

NSW COVID-19 Related Deaths



Summary

From 1 January 2020 to 23 March 2022, there were 2,044 COVID-related deaths reported by NSW Health, with most of these deaths occurring during the Delta and Omicron waves.

To ensure NSW COVID-19 mortality data is as robust as possible, NSW Health has been cross-checking these deaths with all those identified in death certificates by the NSW Registry of Births Deaths and Marriages (RBDM) during this period. Analysis of this data has found an additional 331 COVID-19 related deaths from January 2020 to March 2022, which showed that the certifying doctor identified COVID-19 as a contributing factor or cause of death. NSW Health has put processes in place to ensure that the information available through the death certificates provided by the NSW Registry of Births Deaths and Marriages is captured in its daily reporting processes and will be included in future COVID-19 surveillance reports.

Reporting COVID-19 deaths

NSW Health is continuously seeking to improve its reporting processes and ensure it is capturing and publicly reporting the full impacts of the COVID-19 pandemic on the community.

There are different ways of measuring the impact of COVID-19 on deaths in a community. One way is by counting the number of people for whom a health practitioner considers their deaths was caused by or contributed to be Covid-19. However, it is often hard to know how much a particular condition contributes to a death.

Another, more comprehensive way to estimate the impact of COVID-19 on deaths is to measure changes in the overall number of deaths in a community (regardless of cause), using an indicator called excess mortality. Excess mortality methods compare the expected number of deaths to the observed number of deaths in a region, after adjustment for expected seasonal impacts.

To better understand the impact of the pandemic, NSW Health has been working to evaluate both the completeness of the number of deaths it received on people who have died from COVID-19, as well as the degree of excess mortality during the pandemic.

This report examines the completeness of the number of deaths NSW Health has received for people who have reported to have died with COVID-19, using a combination of information sources to provide the most up-to-date and complete assessment of COVID-19 related deaths in NSW reported to date.

NSW Health will shortly release a review of excess mortality, to further explore the impact of the COVID-19 epidemic on the overall level of deaths in NSW.

Routine reporting of deaths of people with COVID-19

NSW Health has routinely reported the deaths of people with COVID-19 through its daily updates on its website, social media accounts and media releases. Further information and analysis are provided via the regular NSW Health [COVID-19 surveillance reports](#).

Between January 2020 and to 23 March 2022, there were 2,044 COVID-related deaths identified by NSW Health, with most of these deaths occurring during the Delta and Omicron waves.

These COVID-19 related deaths were reported from a range of sources, including public and private hospitals, aged care facilities, and the Coroner. For patients cared for by NSW Health in public hospitals, deaths in people with an active COVID-19 infection are usually automatically flagged and reported to the NSW Ministry of Health. Where there is a reason to further investigate a death, the death is referred to the Coroner. Where this

occurs, NSW Health awaits the Coroner's findings. The timeliness of reports of COVID-19 deaths can vary substantially, as a report may follow the date of death by a few days or, in some cases, several weeks.

Information sources used for this report

NSW Health compared reports of deaths in people with COVID-19 identified from existing sources with deaths identified by the RBDM in death certificates completed by registered medical practitioners.

RBDM provides NSW Health with electronic extracts of data from death certificates under section 129A of the NSW Public Health Act 2010.

Summary of the previously unreported deaths

An additional 331 COVID-19 related deaths were identified from 1 January 2020 to 23 March 2022. This represents around 14% of the total COVID-19 related deaths to 23 March 2022.

Of these:

- 270 (81.6%) deaths occurred in 2022, 58 (17.5%) in 2021, and three (0.9%) in 2020 (Table 3).
- 131 (39.6%) deaths occurred in aged care facilities, 98 (29.6%) occurred in public hospitals, 22 (6.6%) occurred in private hospitals, 66 (19.9%) occurred at the person's home and 14 (4.2%) occurred in other locations (Table 4).
- 256 (77.3%) were known by NSW Health to have had a positive COVID-19 test, but their death had not been reported to NSW Health. For 75 (22.7%) deaths, neither a positive COVID-19 test nor the death had been reported to NSW Health (Table 5).

The distribution of these deaths by age, gender and local health district was broadly similar to the COVID-19 deaths already reported by NSW Health (Table 6 and Figure 1).

Of these deaths, 28 (8.5%) were in people aged under 65 years. Of these 28 deaths, 23 (82.1%) deaths were in people who had significant underlying health conditions, with 16 (57.1%) having more than one underlying health condition. There were no known underlying health conditions for five (17.9%) of the deaths in people aged under 65 years (Table 7).

The dates of the additional deaths, like those already reported by NSW Health, reflect the periods when there was widespread community transmission of COVID-19. 270 (82 per cent) of the deaths identified in the RBDM data were found to have occurred from 1 January 2022, during the peak of the first Omicron wave. Fifty-eight deaths occurred during 2021 largely coinciding with the peak of the Delta wave, and three deaths occurred in 2020, when the original strain of the virus was circulating.

Although the rate of death with COVID-19 during the Omicron period was relatively low, the substantial transmission of the virus in the community meant that many more people were infected during this period. Therefore, despite the relatively low rate of death following infection, the actual number of deaths due to infection with the Omicron variant has been high compared to the number of deaths during the Delta period.

A large proportion of the previously unreported deaths occurred in aged care facilities and hospitals, consistent with the places where most people die. While we do not yet know the details of why these deaths were not reported to NSW Health by these facilities in the days after death, it is known that some infections may have been identified by a rapid antigen test that was not registered with Service NSW and some may have had a diagnosis based on testing performed outside of NSW, or based on a clinical diagnosis without a laboratory test. In some cases, it is possible the facilities may have assumed the death was already reported by another authority. Some deaths were associated with other significant conditions such as end-stage cancer or significant neurological conditions.

For people where an expected death occurred at home, for example an elderly person with significant underlying health conditions or people receiving palliative care, the doctor may not have reported the death through any channels other than the RBDM.

As many of the deaths occurred recently, and there is sometimes a delay between a death occurring and it being reported to NSW Health, it is possible that NSW Health would have received a report of the death through the usual channels, but at a later date.

The median time between the date of death and the date the deaths were registered with the RBDM was 16 days (range of 3 to 277 days). There were 39 deaths where the period between the date of death and date of registration was more than 30 days and three deaths where the time between the date of death and date of registration was more than 90 days.

The RBDM provides another valuable source of information about people who have died with COVID-19 and NSW Health now routinely incorporates information from these reports into its daily COVID-19 death ascertainment and reporting processes.

Figure 1. COVID-19 deaths identified from death certificates provided by the Registry of Births Deaths and Marriages, and deaths already reported by NSW Health, by week, 1 January 2020 to 23 March 2022

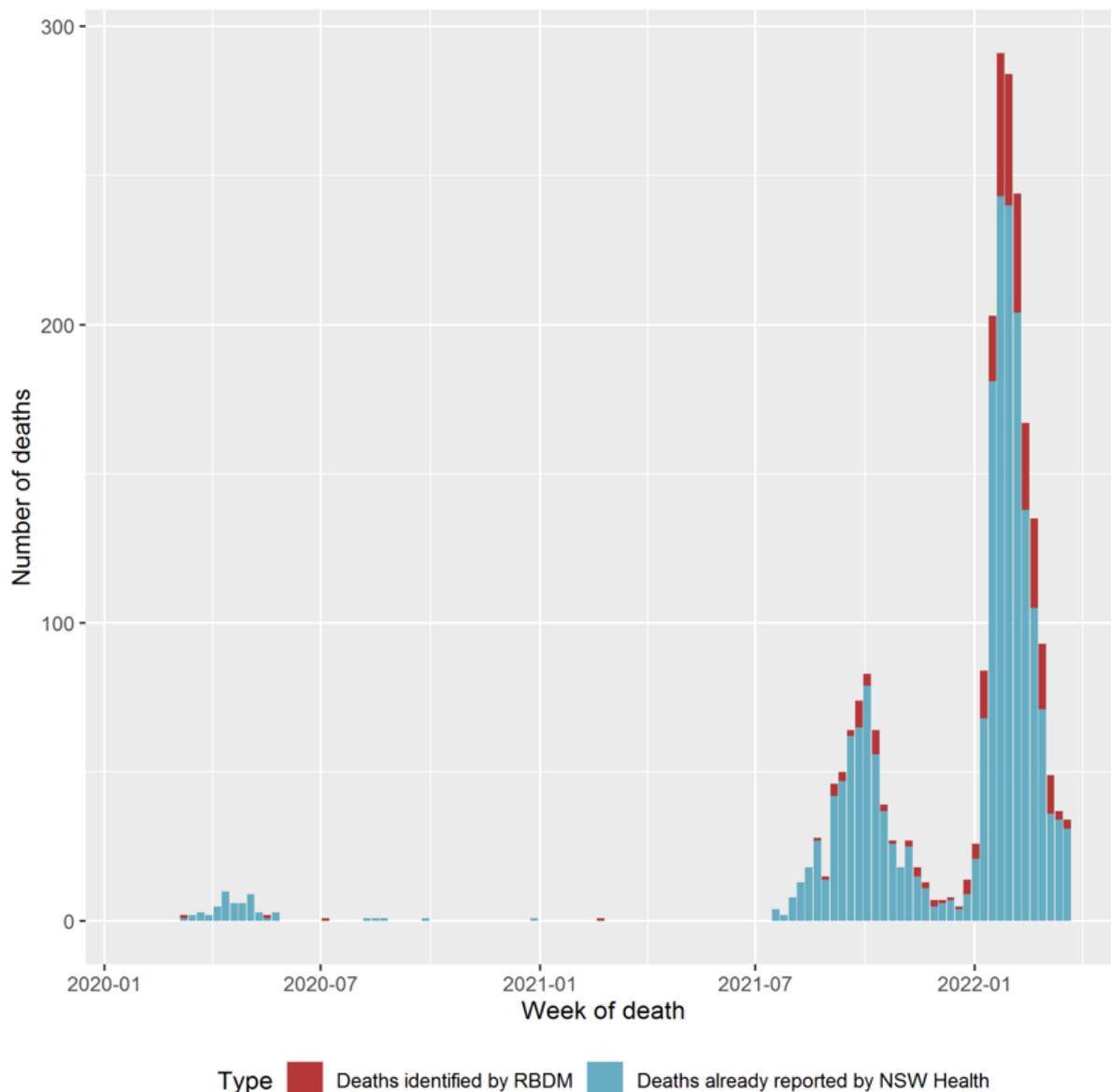


Table 1. Additional COVID-19 deaths identified from death certificates provided by the Registry of Births Deaths and Marriages by gender, 1 January 2020 to 23 March 2022

Gender	Number of deaths
Male	175 (52.9%)
Female	155 (46.8%)
Unknown	1 (0.3%)
Total	331 (100%)

Table 2. Additional COVID-19 deaths identified from death certificates provided by the Registry of Births Deaths and Marriages by age group, 1 January 2020 to 23 March 2022

Age group	Number of deaths
0-4	0 (0%)
5-14	0 (0%)
15-24	0 (0%)
25-34	1 (0.3%)
35-44	4 (1.2%)
45-54	6 (1.8%)
55-64	17 (5.1%)
65-74	36 (10.9%)
75-84	99 (29.9%)
85-94	132 (39.9%)
95-104	36 (10.9%)
Total	331 (100%)

Table 3. Additional COVID-19 deaths identified from death certificates provided by the Registry of Births Deaths and Marriages by year of death, 1 January 2020 to 23 March 2022

Year of death	Number of deaths
2020	3 (0.9%)
2021	58 (17.5%)
2022	270 (81.6%)
Total	331 (100%)

Table 4. Additional COVID-19 deaths identified from death certificates provided by the Registry of Births Deaths and Marriages by place of death, 1 January 2020 to 23 March 2022

Place of death	Number of deaths
Aged Care Facility	131 (39.6%)
Public Hospital	98 (29.6%)
Private Hospital	22 (6.6%)
Home	66 (19.9%)
Other	14 (4.2%)
Total	331 (100%)

Table 5. Additional COVID-19 deaths identified from death certificates provided by the Registry of Births Deaths and Marriages by known COVID-19 positive status, 1 January 2020 to 23 March 2022

Known case	Number of deaths
COVID-19 positive status notified to NSW Health*	256 (77.3%)
COVID-19 positive status not notified to NSW Health #	75 (22.7%)
Total	331 (100%)

* NSW Health was aware of the COVID-19 positive status of 256 people, but not of their death.

NSW Health was not notified of either the COVID-19 positive status, nor the death, of 75 people.

Table 6. Age, gender and location of additional COVID-19 deaths identified from death certificates provided by the Registry of Births Deaths and Marriages (RBDM), and deaths already reported by NSW Health, 1 January 2020 to 23 March 2022

	Deaths identified by RBDM	Deaths already reported by NSW Health
Age group		
0-4	0 (0%)	3 (0.1%)
5-14	0 (0%)	0 (0%)
15-24	0 (0%)	4 (0.2%)
25-34	1 (0.3%)	13 (0.6%)
35-44	4 (1.2%)	29 (1.4%)
45-54	6 (1.8%)	81 (4.0%)
55-64	17 (5.1%)	162 (7.9%)
65-74	36 (10.9%)	347 (17.0%)
75-84	99 (29.9%)	575 (28.1%)
85-94	132 (39.9%)	700 (34.2%)
95-104	36 (10.9%)	129 (6.3%)
105+	0 (0%)	1 (0%)
Sex		
Male	175 (52.9%)	1,248 (61.1%)
Female	155 (46.8%)	791 (38.7%)
Unknown	1 (0.3%)	5 (0.2%)
Local Health District of residence		
Central Coast	20 (6.0%)	57 (2.8%)
Illawarra Shoalhaven	11 (3.3%)	95 (4.6%)
Nepean Blue Mountains	11 (3.3%)	74 (3.6%)
Northern Sydney	32 (9.7%)	139 (6.8%)
South Eastern Sydney	49 (14.8%)	243 (11.9%)
South Western Sydney	102 (30.8%)	546 (26.7%)
Sydney	27 (8.2%)	271 (13.3%)
Western Sydney	36 (10.9%)	286 (14.0%)
Far West	0 (0%)	2 (0.1%)
Hunter New England	17 (5.1%)	124 (6.1%)
Mid North Coast	9 (2.7%)	37 (1.8%)
Murrumbidgee	6 (1.8%)	47 (2.3%)
Northern NSW	9 (2.7%)	54 (2.6%)
Southern NSW	0 (0%)	23 (1.1%)
Western NSW	2 (0.6%)	39 (1.9%)
Correctional settings	0 (0%)	2 (0.1%)
Interstate	0 (0%)	5 (0.2%)
Total	331 (100%)	2,044 (100%)