



# Health system spending on the response to COVID-19 in Australia 2019-20 to 2021-22

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## About

This report examines Australia's health system spending in response to the COVID-19 pandemic over the period 2019-20 to 2021-22. It covers funding by source and by areas of expenditure: primary health care, hospitals, referred medical services, aged care and other health related areas of spending. This report also compares Australia's additional health expenditure and excess mortality during COVID-19 to other countries.

Cat. no: HWE 96

### Findings from this report:

- [Total estimated health spending on the response to COVID-19 was \\$47.9 billion \(2019-20 to 2021-22\)](#)
  - [\\$27.9 billion was spent on primary care, \\$6.1 billion of which was on the vaccine roll out](#)
  - [Individuals spent an estimated \\$0.9 billion on COVID-19 related health goods and services](#)
  - [Australia fared well compared to other countries for additional health spending and excess mortality during the pandemic](#)
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## Summary

The report primarily covers funding by government and non-government, in key areas of expenditure: primary health care, (including MBS unreferred medical services, community and public health), hospitals, referred medical services, aged care and other health related areas of spending.

### Key facts:

- Over the period 2019-20 to 2021-22, total estimated health spending on the response to COVID-19 in Australia was \$47.9 billion.
  - Governments spent an estimated \$47.0 billion on the health response to COVID-19 during 2019-20 to 2021-22, the Australian Government contributed \$35.1 billion (75%) and state and territory government \$11.9 billion (25%).
  - Individuals spent an estimated \$0.9 billion on COVID-19 related health goods and services such as, rapid antigen tests, personal protective equipment, and sanitiser.
  - The main areas of government expenditure were primary care (\$27.9 billion), including public health spending on the vaccine roll out (\$6.1 billion), and public hospitals (\$10.5 billion).
  - Australia ranked seventh lowest out of 36 OECD countries in terms of additional health spending during 2020 to 2022.
  - Australia's total excess mortality rate during 2020-2022 was 4%, which was the fifth lowest outcome compared to 30 other countries.
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## Introduction

Coronavirus disease 2019 (COVID-19) that emerged in 2019 quickly became a worldwide crisis due its severity and lack of immediate population immunity, and by March 2020, the World Health Organization declared it a pandemic. Australia faced significant disruptions due to the COVID-19 pandemic since early 2020 through to the first half of 2022, experiencing waves of infections that strained the health care system and its resources and led to loss of life. By December 2021, there were five detected variants in Australia with a wide spectrum of severity.

Although the initial burden of disease from COVID-19 in Australia was modest, ranking 135th in leading cause of burden (with only 8,400 disability-adjusted life years (DALYs) lost) in 2020, by 2022, COVID-19 became the 5th leading cause of fatal burden (contributing to 4.1% of total burden) and 21st leading cause of non-fatal burden (contributing 1.4% of total burden) See [Australian Burden of Disease Study 2022](#).

COVID-19 has also placed a substantial load on Australia's health system, which has resulted in increased health spending particularly in public health and public hospitals.

The purpose of this report is to understand how government health spending in response to COVID-19 and spending by individuals on COVID-19 related items, was distributed during the three financial years Australia has been most impacted by the pandemic, 2019-20, 2020-21 and 2021-22.

Government spending is sourced from the National Partnership on COVID-19 Response (NPCR) and the Australian Government Department of Health and Aged Care. For completeness this report also includes Australian Government aged care spending that was for health purposes. Spending by individuals is sourced from pharmacy sales data and from out-of-pocket payments for COVID-19 related Medicare Benefits Schedule (MBS) and Pharmaceutical Benefits Scheme (PBS) items. The report also explores Australia's standing amongst OECD countries in terms of additional health spending and excess mortality during the pandemic.

This report has a broader scope than the [Health system spending on disease and injury in Australia 2020-21 report](#), which is limited to spending directly attributable to the treatment of COVID-19 in hospitals, and through MBS and PBS. This report, by contrast, estimates total government spending in response to the pandemic, including public health spending on the vaccine rollout and COVID-19 testing for example. This report also includes estimates of spending by individuals on COVID-19 related items.

A timeline of the key events during the Australian experience of the pandemic is provided in the Appendix.

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## Spending by source

Total health system spending on the response to COVID-19 was \$47.9 billion over the three financial years of the pandemic (2019-20 to 2021-22). This represented 7.2% of total health spending during the same period. In 2021-22, when COVID-19 related spending was at its highest, it made up 10.9% of total health spending.

The total government spending was estimated to be \$47.0 billion combining the Australian Government spending through the National Partnership on COVID-19 Response (NPCR) and spending by the Australian Government Department of Health and Aged Care. The Australian Government spent \$35.1 billion, which is equivalent to 75% of total government spending on COVID-19, while state and territory governments spent \$11.9 billion. An estimated \$878 million was spent by individuals on COVID-19 related items such as, rapid antigen test, masks and respirators, and sanitiser.

Table 1: Summary of COVID-19 spending by source and by year (\$ million)

Source of funding	2019-20	2020-21	2021-22	Total
Government	6,528	15,023	25,470	47,021
Australian Government NPCR	2,462	4,031	6,658	13,151
Australian Government Dept of Health and Aged care	2,073	7,316	12,599	21,988
State and territory governments NPCR	1,993	3,675	6,214	11,881
Individuals	45.9	113.3	718.8	878.1
Total COVID-19 spending	6,574	15,136	26,189	47,899
Total health spending	202,588	221,327	241,316	665,231
COVID-19 spending as a share of total health spending (%)	3.2	6.8	10.9	7.2

Source: National Health Funding Body, Dept of Health and Aged Care, IQVIA.

## Government spending

The National Partnership on COVID-19 Response (NPCR) and spending on COVID-19 related programs by the Australian Government Department of Health and Aged Care were two main sources of government spending.

State and territory governments may have contributed funding for COVID-19 outside of the NPCR, however this funding has not been included in this report as it was difficult to ensure the consistency of reporting across jurisdictions and accurately determine the source of the funding for each jurisdiction. It is reasonable to assume, however, that the NPCR captures the vast majority of state and territory government COVID-19 related spending.

### National Partnership on COVID-19 Response (NPCR)

The NPCR, agreed to and signed by the Council of Australian Governments (COAG) in March 2020, and administered by the Administrator of the National Health Funding Pool (the Administrator) and the National Health Funding Body, is a collaborative initiative established between the Australian Commonwealth government and the state and territory governments to effectively manage the COVID-19 pandemic response. The NPCR was split into three types of payments:

1. Hospital services payments (HSP)
2. State public health services payments (SPHP)
3. Private hospital financial viability (FVP)

The HSP includes activity in the public hospital sector, pathology / diagnostic costs relating to testing for COVID-19 and activity in private hospital sector as directed by States (as public patients). The activities include admitted patient care, emergency department presentations and non-admitted hospital care.

The SPHP includes additional public health activities such as securing additional emergency PPE supplies, providing funding to expand critical ICU and ventilation capacity, boosting contact tracing and public health communication, supporting additional cleaning in hospitals, schools and public transport, and the vaccinations program. From 2021, Vaccine Dose Delivery Payments were included as a part of SPHP.

The FVP payments enable critical resources from the private hospital sector to be available to public hospital sector including clinical, auxiliary staff, hospital, and ICU beds. (NHFB 2022).

The Australian Government and state and territory governments contributed equally to the NPCR funding with the exception of the financial viability payments to private hospitals which was funded solely by the Australian Government.

The total NPCR spending for 2019-20 to 2021-22 was \$24.9 billion, \$13 billion by the Australian Government and \$11.8 billion by state and territory governments. In aggregate over the three years the public health payment was the largest area of spending at \$16.1 billion, followed by hospital services \$7.5 billion and FVP \$1.3 billion.

**Figure 1: NPCR by source and by payment type, current prices, 2019-20 to 2021-22**

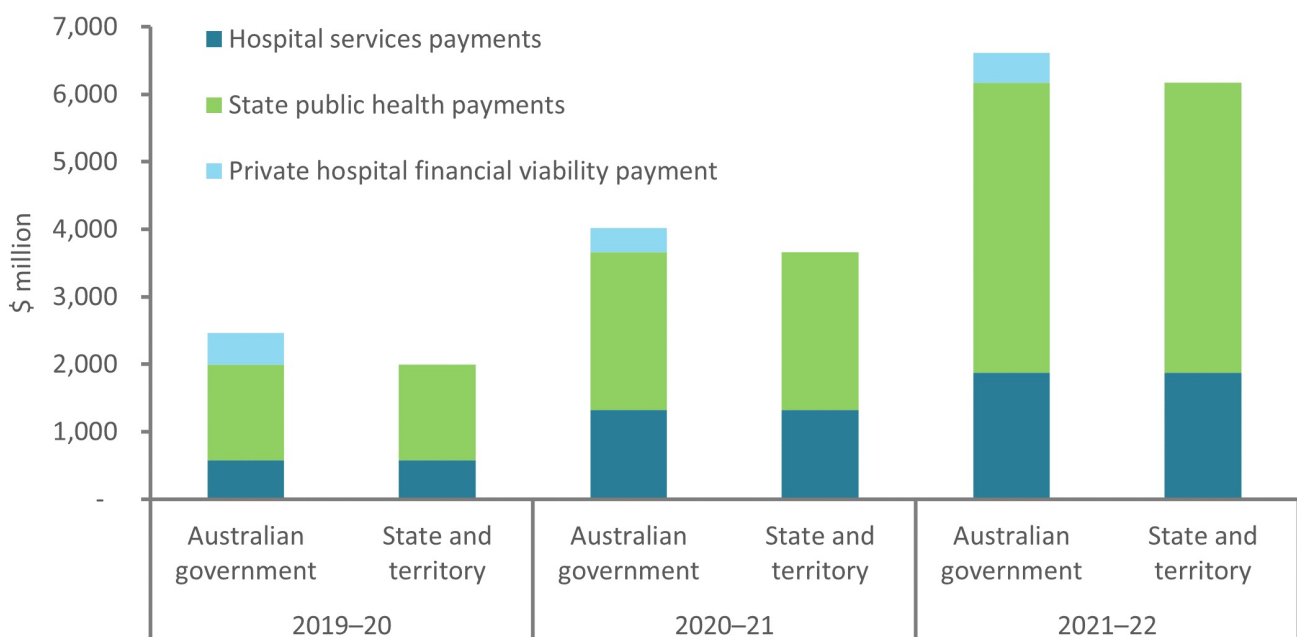


Chart: AIHW

Source: National Health Funding Body

### Hospital services payments (HSP)

From 2019-20 to 2021-22, \$3.7 billion was spent on HSP, which included public and private hospital services (admitted, non-admitted and emergency department activities) and covid testing. For context, during this period, 74 million COVID-19 tests were conducted in Australia (3% in 2019-20, 25% in 2020-21 and 72% in 2021-22) (NHFB).

Figure 2: Hospital Services Payments by program from 2019-20 to 2021-22

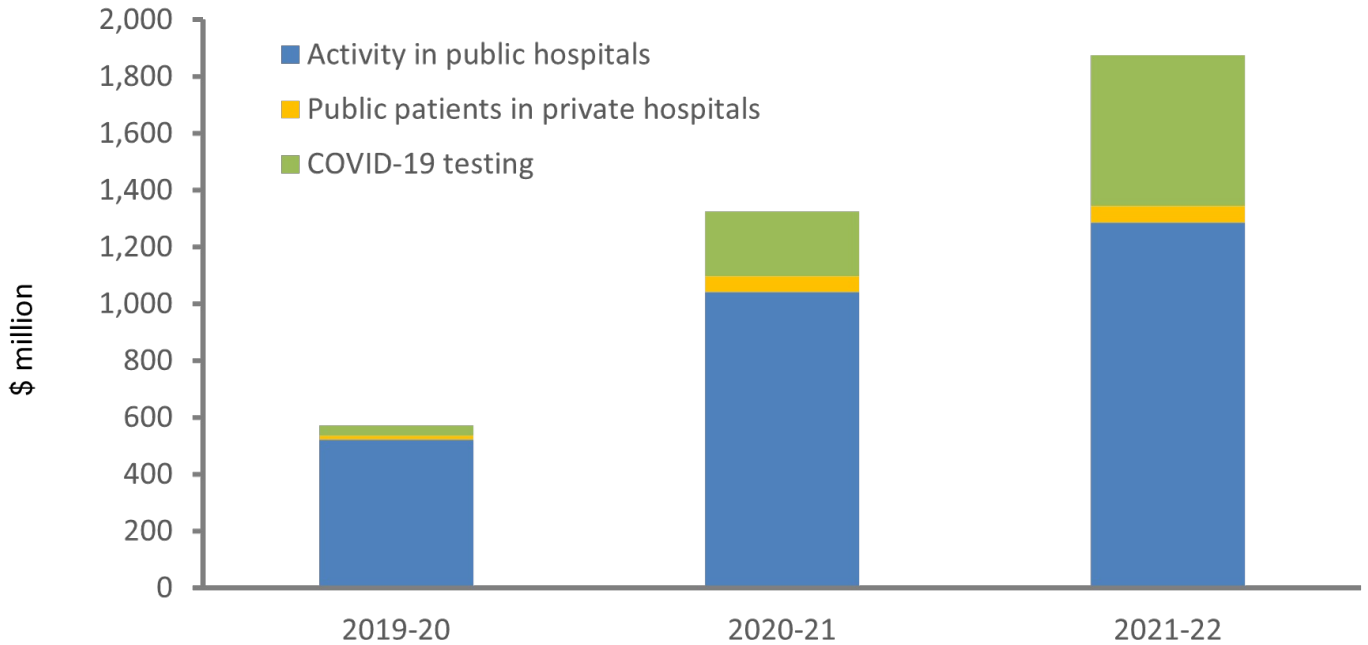


Chart: AIHW

Source: National Health Funding Body.

### State Public Health Payments (SPHP)

From 2019-20 to 2021-22, \$8 billion was spent on SPHP, which included public health activities (such as the vaccination rollouts and communications to address the COVID-19 response), rapid antigen tests, personal protective equipment, primary care services, aged care (mainly staffing support) and non-clinical services. The SPHP also included capital expenditure, equipment, border force and airport screening, which are included in the category 'other' in Figure 3 below.

For context, by 30 June 2022, over 95% of the Australians aged 16 and over received at least two doses of a COVID-19 vaccine and almost 60.3 million doses had been administered across Australia. (Department of Health 2022).

**Figure 3: State Public Health Payments by program from 2019-20 to 2021-22**

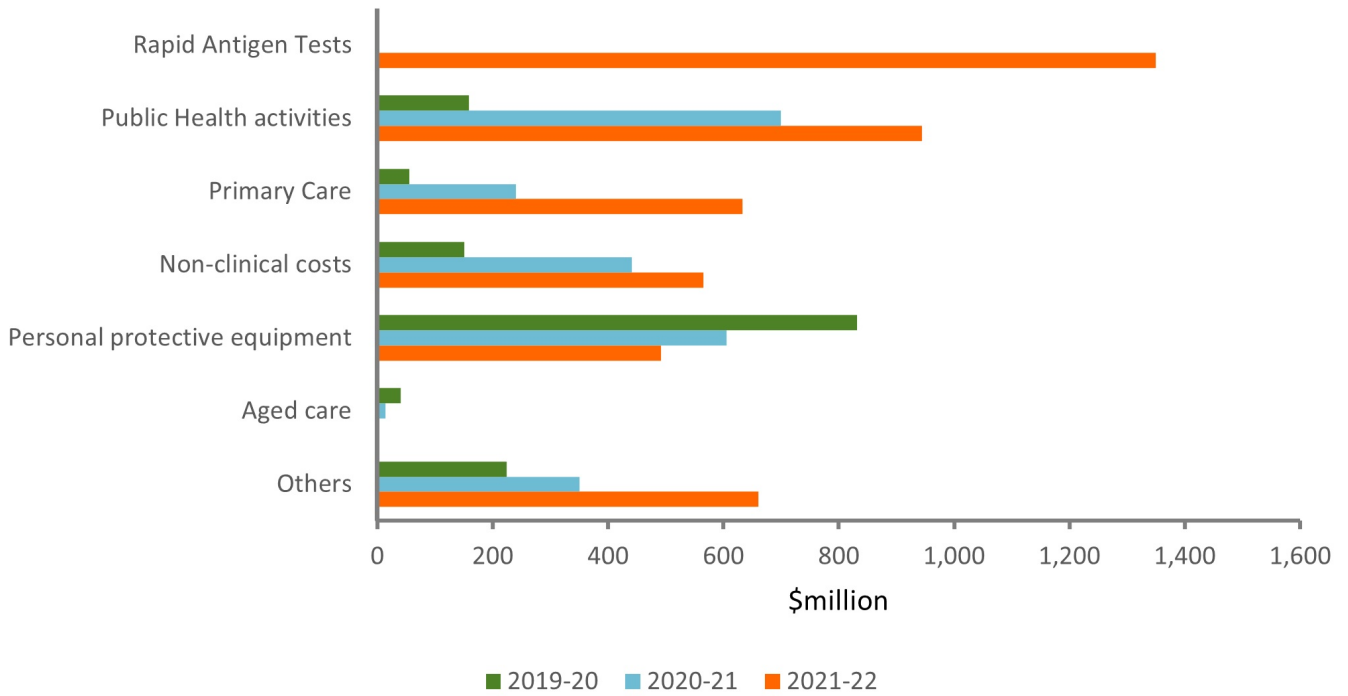


Chart: AIHW

Source: National Health Funding Body.

**Private Hospital Financial Viability Payment (FVP)**

From 2019-20 to 2021-22, \$1.2 billion was spent on the FVP. This funding comprised three broad subcomponents: a financial viability and capability payment, a fund for private hospital equipment and the redeployment of the health workforce to public hospitals and Commonwealth directed private hospital activity.

**Figure 4: Private Hospital Financial Viability Payment from 2019-20 to 2021-22**

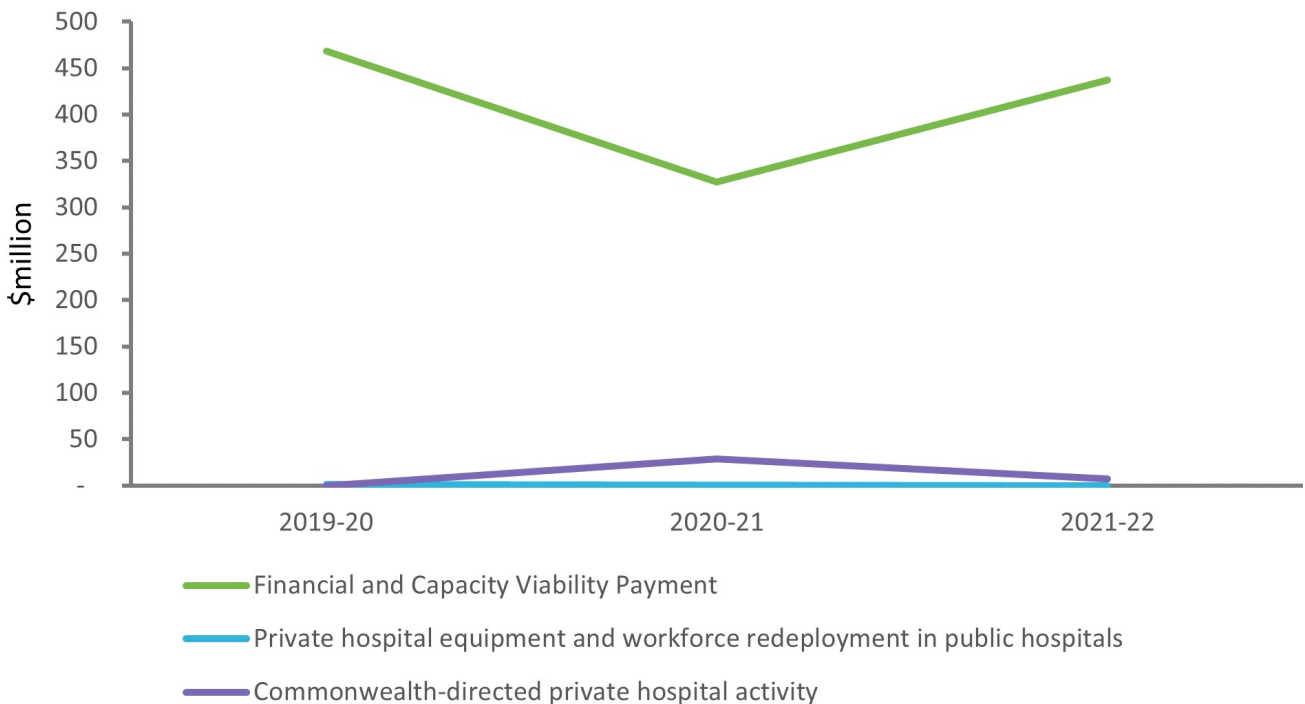


Chart: AIHW

Source: National Health Funding Body.

Notes: The line representing the 'private hospital equipment and workforce redeployment in public hospitals' is close to the horizontal axis due to its low value compared to other components of FVP.

**NPCR payments by jurisdiction**

In aggregate over the three financial years of the pandemic (2019-20 to 2021-22), Victoria received the highest NPCR payment of \$9.5 billion. NSW received the second highest payment of \$8.6 billion. This is consistent with the number of COVID-19 cases and hospitalisations experienced by these jurisdictions. See [MyHospitals](#).

**Figure 5: NPCR payments by jurisdiction and funding source, 2019-20 to 2021-22**

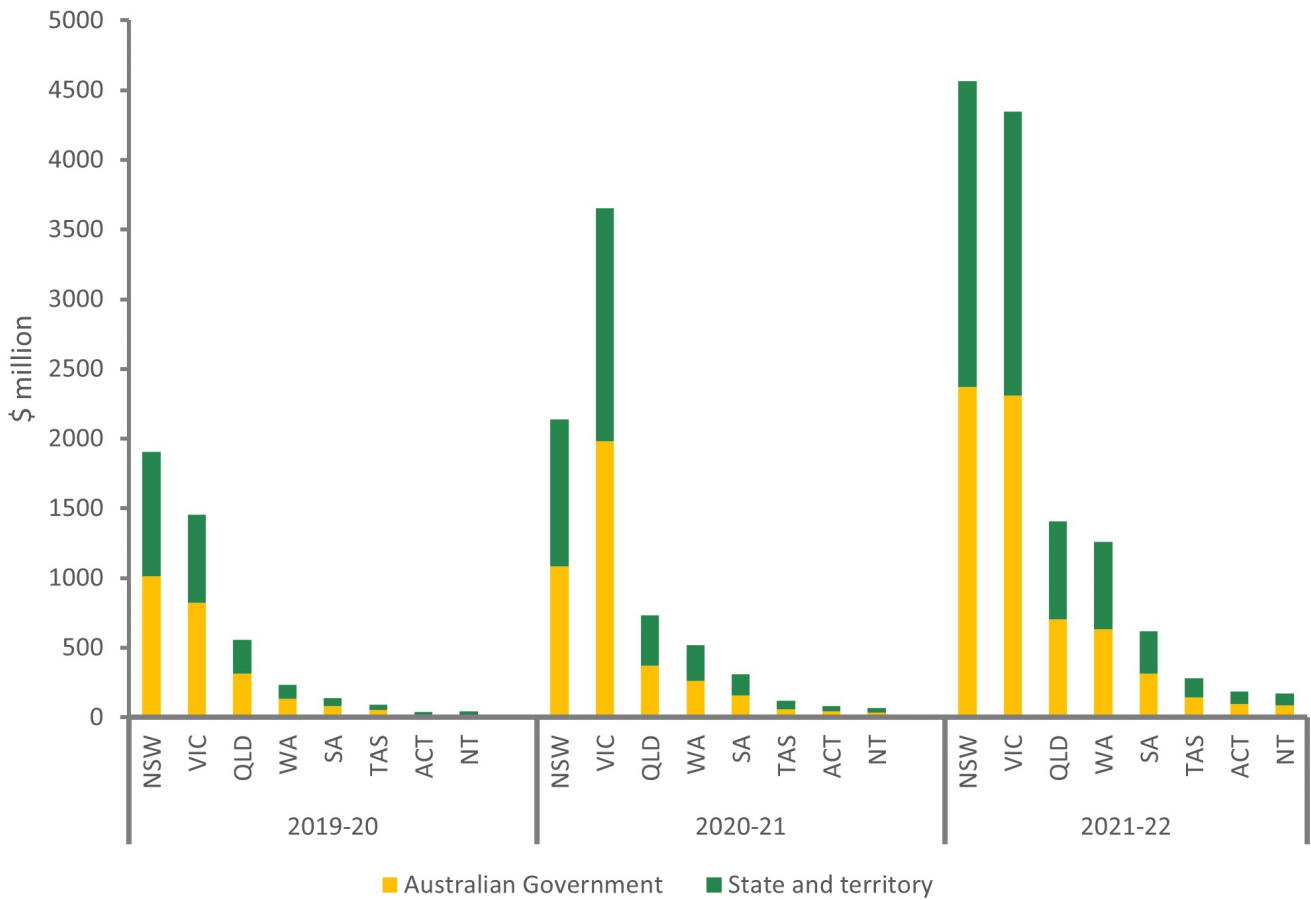


Chart: AIHW

Source: National Health Funding Body

It is important to note that any spending for COVID-19 by the state and territories outside the NPCR has been excluded from the report as it was difficult to ensure the consistency of reporting between jurisdictions and accurately determine the source of the funding for each jurisdiction.

**NPCR payment types by area of spending**

Figure 6 shows the NPCR payments of \$25 billion over the three main years of the pandemic disaggregated by the areas of expenditure as per the Australian National Health Account.

**Figure 6: NPCR payments by area of spending, 2019-20 to 2021-22**



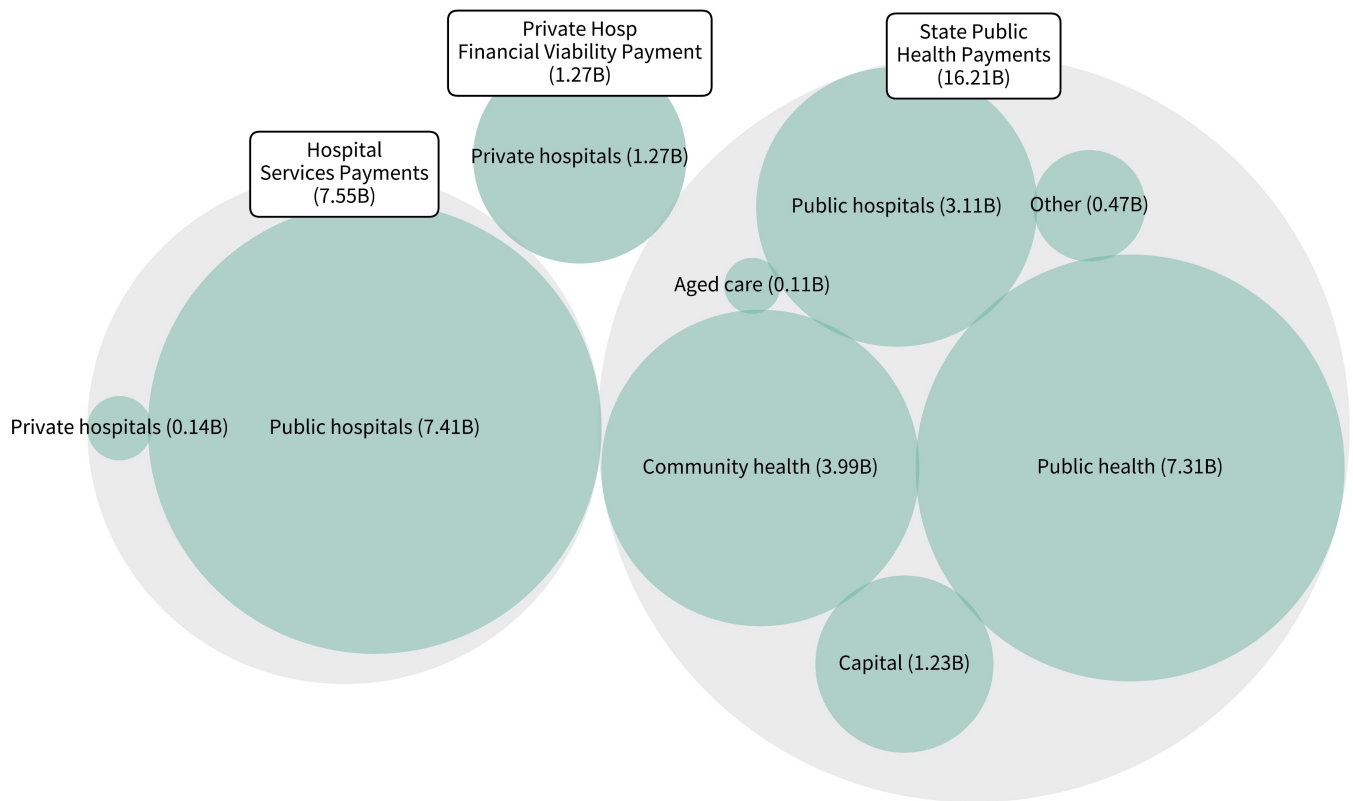


Chart: AIHW

Source: Department of Health and Aged Care.

### Australian Government Department of Health and Aged Care

Total Australian Government spending through specific COVID-19 Department of Health and Aged Care programs (outside the NPCR) for the period 2019-20 to 2021-22, was estimated to be \$22 billion in current prices. This included \$2 billion of health-related spending in the aged care sector. Of the \$20 billion spent in the health care sector, \$16.6 billion (75.6%) was spent in primary health care. This included:

- \$10.8 billion for public health activities including, vaccine response (\$5.3 billion), protective and preventive measures (\$2.3 billion), rapid antigen test (RAT) subsidies (\$0.8 billion), respiratory clinic services (\$0.5 billion).
- \$0.9 billion on community health services including RAT subsidies (\$0.8 billion), mental health and suicide prevention (\$0.1 billion).
- \$0.2 billion on community health services, almost entirely for mental health and suicide prevention.
- \$0.1 billion for pharmaceuticals subsidised through the PBS.

Spending on referred medical services was the next highest area of spending (\$2.8 billion). The remaining \$538 million was spent on other areas including private hospital services, health administration, capital expenditure and health research. See [Data tables](#).

**Figure 7: Dept of Health and Aged Care areas of spending for COVID-19, by year, 2019-20 to 2021-22**

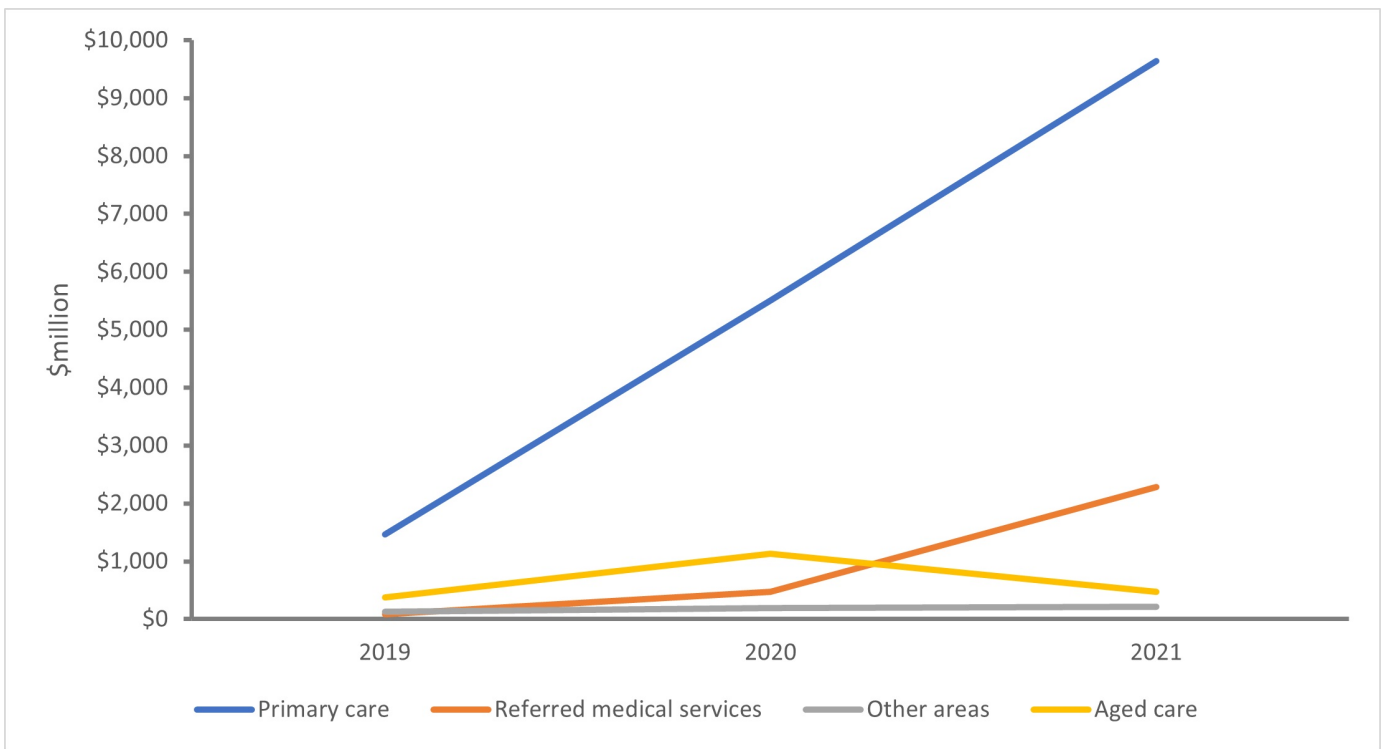


Chart: AIHW

Source: Dept of Health and Aged Care

**Australian Government Department of Health and Aged Care payments by outcome and area of spending**

Total Australian Government Department of Health and Aged Care spending on the response to COVID-19 over the period 2019-20 to 2021-22 was \$22 billion. Figure 8 shows the payments by outcomes, as reported in their 2021-22 annual report, and by the areas of expenditure as reported in the Australian National Health Account.

**Figure 8: Dept of Health and Aged Care spending by outcome and area of spending (\$22 billion) 2019-20 to 2021-22**

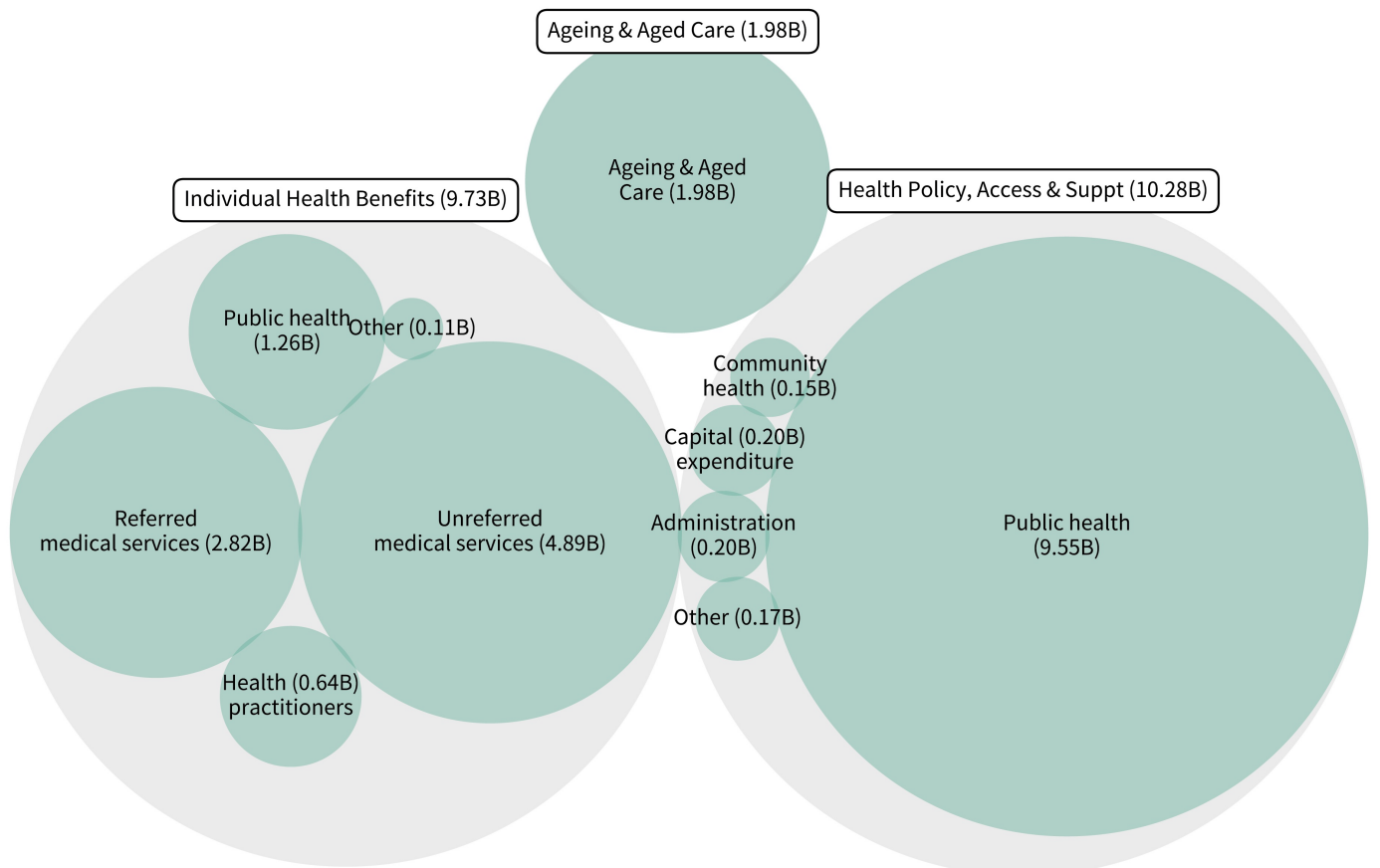


Chart: AIHW

Source: Dept of Health and Aged Care

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Department of Health (2023) [COVID-19 vaccination daily rollout update - 04 October 2023](#), Department of Health website, accessed 06 October 2023.

National Health Funding Body (NHFB) (2019-20), '[The National Health Funding Body Annual Report 2019-20](#)', accessed 03 August 2023

NHFB (2020-21), '[The National Health Funding Body Annual Report 2020-21](#)', accessed 03 August 2023

NHFB (2021-22), '[The National Health Funding Body Annual Report 2021-22](#)', accessed 03 August 2023

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## Non-government (individuals) spending

Spending by non-government, specifically individuals, on COVID-19 related services and items was an estimated \$878 million over the period 2019-20 to 2021-22. This is made up of:

- \$877 million on over the counter (OTC) COVID-19 related products, such as COVID-19 antigen tests (\$597 million), personal protective equipment and respirators (\$224 million), and sanitizer (\$56 million).
- \$1.3 million out-of-pocket for benefit paid pharmaceuticals (72,000 scripts) approved by the Therapeutic Goods Administration for the treatment of COVID-19 (specifically *nirmatrelvir + ritonavir (PAXLOVID)*; *molnupiravir (LAGEVRIO)*).
- \$97,603 in out-of-pocket (OOP) costs for 62 million MBS services to specifically treat and detect COVID-19 (such as PCR tests, vaccine suitability assessments and support for patients isolating with COVID). This low cost across the three years reflected the high bulk billing rate for these services and hence minimal out of pocket costs incurred. Noting however, that this only includes MBS items that could be directly attributable to COVID-19 and as such, GP services (item 23 etc) that may have incurred an OOP cost are excluded. The AIHW will be conducting further investigation of primary care COVID-19 spending in subsequent reports.

Table 2: Individual spending on COVID-19 related items by year, 2019-20 to 2021-22

Item description	2019-20 \$million	2020-21 \$million	2021-22 \$million	Total \$million	%
Antigen test kits	-	-	596.9	596.9	68
Respirators, face masks and shields	12.1	97.6	114.0	223.7	26
Sanitiser	33.8	15.8	6.6	56.1	6
Total	45.9	113.3	717.4	876.7	100

Source: IQVIA.

Note: this excludes non-pharmacy expenditure.

## Spending by area

In this section, the total health spending of \$47.9 billion on the response to COVID-19 for 2019-20 to 2021-22 is allocated across the broad areas of spending as per the Australian National Health Account categories, which are: primary health care, hospitals, referred medical services and others.

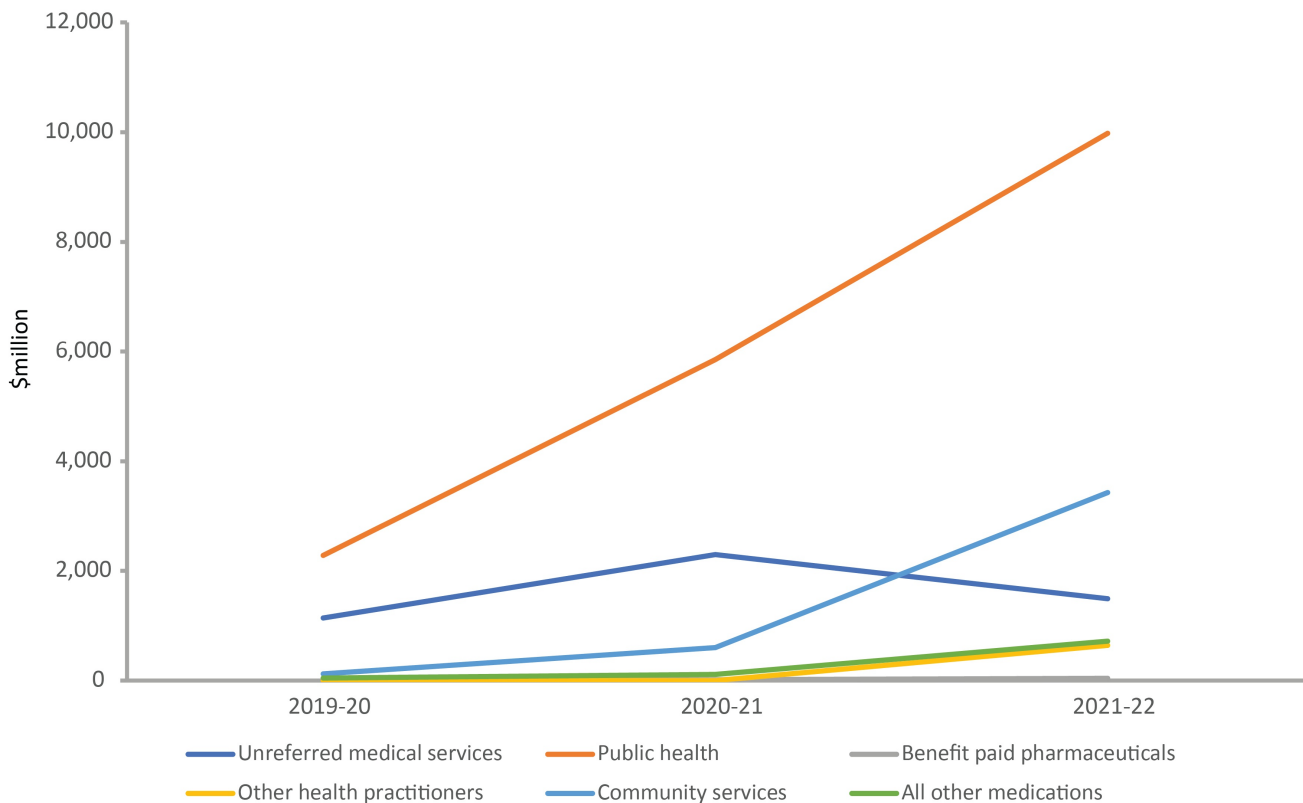
### Primary health care

During the pandemic from 2019-20 to 2021-22, \$28 billion (49%) of total government COVID-19 related expenditure was spent on primary health care, this included:

- \$18.1 billion (65%) for public health activities including vaccine response (\$6.1 billion), personal protective equipment (\$3 billion), communication programs (\$1.8 billion), RAT subsidies (\$0.8 billion).
- \$5 billion (18%) for unreferral medical services mainly telehealth (\$4.3 billion) and vaccine administration (\$0.1 billion).

Estimated spending by individuals on primary health care from 2019-20 to 2021-22 was around \$878 million spent almost entirely on over-the-counter COVID-19 related products (\$877 million). The remaining \$1.4 million, was for PBS pharmaceuticals approved by the TGA for the treatment of COVID-19 (\$1.3 million) and unreferral medical services (\$0.1 million) such as vaccine suitability assessments and support for patients isolating with COVID-19. These services were all primarily bulk billed with little to no out-of-pocket costs incurred by patients.

Figure 9: Areas of spending for COVID-19, Primary health care, 2019-20 to 2021-22



Source: Department of Health and Aged Care, National Health Funding Body, IQVIA.

### Hospitals

The total government spending on the response to COVID-19 for hospitals was \$11.9 billion (25%) over the three financial years of the pandemic (2019-20 to 2021-22). Of this, \$10.5 billion was for public hospitals and \$1.4 billion was for private hospitals that mainly consisted of financial viability payments. Table 3 shows the total hospital COVID-19 related spending for each year compared to the number of confirmed COVID-19 cases, hospital separations, intensive care unit stays (ICU), continuous ventilatory support (CVS) and deaths, with a COVID-19 related diagnosis. See [Admitted Patient Activity](#).

There was also a substantial number of presentations to specialised COVID-19 outpatient clinics, primarily for COVID-19 PCR tests, that are not captured as a measure of activity in Table 3. See [Health system spending on disease and injury in Australia 2020-21 report](#).

Table 3: Hospital spending on COVID-19, 2019-20 to 2021-22

	2019-20	2020-21	2021-22	Total
Total Government Spending (\$billion)	1.9	3.9	6.1	11.9
Confirmed COVID-19 cases	8,593	22,418	7,933,990	7,965,001
Hospital Separations*	2,478	4,718	263,425	270,771
ICU*	225	329	7,774	8,328
CVS*	138	180	3,338	3,656
Deaths*	105	487	5,265	5,857

\* with a COVID-19 related diagnosis

Source: National Notifiable Diseases Surveillance System, Australian Institute of Health and Welfare, National Health Funding Body, Dept of Health and Aged Care

### Referred medical services

After primary health care, and hospitals, the highest COVID-19 related spending was for referred medical services at \$2.8 billion. Referred medical services include non-hospital medical services that are not classified as primary health care. Some of the services during the pandemic include microbiology testing and pathology (\$2.1 billion), telehealth extension support (\$0.2 billion) and early mental health interventions (\$0.04 million).

### Aged care

Over a period of 2019-20 to 2021-22, a total of \$2 billion was spent on aged care (Figure 10). Aged spending broadly involved aged care workforce (\$0.5 billion), COVID-19 preparedness (\$0.2 billion), Rapid Antigen testing (0.06 million) among other areas. The Australian National Health Account categorises spending in the aged care sector as welfare spending and as such it is excluded from estimates of health care spending. For this report however, the exception is being made to include COVID-19 related health spending that occurred in the aged care setting.

Figure 10: Health-related Aged Care spending for COVID-19, 2019-20 to 2021-22

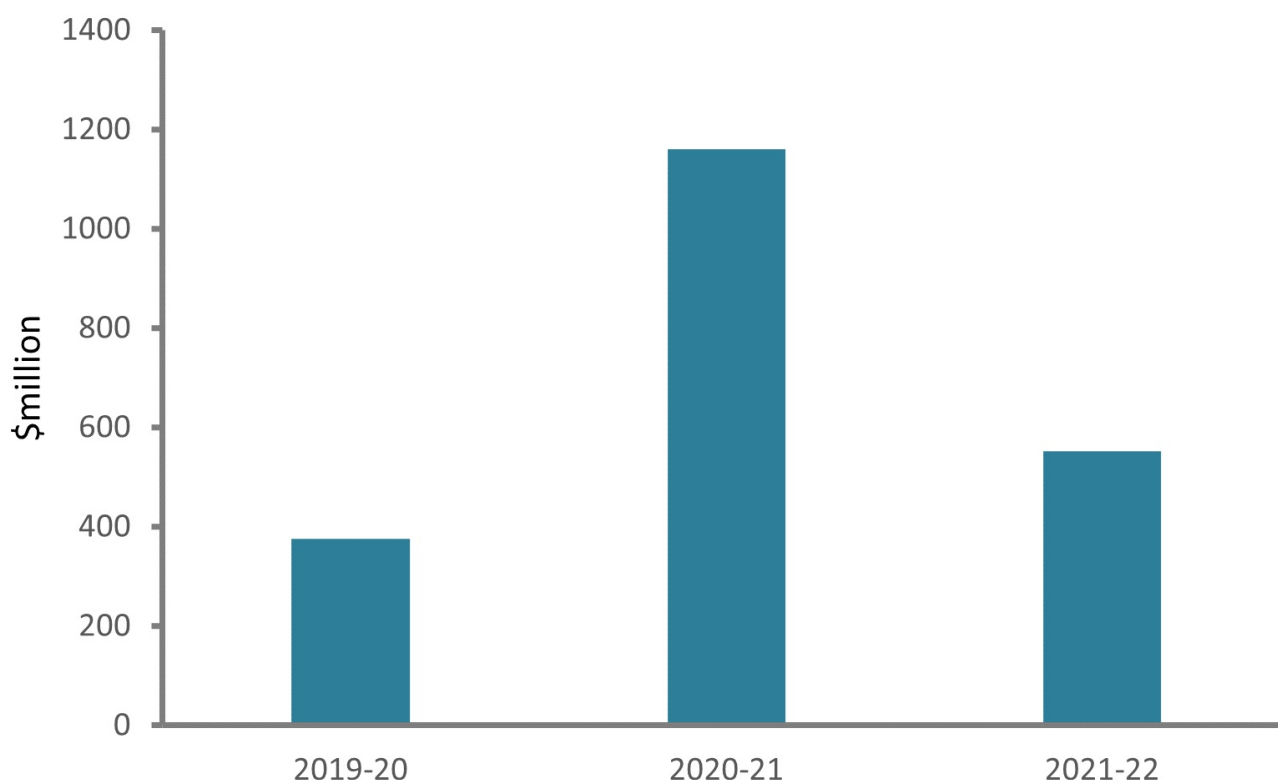


Chart: AIHW

Source: National Health Funding Body, Dept of Health and Aged Care

### Other Areas

During 2019-20 to 2021-22, other areas of spending besides primary health care, hospitals and aged care are totalled to an estimated \$2.2 billion of which:

- \$1.4 billion on capital expenditure
- \$0.5 billion on patient transport costs
- \$0.2 billion on health administration

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## International comparison

Each country's experience of the pandemic was different in terms of timing, health impacts and financial impacts. Australia recorded the first confirmed case of COVID-19 virus in January 2020 and since then implemented strict containment measures including border controls, quarantine for returning travellers, and social distancing measures. Various states and territories imposed lockdowns and restrictions as needed.

Australia's early response helped flatten the curve keeping the number of cases initially low compared to many other countries and continued to be flat during the initial outbreak of Omicron in December 2021 (AIHW 2022). Other countries, such as the United States and the United Kingdom, had a much more even distribution of COVID-19 cases across the three years of the pandemic (2020 -2022).

### OECD comparison of health system spending during COVID-19

Over the three calendar years most impacted by the pandemic (2020 to 2022), health system spending increased for almost all Organization for Economic Co-operation and Development (OECD) countries compared to the forecast trend. Figure 11, compares the percentage change compared to the trend for each country based on purchasing power parities (PPP) and shows that Australia's health expenditure was 2% higher than expected, based on a linear forecast of the ten years preceding COVID-19.

#### What is purchasing power parities (PPPs)?

The cost of health goods and services can vary greatly from one country to another due to differences in price levels. PPPs adjust these costs to a common currency, and a basket of goods and services used for PPP calculations is standardized so that the same set of health goods and services are compared across countries.

Figure 11: Health system spending (PPP) compared to trend, 2020 to 2022



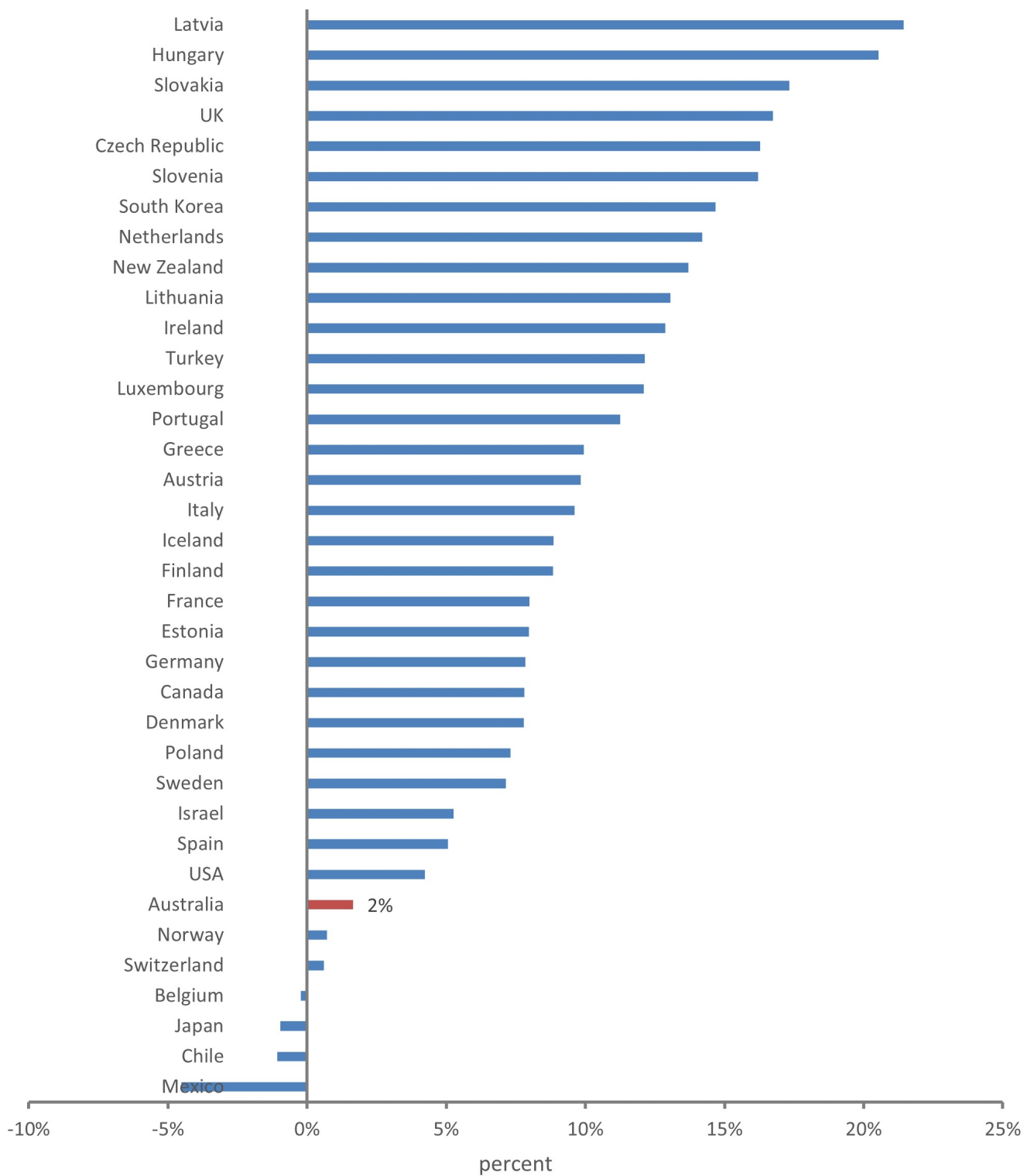


Chart: AIHW

Source: Organization for Economic Corporation and Development (OECD)

Notes: Excludes some OECD countries due to lack of data. Some of the countries in the chart have not reported data across different areas of expenditure.

### International comparison of excess mortality

#### What is excess mortality?

Excess mortality compares the number of deaths recorded for a period against the expected number of deaths over the same period. In this case, the period examined is the three years considered to be most impacted by COVID-19, 2020 to 2022, (though it is acknowledged that the impact continues into 2023). The expected number of deaths is based on the average number of deaths for the previous five years, (2015-19).

While COVID-19 had a major impact on the healthcare and health system spending in Australia, there has been less of an impact on morbidity and mortality than for many other countries (OECD 2021).

Excess mortality is a useful and available measure for the purposes of international comparison of the impact of the pandemic and while a country's health system spending in response to COVID-19 is likely to have had an impact on excess mortality, there are many other contributing factors, such as geography and social policy, that are beyond the scope of this report.

As shown in Figure 12, Australia ranked 5 in terms of lowest percentage of excess mortality during the pandemic compared to 30 other countries. These countries with a range of health systems and economies were chosen for comparison purpose. Australia's total excess mortality during the period 2020 to 2022 was 4% higher than the expected mortality, which represents approximately 22,000 extra deaths. Note that this figure is different to what the Australian Bureau of Statistics (ABS) estimated for the same period, which was around 15,000 extra deaths. This is due to different methods used for estimating expected mortality (refer to technical notes).

The excess mortality for these 30 countries combined was 14% during the pandemic, noting that the United States' impact on the average due to their large number of excess deaths.

**Figure 12: Excess mortality rate during the COVID-19 pandemic, 2020 to 2022**

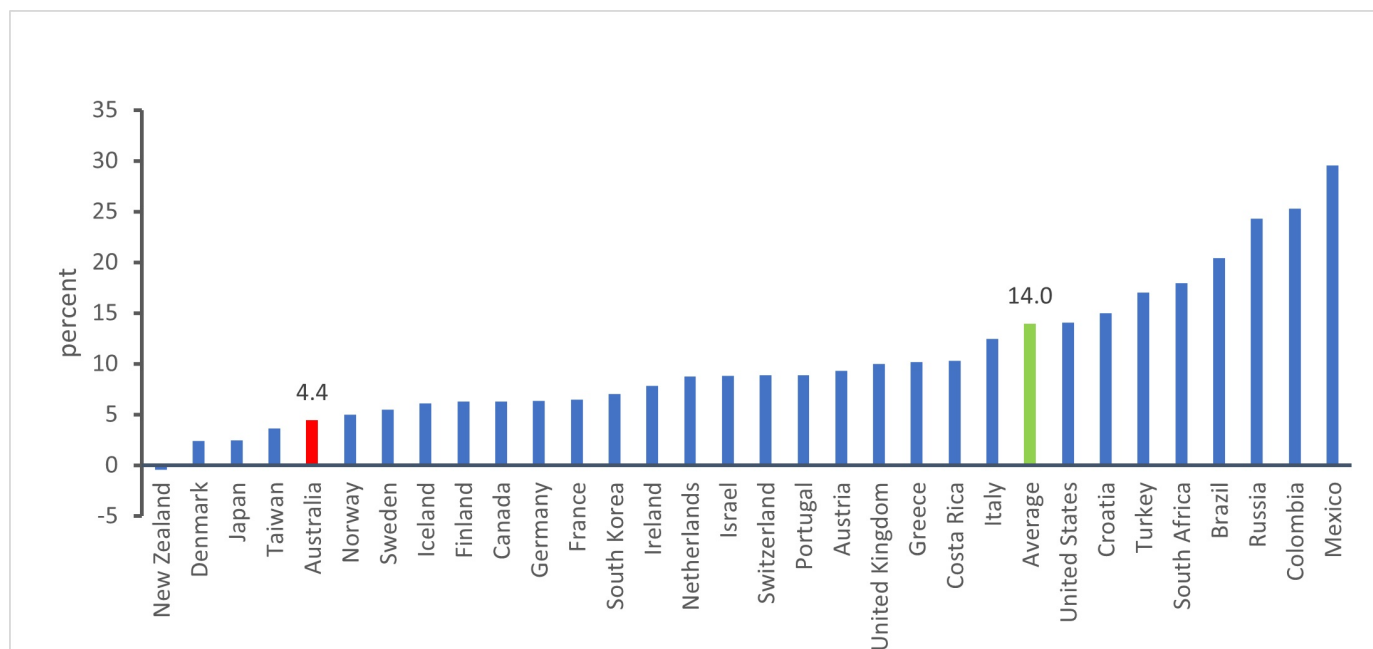


Chart: AIHW

Source: Our world in data

Excess mortality varied by year for each country during the pandemic. Figure 13 below shows that the majority of Australia's excess mortality occurred during the third year of the pandemic (2022), which was similar to Norway and Japan. Sweden by contrast experienced the majority of its excess mortality during the first year of the pandemic. The United States' and the United Kingdom's excess mortality was more evenly distributed over the three calendar years of the pandemic 2020-2022.

**Figure 13: Contribution to excess mortality by year, 2020 to 2022**

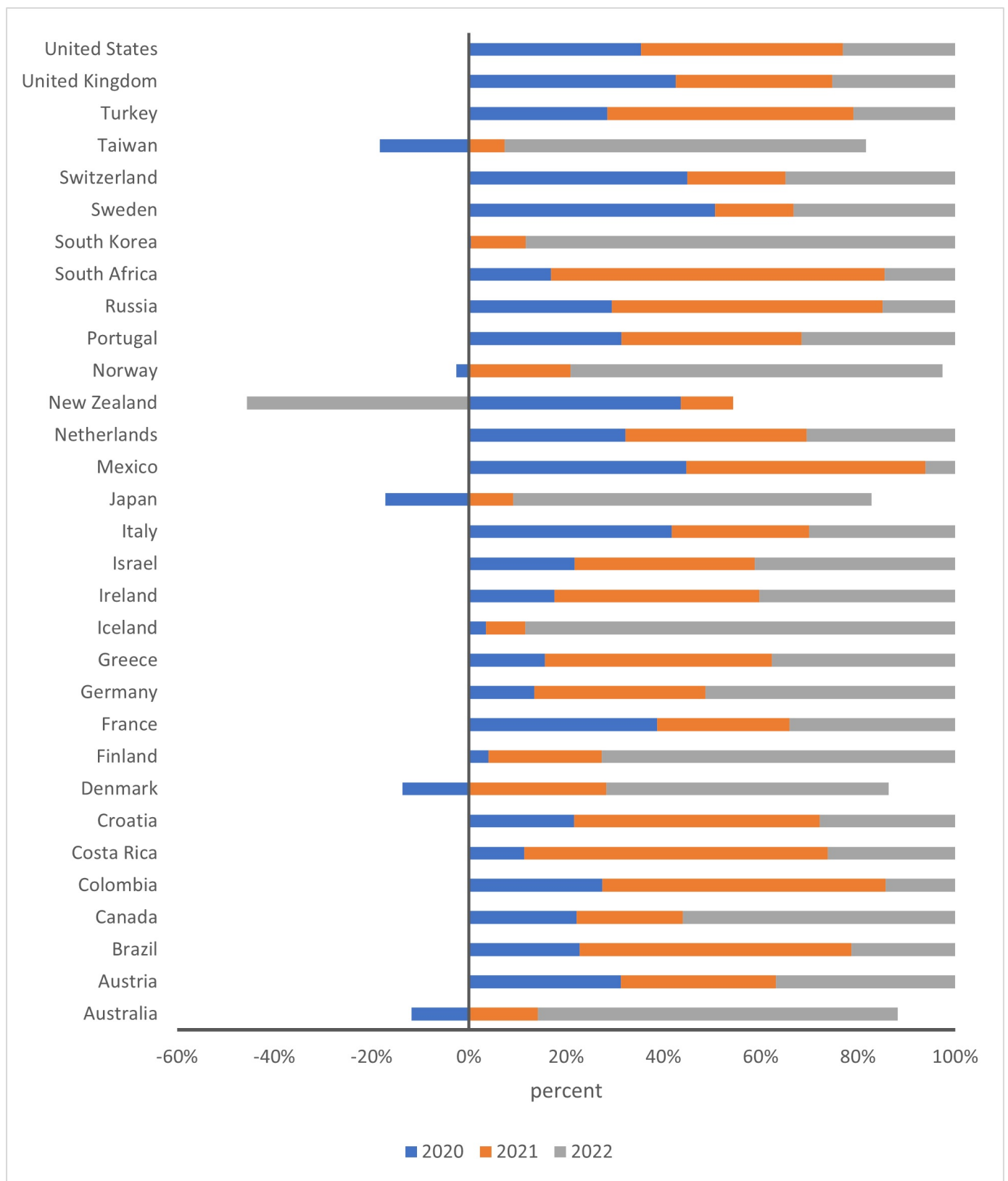


Chart: AIHW

Source: Our world in data

Notes: Australia, Denmark, Japan, Taiwan, Norway and New Zealand had lower than expected deaths in 2020, i.e., negative excess mortality

The global burden of disease results, scheduled for a release update in December 2023, will be another useful measure for comparing the impact of COVID-19 across countries.

**References**


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Grimly N, Cornish J and Stylianou N (5 May 2022), ‘[Covid: World’s true pandemic death toll nearly 15 million, says WHO](#)’ [news report], BBC News, accessed 01 October 2023,

OECD (Organisation for Economic Co-operation and Development) (2021), [‘The health impact of COVID-19’](#), [Health at a Glance 2021](#), OECD Publishing, Paris.

[Our World in Data \(2023\) Excess mortality: Cumulative deaths from all causes compared to projection based on previous years](#), accessed 03 November 2023.

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## Appendix

### COVID-19 timeline for Australia

#### Early 2020 - Initial Outbreak and Containment (January - March 2020)

- The first COVID-19 case in Australia was reported in late January 2020.

#### Mid-2020 - First Wave and Lockdowns (March - May 2020):

- Cases started to increase in March, leading to the first wave of the pandemic.
- In March, several states and territories implemented various restrictions, including lockdowns, border closures, and travel restrictions.
- Australia recorded its first COVID-19-related death in March.
- By May, strict lockdown measures had largely contained the spread of the virus.

#### June-2020 to Dec 2020 - Suppression and Reopening (June - December 2020):

- Throughout mid-2020, the number of new cases remained low, allowing for a gradual easing of restrictions.
- Some states and territories maintained strict border controls.
- A "COVID-normal" approach was adopted, with economic and social activities resuming, though with ongoing precautions.

#### Jan 2021 - March 2021 Second Wave and Vaccine Rollout

- Australia initiated its COVID-19 vaccination program in February 2021, beginning with healthcare workers and vulnerable populations.
- A second wave hit Victoria in mid-2021, leading to a strict lockdown in Melbourne.

#### April 2021 to Dec 2021 - Vaccine Expansion and New Variants (April - December 2021)

- April onwards, the vaccination rollout expanded to include the general population.
- Mid of 2021, the Delta variant posed new challenges, leading to outbreaks in multiple states.
- Lockdowns and border restrictions were reimposed in response to these outbreaks.
- September 2021, government announced three stage system for COVID-19 preparedness, vaccination rates rose.
- By November 2021, easing of restrictions began and International borders opened after nearly 2 years.
- By December 2021, Omicron variant outbreak began.

#### Dec 2021 to Jul 2022 - Omicron and COVID-19 booster dose vaccine rollout

- Omicron outbreak continues, but Australia focussed on managing outbreaks without restrictions.
- Booster dose of vaccine rollout began.
- Most of the population was vaccinated with at least 2 doses of vaccine.

#### Jul 2022 - Present

- Population getting additional booster doses
- The situation continued to evolve, with the focus shifting from containment to managing the virus as an endemic disease.
- Travel restrictions and quarantine requirements were eased as vaccination rates increased.
- Australia adapted to living with the virus while continuing vaccination and booster efforts.

## Technical notes

### Data sources

#### National Health Funding Body

The main sources of information for this web report are National Health Funding Body's NPCR payments data that contains detailed estimates of NPCR payments made by the commonwealth to states and territories and contribution of the state and territory governments towards NPCR.

#### AIHW Health Expenditure Database

The Australian Government's spending on COVID-19 through Department of Health and Aged Care was taken from AIHW's Health Expenditure Database which contains data on the money spent by all levels of governments as well as non-government entities such as individuals, private health insurers, and injury compensation insurers.

#### IQVIA

IQVIA is a company that is a global provider of advanced analytics clinical research, commercialization, real-world evidence solutions, and technology services to the life sciences industry. IQVIA plays a crucial role in supporting pharmaceutical and biotechnology companies, as well as healthcare providers and government agencies, in their efforts to improve patient outcomes and advance the healthcare industry.

#### OECD

The OECD (Organisation for Economic Co-operation and Development) is an international organization composed of member countries that collaborate on economic and social policies. The OECD had 38 member countries are Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States

#### Estimating excess mortality during covid

The OECD compares actual mortality during the pandemic (2020,2021,2022) to a baseline, which was the average of mortality in the 5 years prior to pandemic (2015-2019). Comparing current levels of mortality against this baseline may, in effect, either under- or over-estimate the level of excess mortality. The OECD method has the advantage of being transparent in basing the calculations on the actual number of reported deaths rather than any adjusted values.

#### Estimating purchasing power parities

Price data for a representative basket of health products and services is collected from each country. This basket is standardized to ensure consistency across different countries and over time. The collected price data is then converted into price relativities. This involves comparing the price of the same basket of goods and services across different countries, and expressing the results relative to a base country (normally \$USD). These price relativities are then weighted and averaged at different aggregation levels, for example, at the level of hospitals, healthcare, or GDP, to generate PPPs for health goods and services.

MBS items included in the MBS out-of-pocket calculation

MBS ITEM NUMBER	Description
10660	professional attendance by a general practitioner, if all of the following apply: (a) the service is associated with a service to which item 93644, 93645, 93653 or 93654 applies; (b) the service requires personal attendance by the general practitioner, lasting more than 10 minutes in duration, to provide in-depth clinical advice on the individual risks and benefits associated with receiving a covid-19 vaccine; (c) one or both of the following is undertaken, where clinically relevant: (i) a detailed patient history; (ii) complex examination and management; (d) the service is bulk-billed
10661	professional attendance by a medical practitioner (other than a general practitioner), if all of the following apply: (a) the service is associated with a service to which item 93646, 93647, 93655 or 93656 applies; (b) the service requires personal attendance by the medical practitioner (other than a general practitioner), lasting more than 10 minutes in duration, to provide in-depth clinical advice on the individual risks and benefits associated with receiving a covid-19 vaccine; (c) one or both of the following is undertaken, where clinically relevant: (i) a detailed patient history; (ii) complex examination and management; (d) the service is bulk-billed

10981	a medical service to which an item of the general medical services table (other than this item, item 10982 or item 10990, 10991 or 10992 of the general medical services table) applies if: (a) the service is an unreferred service; and (b) the service is provided to a person who is a patient at risk of covid-19 virus; and (c) the person is not an admitted patient of a hospital; and (d) the service is bulk-billed in relation to the fees for: (i) this item; and (ii) the other item in the general medical services table applying to the service (e) the service is not provided at, or from, a practice location in an eligible area.
10982	a medical service to which an item of the general medical services table (other than this item, item 10981 or item 10990, 10991 or 10992 of the general medical services table) applies if: (a) the service is an unreferred service; and (b) the service is provided to a person who is a patient at risk of covid-19 virus; and (c) the person is not an admitted patient of a hospital; and (d) the service is bulk-billed in relation to the fees for: (i) this item; and (ii) the other item in the general medical services table applying to the service; and (e) the service is provided at, or from, a practice location in an eligible area.
63399	mri-scan of cardiovascular system for the assessment of myocardial structure and function, if the service is requested by a consultant physician who has assessed the patient, and the request for the scan indicates: the patient has suspected myocarditis after receiving a mrna covid-19 vaccine; and the patient had symptom onset within 21 days of a mrna covid-19 vaccine administration; and the results from the following examinations are inconclusive to form a diagnosis of myocarditis: (i) echocardiogram; and (ii) troponin; and (iii) chest x-ray. applicable not more than once in a patients lifetime (r) (contrast)
69479	detection of a sars-cov-2 nucleic acid 1 or more tests if: (a) the person is a private patient in a recognised hospital and the fee charged for the service does not exceed the schedule fee; or (b) the person receives a bulk-billed service from a prescribed laboratory as described in 4.1 of the pathology services table
69480	detection of a sars-cov-2 nucleic acid 1 or more tests if: (a) the person is a private patient in a hospital other than a recognised hospital and the fee charged for the service does not exceed the schedule fee; or (b) the person receives a bulk-billed service not covered by item 69479
69501	detection of a sars-cov-2 nucleic acid 1 or more tests if: (a) the person is employed, hired, retained or contracted; (i) by an approved provider, or works in an aged care service, in victoria; or (ii) to travel interstate as a driver of a heavy vehicle; or (iii) to travel interstate as a rail crew member; and (b) the person is informed of the results of the tests within 24 hours of receipt of the specimen at an accredited pathology laboratory; and (c) the results of the test are reported in adherence with the applicable state or territory reporting requirements within 24 hours of receipt of the specimen at an accredited pathology laboratory; and (d) the person is not a private patient in a recognised hospital; and (e) the person is not an admitted patient of a hospital; and (f) the service is not performed in a prescribed laboratory as described in 4.1 of the pathology services table other than a service to which item 69476, 69477, 69479 or 69480 applies, or an item in the pathology services tables applies. where the service is bulk billed.
93624	professional attendance by a general practitioner for the purpose of assessing a patient's suitability for the first dose of a covid-19 vaccine if all of the following apply: (a) one or both of the following is undertaken, where clinically relevant: (i) a short patient history; (ii) limited examination and management; (b) the service is bulk-billed; (c) the service is provided at, or from, a practice location in a modified monash 1 area note: effective 31 may 2021, age restrictions on the use of this item have been removed.
93625	professional attendance by a general practitioner for the purpose of assessing a patient's suitability for the first dose of a covid-19 vaccine if all of the following apply: (a) one or both of the following is undertaken, where clinically relevant: (i) a short patient history; (ii) limited examination and management; (b) the service is bulk-billed; (c) the service is provided at, or from, a practice location in: (i) a modified monash 2 area; or (ii) a modified monash 3 area; or (iii) a modified monash 4 area; or (iv) a modified monash 5 area; or (v) a modified monash 6 area; or (vi) a modified monash 7 area note: effective 31 may 2021, age restrictions on the use of this item have been removed.
93626	professional attendance by a medical practitioner (other than a general practitioner) for the purpose of assessing a patient's suitability for the first dose of a covid-19 vaccine if all of the following apply: (a) one or both of the following is undertaken, where clinically relevant: (i) a short patient history; (ii) limited examination and management; (b) the service is bulk-billed; (c) the service is provided at, or from, a practice location in a modified monash 1 area note: effective 31 may 2021, age restrictions on the use of this item have been removed.
93627	professional attendance by a medical practitioner (other than a general practitioner) for the purpose of assessing a patient's suitability for the first dose of a covid-19 vaccine if all of the following apply: (a) one or both of the following is undertaken, where clinically relevant: (i) a short patient history; (ii) limited examination and management; (b) the service is bulk-billed; (c) the service is provided at, or from, a practice location in: (i) a modified monash 2 area; or (ii) a modified monash 3 area; or (iii) a modified monash 4 area; or (iv) a modified monash 5 area; or (v) a modified monash 6 area; or (vi) a modified monash 7 area note: effective 31 may 2021, age restrictions on the use of this item have been removed.





93655	professional attendance by a medical practitioner (other than a general practitioner) for the purpose of assessing a patients suitability for a covid-19 vaccine if all of the following apply: (a) one or both of the following is undertaken, where clinically relevant: (i) a short patient history; (ii) limited examination and management; (b) the service is bulk-billed; (c) the service is provided at, or from, a practice location in a modified monash 1 area; (d) the service is rendered in an after-hours period
93656	professional attendance by a medical practitioner (other than a general practitioner) for the purpose of assessing a patients suitability for a covid-19 vaccine if all of the following apply: (a) one or both of the following is undertaken, where clinically relevant: (i) a short patient history; (ii) limited examination and management; (b) the service is bulk-billed; (c) the service is provided at, or from, a practice location in: (i) a modified monash 2 area; or (ii) a modified monash 3 area; or (iii) a modified monash 4 area; or (iv) a modified monash 5 area; or (v) a modified monash 6 area; or (vi) a modified monash 7 area; (d) the service is rendered in an after-hours period
93660	attendance by a relevant health professional on behalf of a medical practitioner for the purpose of assessing a patients suitability for a dose of a covid-19 vaccine if all of the following apply: (a) one or both of the following is undertaken, where clinically relevant: (i) a short patient history; (ii) limited examination and management; (b) the service is bulk-billed; (c) the service is not provided at a practice location; and (d) the service is provided from a practice location in a modified monash 1 area
93661	attendance by a relevant health professional on behalf of a medical practitioner for the purpose of assessing a patients suitability for a dose of a covid-19 vaccine if all of the following apply: (a) one or both of the following is undertaken, where clinically relevant: (i) a short patient history; (ii) limited examination and management; (b) the service is bulk-billed; (c) the service is not provided at a practice location; and (d) the service is provided from a practice location in: (i) a modified monash 2 area; or (ii) a modified monash 3 area; or (iii) a modified monash 4 area; or (iv) a modified monash 5 area; or (v) a modified monash 6 area; or (vi) a modified monash 7 area
93666	a medical service associated with a service to which item 93644, 93645, 93646, 93647, 93653, 93654, 93655 or 93656 applies, if: (a) the service is bulk-billed; and (b) the service is for a patient being assessed for their suitability for the booster dose of a covid-19 vaccine
93715	attendance by a medical practitioner (other than a specialist or consultant physician) for the assessment and management of a person with covid-19 infection of recent onset and confirmed by either: (a) laboratory testing; or (b) a covid-19 rapid antigen self-test which has been approved for supply in Australia by the therapeutic goods administration, where: (i) the treating practitioner makes a record in the patients notes that the relevant state and territory reporting requirements have been met, if applicable, and either: a. confirms the patient has reported the positive test result to the relevant state or territory public health unit where reporting requirements are in place from time to time; or b. assists the patient to report the positive result to the relevant state or territory public health unit where reporting requirements are in place from time to time.

## Glossary

**Capital expenditure:** Expenditure on large-scale fixed assets

**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.

**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.

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

**Hospital services:** Services provided to a patient 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. Can include services provided off site, such as dialysis or hospital in the home.

**OECD:** The Organisation for Economic Co-operation and Development is an intergovernmental organisation with 38 member countries, founded in 1961 to stimulate economic progress and world trade.

**Other health practitioner services:** Services that health practitioners (other than doctors and dentists) provide. These include practice nurses, chiropractors, optometrists, physiotherapists, occupational therapists, speech therapists, audiologists, dieticians, podiatrists, homeopaths, naturopaths, practitioners of Chinese medicine and other forms of traditional medicine.

**Out-of-pocket costs:** Total costs incurred by individuals for health-care services over and above any refunds from the MBS, the PBS and private health insurance funds (see co-payment).

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

**Patient transport services:** Expenditure by organisations primarily engaged in providing transportation of patients by ground or air, along with health (or medical) care.

**Pharmaceutical Benefits Scheme (PBS):** National, government-funded scheme that subsidises the cost of a wide variety of pharmaceutical drugs (see Repatriation Pharmaceutical Benefits Scheme).

**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.

**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.

**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.

**Referred medical services:** Non-hospital medical services that are not classified as primary health care.

**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.



# Data

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## Formats

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