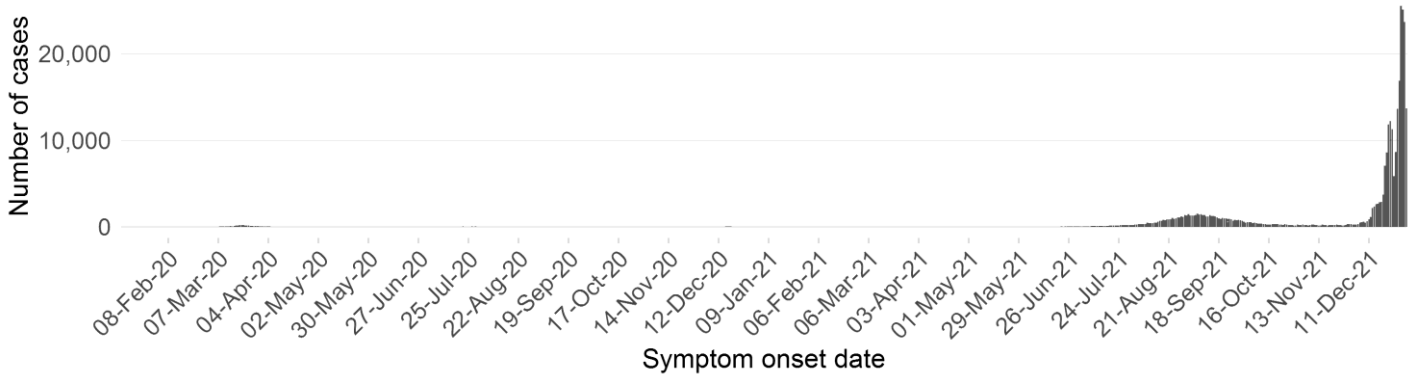
COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 52 ENDING 1 JANUARY 2022

Published 13 January 2022

Summary for the week 26 December 2021 to 1 January 2022 (inclusive)

Figure 1. COVID-19 cases by reported illness onset, NSW, from 13 January 2020 to 1 January 2022



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

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

	1 Jan 2020 – 15 Jun 2021 (pre-Delta)	16 Jun 2021 – 25 Nov 2021 (Delta variant)	26 Nov 2021 – 1 Jan 2022 (Omicron emergence)	Total
Total cases	5,431 (100%)	75,319 (100%)	152,440 (100%)	233,190 (100%)
Hospitalised*	386 (7%)	7,885 (10%)	2,058 (1%)	10,329 (4%)
Admitted to ICU*	146 (3%)	1,467 (2%)	197 (<1%)	1,810 (1%)
Deaths*	56 (1%)	584 (1%)	34 (<1%)	674 (<1%)
Tests	6,858,438	15,811,738	3,992,740	26,662,916

* 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.

In the week ending 1 January 2022:

- There were 100,837 total cases reported, nearly triple those reported in the week ending 25 December 2021 (34,569).
- Since 26 November 2021, when the first Omicron case was detected in NSW, 3,978 cases have been whole genome sequenced, of which 1,376 were Omicron and 2,602 were Delta variants of SARS-CoV-2. Note that the samples with whole genome sequencing are not representative of all samples.
- The ten LGAs with the highest number of cases were:
  - Canterbury-Bankstown, 7,177 (7%) cases
  - Blacktown, 5,917 (6%) cases
  - Sydney, 5,261 (5%) cases
  - Sutherland Shire, 4,937 (5%) cases
  - Cumberland, 4,191 (4%) cases
  - Liverpool, 4,114 (4%) cases
  - Fairfield, 3,697 (4%) cases
  - Bayside, 3,684 (4%) cases
  - Randwick, 3,423 (3%) cases
  - Campbelltown, 3,358 (3%) cases
  - 55,078 (55%) cases were residents across 119 other LGAs
- There were 20 deaths in people diagnosed with COVID, compared with 8 in the week ending 25 December 2021.
- Among those aged 12 and over, 77.5% of all cases, and 92.5% of the population were fully vaccinated.
- Testing rates decreased compared to the previous week (down 31%).

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Table 2. Measures of public health action, NSW, for the period from 19 December 2021 to 1 January 2022

	Week ending 1 Jan	Week ending 25 Dec
Proportion total cases notified to NSW Health by the laboratory within 1 day of specimen collection	27% (26,883/100,837)	25% (8,504/34,569)
Total cases contacted by text message within 1 day of notification to NSW Health	98% (98,601/100,837)	99% (34,193/34,569)
Number of high-risk cases fully interviewed by public health staff within 1 day of responding to the NSW Health text message*	51% (3,993/7,884)	80% (2,791/3,506)
Total cases fully interviewed by public health staff within 1 day of notification to NSW Health#	9% (8,638/100,837)	22% (7,553/34,569)
Number of high-risk or un-responded cases to be interviewed by public health staff within 1 day of notification to NSW Health*	29% (5,462/18,917)	59% (3,800/6,432)

* In the week ending 1 January, cases were considered high risk if they identify as Aboriginal and/or Torres Strait Islander, or had visited or worked in the following settings in the last week: Aboriginal community, aged care or disability service, hospital, or prison/detention.
# Due to the increase in case numbers, NSW Health is no longer interviewing all COVID-19 cases.

Section 1: Case overview

Figure 2. COVID-19 case count by symptom onset date*, with 7 day backward rolling average, NSW, from 16 June 2021 to 1 January 2022

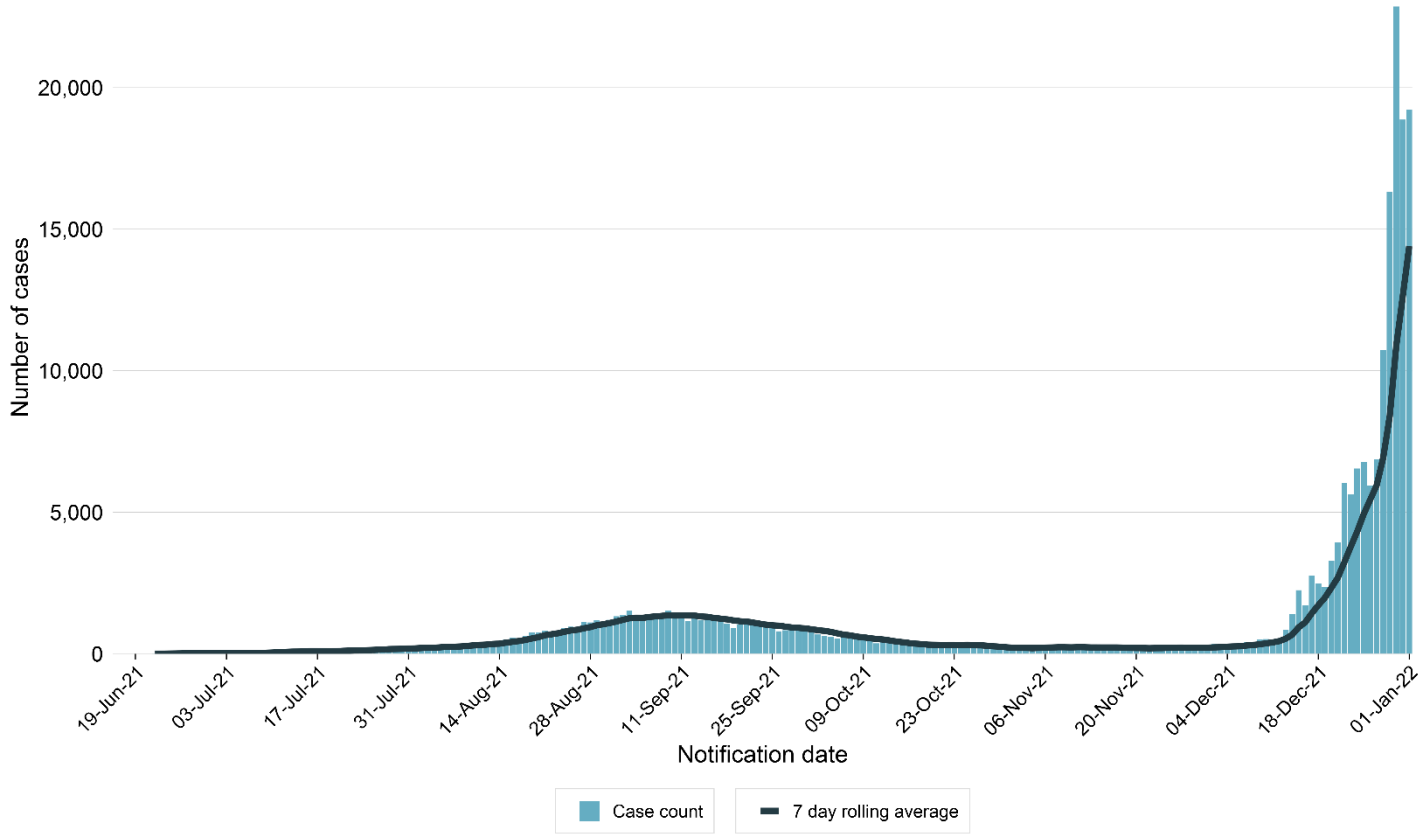


Table 3. Demographics of infections among total cases by gender and age, NSW, 1 January 2020 to 1 January 2022

	Week ending		26 Nov 2021 – 1 Jan 2022	16 Jun 2021 – 25 Nov 2021	1 Jan 2020 – 15 Jun 2021
	1 Jan 2022	25 Dec 2021			
Gender					
Female	51,215 (51%)	17,031 (49%)	76,604 (50%)	35,772 (47%)	2,670 (49%)
Male	49,428 (49%)	17,493 (51%)	75,542 (50%)	39,505 (52%)	2,760 (51%)
Non-specified or non-binary	194 (<1%)	45 (<1%)	294 (<1%)	42 (<1%)	1 (<1%)
Age group					
0-9	6,265 (6%)	1,752 (5%)	9,643 (6%)	12,409 (16%)	251 (5%)
10-19	12,860 (13%)	5,173 (15%)	20,744 (14%)	12,318 (16%)	325 (6%)
20-29	29,694 (29%)	12,410 (36%)	48,135 (32%)	14,744 (20%)	1,115 (21%)
30-39	19,391 (19%)	6,741 (20%)	28,946 (19%)	12,885 (17%)	1,098 (20%)
40-49	12,642 (13%)	3,700 (11%)	18,020 (12%)	9,269 (12%)	718 (13%)
50-59	10,564 (10%)	2,662 (8%)	14,322 (9%)	6,747 (9%)	710 (13%)
60-69	5,725 (6%)	1,310 (4%)	7,664 (5%)	3,869 (5%)	656 (12%)
70-79	2,494 (2%)	556 (2%)	3,349 (2%)	1,902 (3%)	394 (7%)
80-89	940 (1%)	215 (1%)	1,276 (1%)	939 (1%)	122 (2%)
90+	251 (<1%)	48 (<1%)	328 (<1%)	237 (<1%)	42 (1%)
Total	100,837 (100%)	34,569 (100%)	152,440 (100%)	75,319 (100%)	5,431 (100%)

Figure 3. Seven day backward rolling average of COVID-19 cases rate per 100,000 population by age and notification date, NSW, from 16 June 2021 to 1 January 2022

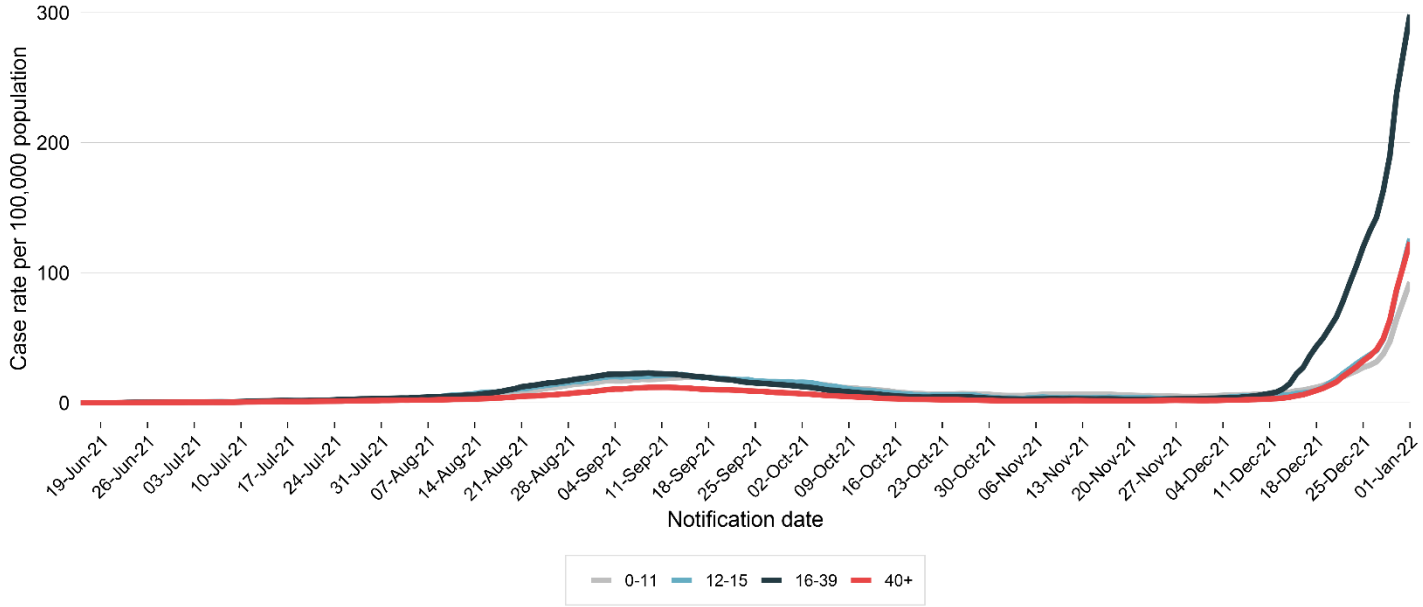
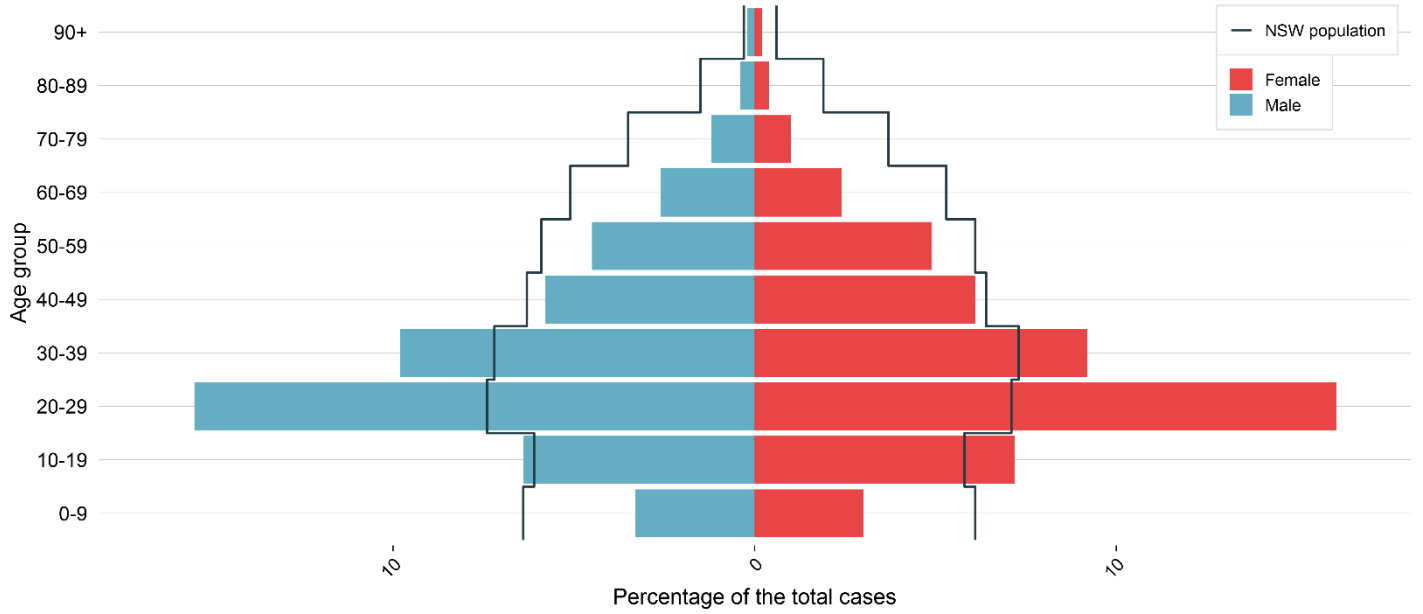


Figure 4. Current wave total case percentage (n = 152,135) by age and gender, NSW, from 26 November 2021 to 1 January 2022



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

- Cases nearly tripled in the week ending 1 January 2022, compared to the previous week.
- Cases since 26 November 2021 have been concentrated in the 10-49 years age group, and especially in the 20-29 years age group. The median age of cases since 26 November 2021 was 29 (interquartile range (IQR) = 21-43). Cases aged 20-29 years are over-represented among the cases relative to their proportion in the NSW population by a factor of approximately two.
- This may be due to increased social interaction in this age group, particularly during the Christmas and New Year period.
- Case rates for those aged 12-15 and 40+ years increased similarly since 26 November 2021, while rates for those aged 0-11 have been slightly lower since the week of 25 December 2021.

Section 2: Variants in NSW

Table 4. Variants identified among COVID-19 cases by week reported, NSW, 1 January 2020 to 1 January 2022

Variant	Week ending				26 Nov 2021 – 1 Jan 2022	16 Jun 2021 – 25 Nov 2021	1 Jan 2020 – 15 Jun 2021
	1 Jan*	25 Dec*	18 Dec	11 Dec			
Total	260	369	1,138	1,165	4,044	16,614	297
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)	30	70	390	1,048	2,620	16,598	73
Omicron (B.1.1.529)	230	299	748	117	1,424	-	-

***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.

Table 5. Demographics of confirmed and probable Omicron infections, Delta infections, and infections without genomic sequencing by gender, age, vaccination status and clinical severity, NSW, 26 November 2021 to 1 January 2022

	Confirmed Omicron Cases	Probable Omicron Cases^	Confirmed Delta Cases	Not Sequenced
Gender				
Female	736 (51%)	1,473 (50%)	1,242 (47%)	73,153 (50%)
Male	709 (49%)	1,442 (49%)	1,374 (52%)	72,017 (50%)
Not stated	4 (<1%)	9 (<1%)	6 (<1%)	275 (<1%)
Age group*				
0-9	33 (2%)	83 (3%)	378 (14%)	9,149 (6%)
10-19	249 (17%)	516 (18%)	461 (18%)	19,518 (13%)
20-29	654 (45%)	1,446 (49%)	586 (22%)	45,449 (31%)
30-39	178 (12%)	442 (15%)	410 (16%)	27,916 (19%)
40-49	122 (8%)	202 (7%)	325 (12%)	17,371 (12%)
50-59	89 (6%)	145 (5%)	196 (7%)	13,892 (10%)
60-69	44 (3%)	56 (2%)	140 (5%)	7,424 (5%)
70-79	38 (3%)	21 (1%)	83 (3%)	3,207 (2%)
80-89	33 (2%)	12 (<1%)	37 (1%)	1,194 (1%)
90+	9 (1%)	1 (<1%)	6 (<1%)	312 (<1%)
Vaccination status				
Fully vaccinated	1,152 (80%)	2,349 (80%)	1,268 (48%)	103,289 (71%)
Partially vaccinated	15 (1%)	9 (0%)	47 (2%)	1,041 (1%)
No effective dose	32 (2%)	44 (2%)	450 (17%)	2,240 (2%)
Under investigation#	209 (14%)	425 (15%)	327 (12%)	27,215 (19%)
Not eligible (aged 0-11 years)	41 (3%)	97 (3%)	530 (20%)	11,660 (8%)
Clinical severity†				
Hospitalised	44 (3%)	14 (<1%)	84 (3%)	1,715 (1%)
ICU	38 (3%)	2 (<1%)	63 (2%)	59 (<1%)
Deaths	3 (<1%)	2 (<1%)	9 (<1%)	20 (<1%)
Reinfections	4 (<1%)	8 (<1%)	0 (0%)	312 (<1%)
Total	1,449 (100%)	2,924 (100%)	2,622 (100%)	145,445 (100%)

* Does not include people with no birth date recorded
# Vaccination status is updated regularly using both the Australian Immunisation Register and the patient's interview.
^ Probable Omicron cases are confirmed cases that are yet to have genomic sequencing but have PCR results that show an S gene dropout, a feature caused by a mutation in the Omicron variant. Detection and reporting of S gene dropout is subject to lab capacity. Following genomic sequencing, these cases will be reported with their confirmed variant.
† In this table, cases are classified according to their most severe outcome (e.g., a person who was admitted to hospital and then died is counted only as a death). Numbers in this table will not match other outcome counts where categories are not mutually exclusive.

- 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.

- Approximately half of all confirmed and probable Omicron cases are in the 20-29 year age group. This is also the most common age group for confirmed Delta cases, but there is a wider spread of cases across age groups for confirmed Delta cases with only 22% being in the 20-29 year age group.
- Approximately 80% of confirmed and probable Omicron cases are fully vaccinated, while only 48% of confirmed Delta cases are fully vaccinated.
- The proportion of confirmed Omicron cases (2.5%) and confirmed Delta cases (2.2%) who have been hospitalised is approximately the same. Confirmed Omicron cases (3%) are slightly more likely to have been admitted to ICU than confirmed Delta cases (2%).

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

Figure 5a. Estimated active cases (number of cases notified last 14 days), number of cases in hospital, in ICU and ventilated by date, NSW, from 16 June 2021 to 1 January 2022

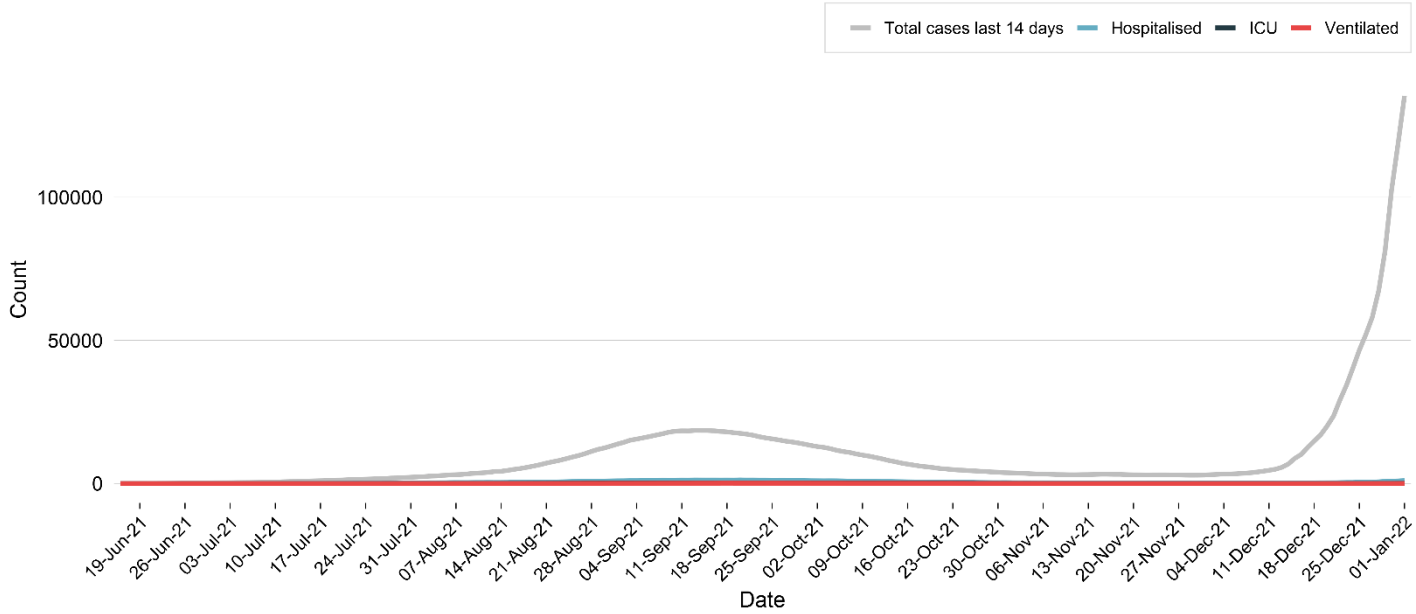
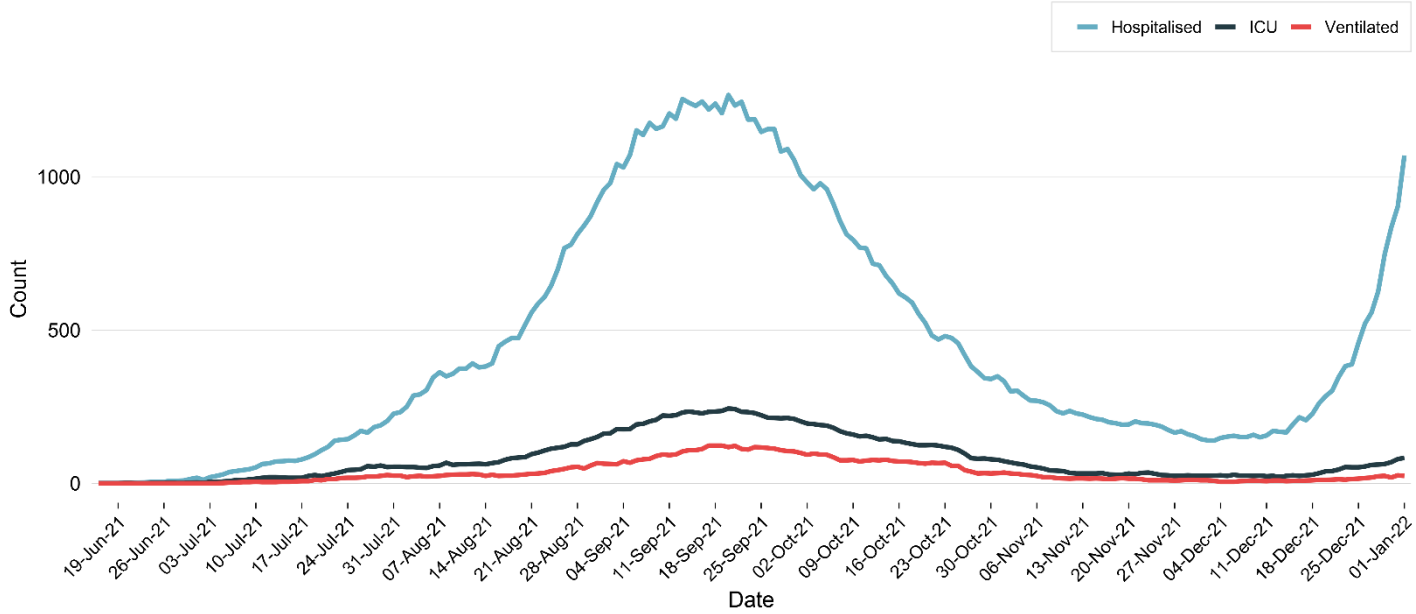


Figure 5b. Number of cases in hospital, in ICU and ventilated by date, NSW, from 16 June 2021 to 1 January 2022



- The graph shows the number of active cases and the number hospitalised, in ICU and ventilated.
- The median delay between a person becoming ill with COVID-19 and requiring a hospitalisation is 5 days.
- Throughout November, case rates flattened, but hospitalisations continued to decline, likely reflective of high vaccination coverage in the community being protective against hospitalisation.
- Cases tripled in the week ending 1 January, and the number of cases who are hospitalised approximately doubled. The number of cases hospitalised remained lower than the previous peak in mid-September, despite the number of cases being much higher.

Section 4: Clinical severity by vaccination status

Figure 6. COVID-19 cases by outcome, notification date and vaccination status with 7 day backward rolling average, NSW, from 16 June to 1 January 2021

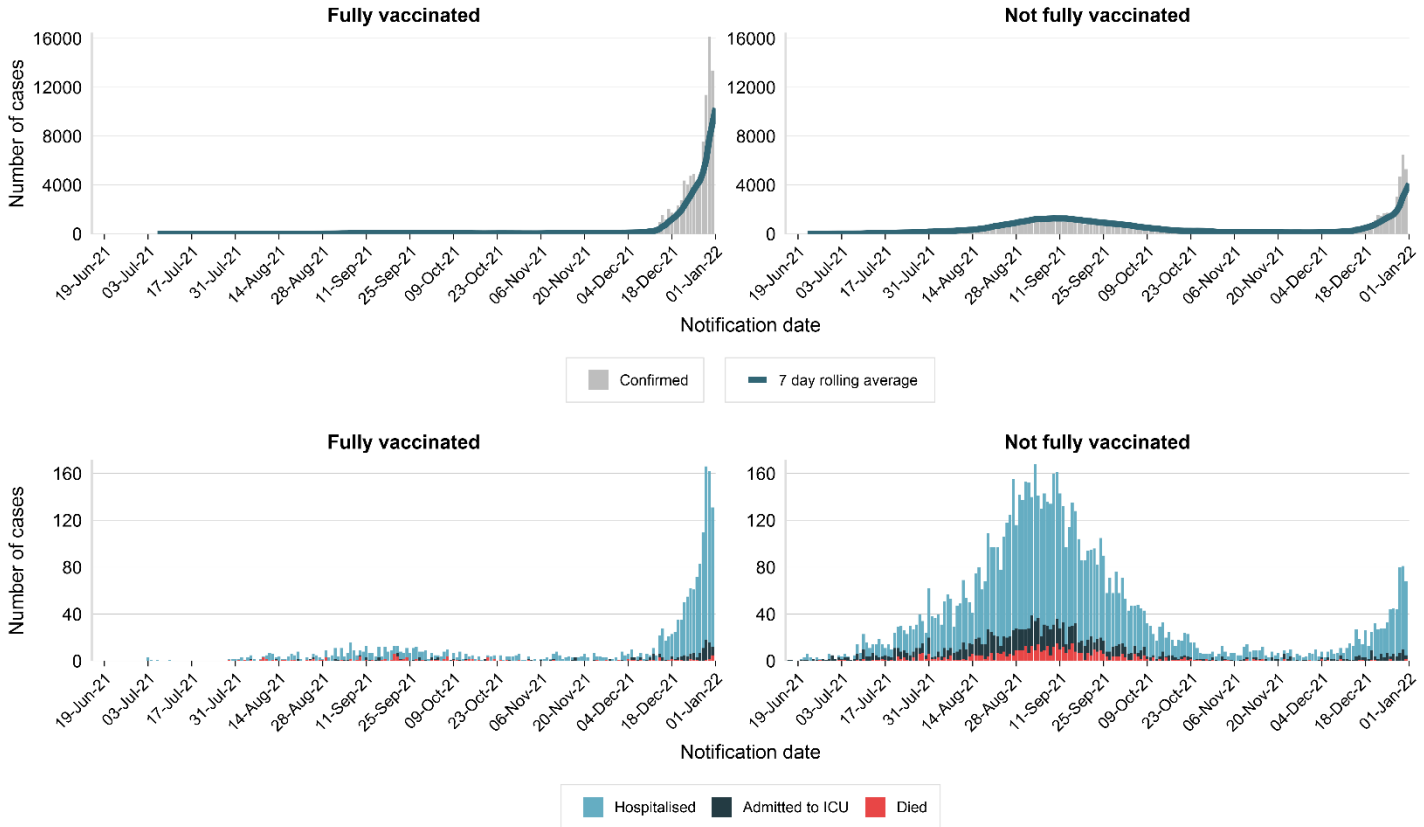


Table 6. Hospitalisations, ICU admissions and deaths among cases diagnosed with COVID-19, by vaccination status, NSW, from 26 November 2021 to 1 January 2022

Vaccination status	Total cases	Hospitalised (% of total cases)	Hospitalised and in ICU (% of total cases)	Death (% of total cases)
Fully vaccinated	108,056	1,280 (1.2%)	104 (0.1%)	22 (<0.1%)
Partially vaccinated	1,110	47 (4.2%)	8 (0.7%)	3 (0.3%)
No effective dose	2,765	251 (9.1%)	42 (1.5%)	7 (0.3%)
Under investigation	28,181	395 (1.4%)	40 (0.1%)	2 (<0.1%)
Not eligible for vaccination (aged 0-11 years)	12,328	93 (0.8%)	3 (<0.1%)	0 (0.0%)
Total	152,440	2,066 (1.4%)	197 (0.1%)	34 (<0.1%)

- In the past week, 72,042 (71.4%) of all cases were fully vaccinated (see Appendix D), reflective of the high proportion of community vaccination (92.7% of those aged 12+ years, at the start of this wave on 26 November 2021). Similar breakdowns by vaccination status for previous periods are in Appendix D.
- Among cases since 26 November 2021, although the *number* of hospitalisations, admissions to ICU and deaths is greater among the fully vaccinated than those with no effective dose, the *proportion* of cases with these outcomes is still much higher among those with no effective dose.
- Among cases aged 12 years and over with no effective dose, 9.1% of cases were hospitalised, 1.5% of cases were admitted to ICU, and 0.3% of cases died. In comparison, among fully vaccinated cases, 1.2% of cases were hospitalised, 0.1% were admitted to ICU, and less than 0.1% died.
- COVID-19 is relatively mild in most young children aged 0-11 years who are ineligible for vaccination: among cases in this group, 0.8% were hospitalised, less than 0.1% were admitted to ICU, and no cases have died.
- 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 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 1 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 7. Proportion of 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 1 January 2022

Age-group (years)	1 Jan 2020 - 15 Jun 2021		16 Jun 2021 – 25 Nov 2021				26 Nov 2021 – 1 Jan 2022			
			Fully vaccinated		Un-vaccinated		Fully vaccinated		Un-vaccinated	
0-9	0%	(0 / 251)	-	-	<1%	(10 / 12,409)	-	-	<1%	(2 / 9,643)
10-19	<1%	(1 / 325)	<1%	(0 / 155)	<1%	(28 / 10,078)	<1%	(1 / 13,744)	<1%	(4 / 3,497)
20-29	<1%	(4 / 1,115)	<1%	(2 / 1,034)	1%	(97 / 12,409)	<1%	(6 / 36,506)	1%	(4 / 692)
30-39	1%	(15 / 1,098)	<1%	(5 / 1,406)	2%	(153 / 8,024)	<1%	(8 / 21.341)	1%	(6 / 527)
40-49	2%	(12 / 718)	<1%	(4 / 1,303)	3%	(178 / 5,517)	<1%	(11 / 14,370)	1%	(4 / 335)
50-59	4%	(30 / 710)	1%	(15 / 1,159)	7%	(262 / 3,795)	<1%	(14 / 11,854)	6%	(10 / 176)
60-69	7%	(44 / 656)	2%	(17 / 812)	13%	(228 / 1,772)	<1%	(26 / 6,267)	10%	(10 / 100)
70-79	12%	(46 / 394)	7%	(37 / 564)	23%	(163 / 708)	1%	(22 / 2,709)	11%	(8 / 72)
80-89	21%	(26 / 122)	11%	(34 / 298)	36%	(129 / 359)	3%	(26 / 1,018)	8%	(3 / 39)
90+	38%	(16 / 42)	21%	(24 / 114)	45%	(29 / 64)	4%	(9 / 247)	0%	(0 / 12)
Total	4%	(194 / 5,431)	<1%	(138 / 6,845)	2%	(1,277 / 52,870)	<1%	(123 / 108,056)	<1%	(51 / 15,093)

* For this table, un-vaccinated includes those with no effective dose, and those who are ineligible for vaccination (aged 0-11 years).

- 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.
- In the period from 16 June to 25 November 2021, the likelihood of a severe outcome for un-vaccinated individuals is similar to the pre-delta period, while the likelihood of a severe outcome is substantially reduced amongst fully vaccinated individuals.
- 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.
- 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 since 26 November 2021, the *number* of fully vaccinated people with severe outcomes is reflective of the high number in the community who are fully vaccinated. However, the *proportion* of fully vaccinated cases who experience severe outcomes is still lower than that for un-vaccinated people 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 no effective dose 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.

Section 5: Deaths following recent infection with COVID-19

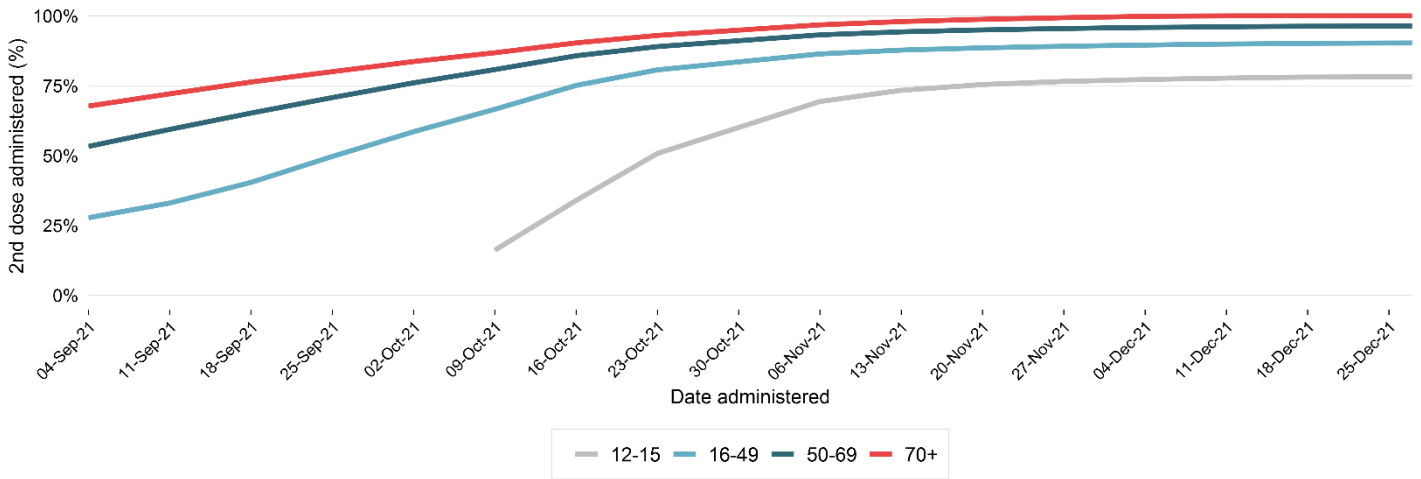
Table 8. Deaths following recent infection with COVID-19, by age group and location, 26 November 2021 to 1 January 2022

Age-group (years)	Number of deaths	Case fatality rate	Location of death		
			Health care facility	Aged care facility	Home
0-9	0	0.0%	-	-	-
10-19	0	0.0%	-	-	-
20-29	0	0.0%	-	-	-
30-39	0	0.0%	-	-	-
40-49	0	0.0%	-	-	-
50-59	0	0.0%	-	-	-
60-69	2	<0.1%	2	0	0
70-79	9	0.3%	7	2	0
80-89	14	1.1%	14	0	0
90+	9	2.7%	5	4	0
Total	34	<0.1%	28	6	0

- Since the start of the pandemic, 0.3% of cases (674 people) have died.
- This includes 111 residents of aged care facilities.
- Among cases since 26 November, 20.6% (7/34) of the deaths were among people who had received no effective dose (see Table 6). This is an over-representation, given that those with no effective dose represent 1.8% (2,765/152,440) of cases.
- The median delay between a person becoming ill and death was 11 days.
- In the week ending 1 January 2022, there were 20 deaths in people diagnosed with COVID-19, including
  - 12 people who were fully vaccinated (3 in their 70s, 6 in their 80s, and 3 aged 90+ years),
  - 2 people who were partially vaccinated (1 in their 60s and 1 in their 80s),
  - 4 people who had received no effective dose (1 in their 60s, 2 in their 70s and 1 in their 80s), and
  - 2 people whose vaccination status is under investigation (1 in their 70s and 1 aged 90+ years).
- The majority of deaths in cases since 26 November 2021 have occurred in hospital (28/34, 82%).

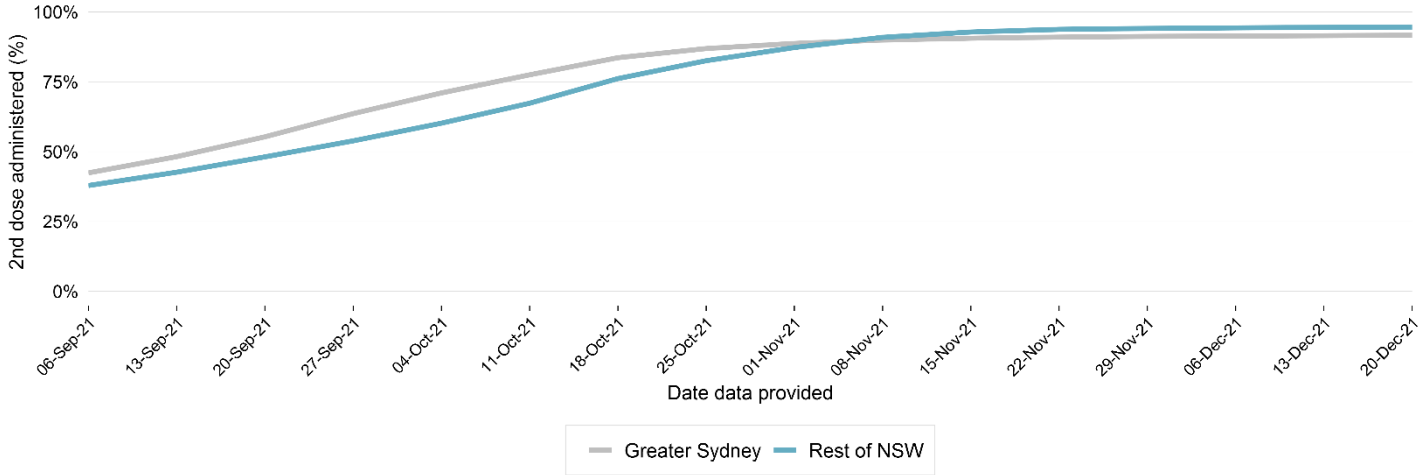
Section 6: Vaccination coverage in NSW

Figure 7. Proportion who have received two doses of COVID-19 vaccine, by age range and time, NSW, 4 September to 27 December 2021



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

Figure 8. Proportion who have received two doses, by region and time, for those aged 15 and over, NSW, 6 September to 20 December 2021



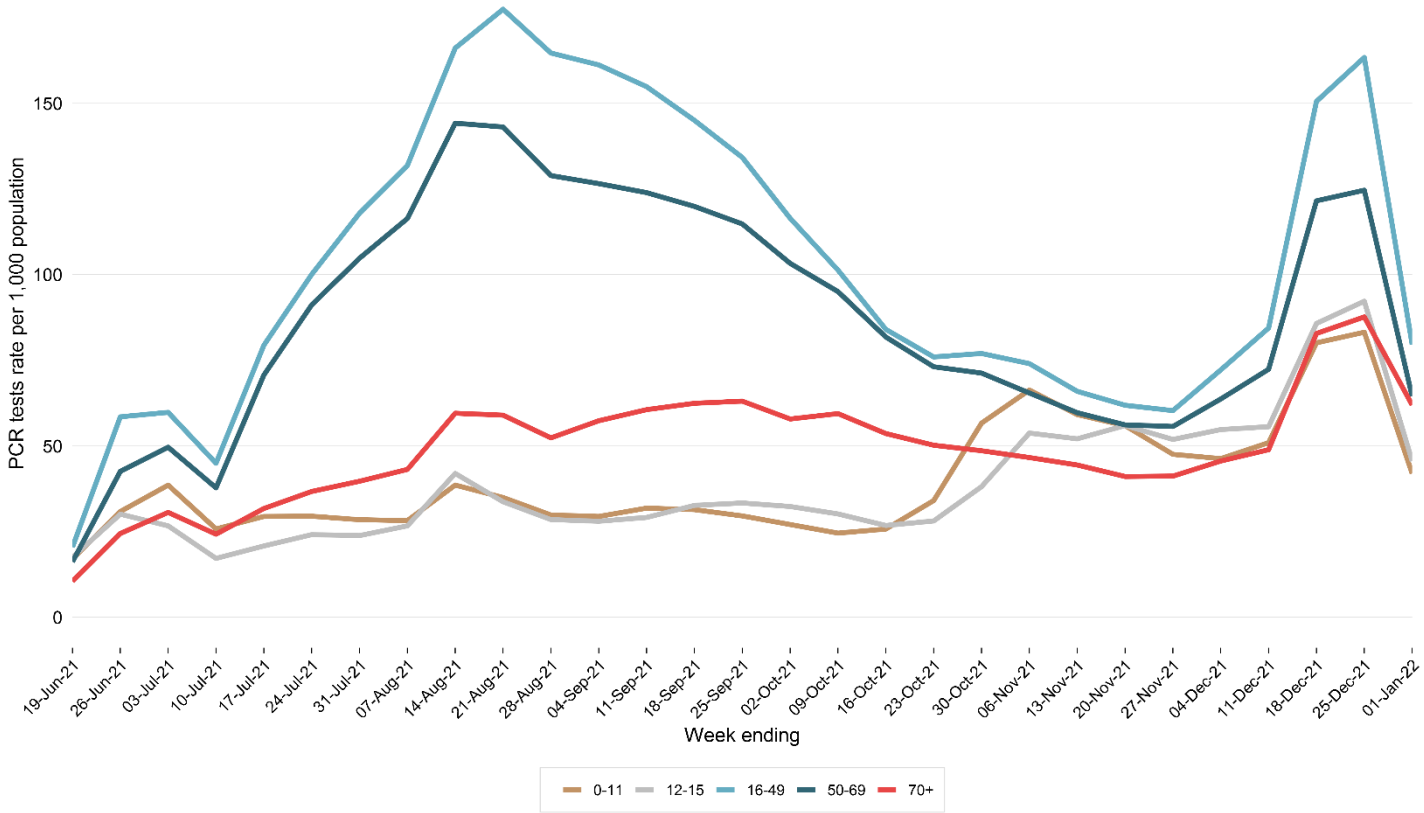
Source: https://www.health.gov.au/resources/collections/covid-19-vaccination-geographic-vaccination-rates-sa4

- The proportion of the NSW population who have received two vaccine doses has increased substantially in the last four months, reaching over 93% of those aged 16 and over by 1 January 2022.
- Children aged 12-15 years became eligible for vaccination from mid-September 2021, and showed strong uptake of vaccination immediately.
- The highest vaccination rates have been achieved among those aged 70+, who have been eligible for vaccination for the longest period.
- Vaccination rates in Greater Sydney were higher than those in the Rest of NSW to early November 2021, and since then have been higher outside Greater Sydney[1].

[1] Federal geographic vaccination data is provided publicly at the level of 28 geographic regions (Australian Bureau of Statistics Statistical Area Level 4, or SA4), designated as Greater Sydney or Rest of NSW. The total population and proportion with two vaccine doses (truncated at > 95%) is provided. Data presented in the graph are calculated as a weighted average across SA4s within each designation. Due to the truncation of the source data at 95%, the maximum vaccination rate over time will also be 95%. Other geographic representations of NSW vaccination data use other sources and will not exactly correspond to this figure.

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

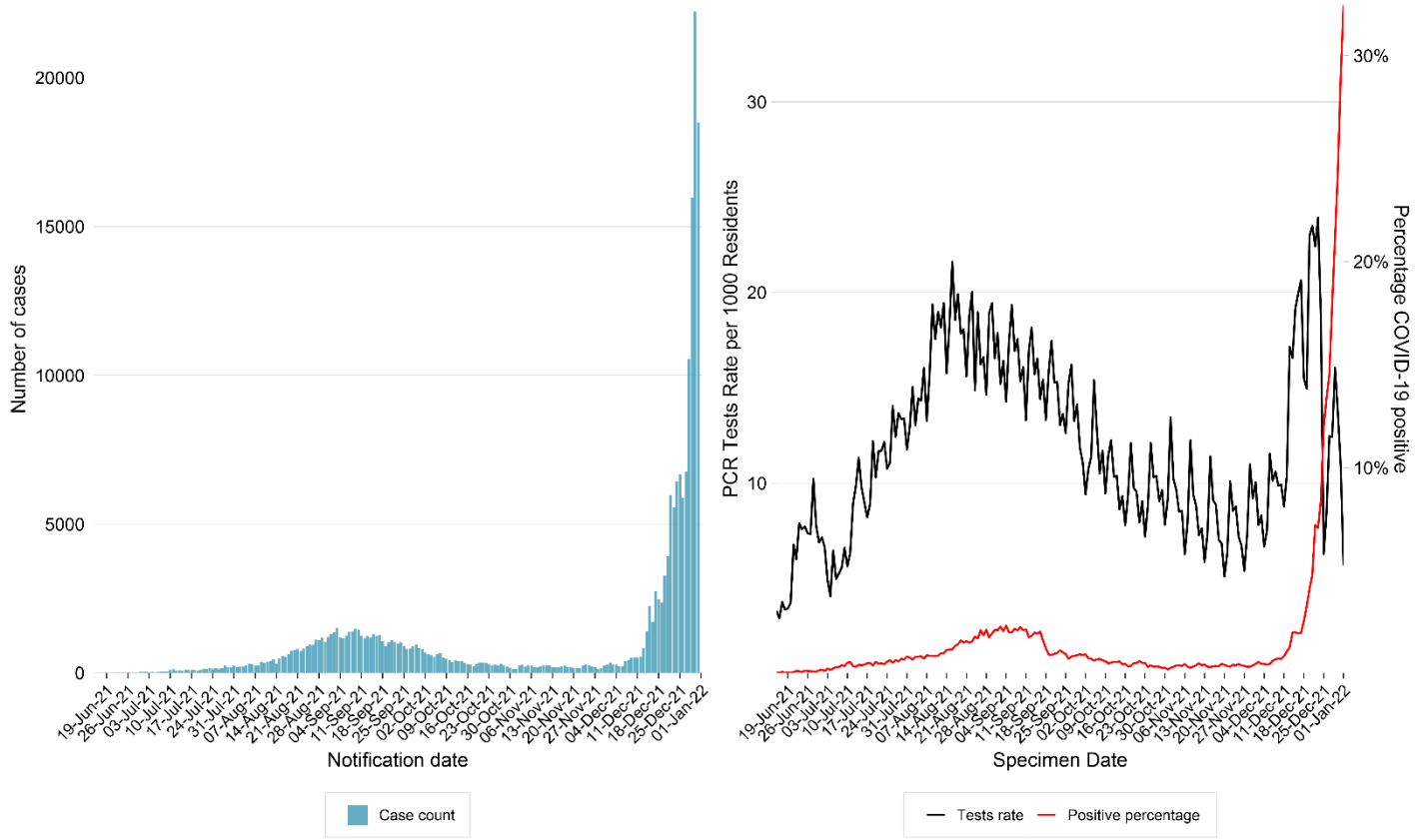
Figure 9. Number of PCR tests per 1,000 population, by age group, NSW, 16 June 2021 to 1 January 2022



- During the wave between 16 June and 25 November 2021, there was a sustained increase in the number of tests reported for people aged 16 years and over, which peaked in August. The greatest testing rate was among those aged 16-49 years.
- In December 2021 there was a large and sustained increase in testing for all age groups. In the week ending 1 January, testing rates decreased for all age groups. This may be due to difficulties accessing testing facilities, and/or due to delays in processing and reporting tests to NSW Health.

Section 8: Testing and positivity rates, NSW

Figure 10. Cases, testing rates per 1000 population, and percentage of tests which were positive for COVID-19, NSW, 16 June 2021 to 1 January 2022



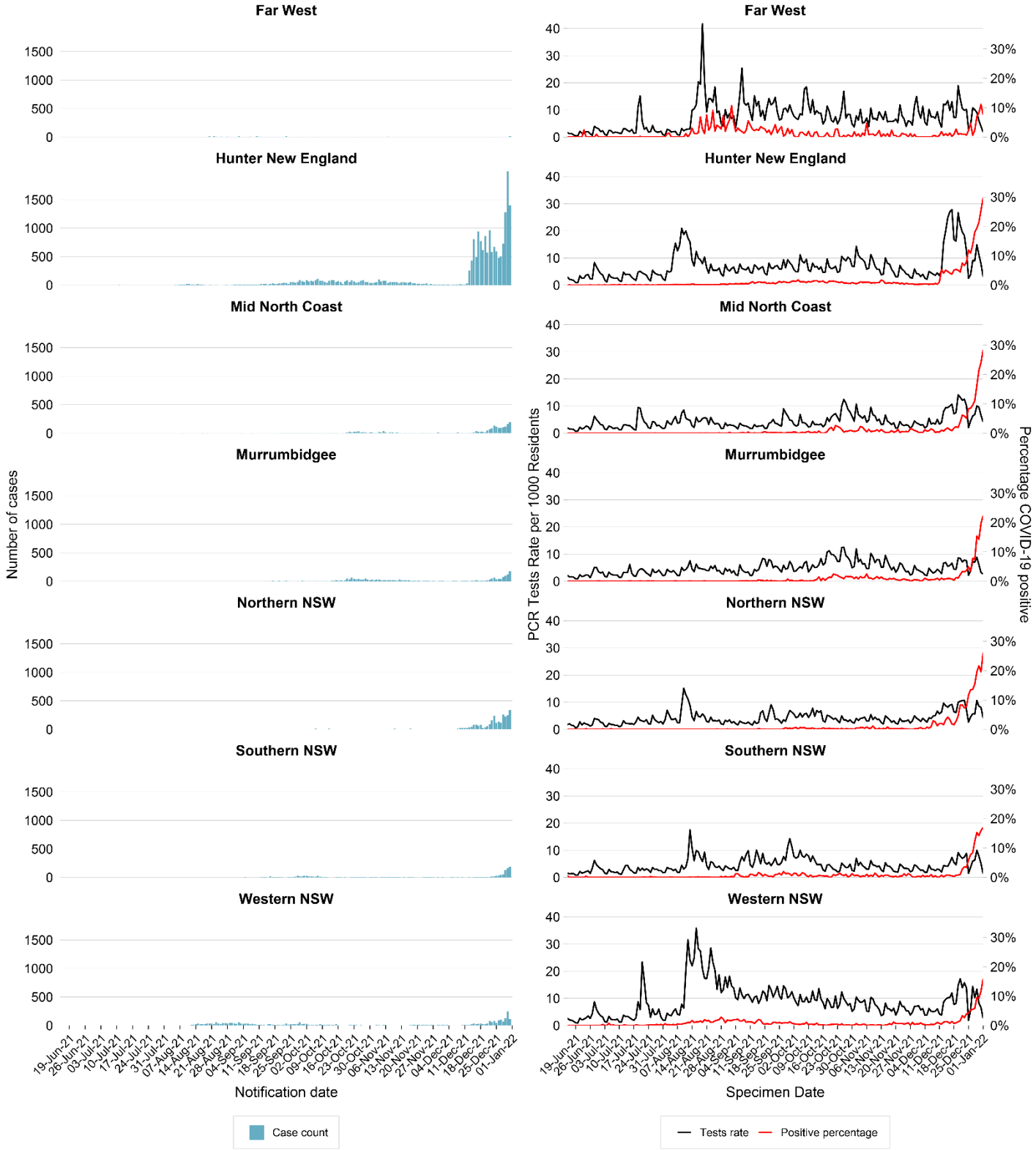
- There were 820,884 tests reported in the week ending 1 January 2022, down 31% from the 1,191,493 reported in the week ending 25 December 2021.
- This may be due to fewer people being able to access testing as well as delays in reporting tests to NSW Health.
- Test positivity rates have generally between well below 3%, reflecting high surveillance capacity and rapid case identification. However, in the week ending 1 January 2022, the test positivity rate increased to above 30%. This high positivity rate indicates that there is undetected COVID-19 transmission in the community.

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

Figure 11. Cases, 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 1 January 2022

Section 10: Testing and positivity rates, rural and regional LHDs

Figure 12. Cases, 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 1 January 2022



- Note that the axes 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 during December are apparent in all LHDs.

Section 11: Case rates in Local Government Areas

Table 9a. Top 20 metropolitan LGAs of residence, ordered by total COVID-19 cases in the last 7 days, per 100,000 population rate, NSW, 26 November 2021 to 1 January 2022

LGA name	Last 7 days		26 Nov 2021 - 1 Jan 2022	
	Cases	Cases per 100,000 population	Cases	Cases per 100,000 population
Hunters Hill	417	2,784	616	4,112
Waverley	1,795	2,416	3,133	4,217
Strathfield	1,106	2,357	1,472	3,137
Randwick	3,423	2,199	5,212	3,349
Sutherland Shire	4,937	2,141	6,407	2,778
Sydney	5,261	2,136	9,322	3,784
Bayside	3,684	2,065	5,133	2,877
Campbelltown	3,358	1,964	4,177	2,444
Canterbury-Bankstown	7,161	1,895	11,005	2,912
Lane Cove	761	1,895	1,203	2,996
Camden	1,911	1,884	2,470	2,435
The Hills Shire	3,331	1,872	4,223	2,373
Liverpool	4,114	1,808	5,827	2,560
Fairfield	3,697	1,746	5,402	2,552
Georges River	2,774	1,740	3,967	2,488
Cumberland	4,191	1,735	6,567	2,719
Woollahra	1,019	1,716	1,789	3,012
Canada Bay	1,570	1,634	2,185	2,274
Blacktown	5,917	1,580	8,138	2,173
Penrith	3,189	1,497	4,245	1,993

Table 9b. Top 20 regional and rural LGAs of residence, ordered by total COVID-19 cases in the last 7 days, per 100,000 population rate, NSW, 26 November 2021 to 1 January 2022

LGA name	Last 7 days		26 Nov 2021 - 1 Jan 2022	
	Cases	Cases per 100,000 population	Cases	Cases per 100,000 population
Byron	746	2,127	1,521	4,336
Newcastle	2,148	1,297	5,546	3,350
Maitland	1,020	1,198	2,054	2,412
Singleton	249	1,061	386	1,645
Lake Macquarie	1,981	962	4,647	2,257
Narrabri	116	883	137	1,043
Muswellbrook	144	879	208	1,270
Moree Plains	115	867	178	1,342
Cessnock	497	829	839	1,399
Port Stephens	549	747	1,010	1,375
Warren	18	667	25	927
Yass Valley	114	667	125	732
Upper Hunter Shire	91	642	149	1,051
Orange	240	565	423	996
Ballina	245	549	399	894
Dubbo Regional	287	534	399	743
Coffs Harbour	402	520	642	831
Port Macquarie-Hastings	427	505	714	845
Brewarrina	8	497	9	559
Kempsey	147	494	243	817

- The top 20 metropolitan LGAs contributed 63% of all cases in the week ending 1 January.
- The top 20 regional and rural LGAs contributed another 9% of cases.
- The LGAs with the highest case rates per 100,000 population are predominantly metropolitan LGAs, with 19 of the top 20 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 13. Number of confirmed COVID-19 infections among Aboriginal people by date, NSW, 16 June 2021 to 1 January 2022

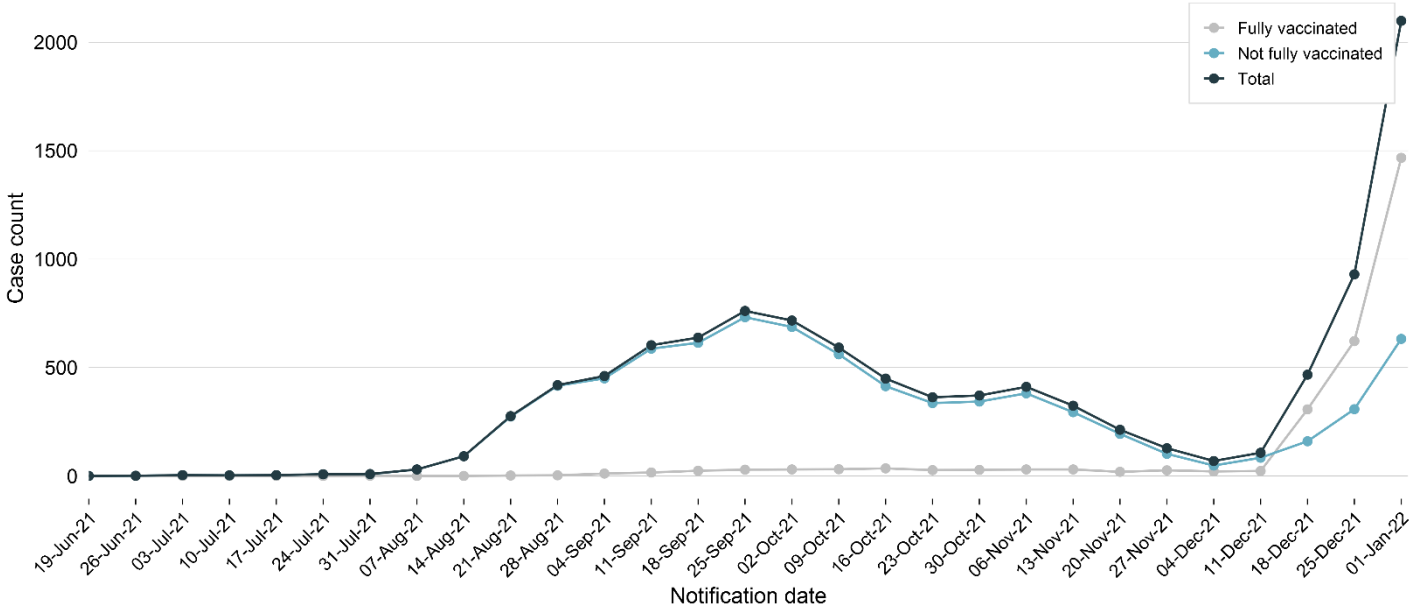


Table 10. Demographics of infections among Aboriginal people by gender, age, and vaccination status, NSW, 16 June 2021 to 1 January 2022

	Week ending				26 Nov 2021 - 1 Jan 2022	16 Jun 2021 - 25 Nov 2021
	1 Jan	25 Dec	18 Dec	11 Dec		
Gender						
Female	1,147 (55%)	492 (53%)	243 (52%)	42 (39%)	1,973 (53%)	3,494 (51%)
Male	951 (45%)	437 (47%)	224 (48%)	63 (59%)	1,712 (46%)	3,364 (49%)
Non-specified or non-binary	1 (<1%)	1 (<1%)	0 (0%)	2 (2%)	4 (<1%)	1 (<1%)
Age group						
0-9	277 (13%)	99 (11%)	37 (8%)	32 (30%)	475 (13%)	1,804 (26%)
10-19	430 (20%)	217 (23%)	114 (24%)	28 (26%)	802 (22%)	1,596 (23%)
20-29	636 (30%)	334 (36%)	196 (42%)	28 (26%)	1,213 (33%)	1,223 (18%)
30-39	309 (15%)	119 (13%)	57 (12%)	9 (8%)	504 (14%)	960 (14%)
40-49	200 (10%)	92 (10%)	33 (7%)	5 (5%)	336 (9%)	643 (9%)
50-59	159 (8%)	45 (5%)	19 (4%)	2 (2%)	229 (6%)	387 (6%)
60+	88 (4%)	24 (3%)	11 (2%)	3 (3%)	130 (4%)	246 (4%)
Vaccination status						
Fully vaccinated	1,467 (70%)	622 (67%)	307 (66%)	23 (21%)	2,441 (66%)	341 (5%)
Partially vaccinated	19 (1%)	10 (1%)	12 (3%)	1 (1%)	49 (1%)	477 (7%)
No effective dose	116 (6%)	67 (7%)	39 (8%)	29 (27%)	271 (7%)	3,323 (48%)
Under investigation*	169 (8%)	98 (11%)	62 (13%)	9 (8%)	342 (9%)	551 (8%)
Not eligible for vaccination (aged 0-11 years)	328 (16%)	133 (14%)	47 (10%)	45 (42%)	586 (16%)	2,167 (32%)
Total	2,099 (100%)	930 (100%)	467 (100%)	107 (100%)	3,689 (100%)	6,859 (100%)

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

- Since 26 November 2021 there have been 3,689 Aboriginal people diagnosed with COVID-19, representing 2.4% 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, 12.9% of cases of COVID-19 among Aboriginal people have been in children aged 0-9 years. However, the proportion of cases of COVID-19 in Aboriginal people in the 20-29 year age group has been high throughout this period, reflecting the high case numbers in this age group in the population as a whole.

Section 13: Correctional settings

Figure 14. Number of confirmed COVID-19 infections among people residing in correctional settings by date, NSW, 16 June 2021 to 1 January 2022

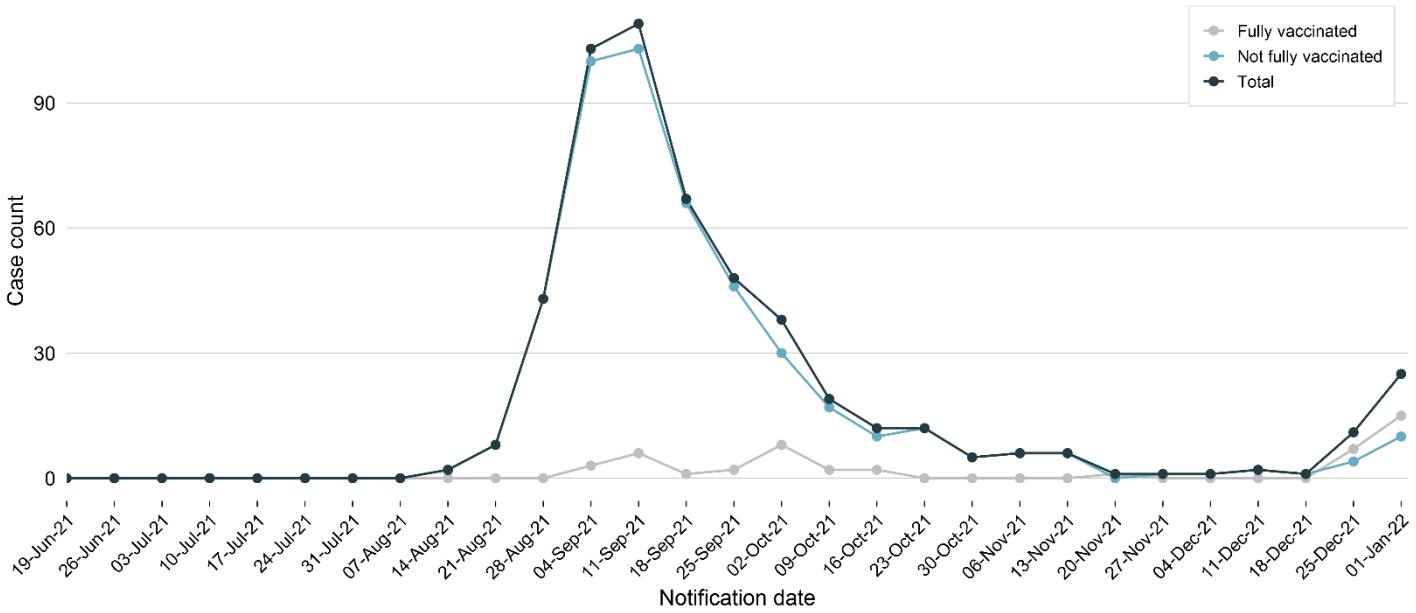


Table 11. Demographics of infections in correctional settings by gender, age, and vaccination status, NSW, 16 June to 1 January 2022

	Week ending				26 Nov 2021 – 1 Jan 2022	16 Jun 2021 - 25 Nov 2021
	1 Jan	25 Dec	18 Dec	11 Dec		
Gender						
Male	22 (88%)	11 (100%)	1 (100%)	2 (100%)	37 (92%)	453 (94%)
Female	3 (12%)	0 (0%)	0 (0%)	0 (0%)	3 (8%)	27 (6%)
Age group						
10-19	1 (4%)	4 (36%)	0 (0%)	0 (0%)	5 (12%)	28 (6%)
20-29	7 (28%)	3 (27%)	1 (100%)	1 (50%)	13 (32%)	142 (30%)
30-39	10 (40%)	1 (9%)	0 (0%)	0 (0%)	11 (28%)	169 (35%)
40-49	6 (24%)	1 (9%)	0 (0%)	1 (50%)	8 (20%)	95 (20%)
50-59	1 (4%)	2 (18%)	0 (0%)	0 (0%)	3 (8%)	35 (7%)
60-69	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	7 (1%)
70-79	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3 (1%)
80-89	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (<1%)
Vaccination status						
Fully vaccinated	15 (60%)	7 (63%)	0 (0%)	0 (0%)	22 (55%)	25 (5%)
Partially vaccinated	0 (0%)	0 (0%)	0 (0%)	1 (50%)	2 (5%)	59 (12%)
No effective dose	0 (0%)	0 (0%)	0 (0%)	1 (50%)	0 (0%)	267 (56%)
Under investigation*	10 (40%)	4 (36%)	1 (100%)	0 (0%)	16 (40%)	129 (27%)
Total	25 (100%)	11 (100%)	1 (100%)	2 (100%)	40 (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.
- Cases in correctional settings more than doubled from the week ending 25 December 2021 to the week ending 1 January 2022.

Section 14: Other respiratory infections in NSW

Figure 15. Proportion of tests positive for influenza, NSW, 1 January 2016 to 5 December 2021

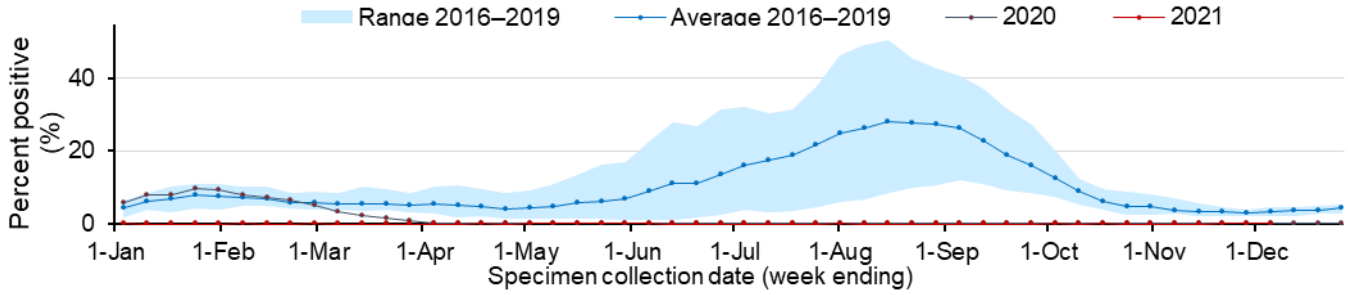


Figure 16. Proportion of FluTracker participants reporting influenza-like illness, NSW, 1 January 2016 to 2 January 2022

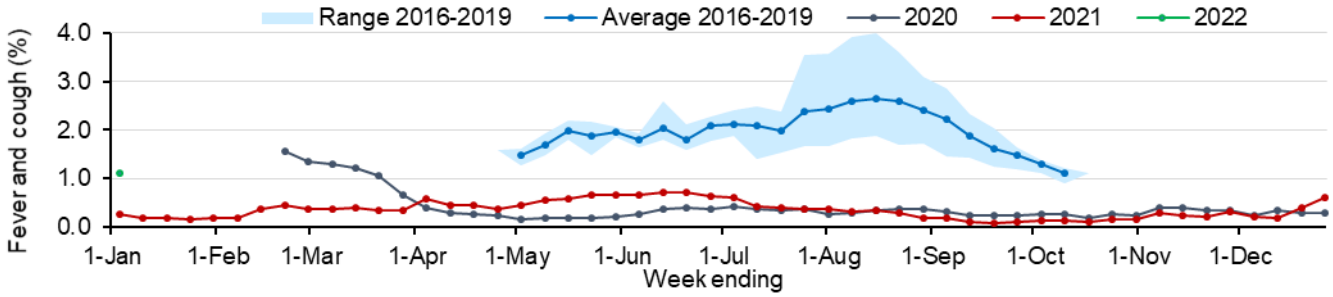


Figure 17. Emergency Department pneumonia presentations, NSW, 1 January 2016 to 2 January 2022

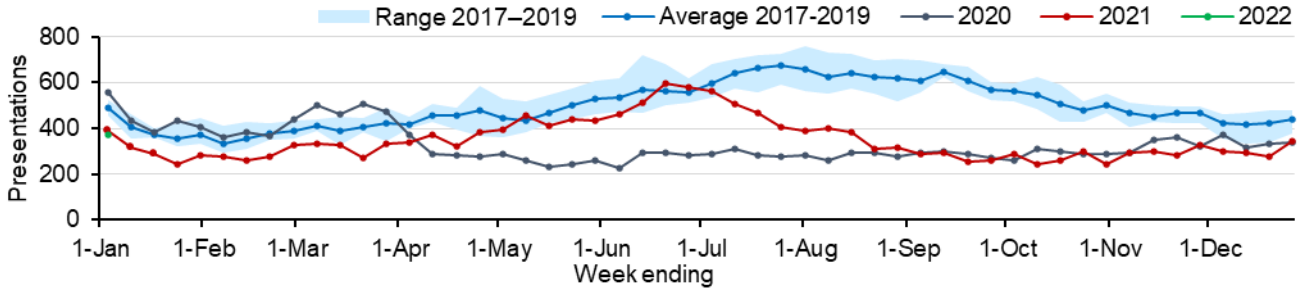
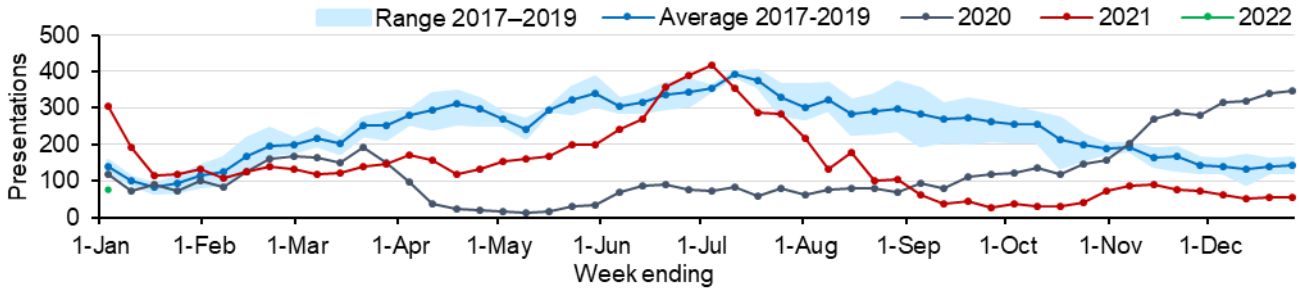


Figure 18. Emergency Department bronchiolitis presentations, NSW, 1 January 2016 to 2 January 2022



- The percentage of influenza tests that were positive has been very low (<0.01%) relative to the usual seasonal range, indicating limited influenza transmission in the community
- There have been 26 influenza cases reported in 2021
- In the week ending 2 January 2022, 14,601 people were surveyed, and 162 people (1.1%) reported flu-like symptoms. Of those, 77 (47.5%) reported having a COVID-19 test.
- Improved hygiene and social distancing measures implemented during the COVID-19 pandemic have impacts 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 June 2021 to remain below the seasonal range for this time of year.
- Data is pending from several labs for the weeks since 5 December due to high demand on testing laboratories in the past weeks.

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

		Week ending				Total since January 2021	
		01 Jan 2022		25 Dec 2021			
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**	20,561	8.3	36,962	15.0	720,328	291.6
Illawarra Shoalhaven	Kiama	1,812	11.1	2,325	14.2	40,798	249.2
	Shellharbour	5,854	11.4	6,684	13.0	162,535	317.1
	Shoalhaven	5,912	8.0	6,041	8.2	137,800	186.3
	Wollongong	19,066	12.5	26,589	17.4	491,382	321.8
	*LHD Total**	32,644	11.1	41,639	14.2	832,515	283.4
Nepean Blue Mountains	Blue Mountains	5,476	9.9	10,838	19.6	183,487	331.3
	Hawkesbury	4,393	9.33	8,825	18.7	225,776	479.3
	Lithgow	846	5.6	1,091	7.2	23,251	153.7
	Penrith	21,505	14.4	33,814	22.7	764,640	512.9
	*LHD Total**	31,927	11.7	53,962	19.7	1,182,791	432.2
Northern Sydney	Hornsby	7,431	7.0	16,277	15.3	261,677	245.8
	Hunters Hill	2,509	23.9	4,305	41.1	65,483	624.5
	Ku-ring-gai	10,984	12.3	21,712	24.4	298,906	335.8
	Lane Cove	4,857	17.3	11,693	41.6	151,919	540.5
	Mosman	2,356	10.9	4,402	20.3	60,101	277.1
	North Sydney	3,818	7.3	9,148	17.4	122,530	233.3
	Northern Beaches	20,344	10.6	38,658	20.2	663,172	346.4
	Parramatta#	18,238	10.1	32,701	18.2	661,307	367.3
	Ryde	10,920	11.9	19,220	20.9	343,022	373.3
	Willoughby	4,726	8.3	9,732	17.1	127,834	224.9
	*LHD Total**	71,287	10.7	141,305	21.1	2,199,011	328.6
South Eastern Sydney	Bayside	17,627	14.1	27,811	22.3	549,828	440.3
	Georges River	15,952	14.3	25,145	22.5	466,437	417.8
	Randwick	15,990	14.7	28,626	26.3	520,413	477.6
	Sutherland Shire	23,144	14.3	37,979	23.5	580,967	359.9
	Sydney#	24,427	14.2	50,722	29.4	728,661	422.6
	Waverley	8,361	16.1	17,628	33.9	254,954	490.2
	Woollahra	5,519	13.3	12,647	30.4	189,046	454.8
	*LHD Total**	95,027	14.2	167,768	25.0	2,799,482	417.0
South Western Sydney	Camden	9,967	14.0	17,347	24.4	380,692	536.1
	Campbelltown	15,423	12.9	23,950	20.0	606,009	506.4
	Canterbury-Bankstown#	41,602	15.7	60,683	22.9	1,617,303	611.4
	Fairfield	17,132	11.6	29,372	19.8	899,569	607.1
	Liverpool	20,503	12.9	35,251	22.1	894,112	561.2
	Wingecarribee	3,622	10.1	4,636	13.0	87,012	243.1
	Wollondilly	2,719	7.3	4,710	12.7	102,699	276.0
	*LHD Total**	90,562	12.5	145,439	20.0	3,792,637	521.7
Sydney	Burwood	3,109	10.9	5,060	17.8	98,778	347.5
	Canada Bay	8,461	12.6	15,109	22.5	253,976	377.7
	Canterbury-Bankstown#	41,602	15.7	60,683	22.9	1,617,303	611.4
	Inner West	17,133	12.2	33,537	23.9	526,499	374.6
	Strathfield	6,398	19.5	10,708	32.6	212,383	646.6

		Week ending				Total since January 2021	
		01 Jan 2022		25 Dec 2021			
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#	24,427	14.2	50,722	29.4	728,661	422.6
	*LHD Total**	70,894	14.5	126,804	26.0	2,346,161	481.0
Western Sydney	Blacktown	37,342	14.3	59,818	22.8	1,372,436	523.6
	Cumberland	25,622	15.2	41,278	24.4	1,116,960	660.7
	Parramatta#	18,238	10.1	32,701	18.2	661,307	367.3
	The Hills Shire	19,080	15.3	34,345	27.6	563,200	452.1
	*LHD Total**	97,859	13.3	163,526	22.2	3,655,487	495.7
Far West	Balranald	62	3.8	146	8.9	2,360	144.2
	Broken Hill	908	7.4	1,421	11.6	32,620	266.6
	Central Darling	76	5.9	95	7.4	4,964	385.6
	Wentworth	339	6.9	561	11.4	10,541	213.5
	*LHD Total**	1,385	6.6	2,223	10.5	50,485	239.3
Hunter New England	Armidale Regional	1,485	6.9	2,598	12.1	37,802	175.5
	Cessnock	3,059	7.3	4,558	10.9	76,090	181.2
	Dungog	259	3.9	670	10.2	8,730	132.4
	Glen Innes Severn	191	3.1	341	5.5	6,555	105.6
	Gunnedah	504	5.7	990	11.2	12,696	143.0
	Gwydir	126	3.4	191	5.1	3,141	83.8
	Inverell	391	3.3	853	7.2	17,789	150.5
	Lake Macquarie	12,308	8.5	31,251	21.7	391,836	271.9
	Liverpool Plains	207	3.7	356	6.4	6,752	122.1
	Maitland	5,920	9.9	14,452	24.2	197,386	331.1
	Mid-Coast	3,810	5.8	4,145	6.3	99,883	152.1
	Moree Plains	1,311	14.1	2,067	22.3	22,289	240.1
	Muswellbrook	924	8.1	1,209	10.6	15,806	137.9
	Narrabri	1,129	12.3	1,348	14.7	11,151	121.3
	Newcastle	12,360	10.7	28,954	25.0	348,471	300.7
	Port Stephens	3,689	7.2	7,150	13.9	109,658	213.2
	Singleton	1,784	10.9	2,822	17.2	37,671	229.4
	Tamworth Regional	3,584	8.2	4,907	11.2	91,082	208.1
	Tenterfield	120	2.6	207	4.5	4,181	90.6
	Upper Hunter Shire	776	7.8	884	8.91	13,079	131.8
	Uralla	194	4.6	296	7.0	4,660	110.7
	Walcha	188	8.6	248	11.3	3,113	141.9
	*LHD Total**	54,285	8.1	110,471	16.6	1,519,253	227.9
Mid North Coast	Bellingen	534	5.9	1,017	11.2	11,273	123.9
	Coffs Harbour	3,849	7.1	6,709	12.4	67,278	124.4
	Kempsey	1,517	7.3	1,796	8.6	45,727	219.6
	Nambucca	644	4.7	1,122	8.1	15,282	110.2
	Port Macquarie-Hastings	4,164	7.0	5,499	9.3	93,391	157.8
	*LHD Total**	10,708	6.8	16,143	10.2	232,951	147.5
Murrumbidgee	Albury	2,447	6.4	2,548	6.7	84,091	221.0
	Berrigan	99	1.6	115	1.9	4,674	76.3
	Bland	98	2.3	152	3.6	4,265	102.0
	Carrathool	103	5.3	101	5.2	1,354	69.1

		Week ending				Total since January 2021	
		01 Jan 2022		25 Dec 2021			
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	129	4.3	167	5.5	4,193	138.0
	Cootamundra-Gundagai Regional	340	4.3	350	4.5	9,897	125.8
	Edward River	278	4.4	288	4.5	9,703	152.6
	Federation	398	4.6	359	4.1	13,136	150.9
	Greater Hume Shire	400	5.3	351	4.7	13,192	175.1
	Griffith	1,534	8.1	1,478	7.8	25,285	133.6
	Hay	60	2.9	92	4.5	1,935	93.7
	Hilltops	785	6.0	941	7.2	25,187	192.4
	Junee	461	9.9	227	4.9	5,579	119.3
	Lachlan[#]	191	4.5	226	5.3	4,224	99.3
	Leeton	308	3.8	357	4.5	7,703	96.2
	Lockhart	90	3.9	129	5.6	3,427	149.0
	Murray River	193	2.3	315	3.7	6,064	71.5
	Murrumbidgee	95	3.5	110	4.0	2,756	100.5
	Narrandera	108	2.6	188	4.6	3,311	80.2
	Snowy Valleys	445	4.4	582	5.7	10,469	103.3
	Temora	137	3.1	164	3.7	4,320	97.9
	Wagga Wagga	2,899	6.4	4,624	10.1	93,644	205.0
	LHD Total[*]	11,455	5.5	13,685	6.6	335,492	160.8
	Ballina	2,336	7.5	2,703	8.7	59,499	190.5
	Byron	2,827	11.5	4,252	17.3	52,096	212.2
	Clarence Valley	1,882	5.2	2,391	6.6	43,784	121.1
	Kyogle	201	3.3	249	4.0	6,527	106.0
Northern NSW	Lismore	1,579	5.2	2,593	8.5	52,510	171.7
	Richmond Valley	653	4.0	927	5.6	27,525	167.6
	Tenterfield	120	2.6	207	4.5	4,181	90.6
	Tweed	4,932	7.3	4,508	6.6	85,725	126.3
	LHD Total[*]	14,439	6.7	17,636	8.1	328,595	151.3
	Bega Valley	812	3.4	1,024	4.2	26,213	108.6
	Eurobodalla	1,025	3.8	1,424	5.3	31,753	117.9
	Goulburn Mulwaree	2,037	9.4	2,051	9.4	43,857	201.3
Southern NSW	Queanbeyan-Palerang Regional	2,755	6.4	3,401	8.0	69,543	162.6
	Snowy Monaro Regional	801	5.5	1,165	8.0	28,325	194.6
	Upper Lachlan Shire	448	7.9	371	6.6	7,641	135.5
	Yass Valley	807	6.8	621	5.2	16,500	138.0
	LHD Total[*]	8,689	5.7	10,063	6.6	223,974	147.4
	Bathurst Regional	2,738	9.0	3,546	11.6	83,334	272.9
	Blayney	341	6.6	541	10.5	12,136	235.0
	Bogan	182	10.1	191	10.6	3,096	171.4
Western NSW	Bourke	244	13.5	200	11.0	7,630	420.9
	Brewarrina	77	6.8	54	4.8	2,617	232.1
	Cabonne	421	4.4	664	7.0	16,527	173.2
	Cobar	230	7.1	266	8.2	5,016	153.8

		Week ending				Total since January 2021	
		01 Jan 2022		25 Dec 2021			
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	172	6.2	256	9.2	4,277	154.4
	Cowra	372	4.2	534	6.0	20,838	233.6
	Dubbo Regional	5,017	13.3	7,394	19.7	181,518	482.7
	Forbes	253	3.7	395	5.7	8,355	120.5
	Gilgandra	157	5.3	258	8.7	5,505	185.5
	Lachlan#	191	4.5	226	5.3	4,224	99.3
	Mid-Western Regional	1,218	6.9	1,912	10.8	35,546	201.1
	Narromine	471	10.3	630	13.8	13,129	287.8
	Oberon	269	7.1	301	8.0	9,111	240.5
	Orange	3,471	11.7	4,887	16.5	96,665	325.3
	Parkes	533	5.1	691	6.7	15,565	149.9
	Walgett	162	3.9	306	7.3	9,561	229.4
	Warren	300	15.9	362	19.2	7,566	400.8
	Warrumbungle Shire	423	6.5	558	8.6	12,416	191.2
	Weddin	92	3.6	144	5.7	3,220	127.3
	*LHD Total**	17,290	8.7	24,275	12.2	556,676	279.0
NSW Total	**NSW Total^**	629,065	11.1	1,071,914	18.9	20,777,063	366.9

Source - Notifiable Condition Information Management System, accessed as at 8pm 5 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.
^ NSW Total counts and rates since January 2021 include tests where residential information is incomplete. See https://www.health.nsw.gov.au/Infectious/covid-19/Pages/counting-tests.aspx for detail on how tests are counted.

Appendix B: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2021 to 5 December 2021

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 – 5 December 2021

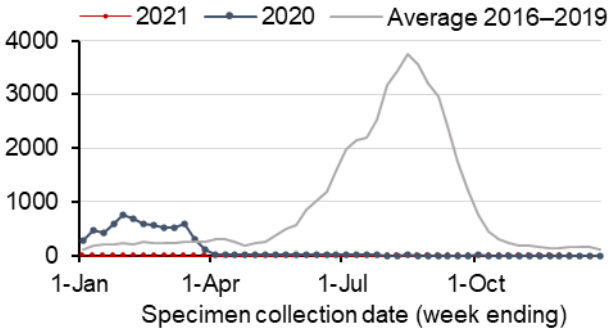
Specimen collection date	PCR tests conducted	Influenza A		Influenza B		Adeno-virus	Para-influenza	RSV	Rhino-virus	HMPV	Entero-virus
		No.	%Pos.	No.	%Pos.						
Total	774,951	16	<0.01%	10	<0.01%	7,984	18,675	17,578	62,968	5,853	6,653
Month ending											
31 January*	63,814	1	<0.01%	0	-	416	88	3,275	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
Week ending											
7 November	16,747	0	-	0	-	76	5	5	1,113	32	30
14 November	14,621	0	-	0	-	81	12	12	1,037	40	31
21 November	12,920	1	< 0.01%	0	-	86	12	6	1,108	65	52
28 November	11,437	2	0.02%	0	-	71	16	8	828	95	54
5 December	10,593	3	0.03%	0	-	72	24	9	791	129	49

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 is 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

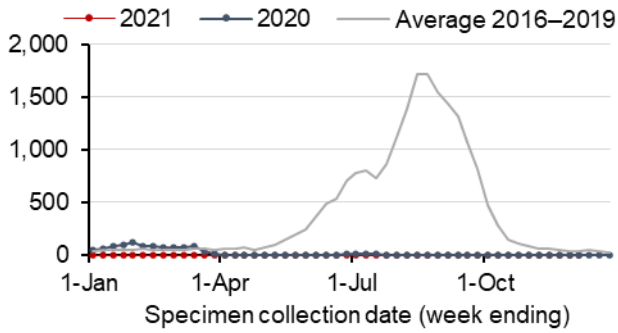
Appendix C: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 5 December 2021

Not all samples are tested for all respiratory viruses. Therefore, data presented may tend to under-represent current respiratory virus activity in NSW. Data is pending from several labs for the weeks since 5 December due to high demand on testing laboratories in the past weeks.

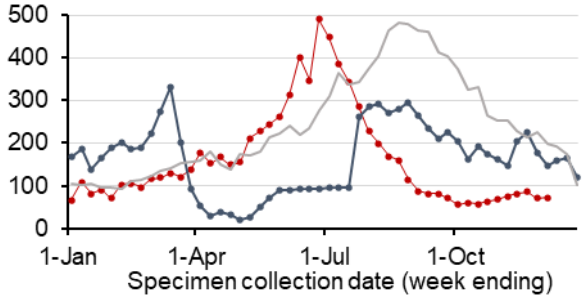
Influenza A



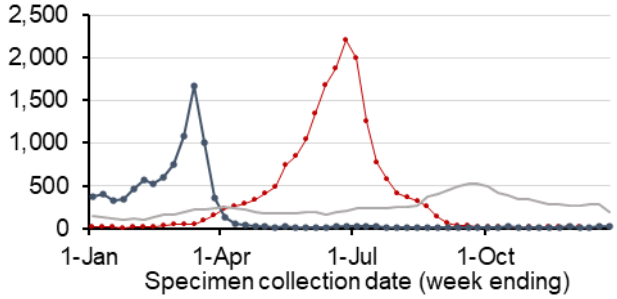
Influenza B



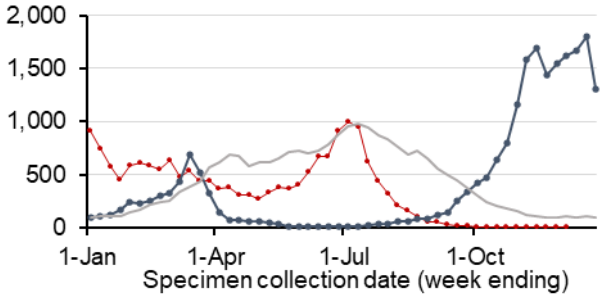
Adenovirus



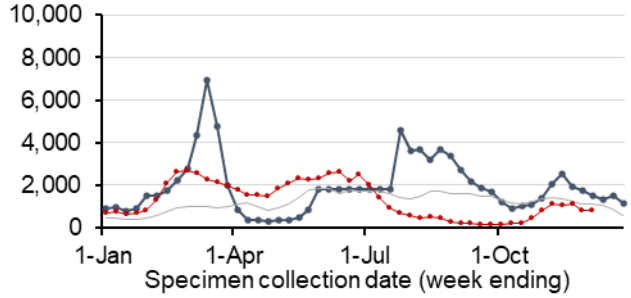
Parainfluenza



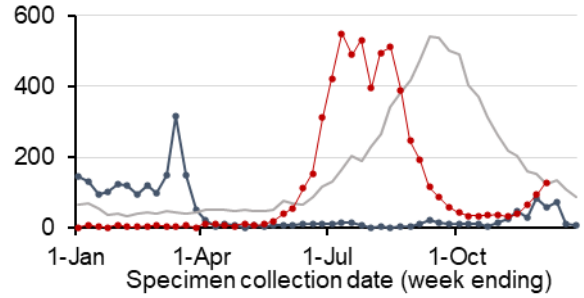
Respiratory Syncytial Virus



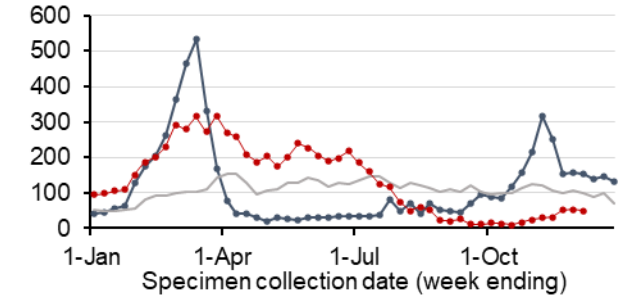
Rhinovirus



Human metapneumovirus



Enterovirus



Note: Preliminary laboratory data is provided by participating sentinel laboratories on a weekly basis and are subject to change. Serological diagnoses are not included.

Appendix D: Additional tables and figures

Total COVID-19 cases by LHD of residence and week reported, NSW, 5 December 2021 to 1 January 2022

	Local Health District	Week ending				Total
		1 Jan	25 Dec	18 Dec	11 Dec	
Metropolitan Local Health Districts	South Eastern Sydney	19,503	7,023	1,723	507	28,756
	South Western Sydney	17,525	4,088	1,506	605	23,724
	Western Sydney	15,872	4,347	1,343	515	22,077
	Sydney	12,416	5,417	1,199	488	19,520
	Northern Sydney	10,724	3,664	830	163	15,381
	Nepean Blue Mountains	4,084	1,008	201	72	5,365
	Illawarra Shoalhaven	2,847	779	198	73	3,897
	Central Coast	2,791	1,087	390	71	4,339
Rural and Regional Local Health Districts	Hunter New England	7,836	4,861	3,738	80	16,515
	Northern NSW	1,720	719	417	107	2,963
	Mid North Coast	1,079	499	123	47	1,748
	Western NSW	909	344	165	38	1,456
	Southern NSW	747	99	29	17	892
	Murrumbidgee	743	200	70	41	1,054
	Far West	53	22	11	2	88
	Correctional settings	25	11	1	2	39
	Hotel Quarantine*	2	0	0	1	3
	NSW#	100,837	34,569	12,013	2,835	150,254

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

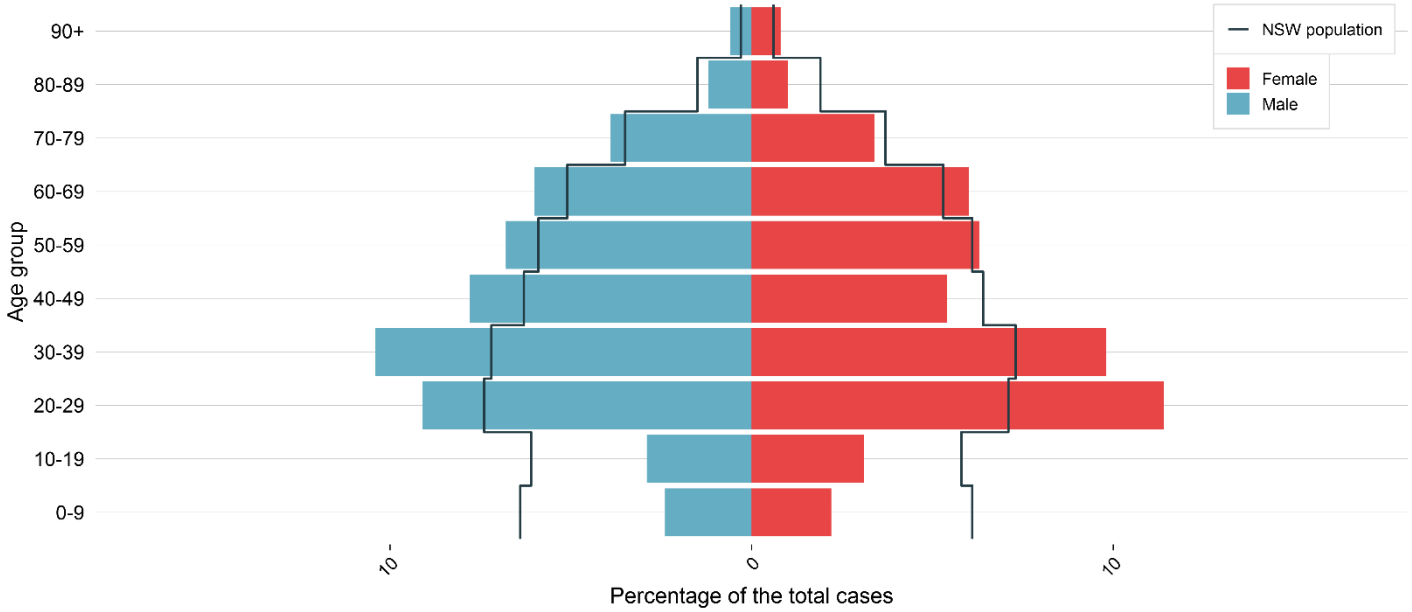
Includes people with a usual place of residence outside of NSW, and those for whom LHD was not available at the time of data extraction.

Total COVID-19 cases by vaccination status and week reported, NSW, 16 June to 1 January 2022

	Fully vaccinated	Partially vaccinated	No effective dose	Under investigation*	Not eligible for vaccination (aged 0-11 years)	Total
16 Jun - 25 Nov 2021	6,845 (9%)	6,825 (9%)	37,915 (50%)	8,779 (12%)	14,955 (20%)	75,319 (100%)
26 Nov 2021 - 1 Jan 2022	108,056 (71%)	1,112 (1%)	2,766 (2%)	28,176 (18%)	12,328 (8%)	152,440 (100%)
Month						
June 2021	3 (1%)	11 (5%)	197 (83%)	2 (1%)	24 (10%)	237 (100%)
July 2021	70 (2%)	97 (3%)	2,665 (81%)	41 (1%)	434 (13%)	3,307 (100%)
August 2021	554 (3%)	807 (4%)	13,388 (71%)	1,097 (6%)	3,134 (17%)	18,980 (100%)
September 2021	2,612 (7%)	3,888 (11%)	15,551 (45%)	6,427 (18%)	6,395 (18%)	34,873 (100%)
October 2021	1,872 (15%)	1,716 (14%)	4,813 (39%)	822 (7%)	3,138 (25%)	12,361 (100%)
November 2021	2,147 (33%)	328 (5%)	1,499 (23%)	472 (7%)	2,095 (32%)	6,541 (100%)
December 2021	93,969 (71%)	959 (1%)	2,496 (2%)	24,394 (18%)	10,418 (8%)	132,236 (100%)
Week ending						
11 Dec 2021	1,431 (50%)	50 (2%)	432 (15%)	355 (13%)	567 (20%)	2,835 (100%)
18 Dec 2021	8,458 (70%)	92 (1%)	659 (5%)	1,798 (15%)	1,006 (8%)	12,013 (100%)
25 Dec 2021	25,196 (73%)	244 (1%)	616 (2%)	6,212 (18%)	2,301 (7%)	34,569 (100%)
1 Jan 2022	72,042 (71%)	671 (1%)	634 (1%)	19,616 (19%)	7,874 (8%)	100,837 (100%)

* 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 recent increase in cases with a vaccination status Under investigation 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 fully vaccinated and those with no effective dose.

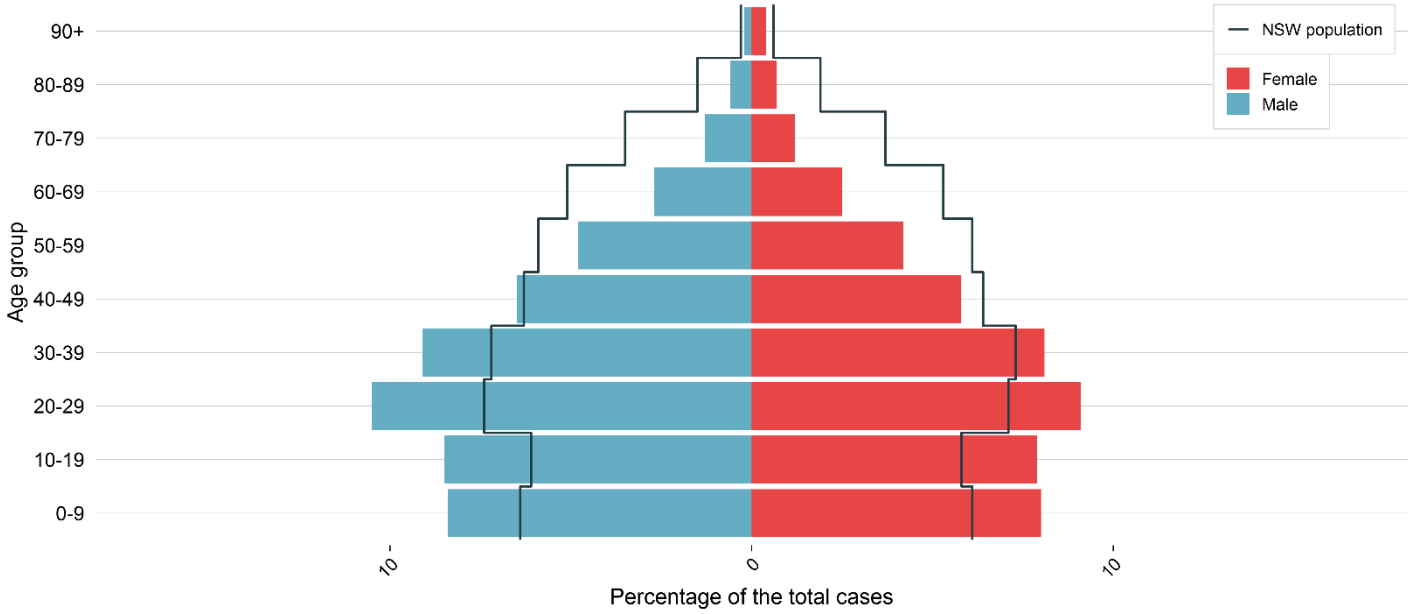
Total case percentage (n = 5,430) by age and gender, NSW, from 1 January 2020 to 15 June 2021



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.

Total 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 diagnosed with COVID-19, by age group, NSW, 1 January 2020 to 1 January 2022

Age-group (years)	1 Jan 2020 – 15 Jun 2021		16 Jun – 25 Nov 2021		26 Nov 2021 – 1 Jan 2022	
	Hospitalised	Percentage of cases hospitalised	Hospitalised	Percentage of cases hospitalised	Hospitalised	Percentage of cases hospitalised
0-9	5	2%	290	2%	87	1%
10-19	8	2%	359	3%	67	<1%
20-29	23	2%	970	7%	257	1%
30-39	43	4%	1,255	10%	263	1%
40-49	41	6%	1,293	14%	204	1%
50-59	59	8%	1,269	19%	246	2%
60-69	85	13%	1,046	27%	245	3%
70-79	68	17%	764	40%	326	10%
80-89	40	33%	508	54%	282	22%
90+	13	31%	128	54%	89	27%
Total	385	7%	7,882	10%	2,066	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 6 days and between onset and death is 11 days. Therefore hospitalisations and deaths are under-reported for the most recently notified cases.

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

Age-group (years)	1 Jan 2020 – 15 Jun 2021		16 Jun – 25 Nov 2021		26 Nov 2021 – 1 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	<1%	10	<1%	2	<1%
10-19	2	1%	35	<1%	5	<1%
20-29	4	<1%	120	1%	18	<1%
30-39	14	1%	186	1%	26	<1%
40-49	12	2%	225	2%	27	<1%
50-59	23	3%	334	5%	29	<1%
60-69	41	6%	285	7%	43	1%
70-79	35	9%	208	11%	28	1%
80-89	13	11%	58	6%	17	1%
90+	1	5%	1	1%	2	1%
Total	145	3%	1,462	2%	197	<1%

Deaths following recent 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				
					Location of death		
	Number of deaths	Case fatality rate	Number of deaths	Case fatality rate	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 diagnosed with 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				
Fully vaccinated	6,845	567 (8.3%)	62 (0.9%)	86 (1.3%)
Partially vaccinated	6,825	585 (8.6%)	91 (1.3%)	75 (1.1%)
No effective dose	37,915	5,103 (13.5%)	1,042 (2.7%)	415 (1.1%)
Under investigation	8,779	1,263 (14.4%)	241 (2.7%)	8 (0.1%)
Not eligible for vaccination (aged 0-11 years)	14,955	336 (2.2%)	12 (0.1%)	0 (0.0%)
Total	75,319	7,854 (10.4%)	1,448 (1.9%)	584 (0.8%)

- The percentage of cases who died is slightly higher for the fully vaccinated than un-vaccinated group because elderly people were more likely to be vaccinated in this period. 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). See below for further breakdowns by age.

Glossary

Term	Description
Case	A person infected who has tested positive to a validated specific SARS-CoV-2 nucleic acid test 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
Health care workers	Individuals who work within a hospital or other healthcare settings, including staff in direct or indirect contact with patients or infectious materials. HCWs includes roles such as doctor, nurse, orderly, paramedic, laboratory technician, pharmacist, administrative staff, cleaners, and other support staff. Public health units routinely undertake investigations of COVID-19 cases in healthcare workers to identify ongoing risks in healthcare settings. See COVID-19 in healthcare workers in NSW for a detailed report on infections to August 2020 in 35 HCWs who had worked in a health facility in the 14 days prior to symptom onset or date or testing.
Incubation period	The time in which the case was infected. The incubation period for COVID-19 is between 1 and 14 days prior to symptom onset.
Overseas acquired case	Case who travelled overseas during their incubation period. While testing rates in NSW are high and case counts are low, cases who have travelled overseas in their incubation period are considered to have acquired their infection overseas.
Interstate acquired case	Case who travelled interstate during their infection and the public health investigation concludes the infection was likely acquired interstate.
Cluster	Group of cases sharing a common source of infection or are linked to each other in some way.
Fully vaccinated	Cases reported as fully vaccinated completed the recommended vaccine course at least 14 days prior to known exposure to COVID-19 or arrival in Australia. The COVID-19 vaccines available in Australia are very effective with evidence showing that people who are fully vaccinated are 70–95% less likely to get sick with COVID-19 compared with those who are not vaccinated. However, a small proportion of fully vaccinated people may still get the disease. As the proportion of the population who are vaccinated increases, the numbers of cases who are fully vaccinated will increase but this does not mean the vaccines are not working.
Partially vaccinated	Cases reported as partially vaccinated (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 arrival in Australia, or • received their second dose of a two-dose vaccination course less than 14 days prior to known exposure to COVID-19 or arrival in Australia, or • received a single-dose vaccination course (currently only Johnson & Johnson vaccine) less than 14 days prior to known exposure to COVID-19 or arrival in Australia.
No effective dose	Cases reported as no effective dose: • received their first dose of a two-dose vaccination course less than 21 days prior to known exposure to COVID-19 or arrival in Australia, 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.
Under investigation	For cases reported as under investigation, vaccination status could not be determined through searching the Australian Immunisation Register (AIR). Based on self-reported data at interview, for cases to September 2021, those with an unknown status are likely to be un-vaccinated. Cases between October and mid-December with an unknown status are likely to have received at least one dose, but their record could not be matched in AIR.

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, including emergency departments, around the time of their COVID-19 diagnosis. This does not mean that all the hospitalisations reported are due to a worsening of COVID-19 symptoms. 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	Global surveillance monitors the prevalence of mutations in the SARS-CoV-2 virus, focusing particularly on mutations that may reduce vaccine effectiveness or enable re-infection. This report reflects the recommendations of Australia's Communicable Diseases Genomics Network (CDGN) for reporting of Variants of Concern (VoC) in NSW. The CDGN reports on the Alpha (B.1.1.7), Beta (B.1.351), Gamma (P.1), and Delta (B.1.617.2) internationally recognised VoCs. The first recognised VoC was the Alpha variant, in December 2020. The Delta lineage (B.1.617.2) was internationally recognised as a VoC on 11 May 2021 and is responsible for almost all cases in the NSW outbreak from 16 June 2021. A new variant, Omicron (B.1.1.529) was recognised internationally on 26 November 2021 and the first notification of a case in NSW occurred on 28 November 2021.
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 last year 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 C). 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.

Dates used in COVID-19 reporting

Event	Date name	Source
Person first starts to feel unwell	Date of symptom onset	Public health staff interview all cases at the time of diagnosis. This is the date provided to NSW Health by the case.
Person has a swab taken	Date of test	This date is provided to NSW Health by the laboratory when the test result (positive or negative) is notified.
Laboratory notifies NSW Health of result	Date of notification	This date is provided to NSW Health by the laboratory. Laboratories prioritise notification of positive results to allow prompt public health action. Positive 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 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.