

COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 39 ENDING 2 October 2021

Published 13 October 2021

Overview

Table 1. Number and proportion of COVID-19 cases in NSW by likely source of infection to week ending 2 October 2021

	2020		2021		Total
	Jan – Jun	Jul – Dec	01 Jan – 15 Jun	16 Jun – 2 Oct	
Locally acquired	1,236 (39 %)	807 (52 %)	51 (7 %)	58,895 (100 %)	60,989 (94 %)
Interstate acquired	67 (2 %)	23 (1 %)	0 (0%)	17 (<1 %)	107 (<1 %)
Overseas acquired	1,892 (59 %)	714 (46 %)	641 (93 %)	223 (<1 %)	3,470 (5 %)
Total	3,195 (100 %)	1,544 (100 %)	692 (100 %)	59,135 (100 %)	64,566 (100 %)
Deaths	51	5	0	374	430

Summary for the week 26 September to 2 October 2021 (inclusive)

In the week ending 2 October 2021:

- There were 5,871 locally acquired cases reported.
- The ten LGAs with the highest number of cases were:
 - Canterbury-Bankstown LGA with 633 (11%) cases
 - Blacktown LGA with 502 (9%) cases
 - Cumberland LGA with 451 (8%) cases
 - Liverpool LGA with 390 (7%) cases
 - Wollongong LGA with 359 (6%) cases
 - Campbelltown LGA with 354 (6%) cases
 - Fairfield LGA with 254 (4%) cases
 - Penrith LGA with 250 (4%) cases
 - Central Coast LGA with 231 (4%) cases
 - Sydney LGA with 173 (3%) cases
 - 2,227 (38%) cases were residents across 73 other LGAs
- There were 11 cases in overseas returned travellers (up 57%).
- There were 71 deaths in people diagnosed with COVID.
- 10.8% of locally acquired cases were fully vaccinated. This compares with around 52.6% of the NSW population aged 16 and over who had been fully vaccinated (that is, had completed their recommended vaccine schedule more than 2 weeks before, by 18 September).
- Testing rates decreased compared to the previous week (down 12%), with continued high testing rates in the Nepean Blue Mountains, South Western Sydney, Sydney, and Western Sydney LHDs.
- 275 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 110 detections. Detections from Armidale, Ballina, Bermagui, Dareton, Dungog, Gulgong, Jindabyne, Karuah, Kyogle, Moruya, Nyngan, Quirindi, South Grafton, Tamworth, Thredbo and Tweed - Banora Point, Hastings Point and Kingscliff occurred with no known or recent cases in the catchment. Subsequently cases were identified in Gulgong, Oberon, Kyogle, Jindabyne, Moruya, Tamworth, Thredbo, Tweed- Hastings Point and Crookwell following detections in recent weeks. Note that cases may have been identified in these catchments after 2 October.

Indicators of effective prevention for COVID-19 in NSW for the week ending 2 October 2021

On receipt of a laboratory notification diagnosis of COVID-19, NSW Health now sends a text message to the case informing them that they and their close contacts are required to isolate and asking them to answer a short questionnaire.

Where a mobile number is not available, NSW Health works with the NSW Police to locate and inform the case as soon as possible.

Table 2. Measures of public health action, NSW, for the period from 19 September to 2 October 2021

	Week ending 02 Oct	Week ending 25 Sep
Proportion locally acquired cases notified to NSW Health by the laboratory within 1 day of specimen collection	76% (4,475/5,871)	75% (5,349/7,088)
Locally acquired cases contacted by text message within 1 day of notification to NSW Health	87% (5,114/5,871)	87% (6,140/7,088)
Of the locally acquired cases responded to text message and identified as high risk cases fully interviewed by public health staff within 1 day of notification to NSW Health	91% (1,130/1,241)	88% (1,007/1,146)
Locally acquired cases fully interviewed by public health staff within 1 day of notification to NSW Health	89% (5,223/5,871)	83% (5,870/7,088)

Interpretation: In the week ending 2 October, 76% of cases were notified to NSW Health within a day of test, 89% of cases were fully interviewed within one day of notification and 87% of cases were sent a text message to advise of their positive result, provide isolation requirements and to identify high risk exposure settings.

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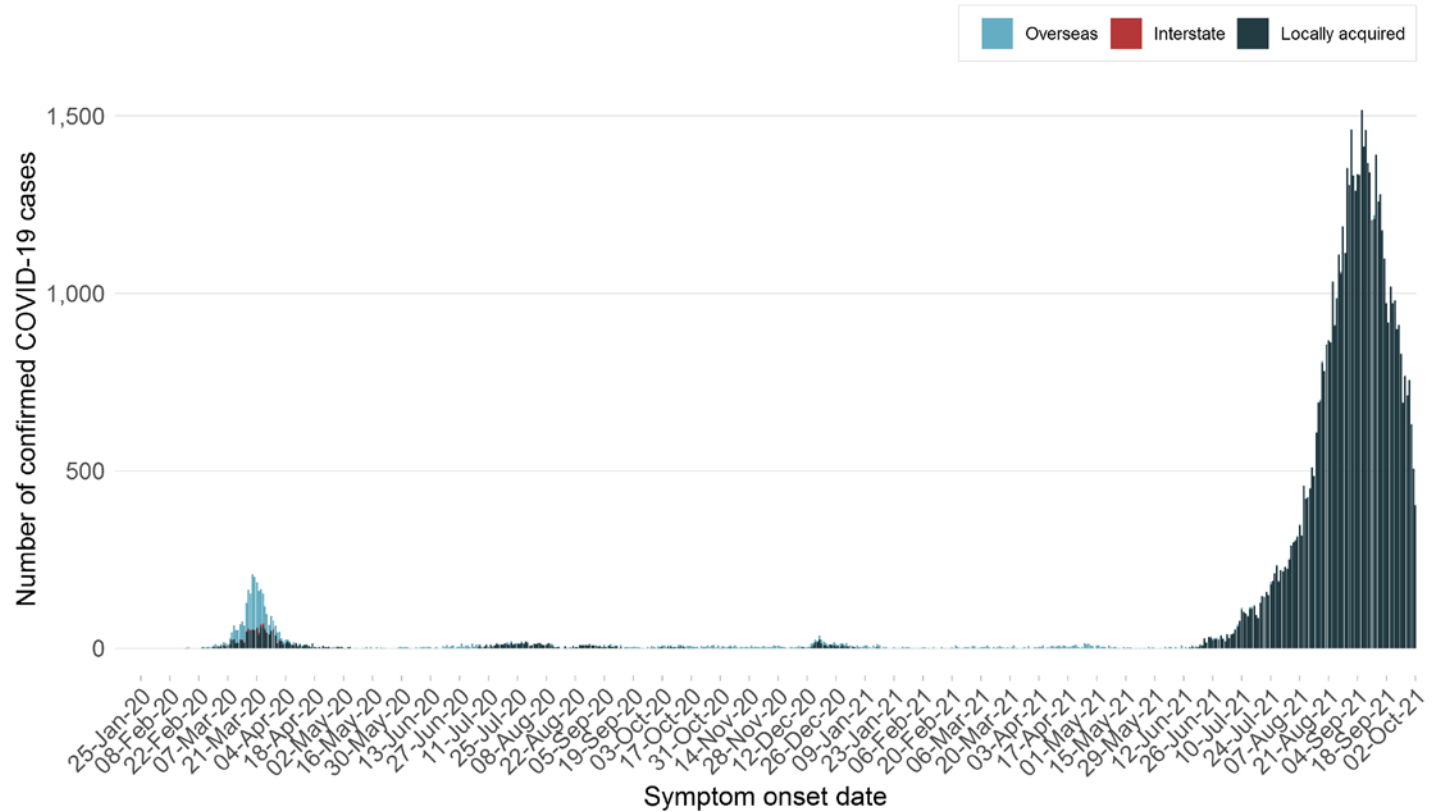
COVID-19 Vaccination program

- Australian Government Department of Health reports the number of vaccine doses administered across Australia — [Daily COVID-19 vaccine rollout numbers](#)
- Australian Government Department of Health also reports the percentage of fully vaccinated individuals by LGA — [Vaccination rate by LGA](#)
- Therapeutic Goods Administration (TGA) report data on received reports of suspected side effects (also known as adverse events) and other safety information from Australia and overseas — [Weekly COVID-19 vaccine safety report](#)
- AusVaxSafety is conducting active vaccine safety surveillance of the vaccines in use. Surveillance data have been

Section 1: How is the outbreak tracking in NSW?

To understand how the outbreak is tracking we look at how many new cases are reported each day and the number of people being tested. Each bar in the graph below represents the number of new cases based on the date of symptom onset.

Figure 1. COVID-19 cases by likely infection source and illness onset, NSW, from 13 January 2020 to 2 October 2021



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

Interpretation: Between 13 January 2020 and 2 October 2021, there were 64,566 confirmed COVID-19 cases in NSW. Of those, 3,470 (5%) were overseas acquired, 107 (<1%) were interstate acquired, and 60,989 (94%) were locally acquired. Cases who tested positive by 2 October are included, but are plotted by earliest symptom onset date. As cases typically develop symptoms prior to being notified, the number of cases reported by symptom onset date will appear to decline in more recent days, even if the total number of cases reported on that day does not.

Four major waves of COVID-19 cases

The epidemiology of COVID-19 in NSW continued to evolve since the first three cases were reported in NSW on 25 January 2020 in people who acquired their infection in China. The first locally acquired COVID-19 case in NSW was reported on 2 March 2020 and by mid-March case numbers had increased rapidly in overseas returned travellers and their contacts and within localised community outbreaks. In NSW, the number of reported daily cases peaked on 27 March 2020 at 213 cases. Public health action and the introduction of a range of stringent control measures, including the closure of international borders, 14-day mandatory quarantine for returned travellers and restrictions of movement within NSW lead to a decline in cases. Community transmission was interrupted by the end of May 2020.

In early July seeding of SARS-CoV-2 into South Western Sydney from an outbreak in Melbourne led to a second wave of infection. Following intensive public health action community transmission was again interrupted by the end of November 2020.

In December 2020 two new introductions of SARS-CoV-2 caused outbreaks in Sydney's Northern Beaches and Berala in Sydney's West. Community transmission was again interrupted by the end of January 2021.

The current outbreak across NSW began in mid-June 2021 in Sydney's east, and spread from there to West and South Western Sydney. Clusters have developed in the Central Coast, Hunter New England, Western NSW, Far Western NSW, and Southern NSW regions.

Section 2: Locally acquired COVID-19 transmission in NSW in the last four weeks

Table 3. Locally acquired COVID-19 cases by LHD of residence and week reported, NSW, 5 September to 2 October 2021

Local Health District	Week ending				Total	Days since last case reported
	2 Oct	25 Sep	18 Sep	11 Sep		
South Western Sydney	1,511	2,074	2,773	3,138	9,496	0
Western Sydney	1,126	1,537	2,196	2,749	7,608	0
South Eastern Sydney	559	767	1,034	911	3,271	0
Sydney	535	476	317	209	1,537	0
Illawarra Shoalhaven	458	761	1,045	1,213	3,477	0
Nepean Blue Mountains	286	432	419	527	1,664	0
Northern Sydney	231	211	133	164	739	0
Central Coast	219	300	216	212	947	0
Hunter New England	463	247	145	63	918	0
Western NSW	213	115	98	177	603	0
Southern NSW	143	41	46	10	240	0
Far West	33	45	38	47	163	0
Murrumbidgee	25	0	2	0	27	0
Mid North Coast	12	6	4	0	22	0
Northern NSW	10	15	9	0	34	1
Correctional settings	24	19	20	75	138	0
NSW*	5,871	7,088	8,558	9,536	31,053	

*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.

Interpretation: There were 5,871 locally acquired cases reported in the week ending 2 October 2021. The largest proportion of cases were residents of South Western Sydney LHD (1,511, 26%) followed by Western Sydney LHD (1,126, 19%), and South Eastern LHD (559, 10%). Correctional settings include all cases residing in NSW correctional facilities.

Section 3: Epidemiology of local cases with COVID-19 from 16 June 2021 to 2 October 2021

Since 16 June 2021, NSW has experienced a cluster of COVID-19 infections caused only by the delta variant of the SARS-CoV-2 virus. This section describes some of the epidemiological features of this cluster.

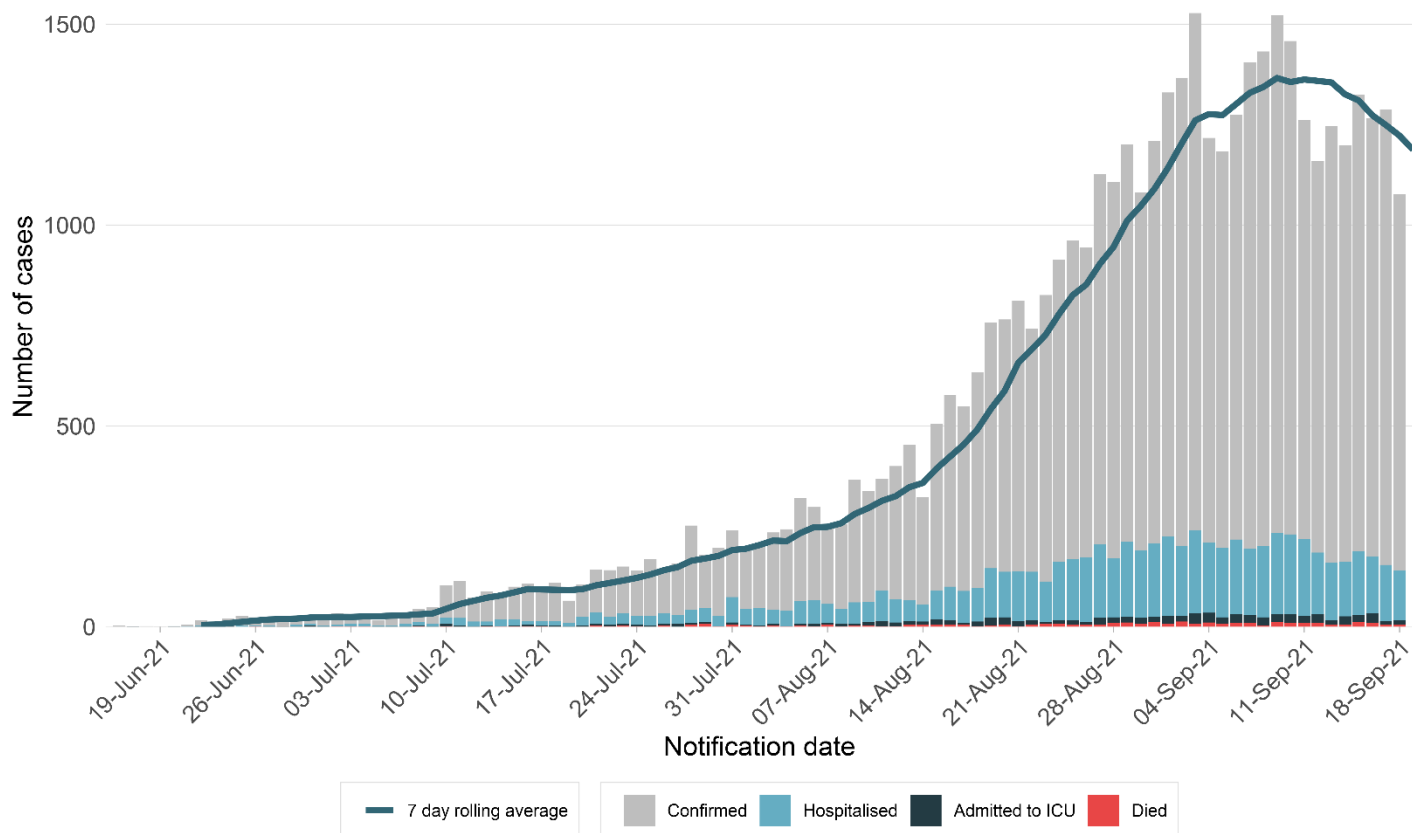
Table 4. COVID-19 cases and tests reported, NSW, from 1 January 2021 to 2 October 2021

	Week ending 2 Oct	Week ending 25 Sep	% change	Total 2021
Number of cases	5,889	7,096	-17 %	59,827
Locally acquired	5,871	7,088	-17 %	58,946
Known epidemiological links to other cases or clusters	1,807	2,047	-12 %	20,286
No epidemiological links to other cases or clusters	4,064	5,041	-19 %	38,660
Overseas acquired	11	7	57 %	864
Interstate acquired	7	1	600 %	17
Number of Tests	730,600	829,961	-12 %	14,122,329

Note: The case numbers reported for previous weeks is based on the most up to date information from public health investigations.

Interpretation: Almost all cases reported in the last two weeks in NSW were locally acquired (12,959/12,985 cases, or 99.8%). Of the 5,871 locally acquired cases reported in the week ending 2 October 2021, 55% were from the 12 LGAs of concern (Cumberland, Canterbury-Bankstown, Blacktown, Fairfield, Liverpool, Penrith, Campbelltown, Burwood, Parramatta, Bayside, Georges River, and Strathfield).

Figure 2. COVID-19 cases by outcome and notification date with 7 day backward rolling average, NSW, from 16 June 2021 to 18 September 2021



Interpretation: This graph shows the number of COVID-19 cases notified each day to NSW Health, as of 18 September and their outcome. The grey bar represents the number of cases notified on a given day and the blue bar is the number of those same cases that were subsequently hospitalised. Because there can be a delay between a person becoming ill with COVID-19 and when they may require hospitalisation (currently, a median of 5 days) or between becoming ill and dying (currently, a median of 11 days), data is provided to 18 September, allowing sufficient time to capture the development of severe illness or death among the most recently notified cases.

Local Government Areas

Table 5a. Top 20 metropolitan LGAs of residence, ordered by locally acquired COVID-19 cases in the last 7 days, per 100,000 population rate, NSW, 16 June to 2 October 2021

LGA name	Last 7 days		Current NSW outbreak (16 Jun-2 Oct 2021)	
	Cases	Cases per 100,000 population	Cases	Cases per 100,000 population
Campbelltown	354	207	2,230	1,305
Cumberland	451	187	8,303	3,438
Liverpool	390	171	4,970	2,184
Canterbury-Bankstown	633	167	10,256	2,714
Wollongong	359	165	1,121	514
Shellharbour	103	141	391	534
Blacktown	502	134	6,211	1,659
Fairfield	254	120	4,219	1,993
Penrith	250	117	2,861	1,343
Bayside	158	89	1,315	737
Randwick	131	84	1,139	732
Sydney	173	70	1,804	732
Camden	68	67	883	870
Central Coast	231	67	840	244
Shoalhaven	69	65	152	144
Georges River	92	58	1,135	712
Waverley	43	58	296	398
Strathfield	25	53	381	812
Burwood	20	49	290	714
Wollondilly	25	47	167	314

Table 5b. Top 20 regional and rural LGAs of residence, ordered by locally acquired COVID-19 cases in the last 7 days, per 100,000 population rate, NSW, 16 June to 2 October 2021

LGA name	Last 7 days		Current NSW outbreak (16 Jun-2 Oct 2021)	
	Cases	Cases per 100,000 population	Cases	Cases per 100,000 population
Bourke	24	927	139	5,367
Oberon	27	499	27	499
Narromine	19	292	42	644
Central Darling	4	218	150	8,157
Cowra	26	204	49	385
Dubbo Regional	92	171	892	1,660
Broken Hill	29	166	120	687
Snowy Monaro Regional	27	130	29	139
Queanbeyan-Palerang Regional	78	128	104	170
Maitland	91	107	189	222
Cessnock	55	92	87	145
Kyogle	8	91	8	91
Goulburn Mulwaree	27	87	59	190
Newcastle	123	74	347	210
Lake Macquarie	137	67	359	174
Walgett	4	67	36	605
Muswellbrook	9	55	14	85
Mid-Western Regional	11	44	34	135
Singleton	10	43	25	107
Port Stephens	27	37	97	132

Interpretation: The top 20 metropolitan LGAs contributed 74% of all cases in the week ending 2 October. The two LGAs with the highest case rates per 100,000 population are in a rural and regional area and are associated with known clusters in the west of NSW. 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.

Source of infection for locally acquired cases in NSW

Figure 3a. Source of infection for locally acquired cases, Metropolitan LHDs, from 16 June to 2 October 2021

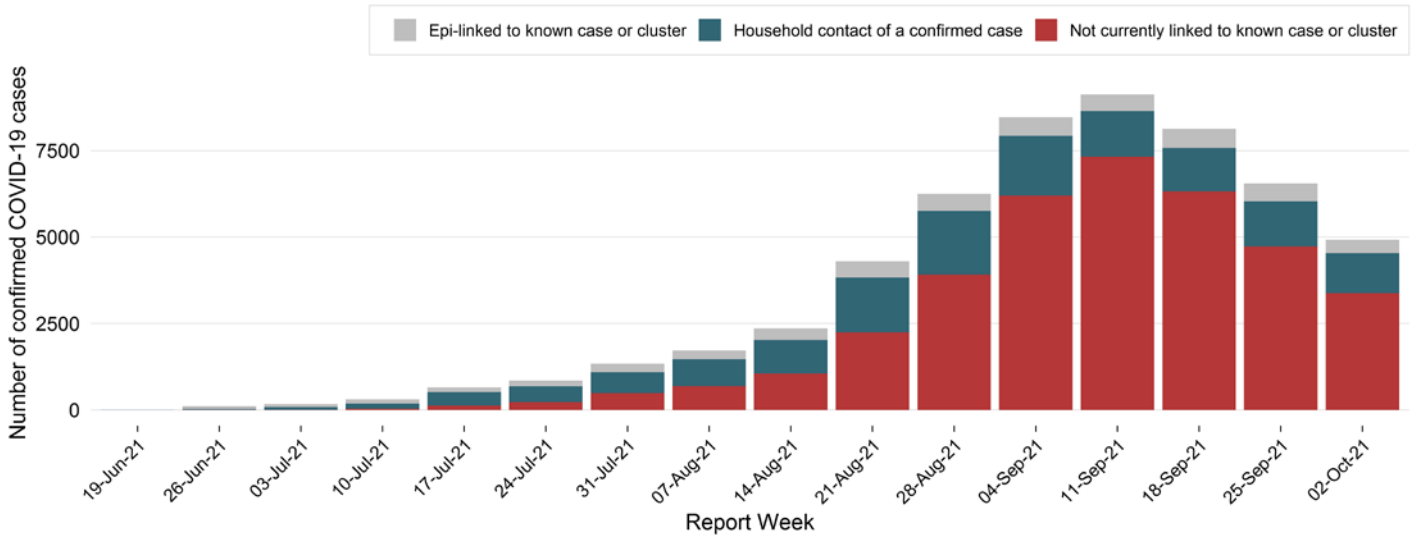
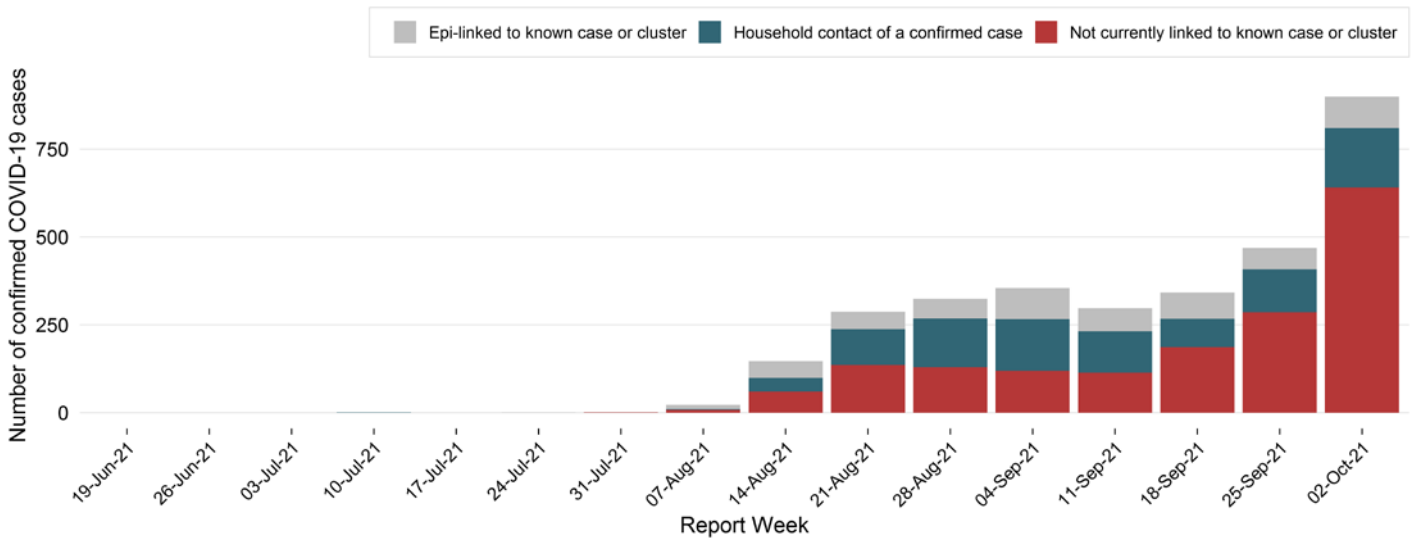


Figure 3b. Source of infection for locally acquired cases, rural and regional LHDs, from 16 June to 2 October 2021



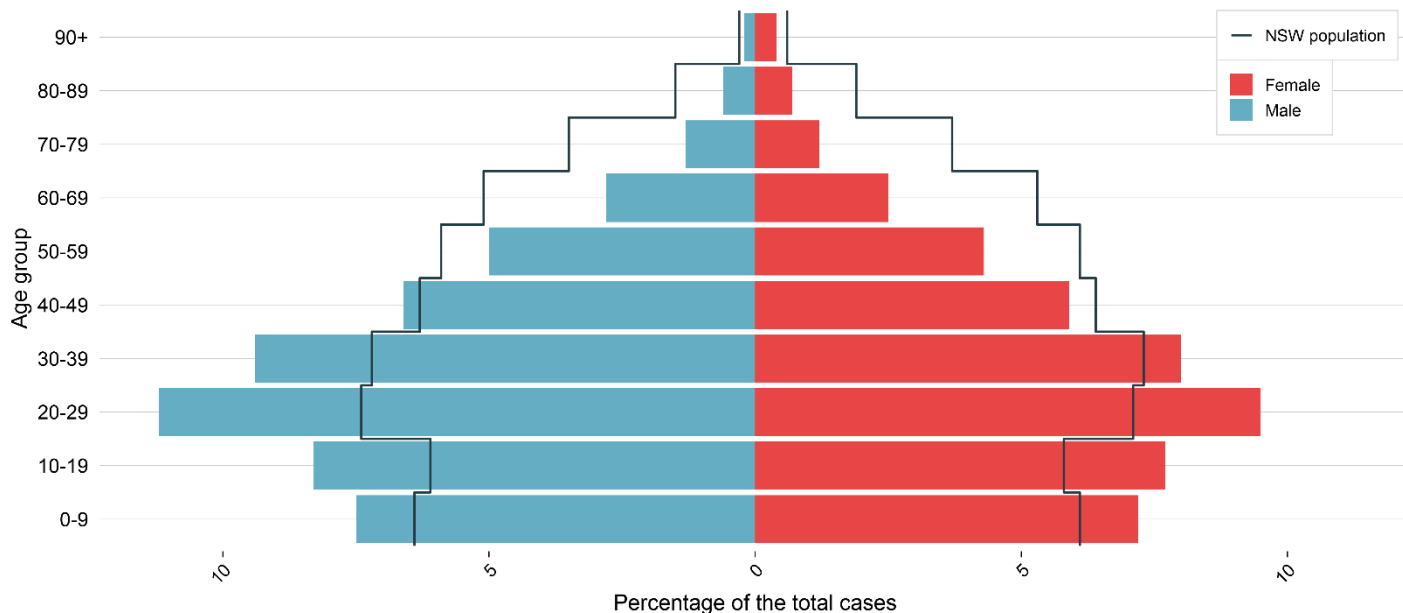
Note: This graph does not include cases in Justice Health and correctional facilities and those for whom LHD was not available at the time of data extraction.

Interpretation: In the week ending 2 October, cases decreased by 25% in metropolitan LHDs (4,925 compared to 6,558 the previous week), and nearly doubled in rural and regional LHDs (899 compared to 469 the previous week). Of the 4,925 cases reported this week in metropolitan LHDs, 1,158 (24%) were household contacts, 386 (8%) were epidemiologically linked but not household contacts and 3,381 (69%) were not currently linked to a case or cluster. There were 899 cases reported this week in rural and regional LHDs. Of these 169 (19%) are household contacts, 89 (10%) are epidemiologically linked but not household contacts and 641 (71%) have not currently been linked to a case or cluster.

Age breakdown of locally acquired cases, NSW, from 16 June - 2 October 2021

The median age of cases between 1 January 2020 and 15 June 2021 was 37 years (interquartile range (IQR) = 25-55 years). By contrast, between 16 June and 2 October 2021, there have been 58,895 locally acquired cases. The median age was 29 years (IQR = 16-44 years).

Figure 4. Current wave locally acquired case percentage (n = 58,728) by age and gender, NSW, from 16 June to 2 October 2021



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

Interpretation: In the current outbreak from 16 June 2021, people aged under 40 are over-represented among the cases, relative to their proportion in the NSW population. Under-representation among older groups may be due to vaccination programs targeted towards elderly and aged care residents.

Section 4: COVID-19 in specific populations

Aboriginal people

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.

There were 625 locally acquired cases of COVID-19 reported in Aboriginal people in the week ending 2 October 2021. Of the 625 cases, 22 were fully vaccinated (see Section 5 for a full description of vaccination status). In total there have been 3,464 Aboriginal people diagnosed with COVID-19 in the current NSW outbreak.

Pregnant women

In the week ending 2 October, 71 pregnant women were diagnosed with COVID-19. Since January 2020, 647 pregnant women have been diagnosed with COVID-19 in NSW. As those who test negative are not interviewed, testing rates among pregnant women are not available. Fifteen of the women were fully vaccinated at the time of their illness. Pregnant women of any age became a priority group eligible for vaccination on 22 July 2021, although some women may have been eligible before this date due to higher-risk occupations or being aged 40 years or more.

Correctional settings

There were 35 confirmed cases residing in correctional settings in the week ending 2 October. Since 16 June 2021, 420 people residing in correctional settings have been diagnosed with COVID-19 in NSW. Fourteen (3.3%) of these were fully vaccinated.

Healthcare workers

The following describes infections of COVID-19 in healthcare workers (HCWs). HCWs in this section 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.

In the week ending 2 October, there were 80 healthcare workers diagnosed with COVID-19. Of these, 9 (11%) were potentially infected in a healthcare setting, 15 (19%) were social or household contacts of previously reported cases and 56 (70%) are currently not linked. Forty-seven (59%) cases were fully vaccinated and 16 (20%) were partially vaccinated.

In total there have been 944 cases of COVID-19 in health care workers since August 2020. Of these, 156 were potentially infected in healthcare settings. A further 236 cases were linked to social or household contacts, and for 552 cases the source of infection is either unknown or under investigation. Prior to August 2020, there were 35 cases identified in HCWs who had worked in a health facility in the 14 days prior to symptom onset or date of testing (see [COVID-19 in healthcare workers in NSW](#)).

Table 6. Number of healthcare worker infections by source of infection and proportion fully vaccinated

Healthcare workers	Last 7 days			Current NSW outbreak (16 Jun-02 Oct 2021)		
	Number of HCWs	Fully vaccinated	Partially vaccinated	Number of HCWs	Fully vaccinated	Partially vaccinated
Healthcare acquired	9	3 (33%)	2 (22%)	131	47 (36%)	12 (9%)
Community acquired	15	10 (67%)	2 (13%)	219	80 (37%)	24 (11%)
Not currently linked	56	34 (61%)	12 (21%)	546	220 (40%)	57 (10%)
Total	80	47 (59%)	16 (20%)	896	347 (39%)	93 (10%)

Interpretation: Since 16 June, most healthcare workers associated with the current NSW outbreak have been infected in the community and outside of a healthcare setting (765/896, 85%). Of the 896 healthcare workers that have been diagnosed with COVID-19 in the current outbreak, 347 (39%) have been fully vaccinated and 93 (10%) have been partially vaccinated.

Aged care workers

Since 16 June 2021, there have been 278 cases reported in aged care workers. Of these, 57 (21%) people have reported being vaccinated with one effective dose, and 91 (33%) were fully vaccinated.

Table 7. Number of aged care worker infections by source of infection and proportion fully vaccinated

Aged care workers	Last 7 days			Current NSW outbreak (16 Jun-02 Oct 2021)		
	Number of ACWs	Fully vaccinated	Partially Vaccinated	Number of ACWs	Fully vaccinated	Partially Vaccinated
Acquired at aged care facility	4	2 (50%)	0 (0%)	56	16 (29%)	15 (27%)
Community acquired	5	1 (20%)	3 (60%)	78	25 (32%)	10 (13%)
Not currently linked	11	8 (73%)	3 (27%)	144	50 (35%)	32 (22%)
Total	20	11 (55%)	6 (30%)	278	91 (33%)	57 (21%)

Interpretation: In the week ending 2 October there were 20 aged care workers diagnosed with COVID-19. Of these, 4 (20%) were infected in an aged care facility, 5 (25%) were social or household contacts of previously reported cases and 11 (55%) are not currently linked.

Section 5: COVID-19 vaccination status

COVID-19 vaccinations began in Australia on 22 February 2021. The first people to receive the COVID-19 vaccines were priority groups at a higher risk of COVID-19 infection, including quarantine and border workers, frontline healthcare workers, and aged and disability care residents and staff. People receiving vaccines are considered fully vaccinated two weeks after they complete the recommended course for that vaccine. All the vaccines being administered in Australia, and most from overseas, recommend a two-dose course.

The tables below show the number of COVID-19 cases by their COVID-19 vaccination status. Definitions of status are as follows:

- 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.
- Cases reported as **partially vaccinated** (one effective dose):
 - received their first dose of a two-dose vaccination course at least 21 days prior to known exposure to COVID-19 or arrival in Australia, or
 - received their second dose of a two-dose vaccination course less than 14 days prior to known exposure to COVID-19 or arrival in Australia, or
 - received a single-dose vaccination course (currently only Johnson & Johnson vaccine) less than 14 days prior to known exposure to COVID-19 or arrival in Australia.
- Cases reported as **no effective dose**:
 - received their first dose of a two-dose vaccination course less than 21 days prior to known exposure to COVID-19 or arrival in Australia, or
 - have not received any vaccine dose.

Using the phrase “no effective dose” indicates that an insufficient period of time has elapsed to allow for maximal immune response provided by the vaccine. It does not indicate that vaccines are ineffective.

Table 8. Locally acquired COVID-19 cases by vaccination status and week reported, NSW, 16 June to 2 October 2021

Vaccination Status	Week ending				16 Jun to 4 Sep 2021	Total from 16 Jun 2021
	2 Oct 21	25 Sep 21	18 Sep 21	11 Sep 21		
Fully Vaccinated	632 (10.8%)	604 (8.5%)	626 (7.3%)	575 (6.0%)	845 (3.0%)	3,282 (5.6%)
Partially Vaccinated	916 (15.6%)	1,006 (14.2%)	959 (11.2%)	759 (8.0%)	1,169 (4.2%)	4,809 (8.2%)
No effective dose	3,288 (56.0%)	3,241 (45.7%)	3,942 (46.1%)	5,346 (56.1%)	21,948 (78.8%)	37,765 (64.1%)
Under investigation*	1,035 (17.6%)	2,237 (31.6%)	3,031 (35.4%)	2,856 (29.9%)	3,880 (13.9%)	13,039 (22.1%)
Total	5,871	7,088	8,558	9,536	27,842	58,895

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

Interpretation: In the past week 10.8% of locally acquired cases were fully vaccinated. This compares with around 52.6% of the NSW population aged 16 and over who had been fully vaccinated (that is, had completed their recommended vaccine schedule by 18 September). The proportion of cases who are fully or partially vaccinated will continue to increase as the rates of vaccination continue to increase in the community.

Clinical severity and COVID-19 vaccination

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.

Of the 8,851 people hospitalised with COVID-19 in the current outbreak, 1,082 (12.2%) people were in ICU. Of these, 708 (65.4%) had not received an effective dose, and 63 (5.8%) were partially vaccinated. There were 31 (2.9%) fully vaccinated cases in ICU. For the remaining 280 (25.9%) people in ICU, 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.

Table 9. Hospitalisations, ICU admissions and deaths among locally acquired cases diagnosed with COVID-19, by vaccination status, NSW, from 16 June to 2 October 2021

Vaccination status	Hospitalised (%)	Hospitalised and in ICU (%)	Death (%)
Fully Vaccinated	456 (5.2%)	31 (2.9%)	40 (10.8%)
Partially vaccinated	580 (6.6%)	63 (5.8%)	40 (10.8%)
No effective dose	5,855 (66.2%)	708 (65.4%)	281 (75.5%)
Under investigation	1,960 (22.1%)	280 (25.9%)	11 (3.0%)
Total	8,851 (100.0%)	1,082 (100.0%)	372 (100.0%)

Interpretation: Of the 8,851 people hospitalised, 456 (5.2%) had received two effective doses, 580 (6.6%) had received one effective dose, and 7,815 (88.3%) had either received no effective doses or vaccination status has not yet been determined. The 40 deaths among people fully vaccinated were 3 people in their 50s, 11 people in their 70s, 14 people in their 80s and 12 people in their 90s.

Section 6: COVID-19 hospitalisations and deaths

How many people were 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 2 October 2021

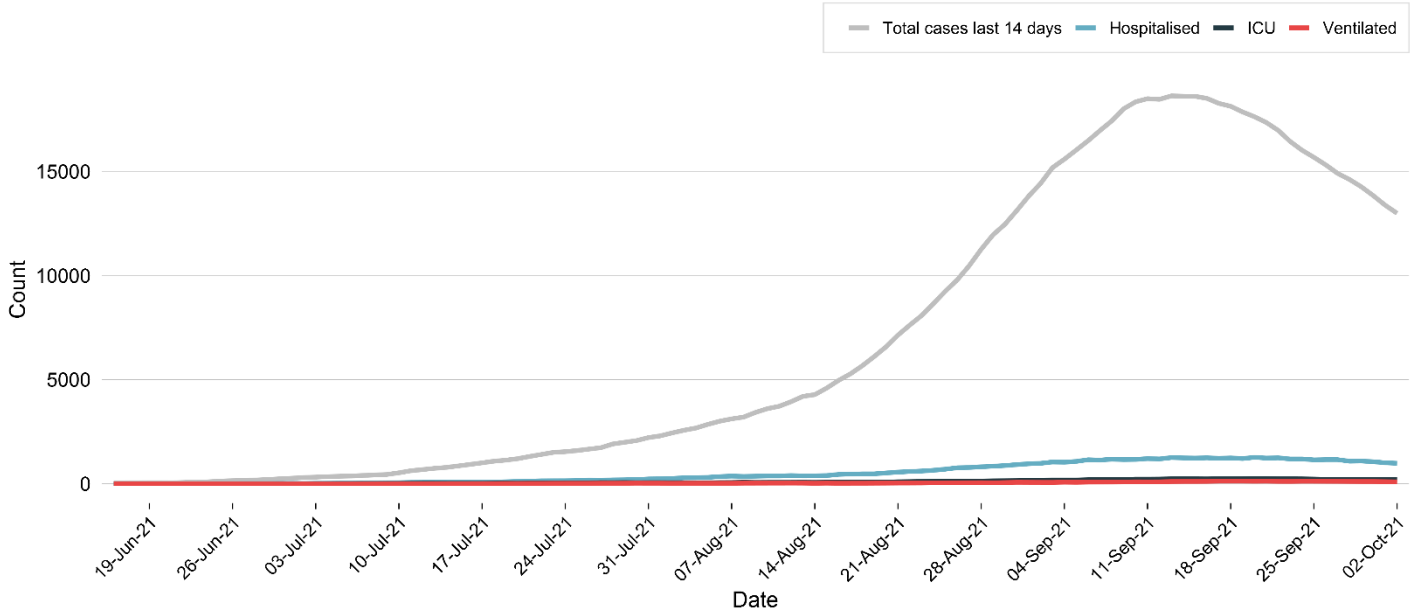
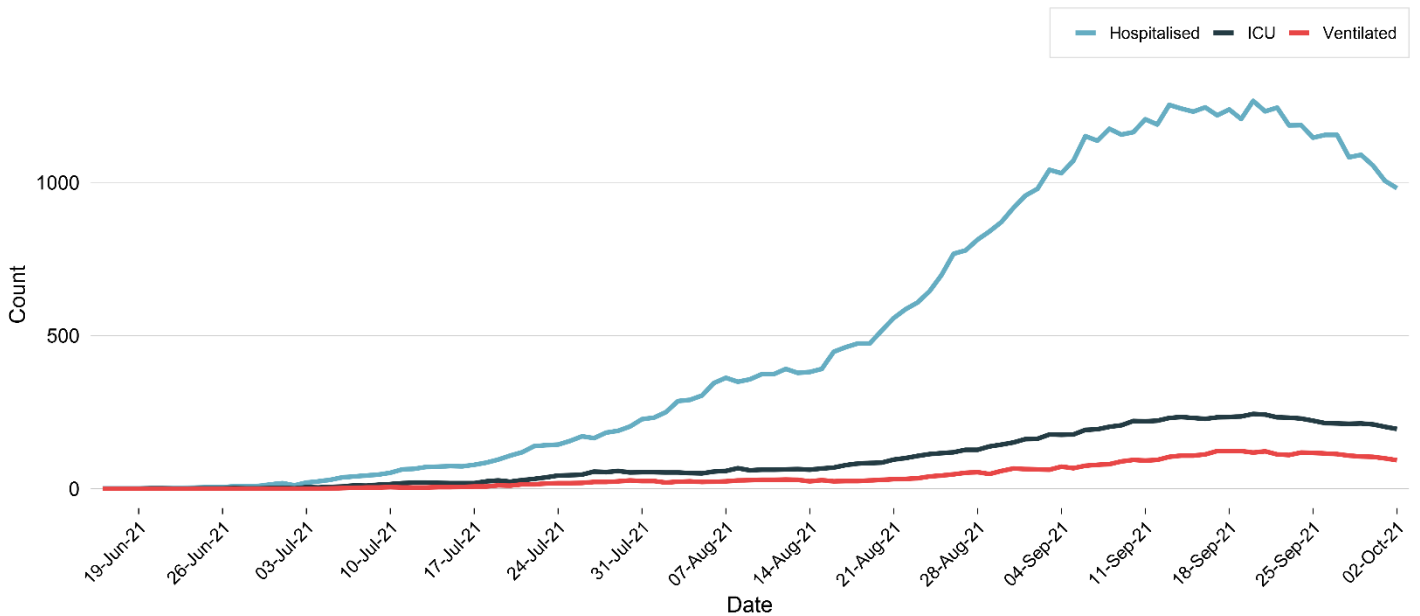


Figure 5b. Number of cases in hospital, in ICU and ventilated by date, NSW, from 16 June to 2 October 2021



Interpretation: Cases are considered active for 14 days from symptom onset; during this time a person may become increasingly ill and require hospitalisation. Figure 7a shows the total number of COVID-19 cases in the last 14 days, the number currently hospitalised, the number in ICU and the number ventilated. Figure 7b shows the number of COVID-19 cases in hospital each day, the number of cases in ICU each day and the number requiring ventilation each day. There can be a delay between a person becoming ill with COVID-19 and subsequently requiring a hospitalisation and people may be hospitalised before becoming cases. Additionally, people may require hospitalisation for long periods of time therefore reporting the number of cases hospitalised on any given date does not reflect the true proportion that will require hospitalisation. Currently there is a median delay of 5 days between a person becoming ill with COVID-19 and being admitted to hospital, and 11 days between becoming ill and dying.

How many people with a COVID-19 diagnosis were admitted to hospital wards?

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).

In the week ending 2 October 2021, of the 5,871 locally acquired cases, there were 540 people who had a diagnosis of COVID-19 who were also admitted to a hospital ward, and 40 of those were admitted to ICU. In total, there have been 8,851 people with COVID-19 who were also hospitalised since the beginning of the current NSW outbreak.

Table 10. Hospitalisations among people diagnosed with COVID-19, by age group, NSW

Age-group (years)	Current outbreak since 16 June (Locally acquired only)			Total since January 2020	
	Hospitalised	Percentage of cases hospitalised ¹	Hospitalised per 100,000 population	Hospitalised	Percentage of cases hospitalised ¹
0-9	417	5%	41.3	423	5%
10-19	515	5%	53.4	526	5%
20-29	1,382	11%	117.9	1,410	11%
30-39	1,532	15%	130.8	1,578	14%
40-49	1,414	19%	136.9	1,464	18%
50-59	1,333	24%	137.1	1,413	23%
60-69	994	32%	118.3	1,115	30%
70-79	686	46%	117.7	778	41%
80-89	460	61%	167.7	513	59%
90+	118	64%	170.1	134	59%
Total	8,851	15%	109.4	9,354	14%

Interpretation: The highest number of cases hospitalised are aged 30-39 years (1,532, 15%), followed by those aged 40-49 years (1,414, 19%). In NSW, cases aged 90 years and over have the highest rate of hospitalisation (170.1 per 100,000 people), closely followed by those aged 80-89 years (167.7 per 100,000 people).

How many people with a COVID-19 diagnosis admitted to ICU wards?

Table 11. ICU hospitalisations among people diagnosed with COVID-19, by age group, NSW

Age-group (years)	Current outbreak since 16 June (Locally acquired only)			Total since January 2020	
	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	6	<1%	0.6	6	<1%
10-19	26	<1%	2.7	27	<1%
20-29	74	1%	6.3	78	1%
30-39	115	1%	9.8	130	1%
40-49	154	2%	14.9	166	2%
50-59	239	4%	24.6	267	4%
60-69	198	6%	23.6	241	6%
70-79	129	9%	22.1	163	9%
80-89	33	4%	12.0	46	5%
90+	0	0%	0.0	0	0%
Total	974	2%	12.0	1124	2%

Interpretation: The highest number of cases in ICU are aged 50-59 years (239, 4%). The highest rate of admission to ICU is for those aged 50-59 years (239 cases, 24.6 per 100,000 people).

¹ 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 5 days and between onset and death is 11 days. Therefore hospitalisations and deaths are under-reported for the most recently notified cases.

How many people have died following recent infection with COVID-19?

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.

Since the start of the pandemic, less than 1% of cases (430 people) have died following a recent infection with COVID-19, most of whom were 80 years of age or older, including 65 residents of aged care facilities with known COVID-19 outbreaks. Approximately 3% (14/430) of the deaths were in overseas acquired cases.

There were 71 deaths in people diagnosed with COVID-19 reported this week including 8 people who were fully vaccinated, 11 people who were partially vaccinated, 51 who were unvaccinated, and 1 whose vaccination status was unknown (see Section 5 for the definitions of vaccination status).

Table 12. Deaths following recent infection with COVID-19, by age group

Age-group (years)	Current outbreak since 16 June (Locally acquired only)			Total since January 2020	
	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	1	<1%
20-29	5	<1%	0.4	5	<1%
30-39	8	<1%	0.7	8	<1%
40-49	17	<1%	1.6	17	<1%
50-59	39	1%	4.0	40	1%
60-69	62	2%	7.4	67	2%
70-79	84	6%	14.4	99	5%
80-89	116	15%	42.3	137	16%
90+	40	22%	57.7	56	25%
Total	372	1%	4.6	430	1%

Interpretation: Cases aged 80-89 years of age had the highest number of deaths, while those aged over 90 had the highest case fatality rate.

Table 13. Deaths following recent locally acquired infection with COVID-19, by age group and location, from 16 June to 2 October 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	1
30-39	4	0	4
40-49	11	0	6
50-59	33	0	6
60-69	51	0	11
70-79	81	1	2
80-89	108	2	6
90+	34	6	0
Total	327	9	36

Interpretation: The majority of deaths following recent locally acquired COVID-19 infection have occurred in hospital (327/372, 88%). Nine deaths in aged care facilities have been among people aged 70+, while 36 deaths occurring at home have been in a younger cohort aged 20-89, and 21 (58%) of the deaths at home were tested forensically for infection (following death).

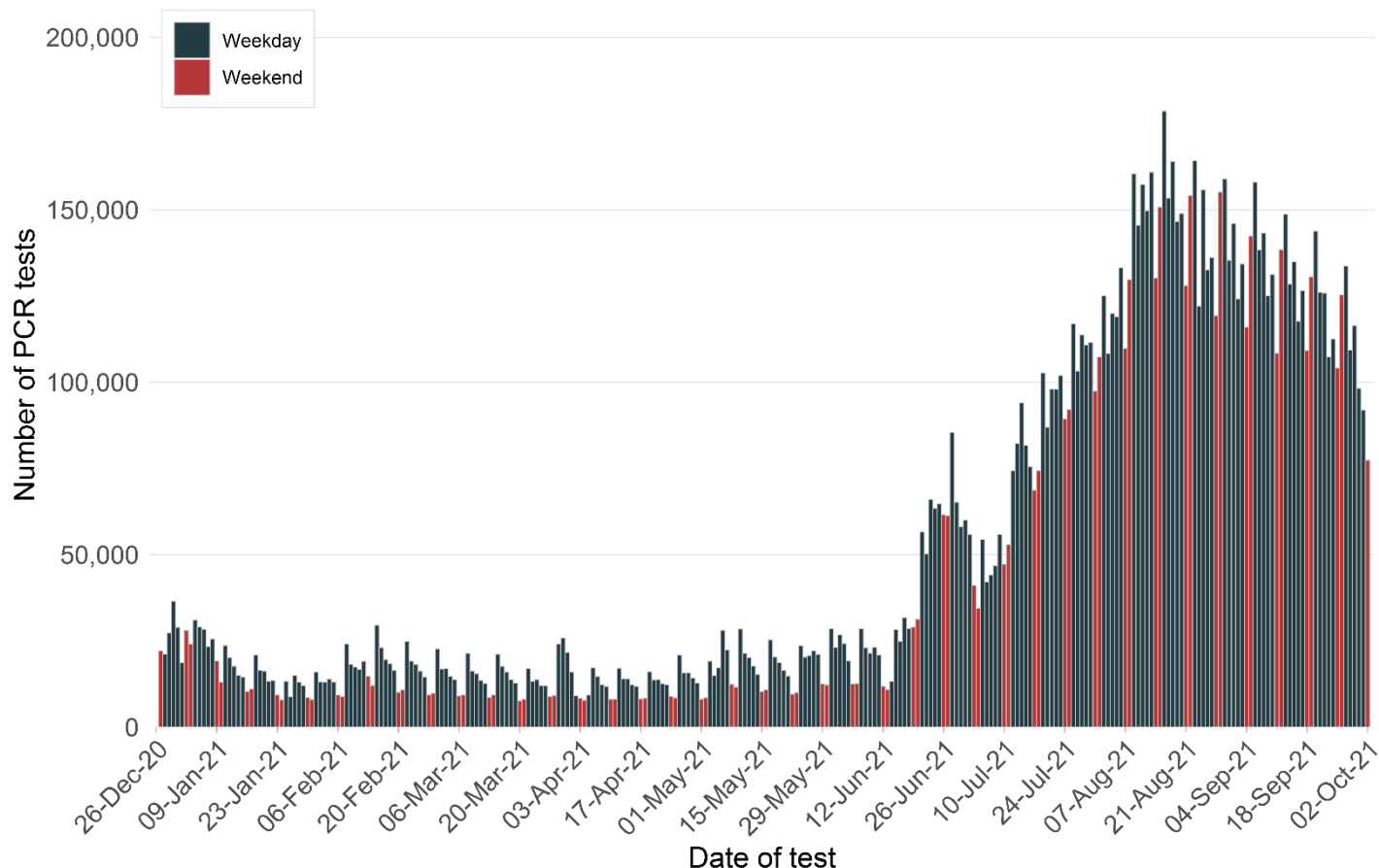
² There is often a delay between a person becoming ill with COVID-19 and subsequently requiring a hospitalisation or dying. In the current outbreak the median time between onset and hospitalisation is 5 days and between onset and death is 11 days. Therefore hospitalisations and deaths are under-reported for the most recently notified cases.

Section 7: COVID-19 testing in NSW

How much testing is happening?

The bars on the graph below show the number of negative tests by the date a person presented for the test.³ While public health facilities are generally open seven days a week, there may be less demand and availability for testing through GPs and private collection centres on weekends and public holidays. This likely explains lower testing numbers on weekends.

Figure 6. Number of negative PCR tests per day, NSW, 12 December 2020 to 2 October 2021



Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.

Interpretation: Testing numbers decreased in the week ending 2 October 2021 (down 12%) compared to the previous week. The average daily testing rate of 12.5 per 1,000 people in NSW each day decreased compared to the previous week of 14.2 per 1,000 people.

³ The number of tests per day displayed is different to the 24 hour increase in tests reported each day as there are delays in some laboratories providing negative results to NSW Health.

Testing and positivity rates by Local Health District

Figure 7a. 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 2 October 2021

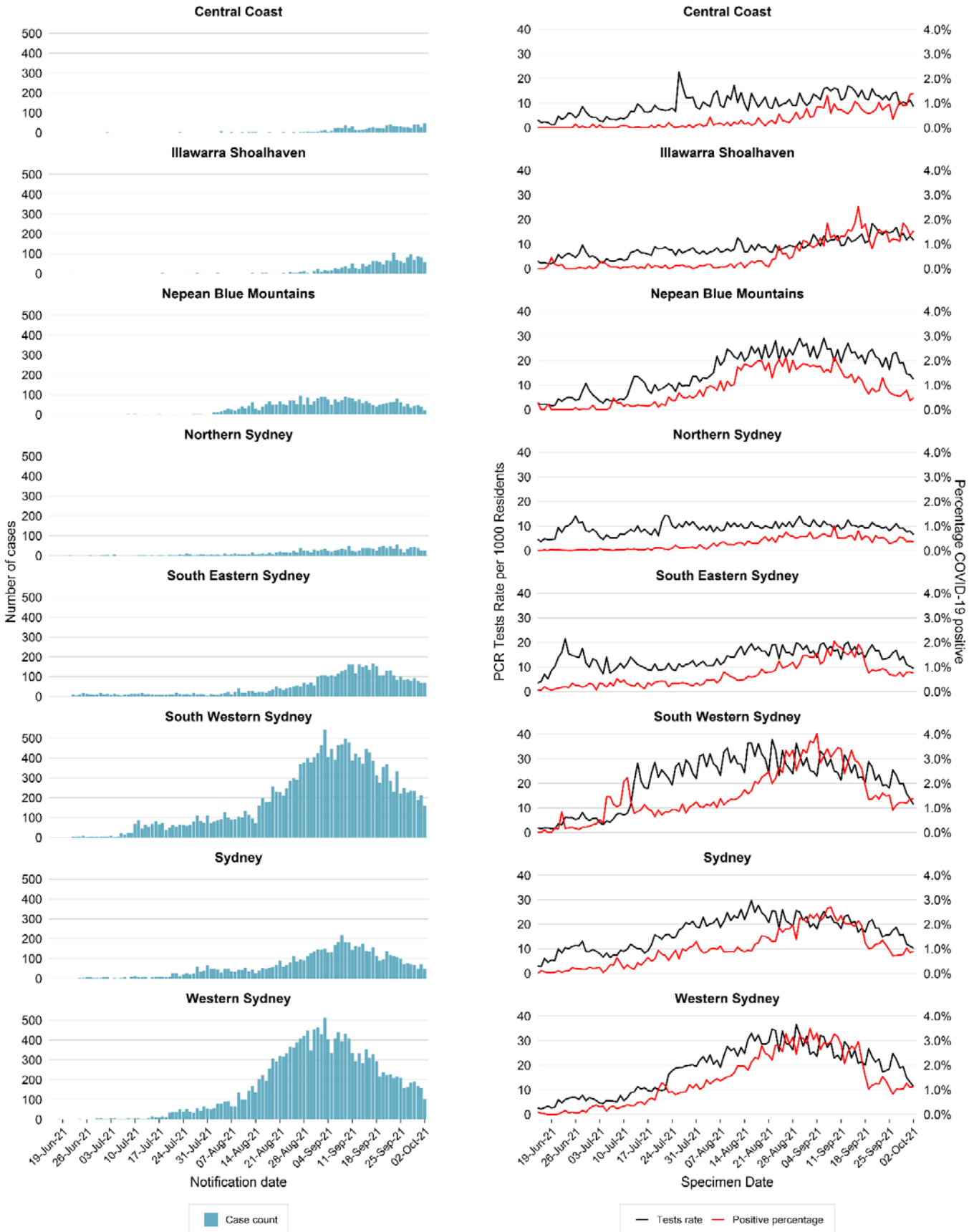
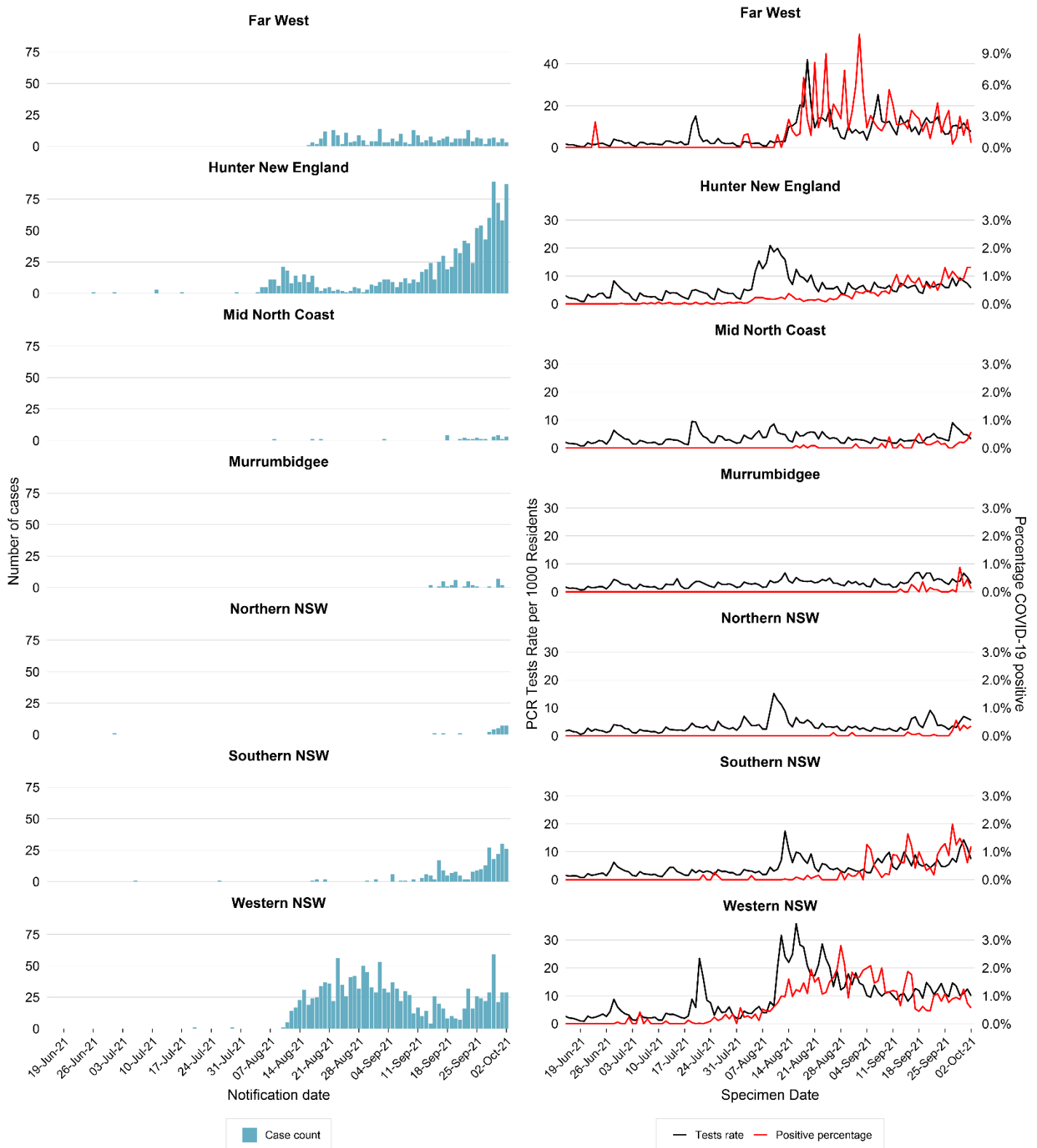


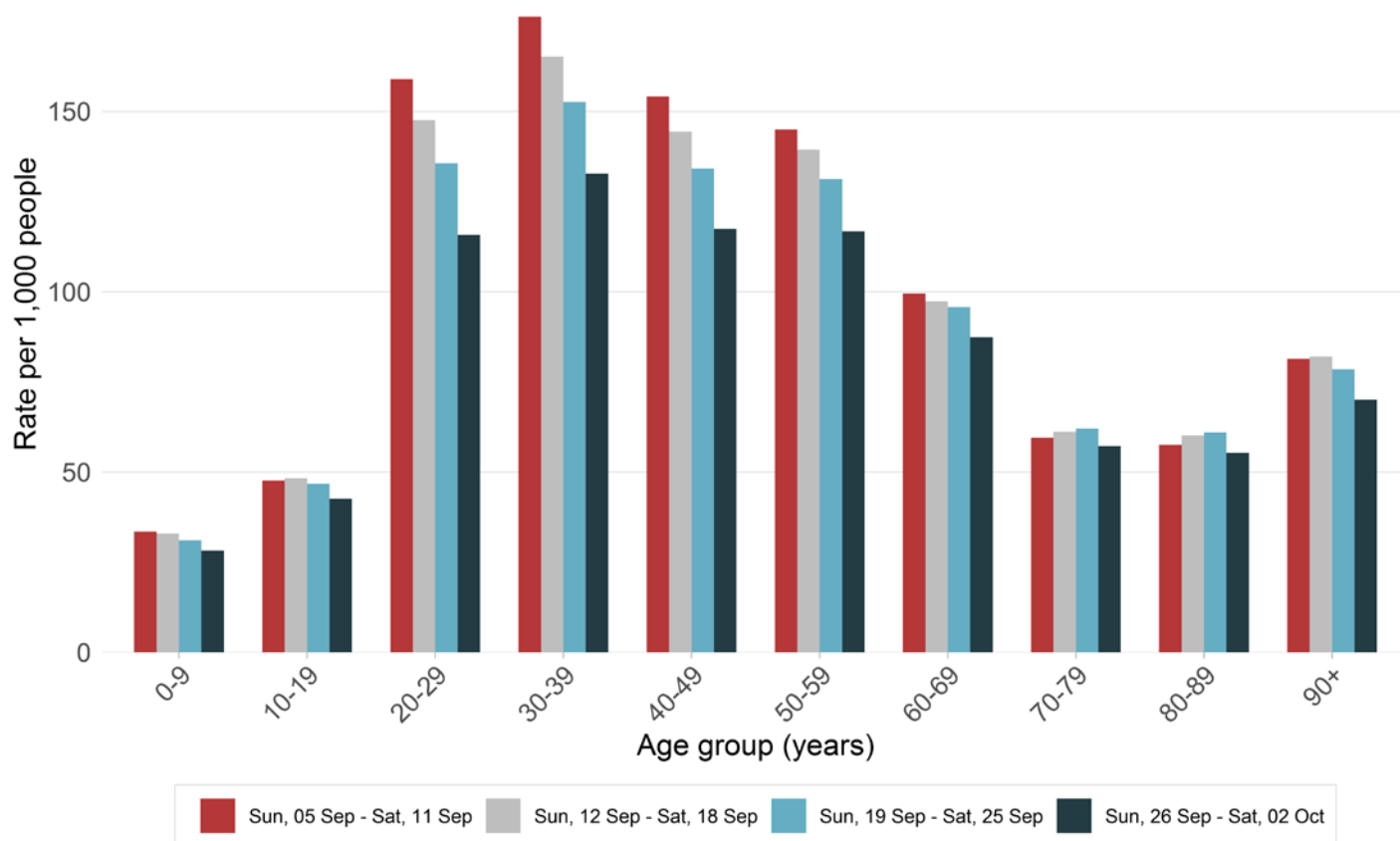
Figure 7b. Cases, testing rates per 1000 population, and percentage of tests which were positive for COVID-19, by LHD of residence, rural and regional LHDs, NSW, 16 June to 2 October 2021



Interpretation: The left panel shows the number of cases by notification date for each LHD, while the right panel shows the testing rate per 1,000 population (black line and left axis) and the percentage of tests which were positive (red line and right axis) for each LHD, from 16 June to 2 October 2021. Note that the axes differ within and between Figure 10a (metropolitan LHDs) and 10b (rural and regional LHDs). Percent positivity has generally been well below 3%, reflecting a high surveillance capacity and rapid case identification. Positivity generally follows the same trend as testing rates however where testing rates decrease and positivity remains stable or increases it may indicate higher number of cases in the community or be a result of more specific and targeted testing programs. Although case numbers in most regional LHDs are relatively small, because the population is also small, testing rates and positivity rates appear to show larger deviations than observed in some metropolitan LHDs.

Testing by age group

Figure 8. Rates of COVID-19 testing by age group and week, NSW, 29 August to 2 October 2021



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

Interpretation: In the week ending 2 October 2021, testing rates remained highest overall among those aged 20-59. All age groups 0-69 years of age and 90+ showed a steady decrease in testing rates over the past month, while those aged 70-89 have remained stable over that time.

Section 8: Variants of Concern (VoC)

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 locally acquired cases in the NSW outbreak from 16 June 2021.

Table 14. Variants identified among locally acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 2 October 2021

Variant	Week ending				29 Nov 2020 to 4 Sep 2021	Total since 29 Nov 2020
	2 Oct*	25 Sep*	18 Sep	11 Sep		
Total variants identified	2	110	674	796	7,647	9,229
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)	2	110	674	796	7,640	9,222

***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. All locally acquired cases sequenced in the week ending 2 October have been the Delta variant of concern.

Interpretation: Only the delta variant has been detected in recent weeks among locally acquired cases, and this is associated with the cluster that emerged in Sydney from 16 June 2021.

Table 15. Variants identified among overseas acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 2 October 2021

Variant	Week ending				29 Nov 2020 to 4 Sep 2021	Total since 29 Nov 2020
	2 Oct*	25 Sep*	18 Sep	11 Sep		
Total variants identified	0	0	4	2	389	395
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)	0	0	4	2	147	153

***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.

Interpretation: Only the delta variant has been detected in recent weeks among overseas acquired cases.

Section 9: NSW Sewage Surveillance Program

The NSW Sewage Surveillance Program tests untreated sewage for fragments of the COVID-19 (SARS-CoV-2) virus at sewage treatment plant locations across NSW. In Sydney, testing is undertaken from both the sewage treatment plant (inlet sites) and sites within the network (network sites). Testing sewage can help track infections in the community and provide early warning of an increase in infections. These tests provide data to support NSW Health's response to COVID-19.

An infected person can shed virus in their faeces even if they do not have symptoms, and shedding can continue for several weeks after they are no longer infectious. The NSW sewage surveillance for SARS-CoV-2 is in the preliminary stages of analysis and work is progressing to assess the significance of the results. For example, it is not currently known the minimum number of cases that can be detected in a catchment. A small number of cases in a large sewage catchment may not be detected by sewage surveillance due to factors such as dilution, inhibition, reduction in shedding over the infection period or movement of cases.

In the week ending 2 October, 275 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 110 detections:

- Detections outside Sydney

There were 100 detections outside Sydney taken from the sewage treatment plants at Albury composite (2), Armidale, Ballina, Bateau Bay, Batemans Bay, Bathurst, Bermagui, Bomaderry, Bombo, Bourke, Broken Hill (2), Broken Hill South (2), Byron Bay, Casino (3), Charmhaven, Coffs Harbour, Cooma, Culburra Beach, Dareton (3), Dubbo, East Lismore, Gerroa, Gilgandra, Googong, Gosford – Kincumber, Goulburn, Gulgong, Gunnedah, Gwandalan, Hunter - Boulder Bay, Burwood Beach, Dora Creek, Edgeworth, Karuah, Morpeth, Raymond Terrace, Shortland, Toronto, Belmont, Cessnock, Dungog, Farley, Kurri Kurri and Tanilba Bay, Jindabyne (3), Kyogle, Mannering Park, Mittagong, Moruya (2), Moss Vale, Mudgee, Muswellbrook, Narooma (2), Narromine, Nowra, Nyngan (2), Oberon, Orange, Port Macquarie (2), Queanbeyan, Quirindi, Singleton, South Grafton (2), South Kempsey, South Lismore, St Georges Basin, Tamworth (2), Thredbo (2), Tweed - Banora Point (2), Hastings Point and Kingscliff, Ulladulla, Vincentia, Wagga Wagga composite, Walgett, Wellington, West Kempsey, Wilcannia, Woy Woy, Wyong – Toukley, Wyong South, Yass, 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. There were also detections from the sewage networks and pumping stations at Caringbah, eastern Creek, Fairfield 1, Miranda, Padstow 1 and Rozelle.

- Detections with no known cases

Detections from Armidale, Ballina, Bermagui, Dareton, Dungog, Gulgong, Jindabyne, Karuah, Kyogle, Moruya, Nyngan, Quirindi, South Grafton, Tamworth, Thredbo and Tweed - Banora Point, Hastings Point and Kingscliff occurred with no known or recent cases in the catchment. Subsequently cases were identified in Gulgong, Oberon, Kyogle, Jindabyne, Moruya, Tamworth, Thredbo, Tweed-Hastings Point and Crookwell following 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, Bega, Bellingen, Blayney, Bodalla, Bombala, Bonny Hills, Boorowa, Bowral, Bowraville, Brewarrina, Buronga, Ocean Shores, Canowindra, Cobar, Condobolin, Coolah, Coolamon, Coonabarabran, Coonamble, Cootamundra, Coraki, Corowa, Crescent Head, Crookwell, Denman, Dunbogan, Dunedoo, Eden, Evans Head, Forbes, Forster, Frederickton, Glen Innes, Grenfell, Gulargambone, Gulgong, Gundagai, Guyra, Hallidays Point, Harden, Hawkes Nest, Hay, Holbrook, Inverell, Junee, Lake Cargelligo, Leeton, Lennox Head, Lockhart, Merimbula, Molong, Moree, Mullumbimby, Mulwala, Mungindi, Nambucca Heads, Narrabri, Narrandera, North Grafton, Parkes, Perisher, Scone, South West Rocks, Taree, Temora, Tenterfield, Trangie, Tumut, Tuross, Tweed - Murwillumbah, Uralla, Wagga - Koorinal, Narrung Orbal and Narrung SBR, Walcha, Wardell, Wauchope, Wee Waa, Wentworth, West Wyalong, Woodenbong, Woolgoolga and Yamba.

- New collection sites

The sewage treatment plants at Denman and Boorowa were added as new sites.

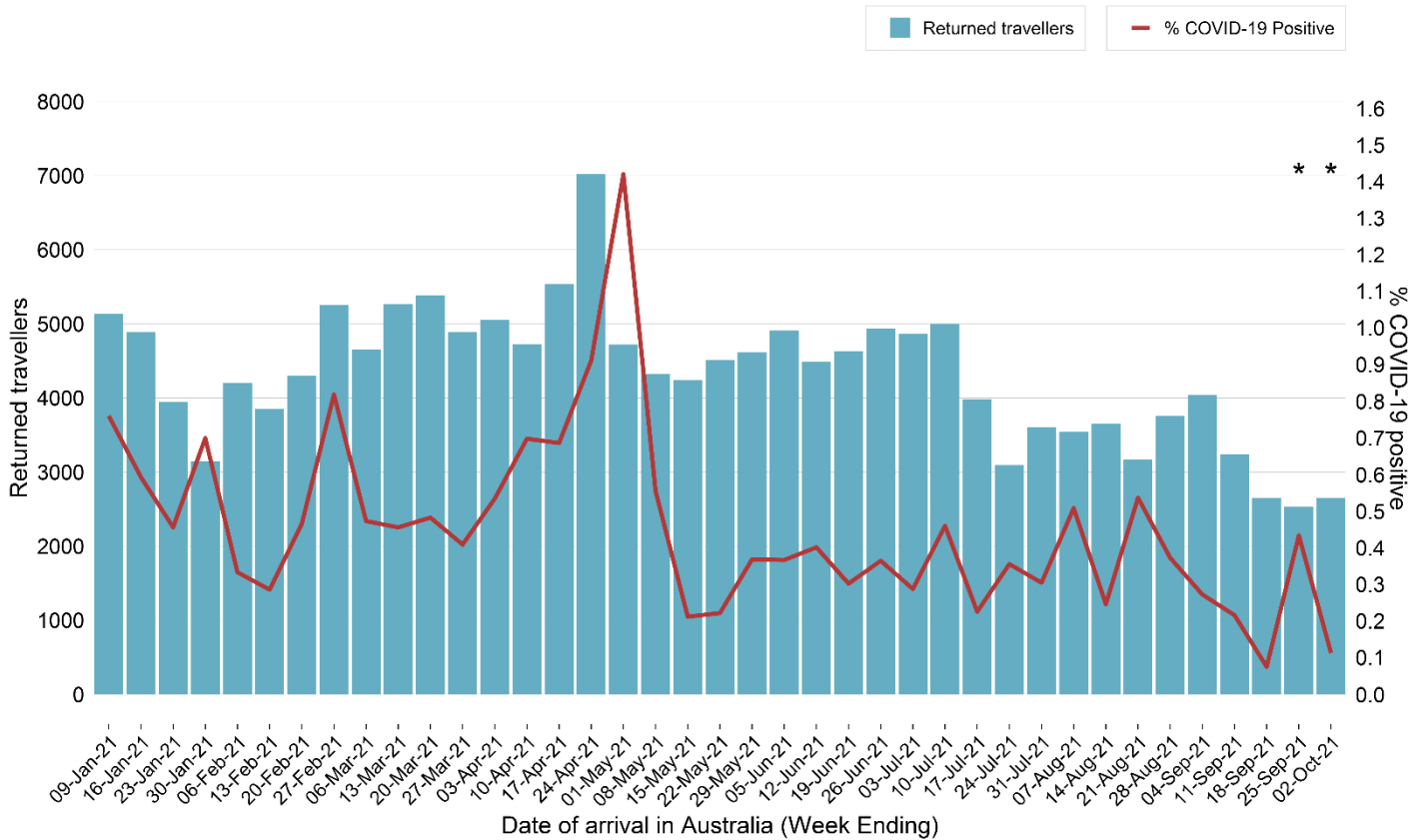
Section 10: COVID-19 in returned travellers

To limit the spread of COVID-19 into NSW, travel restrictions were introduced for all non-Australian citizens and permanent residents in mid-March 2020. In addition:

- From 29 March 2020 returned travellers have been quarantined in hotels for a 14-day period and travellers who develop symptoms are isolated until no longer infectious. Returned travellers are screened on entry and exit from quarantine and following release from quarantine.
- From 22 January 2021 (local time at departure point) all people travelling to Australia on flights must provide proof of a negative COVID-19 PCR test result at the time of check-in.

The figure below shows the number of returned travellers screened at Sydney International Airport since 2021. Returned travellers include international flight crew who are required to be tested before leaving the airport.

Figure 9. Returned travellers screened at Sydney International Airport by week of arrival and percent COVID-19 positive, NSW, 3 January 2021 to 2 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.

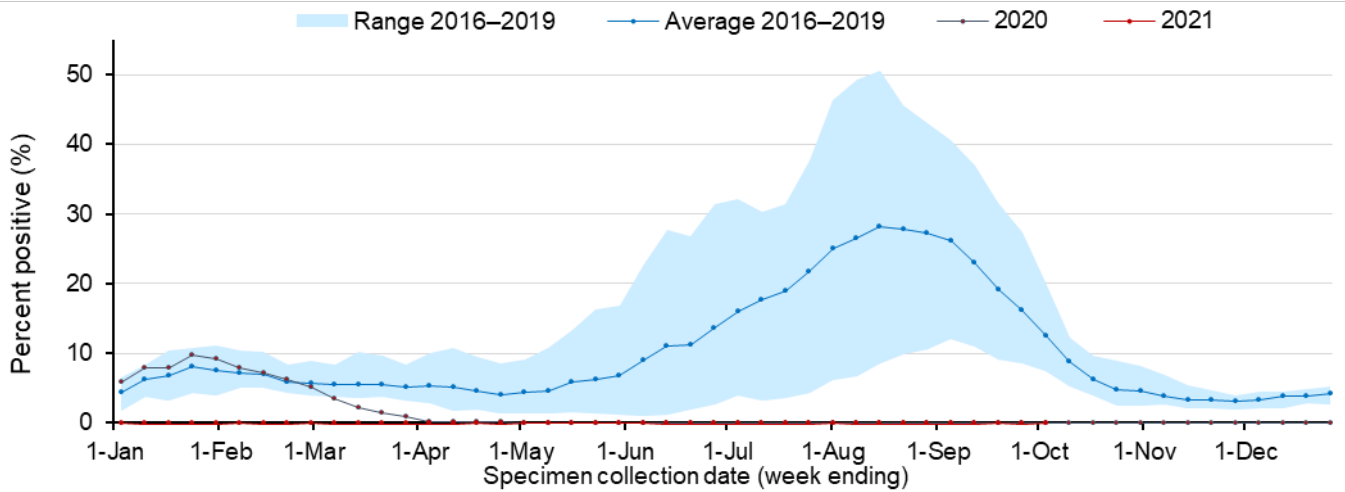
Interpretation: Since 3 January 2021, there has been on average 620 people screened on arrival through Sydney International Airport daily. In the last four weeks, 23 returned travellers have subsequently tested positive for COVID-19 while completing quarantine. The proportion of returned travellers who test positive for COVID-19 has been low. In the week ending 1 May 2021 the proportion increased to over 1% (1.4%) of returned travellers testing positive, but this has subsequently fallen back to lower levels.

Section 11: Other respiratory infections in NSW

How much influenza is circulating?

The graph below shows the proportion of tests found to be positive for influenza with the red line showing weekly counts for 2021, the dark blue line showing counts for 2020, the light blue line showing the average for 2016 to 2019 and the shaded area showing the range recorded for 2016 to 2019.

Figure 10. Proportion of tests positive for influenza, NSW, 1 January 2016 to 3 October 2021

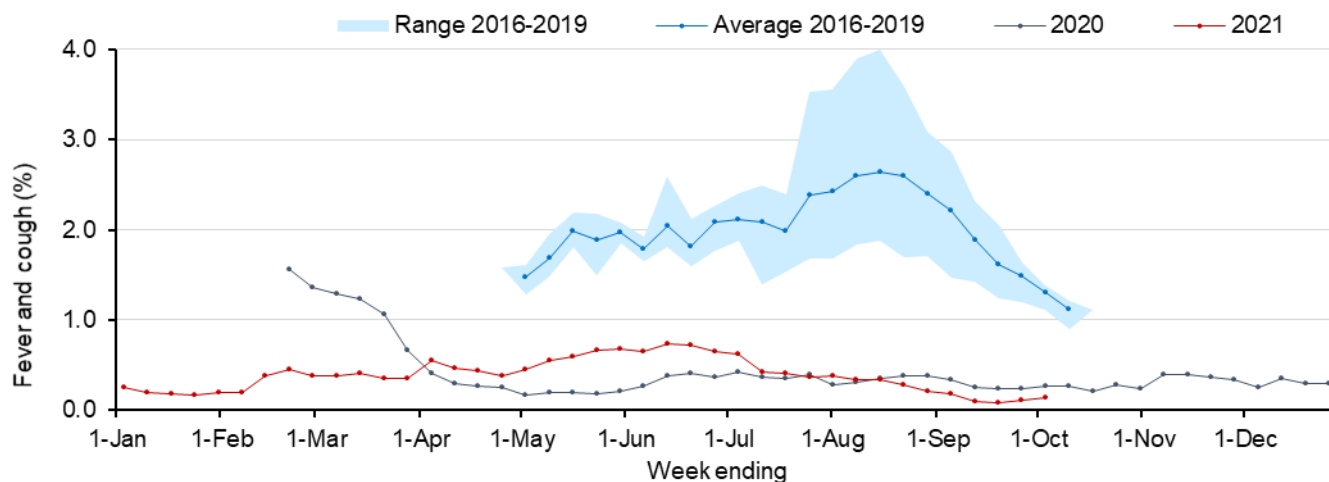


Interpretation: In the week ending 3 October, the percent of influenza tests that were positive continued to be very low (<0.01%), indicating limited influenza transmission in the community. Since early March 2020, this percentage has remained far lower than the usual range for the time of year. There have been 16 influenza cases reported in 2021.

How many people have flu-like symptoms in the community?

FluTracking is an online survey that asks participants to report flu-like symptoms, such as fever or cough, in the last week. Across NSW approximately 25,000–30,000 people participate each week. The survey usually commences at the beginning of May in line with the flu season but has continued throughout the year due to the COVID-19 outbreak.

Figure 11. Proportion of FluTracker participants reporting influenza-like illness, NSW, 1 January 2016 to 3 October 2021



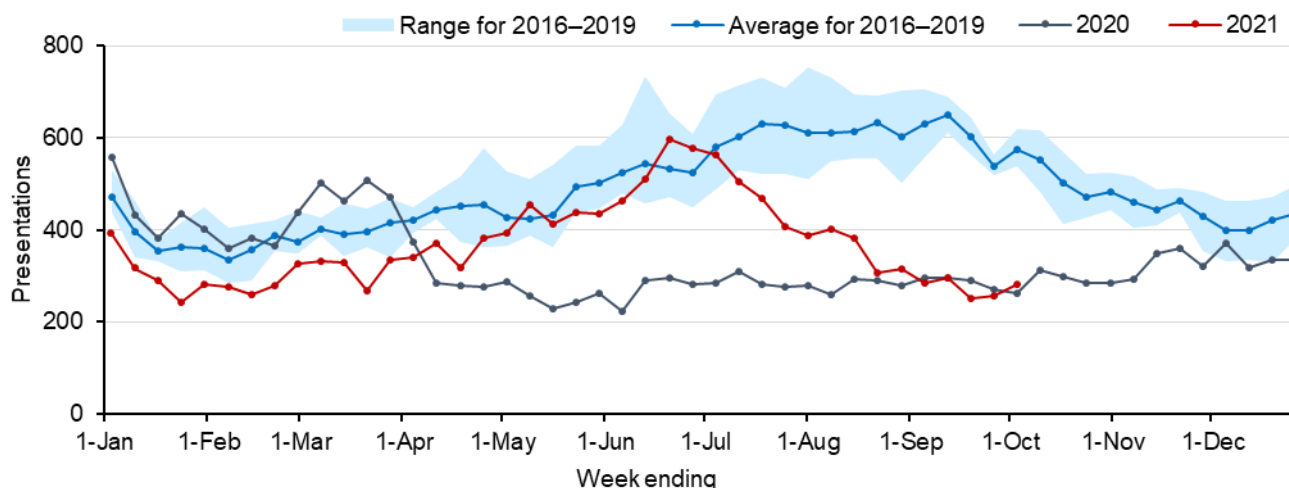
Interpretation: In NSW in the week ending 3 October 2021, of the 22,764 people surveyed, 33 people (0.14%) reported flu-like symptoms. In the last four weeks, 62% (62/100) of new cases of flu-like illness reported having a COVID-19 test. The proportion of people with flu-like symptoms being tested for COVID-19 decreased from January 2021, when 80% reported being tested, to around 50% between April and June 2021, and then increased to around 60% from June 2021 onwards.

How are emergency department presentations tracking?

Improved hygiene and social distancing measures implemented during the COVID-19 pandemic have impacts on a broad range of other viral and bacterial infections.

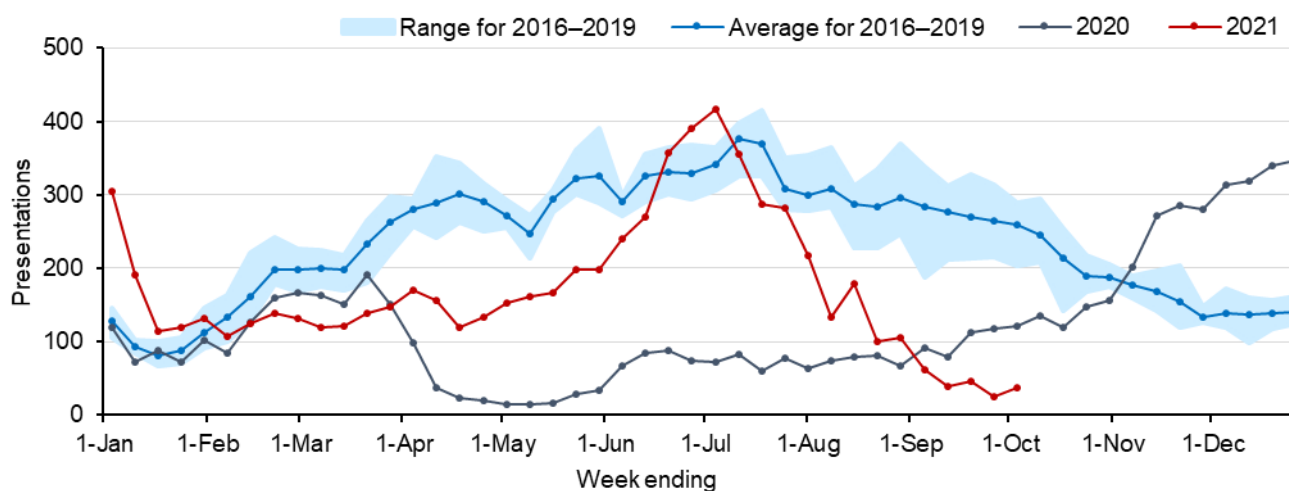
The figures below show weekly pneumonia and bronchiolitis presentations to Emergency Departments in NSW, using PHREDSS⁴. The red line shows the weekly counts for 2021, the dark blue line showing counts for 2020, the light blue line showing the average for 2016 to 2019 and the shaded area showing the range recorded for 2016 to 2019.

Figure 12. Emergency Department pneumonia presentations, NSW, 1 January 2016 to 3 October 2021



Interpretation: Pneumonia presentations 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. Since the beginning of the current outbreak from 16 June 2021, there has been a steady decline in pneumonia presentations, with the number of presentations in the week ending 3 October remaining significantly below the seasonal range for this time of year.

Figure 13. Emergency Department bronchiolitis presentations, NSW, 1 January 2016 to 3 October 2021



Interpretation: 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. Since the beginning of the current outbreak from 16 June 2021, there has again been a steady decrease in bronchiolitis presentations, with the number of presentations in the week ending 3 October remaining well below the seasonal range for this time of year.

⁴ NSW Health Public Health Rapid, Emergency Disease and Syndromic Surveillance (PHREDSS) system, CEE, NSW Ministry of Health. Comparisons are made with data for the preceding 4 years. Includes unplanned presentations to 67 NSW emergency departments (accounts for 87% of total public ED activity).

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

		Week ending				Total since January 2021	
		2 Oct		25 Sep			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Central Coast	<i>LHD Total²</i>	27296	77.4	31162	88.3	444169	1258.8
	Kiama	1438	61.5	1552	66.4	24271	1037.8
Illawarra Shoalhaven	Shellharbour	8150	111.3	9062	123.7	100508	1372.4
	Shoalhaven	6216	58.8	5732	54.3	78149	739.7
	Wollongong	23837	109.3	27122	124.4	281096	1288.8
	<i>LHD Total²</i>	39641	94.5	43468	103.6	484024	1153.5
Nepean Blue Mountains	Blue Mountains	6791	85.8	7619	96.3	110244	1393.4
	Hawkesbury	9977	148.3	11983	178.1	139934	2079.4
	Lithgow	1257	58.2	833	38.6	13679	633.1
	Penrith	31008	145.6	36334	170.6	477002	2239.7
	<i>LHD Total²</i>	48508	124.1	56167	143.7	731465	1870.8
Northern Sydney	Hornsby	7442	48.9	8191	53.9	156778	1031.0
	Hunters Hill	1659	110.8	1929	128.8	38697	2583.2
	Ku-ring-gai	6752	53.1	7166	56.4	172863	1359.5
	Lane Cove	3787	94.3	4610	114.8	88901	2214.0
	Mosman	1417	45.7	1524	49.2	34516	1114.1
	North Sydney	2873	38.3	3456	46.1	72257	963.2
	Northern Beaches	17990	65.8	19538	71.4	418605	1530.6
	Parramatta ¹	22018	85.6	25919	100.8	423949	1648.3
	Ryde	9259	70.5	11037	84.1	219343	1670.9
	Willoughby	3265	40.2	3615	44.5	73218	901.8
<i>LHD Total²</i>	57740	60.4	64716	67.7	1337572	1399.3	
South Eastern Sydney	Bayside	19998	112.1	24523	137.5	347816	1949.7
	Georges River	14760	92.6	18460	115.8	297700	1866.8
	Randwick	16349	105.0	20422	131.2	310448	1994.5
	Sutherland Shire	18133	78.6	20695	89.7	339896	1473.9
	Sydney ¹	20698	84.0	25676	104.2	437321	1775.3
	Waverley	6126	82.5	7317	98.5	152437	2051.8
	Woollahra	4379	73.7	4857	81.8	114655	1930.6
	<i>LHD Total²</i>	86135	89.8	104010	108.5	1706947	1779.7
South Western Sydney	Camden	13822	136.3	17612	173.6	238772	2353.9
	Campbelltown	24592	143.9	28291	165.5	390065	2281.8
	Canterbury-Bankstown ¹	50861	134.6	62988	166.7	1103427	2919.8
	Fairfield	28745	135.8	34975	165.2	630763	2979.6
	Liverpool	31790	139.7	39123	171.9	583720	2564.8
	Wingecarribee	2736	53.5	2999	58.7	52269	1022.2
	Wollondilly	4225	79.5	4818	90.7	66726	1255.5
<i>LHD Total²</i>	132626	127.7	160514	154.6	2517174	2423.8	
Sydney	Burwood	3385	83.4	4259	104.9	63521	1564.1
	Canada Bay	7076	73.7	8652	90.1	149911	1560.4
	Canterbury-Bankstown ¹	50861	134.6	62988	166.7	1103427	2919.8
	Inner West	14594	72.7	17690	88.1	306649	1527.1
	Strathfield	7366	157.0	8945	190.6	137588	2932.0
	Sydney ¹	20698	84.0	25676	104.2	437321	1775.3

		Week ending				Total since January 2021	
		2 Oct		25 Sep			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	<i>LHD Total</i>	69979	100.4	86637	124.3	1478525	2122.0
Western Sydney	Blacktown	52257	139.6	60715	162.1	874862	2336.4
	Cumberland	39832	164.9	48528	200.9	759587	3145.0
	Parramatta ¹	22018	85.6	25919	100.8	423949	1648.3
	The Hills Shire	18292	102.8	20363	114.4	337374	1895.7
	<i>LHD Total</i>	130531	123.9	153626	145.8	2364134	2244.2
Far West	Balranald	65	27.8	59	25.2	1279	547.1
	Broken Hill	1407	80.5	1925	110.1	19618	1122.4
	Central Darling	220	119.6	199	108.2	2911	1582.9
	Wentworth	214	30.3	137	19.4	3749	531.6
	<i>LHD Total</i>	1906	63.2	2320	77.0	27557	914.2
Hunter New England	Armidale Regional	660	21.4	487	15.8	22808	741.0
	Cessnock	3600	60.0	3217	53.6	36426	607.3
	Dungog	331	35.1	206	21.9	5062	537.2
	Glen Innes Severn	122	13.8	284	32.0	4130	465.6
	Gunnedah	281	22.2	277	21.8	6666	525.7
	Gwydir	68	12.7	65	12.1	1744	325.8
	Inverell	292	17.3	292	17.3	8155	482.8
	Lake Macquarie	12691	61.6	13200	64.1	216677	1052.3
	Liverpool Plains	178	22.5	157	19.9	3874	490.2
	Maitland	6514	76.5	5458	64.1	103544	1215.8
	Mid-Coast	3023	32.2	1757	18.7	42595	453.9
	Moree Plains	258	19.5	212	16.0	8149	614.5
	Muswellbrook	1281	78.2	342	20.9	9213	562.6
	Narrabri	230	17.5	232	17.7	5202	396.0
	Newcastle	11668	70.5	9037	54.6	185084	1117.9
	Port Stephens	3042	41.4	3067	41.7	59264	806.5
	Singleton	1727	73.6	1139	48.6	18860	803.9
	Tamworth Regional	2093	33.5	1841	29.4	46686	746.5
	Tenterfield	124	18.8	102	15.5	2232	338.5
	Upper Hunter Shire	569	40.1	217	15.3	7400	521.9
	Uralla	102	17.0	66	11.0	2890	480.7
	Walcha	119	38.0	51	16.3	1873	597.6
	<i>LHD Total</i>	48936	51.4	41685	43.8	798081	838.0
Mid North Coast	Bellingen	267	20.5	228	17.5	6626	509.9
	Coffs Harbour	1446	18.7	1645	21.3	36548	473.0
	Kempsey	1522	51.2	1288	43.3	18786	631.6
	Nambucca	524	26.5	387	19.5	8225	415.3
	Port Macquarie-Hastings	4800	56.8	1977	23.4	48633	575.4
	<i>LHD Total</i>	8559	37.9	5525	24.5	118818	526.5
Murrumbidgee	Albury	1684	31.0	1982	36.5	33985	625.3
	Berrigan	176	20.1	166	19.0	2634	301.0
	Bland	150	25.1	144	24.1	2857	478.4
	Carrathool	29	10.4	22	7.9	783	279.7
	Coolamon	153	35.3	134	30.9	2498	575.4

		Week ending				Total since January 2021	
		2 Oct		25 Sep			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Cootamundra-Gundagai Regional	321	28.6	553	49.2	6366	566.6
	Edward River	669	73.7	224	24.7	4243	467.1
	Federation	318	25.6	364	29.3	5942	477.8
	Greater Hume Shire	299	27.8	334	31.0	6623	615.3
	Griffith	509	18.8	547	20.2	13567	501.9
	Hay	69	23.4	51	17.3	1007	341.5
	Hilltops	1627	87.0	4078	218.0	17548	938.2
	Junee	246	36.8	215	32.2	3146	470.8
	Lachlan ¹	172	28.3	110	18.1	2676	440.5
	Leeton	207	18.1	221	19.3	4520	394.9
	Lockhart	109	33.2	104	31.7	1803	548.9
	Murray River	194	16.0	85	7.0	1618	133.5
	Murrumbidgee	72	18.4	79	20.2	1445	368.9
	Narrandera	87	14.8	97	16.4	1799	305.0
	Snowy Valleys	356	24.6	316	21.8	6092	420.8
	Temora	137	21.7	133	21.1	2638	418.3
	Wagga Wagga	3033	46.5	2402	36.8	48783	747.5
	<i>LHD Total²</i>	10482	35.2	12274	41.2	170821	573.0
Northern NSW	Ballina	1210	27.1	1705	38.2	37540	841.2
	Byron	988	28.2	1083	30.9	30066	857.1
	Clarence Valley	961	18.6	866	16.8	20652	399.8
	Kyogle	1079	122.7	175	19.9	4152	472.0
	Lismore	1862	42.6	2870	65.7	31387	718.4
	Richmond Valley	1320	56.3	846	36.1	16228	691.6
	Tenterfield	124	18.8	102	15.5	2232	338.5
	Tweed	2613	26.9	3564	36.7	50689	522.6
		<i>LHD Total²</i>	10078	32.5	11140	35.9	191268
Southern NSW	Bega Valley	605	17.6	425	12.3	16190	469.6
	Eurobodalla	1969	51.2	1173	30.5	21649	562.7
	Goulburn Mulwaree	3226	103.6	1818	58.4	27580	885.9
	Queanbeyan-Palerang Regional	4811	78.7	2338	38.3	37577	615.0
	Snowy Monaro Regional	2217	106.6	427	20.5	15143	728.2
	Upper Lachlan Shire	309	38.3	299	37.1	5074	629.6
	Yass Valley	481	28.2	1438	84.2	11160	653.1
		<i>LHD Total²</i>	13625	62.8	7920	36.5	134457
Western NSW	Bathurst Regional	2605	59.7	2757	63.2	47678	1093.1
	Blayney	343	46.5	455	61.7	7656	1037.5
	Bogan	75	29.1	100	38.8	2171	841.5
	Bourke	435	168.0	293	113.1	4772	1842.5
	Brewarrina	129	80.1	71	44.1	1897	1177.5
	Cabonne	860	63.1	648	47.5	9259	679.1
	Cobar	150	32.2	172	36.9	2861	614.2
	Coonamble	125	31.6	137	34.6	2773	700.6
	Cowra	3227	253.2	4773	374.6	14236	1117.2

		Week ending				Total since January 2021	
		2 Oct		25 Sep			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Dubbo Regional	7842	146.0	8426	156.9	118922	2213.8
	Forbes	240	24.2	260	26.3	5810	586.5
	Gilgandra	208	49.1	198	46.7	3846	907.3
	Lachlan ¹	172	28.3	110	18.1	2676	440.5
	Mid-Western Regional	784	31.1	966	38.3	25469	1008.6
	Narromine	669	102.7	419	64.3	8458	1297.8
	Oberon	1647	304.4	700	129.4	5011	926.1
	Orange	2181	51.4	1953	46.0	56287	1325.9
	Parkes	393	26.5	351	23.7	10864	732.2
	Walgett	229	38.5	369	62.0	5278	886.6
	Warren	251	93.1	281	104.2	5199	1927.7
	Warrumbungle Shire	218	23.5	248	26.7	5690	613.3
	Weddin	169	46.8	318	88.0	2156	596.7
	<i>LHD Total²</i>	22917	80.4	23983	84.2	348136	1221.5
NSW Total	NSW Total³	708960	87.6	805147	99.5	12853488	1588.8

Source - Notifiable Condition Information Management System, accessed as at 8pm 04 Oct 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 3 October 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 2020–3 October 2021

Specimen collection date	PCR tests conducted	Influenza A		Influenza B		Adeno-virus	Para-influenza	RSV	Rhino-virus	HMPV	Entero-virus
		No.	%Pos.	No.	%Pos.						
Total	1,634,439	5	<0.01%	10	<0.01%	7,224	18,528	17,481	56,035	5,244	6,344
Month ending											
31 January*	168,596	1	<0.01%	0	-	416	88	3,275	3,541	23	560
28 February	125,718	2	<0.01%	0	-	419	106	2,386	8,667	22	910
28 March	95,458	0	-	0	-	507	354	1,909	8,891	18	1,187
2 May*	112,962	0	-	3	<0.01%	802	1,515	1,653	8,141	48	1,128
30 May	131,316	0	-	6	<0.01%	946	3,129	1,491	8,982	78	843
27 June	243,351	1	<0.01%	0	-	1,551	7,104	2,794	9,915	635	811
26 July	530,698	0	-	0	-	1,463	4,603	3,014	5,089	1,991	587
29 August*	157,063	0	-	1	<0.01%	869	1,497	852	2,252	2,035	259
Week ending											
5 September	23,303	0	-	0	-	87	68	54	212	192	20
12 September	23,446	0	-	0	-	82	37	28	183	115	27
19 September	22,528	1	<0.01%	0	-	82	27	25	162	87	12
26 September	25,659	0	-	0	-	70	19	17	158	60	11
3 October	24,430	1	< 0.01%	0	-	53	11	14	171	44	16

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

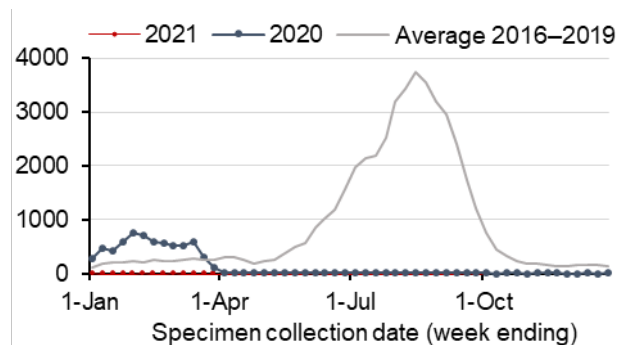
RSV - Respiratory syncytial virus

*Five-week period

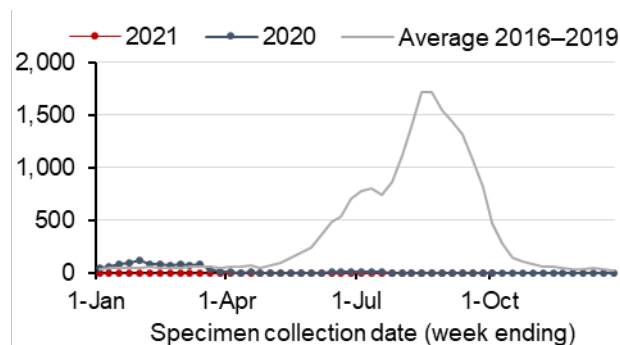
Appendix C: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 3 October 2021

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

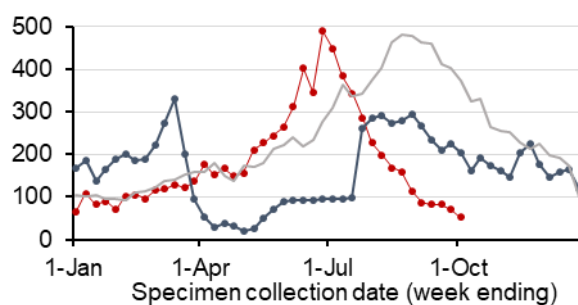
Influenza A



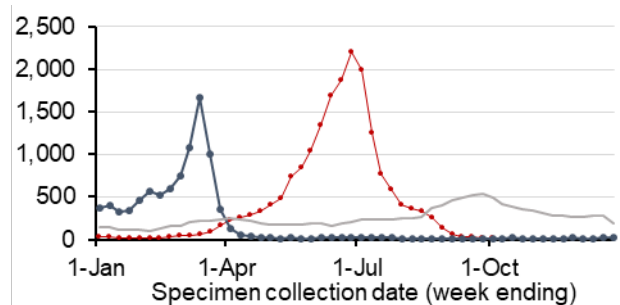
Influenza B



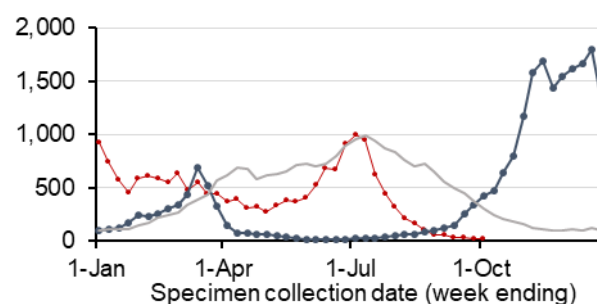
Adenovirus



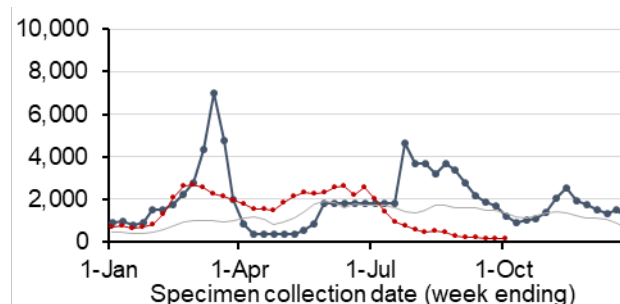
Parainfluenza



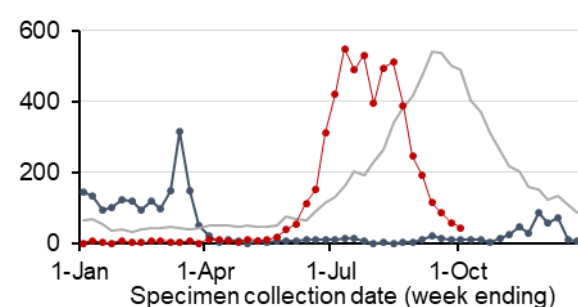
Respiratory Syncytial Virus



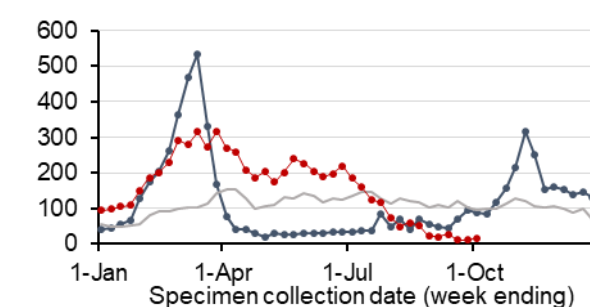
Rhinovirus



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.

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	Individuals who work within a hospital or other healthcare settings, including staff in direct or indirect contact with patients or infectious materials.
Incubation period	The time in which the case was infected. The incubation period for COVID-19 is between 1 and 14 days prior to symptom onset.
Overseas acquired case	Case who travelled overseas during their incubation period. While testing rates in NSW are high and case counts are low, cases who have travelled overseas in their incubation period are considered to have acquired their infection overseas.
Interstate acquired case	Case who travelled interstate during their infection and the public health investigation concludes the infection was likely acquired interstate.
Cluster	Group of cases sharing a common source of infection or are linked to each other in some way.

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>