

COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 47 ENDING 27 NOVEMBER 2021

Published 3 December 2021

Summary for the week 21 November to 27 November 2021 (inclusive)

Figure 1. COVID-19 cases by likely infection source and reported illness onset, NSW, 13 January 2020 to 27 November 2021

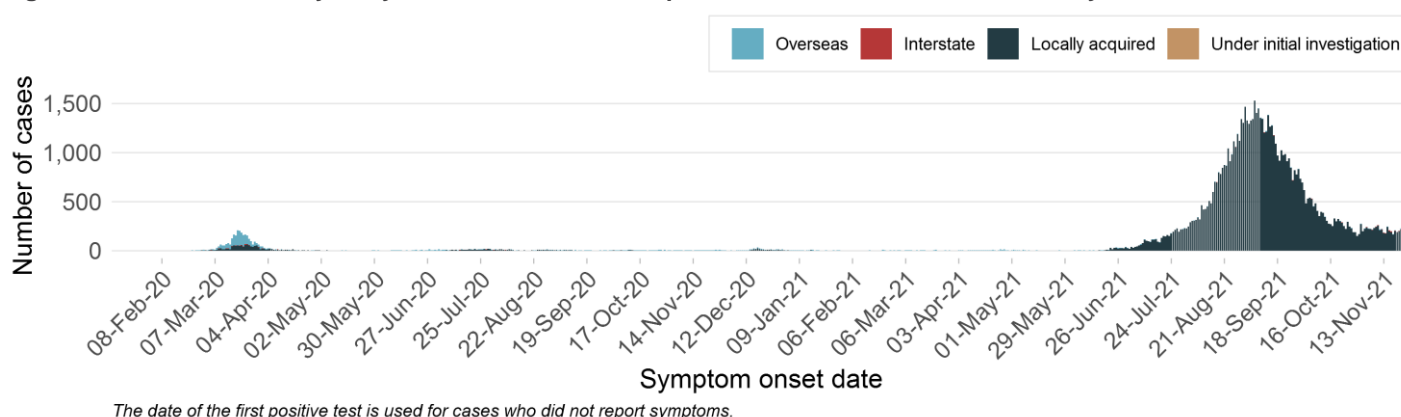


Table 1. Number and proportion of COVID-19 cases in NSW by likely source of infection to week ending 27 November 2021

	2020		2021			Total
	Jan – Jun	July – Dec	01 Jan - 15 Jun	16 Jun - 31 Oct	01 Nov - 27 Nov	
Locally acquired	1,236 (39 %)	807 (52 %)	51 (7 %)	69,499 (100 %)	5,820 (97 %)	77,413 (95 %)
Interstate acquired	67 (2 %)	23 (1 %)	0 (0 %)	28 (<1 %)	80 (1 %)	198 (<1 %)
Overseas acquired	1,892 (59 %)	714 (46 %)	641 (93 %)	240 (<1 %)	69 (1 %)	3,556 (4 %)
Under investigation	0 (0 %)	0 (0 %)	0 (0 %)	0 (0 %)	17 (<1 %)	17 (<1 %)
Total	3,195 (100 %)	1,544 (100 %)	692 (100 %)	69,767 (100 %)	5,986 (100 %)	81,184 (100 %)
Deaths	51	5	0	522	50	628

In the week ending 27 November 2021:

- There were 1,550 total cases reported, with 1,475 locally acquired
- The ten LGAs with the highest number of cases were:
 - Canterbury-Bankstown, 248 (10%) cases
 - Liverpool, 109 (7%) cases
 - Cumberland, 107 (7%) cases
 - Fairfield, 89 (6%) cases
 - Sutherland Shire, 68 (5%) cases
 - Randwick, 63 (4%) cases
 - Sydney, 62 (4%) cases
 - Parramatta, 60 (4%) cases
 - Blacktown, 58 (4%) cases
 - Waverley, 52 (4%) cases
- 728 (49%) cases were residents across 69 other LGAs
- There were 35 cases in overseas returned travellers (compared with 16 the previous week).
- There were 6 deaths in people diagnosed with COVID.
- Among those aged 12 and over, 56.2% of all cases, and 90.1% of the population were fully vaccinated.
- Testing rates decreased compared to the previous week (down 4%).
- 253 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 101 detections. Detections from Gerroa, Brooklyn, Lithgow, McGraths Hill, Gladstone, Crescent Head, Uralla, Denman, Mungindi, Quirindi, Eden, Merimbula, Bermagui, Deniliquin, Holbrook, Young, Goulburn, Coonamble, Daretton, Grenfell, Blayney, Molong, and Cobar occurred with no known or recent cases in the catchment.

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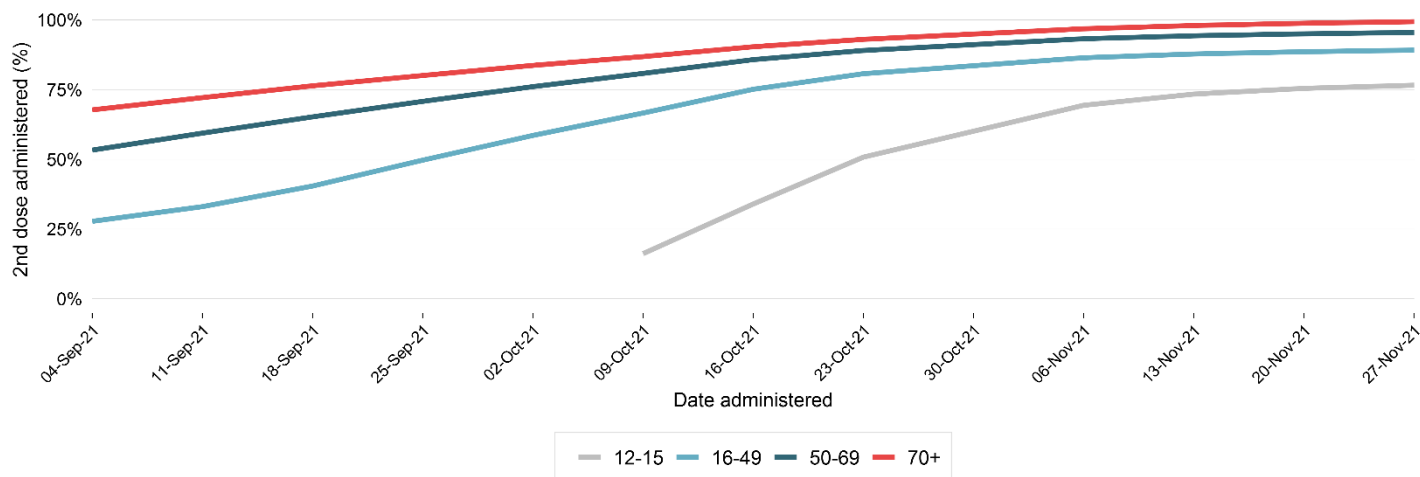
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Table 2. Measures of public health action, NSW, for the period from 14 November to 27 November 2021

	Week ending 27 Nov	Week ending 20 Nov
Proportion total cases notified to NSW Health by the laboratory within 1 day of specimen collection	89% (1,376/1,550)	88% (1,270/1,441)
Total cases contacted by text message within 1 day of notification to NSW Health	98% (1525/1550)	98% (1412/1439)
Number of high-risk cases fully interviewed by public health staff within 1 day of responding to the NSW Health text message	95% (567/598)	94% (406/432)
Total cases fully interviewed by public health staff within 1 day of notification to NSW Health	97% (1,505/1,550)	98% (1,417/1,441)

Section 1: Vaccination coverage in NSW

Figure 2. Proportion who have received two doses of COVID-19 vaccine, by age range and time, NSW, 4 September to 27 November 2021.



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

Figure 3. Proportion who have received two doses, by region and time, for those aged 15 and over, NSW, 6 September to 29 November 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 92% of those aged 16 and over by 27 November 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 Sydney¹.

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 2: Cases from 16 June 2021 to 27 November 2021

Figure 4. Source of infection, NSW from 16 June to 27 November 2021

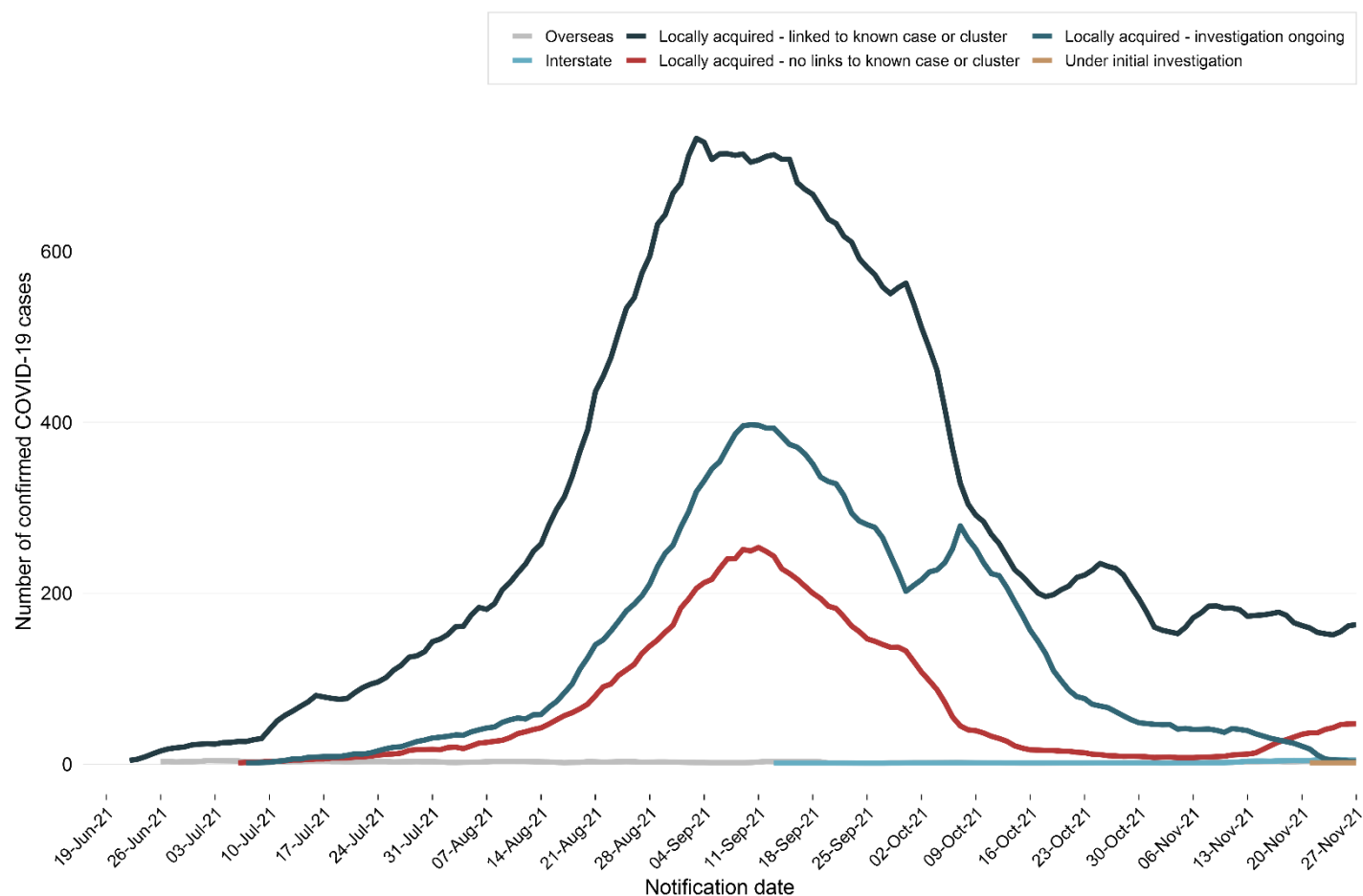


Table 3. COVID-19 cases and tests reported, NSW, from 16 June 2021 to 27 November 2021

	Week ending 27 Nov	Week ending 20 Nov	% change	16 Jun to 31 Oct 2021	Since 1 Nov 2021
Number of cases	1,550	1,439	8 %	69,767	5,986
Locally acquired	1,475	1,390	6 %	69,499	5,820
Known epidemiological links to other cases or clusters	1,141	1,134	1 %	41,923	4,578
No epidemiological links to other cases or clusters	334	256	30 %	27,576	1,242
Overseas acquired	35	16	119 %	240	69
Interstate acquired	30	27	11 %	28	80
Number of tests	445,088	463,833	-4 %	13,983,874	1,869,890

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 and interstate increased modestly, and overseas acquired cases doubled in the last week.
- Most recent cases have been linked to a known case or cluster
- Unlinked cases are the minority for locally acquired cases, suggesting that contact tracing efforts are effectively identifying the source of infection for the majority of cases.

Section 3: Age and sex breakdown of cases

Figure 5. 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 27 November 2021

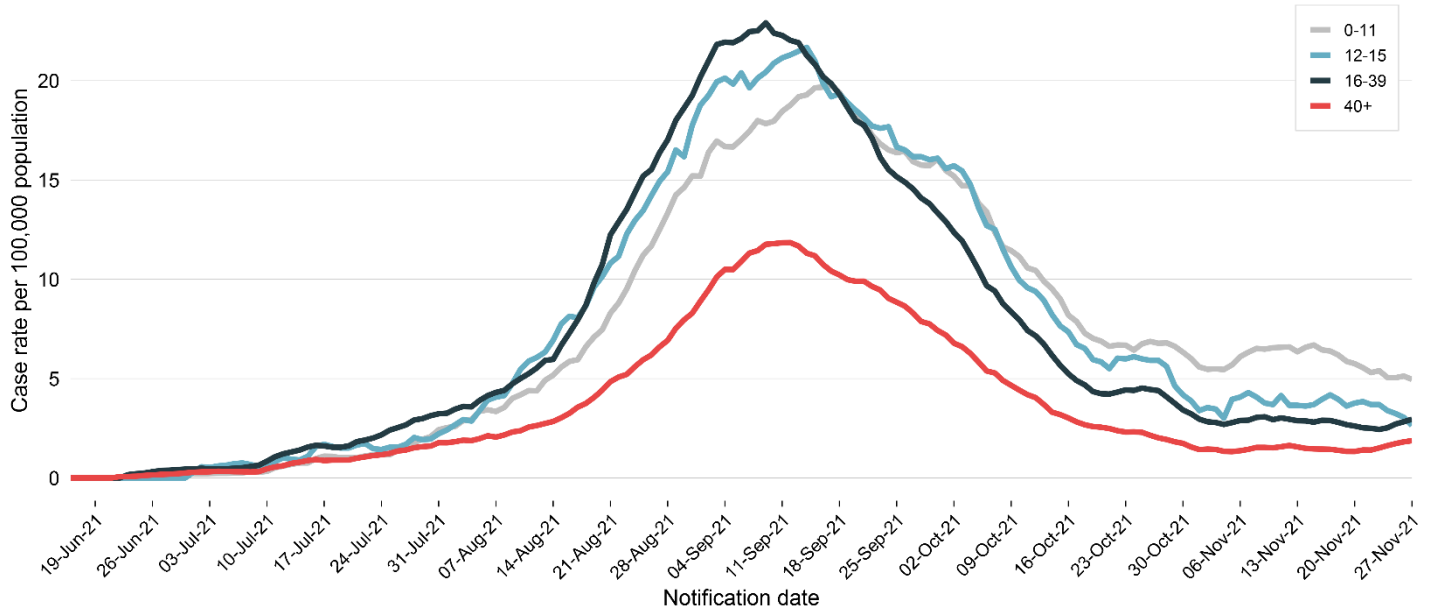
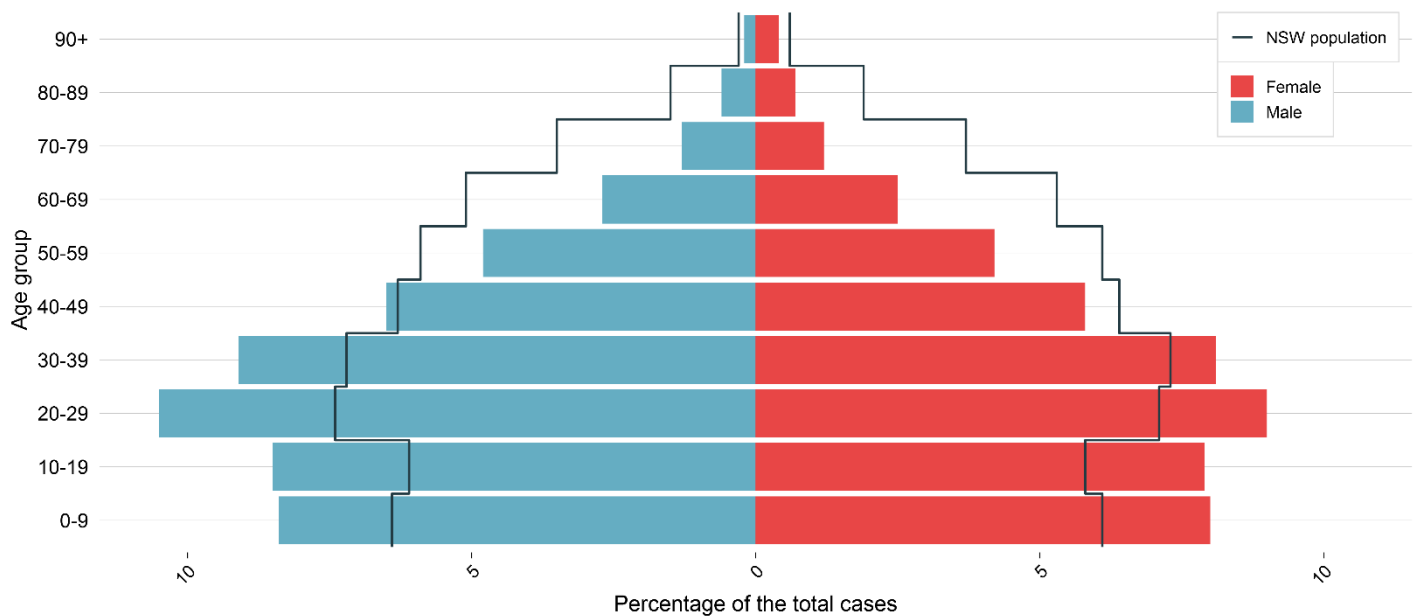


Figure 6. Current wave total case percentage (n = 75,709) by age and gender, NSW, from 16 June to 27 November 2021



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

- Case rates peaked in September
- The peak was slightly later for children aged 12-15 and 0-11 years
- Case rates have since decreased but have flattened in most age groups since mid-October.
- Cases since 16 June 2021 have been younger (median age = 28 years, interquartile range (IQR) = 15-44 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.
- 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 7a. 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 27 November 2021

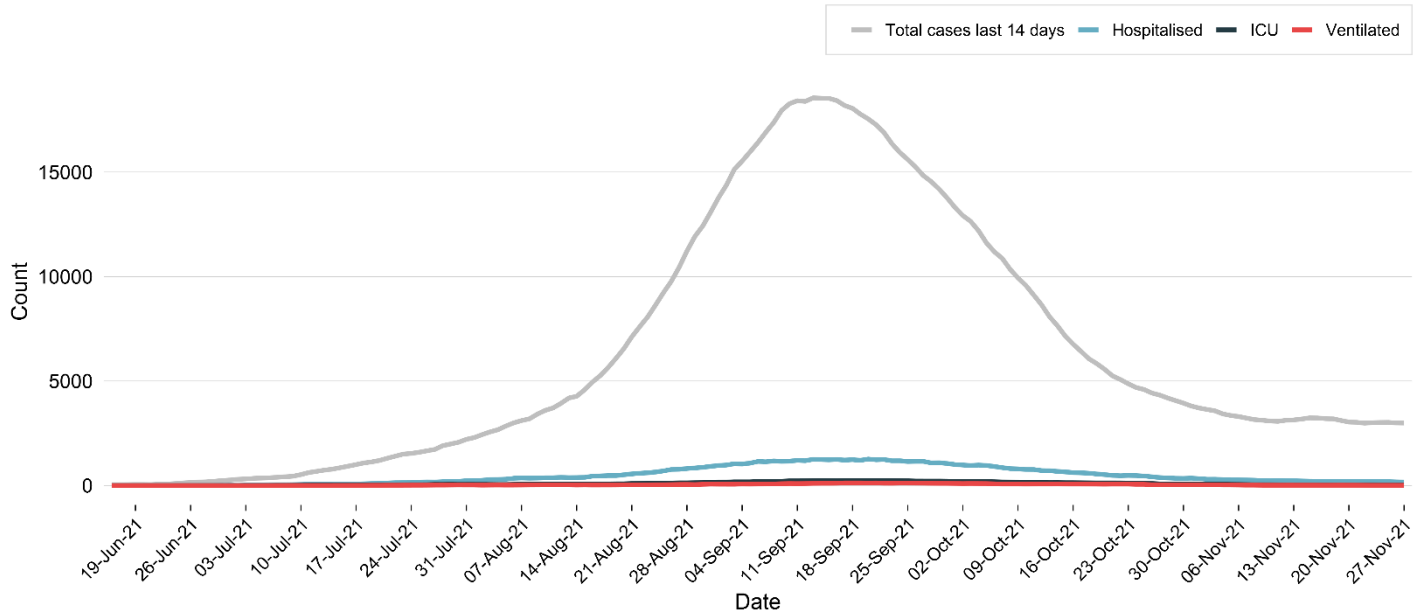
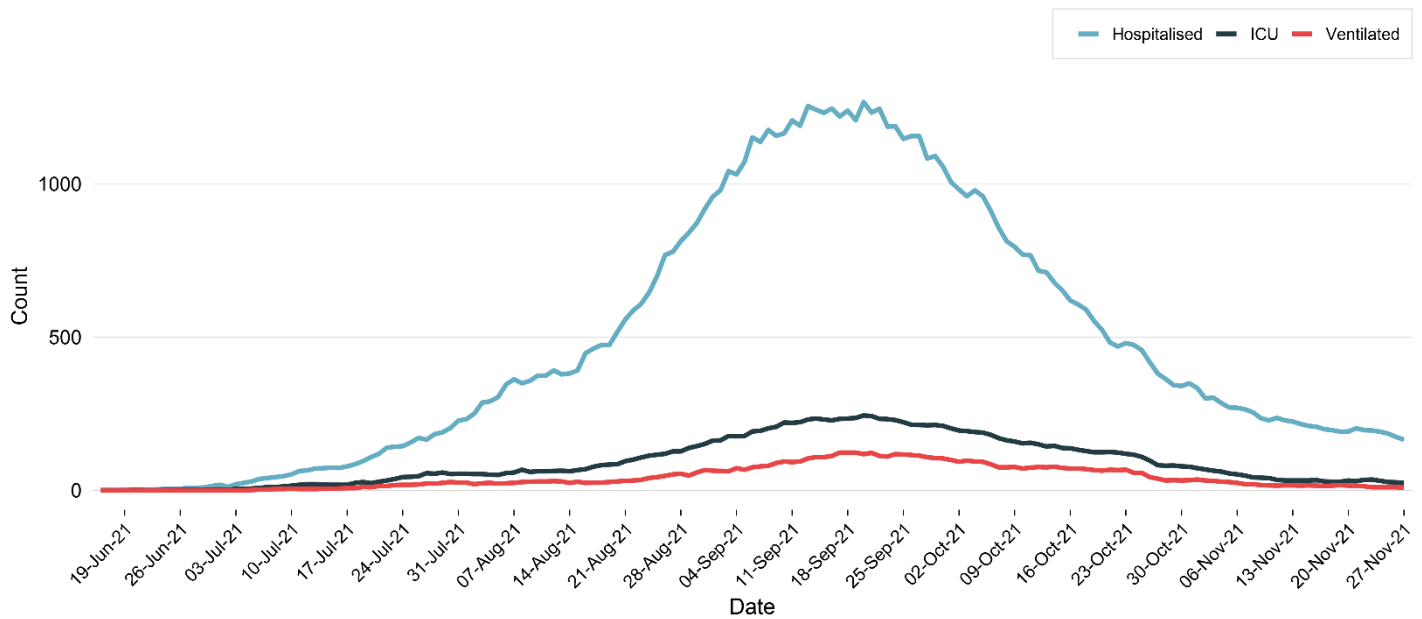


Figure 7b. Number of cases in hospital, in ICU and ventilated by date, NSW, from 16 June to 27 November 2021



- 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 have flattened, but hospitalisations have continued to decline
- This is likely reflective of high vaccination coverage in the community being protective against hospitalisation.

Section 5: Clinical severity by vaccination status

Figure 8. COVID-19 cases by outcome, notification date and vaccination status with 7 day backward rolling average, NSW, from 16 June to 13 November 2021

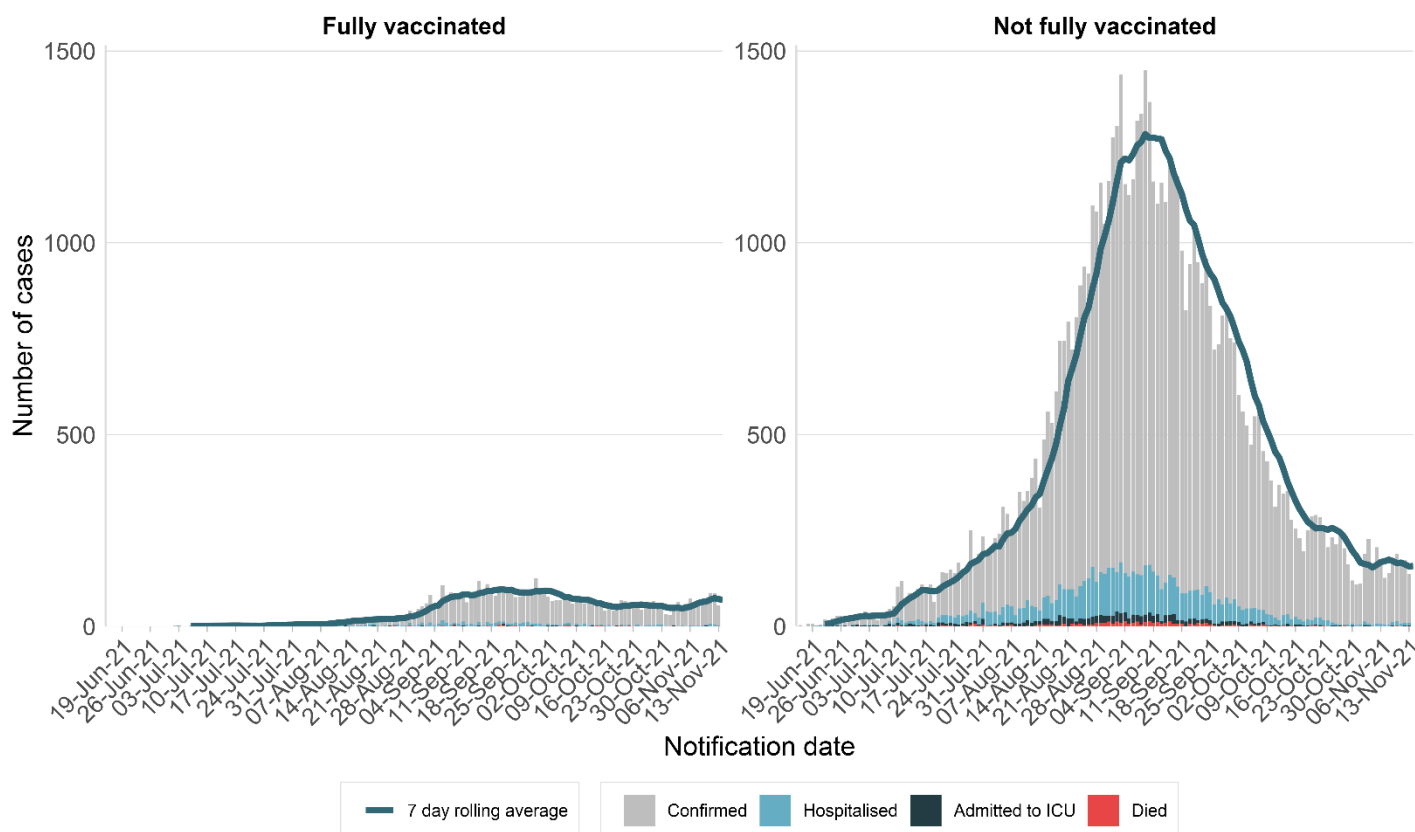


Table 4. Hospitalisations, ICU admissions and deaths among cases diagnosed with COVID-19, by vaccination status, NSW, from 16 June to 27 November 2021

Vaccination status	Total cases (%)	Hospitalised (%)	Hospitalised and in ICU (%)	Death (%)
Fully Vaccinated	6,989 (9.2%)	561 (7.1%)	62 (4.2%)	83 (14.6%)
Partially vaccinated	6,773 (8.9%)	582 (7.4%)	92 (6.3%)	71 (12.5%)
No effective dose	36,787 (48.6%)	4,962 (63.2%)	1,054 (71.7%)	408 (71.6%)
Under investigation	10,147 (13.4%)	1,416 (18.0%)	251 (17.1%)	8 (1.4%)
Not eligible for vaccination (aged 0-11 years)	15,057 (19.9%)	335 (4.3%)	12 (0.8%)	0 (0.0%)
Total	75,753 (100.0%)	7,856² (100.0%)	1,471 (100.0%)	570 (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 13 November, 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, 634 (40.9%) of all cases were fully vaccinated
- This represents 56.2% of the 1,129 cases who were eligible for vaccination (aged 12 years and over). In comparison, 90.1% of the NSW population aged 12 and over were fully vaccinated (had completed their recommended vaccine schedule by 13 November)
- Since 16 June 2021, cases aged 12 years and over with no effective dose account for 48.6% of all cases, and as much as 63.2% of hospitalisations, 71.7% of ICU admissions, and 71.6% of deaths.
- COVID-19 is relatively mild in most young children: children aged 0-11 years who are ineligible for vaccination account for 19.9% of cases, but only 5.1% of hospitalisations, 0.8% of ICU admissions, and no deaths.

² 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 5. Deaths following recent infection with COVID-19, by age group, from January 2020 to 27 November 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 ³	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	64	1%	6.6	1	<1%
60-69	101	3%	12.0	4	1%
70-79	132	7%	22.7	15	4%
80-89	164	17%	59.8	20	16%
90+	62	26%	89.4	16	38%
Total	572	1%	7.1	56	1%

Table 6. Deaths following recent infection with COVID-19, by age group and location, from 16 June to 27 November 2021

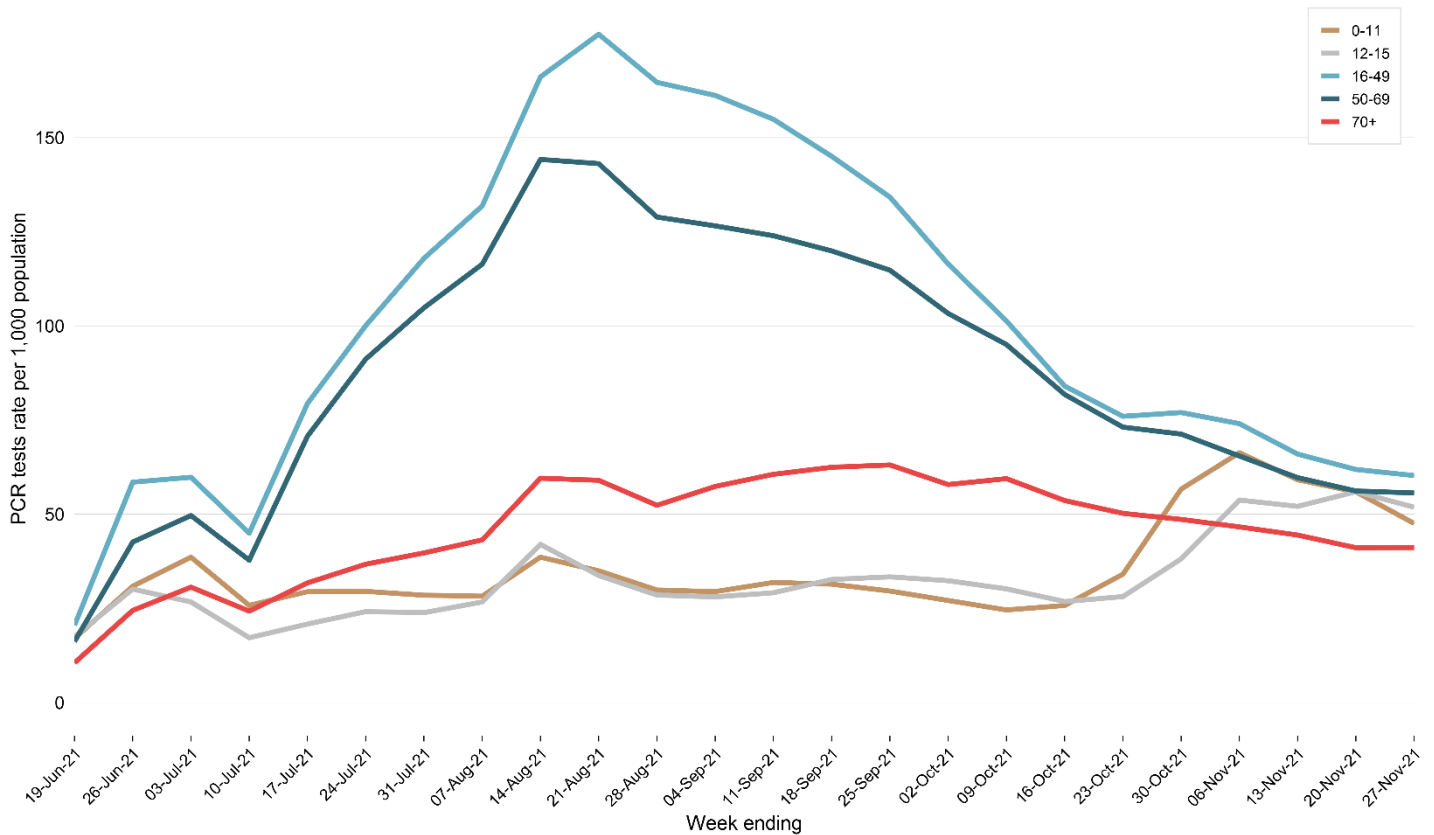
Age-group (years)	Health care facility	Aged care facility	Home
0-9	0	0	0
10-19	1	0	0
20-29	4	0	2
30-39	11	0	4
40-49	21	0	6
50-59	55	0	9
60-69	89	1	11
70-79	123	6	3
80-89	147	10	7
90+	46	16	0
Total	497	33	42

- Since the start of the pandemic, 1% of cases (628 people) have died
- This includes 98 residents of aged care facilities
- 2% (14/628) of the deaths were overseas acquired
- 72% of the deaths since 16 June 2021 have not received an effective vaccine dose (see Table 4)
- The median delay between a person becoming ill and death is 11 days
- In the week ending 27 November, there were 6 deaths in people diagnosed with COVID-19, including
 - 1 person who was partially vaccinated (in their 60s), and
 - 5 people who had received no effective dose (one in their 40s, one in their 50s, and three in their 80s)
- The majority of deaths since 16 June 2021 have occurred in hospital (497/572, 87%)
- Among deaths occurring at home, the majority (26/42, 62%) were diagnosed after death

³ 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: 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 27 November 2021



- Since 16 June 2021, there was a sustained increase in the number of tests performed for people aged 16 years and over, which peaked in August
- The increase was greatest among those aged 16-49 years.
- Since late October 2021, testing rates have increased among those aged 15 years and under

Section 8: Testing and positivity rates by Local Health District

Figure 10a. 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 27 November 2021

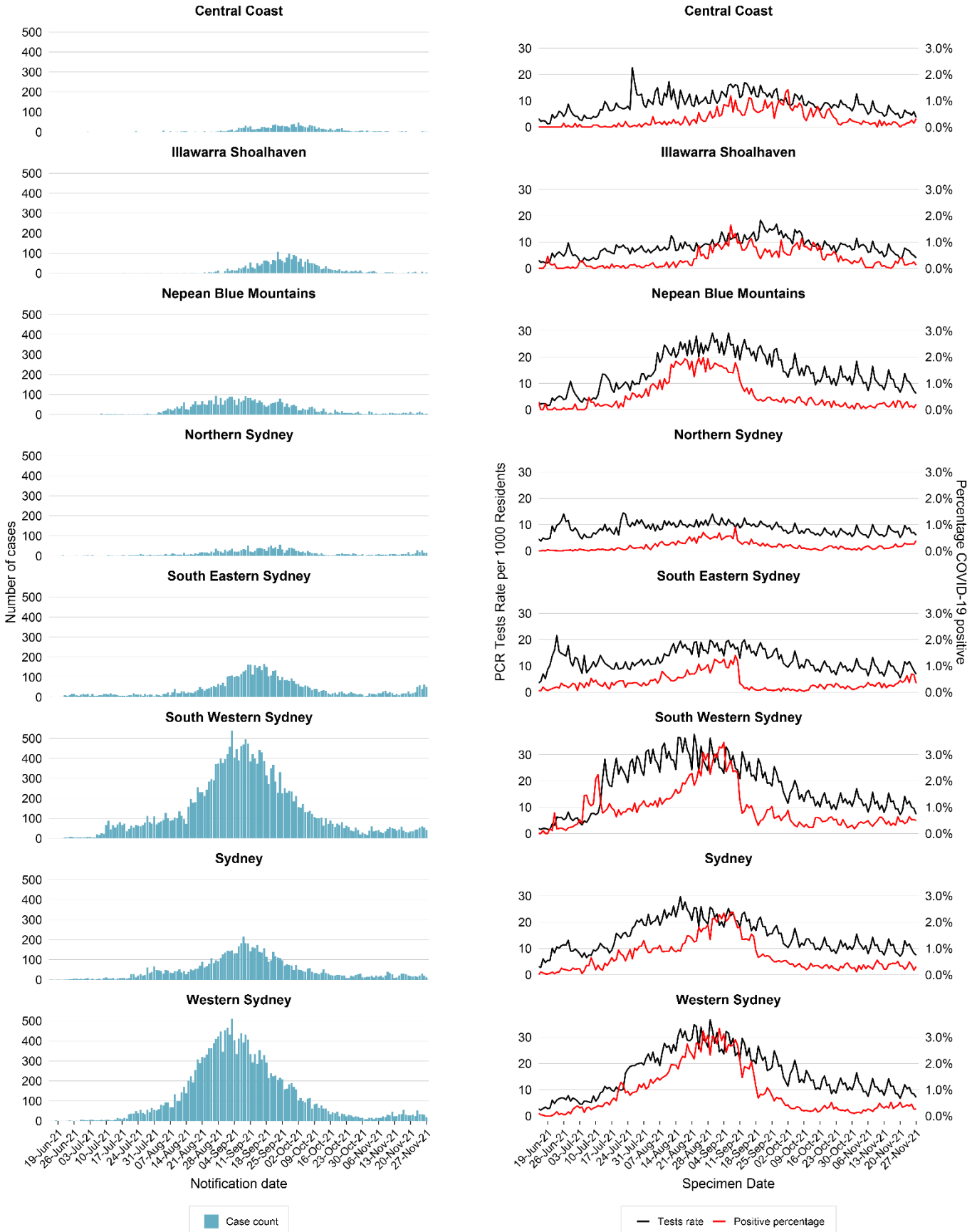
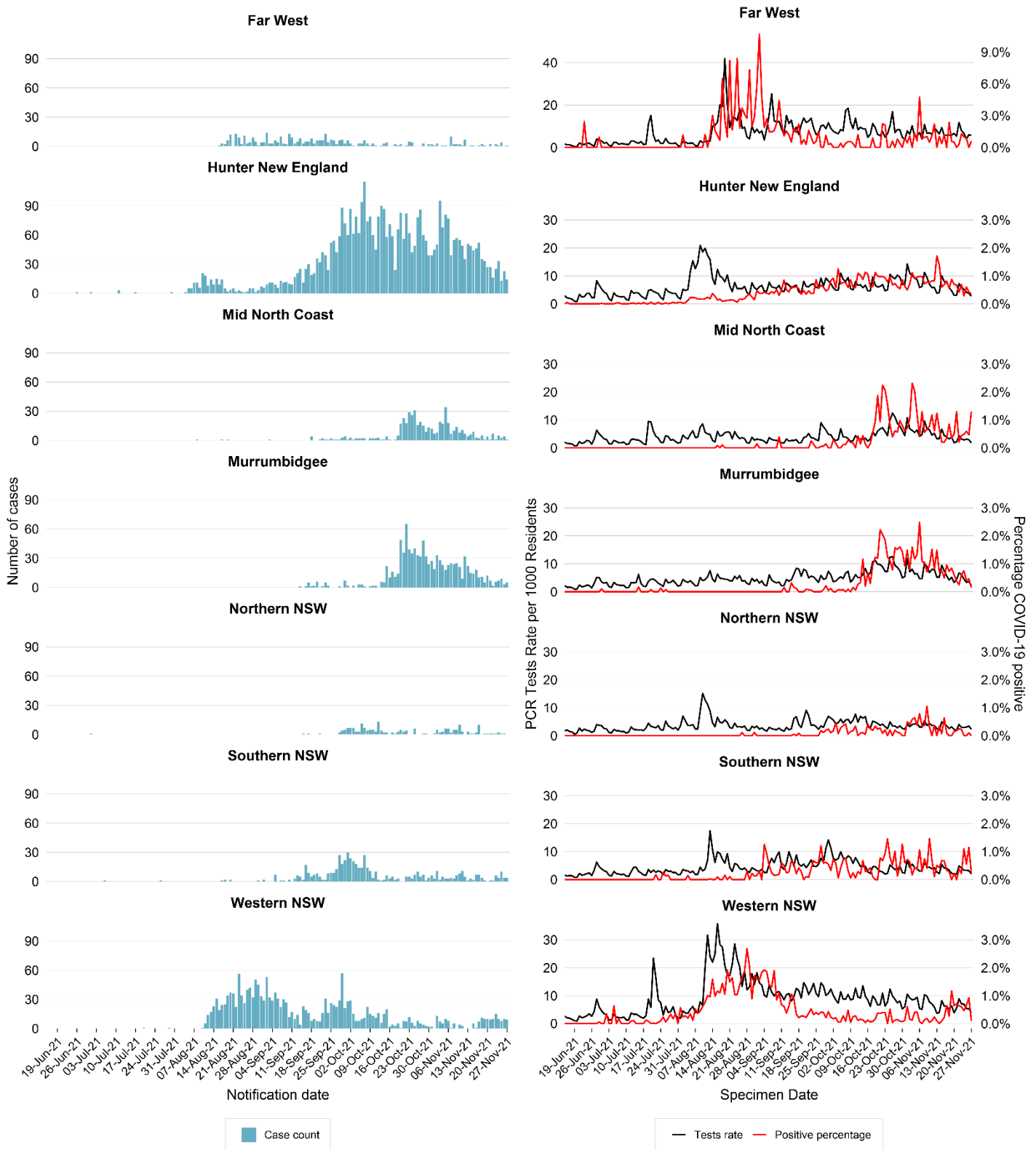


Figure 10b. Cases, testing rates per 1000 population, and percentage of tests which were positive for COVID-19, by LHD of residence, rural and regional LHDs, NSW, 16 June to 27 November 2021



- 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

Section 9: Case rates in Local Government Areas

Table 7a. 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 27 November 2021

LGA name	Last 7 days		16 Jun-27 Nov 2021	
	Cases	Cases per 100,000 population	Cases	Cases per 100,000 population
Waverley	52	70	475	639
Woollahra	34	57	250	421
Liverpool	109	48	5,915	2,599
Hunters Hill	7	47	97	648
Cumberland	107	44	9,296	3,849
Fairfield	89	42	4,873	2,302
Randwick	63	40	1,451	932
Canterbury-Bankstown	148	39	11,965	3,166
Sutherland Shire	68	29	754	327
Bayside	45	25	1,651	925
Lane Cove	10	25	126	314
Sydney	62	25	2,174	883
Parramatta	60	23	2,085	811
Blue Mountains	17	21	210	265
Campbelltown	36	21	2,852	1,668
Blacktown	58	15	7,089	1,893
Inner West	30	15	988	492
Northern Beaches	41	15	650	238
Georges River	22	14	1,379	865
Mosman	4	13	35	113

Table 7b. 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 27 November 2021

LGA name	Last 7 days		16 Jun-27 Nov 2021	
	Cases	Cases per 100,000 population	Cases	Cases per 100,000 population
Warrumbungle Shire	36	388	53	571
Moree Plains	31	234	217	1,636
Central Darling	4	218	177	9,625
Snowy Monaro Regional	15	72	96	462
Orange	26	61	123	290
Mid-Coast	36	38	451	481
Greater Hume Shire	4	37	39	362
Griffith	8	30	17	63
Wentworth	2	28	42	595
Coonamble	1	25	3	76
Federation	3	24	53	426
Kempsey	7	24	254	854
Broken Hill	4	23	146	835
Cobar	1	21	2	43
Snowy Valleys	3	21	4	28
Albury	11	20	715	1,315
Queanbeyan-Palerang Regional	12	20	301	493
Gwydir	1	19	1	19
Inverell	3	18	129	764
Lake Macquarie	34	17	958	465

- The top 20 metropolitan LGAs contributed 69% of all cases in the week ending 27 November
- The top 20 regional and rural LGAs contributed another 16% of cases.
- The four LGAs with the highest case rates per 100,000 population are in rural and regional areas.
- 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 10: Aboriginal people

Figure 11. Number of confirmed COVID-19 infections among Aboriginal people by date, NSW, 16 June to 27 November 2021

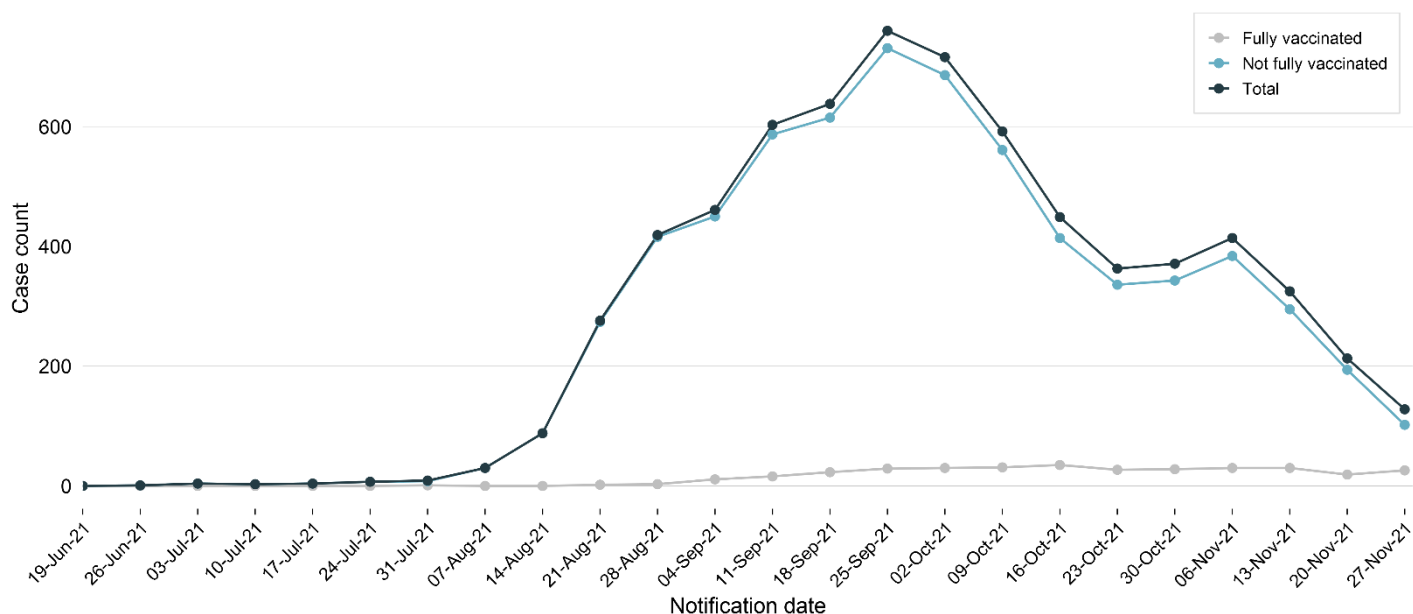


Table 8. Demographics of infections among Aboriginal people by gender, age, and vaccination status, NSW, 16 June to 27 November, 2021

	Week ending				16 Jun to 27 Nov 2021
	27 Nov 2021	20 Nov 2021	13 Nov 2021	6 Nov 2021	
Gender					
Female	70 (54.7%)	118 (55.4%)	183 (56.3%)	223 (53.9%)	3,508 (51.0%)
Male	58 (45.3%)	95 (44.6%)	142 (43.7%)	191 (46.1%)	3,365 (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	35 (27.3%)	77 (36.2%)	120 (36.9%)	134 (32.4%)	1,808 (26.3%)
10-19	26 (20.3%)	65 (30.5%)	80 (24.6%)	113 (27.3%)	1,601 (23.3%)
20-29	19 (14.8%)	25 (11.7%)	42 (12.9%)	69 (16.7%)	1,222 (17.8%)
30-39	18 (14.1%)	19 (8.9%)	36 (11.1%)	53 (12.8%)	962 (14.0%)
40-49	15 (11.7%)	13 (6.1%)	18 (5.5%)	27 (6.5%)	646 (9.4%)
50-59	8 (6.2%)	10 (4.7%)	17 (5.2%)	6 (1.4%)	388 (5.6%)
60+	7 (5.5%)	4 (1.9%)	12 (3.7%)	12 (2.9%)	247 (3.6%)
Vaccination status					
Fully vaccinated	26 (20.3%)	19 (8.9%)	30 (9.2%)	30 (7.2%)	341 (5.0%)
Partially vaccinated	5 (3.9%)	5 (2.3%)	24 (7.4%)	27 (6.5%)	476 (6.9%)
No effective dose	44 (34.4%)	79 (37.1%)	109 (33.5%)	189 (45.7%)	3,262 (47.5%)
Under investigation*	7 (5.5%)	6 (2.8%)	14 (4.3%)	11 (2.7%)	623 (9.1%)
Not eligible for vaccination (aged 0-11 years)	46 (35.9%)	104 (48.8%)	148 (45.5%)	157 (37.9%)	2,172 (31.6%)
Total	128 (100%)	213 (100%)	325 (100%)	414 (100%)	6,874 (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 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 6,874 Aboriginal people diagnosed with COVID-19, representing 9.1% 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.
- More than 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 11: Correctional settings

Figure 12. Number of confirmed COVID-19 infections among people residing in correctional settings by date, NSW, 16 June to 27 November 2021

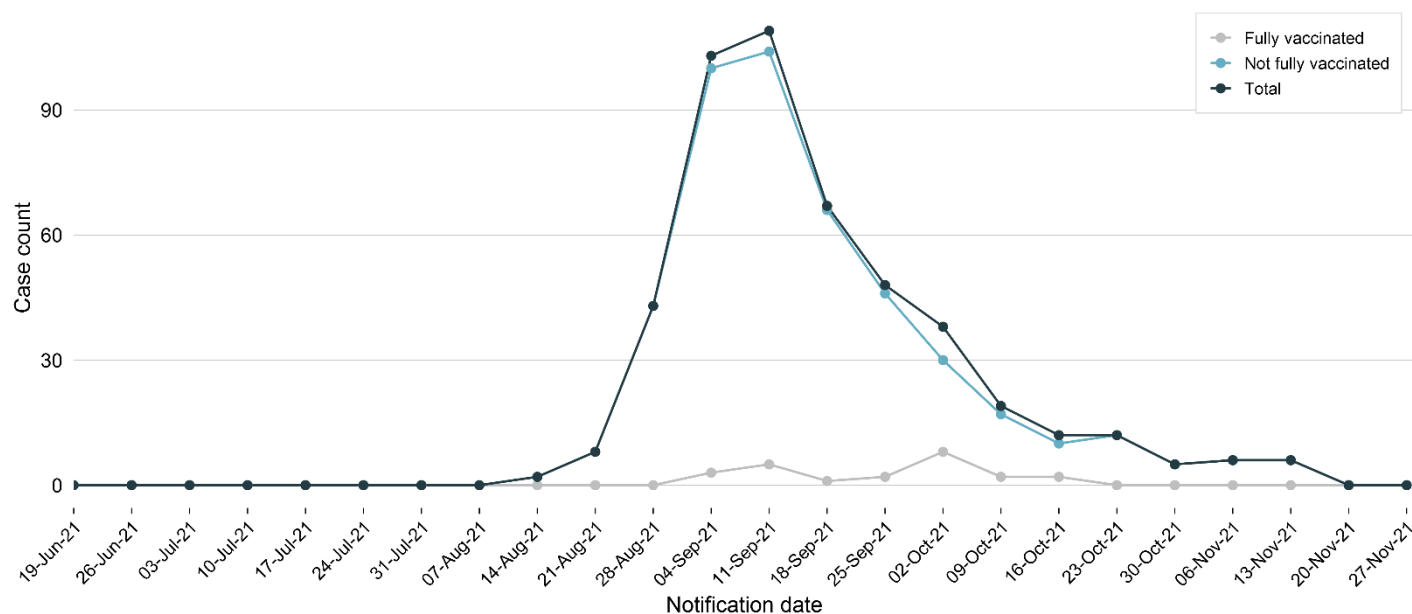


Table 9. Demographics of infections in correctional settings by gender, age, and vaccination status, NSW, 16 June to 27 November, 2021

	Week ending				16 Jun to 27 Nov 2021
	27 Nov 2021	20 Nov 2021	13 Nov 2021	6 Nov 2021	
Gender					
Female	0 (0.0%)	0 (0.0%)	2 (33.3%)	0 (0.0%)	27 (5.6%)
Male	0 (0.0%)	0 (0.0%)	4 (66.7%)	6 (100.0%)	451 (94.4%)
Age group					
10-19	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (16.7%)	28 (5.9%)
20-29	0 (0.0%)	0 (0.0%)	3 (50.0%)	3 (50.0%)	141 (29.5%)
30-39	0 (0.0%)	0 (0.0%)	1 (16.7%)	1 (16.7%)	169 (35.4%)
40-49	0 (0.0%)	0 (0.0%)	2 (33.3%)	1 (16.7%)	95 (19.9%)
50-59	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	34 (7.1%)
60-69	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	7 (1.5%)
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%)	23 (4.8%)
Partially vaccinated	0 (0.0%)	0 (0.0%)	1 (16.7%)	2 (33.3%)	60 (12.6%)
No effective dose	0 (0.0%)	0 (0.0%)	4 (66.7%)	4 (66.7%)	267 (55.9%)
Under investigation*	0 (0.0%)	0 (0.0%)	1 (16.7%)	0 (0.0%)	128 (26.8%)
Total	0	0	6 (100%)	6 (100%)	478 (100%)

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

- No cases were reported in correctional settings in the last week.
- Since 16 June, there have been 478 people residing in correctional settings diagnosed with COVID-19, representing 0.6% of all cases.
- 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.

Section 12: Health care workers

Figure 13. Number of confirmed COVID-19 infections among healthcare workers by date, NSW, 16 June to 27 November 2021

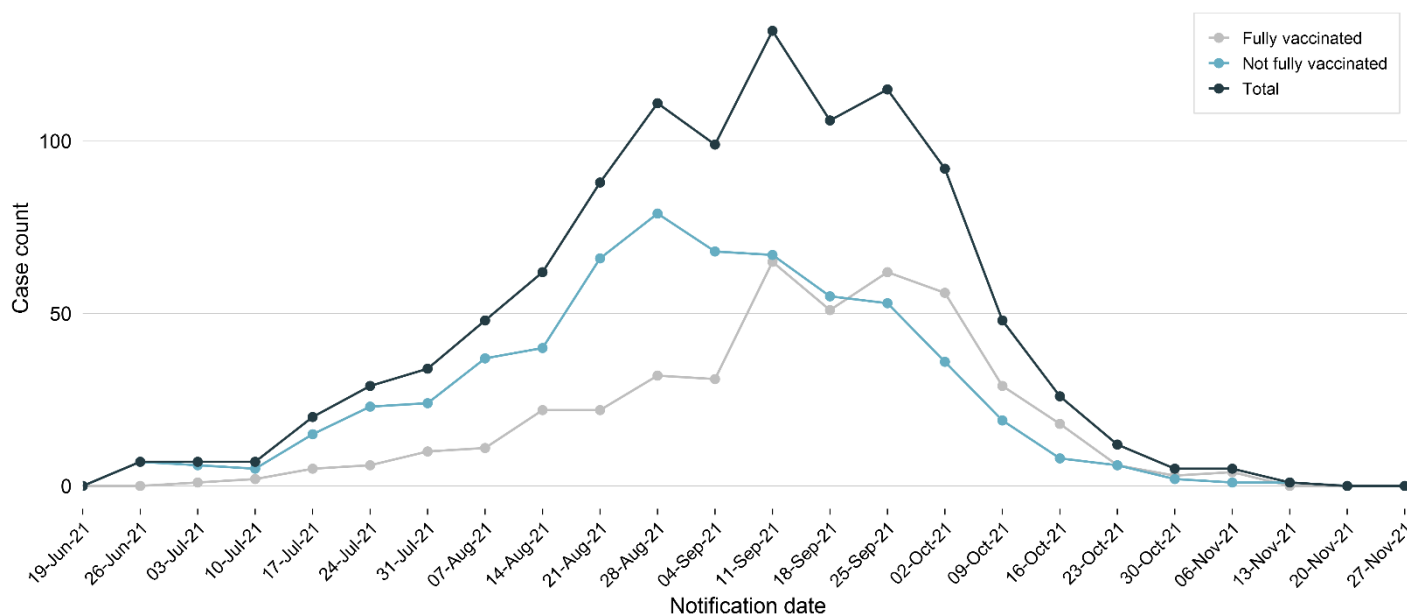


Table 10. Number of healthcare worker infections by source of infection and proportion fully vaccinated, NSW, 16 June to 27 November, 2021

Healthcare workers	Last 7 days			Current NSW outbreak (16 Jun-27 Nov 2021)		
	Number of HCWs	Fully vaccinated	Partially vaccinated	Number of HCWs	Fully vaccinated	Partially vaccinated
Healthcare acquired	0	-	-	206	82 (40%)	23 (11%)
Community acquired	0	-	-	439	180 (41%)	55 (13%)
Not currently linked	0	-	-	409	171 (43%)	44 (11%)
Total	0	-	-	1054	436 (41%)	122 (12%)

- No cases were reported in health care workers in the last week.
- Since 16 June, most healthcare workers associated with the current NSW outbreak have been infected in the community and outside of a healthcare setting.
- The majority of infected healthcare workers have been fully vaccinated.
- These indicate that efforts to stop transmission within health care facilities, including high vaccination rates among staff, have been successful.

Section 13: Aged care workers

Figure 14. Number of confirmed COVID-19 infections among aged care workers by date, NSW, 16 June to 27 November 2021

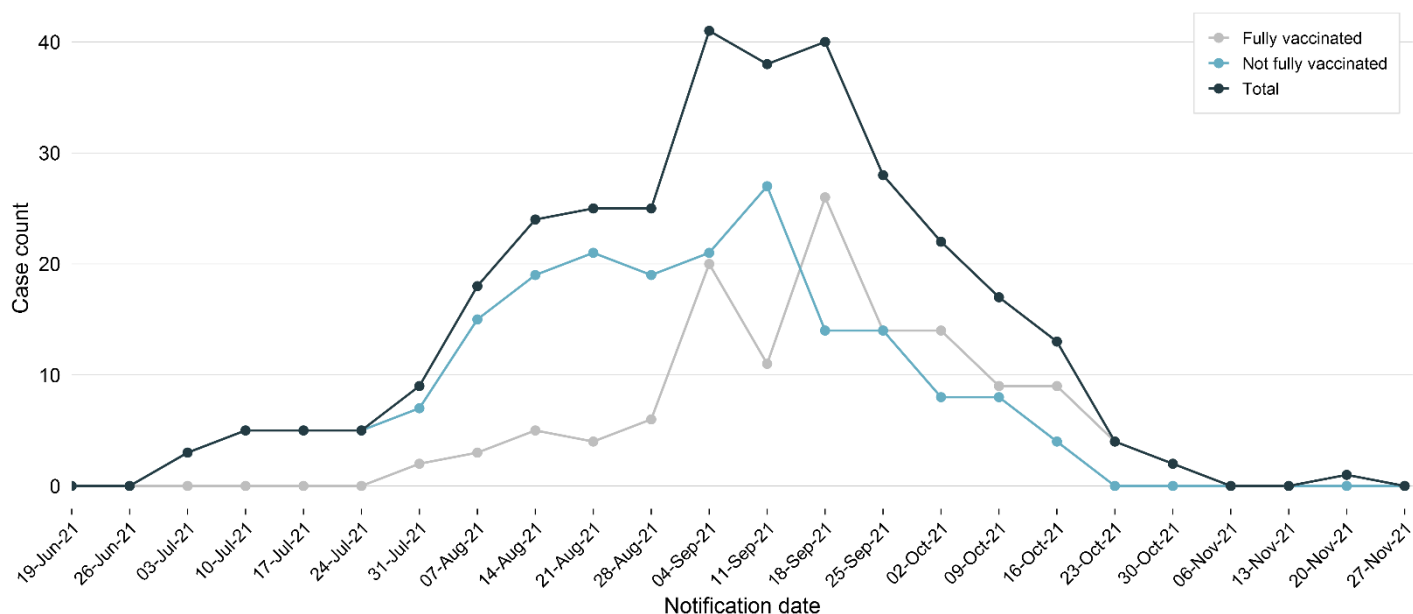


Table 11. Number of aged care worker infections by source of infection and proportion fully vaccinated, NSW, 16 June to 27 November 2021

Aged care workers	Last 7 days			Current NSW outbreak (16 Jun-27 Nov 2021)		
	Number of ACWs	Fully vaccinated	Partially Vaccinated	Number of ACWs	Fully vaccinated	Partially Vaccinated
Acquired at aged care facility	0	-	-	71	23 (32%)	18 (25%)
Community acquired	0	-	-	143	64 (45%)	26 (18%)
Not currently linked	0	-	-	111	43 (39%)	23 (21%)
Total	0	-	-	325	130 (40%)	67 (21%)

- No cases were reported in aged care workers in the last week.
- Since 16 June, most aged care workers associated with the current NSW outbreak have been infected in the community and outside of an aged care setting.
- The majority of infected aged care workers have been fully vaccinated.
- These indicate that efforts to stop transmission within aged care facilities, including high vaccination rates among staff, have been successful.

Section 14: Variants of Concern (VoC)

Table 12. Variants identified among locally acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 20 November 2021

Variant	Week ending				29 Nov 2020 to 23 Oct 2021	Total since 29 Nov 2020
	20 Nov*	13 Nov*	6 Nov	30 Oct		
Total variants identified	312	729	672	623	13,341	15,677
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
Kappa (B.1.617.1)	0	0	0	0	0	0
Delta (B.1.617.2)	312	729	672	623	13,334	15,670

*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 13. Variants identified among overseas acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 20 November 2021

Variant	Week ending				29 Nov 2020 to 23 Oct 2021	Total since 29 Nov 2020
	20 Nov*	13 Nov*	6 Nov	30 Oct		
Total variants identified	5	12	2	2	412	433
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
Kappa (B.1.617.1)	0	0	0	0	9	9
Delta (B.1.617.2)	5	12	2	2	170	191

*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.

- Only the delta variant has been detected in recent weeks among both overseas and locally acquired cases.

Section 15: Other respiratory infections in NSW

Figure 15. Proportion of tests positive for influenza, NSW, 1 January 2016 to 21 November 2021

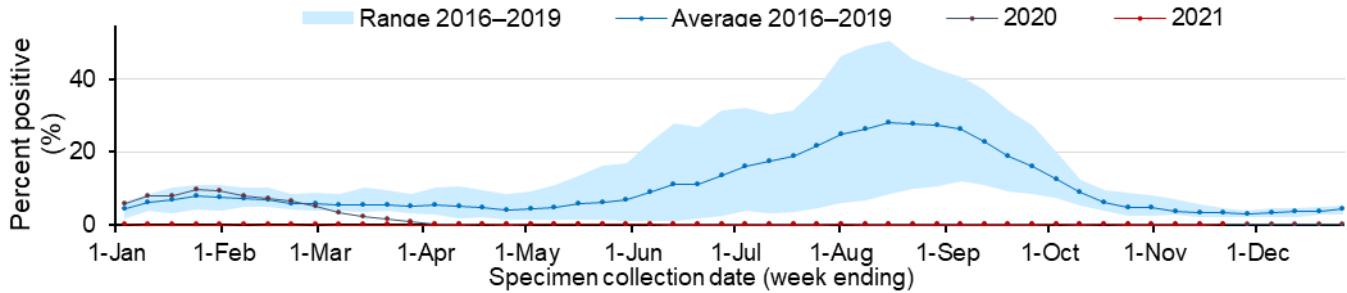


Figure 16. Proportion of FluTracker participants reporting influenza-like illness, NSW, 1 January 2016 to 21 November 2021

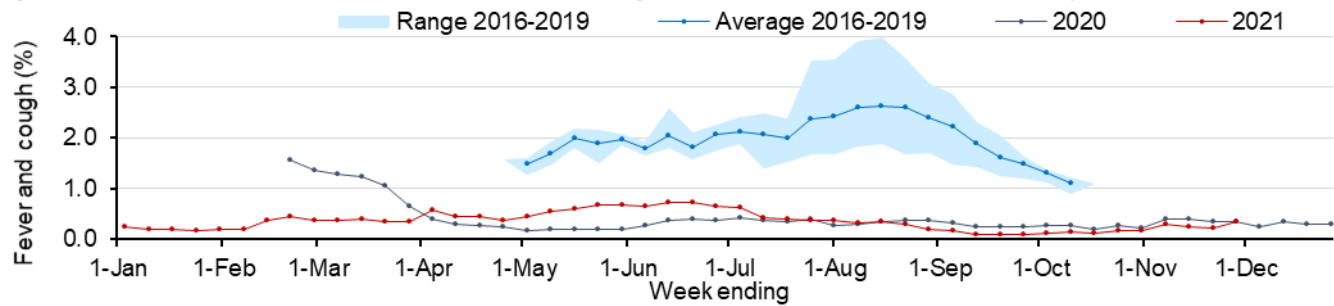


Figure 17. Emergency Department pneumonia presentations, NSW, 1 January 2016 to 28 November 2021

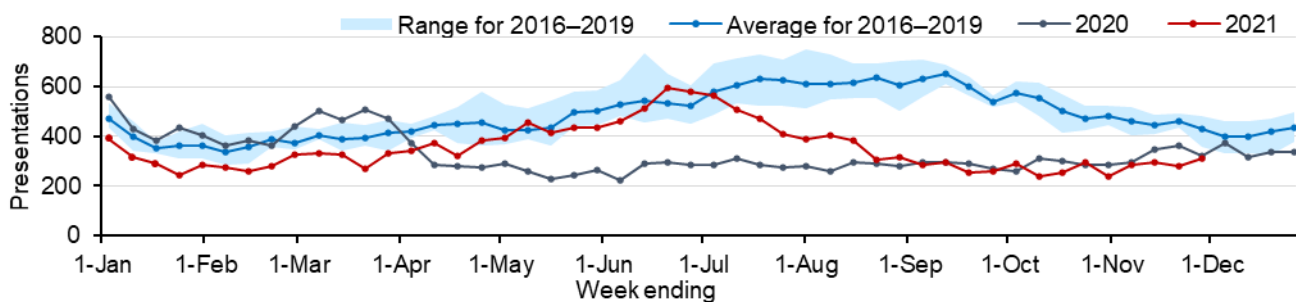
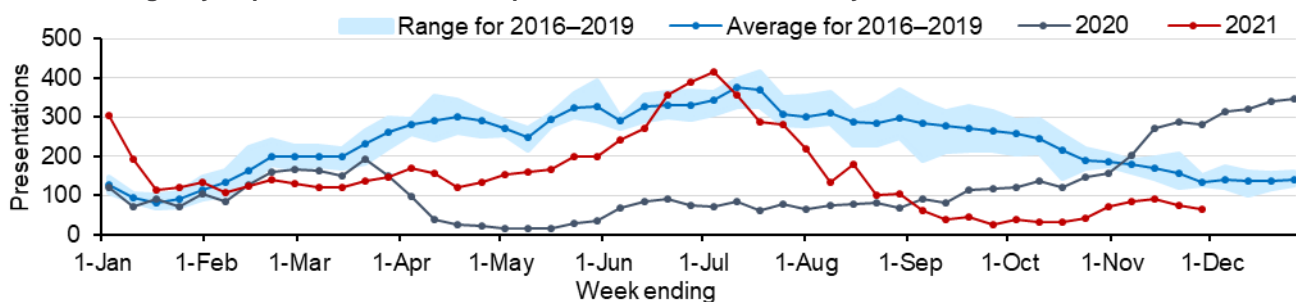


Figure 18. Emergency Department bronchiolitis presentations, NSW, 1 January 2016 to 28 November 2021



- 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 21 influenza cases reported in 2021
- In the week ending 21 November, 15,969 people were surveyed, and 37 people (0.2%) reported flu-like symptoms
- In the last four weeks, 76% (129/169) 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.

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

Local Health District	Local Government Area	Week ending				Total since January 2021	
		27 Nov		20 Nov		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>	12,294	5.0	13,613	5.5	591,865	239.6
	Kiama	837	5.1	949	5.8	32,311	197.4
Illawarra Shoalhaven	Shellharbour	2,925	5.7	3,021	5.9	136,692	266.7
	Shoalhaven	2,907	3.9	3,465	4.7	113,353	153.3
	Wollongong	10,174	6.7	10,049	6.6	391,359	256.3
	<i>LHD Total²</i>	16,843	5.7	17,484	6.0	673,715	229.4
Nepean Blue Mountains	Blue Mountains	5,100	9.2	4,478	8.1	150,709	272.1
	Hawkesbury	4,788	10.2	5,238	11.1	193,748	411.3
	Lithgow	507	3.4	774	5.1	19,319	127.7
	Penrith	15,731	10.6	18,100	12.1	642,103	430.7
	<i>LHD Total²</i>	25,849	9.4	28,305	10.3	993,723	363.1
Northern Sydney	Hornsby	6,011	5.7	6,695	6.3	206,693	194.2
	Hunters Hill	1,471	14.0	1,551	14.8	50,696	483.5
	Ku-ring-gai	7,298	8.2	7,246	8.1	225,711	253.6
	Lane Cove	3,543	12.6	3,225	11.5	114,871	408.7
	Mosman	1,463	6.8	1,185	5.5	45,170	208.3
	North Sydney	2,869	5.5	2,569	4.9	93,156	177.4
	Northern Beaches	15,108	7.9	13,355	7.0	529,824	276.7
	Parramatta ¹	14,135	7.9	14,133	7.9	544,744	302.6
	Ryde	7,024	7.6	7,366	8.0	277,658	302.2
	<i>LHD Total²</i>	50,468	7.5	48,868	7.3	1,720,916	257.2
South Eastern Sydney	Bayside	11,040	8.8	10,435	8.4	448,991	359.6
	Georges River	8,324	7.5	9,275	8.3	380,828	341.2
	Randwick	13,284	12.2	11,916	10.9	411,956	378.1
	Sutherland Shire	15,000	9.3	13,166	8.2	453,321	280.8
	Sydney ¹	14,640	8.5	13,554	7.9	562,670	326.3
	Waverley	6,218	12.0	5,858	11.3	194,965	374.9
	<i>LHD Total²</i>	63,249	9.4	58,550	8.7	2,217,813	330.3
South Western Sydney	Camden	7,805	11.0	8,275	11.7	318,294	448.3
	Campbelltown	12,673	10.6	12,712	10.6	513,779	429.4
	Canterbury-Bankstown ¹	29,129	11.0	33,117	12.5	1,380,583	521.9
	Fairfield	15,798	10.7	16,492	11.1	781,805	527.6
	Liverpool	19,244	12.1	18,871	11.9	754,558	473.6
	Wingecarribee	2,090	5.8	2,087	5.8	70,064	195.7
	Wollondilly	2,037	5.5	2,299	6.2	87,711	235.8
	<i>LHD Total²</i>	75,584	10.4	78,490	10.8	3,225,772	443.7
Sydney	Burwood	1,841	6.5	1,913	6.7	81,660	287.3
	Canada Bay	6,172	9.2	5,975	8.9	200,678	298.4
	Canterbury-Bankstown ¹	29,129	11.0	33,117	12.5	1,380,583	521.9
	Inner West	12,822	9.1	12,281	8.7	409,473	291.3
	Strathfield	4,548	13.9	4,001	12.2	176,642	537.8

		Week ending				Total since January 2021		
		27 Nov		20 Nov				
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	14,640	8.5	13,554	7.9	562,670	326.3	
	<i>LHD Total²</i>	48,120	9.9	48,492	9.9	1,903,798	390.3	
Western Sydney	Blacktown	25,760	9.8	29,185	11.1	1,150,232	438.8	
	Cumberland	19,538	11.6	20,916	12.4	955,986	565.5	
	Parramatta ¹	14,135	7.9	14,133	7.9	544,744	302.6	
	The Hills Shire	12,204	9.8	12,696	10.2	447,194	359.0	
	<i>LHD Total²</i>	69,642	9.4	74,693	10.1	3,054,149	414.2	
	Far West	Balranald	72	4.4	46	2.8	1,946	118.9
		Broken Hill	954	7.8	784	6.4	26,059	213.0
Central Darling		148	11.5	239	18.6	4,378	340.1	
Wentworth		240	4.9	286	5.8	8,511	172.4	
<i>LHD Total²</i>		1,414	6.7	1,355	6.4	40,894	193.8	
Hunter New England	Armidale Regional	565	2.6	987	4.6	30,446	141.3	
	Cessnock	1,520	3.6	2,522	6.0	60,517	144.1	
	Dungog	130	2.0	180	2.7	6,907	104.7	
	Glen Innes Severn	144	2.3	150	2.4	5,397	86.9	
	Gunnedah	195	2.2	184	2.1	10,167	114.5	
	Gwydir	79	2.1	97	2.6	2,543	67.9	
	Inverell	721	6.1	898	7.6	15,110	127.8	
	Lake Macquarie	6,672	4.6	8,133	5.6	298,892	207.4	
	Liverpool Plains	129	2.3	186	3.4	5,740	103.8	
	Maitland	3,309	5.6	4,809	8.1	152,396	255.6	
	Mid-Coast	4,471	6.8	7,835	11.9	81,240	123.7	
	Moree Plains	827	8.9	1,049	11.3	16,290	175.5	
	Muswellbrook	248	2.2	266	2.3	12,243	106.8	
	Narrabri	510	5.6	227	2.5	7,623	82.9	
	Newcastle	6,276	5.4	7,229	6.2	254,516	219.6	
	Port Stephens	1,756	3.4	2,144	4.2	84,961	165.2	
	Singleton	619	3.8	744	4.5	28,293	172.3	
	Tamworth Regional	1,654	3.8	2,669	6.1	76,475	174.7	
	Tenterfield	162	3.5	150	3.3	3,381	73.3	
	Upper Hunter Shire	268	2.7	291	2.9	9,978	100.5	
Uralla	68	1.6	115	2.7	3,806	90.4		
Walcha	48	2.2	58	2.6	2,398	109.3		
	<i>LHD Total²</i>	30,345	4.6	40,886	6.1	1,168,721	175.3	
Mid North Coast	Bellingen	208	2.3	195	2.1	8,532	93.8	
	Coffs Harbour	1,164	2.2	1,258	2.3	49,415	91.4	
	Kempsey	866	4.2	1,165	5.6	37,852	181.8	
	Nambucca	238	1.7	275	2.0	11,808	85.2	
	Port Macquarie-Hastings	2,006	3.4	3,197	5.4	73,657	124.5	
	<i>LHD Total²</i>	4,482	2.8	6,090	3.9	181,264	114.8	
Murrumbidgee	Albury	1,924	5.1	2,825	7.4	73,021	191.9	
	Berrigan	84	1.4	101	1.7	4,087	66.7	
	Bland	92	2.2	122	2.9	3,775	90.3	
	Carrathool	21	1.1	23	1.2	1,034	52.8	

		Week ending				Total since January 2021	
		27 Nov		20 Nov			
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	110	3.6	130	4.3	3,596	118.3
	Cootamundra-Gundagai Regional	232	3.0	225	2.9	8,441	107.3
	Edward River	196	3.1	208	3.3	8,038	126.4
	Federation	428	4.9	983	11.3	11,126	127.8
	Greater Hume Shire	279	3.7	366	4.9	11,551	153.3
	Griffith	647	3.4	832	4.4	19,788	104.6
	Hay	61	3.0	49	2.4	1,584	76.7
	Hilltops	463	3.5	434	3.3	22,153	169.2
	Junee	122	2.6	122	2.6	4,413	94.3
	Lachlan ¹	76	1.8	78	1.8	3,483	81.9
	Leeton	215	2.7	189	2.4	6,355	79.3
	Lockhart	85	3.7	108	4.7	2,807	122.1
	Murray River	324	3.8	407	4.8	4,692	55.3
	Murrumbidgee	69	2.5	72	2.6	2,352	85.8
	Narrandera	90	2.2	85	2.1	2,716	65.8
	Snowy Valleys	307	3.0	221	2.2	8,530	84.2
	Temora	111	2.5	230	5.2	3,725	84.4
	Wagga Wagga	3,336	7.3	4,214	9.2	77,563	169.8
	<i>LHD Total²</i>	9,221	4.4	11,973	5.7	282,475	135.4
Northern NSW	Ballina	944	3.0	961	3.1	48,486	155.2
	Byron	925	3.8	725	3.0	36,178	147.3
	Clarence Valley	835	2.3	1,363	3.8	36,173	100.0
	Kyogle	120	2.0	104	1.7	5,575	90.5
	Lismore	950	3.1	1,121	3.7	42,614	139.3
	Richmond Valley	598	3.6	685	4.2	23,525	143.2
	Tenterfield	162	3.5	150	3.3	3,381	73.3
	Tweed	2,011	3.0	2,033	3.0	66,931	98.6
	<i>LHD Total²</i>	6,413	3.0	7,029	3.2	260,296	119.8
Southern NSW	Bega Valley	435	1.8	599	2.5	22,229	92.1
	Eurobodalla	567	2.1	520	1.9	26,695	99.1
	Goulburn Mulwaree	656	3.0	848	3.9	37,041	170.0
	Queanbeyan-Palerang Regional	1,944	4.6	2,180	5.1	57,763	135.1
	Snowy Monaro Regional	867	6.0	360	2.5	23,848	163.8
	Upper Lachlan Shire	108	1.9	170	3.0	6,358	112.7
	Yass Valley	363	3.0	378	3.2	14,245	119.1
<i>LHD Total²</i>	4,942	3.3	5,059	3.3	188,298	123.9	
Western NSW	Bathurst Regional	1,712	5.6	2,367	7.8	70,417	230.6
	Blayney	221	4.3	255	4.9	10,212	197.7
	Bogan	30	1.7	34	1.9	2,567	142.1
	Bourke	93	5.1	150	8.3	6,703	369.7
	Brewarrina	32	2.8	16	1.4	2,385	211.5
	Cabonne	256	2.7	207	2.2	11,874	124.4
	Cobar	111	3.4	83	2.6	4,066	124.7

Local Health District	Local Government Area	Week ending				Total since January 2021	
		27 Nov		20 Nov		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	69	2.5	44	1.6	3,585	129.4
	Cowra	213	2.4	253	2.8	19,097	214.1
	Dubbo Regional	3,196	8.5	3,808	10.1	159,155	423.3
	Forbes	128	1.9	116	1.7	7,127	102.8
	Gilgandra	119	4.0	75	2.5	4,847	163.4
	Lachlan ¹	76	1.8	78	1.8	3,483	81.9
	Mid-Western Regional	382	2.2	487	2.8	29,960	169.5
	Narromine	166	3.6	190	4.2	11,305	247.8
	Oberon	151	4.0	208	5.5	7,926	209.3
	Orange	2,555	8.6	2,147	7.2	78,670	264.7
	Parkes	225	2.2	245	2.4	13,356	128.6
	Walgett	198	4.8	113	2.7	8,537	204.9
	Warren	106	5.6	126	6.7	6,564	347.7
	Warrumbungle Shire	2,048	31.5	299	4.6	9,754	150.2
	Weddin	53	2.1	68	2.7	2,774	109.7
	<i>LHD Total²</i>	12,119	6.1	11,342	5.7	473,348	237.3
NSW Total	NSW Total³	430,985	7.6	452,229	8.0	16,977,717	299.8

Source - Notifiable Condition Information Management System, accessed as at 8pm 29 Nov 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 21 November 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– 21 November 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	759,285	11	<0.01%	10	<0.01%	7,841	18,635	17,561	61,349	5,629	6,550
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

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

HMPV – Human metapneumovirus

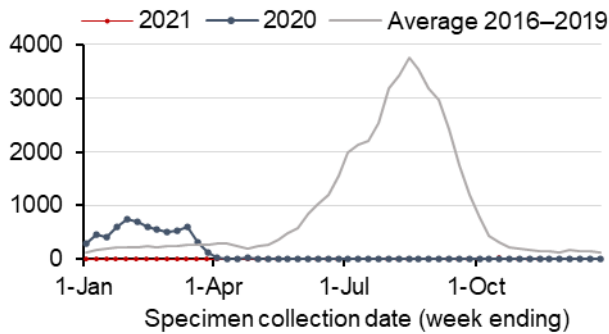
RSV - Respiratory syncytial virus

*Five-week period

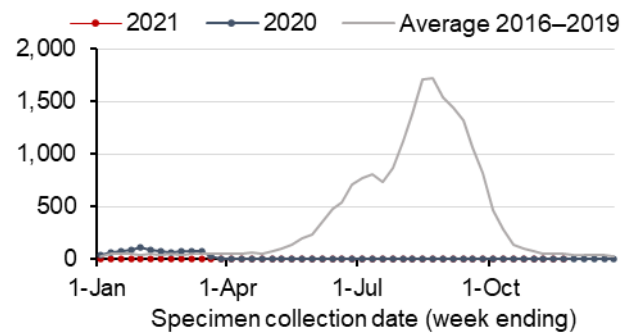
Appendix C: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 21 November 2021

Not all samples are tested for all respiratory viruses. Therefore, data presented may tend to under-represent current respiratory virus activity in NSW.

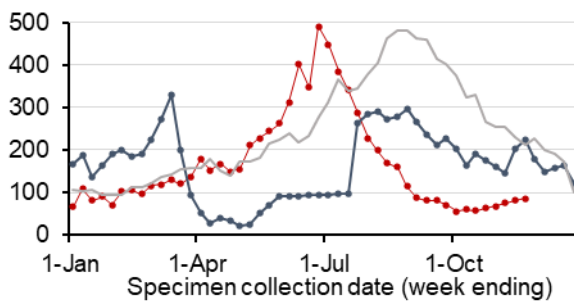
Influenza A



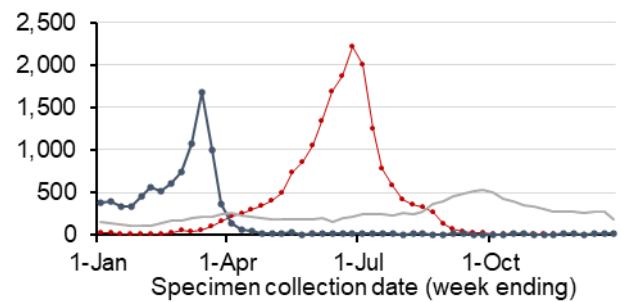
Influenza B



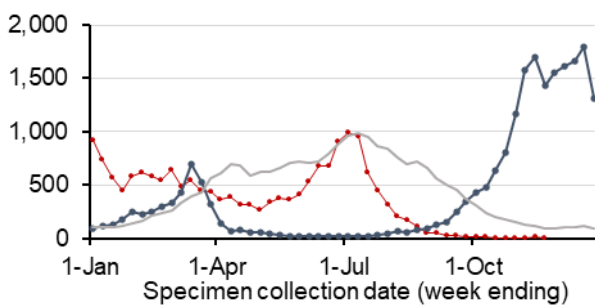
Adenovirus



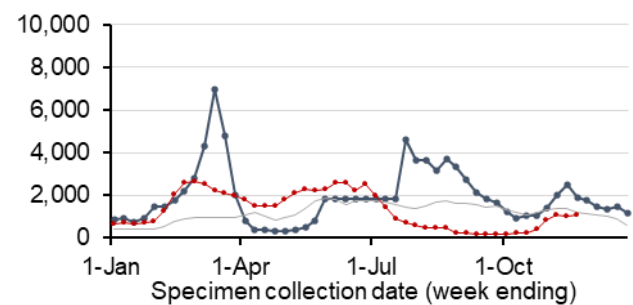
Parainfluenza



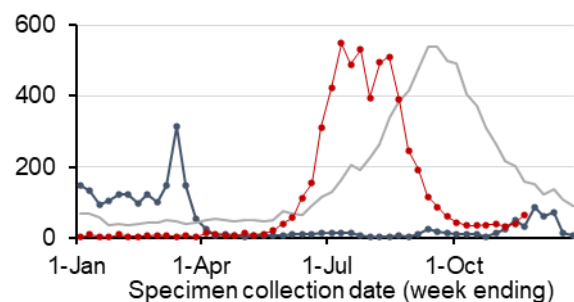
Respiratory Syncytial Virus



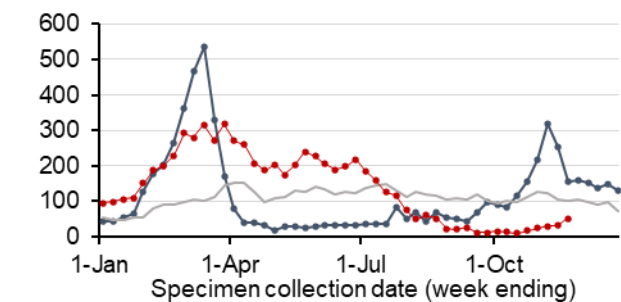
Rhinovirus



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 27 November, 253 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 101 detections:

- Detections outside Sydney

There were 97 detections outside Sydney taken from the sewage treatment plants at Albury, Armidale, Ballina, Bateau Bay, Bathurst, Bermagui, Blayney, Boggabilla, Bombo, Bonny Hills (2), Bourke, Broken Hill (2), Broken Hill South, Byron Bay (2), Cobar (2), Coffs Harbour, Coonabarabran, Coonamble, Crescent Head, Dareton, Deniliquin, Denman, Dubbo, East Lismore, Eden, Forster, Gerroa (2), Gladstone/Smithtown, Gosford – Kincumber, Goulburn, Grenfell, Griffith, Gwandalan, Hallidays Point, Harrington, Hawks Nest, Holbrook, Hunter - Boulder Bay, Burwood Beach, Dora Creek, Edgeworth, Morpeth, Raymond Terrace, Shortland, Toronto, Belmont, Cessnock, Farley, Kurri Kurri and Tanilba Bay, Inverell, Jindabyne, Kew Kendall, Lennox Head, Macksville, Merimbula (2), Moama, Molong, Moree, Mungindi, Muswellbrook, Narromine, North Grafton, Oberon, Old Bar, Port Macquarie, Queanbeyan, Quirindi, Singleton, South Grafton, South Kempsey, South Lismore, South West Rocks, Tamworth, Taree, Temora, Tumut, Tweed - Banora Point, Uralla, Wagga Wagga - Koorlingal, Narrung SBR and Narrung Orbal, Walgett, West Kempsey, Wilcannia, Wingham, Woolgoolga, Wyong – Toukley, and Young.

- 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 Brooklyn, Lithgow, McGraths Hill and South Windsor.

- Detections with no known cases

Detections from Gerroa, Brooklyn, Lithgow, McGraths Hill, Gladstone, Crescent Head, Uralla, Denman, Mungindi, Quirindi, Eden, Merimbula, Bermagui, Deniliquin, Holbrook, Young, Goulburn, Coonamble, Dareton, Grenfell, Blayney, Molong, and Cobar occurred with no known or recent cases in the catchment. Cases were also identified in Denman, Mungindi, Goulburn, Coonamble, Cobar, Coonabarabran, Tumut, Narrabri, Tweed - Kingscliff, Lennox Head, and Jindabyne following sewage detections in recent weeks.

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

There were no detections in the following catchments: Alstonville, Balranald, Bangalow, Baradine, Barraba, Batemans Bay, Bega, Bingara, Bodalla, Boggabri, Bomaderry, Bombala, Boorowa, Bowral, Brewarrina, Buronga, Canowindra, Casino, Charmhaven, Condobolin, Coolah, Coolamon, Coraki, Crookwell, Culburra Beach, Darlington Point, Delungra, Dorrigo, Dunbogan, Dunedoo, Evans Head, Forbes, Frederickton, Glen Innes, Gloucester, Googong, Gulargambone, Gulgong, Gunnedah, Guyra, Harden, Hunter - Branxton, Dungog and Karuah, Jerilderie, Junee, Kyogle, Lake Cargelligo, Leeton, Lockhart, Manilla, Mannering Park, Merriwa, Mittagong, Moonee, Moruya, Moss Vale, Mullumbimby, Nambucca Heads, Narooma, Narrabri, Nowra, Ocean Shores, Parkes, St Georges Basin, Tenterfield, Tomakin, Trangie, Tuross, Tweed - Hastings Point, Kingscliff and Murwillumbah, Ulladulla, Urunga, Vincentia, Walcha, Wardell, Warialda, Warren, Wauchope, Wee Waa, Wentworth, Werris Creek, West Wyalong, Woodenbong, Woy Woy, Wyong South, and Yass.

- New collection sites

No sewage treatment plants were added as new sites.

Appendix E: Additional tables and figures

Total COVID-19 cases by LHD of residence and week reported, NSW, 31 October to 27 November 2021

	Local Health District	Week ending				Total
		27 Nov	20 Nov	13 Nov	6 Nov	
Metropolitan Local Health Districts	South Western Sydney	333	276	299	255	1,163
	South Eastern Sydney	313	128	153	91	685
	Western Sydney	225	236	187	94	742
	Sydney	132	159	162	106	559
	Northern Sydney	124	65	50	30	269
	Nepean Blue Mountains	46	51	33	40	170
	Illawarra Shoalhaven	30	15	24	40	109
	Central Coast	11	14	16	26	67
Rural and Regional Local Health Districts	Hunter New England	151	286	341	455	1,233
	Western NSW	71	44	13	45	173
	Murrumbidgee	39	85	158	171	453
	Southern NSW	30	24	38	33	125
	Mid North Coast	22	30	61	115	228
	Far West	10	6	24	8	48
	Northern NSW	7	16	28	23	74
	Correctional settings	1	0	6	6	13
Hotel Quarantine	4	0	0	0	4	
	NSW*	1,550	1,439	1,599	1,540	6,128

*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 27 November 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	6,989 (9.2%)	6,773 (8.9%)	36,787 (48.6%)	10,147 (13.4%)	15,057 (19.9%)	75,753 (100%)
Month ending						
26 Jun 2021	0 (0.0%)	9 (6.6%)	111 (81.6%)	1 (0.7%)	15 (11.0%)	136 (100%)
31 Jul 2021 [#]	72 (2.1%)	99 (2.9%)	2,750 (80.6%)	46 (1.3%)	443 (13.0%)	3,410 (100%)
28 Aug 2021	435 (2.8%)	623 (4.0%)	11,228 (72.5%)	652 (4.2%)	2,558 (16.5%)	15,496 (100%)
25 Sep 2021	2,225 (6.5%)	3,322 (9.8%)	14,993 (44.1%)	7,461 (21.9%)	6,016 (17.7%)	34,017 (100%)
30 Oct 2021 [#]	2,318 (14.0%)	2,407 (14.5%)	6,272 (37.9%)	1,510 (9.1%)	4,059 (24.5%)	16,566 (100%)
Week ending						
6 Nov 2021	364 (23.6%)	110 (7.1%)	456 (29.6%)	92 (6.0%)	518 (33.6%)	1,540 (100%)
13 Nov 2021	501 (31.3%)	96 (6.0%)	353 (22.1%)	110 (6.9%)	539 (33.7%)	1,599 (100%)
20 Nov 2021	440 (30.6%)	63 (4.3%)	329 (22.9%)	119 (8.3%)	488 (33.9%)	1,439 (100%)
27 Nov 2021	634 (40.9%)	44 (2.8%)	295 (19.0%)	156 (10.1%)	421 (27.2%)	1,550 (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.

[#] Five-week period

Demographics of infections among total cases by gender and age, NSW, 16 June to 27 November 2021

	Week ending				16 Jun to 27 Nov 2021
	27 Nov 2021	20 Nov 2021	13 Nov 2021	6 Nov 2021	
Gender					
Female	700 (45.2%)	680 (47.3%)	796 (49.8%)	785 (51.0%)	35,982 (47.5%)
Male	850 (54.8%)	759 (52.7%)	799 (50.0%)	755 (49.0%)	39,727 (52.4%)
Non-specified or non-binary	0 (0.0%)	0 (0.0%)	4 (0.3%)	0 (0.0%)	44 (0.1%)
Age group					
0-9	304 (19.6%)	383 (26.6%)	425 (26.6%)	418 (27.1%)	12,488 (16.5%)
10-19	243 (15.7%)	277 (19.2%)	290 (18.1%)	291 (18.9%)	12,377 (16.3%)
20-29	252 (16.3%)	211 (14.7%)	235 (14.7%)	236 (15.3%)	14,822 (19.6%)
30-39	256 (16.5%)	216 (15.0%)	236 (14.8%)	233 (15.1%)	12,961 (17.1%)
40-49	199 (12.8%)	139 (9.7%)	194 (12.1%)	178 (11.6%)	9,319 (12.3%)
50-59	140 (9.0%)	99 (6.9%)	104 (6.5%)	81 (5.3%)	6,784 (9.0%)
60-69	78 (5.0%)	69 (4.8%)	62 (3.9%)	57 (3.7%)	3,894 (5.1%)
70-79	56 (3.6%)	34 (2.4%)	34 (2.1%)	32 (2.1%)	1,925 (2.5%)
80-89	16 (1.0%)	11 (0.8%)	16 (1.0%)	12 (0.8%)	944 (1.2%)
90+	6 (0.4%)	0 (0.0%)	3 (0.2%)	2 (0.1%)	239 (0.3%)
Total	1,550 (100%)	1,439 (100%)	1,599 (100%)	1,540 (100%)	75,753 (100%)

Proportion of cases with a severe outcome (ICU and/or death) amongst all cases, by age, time of infection, and vaccination status

Age-group (years)	% cases with severe outcomes (ICU and/or death)				
	Jan 2020 - 15 Jun 2021		16 Jun - 27 Nov 2021: Fully vaccinated		16 Jun - 27 Nov 2021: Un-vaccinated
0-9	0%	(0 / 251)	-	-	<1% (10 / 12,488)
10-19	<1%	(1 / 325)	0%	(0 / 164)	<1% (28 / 9,881)
20-29	<1%	(4 / 1,115)	<1%	(2 / 1,072)	1% (99 / 9,812)
30-39	1%	(15 / 1,098)	<1%	(5 / 1,438)	2% (156 / 7,775)
40-49	2%	(12 / 718)	<1%	(4 / 1,327)	3% (177 / 5,359)
50-59	4%	(30 / 710)	1%	(15 / 1,172)	7% (263 / 3,683)
60-69	7%	(44 / 656)	2%	(17 / 821)	13% (230 / 1,740)
70-79	12%	(46 / 394)	6%	(34 / 578)	23% (162 / 691)
80-89	21%	(26 / 122)	11%	(33 / 301)	37% (129 / 351)
90+	38%	(16 / 42)	21%	(24 / 116)	44% (28 / 64)
Total	4%	(194 / 5,431)	2%	(134 / 6,989)	2% (1,282 / 51,844)

* 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	288	2%	28.5	4	2%
10-19	360	3%	37.3	10	3%
20-29	972	7%	82.9	27	2%
30-39	1,250	10%	106.8	46	4%
40-49	1,287	14%	124.6	48	7%
50-59	1,264	19%	130.0	78	11%
60-69	1,040	27%	123.7	117	18%
70-79	760	40%	130.4	92	23%
80-89	507	54%	184.9	52	43%
90+	128	54%	184.5	16	38%
Total	7,856	10%	97.1	490	9%

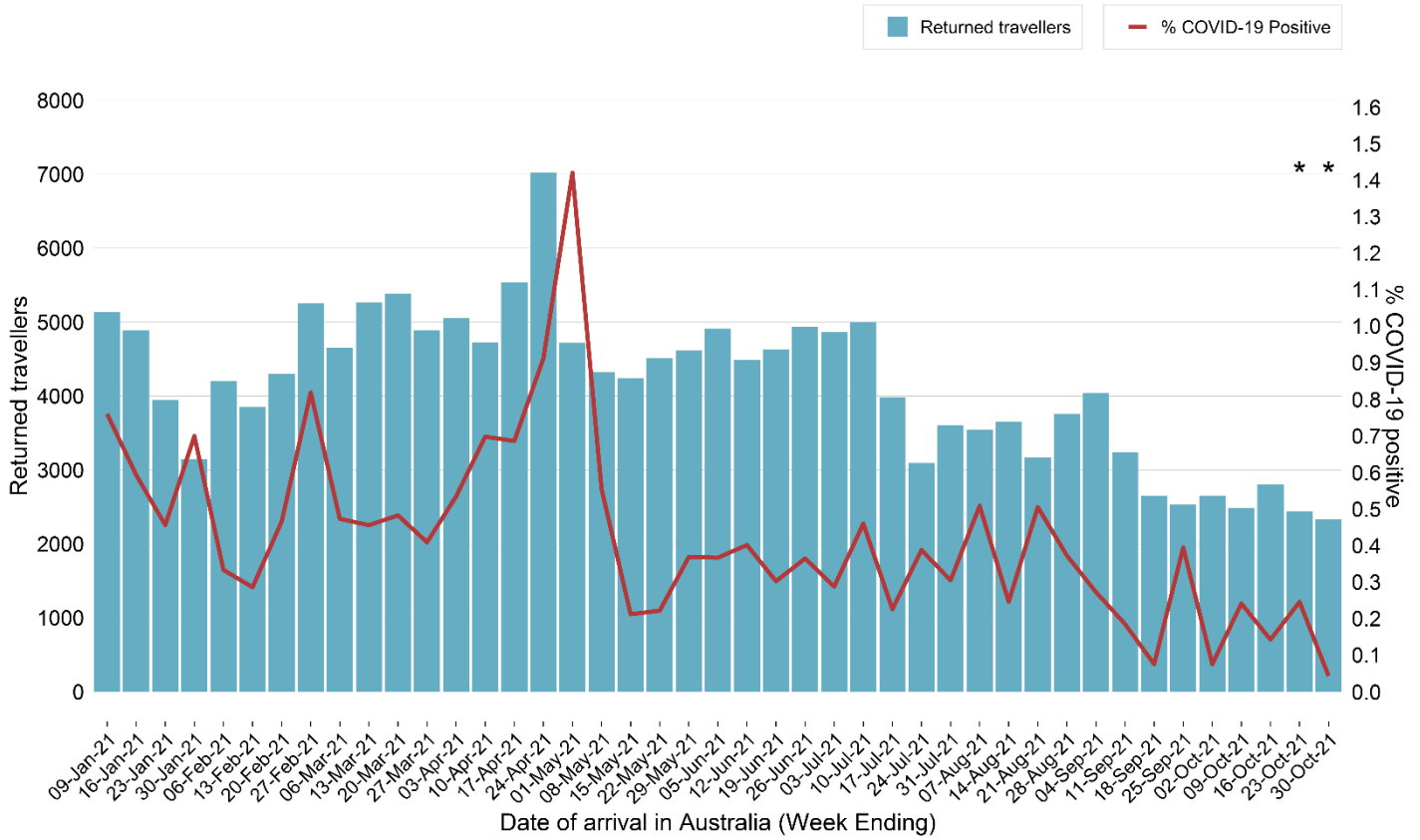
ICU hospitalisations among people diagnosed with COVID-19, by age group, NSW

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	10	0%	1.0	0	0%
10-19	35	0%	3.6	1	0%
20-29	122	1%	10.4	4	0%
30-39	191	1%	16.3	15	1%
40-49	228	2%	22.1	12	2%
50-59	335	5%	34.5	29	4%
60-69	287	7%	34.1	43	7%
70-79	205	11%	35.2	39	10%
80-89	57	6%	20.8	13	11%
90+	1	0%	1.4	0	0%
Total	1,471	2%	18.2	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.

Returned travellers screened at Sydney International Airport by week of arrival and percent COVID-19 positive, NSW, 3 January 2021 to 30 October 2021



*Returned travellers entering Australia in the past 14 days are still in quarantine and may return a positive result prior to the end of their hotel quarantine period.

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, either through interview or searching the Australian Immunisation Register, suggesting they were unlikely to have been vaccinated in Australia, or that their Medicare registration is outside NSW.</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), Kappa (B.1.617.1) 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.
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>