Australian Government
Australian Institute of Health and Welfare

Health system spending on disease and injury in Australia 2022–23

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About

Health system spending on disease and injury in Australia 2022–23, analyses Australia's national health spending to provide additional detail about the people receiving care and the conditions and diseases being treated.

In this report, 2022–23 data is presented for each of the 17 Australian Burden of Disease Study (ABDS) groups and 220 conditions within these groups. Spending for three additional groups, well care, the treatment of risk factors and examination and observation NEC are also included. Spending is reported by area of expenditure, age group and sex. This report also includes comparisons with historical data back to 2013–14.

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Findings from this report:

- In 2022–23, cancer had the highest spending followed by cardiovascular diseases and musculoskeletal disorders
- Spending on cancer more than doubled from 2013–14 to 2022–23 and has been the highest ranked disease group since 2014–15
- The highest spending in 2022–23 was for injuries from falls, osteoarthritis, back pain and problems
- Spending on cancer, cardiovascular diseases and musculoskeletal disorders accounts for around 1/3 of disease spending

Summary

Spending by disease and injury increased by $13 billion to $172.3 billion in 2022–23, up from $159.3 billion in 2021–22. Of the $172.3 billion, close to two-thirds was for hospital services ($110.4 billion), over one-quarter for primary health care ($46.7 billion) with the remaining spending for referred medical services ($15.2 billion).

In 2022–23 the highest spending was for cancer ($18.9 billion), followed by cardiovascular diseases ($16.2 billion), and musculoskeletal disorders ($15.9 billion). Cancer also had the highest burden, or human cost of disease in 2023. Second highest in terms of disease burden was mental health conditions and substance use disorders.

Spending on cancer more than doubled from $9.3 billion in 2013–14 to $18.9 billion in 2022–23 and has been the highest ranked disease group in terms of spending since 2014–15 accounting for around 10% of spending each year. Over the period 2013–14 to 2022–23, the largest increase in cancer spending was observed for prostate cancer, non-melanoma skin cancer, breast cancer and bowel cancer.

Cancer, cardiovascular diseases and musculoskeletal disorders, were the top 3 disease groups in all but one year over the period 2013–14 to 2022–23, accounting for around one-third of spending each year.

Spending on chronic conditions (often referred to as long-term health conditions), accounted for around $82 billion in 2022–23, just under half (48%) of all disease spending in 2022–23.

The conditions within disease groups with the highest spending in 2022–23 were injuries from falls ($5.1 billion), osteoarthritis ($4.9 billion) and back pain and problems ($3.9 billion). This was followed by spending on coronary heart disease ($3.8 billion) and dental caries ($3.3 billion).

In 2022–23, there was higher spending for females ($84 billion) than males ($76 billion) and spending peaked in the 70–74 year age group for both males and females.

There was $13.3 billion spent on well care in 2022–23. The majority of this spending (82%) was for routine dental checkups and cleaning and pregnancy and postpartum care.

This report uses a range of modelling techniques to apportion health spending to population groups based on age and sex, and to Australian Burden of Disease Study (ABDS) groups and to conditions within those groups. Whilst findings in this report are based on estimates (rather than direct observations) these data provide important insights into the nature and drivers of health spending, such as how an ageing population affects health spending.

Introduction

The AIHW Disease expenditure database takes data from Australia's National Health Accounts, that forms the base of reporting for the AIHW *Health expenditure Australia* report series (latest report, AIHW 2024a), and further examines the data to understand more about the people receiving care and the diseases and conditions being managed. The Disease expenditure database contains spending estimates for 17 Australian Burden of Disease Study (ABDS) groups and the 220 conditions within those groups, by age group and sex for each of the following broad and detailed areas of spending:

- Hospitals
  - Public hospital admitted patients
  - Public hospital emergency departments
  - Public hospital outpatients
  - Private hospital services
- Primary health care
  - general practitioner services
  - allied health and other services
  - pharmaceutical benefits scheme
  - dental expenditure (not available by age group and sex)
- Referred medical services
  - specialist services
  - pathology
  - medical imaging

Spending on health prevention (through public and community health programs) is currently not included as part of the AIHW Disease Expenditure database due to the difficulty in allocating this spending to specific burden of disease conditions. The scope of the disease expenditure database will however expand to include spending on cancer screening in future reports. The AIHW will consider if other spending on prevention can be included into the disease expenditure database as well.

While health research is also not included as part of the Disease Expenditure database, there is a separate section in this report that reflects on National Health and Medical Research Council (NHMRC) expenditure for disease, research and health areas presented according to the International Classification of Diseases (ICD).

In this report, spending for three additional groups (outside the 17 disease groups) have been included in this report – well care, the treatment of risk factors and examination and observation NEC. Well care includes the following seven sub-categories of spending:

- well person (includes expenditure for services that are typically routine examinations, general examinations without specific complaints or diagnoses, or administrative in nature)
- well dental (includes routine checkups and cleaning)
- pregnancy and postpartum care
- family planning
- counselling services
- social services (includes problems related to housing and economic circumstances, social environment, support groups)
- donor

Estimates of spending on Coronavirus 19 (COVID–19) in the hospital setting as well as through the Medicare Benefits Schedule (MBS), Pharmaceutical Benefits Scheme (PBS) and research, have been included in this report. For a more detailed analysis of the response to COVID–19, refer to *Health system spending on the response to COVID–19 in Australia 2019–20 to 2022–23* (AIHW 2024b).

The data in the AIHW Disease expenditure database and in this report includes all sources of funding, including patient co-payments. Spending estimates are based on hospital admissions, emergency department records, outpatient records, MBS and PBS records. For each of these data sources, patients' sex was recorded as male, female or other, not reported or unknown.

This may be based on what the patient selected, or how staff completed the record. It may also be based on an existing record for the patient, which may no longer reflect how they identify.

It is important to note that it is not known if the people completing these records interpreted sex to mean sex at birth or gender identity.

This report uses the terms 'male' and 'female', but it should be noted that some participants may not identify with these terms. Where sex was reported as other, not reported or unknown, the data has been included as part of the spending for 'Total Persons'.

How do we measure disease costs?

The cost of disease is not just financial. Being unwell or suffering from a health condition has other effects on quality of life, affecting people's ability to work or do the activities they enjoy. The spending estimates in this report do not include direct costs from outside of the health care sector or estimates of the indirect costs due to illness.

How much is spent on treating, managing, or preventing conditions in financial terms can be influenced by a range of factors such as the cost and availability of effective treatments, and disease prevalence. As such, the disease expenditure estimates in this report do not necessarily reflect the incidence or prevalence of those conditions, or the full 'burden', or human cost. Refer to the Comparison of disease expenditure and disease burden section in this report and AIHW 2023a for further information.

It is not feasible (or appropriate) to allocate some forms of health spending to specific diseases. For example, administration expenditure and capital expenditure are generally unable to be attributed to any particular condition. In addition, most community and public health programs, which support the treatment and prevention of many conditions, do not have sufficient data to allocate to conditions. Therefore, the disease expenditure estimates in this publication are not directly comparable with estimates published in the AIHW's *Health expenditure Australia* reports (which cover all health spending) (AIHW 2024a). Refer to Figure 1 in this report and Table 2.2 in the accompanying methods paper for more detailed information on the inclusions and exclusions. For further details on the estimation methods, scope of data included, and comparability to previous studies, readers should refer to the accompanying methods report, *Health system spending on disease and injury in Australia, 2022-23: Overview of analysis and methodology* available from the Related material section of this report.

Health spending in Australia is generally managed through particular funding programs such as the National Health Reform Agreement (NHRA), MBS or PBS. Often the relationship under these schemes between the spending, the particular diseases or conditions being managed, and the demographic characteristics of the people whose care the spending is for, is complex. It can be difficult, for example, to precisely identify for a hospital stay involving someone suffering from a number of ailments and including a range of procedures and treatments, which expenses were related to which conditions. Health spending is also often associated with the management of symptoms and issues for which there is no specific diagnosis (for example, someone attending to an Emergency Department (ED) with abdominal pain for which no specific cause can be identified).

The aim of this report is to use a range of modelling techniques to apportion health spending to population groups based on age, sex, and to disease expenditure groups using the ICD and the AIHW's Australian Burden of Disease Study (ABDS) conditions as far as is possible. Due to data availability, allocated spending is skewed towards activity in hospitals, and estimates should be interpreted with this in mind.

This disease expenditure study largely draws upon previously published methods, the most recent being *Health system spending on disease and injury in Australia, 2020–21* (AIHW 2023b). There were however changes made to the methods used for estimating the cost of services in public hospitals, allocating costs to specific conditions within disease groups, and the list of conditions that are included in the study. Data in this report should be used and are not directly comparable to data in earlier reports (AIHW 2019, AIHW 2021, AIHW 2022, AIHW 2023b). This report also includes comparisons with historical data (using these updated methods) so there is a consistent time series for 2013–14 to 2022–23. Refer to the Technical notes and the accompanying methods report, *Health system spending on disease and injury in Australia, 2022-23: Overview of analysis and methodology* for further information. The methods report is available from the Related material section.

References

AIHW (Australian Institute of Health and Welfare) (2019) *Disease expenditure in Australia 2015–16*, AIHW, AIHW, Australian Government, accessed 19 July 2024.

AIHW (2021) *Disease expenditure in Australia 2018–19*, AIHW, AIHW, Australian Government, accessed 19 July 2024.

AIHW (2022) *Disease expenditure in Australia 2019–20*, AIHW, AIHW, Australian Government, accessed 19 July 2024.

AIHW (2023a) *Australian Burden of Disease Study 2023*, AIHW, Australian Government, accessed 19 July 2024.

AIHW (2023b) *Health system spending on disease and injury in Australia, 2020–21*, AIHW, Australian Government, accessed 20 July 2024.

AIHW (2024a) *Health expenditure Australia 2022–23*, AIHW, Australian Government.

AIHW (2024b) *Health system spending on the response to COVID–19 in Australia, 2019–20 to 2022–23*, AIHW, Australian Government.

Spending on disease by area of spending

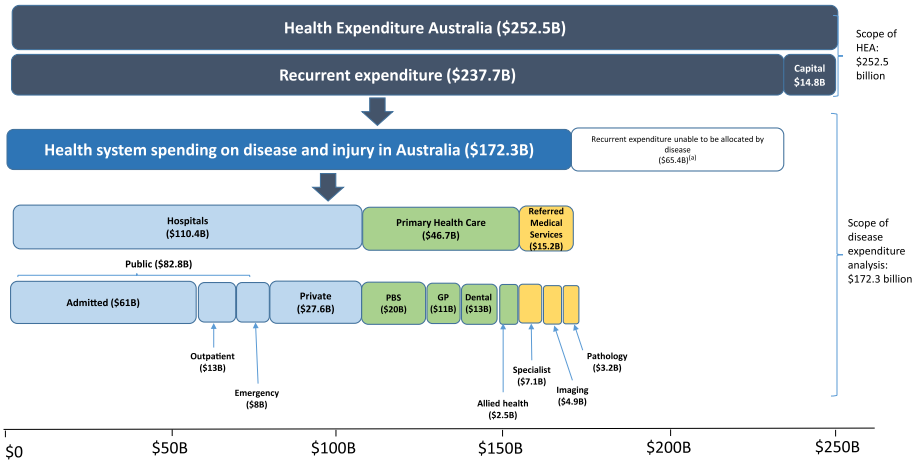
There are three broad areas of health spending included in the disease expenditure analysis: hospitals, primary health care and referred medical services. Total estimated spending in 2022–23 was $172.3 billion and can be disaggregated as follows:

- hospital services $110.4 billion (public and private admitted patient services, public hospital emergency departments, and public hospital outpatient clinics)
- primary health care services $46.7 billion (general practitioner services, allied health services, benefit paid pharmaceuticals and dental expenditure)
- referred medical services $15.2 billion (specialist services, medical imaging, and pathology).

Public health and community health have not been included as part of primary health care services in the Disease Expenditure database due to the difficulty in allocating spending to specific burden of disease conditions within the disease groups. Research is also excluded from the database, however there is a separate research section in this report that reflects on the National Health and Medical Research Council (NHMRC) expenditure for disease, research and health areas presented according to the International Classification of Diseases (ICD).

Figure 1 below shows how total health spending for 2022–23 as reported in *Health expenditure Australia 2022–23* (AIHW 2024a) relates to disease expenditure reporting for 2022–23.

Figure 1: Areas of health spending included in the disease expenditure study 2022–23



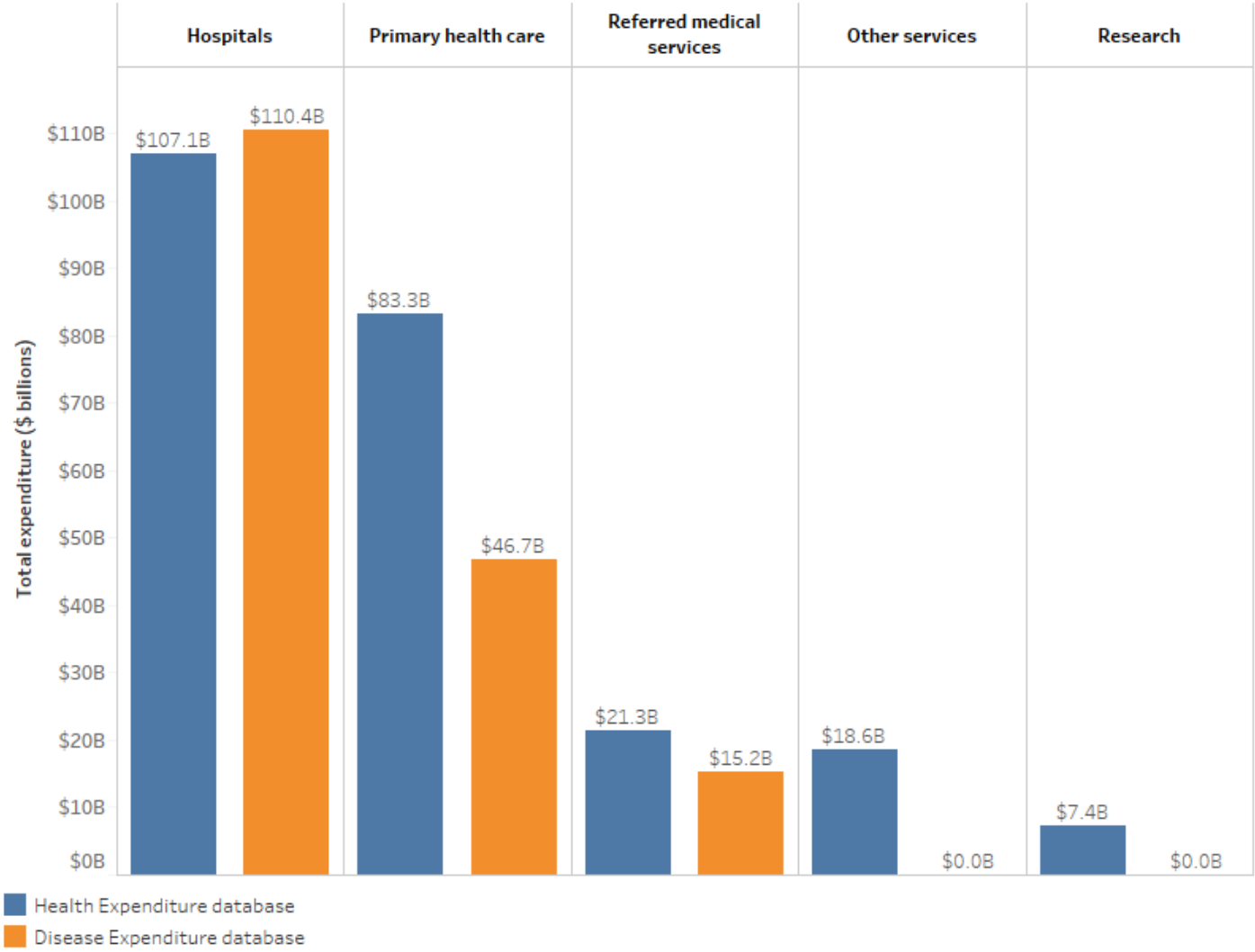
(a) Recurrent spending unable to be allocated by disease includes for example, administration expenditure, community and public health programs.
Source: Health expenditure Database; Disease Expenditure Database.

There are some key differences between recurrent health spending in the Health Expenditure database, and the Disease Expenditure database. In the Disease Expenditure database:

- Public hospitals spending is further reported as emergency department, admitted patient, and outpatient clinic spending.
- Highly specialised PBS drugs dispensed in hospitals are reported as PBS spending, which is a component of primary health care, while the health expenditure database reports this as hospital spending.

The visualisation below (Figure 2) shows spending for the broad areas of expenditure in the Disease Expenditure database for 2022–23 compared to recurrent health spending for 2022–23 reported in Health Expenditure database. Data used to create the visualisation is available to download from the data tables. For further information on methods used to derive the expenditure reported, please refer to the Technical notes in this web report and to *Health system spending on disease and injury in Australia, 2022-23: Overview of analysis and methodology* which is available from the Related material section.

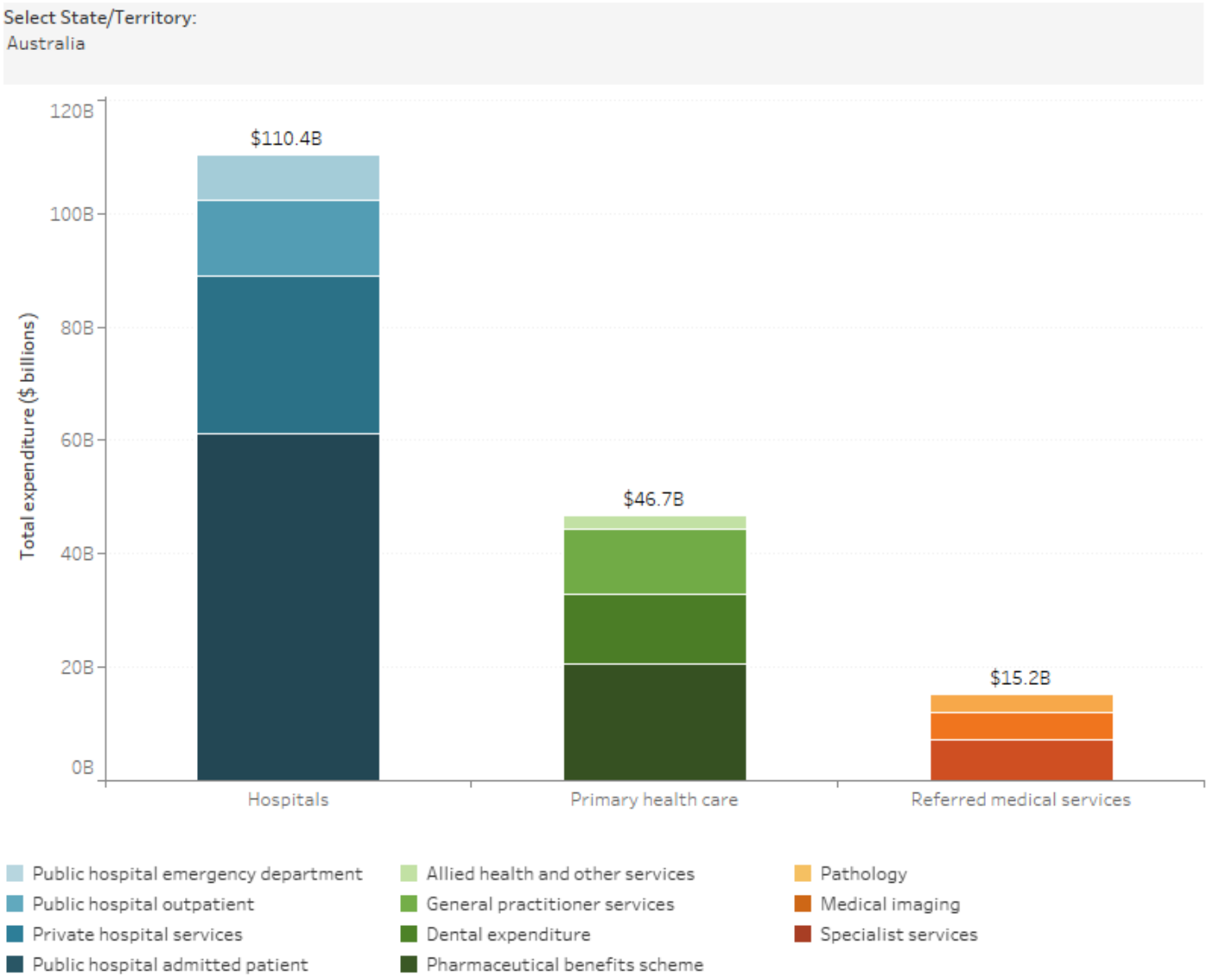
Figure 2: Disease expenditure and recurrent health expenditure by broad area of expenditure, 2022–23



Source:
AIHW Disease Expenditure database
AIHW Health Expenditure database
http://www.aihw.gov.au

The following interactive data visualisation (Figure 3) shows disease spending by broad area of expenditure for Australia and each of the states and territories for 2022–23. Data used to create the visualisation is available to download from the data tables.

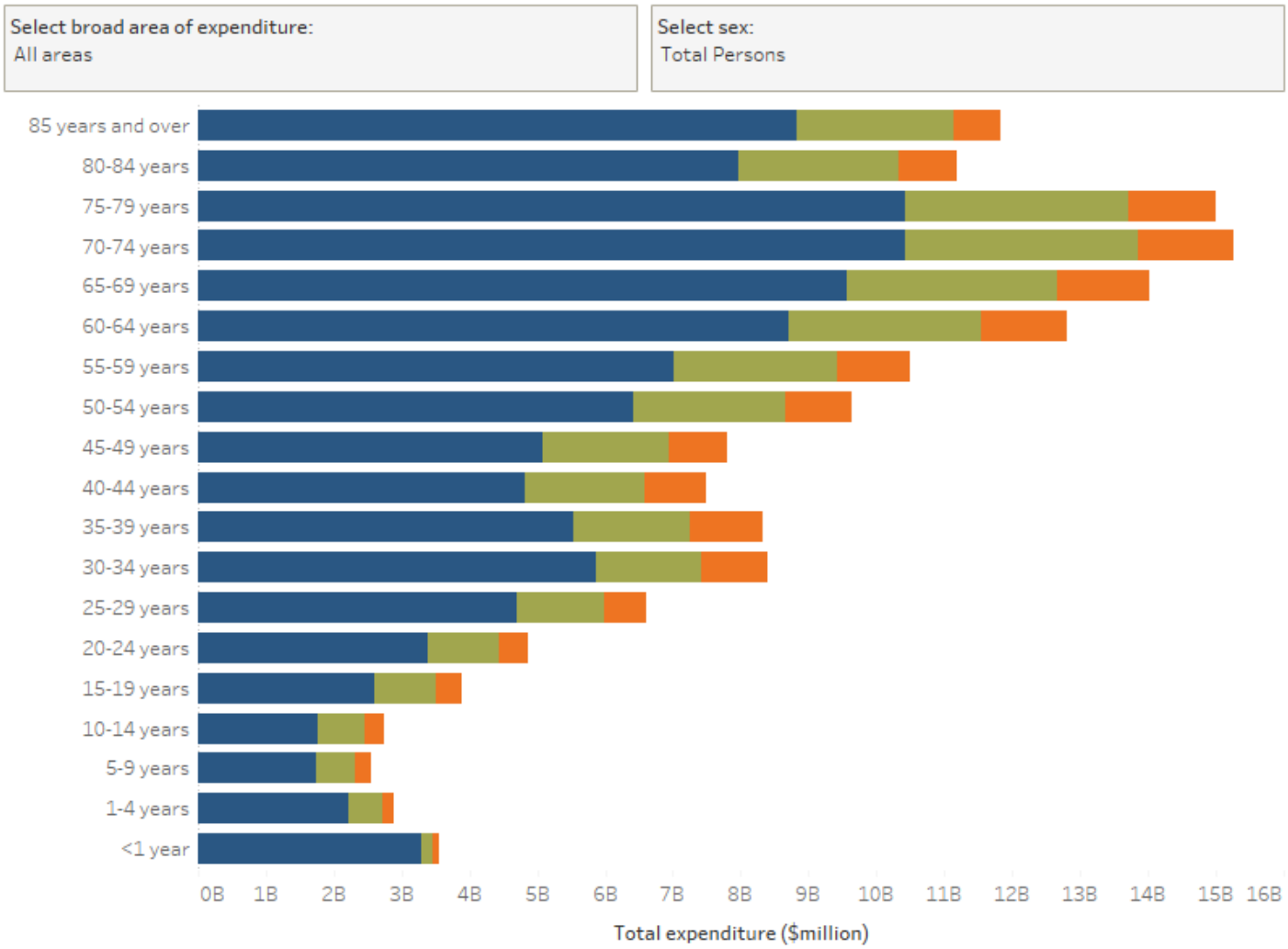
Figure 3: Disease expenditure by broad area of expenditure, 2022–23



Notes:
1. Pharmaceutical expenditure includes benefits and patient contributions for over and under-copayment prescriptions
2. Dental expenditure does not contain age or sex disaggregation
3. This figure excludes expenditure on Research.
Totals refer to recurrent spending attributed to specific diseases and injuries
Source: AIHW Disease Expenditure database
http://www.aihw.gov.au

The visualisation below (Figure 4) looks at disease spending for 2022–23 by sex, age group and area of spending. Data used to create this visualisation is available to download from the data tables.

Figure 4: Disease expenditure by sex, age group and area of expenditure, 2022–23



Notes:
1.Pharmaceutical expenditure includes benefits and patient contributions for over and under-copayment prescriptions
2.Dental expenditure does not contain age or sex disaggregation
Totals refer to recurrent spending attributed to specific diseases and injuries
Source: AIHW Disease Expenditure database
http://www.aihw.gov.au

References

AIHW (2024a) *Health expenditure Australia 2022–23*, AIHW, Australian Government.

Spending on disease by Australian Burden of Disease groups

Burden of disease measures the impact of diseases and injuries on a population. It combines the years of healthy life lost due to living with ill health (non-fatal burden) with the years of life lost due to dying prematurely (fatal burden). The Australian Burden of Disease Study (ABDS) includes estimates of disease burden due to 220 diseases and injuries in Australia. In this disease hierarchy, each disease is allocated to one of 17 disease groups. The burden of disease groups contain related diseases or conditions – such as cardiovascular diseases, gastrointestinal disorders, or injuries – and one alternative reporting disease group (nature of injury instead of injury by external cause). These groups are listed in the figures below.

Not all health spending is directly related to a burden of disease condition or group. The AIHW Disease Expenditure database now incorporates three additional groups – well care, the treatment of risk factors and examination and observation NEC. These groups include medical treatments for risk factors, long term outcomes of some conditions, well care and prevention causes, and other interventions and symptoms that are reported as the reasons for provision of health care. Refer to the Technical notes in this web report and to the accompanying methods report, *Health system spending on disease and injury in Australia 2022–23: Overview of analysis and methodology*, available in the Related material section, for further information on the inclusions for these additional groups.

In 2022–23, cancer and other neoplasms was the disease group with the highest spending ($18.9 billion), followed by cardiovascular diseases ($16.2 billion), and musculoskeletal disorders ($15.9 billion).

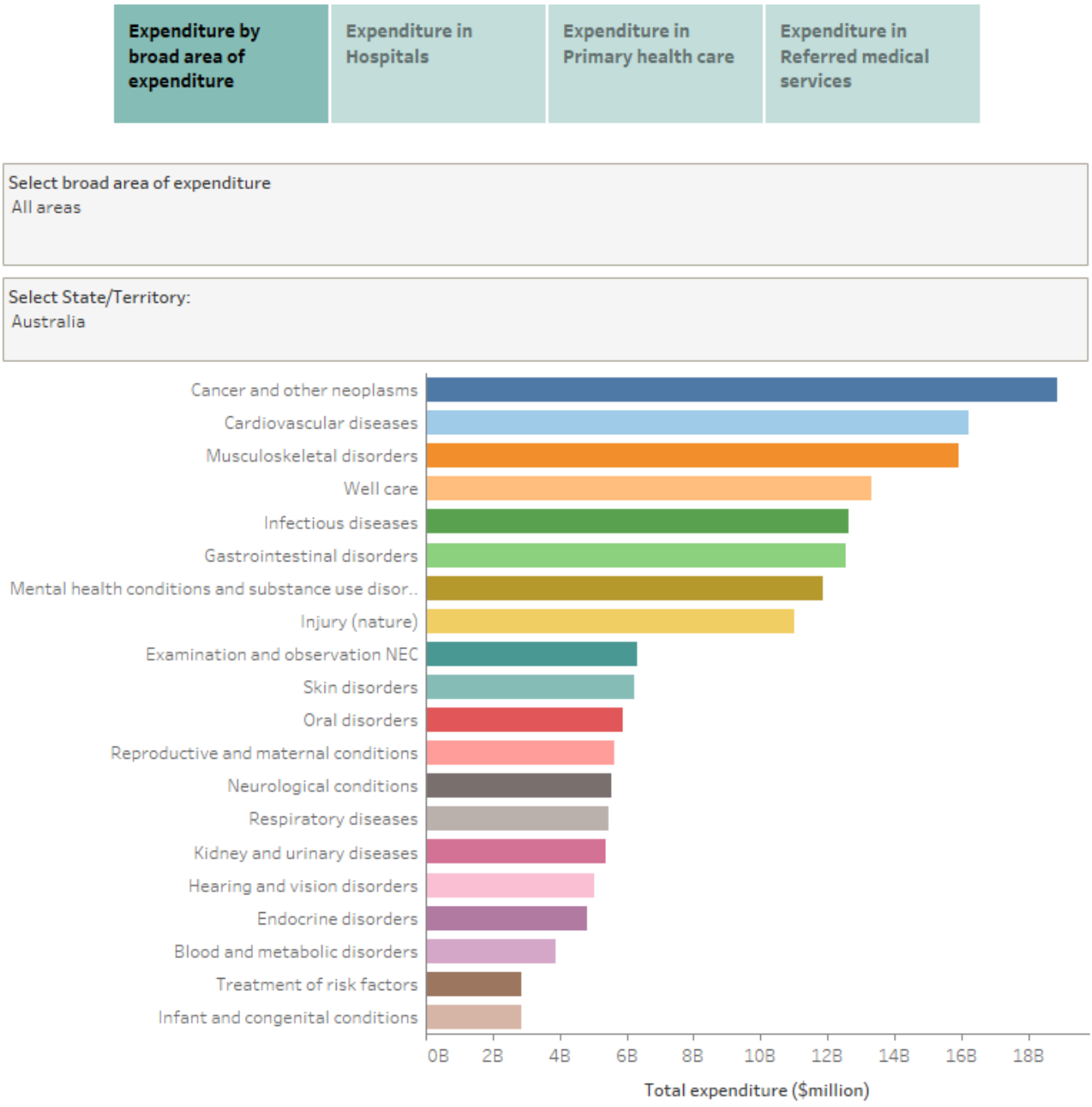
Spending on disease groups by area of expenditure

In 2022–23 spending on disease groups varied across different areas of spending.

- For public hospital admitted patients, the highest spending was for cardiovascular diseases ($7.1 billion), followed by cancer and other neoplasms ($6.4 billion) and gastrointestinal disorders ($6.1 billion).
- In private hospitals, musculoskeletal disorders had the highest spending ($6.1 billion), followed by cardiovascular diseases ($3.3 billion) and cancer and other neoplasms ($3.1 billion).
- For general practitioner services, the highest spending was for infectious diseases ($2.0 billion) followed by mental health conditions and substance use disorders ($1.2 billion).
- Almost half (49%) of spending for allied health and other health practitioners related to mental health conditions and substance use disorders ($1.2 billion), with around one-quarter (24%) relating to hearing and vision disorders ($0.6 billion).

The following interactive data visualisation (Figure 5) shows health spending for each disease group by area of expenditure, for Australia and for each state and territory. Data used to create the visualisation is available to download from the data tables.

Figure 5: Expenditure for Burden of Disease groups by area of expenditure, 2022–23



NEC: Not elsewhere classified

Notes:

The Injuries Burden of Disease group can be disaggregated according to the cause of injury, or nature of injury, the latter of which is reported here.

Source: AIHW Disease Expenditure database

http://www.aihw.gov.au

The proportion of total spending related to disease groups varies substantially according to age group, sex, and area of expenditure.

Spending on disease groups by age group and sex

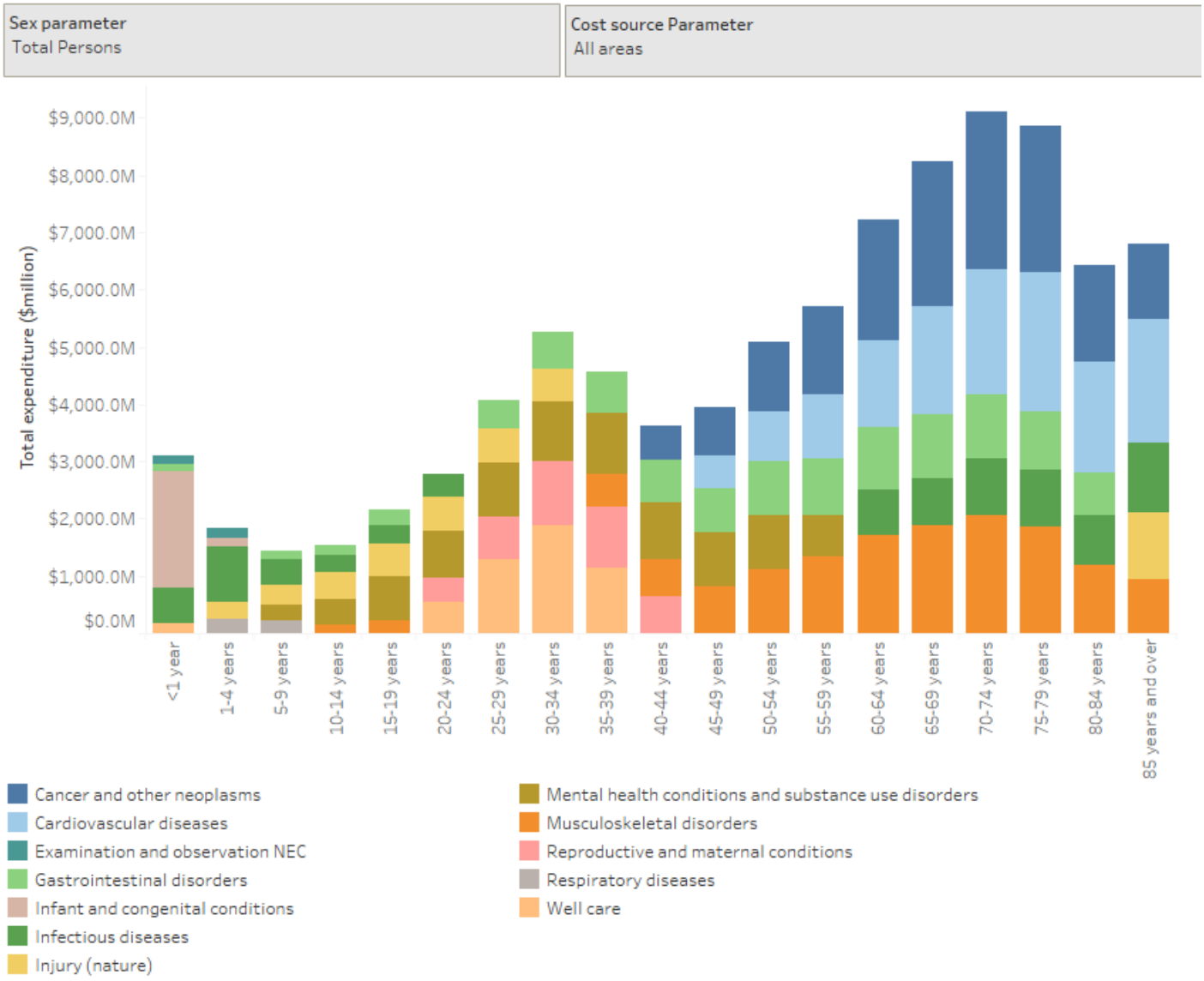
In 2022–23 spending on disease groups varied by age group and sex.

- Within the Infectious diseases group, spending was the highest for people aged over 70 years and 1–4 years.
- Spending on mental health conditions and substance use disorders was higher for females ($6.2 billion) than males ($5.5 billion) in 2022–23. For females, spending peaked for those aged 30–34 years. For males, spending peaked for those aged 35–39 years.
- For Cancer and other neoplasms, spending was higher for males ($10.0 billion) than females ($8.5 billion) in 2022–23 and peaked for both males and females in the 70–74 years age group.

- Spending on Cardiovascular diseases was higher for males ($9.4 billion) than females ($6.8 billion) in 2022–23. For males, spending peaked for those aged 75–79 years. For females, spending peaked for those aged 85+.

The following interactive data visualisation (Figure 6) shows spending on the top 5 disease groups for each sex and age group combination, for each area of expenditure. Data used to create the visualisation is available to download from the data tables.

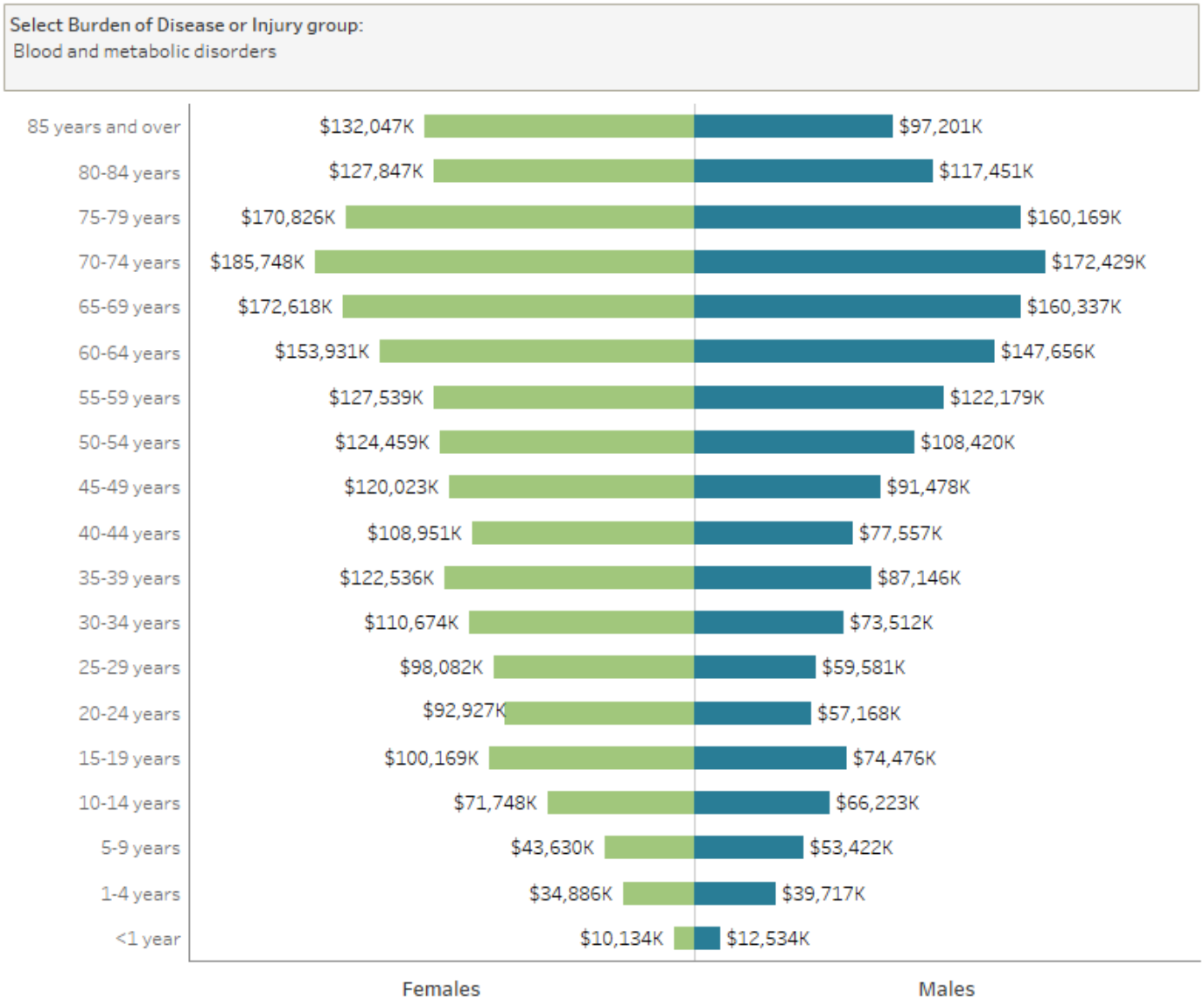
Figure 6: Disease expenditure by detailed area of expenditure, sex, age group and disease or injury group, 2022–23



NEC: Not elsewhere classified
Notes:
1.Pharmaceutical expenditure includes benefits and patient contributions for over and under-copayment prescriptions
2. Dental expenditure does not contain age or sex disaggregation
Totals refer to recurrent spending attributed to specific diseases and injuries
Source: AIHW Disease Expenditure database

The following interactive data visualisation (Figure 7) shows spending on disease groups in 2022–23 by sex and age group. Data used to create the visualisation is available to download from the data tables.

Figure 7: Expenditure on Burden of Disease or Injury group by sex and age group, 2022–23



NEC: Not elsewhere classified

Notes:

1.Totals refer to recurrent spending attributed to specific diseases and injuries

2.The Injuries Burden of Disease group can be disaggregated according to the cause of injury, or nature of injury, the latter of which is reported here.

Source: AIHW Disease Expenditure database

http://www.aihw.gov.au

Spending on disease by Australian Burden of Disease conditions

The Burden of Disease conditions list contains 220 conditions across 17 disease groups. Refer to Table 3 in the data tables for 2022–23, for a mapping of all the ABDS conditions to the 17 disease groups. This is not an exhaustive list of all possible health conditions and, as such, the spending associated with 'other' conditions within a group is relatively large.

Top 5 conditions for spending

The five conditions within disease groups with the highest spending in 2022–23 were:

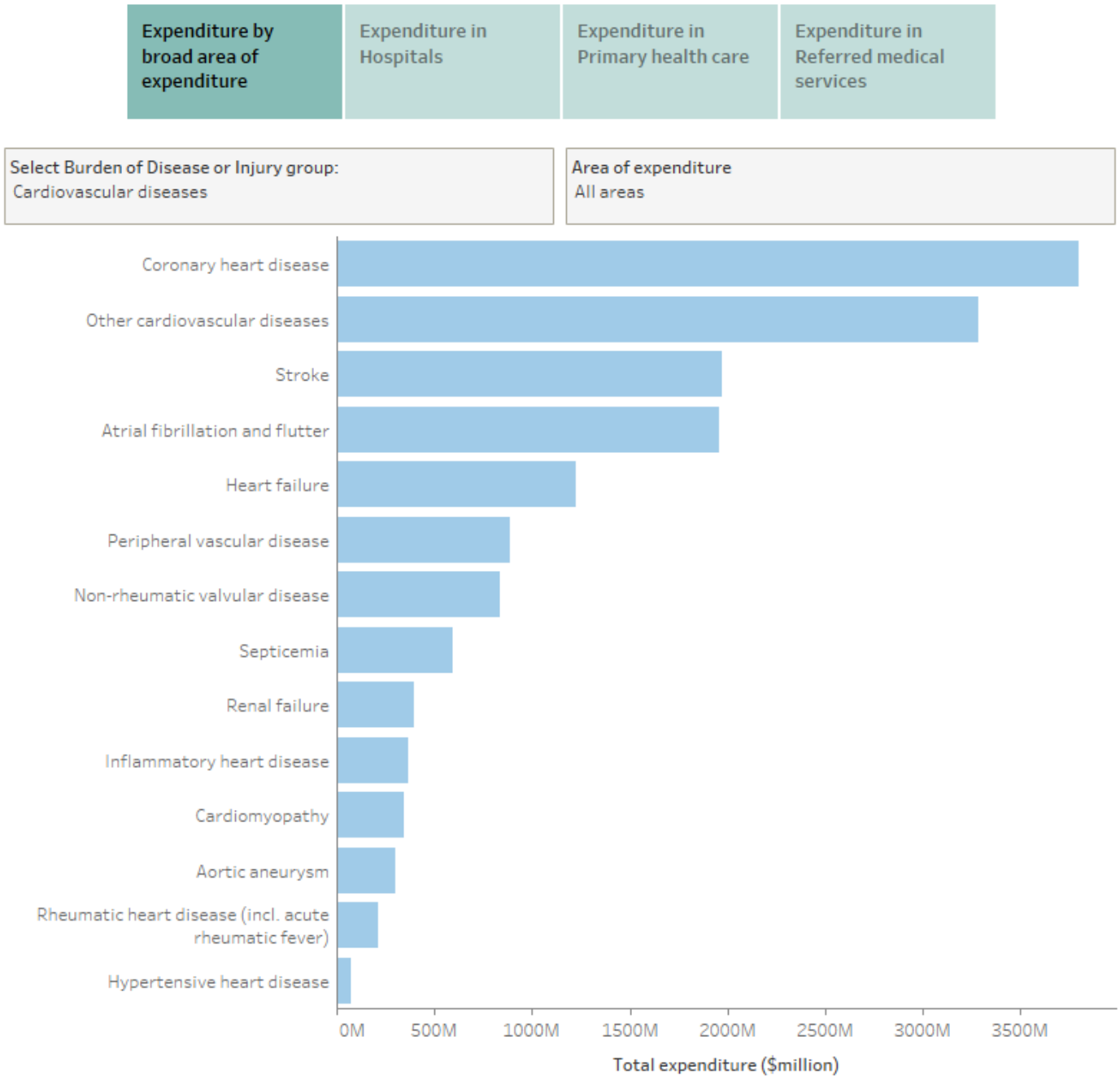
- Injuries from falls ($5.1 billion)
- Osteoarthritis ($4.9 billion)
- Back pain and problems ($3.9 billion)
- Coronary heart disease ($3.8 billion)
- Dental caries ($3.3 billion)

The spending associated with 'other' conditions within a disease group was the highest for Other musculoskeletal disorders ($5.8 billion), Other cardiovascular diseases ($3.3 billion) and Other injuries ($3.3 billion) (excludes 'not elsewhere classified' groupings).

Of the estimated $172 billion of health spending in 2022–23, $1.8 billion could be allocated by age group and sex to the treatment and management of COVID–19 within the hospital, primary health care (GP services and PBS) and referred medical services (specialist, medical imaging and pathology) setting. For further information on COVID–19, refer to the COVID–19 section within this report and to *Health system spending in response to COVID–19 in Australia 2019–20 to 2022–23* (AIHW 2024b).

The following interactive data visualisation (Figure 8) shows spending on conditions within each of the disease groups for each area of expenditure. Data used to create the visualisation is available to download from the data tables.

Figure 8: Expenditure on Burden of Disease conditions by area of expenditure, 2022–23



NEC: Not elsewhere classified
Notes:
1. Pharmaceutical expenditure includes benefits and patient contributions for over and under-copayment prescriptions
2. Dental expenditure does not contain age or sex disaggregation
3. Lower respiratory infections includes influenza and pneumonia
Totals refer to recurrent spending attributed to specific diseases and injuries
Source: AIHW Disease Expenditure database
http://www.aihw.gov.au

Spending on disease conditions for females

In 2022–23, of the $83.9 billion spent on females, the disease groups with the highest spending were musculoskeletal disorders, cancer and other neoplasms and cardiovascular diseases.

- Musculoskeletal disorders ($8.8 billion) of which the top 3 specific conditions within this group were:
  - Osteoarthritis ($2.8 billion)
  - Back pain and problems ($2.1 billion)
  - Rheumatoid arthritis ($0.7 billion)

- Cancer and other neoplasms ($8.5 billion) of which the top 3 specific cancers were:
  - Breast cancer ($1.7 billion)
  - Bowel cancer ($0.7 billion)
  - Non-melanoma skin cancer ($0.7 billion)
- Cardiovascular diseases ($6.8 billion) of which the top 2 specific conditions within this group were:
  - Coronary heart disease ($1.1 billion)
  - Stroke ($0.9 billion)

Spending on disease conditions for males

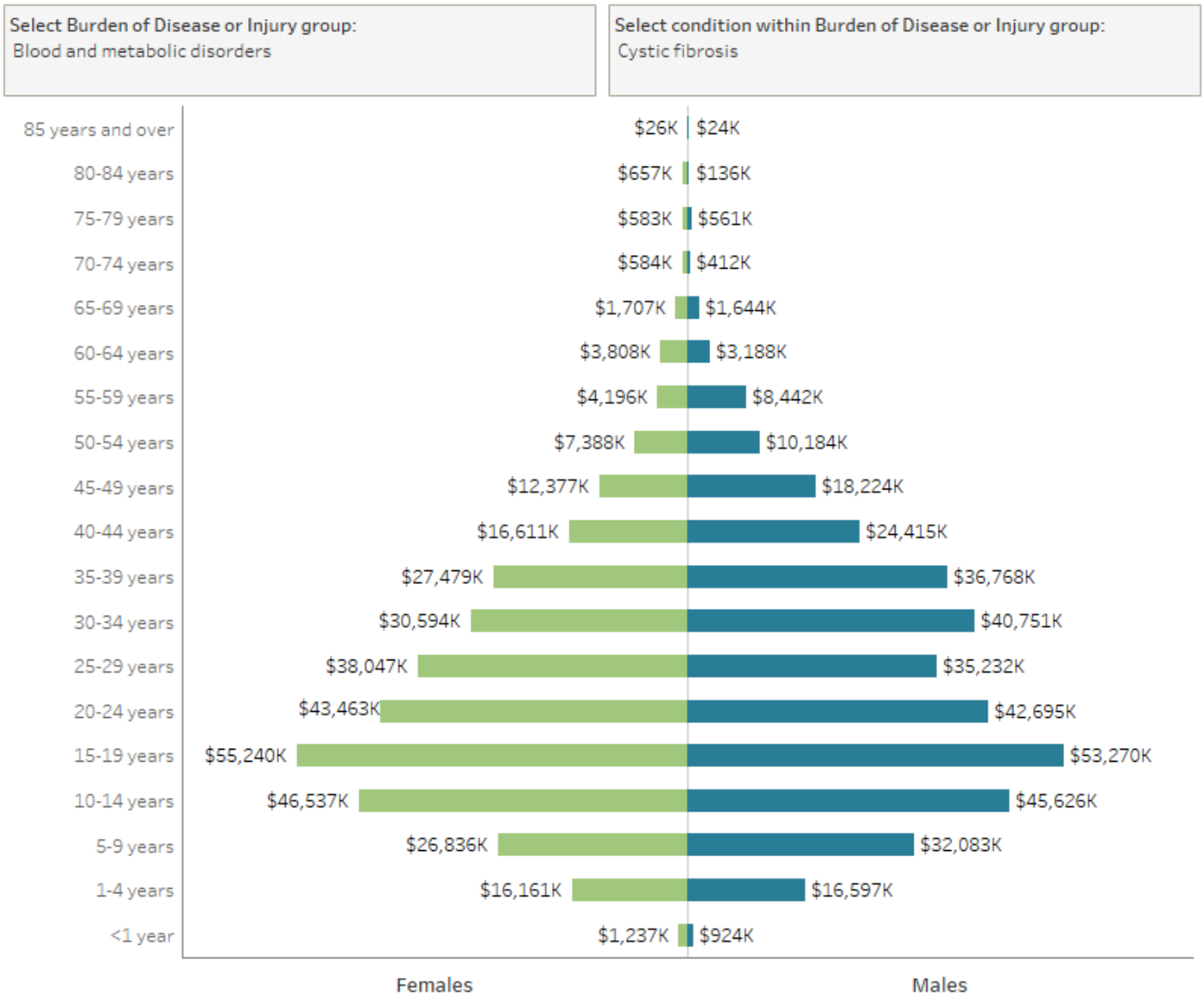
In 2022–23, of the $75.5 billion spent on males, the disease groups with the highest spending were cancer and other neoplasms, cardiovascular diseases and musculoskeletal disorders.

- Cancer and other neoplasms ($10.0 billion) of which the top 3 specific cancers were:
  - Prostate cancer ($1.9 billion)
  - Non-melanoma skin cancer ($1.1 billion)
  - Bowel cancer ($0.9 billion)
- Cardiovascular diseases ($9.4 billion) of which the top 3 specific conditions within this group were:
  - Coronary heart disease ($2.6 billion)
  - Atrial fibrillation and flutter ($1.1 billion)
  - Stroke ($1.1 billion)
- Musculoskeletal disorders ($7.0 billion) of which the top 2 specific conditions within this group were:
  - Osteoarthritis ($2.1 billion)
  - Back pain and problems ($1.8 billion)

In this report, dental expenditure is not currently reported by age and sex therefore ranking of conditions for sexes excludes dental expenditure.

The following interactive data visualisation (Figure 9) shows spending on conditions within a disease group by age group and sex. Data used to create the visualisation is available to download from the data tables.

Figure 9: Expenditure on Burden of Disease condition by sex and age group, 2022–23



Notes:
1. Lower respiratory infections includes influenza and pneumonia
2. Totals refer to recurrent spending attributed to specific diseases and injuries

Source: AIHW Disease Expenditure database
http://www.aihw.gov.au

References

AIHW (2024b) *Health system spending on the response to COVID–19 in Australia, 2019–20 to 2022–23*, AIHW, Australian Government.

Comparison with 2021–22 and historical data

Estimated spending by disease increased by $13 billion (in current prices) to $172.3 billion in 2022–23, up from $159.3 billion in 2021–22. This was an overall growth of 8.2% in nominal terms (current prices). This compares to a nominal growth of 2.7% in recurrent health spending in 2022–23 reported in *Health expenditure Australia 2022–23* (AIHW 2024a). The disease expenditure database could allocate around 73% of recurrent health spending to disease groups in 2022–23. The large decrease in spending on public health in 2022–23 (–52%) largely contributed to the lower overall growth in recurrent health spending. This was related to the decrease in government spending relating to the COVID–19 pandemic in 2022–23 compared to 2021–22.

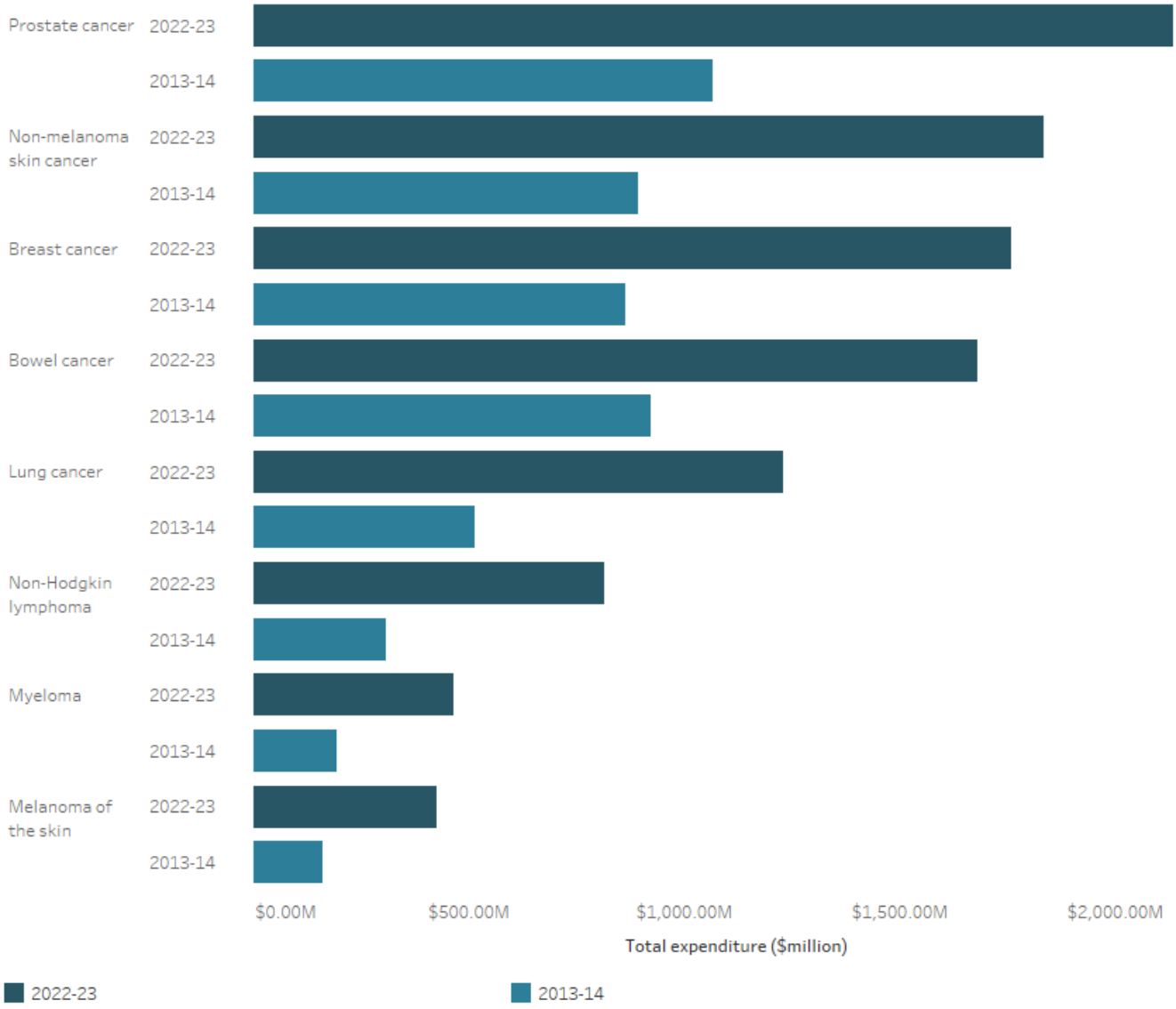
Chronic conditions, also referred to as chronic diseases, non-communicable diseases or long-term health conditions are generally characterised by their long-lasting and persistent effects. There are over 100 burden of disease conditions that are considered to be chronic conditions. In 2022–23, spending on chronic conditions accounted for around $82 billion (48% of all disease spending). Over the period 2013–14 to 2022–23, total spending by disease and injury grew $70.5 billion (in current prices), of which $38.2 billion (54%) was due to an increase in spending for chronic conditions.

Overall rank of disease groups

- Cancer, cardiovascular diseases and musculoskeletal disorders, were the top 3 disease groups in all but one year over the period 2013–14 to 2022–23, accounting for around one-third of spending each year.
- Spending on cancer and other neoplasms more than doubled from $9.3 billion in 2013–14 to $18.9 billion in 2022–23 and has been the highest ranked disease group in terms of spending since 2014–15.
- The top 4 specific cancers in terms of spending for each year between 2013–14 and 2022–23 were prostate cancer, non-melanoma skin cancer, breast cancer and bowel cancer.

The following data visualisation (Figure 10) shows the top 8 specific cancers in terms of spending in 2022–23 and how spending has grown for these cancers since 2013–14. Data used to create the visualisation is available to download from the data tables.

Figure 10: Spending on top 8 cancers in 2022–23 compared to 2013–14



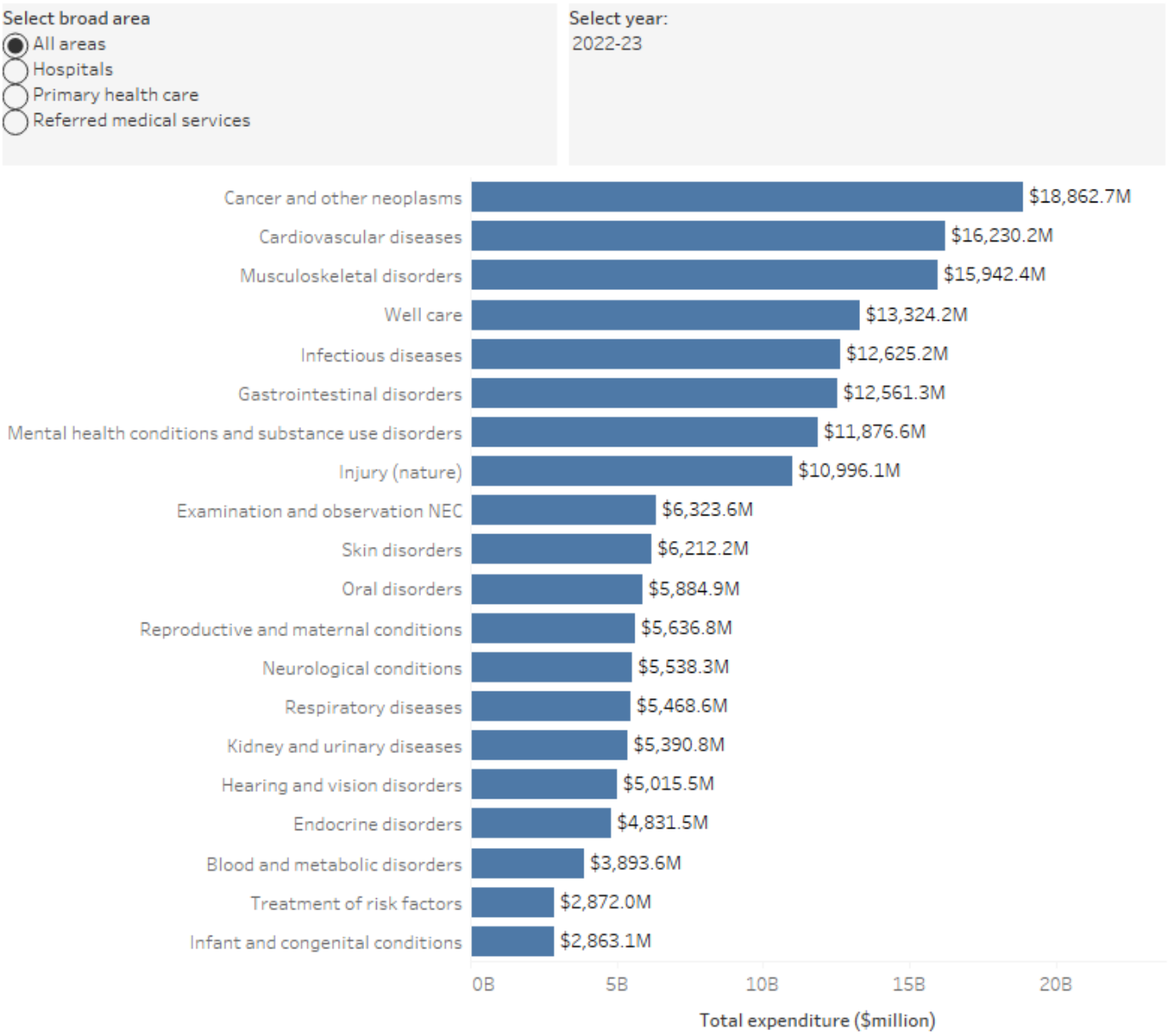
Source: AIHW Disease Expenditure database
https://www.aihw.gov.au

In 2021–22, infectious diseases was the second highest disease group in terms of spending ($15.8 billion), increasing $5.0 billion from 2020–21, primarily due to the large amount of spending related to COVID–19 in that year. Spending on infectious diseases then decreased by $3.1 billion in 2022–23 and spending on this disease group dropped back to the fourth highest overall.

In 2013–14, musculoskeletal disorders had the highest spending of all disease groups. While spending has continued to increase for musculoskeletal disorders over the period to 2022–23, there was a drop in ranking and spending in 2021–22 coinciding with COVID–19 lockdowns and the cancellation of elective surgeries. This would have impacted the number of musculoskeletal conditions treated in hospitals in that year.

The following interactive data visualisation (Figure 11) shows the change in rank in terms of overall spending and spending by broad area of expenditure between 2013–14 and 2022–23. Data used to create the visualisation is available to download from the data tables.

Figure 11: Ranking of spending on disease groups, by broad area of expenditure, current prices, 2013–14 to 2022–23



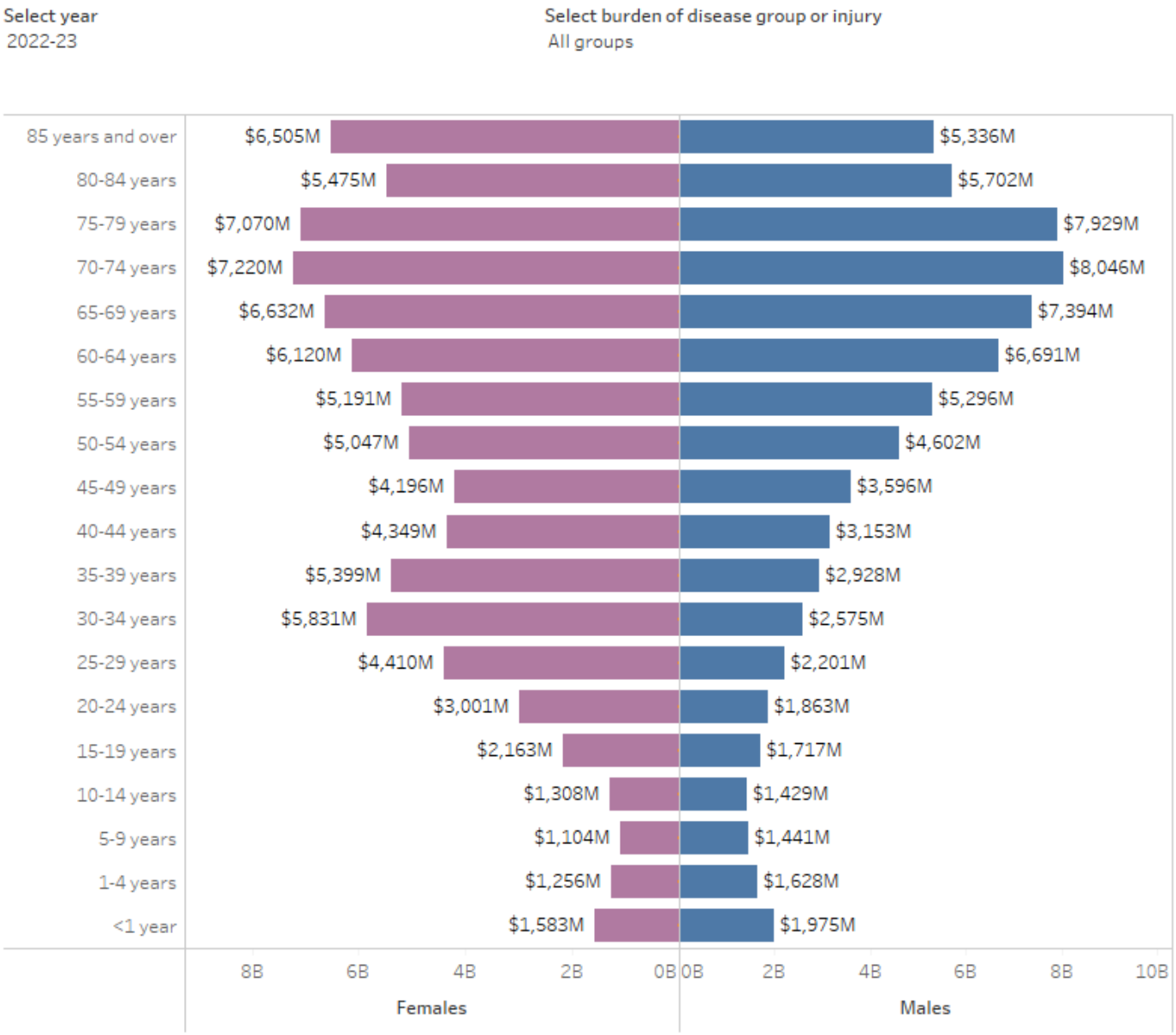
Note:
The Injuries Burden of Disease group can be disaggregated according to the cause of injury, or nature of injury, the latter of which is reported here.
Source: AIHW Disease Expenditure database
https://www.aihw.gov.au

Spending by sex and age group

- Early in the period from 2013–14 to 2016–17, spending peaked for both males and females in the 65–69 year age group. Since 2017–18, spending has peaked slightly later in the 70–74 year age group.
- For Infectious diseases, the 1–4 year and 85+ years age groups had the highest share of spending for both males and females for most years in the period 2013–14 to 2022–23. In 2021–22 during the height of the COVID–19 pandemic, spending for infectious diseases peaked in the 30–34 year age group.
- Since 2017–18, spending on cancers has peaked in the age group 70–74 years for both males and females.

The following interactive data visualisation (Figure 12) shows the spending on disease groups by broad area of expenditure, age group and sex in current prices between 2013–14 and 2022–23. Data used to create the visualisation is available to download from the data tables.

Figure 12: Spending on disease groups, by broad area of expenditure, age group and sex, current prices, 2013–14 to 2022–23 ($ million)



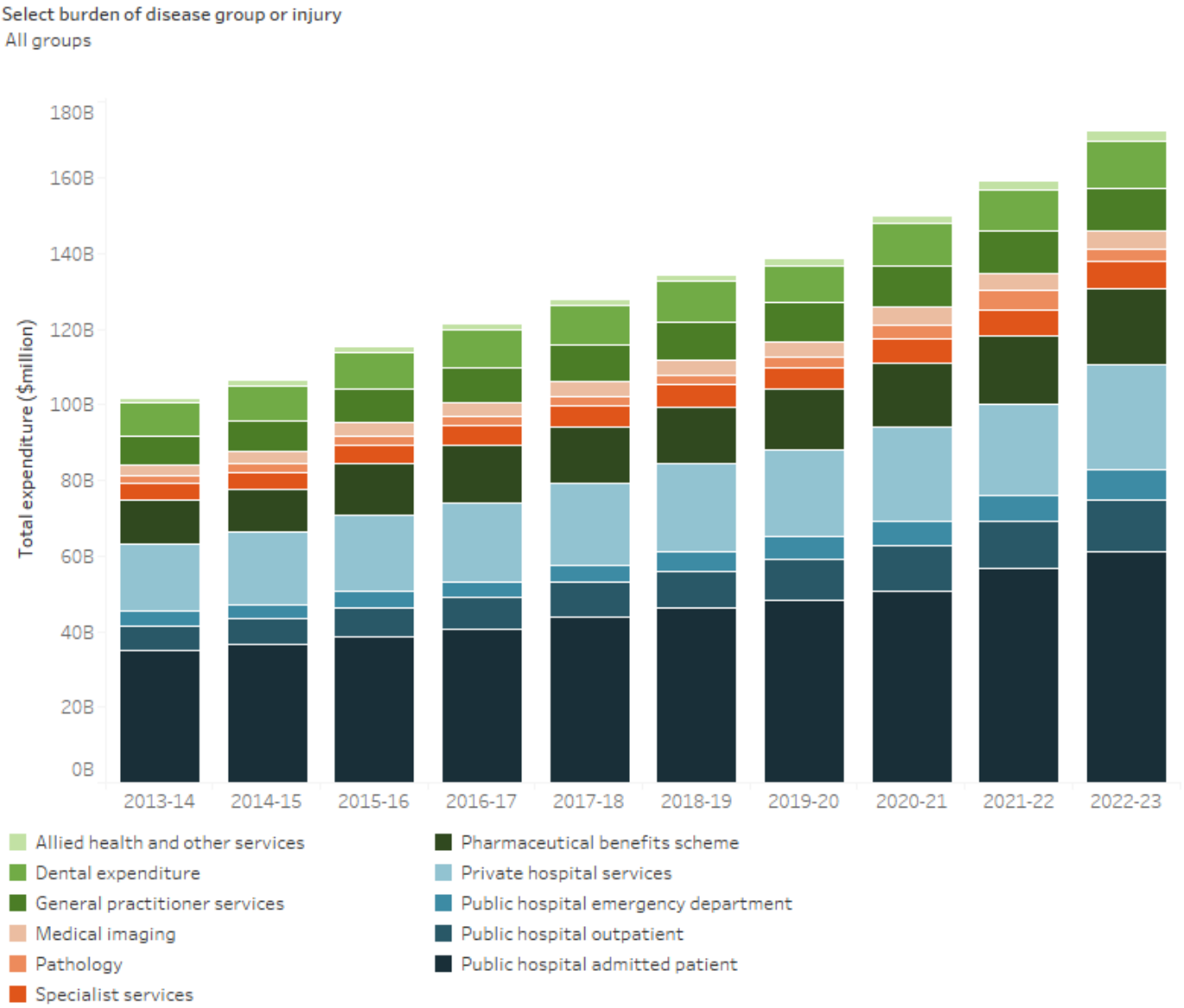
Note:
The Injuries Burden of Disease group can be disaggregated according to the cause of injury, or nature of injury, the latter of which is reported here.
Source: AIHW Disease Expenditure database
https://www.aihw.gov.au

Spending by area of expenditure

- Spending on infectious diseases across the period 2013–14 to 2022–23 has shown the most variation. The impact of COVID–19, resulted in a large increase in spending in 2021–22 in particular. Earlier in the decade, in 2016–17, there was an increase in spending of medicines on the PBS used to treat infectious diseases in that year, namely the inclusion of ledipasvir+sofosbuvir, which is primarily used to treat hepatitis C.
- Throughout the period 2013–14 to 2022–23, musculoskeletal disorders had the highest share of spending in private hospitals.
- Since 2019–20, PBS spending on cancers and other neoplasms was more than double the spending of the next highest disease group.

The following interactive data visualisation (Figure 13) shows the spending on disease groups by area of expenditure in current prices between 2013–14 and 2022–23. Data used to create the visualisation is available to download from the data tables.

Figure 13: Spending on disease groups, by area of expenditure, current prices, 2013–14 to 2022–23 ($ million)



Notes:
(a)Public hospital non-admitted patient includes Public hospital emergency department and Public hospital outpatient.
(b)The Injuries Burden of Disease group can be disaggregated according to the cause of injury, or nature of injury, the latter of which is reported here.
Source: AIHW Disease Expenditure database
https://www.aihw.gov.au

References

AIHW (2024a) *Health expenditure Australia 2022–23*, AIHW, Australian Government.

Spending on COVID–19

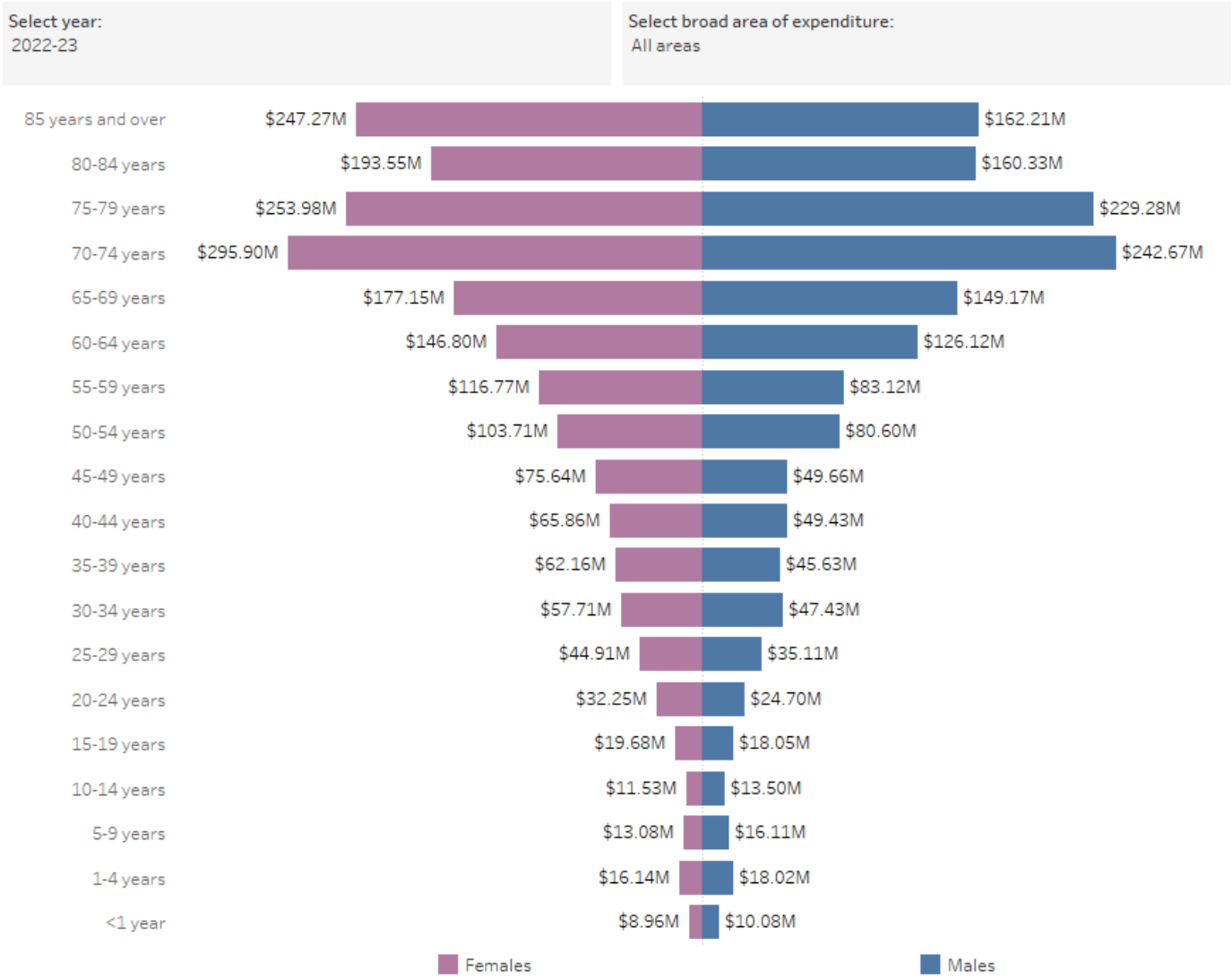
The Coronavirus disease 2019 (COVID–19) pandemic has been one of the biggest public health challenges Australia has faced since the Influenza pandemic of 1918 around 100 years ago.

COVID–19 is included as an infectious disease within the ABDS condition list and in the disease expenditure database it captures the estimated spending that can be identified by age group and sex for patients who were confirmed or suspected COVID–19 positive patients that were treated in either a public hospital emergency department, public hospital admitted patient or in a private hospital. It also includes GP and specialist attendances related to COVID–19 and pathology testing for COVID–19 claimed through the MBS. From 2021–22 it also includes spending on PBS medications approved by the Therapeutical Goods Administration (TGA) to treat COVID–19. In 2022–23, an estimated $1.8 billion was spent on COVID–19 which was a decrease compared to the $6.4 billion spent in 2021–22.

The COVID–19 spending in this report excludes payments under the National Partnership on COVID–19 Response (NPCR) as well as any community or public health related spending on COVID–19 outside of the NPCR. For further information on this spending refer to the report *Health system spending on the response to COVID–19 in Australia 2019–20 to 2022–23* (AIHW 2024b).

The following interactive data visualisation (Figure 14) can be used to see spending on COVID–19 by area of expenditure, sex and age group for the years 2019–20 to 2022–23. Data used to create the visualisation is available to download from the data tables.

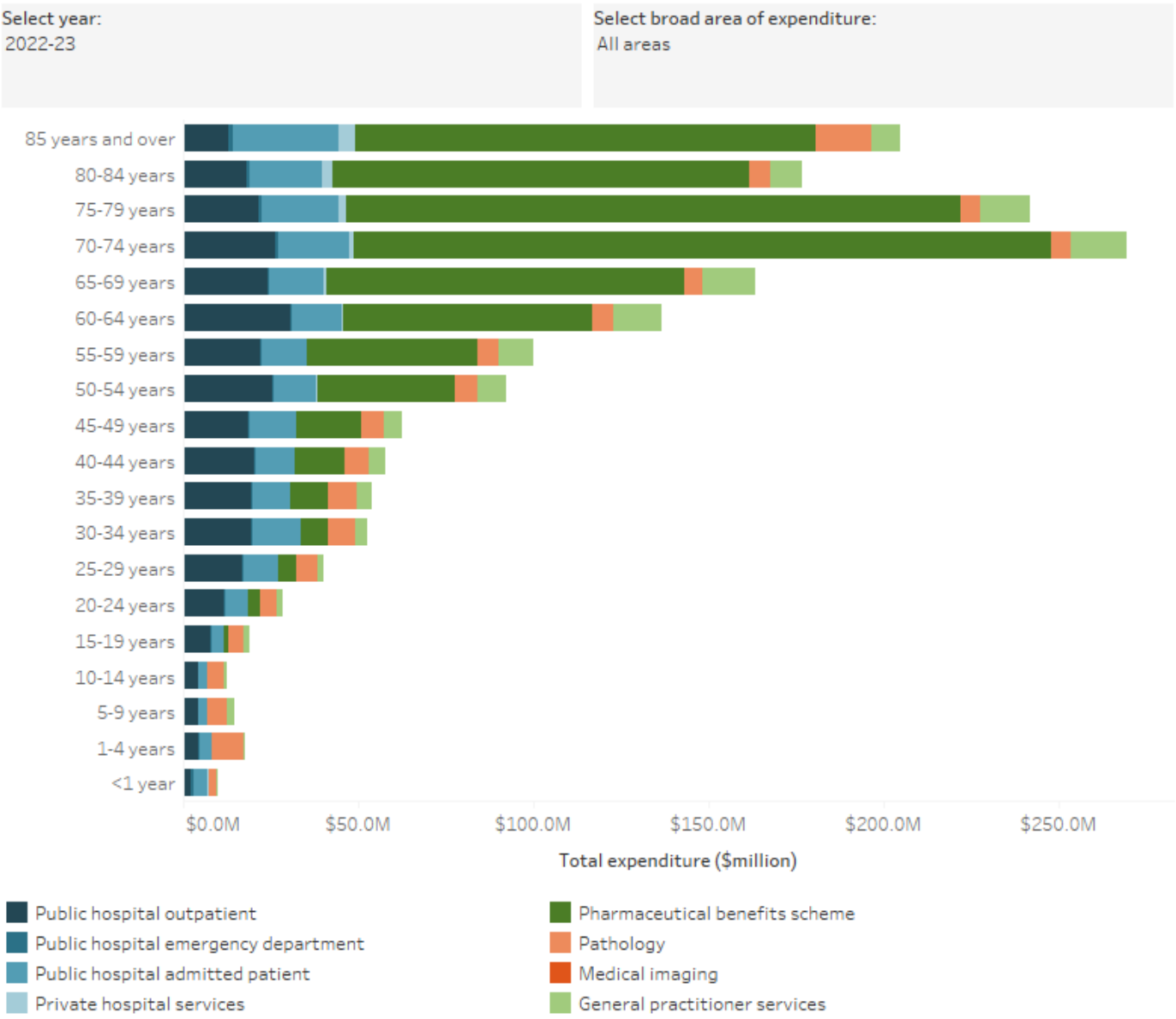
Figure 14: Expenditure on COVID–19 by age group and sex, 2019–20 to 2022–23



Note: The data presented in the graph is based on the classification criteria used for COVID-19, including the ICD codes from version 11th (U07.1, U07.2, U07.4, U07.5, U07.7, U06.0). Additionally, the analysis considered clinic types (10.21, 20.57, 40.63, 30.09) and MBS items that had the keywords 'COVID-19', 'SARS-COV-2', and 'COVID' mentioned in their description.
Source: AIHW Disease Expenditure database

The following interactive data visualisation (Figure 15) shows spending on COVID–19 by age group and area of expenditure for 2019–20 to 2022–23. Data used to create the visualisation is available to download from the data tables.

Figure 15: COVID–19 spending by area of expenditure and age group, 2019–20 to 2022–23



Note: The data presented in the graph is based on the classification criteria used for COVID-19, including the ICD codes from version 11th (U07.1, U07.2, U07.4, U07.5, U07.7, U06.0). Additionally, the analysis considered clinic types (10.21, 20.57, 40.63, 30.09) and MBS items that had the keywords 'COVID-19', 'SARS-COV-2', and 'COVID' mentioned in their description.
Source: AIHW Disease Expenditure database

The costs identified as COVID–19 in the disease expenditure database are a component of a wider set of COVID–19 payments many of which are unable to be identified by age group and sex at this point in time. These payments include:

- Australian Government payments to the state and territory health authorities under the National Partnership on COVID–19 Response (NPCR)
- Australian Government Department of Health and Aged Care payments related to COVID–19 that are outside of the NPCR including programs for private hospitals, medical services, community health, pharmaceuticals, public health, administration, health research, health workforce, capital and aged care services
- State and territory government health authority payments under the NPCR
- Estimated costs for out-of-pocket payments for respirators, face masks and shields

The report *Health system spending on the response to COVID–19 in Australia 2019–20 to 2022–23* (AIHW 2024b) examines Australia's health system spending in response to the COVID–19 pandemic over the period 2019–20 to 2022–23. The report covers funding by the Australian Government, state and territory governments and individuals. It looks at spending by broad area: primary health care, hospitals, referred medical services, aged care services and other health services as well as detailed areas of expenditure within these broad areas. This report also compares Australia's additional health expenditure and excess mortality during COVID–19 to other countries.

References

AIHW (2024b) *Health system spending on the response to COVID–19 in Australia, 2019–20 to 2022–23*, AIHW, Australian Government.

Spending on well care

The AIHW Disease expenditure database now includes ‘well care’.

Well care includes the following 7 sub-categories:

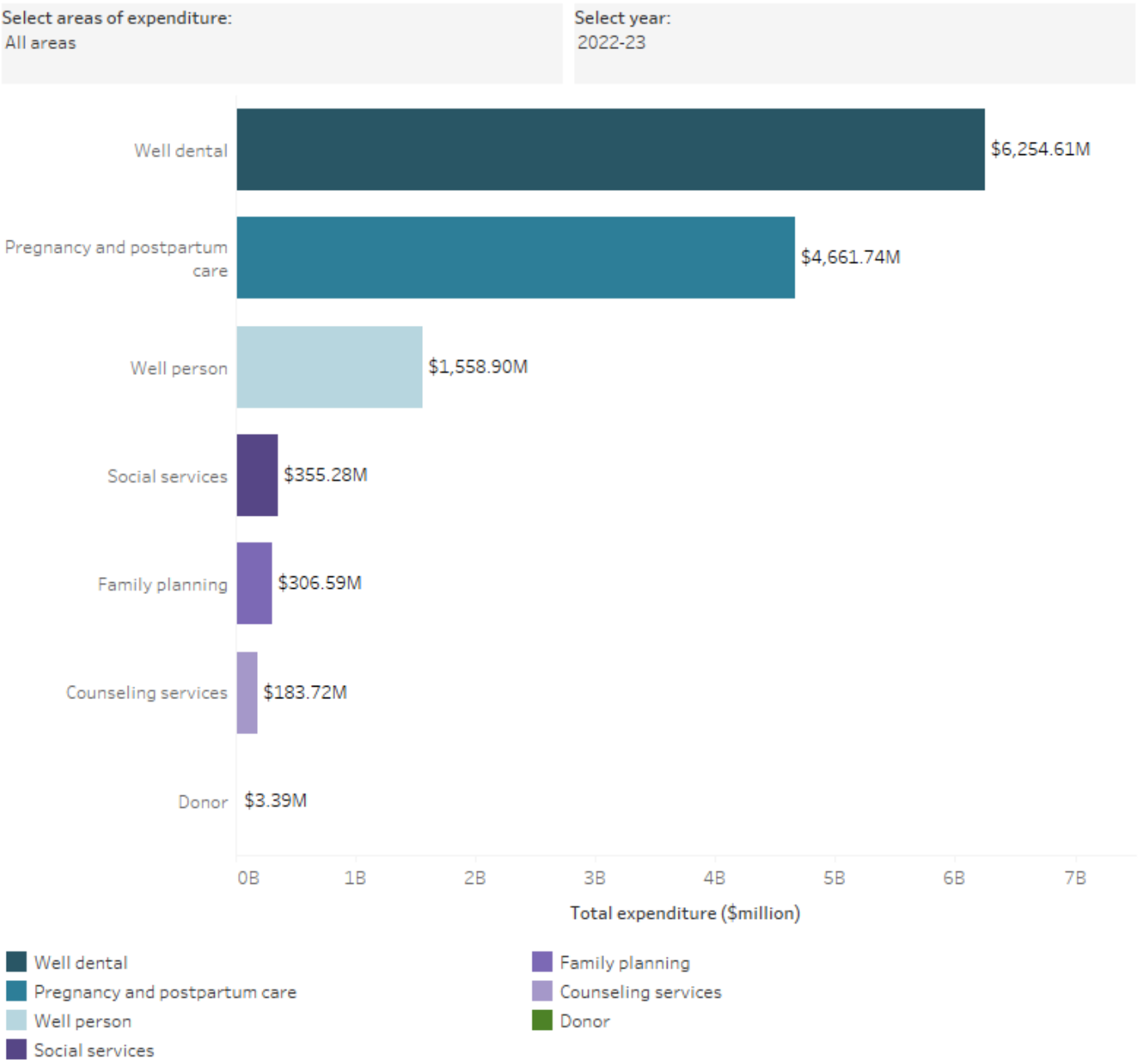
- well person (includes expenditure for services that are typically routine examinations, general examinations without specific complaints or diagnoses, or administrative in nature)
- well dental (includes routine checkups and cleaning)
- pregnancy and postpartum care
- family planning
- counselling services
- social services (includes problems related to housing and economic circumstances, social environment, support groups)
- donor

In 2022–23 $13.3 billion was spent on well care (8% of total spending). This was up from $12.6 billion in 2021–22.

The two components of well care that account for the majority of the spending are well dental ($6.3 billion) and pregnancy and postpartum care ($4.7 billion). In 2022–23, these two sub-components accounted for $10.9 billion (82% of well care). Note: In earlier editions of AIHW disease expenditure reports, pregnancy and postpartum care was included in reproductive and maternal conditions.

The following interactive data visualisation (Figure 16) shows spending on well care for each of the seven sub-categories for 2013–14 to 2022–23. Data used to create the visualisation is available to download from the data tables.

Figure 16: Spending on Well care by area of expenditure, 2013–14 to 2022–23



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

Comparison of disease expenditure and disease burden

Ill health has a substantial impact on the human cost of suffering and premature death, and the financial cost of health services.

This report along with the *Australian Burden of Disease Study 2023* (AIHW 2023a) estimate the costs of different types of health conditions.

By looking at both the financial and human cost of diseases and injury, we gain a better understanding of the full impact of diseases.

What do we mean by 'human cost'?

The human cost of particular diseases can be measured through burden of disease analysis. This looks at the impact of different diseases and injuries on a population and helps us to understand the impact of these conditions in terms of 'years of healthy life lost'.

Losing healthy years can occur in two ways: through premature death (the fatal burden), or through living with the impacts of a disease (the non-fatal burden). Looking at these two measures together provides an overall understanding of the total burden, or human cost of disease and injury.

It is estimated that 5.6 million years of healthy life were lost due to Australians living with or dying prematurely from disease and injury in 2023 (AIHW 2023a).

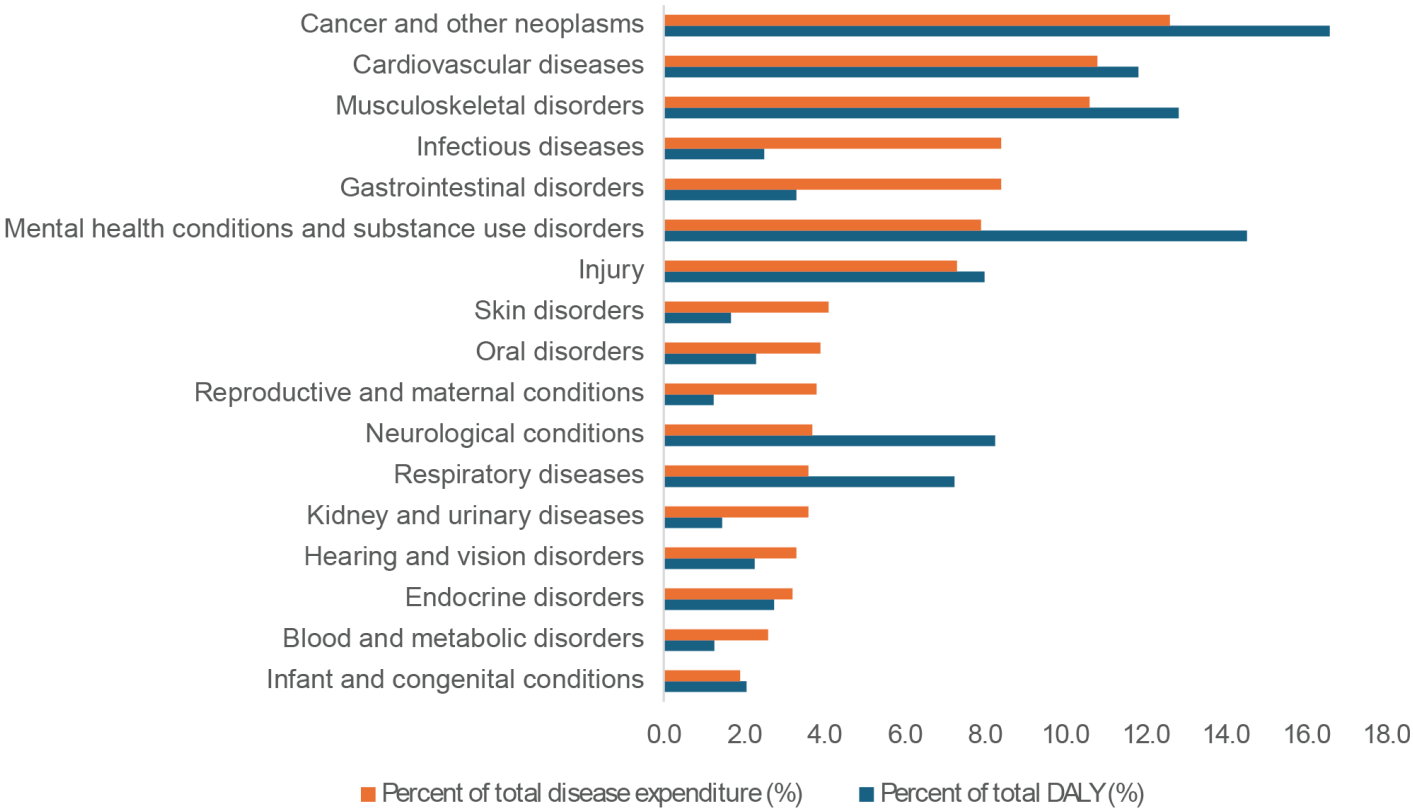
Which disease groups have the greatest impact in terms of spending and burden?

Both burden of disease reporting and disease expenditure reporting provide two different lenses through which we can consider the impact of diseases.

Of all disease groups, cancer had the greatest human cost (highest share of total disease burden measured as the share of total disability adjusted life years (DALY)) in 2023 and was also responsible for the most spending in 2022–23.

Figure 17 shows a comparison of spending on each of the Australian Burden of Disease groups in 2022–23 with the share of total disease burden for each disease group in 2023. Mental health conditions and substance use disorders ranked second highest in terms of disease burden but only sixth highest in terms of spending.

Figure 17: Spending vs burden for each Australian Burden of Disease Group



Notes: Disease expenditure in this chart excludes spending on well care, treatment of risk factors and examination and observation NEC.

Sources: AIHW Disease Expenditure database; AIHW 2023a.

Both measures provide insights into the impact of diseases on our society. By considering multiple sources of data, governments and service providers have better evidence to help them identify priorities and develop policies and strategies to meet the needs of those affected.

It is important to note, however, that diseases and their effects on people, society and the health system are complex. There can be many reasons why a disease may have a large human cost but low health spending – and vice versa.

In cases where a particular disease has relatively high human cost but low spending, it does not necessarily mean that health spending should be increased. Road transport injuries or smoking related diseases, for example, may be also addressed by investments and responses outside the health system, such as through education, transport, environmental health or other social services.

References

AIHW (2023a) *Australian Burden of Disease Study 2023*, AIHW, Australian Government, accessed 19 July 2024.

Spending on research

Research is not included as part of the AIHW Disease expenditure database. This section presents National Health and Medical Research Council (NHMRC) expenditure for disease, research and health areas from 2020–21 to 2022–23.

- In 2022–23, $1.4 billion was spent through the NHMRC expenditure on disease, research and health
- The highest spending in 2022–23 was for Neurological diseases ($187.8 million), followed by spending for Infectious diseases ($169.7 million) and Cancer ($161.1 million)
- Neurological diseases attracted the highest spending each year
- From 2020–21 to 2022–23, a total of $15.9 million was for COVID–19 research

The table below shows the NHMRC expenditure for disease, research and health areas from 2020–21 to 2022–23. A comparison of NHMRC expenditure for disease, research and health areas for years 2011–12 to 2022–23, can be downloaded from the data section.

Table 1: NHMRC expenditure for disease, research and health areas 2020–21 to 2022–23 ($ million)

Disease, research and health areas[1]	**2020–21**	**2021–22**	**2022–23**
Balance, Eye and Hearing Diseases	22.1	23.6	24.1
Blood Diseases	23.0	23.0	25.1
Cancer	161.5	155.8	161.1
Cardiovascular Disease	104.8	100.5	94.1
Congenital and Genetic Diseases	96.4	90.5	94.9
Endocrine, Metabolic and Nutritional Diseases	111.4	110.6	108.2
Environmental and Occupational Health	19.0	22.1	24.2
Gastrointestinal Diseases	44.3	43.2	43.0
Genitourinary Diseases	37.4	37.2	36.7
Immunological Diseases[2]	75.8	71.0	76.0
Infectious Diseases	161.6	163.2	169.7
Injury	48.0	48.2	49.3
Mental Health[3]	101.1	102.5	102.8
Musculoskeletal Diseases	43.9	42.2	42.8
Neurological Diseases	199.7	193.7	187.8
Orofacial Diseases	2.4	2.6	2.7
Reproductive Health	69.6	67.8	70.0
Respiratory Diseases	56.2	55.9	53.5
Skin Diseases	10.6	11.2	10.2
COVID-19	0.9	5.1	9.9
Total	**1,389.6**	**1,370.0**	**1,386.1**

Notes

1. These disease, health and research topics are based on the International Classification of Disease (ICD) produced by the World Health Organisation.
2. The figures in the table above for Immunological Diseases have been modified to exclude immunological research specifically related to cancer. These figures relate to research relevant to allergy, autoimmune diseases, and immunodeficiency.
3. Includes research into addiction and research into eating disorders.

Source: NHMRC.

Technical notes

The main source of information for this web report is the AIHW's Disease Expenditure database. It contains estimates of spending by Australian Burden of Disease Study condition, age group, and sex for:

- hospital services
  - public hospital admitted patients
  - public hospital emergency departments
  - public hospital outpatient services
  - private hospital admitted patients
- primary health care
  - general practitioner services
  - allied health services
  - benefit paid pharmaceuticals
  - dental services
- referred medical services
  - specialist services
  - medical imaging
  - pathology

The methods used for estimating disease spending is a mixture of 'top-down' and 'bottom-up' approaches. A 'top-down' approach is where total spending across the health system is estimated and then allocated to the relevant conditions based on the available service use data.

Although this approach produces consistency, good coverage and totals that add up to known expenditure, it is not as comprehensive for any specific disease as a detailed 'bottom-up' analysis, which would include the actual costs incurred for that disease. A lack of amenable data sources means that a more granular 'bottom-up' analysis is not possible.

Estimates in the AIHW Disease Expenditure database have been derived by combining information from the following data sources:

- National Hospital Morbidity Database (NHMD)
- National Non-admitted Patient Emergency Department Care Database (NNAPEDC)
- National Non-admitted Patient Databases (aggregate, NAPAGG, and unit record, NAPUR)
- IHACPAs National Weighted Activity Unit (NWAU) calculators and the National Efficient Price (NEP)
- Private Hospital Data Bureau (PHDB) collection
- Bettering the Evaluation and Care of Health (BEACH) survey
- Medicare Benefits Schedule (MBS)
- Pharmaceutical Benefits Scheme (PBS)
- Health Expenditure Database.

It is not technically appropriate or feasible to allocate all spending 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.

This study includes payments from all sources of funds, such as the Australian and state and territory governments, Private Health Insurance, and out of pocket payments by patients.

Some components of recurrent spending are allocated differently between the AIHW Health Expenditure database, and the Disease Expenditure database. This approach was taken to reflect patterns of healthcare use for particular conditions, which is the focus of disease expenditure analysis, rather than health funding arrangements. Spending estimates in hospitals in the Disease Expenditure database are slightly higher than in the Health Expenditure database. This is discussed further in the accompanying methodology report.

Expenditure information is added to hospital activity data for every admitted patient record in the NHMD, all emergency department presentations in the NNAPEDC, and all service events in the National Non-admitted Patient Databases. Data sets have been constructed for all private hospital admitted patient separations. Aggregated data sets by sex, age group, state/territory and SA3 geographical area, including patient co-payments, have been created for MBS services by provider specialty and subgroup, and pharmaceuticals by Anatomical Therapeutic Classification (ATC). All of the data sets include expenditure estimates for each ABDS condition.

Changes to methodology compared to the 2020–21 study

The scope of expenditure and methods used in this disease expenditure study are similar to those used in the 2020–21 report (AIHW 2023b) however there are changes that have been made that make comparison of data between the 2020–21 report and this report to be done with caution. The key changes that have been made in the 2022–23 study compared with the 2020–21 study were changes to the methods used for estimating costs of services in public hospitals, allocating costs to specific conditions, and the list of conditions that are included in the study.

The methodology changes are outlined briefly below. For further details on the methods used, refer to accompanying methods report, *Health system spending on disease and injury in Australia: Overview of analysis and methodology 2022–23* available in the Related material section.

Costing public hospital services

Previous iterations of the disease expenditure analysis used cost data from the Independent Hospital and Aged Care Pricing Authority's (IHACPA) National Hospital Cost Data Collection (NHCDC) to estimate costs for public hospital admissions, emergency department presentations, and non-admitted services. In the 2022–23 study, the costing method was updated to use the IHACPAs National Weighted Activity Unit (NWAU) calculators and the

National Efficient Price (NEP), to estimate the relative resource intensity and cost for each service based on service level information such as diagnosis, comorbidities, clinical complexity, length of stay, procedures, and outpatient clinic type. This allows more timely reporting of disease expenditure estimates.

Allocating costs to conditions

In previous disease expenditure reports, cost redistributions included most comorbidities as in scope. The 2022–23 study updates this to exclude conditions that are related to the principal diagnosis, symptoms of the conditions, not cost relevant for the service, 'other' residual conditions, or adverse effects of the medical treatment received.

Diagnoses excluded from the redistribution are listed in Table 5.1 in the methods report. Spending on cancer was impacted by this change as all comorbidities are now excluded from the costs for patient separations, that is: all costs for patients with cancer as a principal diagnosis is assumed to be related to the cancer. Previously, some of the cost was assumed to be due to the comorbidities. This change in method has increased spending on cancer to what was published in earlier reports. This change in method was made to align with methods used by the United States and other countries.

List of conditions

The list of conditions that are included in the study was updated to report further details for certain types of conditions that were previously included in the 'other' categories. This includes:

- medical treatments for certain risk factors (hypertension, hyperlipidemia, obesity, and tobacco interventions)
- long outcomes of chronic conditions (renal failure, heart failure, and septicaemia)
- certain types of 'well care' (well person, well dental, pregnancy and postpartum care, family planning, counselling services, social services and donor).

Identification of COVID–19 cases

Analysis for private and public hospitals:

The 12th version of the International Classification of Diseases (ICD) codes, including U07.1, U07.2, U07.4, U07.5, and U07.7, were used in the diagnostic field of both public and private admitted hospitals to identify COVID–19 cases.

Analysis for ED cases:

The analysis included both confirmed COVID–19 cases using the designated codes and ruled-out cases (U06.0) in the emergency department.

Introduction of Tier 2 clinic classes:

For NAP, four Tier 2 clinic classes (10.21, 20.57, 40.63, 30.09) were established to capture and track the diagnosis, treatment, and COVID–19 vaccination activities in outpatient clinics.

MBS mapping for keyword search:

A mapping file was created for MBS areas to search for specific keywords in the item descriptions. The keywords used in the search were 'COVID–19', 'SARS–COV–2', and 'COVID'. This process enabled the identification of 66 MBS items that could be linked to COVID–19 based on the presence of these keywords in the item descriptions.

The AIHW continually seeks to improve the methods used to produce these estimates. Estimates for disease expenditure are subject to revision. Hence the most recently published results are not directly comparable with previously published data.

References

AIHW (2023b) *Health system spending on disease and injury in Australia, 2020–21*, AIHW, Australian Government, accessed 20 July 2024.

Abbreviations

List of abbreviations

Term	Definition
ABDS	Australian Burden of Disease Study
AIHW	Australian Institute of Health and Welfare
BEACH	Bettering the Evaluation and Care of Health
COVID-19	Coronavirus 19
DALY	Disability adjusted life years
ED	Emergency Department
MBS	Medicare Benefits Schedule
NEC	Not elsewhere classified
NEP	National Efficient Price
NAPAGG	National Non-admitted Patient Aggregate Database
NAPUR	National Non-admitted Patient Unit Record Database
NHCDC	National Hospital Cost Data Collection
NHMD	National Hospital Morbidity Database
NHMRC	National Health and Medical Research Council
NHRA	National Health Reform Agreement
NNAPEDC	National Non-admitted Patient Emergency Department Care Database
NPCR	National Partnership on COVID–19 Response
NWAU	National Weighted Activity Unit
ICD	International Classification of Diseases
IHACPA	Independent Hospital and Aged Care Pricing Authority
PBS	Pharmaceutical Benefits Scheme
PHDB	Private Hospitals Data Bureau
TGA	Therapeutical Goods Administration

Glossary

admitted patient: A patient who undergoes a hospital's admission process to receive treatment and/or care. This treatment and/or care are provided over time and can occur in hospital and/or in the person's home (for hospital in the home patients).

aids and appliances: Durable medical goods dispensed to ambulatory patients that are used more than once for therapeutic purposes, such as glasses, hearing aids, wheelchairs and orthopaedic appliances, and prostheses fitted externally (rather than implanted surgically). Excludes prostheses fitted as part of admitted patient care in a hospital.

Australian Government health expenditure: Total expenditure that the Australian Government actually incurs on its own health programs. It does not include the funding provided by the Australian Government to the states and territories by way of grants under section 96 of the Constitution.

average annual growth rate: To calculate the average annual growth rate in health expenditure between two years, Y1 and Y2, with N years between the two time periods, the following formula applies:
($ million in Y2/$ million in Y1)^(1/N)–1)*100.

benefit-paid pharmaceuticals: Pharmaceuticals listed in the schedule of the PBS and the Repatriation PBS for which pharmaceutical benefits have been paid or are payable. Does not include listed pharmaceutical items where the full cost is met from the patient copayment under the PBS or Repatriation PBS.

capital consumption: The amount of fixed capital used up each year – sometimes referred to as depreciation.

capital expenditure: Expenditure on large-scale fixed assets (for example, new buildings and equipment with a useful life extending over a number of years). The term is used in this report to refer to what the ABS calls gross fixed capital formation (see also capital formation).

capital formation: Gross fixed capital formation is the value of acquisitions less disposals of new or existing fixed assets. Assets consist of tangible or intangible assets that have come into existence as outputs from processes of production, and that are themselves used repeatedly or continuously in other processes of production over periods of time longer than 1 year. (See also capital expenditure).

chain price index: An annually re-weighted index providing a close approximation to measures of pure price change.

community health services: Non-residential health services that establishments offer to patients/clients in an integrated and coordinated manner in a community setting, or the coordination of health services elsewhere in the community. Including, for example:

- well baby clinics
- health services provided to particular groups, such as Aboriginal and Torres Strait Islander people, women, youth and migrants, as well as family planning services, community mental health and alcohol and drug treatment services
- specialised mental health programs delivered in a community setting.

constant prices: Constant price expenditure adjusts current prices for the effects of inflation – that is, it aims to remove the effects of inflation. Constant price estimates for expenditure aggregates have been derived using either annually re-weighted chain price indexes or IPDs. The estimates indicate what expenditure would have been had the reference year prices applied in all years. As a result, expenditures in different years can be compared dollar for dollar, using this as a measure of changes in the volume of health goods and services (see also real expenditure).

copayment: A payment made by an individual who has health insurance, usually at the time a health service is received, to offset some of the cost of care.

current prices: Refers to expenditures reported for a particular year, unadjusted for inflation. Changes in current price expenditures reflect changes in both price and volume.

dental services: Services that registered dental practitioners provide. These include oral and maxillofacial surgery items, orthodontic, pedodontic and periodontic services, cleft lip and palate services, dental assessment, and other dental items listed in the MBS. The term covers dental services funded by health funds, state and territory governments and also individuals' out-of-pocket payments.

excess health inflation: The difference when the health inflation rate exceeds the general inflation rate – that is, the rise in the price of goods and services in the health-care sector exceeds the rise in the price of goods and services in the economy as a whole.

general inflation: The rise in the general price level of goods and services in the economy.

government finance statistics: Provides details of revenues, expenses, cash flows, assets and liabilities of the Australian public sector, and comprises units that are owned and/or controlled by the Australian Government, state and territory governments and local governments.

gross domestic product (GDP): Commonly used to indicate national income – the total market value of goods and services produced within a given period after deducting the cost of goods and services used up in the process of production, but before deducting allowances for depreciation.

gross national expenditure (GNE): An alternative measure to GDP; GNE is equal to GDP minus export income, but including imports.

health administration: Activities related to the formulation and administration of government and non-government health policy, and in the setting and enforcement of standards for health personnel and health services. One activity, for example, is the regulation and licensing of providers of health services.

- The term includes only those administrative services that cannot be allocated to a particular health good or service. Such services might include, for example, maintaining an office for the chief medical officer, a departmental liaison officer in the office of the minister, or other agency-wide items for which it is not possible to derive appropriate or meaningful allocations to particular health programs.

health inflation: The rise in the price level of goods and services in the health sector.

health research: Research done at tertiary institutions, in private non-profit organisations, and in government facilities that has a health socioeconomic objective.

- It excludes commercially oriented research that private business funds, the costs of which are assumed to be included in the prices charged for the goods and services (for example, medications that have been developed and/or supported by research activities).

hospital services: Services provided to a patient who is receiving admitted patient services or non-admitted patient services in a hospital, but excluding non-admitted dental services, community health services, patient transport services, public health activities and health research done within the hospital. They can include services provided off-site, such as dialysis or hospital in the home.

household final consumption expenditure (HFCE): Net expenditure on goods and services by households and by private non-profit institutions serving households.

implicit price deflator (IPD): An index obtained using the ratio of current price expenditure to constant price expenditure.

individuals' out-of-pocket funding: Payments by individuals where they meet the full cost of a good or service, or where they share the cost of goods and services with third-party payers, such as private health insurance funds or the Australian Government.

injury compensation insurers: Workers compensation and compulsory third-party motor vehicle insurers.

local government: A public sector unit where the political authority underlying its function is limited to a local government area or other region within a state or territory, or where its functions involve policies that are primarily of concern at the local level.

medical expenses tax rebate: An Australian Government subsidy to assist with the cost of medical expenses. It applies to a wide variety of health expenditures, not just expenses associated with doctors. This rebate is now income tested and is currently being phased out.

medical services expenditure: Includes services provided by, or on behalf of the following parties: registered medical practitioners who are funded by the MBS, DVA, compulsory third-party motor vehicle insurance, workers compensation insurance, private health insurance funds, Australian Government premium rebates allocated to medical services, Medicare copayments, and other out-of-pocket payments.

- Most medical services in Australia are provided on a fee-for-service basis and attract benefits from the Australian Government under Medicare. These include both private in-hospital medical services and out-of-hospital medical services.
- This term includes medical services not from the MBS, such as vaccines for overseas travel, as well as some expenditure by the Australian Government under alternative funding arrangements.
- It excludes medical services provided to public patients admitted to public hospitals and medical services provided to public patients at outpatient clinics in public hospitals.

medications: Benefit-paid pharmaceuticals and other medications.

other health practitioner services: Services that health practitioners (other than doctors and dentists) provide. These include, but are not limited to practice nurses, chiropractors, optometrists, physiotherapists, occupational therapists, speech therapists, audiologists, dieticians, podiatrists, homeopaths, naturopaths, practitioners of Chinese medicine and other forms of traditional medicine.

other medications: Pharmaceuticals for which no PBS or Repatriation PBS benefit was paid. They include:

- pharmaceuticals listed in the PBS or Repatriation PBS, the total costs of which are equal to, or less than, the statutory patient contribution for the class of patient (under copayment pharmaceuticals)
- pharmaceuticals dispensed through private prescriptions that do not fulfil the criteria for payment of benefit under the PBS
- Repatriation PBS over-the-counter medicines, including pharmacy-only medicines, aspirin, cough and cold medicines, vitamins and minerals, herbal and other complementary medicines, and various medical non-durables, such as condoms, adhesive and non-adhesive bandages.

over-the-counter medicines: Medicinal preparations that are primarily bought from pharmacies and supermarkets, that are not prescription medicines.

patient transport services: Expenditure by organisations primarily engaged in providing transportation of patients by ground or air, along with health (or medical) care. These services are often provided during a medical emergency, but are not restricted to emergencies. The vehicles are equipped with lifesaving equipment operated by medically trained personnel. Patient transport services include public ambulance services or flying doctor services, such as Royal Flying Doctor Service and Care Flight. Also includes patient transport programs, such as patient transport vouchers or support programs to assist isolated patients with travel to obtain specialised health care. From 2003–04 onwards, this category includes patient transport expenses that are included in the operating costs of public hospitals.

Pharmaceutical Benefits Scheme (PBS): A national, government-funded scheme that subsidises the cost of a wide variety of pharmaceutical drugs, and that covers all Australians to help them afford standard medications. The PBS lists all the medicinal products available under the PBS and explains the uses for which they can be subsidised (see Repatriation Pharmaceutical Benefits Scheme).

primary health care: Primary health-care expenditure includes recurrent expenditure on health goods and services, such as medical services, dental services, other health practitioner services, pharmaceuticals and community and public health services. Primary health-care services are delivered in many settings, such as general practices, community health centres, Aboriginal health services and allied health practices (for example, physiotherapy, dietetic and chiropractic practices, and tele-health) and come under numerous funding arrangements.

private hospital: A privately owned and operated institution, catering for patients who are treated by a doctor of their own choice. Patients are charged fees for accommodation and other services provided by the hospital and relevant medical and paramedical practitioners. Acute care and psychiatric hospitals are included, as are private free-standing day hospital facilities (see public hospital). Private hospital expenditure includes expenditures incurred by a private hospital in providing contracted and/or ad hoc treatments for public patients.

private patient: Person admitted to a private hospital, or person admitted to a public hospital who decides to choose the doctor(s) who will treat them or to have private ward accommodation. This means they will be charged for medical services, food and accommodation.

public health activities: The core types of activities done or funded by the key jurisdictional health departments that deal with issues related to populations, rather than individuals. These activities comprise:

- communicable disease control
- selected health promotion
- organised immunisation
- environmental health
- food standards and hygiene
- cancer screening
- prevention of hazardous and harmful drug use
- public health research.
- These activities do not include treatment services.

public health services: Services provided and/or funded by governments that are aimed at protecting and promoting the health of the whole population or specified population subgroups, and/or preventing illness or injury in the whole population or specified population subgroups.

- Public health services until 2008–09 also include departmental costs for the following Commonwealth regulators: the Therapeutic Goods Administration, the Office of Gene Technology Regulator, and the National Industrial Chemicals Notification and Assessment Scheme. These are now reported as administration expenses.

public hospital: A hospital controlled by a state or territory health authority. In Australia public hospitals offer free diagnostic services, treatment, care and accommodation to all Australians who need them. Public hospitals include some denominational hospitals that are privately owned. Defence force hospitals are not included in the scope of public hospitals (see private hospital).

public hospital services: The balance of public hospital expenditure remaining, after community health services, public health services, non-admitted dental services, patient transport services, and health research activities done by public hospitals have been removed and reallocated to their own expenditure categories.

public patient: A patient admitted to a public hospital who has agreed to be treated by doctors of the hospital's choice and to accept shared ward accommodation. This means that the patient is not charged.

real expenditure: Expenditure that has been adjusted to remove the effects of inflation (that is, expenditure for all years has been compiled using the reference year prices). Removing the effects of inflation enables comparisons to be made between expenditures in different years on an equal dollar-for-dollar basis. Changes in real expenditure measure the change in the volume of goods and services produced (see constant prices).

rebates of health insurance premiums: Introduced in January 1999, a non-income-tested rebate on private health insurance premiums replaced the Private Health Insurance Incentives Scheme subsidy. From 1 July 2012, the private health insurance rebate became income tested. From 1 April 2014, all rebate percentages are adjusted annually by a rebate adjustment factor.

- There are two mechanisms for rebates of health insurance premiums:
- The first is where the rebate is taken as a reduced premium payable by the individual with private health cover (with the health fund claiming reimbursement from the Australian Government).
- The second is taken as an income tax rebate, where individuals with private health cover elect to claim the rebate through the tax system at the end of the financial year, having paid the health funds 100% of their premiums up front.

recurrent expenditure: Expenditure for which organisations are liable on a recurring basis, for the provision of health goods and services, which does not result in creating or acquiring fixed assets (new or second-hand). It consists mainly of expenditure on wages, salaries and supplements, purchases of goods and services, and depreciation. This excludes capital expenditure. For all years, recurrent expenditure includes capital consumption (depreciation).

referred medical services: Non-hospital medical services that are not classified as primary health care (see unreferred medical services).

Repatriation Pharmaceutical Benefits Scheme (Repatriation PBS): Provides assistance to eligible veterans (with recognised war- or service-related disabilities) and their dependants for pharmaceuticals listed on the PBS and a supplementary repatriation list, at the same cost as patients entitled to the concessional payment under the PBS (see Pharmaceutical Benefits Scheme).

specific purpose payments (SPPs): Australian Government payments to the states and territories under the provisions of section 96 of the Constitution, used for purposes specified in agreements between the Australian Government and individual state and territory governments. Some are conditional on states and territories incurring a specified level or proportion of expenditure from their own resources. The SPP associated with the National Healthcare Agreement, implemented from 1 July 2009, provides payments to state and territory governments that are to be spent only within the sector described – for example, within the health sector. In addition, there are NPPs under national partnership agreements that are aimed at specific areas of health expenditure.

state and territory dental services: School dental programs, community dental services and hospital dental programs that state and territory health authorities fund.

total health expenditure: Comprises **recurrent expenditure**, **capital expenditure and medical expenses tax rebate**.

total health price index: The ratio of total national health expenditure at current prices, to total national health expenditure at constant prices.

unreferred medical services: A medical service provided to a person by, or under the supervision of, a medical practitioner, being a service that has not been referred to that practitioner by another medical practitioner or person with referring rights. In this report, these are medical services that are classified as primary health care (see referred medical services).

well care: Includes the following:

- well person (includes expenditure for services that are typically routine examinations, general examinations without specific complaints or diagnoses, or administrative in nature)
- well dental (includes routine checkups and cleaning)
- pregnancy and postpartum care
- family planning
- counselling services
- social services
- donor

Further information

This web report including the visualisations, downloadable data tables and the accompanying methods report were prepared by the Health Economics Unit of the Australian Institute of Health and Welfare.

The AIHW offers a customised data request service for access to statistics that are not available in published reports, tables, dynamic data displays or data cubes. Customised tabulations of disease expenditure estimates from the AIHW Disease Expenditure Database may be provided, depending on the level of detail required.

Request a customised analysis from the AIHW (note there may be a charge for custom data requests).

For any questions relating to the disease expenditure information collected by the AIHW, contact disease.expenditure@aihw.gov.au.

Notes

Amendments

20 January 2025

The full AIHW disease expenditure database is now available to download in machine readable format on the Data page. The database contains spending estimates from 2013–14 to 2022–23, by burden of disease group, condition, area of spending, sex and age group at the national and state/territory level.

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Data

NEW: The full AIHW disease expenditure database is now available to download in machine readable format. The database contains spending estimates from 2013–14 to 2022–23, by burden of disease group, condition, area of spending, sex and age group at the national and state/territory level.

Data tables: Disease expenditure database (zipped CSV, XLSX and TXT files)

Data
ZIP 239.6MB

Data tables: Health system spending on disease and injury in Australia, 2022–23

Data
XLSX 8.8MB

Data tables: Health system spending on disease and injury in Australia, 2021–22

Data
XLSX 10.6MB

Data tables: Health system spending on disease and injury in Australia, 2020–21

Data
XLSX 10.5MB

Data tables: Health system spending on disease and injury in Australia, 2019–20

Data
XLSX 10.4MB

Data tables: Health system spending on disease and injury in Australia, 2018–19

Data
XLSX 10.4MB

Data tables: Health system spending on disease and injury in Australia, 2017–18

Data
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Data tables: Health system spending on disease and injury in Australia, 2016–17

Data
XLSX 10.4MB

Data tables: Health system spending on disease and injury in Australia, 2015–16

Data
XLSX 10.3MB

Data tables: Health system spending on disease and injury in Australia, 2014–15

Data
XLSX 10.3MB

Report editions

Previous releases

Health system spending on disease and injury in Australia 2022–23 is the most recent release of disease expenditure estimates. This report supersedes all previous releases of the AIHW *Health system spending on disease and injury in Australia* reports and *Disease expenditure in Australia* reports. Methods have been further refined in this report compared to previous reports, hence data in this report should be used and are not directly comparable to data in earlier reports. Refer to the Data section in this report for downloadable Microsoft Excel tables for years 2013–14 to 2022–23 for time series comparisons in both current and constant prices using comparable methods.

- Health system spending on disease and injury in Australia 2022–23 |
  Web report | 20 Nov 2024
  This release
- Health system spending on disease and injury in Australia, 2020-21 |
  Web report | 29 Nov 2023
- Disease expenditure in Australia 2019–20 |
  Web report | 02 Dec 2022
- Disease expenditure in Australia 2018-19 |
  Web report | 25 Aug 2021
- Disease expenditure in Australia 2015-16 |
  Web report | 13 Jun 2019

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