

COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 27, ENDING 10 July 2021

Published 19 July 2021

Overview

Table 1. Number and proportion of COVID-19 cases in NSW by likely source of infection to week ending 10 July 2021

	2020		2021		
	Jan – Jun	July – Dec	year to date	last 4 weeks	last 7 days
			1 Jan - 10 Jul	13 Jun - 10 Jul	04 Jul - 10 Jul
Locally acquired	1,236 (39%)	808 (52%)	652 (48%)	601 (89%)	314 (97%)
Interstate acquired	67 (2%)	23 (1%)	1 (<1%)	1 (<1%)	0
Overseas acquired	1,892 (59%)	714 (46%)	697 (52%)	70 (10%)	11 (3%)
Total	3,195 (100%)	1,545 (100%)	1,350 (100%)	672 (100%)	325 (100%)
Deaths	52	4	1	1	1

Summary for the week ending 10 July 2021

- There were 314 locally acquired cases reported in the week ending 10 July 2021 and associated with the current Greater Sydney outbreak. Of these:
 - 62 cases had direct contact with other cases in the Eastern Suburbs cluster
 - 41 cases associated with a small gathering in a hotel in Waterloo
 - 7 cases associated with an aged care facility in Baulkham Hills
 - 2 cases associated with a place of worship in Lidcombe
 - 1 case associated with a workplace in Banksmeadow
 - 148 cases linked to a known case who is not directly linked to a cluster
 - 53 cases not currently linked to any other cases
- There were 11 cases reported in overseas returned travellers in the last week (down 59%).
- There was one death reported this week in a woman in her 90s reported with COVID-19.
- In the four weeks ending 10 July 2021, 100% (352/352) of locally acquired cases were sequenced and were the Delta variant of concern and 51% (36/70) of overseas acquired cases sequenced have been identified as having COVID-19 variants of concern [Alpha (B.1.1.7), Beta (B.1.351), Gamma (P.1) and Delta/Kappa (B.1.617)]. Not all case samples can be sequenced.
- Since March 2021, 10 (2%) of locally acquired cases have reported being fully vaccinated. Sixteen (3%) overseas acquired COVID-19 cases self-reported being fully vaccinated prior to arrival in Australia.
- Testing rates were high but decreased or remained steady across Local Health Districts compared to the previous week (down 26%) following a surge of testing in the previous fortnight in response to the outbreak.
- In the week ending 10 July, 173 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 46 detections taken from the sewage treatment sites (including pumping stations) in Bateau Bay, Penrith, Hornsby Heights, Bondi, Cronulla, Malabar, Liverpool, Glenfield, North Head, Castle Hill – Cattai, Paddington, Caringbah, Botany, Earlwood, Marrickville 1, Marrickville 2, Blakehurst, Arncliffe 1, Arncliffe 2, Padstow 1, Padstow 2, Fairfield 1, Fairfield 2, Dulwich Hill, Canterbury, Maroubra, Homebush, Ireland Park, Tunks Park, Camellia South, Camellia North, Northmead, Vineyard Creek, Boronia Park, Minto and Port Kembla.

No active cases were identified in the Castle Hill - Cattai catchment at the time. These detections may be due to undetected cases, the movement of cases in neighbouring areas whilst unknowingly infectious or the presence of people in the community who have recently been infected with the virus that causes COVID-19 but may no longer be infectious. People can continue to shed fragments of the virus for several weeks. All other catchments were associated with known cases in the area.

Indicators of effective prevention for COVID-19 in NSW for the week ending 10 July 2021

Cases risk of community exposure

A case is assigned a risk level based on an initial assessment of a case's community exposures during their infectious period i.e. two days before symptom onset (or specimen collection date if asymptomatic) until the date NSW Health is notified.

- **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	10-Jul	9-Jul	8-Jul	7-Jul	6-Jul	5-Jul	4-Jul	Total Week ending 10 July
Low risk	32	13	14	18	13	11	24	125 (43%)
Medium risk	10	11	10	9	7	5	4	56 (19%)
High risk	35	26	20	11	7	2	7	108 (37%)
Total	77	50	44	38	27	18	35	289(100%)

Interpretation: In the week ending 10 July, 43% of total cases reported this week had low risk of community exposures, 19% had medium risk and 37% had high risk of community exposures.

Measures of Public Health Action

	Week ending 10 July	Week ending 03 July
Proportion locally acquired cases notified to NSW Health by the laboratory within 24 hours	99% (312/314)	88% (150/171)
Locally acquired cases interviewed by public health staff within 1 day of notification to NSW Health	100%	100%
Close contacts (identified by the case) contacted by public health within 48 hours of case notification	100%	100%

Interpretation: In the week ending 10 July, 99% of cases were notified to NSW Health within a day of test, 100% of cases were interviewed within 1 day of notification and all close contacts were contacted by public health within 48 hours 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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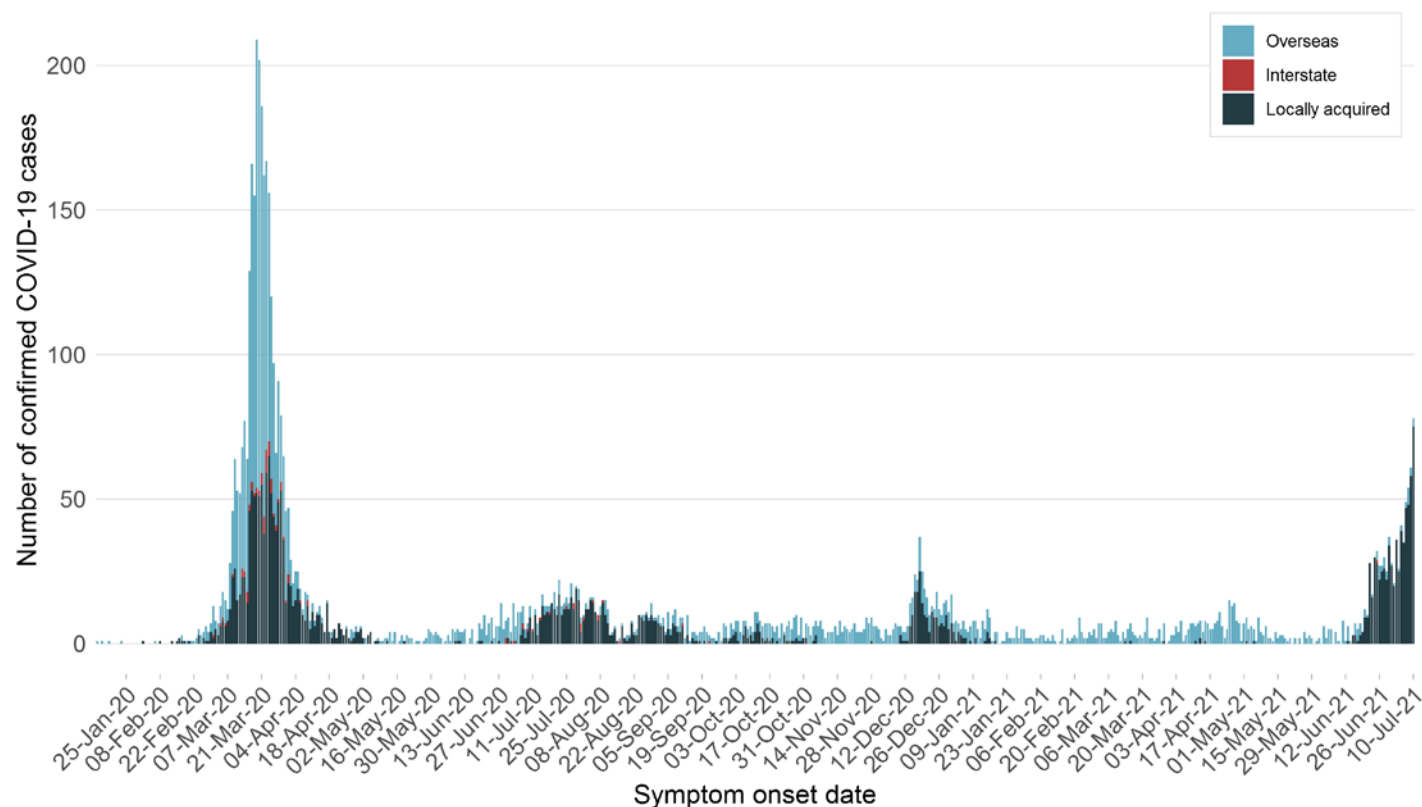
COVID-19 Vaccination program

- Australian Government Department of Health reports the number of vaccine doses administered across Australia — [Daily COVID-19 vaccine rollout numbers](#)
- 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 10 July 2021



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

Interpretation: Between 13 January 2020 and 10 July 2021, there were 6,090 confirmed COVID-19 cases. Of those, 2,696 (44%) were locally acquired, 91 (2%) were interstate acquired and 3,303 (54%) 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 10 July 2021

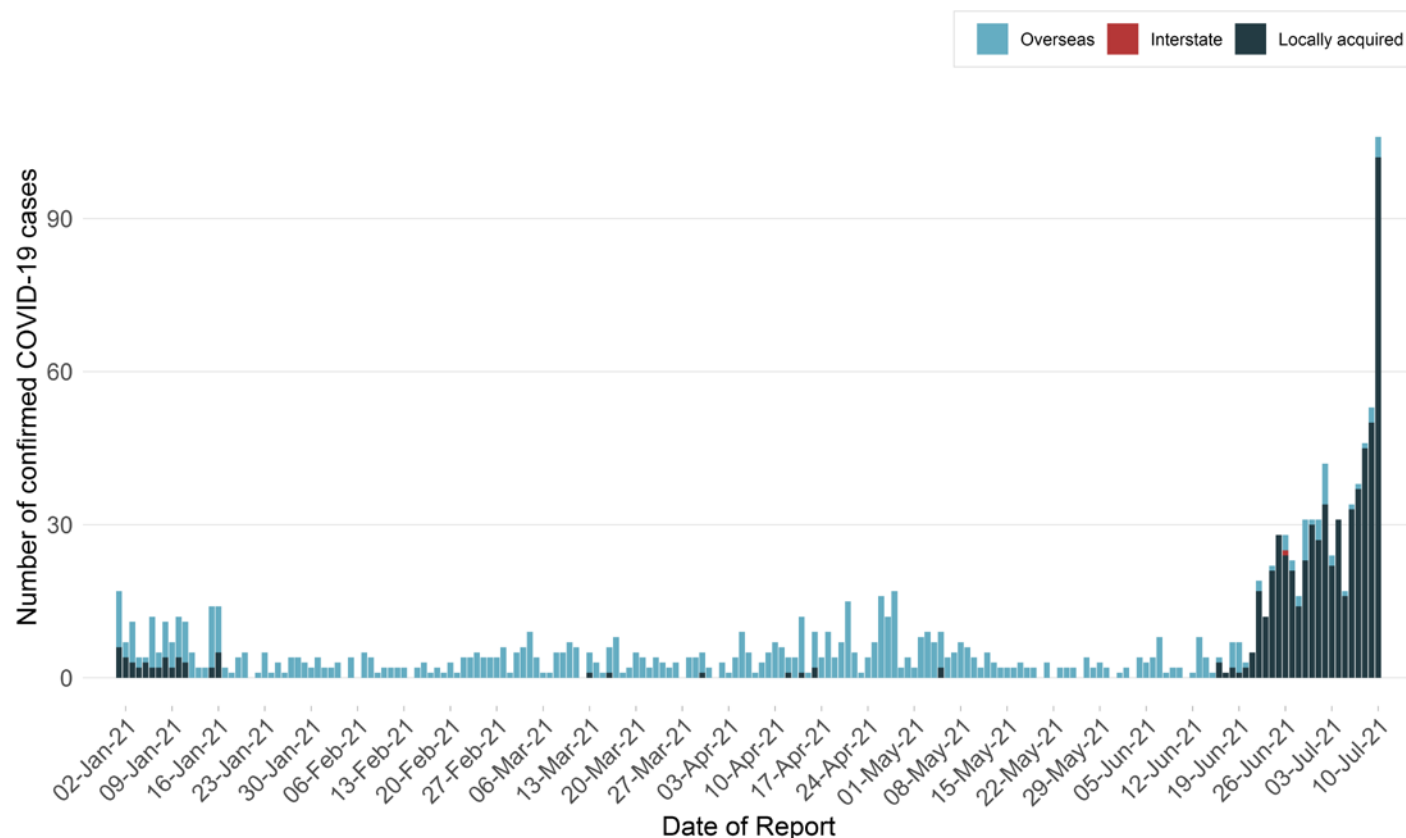


Table 2. COVID-19 cases and tests reported, NSW, from 1 January 2021 to 10 July 2021

	Week ending 10 Jul	Week ending 03 Jul	% change	Total 2021
Number of cases	325	198	64 %	1,350
Locally acquired	314	171	84 %	652
Known epidemiological links to other cases or clusters	261	162	61 %	580
No epidemiological links to other cases or clusters	53	9	489 %	72
Overseas acquired	11	27	-59 %	697
Interstate acquired	0	0	-	1
Number of tests	296,389	399,345	-26 %	3,356,889

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

Interpretation: The majority of cases reported in the last four weeks in NSW were locally acquired (601/671, 90%). All locally acquired cases had the same Delta variant of concern genetic sequence. Of the 314 locally acquired cases associated with the Greater Sydney outbreak reported in the week ending 10 July 2021, 62 cases were directly linked to cases in the Eastern Suburbs cluster. The remaining cases are not known to have direct links to cases in the Eastern Suburbs cluster, including:

- 41 cases associated with a small gathering in a hotel in Waterloo
- 7 cases associated with an aged care facility in Baulkham Hills
- 2 cases associated with a place of worship in Lidcombe
- 1 case associated with a workplace in Banksmeadow
- 148 cases linked to known cases not directly linked to other clusters
- 53 cases not currently linked to any other cases

There were 11 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, 19 June to 10 July 2021

Local Health District	Week ending				Total	Days since last case reported
	10 Jul	03 Jul	26 Jun	19 Jun		
Central Coast	1	2	0	0	3	0
Illawarra Shoalhaven	0	1	3	2	6	10
Nepean Blue Mountains	7	0	0	0	7	0
Northern Sydney	4	6	2	0	12	6
South Eastern Sydney	74	80	62	4	220	0
South Western Sydney	164	35	26	0	225	0
Sydney	34	25	13	1	73	0
Western Sydney	30	22	3	0	55	0
Far West	0	0	0	0	0	464
Hunter New England	0	0	0	0	0	85
Mid North Coast	0	0	0	0	0	445
Murrumbidgee	0	0	0	0	0	306
Northern NSW	0	0	0	0	0	102
Southern NSW	0	0	0	0	0	264
Western NSW	0	0	0	0	0	345
NSW*	314	171	109	7	601	0

*Includes people with a usual place of residence outside of NSW

Interpretation: There were 314 locally acquired cases reported in the week ending 10 July. The majority of cases were residents of South Western Sydney LHD (164, 52%) followed by South Eastern Sydney LHD (74, 24%), and Sydney (34, 11%).

Section 3: Current COVID-19 clusters in NSW

Public health staff interview all new cases at the time of diagnosis to identify the likely source of their infection. Cases are also asked to report all the locations visited and people with whom they have been in contact within their infectious period (generally two days prior to symptom onset until the time of isolation and three days in high-risk settings). Close contacts are quarantined to limit the spread of infection to others and encouraged to seek testing.

Clusters are defined as a group of two or more cases (who don't reside in the same household) that are infected with the same virus (with the identical genetic sequence) that are linked epidemiologically to each other. This means that a direct source of infection can be identified for each case in the cluster, through contact with a known case where transmission likely occurred.

A case that shares the same virus (with an identical genetic sequence) is not counted as part of the cluster if an epidemiological link to another case in the cluster has not been found. Although the case must have been infected through contact with an infectious person in the cluster, that contact or that infectious person has not been found.

Cases in community settings

Of the 314 locally acquired cases associated with the Greater Sydney outbreak reported in the last week, 122 cases were epidemiologically linked to recent clusters. Of these, 62 cases were in direct contact with other cases in the Eastern Suburbs, 41 cases were linked to the Waterloo hotel cluster, 7 cases were linked to an aged care facility in Baulkham Hills, 2 cases were linked to a place of worship in Lidcombe, and 1 case were linked to a workplace in Banksmeadow. A further 148 cases were linked to previously reported cases not linked to a cluster and 53 cases are under investigation.

Eastern Suburbs cluster

On 16 June 2021, South Eastern Sydney Public Health Unit was notified of a case of COVID-19 in a resident of the Eastern Suburbs who worked as a hire car driver transporting overseas travellers from Sydney International Airport to hotel quarantine. The source of infection was unknown. On the same day, two further cases were reported in a household contact of the driver and a resident of Sydney Local Health District who was at a café in Vaucluse at the same time as the driver.

In the week ending 10 July there were 62 cases directly epidemiologically linked to other cases in the outbreak, with 290 cases linked to the cluster since June 16. Of the 290 cases reported, 129 are associated with transmission at public exposure locations and one private event, 113 cases were household contacts and 48 were social contacts of previously reported cases. Whole genome sequencing results show the variant associated with this cluster is the Delta strain (B.1.617.2). Investigation of the source of the driver's infection could not identify the individual source of his infection.

Cases associated with this cluster attended many public venues across Greater Sydney including pubs, restaurants, gyms, hair salons, healthcare facilities and schools. To limit the spread of COVID-19, NSW Health have issued multiple public health alerts to people who may have been exposed. The list of venues attended by cases is published on the [NSW Government website](#).

Waterloo cluster

On 3 July 2021, South Western Sydney Public Health Unit was notified of six cases of COVID-19 associated with a small gathering in a hotel in Waterloo. Three of the six cases attended the event at the hotel including one case who later infected their three household contacts. In the week ending 10 July there were 41 cases linked to this cluster. In total, there are 51 cases linked to this cluster including seven cases who attended the hotel, 32 household contacts and 19 social contacts. In response, NSW Health issued a media release advising guests, staff and contractors, who were on any level of the hotel at the time to get tested and isolate. The source for this cluster remains under investigation.

Aged care facility cluster, Baulkham Hills

On 30 June 2021 Western Sydney Public Health Unit was notified of a case in an aged care worker who worked at an aged care facility in Baulkham Hills. The source of infection was a family member linked to a previously reported case whose source remains under investigation. The aged care worker worked for three days whilst unknowingly infectious. Testing of close contacts including residents and staff identified a further case in a household contact, who also worked at the facility as an aged care worker, and three residents. In the week ending 10 July there are seven cases linked to this cluster. Excluding the source, an aged care worker and their household contact, there are 10 cases linked to this cluster. Of the ten cases, four cases are in aged care

workers who acquired their infection at the facility and six cases are in residents. All infected residents have been transferred to hospital for close monitoring and isolation purposes. Five of the six residents were fully vaccinated.

Community Centre cluster, Lidcombe

On 29 June 2021, Western Sydney Public Health Unit was notified of two cases who attended a religious community centre in Lidcombe on the evening of the 25 June 2021. The source of infection was a previously identified case whose source of infection remains under investigation. Two household contacts were subsequently notified. In the week ending 10 June there were two people linked to this cluster who were household contacts of a previously report case. Extensive contact tracing has not uncovered any further transmission associated with the venue. Excluding the source, there are six cases associated with this cluster including two cases who acquired their infection at the community centre and four household contacts.

Workplace cluster, Banksmeadow

On 26 June, Sydney Public Health Unit was notified of a single case who worked at a factory in Banksmeadow. In the following days a second worker from the factory and the household contact of the original worker were also notified. Excluding the source, who is not linked to a known case or cluster, there are four cases linked to this cluster including 2 cases who acquired their infection at the workplace and two household contacts.

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.

Since the beginning of the pandemic in January 2020, there have been 54 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 six locally acquired cases of COVID-19 reported in HCWs in the week ending 10 July 2021. Of the six cases, one was partially vaccinated and five were not vaccinated.

In total there have been 71 cases of COVID-19 in health care workers since 1 August 2020. Of these, 32 HCWs were potentially infected in healthcare settings. A further 28 cases were social or household contacts of a known case, and for 11 cases the source of infection is unknown. 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 four cases in aged care workers in the week ending 10 July 2021 who acquired their infection working in an aged care facility in Baulkham Hills. Three of the four cases were partially vaccinated and one was not vaccinated.

Pregnant women

There was one case in a pregnant woman in the week ending 10 July 2021. Since January 2020, 47 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 are priority groups who are at a higher risk of COVID-19 including quarantine and border workers, frontline healthcare workers, and aged and disability care residents and staff. There are a range of vaccines, currently being administered 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. There is one single dose vaccine course currently being administered, the Johnson & Johnson vaccine in the USA.

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

- The number of cases reported as **fully vaccinated** refers to completion of the recommended course for the vaccine greater than 14 days prior to known exposure to COVID-19 or arrival in Australia.
- The number of cases reported as **partially vaccinated** refers to either:
 - the first dose of a two-dose vaccination being completed greater than 14 days prior to known exposure to COVID-19 or arrival in Australia, without receiving the second dose.
 - or, the second dose of a two-dose vaccination being completed within 14 days of known exposure to COVID-19 or arrival in Australia.
- The number of cases reported as single dose within 14 days refers to one dose of a two-dose vaccine (or single dose of Johnson & Johnson vaccine) being completed within 14 days of 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 10 July 2021

Number of self-reported vaccination doses received	Week ending				01 Mar-12 Jun	Total from 1 Mar 2021
	10 Jul	03 Jul	26 Jun	19 Jun		
Total locally acquired cases	314	171	109	7	9	610
Fully Vaccinated	1 (<1%)	7 (4%)	2 (2%)	0	0	10 (2%)
Partially Vaccinated	10 (3%)	3 (2%)	5 (5%)	1 (14%)	2 (22%)	21 (3%)
Single dose within 14 days	4 (1%)	1 (1%)	0	0	0	5 (1%)
Not vaccinated	288 (92%)	157 (92%)	99 (91%)	6 (86%)	7 (78%)	557 (91%)
Unknown/Missing	11 (4%)	3 (2%)	3 (3%)	0	0	17 (3%)

Table 4b. Interstate and overseas acquired COVID-19 cases by vaccination status and week reported, NSW, 1 March to 10 July 2021

Number of self-reported vaccination doses received	Week ending				01 Mar-12 Jun	Total from 1 Mar 2021
	10 Jul	03 Jul	26 Jun	19 Jun		
Total overseas acquired cases	11	27	7	25	418	488
Fully Vaccinated	0	3 (11%)	0	2 (8%)	11 (3%)	16 (3%)
Partially Vaccinated	2 (18%)	0	0	4 (16%)	18 (4%)	24 (5%)
Single dose within 14 days	0	0	0	0	0	0
Not vaccinated	4 (36%)	21 (78%)	8 (100%)	18 (72%)	377 (90%)	428 (88%)
Unknown /Missing	5 (46%)	3 (11%)	0	1 (4%)	12 (3%)	21 (4%)

Interpretation: Since 1 March 2021, there have been 10 (2%) locally acquired cases reported as being fully vaccinated and 21 (3%) cases partially vaccinated. Sixteen (3%) 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.

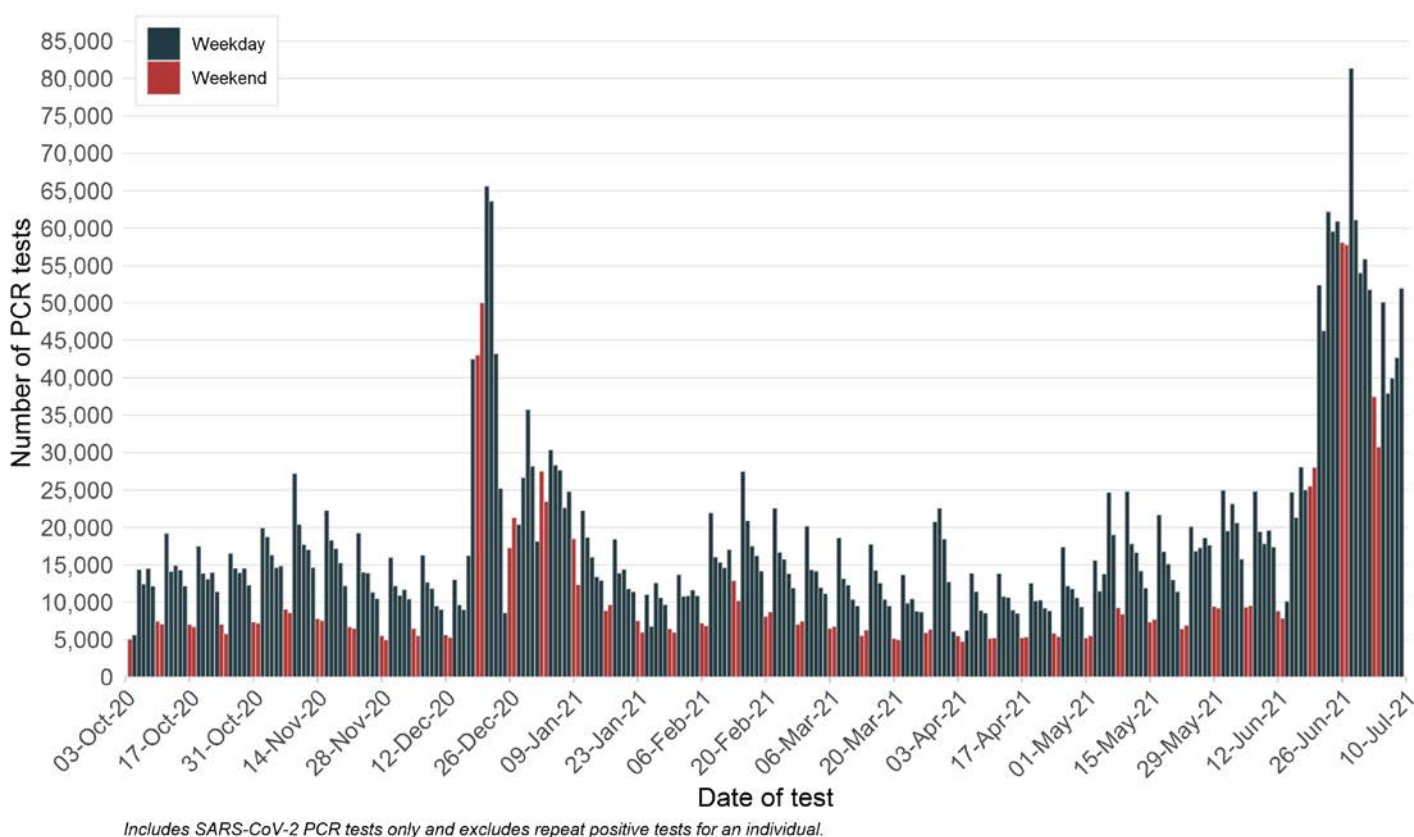
Section 6: COVID-19 testing in NSW

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.¹ 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 3. Number of PCR tests per day, NSW, 12 September 2020 to 10 July 2021

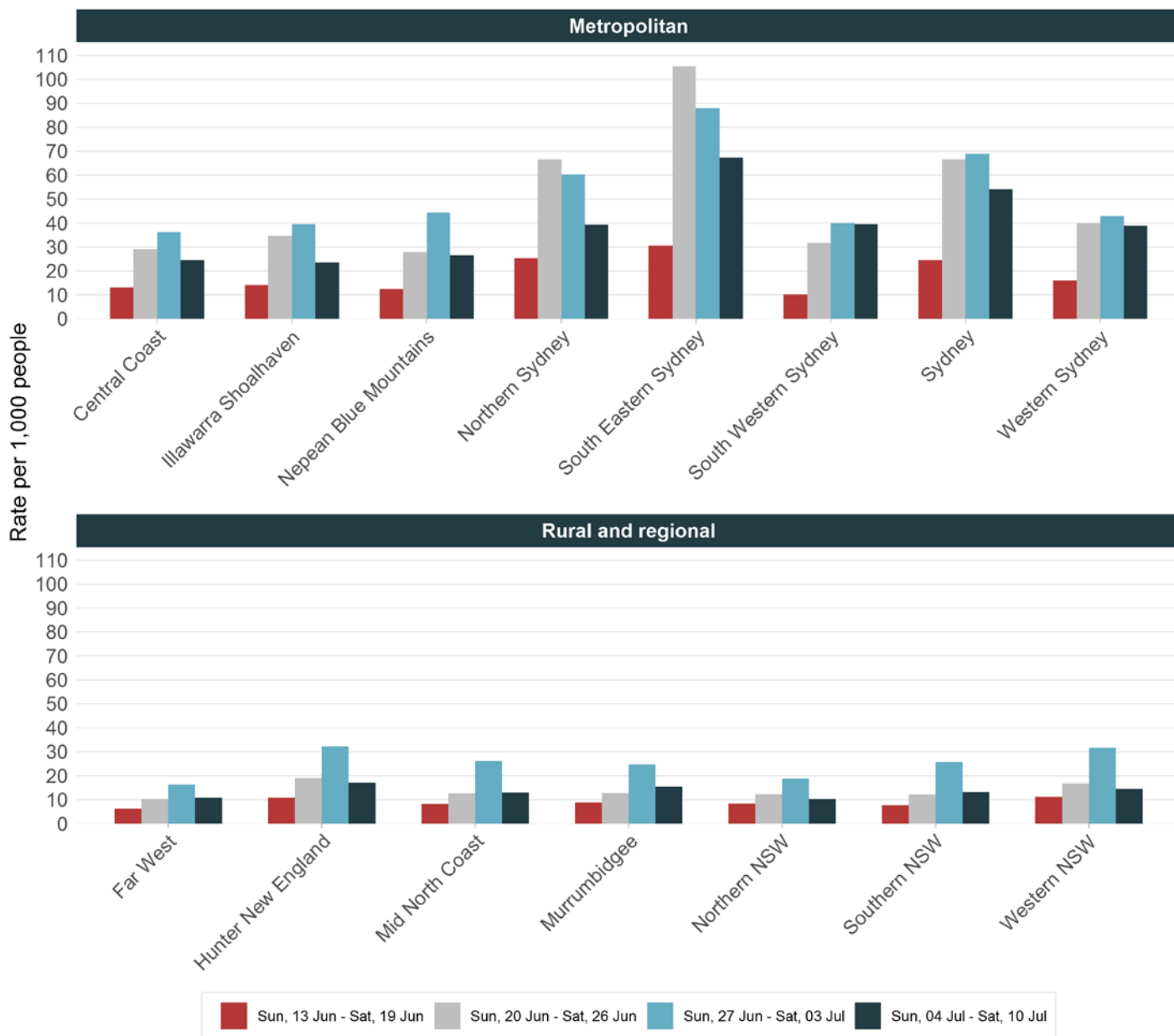


Interpretation: Testing numbers were high but decreased in the week ending 10 July 2021 (down 26%) compared to the previous week. The average daily testing rate of 5.2 per 1,000 people in NSW each day decreased compared to the previous week of 7.1 per 1,000 people.

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

Figure 4. Rates of COVID-19 testing by LHD of residence, NSW, 6 June to 10 July 2021

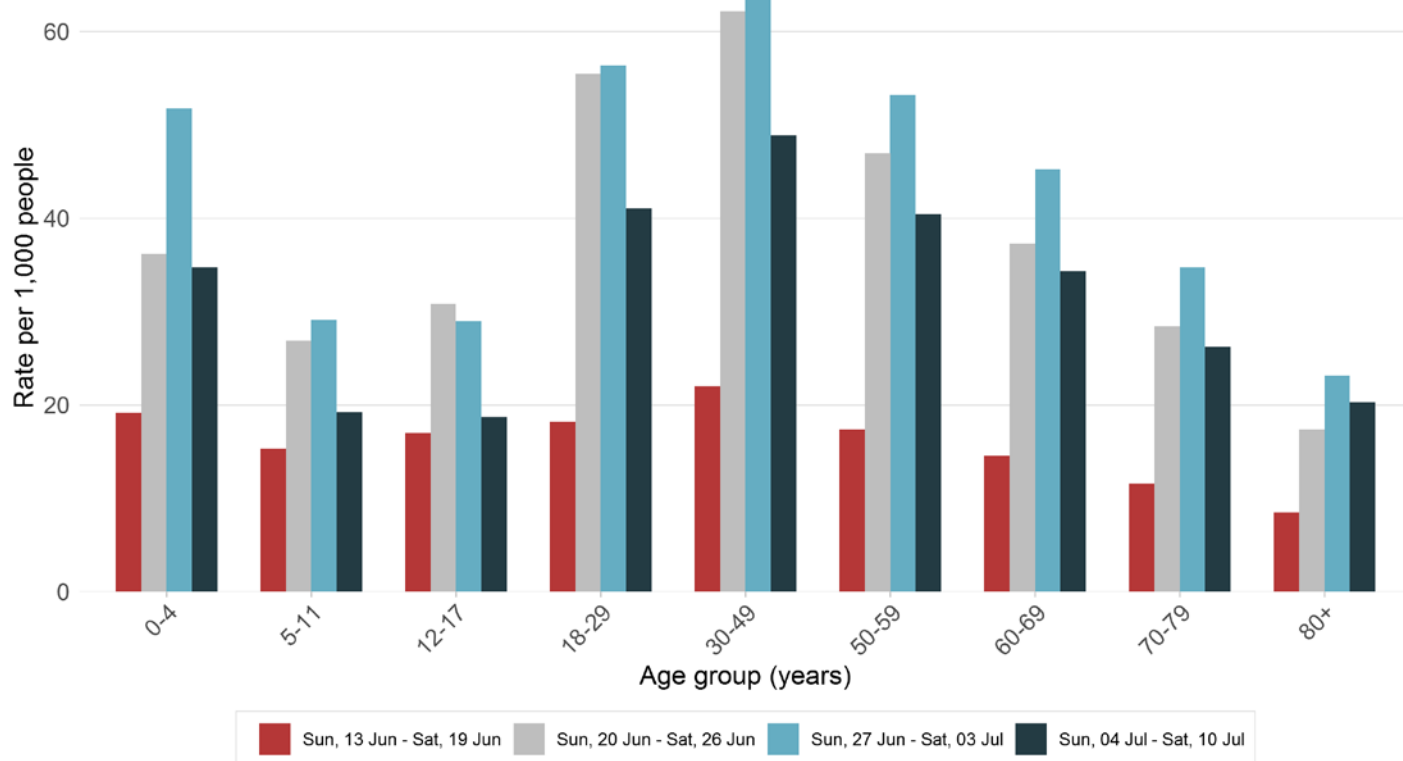


Includes SARS-CoV-2 PCR tests only and excludes notifications with missing postcode of residence.

Interpretation: State-wide weekly testing rates in the week ending 10 July decreased when compared to the previous week (36.6 per 1,000 people compared to 49.3 per 1,000 people). Testing rates decreased across all metropolitan and rural and regional Local Health Districts.

Testing by age group

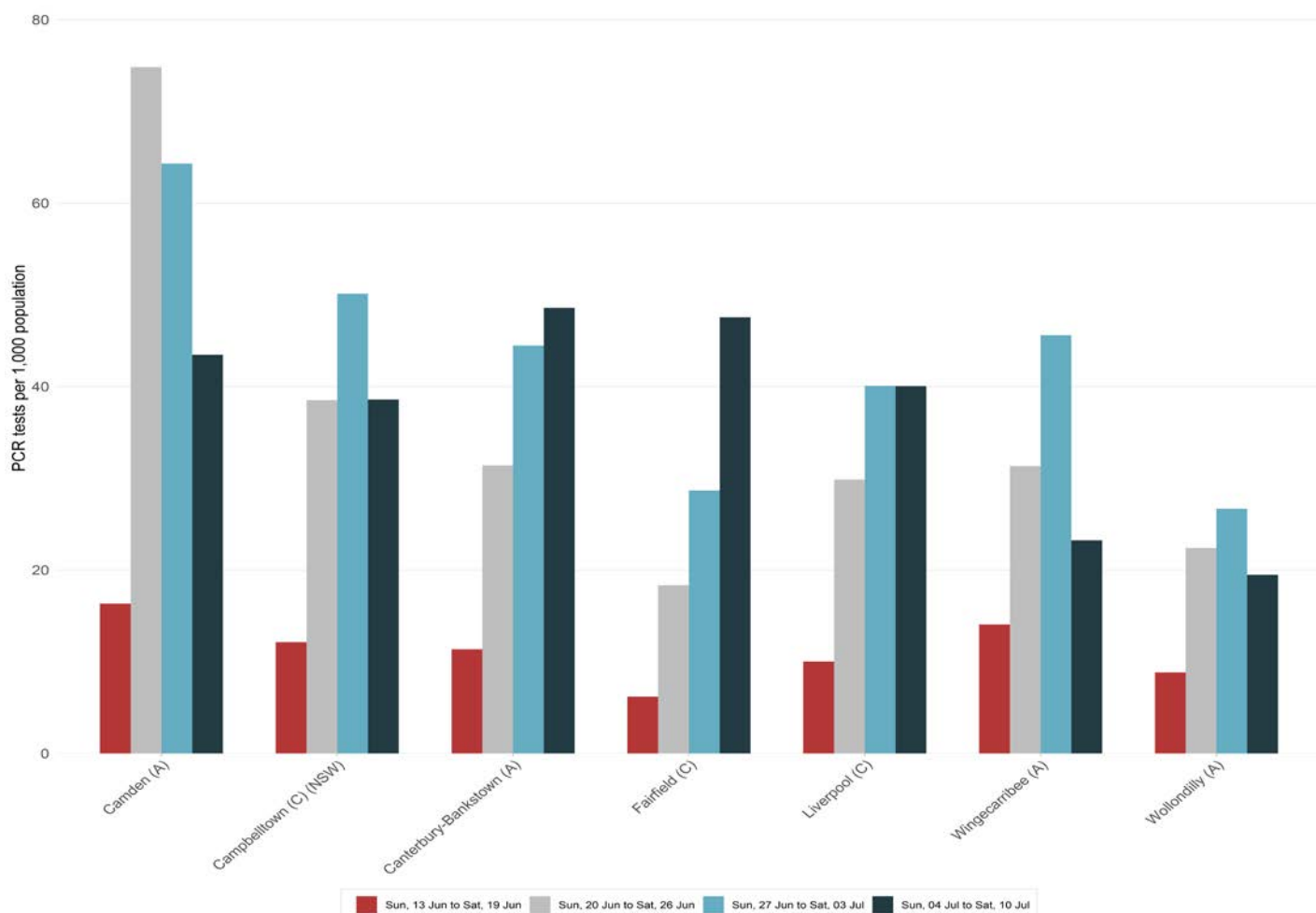
Figure 5. Rates of COVID-19 testing by age group and week, NSW, 6 June to 10 July 2021



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

Interpretation: In the week ending 10 July 2021, testing rates decreased across all age groups after a surge in testing in the previous fortnight in response to the emerging Eastern Suburbs cluster. The largest relative increase was in children aged under five years.

Figure 6. Rates of COVID-19 testing by LGA in South Western Sydney, NSW, 13 June to 10 July 2021

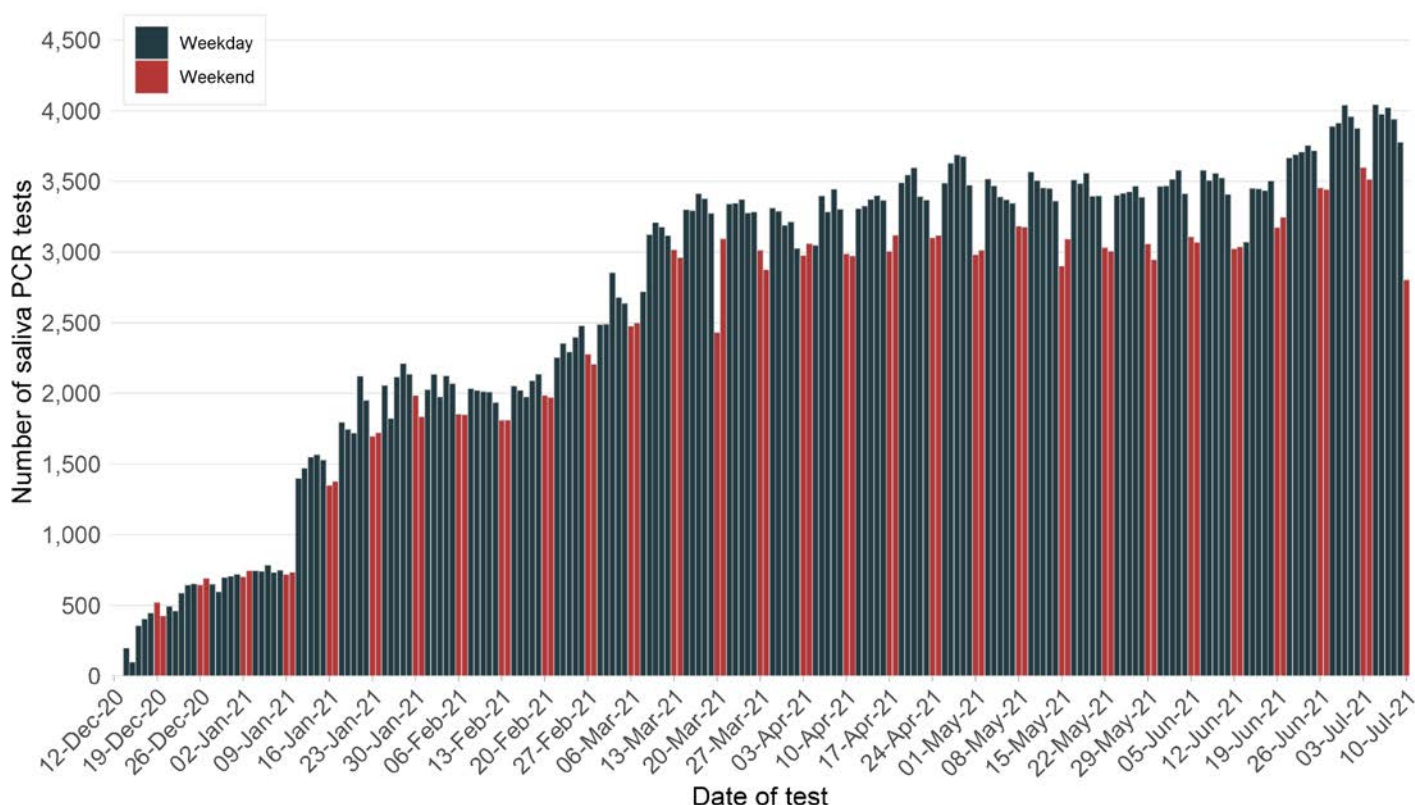


Interpretation: Testing rates have been elevated in seven LGAs across South Western Sydney for the third consecutive week in response to targeted public health messaging advising residents in the area to get tested. This was mainly driven by testing in Fairfield LGA where the rate increased significantly (47.8 tests per 1000 people compared with 28.7 per 1,000 last week respectively).

Border and quarantine workers – saliva testing screening program

As the number of COVID-19 cases rise across the world and more people return to Australia from overseas, increased numbers of COVID-19 cases are seen in returned overseas travellers 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 7. Daily numbers of saliva PCR test results reported for border and quarantine workers, NSW, 12 December 2020 to 10 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 547,028 saliva PCR tests have been conducted. 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 occur in regions that are critical to virus function, such as the spike protein. The spike protein allows the virus to enter human cells, which is why it is the target of many COVID-19 vaccines and part of our own immune response to the virus. Global surveillance is done to monitor the prevalence of mutations in the SARS-CoV-2 virus, with particular focus on those occurring in the spike protein 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 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). 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 10 July 2021, there have been:

- 352 locally acquired cases diagnosed with a VoC. All cases have been identified as having the Delta variant.
- 36 returned travellers diagnosed with a VoC. Of these:
 - 11 (31%) with the alpha variant
 - 5 (14%) with the beta variant
 - 20 (56%) with the delta variant.
- The countries of likely acquisition of the 36 returned travellers diagnosed with a VoC are: Afghanistan (8, 22%), Bangladesh (5, 14%), Indonesia (4, 11%), India (3, 8%), Pakistan (3, 8%), USA (3, 8%), Philippines (2, 6%), UK (2, 6%), Algeria (1, 3%), South Africa (1, 3%), Sierra Leone (1, 3%), Cambodia (1, 3%), Myanmar (1, 3%), and unknown (1, 3%).

Table 5a. Variants identified among locally acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 10 July 2021

	Week ending				29 Nov to 12 June	Total since 29 November
	10 July*	3 July*	26 June	19 June		
Total variants identified	114	131	100	7	9	361
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)	114	131	100	7	2	354

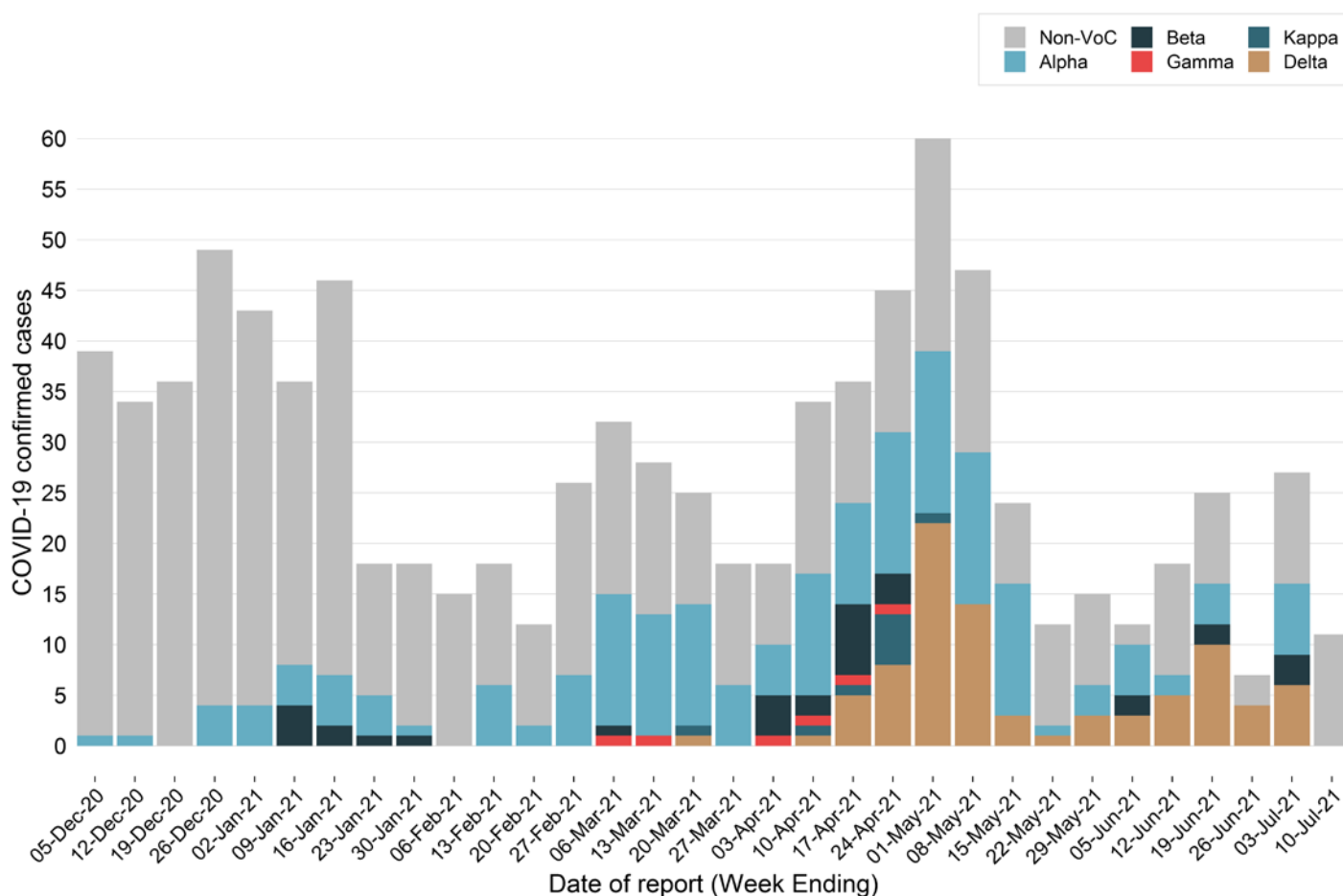
***Note:** identification of variants of concern is through whole genome sequencing. Results for reported cases in the most recent week may not be available at the time of reporting. 100% of locally acquired cases sequenced in the week ending 10 July have been the Delta variant of concern.

Table 5b. Variants identified among overseas acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 10 July 2021

	Week ending				29 Nov to 12 June	Total since 29 November
	10 July*	3 July*	26 June	19 June		
Total variants identified	0	16	4	16	286	322
Alpha (B.1.1.7)	0	7	0	4	178	189
Beta (B.1.351)	0	3	0	2	27	32
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	6	4	10	66	86

*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 8. Overseas acquired COVID-19 cases by VoC and week reported, NSW, 29 November 2020 to 10 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 322 returned travellers diagnosed with a COVID-19 VoC. In the four weeks ending 10 July 2021, 51% (36/70) 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.




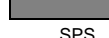
Table 6. Locations with SARS-CoV-2 detections in sewage samples in the last 10 weeks, NSW, 11 April to 10 July 2021

		8-May	15-May	22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July
Pop.	Location	18	19	20	21	22	23	24	25	26	27
Sydney sewage treatment plant (inlet sites)											
110,114	Penrith										
1,241	Brooklyn										
31,924	Hornsby Heights										
318,810	Bondi										
233,176	Cronulla										
1,857,740	Malabar 1										
	Malabar 2										
181,005	Liverpool										
98,743	West Camden										
161,200	Glenfield										
1,341,986	North Head										
26,997	Castle Hill Cattai										
	Castle Hill Glenhaven										
119,309	Rouse Hill										
163,147	St Marys										
68,000	Port Kembla										
93,000	Bellambi										
Sydney network sites											
Bondi	Paddington										
Cronulla	Caringbah										
Malabar	Earlwood										
Malabar	Marrickville 1										
Malabar	Marrickville 2										
Malabar	Arncliffe 1										
Malabar	Arncliffe 2										
Malabar	Blakehurst										
Malabar	Padstow 1										
Malabar	Padstow 2										
Malabar	Fairfield 1										
Malabar	Fairfield 2										

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

		8-May	15-May	22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July
Pop.	Location	18	19	20	21	22	23	24	25	26	27
Sydney network sites (continued)											
	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									
Regional Sites											
2,050		Bourke									
38,900		Bateau Bay									

Sampling commenced week ending 18 July 2020

	not sampled or analysed
	SARS-CoV-2 not detected
	SARS-CoV-2 detected
	site moved to composite sample or ceased
SPS	Sewage Pumping Station
p	result pending, not available at time of reporting

Interpretation: In the week ending 10 July 2021, 173 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 46 detections. There was one detection outside Sydney taken from the Bateau Bay sewage treatment plant.

In Sydney there were detections from the sewage treatment plants in Penrith, Hornsby Heights, Bondi, Cronulla (2), Malabar (2), Liverpool, Glenfield (2), North Head and Castle Hill - Cattai.

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 (2), Canterbury (2), Maroubra and Homebush pumping station (2)
- the Liverpool catchment including Ireland Park (2)
- the North Head catchment including, Tunks Park, Camellia South and Camellia North, Northmead sewage pumping station, Vineyard Creek (2), Boronia Park
- the Glenfield catchment including Minto (2) Port Kembla (2)

No active cases were identified in the Castle Hill - Cattai catchments at the time. These detections may be due undetected cases, the movement of cases in neighbouring areas whilst unknowingly infectious or the presence of people in the community who have recently been infected with the virus that causes COVID-19 but may no longer be infectious. People can continue to shed fragments of the virus for several weeks. All other catchments were associated with known cases in the area.

Section 9: COVID-19 hospitalisations and deaths

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

In the four weeks ending 10 July 2021, there have been 78 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 10 July 2021

Age-group (years)	Hospitalised (%)	Hospitalised and in ICU (%)
0-4	1 (1%)	0
5-17	6 (8%)	1 (4%)
18-29	10 (13%)	2 (9%)
30-49	18 (23%)	4 (17%)
50-59	14 (18%)	5 (22%)
60-69	9 (12%)	4 (17%)
70-79	10 (13%)	5 (22%)
80+	10 (13%)	2 (9%)
Total	78 (100%)	23 (100%)

Interpretation: The majority of cases hospitalised are 30-49 (23%) years of age followed by those aged 50-59 (18%). Of the 78 hospitalised cases, six are residents of the Baulkham Hills 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 as a result of COVID-19 are vaccinated?

Of the 78 people hospitalised as a result of COVID-19, 23 (29%) people are in ICU of which 20 (91%) were unvaccinated and two (9%) are partially vaccinated. There have been no cases in ICU that have been fully vaccinated.

Table 8. Hospitalisations and ICU admissions as a result of COVID-19, by vaccination status, NSW, from 13 June to 10 July 2021

Vaccination status	Hospitalised (%)	Hospitalised and in ICU (%)
Fully Vaccinated	5 (6%)	0
Partially Vaccinated	8 (10%)	2 (9%)
Single dose within 14 days	1 (2%)	0
Not vaccinated	64 (82%)	21 (91%)
Total locally acquired cases	78 (100%)	23 (100%)

Interpretation: Of the 78 people hospitalised, 5 (6%) are fully vaccinated (all aged care residents) who were admitted for public health reasons rather than clinical need, 8 (10%) are partially vaccinated and 65 (82%) have not been vaccinated.

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

Since the start of the pandemic, 1.0% of cases (56 people) have died as a result of COVID-19, most of whom were 70 years of age or older, including 28 residents of aged care facilities with known COVID-19 outbreaks. Approximately 21% (12/56) of the deaths were in overseas acquired cases.

There was one death reported in the week ending 10 July 2021 in a person in their 90s. This person was a household contact of a previously reported case and was unvaccinated.

Table 9. Deaths as a result of COVID-19, by age group, NSW, from 25 January 2020 to 10 July 2021

Age group (years)	Number of deaths	Number of cases	Case fatality rate
0-4	0	169	0%
5-11	0	184	0%
12-17	0	221	0%
18-29	0	1409	0%
30-49	0	2020	0%
50-59	1	795	0.1%
60-69	4	696	0.6%
70-79	15	417	3.6%
80+	37	179	20.7%
Total	57	6090	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.

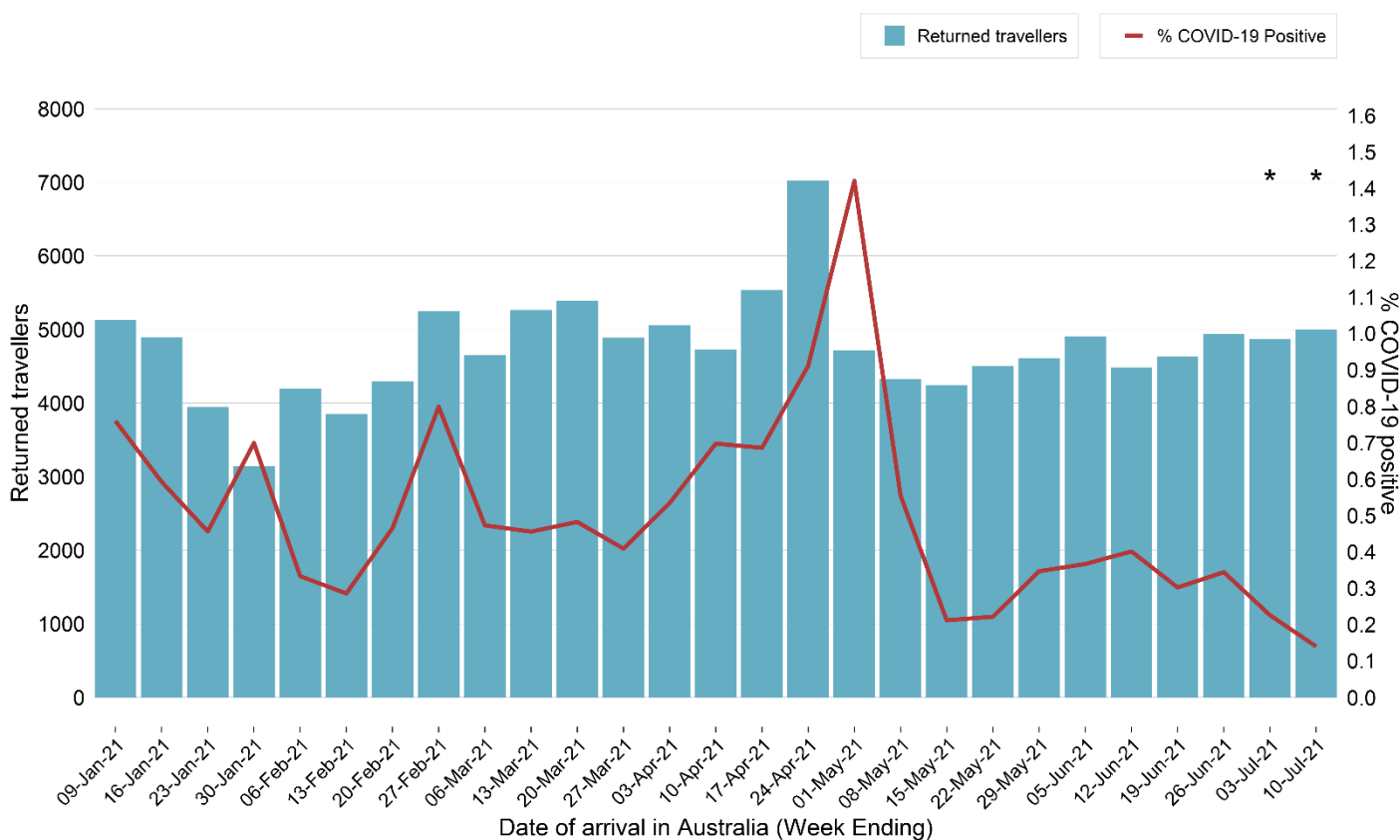
Section 10: COVID-19 in returned travellers

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 9. Returned travellers screened at Sydney International Airport by week of arrival and percent COVID-19 positive, NSW, 3 January 2021 to 10 July 2021



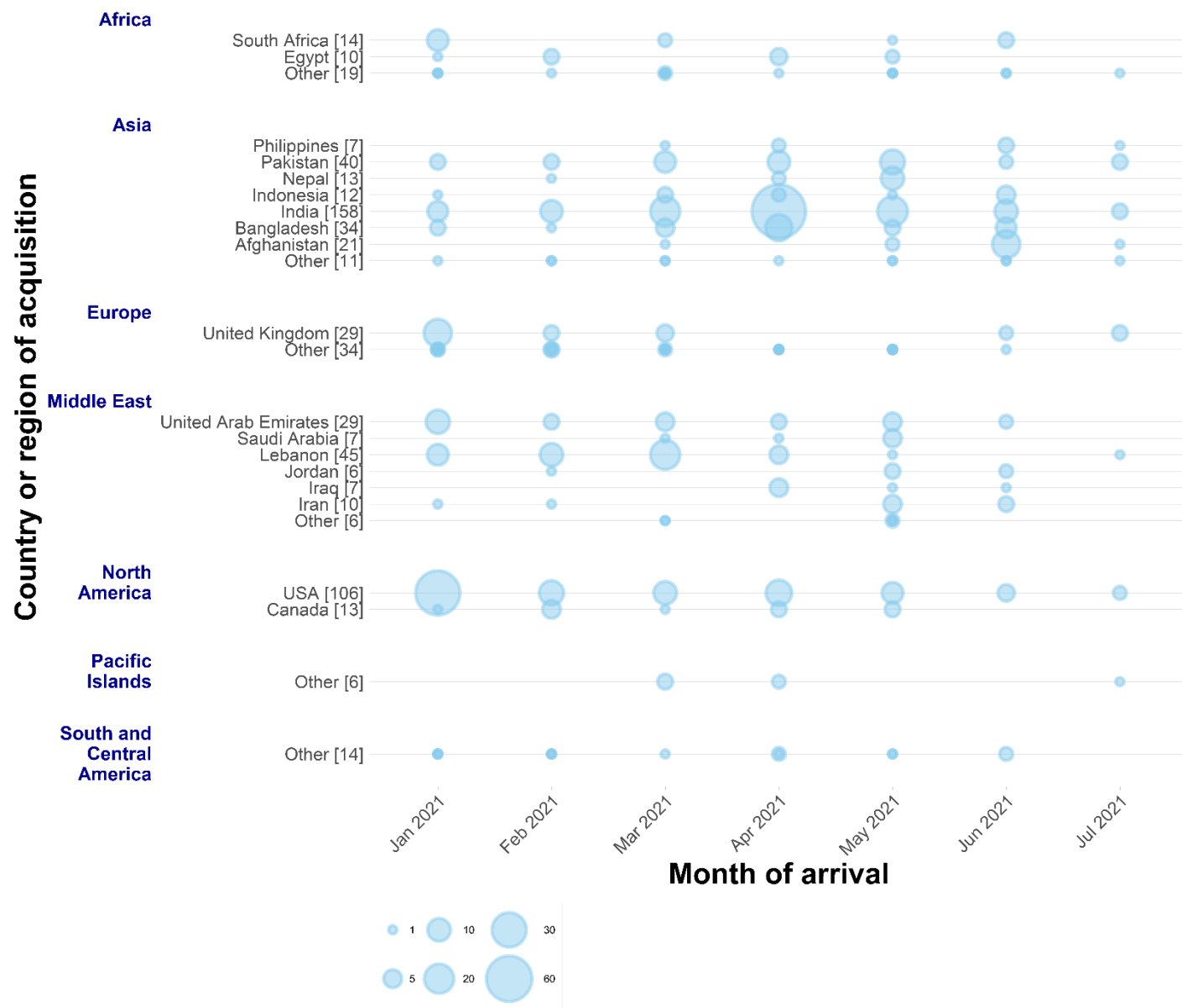
*Returned travellers entering Australia in the past 14 days are still in quarantine and may return a positive result prior to the end of their hotel quarantine period.

Interpretation: Since 3 January 2021, there has been on average 680 people screened on arrival through Sydney International Airport daily. In the last four weeks, 77 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 10. Overseas acquired COVID-19 cases by country of acquisition and arrival month, NSW, 1 December 2020 to 10 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 77 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, 6 June 2021 to 10 July 2021

Country of acquisition of COVID-19	Number (%) of cases in the last four weeks
Afghanistan	13 (19%)
India	7 (10%)
Bangladesh	5 (7%)
Indonesia	5 (7%)
Pakistan	5 (7%)
United Kingdom	5 (7%)
USA	4 (6%)
Cambodia	2 (3%)
Jordan	2 (3%)
Philippines	2 (3%)
United Arab Emirates	2 (3%)
Other	18 (26%)
Total	70

Interpretation: In the last four weeks, travellers returning from Afghanistan and India accounted for the largest number of overseas acquired cases (20, 29%), followed by travellers returning from Bangladesh, Indonesia, Pakistan and UK (25, 36%).

Cases among returned travellers in quarantine

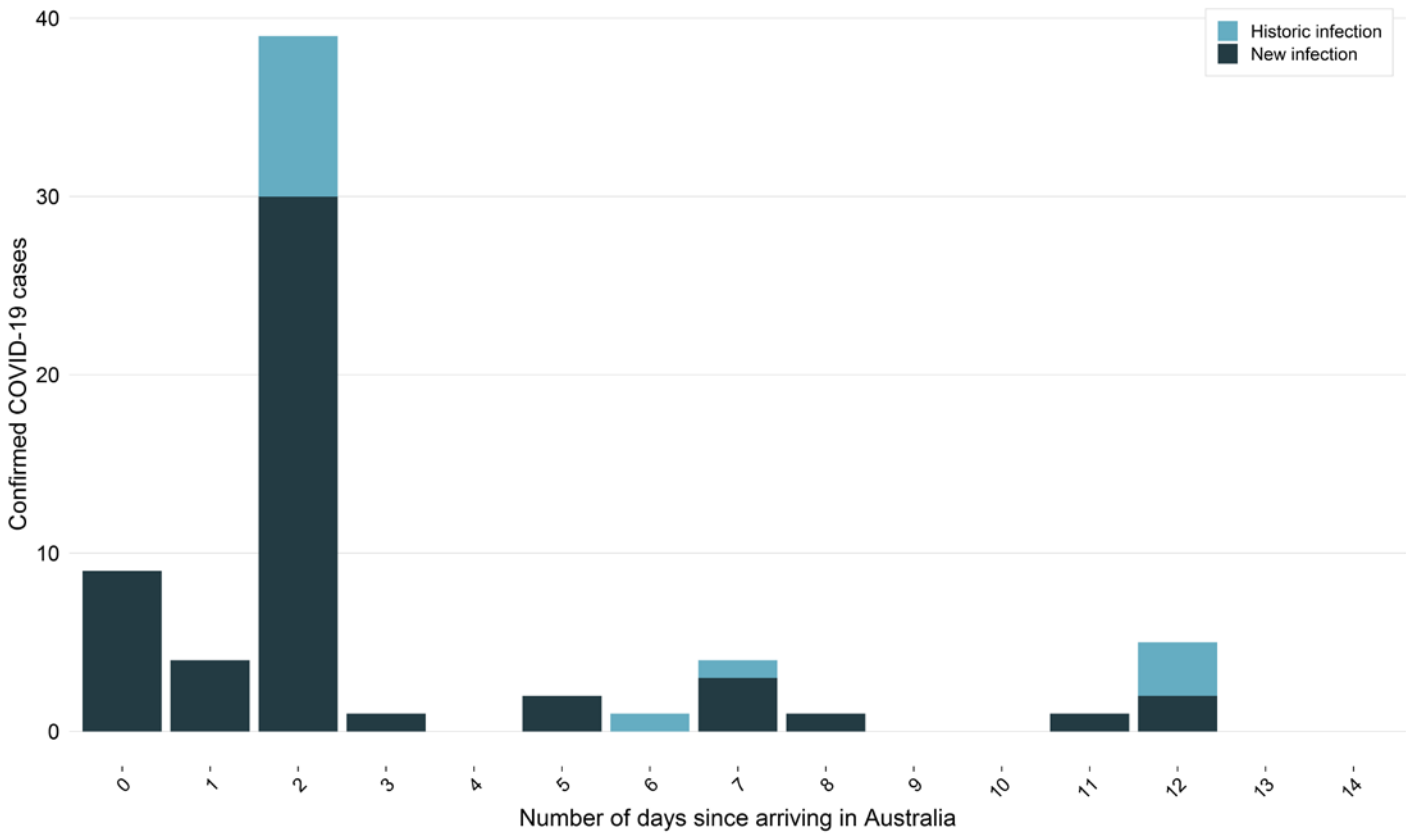
The program of screening all overseas travellers after arrival in NSW commenced on 15 May 2020. From 30 June 2020, the program was extended to include screening of travellers on entry to quarantine, day 2 after arrival, and exit of quarantine. On 11 January 2021, exit screening of travellers was moved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

Overseas returned travellers complete their quarantine in several facilities with the majority of people in police-managed hotels 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 co-quarantining 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 11. 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, 6 Jun to 10 July 2021



Interpretation: In the four weeks ending 10 July 2021, 56% 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 04 July 2021

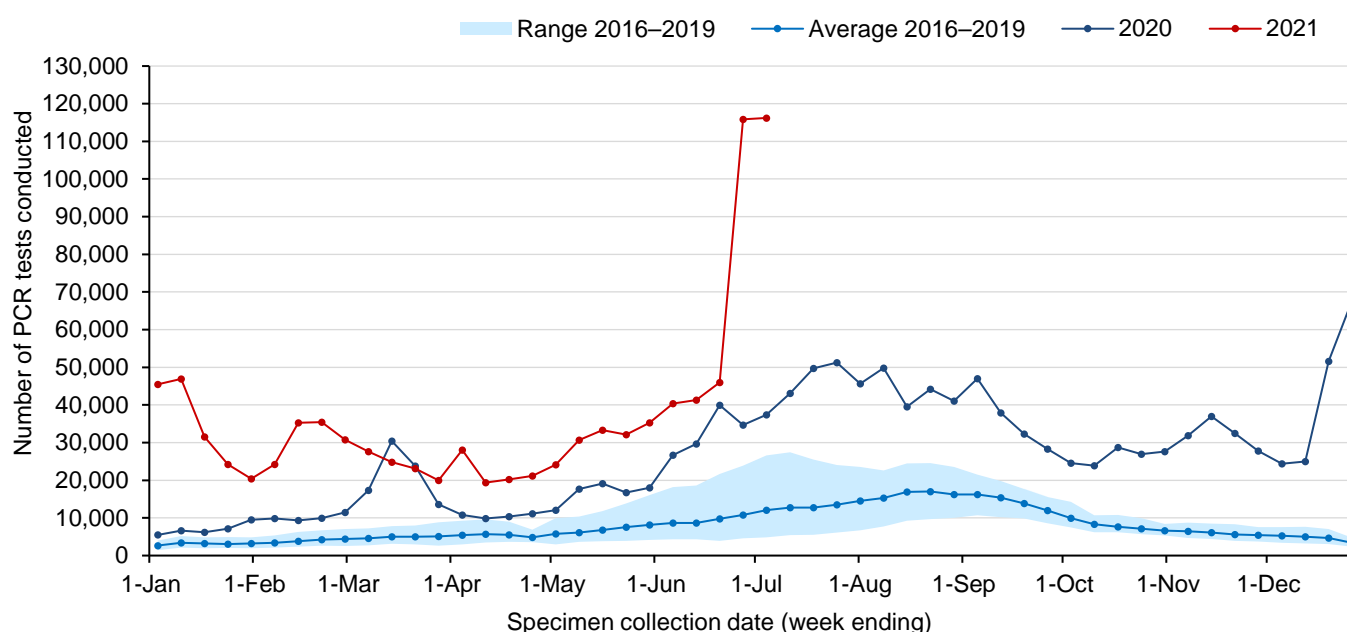
In NSW, routine surveillance for influenza and other respiratory viruses is conducted through sentinel laboratories. The number of all PCR tests (positive and negative) are provided to NSW Health by participating laboratories each week. Testing counts reflect the number of influenza PCR tests conducted;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

The most recent data available is for testing carried out to 4 July 2021. A total of 993,812 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 12. Testing for influenza by week, NSW, 1 January 2016 to 04 July 2021

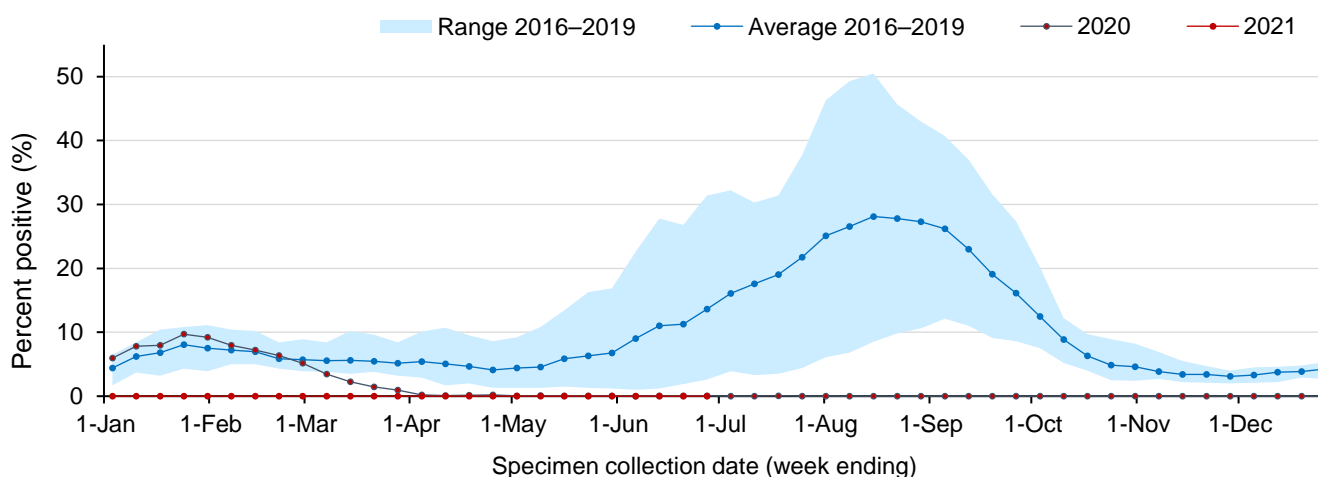


Interpretation: In the week ending 4 July, the number of influenza tests surged, with 116,223 influenza tests performed across participating laboratories compared with 45,936 the previous week. This spike in influenza tests is likely due to concurrent testing of influenza and COVID-19 by some sentinel 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.

Figure 13. Proportion of tests positive for influenza, NSW, 1 January 2016 to 4 July 2021

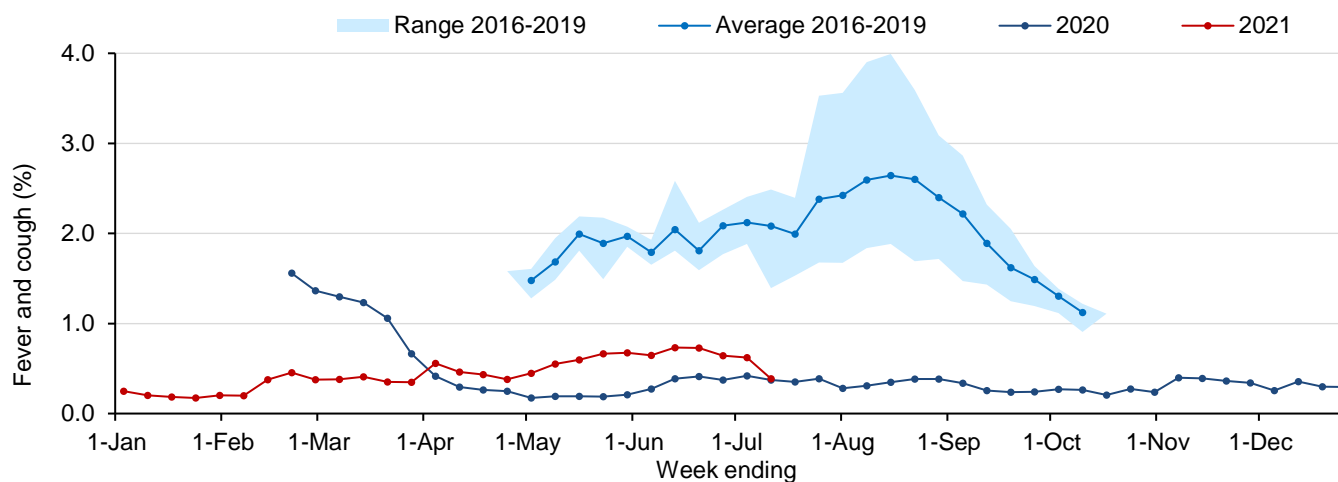


Interpretation: In the week ending 4 July, the percent of influenza tests that were positive continued to be very low (<0.01%), indicating limited influenza transmission in the community. Since early March 2020, this percentage has remained far lower than the usual range for the time of year. There have been 13 influenza cases reported in 2021 and none in the last week.

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 14. Proportion of FluTracker participants reporting influenza-like illness, NSW, 1 January 2016 to 11 July 2021



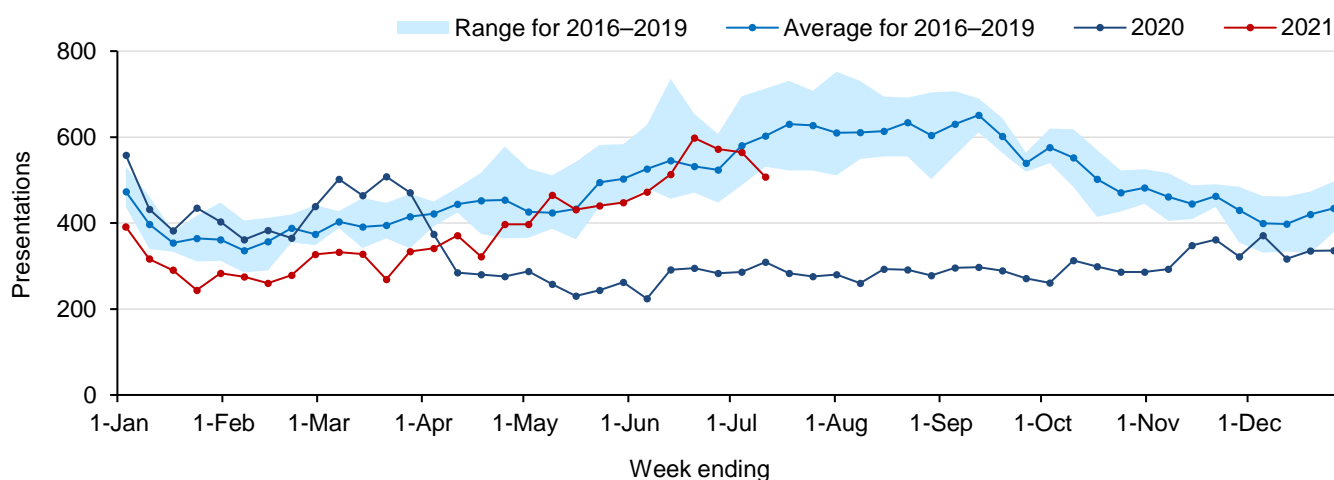
Interpretation: In NSW in the week ending 11 July 2021, of the 22,034 people surveyed, 85 people (0.39%) reported flu-like symptoms. In the last four weeks, 64% (375/588) of new cases of flu-like illness reported having a COVID-19 test. The proportion of people being tested for COVID-19 has decreased since January, when 80% of people surveyed with flu-like symptoms were 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.

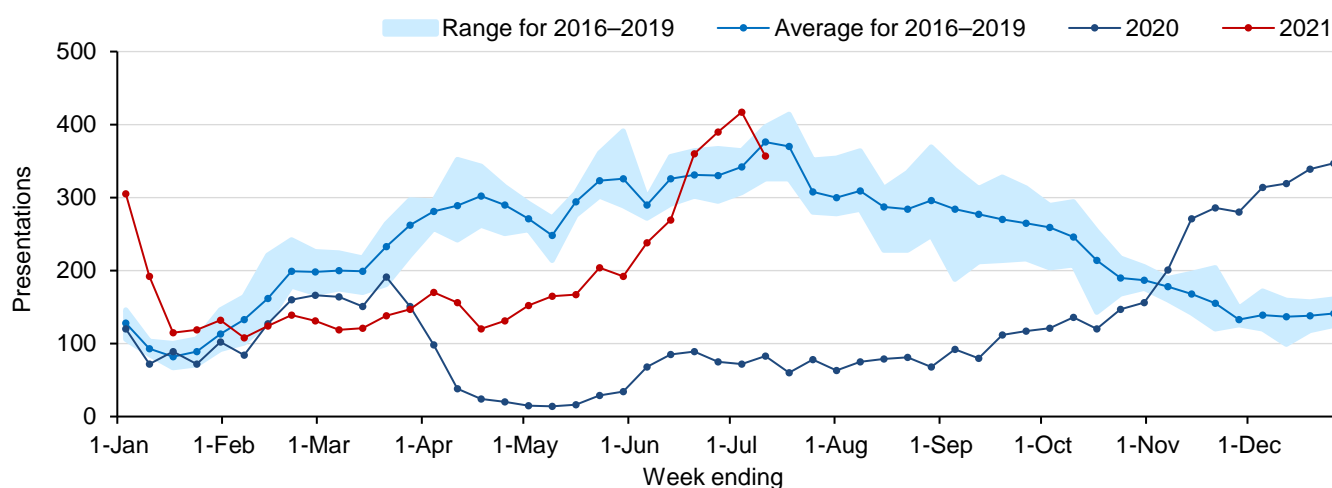
The figures below show weekly pneumonia and bronchiolitis presentations to Emergency Departments in NSW, using PHREDSS². The red line shows the weekly counts for 2021, the dark blue line showing counts for 2020, the light blue line showing the average for 2016 to 2019 and the shaded area showing the range recorded for 2016 to 2019.

Figure 15. Emergency Department pneumonia presentations, NSW, 1 January 2016 to 11 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 11 July, pneumonia presentations decreased and are below the seasonal range for this time of year.

Figure 16. Emergency Department bronchiolitis presentations, NSW, 1 January 2016 to 11 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 11 July 2021, bronchiolitis presentations decreased and are within 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

		Week ending				Total since January 2021	
		10-Jul		03-Jul			
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 Total</i>	8667	24.56	12817	36.32	267842	759.05
	Balranald	15	6.42	22	9.41	868	371.26
	Broken Hill	188	10.76	319	18.25	11001	629.38
Far West	Central Darling	20	10.88	23	12.51	661	359.43
	Wentworth	103	14.60	127	18.01	4054	574.79
	<i>LHD Total</i>	326	10.81	491	16.29	16584	550.16
	Armidale Regional	444	14.43	843	27.39	18355	596.35
	Cessnock	696	11.60	1251	20.86	26170	436.28
	Dungog	92	9.76	240	25.47	4462	473.52
	Glen Innes Severn	55	6.20	142	16.01	3176	358.02
	Gunnedah	156	12.30	292	23.03	5702	449.65
	Gwydir	34	6.35	49	9.15	1342	250.70
	Inverell	220	13.03	327	19.36	7655	453.23
	Lake Macquarie	4422	21.48	8087	39.28	164241	797.67
	Liverpool Plains	64	8.10	155	19.61	3618	457.80
	Maitland	1985	23.31	3775	44.33	73382	861.63
Hunter New England	Mid-Coast	1110	11.83	1860	19.82	42222	449.96
	Moree Plains	102	7.69	220	16.59	7272	548.37
	Muswellbrook	192	11.72	384	23.45	7959	485.99
	Narrabri	99	7.54	212	16.14	4428	337.11
	Newcastle	3749	22.64	7013	42.36	157293	950.00
	Port Stephens	1229	16.73	2406	32.74	49264	670.43
	Singleton	372	15.86	711	30.31	15910	678.15
	Tamworth Regional	968	15.48	2058	32.91	40351	645.19
	Tenterfield	33	5.00	54	8.19	1925	291.93
	Upper Hunter Shire	151	10.65	355	25.04	7210	508.46
	Uralla	66	10.98	127	21.12	2256	375.25
	Walcha	34	10.85	104	33.18	1633	521.06
	<i>LHD Total</i>	16272	17.09	30660	32.19	645397	677.67
Illawarra Shoalhaven	Kiama	663	28.35	1340	57.30	19692	842.04
	Shellharbour	1756	23.98	2733	37.32	57504	785.22
	Shoalhaven	1782	16.87	3700	35.02	65399	619.03
	Wollongong	5674	26.01	8870	40.67	185770	851.71
	<i>LHD Total</i>	9875	23.53	16643	39.66	328365	782.54
Mid North Coast	Bellingen	158	12.16	329	25.32	7088	545.40
	Coffs Harbour	899	11.63	1768	22.88	36797	476.17
	Kempsey	385	12.94	729	24.51	15888	534.14
	Nambucca	188	9.49	385	19.44	8592	433.83
	Port Macquarie-Hastings	1309	15.49	2695	31.88	47974	567.57
	<i>LHD Total</i>	2939	13.02	5906	26.17	116339	515.54
Murrumbidgee	Albury	1030	18.95	1405	25.85	33279	612.28
	Berrigan	80	9.14	94	10.74	2916	333.26
	Bland	57	9.54	121	20.26	2488	416.61

		Week ending				Total since January 2021	
		10-Jul		03-Jul			
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	19	6.79	38	13.58	581	207.57
	Coolamon	63	14.51	104	23.96	2223	512.09
	Cootamundra-Gundagai Regional	167	14.86	279	24.83	5384	479.22
	Edward River	103	11.34	108	11.89	3980	438.13
	Federation	203	16.32	195	15.68	5327	428.32
	Greater Hume Shire	128	11.89	245	22.76	5633	523.32
	Griffith	528	19.53	833	30.82	16189	598.95
	Hay	28	9.49	41	13.90	857	290.61
	Hilltops	263	14.06	491	26.25	9409	503.05
	Junee	48	7.18	119	17.81	2529	378.42
	Lachlan ¹	58	9.55	83	13.66	1548	254.81
	Leeton	133	11.62	250	21.84	4665	407.60
	Lockhart	39	11.87	78	23.74	1383	421.00
	Murray River	74	6.11	58	4.79	1474	121.64
	<i>LHD Total²</i>	49	12.51	70	17.87	1376	351.29
	Narrandera	42	7.12	81	13.73	1855	314.46
	Snowy Valleys	161	11.12	314	21.69	6984	482.35
	Temora	47	7.45	83	13.16	2062	326.94
	Wagga Wagga	1328	20.35	2373	36.36	47354	725.64
	<i>LHD Total²</i>	4615	15.48	7395	24.81	158459	531.55
Nepean Blue Mountains	Blue Mountains	2126	26.87	6485	81.97	80822	1021.54
	Hawkesbury	1684	25.02	2340	34.77	54431	808.83
	Lithgow	235	10.88	492	22.77	10565	489.01
	Penrith	6535	30.68	8189	38.45	186901	877.56
	<i>LHD Total²</i>	10387	26.57	17339	44.35	329990	843.99
Northern NSW	Ballina	506	11.34	1044	23.39	36786	824.28
	Byron	509	14.51	921	26.25	28970	825.80
	Clarence Valley	400	7.74	861	16.67	20322	393.36
	Kyogle	66	7.50	121	13.76	3290	374.03
	Lismore	483	11.05	878	20.10	28447	651.08
	Richmond Valley	227	9.67	380	16.19	12566	535.52
	Tenterfield	33	5.00	54	8.19	1925	291.93
	Tweed	995	10.26	1598	16.47	46939	483.90
	<i>LHD Total²</i>	3193	10.29	5811	18.72	177751	572.72
Northern Sydney	Hornsby	4415	29.03	6101	40.12	134944	887.45
	Hunters Hill	1259	84.05	1765	117.82	31609	2110.08
	Ku-ring-gai	5221	41.06	7939	62.44	178121	1400.84
	Lane Cove	2788	69.43	4315	107.46	87132	2169.89
	Mosman	1172	37.83	1889	60.97	37042	1195.64
	North Sydney	2425	32.32	3628	48.36	69215	922.61
	Northern Beaches	10312	37.70	17972	65.71	427915	1564.59
	Parramatta ¹	11598	45.09	10250	39.85	204805	796.30
	Ryde	6064	46.19	8517	64.88	135963	1035.74
	Willoughby	2326	28.65	3491	43.00	70800	872.04

		Week ending				Total since January 2021	
		10-Jul		03-Jul			
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>	37688	39.43	57576	60.23	1214349	1270.35
South Eastern Sydney	Bayside	9326	52.28	11624	65.16	146537	821.41
	Georges River	9510	59.63	7786	48.82	119381	748.61
	Randwick	17512	112.51	25565	164.25	222864	1431.84
	Sutherland Shire	13338	57.84	12698	55.06	235016	1019.10
	Sydney ¹	13920	56.51	19970	81.07	317964	1290.74
	Waverley	6016	80.97	11868	159.74	134227	1806.68
	Woollahra	4393	73.97	7802	131.38	108438	1825.96
	<i>LHD Total</i>	64658	67.42	84381	87.98	1082678	1128.85
South Western Sydney	Camden	4409	43.47	6523	64.31	118144	1164.70
	Campbelltown	6596	38.59	8568	50.12	155755	911.15
	Canterbury-Bankstown ¹	18358	48.58	16807	44.47	283418	749.95
	Fairfield	10068	47.56	6069	28.67	121629	574.55
	Liverpool	9117	40.06	9124	40.09	185125	813.43
	Wingecarribee	1188	23.23	2332	45.61	47804	934.88
	Wollondilly	1035	19.47	1418	26.68	32370	609.04
	<i>LHD Total</i>	41152	39.63	41677	40.13	797046	767.47
Southern NSW	Bega Valley	494	14.33	811	23.52	17267	500.84
	Eurobodalla	545	14.17	1115	28.98	24954	648.61
	Goulburn Mulwaree	440	14.13	1012	32.51	18799	603.85
	Queanbeyan-Palerang Regional	756	12.37	1390	22.75	25496	417.28
	Snowy Monaro Regional	377	18.13	652	31.35	11347	545.66
	Upper Lachlan Shire	110	13.65	221	27.42	4200	521.16
	Yass Valley	139	8.13	372	21.77	6224	364.25
	<i>LHD Total</i>	2867	13.21	5581	25.71	108343	499.11
Sydney	Burwood	1673	41.19	2032	50.03	27625	680.22
	Canada Bay	4087	42.54	6443	67.06	105005	1092.96
	Canterbury-Bankstown ¹	18358	48.58	16807	44.47	283418	749.95
	Inner West	10134	50.47	13826	68.85	238850	1189.43
	Strathfield	2941	62.67	3827	81.55	48808	1040.11
	<i>LHD Total</i>	13920	56.51	19970	81.07	317964	1290.74
	<i>LHD Total</i>	37701	54.11	47970	68.85	764268	1096.87
Western NSW	Bathurst Regional	765	17.54	1774	40.67	30655	702.81
	Blayney	137	18.57	259	35.10	4984	675.43
	Bogan	21	8.14	37	14.34	1253	485.66
	Bourke	29	11.20	147	56.76	1009	389.58
	Brewarrina	8	4.97	24	14.90	455	282.43
	Cabonne	139	10.20	313	22.96	5314	389.76
	Cobar	45	9.66	65	13.95	1739	373.34
	Coonamble	56	14.15	85	21.48	1435	362.56
	Cowra	181	14.20	270	21.19	5836	457.98
	Dubbo Regional	821	15.28	1730	32.20	32319	601.63
	Forbes	98	9.89	180	18.17	4134	417.32
	Gilgandra	49	11.56	74	17.46	1552	366.12
	Lachlan ¹	58	9.55	83	13.66	1548	254.81

		Week ending				Total since January 2021	
		10-Jul		03-Jul			
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	345	13.66	758	30.02	14224	563.30
	Narromine	71	10.89	145	22.25	2939	450.97
	Oberon	42	7.76	161	29.75	2603	481.06
	Orange	881	20.75	2128	50.13	35161	828.27
	Parkes	157	10.58	291	19.61	6626	446.59
	Walgett	42	7.06	101	16.97	2259	379.47
	Warren	56	20.76	104	38.56	2076	769.74
	Warrumbungle Shire	102	10.99	214	23.07	4380	472.08
	Weddin	29	8.03	79	21.87	1355	375.03
	<i>LHD Total²</i>	4118	14.45	9011	31.62	163432	573.42
Western Sydney	Blacktown	11631	31.06	14569	38.91	320037	854.68
	Cumberland	10862	44.97	11915	49.33	206309	854.21
	Parramatta ¹	11598	45.09	10250	39.85	204805	796.30
	The Hills Shire	8268	46.46	9952	55.92	219466	1233.17
	<i>LHD Total²</i>	40965	38.89	45159	42.87	916922	870.41
NSW Total³	296389	36.64	399345	49.36	3356889	414.95	

Source - Notifiable condition information management System, accessed as at 8pm 12 Jul 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 2020 to 04 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 2020–04 July 2021

Specimen collection date	PCR tests conducted	Influenza A		Influenza B		Adeno - virus	Para-influenza	RS V	Rhino-virus	HMPV	Entero - virus
		No.	%Pos.	No.	%Pos.						
Total											
Total	993,812	4	<0.01%	9	<0.01%	5,068	14,157	14,392	50,090	1,213	5,624
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
Week ending											
6 June	40,405	1	-	0	<0.01%	312	1,339	531	2,574	56	205
13 June	41,306	0	-	0	-	402	1,685	678	2,597	113	189
20 June	45,936	0	-	0	-	336	1,818	629	2,182	149	198
27 June	115,892	0	-	0	-	490	2,210	910	2,530	312	219
4 July	116,223	0	-	0	-	438	1,913	930	1,985	394	185

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

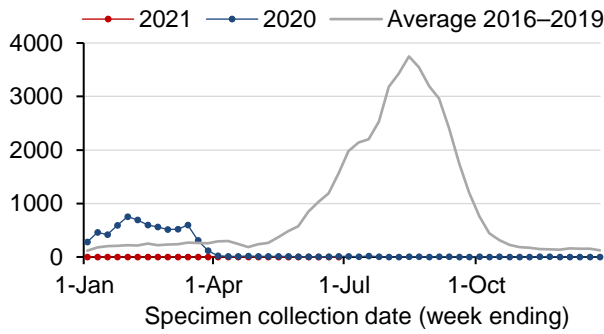
RSV - Respiratory syncytial virus

*Five-week period

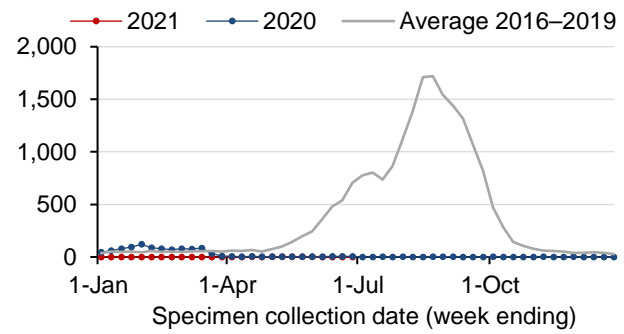
Appendix C: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 04 July 2021

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.

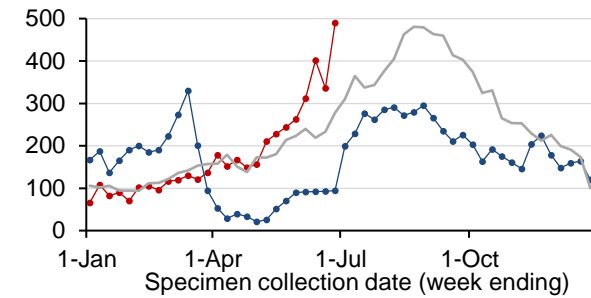
Influenza A



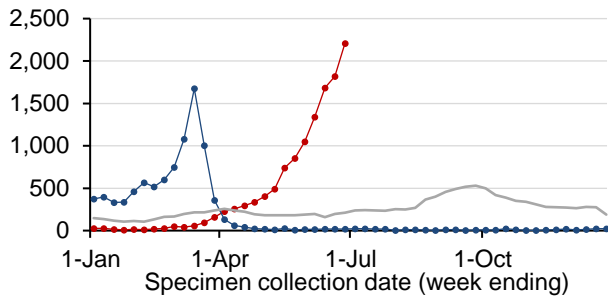
Influenza B



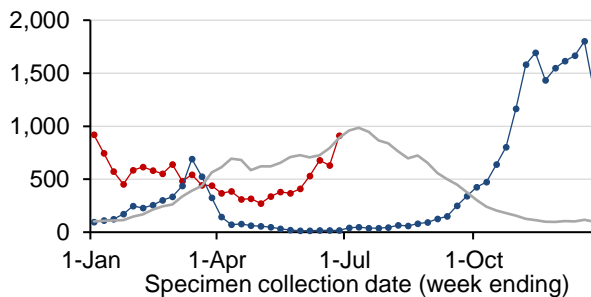
Adenovirus



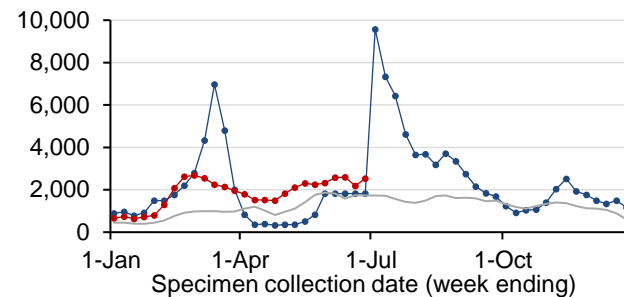
Parainfluenza



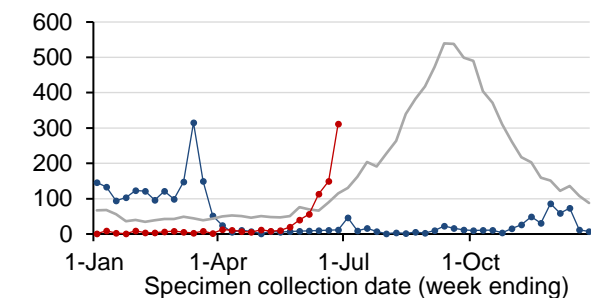
Respiratory syncytial virus (RSV)



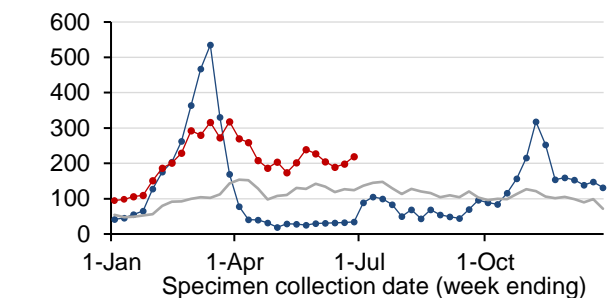
Rhinovirus



Human metapneumovirus (HMPV)



Enterovirus



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

Appendix D: SARS-CoV-2 testing in sewage samples collected in the previous 10 weeks, week ending 10 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		8-May	15-May	22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July
Pop.	Location	18	19	20	21	22	23	24	25	26	27
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										

Sydney Network Sites		8-May	15-May	22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July
Network	Location	18	19	20	21	22	23	24	25	26	27
Bondi	Paddington Sewage Network	Red	Red	Green	Red	Red	Green	Red	Red	Red	Red
Bondi	Rozelle Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Cronulla	Caringbah Sewage Network	Green	Green	Green	Green	Green	Green	Green	Red	Green	Red
Cronulla	Miranda Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Malabar	Earlwood Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
Malabar	Marrickville Sewage Network 1	Red	Green	Green	Green	Green	Green	Green	Green	Green	Red
Malabar	Marrickville Sewage Network 2	Red	Green	Green	Green	Green	Green	Green	Green	Green	Red
Malabar	Bardwell Creek Sewage Network	Green	Green	Green	Green	Green	Green	Green	Grey	Grey	Grey
Malabar	Arncliffe Sewage Network 1	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
Malabar	Arncliffe Sewage Network 2	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
Malabar	Blakehurst Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
Malabar	Padstow Sewage Network 1	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
Malabar	Padstow Sewage Network 2	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
Malabar	Fairfield SPS 1	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
Malabar	Fairfield SPS 2	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
Malabar	Homebush SPS	Green	Green	Red	Red	Green	Green	Green	Green	Red	Red
Malabar	Olympic Park	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
Malabar	Croydon Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Red	Green
Malabar	Dulwich Hill Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
Malabar	Canterbury Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
Malabar	Botany Sewage Network	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
Malabar	Maroubra Sewage Network	Green	Green	Green	Green	Green	Green	Green	Red	Red	Red
North Head	Camellia SPS - North	Green	Green	Green	Green	Green	Green	Red	Red	Red	Red
North Head	Camellia SPS - South	Green	Green	Green	Green	Green	Green	Red	Red	Red	Red
North Head	Auburn Sewage Network	Green	Green	Green	Green	Green	Green	Green	Red	Red	Green
North Head	Northmead SPS	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red
North Head	Northmead Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
North Head	Tunks Park Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
North Head	Vineyard Creek Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red
North Head	Boronia Park Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red
North Head	West Lindfield Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
North Head	Lane Cove West Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
North Head	Allambie Heights Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
North Head	Buffalo Creek Reserve Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Glenfield	Minto Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red
Liverpool	Ireland Park Sewage Network	Green	Green	Green	Green	Green	Green	Green	Red	Red	Red
Quakers Hill	Eastern Creek Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
St Marys	Ropes Creek Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

Regional Sites		8-May	15-May	22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July
Pop.	Location	18	19	20	21	22	23	24	25	26	27
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										
51,750	Albury composite	C	C	C	C	C	C	C	C	C	C
	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										
50,000	Wagga Wagga composite	C	C	C	C	C	C	C	C	C	C
	Wagga Wagga- inlet 1										
	Wagga Wagga- inlet 2										
	Wagga Wagga -Koorinal STP										
	Gundagai										
	Narrandera										

Regional Sites (con't)		8-May	15-May	22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July
Pop.	Location	18	19	20	21	22	23	24	25	26	27
	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	C	C	C	C	C	C	C		C	C
17,000	East Lismore										
15,500	South Lismore										

Regional Sites (con't)		8-May	15-May	22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July
Pop.	Location	18	19	20	21	22	23	24	25	26	27
18,958 (both plants total)	Byron Bay - Ocean Shores										
	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	c	c	c	c	c	c	c	c	c	c
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
- n result from network sites

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>