

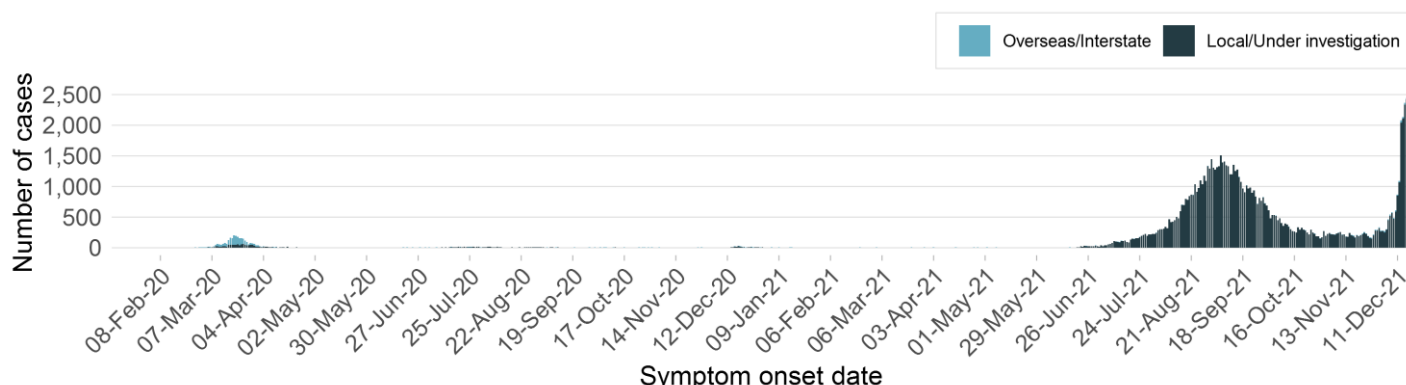
COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 50 ENDING 18 DECEMBER 2021

Published 30 December 2021

Summary for the week 12 December to 18 December 2021 (inclusive)

Figure 1. COVID-19 cases by likely infection source and reported illness onset, NSW, 13 January 2020 to 18 December 2021



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

Table 1. Number and proportion of COVID-19 cases in NSW by likely source of infection to week ending 18 December 2021

	2020		2021			Total
	Jan – Jun	July – Dec	01 Jan - 15 Jun	16 Jun - 31 Oct	01 Nov - 18 Dec	
Locally acquired	1,236 (39 %)	807 (52 %)	51 (7 %)	69,489 (100 %)	18,878 (83 %)	90,461 (92 %)
Interstate acquired	67 (2 %)	23 (1 %)	0 (0 %)	31 (<1 %)	218 (1 %)	339 (<1 %)
Overseas acquired	1,892 (59 %)	714 (46 %)	641 (93 %)	240 (<1 %)	349 (2 %)	3,836 (4 %)
Under investigation	0 (0 %)	0 (0 %)	0 (0 %)	0 (0 %)	3,182 (14 %)	3,182 (3 %)
Total	3,195 (100 %)	1,544 (100 %)	692 (100 %)	69,760 (100 %)	22,627 (100 %)	97,818 (100 %)
Deaths	51	5	0	522	68	646

In the week ending 18 December 2021:

- There were 12,041 total cases reported, with 8,720 (72%) locally acquired and 3,126 (26%) under investigation.
- Of these cases, 187 cases have been confirmed as having the Omicron variant. Since 26 November 2021, 315 Omicron cases have been confirmed, with a further 1,634 probable Omicron cases.
- The ten LGAs with the highest number of cases were:
 - Newcastle, 1,755 (15%) cases
 - Lake Macquarie, 1,038 (9%) cases
 - Sydney, 743 (6%) cases
 - Canterbury-Bankstown, 740 (6%) cases
 - Cumberland, 513 (4%) cases
 - Blacktown, 426 (4%) cases
 - Randwick, 418 (3%) cases
 - Fairfield, 399 (3%) cases
 - Maitland, 395 (3%) cases
 - Central Coast, 391 (3%) cases
 - 5,223 (43%) cases were residents across 96 other LGAs
- There were 137 (1%) cases in overseas returned travellers (compared with 78 the previous week).
- There were 4 deaths in people diagnosed with COVID.
- Among those aged 12 and over, 76.4% of all cases, and 91.9% of the population were fully vaccinated.
- Testing rates increased compared to the previous week (up 68%).
- 211 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 108 detections. Detections from Wilcannia, Cowra, Walgett, Scone, Wauchope, Moonee, Moss Vale, Yass, Leeton, Batemans Bay and Moruya occurred with no known or recent cases in the catchment. Cases were also identified in Mannering Park, Wauchope, Moonee, Bellingen, South West Rocks, Moss Vale, Bomaderry, Merimbula, Raymond Terrace, Dungog, Boulder Bay, Scone, Lockhart, Goulburn, Young, Narrandera, Blayney, Trangie, and Walgett following recent detections.

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Table 2. Measures of public health action, NSW, for the period from 5 December to 18 December 2021

	Week ending 18 Dec	Week ending 11 Dec
Proportion total cases notified to NSW Health by the laboratory within 1 day of specimen collection	58% (6,948/12,041)	86% (2,445/2,839)
Total cases contacted by text message within 1 day of notification to NSW Health	99% (11,937/12,041)	93% (2,644/2,839)
Number of high-risk cases fully interviewed by public health staff within 1 day of responding to the NSW Health text message	89% (2,394/2,678)	93% (651/699)
Total cases fully interviewed by public health staff within 1 day of notification to NSW Health	59% (7,145/12,041)	95% (2,709/2,839)
Number of high-risk or un-responded cases to be interviewed by public health staff within 1 day of notification to NSW Health	80% (3,210/4,004)	94 (1,372/1,455)

Section 1: Omicron variant in NSW

Table 3. Demographics of confirmed and probable Omicron infections by gender, age, vaccination status, source of infection and clinical severity, NSW, 26 November to 18 December, 2021

	Confirmed Omicron Cases					Probable Omicron Cases ^b
	Week ending				26 Nov to 18 Dec 2021	
	18 Dec 2021	11 Dec 2021	4 Dec 2021	27 Nov 2021		26 Nov to 18 Dec 2021
Gender						
Female	104 (55.6%)	48 (49.0%)	13 (44.8%)	0 (0.0%)	165 (52.4%)	813 (49.7%)
Male	83 (44.4%)	50 (51.0%)	16 (55.2%)	1 (100%)	150 (47.6%)	821 (50.2%)
Age group						
0-9	1 (0.5%)	5 (5.1%)	3 (10.3%)	1 (100%)	10 (3.2%)	30 (1.8%)
10-19	43 (23.0%)	10 (10.2%)	10 (34.5%)	0 (0.0%)	63 (20.0%)	247 (15.1%)
20-29	118 (63.1%)	37 (37.8%)	2 (6.9%)	0 (0.0%)	157 (49.8%)	948 (57.9%)
30-39	13 (7.0%)	23 (23.5%)	2 (6.9%)	0 (0.0%)	38 (12.1%)	227 (13.9%)
40-49	5 (2.7%)	13 (13.3%)	8 (27.6%)	0 (0.0%)	26 (8.3%)	93 (5.7%)
50-59	4 (2.1%)	4 (4.1%)	3 (10.3%)	0 (0.0%)	11 (3.5%)	54 (3.3%)
60-69	2 (1.1%)	3 (3.1%)	1 (3.4%)	0 (0.0%)	6 (1.9%)	17 (1.0%)
70-79	0 (0.0%)	3 (3.1%)	0 (0.0%)	0 (0.0%)	3 (1.0%)	12 (0.7%)
80-89	1 (0.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	7 (0.4%)
90+	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Vaccination status						
Fully vaccinated	152 (81.3%)	60 (61.2%)	19 (65.5%)	0 (0.0%)	231 (73.3%)	1319 (80.6%)
Partially vaccinated	0 (0.0%)	4 (4.1%)	3 (10.3%)	0 (0.0%)	7 (2.2%)	10 (0.6%)
No effective dose	3 (1.6%)	11 (11.2%)	4 (13.8%)	0 (0.0%)	18 (5.7%)	27 (1.6%)
Under investigation ^a	31 (16.6%)	18 (18.4%)	0 (0.0%)	0 (0.0%)	49 (15.6%)	249 (15.2%)
Not eligible (aged 0-11 years)	1 (0.5%)	5 (5.1%)	3 (10.3%)	1 (100%)	10 (3.2%)	32 (2.0%)
Source of infection						
Overseas acquired	8 (4.3%)	9 (9.2%)	9 (31.0%)	1 (100%)	27 (8.6%)	16 (1.0%)
Interstate	0 (0.0%)	1 (1.0%)	1 (3.4%)	0 (0.0%)	2 (0.6%)	3 (0.2%)
Locally acquired	178 (95.2%)	88 (89.8%)	19 (65.5%)	0 (0.0%)	285 (90.5%)	1317 (80.5%)
Under initial investigation	1 (0.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	301 (18.4%)
Clinical Severity						
Hospitalised	0 (0.0%)	1 (1.0%)	1 (3.4%)	0 (0.0%)	2 (0.6%)	12 (0.7%)
ICU	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Deaths	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total	187 (100%)	98 (100%)	29 (100%)	1 (100%)	315 (100%)	1,634 (100%)

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

^b 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. Following genomic sequencing, these cases will be reported with their confirmed variant.

- On 26 November 2021, the World Health Organization designated a new variant, Omicron (B.1.1.529), as a variant of concern.
- The first Omicron case in NSW was identified on 28 November 2021. Genomic sequencing of older cases has since identified an Omicron case who was notified in the week ending 27 November 2021.
- Since 26 November 2021, 315 Omicron cases have been confirmed by genomic sequencing. Probable Omicron cases give a broader indication of the spread of Omicron in the community, with 1,634 probable Omicron cases (i.e., those with S-gene target failure on PCR testing) identified since 26 November 2021.

Table 4. Demographics of confirmed and probable Omicron infections, Delta infections, and infections with genomic sequencing under investigation by gender, age, vaccination status and clinical severity, NSW, 26 November to 18 December, 2021

	Confirmed Omicron Cases	Probable Omicron Cases	Confirmed Delta Cases	Not Sequenced
Gender				
Female	165 (52.4%)	813 (49.7%)	1,017 (47.4%)	7,212 (49.4%)
Male	150 (47.6%)	821 (50.2%)	1,124 (52.4%)	7,384 (50.6%)
Age group				
0-9	10 (3.2%)	30 (1.8%)	333 (15.5%)	1,288 (8.8%)
10-19	63 (20.0%)	247 (15.1%)	415 (19.4%)	2,235 (15.3%)
20-29	157 (49.8%)	948 (57.9%)	456 (21.3%)	5,425 (37.1%)
30-39	38 (12.1%)	227 (13.9%)	324 (15.1%)	2,458 (16.8%)
40-49	26 (8.3%)	93 (5.7%)	262 (12.2%)	1,395 (9.6%)
50-59	11 (3.5%)	54 (3.3%)	154 (7.2%)	932 (6.4%)
60-69	6 (1.9%)	17 (1.0%)	107 (5.0%)	517 (3.5%)
70-79	3 (1.0%)	12 (0.7%)	65 (3.0%)	233 (1.6%)
80-89	1 (0.3%)	7 (0.4%)	26 (1.2%)	96 (0.7%)
90+	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Vaccination status				
Fully vaccinated	231 (73.3%)	1,319 (80.6%)	1,020 (47.6%)	9,528 (65.2%)
Partially vaccinated	7 (2.2%)	10 (0.6%)	32 (1.5%)	161 (1.1%)
No effective dose	18 (5.7%)	27 (1.6%)	381 (17.8%)	1,074 (7.4%)
Under investigation ^a	49 (15.6%)	249 (15.2%)	237 (11.1%)	2,169 (14.8%)
Not eligible (aged 0-11 years)	10 (3.2%)	32 (2.0%)	474 (22.1%)	1,675 (11.5%)
Clinical severity				
Hospitalised	2 (0.6%)	12 (0.7%)	76 (3.5%)	249 (1.7%)
ICU	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Deaths	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total	315 (100%)	1,634 (100%)	2,141 (100%)	14,596 (100%)

- Although the case numbers with Omicron are growing, it is still too early to draw conclusions about severity or vaccine effectiveness from the data that are currently available.

Section 2: Cases from 16 June 2021 to 18 December 2021

Figure 2. Source of infection, NSW from 16 June to 18 December 2021

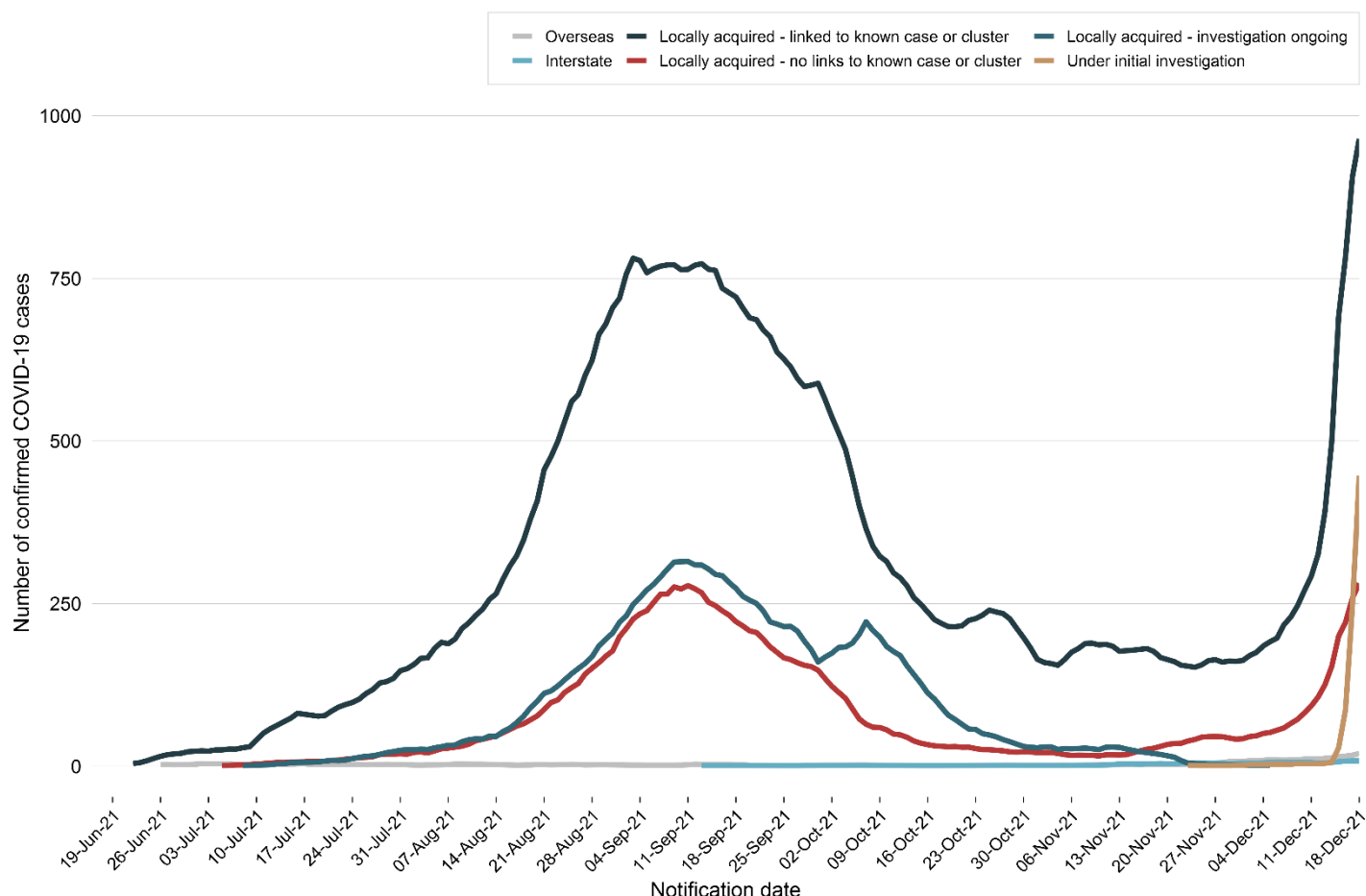


Table 5. COVID-19 cases and tests reported, NSW, from 16 June 2021 to 18 December 2021

	Week ending 18 Dec	Week ending 11 Dec	% change	16 Jun to 31 Oct 2021	Since 1 Nov 2021
Number of cases	12,041	2,839	324 %	69,760	22,627
Locally acquired	8,720	2,695	224 %	69,489	18,878
Known epidemiological links to other cases or clusters	6,752	2,045	230 %	44,547	14,742
No epidemiological links to other cases or clusters	1,968	650	203 %	24,942	4,136
Overseas acquired	137	78	76 %	240	349
Interstate acquired	58	40	45 %	31	218
Under investigation	3,126	26	11,923 %	0	3,182
Number of tests	978,566	581,615	168 %	14,081,739	2,957,232

Note: The case numbers reported for previous weeks is based on the most up to date information from public health investigations. Source of acquisition is subject to change as data are cleaned and updated.

- The number of reported cases acquired in NSW more than tripled in the last week, driven largely by an increase in locally acquired cases. Overseas and interstate acquired cases showed more modest increases.
- A large proportion of cases reported in the week ending 18 December 2021 remain under investigation.
- Of cases confirmed to be locally acquired, most cases have been linked to a known case or cluster with unlinked cases being a minority of cases.

Section 3: Age and sex breakdown of cases

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 18 December 2021

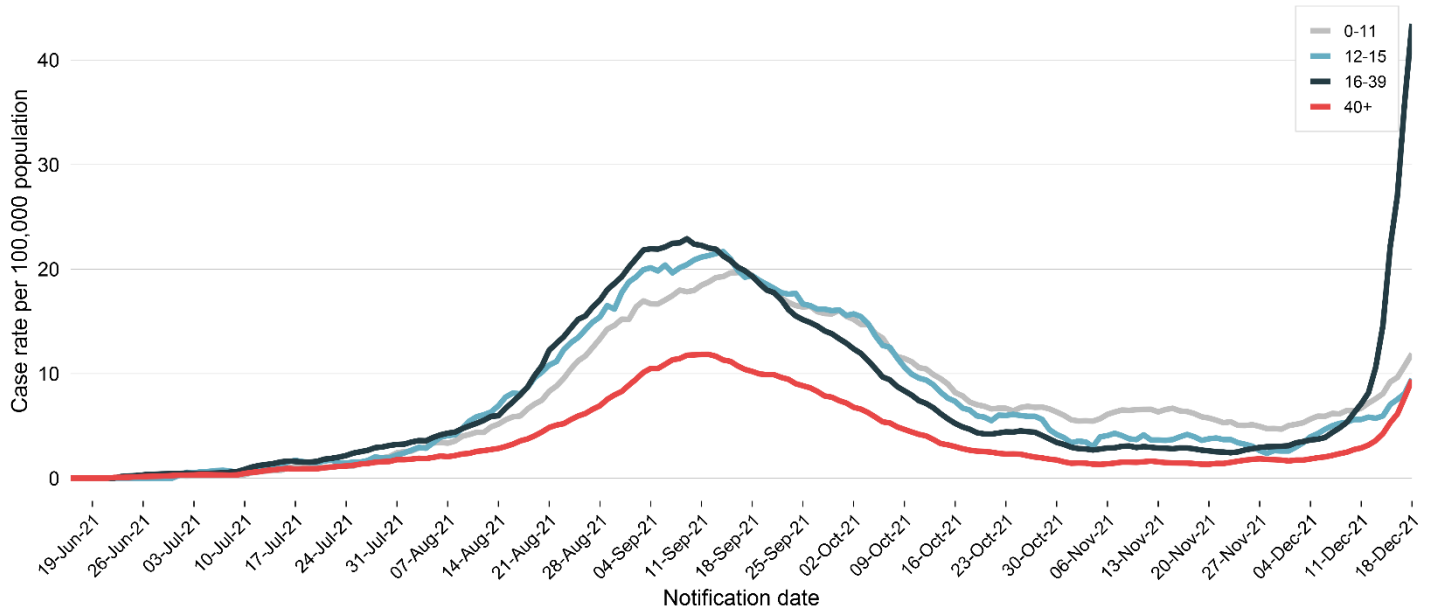
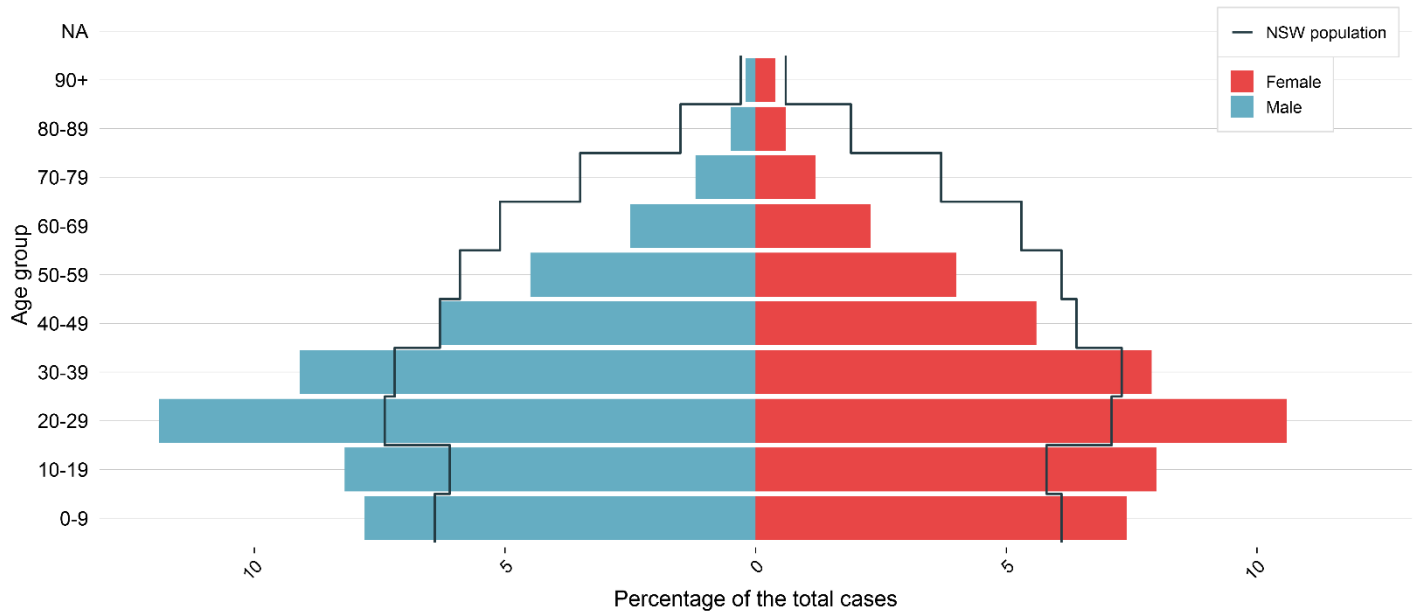


Figure 4. Current wave total case percentage (n = 92,331) by age and gender, NSW, from 16 June to 18 December 2021



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

- The large increase in case numbers in the week ending 18 December was principally in the 20-29 age range (see Appendix E for further detail)
- Cases since 16 June 2021 have been younger (median age = 28 years, interquartile range (IQR) = 15-43 years) than cases before this date (median age = 37 years, IQR = 25-55 years).
- Most cases were aged 20-29 years, with all age groups under 40 over-represented among the cases, relative to their proportion in the NSW population. See Appendix E for further detail
- The over-representation of younger age group and under-representation among older groups may be due to increased social mixing amongst younger groups and higher vaccination rates in older groups.

Section 4: 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 to 18 December 2021

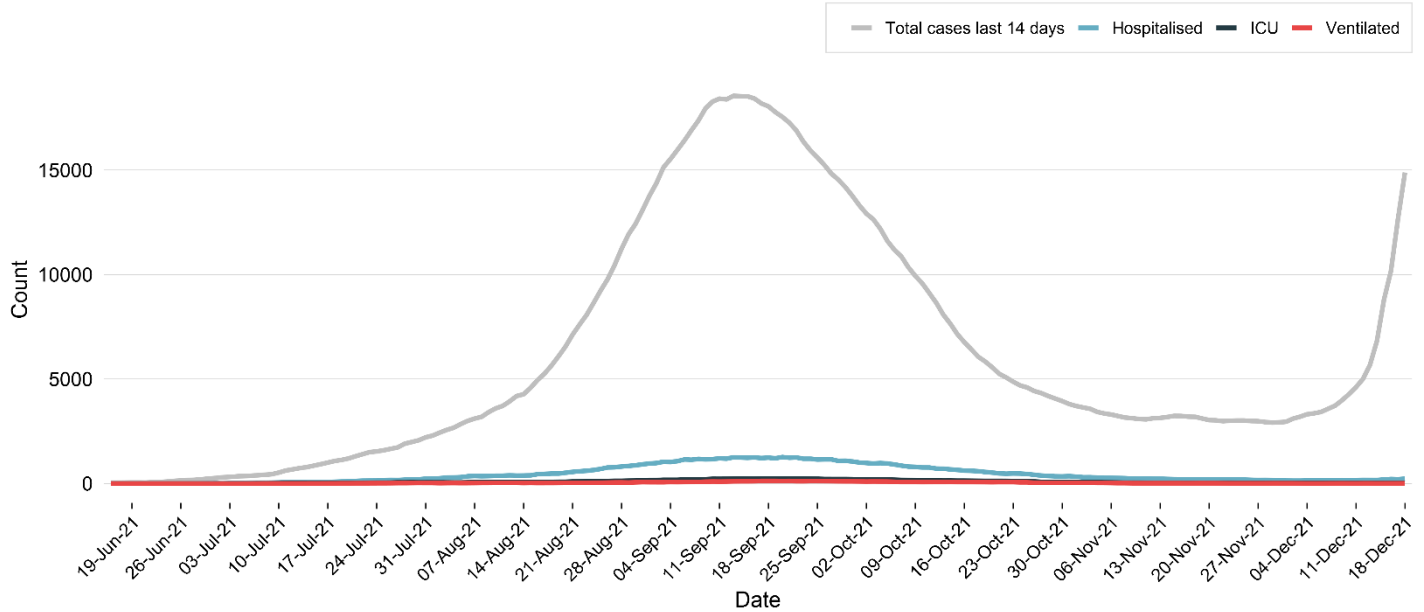
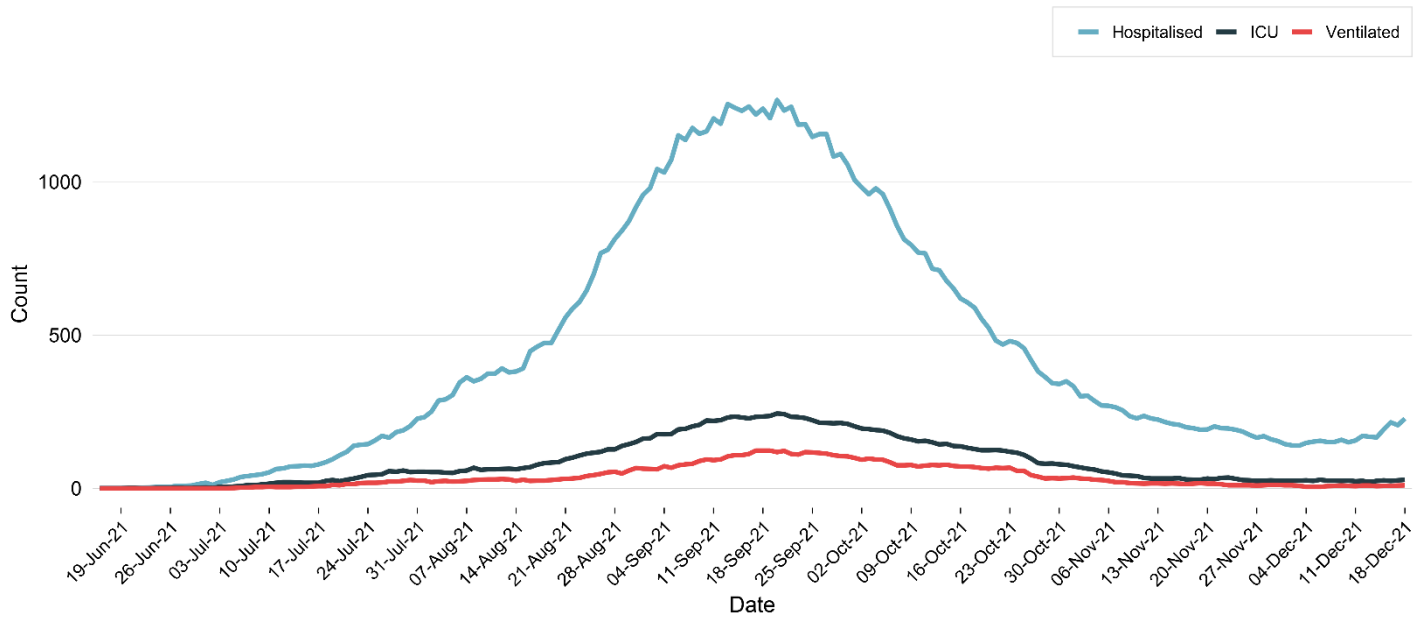


Figure 5b. Number of cases in hospital, in ICU and ventilated by date, NSW, from 16 June to 18 December 2021



- 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 6 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 18 December, but the increase in hospitalisations was much smaller. The delay between infection and hospitalisation means that it is too soon to see how the increase in case rates will affect hospitalisations.

Section 5: 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 4 December 2021

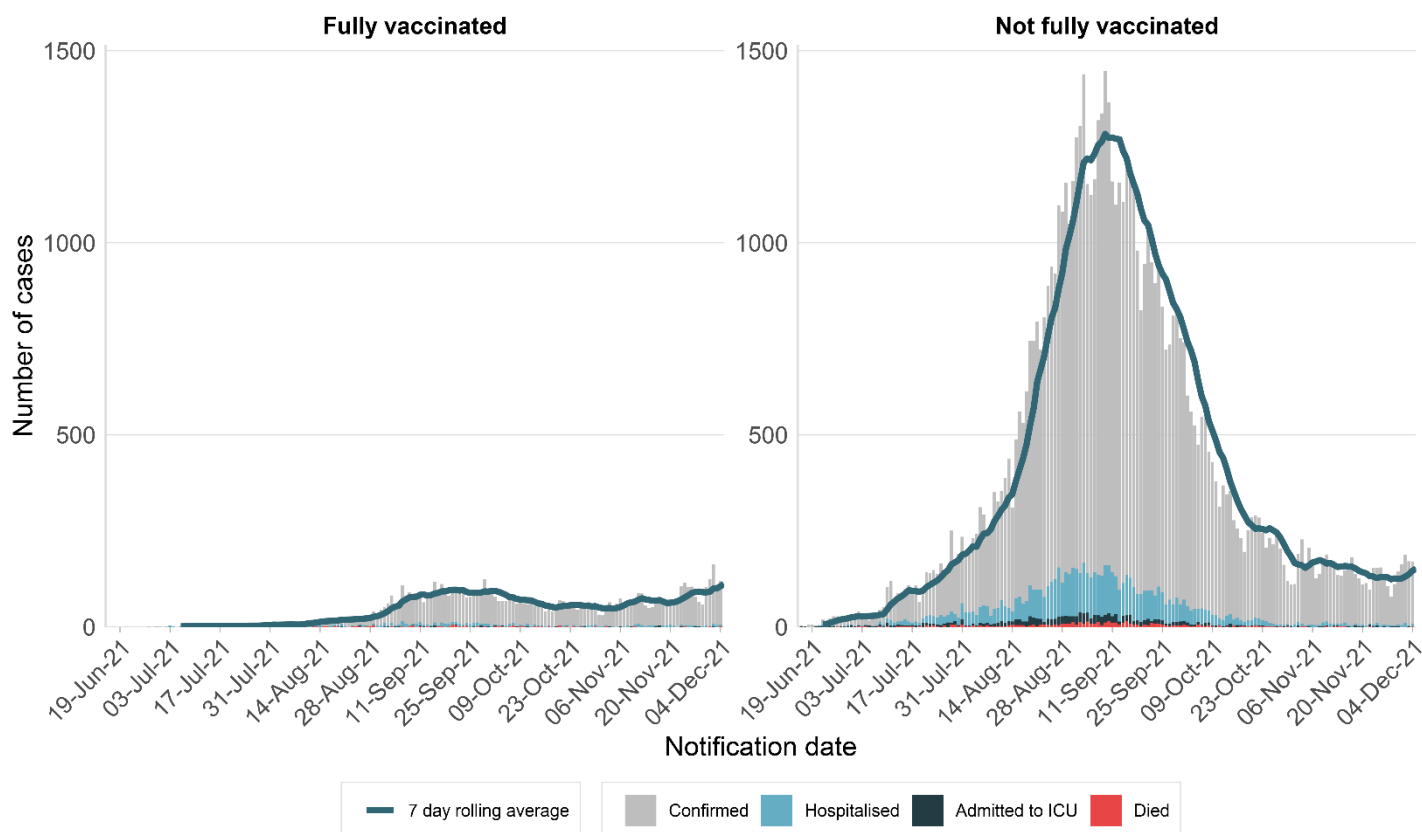


Table 6. Hospitalisations, ICU admissions and deaths among cases diagnosed with COVID-19, by vaccination status, NSW, from 16 June to 18 December 2021

Vaccination status	Total cases (%)	Hospitalised (%)	Hospitalised and in ICU (%)	Death (%)
Fully Vaccinated	17,604 (19.1%)	723 (8.8%)	88 (5.8%)	90 (15.3%)
Partially vaccinated	7,013 (7.6%)	605 (7.4%)	95 (6.2%)	76 (12.9%)
No effective dose	39,257 (42.5%)	5,233 (63.7%)	1,076 (70.5%)	416 (70.5%)
Under investigation	11,399 (12.3%)	1,310 (15.9%)	255 (16.7%)	8 (1.4%)
Not eligible for vaccination (aged 0-11 years)	17,114 (18.5%)	348 (4.2%)	13 (0.9%)	0 (0.0%)
Total	92,387 (100.0%)	8,219¹ (100.0%)	1,527 (100.0%)	590 (100.0%)

- Dates are based on the date of the case’s notification rather than the date they were hospitalised, admitted to ICU, or died.
- Figure data is provided to 4 December, allowing sufficient time to capture the development of severe illness or death among the most recently notified cases.
- The proportion of cases who are fully vaccinated has increased over time, as the proportion of the general population who are fully vaccinated has increased over the same period.
- In the past week, 8,430 (70.0%) of all cases were fully vaccinated (see Appendix E)
- This represents 76.4% of the 11,031 cases who were eligible for vaccination (aged 12 years and over). In comparison, 91.9% of the NSW population aged 12 and over were fully vaccinated (had completed their recommended vaccine schedule by 4 December).
- Since 16 June 2021, cases aged 12 years and over with no effective dose account for 42.5% of all cases, and as much as 63.7% of hospitalisations, 70.5% of ICU admissions, and 70.5% of deaths.
- COVID-19 is relatively mild in most young children: children aged 0-11 years who are ineligible for vaccination account for 18.5% of cases, but only 4.2% of hospitalisations, 0.9% of ICU admissions, and no deaths.

¹ The weekly report relies on public health surveillance data which is continually cleaned and updated during an investigation. The number of cases hospitalised has reduced in recent weeks due to removing cases who were hospitalised but unlikely to have been hospitalised because of experiencing illness due to COVID (for example emergency department presentations without admission). These types of data cleaning activities have occurred throughout the pandemic and the differences are most noticeable when case numbers are declining or stable.

Section 6: Deaths following recent infection with COVID-19

Table 7. Deaths following recent infection with COVID-19, by age group, from January 2020 to 18 December 2021

Age-group (years)	Since 16 Jun 2021			Jan 2020 – 15 Jun 2021	
	Number of deaths	Case fatality rate	Fatality rate per 100,000 population ²	Number of deaths	Case fatality rate ²
0-9	0	0%	0.0	0	0%
10-19	1	<1%	0.1	0	0%
20-29	6	<1%	0.5	0	0%
30-39	15	<1%	1.3	0	0%
40-49	27	<1%	2.6	0	0%
50-59	66	1%	6.8	1	<1%
60-69	105	2%	12.5	4	1%
70-79	136	6%	23.3	15	4%
80-89	168	16%	61.3	20	16%
90+	66	25%	95.2	16	38%
Total	590	1%	7.3	56	1%

Table 8. Deaths following recent infection with COVID-19, by age group and location, from 16 June to 18 December 2021

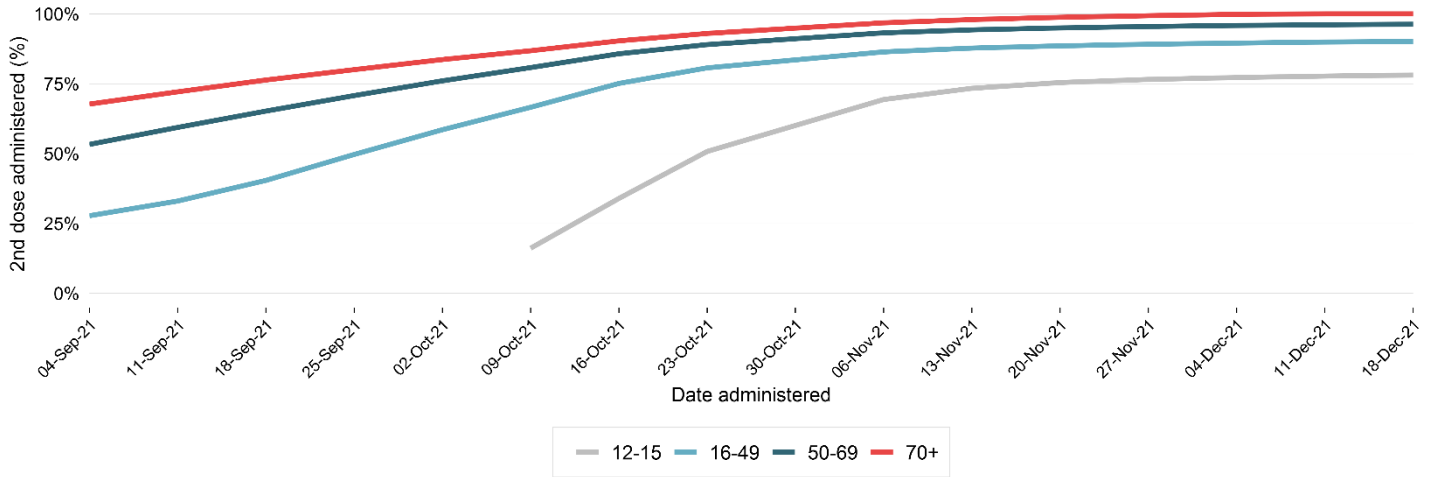
Age-group (years)	Health care facility	Aged care facility	Home
0-9	0	0	0
10-19	1	0	0
20-29	4	0	2
30-39	11	0	4
40-49	21	0	6
50-59	57	0	9
60-69	93	1	11
70-79	126	7	3
80-89	151	10	7
90+	48	18	0
Total	512	36	42

- Since the start of the pandemic, 0.7% of cases (646 people) have died.
- This includes 102 residents of aged care facilities.
- 2% (14/646) of the deaths had infections that were overseas acquired.
- 70.5% of the deaths since 16 June 2021 had not received an effective vaccine dose (see Table 6).
- The median delay between a person becoming ill and death was 11 days.
- In the week ending 18 December, there were 4 deaths in people diagnosed with COVID-19, including
 - 1 person who was fully vaccinated (aged 90+ years),
 - 1 person who was partially vaccinated (aged 90+ years), and
 - 2 people who had received no effective dose (one in their 60s and one in their 70s).
- The majority of deaths since 16 June 2021 have occurred in hospital (512/590, 87%).
- Among deaths occurring at home, the majority (26/42, 62%) were diagnosed after death.

² There is often a delay between a person becoming ill with COVID-19 and subsequently requiring a hospitalisation or dying. In the current outbreak 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.

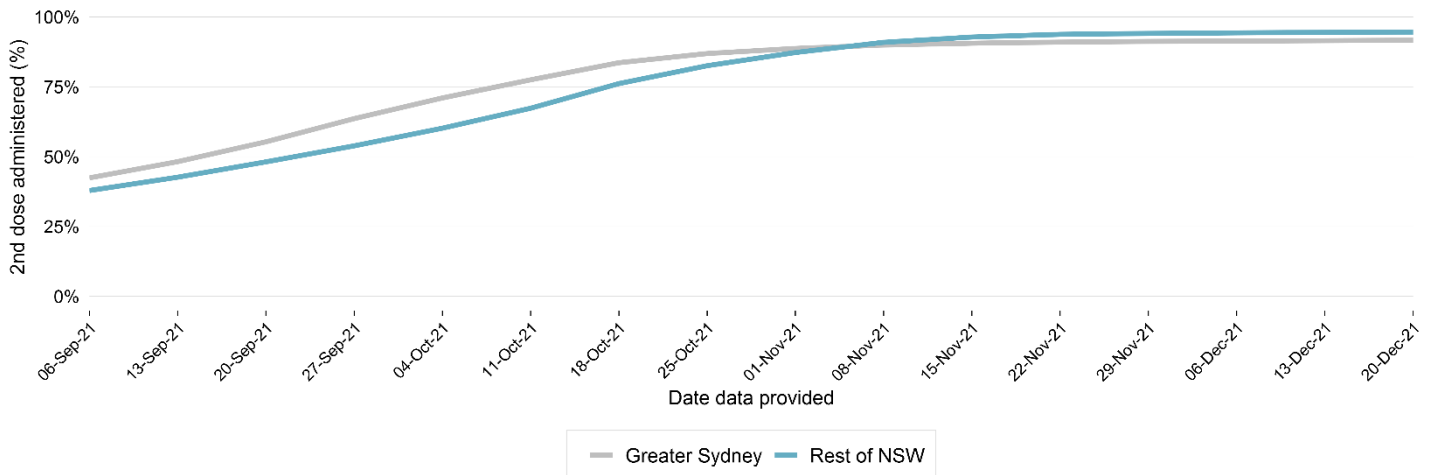
Section 7: Vaccination coverage in NSW

Figure 7. Proportion who have received two doses of COVID-19 vaccine, by age range and time, NSW, 4 September to 18 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



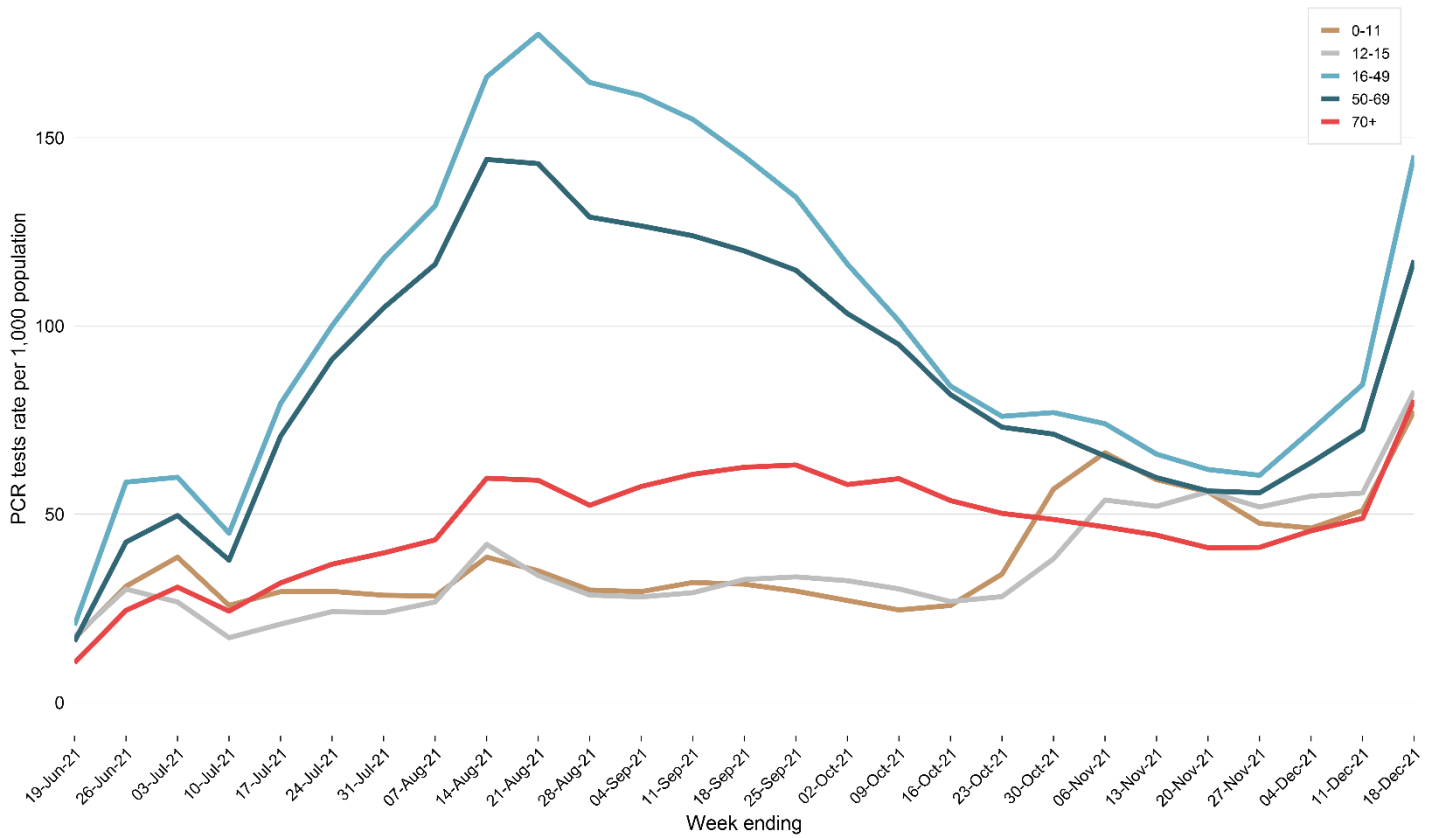
Source: <https://www.health.gov.au/resources/collections/covid-19-vaccination-geographic-vaccination-rates-sa4>

- The proportion of the NSW population who have received two vaccine doses has increased substantially in the last three months, reaching over 93% of those aged 16 and over by 18 December 2021.
- 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 Sydney³.

³ 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 8: COVID-19 testing in NSW by age group

Figure 9. Number of negative PCR tests per 1,000 population, by age group, NSW, 16 June to 18 December 2021



- During the wave between 16 June and mid-October 2021, there was a sustained increase in the number of tests performed for people aged 16 years and over, which peaked in August.
- The greatest testing rate was among those aged 16-49 years.
- Throughout December 2021, and particularly in the week ending 18 December, there was a large and sustained increase in testing for all age groups.

Section 9: Testing and positivity rates

Figure 10. Cases, testing rates per 1000 population, and percentage of tests which were positive for COVID-19, NSW, 16 June to 18 December 2021

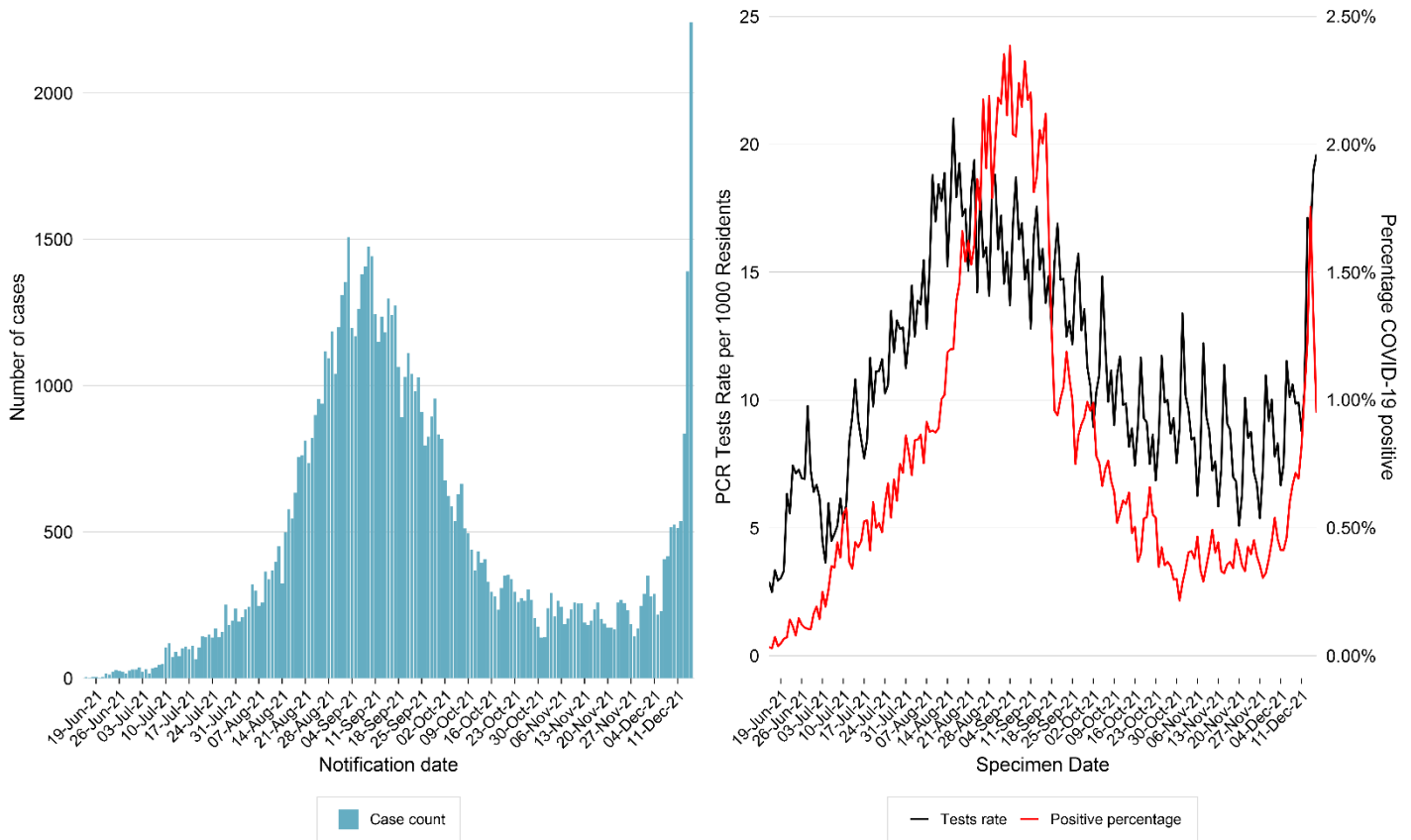


Figure 11a. Cases, testing rates per 1000 population, and percentage of tests which were positive for COVID-19, by LHD of residence, metropolitan LHDs, NSW, 16 June to 18 December 2021

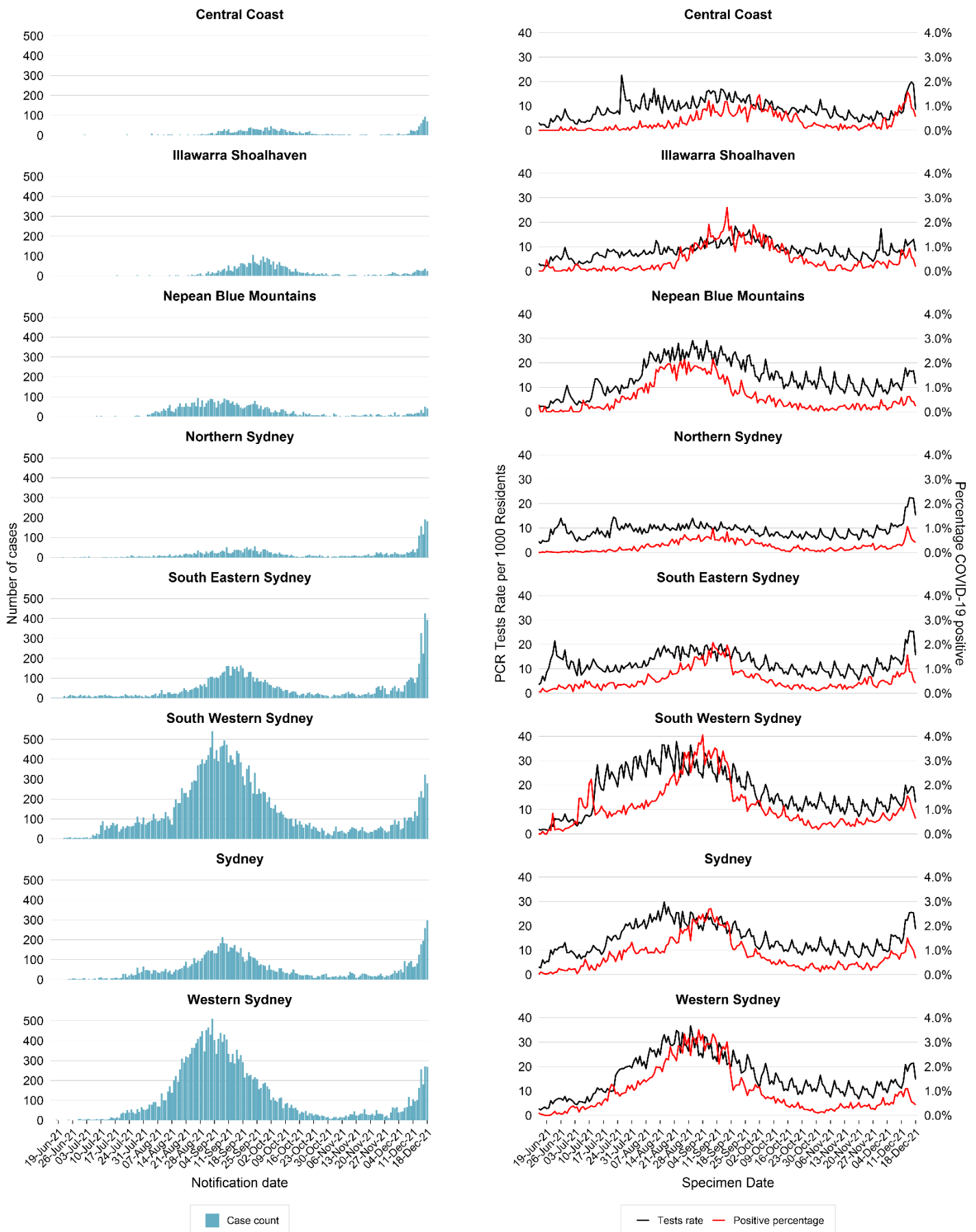
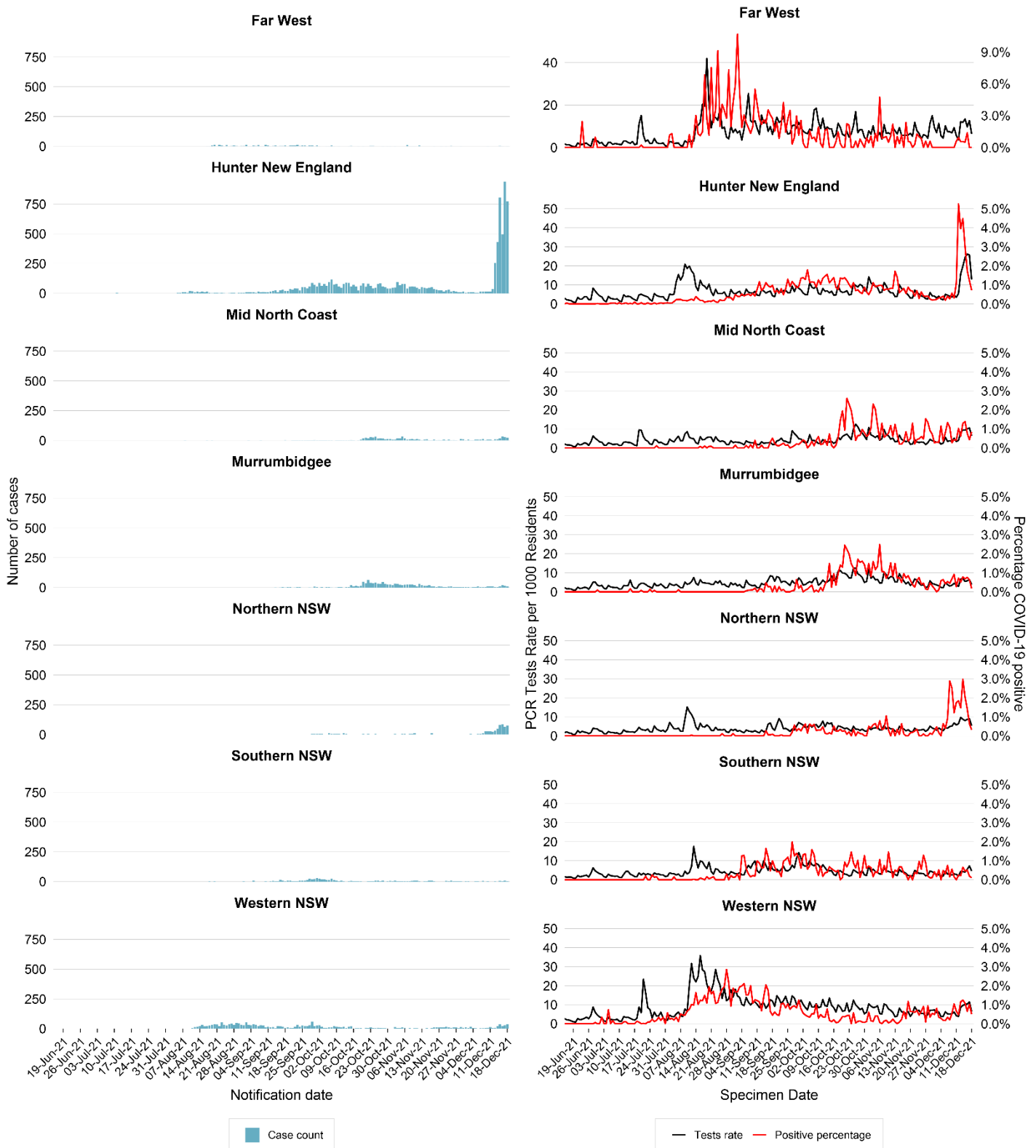


Figure 11b. Cases, testing rates per 1000 population, and percentage of tests which were positive for COVID-19, by LHD of residence, rural and regional LHDs, NSW, 16 June to 18 December 2021



- Note that the axes differ within and between figures
- Percent positivity has generally been well below 3%, reflecting high surveillance capacity and rapid case identification
- Testing rates and positivity rates appear to 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 most LHDs.

Section 10: 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, 16 June to 18 December 2021

LGA name	Last 7 days		16 Jun-18 Dec 2021	
	Cases	Cases per 100,000 population	Cases	Cases per 100,000 population
Waverley	252	339	869	1,170
Sydney	743	302	3,151	1,279
Randwick	418	269	2,068	1,329
Woollahra	143	241	454	764
Cumberland	513	212	10,191	4,220
Canterbury-Bankstown	737	195	13,329	3,527
Lane Cove	76	189	223	555
Fairfield	399	188	5,581	2,636
Hunters Hill	25	167	140	935
Liverpool	380	167	6,595	2,898
Campbelltown	226	132	3,166	1,852
Inner West	265	132	1,401	698
Bayside	218	122	1,994	1,118
Blacktown	426	114	7,739	2,067
Central Coast	391	114	1,811	527
North Sydney	81	108	198	264
Canada Bay	103	107	525	546
Sutherland Shire	246	107	1,093	474
Mosman	32	103	83	268
Georges River	160	100	1,628	1,021

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, 16 June to 18 December 2021

LGA name	Last 7 days		16 Jun-18 Dec 2021	
	Cases	Cases per 100,000 population	Cases	Cases per 100,000 population
Newcastle	1,755	1,060	2,687	1,623
Byron	296	844	381	1,086
Lake Macquarie	1,038	504	2,014	978
Maitland	395	464	848	996
Port Stephens	216	294	501	682
Singleton	56	239	98	418
Cessnock	112	187	625	1,042
Balranald	4	171	7	299
Muswellbrook	26	159	56	342
Orange	66	155	216	509
Blayney	9	122	17	230
Ballina	54	121	91	204
Narrandera	6	102	6	102
Upper Hunter Shire	13	92	20	141
Mid-Western Regional	23	91	58	230
Moree Plains	10	75	242	1,825
Port Macquarie-Hastings	61	72	261	309
Nambucca	14	71	48	242
Bathurst Regional	30	69	163	374
Lismore	29	66	85	195

- The top 20 metropolitan LGAs contributed 48% of all cases in the week ending 18 December
- The top 20 regional and rural LGAs contributed another 35% of cases.
- The four LGAs with the highest case rates per 100,000 population are in a rural and regional area.
- Although case numbers in most regional LGAs are relatively small, because the population is also small, the case rate is substantially higher than observed in some metropolitan LGAs.

Section 11: Returned travellers

Figure 12. Number of returned travellers, and percent who test COVID-19 positive within 14 days of arrival, NSW, 21 November 2021 to 18 December 2021



- Since 1 November 2021, fully vaccinated international arrivals are no longer required to enter mandatory 14-day hotel quarantine. Rather, they must isolate at home for 72 hours after arrival and be tested on day 1 and day 6, with an additional test recommended on day 12.
- The number of daily international arrivals has increased from an average 595 in the week ending October 31, to over 4000 in the week ending 18 December.
- Because fully vaccinated returned travellers no longer need to isolate after the first three days, cases reported here may include some returned travellers with locally-acquired infections.
- Although the number of returned travellers arriving each day has increased over the past month, the proportion testing positive has remained relatively stable over the same time.

Section 12: Aboriginal people

Figure 13. Number of confirmed COVID-19 infections among Aboriginal people by date, NSW, 16 June to 18 December 2021

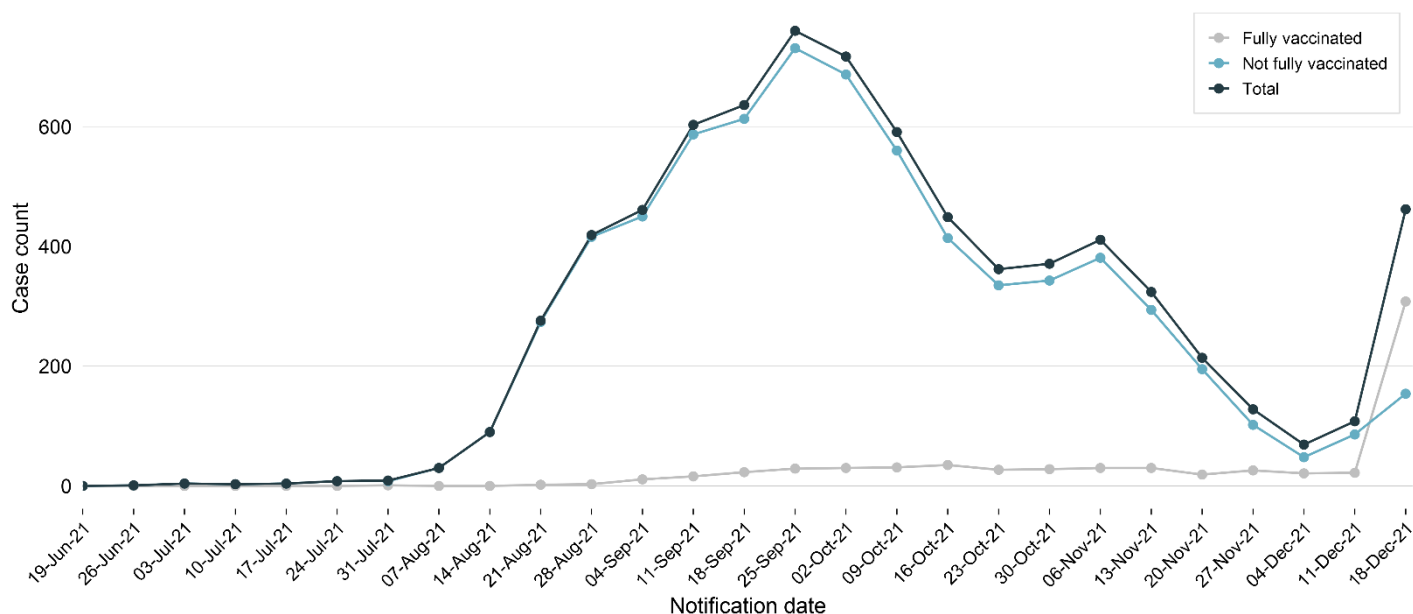


Table 10. Demographics of infections among Aboriginal people by gender, age, and vaccination status, NSW, 16 June to 18 December, 2021

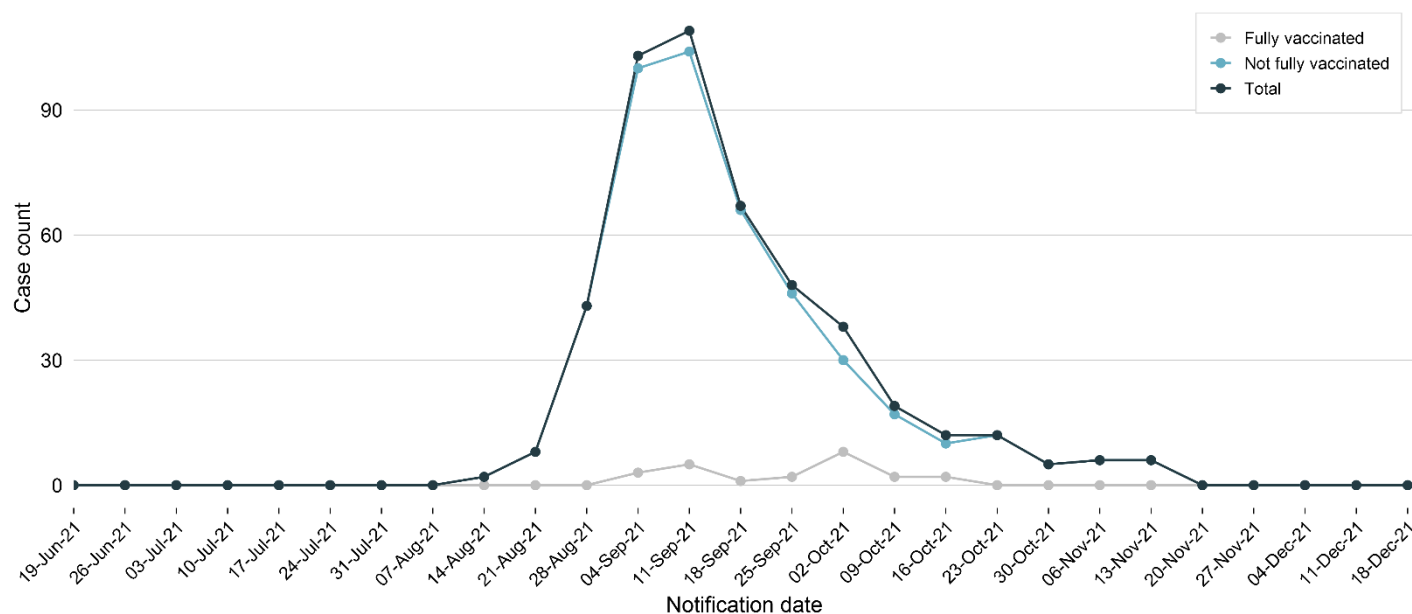
	Week ending				16 Jun to 18 Dec 2021
	18 Dec 2021	11 Dec 2021	4 Dec 2021	27 Nov 2021	
Gender					
Female	241 (52.2%)	45 (41.7%)	39 (56.5%)	70 (54.7%)	3,827 (51.0%)
Male	221 (47.8%)	63 (58.3%)	30 (43.5%)	58 (45.3%)	3,682 (49.0%)
Non-specified or non-binary	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (<0.1%)
Age group					
0-9	37 (8.0%)	32 (29.6%)	26 (37.7%)	35 (27.3%)	1,902 (25.3%)
10-19	111 (24.0%)	29 (26.9%)	9 (13.0%)	26 (20.3%)	1,748 (23.3%)
20-29	194 (42.0%)	28 (25.9%)	16 (23.2%)	19 (14.8%)	1,462 (19.5%)
30-39	59 (12.8%)	5 (4.6%)	9 (13.0%)	18 (14.1%)	1,038 (13.8%)
40-49	34 (7.4%)	5 (4.6%)	3 (4.3%)	15 (11.7%)	687 (9.1%)
50-59	18 (3.9%)	2 (1.9%)	3 (4.3%)	8 (6.3%)	411 (5.5%)
60+	9 (1.9%)	3 (2.8%)	3 (4.3%)	7 (5.5%)	262 (3.5%)
Vaccination status					
Fully vaccinated	308 (66.7%)	22 (20.4%)	21 (30.4%)	26 (20.3%)	692 (9.2%)
Partially vaccinated	13 (2.8%)	1 (0.9%)	5 (7.2%)	6 (4.7%)	496 (6.6%)
No effective dose	38 (8.2%)	29 (26.9%)	12 (17.4%)	44 (34.4%)	3,401 (45.3%)
Under investigation*	56 (12.1%)	10 (9.3%)	3 (4.3%)	6 (4.7%)	629 (8.4%)
Not eligible for vaccination (aged 0-11 years)	47 (10.2%)	46 (42.6%)	28 (40.6%)	46 (35.9%)	2,292 (30.5%)
Total	462 (100%)	108 (100%)	69 (100%)	128 (100%)	7,510 (100%)

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

- Aboriginal and Torres Strait Islander communities are recognised as a priority group due to key drivers of increased risk of transmission and severity of COVID-19 which include mobility, remoteness, barriers to healthcare access including institutional racism and mistrust of mainstream health services, crowded and inadequate housing, and burden of disease.
- Since 16 June 2021 there have been 7,510 Aboriginal people diagnosed with COVID-19, representing 8.1% of all cases in that time.
- This is an over-representation among Aboriginal and Torres Strait Islander people, who represent 3.4% of the NSW population, according to the Australian Bureau of Statistics.
- Approximately a quarter of cases of COVID-19 among Aboriginal people have been in children aged 0-9 years.
- The Aboriginal population in NSW is younger than the non-Aboriginal population, and therefore a higher proportion of the Aboriginal population are too young to be eligible for vaccination.

Section 13: Correctional settings

Figure 14. Number of confirmed COVID-19 infections among people residing in correctional settings by date, NSW, 16 June to 18 December 2021



- 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.

Table 11. Demographics of infections in correctional settings by gender, age, and vaccination status, NSW, 16 June to 18 December, 2021

	Week ending				16 Jun to 18 Dec 2021
	18 Dec 2021	11 Dec 2021	4 Dec 2021	27 Nov 2021	
Gender					
Female	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	27 (5.6%)
Male	0 (0.0%)	2 (100%)	1 (100%)	1 (100%)	456 (94.4%)
Age group					
10-19	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	28 (5.8%)
20-29	0 (0.0%)	1 (50.0%)	1 (100%)	0 (0.0%)	144 (29.8%)
30-39	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	169 (35.0%)
40-49	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)	96 (19.9%)
50-59	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100%)	35 (7.2%)
60-69	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	7 (1.4%)
70-79	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (0.6%)
80-89	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.2%)
Vaccination status					
Fully vaccinated	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	24 (5.0%)
Partially vaccinated	0 (0.0%)	1 (50.0%)	1 (100%)	0 (0.0%)	62 (12.8%)
No effective dose	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	267 (55.3%)
Under investigation*	0 (0.0%)	1 (50.0%)	0 (0.0%)	1 (100%)	130 (26.9%)
Total	0 (100%)	2 (100%)	1 (100%)	1 (100%)	483 (100%)

Section 14: Venues attended by COVID-19 cases

Figure 15. Number of COVID-19 exposures in high transmission risk and vulnerable group settings, by setting and date, NSW, 21 November to 18 December 2021

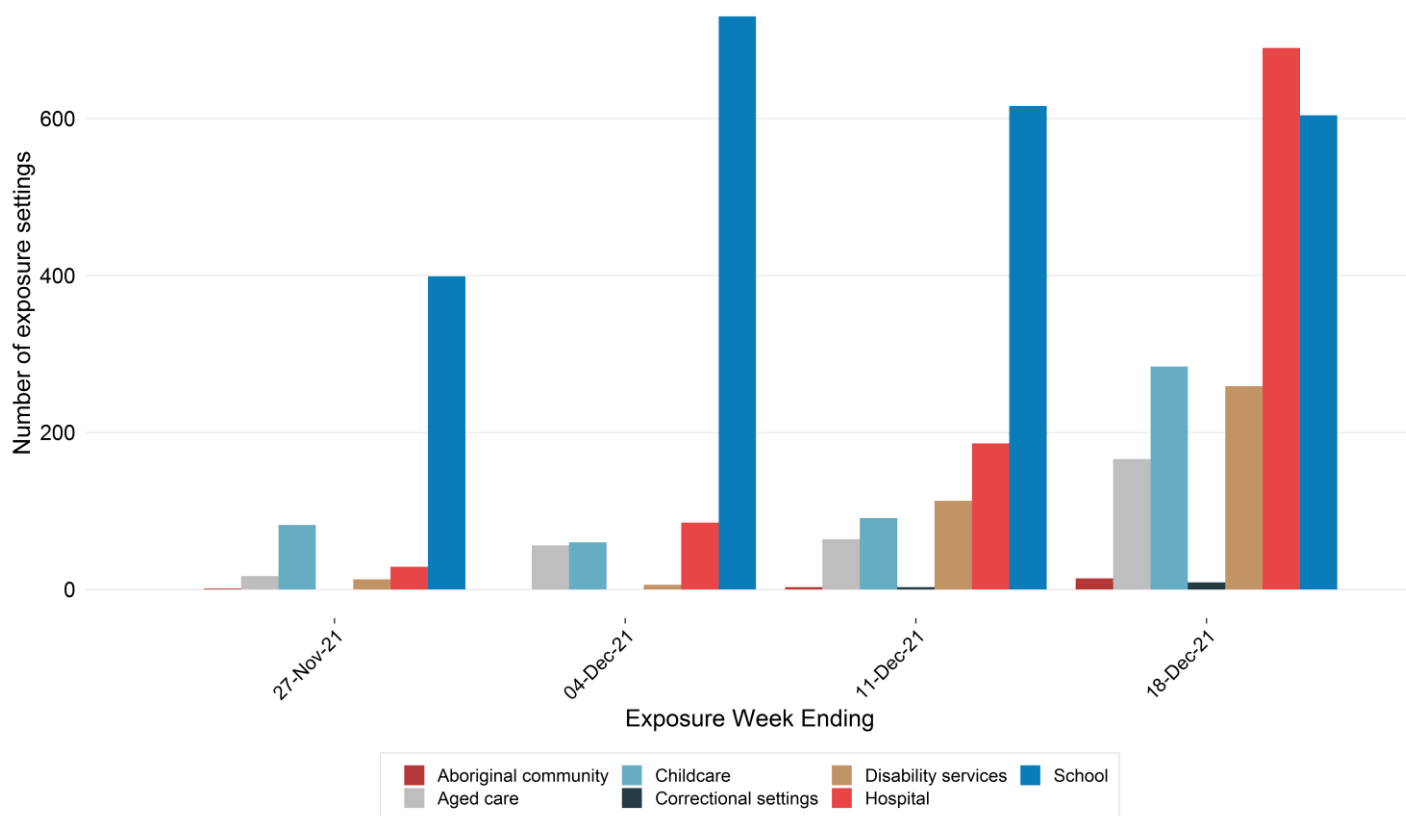


Table 12. Number of COVID-19 exposures in high transmission risk and vulnerable group settings while infectious, by setting and date, NSW, 21 November to 18 December 2021^a

	Week ending			
	18 Dec 2021	11 Dec 2021	04 Dec 2021	27 Nov 2021
High Transmission Risk				
Childcare	283	87	68	71
School	601	626	706	398
Vulnerable Group				
Aboriginal Community	14	2	0	1
Aged Care	156	79	23	16
Corrections	8	1	0	0
Disability Services	258	84	5	9
Hospital	665	150	72	43

^a venues are counted for each day a case attended while infectious. They are counted multiple times when a case attends on multiple days, and also when different cases attend.

- The number of exposures in high transmission risk and vulnerable group settings increased considerably between the week ending 11 December and 18 December 2021 for all types except schools. School holidays commenced on 17 December 2021, which may have impacted on the number of exposures in this setting.
- Schools have had the highest number of cases attending while infectious each week, with the exception of the week ending 18 December 2021.
- The number of exposures in hospitals increased noticeably in the week ending 18 December 2021.

Section 15: Variants of Concern (VoC)

Table 13. Variants identified among locally acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 18 December 2021

Variant	Week ending				29 Nov 2020 to 20 Nov 2021	Total since 29 Nov 2020
	18 Dec*	11 Dec*	4 Dec	27 Nov		
Total variants identified	259	1,036	825	710	15,876	18,706
Alpha (B.1.1.7)	0	0	0	0	6	6
Beta (B.1.351)	0	0	0	0	1	1
Gamma (P.1)	0	0	0	0	0	0
Delta (B.1.617.2)	81	948	806	710	15,867	18,412
Omicron (B.1.1.529)	178	88	19	0	2	287

***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 14. Variants identified among overseas and interstate acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 18 December 2021

Variant	Week ending				29 Nov 2020 to 20 Nov 2021	Total since 29 Nov 2020
	18 Dec*	11 Dec*	4 Dec	27 Nov		
Total variants identified	10	33	44	25	429	541
Alpha (B.1.1.7)	0	0	0	0	194	194
Beta (B.1.351)	0	0	0	0	33	33
Gamma (P.1)	0	0	0	0	6	6
Delta (B.1.617.2)	2	24	35	24	196	281
Omicron (B.1.1.529)	8	9	9	1	-	27

***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.

Section 16: Other respiratory infections in NSW

Figure 16. Proportion of tests positive for influenza, NSW, 1 January 2016 to 5 December 2021

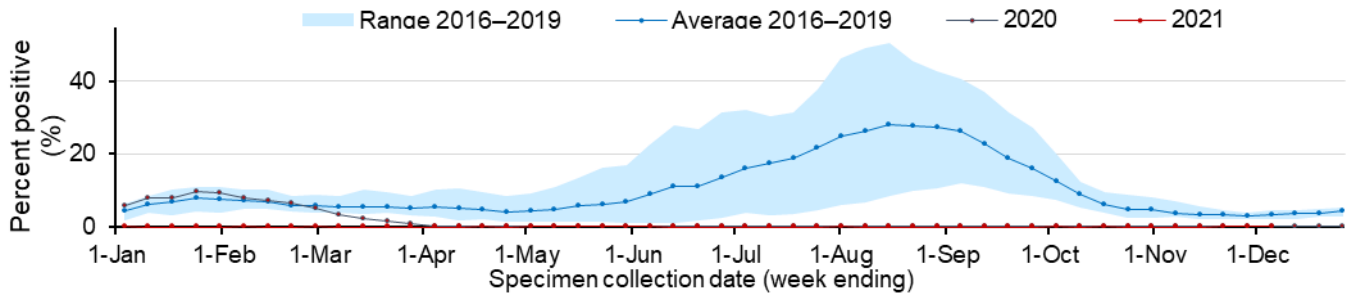


Figure 17. Proportion of FluTracker participants reporting influenza-like illness, NSW, 1 January 2016 to 12 December 2021

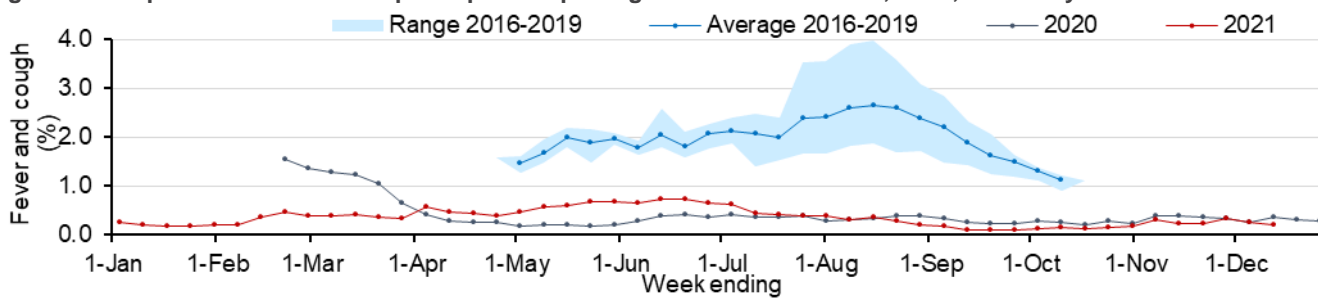


Figure 18. Emergency Department pneumonia presentations, NSW, 1 January 2016 to 19 December 2021

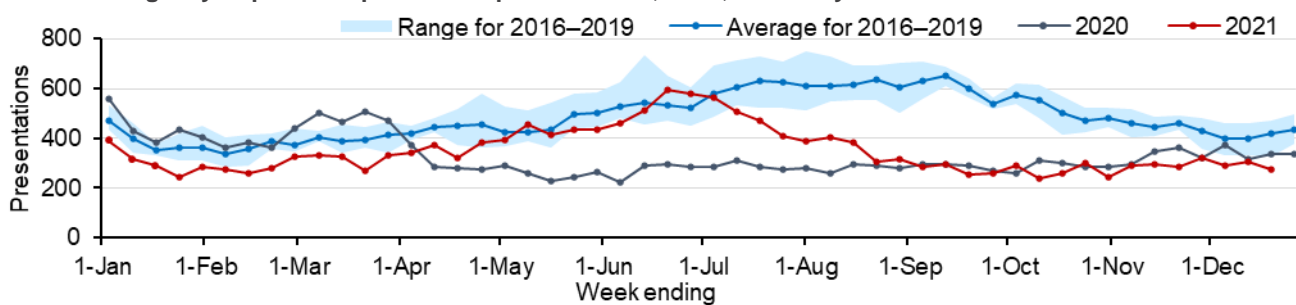
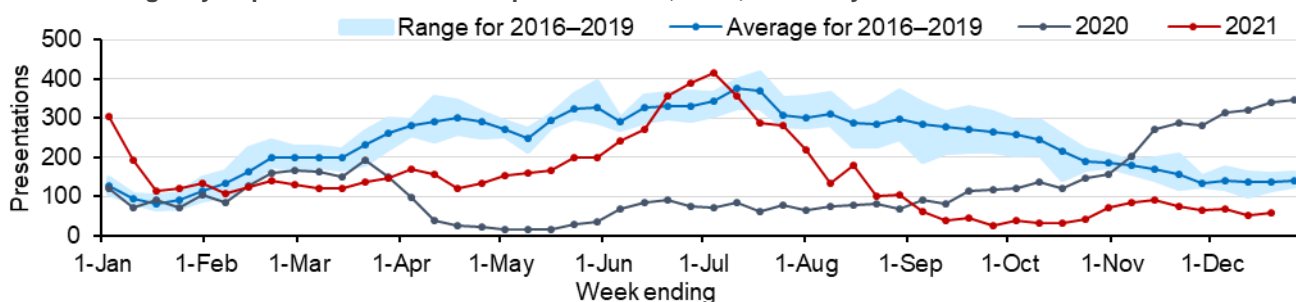


Figure 19. Emergency Department bronchiolitis presentations, NSW, 1 January 2016 to 19 December 2021



- 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 12 December, 15,939 people were surveyed, and 31 people (0.2%) reported flu-like symptoms
- In the last four weeks, 67% (109/162) of new cases of flu-like illness 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 well below the seasonal range for this time of year.
- Data is pending from several labs for the week ending 12 December due to high demand on testing laboratories in the past week. Therefore, updated influenza data is not yet available beyond 5 December 2021.

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

Local Health District	Local Government Area	Week ending				Total since January 2021	
		18 Dec		11 Dec		No.	Tests per 1,000 population
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Central Coast	<i>LHD Total²</i>	36,380	14.7	16,410	6.6	659,062	266.8
	Kiama	1,659	10.1	1,303	8.0	36,598	223.6
Illawarra Shoalhaven	Shellharbour	4,944	9.6	3,776	7.4	149,348	291.3
	Shoalhaven	5,244	7.1	3,617	4.9	125,416	169.6
	Wollongong	19,563	12.8	15,222	10.0	443,462	290.5
	<i>LHD Total²</i>	31,410	10.7	23,918	8.1	754,824	257.0
	Blue Mountains	6,939	12.5	4,645	8.4	166,655	300.9
Nepean Blue Mountains	Hawkesbury	7,818	16.6	5,354	11.4	211,868	449.8
	Lithgow	859	5.7	523	3.5	21,176	140.0
	Penrith	26,432	17.7	19,087	12.8	704,741	472.7
	<i>LHD Total²</i>	41,600	15.2	29,225	10.7	1,091,065	398.7
	Hornsby	15,175	14.3	8,646	8.1	237,140	222.8
Northern Sydney	Hunters Hill	3,643	34.7	2,211	21.1	58,413	557.1
	Ku-ring-gai	18,966	21.3	11,176	12.6	264,921	297.6
	Lane Cove	9,460	33.7	5,582	19.9	134,927	480.0
	Mosman	3,854	17.8	2,327	10.7	53,148	245.1
	North Sydney	7,785	14.8	4,479	8.5	109,135	207.8
	Northern Beaches	34,992	18.3	19,143	10.0	601,700	314.3
	Parramatta ¹	27,567	15.3	18,208	10.1	607,091	337.2
	Ryde	16,075	17.5	9,401	10.2	311,694	339.2
	Willoughby	9,318	16.4	4,703	8.3	112,961	198.8
	<i>LHD Total²</i>	124,734	18.6	71,385	10.7	1,978,545	295.7
South Eastern Sydney	Bayside	23,336	18.7	15,688	12.6	501,565	401.7
	Georges River	19,006	17.0	13,054	11.7	423,093	379.0
	Randwick	28,181	25.9	17,836	16.4	472,685	433.8
	Sutherland Shire	30,817	19.1	17,231	10.7	517,809	320.8
	Sydney ¹	41,772	24.2	25,570	14.8	648,739	376.2
	Waverley	14,717	28.3	9,820	18.9	227,248	437.0
	Woollahra	11,349	27.3	7,096	17.1	169,935	408.8
<i>LHD Total²</i>	140,813	21.0	88,614	13.2	2,522,242	375.7	
South Western Sydney	Camden	14,201	20.0	10,710	15.1	351,591	495.2
	Campbelltown	21,511	18.0	14,762	12.3	562,862	470.4
	Canterbury-Bankstown ¹	48,558	18.4	39,176	14.8	1,499,830	567.0
	Fairfield	24,861	16.8	20,733	14.0	846,889	571.5
	Liverpool	29,766	18.7	24,146	15.2	830,756	521.5
	Wingecarribee	3,729	10.4	2,549	7.1	78,542	219.4
	Wollondilly	2,986	8.0	2,203	5.9	94,960	255.2
	<i>LHD Total²</i>	122,002	16.8	95,632	13.2	3,527,471	485.2
Sydney	Burwood	3,886	13.7	2,431	8.6	90,225	317.4
	Canada Bay	13,783	20.5	8,258	12.3	229,476	341.2
	Canterbury-Bankstown ¹	48,558	18.4	39,176	14.8	1,499,830	567.0
	Inner West	29,968	21.3	19,091	13.6	473,140	336.6
	Strathfield	7,804	23.8	5,128	15.6	194,390	591.8

		Week ending				Total since January 2021		
		18 Dec		11 Dec				
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 ¹	41,772	24.2	25,570	14.8	648,739	376.2	
	<i>LHD Total²</i>	106,546	21.8	69,755	14.3	2,134,827	437.7	
Western Sydney	Blacktown	51,157	19.5	34,246	13.1	1,266,013	483.0	
	Cumberland	32,240	19.1	26,643	15.8	1,039,276	614.7	
	Parramatta ¹	27,567	15.3	18,208	10.1	607,091	337.2	
	The Hills Shire	29,427	23.6	17,117	13.7	507,963	407.8	
	<i>LHD Total²</i>	136,269	18.5	94,367	12.8	3,368,889	456.9	
	Far West	Balranald	72	4.4	49	3.0	2,124	129.8
		Broken Hill	1,477	12.1	1,133	9.3	30,131	246.3
Central Darling		82	6.4	73	5.7	4,615	358.5	
Wentworth		461	9.3	291	5.9	9,594	194.3	
<i>LHD Total²</i>		2,092	9.9	1,546	7.3	46,464	220.2	
Hunter New England	Armidale Regional	1,789	8.3	717	3.3	33,644	156.2	
	Cessnock	4,866	11.6	1,161	2.8	67,716	161.3	
	Dungog	583	8.8	130	2.0	7,758	117.6	
	Glen Innes Severn	301	4.9	145	2.3	6,013	96.8	
	Gunnedah	654	7.4	206	2.3	11,168	125.8	
	Gwydir	137	3.7	71	1.9	2,821	75.3	
	Inverell	617	5.2	338	2.9	16,401	138.7	
	Lake Macquarie	33,410	23.2	5,948	4.1	344,106	238.8	
	Liverpool Plains	212	3.8	118	2.1	6,179	111.7	
	Maitland	16,780	28.2	3,037	5.1	175,247	294.0	
	Mid-Coast	4,478	6.8	2,722	4.1	91,142	138.8	
	Moree Plains	1,080	11.6	594	6.4	18,633	200.7	
	Muswellbrook	888	7.8	234	2.0	13,580	118.5	
	Narrabri	687	7.5	183	2.0	8,659	94.2	
	Newcastle	37,015	31.9	6,047	5.2	303,102	261.5	
	Port Stephens	9,162	17.8	1,747	3.4	97,569	189.7	
	Singleton	3,340	20.3	618	3.8	32,867	200.1	
	Tamworth Regional	2,979	6.8	1,327	3.0	82,206	187.8	
	Tenterfield	188	4.1	147	3.2	3,848	83.4	
	Upper Hunter Shire	845	8.5	244	2.5	11,360	114.5	
Uralla	213	5.1	84	2.0	4,167	99.0		
Walcha	160	7.3	59	2.7	2,672	121.8		
<i>LHD Total²</i>	120,349	18.1	25,950	3.9	1,340,353	201.1		
Mid North Coast	Bellingen	672	7.4	265	2.9	9,700	106.6	
	Coffs Harbour	4,375	8.1	1,552	2.9	56,566	104.6	
	Kempsey	1,699	8.2	1,099	5.3	42,086	202.1	
	Nambucca	1,083	7.8	317	2.3	13,462	97.1	
	Port Macquarie-Hastings	5,020	8.5	2,801	4.7	83,364	140.9	
	<i>LHD Total²</i>	12,849	8.1	6,034	3.8	205,178	129.9	
Murrumbidgee	Albury	2,047	5.4	1,551	4.1	78,189	205.5	
	Berrigan	142	2.3	89	1.5	4,444	72.6	
	Bland	100	2.4	62	1.5	4,007	95.9	
	Carrathool	57	2.9	34	1.7	1,149	58.6	

		Week ending				Total since January 2021	
		18 Dec		11 Dec			
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	118	3.9	82	2.7	3,894	128.2
	Cootamundra-Gundagai Regional	352	4.5	175	2.2	9,195	116.9
	Edward River	241	3.8	260	4.1	9,117	143.4
	Federation	445	5.1	452	5.2	12,310	141.4
	Greater Hume Shire	384	5.1	216	2.9	12,388	164.4
	Griffith	1,163	6.2	681	3.6	22,248	117.6
	Hay	82	4.0	58	2.8	1,781	86.3
	Hilltops	532	4.1	381	2.9	23,422	178.9
	Junee	169	3.6	124	2.7	4,865	104.0
	Lachlan ¹	144	3.4	94	2.2	3,805	89.5
	Leeton	329	4.1	155	1.9	7,037	87.8
	Lockhart	213	9.3	101	4.4	3,203	139.3
	Murray River	306	3.6	298	3.5	5,496	64.8
	Murrumbidgee	100	3.7	62	2.3	2,548	92.9
	Narrandera	166	4.0	77	1.9	3,007	72.8
	Snowy Valleys	383	3.8	252	2.5	9,416	92.9
	Temora	107	2.4	87	2.0	4,010	90.8
	Wagga Wagga	3,736	8.2	2,269	5.0	85,993	188.3
	<i>LHD Total²</i>	11,203	5.4	7,492	3.6	308,929	148.0
	Ballina	3,104	9.9	1,555	5.0	54,307	173.8
	Byron	4,537	18.5	2,426	9.9	44,536	181.4
	Clarence Valley	1,300	3.6	969	2.7	39,369	108.9
	Kyogle	211	3.4	133	2.2	6,048	98.2
Northern NSW	Lismore	2,483	8.1	1,528	5.0	48,177	157.5
	Richmond Valley	978	6.0	687	4.2	25,885	157.6
	Tenterfield	188	4.1	147	3.2	3,848	83.4
	Tweed	4,243	6.3	2,795	4.1	76,191	112.2
	<i>LHD Total²</i>	16,880	7.8	10,119	4.7	295,398	136.0
	Bega Valley	1,191	4.9	446	1.9	24,348	100.9
	Eurobodalla	1,186	4.4	672	2.5	29,229	108.5
	Goulburn Mulwaree	1,298	6.0	676	3.1	39,677	182.1
Southern NSW	Queanbeyan-Palerang Regional	1,906	4.5	1,729	4.0	62,925	147.1
	Snowy Monaro Regional	721	5.0	618	4.3	26,220	180.1
	Upper Lachlan Shire	197	3.5	132	2.3	6,819	120.9
	Yass Valley	392	3.3	197	1.7	15,031	125.7
	<i>LHD Total²</i>	6,895	4.5	4,475	3.0	204,380	134.5
	Bathurst Regional	2,870	9.4	2,009	6.6	76,811	251.6
	Blayney	484	9.4	253	4.9	11,226	217.3
	Bogan	82	4.5	33	1.8	2,714	150.3
Western NSW	Bourke	95	5.2	91	5.0	7,024	387.4
	Brewarrina	30	2.7	17	1.5	2,466	218.7
	Cabonne	632	6.6	1,062	11.1	15,353	160.9
	Cobar	207	6.4	99	3.0	4,514	138.4

Local Health District	Local Government Area	Week ending				Total since January 2021	
		18 Dec		11 Dec		No.	Tests per 1,000 population
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Coonamble	110	4.0	65	2.4	3,835	138.4
	Cowra	341	3.8	198	2.2	19,858	222.6
	Dubbo Regional	4,075	10.8	2,308	6.1	167,999	446.8
	Forbes	259	3.7	174	2.5	7,688	110.9
	Gilgandra	95	3.2	71	2.4	5,077	171.1
	Lachlan ¹	144	3.4	94	2.2	3,805	89.5
	Mid-Western Regional	1,445	8.2	492	2.8	32,338	183.0
	Narromine	349	7.7	172	3.8	11,967	262.3
	Oberon	213	5.6	200	5.3	8,499	224.4
	Orange	4,355	14.7	2,150	7.2	87,897	295.8
	Parkes	451	4.3	250	2.4	14,310	137.8
	Walgett	213	5.1	109	2.6	9,003	216.1
	Warren	163	8.6	64	3.4	6,880	364.4
	Warrumbungle Shire	346	5.3	291	4.5	11,377	175.2
	Weddin	99	3.9	48	1.9	2,984	118.0
	<i>LHD Total²</i>	17,030	8.5	10,225	5.1	512,536	256.9
NSW Total	NSW Total³	927,052	16.4	555,147	9.8	18,950,835	334.7

Source - Notifiable Condition Information Management System, accessed as at 8pm 20 Dec 2021

¹ Local Government Area (LGA) spans multiple Local Health Districts.

² Local Health District total counts and rates includes tests for LHD residents only. Murrumbidgee includes Albury LGA residents.

³ 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 No.	Influenza A %Pos.	Influenza B No.	Influenza B %Pos.	Adeno-virus	Para-influenza	RSV	Rhino-virus	HMPV	Entero-virus
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 week ending 12 December due to high demand on testing laboratories in the past week. Therefore, updated data is not yet available beyond 5 December 2021.

HMPV – Human metapneumovirus

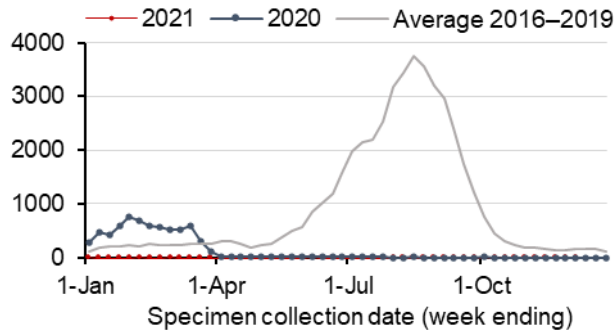
RSV - Respiratory syncytial virus

*Five-week period

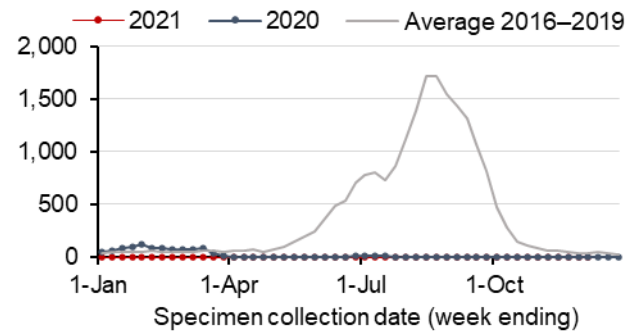
Appendix C: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 5 December 2021

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 week ending 12 December due to high demand on testing laboratories in the past week. Therefore, updated data is not yet available beyond 5 December 2021.

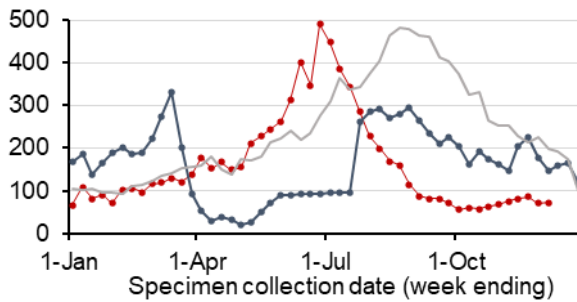
Influenza A



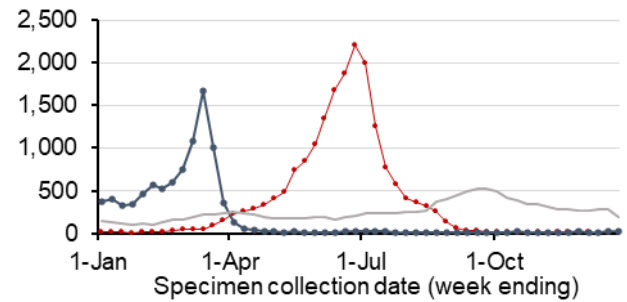
Influenza B



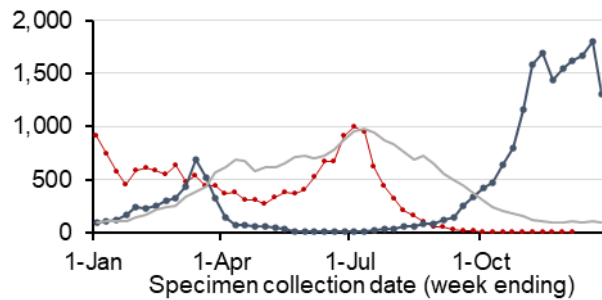
Adenovirus



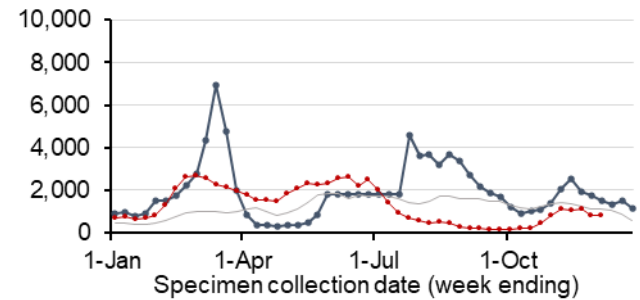
Parainfluenza



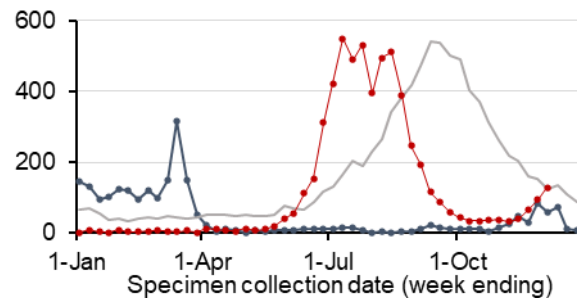
Respiratory Syncytial Virus



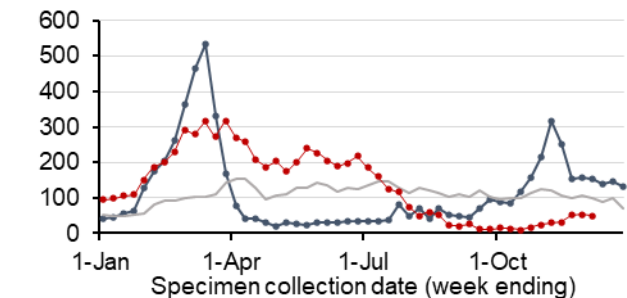
Rhinovirus



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: NSW Sewage Surveillance Program

In the week ending 18 December, 211 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 108 detections:

- Detections outside Sydney

There were 96 detections outside Sydney taken from the sewage treatment plants at Albury, Ballina, Bangalow, Bateau Bay, Batemans Bay, Bathurst, Bega, Blayney, Bomaderry, Bonny Hills, Bowral, Broken Hill, Broken Hill South, Byron Bay, Charmhaven, Coffs Harbour, Coonabarabran, Cowra, Crescent Head, Culburra Beach, Denman, Dubbo, Evans Head, Forster, Gladstone, Gosford – Kincumber, Goulburn, Gunnedah, Hallidays Point, Harrington, Hunter - Boulder Bay, Branxton, Burwood Beach, Edgeworth, Karuah, Morpeth, Raymond Terrace, Shortland, Belmont, Cessnock, Dungog, Farley, Kurri Kurri and Tanilba Bay, Inverell, Jindabyne, Leeton, Lennox Head, Lismore composite, Lockhart, Macksville, Mannering Park, Merimbula, Mittagong, Molong, Moonee, Moree, Moruya, Moss Vale, Mudgee, Mullumbimby, Mungindi, Muswellbrook, Nambucca Heads, Narromine, Nowra, Ocean Shores, Orange, Port Macquarie, Queanbeyan, Scone, Singleton, South Kempsey, South West Rocks, St Georges Basin, Tamworth, Taree, Temora, Tumut, Tuross, Tweed - Banora Point, Kingscliff and Murwillumbah, Vincentia, Wagga Wagga composite, Walgett, Wauchope, Wellington, West Kempsey, Wilcannia, Wingham, Woodenbong, Woy Woy, Wyong - Toukley, Wyong South, and Yass.

- Sydney detections

Results for Sydney sites may be delayed to prioritise analysis of regional sites. In Sydney there were detections from the sewage treatment plants at Lithgow, Quakers Hill and South Windsor and the network at Caringbah (4), Botany and Miranda (4).

- Detections with no known cases

Detections from Wilcannia, Cowra, Walgett, Scone, Wauchope, Moonee, Moss Vale, Yass, Leeton, Batemans Bay and Moruya occurred with no known or recent cases in the catchment. Cases were also identified in Mannering Park, Wauchope, Moonee, Bellingen, South West Rocks, Moss Vale, Bomaderry, Merimbula, Raymond Terrace, Dungog, Boulder Bay, Scone, Lockhart, Goulburn, Young, Narrandera, Blayney, Trangie, and Walgett following recent detections.

- Sampled sites with no SARS-CoV-2 fragment detections

There were no detections in the following catchments: Aberdeen, Alstonville, Ashford, Balranald, Baradine, Barraba, Bellingen, Bermagui, Bingara, Bodalla, Boggabilla, Boggabri, Bombala, Boorowa, Bourke, Bowraville, Bulahdelah, Buronga, Casino, Cobar, Coolah, Coolamon, Cooma, Coraki, Curlewis, Dareton, Darlington Point, Delungra, Dorrigo, Dunbogan, Dunedoo, Eden, Frederickton, Gilgandra, Gloucester, Googong, Grafton composite, Grenfell, Gulgong, Gundagai, Guyra, Gwandalan, Harden, Hawkes Nest, Holbrook, Hunter - Dora Creek and Toronto, Jerilderie, Junee, Kew Kendall, Kyogle, Lightning Ridge, Manilla, Mcgraths Hill, Murrurundi, Narooma, Narrabri, Oberon, Old Bar, Parkes, Quirindi, Scotts Head, Tenterfield, Tomakin, Trangie, Tweed - Hastings Point, Ulladulla, Urunga, Walcha, Wardell, Warialda, Warren, Wee Waa, Wentworth, Werris Creek, West Wyalong, and Woolgoolga.

Appendix E: Additional tables and figures

Total COVID-19 cases by LHD of residence and week reported, NSW, 21 November to 18 December 2021

	Local Health District	Week ending				Total
		18 Dec	11 Dec	4 Dec	27 Nov	
Metropolitan Local Health Districts	South Eastern Sydney	1,726	505	274	310	2,815
	South Western Sydney	1,510	606	468	333	2,917
	Western Sydney	1,336	514	307	222	2,379
	Sydney	1,202	489	216	132	2,039
	Northern Sydney	827	163	128	124	1,242
	Central Coast	391	71	27	11	500
	Nepean Blue Mountains	201	72	60	46	379
	Illawarra Shoalhaven	196	73	74	30	373
Rural and Regional Local Health Districts	Hunter New England	3,738	79	67	151	4,035
	Northern NSW	418	107	12	8	545
	Western NSW	166	38	61	71	336
	Mid North Coast	120	47	34	22	223
	Murrumbidgee	70	42	22	39	173
	Southern NSW	29	17	14	29	89
	Far West	11	2	4	10	27
	Correctional settings	0	2	1	1	4
Hotel Quarantine [#]	0	1	0	4	5	
NSW*	12,041	2,839	1,769	1,543	18,192	

[#]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 18 December 2021

	Fully vaccinated	Partially vaccinated	No effective dose	Under investigation*	Not eligible for vaccination (aged 0-11 years)	Total
Total cases since 16 June 2021	17,604 (19.1%)	7,013 (7.6%)	39,257 (42.5%)	11,399 (12.3%)	17,114 (18.5%)	92,387 (100%)
Month						
June 2021	3 (1.3%)	11 (4.6%)	197 (83.1%)	2 (0.8%)	24 (10.1%)	237 (100%)
July 2021	70 (2.1%)	97 (2.9%)	2,665 (80.6%)	41 (1.2%)	434 (13.1%)	3,307 (100%)
August 2021	552 (2.9%)	808 (4.3%)	13,389 (70.5%)	1,098 (5.8%)	3,134 (16.5%)	18,981 (100%)
September 2021	2,600 (7.5%)	3,884 (11.1%)	15,462 (44.3%)	6,533 (18.7%)	6,395 (18.3%)	34,874 (100%)
October 2021	1,868 (15.1%)	1,709 (13.8%)	4,771 (38.6%)	875 (7.1%)	3,138 (25.4%)	12,361 (100%)
November 2021	2,144 (32.8%)	324 (5.0%)	1,499 (22.9%)	479 (7.3%)	2,095 (32.0%)	6,541 (100%)
Week ending						
27 Nov 2021	638 (41.3%)	43 (2.8%)	294 (19.1%)	148 (9.6%)	420 (27.2%)	1,543 (100%)
04 Dec 2021	743 (42.0%)	37 (2.1%)	339 (19.2%)	170 (9.7%)	480 (27.1%)	1,769 (100%)
11 Dec 2021	1,422 (50.1%)	49 (1.7%)	436 (15.4%)	364 (12.8%)	568 (20.0%)	2,839 (100%)
18 Dec 2021	8,430 (70.0%)	102 (0.8%)	612 (5.1%)	1,887 (15.7%)	1,010 (8.4%)	12,041 (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.

Demographics of infections among total cases by gender and age, NSW, 16 June to 18 December 2021

	Week ending				16 Jun to 18 Dec 2021
	18 Dec 2021	11 Dec 2021	4 Dec 2021	27 Nov 2021	
Gender					
Female	5,955 (49.5%)	1,320 (46.5%)	918 (51.9%)	697 (45.2%)	44,168 (47.8%)
Male	6,075 (50.5%)	1,516 (53.4%)	851 (48.1%)	846 (54.8%)	48,163 (52.1%)
Non-specified or non-binary	11 (0.1%)	3 (0.1%)	0 (0.0%)	0 (0.0%)	56 (0.1%)
Age group					
0-9	782 (6.5%)	410 (14.4%)	361 (20.4%)	303 (19.6%)	14,040 (15.2%)
10-19	1,842 (15.3%)	474 (16.7%)	339 (19.2%)	243 (15.7%)	15,030 (16.3%)
20-29	4,933 (41.0%)	698 (24.6%)	332 (18.8%)	251 (16.3%)	20,784 (22.5%)
30-39	2,002 (16.6%)	494 (17.4%)	250 (14.1%)	255 (16.5%)	15,705 (17.0%)
40-49	1,073 (8.9%)	341 (12.0%)	219 (12.4%)	199 (12.9%)	10,952 (11.9%)
50-59	742 (6.2%)	210 (7.4%)	114 (6.4%)	137 (8.9%)	7,844 (8.5%)
60-69	411 (3.4%)	126 (4.4%)	72 (4.1%)	78 (5.1%)	4,500 (4.9%)
70-79	166 (1.4%)	59 (2.1%)	53 (3.0%)	55 (3.6%)	2,203 (2.4%)
80-89	73 (0.6%)	26 (0.9%)	19 (1.1%)	16 (1.0%)	1,062 (1.1%)
90+	16 (0.1%)	1 (<0.1%)	10 (0.6%)	6 (0.4%)	266 (0.3%)
Total	12,041 (100%)	2,839 (100%)	1,769 (100%)	1,543 (100%)	92,387 (100%)

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 18 December 2021

Age-group (years)	% cases with severe outcomes (ICU and/or death)			
	Jan 2020 - 15 Jun 2021	16 Jun - 18 Dec 2021: Fully vaccinated		16 Jun - 18 Dec 2021: Un-vaccinated
0-9	0% (0 / 251)	-	-	<1% (11 / 14,040)
10-19	<1% (1 / 325)	<1%	(1 / 1,611)	<1% (29 / 10,993)
20-29	<1% (4 / 1,115)	<1%	(2 / 5,621)	1% (100 / 10,451)
30-39	1% (15 / 1,098)	<1%	(6 / 3,329)	2% (158 / 8,272)
40-49	2% (12 / 718)	<1%	(8 / 2,477)	3% (180 / 5,726)
50-59	4% (30 / 710)	1%	(19 / 2,004)	7% (269 / 3,888)
60-69	7% (44 / 656)	2%	(23 / 1,280)	13% (234 / 1,821)
70-79	12% (46 / 394)	5%	(39 / 763)	22% (164 / 741)
80-89	21% (26 / 122)	10%	(40 / 386)	35% (131 / 372)
90+	38% (16 / 42)	20%	(26 / 133)	43% (29 / 67)
Total	4% (194 / 5,431)	1%	(164 / 17,604)	2% (1,305 / 56,371)

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

Hospitalisations among people diagnosed with COVID-19, by age group, NSW

Age-group (years)	Since 16 Jun 2021			Jan 2020 – 15 Jun 2021	
	Hospitalised	Percentage of cases hospitalised ⁴	Hospitalised per 100,000 population	Hospitalised	Percentage of cases hospitalised ¹
0-9	299	2%	29.6	4	2%
10-19	375	3%	38.9	10	3%
20-29	1013	5%	86.4	27	2%
30-39	1286	9%	109.8	46	4%
40-49	1330	13%	128.8	48	7%
50-59	1303	17%	134.0	78	11%
60-69	1076	25%	128.0	117	18%
70-79	802	38%	137.6	92	23%
80-89	538	52%	196.2	52	43%
90+	135	51%	194.6	16	38%
Total	8,157	9%	100.8	490	9%

ICU hospitalisations among people diagnosed with COVID-19, by age group, NSW

Age-group (years)	Since 16 Jun 2021			Jan 2020 – 15 Jun 2021	
	Admitted to ICU	Percentage of cases admitted to ICU ¹	ICU admission per 100,000 population	Admitted to ICU	Percentage of cases admitted to ICU ¹
0-9	11	<1%	1.1	0	0%
10-19	37	<1%	3.8	1	0%
20-29	124	1%	10.6	4	0%
30-39	194	1%	16.6	15	1%
40-49	233	2%	22.6	12	2%
50-59	344	5%	35.4	29	4%
60-69	294	7%	35.0	43	7%
70-79	213	10%	36.6	39	10%
80-89	63	6%	23.0	13	11%
90+	1	<1%	1.4	0	0%
Total	1,514	2%	18.7	156	3%

⁴ There is often a delay between a person becoming ill with COVID-19 and subsequently requiring a hospitalisation or dying. In the current outbreak 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.

*Note: The weekly report relies on public health surveillance data which is continually cleaned and updated during an investigation. The number of cases hospitalised has reduced in recent weeks due to removing cases who were hospitalised but unlikely to have been hospitalised because of experiencing illness due to COVID (for example emergency department presentations without admission). These types of data cleaning activities have occurred throughout the pandemic and the differences are most noticeable when case numbers are declining or stable.

Glossary

Term	Description
Case	<p>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).</p> <p>Case counts include:</p> <ul style="list-style-type: none"> - 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	<p>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 of testing.</p>
Incubation period	<p>The time in which the case was infected. The incubation period for COVID-19 is between 1 and 14 days prior to symptom onset.</p>
Overseas acquired case	<p>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.</p>
Interstate acquired case	<p>Case who travelled interstate during their infection and the public health investigation concludes the infection was likely acquired interstate.</p>
Cluster	<p>Group of cases sharing a common source of infection or are linked to each other in some way.</p>
Fully vaccinated	<p>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.</p> <p>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.</p>
Partially vaccinated	<p>Cases reported as partially vaccinated (one effective dose):</p> <ul style="list-style-type: none"> • 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	<p>Cases reported as no effective dose:</p> <ul style="list-style-type: none"> • 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. <p>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.</p>
Under investigation	<p>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 from October with an unknown status are likely to have received at least one dose, but their record could not be matched in AIR.</p>

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	<p>This date is provided to NSW Health by the laboratory. Laboratories prioritise notification of positive results to allow prompt public health action.</p> <p>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.</p> <p>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.</p>