

COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 28, ENDING 17 July 2021

Published 2 August 2021

Overview

Table 1. Number and proportion of COVID-19 cases in NSW by likely source of infection to week ending 17 July 2021

	2020)		202	1	
	Jan – Jun	July – Dec	Jan – Jun	last 4 weeks	last 7 days	Year to date
				20 Jun - 17 Jul	11 Jul - 17 Jul	
Locally acquired	1,236 (39%)	808 (52%)	255(25%)	1,249 (95%)	656 (96%)	1,307 (64%)
Interstate acquired	67 (2%)	23 (1%)	1(<1%)	1 (<1%)	0	1 (<1%)
Overseas acquired	1,892 (59%)	714 (46%)	672 (72%)	69 (5%)	24 (4%)	721 (36%)
Total	3,195 (100%)	1,545 (100%)	928 (100%)	1,319 (100 %)	680 (100 %)	2,029 (100%)
Deaths	51	5	0	4	3	4

Summary for the week ending 17 July 2021

- There were 656 locally acquired cases reported in the week ending 17 July 2021. Of these:
 - o 384 (59%) cases were residents of Fairfield LGA
 - o 67 (10%) cases were residents of Canterbury-Bankstown LGA
 - o 47 (7%) cases were residents of Liverpool LGA
 - o 158 (24%) cases were residents across 25 other LGAs
- There were 24 cases reported in overseas returned travellers in the last week, an increase compared to the week ending 10 July, when 11 cases were reported.
- There were three deaths as a result of COVID-19 reported this week including a man in his 70s, a man in his 80s and a woman in her 90s.
- In the four weeks ending 17 July 2021, 100% (788/788) of the locally acquired cases sequenced were the delta variant of concern. For overseas-acquired cases, 48% (33/69) of sequenced cases were COVID-19 variants of concern. Not all case samples can be sequenced.
- Since March 2021, 16 (1%) of 1265 locally acquired cases have reported being fully vaccinated. Nineteen (4%) of overseas acquired COVID-19 cases self-reported being fully vaccinated prior to arrival in Australia.
- Testing rates increased across all Local Health Districts compared to the previous week (up 68%) with a surge in testing in the South Western Sydney area in response to targeted public health messaging.
- In the week ending 17 July, 170 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 54 detections taken from the sewage treatment sites (including pumping stations) in Bateau Bay, Winmalee, Penrith, McGraths Hill, Hornsby Heights, Bondi, Cronulla, Malabar, Liverpool, West Camden, Glenfield, North Head, Quakers Hill, Rouse Hill, St Marys, Wollongong, Paddington, Caringbah, Botany, Earlwood, Marrickville 1 and 2, Blakehurst, Arncliffe 1 and 2, Padstow 1 and 2, Fairfield pumping station 1 and 2, Dulwich Hill, Canterbury, Maroubra, Homebush, Ireland Park, Auburn, Tunks Park, Camellia South, Camellia North, Northmead, Vineyard Creek, Minto, Ropes Creek, Eastern Creek, Port Kembla.

All catchments with positive detections were associated with known cases living in the area.

Indicators of effective prevention for COVID-19 in NSW for the week ending 17 July 2021

Cases' community risk

A case is assigned a community exposure risk level based on an initial assessment of their opportunity to transmit the infection in the community during their infectious period. Their infectious period is two days before symptom onset (or specimen collection date if asymptomatic) until the date NSW Health is notified of the infection.

- Low risk indicates that the case was in isolation during their infectious period or had stayed at home (with or without household members) with no community exposures.
- **Medium risk** indicates that the case was isolating for part of their infectious period, or only had low risk community exposures and no venue exposures for their entire infectious period.
- High risk indicates that the case was active in the community with venue exposures during their infectious period

Locally acquired cases by risk of community exposure during their infectious period, as reported daily to 8pm

Community exposure risk	17-Jul	16-Jul	15-Jul	14-Jul	13-Jul	12-Jul	11-Jul	Total Week ending 17 July
Low risk	70	71	51	30	65	56	57	400 (59%)
Medium risk	5	10	16	7	7	9	17	71 (11%)
High risk	30	30	30	28	25	24	39	206 (30%)
Total	105	111	97	65	97	89	113	677 (100%)

Note: Risk numbers reported to 8pm on 17 July and will not be the same as total numbers reported for the week

Interpretation: In the week ending 17 July, 59% of total cases reported this week had low risk of community exposures, 11% had medium risk and 30% had high risk of community exposures. This compares to 43% low risk, 19% medium risk and 37% high risk reported in the previous week.

Measures of Public Health Action

	Week ending 17 July	Week ending 10 July
Proportion locally acquired cases notified to NSW Health by the laboratory within one day of specimen collection	93%	99%
Locally acquired cases interviewed by public health staff within one day of notification to NSW Health*	97%	100%
Close contacts (identified by the case) contacted by public health within two days of case notification	100%	100%

^{*} Note: Short delays in conducting interviews may be as a result of cases being moved to a different location for the purpose of isolation or deteriorating health, incorrect contact details, or not being able to be reached by phone, in which case escalation processes are put in place.

Interpretation: In the week ending 17 July, 93% of cases were notified to NSW Health within a day of test and 96% of cases were interviewed within one day of notification and all close contacts were contacted by public health within two days of case notification. NSW health has been working closely with laboratory providers to minimise the turn-around times for test results.

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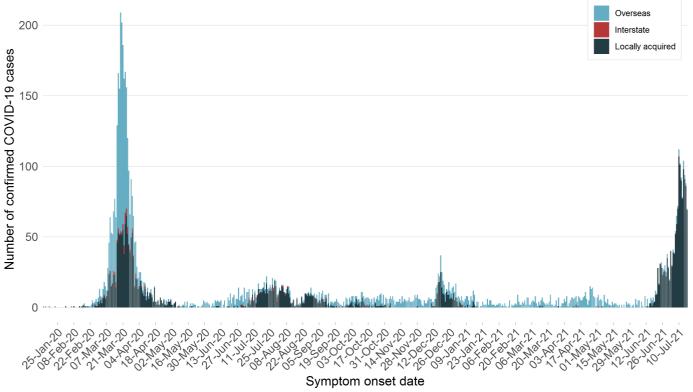
COVID-19 Vaccination program

- Australian Government Department of Health reports the number of vaccine doses administered across Australia —
 <u>Daily COVID-19 vaccine rollout numbers</u>
- 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
 provided by Vaxtracker, SmartVax and the Victorian Department of Health COVID-19 Vaccine Management System
 based on surveys sent on Day 3 after the vaccination Weekly COVID-19 vaccine safety surveillance report

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 25 January 2020 to 17 July 2021



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

Interpretation: Between 13 January 2020 and 17 July 2021, there were 6,769 confirmed COVID-19 cases. Of those, 3,351 (50%) were locally acquired, 91 (1%) were interstate acquired and 3,327 (49%) were overseas acquired.

COVID-19 cases reported in 2020

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 lead 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.

COVID-19 cases reported in 2021

Figure 2. COVID-19 cases by likely infection source and reporting date, NSW, from 1 January 2021 to 17 July 2021

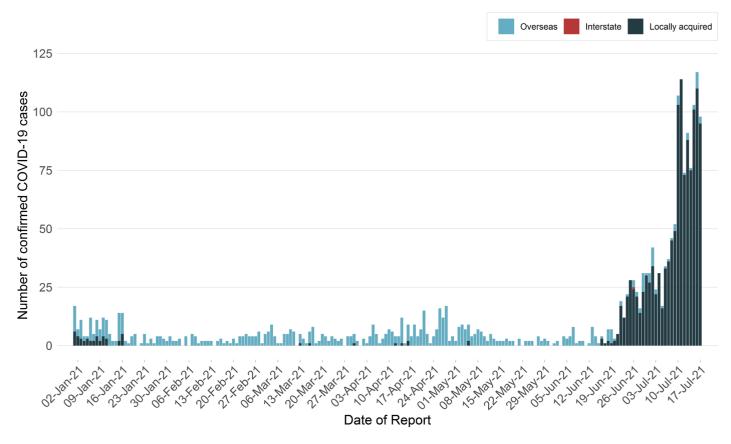


Table 2. COVID-19 cases and tests reported, NSW, from 1 January 2021 to 17 July 2021

	Week ending 17 Jul	Week ending 10 Jul	% change	Total 2021
Number of cases	680	324	110 %	2,029
Locally acquired	656	313	110 %	1,307
Known epidemiological links to other cases or clusters	507	271	87 %	1,097
No epidemiological links to other cases or clusters	149	42	254 %	210
Overseas acquired	24	11	118 %	721
Interstate acquired	0	0	-	1
Number of tests	499,760	297,328	68 %	3,856,317

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

Interpretation: Most cases reported in the last four weeks in NSW were locally acquired 1249 (95%). All locally acquired cases sequenced had the same delta variant of concern. Of the 656 locally acquired cases associated with the Greater Sydney outbreak reported in the week ending 17 July 2021,

- 384 (59%) cases were residents of Fairfield LGA
- 67 (10%) cases were residents of Canterbury-Bankstown LGA
- 47 (7%) cases were residents of Liverpool LGA
- 158 (24%) cases were residents across 25 other LGAs

In the week ending 17 July, the majority of cases with no epidemiological links were residents of Fairfield LGA (87/149, 58%). There were 24 cases that acquired their infection overseas.

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

Information from cases who were diagnosed in the last four weeks is used to understand where COVID-19 is spreading in the community. This takes into account the incubation period and the time it takes for people to seek testing and for the laboratory to perform the test. This section summarises cases based on the date the case was reported to NSW Health.

Table 3. Locally acquired COVID-19 cases by LHD of residence and week reported, NSW, 20 June to 17 July 2021

		Week 6	ending			
Local Health District	17 Jul	10 Jul	03 Jul	26 Jun	Total	Days since last case reported
Central Coast	0	1	2	0	3	8
Illawarra Shoalhaven	0	0	1	3	4	19
Nepean Blue Mountains	11	7	0	0	18	1
Northern Sydney	5	4	6	2	17	2
South Eastern Sydney	79	76	80	62	297	1
South Western Sydney	472	162	35	26	695	0
Sydney	39	33	25	13	110	1
Western Sydney	50	30	22	3	105	1
Far West	0	0	0	0	0	483
Hunter New England	0	0	0	0	0	95
Mid North Coast	0	0	0	0	0	471
Murrumbidgee	0	0	0	0	0	315
Northern NSW	0	0	0	0	0	110
Southern NSW	0	0	0	0	0	278
Western NSW	0	0	0	0	0	346
NSW*	656	313	171	109	1249	0

^{*}Includes people with a usual place of residence outside of NSW

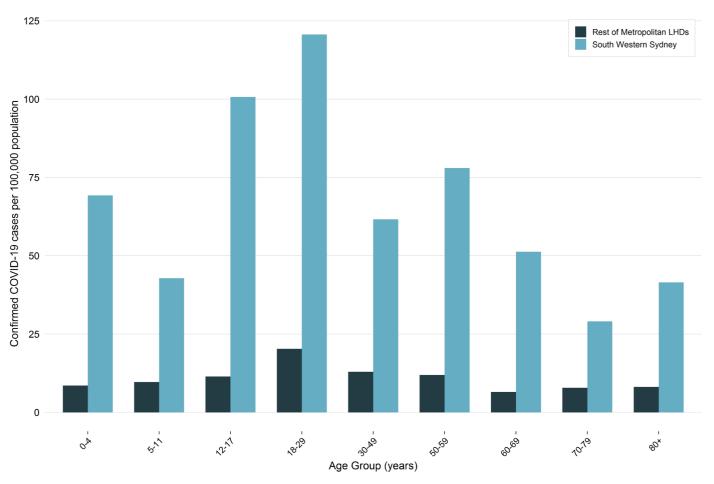
Interpretation: There were 656 locally acquired cases reported in the week ending 17 July. Most cases were residents of South Western Sydney LHD (472, 72%) followed by South Eastern Sydney LHD (79, 12%), and Western Sydney (50, 8%).

Section 3: Epidemiology of local cases with COVID-19 from 16 June 2021 to 17 July 2021

Age breakdown of locally acquired cases in NSW

Since 16 June 2021, 1,256 locally acquired cases have been diagnosed with COVID-19 in NSW. The rate of COVID-19 diagnosed in each age group allows the risk of infection by age to be compared between areas. The largest number of cases were reported in South Western Sydney (55%, 695/1,256). The rate in this period in the South Western Sydney was 72.1 per 100,000 people compared with 12.4 per 100,000 people in the rest of the metropolitan local health districts.

Figure 3. Rates of COVID-19 infection by age group, South Western Sydney LHD and rest of metropolitan LHDs, NSW, 16 June to 17 July 2021



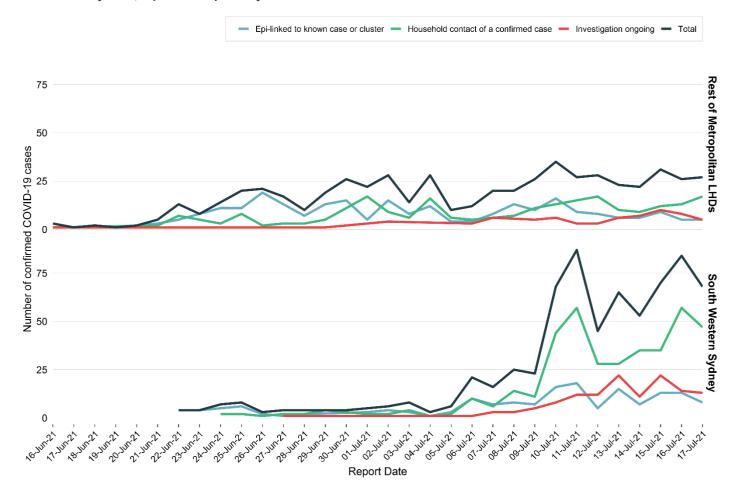
Interpretation: Since July 16, the highest rate of people diagnosed with COVID-19 was in people aged 18-29 years of age. The rate was almost six times higher in South Western Sydney when compared with the rest of metropolitan LHDs (120.7 per 100,000 compared with 20.3 per 100,000 people respectively).

Source of infection for locally acquired cases in NSW

In the week ending 17 July, the majority of cases diagnosed with COVID-19 acquired their infection in a household setting 380/656 (58%). Of the 472 case reported this week in South Western Sydney LHD, 287 (61%) were household contacts, 79 (17%) were epidemiologically linked but not household contacts and 106 (22%) were not currently linked to a case or cluster.

There were 184 cases reported this week who reside outside of the South Western Sydney area. Of these 93 (51%) are household contacts, 48 (26%) are epidemiologically linked but not household contacts and 43 (23%) have not currently been linked to a case or cluster.

Figure 4: Source of infection for locally acquired cases, South Western Sydney LHD and rest of metropolitan LHDs, 16 June to 17 July 2021, reported at 8pm daily

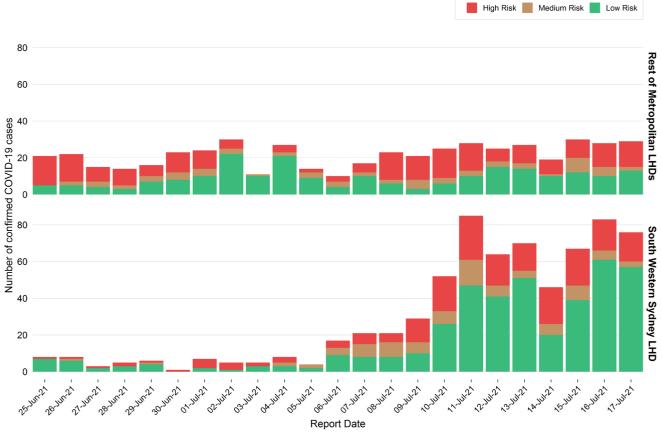


Interpretation: There was a surge of case in South Western Sydney on the 10 and 11 July following targeted testing of close contacts in the Fairfield LGA area. The proportion of household contacts diagnosed with COVID-19 has increased over time and remains the biggest risk group for onward transmission of COVID-19.

Measurement of risk of community exposure by LGA

In the week ending 17 July, 677 cases were assessed for risk to the community. Of these, 491 (73%) were residents of South Western Sydney and 186 (27%) were residents of other metropolitan LHDs. In the week ending 17 July, the majority of cases were considered low risk in the community (400/677, 59%).

Figure 5: Daily number of locally acquired cases by community risk level, South Western Sydney LHD and rest of metropolitan LHDs, 25 June to 17 July 2021.



Note: Reported at 24-hour intervals to 8pm daily. This is a different reporting period to what is used in the rest of the report which uses calendar days.

Interpretation: Of the 491 cases reported this week in South Western Sydney, 129 (26%) were classified as high risk, 46 (9%) medium risk and 316 (64%) low risk. This compares to 77 (41%) classified as high risk, 25 (13%) as medium risk and 84 (45%) as low risk in the rest of the metropolitan LHDs during the same period.

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 four locally acquired cases of COVID-19 reported in Aboriginal people in the week ending 17 July 2021. None of the cases have reported being vaccinated. There have been 12 Aboriginal people diagnosed with COVID-19 associated with the Greater Sydney outbreak.

Since the beginning of the pandemic in January 2020, there have been 61 Aboriginal people diagnosed with COVID-19, representing 1% of all cases in NSW.

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.

There were seventeen locally acquired cases of COVID-19 reported in HCWs in the week ending 17 July 2021. Of the seventeen cases, five (29%) were fully vaccinated,

In total there have been 85 cases of COVID-19 in health care workers since 1 August 2020. Of these, 35 HCWs were potentially infected in healthcare settings. A further 34 cases were social or household contacts of a known case, and for 16 cases the source of infection is either unknown or under investigation. Prior to August 2020, there were 26 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).

Aged care workers

There were five locally acquired cases in aged care workers in the week ending 17 July 2021. One case, who was unvaccinated, acquired their infection while working in an aged care facility in Baulkham Hills and four cases acquired their infections in the community. Of the four community acquired cases, one case was partially vaccinated and three were not vaccinated.

Since 1 January 2021, there have been 16 cases reported in aged care workers. Of these, 5 (31%) people have reported being partially vaccinated. There have been no aged care workers that have been fully vaccinated.

Pregnant women

There were five cases in a pregnant woman in the week ending 17 July 2021. Since January 2020, 55 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.

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.

There are a range of vaccines available worldwide. People receiving vaccines are considered fully vaccinated two weeks after they complete the recommended course for that vaccine. Both vaccines being administered in Australia, Pfizer-BioNTech and AstraZeneca, and many from overseas such as Moderna and Sinovac, recommend a two-dose course. In the United States of America, there is one single dose vaccine available, the Johnson & Johnson vaccine.

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 greater than 14 days prior to known exposure to COVID-19 or arrival in Australia.
- Cases reported as partially vaccinated:
 - o received their first dose of a two-dose vaccination prior to known exposure to COVID-19 or arrival in Australia, or
 - completed their second dose of a two-dose vaccination within 14 days prior to known exposure to COVID-19 or arrival in Australia, or
 - o completed a single-dose vaccination course (currently only Johnson & Johnson vaccine) within 14 days prior to known exposure to COVID-19 or arrival in Australia.

Table 4a. Locally acquired COVID-19 cases by vaccination status and week reported, NSW, 1 March to 17 July 2021

		Week	ending			
Vaccination status	17-Jun	10-Jul	3-Jul	26-Jun	01 Mar-19 Jun	Total from 1 Mar 2021
Total locally acquired cases	656	313	171	109	16	1265
Fully Vaccinated	2 (<1%)	3 (1%)	7 (4%)	2 (2%)	0	14 (1%)
Partially Vaccinated	24 (4%)	20 (6%)	5 (3%)	5 (5%)	3 (19%)	57 (5%)
None	565 (86%)	287 (92%)	157 (92%)	100 (92%)	13 (81%)	1122 (89%)
Unknown/Missing	65 (10%)	3 (1%)	2 (1%)	2 (2%)	0	72 (6%)

Table 4b. Overseas acquired COVID-19 cases by vaccination status and week reported, NSW, 1 March to 17 July 2021

		Week e	ending			
Vaccination status	17-Jun	10-Jul	3-Jul	26-Jun	01 Mar-19 Jun	Total from 1 Mar 2021
Total overseas acquired cases	24	11	27	7	443	512
Fully Vaccinated	6 (25%)	0	3 (11%)	0	10 (2%)	19 (4%)
Partially Vaccinated	5 (21%)	3 (27%)	1 (4%)	0	25 (6%)	34 (7%)
None	7 (29%)	5 (45%)	21 (78%)	7 (100%)	395 (89%)	435 (85%)
Unknown /Missing	6 (25%)	3 (27%)	2 (7%)	0	13 (3%)	24 (5%)

Interpretation: In the past week fewer than 1% of locally acquired cases were fully vaccinated. This compares with around 10% of the NSW population who had received two doses of vaccine by July 9. Since 1 March 2021, there have been 14 (1%) locally acquired cases reported as being fully vaccinated and 57 (5%) cases partially vaccinated in the 14 days preceding their known exposure date. Nineteen (4%) overseas acquired cases reported being fully vaccinated prior to arrival in Australia, although they may not have been fully vaccinated prior to being exposed to COVID-19.

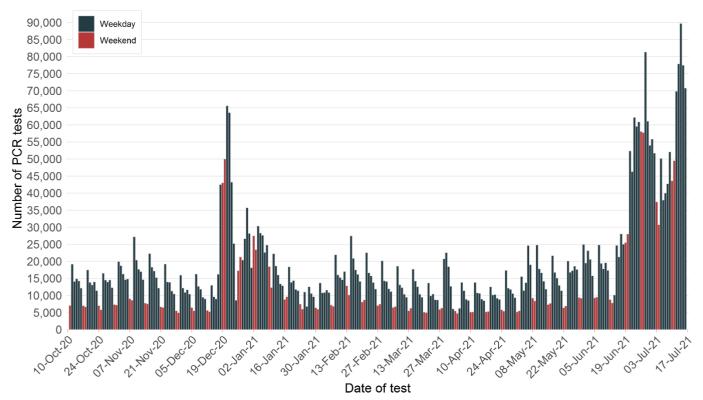
Section 6: COVID-19 testing in NSW

How much testing is happening?

The bars on the graph below show the number of tests by the date a person presented for the test. 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.

The PCR testing numbers reported are for tests performed on nose and throat swabs. Saliva PCR tests are not included, these are reported in the "Border and quarantine workers – saliva testing screening program" section.

Figure 6. Number of PCR tests per day, NSW, 10 October 2020 to 17 July 2021



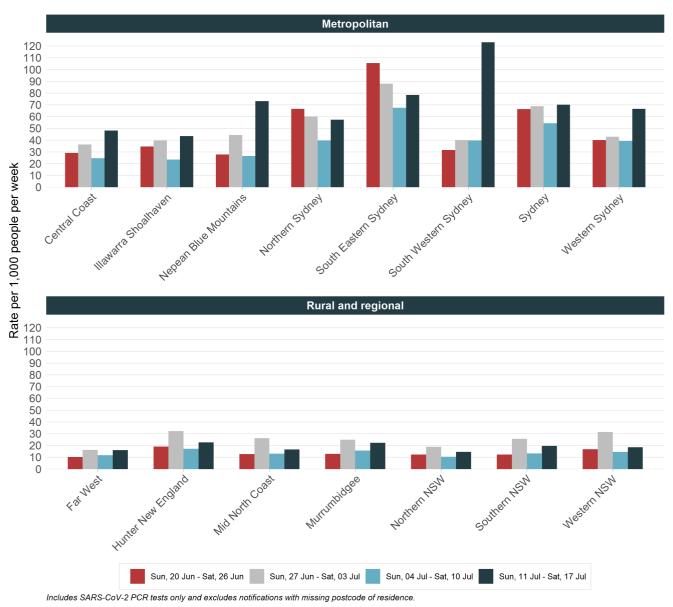
Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.

Interpretation: Testing numbers increased significantly in the week ending 17 July 2021 (up 68%) compared to the previous week. The average daily testing rate of 8.8 per 1,000 people in NSW each day increased compared to the previous week of 5.3 per 1,000 people.

¹ The number of tests per day displayed below 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 by Local Health District and Selected Suburb in the previous four weeks

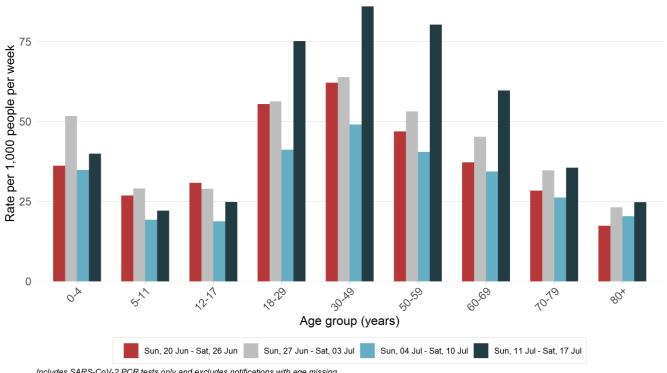
Figure 7. Rates of COVID-19 testing by LHD of residence, NSW, 20 June to 17 July 2021



Interpretation: State-wide weekly testing rates in the week ending 17 July increased compared to the previous week (61.8 per 1,000 people compared to 36.8 per 1,000 people). Testing rates increased in South Western Sydney Local Health District (LHD) as a result of targeted public health messaging to residents of the Fairfield, Canterbury Bankstown and Liverpool Local Government Areas (LGAs) in response to high numbers of COVID-19 cases and exposure venues in South western Sydney LHD. This week NSW Health has expanded COVID-19 testing across the Fairfield LGA with more 24/7 clinics and extended hours at existing sites. High testing rates were also seen in Nepean Blue Mountains and Western Sydney LHDs.

Testing by age group

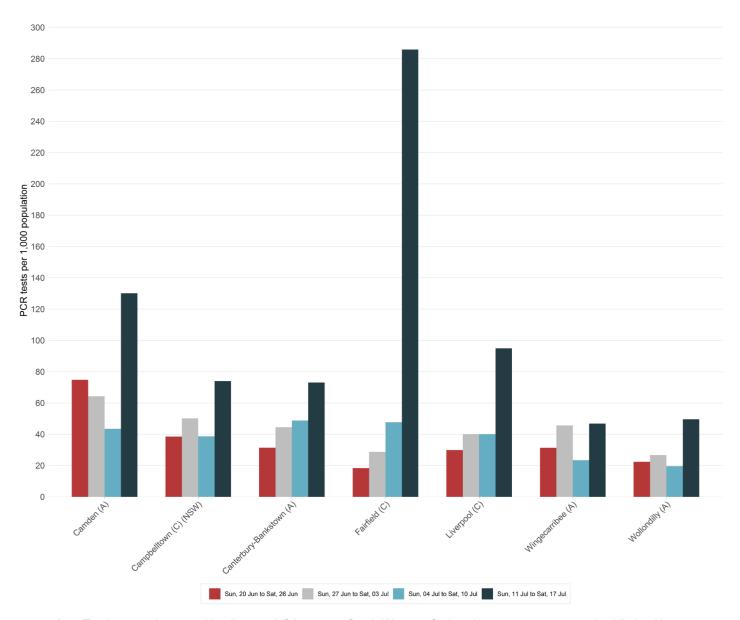
Figure 8. Rates of COVID-19 testing per 1,000 people by age group and week, NSW, 20 June to 17 July 2021



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

Interpretation: In the week ending 17 July 2021, testing rates increased across all age groups with the greatest increase seen in adults aged 18-69.

Figure 9. Rates of COVID-19 testing per 1,000 people by LGA in South Western Sydney and week, NSW, 20 June to 17 July 2021

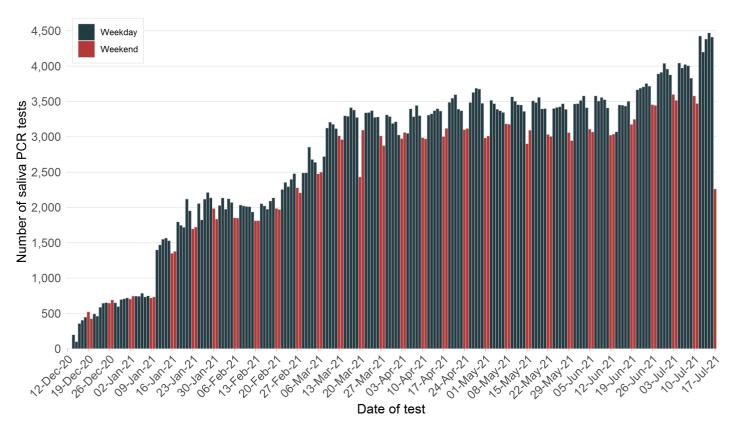


Interpretation: Testing rates increased in all seven LGAs across South Western Sydney in response to targeted public health messaging advising residents in the area to get tested. The largest increase was in Fairfield LGA where the rate increased substantially (285.9 tests per 1,000 people compared with 47.7 per 1,000 last week).

Border and quarantine workers – saliva testing screening program

The number of COVID-19 infections in people returning to Australia from overseas reflects the number of cases in other parts of the world. Cases in returned overseas travellers are then detected in quarantine facilities. Routine screening of quarantine workers is implemented out of care and caution for staff members who work in NSW quarantine facilities. Screening involves a daily SARS-CoV-2 saliva PCR testing, which is painless and quick (see NSW hotel quarantine worker surveillance and testing program).

Figure 10. Daily numbers of saliva PCR test results reported for border and quarantine workers, NSW, 12 December 2020 to 17 July 2021



^{*} The number of saliva PCR tests in the most recent days may be incomplete due to delays in reporting negative results.

Interpretation: Since screening of quarantine workers began in December 2020, a total of 575,950 saliva PCR tests have been conducted to 17 July 2021. The number of saliva PCR tests increased significantly on 11 January 2021, which corresponds to the expansion of the NSW quarantine hotel worker surveillance and testing program. Two confirmed cases of COVID-19 have been reported through saliva PCR testing, reported on 13 March and 16 June 2021. The daily number of saliva PCR tests is not included in the total PCR testing numbers reported.

Section 7: Variants of Concern (VoC)

Like other viruses, the SARS-CoV-2 virus that causes COVID-19 acquires mutations over time. Some of these mutations affect parts of the virus, such as the spike protein on the surface of the virus, which play an important role in infection. The spike protein allows the virus to enter human cells during infection. That is why it plays an important role in our own immune response to the virus and is the immune mechanism targeted by many COVID-19 vaccines. Global surveillance is done to monitor the prevalence of mutations in the SARS-CoV-2 virus. The surveillance particularly focuses on mutations affecting the spike protein that may reduce vaccine effectiveness or enable re-infection.

This report reflects the recommendations of <u>Australia's Communicable Diseases Genomics Network (CDGN)</u> for reporting of Variants of Concern (VoC) in NSW. The CDGN reports on four internationally recognised VoCs:

- Alpha (B.1.1.7) first identified in the United Kingdom in September 2020 and recognised as a VoC on 18 December 2020.
- Beta (B.1.351) first identified in South Africa in December 2020 and recognised as a VoC on 18 December 2020.
- Gamma (P.1) first identified in Japan among a group of Brazilian travellers in December 2020 and recognised as a VoC on 11 January 2021.
- B.1.617 sub-lineages, including Kappa (B.1.617.1) and Delta (B.1.617.2). The B.1.617 lineage was first detected in India in October 2020. The Delta lineage (B.1.617.2) was internationally recognised as a VoC on 11 May 2021.

In the four weeks ending 17 July 2021, there have been:

- 788 locally acquired cases diagnosed with a VOC. All of these cases have been diagnosed with infection by the Delta variant.
- 33 returned travellers diagnosed with a VoC. Of these:
 - o 10 (31%) with the alpha variant
 - o 3 (14%) with the beta variant
 - o 20 (56%) with the delta variant.
- The countries of likely acquisition of the 33 returned travellers diagnosed with a VoC are: Indonesia (4, 12%), Bangladesh (3, 9%), USA (3, 9%), Afghanistan (2, 6%), Cambodia (2, 6%), Pakistan (2, 6%), UAE (2, 6%), UK (2, 6%), Algeria (1, 3%), China (1, 3%), Fiji (1, 3%), Germany (1, 3%), India (1 3%), Lebanon (1, 3%), Myanmar (1, 3%), Philippines (1, 3%), Sri Lanka (1, 3%), and unknown (4, 12%).

Table 5a. Variants identified among locally acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 17 July 2021

		Week	c ending		29 Nov to	Total since	
Variant	17 July*	10 July*	3 July	26 June	19 June	29 November	
Total variants identified	291	260	137	100	16	804	
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	
Карра (В.1.617.1)	0	0	0	0	0	0	
Delta (B.1.617.2)	291	260	137	100	9	797	

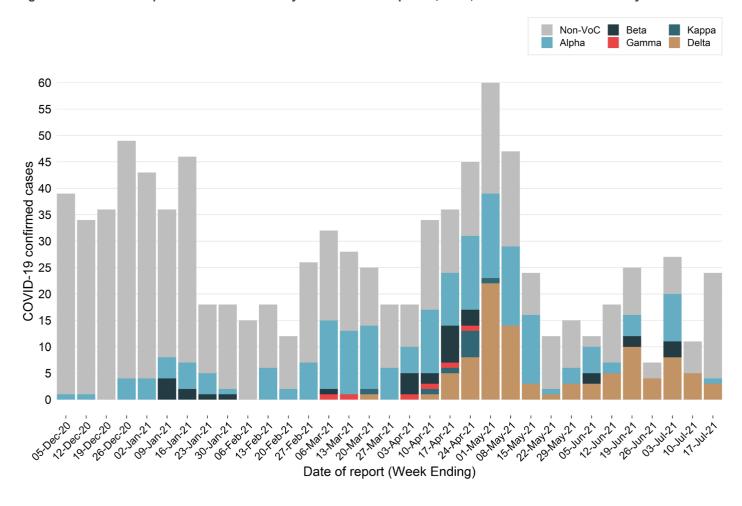
^{*}Note: identification of variants of concern is through whole genome sequencing. Results for reported cases in the most recent week may not be available at the time of reporting. 100% of locally acquired cases sequenced in the week ending 17 July have been the Delta variant of concern.

Table 5b. Variants identified among overseas acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 17 July 2021

Variant		Week	c ending		29 Nov to	Total since 29 November	
Vallalit	17 July*	10 July*	3 July	26 June	19 June		
Total variants identified	4	5	20	4	302	335	
Alpha (B.1.1.7)	1	0	9	0	182	191	
Beta (B.1.351)	0	0	3	0	29	32	
Gamma (P.1)	0	0	0	0	6	6	
Карра (В.1.617.1)	0	0	0	0	9	9	
Delta (B.1.617.2)	3	5	8	4	76	96	

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

Figure 11. Overseas acquired COVID-19 cases by VoC and week reported, NSW, 29 November 2020 to 17 July 2021



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

Interpretation: Since 29 November 2020 there have been 335 returned travellers diagnosed with a COVID-19 VoC. In the four weeks ending 17 July 2021, 48% (33/69) of overseas acquired cases have been identified as having COVID-19 variants of concern.

Section 8: 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.

The table below shows results for the last 10 weeks for sites that have had detections. The results from all sites across NSW are available in Appendix D.

Table 6. Locations with SARS-CoV-2 detections in sewage samples in the last 10 weeks, NSW, 11 April to 17 July 2021

		15 May	22 May	29 May	5 June	12 June	19 June	26 June	3 July	10 July	17 July
Pop.	Location	19	20	21	22	23	24	25	26	27	28
60,514	Blue Mountains (Winmalee)										
110,114	Penrith										
8,000	McGraths Hill										
1,241	Brooklyn										
31,924	Hornsby Heights										
318,810	Bondi										
233,176	Cronulla										
4.057.740	Malabar 1										
1,857,740	Malabar 2										
181,005	Liverpool										
98,743	West Camden										
161,200	Glenfield										
1,341,986	North Head										
00.007	Castle Hill Cattai										
26,997	Castle Hill Glenhaven										
163,147	Quakers Hill										
119,309	Rouse Hill										
37,061	Riverstone										
163,147	St Marys										
55,000	Wollongong										
68,000	Port Kembla										
93,000	Bellambi										

Table 6 (Continued). Locations with SARS-CoV-2 detections in sewage samples in the last 10 weeks, NSW, 11 April to 17 July 2021

		15-May	22-May	29-May	5-June	12- June	19- June	26- June	3-July	10-July	17-July
Catchment	Location	19	20	21	22	23	24	25	26	27	28
Sydney netwo	ork sites	•	•						•	•	
Bondi	Paddington										
Cronulla	Caringbah										
Malabar	Earlwood										
Malabar	Marrickville										
Malabar	Marrickville										
Malabar	Arncliffe 1										
Malabar	Arncliffe 2										
Malabar	Blakehurst										
Malabar	Padstow 1										
Malabar	Padstow 2										
Malabar	Fairfield SPS 1										
Malabar	Fairfield SPS 2										
Malabar	Homebush SPS										
Malabar	Croydon										
Malabar	Dulwich Hill										
Malabar	Canterbury										
Malabar	Botany										
Malabar	Maroubra										
North Head	Camellia SPS - North										
North Head	Camellia SPS - South										
North Head	Auburn										
North Head	Northmead SPS										
North Head	Tunks Park										
North Head	Vineyard Creek										
North Head	Boronia										
Glenfield	Minto										
Liverpool	Ireland Park										
Quakers Hill	Eastern Creek										
St Marys	Ropes Creek										
Regional Sites	s										
2,050	Bourke										
38,900	Bateau Bay										

Sampling commenced week ending 18 July 2020



Interpretation: In the week ending 17 July, 170 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 54 detections. There was one detection outside Sydney taken from the Bateau Bay sewage treatment plant.

Epidemiological week 28, ending 17 July 2021

In Sydney there were detections from the sewage treatment plants in:

- Winmalee, Penrith (2), McGraths Hill, Hornsby Heights, Bondi, Cronulla (2), Malabar (2), Liverpool, West Camden, Glenfield, North Head, Quakers Hill, Rouse Hill, St Marys and Wollongong

There were also detections from the sewage networks and pumping stations within:

- the Bondi catchment including Paddington
- the Cronulla catchment including Caringbah
- the Malabar catchment including Botany, Earlwood, Marrickville 1, Marrickville 2, Blakehurst, Arncliffe 1, Arncliffe 2, Padstow 1, Padstow 2, Fairfield pumping station 1, Fairfield pumping station 2, Dulwich Hill, Canterbury, Maroubra and Homebush
- the Liverpool catchment including Ireland Park (2)
- the North Head catchment including Auburn (2), Tunks Park, Camellia South (2) and Camellia North (2), Northmead sewage pumping station, Vineyard Creek (2)
- the Glenfield catchment including Minto (2)
- the St Marys catchment including Ropes Creek (2)
- the Quakers Hill catchment including Eastern Creek
- Port Kembla

All catchments with positive detections were associated with known cases living in the area.

Section 9: COVID-19 hospitalisations and deaths

How many people are in hospital as a result of COVID-19?

In the last four weeks, there have been 175 people that have been admitted to hospital as a result of being diagnosed with COVID-19.

Table 7. Hospitalisations and ICU admissions as a result of COVID-19, by age group, NSW, from 13 June to 17 July 2021

Age-group (years)	Hospitalised (%)	Hospitalised and in ICU (%)
0-4	3 (2%)	0
5-11	3 (2%)	0
12-17	5 (3%)	1 (3%)
18-29	29 (17%)	4 (11%)
30-49	45 (26%)	8 (22%)
50-59	34 (19%)	8 (22%)
60-69	19 (11%)	7 (19%)
70-79	17 (10%)	5 (14%)
80+	20 (11%)	3 (8%)
Total	175	36

Interpretation: The highest number of cases hospitalised are aged 30-49 (45, 26%) years, followed by those aged 50-59 years (34, 19%). Of the 175 hospitalised cases, six were residents an aged care facility and have been admitted for close monitoring and not due to deteriorating health concerns. Five of the six aged care residents are fully vaccinated.

How many people in hospital with COVID-19 are vaccinated?

Of the 175 people hospitalised as a result of COVID-19 in the four weeks ending 17 July 2021, 36 (21%) people were in ICU of which 33 (91%) were unvaccinated and three (9%) were partially vaccinated or had a single dose within 14 days. There have been no fully vaccinated cases in ICU.

Table 8. Hospitalisations and ICU admissions due to COVID-19, by vaccination status, NSW, from 20 June to 17 July 2021

Vaccination status	Hospitalised (%)	Hospitalised and in ICU (%)
Fully Vaccinated	6 (3%)	0
Partially Vaccinated / one dose	15 (9%)	3 (9%)
Not vaccinated	154 (88%)	33 (91%)
Total locally acquired cases	175 (100%)	36 (100%)

Interpretation: Of the 175 people hospitalised in the last four weeks, 6 (3%) are fully vaccinated, of which five cases are aged care residents who were admitted for public health reasons rather than clinical need, 15 (9%) were partially vaccinated and 154 (88%) were not vaccinated.

How many people have died as a result of COVID-19?

Since the start of the pandemic, <1.0% of cases (60 people) have died as a result of COVID-19, most of whom were 80 years of age or older, including 28 residents of aged care facilities with known COVID-19 outbreaks. Approximately 20% (12/60) of the deaths were in overseas acquired cases.

There were three deaths reported in the week ending 17 July including a man in his 70s, a man in his 80s and a woman in her 90s reported with COVID-19. Two cases were household contacts and one case was a close contact of previously reported cases. All three cases were unvaccinated.

Table 9. Deaths as a result of COVID-19, by age group, NSW, from 25 January 2020 to 17 July 2021

Age group (years)	Number of deaths	Number of cases	Case fatality rate
0-4	0	213	0%
5-11	0	233	0%
12-17	0	288	0%
18-29	0	1606	0%
30-49	0	2183	0%
50-59	1	881	0.1%
60-69	4	737	0.5%
70-79	16	434	3.7%
80+	39	194	20.1%
Total	60	6769	0.9%

Interpretation: Cases older than 80 years of age had both the highest number of deaths and the highest case fatality rate. No cases under 50 years of age have died as a result of COVID-19 in NSW.

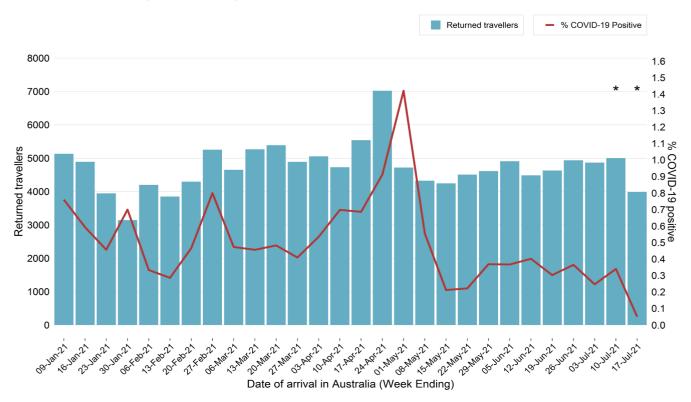
Section 10: COVID-19 in returned travellers

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 12. Returned travellers screened at Sydney International Airport by week of arrival and percent COVID-19 positive, NSW, 3 January 2021 to 17 July 2021



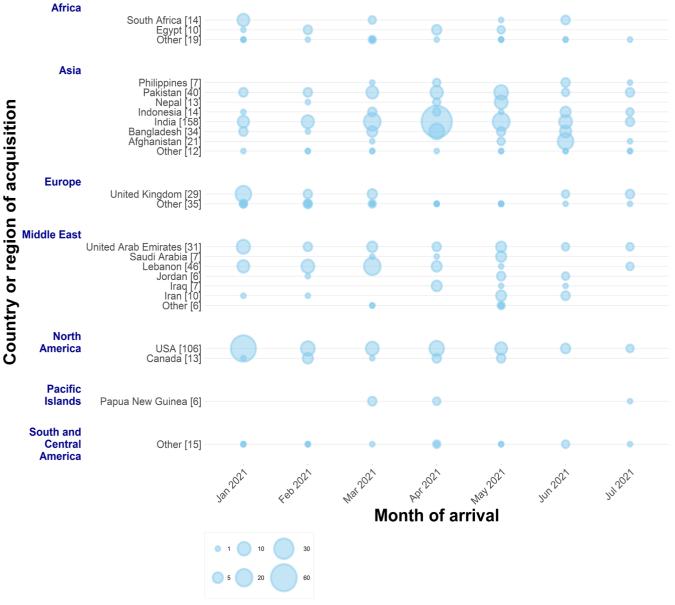
^{*}Returned travellers entering Australia in the past 14 days are still in quarantine and may return a positive result prior to the end of their hotel quarantine period.

Interpretation: Since 3 January 2021, there has been on average 676 people screened on arrival through Sydney International Airport daily. In the last four weeks, 69 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.

Country of acquisition of COVID-19 for returned travellers

The following figure displays the countries and regions with the greatest numbers of returned international travellers diagnosed with COVID-19 in NSW.

Figure 13. Overseas acquired COVID-19 cases by country of acquisition and arrival month, NSW, 1 December 2020 to 17 July 2021*



^{*} Data for current month is incomplete

Interpretation: In April 2021, there was a significant increase in detections of COVID-19 in travellers from India, which subsided following travel restrictions introduced in May. The pattern seen in COVID-positive returned travellers over time reflects the evolving nature of the pandemic in those areas and the country of origin of returned travellers, as well as travel requirements enacted by the Australian Government.

In the last four weeks, there have been 69 COVID-positive returned travellers in NSW. The table below lists countries of acquisition for these travellers.

Table 10. Top countries of acquisition for overseas acquired cases that have tested positive in the last four weeks, 20 June 2021 to 17 July 2021

Country of acquisition of COVID-19	Number (%) of cases in the last four weeks
Indonesia	8 (12%)
Afghanistan	6 (9%)
United Arab Emirates	4 (6%)
United Kingdom	4 (6%)
Bangladesh	3 (4%)
Egypt	3 (4%)
India	3 (4%)
Pakistan	3 (4%)
USA	3 (4%)
Cambodia	2 (3%)
Fiji	2 (3%)
Jordan	2 (3%)
Lebanon	2 (3%)
Other	24 (35%)
Total	69

Interpretation: In the four weeks to 17 July 2021, travellers returning from Indonesia, Afghanistan and United Arab Emirates accounted for the largest number of overseas acquired cases (18, 26%).

Cases among returned travellers in quarantine

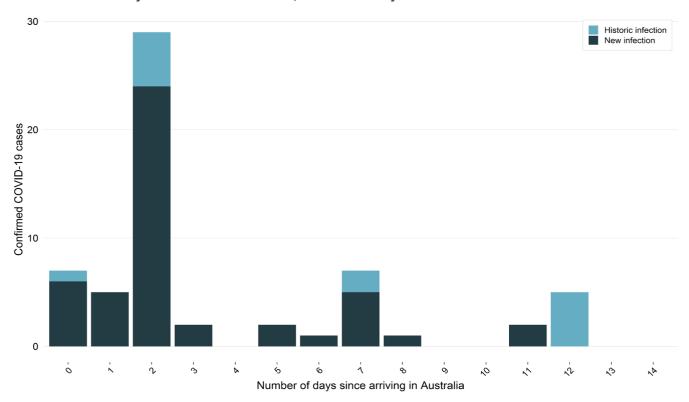
The program of screening all overseas travellers after arrival in NSW commenced on 15 May 2020. From 30 June 2020, the program was extended to include screening of travellers on entry to quarantine, day 2 after arrival, and exit of quarantine. On 11 January 2021, exit screening of travellers was moved from day 10 to day 12 of quarantine. Routine day 7 screening was introduced on 2 June 2021. In addition to these three routine tests, individuals that become symptomatic, or who are symptomatic on arrival, are also tested.

Overseas returned travellers complete their quarantine in several facilities, with the majority in hotels managed by police or hotels managed by NSW Health (known as Special Health Accommodation). Since September 2020 international flight crew are also required to quarantine in police-managed hotels.

The figure below shows the number of overseas acquired cases in returned travellers within the quarantine program, by the number of days since they arrived in Australia. Overseas acquired cases include people with likely exposure overseas, in flight or are coquarantining with family members who acquired COVID-19 overseas.

Historical COVID-19 infections are a subset of confirmed cases that have been infected sometime in the past and are not considered infectious at the time of diagnosis. An historic case requires laboratory evidence to support historic infection and must be asymptomatic in the 14 days prior to the positive test.

Figure 14. Number of overseas acquired cases in the last four weeks who tested positive for SARS-CoV-2 within 14 days since arrival in NSW by COVID-19 infection status, 20 Jun to 17 July 2021



Interpretation: In the four weeks ending 17 July 2021, 59% of overseas acquired COVID-19 cases have tested positive within two days of arriving to Australia, with most people testing positive on day two screening.

Section 11: Other respiratory infections in NSW

Influenza and other respiratory virus cases and tests reported in NSW, up to 11 July 2021

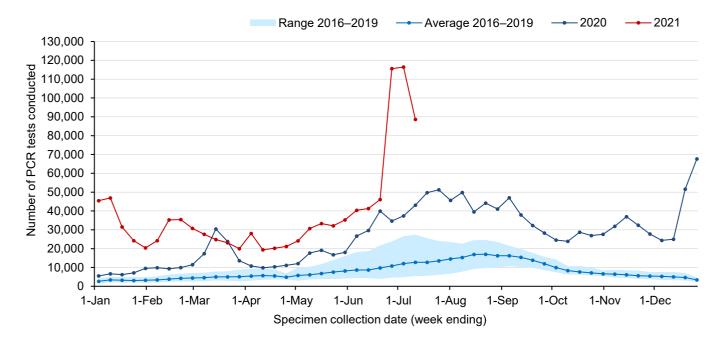
In NSW, routine surveillance for influenza and other respiratory viruses is conducted through sentinel laboratories. The number of all PCR tests (positive and negative) are provided to NSW Health by participating laboratories each week. Testing counts reflect the number of influenza PCR tests conducted; not all samples are tested for all respiratory viruses.

The most recent data available is for testing carried out to 11 July 2021. A total of 1,082, 506 influenza tests have been performed at participating laboratories from 28 December 2020. Refer to Appendix B for PCR testing results for a range of respiratory viruses.

How much influenza testing is happening?

The red line in the figure below shows the number of PCR tests for influenza carried out each week in 2021, the dark blue line showing PCR tests for 2020. The light blue line shows the average number of PCR tests carried out for the same week in the previous four years (2016–2019) and the shaded area shows the range of tests reported in the same time period.

Figure 15. Testing for influenza by week, NSW, 1 January 2016 to 11 July 2021



Interpretation: In the week ending 11 July, the number of influenza tests surged, with 88,691 influenza tests performed across participating laboratories compared with 116,414 the previous week. The elevated level of influenza tests is likely due to concurrent testing of influenza and COVID-19 by some sentinel labs. Testing for influenza continues to exceed the four-year average for this time of year.

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.

Range 2016-2019 Average 2016-2019 -20202021 50 40 Percent positive (%) 30 20 10 0 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep 1-Oct 1-Nov 1-Dec Specimen collection date (week ending)

Figure 16. Proportion of tests positive for influenza, NSW, 1 January 2016 to 11 July 2021

Interpretation: In the week ending 11 July, 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 13 influenza cases reported in 2021 and none were reported in the week ending 11 July.

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.

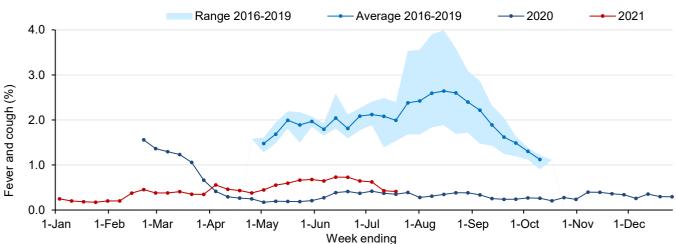


Figure 17. Proportion of FluTracker participants reporting influenza-like illness, NSW, 1 January 2016 to 18 July 2021

Interpretation: In NSW in the week ending 18 July 2021, of the 22,068 people surveyed, 91 people (0.41%) reported flu-like symptoms. In the last four weeks, 62% (324/521) 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 has decreased since January, when 80% reported being tested, and has remained at around 50% since early April 2021.

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 PHREDSS². 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.

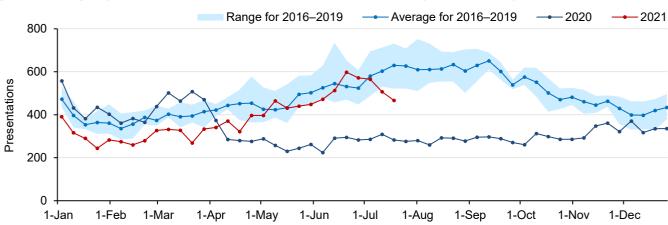


Figure 18. Emergency Department pneumonia presentations, NSW, 1 January 2016 to 18 July 2021

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. In the week ending 18 July, pneumonia presentations decreased and are below the seasonal range for this time of year.

Week ending

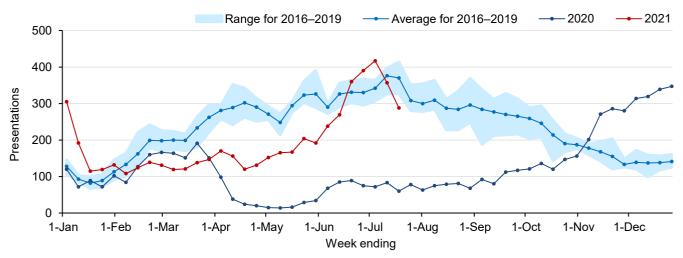


Figure 19. Emergency Department bronchiolitis presentations, NSW, 1 January 2016 to 18 July 2021

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. In the week ending 18 July 2021, bronchiolitis presentations decreased are below the seasonal range for this time of year.

² 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 5 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

Appendi	IX A: COVID-19 PCR	tooto III N	_	ending			lanuar (2024
		17	-Jul		-Jul	Total since	January 2021
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Central Coast	LHD Total ²	16975	48.11	8709	24.68	284822	807.17
	Balranald	42	17.96	16	6.84	911	389.65
	Broken Hill	257	14.7	212	12.13	11280	645.35
Far West	Central Darling	25	13.59	22	11.96	688	374.12
	Wentworth	158	22.4	105	14.89	4214	597.48
	<i>LHD Total</i> ² Armidale Regional	482 487	15.99 15.82	355 446	11.78 14.49	17093 18844	567.04 612.24
	Cessnock	1023	17.05	697	11.62	27199	453.43
	Dungog	149	15.81	93	9.87	4612	489.44
	Glen Innes Severn	70	7.89	55	6.2	3247	366.02
	Gunnedah	161	12.7	157	12.38	5861	462.19
	Gwydir	42	7.85	34	6.35	1384	258.55
	Inverell	158	9.35	219	12.97	7808	462.29
	Lake Macquarie	6454	31.35	4428	21.51	170679	828.94
	Liverpool Plains	86	10.88	65	8.22	3705	468.81
	Maitland	3016	35.41	1986	23.32	76380	896.84
Hunter New	Mid-Coast	1382	14.73	1113	11.86	43605	464.69
England	Moree Plains	129	9.73	109	8.22	7409	558.71
	Muswellbrook	256	15.63	192	11.72	8214	501.56
	Narrabri Newcastle	125 4475	9.52 27.03	99 3761	7.54 22.72	4551 161759	346.48 976.98
	Port Stephens	1361	18.52	1227	16.7	50623	688.93
	Singleton	613	26.13	372	15.86	16522	704.23
	Tamworth Regional	1178	18.84	1011	16.17	41603	665.21
	Tenterfield	47	7.13	33	5	1971	298.91
	Upper Hunter Shire	212	14.95	151	10.65	7419	523.2
	Uralla	52	8.65	66	10.98	2308	383.9
	Walcha	40	12.76	34	10.85	1673	533.82
	LHD Total ²	21514	22.59	16347	17.16	666945	700.29
	Kiama	914	39.08	666	28.48	20607	881.17
Illawarra	Shellharbour	3918	53.5	1758	24.01	61416	838.64
Shoalhaven	Shoalhaven	2648	25.06	1793	16.97	68052	644.14
	Wollongong <i>LHD Total</i> ²	10593 18073	48.57 43.07	5692 9909	26.1 23.61	196362 346437	900.27 825.61
	Bellingen	208	43.07	158	12.16	7296	561.4
	Coffs Harbour	1077	13.94	903	11.69	37873	490.09
Mid North	Kempsey	551	18.52	383	12.88	16435	552.53
Coast	Nambucca	297	15	188	9.49	8889	448.83
	Port Macquarie-Hastings	1629	19.27	1313	15.53	49606	586.88
	LHD Total ²	3762	16.67	2945	13.05	120099	532.2
	Albury	1563	28.76	1034	19.02	34842	641.03
Murrumbidgee	Berrigan	61	6.97	83	9.49	2980	340.57
	Bland	72	12.06	57	9.54	2560	428.67

COVID-19 WEEKLY SURVEILLANCE IN NSW Epidemiological week 28, ending 17 July 2021

				ending		Total since January 2021			
		17	'-Jul	10	-Jul	TOTAL SILICE	,		
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population		
	Carrathool	47	16.79	19	6.79	628	224.37		
	Coolamon	96	22.11	63	14.51	2319	534.21		
	Cootamundra-Gundagai Regional	253	22.52	168	14.95	5638	501.82		
	Edward River	162	17.83	103	11.34	4142	455.97		
	Federation	241	19.38	211	16.97	5576	448.34		
	Greater Hume Shire	652	60.57	130	12.08	6287	584.08		
	Griffith	499	18.46	534	19.76	16701	617.89		
	Hay	93	31.54	34	11.53	956	324.18		
	Hilltops	315	16.84	263	14.06	9722	519.78		
	Junee	71	10.62	63	9.43	2624	392.64		
	Lachlan ¹	61	10.04	59	9.71	1610	265.02		
	Leeton	171	14.94	136	11.88	4840	422.89		
	Lockhart	63	19.18	39	11.87	1446	440.18		
	Murray River	69	5.69	74	6.11	1543	127.33		
	LHD Total ²	62	15.83	50	12.76	1439	367.37		
	Narrandera	81	13.73	43	7.29	1937	328.36		
	Snowy Valleys	235	16.23	164	11.33	7223	498.86		
	Temora	66	10.46	47	7.45	2128	337.4		
	Wagga Wagga	1705	26.13	1334	20.44	49017	751.13		
	LHD Total ²	6598	22.13	4674	15.68	165080	553.76		
	Blue Mountains	5182	65.5	2130	26.92	86003	1087.02		
	Hawkesbury	6494	96.5	1698	25.23	60928	905.37		
Nepean Blue	Lithgow	413	19.12	237	10.97	10980	508.22		
Mountains	Penrith	16946	79.57	6550	30.75	203872	957.25		
	LHD Total ²	28598	73.14	10422	26.66	358616	917.2		
	Ballina	597	13.38	504	11.29	37375	837.48		
	Byron	613	17.47	520	14.82	29569	842.88		
	Clarence Valley	614	11.88	400	7.74	20934	405.21		
	Kyogle	101	11.48	67	7.62	3393	385.74		
Northern NSW	Lismore	736	16.85	528	12.08	29273	669.99		
	Richmond Valley	595	25.36	229	9.76	13164	561.01		
	Tenterfield	47	7.13	33	5	1971	298.91		
	Tweed	1266	13.05	1000	10.31	48214	497.05		
	LHD Total ²	4533	14.61	3255	10.49	182364	587.58		
	Hornsby	6275	41.27	4433	29.15	141245	928.88		
	Hunters Hill	1577	105.27	1264	84.38	33187	2215.42		
	Ku-ring-gai	7809	61.41	5255	41.33	185951	1462.42		
	Lane Cove	3621	90.18	2805	69.85	90790	2260.99		
Northorn	Mosman	1515	48.9	1183	38.18	38567	1244.86		
Northern Sydney	North Sydney	3071	40.94	2443	32.56	72298	963.7		
	Northern Beaches	18087	66.13	10349	37.84	446022	1630.8		
	Parramatta ¹	13622	52.96	11657	45.32	218462	849.4		
	Ryde	7516	57.26	6164	46.96	143603	1093.94		
	Willoughby	3092	38.08	2344	28.87	73914	910.39		
	villougriby	5032	50.00	20 44	20.07	10314	910.09		

COVID-19 WEEKLY SURVEILLANCE IN NSW Epidemiological week 28, ending 17 July 2021

			Week e	nding			
		17	-Jul		-Jul	Total since	January 2021
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	LHD Total ²	54697	57.22	37951	39.7	1269323	1327.86
	Bayside	12842	71.99	9357	52.45	159392	893.47
	Georges River	13356	83.75	9518	59.68	132755	832.47
	Randwick	12036	77.33	17504	112.46	234850	1508.84
South Eastern	Sutherland Shire	19836	86.01	13362	57.94	254879	1105.23
Sydney	Sydney ¹	20430	82.93	14031	56.96	338351	1373.5
	Waverley	6145	82.71	6051	81.45	140362	1889.25
	Woollahra	4586	77.22	4414	74.33	113013	1902.99
	LHD Total ²	75174	78.38	64848	67.61	1157849	1207.22
	Camden	13201	130.14	4409	43.47	131304	1294.44
	Campbelltown	12647	73.98	6610	38.67	168375	984.98
	Canterbury-Bankstown ¹	27616	73.07	18428	48.76	311046	823.05
South Western	Fairfield	60517	285.87	10096	47.69	182099	860.2
Sydney	Liverpool	21599	94.91	9124	40.09	206632	907.93
	Wingecarribee	2394	46.82	1196	23.39	50196	981.66
	Wollondilly	2634	49.56	1040	19.57	34998	658.49
	LHD Total ²	127801	123.06	41232	39.7	924640	890.33
	Bega Valley	539	15.63	496	14.39	17806	516.48
	Eurobodalla	628	16.32	545	14.17	25581	664.91
	Goulburn Mulwaree	1286	41.31	447	14.36	20089	645.28
Southern NSW	Queanbeyan-Palerang Regional	914	14.96	755	12.36	26408	432.21
Southern NSVV	Snowy Monaro Regional	403	19.38	388	18.66	11758	565.42
	Upper Lachlan Shire	227	28.17	110	13.65	4425	549.08
	Yass Valley	221	12.93	139	8.13	6443	377.07
	LHD Total ²	4220	19.44	2886	13.3	112568	518.58
	Burwood	1745	42.97	1683	41.44	29375	723.31
	Canada Bay	5274	54.9	4107	42.75	110299	1148.06
	Canterbury-Bankstown ¹	27616	73.07	18428	48.76	311046	823.05
Sydney	Inner West	11832	58.92	10176	50.67	250743	1248.65
	Strathfield	3288	70.07	2962	63.12	52094	1110.13
	LHD Total ²	20430	82.93	14031	56.96	338351	1373.5
	LHD Total ²	48754	69.97	37874	54.36	813051	1166.89
	Bathurst Regional	1043	23.91	764	17.52	31697	726.7
	Blayney	136	18.43	138	18.7	5121	694
	Bogan	30	11.63	21	8.14	1283	497.29
	Bourke	36	13.9	30	11.58	1046	403.86
	Brewarrina	22	13.66	8	4.97	477	296.09
	Cabonne	306	22.44	139	10.2	5620	412.2
Western NSW	Cobar	52	11.16	43	9.23	1787	383.64
	Coonamble	61	15.41	60	15.16	1505	380.24
	Cowra	170	13.34	181	14.2	6005	471.24
	Dubbo Regional	865	16.1	822	15.3	33182	617.7
	Forbes	104	10.5	98	9.89	4238	427.82
	Gilgandra	34	8.02	50	11.8	1587	374.38
	Lachlan ¹	61	10.04	59	9.71	1610	265.02

Epidemiological week 28, ending 17 July 2021

			Week	ending		Total since	January 2021
		17	-Jul	10	-Jul	Total Since	January 2021
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Mid-Western Regional	597	23.64	345	13.66	14821	586.95
	Narromine	85	13.04	72	11.05	3024	464.02
	Oberon	86	15.89	42	7.76	2689	496.95
	Orange	1093	25.75	887	20.89	36253	854
	Parkes	203	13.68	158	10.65	6827	460.13
	Walgett	87	14.61	57	9.58	2362	396.77
	Warren	62	22.99	57	21.13	2139	793.1
	Warrumbungle Shire	117	12.61	106	11.42	4502	485.23
	Weddin	49	13.56	29	8.03	1403	388.32
	LHD Total ²	5284	18.54	4152	14.57	168739	592.04
	Blacktown	24644	65.81	11849	31.64	344857	920.97
	Cumberland	20073	83.11	10960	45.38	226467	937.67
Western Sydney	Parramatta ¹	13622	52.96	11657	45.32	218462	849.4
Cyuncy	The Hills Shire	13269	74.56	8298	46.63	232760	1307.87
	LHD Total ²	70168	66.61	41369	39.27	987414	937.33
NSW Total ³		499760	61.78	297328	36.75	3856317	476.69

Source - Notifiable condition information management System, accessed as at 8pm 18 Jul 2021

https://www.health.nsw.gov.au/Infectious/covid-19/Pages/counting-tests.aspx for detail on how tests are counted.

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

Appendix B: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 11 July 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 2020-11 July 2021

Specimen collection	PCR tests	Influenza A		Influ	ienza B	Adeno-	Para-	RSV	Rhino-	HMPV	Entero-
date	conducted	No.	%Pos.	No.	%Pos.	virus	influenza	KSV	virus	пічіРУ	virus
Total	1,082,506	4	<0.01%	9	<0.01%	5,474	15,543	15,455	51,579	1,795	5,784
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	<0.01%	1,551	7,104	2,794	9,915	635	811
Week ending											
4 July	116,414	0	-	0	-	448	1,995	994	2,018	422	185
11 July	88,691	0	-	0	-	385	1,252	953	1,424	549	160

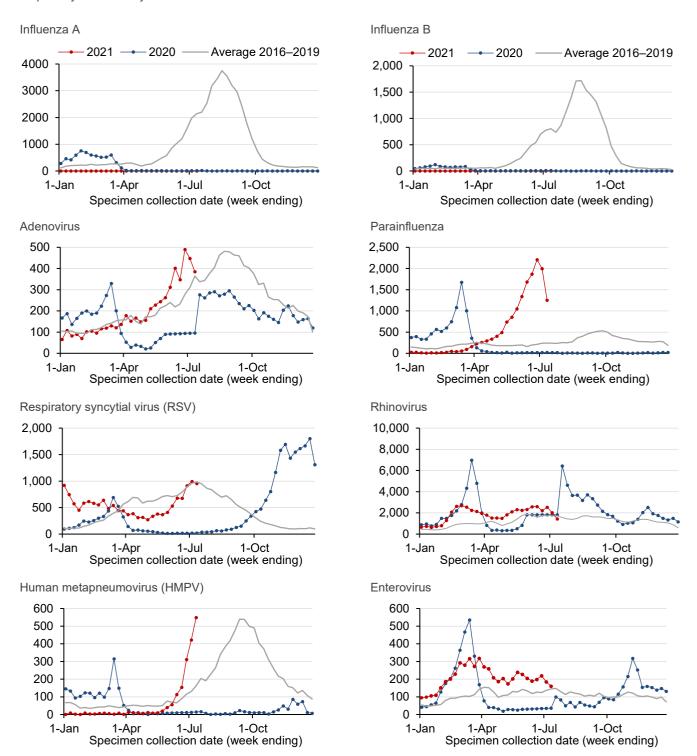
Notes: Preliminary laboratory data is provided by participating sentinel laboratories on a weekly basis and are subject to change. Serological diagnoses are not included.

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 11 July 2021

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.



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: SARS-CoV-2 testing in sewage samples collected in the previous 10 weeks, week ending 17 July 2021

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. Charlotte Pass has recommenced sampling. The table below shows results for the last 10 weeks of samples collected across all sites in NSW.

Sydney Sites		15- May	22- May	29- May	5- June	12- June	19- June	26- June	3- July	10- July	17- July
Рор.	Location	19	20	21	22	23	24	25	26	27	28
60, 514	Blue Mountains (Winmalee)										
4,681	North Richmond										
13,052	Richmond										
110,114	Penrith										
12,000	Lithgow										
19,000	South Windsor										
8,000	McGraths Hill										
69,245	Warriewood										
1,241	Brooklyn										
31,924	Hornsby Heights										
57,933	West Hornsby										
318,810	Bondi										
233,176	Cronulla										
1,857,740	Malabar 1										
	Malabar 2										
181,005	Liverpool										
98,743	West Camden										
6,882	Wallacia										
14,600	Picton										
161,200	Glenfield										
1,341,986	North Head										
26,997	Castle Hill Cattai										
	Castle Hill Glenhaven										
163,374	Quakers Hill										
119,309	Rouse Hill										
37,61	Riverstone										
163,147	St Marys										
73,686	Shellharbour										
55,000	Wollongong										
68,000	Port Kembla										
93,000	Bellambi										

COVID-19 WEEKLY SURVEILLANCE IN NSW

Epidemiological week 28, ending 17 July 2021

Sydney Netw	ork Sites	15- May	22- May	29- May	5- June	12- June	19- June	26- June	3- July	10- July	17- July
Network	Location	19	20	21	22	23	24	25	26	27	28
Bondi	Paddington Sewage Network										
Bondi	Rozelle Sewage Network										
Cronulla	Caringbah Sewage Network										
Cronulla	Miranda Sewage Network										
Malabar	Earlwood Sewage Network										
Malabar	Marrickville Sewage Network 1										
Malabar	Marrickville Sewage Network 2										
Malabar	Bardwell Creek Sewage Network										
Malabar	Arncliffe Sewage Network 1										
Malabar	Arncliffe Sewage Network 2										
Malabar	Blakehurst Sewage Network										
Malabar	Padstow Sewage Network 1										
Malabar	Padstow Sewage Network 2										
Malabar	Fairfield SPS 1										
Malabar	Fairfield SPS 2										
Malabar	Homebush SPS										
Malabar	Olympic Park										
Malabar	Croydon Sewage Network										
Malabar	Dulwich Hill Sewage Network										
Malabar	Canterbury Sewage Network										
Malabar	Botany Sewage Network										
Malabar	Maroubra Sewage Network										
North Head	Camellia SPS - North										
North Head	Camellia SPS - South										
North Head	Auburn Sewage Network										
North Head	Northmead SPS										
North Head	Northmead Sewage Network										
North Head	Tunks Park Sewage Network										
North Head	Vineyard Creek Sewage Network										
North Head	Boronia Park Sewage Network										
North Head	West Lindfield Sewage Network										
North Head	Lane Cove West Sewage Network										
North Head	Allambie Heights Sewage Network										
North Head	Buffalo Creek Reserve Sewage Network										
Glenfield	Minto Sewage Network										
Liverpool	Ireland Park Sewage Network										
Quakers Hill	Eastern Creek Sewage Network										
St Marys	Ropes Creek Sewage Network										

COVID-19 WEEKLY SURVEILLANCE IN NSW Epidemiological week 28, ending 17 July 2021

Regional Site	es	15- May	22- May	29- May	5- June	12- June	19- June	26- June	3- July	10- July	17- July
Pop.	Location	19	20	21	22	23	24	25	26	27	28
14,700	Bowral										
14,000	Mittagong										
9,000	Moss Vale										
1,000	Berrima										
2,000	Bundanoon										
900	Robertson										
16,68	Bombo										
7,200	Gerringong/Gerroa										
32,000	Ulladulla										
18,000	Bomaderry										
37,500	Nowra										
14,000	Vincentia										
16,000	St Georges Basin										
11,000	Cullburra Beach										
139,500	Gosford-Kincumber										
59,60	Charmhaven										
29,300	Wyong-Toukley										
38,900	Bateau Bay										
41,300	Woy Woy										
5,000	Perisher										
8,400	Thredbo										
3,000	Jindabyne										
8,000	Cooma										
500	Gunning										
500	Charlottes Pass										
	Albury composite	С	С	С	С	С	С	С	С	С	С
51,750	Albury Kremer St										
	Albury Waterview										
22,419	Goulburn										
21,000	Batemans Bay										
18,000	Moruya										
17,000	Narooma										
8,000	Eden										
15,500	Merimbula										
5,000	Bermagui										
7,800	Deniliquin										
48,000	Queanbeyan										
	Wagga Wagga composite	С	С	С	С	С	С	С	С	С	С
E0 000	Wagga Wagga- inlet 1										
50,000	Wagga Wagga- inlet 2										
	Wagga Wagga -Kooringal STP										
	Gundagai										
	Narrandera										

COVID-19 WEEKLY SURVEILLANCE IN NSW Epidemiological week 28, ending 17 July 2021

Regional Sites (con't)		15- May	22- May	29- May	5- June	12- June	19- June	26- June	3-July	10- July	17- July
Рор.	Location	19	20	21	22	23	24	25	26	27	28
	Griffith										
2,050	Bourke										
	Nyngan										
40,000	Orange										
12,000	Mudgee										
36,63	Bathurst										
	Forbes										
	Coonabarabran										
	Balranald										
19,000	Broken Hill										
500	Dareton										
1100	Buronga										
11,600	Parkes										
37,000	Dubbo										
24,000	Armidale										
45,000	Tamworth										
	Muswellbrook										
	Narrabri										
	Tenterfield										
	Urbenville										
10,000	Moree										
26,394	Taree										
12,000	Forster										
7,582	Hallidays Point										
5,180	Harrington										
10,715	Hawks Nest										
225,834	Hunter - Burwood Beach										
60,000	Hunter - Shortland										
115,000	Hunter - Belmont										
60,000	Hunter - Morpeth										
58,300	Hunter - Boulder Bay										
35,000	Hunter - Raymond Terrace										
32,000	Hunter - Dora Creek										
42,000	Hunter - Toronto										
70,000	Hunter - Edgeworth										
2,500	Hunter - Karuah										
3,000	Hunter -Dungog										
21,500	Hunter - Kurri Kurri										
32,000	Hunter - Cessnock										
40,000	Hunter - Farley										
32500	Lismore composite	С	С	С	С	С	С		С	С	С
17,000	East Lismore										
15,500	South Lismore										

Epidemiological week 28, ending 17 July 2021

Regional Sites (con't)		15- May	22- May	29- May	5- June	12- June	19- June	26- June	3-July	10- July	17- July
Pop.	Location	19	20	21	22	23	24	25	26	27	28
18,958	Byron Bay - Ocean Shores										
(both plants total)	Byron Bay										
2,000	Bangalow										
3,500	Mullumbimby										
31,104	Ballina										
7,700	Lennox Head										
16,000	Tweed - Murwillumbah										
75,000	Tweed - Banora Point										
25,000	Tweed - Kingscliff										
18,000	Tweed - Hastings Point										
18,550	Grafton composite	С	С	С	С	С	С	С	С	С	С
12,250	North Grafton										
6,300	South Grafton										
6,500	Yamba										
8,730	Nambucca Heads										
54,370	Port Macquarie										
7,010	Bonny Hills										
8,540	Dunbogan										
12,105	South West Rocks										
4,052	Crescent Head										
12,000	Urunga										
50,000	Coffs Harbour										

Sampling commenced week ending 18 July 2020
not sampled or analysed
SARS-CoV-2 not detected
SARS-CoV-2 detected
site moved to composite or ceased
c composite of the separate influent samples

result from network sites

Glossary

Term	Description
Case	A person infected who has tested positive to a validated specific SARS-CoV-2 nucleic acid test or has had the virus identified by electron microscopy or viral culture. Blood tests (serology) is only used in special situations following a public health investigation and require other criteria to be met in addition to the positive serology result (related to timing of symptoms and contact with known COVID-19 cases). Case counts include: - NSW residents diagnosed in NSW who were infected overseas or in Australia (in NSW or interstate), and - interstate or international visitors diagnosed in NSW who were under the care of NSW Health at the time of diagnosis
Health care workers	Individuals who work within a hospital or other healthcare settings, including staff in direct or indirect contact with patients or infectious materials.
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 sympton		Public health staff interview all cases at the time of diagnosis. This is the date provided to NSW Health by the case.
Person has a swab taken	Date of test	This date is provided to NSW Health by the laboratory when the test result (positive or negative) is notified.
Laboratory notifies NSW Health of result	Date of notification	This date is provided to NSW Health by the laboratory. Laboratories prioritise notification of positive results to allow prompt public health action. Positive cases: The date of notification is collected by NSW Health on the day of notification. Cases are informed of their diagnosis by their doctor or public health staff as soon as the result is available. The date of notification to NSW Health is usually the same day as the date the case finds out about the result. Negative cases: Some laboratories notify NSW Health of negative results in batches at regular intervals. For these laboratories the date of notification to NSW Health does not reflect the date the negative result was available at the laboratory. NSW Health does not collect information on the date the person was informed of the result.