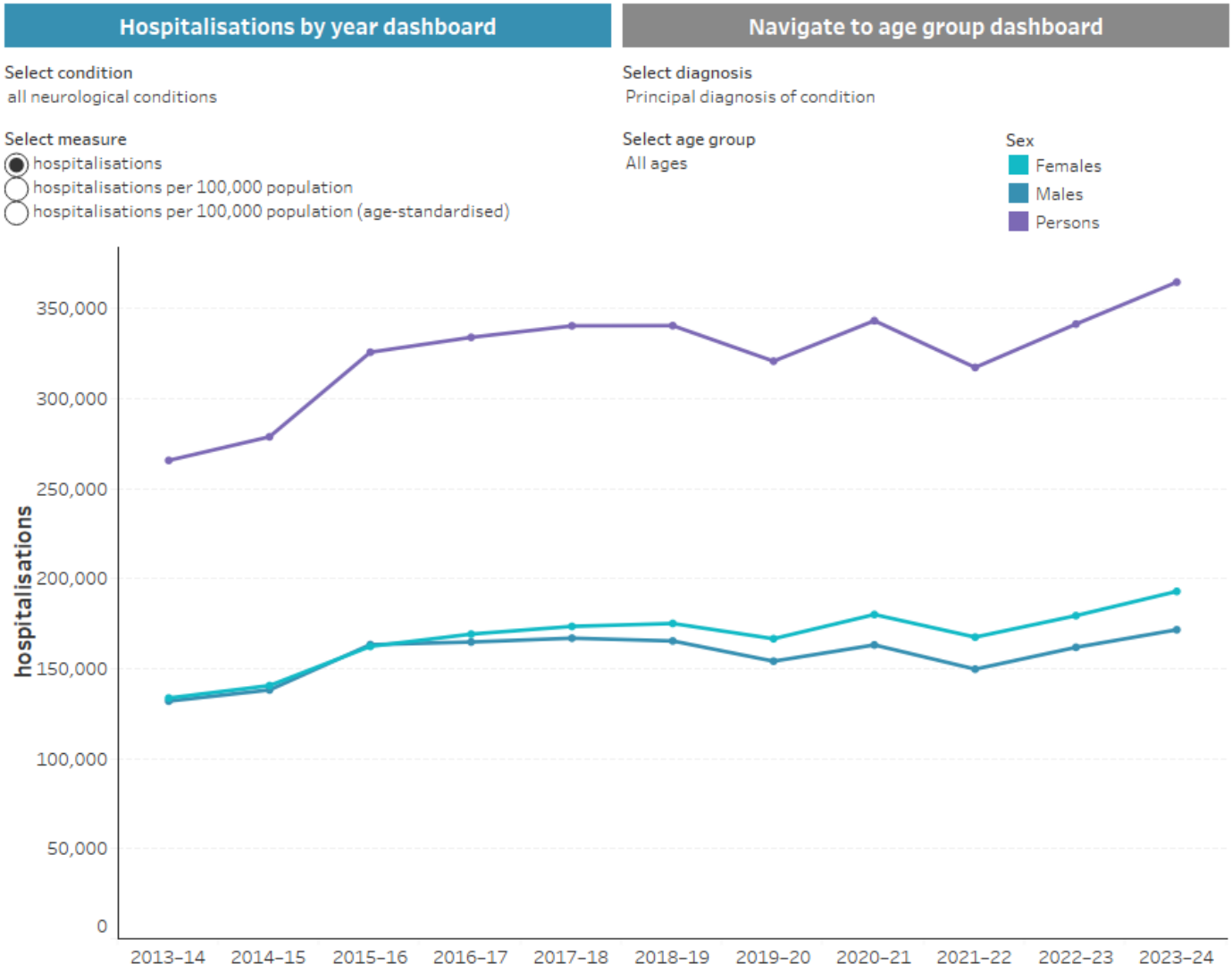
Hospitalisation trends only from 2015–16

For hospitalisations, there were some anomalies in the data for 2013–14 and 2014–15 that made the statistics for neurological conditions as a grouped category appear unreliable (see Figure 2). For comparisons over time, we therefore only go back to 2015–16.
Between 2015–16 and 2023–24:

- the crude hospitalisation rate for neurological conditions (principal diagnosis) changed very little, remaining at around 1,300 to 1,400 per 100,000 population. The age-standardised hospitalisation rate was similarly stable, remaining around 1,300 per 100,000 population

- the percentage of hospitalisations due to neurological conditions that became overnight stays decreased from 52% to 45%, the average length of stay for these increased from 4.4 days to 4.9 days
- the median age of people hospitalised for neurological conditions remained the same for all Australians at 55 years; for males the median age increased from 57 to 59 years, for females it decreased from 53 to 52 years.

Figure 2: Hospitalisation measures for neurological conditions, by age group and diagnosis scope, 2013–14 to 2023–24



Notes:
1. For more details, please see the Data sources and Data tables.
2. Rates were calculated using December estimated resident populations.
Source: AIHW analysis of the NHMD.
https://www.aihw.gov.au/

Procedures performed for people hospitalised due to a neurological condition

Information on procedures in the National Hospital Morbidity Database (NHMD) is reported using the Australian Classification of Health Interventions (ACHI) which classifies surgical operations, procedures and other types of interventions performed for the purpose of investigating and/or remedying health state.

In 2023–24, there were over 667,000 procedures for hospitalisations with a principal diagnosis involving neurological conditions – equating to around 1.8 procedures per neurological condition hospitalisation. Over a third (35%) of procedures were generalised allied health interventions, more than 1 in 10 (11%) were cerebral anaesthesia and 8.8% and 8% were for administration of blood (or blood products) and sleep study, respectively.

For more information on surgeries and intervention types, see Surgery and other interventions.

Emergency department presentations

Undercounting of emergency department presentations due to neurological conditions

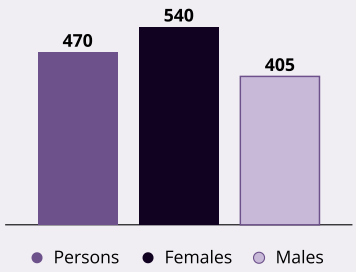
For emergency departments data, apart from condition codes for functional neurological disorder, this report uses the Emergency Department ICD-10-AM Principal Diagnosis Shortlist (ED shortlist) condition codes listed under the category of "Diseases of the nervous system". This means that people presenting at ED for some neurological conditions are not included in the statistics reported here.

For example, only 3 types of dementia are categorised in the ED shortlist under "Diseases of the nervous system", with other types of dementia categorised elsewhere. Therefore, the numbers reported here do not account for all the different types of dementia that people may present at ED for.

See the Data sources section of this report for more details on the condition codes used for reporting from the National Non-admitted Patient Emergency Department Care Database.
Based on the National Non-admitted Patient Emergency Department Care Database (NAPEDC), in 2023–24:

- there were 132,000 emergency department (ED) presentations due to neurological conditions (principal diagnosis) (490 presentations per 100,000 population, or 470 per 100,000 population age-standardised), representing 1.5% of all ED presentations
  - this suggests that most of the 365,000 hospitalisations due to neurological conditions were probably planned hospitalisations, as compared to admissions following ED presentations
- there were almost 11,000 ED presentations with neurological conditions listed as an additional diagnosis (41 per 100,000 population, or 37 per 100,000 population age-standardised)
- females accounted for more than half (57%) of ED presentations for which neurological conditions were the principal diagnosis
- females had a higher rate of presentations (560 per 100,000 population) compared with males (425 per 100,000 population) – the sex difference remained even after adjusting for age, with 540 presentations per 100,000 females and 405 presentations per 100,000 males

The **age-standardised rate of ED presentations** (per 100,000 population) due to neurological conditions was **higher for females** as compared with males.



- females presenting at EDs for neurological conditions were younger than males (median of 42 and 49 years, respectively)
- almost half (44%) of all ED presentations due to neurological conditions were admitted to hospital – 86% of ED presentations due to Guillain-Barré syndrome were admitted to hospital, 74% of ED presentations due to myasthenia gravis were admitted to hospital and 71% of ED presentations due to Parkinson's disease were admitted to hospital
- migraine accounted for almost 1 in 4 ED presentations due to neurological conditions and epilepsy accounted for more than 1 in 5.

of ED presentations due to neurological conditions were for **migraine**.

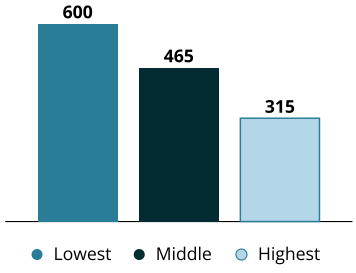
of ED presentations due to neurological conditions were for **epilepsy**.

Socioeconomic and remoteness areas

In 2023–24:

- people living in lower socioeconomic areas had higher rates of ED presentations (per 100,000 population) due to neurological conditions than people living in higher socioeconomic areas, even after age-standardisation
- people living in *Remote and very remote areas* had the highest age-standardised rate of ED presentations (760 per 100,000) due to neurological conditions; this was 1.9 times as high as people living in *Major cities* with the lowest age-standardised rate (400 per 100,000).

The **age-standardised rate of ED presentations** (per 100,000 population) was **highest for the lowest socioeconomic areas** and lowest for the highest socioeconomic areas.

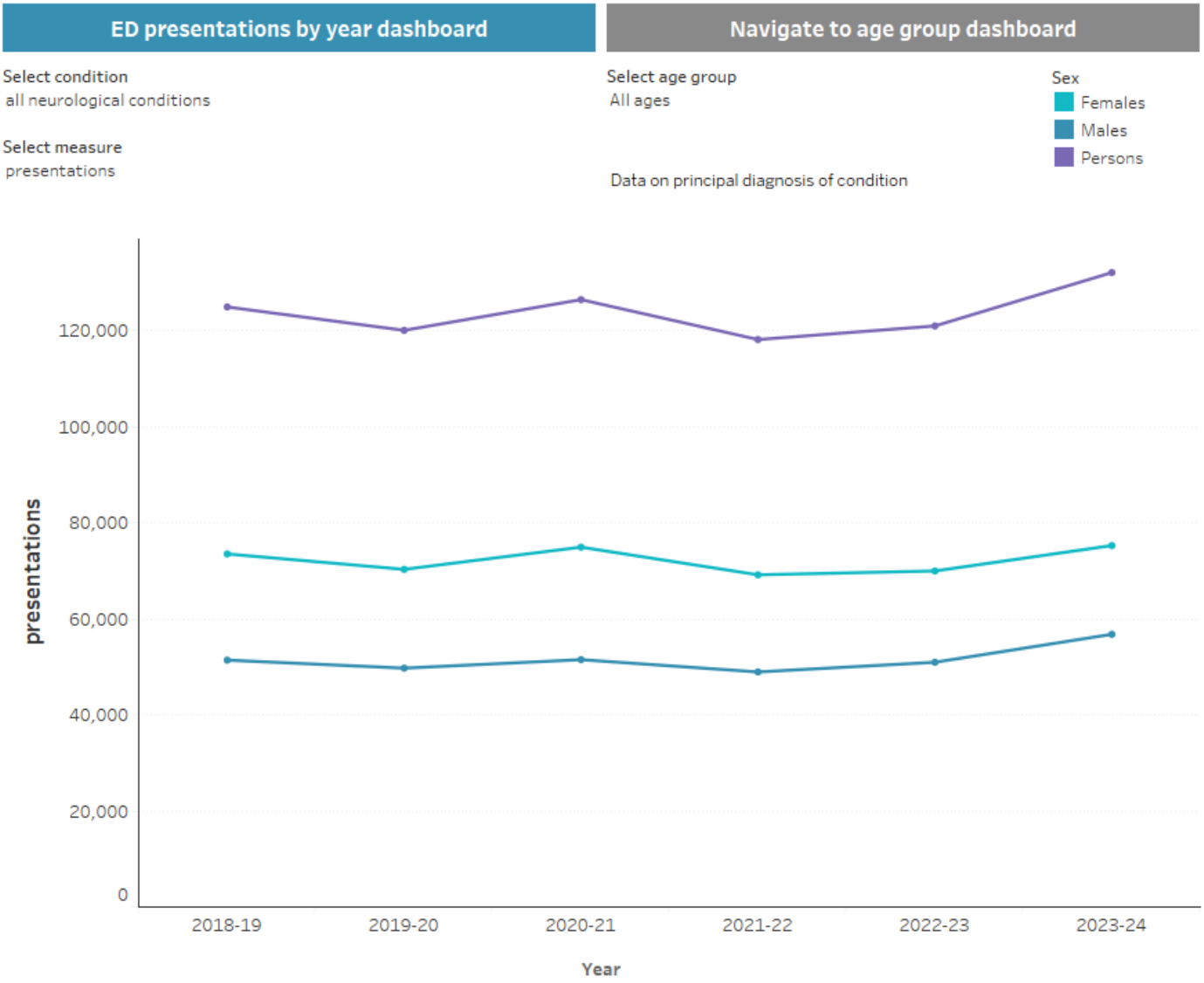


Data tables on socioeconomic and remoteness figures are available for download under the Data section of this report.

Trends over time

Between 2018–19 and 2023–24, the crude rate of ED presentations due to neurological conditions somewhat fluctuated between 495 and 460 per 100,000. The age-standardised rate similarly fluctuated between 485 and 445 per 100,000 population.

Figure 3: Emergency department presentations for neurological conditions, by age group and diagnosis scope, 2018–19 to 2023–24



Note: For more details, please see the Technical notes and Data tables.
Source: AIHW National Non-Admitted Patient Emergency Department Care Database
https://www.aihw.gov.au/

NDIS and aged care

As of 31 March 2025, there were 57,300 registered NDIS plans for people with an eligible neurological condition that was identified as the primary condition affecting care (NDIS 2025).

These numbers represent people who are eligible for NDIS funding based on evidence required by the National Disability Insurance Agency, they should not be used as an indication of prevalence.
Between 1 July 2021 and 30 June 2022, there were 246,000 people in permanent residential aged care who received an Aged Care Funding Instrument (ACFI) assessment, median age 87 years (64% of these were women and 36% were men with median ages of 88 and 85 years, respectively). Of these:

- 14% had a neurological condition (not including dementia) listed as a condition affecting care (median age 84 years) – 54% of these were women and 46% were men with median ages of 85 and 82 years, respectively
- including dementia, 60% had a neurological condition listed as a condition affecting care (median age 87 years) – 63% of these were women and 36% were men with median ages of 88 and 85 years, respectively.

In October 2022, the Aged Care Funding Instrument (ACFI) was replaced with the Australian National Aged Care Classification (AN-ACC) funding model, which does not capture health condition information. Therefore, the most recent data for this section are from 2021–22, with no further updates. For more information, see the National Aged Care Data Clearinghouse tab in the Data sources section of this report.

References

National Disability Insurance Scheme (NDIS) (2025) *Participants by diagnosis: Participants count by diagnosis data* [data set], Participant datasets, NDIS website, accessed 5 May 2025.

Impact: health-system costs, burden of disease and mortality

Neurological conditions can have significant impacts on people living with the condition(s), including their ability to participate in social activities, education and the workforce, as well as on the lives of family, friends and carers. Neurological conditions are therefore costly, to individuals, families, communities and governments (WHO 2023).

In this report, the impacts of neurological conditions are broadly measured in terms of mortality, health system costs and burden of disease.

The *Health system spending on disease and injury in Australia 2023–24* report (AIHW 2025) estimates annual health system costs. The report provides estimates of health system costs associated with specific diseases as well as disease groupings, such as neurological conditions.

The *Australian Burden of Disease Study 2024* (AIHW 2024) provides estimates for different measures of disease burden (years of life lost, years lived with disability and disability-adjusted life years) for over 200 disease and injuries in Australia, including neurological conditions. The reference periods available for reporting include 2003, 2011, 2015, 2018 and 2024.

The National Mortality Database (NMD) holds records for all deaths registered in Australia since 1964. It provides estimates of mortality for specific causes of death, including neurological conditions. The NMD contains information about the causes of death and the characteristics of the person, such as sex, age at death, area of usual residence and Indigenous status.

Note regarding cerebral palsy

Estimates of health-system costs and burden of disease related to cerebral palsy are included under the infant and congenital disease category in the *Health system spending on disease and injury in Australia 2023–24* and *Australian Burden of Disease Study 2024* reports, respectively.

Although cerebral palsy is a neurological condition, most of its associated burden and health-system expenditure occurs in younger age groups. For this reason, it is not classified as a neurological condition in the studies on health-system costs and burden of disease.

References

AIHW (Australian Institute of Health and Welfare) (2024a*) Australian Burden of Disease Study 2024*, AIHW website, accessed 5 May 2025.

AIHW (2025) *Health system spending on disease and injury in Australia 2023–24*, AIHW website, accessed 29 October 2025.

WHO (World Health Organization) (2023) *Intersectoral global action plan on epilepsy and other neurological disorders 2022–2031*, WHO, accessed 2 July 2024.

Health-system costs

Note regarding cerebral palsy

Estimates of health-system costs related to cerebral palsy are included under the infant and congenital disease category in the *Health system spending on disease and injury in Australia 2023–24* report.

Although cerebral palsy is a neurological condition, most of its associated health-care expenditure occurs in younger age groups. For this reason, it is not classified as a neurological condition in the health-system costs report.

Note on comparing previous health expenditure reports

The scope of expenditure and methods used in the most recent 2023–24 disease expenditure study (AIHW 2025) are similar to those used in the 2022–23 report however there are changes that have been made that make comparison of data between the 2023–24 report and the 2022–23 report to be done with caution. For more information see the methodology of the *Health system spending on disease and injury in Australia 2023–24* report (AIHW 2025).
In 2023–24:

- an estimated $6.6 billion of health-system costs were for neurological conditions, representing 3.6% of all health-system costs that can be attributed to disease or injury
- the highest costs for individual neurological conditions were dementia ($1.6 billion, epilepsy ($760.2 million), multiple sclerosis ($674.6 million) and migraine ($592.6 million)
- females accounted for 55% of the health system costs attributed to neurological conditions and males accounted for 45% (for 0.1% of costs, sex was not reported)
- about 35% of the health-system costs for neurological conditions were for public hospital admitted patient services; 17% were for Pharmaceutical Benefits Scheme (Figure 4) (AIHW 2025).

of the health-system costs attributed to neurological conditions were due to **dementia**.

of the health-system costs attributed to neurological conditions were due to **epilepsy**.

of the health-system costs attributed to neurological conditions were due to **multiple sclerosis**.

of the health-system costs attributed to neurological conditions were due to **migraine**.

For more information, see the *Health system spending on disease and injury in Australia 2023–24* report (AIHW 2025).

Socioeconomic and remoteness areas

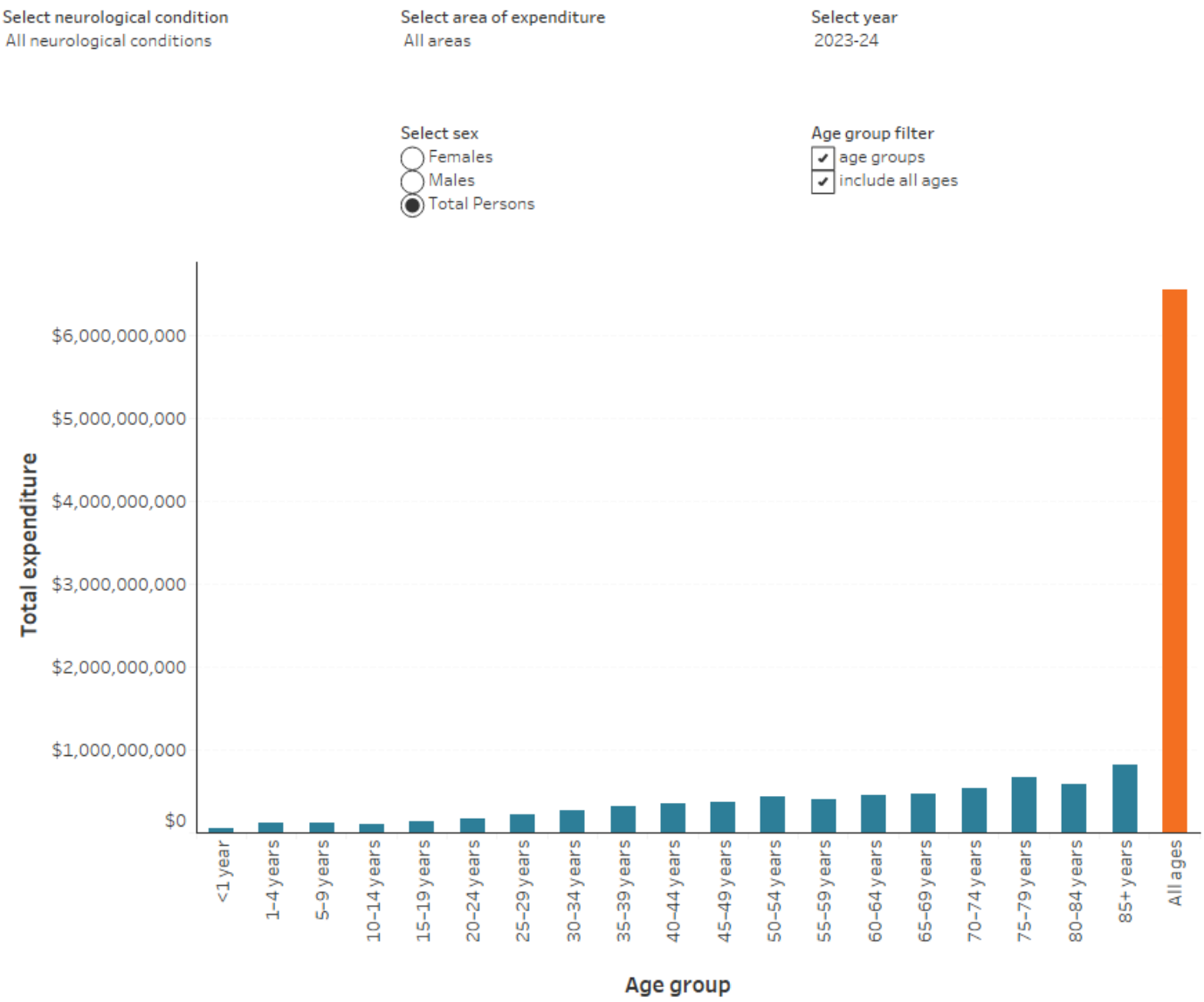
There were no data on health-system costs disaggregated by socioeconomic areas.

Except for *Major cities* ($21.9 million per 100,000 population), the rate of health-system costs for neurological conditions decreased with increasing remoteness. People living in *Inner regional* areas had the highest rate ($25.7 million per 100,000 population), and people living in *Very remote* areas had the lowest rate ($20.9 million per 100,000 population).

Trends over time

Between 2013–14 and 2023–24, health-system costs for neurological conditions, adjusted for inflation (reported in constant prices), have increased, going from $3.8 billion to $6.6 billion (Figure 4), representing 2.9% and 3.6% of all health-system costs in 2013–14 and 2023–24, respectively.

Figure 4: Neurological conditions expenditure by sex, age-group and area of the health-system, 2013–14 to 2023–24, constant prices



Source: AIHW Disease Expenditure Database.
https://www.aihw.gov.au

References

AIHW (2025) *Health system spending on disease and injury in Australia 2023–24*, AIHW website, accessed 29 October 2025.

Burden of disease

Burden of disease measures

Burden of disease is measured using the metric of disability-adjusted life years (DALY, also referred to as total burden). One DALY is one year of healthy life lost due to disease or injury.

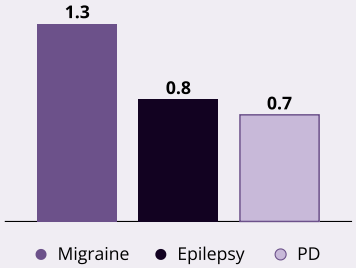
DALY caused by living in with disease or injury are referred to as non-fatal burden and measured in years lived with disability (YLD). DALY caused by premature death are referred to as fatal burden and measured in years of life lost (YLL).

Note regarding cerebral palsy

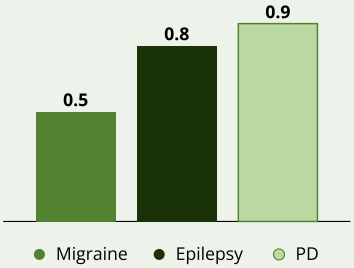
Estimates of burden of disease related to cerebral palsy are included under the infant and congenital disease category in the *Australian Burden of Disease Study 2024* report.

Although cerebral palsy is a neurological condition, most of its associated burden occurs in younger age groups. For this reason, it is not classified as a neurological condition in the burden of disease report.
In 2024 (AIHW 2024):

- neurological conditions were responsible for over 486,000 years of healthy life lost or DALY (15 DALY per 1,000 population, or 13 DALY per 1,000 age-standardised), making them the 5th leading disease group causing burden in Australia
  - this was equivalent to 8.4% of the total disease burden overall –10.1% of the total disease burden among females and 6.8% of the total disease burden among males
- females accounted for 57% of the total disease burden attributed to neurological conditions, and males accounted for 43%
- **dementia was the leading cause of total disease burden for neurological conditions** for both females and males, accounting for **5.7% of the total disease burden in females** and **3.4% of the total disease burden in males**
- for females, migraine, epilepsy and Parkinson's disease were the 2nd, 3rd and 4th (single) leading causes of burden for neurological conditions respectively
- for males, Parkinson's disease, epilepsy and migraine were the 2nd, 3rd and 4th (single) leading causes of total burden for neurological conditions respectively



For **females**, migraine, epilepsy and Parkinson's disease (PD) accounted for 1.3%, 0.8% and 0.7% of the total burden, respectively.



For **males**, Parkinson's disease (PD), epilepsy and migraine accounted for 0.9%, 0.8% and 0.5% of the total burden, respectively.

- about half of the DALY for neurological conditions were due to years lived with disability (YLD of 244,000 years) and half due to years of life lost (YLL of 242,000 years), representing 7.8% of the non-fatal burden in Australia and 9.1% of the fatal burden respectively
  - among females, neurological conditions accounted for 9.4% of the non-fatal burden and 11.1% of the fatal burden
  - among males, neurological conditions accounted for 6.0% of the non-fatal burden and 7.6% of the fatal burden
- of the disease burden for neurological conditions, females accounted for 64% of YLD and 51% of YLL; males accounted for 36% of YLD and 49% of YLL (Figure 4).

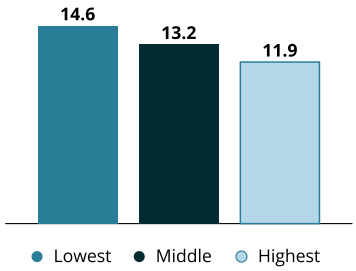
Socioeconomic and remoteness areas

The most recent burden of disease statistics disaggregated by socioeconomic and remoteness areas, at the time of writing this report, are from the *ABDS 2018* (AIHW 2021).

In 2018, the age-standardised rate of total disease burden attributed to neurological conditions was:

- lower for people living in higher socioeconomic areas, with people in the highest socioeconomic areas having the lowest age-standardised rate (almost 12 DALY per 1,000 population)
- lower for people living in *Major cities* (13.1 DALY per 1,000 population) and *Remote and very remote areas* (12.6 DALY per 1,000 population), compared with people living in *Inner regional areas* (14.9 DALY per 1,000 population) and *Outer regional areas* (13.7 DALY per 1,000 population).

The **lowest socioeconomic areas had a higher age-standardised DALY rate** (per 1,000 population) than the highest socioeconomic areas.



Trends over time

From 2003 to 2024:

- neurological conditions moved from being the 6th leading disease group causing burden in 2003, responsible for 242,000 DALY, to the 5th leading disease group in 2024, responsible for 486,000 DALY
- the crude DALY rate increased from 12 to 18 DALY per 1,000 population (15 to 21 per 1,000 for females and 10 to 16 per 1,000 for males)
  - this reflected an increase in the crude YLL rate from 5 to 9 per 1,000 population, and a smaller increase in the crude YLD rate from 8 to 9 per 1,000 population
- the age-standardised DALY rate increased by 16%, from 12 to 14 DALY per 1,000 population (from 13 to 15 per 1,000 for females and from 11 to 13 per 1,000 for males)
  - this reflected an increase in the age-standardised YLL rate (from 4.5 to 6.5 YLL per 1,000 people) and a somewhat stable age-standardised YLD rate (at about 7.5 YLD per 1,000 people)
- dementia remained the leading cause of total burden for neurological conditions for both females and males
- for females, migraine, epilepsy and Parkinson's disease remained the 2nd, 3rd and 4th (single) leading causes of total burden, respectively
- for males, Parkinson's disease went from being the 4th (single) leading cause of total burden to being the 2nd, with epilepsy and migraine going from 2nd and 3rd to 3rd and 4th, respectively.

Figure 5: Burden of disease due to neurological conditions by sex and age, 2003 to 2024

Select neurological condition: All neurological conditions

Select measure: (●) DALY ( ) YLD ( ) YLL

Select sex: ( ) Males ( ) Females (●) Persons

Select year: 2024

In **2024**, **Australians** had
973,056
disability-adjusted life years (DALY)
due to All neurological conditions

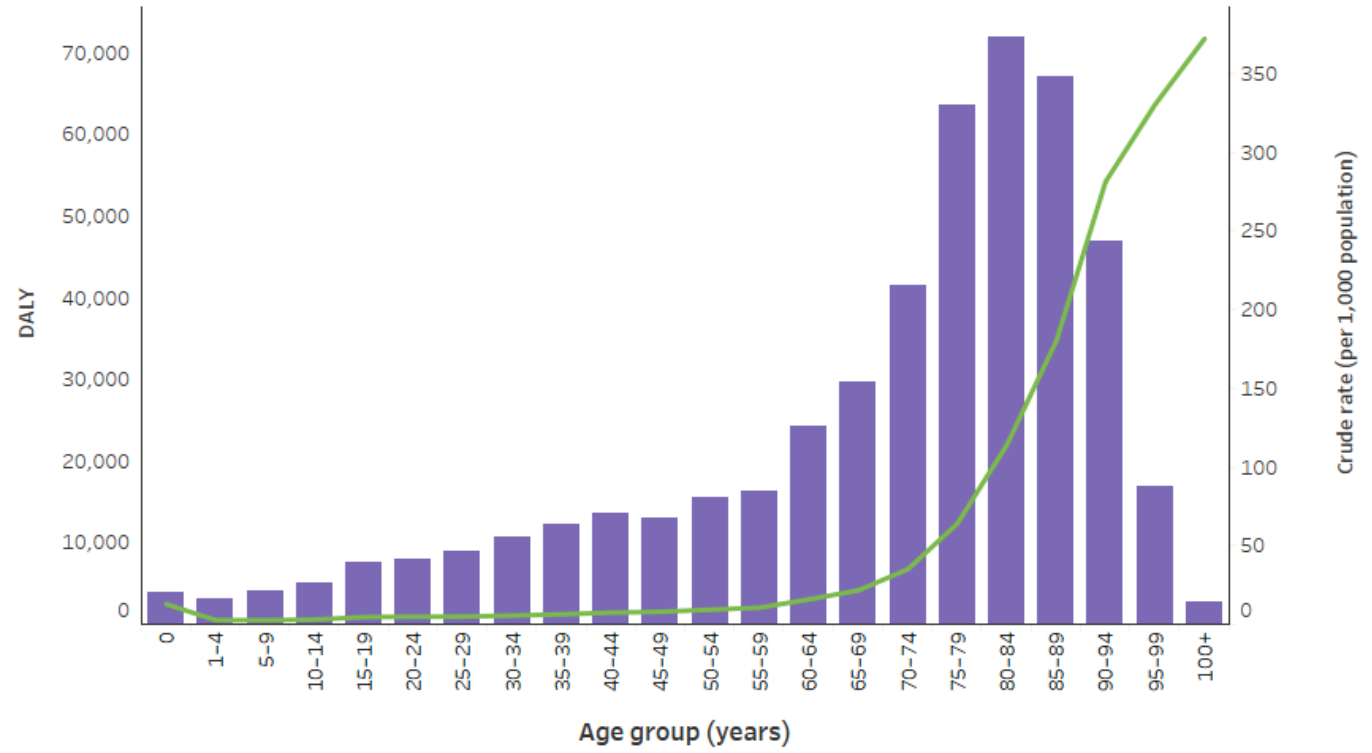
Equivalent to
28.07 DALY per 1,000 population (ASR)
or **1.9%** of the total burden
in Australia.

In **2024**, **Australian females** had
559,312
disability-adjusted life years (DALY)
due to All neurological conditions

Equivalent to
30.04 DALY per 1,000 population (ASR)
or **2.2%** of the total burden
in Australia.

In **2024**, **Australian males** had
413,744
disability-adjusted life years (DALY)
due to All neurological conditions

Equivalent to
25.82 DALY per 1,000 population (ASR)
or **1.5%** of the total burden
in Australia.



Note: Diseases displaying a rate of 0.00 per 1,000 population refer to a rate <0.005 per 1,000 population.
https://www.aihw.gov.au

References

AIHW (Australian Institute of Health and Welfare) (2021) *Australian Burden of Disease Study 2018: Interactive data on disease burden*, AIHW website, accessed 11 September 2025.

AIHW (2024) *Australian Burden of Disease Study 2024*, AIHW website, accessed 5 May 2025.

Mortality

Undercounting of deaths due to neurological conditions and dementia

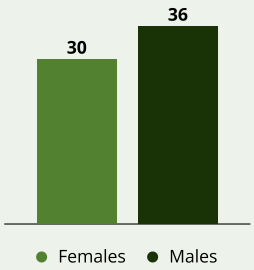
For mortality data, apart from condition codes for functional neurological disorder, this report uses the International Statistical Classification of Diseases 10th Revision (ICD-10) condition codes listed under the category of "Diseases of the nervous system". This means that some neurological conditions are not included in the mortality statistics reported here.

For example, only 3 types of dementia are categorised in the ICD-10 under "Diseases of the nervous system", with other types of dementia categorised elsewhere. Therefore, the numbers reported here do not account for the deaths of people with all the different types of dementia. For deaths due to all of the variants of dementia as a combined category, see AIHW's *Dementia in Australia* report.

See the Data sources section of this report for more details on the condition codes used for reporting from the National Mortality Database.
Based on the National Mortality Database (NMD), in 2023:

- neurological conditions were recorded as the *underlying cause* for 11,853 deaths (44 per 100,000 population, or 32 per 100,000 population age-standardised), representing 6.5% of all deaths in Australia, and an *associated cause* for 11,843 deaths (44 per 100,000 population, or 34 per 100,000 population age-standardised)
- Parkinson's disease was the underlying cause of 21% of the deaths for which neurological conditions were the underlying cause, and motor neurone disease was the underlying cause of 6.6%
- females had a slightly higher rate of deaths (46 per 100,000 female population) due to neurological conditions (underlying cause) than males (43 per 100,000 male population) – the sex difference was reversed after age-standardisation, with 30 deaths per 100,000 females and 36 deaths per 100,000 males
- the median age of people at point of death when neurological conditions were the underlying cause was 83 years (85 years for females and 81 years for males)
- older age-groups accounted for most of the deaths due to neurological conditions, with 78% of neurological condition deaths for people in the 75+ years age-groups (Figure 6).

Males had a higher age-standardised rate of deaths (per 100,000 population) compared with females.



Socioeconomic and remoteness areas

In 2023:

- there was little difference in the rate of deaths due to neurological conditions between people living in the lowest socioeconomic areas and people living in the highest socioeconomic areas (both around 44 per 100,000 population) – age-standardised rates were also similar (31.4 and 32.6 per 100,000 population, respectively)
- people living in *Remote and very remote* areas had the lowest age-standardised rate of deaths due to neurological conditions (23 per 100,000 population), compared with people living in *Outer regional* areas (28 per 100,000 population), *Inner regional* areas (33 per 100,000 population) and *Major cities* (33 per 100,000 population).

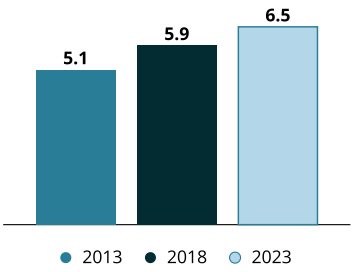
Data tables on socioeconomic and remoteness figures are available for download under the Data section of this report.

Trends over time

From 2013 to 2023:

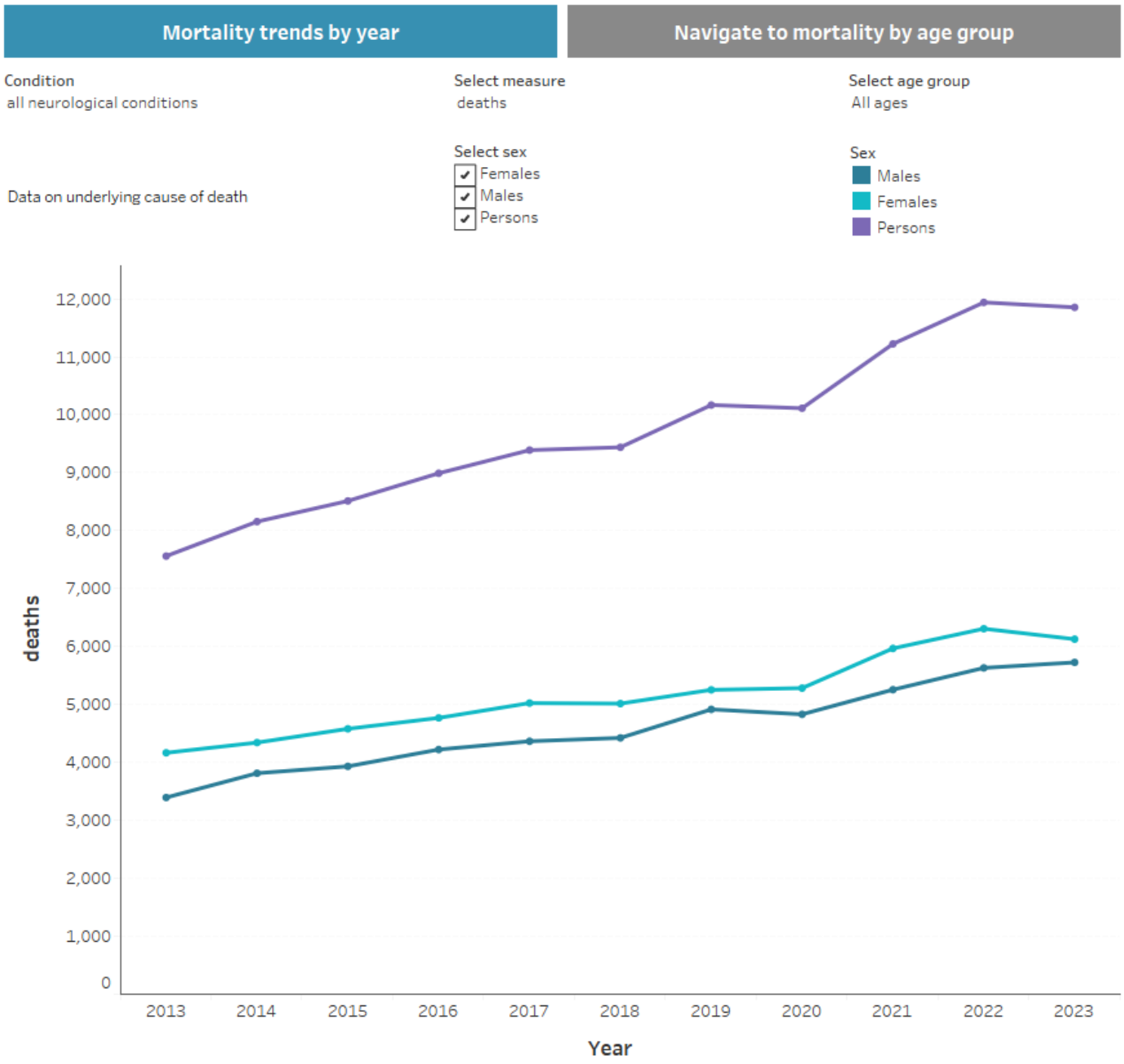
- there was an increase in the number of deaths due to neurological conditions, from 7,560 to 11,853 deaths, as well as an increase in the percentage of all deaths that were due to neurological conditions

Neurological condition deaths, as a percentage of all deaths, have increased from 2013 to 2023.



- the rate of deaths (per 100,000 population) due to neurological conditions increased from 33 to 44 and the age-standardised rate increased from 28 to 32 (Figure 6).

Figure 6: Neurological condition deaths from 2013 to 2023, by age-group and sex



Source: AIHW analysis of the National Mortality Database (NMD).
https://www.aihw.gov.au

First Nations people

How common are neurological conditions among First Nations people?

The best current estimates for how common neurological conditions are for Aboriginal and Torres Strait Islander (First Nations) people come from self-reported data from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) 2022–23 (ABS 2024), conducted by the ABS.

Prevalence of dementia and underestimating prevalence of neurological conditions

For prevalence estimates, this report uses the NATSIHS condition codes listed under the category of "Diseases of the nervous system", in line with the International Statistical Classification of Diseases 10th Revision (ICD-10). This means that some neurological conditions are not included in the prevalence statistics reported here.

For example, only 3 types of dementia are categorised by the NATSIHS and the ICD-10 under "Diseases of the nervous system", with other types of dementia categorised elsewhere. Therefore, the numbers reported here do not account for all the different types of dementia. For prevalence estimates that include all of the variants of dementia as a combined category among First Nations people, see AIHW's *Dementia in Australia* report. See the dropdown box below, labelled "Limitations of prevalence estimates from NATSIHS", for more details on how prevalence is underestimated.

See the Data sources section of this report for more details on the condition codes used for reporting from the NATSIHS.
Based on self-reported data from the NATSIHS 2022–23 (ABS 2024):

- an estimated 92,000 (9.3%) First Nations people were living with long-term neurological conditions
- the most common neurological condition was migraine, with 73,900 (7.4%) First Nations people estimated to be living with it as a long-term condition, equivalent to almost 1 in 13 First Nations people
- First Nations females (12%) were almost twice as likely as First Nations males (6.8%) to be living with long-term neurological conditions
  - this difference is predominantly due to migraine, with First Nations females (11%) being more than twice as likely as First Nations males (4.2%) to be living with it as a long-term condition.

More than **1 in 9 First Nations females** were estimated to be living with a long-term neurological condition, **compared with almost 1 in 15** First Nations males.

Trends over time

The current prevalence estimates are higher than estimates from previous comparable surveys. Past estimates from previous NATSIHSs range from 8% to 8.4% for First Nations people (ABS 2002, 2006, 2013, 2019).

Sex differences have been present in all previous comparable surveys, with females being about twice as likely as males to be living with a neurological condition. For First Nations people, past estimates range from 10% to 13% for females and from 6% to 6.3% for males (ABS 2002, 2006, 2013, 2019).

Sex differences have remained stable over time, with **females about twice as likely as males to be living with neurological conditions since at least 2001**, both among all Australians and among First Nations people.

Limitations of prevalence estimates from the NATSIHS

The NATSIHS will underestimate the prevalence of neurological conditions in among First Nations people in Australia for 4 main reasons.

First, the NATSIHS does not include information about people living in non-private dwellings, such as residential aged care facilities, hospitals or prisons. The prevalence estimates will therefore exclude First Nations people living with some long-term health conditions. For example, AIHW's *Dementia in Australia* report estimated that in 2021–22, about 53% of First Nations people or 1,370 people in permanent residential aged care were living with dementia. These people would be excluded in the prevalence estimates from the NATSIHS.

Second, for prevalence estimates, this report uses the NATSIHS condition codes listed under the category of "Diseases of the nervous system", in line with the International Statistical Classification of Diseases 10th Revision (ICD-10), which differs from the WHO classification of neurological conditions (see Intersectoral global action plan on epilepsy and other neurological disorders). For example, whereas the WHO includes autism spectrum disorder among neurological conditions, the NATSIHS classifies this condition (condition code 140501) under mental and behavioural conditions. As another example, the WHO classifies stroke as a neurological condition, whereas the NATSIHS classifies stroke (condition code 180401) as a disease of the circulatory system. Similarly, the NATSIHS includes only 3 specific types of dementia (frontotemporal dementia, dementia with Lewy bodies and Alzheimer's disease, condition codes 150401, 150402 and 150403, respectively) under the category of neurological conditions, with dementia more generally (condition code 140101) listed under mental and behavioural conditions. Therefore, many First Nations people living with dementia would be excluded from the NATSIHS prevalence estimates for neurological conditions. For more information on the NATSIHS condition codes used to estimate prevalence in this report, see Table 3 in the Data sources section of this report. For more information on the NATSIHS condition codes and classifications, see the "Health Conditions' sheet of the Data item list, downloadable from National Aboriginal and Torres Strait Islander Health Survey, 2022-23.

Third, the NATSIHS defines long-term conditions as those that have lasted or are likely to last at least 6 months. This means that neurological conditions that are episodic or that have not lasted (or which a person thinks will not last) 6 months would not be captured in the prevalence estimates. For example, people who have had a migraine episode, and which has not lasted or is not thought that it will last 6 months, would not be counted as having a long-term neurological condition.

Fourth, the self-reported nature of the NATSIHS data relies on survey respondents providing accurate information. Although self-reported data may lead to either over-reporting or under-reporting, under-reporting may be more likely. This is because conditions that are not specifically prompted for, that are undiagnosed or asymptomatic in early stages are likely to be under-reported. People may also misreport their condition. For example, people with migraine may mistake their condition for some other type of headache and not report having migraine.

As such, the NATSIHS will underestimate the true prevalence of neurological conditions in Australia.

Furthermore, an individual's tendency to self-report a condition can differ based on characteristics such as their age and cultural background and will influence results. Whether a condition is self-reported may also be influenced by characteristics of the condition, such as whether it is episodic or persistent in nature.

Moreover, most neurological conditions are rare (for example, Huntington's disease and motor neurone disease) and household surveys such as NATSIHS are unlikely to capture rarer conditions in their sampling strategies.

These data gap issues regarding neurological conditions need to be addressed to provide more accurate prevalence estimates. For example, future work can be done to classify conditions from the NATSIHS in a way that is consistent with the Australian Burden of Disease Study, which includes the different types of dementia as neurological conditions.

Notwithstanding the data gap issues, the NATSIHS provides recent data from Australian households considered to be representative of most of the First Nations population. The use of recent Australian data with such a large coverage of the First Nations population makes this the most reliable source for estimating the prevalence of long-term neurological conditions among First Nations people.

Moreover, using data from the NATSIHS has further advantages. It allows for comparisons of prevalence over time and across different conditions given that they are recurring surveys which collect data for 72 conditions using similar methods. This further allows for an examination of co- and multi-morbidity.

Hospitalisations

For First Nations people, based on the National Hospital Morbidity Database (NHMD), in 2023–24:

- there were 12,200 hospitalisations (1,200 per 100,000 population) due to neurological conditions (*principal diagnosis*) and 11,800 hospitalisations with neurological conditions as an *additional diagnosis* (1,100 per 100,000 population)
- epilepsy (almost 3,000 hospitalisations) accounted for almost 1 in 4 (24%) hospitalisations for which neurological conditions were the principal diagnosis and migraine and headache disorders (almost 1,200 hospitalisations) accounted for almost 1 in 10 (9.6%)
- females accounted for more than half of hospitalisations (53%) due to neurological conditions with a higher rate of hospitalisations than males (1,300 and 1,100 per 100,000 population respectively).

of hospitalisations of First Nations people due to neurological conditions were for **epilepsy**.

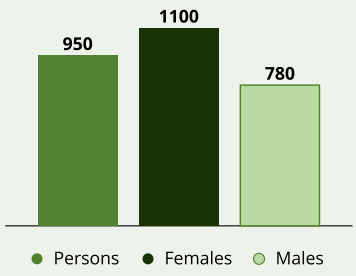
(round up) of hospitalisations of First Nations people due to neurological conditions were for **migraine and headache disorders**.

Emergency department presentations

For First Nations people, based on the National Non-admitted Patient Emergency Department Care Database (NAPEDC), in 2023–24:

- there were over 9,800 ED presentations due to neurological conditions (principal diagnosis) (950 per 100,000 population)
- there were 760 ED presentations with neurological conditions as an additional diagnosis (74 per 100,000 population)
- females accounted for more than half (59%) of the ED presentations with neurological conditions listed as the principal diagnosis
- females had a higher rate of presentations (1,100 per 100,000 population) than males (780 per 100,000 population)
- epilepsy (3,400 presentations) accounted for 1 in 3 (35%) neurological condition ED presentations and migraine (over 2,300 presentations) accounted for more than 1 in 5 (24%).

The **rate of ED presentations** (per 100,000 population) due to neurological conditions was **higher for First Nations females** as compared with First Nations males.



Health-system costs

The *Health system spending on disease and injury in Australia 2023–24* report (AIHW 2025) did not include statistics for First Nations people. AIHW is working to expand the scope of the *Health system spending on disease and injury in Australia* report in future updates to include spending on First Nations people.

Burden of disease

Burden of disease measures

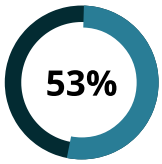
Burden of disease is measured using the metric of disability-adjusted life years (DALY, also referred to as total burden). One DALY is one year of healthy life lost due to disease or injury.

DALY caused by living in with disease or injury are referred to as non-fatal burden and measured in years lived with disability (YLD). DALY caused by premature death are referred to as fatal burden and measured in years of life lost (YLL).

The most recent burden of disease statistics for First Nations people, at the time of writing this report, are from the *ABDS 2018* (AIHW 2022).

In 2018:

- neurological conditions responsible for almost 10,100 DALY, accounting for 4.2% of the total burden of disease for First Nations people, making them the 8th leading disease group causing burden in Australia
- First Nations people had a crude rate of 12 DALY per 1,000 population (23 DALY per 1,000 population age-standardised) attributed to neurological conditions
- dementia (3,300 DALY), epilepsy (3,100 DALY) and migraine (1,700 DALY) were the leading (single) neurological conditions in terms of total burden overall (the relative position of these conditions in terms of DALY were the same for both males and females).



of the total burden attributed to neurological conditions for First Nations people was for **females**.

Mortality

For First Nations people, based on the National Mortality Database (NMD), in 2023:

- neurological conditions were recorded as the *underlying cause* for 161 deaths (16 per 100,000 population), representing 3.1% of all deaths for First Nations people, and an *associated cause* for 347 deaths (34 per 100,000 population)
- Parkinson's disease (18 deaths) was the underlying cause of 11.2% of the deaths for which neurological conditions were the underlying cause, epilepsy (17 deaths) was the underlying cause of 10.6% and motor neurone disease (13 deaths) was underlying cause of 8.1%
- the median age of death when neurological conditions were the underlying cause was 69 years (73.5 years for females and 62 years for males).

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ABS (2019) *Detailed long-term health conditions and psychological distress* [data set], National Aboriginal and Torres Strait Islander Health Survey, 2018-19 financial year, ABS website, accessed 5 May 2025.

ABS (2024) *Table 5 Detailed long-term health conditions* [data set], National Aboriginal and Torres Strait Islander Health Survey, 2022-23 financial year, ABS website, accessed 1 April 2025.

AIHW (Australian Institute of Health and Welfare) (2022) *Australian Burden of Disease Study 2018: Interactive data on disease burden among Aboriginal and Torres Strait Islander people*, AIHW website, accessed 5 May 2025.

AIHW (2025*) Health system spending on disease and injury in Australia 2023–24*, AIHW website, accessed 29 October 2025.

More information and representative organisations

Healthdirect Australia is a government supported online service that provides health information, advice and referrals to the community. Their website contains information on a range of neurological conditions covering topics such as symptoms, causes, how to get diagnosed, treatments and resources for further support.

Neurological Alliance Australia (NAA) is a collective of not-for-profit peak or national patient organisations. NAA represents adults and children living with a neurological or neuromuscular conditions or neurological disorders in Australia. NAA works collaboratively to identify and advocate for opportunities that will promote improved quality of life for people living with these conditions and funding to support research.

NAA members include Dementia Australia, Emerge Australia, Huntington's Australia, MS Australia, Parkinson's Australia, MND Australia, Brain Foundation, Migraine Australia, and more.

Additional articles on specific neurological conditions

Cerebral palsy
Dementia
Epilepsy
Functional neurological disorder
Guillain-Barré syndrome
Huntington's disease
Migraine and headaches
Motor neurone disease
Multiple sclerosis
Myalgic encephalomyelitis / chronic fatigue syndrome
Myasthenia gravis
Parkinson's disease

Technical notes

Rates

Unless otherwise stated, crude rates are presented and, as such, these rates have not been adjusted to account for differences in the age structures of different populations. Differences between populations may therefore be due to differences in age structures and not necessarily to other factors. To enhance comparability across groups where the age structure of the population may affect interpretation, age-standardisation is used where possible.

Age-standardisation is a method of removing the influence of age when comparing populations with different age structures – either different populations at one time or the same population at different times. In this report, the direct age-standardisation method was used. For age-standardised rates in this report, five-year age groups were used, with ages over 85 years combined, thus 0–4, 5–9, 10–14, ... , 80–84, 85+. For more information about age-standardisation, including the formula, see here age-standardised rate.

The Australian estimated resident population (ERP) as at 30 June 2001 has been used as the standard population.

For other rate calculations, the ABS ERP data were used to calculate most of the rates presented for administrative data collections (for example, rate of deaths, hospitalisations and mortality). The ERP data were also used to calculate some of the prevalence rates based on past NHSs which reported only prevalence counts (not rates).

For example, the NHS 2001 and NHS 2004–05 reported only counts of the number of Australians estimated to be living with neurological conditions. To calculate the percentages, AIHW used the ABS ERP for the reference year as the denominator and the estimated count of Australians living with neurological conditions as the numerator.

Rates were calculated using the ERP of the reference year as at 30 June for data that had a reference period of a calendar year (1 January to 30 December) and as at 31 December for data that had a reference period of a financial year (1 July to 30 June).

For ERP data see National, state and territory population, September 2024 | Australian Bureau of Statistics.

Socioeconomic areas

Comparisons between areas that are more or less socioeconomically disadvantaged are based on the Socioeconomic Indexes for Areas (SEIFA) which uses the Index of Relative Socioeconomic Disadvantage (IRSD).

The IRSD classifies individuals according to the socioeconomic characteristics of the area in which they live. It scores each area by summarising attributes of the population, such as income, educational attainment, unemployment rate and jobs in relatively unskilled occupations. The index does not show how individuals living in the same area differ from each other in their socioeconomic group.

Refer to the ABS Socioeconomic indexes for areas (SEIFA): Technical paper 2021 for more information.

Remoteness areas

Comparisons between remoteness areas are done using the Australian Statistical Geography Standard (ASGS) Remoteness Areas structure, which is based on area of residence. Australia is divided into 5 classes of remoteness based on a measure of relative access to services. The 5 remoteness areas are *Major cities*, *Inner regional*, *Outer regional*, *Remote* and *Very remote*. Refer to the ABS Remoteness structure for more information.

Margin of error

The margin of error indicates the range within which the true population value is likely to fall, at a given level of confidence (commonly 95%). In other words, it quantifies how the estimation result from a sample might differ from the actual value you would have obtained if you had studied the whole population. The larger the margin of error, the less confidence one should have that the result from the sample would accurately reflect the true value in the population.

Data sources

Australian Burden of Disease Study

The Australian Burden of Disease Study (ABDS) undertaken by the AIHW provides information on the burden of disease for the Australian population. Burden of disease analysis measures the impact of fatal (years of life lost, YLL) and non-fatal burden (years lived with disability, YLD), with the sum of non-fatal and fatal burden equating to the total burden (disability-adjusted life year, DALY).

The Australian Burden of Disease Study 2024 includes national estimates for 220 diseases and injuries in 2024 based on projections using historical trends in data. Burden estimates may be revised in the future as more data become available.

The ABDS 2024 also includes updated estimates of attributable burden due to selected modifiable risk factors, which were last updated as part of ABDS 2018. The 2018 study also includes a component on the impact and causes of illness and death in First Nations people, which includes estimates of the gap in disease burden between First Nations people and non-Indigenous people. Estimates of the burden of disease for First Nations people are available for 2003, 2011 and 2018.

The methods for estimation of burden of disease can be found in Australian Burden of Disease Study 2024, Technical notes. This includes descriptions for years of life lost (YLL), years lived with disability (YLD) and disability-adjusted life years (DALY).

For further information see Burden of disease.

A full list of condition codes used to get burden of disease statistics for neurological conditions, including the codes for each specific condition, are in Table 1.

Table 1: Australian Burden of Disease Study neurological condition groups

ABDS condition group	ICD-10 codes
Dementia	F00, F01, F02, F03, G30, G31
Epilepsy	G40, G41
Parkinson disease	G20
Cerebral palsy	G80
Multiple sclerosis	G35
Motor neurone disease	G12.2
Migraine	G43
Guillain-Barre Syndrome	G61.0
Other neurological conditions	G08, G09, G10, G11, G12.0, G12.1, G12.8, G12.9, G13, G14, G21, G22, G23, G24, G25, G26, G32, G36, G37, G44, G46, G47, G50, G51, G52 , G53, G54, G55, G56, G57, G58, G59, G60, G61.1, G61.8, G61.9, G62, G63, G64, G70, G71, G72, G73, G90, G91, G92, G93, G94, G95, G96 , G97, G98, G99

Disease Expenditure Database

The AIHW Disease Expenditure Database provides a broad picture of the use of health system resources classified by disease groups and conditions and was used in the AIHW report on Health expenditure Australia 2022–23. The report provides estimates of health system costs associated with specific diseases as well as disease groupings, such as neurological conditions.

The Disease Expenditure Database contains estimates of expenditure by the Australian Burden of Disease Study diseases and injuries, age group, and sex for admitted patient, emergency department and outpatient hospital services, out-of-hospital medical services, and prescription pharmaceuticals.

The database does not allocate all expenditure on health goods and services by disease – for example, neither administration expenditure nor capital expenditure can be meaningfully attributed to any particular condition due to their nature. For more information, see Health & Welfare expenditure.

A full list of condition codes used to get expenditure statistics for neurological conditions, including the codes for each specific condition, are in Table 2.

Table 2: Disease Expenditure condition codes

ABDS condition group	ICD-10 codes
Dementia	F00, F01, F02, F03, G30, G31
Epilepsy	G40-G41,Z82*
Guillain-Barre Syndrome	G61*
Migraine	G43

Cerebral palsy	G80
Motor neurone disease	G12*
Multiple sclerosis	G35,U80*
Other neurological conditions	G08-G11,G12*,G13-G14,G22-G26,G32,G36-G37,G44,G46-G47,G50-G60,G61*,G62-G64,G70-G73,G81-G83,G90-G96,G97*,G98-G99,I95*,P91*,U80*,Z98*
Parkinson disease	G20-G21

National Aboriginal and Torres Strait Islander Health Survey

The National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) is a series of surveys conducted by the ABS to obtain national information on the health of First Nations people, their use of health services and health-related aspects of their lifestyle. The 2022–23 NATSIHS was conducted from August 2022 to March 2024. Data were collected from approximately 4,900 households around Australia, in both non-remote and remote areas, including discrete Indigenous communities.

The survey collected a range of information about the health of respondents including the prevalence of long-term health conditions and demographic and socioeconomic characteristics.

A long-term health condition is defined as a condition that was current at the time of interview and had lasted, or was expected to last, 6 months or more.

Information on long-term health conditions was collected using:

- condition-specific modules to capture detailed information on a selection of conditions
- questions where respondents were prompted to review lists of conditions and identify each condition they had
- an open-ended question to capture any other conditions not already captured.

Questions varied to take into account differences between non-remote and remote populations and demographic characteristics. Respondents could report multiple health conditions.

The 2022–23 NATSIHS uses the Standard for Sex, Gender, Variations of Sex Characteristics and Sexual Orientation Variables, 2020. Data in the NATSIHS publication are presented using the Sex at birth variable. Due to small numbers and the need to protect privacy, people who reported sex at birth as a term other than male or female are not reported separately and are either (1) included in the total Persons category when the statistics are taken directly from the ABS publications and data download tables, or (2) not included in the total person count when the statistics are derived by us in the ABS DataLab environment (such as for the SEIFA and remoteness prevalence estimates).

For further information on methodology, see National Aboriginal and Torres Strait Islander Health Survey methodology, 2022-23.

To get prevalence estimates for neurological conditions from the NATSIHS 2022–23, we included the condition codes listed in Table 3 and included respondents in the counts for each condition if they said that they currently had the condition, whether they had been told by a doctor or not, and the condition was or was expected to be long-term.

Table 3: Condition codes for neurological conditions in NATSIHS 2022-23

Conditions	**ABS input codes**
Meningitis and encephalitis (excluding 'viral')	150101
Motor neurone disease	150202
Huntington's disease	150201
Parkinson's disease	150301
Frontotemporal dementia	150401
Dementia with lewy bodies	150402
Alzheimer's disease	150403
Multiple sclerosis	150501
Epilepsy	150601
Migraine	150602
Narcolepsy	150603
Muscular dystrophy	150701
Cerebral palsy	150801
Paralysis	150901
Chronic fatigue syndrome	151001

Other diseases of the nervous system	159999

National Aged Care Data Clearinghouse

The National Aged Care Data Clearinghouse (NACDC) is an independent and central repository of national aged care data. The NACDC was established in 2013, with the aim of increasing the availability, accessibility and coordination of aged care data. It brings together information on people receiving aged care and the services and organisations providing care. It largely contains administrative by-product data from the Department of Health, Disability and Ageing.

The NACDC includes activity data for residential aged care programs, community-based aged care packages, aged care assessments and a number of other aged care programs and packages. The NACDC also includes recipient details, payment subsidies, and service (facility/provider) details. These data are refreshed annually (including a full replacement of historical data) by the Department of Health, Disability and Ageing and are sourced from the Human Services payment systems, centralised client record systems and minimum datasets.

This report presents information from one key datasets as part of the NACDC – data from the Aged Care Funding Instrument (ACFI). This report uses the NACDC24 which contains aged care data to 30 June 2024 (including all historical ACFI data) with 2023-24 reference period.

For more information see National Aged Care Data Clearinghouse.

Aged Care Funding Instrument (ACFI) data – permanent residential aged care

Up until 30 September 2022, the Aged Care Funding Instrument (ACFI) was used to allocate government funding to aged care providers to support meeting the daily care needs of the people in their care. A snapshot of people in permanent residential aged care on 30 June 2020 showed that ACFI data captured virtually all people living in permanent residential aged care (99.8%).

Although the ACFI was a funding instrument and not a diagnosis or comprehensive assessment tool, it collected information on the assessed care needs of people entering permanent residential aged care at the time of their appraisal. It is important to bear in mind that in some instances, not all services received were captured in ACFI assessments.

People using respite care in a residential aged care facility did not have an ACFI assessment unless they also received permanent care at some point. Therefore, information on residential respite care using ACFI data is not possible.

The ACFI data captured up to 3 behavioural or mental conditions, and up to 3 medical conditions impacting care, which are also considered when determining the level of funding required. As the ACFI only allowed for up to 3 medical and 3 mental/behavioural conditions to be recorded, for some people it will not provide a comprehensive list of health conditions affecting them.

The analyses presented in this report only use the latest ACFI assessment available for an individual's latest episode of care.

On 1 October 2022, the ACFI was replaced with the Australian National Aged Care Classification (AN-ACC), which does not capture health condition information. Data in this section will no longer be updated.

To get estimates for neurological conditions from the ACFI data, we included all codes beginning with 06 (all codes from 0600 to 0699), as well as codes 0500, 0510, 0520 and 0530 (for the different types of dementia).

Table 4 contains a list of codes for specific conditions reported on in other articles associated with this report.

Table 4: Codes used to identify neurological conditions in NACDC (ACFI)

Condition	Relevant Code
Dementia (all variants)	0500, 0510, 0520, 0530
Huntington's disease	0602
Motor neurone disease	0603
Parkinson's disease (includes Parkinson's disease, secondary Parkinsonism)	0604
Multiple sclerosis	0607
Epilepsy (includes seizures)	0608
Cerebral palsy	0610
Post-viral fatigue syndrome	0612
Other neurological conditions	0601, 0605, 0606, 0609, 0611, 0699

National Disability Insurance Scheme

The National Disability Insurance Agency (NDIA) is an independent statutory agency. Their role is to implement the National Disability Insurance Scheme (NDIS).

The National Disability Insurance Agency holds all funds contributed by the Commonwealth, States and Territories in a single pool, manages scheme funds, administers access to the scheme and approves the payment of individualised support packages.

The NDIS eligibility requirements provide guidance on included disability types (List B: Conditions that are likely to result in a permanent impairment.

NDIS participant data is reported by ICD-10-AM (International Classification of Diseases Tenth Revision) codes listed in Table 5.

Table 5: NDIS neurological conditions codes

Condition description	ICD-10-AM Code
Alzheimer's disease	F00
Unspecified dementia	F03
Dementia – rapidly progressing	F03.9
Functional neurological disorder	F44.4
Functional seizures	F44.5
Huntington disease	G10
Other hereditary ataxias	G11.8
Motor neuron disease (also called amyotrophic lateral sclerosis)	G12.2
Parkinson's disease	G20
Dementia - Early Onset	G30.0
Multiple sclerosis	G35
Epilepsy	G40
Muscular dystrophy	G71.0
Glioblastoma	G71.9
Myopathy (variations)	G72.9
Cerebral palsy	G80
Plegia	G83.1
Chronic pain	G89.4
Chronic Regional Pain Syndrome	G90.5
Hypoxic brain injury	G93.1
Other Neurological	G99
Other Neurological (List A)	G99
Other Neurological (List C)	G99

National Health Survey

The National Health Survey (NHS) is a series of surveys conducted by the ABS since 1977. The 2022 NHS was conducted from January 2022 to April 2023. Data were collected from approximately 13,100 households around Australia in urban and rural areas, excluding Very remote parts of Australia and discrete Aboriginal and Torres Strait Islander Communities.

The survey collected a range of information about the health of respondents including the prevalence of long-term health conditions and demographic and socioeconomic characteristics.

A long-term health condition is defined in the NHS as a condition that was current at the time of interview and had lasted, or was expected to last, 6 months or more.

Information on long-term health conditions was collected using:

- condition-specific modules to capture detailed information on a selection of conditions
- questions where respondents were prompted to review lists of conditions and identify each condition they had
- an open-ended question to capture any other conditions not already capture

The 2022 NHS uses the Standard for Sex, Gender, Variations of Sex Characteristics and Sexual Orientation Variables, 2020. Data in the NHS publication are presented using the Sex at birth variable. Due to small numbers and the need to protect privacy, people who reported sex at birth as a term other than male or female are not reported separately and are either (1) included in the total Persons category when the statistics are taken directly from the ABS publications and data download tables, or (2) not included in the total person count when the statistics are derived by us in the ABS DataLab environment (such as for the SEIFA and remoteness prevalence estimates).

For further information on methodology, see National Health Survey methodology, 2022.

To get prevalence estimates for neurological conditions from the NHS 2022, we included the condition codes listed in Table 6 and included respondents in the counts for each condition if they said that they currently had the condition, whether they had been told by a doctor or not, and the condition was or was expected to be long-term.

Table 6: Condition codes for neurological conditions in NHS 2022

Conditions	ABS input codes
Meningitis and encephalitis (excluding 'viral')	150101
Motor neurone disease	150202
Huntington's disease	150201
Parkinson's disease	150301
Frontotemporal dementia	150401
Dementia with lewy bodies	150402
Alzheimer's disease	150403
Multiple sclerosis	150501
Epilepsy	150601
Migraine	150602
Narcolepsy	150603
Muscular dystrophy	150701
Cerebral palsy	150801
Paralysis	150901
Chronic fatigue syndrome	151001
Other diseases of the nervous system	159999

National Hospital Morbidity Database

The National Hospital Morbidity Database (NHMD) is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals.

Reporting to the NHMD occurs at the end of a person's admitted episode of care (separation or hospitalisation) and is based on the clinical documentation for that hospitalisation.

The NHMD is based on the Admitted Patient Care National Minimum Data Set. It records information on admitted patient care (hospitalisations) in essentially all hospitals in Australia, and includes demographic, administrative and length-of-stay data, as well as data on the diagnoses of the patients, the procedures they underwent in hospital and external causes of injury and poisoning.

The hospital separations data do not include episodes of non-admitted patient care given in outpatient clinics or emergency departments. Patients in these settings may be admitted subsequently, with the care provided to them as admitted patients being included in the NHMD.

For more information see Admitted patient care NMDS 2023–24.

To get hospitalisation estimates for neurological conditions from the NHMD, we included all G-codes from the ICD-10-AM (International Classification of Diseases Tenth Revision) as these are classified as 'Diseases of the nervous system'. To include functional neurological disorder (FND), we also included codes F44.0, F44.4, F44.5, F44.6, F44.7 F44.8, and F44.9.

Table 7 contains a list of codes for specific conditions reported on in other articles associated with this report (U codes are supplementary and are reported on separately, meaning that hospitalisations with these codes were not counted in reporting on the principal and/or additional diagnosis of the condition).

Table 7: NHMD condition codes for specific neurological conditions in other articles associated with this report

Condition description	ICD-10 codes
Huntington's disease	G10
Motor neurone disease	G12.2
Parkinson's disease	G20, U80.1
Multiple sclerosis	G35, U80.2
Epilepsy (inc. status epilepticus)	G40, G41, U80.3
Migraine (excluding other headaches)	G43
Cluster headache syndrome	G44.0
Tension-type headache	G44.2
Migraine and other headaches	G43-G44
Guillain-Barre Syndrome	G61.0

Myasthenia Gravis	G70.0
Cerebral palsy	G80, U80.4
Post viral fatigue syndrome	G93.3
Functional neurological disorder	F44.0, F44.4, F44.5, F44.6, F44.7 F44.8, F44.9

National Mortality Database

The National Mortality Database (NMD) comprises information about causes of death and other characteristics of the person, such as sex, age at death, area of usual residence and Indigenous status. The cause of death data are provided to the AIHW by the Registries of Births, Deaths and Marriages and the National Coronial Information System (managed by the Victorian Department of Justice) and include cause of death coded by the ABS. The data are maintained by the AIHW in the NMD.

Notes regarding the NMD:

- Causes of death are coded by the ABS to the International Statistical Classification of Diseases and Related Health Problems (ICD).
- In this report, deaths are counted according to year of registration of death, not necessarily the year in which the death occurred.
- For mortality data by First Nations status, numbers and rates are reported for 6 jurisdictions combined – New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. Numbers of deaths are also reported for Victoria, Tasmania, and the Australian Capital Territory, as well as nationally, however these data should be interpreted with caution due to concerns around the quality of Indigenous identification in those 3 jurisdictions.
- Causes of death data from 2006 onward are subject to a revisions process. Once data for a reference year are final, they are no longer revised. For this report, deaths registered in 2021 and earlier are based on the final version of Causes of Death data; deaths registered in 2022 are based on the revised version; deaths registered in 2023 are based on the preliminary version. Revised and preliminary versions are subject to further revision by the ABS.
- The data quality statements underpinning the AIHW National Mortality Database can be found in Australian Bureau of Statistics (ABS) publications:
  - ABS quality declaration summary for Deaths, Australia methodology (Causes of Death, Australia methodology, 2023)
  - ABS quality declaration summary for Causes of Death, Australia methodology (Deaths, Australia methodology, 2024)
  - For more information on the AIHW National Mortality Database see Deaths data at AIHW.

For more information see National Mortality Database (NMD).

To get mortality statistics for neurological conditions from the NMD, we included all G-codes from the ICD-10 (International Classification of Diseases Tenth Revision) as these are classified as 'Diseases of the nervous system'. To include functional neurological disorder (FND), we also included codes F44.0, F44.4, F44.5, F44.6, F44.7 F44.8, and F44.9.

Table 8 contains a list of codes for specific conditions reported on in other articles associated with this report.

Table 8: National Mortality Database (NMD) condition codes

Cause of death	ICD-10 codes
Huntington's disease	G10
Motor neurone disease	G12.2
Parkinson's disease	G20
Multiple sclerosis	G35
Other acute disseminated demyelination and demyelinating diseases of central nervous system	G36-G37
Epilepsy (including status epilepticus)	G40, G41
Migraine and other headaches	G43-G44
Guillain-Barre Syndrome	G61.0
Myasthenia Gravis	G70.0
Cerebral palsy	G80
Post viral fatigue syndrome	G93.3
Functional neurological disorder	F44.0, F44.4, F44.5, F44.6, F44.7 F44.8, F44.9

National Non-admitted Patient Emergency Department Care Database

The National Non-admitted Patient Emergency Department Care Database (NAPEDC) is a compilation of episode-level records (including waiting times for care) for non-admitted patients registered for care in emergency departments in selected public hospitals. The database only captures information for physical presentations to emergency departments and does not include advice provided via telehealth or videoconferencing.

Patients being treated in emergency departments may be subsequently admitted, including admission in the emergency department, another hospital ward or to hospital-in-the-home. For this reason, there is an overlap in the scope of the NNAPEDCD NMDS and the APC NMDS.

The National Non-Admitted Patient Emergency Department Care Database includes information on people's area of usual residence at the time of ED admission, demographics, as well as data on the diagnoses of the patients. For 2022–23, this was their SA2 based on the 2016 ASGS. In this report, 2016 SA2 values have been concorded to SA2 values based on the 2021 census prior to calculating rates.

The quality of the data reported for Indigenous (or First Nations) status in emergency departments has not been formally assessed. In addition, the scope of the NNAPEDCD may not include some emergency services provided in areas where the proportion of First Nation people (compared with other Australians) is higher than average. Therefore, the information on Indigenous status presented in this report should be used with caution.

For emergency department data, an ICD-10 short list was developed beginning in 2018–19 and continues until now. For valid comparisons over time, we therefore only go back to 2018–19.
For more information see Non-admitted patient emergency department care NMDS 2023–24.Principal diagnoses for episodes of care in the NNAPEDCD 2022–23 are coded according to the Emergency Department ICD-10-AM Principal Diagnosis Shortlist.

To get emergency department estimates for neurological conditions from the NAPEDC, we included all G-codes from the short list of the ICD-10-AM (International Classification of Diseases Tenth Revision) as these are classified as 'Diseases of the nervous system'. To include functional neurological disorder (FND), we also included code F44.9 (or F44).

Table 9 contains a list of shortlist codes on specific conditions reported on in other articles associated with this report. Some conditions had specific 3- or 4-digit codes. However, not all emergency departments used the shortlist codes consistently. For example, epilepsy has only 4 shortlist codes, representing different types of epilepsy (40.10, 40.30, 40.90 and 41.9). And yet in 2018–19, when the shortlist was first introduced, there were almost 4,600 principal diagnoses with codes for epilepsy which are not on the shortlist (for example, G40.6). To capture these, we therefore used broader codes listed in the third column of Table 9.

We excluded A87.9 for viral meningitis. The code A87.9 mapped to G02.0 'Meningitis in viral diseases classified elsewhere' in the ICD-10-AM. However, G02.0 mapped also to 5 other codes (A87.0, A87.1, A87.2, A87.8 and A87.9) from the ICD-10-AM that were not G-codes and thus not classified as neurological conditions.

Table 9: Emergency Department short list of neurological ICD-10 codes

ED Short List Term	ED Short List code	Codes to capture all presentations
Parkinson's disease	G20	G20
Multiple sclerosis	G35	G35
Epilepsy (including status epilepticus)	G40.10, G40.30, G40.90, G41.9	G40, G41
Migraine (excluding other headaches)	G43.9	G43
Headache, cluster	G44.0	G44.0
Headache, tension-type	G44.2	G44.2
Migraine and other headaches	G44.8	G43, G44
Guillain-Barre syndrome	G61.0	G61.0
Myasthenia gravis	G70.0	G70.0
Cerebral palsy	G80.9	G80
Functional neurological disorder	F44.9	F44

Notes

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Amendments

17 April 2026:

In the Epilepsy in Australia web article, the highlights section infographic tiles on **hospitalisations** and **emergency department (ED) presentations** reported statistics for the wrong year.

- For hospitalisations, one tile reported that there were 25,300 hospitalisations (9.4 hospitalisations per 100,000 population). This has been changed to **25,200** hospitalisations (**94** hospitalisations per 100,000 population).
- For ED presentations, one tile reported that there were 28,100 (103 per 100,000 population) ED presentations. This has been changed to **29,200** (**110** per 100,000 population) ED presentations.

In the Emergency department presentations section of the article, 2 dot points reported statistics for the wrong year.

- The first dot point reported that there were 28,100 emergency department (ED) presentations due to epilepsy (103 presentations per 100,000 population). The numbers have been changed to **29,200** and **110**, respectively.
- The second dot point reported the rate of ED presentations for males and females (110 and 91 per 100,000 population, respectively) and age standardised rates (120 and 95 presentations per 100,000 for males and females, respectively). These have been changed to **120** and **97** per 100,000 population for males and females, respectively (crude) and **120** and **100** presentations per 100,000 population for males and females, respectively (age-standardised).

Data

Data tables: Neurological conditions

Data

Tables on prevalence, hospitalisations, emergency department presentations, aged care and mortality for neurological conditions.
XLSX 786kB

Data tables: Australian Burden of Disease Study 2018

Data

Data tables with burden of disease estimates by socioeconomic and remoteness areas.

Data tables: Australian Burden of Disease Study 2018 (First Nations)

Data

Data tables with burden of disease estimates for First Nations people.

Data tables: Australian Burden of Disease Study 2024

Data

Data tables with burden of disease estimates.

Data tables: Health-system spending on disease and injury in Australia

Data

Data tables with health-system expenditure estimates.

Related material

Resources

Cerebral palsy in Australia

Resource

Web article | 05 Dec 2025

Epilepsy in Australia

Resource

Web article | 05 Dec 2025

Functional neurological disorder in Australia

Resource

Web article | 05 Dec 2025

Guillain-Barré syndrome in Australia

Resource

Web article | 05 Dec 2025

Huntington's disease in Australia

Resource

Web article | 05 Dec 2025

Migraine and headaches in Australia

Resource

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Motor neurone disease in Australia

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Multiple sclerosis in Australia

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Myalgic encephalomyelitis / chronic fatigue syndrome in Australia

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