COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 02 ENDING 15 JANUARY 2022

Published 4 February 2022

Summary for the week 9 January 2022 to 15 January 2022 (inclusive)

Table 1. Total number of PCR cases and tests, and number of cases who were hospitalised, admitted to an Intensive Care Unit (ICU) or died, to the week ending 15 January 2022

	1 Jan 2020 – 15 Jun 2021 (pre-Delta)	16 Jun 2021 – 25 Nov 2021 (Delta variant)	26 Nov 2021 – 15 Jan 2022 (Omicron emergence)	Total
PCR cases	5,431	75,318	560,018	640,767
Hospitalised*	379 (7%)	7,872 (10%)	6,351 (1%)	14,602 (2%)
Admitted to ICU*	143 (3%)	1,456 (2%)	600 (<1%)	2,199 (<1%)
Deaths*	56 (1%)	589 (1%)	234 (<1%)	879 (<1%)
PCR Tests	6,858,446	15,811,925	5,285,759	27,956,162

* Note, these categories are not mutually exclusive. Hospitalised includes cases admitted to ICU; deaths may occur with or without being admitted to hospital or ICU. Hospitalisations include only PCR confirmed-cases; there were no admissions to ICU or deaths in the reporting period among cases diagnosed by RAT (see Glossary for further details).

In the week ending 15 January 2022:

- There were 256,787 total cases reported, including 181,549 (71%) detected by PCR and 75,238 (29%) via a positive Rapid Antigen Test (RAT) result. In comparison, in the week ending 8 January 2022, 226,672 positive PCR tests were reported. People with a positive RAT have been required to register their result with Service NSW since 12 January 2022.
- The ten LGAs with the highest number of cases confirmed by PCR were:
  - Canterbury-Bankstown, 12,672 (7%) cases
  - Blacktown, 12,232 (7%) cases
  - Liverpool, 8,775 (5%) cases
  - Cumberland, 8,625 (5%) cases
  - Fairfield, 7,869 (4%) cases
  - Central Coast, 6,810 (4%) cases
  - Wollongong, 6,257 (3%) cases
  - Campbelltown, 6,198 (3%) cases
  - Penrith, 5,876 (3%) cases
  - Northern Beaches, 5,818 (3%) cases
  - 96,982 (53%) cases were residents across 118 other LGAs
- There were 124 deaths in people diagnosed with COVID, compared with 74 in the week ending 8 January 2022.
- 66.5% of all cases, 65.4% of those hospitalised, and 55.7% of those admitted to ICU had received at least two effective doses
- Among those aged 12 years and over, 92.7% of the population had received at least two effective doses.
- PCR testing rates decreased compared to the previous week (down 14%). Since 5 January, people with a positive RAT are considered COVID-19 cases and not required to have a PCR test. This is likely to have influenced the decrease in PCR testing rates.
- This report contains detailed information about PCR-confirmed cases only; detailed epidemiological information about cases diagnosed with RATs was only available after 19 January 2022.

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Table 2. Measures of public health action, NSW, for the period from 1 January 2022 to 15 January 2022

	Week ending 15 Jan	Week ending 8 Jan
Proportion total cases notified to NSW Health by the laboratory within 1 day of specimen collection	58% (105,952/181,549)	43% (96,507/226,121)
Total cases contacted by text message within 1 day of notification to NSW Health	98% (178,397/181,549)	98% (221,649/226,121)
Number of high-risk cases fully interviewed by public health staff within 1 day of responding to the NSW Health text message*	60% (215/359)	82% (343/420)
Total cases fully interviewed by public health staff within 1 day of notification to NSW Health#	2% (4,447/181,549)	4% (7,993/226,121)

* In the week ending 15 January, cases were considered high risk if they had not responded to the text within 24 hours and were aged 65 or over.
# Due to the increase in case numbers, NSW Health is no longer interviewing all COVID-19 cases.

Section 1: Case overview

Figure 1. PCR confirmed COVID-19 case count by symptom onset date*, with 7 day backward rolling average, NSW, from 16 June 2021 to 15 January 2022

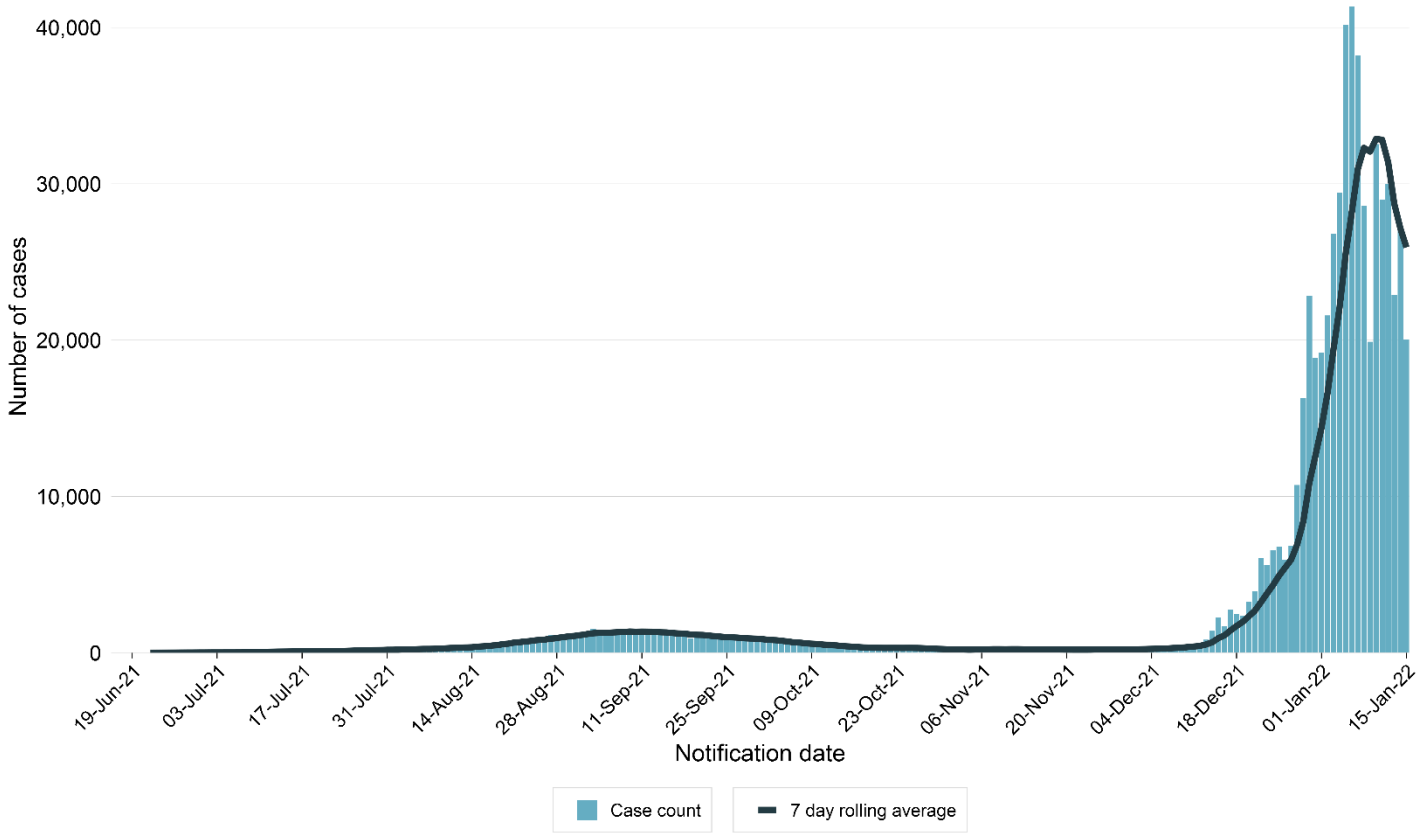


Table 3. Demographics of infections among total PCR confirmed cases by gender and age, NSW, 1 January 2020 to 15 January 2022

	Week ending		26 Nov 2021 – 15 Jan 2022	16 Jun 2021 – 25 Nov 2021	1 Jan 2020 – 15 Jun 2021
	15 Jan 2022	8 Jan 2022			
Gender					
Female	91,203 (50%)	114,929 (51%)	282,704 (50%)	35,771 (47%)	2,670 (49%)
Male	89,998 (50%)	110,762 (49%)	276,268 (49%)	39,503 (52%)	2,760 (51%)
Non-specified or non-binary	348 (<1%)	430 (<1%)	1,046 (<1%)	44 (<1%)	1 (<1%)
Age group					
0-9	16,858 (9%)	14,532 (6%)	41,025 (7%)	12,409 (16%)	251 (5%)
10-19	22,527 (12%)	28,522 (13%)	71,786 (13%)	12,318 (16%)	325 (6%)
20-29	39,546 (22%)	68,219 (30%)	155,870 (28%)	14,742 (20%)	1,115 (21%)
30-39	33,565 (18%)	42,225 (19%)	104,714 (19%)	12,884 (17%)	1,098 (20%)
40-49	25,856 (14%)	28,123 (12%)	71,992 (13%)	9,271 (12%)	718 (13%)
50-59	20,698 (11%)	22,612 (10%)	57,623 (10%)	6,747 (9%)	710 (13%)
60-69	13,060 (7%)	13,048 (6%)	33,766 (6%)	3,870 (5%)	656 (12%)
70-79	6,235 (3%)	5,660 (3%)	15,243 (3%)	1,902 (3%)	394 (7%)
80-89	2,410 (1%)	2,452 (1%)	6,137 (1%)	937 (1%)	122 (2%)
90+	755 (<1%)	702 (<1%)	1,785 (<1%)	238 (<1%)	42 (1%)
Total*	181,549 (100%)	226,121 (100%)	560,018 (100%)	75,318 (100%)	5,431 (100%)

* Total includes cases for whom age was not available at the time of data extraction.

Figure 2. Seven day backward rolling average of PCR confirmed COVID-19 cases rate per 100,000 population by age and notification date, NSW, from 26 November 2021 to 15 January 2022

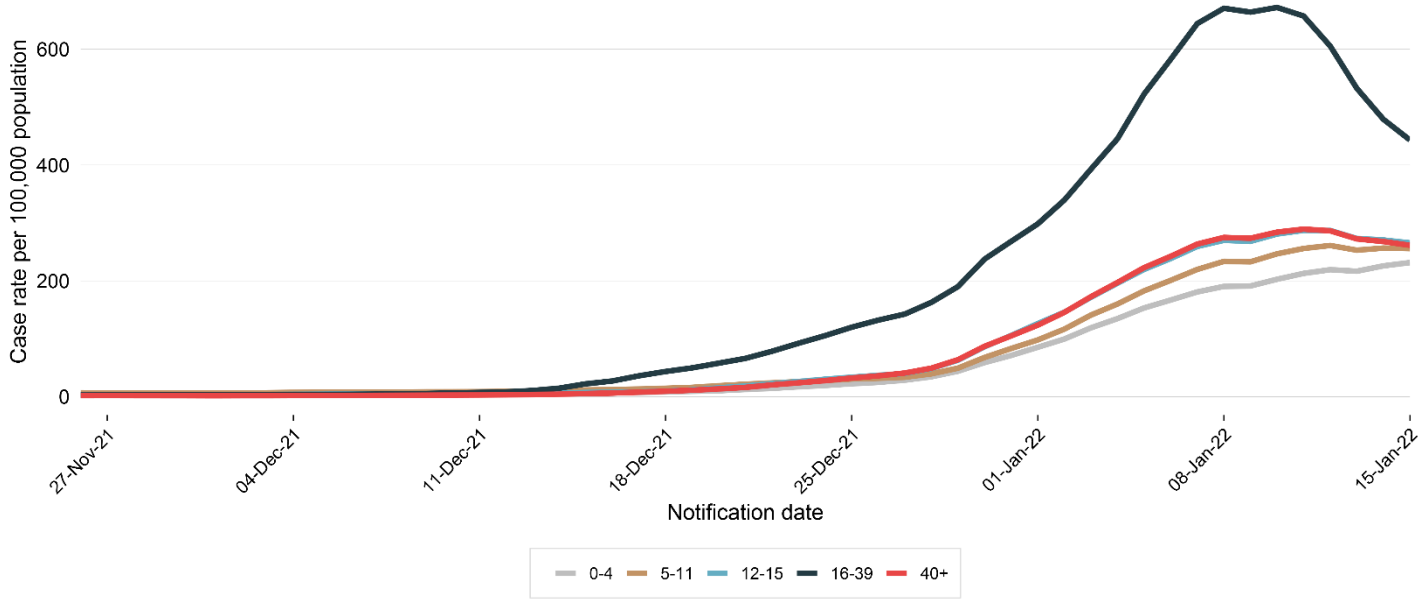
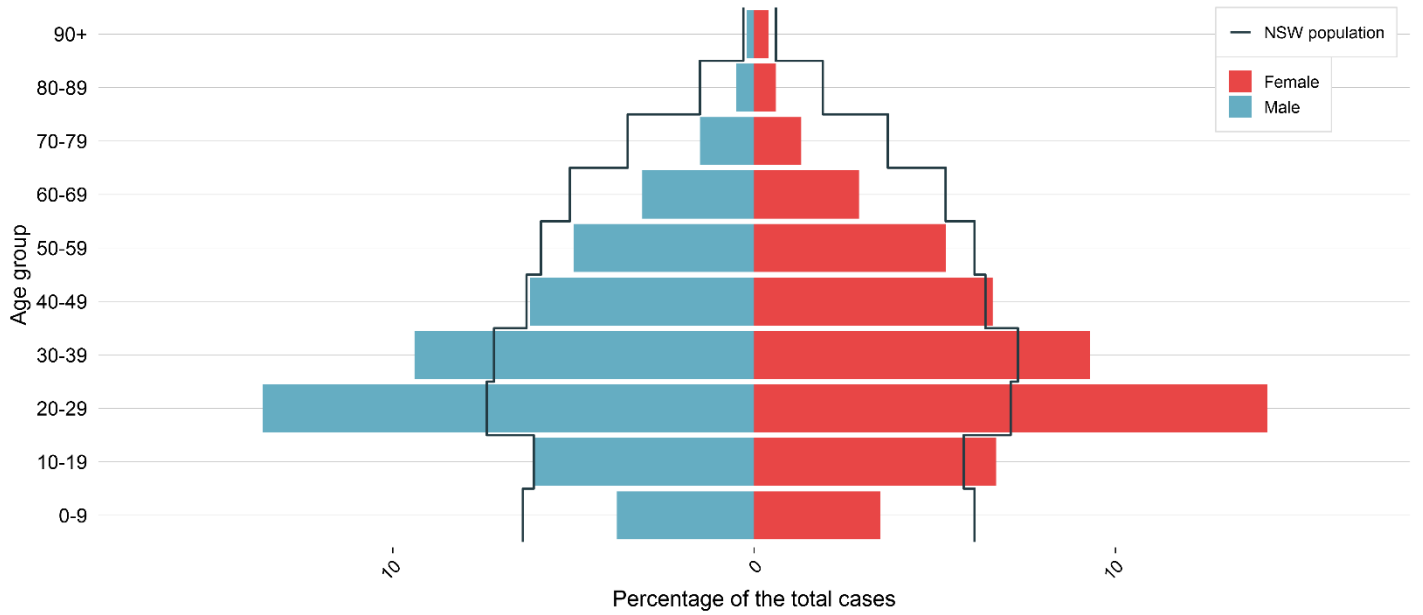


Figure 3. Current wave total PCR confirmed case percentage (n = 558,912) by age and gender, NSW, from 26 November 2021 to 15 January 2022



Note that the figure does not include cases for whom gender is not specified or non-binary.

- PCR positive cases decreased in the week ending 15 January 2022, compared to the previous week.
- PCR positive cases since 26 November 2021 have been concentrated in the 16-39 years age group (see Figure 2), and especially in the 20-29 years age group (see Figure 3). In the week ending 15 January, the decrease in case rates was also largest in this age range.
- PCR positive case rates in all other age groups have been lower. Notably, they did not decrease in the most recent week to the same extent as the 16-39 years age group.
- The median age of PCR positive cases since 26 November 2021 was 30 (interquartile range (IQR) = 21-46). Cases aged 20-29 years are over-represented among cases relative to their proportion in the NSW population by a factor of approximately two. Cases aged 10-19 and 30-39 years are also over-represented among cases relative to their proportion in the NSW population but to a lesser extent.
- Declines in the number of people who test positive by PCR may result from fewer cases having a PCR test than previously, and may not reflect the true number of cases in the community.

Section 2: Variants in NSW

Table 4. Variants identified among COVID-19 cases by week reported, NSW, 25 December 2020 to 15 January 2022

Variant	Week ending				26 Nov 2021 – 15 Jan 2022	16 Jun 2021 – 25 Nov 2021	1 Jan 2020 – 15 Jun 2021
	15 Jan*	8 Jan*	1 Jan	25 Dec			
Alpha (B.1.1.7)	0	0	0	0	0	11	189
Beta (B.1.351)	0	0	0	0	0	5	29
Gamma (P.1)	0	0	0	0	0	0	6
Delta (B.1.617.2)	7	25	43	73	2,664	16,598	73
Omicron (B.1.1.529)	278	268	307	308	2,056	-	-
Total	285	293	350	381	4,720	16,614	297

***Note:** identification of variants of concern is through whole genome sequencing. Results for reported cases in the most recent weeks may not be available at the time of reporting.

- From 1 January 2020 to 15 June 2021, genomic sequencing identified several variants in cases in NSW, with the predominant variant in the community being Alpha (B.1.1.7).
- On 16 June 2021, the first community case with the Delta (B.1.617.2) variant was notified and genomic sequencing has identified this as the only variant circulating in the community in the following months (other variants were detected in hotel quarantine).
- On 26 November 2021, the first community case with the Omicron (B.1.1.529) variant was notified. Since that time, both the Delta and Omicron variants have been circulating in the community.
- These dates form the basis for the major time intervals used throughout the report.
- The current priority for whole genome sequencing is cases admitted to an intensive care unit. In the general community, the Omicron variant is now dominant.

Section 3: Cases in hospital each day with COVID-19

Figure 4a. Estimated active cases (number of PCR-confirmed cases notified last 14 days), number of PCR-confirmed and RAT cases in hospital, in ICU and ventilated by date, NSW, from 16 June 2021 to 15 January 2022

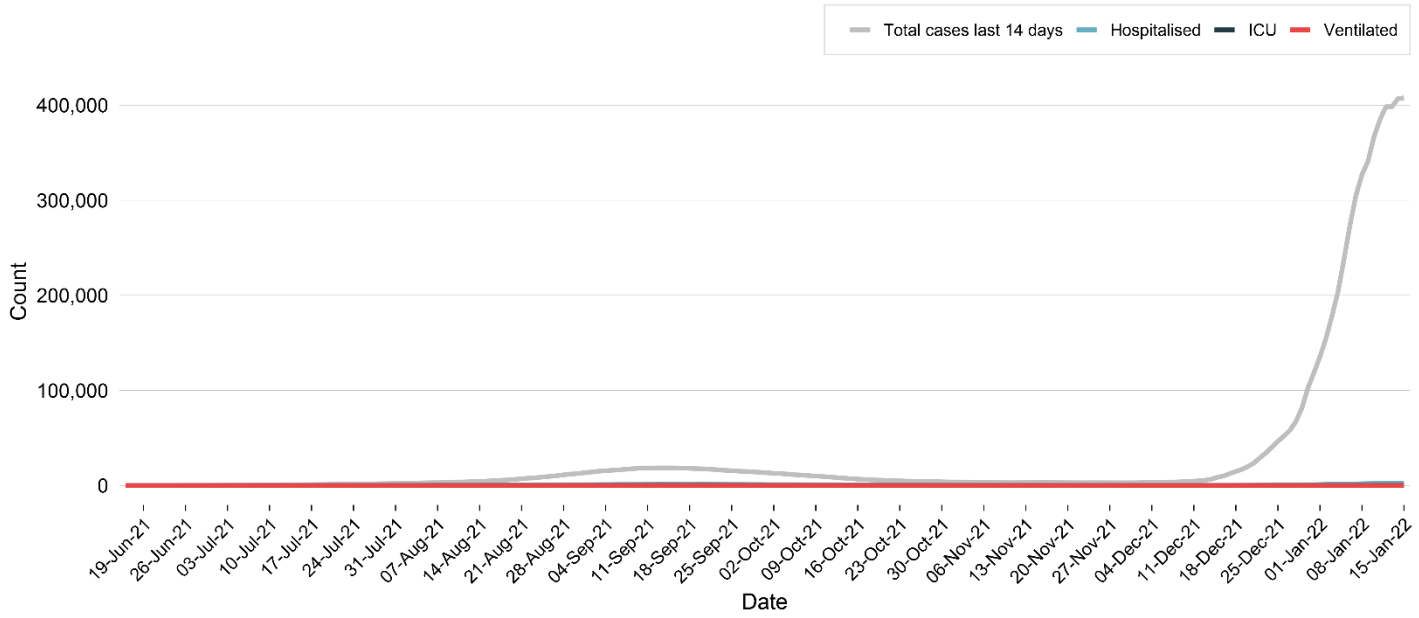
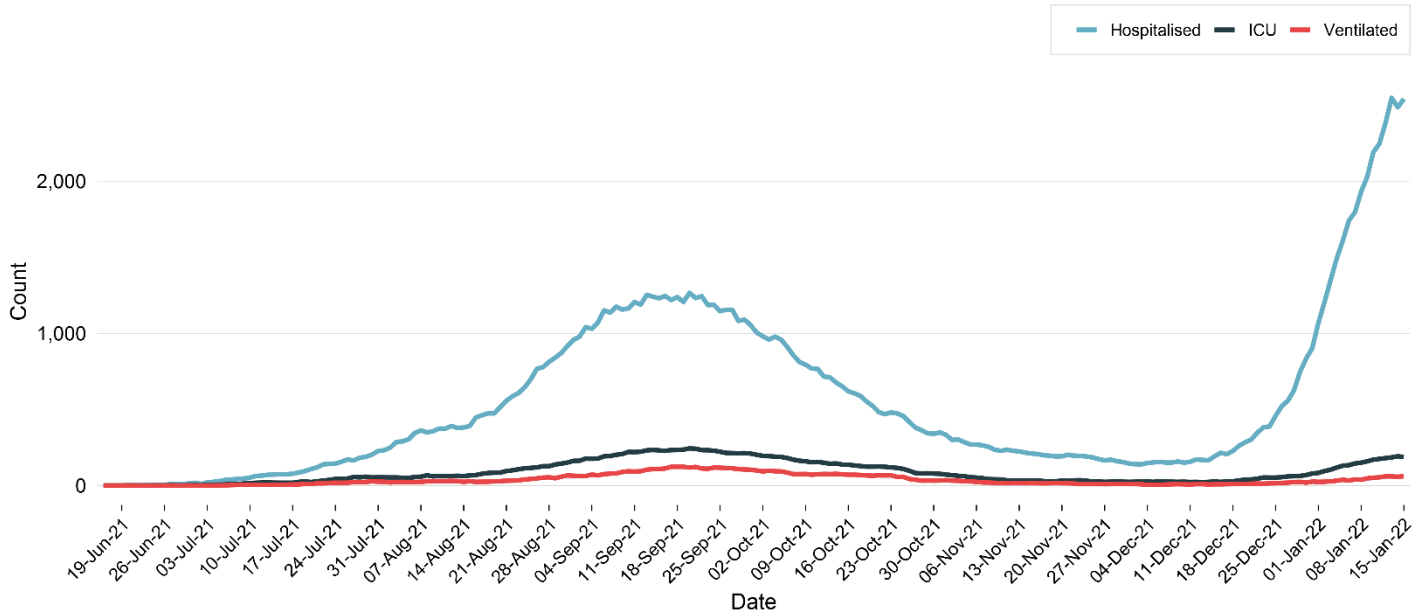
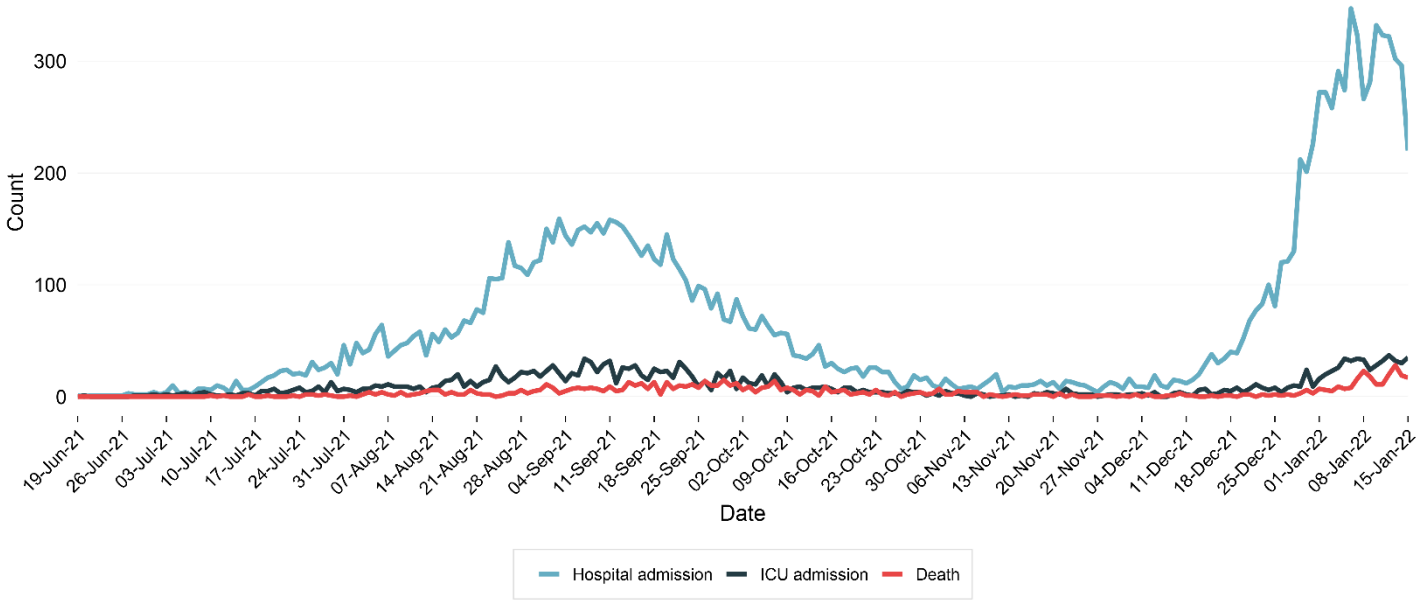


Figure 4b. Number of PCR-confirmed and RAT cases in hospital, in ICU and ventilated by date, NSW, from 16 June 2021 to 15 January 2022



- The graph shows the number of PCR-confirmed active cases and the number of PCR-confirmed and RAT cases hospitalised, in ICU and ventilated.
- Since 16 June 2021, the median delay between a person becoming ill with COVID-19 and requiring a hospitalisation is 4 days, down from the previously reported median of 5 days. This may be due to a recent increase in the proportion of cases being diagnosed within one day of admission to hospital.
- The number of cases who are hospitalised increased in the week ending 15 January, but the rate of increase has slowed. The number of cases in hospital is higher than the previous peak in mid-September 2021, however the number of cases in hospital has not increased at the same rate as number of cases detected. This may be due to cases being primarily young, having received at least two effective doses, and/or the Omicron variant being less severe than the Delta variant circulating in the period 16 June to 25 November 2021.

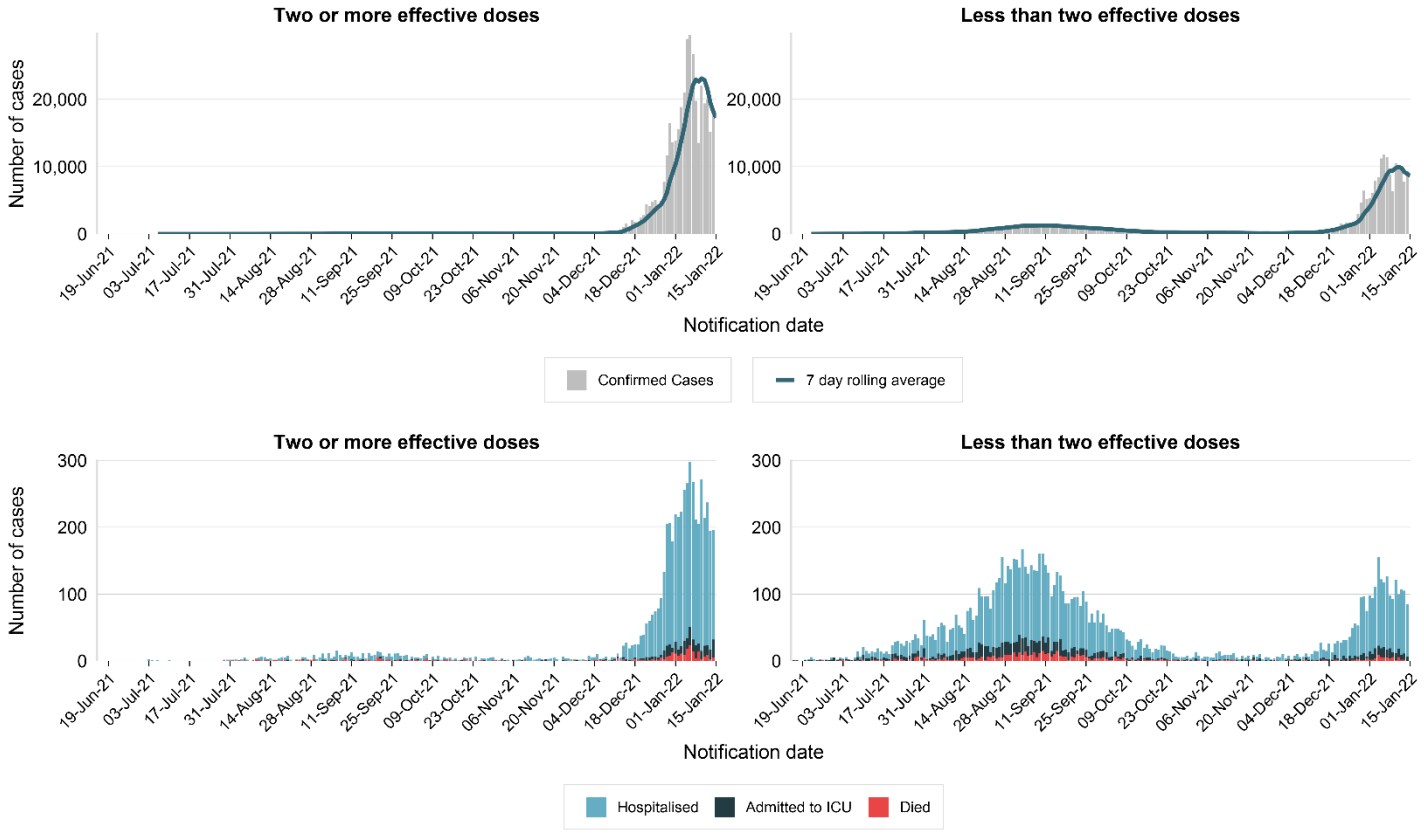
Figure 4c. Number of daily new hospital admissions, ICU admissions and deaths from PCR-confirmed cases, NSW, from 16 June 2021 to 15 January 2022



- The number of daily new hospital admissions has been steady since the week of 1 January 2022. Daily ICU admissions and deaths have not yet shown signs of reaching a peak.

Section 4: Clinical severity by vaccination status

Figure 5. PCR confirmed COVID-19 cases by outcome, notification date and vaccination status with 7 day backward rolling average, NSW, from 16 June 2021 to 15 January 2022[1]



[1] Figure dates are based on the date of the case's notification rather than the date they were hospitalised, admitted to ICU, or died. Cases are classified in the figure according to their most severe outcome (e.g., a person was admitted to hospital and then died is counted only as a death). Data are provided to 15 January 2022; because of the delay between onset and severe illness or death, outcomes are under-reported for the most recently notified cases. Note that the scale differs between the top and bottom panels to allow easier visualisation.

Table 5. Hospitalisations, ICU admissions and deaths among PCR confirmed cases diagnosed with COVID-19, by vaccination status, NSW, from 26 November 2021 to 15 January 2022

Vaccination status	Total cases	Hospitalised* (% of total cases)	Hospitalised and in ICU* (% of total cases)	Death* (% of total cases)
Three or more effective doses	17,350	238 (1.4%)	20 (0.1%)	11 (0.1%)
Two effective doses	372,912	3,912 (1.0%)	314 (0.1%)	149 (<0.1%)
One effective dose	4,644	112 (2.4%)	17 (0.4%)	9 (0.2%)
No effective dose	55,697	679 (1.2%)	78 (0.1%)	53 (0.1%)
Under investigation	109,415	1,409 (1.3%)	171 (0.2%)	12 (<0.1%)
Total	560,018	6,350 (1.1%)	600 (0.1%)	234 (<0.1%)

* Note, table categories are not mutually exclusive. Hospitalised includes cases admitted to ICU; deaths may occur with or without being admitted to hospital or ICU.

Table 6. Proportion of PCR confirmed cases with a severe outcome (ICU and/or death) amongst all cases, by age, time of infection, and vaccination status, NSW, 26 November 2021 to 15 January 2022

Age-group (years)	Three or more effective doses		Two effective doses		Less than two effective doses	
0-9	-	-	-	-	<1%	(13 / 41,025)
10-19	0%	(0 / 179)	<1%	(5 / 46,447)	<1%	(5 / 12,461)
20-29	<1%	(1 / 3,163)	<1%	(18 / 114,633)	<1%	(6 / 2,456)
30-39	<1%	(2 / 2,912)	<1%	(19 / 73,896)	1%	(10 / 1,835)
40-49	<1%	(1 / 3,675)	<1%	(29 / 53,226)	1%	(12 / 1,009)
50-59	<1%	(2 / 3,067)	<1%	(39 / 43,508)	3%	(16 / 552)
60-69	<1%	(5 / 1,947)	<1%	(71 / 25,041)	6%	(25 / 425)
70-79	1%	(9 / 1,346)	1%	(120 / 10,970)	7%	(23 / 324)
80-89	1%	(7 / 732)	2%	(94 / 4,171)	15%	(26 / 172)
90+	1%	(3 / 329)	4%	(42 / 1,020)	13%	(11 / 82)
Total	<1%	(30 / 17,350)	<1%	(437 / 372,912)	<1%	(147 / 60,341)

* Less than two effective doses combines those with one and no effective dose.

- In the past week, 120,819 (66.5%) of all PCR confirmed cases had received at least two effective doses (see Appendix C), reflective of the high proportion of community vaccination (90.0% of those aged 12 years and over, at the start of this wave on 26 November 2021). Similar breakdowns by vaccination status for previous periods are in Appendix C.
- Since children aged 5-11 years became eligible for vaccination on 10 January 2022, cases in this age range with an onset on or after 10 January 2022 have been assigned vaccination status based on their AIR record and/or interview. Historical cases in this age range (with onset between 16 June 2021 and 9 January 2022) have been assigned to the No effective dose category, as have all cases in children aged 0-4, who remain ineligible for vaccination in Australia.
- Accordingly, the proportion of cases who were hospitalised, admitted to ICU or died is similar in Table 5 for those with no effective dose and those with two effective doses because the no effective dose group contains a very large proportion of young children, who typically have mild outcomes and are only very rarely hospitalised, admitted to ICU or die. Similarly, the overall rate of hospitalisation, ICU admission and death is presently higher for those with three effective doses compared to those with two effective doses, because the group with three effective doses contains a larger proportion of elderly cases, as well as more people with immunosuppression, who were eligible for a third vaccine dose earlier. Therefore, it is important to consider rates of hospitalisation, ICU admission, and death by age group as well as vaccination status. Table 6 and Appendix C show such further breakdowns by age range.
- In the period since 26 November 2021, the *number* of cases with two effective doses who experience severe outcomes is reflective of the high number in the community who have received two effective doses. However, the *proportion* of cases with two effective doses who experience severe outcomes is still lower than that for cases with less than two effective doses in every age group, demonstrating the effectiveness of vaccines to protect against severe outcomes.
- Caution should be used when interpreting rates among people over 60 with less than two effective doses since 26 November 2021. The denominator among cases is small, because the proportion of people in the community aged over 60 with no effective dose is small.
- Caution should also be used when interpreting rates among those with three or more effective doses, as the number who have received three doses is still relatively small. Rates will become more reliable as a greater proportion of the population receives their third dose. However, the preliminary evidence to date suggests that three or more effective doses provides additional protection against ICU admission and/or death, compared to having received only two effective doses.

Section 5: Deaths following recent infection with COVID-19

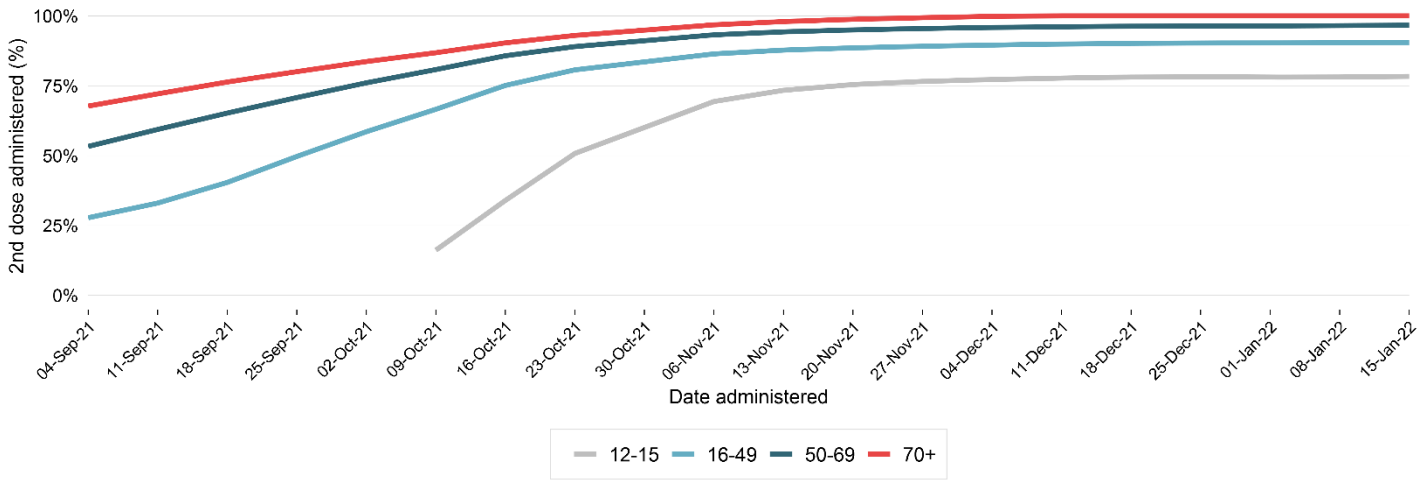
Table 7. Deaths following recent infection with COVID-19, by age group and location, 26 November 2021 to 15 January 2022

Age-group (years)	Number of deaths	Case fatality rate	Location of death	
			Health care facility	Aged care facility
0-9	1	<0.1%	0	0
10-19	0	0%	0	0
20-29	2	<0.1%	2	0
30-39	1	<0.1%	1	0
40-49	4	<0.1%	3	0
50-59	8	<0.1%	7	0
60-69	21	0.1%	20	0
70-79	63	0.4%	53	9
80-89	81	1.3%	72	9
90+	53	3.0%	38	14
Total	234	<0.1%	196	32

- Since the start of the pandemic, 0.1% of cases (879 people) have died.
- This includes 155 residents of aged care facilities.
- Among cases since 26 November, 22.6% (53/234) of the deaths were among people who had received no effective dose (see Table 5). This is an over-representation, given that those with no effective dose represent 9.9% (55,697/560,018) of cases.
- In the period from 16 June to 15 January 2022, the median delay between a person becoming ill and death was 12 days.
- In the week ending 15 January 2022, there were 124 deaths in people diagnosed with COVID-19, including
  - 14 people who had received three doses (1 in their 50s, 3 in their 60s, 1 in their 70s, 6 in their 80s, and 3 aged 90+ years),
  - 72 people who had received two effective doses (1 in their 20s, 3 in their 40s, 2 in their 50s, 2 in their 60s, 23 in their 70s, 27 in their 80s, and 14 aged 90+ years),
  - 3 people who had received one dose (1 in their 60s, 1 in their 80s and 1 aged 90+ years),
  - 29 people who had received no effective dose (1 in their 40s, 1 in their 50s, 5 in their 60s, 4 in their 70s, 14 in their 80s, and 4 aged 90+ years), and
  - 6 people whose vaccination status is under investigation (1 in their 50s, 1 in their 60s, 2 in their 70s, 1 in their 80s, and 1 aged 90+ years).
- The majority of deaths in cases since 26 November 2021 have occurred in hospital (196/234, 84%).
- There have been six deaths at home. Among these, three were diagnosed after death.

Section 6: Vaccination coverage in NSW

Figure 6. Proportion of 12+ year-olds who have received two doses of COVID-19 vaccine, by age range and time, NSW, 4 September 2021 to 15 January 2022

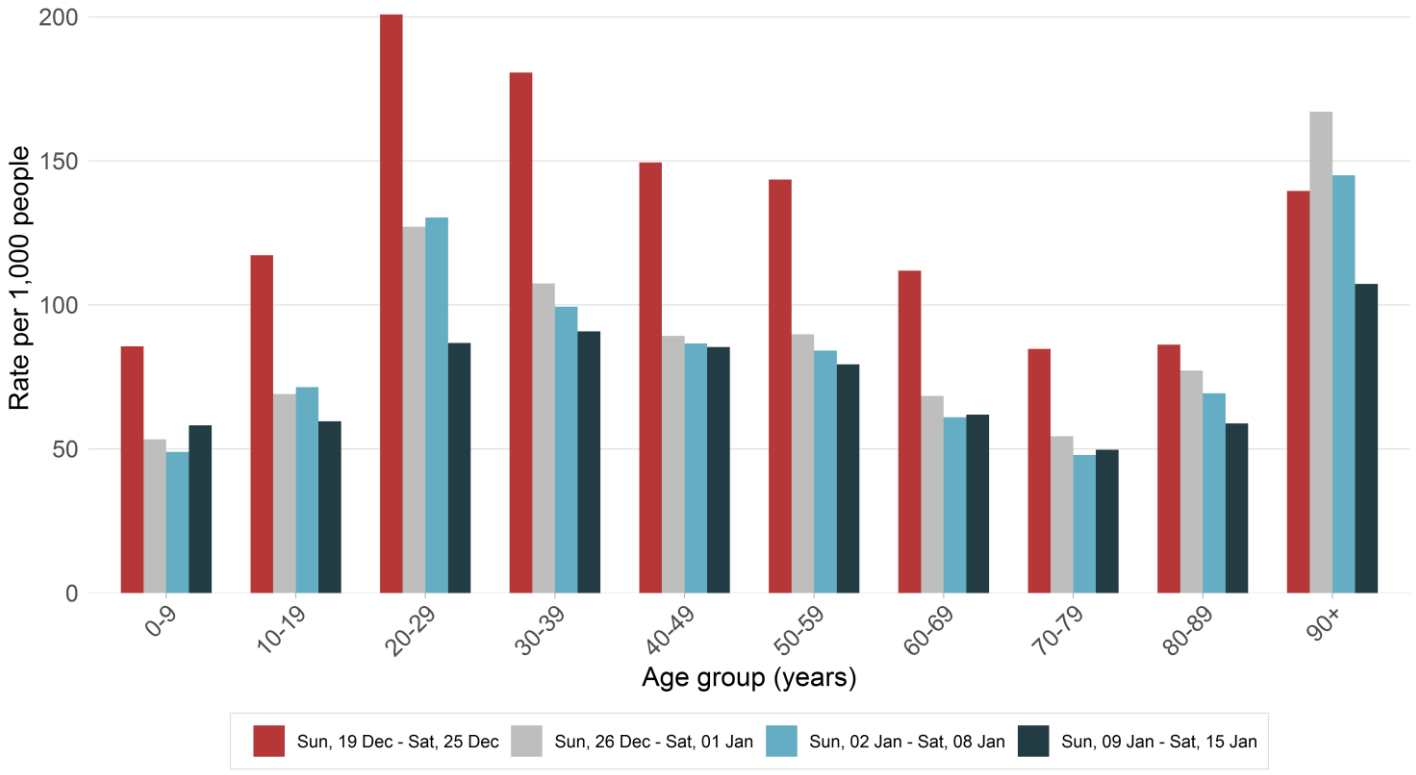


Sources: https://www.health.gov.au/resources/collections/covid-19-vaccination-daily-rollout-update

- The proportion of the NSW population who have received two vaccine doses has increased substantially in the last four months, reaching over 92% of those aged 12 and over by 15 January 2022.
- Children aged 12-15 years became eligible for vaccination from mid-September 2021 and showed strong uptake of vaccination immediately. Since mid-November their vaccination has remained stable at around 75-78%.
- The highest vaccination rates have been achieved among those aged 70+ and 50-69 years, who have a vaccination rate above 95%.
- Children aged 5-11 became eligible for vaccination on 10 January 2022, and by 15 January 13.1% of children in this age range had received their first dose. Children in this age range are recommended to receive their second dose 8 weeks after the first.
- By 15 January 2022, 26.1% of the NSW population aged 18 years and over had received three or more vaccine doses.

Section 7: COVID-19 testing in NSW by age group

Figure 7. Number of PCR tests per 1,000 population, by age group, NSW, 16 June 2021 to 15 January 2022

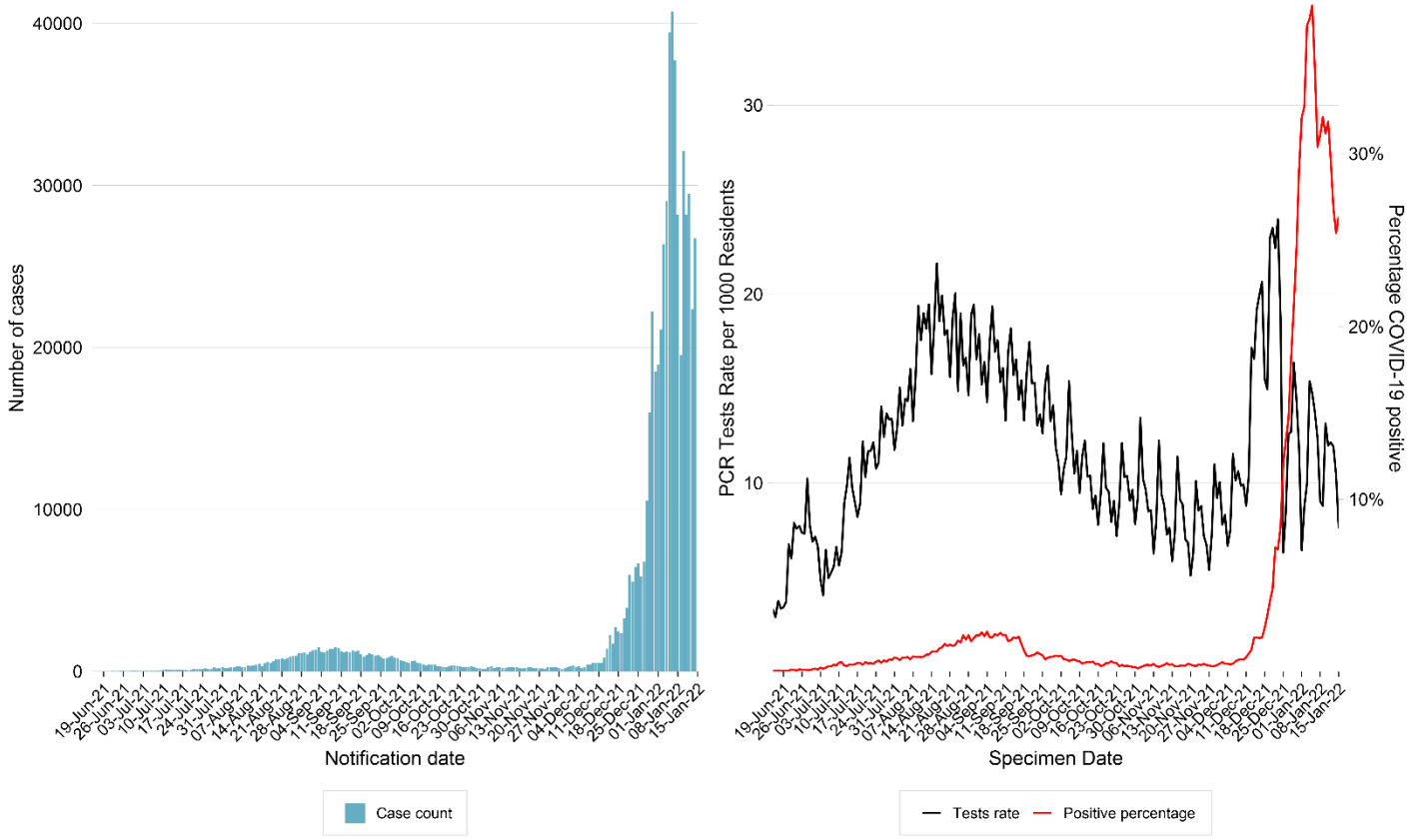


Includes SARS-CoV-2 PCR tests only and excludes notifications with age missing.

- The figure shows PCR testing only and excludes RAT results. While it is mandatory to report positive RAT results, NSW Health receives no information about the number of negative tests performed, and as such it is not possible to calculate RAT testing rates.
- In the last three weeks to 15 January, testing rates decreased for all age groups. This may be due to difficulties accessing PCR testing facilities, using rapid antigen tests instead, and/or delays in processing and reporting PCR tests to NSW Health.
- The PCR testing rate remains highest among those aged 90 years and over.

Section 8: PCR testing and positivity rates, NSW

Figure 8. PCR confirmed cases, testing rates per 1000 population, and percentage of tests which were positive for COVID-19, NSW, 16 June 2021 to 15 January 2022



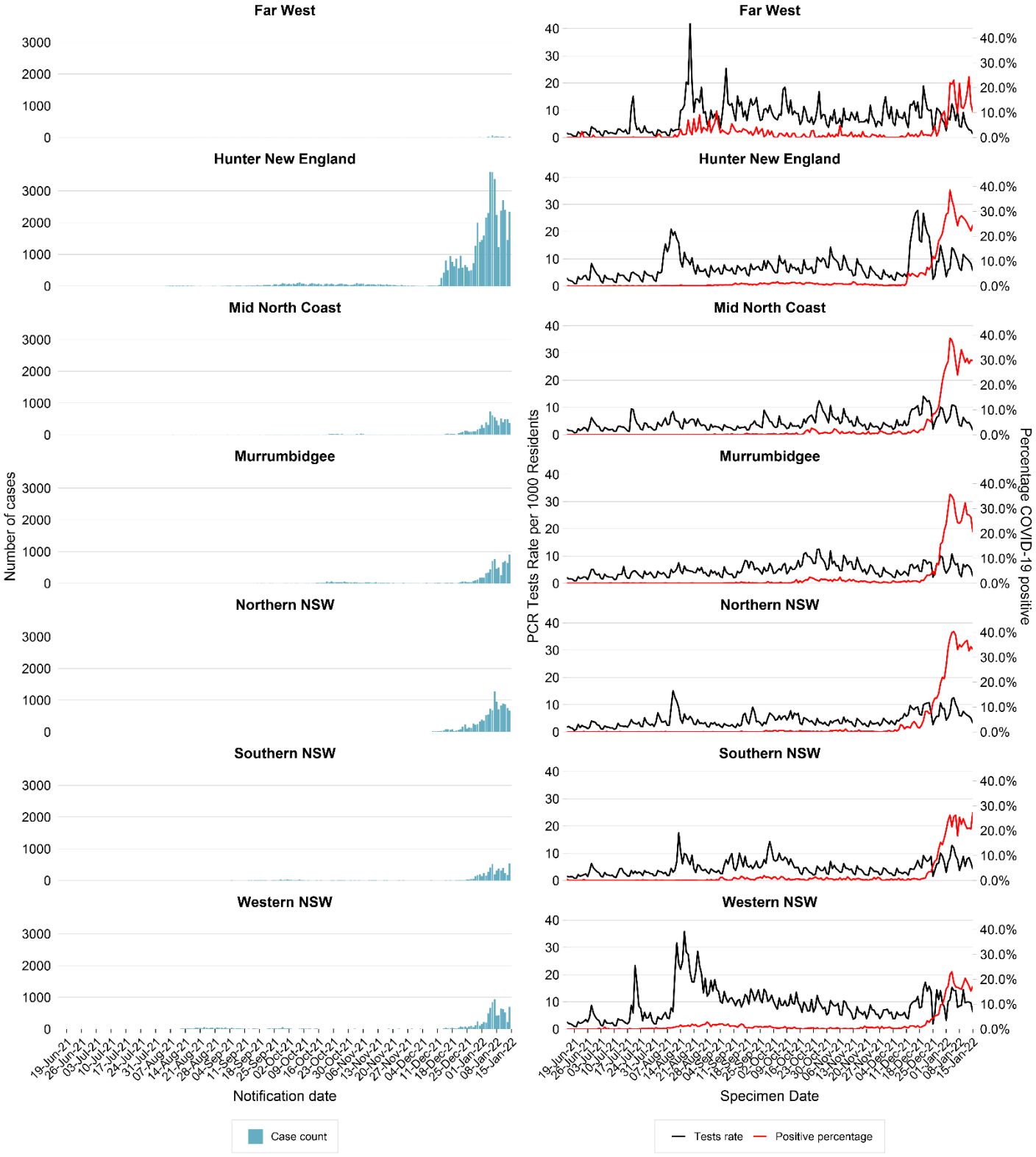
- There were 788,547 PCR tests reported in the week ending 15 January 2022, down 14% from the 924,024 reported in the week ending 8 January 2022.
- This may be due to fewer people being able to access testing, delays in reporting tests to NSW Health and the use of Rapid Antigen Tests instead of PCR.
- Test positivity rates have generally between well below 3%, reflecting high surveillance capacity and rapid case identification. However, during January 2022, the test positivity rate increased to above 30%. This high positivity rate indicates that there were likely undetected COVID-19 cases in the community.
- From 5 January 2022, people who receive a positive Rapid Antigen Test no longer need to have a PCR test (except in limited circumstances). From 12 January 2022, it was mandatory to report positive results; those with positive RAT results from 1 to 11 January were also encouraged to report their result. These policy changes are likely to result in fewer PCR tests being reported, and in particular positive PCR tests.
- The decreased test positivity in the week ending 15 January 2022 should not be interpreted to indicate that the peak of transmission has passed, as it may reflect that more cases are using rapid antigen tests instead of accessing PCR testing.

Section 9: PCR testing and positivity rates, Greater Sydney, Central Coast and Illawarra Shoalhaven LHDs

Figure 9. PCR confirmed cases, PCR testing rates per 1000 population, and percentage of tests which were positive for COVID-19, by LHD of residence, metropolitan LHDs, NSW, 16 June 2021 to 15 January 2022

Section 10: PCR testing and positivity rates, rural and regional LHDs

Figure 10. PCR confirmed cases, PCR testing rates per 1000 population, and percentage of tests which were positive for COVID-19, by LHD of residence, rural and regional LHDs, NSW, 16 June 2021 to 15 January 2022



- Note that the axes may differ within and between figures
- Testing rates and positivity rates show larger deviations in rural compared to metropolitan LHDs because their population is small.
- The increased case numbers, increased testing, and increased test positivity from December 2021 are apparent in all LHDs.

Section 11: PCR case rates in Local Government Areas

Table 8a. Top 20 metropolitan LGAs of residence, ordered by total PCR-confirmed COVID-19 cases in the last 7 days, per 100,000 population rate, NSW, 26 November 2021 to 15 January 2022

LGA name	Last 7 days		26 Nov 2021 - 15 Jan 2022	
	Cases	Cases per 100,000 population	Cases	Cases per 100,000 population
Liverpool	8,775	3,856	24,394	10,719
Fairfield	7,869	3,717	22,396	10,579
Strathfield	1,715	3,655	5,812	12,385
Campbelltown	6,198	3,626	16,477	9,639
Camden	3,674	3,622	9,576	9,440
Cumberland	8,625	3,571	26,693	11,052
Canterbury-Bankstown	12,672	3,353	38,987	10,316
Shellharbour	2,397	3,273	4,687	6,400
Blacktown	12,232	3,267	35,273	9,420
Wollongong	6,257	2,869	13,484	6,182
Penrith	5,876	2,759	17,463	8,199
Georges River	4,326	2,713	13,936	8,739
Bayside	4,545	2,548	17,067	9,567
Lane Cove	995	2,478	3,695	9,202
Kiama	574	2,454	1,372	5,867
Hunters Hill	363	2,423	1,735	11,582
Waverley	1,741	2,343	8,621	11,604
Randwick	3,532	2,269	15,416	9,904
The Hills Shire	3,992	2,243	13,935	7,830
Sutherland Shire	4,964	2,153	18,841	8,170

Table 8b. Top 20 regional and rural LGAs of residence, ordered by total PCR-confirmed COVID-19 cases in the last 7 days, per 100,000 population rate, NSW, 26 November 2021 to 15 January 2022

LGA name	Last 7 days		26 Nov 2021 - 15 Jan 2022	
	Cases	Cases per 100,000 population	Cases	Cases per 100,000 population
Byron	1,212	3,455	3,882	11,066
Griffith	861	3,185	1,404	5,194
Tweed	2,058	2,122	4,610	4,753
Bathurst Regional	889	2,038	1,786	4,095
Maitland	1,717	2,016	6,343	7,448
Balranald	47	2,010	74	3,165
Dubbo Regional	1,020	1,899	2,337	4,350
Inverell	309	1,829	576	3,410
Newcastle	3,027	1,828	12,630	7,628
Cessnock	1,065	1,775	3,322	5,538
Ballina	781	1,750	1,927	4,318
Albury	938	1,726	2,146	3,948
Port Stephens	1,219	1,659	3,840	5,226
Orange	691	1,628	1,985	4,676
Greater Hume Shire	175	1,626	377	3,502
Murray River	196	1,617	256	2,113
Queanbeyan-Palerang Regional	946	1,548	1,940	3,175
Muswellbrook	250	1,527	681	4,158
Tamworth Regional	948	1,516	2,521	4,031
Federation	186	1,496	321	2,581

- The top 20 metropolitan LGAs contributed 56% of all PCR-confirmed cases in the week ending 15 January.
- The top 20 regional and rural LGAs contributed another 10% of PCR-confirmed cases.
- The LGAs with the highest case rates per 100,000 population are predominantly metropolitan LGAs, with 9 of the top 10 LGA case rates being in metropolitan areas.
- The case numbers in some regional LGAs are relatively small, but because the population is also small the case rate is high.

Section 12: Aboriginal people

Figure 11. Number of PCR confirmed COVID-19 infections among Aboriginal people by date, NSW, 16 June 2021 to 15 January 2022

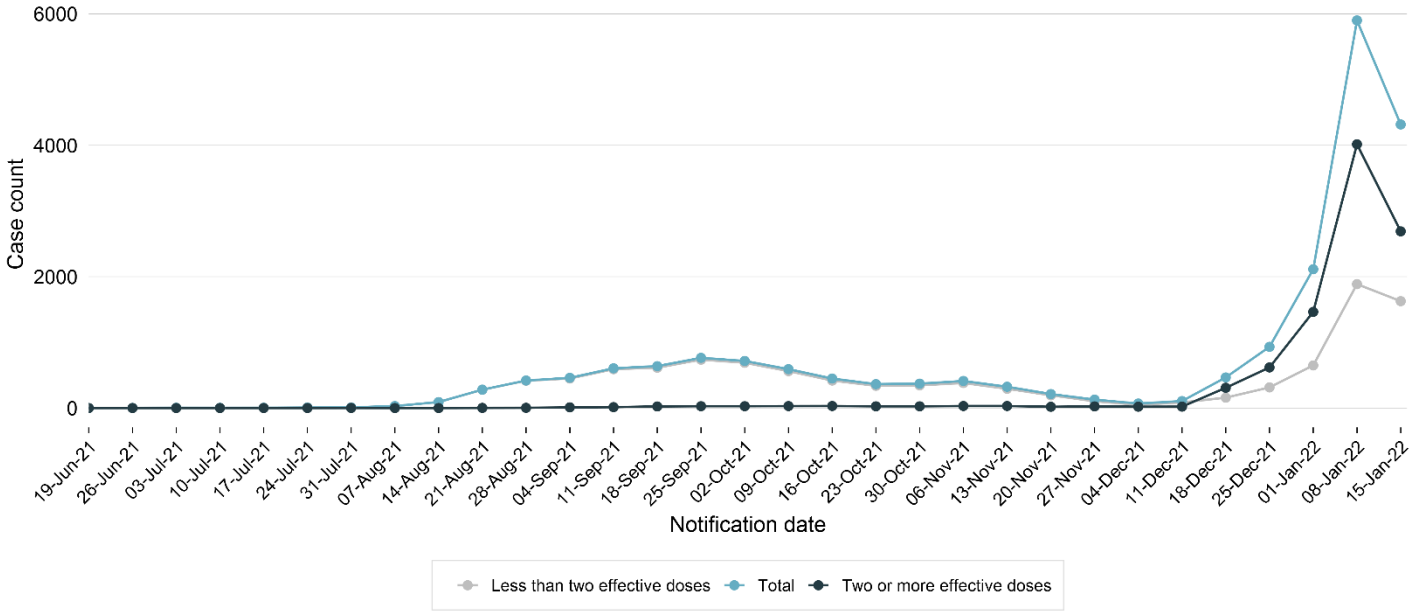


Table 9. Demographics of PCR confirmed infections among Aboriginal people by gender, age, and vaccination status, NSW, 16 June 2021 to 15 January 2022

	Week ending				26 Nov 2021 - 15 Jan 2022	16 Jun 2021 - 25 Nov 2021
	15 Jan	8 Jan	1 Jan	25 Dec		
Gender						
Female	2,345 (54%)	3,267 (55%)	1,153 (55%)	492 (53%)	7,590 (55%)	3,501 (51%)
Male	1,970 (46%)	2,631 (45%)	959 (45%)	439 (47%)	6,322 (45%)	3,367 (49%)
Non-specified or non-binary	2 (<1%)	3 (<1%)	1 (<1%)	1 (<1%)	9 (<1%)	1 (<1%)
Age group						
0-9	725 (17%)	772 (13%)	281 (13%)	99 (11%)	1,976 (14%)	1,804 (26%)
10-19	888 (21%)	1,257 (21%)	433 (20%)	217 (23%)	2,949 (21%)	1,598 (23%)
20-29	1,020 (24%)	1,868 (32%)	638 (30%)	333 (36%)	4,102 (29%)	1,225 (18%)
30-39	645 (15%)	824 (14%)	309 (15%)	120 (13%)	1,974 (14%)	964 (14%)
40-49	501 (12%)	538 (9%)	202 (10%)	92 (10%)	1,376 (10%)	644 (9%)
50-59	331 (8%)	383 (6%)	158 (7%)	46 (5%)	943 (7%)	388 (6%)
60+	207 (5%)	259 (4%)	92 (4%)	25 (3%)	601 (4%)	246 (4%)
Vaccination status						
Three or more effective doses	98 (2%)	78 (1%)	24 (1%)	9 (1%)	213 (2%)	0 (0%)
Two effective doses	2,641 (61%)	4,004 (68%)	1,464 (69%)	620 (67%)	9,081 (65%)	346 (5%)
One effective dose	60 (1%)	69 (1%)	24 (1%)	12 (1%)	186 (1%)	478 (7%)
No effective dose	1,143 (26%)	1,270 (22%)	450 (21%)	200 (21%)	3,275 (24%)	5,518 (80%)
Under investigation*	375 (9%)	480 (8%)	151 (7%)	91 (10%)	1,166 (8%)	527 (8%)
Total	4,317 (100%)	5,901 (100%)	2,113 (100%)	932 (100%)	13,921 (100%)	6,869 (100%)

* Vaccination status is updated regularly using both the Australian Immunisation Register and the patient's interview.

- Since 26 November 2021 there have been 13,921 Aboriginal people diagnosed with COVID-19, representing 2.0% of all cases in that time. This is an under-representation among Aboriginal and Torres Strait Islander people, who represent 3.4% of the NSW population according to the Australian Bureau of Statistics. In contrast, in the period 16 June to 25 November 2021 Aboriginal and Torres Strait Islander people were over-represented in total cases, with 9.1% of cases identified as Aboriginal.
- Since 26 November 2021, the proportion of cases of COVID-19 in Aboriginal people has been highest in the 20-29 year age group, reflecting the high case numbers in this age group in the population as a whole.
- Although NSW Health is no longer interviewing every case, Aboriginal status is recorded through the short text message survey sent at the time of notification. However, not all cases respond to this message and hence Aboriginality may be under-reported.

Section 13: Correctional settings

Figure 12. Number of PCR-confirmed COVID-19 infections among people residing in correctional settings by date, NSW, 16 June 2021 to 15 January 2022

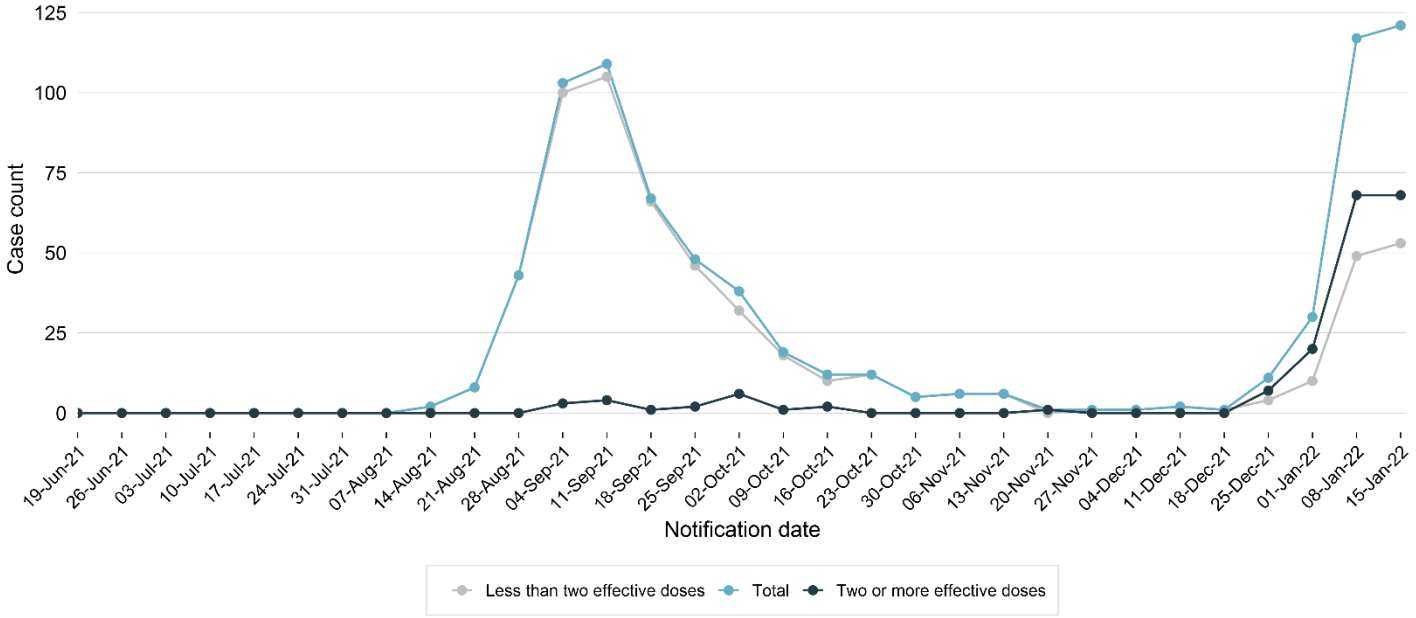


Table 10. Demographics of PCR-confirmed infections in correctional settings by gender, age, and vaccination status, NSW, 16 June to 15 January 2022

	Week ending				26 Nov 2021 - 15 Jan 2022	16 Jun 2021 - 25 Nov 2021
	15 Jan	8 Jan	1 Jan	25 Dec		
Gender						
Male	118 (98%)	113 (97%)	27 (90%)	11 (100%)	273 (97%)	453 (94%)
Female	2 (2%)	4 (3%)	3 (10%)	0 (0%)	9 (3%)	27 (6%)
Non-specified or non-binary	1 (1%)	0 (0%)	0 (0%)	0 (0%)	1 (<1%)	0 (0%)
Age group						
10-19	10 (8%)	8 (7%)	1 (3%)	4 (36%)	23 (8%)	28 (6%)
20-29	29 (24%)	32 (27%)	8 (27%)	3 (27%)	75 (27%)	142 (30%)
30-39	38 (31%)	32 (27%)	12 (40%)	1 (9%)	83 (29%)	169 (35%)
40-49	26 (21%)	30 (26%)	8 (27%)	1 (9%)	66 (23%)	95 (20%)
50-59	10 (8%)	9 (8%)	1 (3%)	2 (18%)	22 (8%)	35 (7%)
60-69	4 (3%)	6 (5%)	0 (0%)	0 (0%)	10 (4%)	7 (1%)
70-79	4 (3%)	0 (0%)	0 (0%)	0 (0%)	4 (1%)	3 (1%)
80-89	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (<1%)
Vaccination status						
Three or more effective doses	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Two effective doses	69 (57%)	69 (59%)	21 (70%)	7 (64%)	166 (59%)	25 (5%)
One effective dose	3 (2%)	7 (6%)	0 (0%)	0 (0%)	12 (4%)	59 (12%)
No effective dose	1 (1%)	1 (1%)	0 (0%)	0 (0%)	2 (1%)	267 (56%)
Under investigation*	48 (40%)	40 (34%)	9 (30%)	4 (36%)	103 (36%)	129 (27%)
Total	121 (100%)	117 (100%)	30 (100%)	11 (100%)	283 (100%)	480 (100%)

* Vaccination status is updated regularly using both the Australian Immunisation Register and the patient's interview.

- Note that cases in correctional settings may have acquired their infection prior to entry into the setting.
- Most cases of COVID-19 among people residing in correctional settings were male and aged 30-39 years, consistent with the demographics of correctional populations generally.
- The number of cases in correctional settings was similar in the week ending 15 January 2022 compared to the previous week.

Section 14: Other respiratory infections in NSW

Figure 13. Proportion of tests positive for influenza, NSW, 1 January 2016 to 9 January 2022

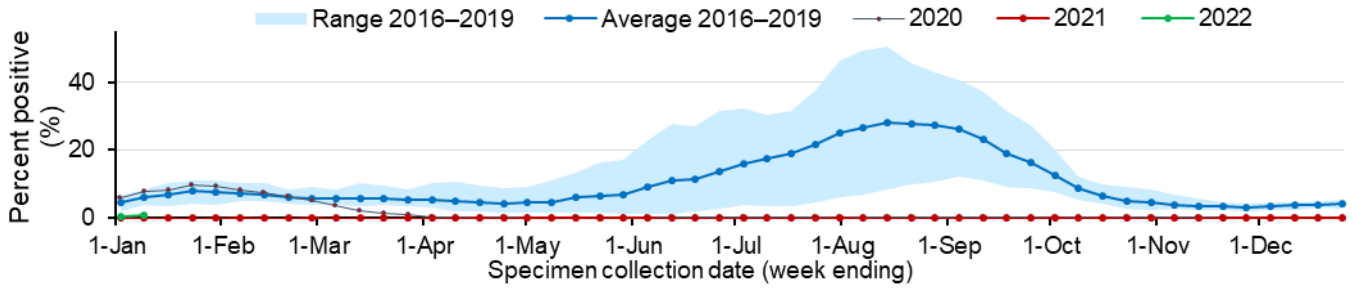


Figure 14. Proportion of FluTracker participants reporting influenza-like illness, NSW, 1 January 2016 to 9 January 2022

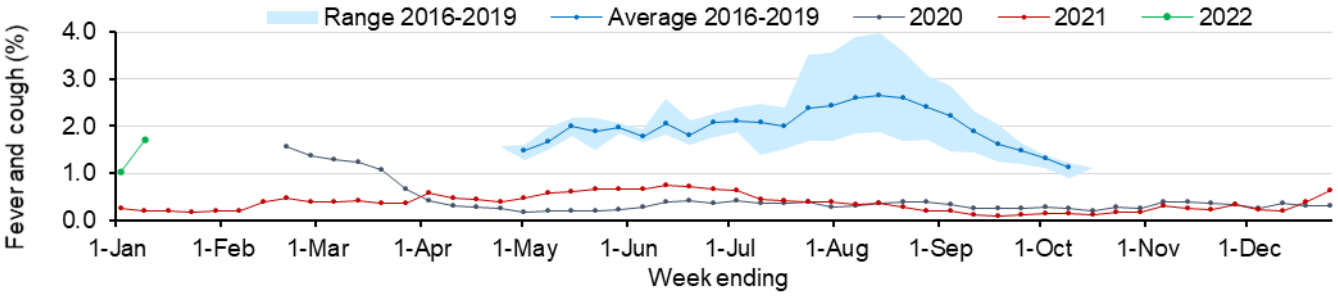


Figure 15. Emergency Department pneumonia presentations, NSW, 1 January 2017 to 16 January 2022

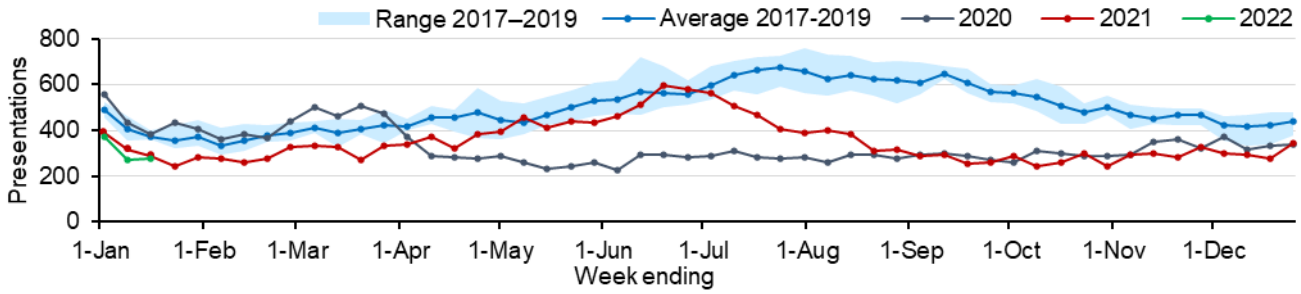
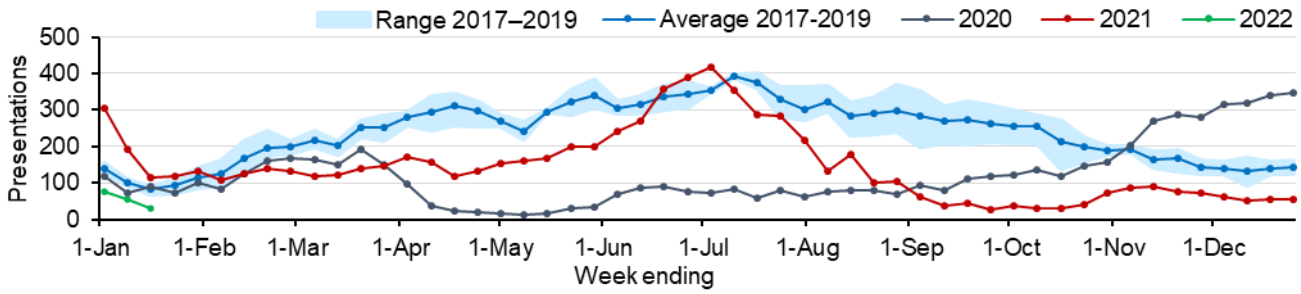


Figure 16. Emergency Department bronchiolitis presentations, NSW, 1 January 2017 to 16 January 2022



- The percentage of influenza tests that were positive has been low (<1%) relative to the usual seasonal range, indicating limited influenza transmission in the community. The number of influenza cases has increased since mid-November with 59 reported in the week ending 9 January. Data are pending from several labs from 5 December 2021 and are subject to change.
- In the week ending 9 January 2022, 21,664 people were surveyed, and 362 people (1.7%) reported flu-like symptoms.
- In the last four weeks, 63% (432/689) of new cases of flu-like illness reported having a COVID-19 test.
- International border closures, improved hygiene and social distancing measures implemented during 2020 and 2021 in the COVID-19 pandemic impacted on a broad range of other viral and bacterial infections.
- Both pneumonia presentations and bronchiolitis presentations to emergency departments decreased in March 2020 and again in July 2021, and remain below the seasonal range for this time of year.

Appendix A: COVID-19 PCR tests in NSW by Local Government Area

		Week ending				Total since January 2022	
		15 Jan 2022		08 Jan 2022			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Central Coast	*LHD Total**	21,780	61.72	22,825	64.69	45,867	129.99
Illawarra Shoalhaven	Kiama	1,764	75.43	2,142	91.59	4,009	171.43
	Shellharbour	6,602	90.15	7,943	108.46	14,895	203.39
	Shoalhaven	7,134	67.53	8,350	79.04	16,044	151.86
	Wollongong	17,117	78.48	22,235	101.94	40,463	185.51
	*LHD Total**	32,617	77.73	40,670	96.92	75,411	179.72
Nepean Blue Mountains	Blue Mountains	4,668	59.00	4,786	60.49	9,737	123.07
	Hawkesbury	6,098	90.61	4,973	73.90	11,359	168.79
	Lithgow	984	45.55	988	45.73	2,042	94.52
	Penrith	21,552	101.19	21,187	99.48	44,234	207.69
	*LHD Total**	33,046	84.52	31,667	80.99	66,843	170.96
Northern Sydney	Hornsby	6,758	44.44	7,058	46.42	14,534	95.58
	Hunters Hill	1,541	102.87	1,849	123.43	3,600	240.32
	Ku-ring-gai	8,903	70.02	9,227	72.57	19,018	149.57
	Lane Cove	3,588	89.35	4,243	105.67	8,244	205.30
	Mosman	1,695	54.71	2,077	67.04	3,945	127.34
	North Sydney	2,509	33.44	3,424	45.64	6,234	83.10
	Northern Beaches	20,152	73.68	19,651	71.85	41,380	151.30
	Parramatta#	16,014	62.26	18,435	71.68	35,990	139.93
	Ryde	9,038	68.85	10,059	76.63	20,037	152.64
	Willoughby	3,654	45.01	3,951	48.66	8,012	98.68
	*LHD Total**	60,443	63.23	64,424	67.39	130,831	136.86
South Eastern Sydney	Bayside	14,072	78.88	16,041	89.92	31,569	176.96
	Georges River	12,310	77.19	14,128	88.59	27,788	174.25
	Randwick	11,753	75.51	15,216	97.76	28,072	180.35
	Sutherland Shire	18,456	80.03	19,902	86.30	40,584	175.98
	Sydney#	14,273	57.94	20,674	83.92	36,869	149.67
	Waverley	4,747	63.89	6,622	89.13	11,837	159.32
	Woollahra	3,119	52.52	4,153	69.93	7,611	128.16
	*LHD Total**	68,722	71.65	83,014	86.55	159,403	166.20
South Western Sydney	Camden	10,542	103.93	9,833	96.94	21,250	209.49
	Campbelltown	19,519	114.18	17,948	104.99	39,554	231.39
	Canterbury-Bankstown#	35,910	95.02	40,395	106.89	80,291	212.46
	Fairfield	19,978	94.37	19,915	94.07	41,127	194.27
	Liverpool	21,919	96.31	22,836	100.34	46,719	205.28
	Wingecarribee	2,936	57.42	3,034	59.33	6,224	121.72
	Wollondilly	3,049	57.37	2,758	51.89	5,983	112.57
	*LHD Total**	97,237	93.63	97,059	93.46	202,874	195.35
Sydney	Burwood	2,629	64.73	3,133	77.14	5,982	147.30
	Canada Bay	7,143	74.35	7,172	74.65	14,946	155.57
	Canterbury-Bankstown#	35,910	95.02	40,395	106.89	80,291	212.46
	Inner West	11,564	57.59	13,491	67.18	26,259	130.76
	Strathfield	5,665	120.72	6,664	142.01	12,795	272.66

		Week ending				Total since January 2022	
		15 Jan 2022		08 Jan 2022			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Sydney[#]	14,273	57.94	20,674	83.92	36,869	149.67
	LHD Total[*]	52,842	75.84	62,976	90.38	121,438	174.29
Western Sydney	Blacktown	41,055	109.64	40,363	107.79	84,600	225.93
	Cumberland	25,018	103.59	27,549	114.06	54,703	226.49
	Parramatta[#]	16,014	62.26	18,435	71.68	35,990	139.93
	The Hills Shire	17,466	98.14	16,872	94.80	36,185	203.32
	LHD Total[*]	98,012	93.04	101,545	96.39	208,030	197.48
Far West	Balranald	33	14.11	124	53.04	159	68.01
	Broken Hill	553	31.64	1,209	69.17	1,815	103.84
	Central Darling	56	30.45	99	53.83	158	85.92
	Wentworth	232	32.89	250	35.45	501	71.03
	LHD Total[*]	874	28.99	1,682	55.80	2,633	87.35
Hunter New England	Armidale Regional	1,431	46.49	1,510	49.06	3,079	100.04
	Cessnock	3,380	56.35	3,546	59.11	7,028	117.16
	Dungog	263	27.91	309	32.79	581	61.66
	Glen Innes Severn	167	18.83	291	32.80	465	52.42
	Gunnedah	595	46.92	744	58.67	1,363	107.48
	Gwydir	68	12.70	117	21.86	190	35.49
	Inverell	692	40.97	874	51.75	1,588	94.02
	Lake Macquarie	12,444	60.44	12,579	61.09	25,635	124.50
	Liverpool Plains	138	17.46	351	44.41	499	63.14
	Maitland	8,012	94.08	7,901	92.77	16,237	190.65
	Mid-Coast	5,306	56.55	5,447	58.05	10,837	115.49
	Moree Plains	747	56.33	1,162	87.63	1,938	146.14
	Muswellbrook	433	26.44	697	42.56	1,247	76.14
	Narrabri	544	41.42	1,123	85.50	1,728	131.56
	Newcastle	11,531	69.64	12,960	78.27	25,428	153.58
	Port Stephens	4,766	64.86	4,803	65.36	9,864	134.24
	Singleton	941	40.11	1,237	52.73	2,238	95.39
	Tamworth Regional	3,491	55.82	4,392	70.23	8,022	128.27
	Tenterfield	94	14.26	196	29.72	306	46.41
	Upper Hunter Shire	291	20.52	665	46.90	1,011	71.30
	Uralla	169	28.11	142	23.62	334	55.56
	Walcha	90	28.72	150	47.86	250	79.77
	LHD Total[*]	55,563	58.34	61,153	64.21	119,791	125.78
Mid North Coast	Bellingen	159	12.23	395	30.39	598	46.01
	Coffs Harbour	1,027	13.29	4,001	51.77	5,405	69.94
	Kempsey	1,225	41.18	1,768	59.44	3,170	106.57
	Nambucca	497	25.09	842	42.51	1,379	69.63
	Port Macquarie-Hastings	3,333	39.43	4,957	58.65	8,615	101.92
	LHD Total[*]	6,241	27.66	11,963	53.01	19,167	84.94
Murrumbidgee	Albury	2,936	54.02	3,710	68.26	6,835	125.75
	Berrigan	98	11.20	135	15.43	242	27.66
	Bland	64	10.72	119	19.93	190	31.82
	Carrathool	24	8.57	92	32.87	127	45.37

		Week ending				Total since January 2022	
		15 Jan 2022		08 Jan 2022			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Coolamon	70	16.13	151	34.78	232	53.44
	Cootamundra-Gundagai Regional	175	15.58	336	29.91	561	49.93
	Edward River	53	5.83	143	15.74	207	22.79
	Federation	359	28.87	576	46.31	960	77.19
	Greater Hume Shire	505	46.92	475	44.13	1,046	97.18
	Griffith	1,471	54.42	1,638	60.60	3,256	120.46
	Hay	22	7.46	42	14.24	65	22.04
	Hilltops	1,092	58.38	932	49.83	2,101	112.33
	Junee	249	37.26	300	44.89	583	87.24
	Lachlan[#]	121	19.92	197	32.43	334	54.98
	Leeton	192	16.78	302	26.39	525	45.87
	Lockhart	64	19.48	101	30.75	175	53.27
	Murray River	49	4.04	404	33.34	455	37.55
	Murrumbidgee	106	27.06	111	28.34	229	58.46
	Narrandera	53	8.98	73	12.37	132	22.38
	Snowy Valleys	229	15.82	360	24.86	631	43.58
	Temora	100	15.86	205	32.50	311	49.31
	Wagga Wagga	2,511	38.48	3,325	50.95	6,148	94.21
	LHD Total[*]	10,443	35.03	13,606	45.64	25,110	84.23
	Ballina	2,027	45.42	2,175	48.74	4,312	96.62
	Byron	1,546	44.07	2,937	83.72	4,734	134.94
	Clarence Valley	994	19.24	2,158	41.77	3,267	63.24
	Kyogle	170	19.33	276	31.38	455	51.73
Northern NSW	Lismore	961	21.99	2,115	48.41	3,183	72.85
	Richmond Valley	645	27.49	1,276	54.38	1,953	83.23
	Tenterfield	94	14.26	196	29.72	306	46.41
	Tweed	5,490	56.60	7,753	79.93	13,938	143.69
	LHD Total[*]	11,862	38.22	18,731	60.35	31,916	102.83
	Bega Valley	1,276	37.01	1,853	53.75	3,159	91.63
	Eurobodalla	716	18.61	1,768	45.95	2,515	65.37
	Goulburn Mulwaree	1,825	58.62	3,140	100.86	5,052	162.28
Southern NSW	Queanbeyan-Palerang Regional	3,884	63.57	2,981	48.79	7,118	116.50
	Snowy Monaro Regional	1,296	62.32	1,723	82.86	3,085	148.35
	Upper Lachlan Shire	250	31.02	363	45.04	647	80.28
	Yass Valley	664	38.86	968	56.65	1,761	103.06
	LHD Total[*]	9,912	45.66	12,797	58.95	23,339	107.52
	Bathurst Regional	4,442	101.84	4,872	111.70	9,345	214.25
	Blayney	356	48.25	366	49.60	739	100.15
	Bogan	88	34.11	98	37.98	188	72.87
Western NSW	Bourke	82	31.66	270	104.25	375	144.79
	Brewarrina	15	9.31	74	45.93	96	59.59
	Cabonne	341	25.01	423	31.03	793	58.16
	Cobar	67	14.38	228	48.95	305	65.48

		Week ending				Total since January 2022	
		15 Jan 2022		08 Jan 2022			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Coonamble	174	43.96	201	50.78	382	96.51
	Cowra	221	17.34	425	33.35	661	51.87
	Dubbo Regional	7,276	135.45	7,614	141.74	15,144	281.91
	Forbes	265	26.75	180	18.17	479	48.35
	Gilgandra	164	38.69	216	50.96	383	90.35
	Lachlan#	121	19.92	197	32.43	334	54.98
	Mid-Western Regional	418	16.55	1,085	42.97	1,530	60.59
	Narromine	314	48.18	602	92.37	948	145.47
	Oberon	98	18.11	286	52.86	403	74.48
	Orange	3,196	75.29	3,839	90.43	7,273	171.33
	Parkes	827	55.74	538	36.26	1,469	99.01
	Walgett	109	18.31	401	67.36	518	87.01
	Warren	225	83.43	359	133.11	590	218.76
	Warrumbungle Shire	259	27.92	453	48.83	724	78.03
	Weddin	74	20.48	49	13.56	127	35.15
	*LHD Total**	19,113	67.06	22,717	79.71	42,726	149.91
NSW Total	**NSW Total**	578,840	71.55	646,922	79.97	1,275,616	157.68

Source - Notifiable Condition Information Management System, accessed as at 8pm 18 Jan 2022

* Local Health District total counts and rates includes tests for LHD residents only. Murrumbidgee includes Albury LGA residents.
# Local Government Area (LGA) spans multiple Local Health Districts.

Appendix B: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 9 January 2022

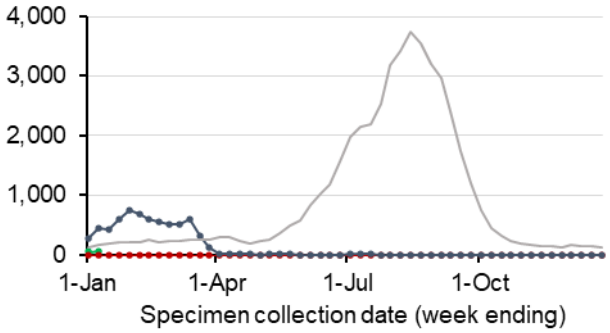
The reported testing numbers reflect the number of influenza PCR tests conducted. Not all samples are tested for all of the other respiratory viruses. Therefore, data presented may tend to under-represent current respiratory virus activity in NSW.

Testing numbers in NSW from 28 December 2020 – 9 January 2022

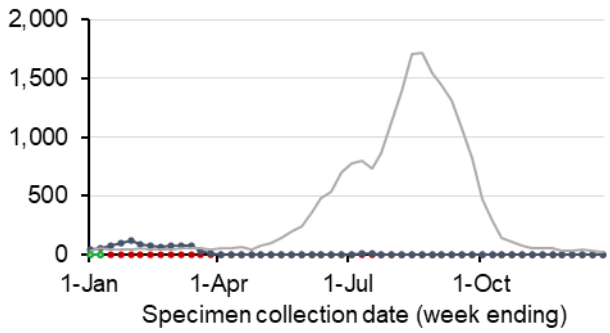
Specimen collection date	PCR tests conducted	Influenza A		Influenza B		Adeno-virus	Para-influenza	RSV	Rhino-virus	HMPV	Entero-virus
		No.	%Pos.	No.	%Pos.						
2021 Total	811,134	81	<0.01%	12	<0.01%	8,474	18,847	17,612	64,890	6,693	6,842
Month ending											
31 January*	63,814	1	<0.01%	0	-	416	88	3,275	3,541	23	560
28 February	54,010	2	<0.01%	0	-	419	106	2,386	8,667	22	910
28 March	42,760	0	-	0	-	507	354	1,909	8,891	18	1,187
2 May*	53,506	0	-	3	<0.01%	802	1,515	1,653	8,141	48	1,128
30 May	52,445	0	-	6	<0.01%	946	3,129	1,491	8,982	78	843
27 June	73,605	1	< 0.01%	0	-	1,551	7,104	2,794	9,915	635	811
26 July	78,704	0	-	0	-	1,463	4,603	3,014	5,089	1,991	587
29 August*	126,147	0	-	1	< 0.01%	869	1,497	852	2,252	2,035	259
26 September	75,074	0	-	0	-	321	151	124	715	454	70
31 October*	88,568	6	< 0.01%	0	-	304	59	40	1,898	188	82
28 November	55,275	3	< 0.01%	0	-	577	45	31	4,086	232	167
2 January*	46,776	68	0.15%	2	< 0.01%	299	196	43	2,713	969	238
Week ending											
5 December	10,675	3	0.03%	0	-	74	24	9	804	134	49
12 December	7,168	3	< 0.01%	0	-	67	27	8	639	197	53
19 December	7,968	7	0.01%	0	-	67	46	8	578	259	61
26 December	10,223	2	< 0.01%	2	< 0.01%	55	55	9	481	220	49
2 January	10,742	2	0.02%	0	-	36	44	9	211	159	26
9 January	9,588	4	0.04%	0	-	37	27	4	155	120	18

Notes: Preliminary laboratory data is provided by participating sentinel laboratories on a weekly basis and are subject to change. Serological diagnoses are not included. Data are pending from several labs for the weeks since 5 December due to high demand on testing laboratories in the past weeks.
HMPV – Human metapneumovirus
RSV - Respiratory syncytial virus
*Five-week period

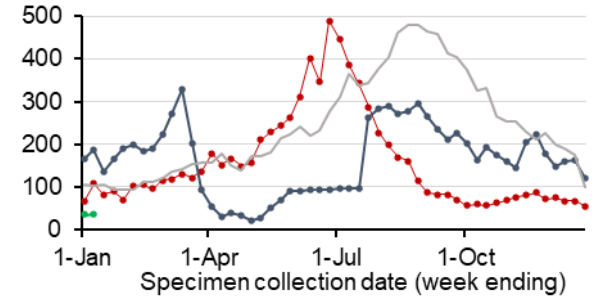
Influenza A



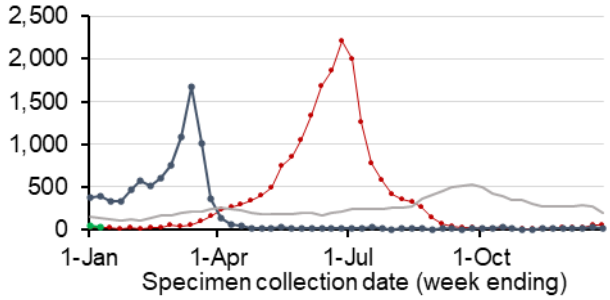
Influenza B



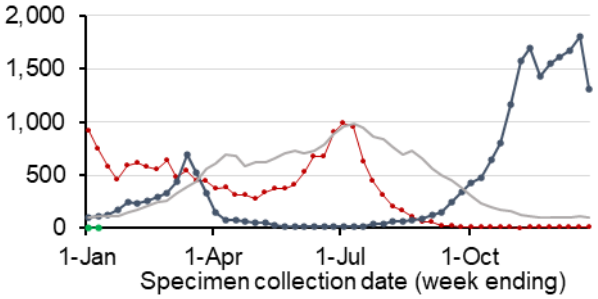
Adenovirus



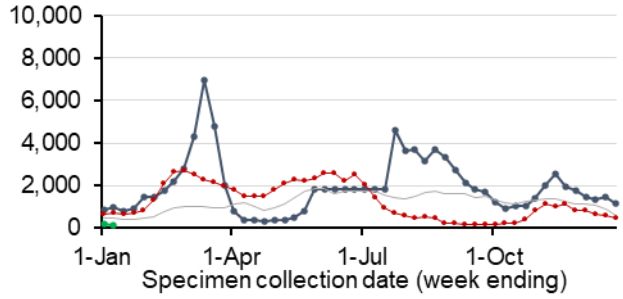
Parainfluenza



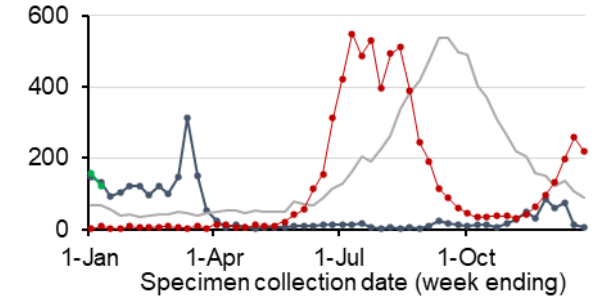
Respiratory Syncytial Virus



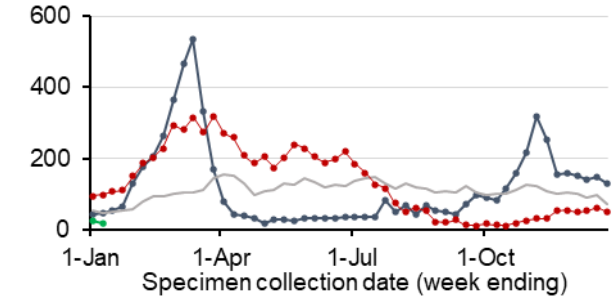
Rhinovirus



Human metapneumovirus



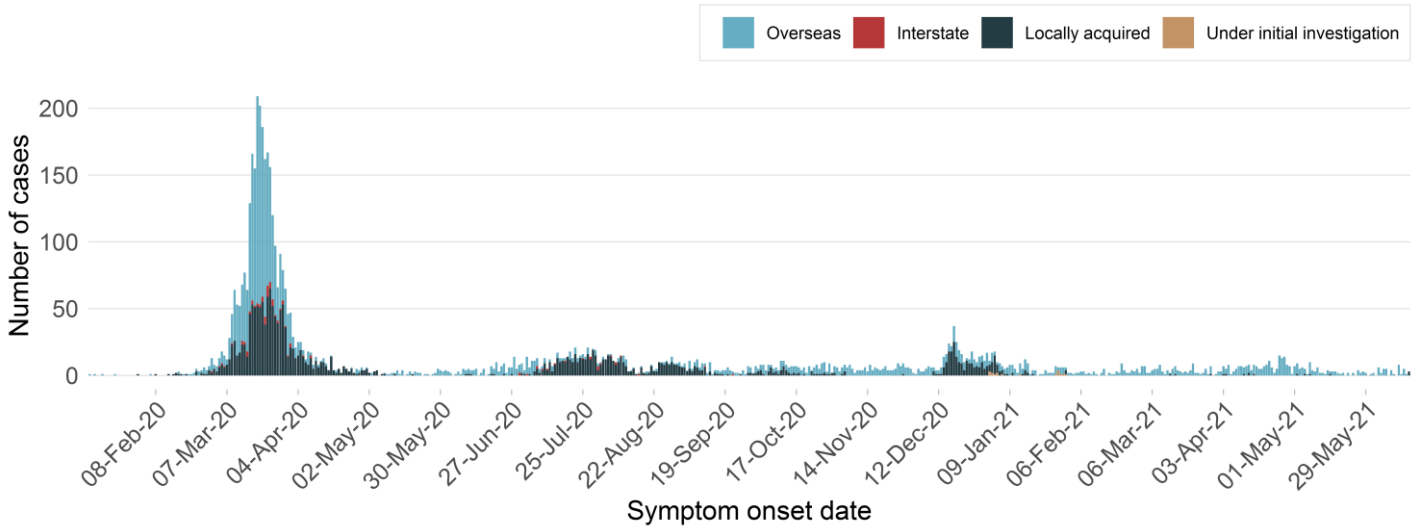
Enterovirus



Note: Preliminary laboratory data are provided by participating sentinel laboratories on a weekly basis and are subject to change. Serological diagnoses are not included. Not all samples are tested for all respiratory viruses. Therefore, data presented may tend to under-represent current respiratory virus activity in NSW. Data are pending from several labs for the weeks since 5 December due to high demand on testing laboratories in the past weeks.

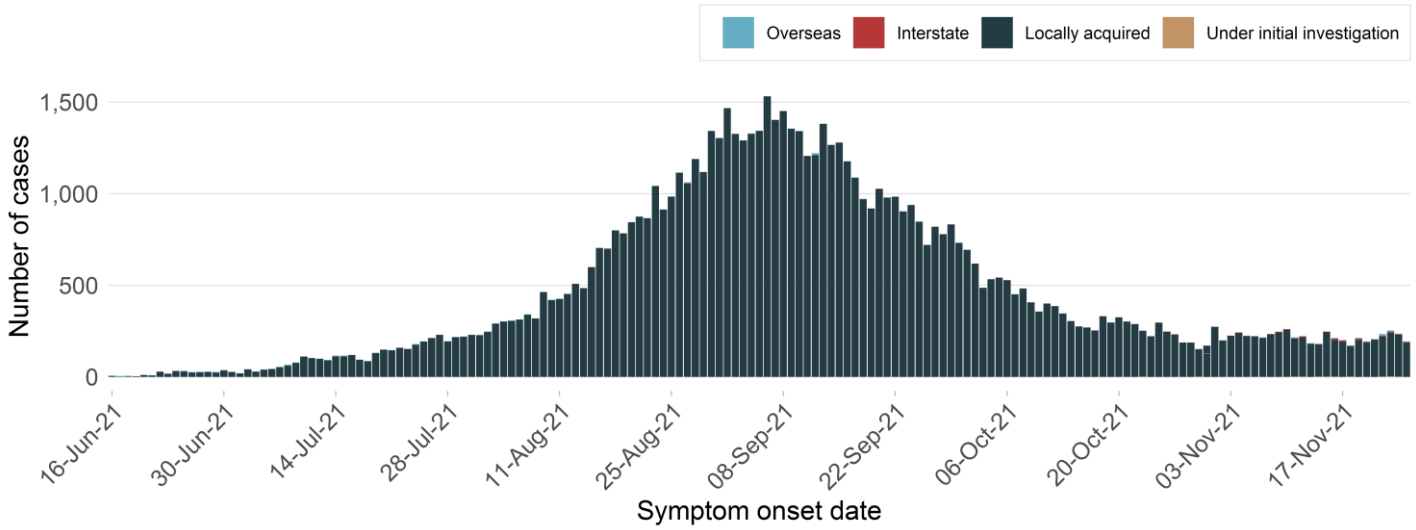
Appendix C: Additional tables and figures

PCR-confirmed COVID-19 cases by likely infection source and reported illness onset, NSW, 13 January 2020 to 15 June 2021



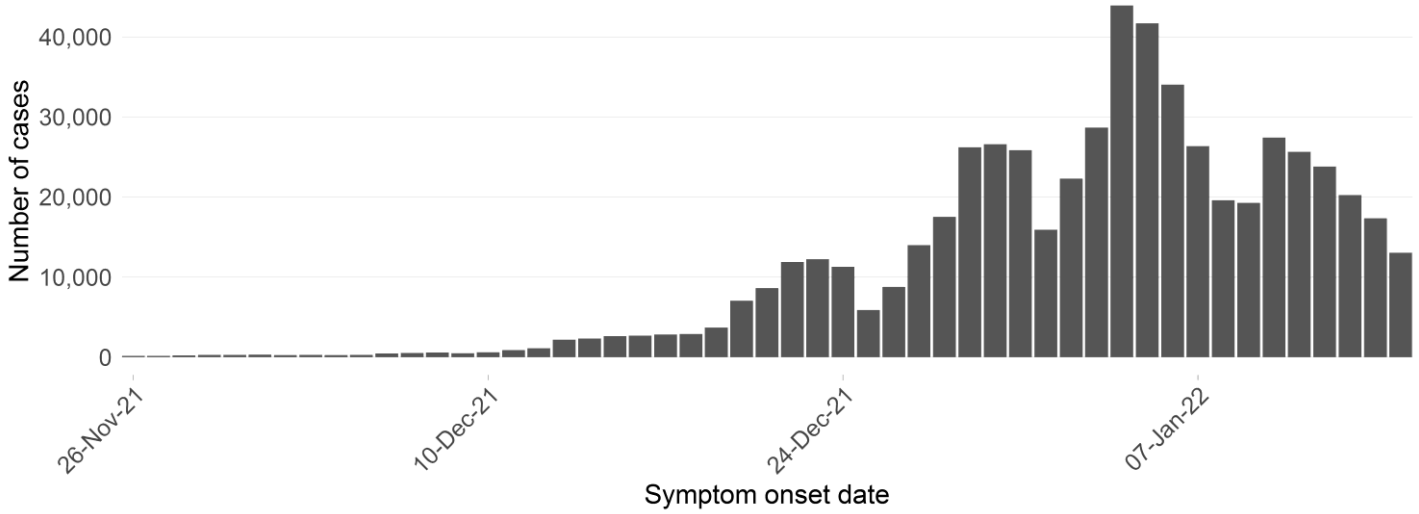
The date of the first positive test is used for cases who did not report symptoms.

PCR-confirmed COVID-19 cases by likely infection source and reported illness onset, NSW, 16 June to 25 November 2021



The date of the first positive test is used for cases who did not report symptoms.

PCR-confirmed COVID-19 cases by reported illness onset, NSW, 25 November 2021 to 15 January 2022



The date of the first positive test is used for cases who did not report symptoms.

Total PCR-confirmed COVID-19 cases by LHD of residence and week reported, NSW, 19 December 2021 to 15 January 2022

	Local Health District	Week ending				Total
		15 Jan	8 Jan	1 Jan	25 Dec	
Metropolitan Local Health Districts	South Western Sydney	35,062	38,800	17,525	4,085	95,472
	Western Sydney	28,971	37,899	15,859	4,346	87,075
	South Eastern Sydney	21,926	36,494	19,502	7,022	84,944
	Northern Sydney	16,454	22,093	10,718	3,662	52,927
	Sydney	16,299	25,423	12,420	5,413	59,555
	Illawarra Shoalhaven	10,941	8,256	2,845	779	22,821
	Nepean Blue Mountains	8,650	9,839	4,082	1,008	23,579
	Central Coast	6,810	7,323	2,790	1,087	18,010
Rural and Regional Local Health Districts	Hunter New England	14,301	18,876	7,828	4,860	45,865
	Northern NSW	5,388	5,075	1,720	719	12,902
	Murrumbidgee	4,129	3,186	743	200	8,258
	Western NSW	3,555	3,819	908	344	8,626
	Mid North Coast	2,865	3,275	1,080	499	7,719
	Southern NSW	2,558	2,095	747	99	5,499
	Far West	205	186	53	22	466
	Correctional settings	121	117	30	11	279
	Hotel Quarantine*	4	3	2	0	9
	NSW[#]	181,549	226,121	100,763	34,556	542,989

* Includes people who were placed into Hotel Quarantine after time in the community.

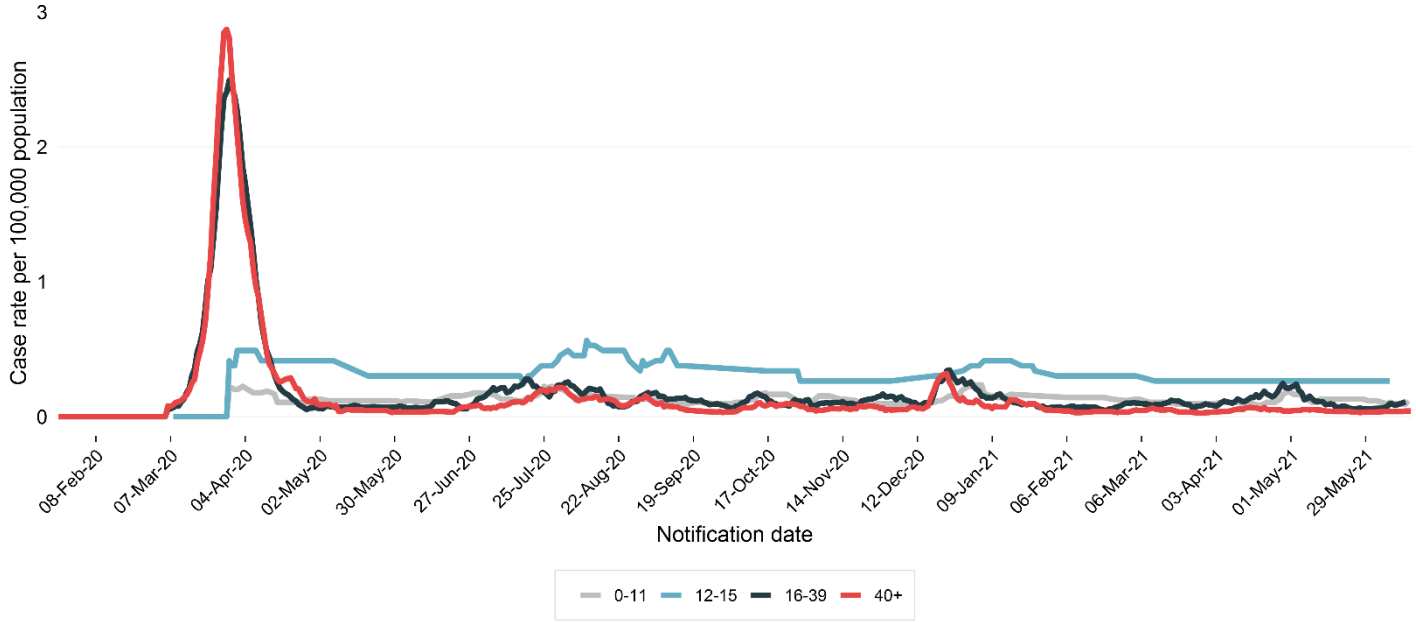
[#] Includes people with a usual place of residence outside of NSW, and those for whom LHD was not available at the time of data extraction.

Total PCR confirmed COVID-19 cases by vaccination status and week reported, NSW, 16 June 2021 to 15 January 2022

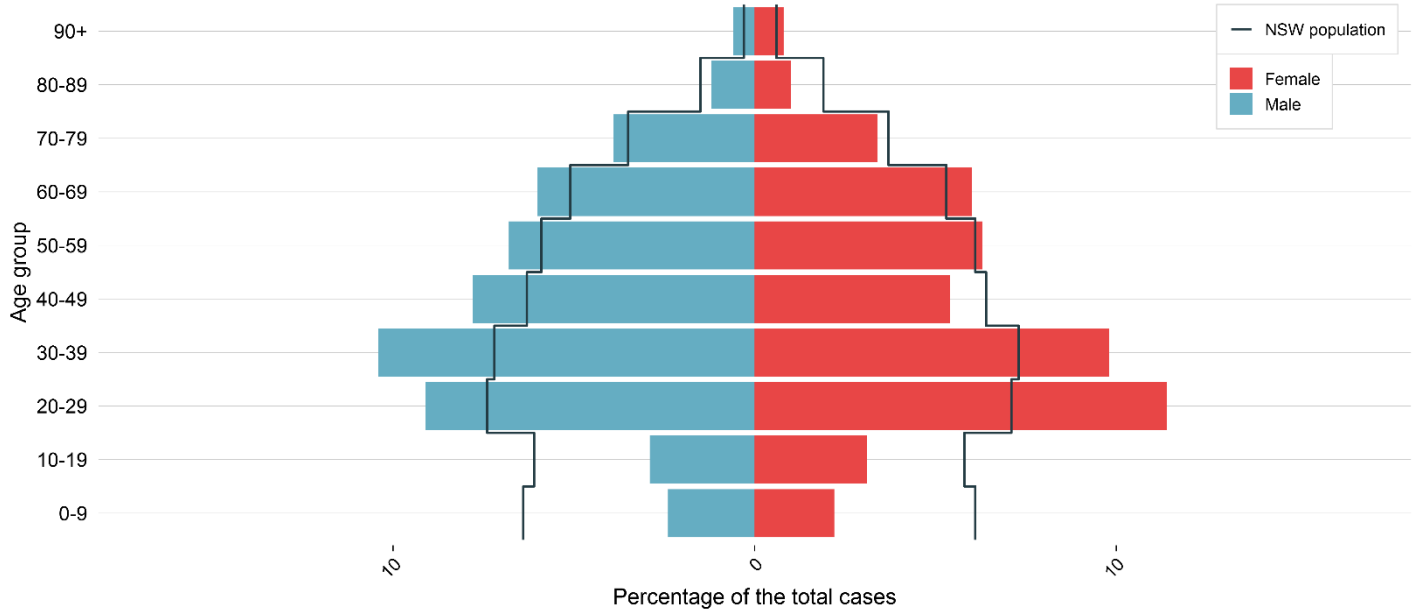
	Third or more effective doses	Two effective doses	One effective dose	No effective dose	Under investigation*	Total
16 Jun - 25 Nov 2021	2 (<1%)	6,866 (9%)	6,865 (9%)	53,165 (71%)	8,420 (11%)	75,318
26 Nov 2021 - 15 Jan 2022	17,350 (3%)	372,912 (67%)	4,644 (1%)	55,697 (10%)	109,415 (20%)	560,018
Month						
June 2021	0 (0%)	3 (1%)	11 (5%)	221 (93%)	2 (1%)	237
July 2021	0 (0%)	70 (2%)	98 (3%)	3,099 (94%)	40 (1%)	3,307
August 2021	0 (0%)	557 (3%)	806 (4%)	16,528 (87%)	1,089 (6%)	18,980
September 2021	0 (0%)	2,614 (7%)	3,898 (11%)	22,031 (63%)	6,329 (18%)	34,872
October 2021	2 (<1%)	1,875 (15%)	1,738 (14%)	8,157 (66%)	589 (5%)	12,361
November 2021	3 (<1%)	2,157 (33%)	337 (5%)	3,592 (55%)	452 (7%)	6,541
December 2021	2,036 (2%)	92,663 (70%)	1,140 (1%)	12,918 (10%)	23,411 (18%)	132,168
Week ending						
25 Dec 2021	481 (1%)	24,902 (72%)	285 (1%)	2,915 (8%)	5,973 (17%)	34,556
1 Jan 2022	1,908 (2%)	70,769 (70%)	813 (1%)	8,515 (8%)	18,758 (19%)	100,763
8 Jan 2022	6,798 (3%)	153,704 (68%)	1,801 (1%)	19,141 (8%)	44,677 (20%)	226,121
15 Jan 2022	8,057 (4%)	112,762 (62%)	1,526 (1%)	21,459 (12%)	37,745 (21%)	181,549

* Vaccination status is updated regularly using both the Australian Immunisation Register and the patient's interview. See Glossary for details of vaccination status categories. The increase in cases with a vaccination status Under investigation since December 2021 is due to no record being found in AIR, and NSW Health no longer interviewing every case, such that cases cannot provide further information about vaccination. These cases likely represent a mix of those with two or more effective doses, and those with no effective dose.

Seven day backward rolling average of PCR-confirmed COVID-19 cases rate per 100,000 population by age and notification date, NSW, from 1 January 2020 to 15 June 2021



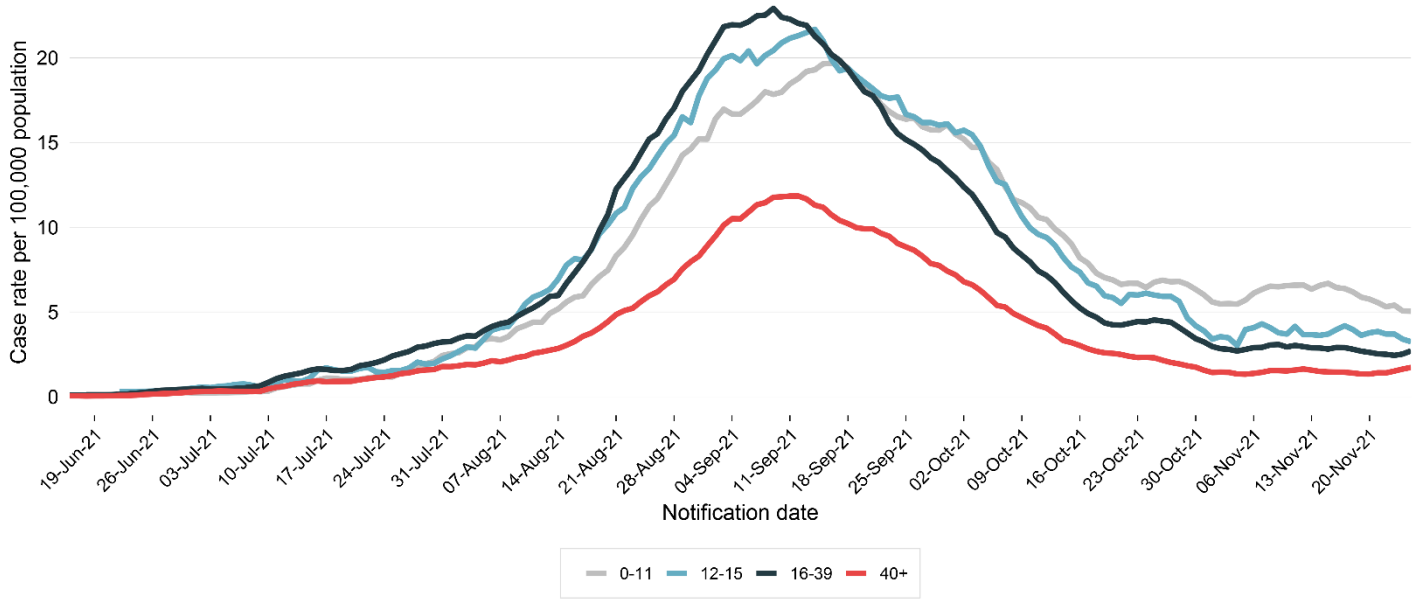
Total PCR-confirmed case percentage (n = 5,430) by age and gender, NSW, from 1 January 2020 to 15 June 2021



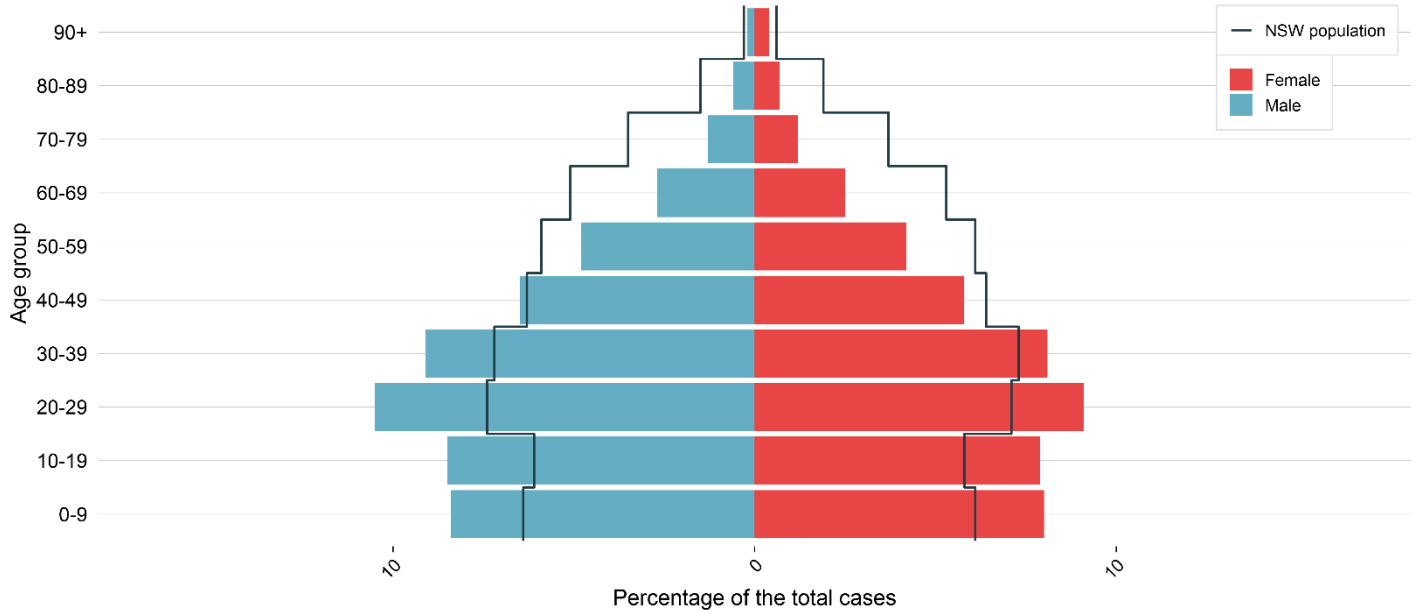
Note that the figure does not include cases for whom gender is not specified or non-binary.

Cases before 16 June 2021 had a median age 39 years, and interquartile range (IQR) = 27-57 years.

Seven day backward rolling average of PCR-confirmed COVID-19 cases rate per 100,000 population by age and notification date, NSW, from 16 June to 25 November 2021



Total PCR-confirmed case percentage (n = 75,277) by age and gender, NSW, from 16 June to 25 November 2021



Note that the figure does not include cases for whom gender is not specified or non-binary.

Cases between 16 June 2021 and 25 November 2021 were younger, with a median age = 28 years and IQR = 15-44 years.

Hospitalisations among people with PCR-confirmed COVID-19, by age group, NSW, 1 January 2020 to 15 January 2022

Age-group (years)	1 Jan 2020 – 15 Jun 2021		16 Jun – 25 Nov 2021		26 Nov 2021 – 15 Jan 2022	
	Hospitalised	Percentage of cases hospitalised	Hospitalised	Percentage of cases hospitalised	Hospitalised	Percentage of cases hospitalised
0-9	5	2%	290	2%	289	1%
10-19	8	2%	359	3%	191	<1%
20-29	23	2%	970	7%	632	<1%
30-39	43	4%	1,255	10%	736	1%
40-49	41	6%	1,293	14%	515	1%
50-59	59	8%	1,269	19%	635	1%
60-69	85	13%	1,046	27%	844	2%
70-79	68	17%	764	40%	1102	7%
80-89	40	33%	508	54%	1067	17%
90+	13	31%	128	54%	340	19%
Total	385	7%	7,882	10%	6,351	1%

* There is often a delay between a person becoming ill with COVID-19 and subsequently requiring a hospitalisation or dying. Since 16 June 2021, the median time between onset and hospitalisation is 4 days and between onset and death is 12 days. Therefore hospitalisations and deaths are under-reported for the most recently notified cases.

ICU hospitalisations among people with PCR-confirmed COVID-19, by age group, NSW, 1 January 2020 to 15 January 2022

Age-group (years)	1 Jan 2020 – 15 Jun 2021		16 Jun – 25 Nov 2021		26 Nov 2021 – 15 Jan 2022	
	Admitted to ICU	Percentage of cases admitted to ICU	Admitted to ICU	Percentage of cases admitted to ICU	Admitted to ICU	Percentage of cases admitted to ICU
0-9	0	0%	10	<1%	12	<1%
10-19	2	1%	35	<1%	12	<1%
20-29	4	<1%	120	1%	36	<1%
30-39	14	1%	186	1%	58	<1%
40-49	12	2%	225	2%	62	<1%
50-59	23	3%	334	5%	94	<1%
60-69	41	6%	285	7%	123	<1%
70-79	35	9%	208	11%	135	1%
80-89	13	11%	58	6%	60	1%
90+	1	5%	1	1%	8	<1%
Total	145	3%	1,462	2%	600	<1%

Deaths following recent PCR-confirmed infection with COVID-19, by age group and location, 1 January 2020 to 25 November 2021

Age-group (years)	1 January 2020 – 15 June 2021		16 June 2021 – 25 November 2021				
	Number of deaths	Case fatality rate	Number of deaths	Case fatality rate	Location of death		
					Health care facility	Aged care facility	Home
0-9	0	0%	0	0%	-	-	-
10-19	0	0%	1	<1%	1	0	0
20-29	0	0%	6	<1%	4	0	2
30-39	0	0%	15	<1%	11	0	4
40-49	0	0%	28	<1%	22	0	6
50-59	1	<1%	66	1%	57	0	9
60-69	4	1%	105	3%	93	1	11
70-79	15	4%	135	7%	126	6	3
80-89	20	16%	165	18%	148	10	7
90+	16	38%	63	27%	47	16	0
Total	56	1%	584	1%	509	33	42

Before 16 June 2021, location of death was not well-recorded. Among deaths occurring at home for cases in the period 16 June – 25 November 2021, the majority (26/42, 62%) were diagnosed after death.

Hospitalisations, ICU admissions and deaths among cases with PCR-confirmed COVID-19, by vaccination status, NSW, from 1 January 2020 to 25 November 2021

Vaccination status	Total cases	Hospitalised (% of total cases)	Hospitalised and in ICU (% of total cases)	Death (% of total cases)
1 January 2020 – 15 June 2021				
Total	5,431	385 (7.1%)	145 (2.7%)	56 (1.0%)
16 June 2021 – 25 November 2021				
Two or more effective doses	6,868	578 (8.4%)	66 (1.0%)	87 (1.3%)
One effective dose	6,865	588 (8.6%)	94 (1.4%)	75 (1.1%)
No effective dose	53,165	5,472 (10.3%)	1,058 (2.0%)	419 (0.8%)
Under investigation	8,420	1,234 (14.7%)	238 (2.8%)	8 (0.1%)
Total	75,318	7,872 (10.5%)	1,456 (1.9%)	589 (0.8%)

* Note, these categories are not mutually exclusive. Hospitalised includes cases admitted to ICU; deaths may occur with or without being admitted to hospital or ICU.

- The percentage of cases who died is higher for those with two or more effective doses compared to those with no effective dose because elderly people were more likely to have received two doses before or during this period, and the group with no effective dose contains a considerable proportion of children aged 0-11 who were ineligible for vaccination throughout this period, and typically have mild illnesses. Among cases in the period from 16 June to 25 November 2021, the median age of those who died was 83.5 (interquartile range (IQR) = 76-90); for those with no effective dose it was 72 (IQR 60-82).

Proportion of PCR confirmed cases with a severe outcome (ICU and/or death) amongst all cases, by age, time of infection, and vaccination status, NSW, 1 January 2020 to 15 June 2021

Age-group (years)	1 Jan 2020 - 15 Jun 2021		16 Jun 2021 – 25 Nov 2021			
			Two or more effective doses		Less than two effective doses	
0-9	0%	(0 / 251)	-	-	<1%	(10 / 12,409)
10-19	<1%	(1 / 325)	0%	(0 / 156)	<1%	(30 / 10,576)
20-29	<1%	(4 / 1,115)	<1%	(2 / 1,046)	1%	(95 / 11,671)
30-39	1%	(15 / 1,098)	<1%	(5 / 1,409)	2%	(161 / 9,698)
40-49	2%	(12 / 718)	<1%	(4 / 1,304)	3%	(190 / 6,692)
50-59	4%	(30 / 710)	1%	(16 / 1,160)	6%	(284 / 4,735)
60-69	7%	(44 / 656)	2%	(17 / 817)	10%	(254 / 2,551)
70-79	12%	(46 / 394)	7%	(37 / 563)	18%	(196 / 1,089)
80-89	21%	(26 / 122)	11%	(34 / 299)	30%	(156 / 517)
90+	38%	(16 / 42)	21%	(24 / 114)	42%	(39 / 92)
Total	4%	(194 / 5,431)	2%	(139 / 6,868)	2%	(1,415 / 60,030)

* Less than two effective doses combines those with one and no effective dose.

- Prior to 15 June 2021, 4% of cases had a severe outcome, with an increasing risk of severe outcome with increasing age (from <1% for those aged under 30 to 38% for those aged 90+ years).
- Although vaccination was available in Australia before 15 June 2021, there were relatively few cases between 22 February 2021 (when vaccination began) and 15 June 2021.
- The total proportion of cases with a severe outcome is lower in the period from 16 June – 25 November 2021 compared to before this date; this is because infections were in a younger cohort in the later period.
- In the period from 16 June to 25 November 2021, the likelihood of a severe outcome for individuals with less than two effective doses is similar to the pre-delta period, while the likelihood of a severe outcome is substantially reduced amongst individuals with two or more effective doses.
- Increased age remains a significant predictor of increased risk of a severe outcome, but the protective effects of vaccination remain apparent for every age group.

Glossary

Term	Description
PCR case	A person infected who has tested positive to a validated specific SARS-CoV-2 nucleic acid test (in NSW, this has been principally via polymerase chain reaction (PCR) tests) or has had the virus identified by electron microscopy or viral culture. Blood tests (serology) is only used in special situations following a public health investigation and require other criteria to be met in addition to the positive serology result (related to timing of symptoms and contact with known COVID-19 cases). Case counts include: - NSW residents diagnosed in NSW who were infected overseas or in Australia (in NSW or interstate), and - interstate or international visitors diagnosed in NSW who were under the care of NSW Health at the time of diagnosis
RAT case	A person who has reported a positive result with a SARS-CoV-2 rapid antigen test (RAT). From 12 January 2022, it was mandatory to report positive results to NSW Health via the Service NSW app. NSW Health receives no information about negative test results. RAT results will be entered in the NSW Health database for COVID cases from 20 January 2022.
Incubation period	The time between a case becoming infected and developing symptoms. The incubation period for COVID-19 is between 1 and 14 days prior to symptom onset.
Overseas acquired case	Cases who likely acquired their infection overseas
Interstate acquired case	Case who likely acquired their infection interstate.
Three effective doses	Cases reported as having three effective doses have had a third dose of COVID-19 vaccine at least 60 days after a valid second dose and 14 days prior to COVID infection. This includes people who are immunocompromised and have had a third primary dose (recommended 2-6 months after second dose), and non-immunocompromised people who have had a booster dose.
Two effective doses	Cases reported as having received two effective doses have received their second vaccine dose at least 14 days prior to known exposure to COVID-19, and have not yet received an effective third dose.
One effective dose	Cases reported as having one effective dose received their first dose of a two-dose vaccination course at least 21 days prior to known exposure to COVID-19, or received their second dose of a two-dose vaccination course less than 14 days prior to known exposure to COVID-19.
No effective dose	Cases reported as no effective dose received their first dose of a vaccination course less than 21 days prior to known exposure to COVID-19, or have not received any vaccine dose. Using the phrase “no effective dose” indicates that an insufficient period of time has elapsed to allow for maximal immune response provided by the vaccine. It does not indicate that vaccines are ineffective. Historical cases in children aged 5-11 between 16 June 2021 and 9 January 2022 have been assigned No effective dose, as have all cases in children aged 0-4 since 16 June 2021.
Under investigation	Cases reported as under investigation are those whose vaccination status has not yet been determined via searching the Australian Immunisation Register and/or via case interview.
Hospitalisation	People with COVID-19 can be hospitalised because of the disease but may also be hospitalised for other reasons not related to their COVID-19 diagnosis. For the purposes of surveillance, reported hospitalisation counts include all people who were admitted to any hospital ward for more than 1 day, around the time of their COVID-19 diagnosis. The count does not include people managed in the community (e.g., including Hospital in the Home schemes).
Death	A COVID-19 death is defined for surveillance purposes as a death in a confirmed COVID-19 case, unless there is a clear alternative cause of death that cannot be related to COVID-19 (e.g., trauma). There should be no period of complete recovery from COVID-19 between illness and death.
Variants of concern	This report reflects the recommendations of Australia’s Communicable Diseases Genomics Network (CDGN) for reporting of Variants of Concern (VoC) in NSW.
Pneumonia presentations	Pneumonia presentations to Emergency Departments include people with diagnoses of viral, bacterial, atypical or unspecified pneumonia, and Legionnaires’ disease, but excludes ‘pneumonia with influenza’ and provides an indicator of more severe respiratory conditions.

Bronchiolitis presentations	Bronchiolitis is a common disease of infants often caused by respiratory syncytial virus (RSV). Public health measures introduced in 2020 around social distancing and improved hygiene practices coincided with a large decrease in bronchiolitis presentations for the majority of 2020. A rise in bronchiolitis presentations in the later part of 2020 corresponds to an increase in RSV detections (see Appendix B). Since 16 June 2021, there has again been a steady decrease in bronchiolitis presentations.
FluTracking	FluTracking is an online weekly survey asking participants to report flu-like symptoms. It usually runs only between May and October in line with flu season but has continued every week since the start of the pandemic. Members of the public are encouraged to enrol and contribute to the FluTracking initiative: https://info.flutracking.net/

Dates used in COVID-19 reporting

Event	Date name	Source
Person first starts to feel unwell	Date of symptom onset	The date that the case reports their symptoms commenced, or the date of test if self-report information is not available.
Person has a PCR swab taken, or performs a rapid antigen test	Date of test	This date is provided to NSW Health by the laboratory when the PCR test result (positive or negative) is notified, or by the person when reporting their test result.
Laboratory or case notifies NSW Health of result	Date of notification	For PCR tests, this date is provided to NSW Health by the laboratory. Laboratories prioritise notification of positive results to allow prompt public health action. Positive PCR cases: The date of notification is collected by NSW Health on the day of notification. Cases are informed of their diagnosis by their doctor or public health staff as soon as the result is available. The date of notification to NSW Health is usually the same day as the date the case finds out about the result. Negative PCR cases: Some laboratories notify NSW Health of negative results in batches at regular intervals. For these laboratories the date of notification to NSW Health does not reflect the date the negative result was available at the laboratory. NSW Health does not collect information on the date the person was informed of the result. Positive RAT cases: The date of notification is collected by NSW Health on the day of notification.