

COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 25, ENDING 26 June 2021

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Overview

Table 1. Number and proportion of COVID-19 cases in NSW by likely source of infection to week ending 26 June 2021

	2021			2020	
	last 7 days 20 June – 26 June	last 4 weeks 30 May – 26 June	year to date 1 Jan – 26 June	Jan – Jun	July – Dec
Locally acquired	110 (93%)	117 (65%)	168 (20%)	1,236 (39%)	808 (52%)
Interstate acquired	1 (1%)	1 (1%)	1 (0%)	67 (2%)	23 (1%)
Overseas acquired	7 (6%)	62 (34%)	665 (80%)	1,892 (59%)	714 (46%)
Total	118 (100%)	180 (100%)	834 (100%)	3,195 (100%)	1,545 (100%)
Deaths	0	0	0	52	4

* the reporting of COVID-19 variants of concern in NSW commenced on 29 November 2020

Summary for the week ending 26 June 2021

- There were 110 locally acquired cases in the week ending 26 June 2021. Of these:
 - 107 cases were directly epi-linked to the Eastern Suburbs cluster
 - 3 cases, including two cases and one of their contacts who became case, have not been directly linked to this cluster but have been in the general area of other cases.
- There were 7 cases reported in returned overseas travellers this week, down 72% compared to the previous week.
- There was one interstate acquired case reported in a person who acquired their infection in the Northern Territory. This case has been identified as having the Delta variant that has a different viral sequence to the Eastern suburbs cluster.
- In the four weeks ending 26 June 2021, 100% (72/72) of locally acquired cases sequenced and 53% (33/62) 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, no locally acquired case has reported being fully vaccinated. Eleven (2%) overseas acquired COVID-19 cases self-reported being fully vaccinated prior to arrival in Australia.
- Testing rates increased significantly across all metropolitan Local Health Districts compared to the previous week (up 155%) with a surge in testing in South Eastern Sydney, Sydney, Northern Sydney and Western Sydney Local Health Districts in response to the Eastern Suburbs cluster.
- In the week ending 26 June, 172 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 30 detections; one detection in regional NSW taken from the Bourke sewage treatment plant, and 27 detections from 20 sites across Sydney taken from the Brooklyn, Bondi, Cronulla, Malabar, West Camden, Castle Hill Glenhaven, Rouse Hill, St Marys, North Head sewage treatment plants and the sewage networks at Botany, Paddington, Lough Park, Caringbah, Maroubra, Auburn, Ireland Park, Port Kembla, Bellambi, Camellia South and Camellia North sewage pumping station.

Although no active cases were identified in the Bourke, Port Kembla and Castle Hill Glenhaven catchments, the detection may indicate 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 26 June 2021

Locally acquired cases in isolation during their infectious period

	Week ending 26-Jun	Week ending 19-Jun
	Count (%)	Count (%)
Locally acquired cases	110	7
Cases with symptoms at diagnosis	88	6
Number in isolation at least 48 hours before symptoms	21 (19%)	0
Cases reporting no symptoms at diagnosis*	22	1
Number in isolation at least 48 hours before test	8 (31%)	0

Interpretation: In the week ending 26 June 2021, 22 cases (20%) did not report symptoms at the time of diagnosis and had sought testing because they were a close contact of a confirmed case of COVID-19. Of the 88 symptomatic cases, 21 (19%) were in isolation at least 48 hours prior to symptom onset. To reduce the spread of COVID-19 it is essential that people seek testing immediately if symptoms develop, however mild.

Measures of Public Health Action

	Week ending 26-Jun	Week ending 19-Jun
Proportion locally-acquired cases notified to NSW Health by the laboratory within 24 hours	100%	100%
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 26 June, 100% of cases were notified to NSW Health within a day of positive test result., 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.

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](#)

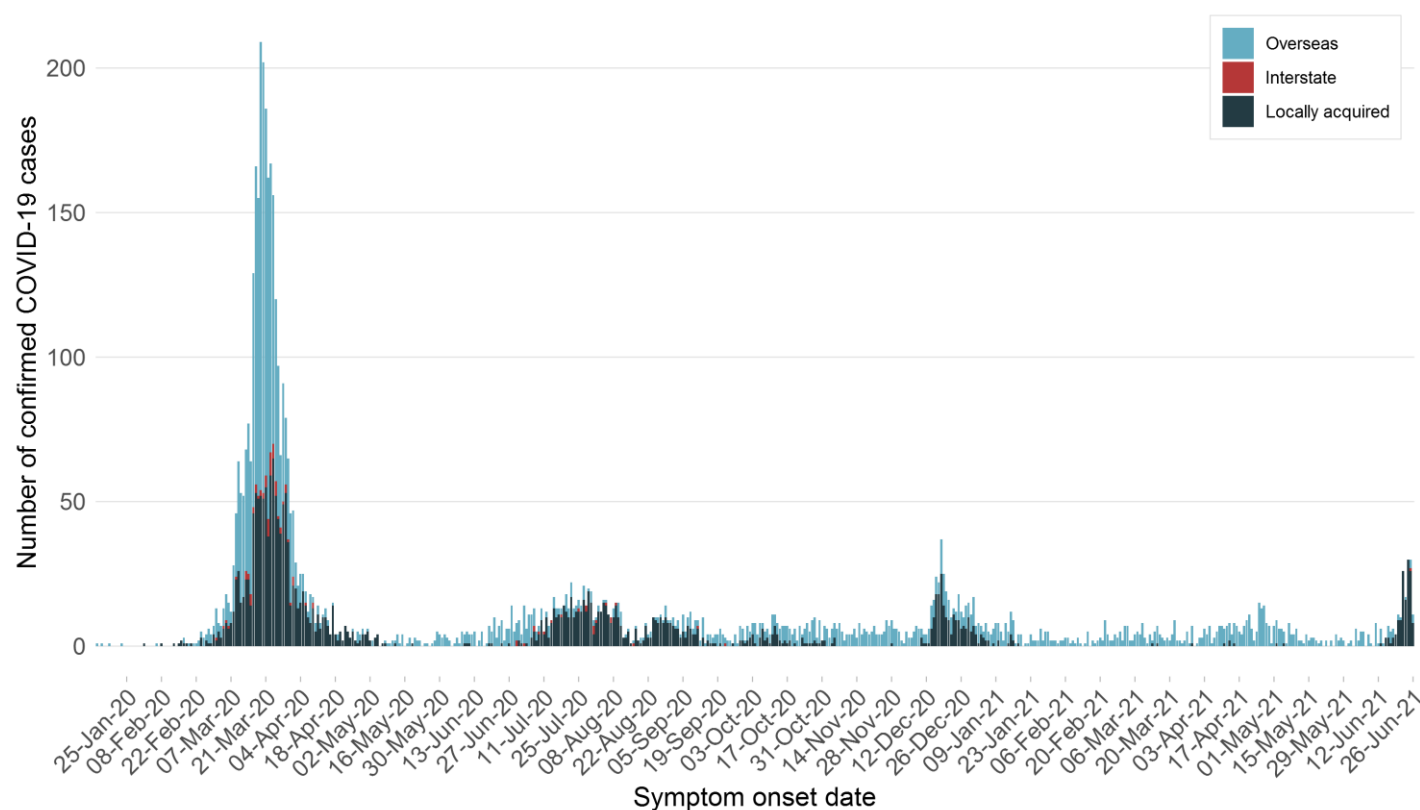
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Section 1: How is the outbreak tracking in NSW?

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 26 June 2021



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

Interpretation: Between 13 January 2020 and 26 June 2021, there were 5,574 confirmed COVID-19 cases. Of those, 3,271 (59%) were overseas acquired, 91 (2%) were interstate acquired, and 2,212 (40%) were locally 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 26 June 2021

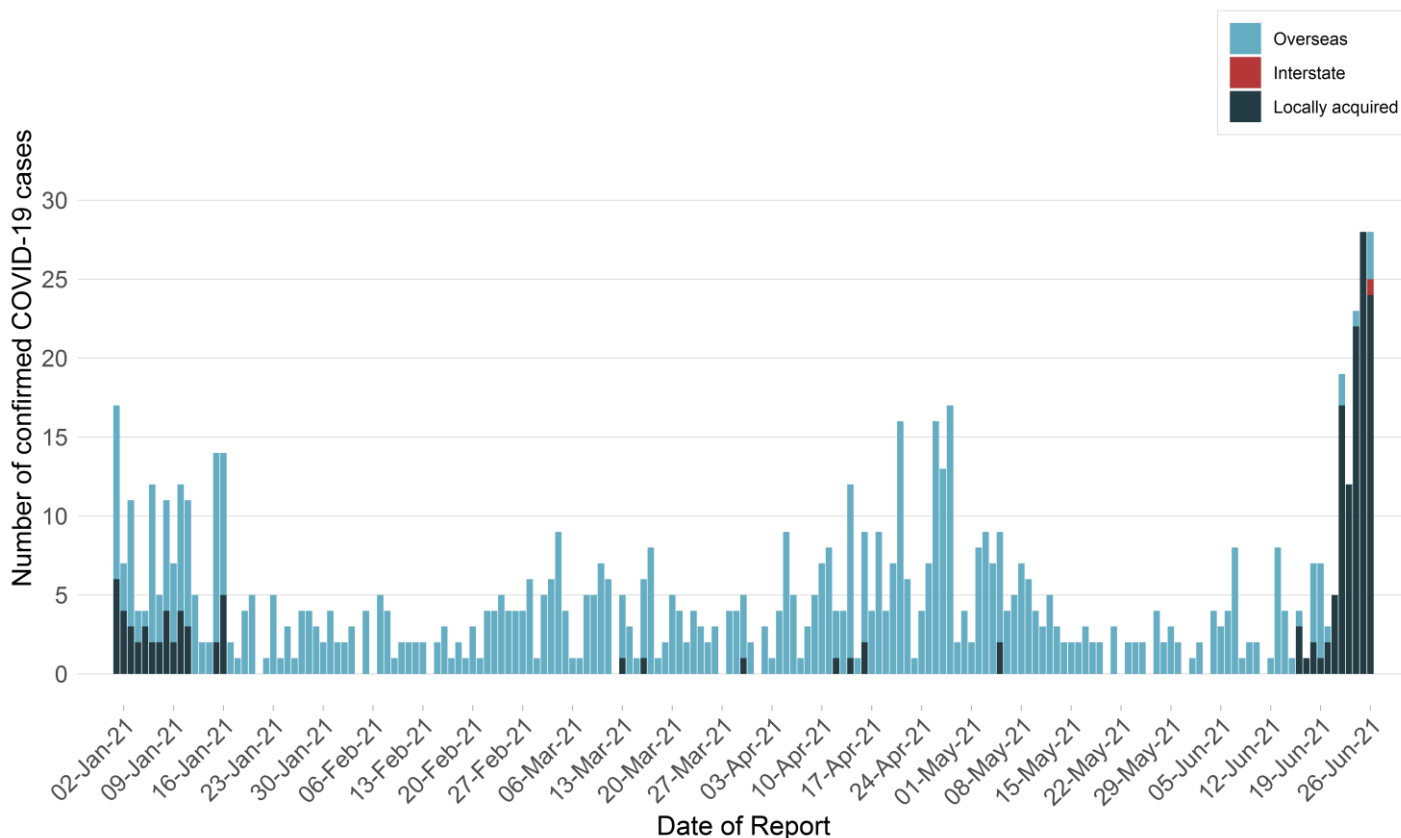


Table 2. COVID-19 cases and tests reported, NSW, from 1 January 2021 to 26 June 2021

	Week ending 26 June	Week ending 19 June	% change	Total 2021
Number of cases	118	32	269 %	834
Locally acquired	110	7	1471 %	168
Known epidemiological links to other cases or clusters	108	6	1700 %	158
No epidemiological links to other cases or clusters	2	1	100 %	10
Overseas acquired	7	25	-72 %	665
Interstate acquired	1	0	-	1
Number of tests	363,532	142,607	155 %	2,657,228

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 (117/180, 65%). Of the 110 locally acquired cases reported in the week ending 26 June 2021; 107 cases are directly linked to the Eastern Suburbs cluster, three cases, including two cases and one of their contacts who became case, have not been directly linked to this cluster but have been in the general area of other cases. There were seven cases that were overseas acquired and one case who acquired their infection interstate whilst in the Northern Territory.

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, 30 May to 26 June 2021

Local Health District	Week ending				Total	Days since last case reported
	26 June	19 June	12 June	5 June		
Central Coast	0	0	0	0	0	179
Illawarra Shoalhaven	3	2	0	0	5	4
Nepean Blue Mountains	0	0	0	0	0	284
Northern Sydney	2	0	0	0	2	5
South Eastern Sydney	63	4	0	0	67	0
South Western Sydney	26	0	0	0	26	0
Sydney	13	1	0	0	14	0
Western Sydney	3	0	0	0	3	1
Far West	0	0	0	0	0	450
Hunter New England	0	0	0	0	0	71
Mid North Coast	0	0	0	0	0	431
Murrumbidgee	0	0	0	0	0	292
Northern NSW	0	0	0	0	0	88
Southern NSW	0	0	0	0	0	250
Western NSW	0	0	0	0	0	331
NSW*	110	7	0	0	117	0

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

Interpretation: There were 110 locally acquired cases reported in the week ending 26 June. The majority of cases were residents of South Eastern Sydney LHD (63, 57%) followed by South Western Sydney LHD (26, 24%), and Sydney (13, 12%).

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

On 16 June, 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. Over the following days the number of cases linked to this cluster increased (see figure 2).

In the week ending 26 June there were 107 cases with direct links to this cluster, with 113 cases linked to the cluster since June 16. Of these, 69 are associated with transmission at 16 public exposure locations and one private event and 44 cases were household or social contacts of known 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 a large number of public venues across Greater Sydney including pubs, restaurants, gyms, hair salons, healthcare facilities and schools (Table 4). 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](#).

Table 4. Cases linked the Eastern Suburbs cluster by setting of exposure, reported to week ending 26 June, NSW

Setting of exposure	Exposure site	Location	Primary cases	Subsequent cases		Total
				Non-household contacts	Household contacts	
Food Service	Cafe	Vaucluse	1	-	-	1
		Bondi Beach	7	9	5	21
		Darlinghurst	1	-	-	1
	Pizza Shop	Paddington	1	-	-	1
	Warehouse	Marrickville	11	-	1	12
Education	Primary school	Coogee	1	-	-	1
Restaurant/Bar/ Club	Pub	Bondi	2	-	-	2
Retail	Myer	Bondi Junction	1	-	5	6
	David Jones	Bondi Junction	1	2	3	6
	Westfield (other)	Bondi Junction	4	1	2	7
	Salvos	St Peters	1	-	-	1
Personal Service	Nail Salon	Bondi Junction	1	-	2	3
	Hair Salon	Double Bay	8	1	1	10
Healthcare	Medical Centre	Bondi Junction	1	-	1	2
	Obstetrics	Wollongong	3	-	-	3
Gym	Gym	Bondi	1	-	3	4
Residential	Home (party)	West Hoxton	24	1	5	30
Other non-public locations	-	-	-	1	1	2
Total			69	15	29	113

Interpretation: Excluding the source case, a hire-car driver whose source is under investigation, there are 113 linked to this cluster.

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 49 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 seven locally acquired cases of COVID-19 reported in HCWs in the week ending 26 June 2021. Of these, three cases may have acquired their infection in private healthcare settings and four were household or social contacts of known cases.

In total there have been 55 cases of COVID-19 in health care workers since 1 August 2020. Of these, 28 HCWs were potentially infected in healthcare settings. A further 13 cases were social or household contacts of a known case, eight were exposed in community settings, and for six cases the source of infection is unknown. Prior to August 2020, there were 206 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](#)).

Pregnant women

There were two cases in a pregnant woman in the week ending 26 June. 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 self-reported 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 5a. Locally acquired COVID-19 cases by vaccination status and week reported, NSW, 1 March to 26 June 2021

Self-reported Vaccination Status	Week ending				1 Mar to 22 May	Total from 1 Mar 2021
	26 Jun	19 Jun	12 Jun	05 Jun		
Total locally acquired cases	110	7	0	0	9	126
Fully Vaccinated	0	0	0	0	0	0
Partially Vaccinated	2 (2%)	0	0	0	1 (11%)	3 (2%)
Single dose within 14 days	5 (5%)	1 (14%)	0	0	1 (11%)	7 (6%)
None	94 (85%)	6 (86%)	0	0	7 (78%)	107 (85%)
Unknown/missing	9 (8%)	0	0	0	0	9 (7%)

Table 5b. Overseas acquired COVID-19 cases by vaccination status and week reported, NSW, 1 March to 26 June 2021

Self-reported Vaccination Status	Week ending				1 Mar to 22 May	Total from 1 Mar 2021
	26 Jun	19 Jun	12 Jun	05 Jun		
Total overseas acquired cases	7	25	18	12	394	456
Fully Vaccinated	0	2 (8%)	0	0	8 (2%)	11 (2%)
Partially Vaccinated	0	0	1 (6%)	0	7 (2%)	6 (1%)
Single dose within 14 days	0	4 (16%)	0	0	15 (4%)	20 (4%)
None	6 (86%)	18 (72%)	17 (94%)	11 (92%)	353 (90%)	405 (89%)
Unknown/missing	1(14%)	1 (4%)	0	1 (8%)	11 (2%)	14 (3%)

Interpretation: Since 1 March 2021, there has been one (1%) locally acquired cases reported as being fully vaccinated and two (2%) cases partially vaccinated. Eleven (2%) 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.

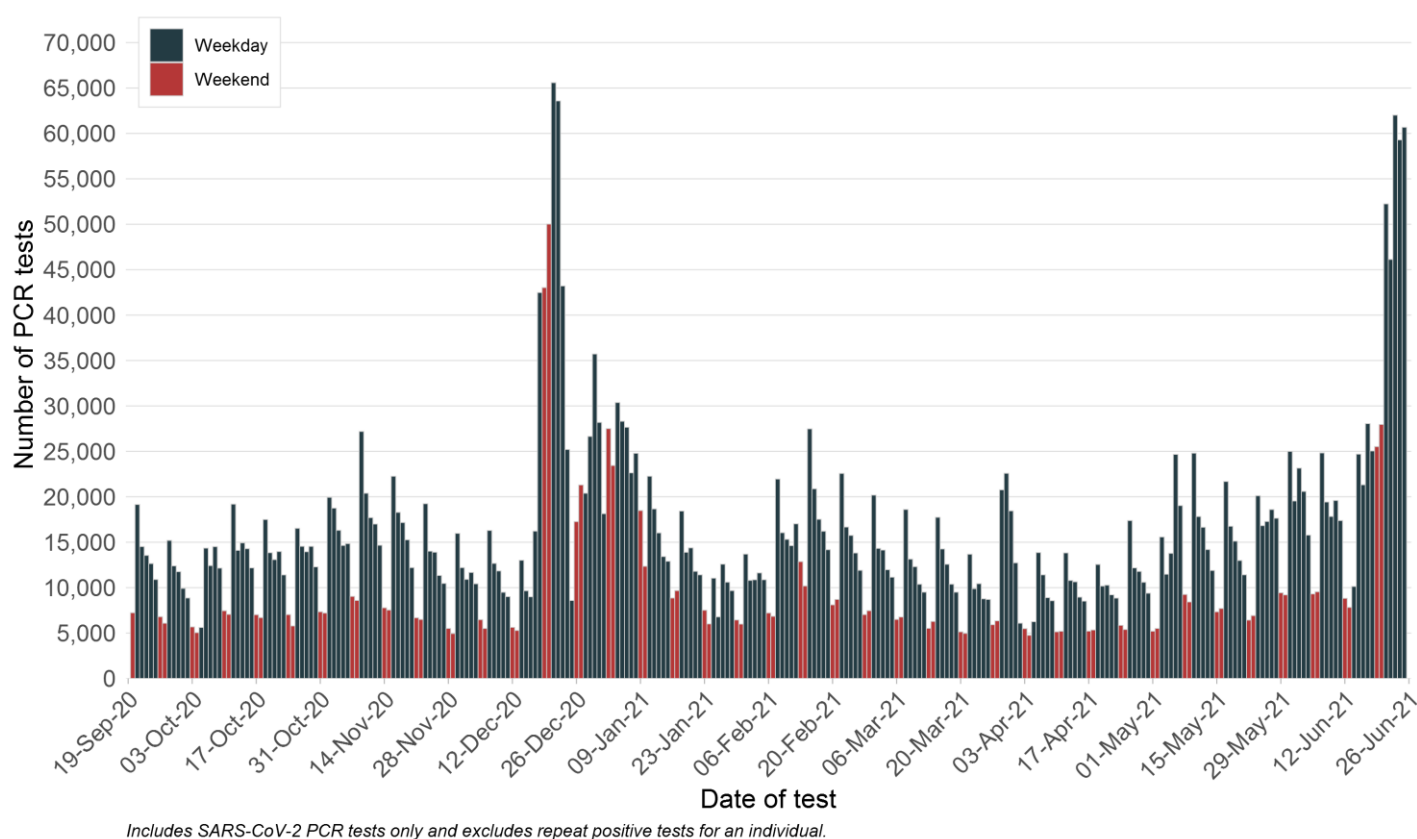
Section 6: COVID-19 testing in NSW

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 on page 16.

Figure 3. Number of PCR tests per day, NSW, 12 September 2020 to 26 June 2021

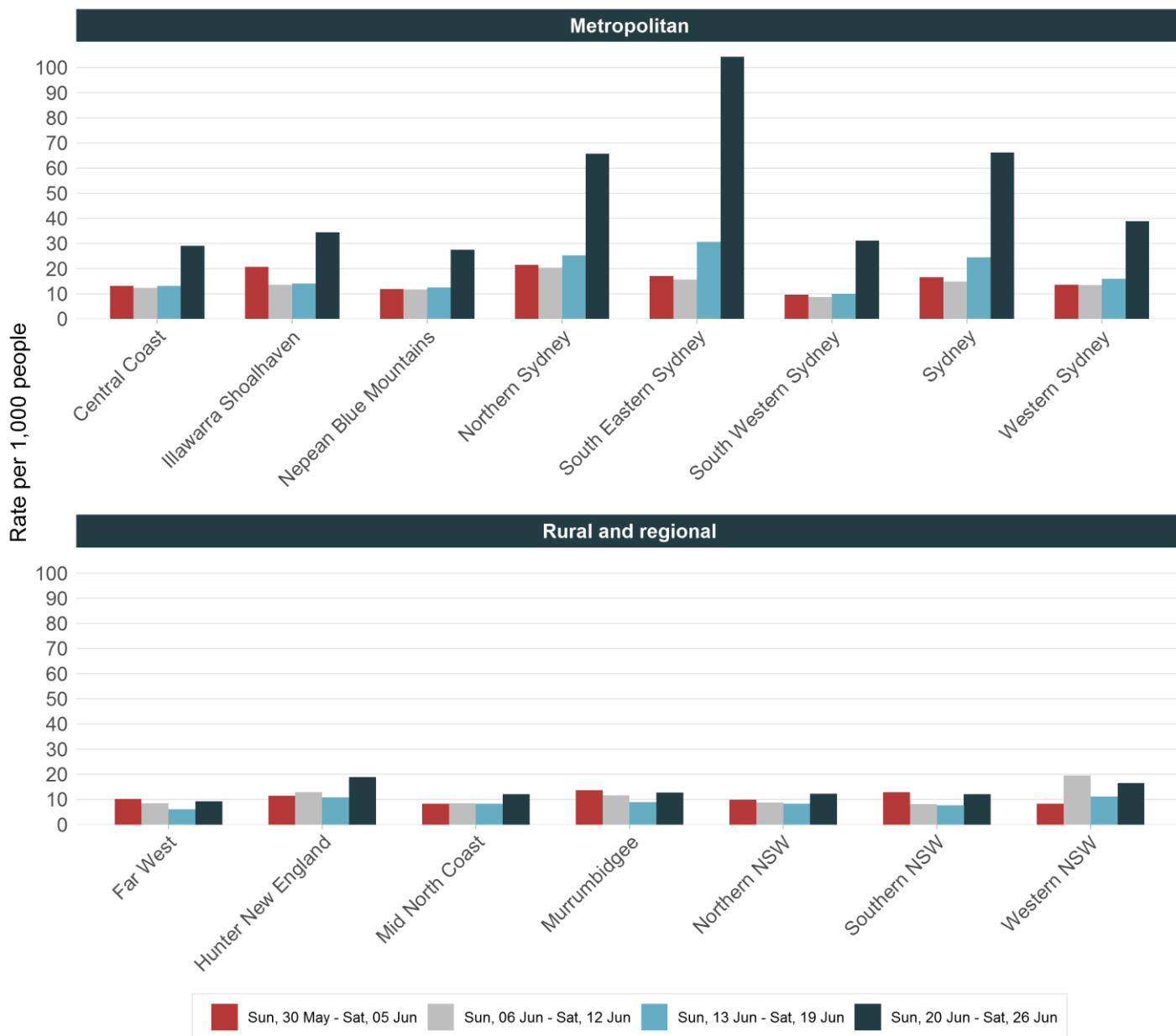


Interpretation: Testing numbers surged in the week ending 26 June 2021 (up 155%) compared to the previous week in response to the developing Eastern Suburbs cluster. The average daily testing rate of 6.4 per 1,000 people in NSW each day increased compared to the previous week of 2.5 per 1,000 people.

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, 30 May to 26 June 2021

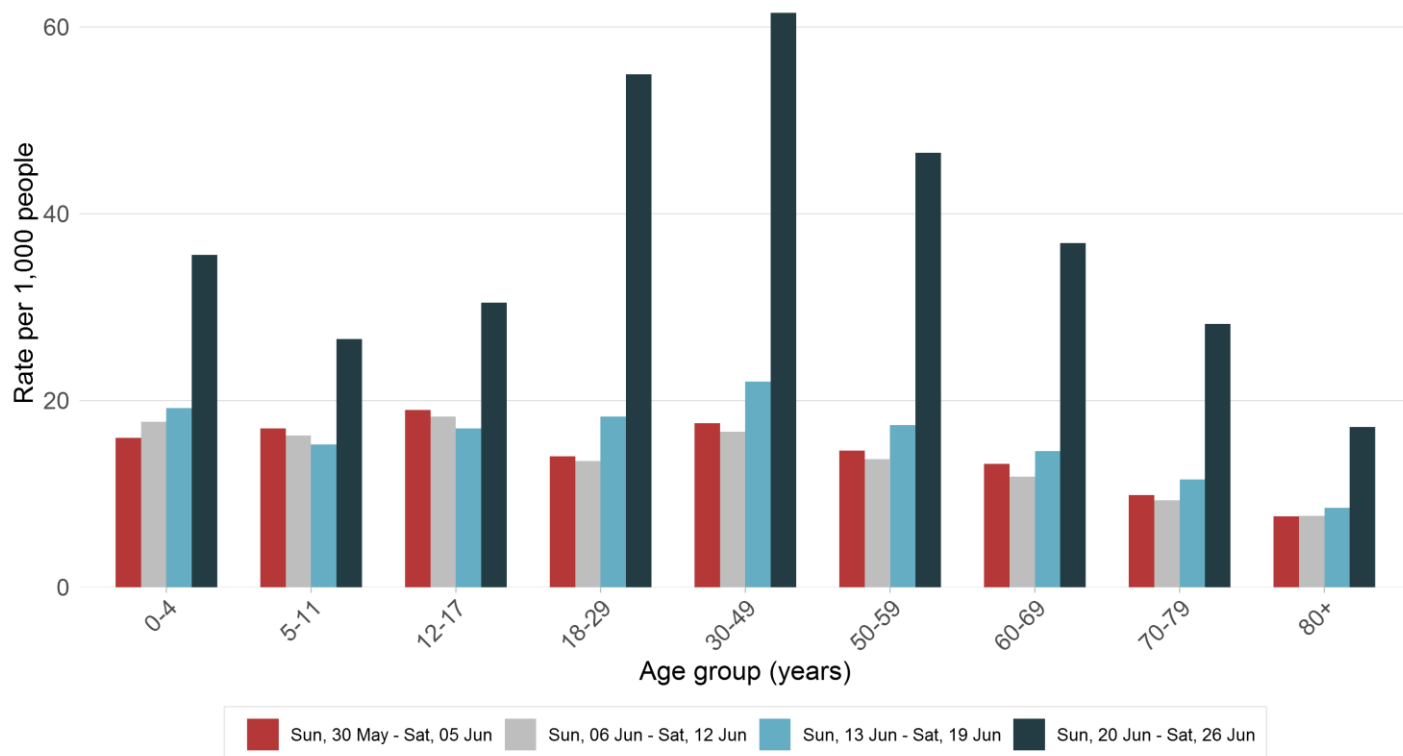


Includes SARS-CoV-2 PCR tests only and excludes notifications with missing postcode of residence.

Interpretation: State-wide weekly testing rates in the week ending 26 June significantly increased when compared to the previous week (44.9 per 1,000 people compared to 17.6 per 1,000 people). Testing rates increased across all metropolitan Local Health Districts with a surge in testing in South Eastern Sydney, Sydney, Northern Sydney and Western Sydney Local Health Districts in response to the Eastern Suburbs cluster. To limit the spread of COVID-19, multiple public health alerts were issued advising people that attended affected venues in the Eastern, Western and South Western suburbs seek testing and isolate regardless of symptoms.

Testing by age group

Figure 5. Rates of COVID-19 testing by age group and week, NSW, 30 May to 26 June 2021

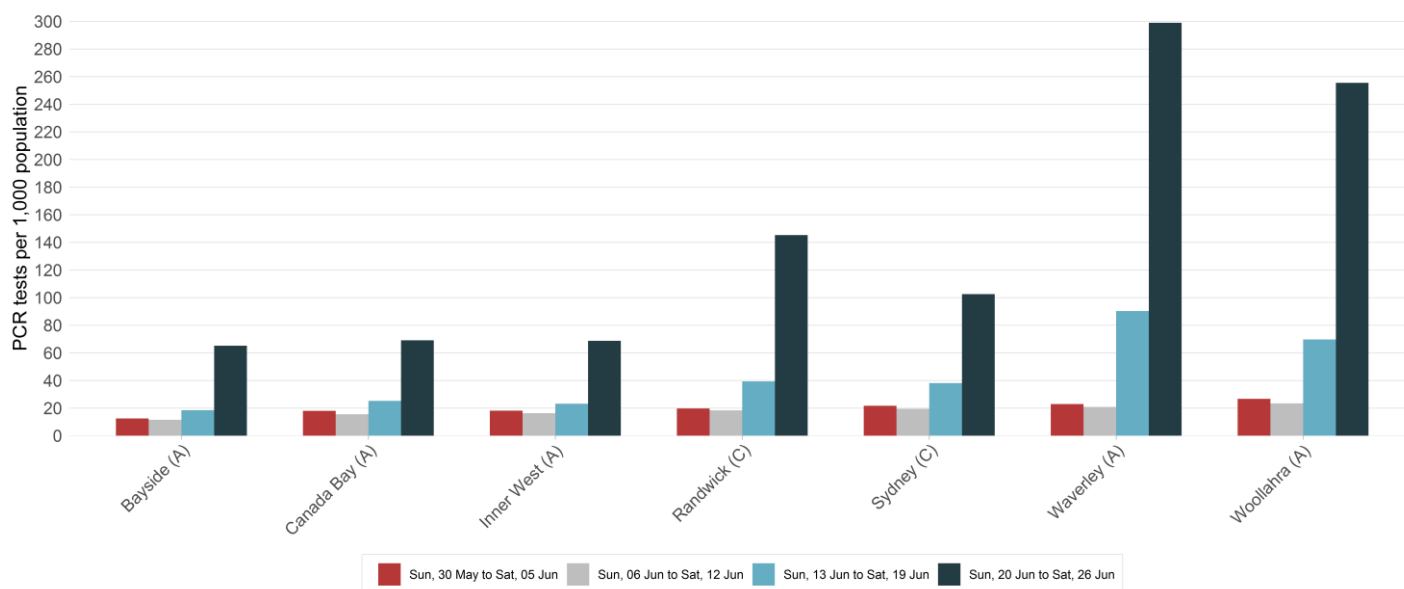


Interpretation: In the week ending 26 June 2021, testing rates increased significantly across all age groups with the largest increase in adults aged 18-29 and 30-49 years.

Testing across Eastern Suburbs LGAs

The following figure displays the number of tests by seven Local Government Area across the Eastern Suburbs area.

Figure 6. Rates of COVID-19 testing by LGA of concern and week, NSW, 30 May to 26 June 2021

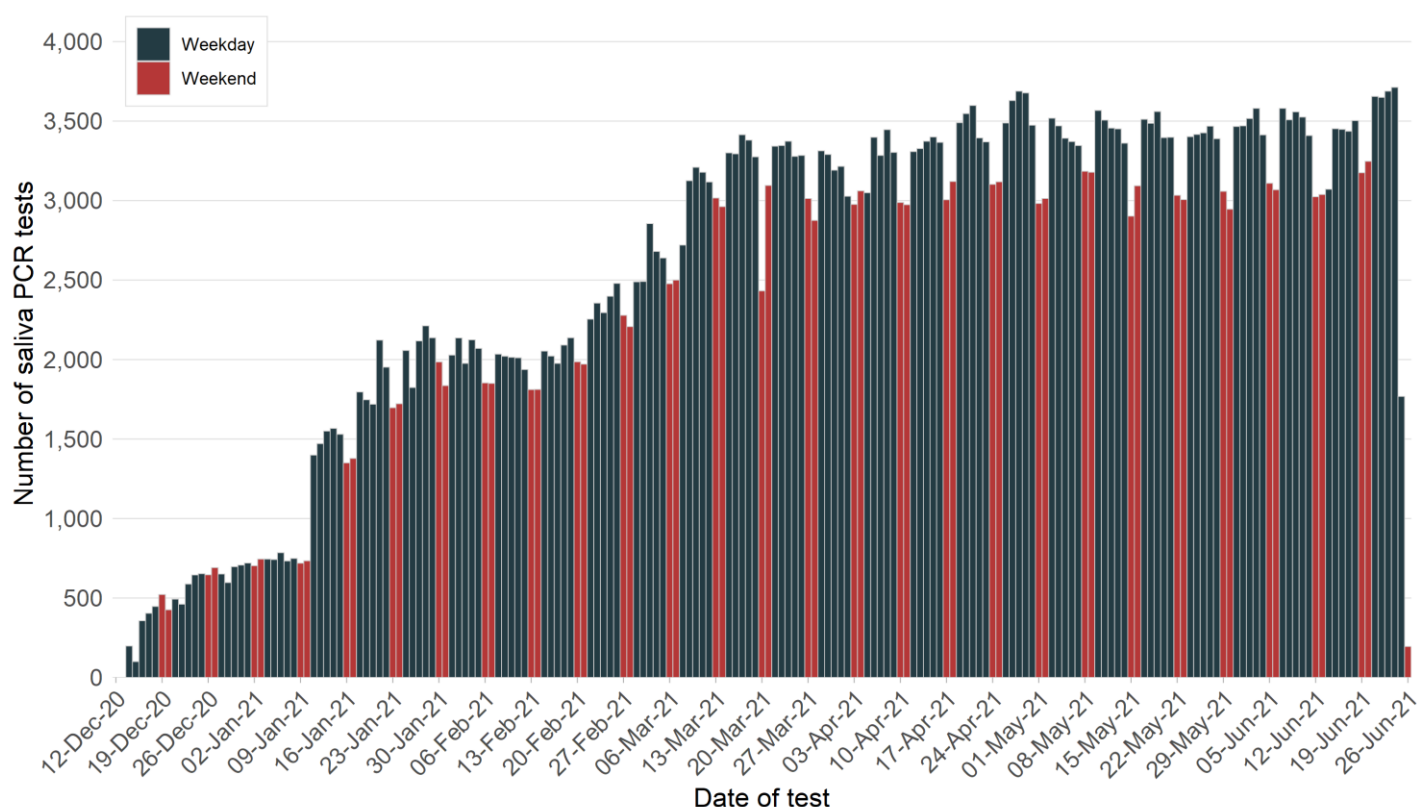


Interpretation: Testing rates increased across seven in response to the recent Eastern Suburbs cluster. This was mainly driven by testing in Waverley, Woollahra and Randwick LGAs where the rate tripled or more when compared to the previous week (299, 255, 145 tests per 1000 people compared with 90, 70, 39 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 26 June 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 493,513 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 26 June 2021, there have been:

- 72 locally acquired cases diagnosed with a VoC. All cases have been identified as having the Delta variant.
- 33 returned travellers diagnosed with a VoC. Of these:
 - 11 (33%) with the Alpha variant
 - 4 (12%) with the Beta variant
 - 18 (55%) with the Delta variant.
- The countries of likely acquisition of the 33 returned travellers diagnosed with a VoC are: Afghanistan (10, 30%), India (4, 12%) South Africa (4, 12%), Iran (2, 6%), UK (2, 6%), Philippines (2, 6%), Bangladesh (2, 6%), USA (2, 6%), Iraq (1, 3%), Indonesia (1, 3%), Pakistan (1, 3%), Sierra Leone (1, 3%) and unknown (1, 3%).

Table 6a. Variants identified among locally acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 26 June 2021

	Week ending				29 Nov to 22 May	Total since 29 November
	26 June*	19 June*	12 June	5 June		
Total variants identified	65	7	0	0	9	33
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)	65	7	0	0	2	26

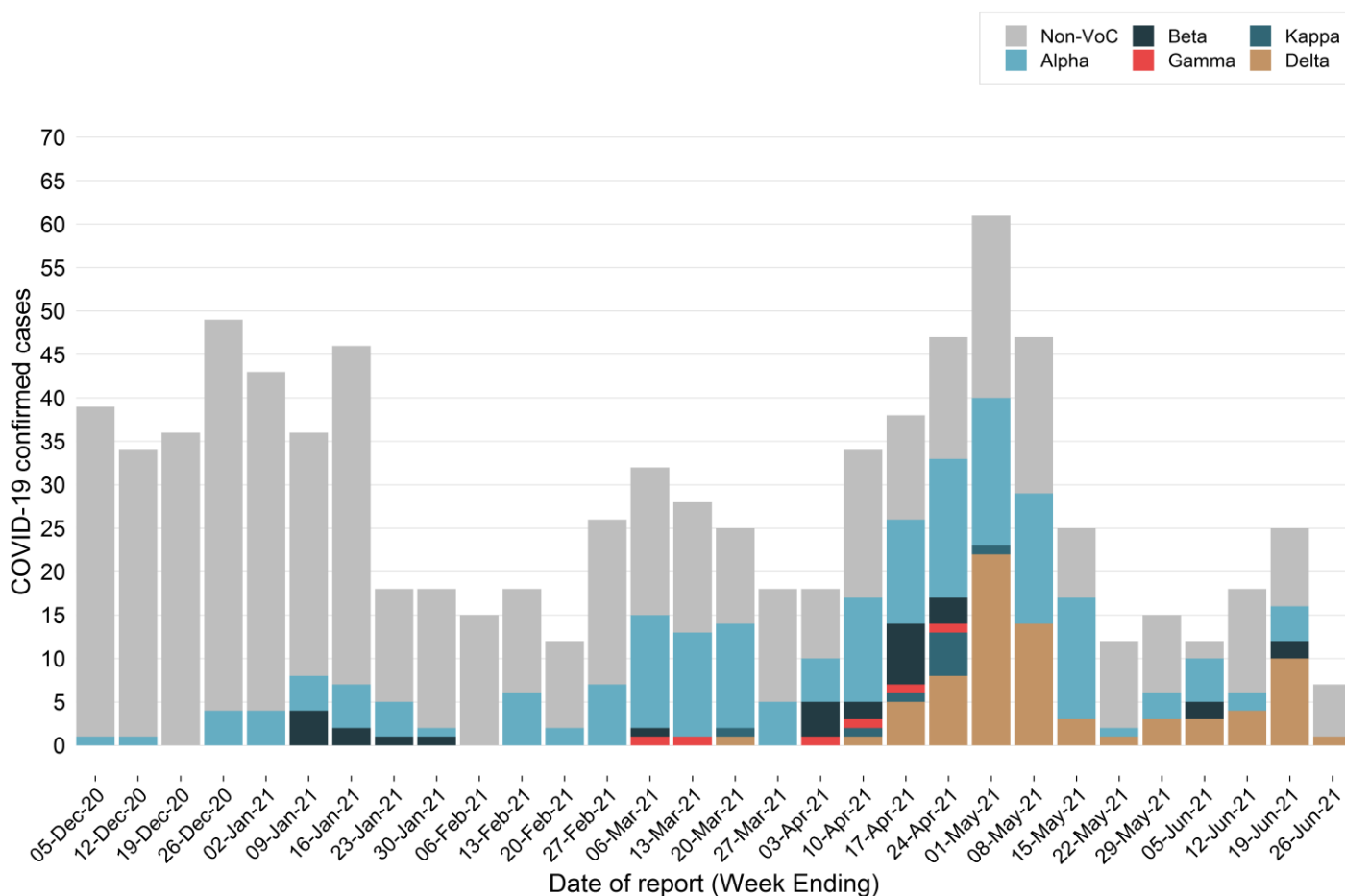
***Note:** identification of variants of concern is through whole genome sequencing. Results for reported cases in the most recent week may not be available at the time of reporting. 100% of locally acquired cases sequenced in the week ending 26 June have been the Delta variant of concern.

Table 6b. Variants identified among overseas acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 26 June 2021

	Week ending				29 Nov to 22 May	Total since 29 November
	26 June*	19 June*	12 June	5 June		
Total variants identified	1	16	6	10	274	307
Alpha (B.1.1.7)	0	4	2	5	176	187
Beta (B.1.351)	0	2	0	2	25	29
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)	1	10	4	3	58	76

*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 26 June 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 301 returned travellers diagnosed with a COVID-19 VoC. In the four weeks ending 26 June 2021, 53% (33/62) 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. Charlotte Pass has recommenced sampling. The results from all sites across NSW are available in Appendix D.





Table 7. Locations with SARS-CoV-2 detections in sewage samples in the last 10 weeks, NSW, 11 April to 26 June 2021

		24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun	12-Jun	19-Jun	26-Jun
Pop.	Location	16	17	18	19	20	21	22	23	24	25
Sydney sewage treatment plant (inlet sites)											
1,241	Brooklyn										
318,810	Bondi										
233,176	Cronulla										
1,857,740	Malabar 1										
	Malabar 2										
98,743	West Camden										
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	Marrickville 1										
Malabar	Marrickville 2										
Malabar	Homebush SPS										
Malabar	Botany										
Malabar	Maroubra										
North Head	Camellia SPS - North										
North Head	Camellia SPS - South										
North Head	Auburn										
North Head	Allambie Heights										
Liverpool	Ireland Park										

Table 7. Continued

		24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun	12-Jun	19-Jun	26-Jun
Pop.	Location	16	17	18	19	20	21	22	23	24	25
Regional Sites											
15,500	Merimbula										
2,050	Bourke										
225,834	Hunter - Burwood Beach										

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 26 June, 172 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were thirty detections. There was one detection in regional NSW taken from the Bourke sewage treatment plant. There were twenty nine detections in Sydney – taken from the Brooklyn, Bondi (2 detections), Cronulla (3 detections), Malabar (3 detections), West Camden, Castle Hill Glenhaven, Rouse Hill (2 detections), St Marys and North Head sewage treatment plants and the sewage network at Botany (within the Malabar catchment), Paddington (within the Bondi catchment), Lough Park (2 detections within the Bondi catchment), Caringbah (within the Cronulla catchment), Maroubra (within the Malabar catchment), Auburn (within the North Head catchment), Ireland Park (within the Liverpool catchment), Port Kembla, Bellambi (2 detections) and the sewage pumping stations Camellia South (2 detections within the North Head catchment) and Camellia North (within the North Head catchment).

Although no active cases were identified in the Bourke, Port Kembla and Castle Hill Glenhaven catchments, the detection may indicate 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 deaths

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 were no deaths reported in the week ending 26 June 2021.

Table 8. Deaths as a result of COVID-19, by age group, NSW, from 25 January 2020 to 26 June 2021

Age group (years)	Number of deaths	Number of cases	Case fatality rate
0-4	0	155	0%
5-11	0	155	0%
12-17	0	177	0%
18-29	0	1260	0%
30-49	0	1869	0%
50-59	1	728	0.1%
60-69	4	666	0.6%
70-79	15	397	3.8%
80+	36	167	22.0%
Total	56	5,574	1.0%

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.

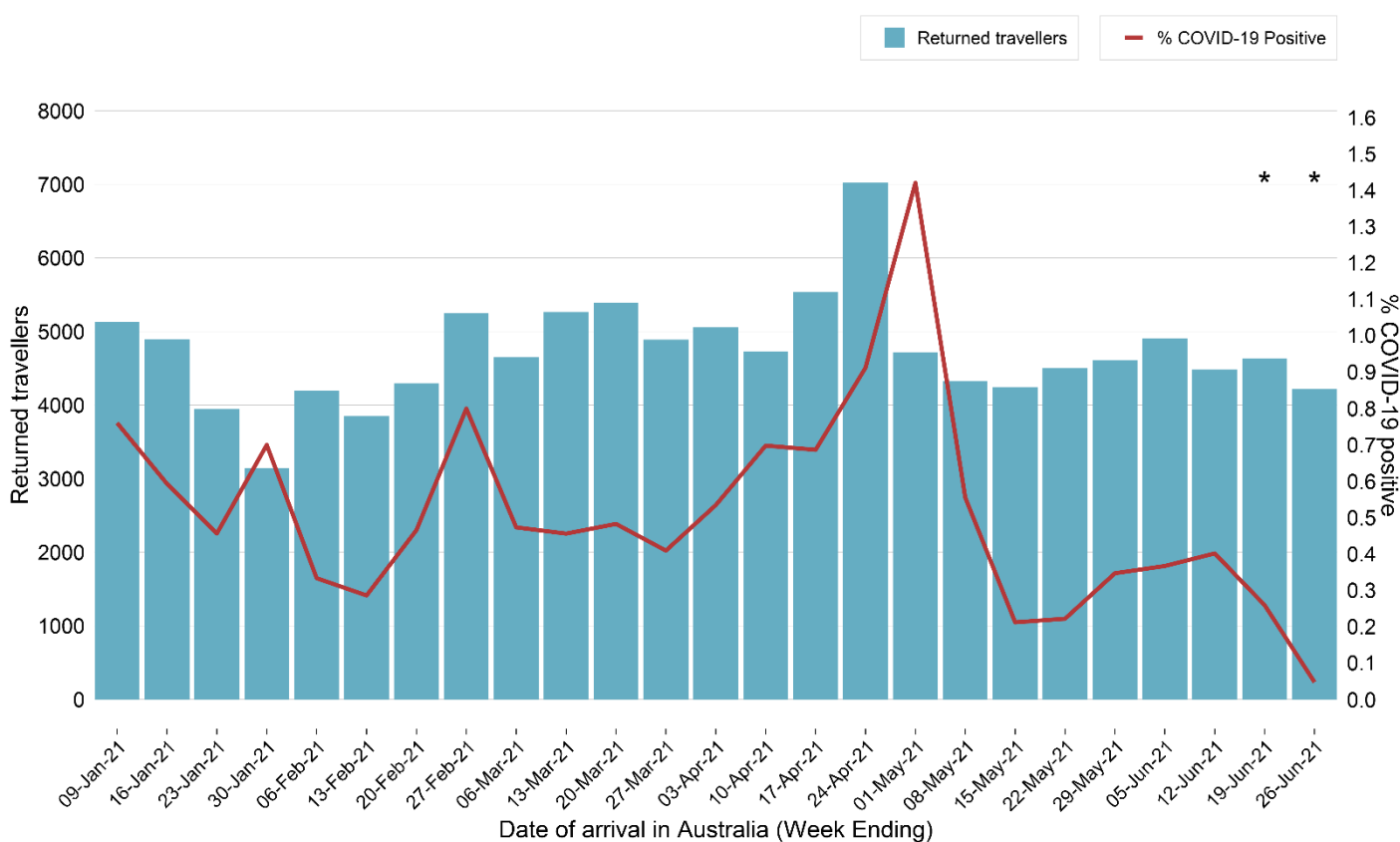
Section 10: COVID-19 in returned travellers

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 26 June 2021



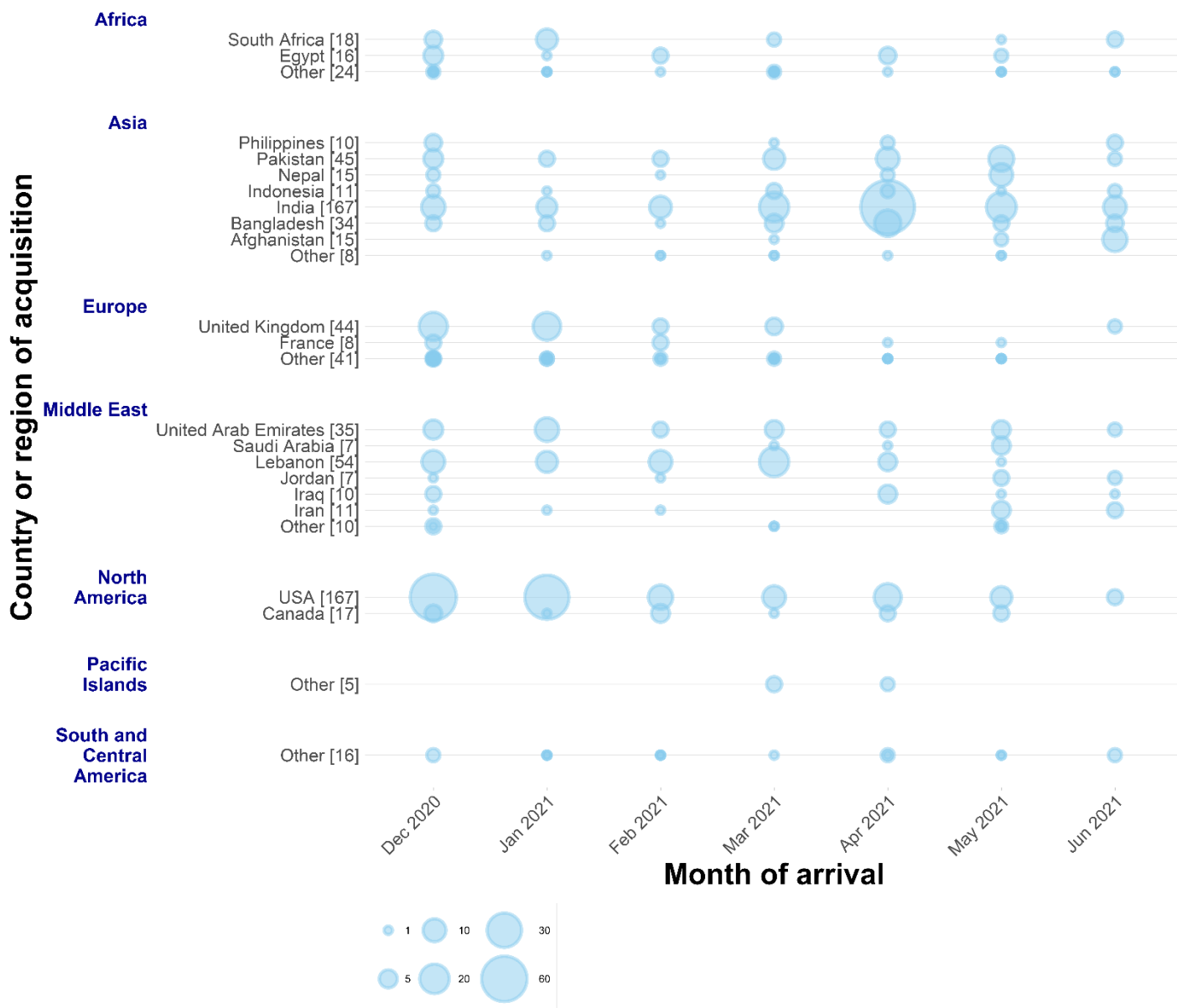
*Returned travellers entering Australia in the past 14 days are still in quarantine and may return a positive result prior to the end of their hotel quarantine period.

Interpretation: Since 3 January 2021, there has been on average 677 people screened on arrival through Sydney International Airport daily. In the last four weeks, 62 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 26 June 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 62 COVID-positive returned travellers in NSW. The table below lists countries of acquisition for these travellers.

Table 9. Top countries of acquisition for overseas acquired cases that have tested positive in the last four weeks, 30 May 2021 to 26 June 2021

Country of acquisition of COVID-19	Number (%) of cases in the last four weeks
Afghanistan	12 (19%)
India	10 (16%)
Bangladesh	4 (6%)
South Africa	4 (6%)
USA	4 (6%)
Indonesia	3 (5%)
Iran	3 (5%)
Philippines	3 (5%)
Jordan	2 (3%)
Pakistan	2 (3%)
United Arab Emirates	2 (3%)
United Kingdom	2 (3%)
Venezuela,	2 (3%)
Other	9 (15%)
Total	62 (100%)

Interpretation: In the last four weeks, travellers returning from Afghanistan and India accounted for the largest number of overseas acquired cases (22, 40%), followed by travellers returning from Bangladesh, South Africa and USA (4, 6%).

Cases among returned travellers in quarantine

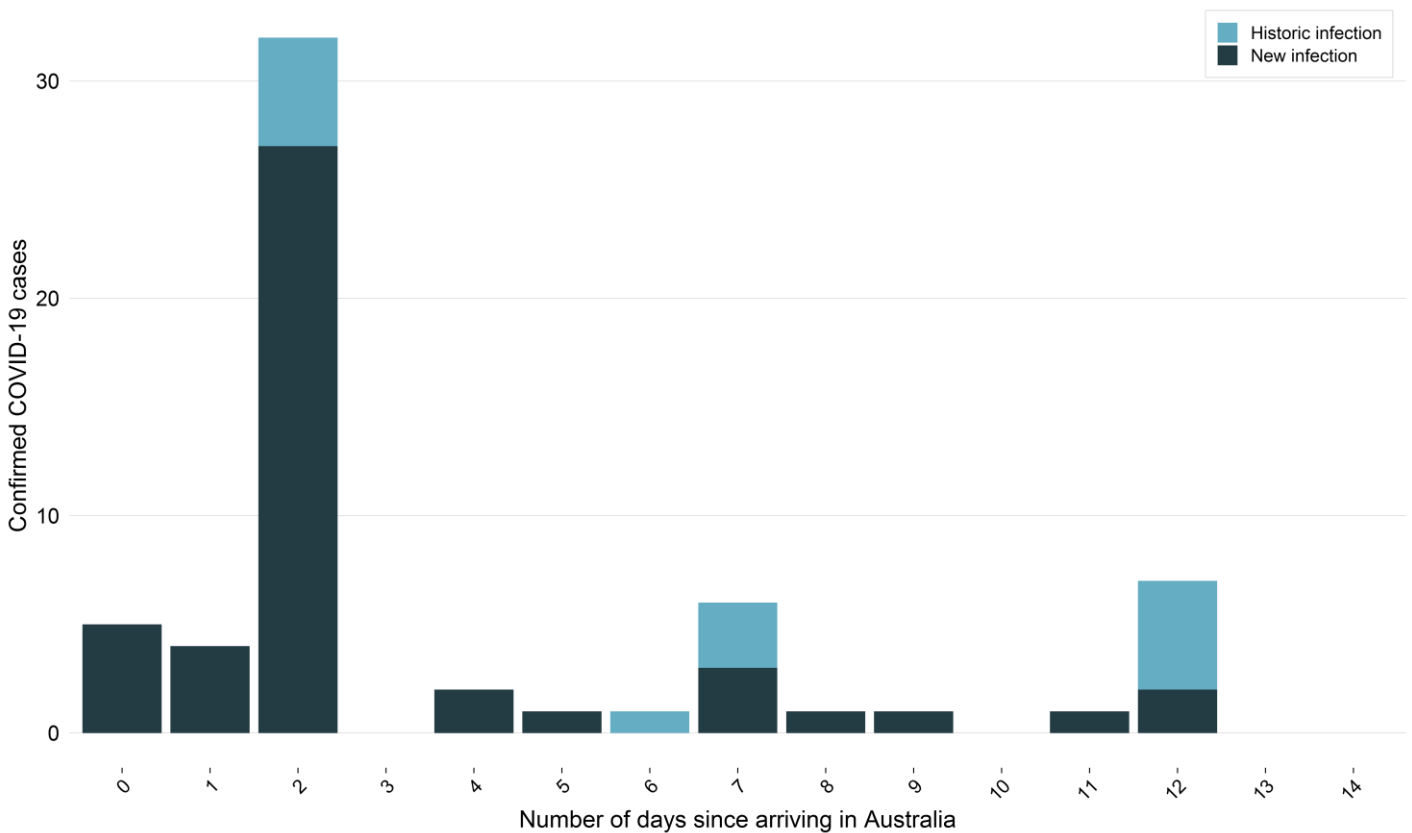
The program of screening all overseas travellers after arrival in NSW commenced on 15 May 2020. From 30 June 2020, the program was extended to include screening of travellers on entry to quarantine, day 2 after arrival, and exit of quarantine. On 11 January 2021, exit screening of travellers was moved 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, 30 May to 26 June 2021



Interpretation: In the four weeks ending 26 June 2021, 48% of overseas acquired COVID-19 cases have tested positive within 2 days of arriving to Australia, with most people testing positive on day 2 screening.

Section 11: Other respiratory infections in NSW

Influenza and other respiratory virus cases and tests reported in NSW, up to 20 June 2021

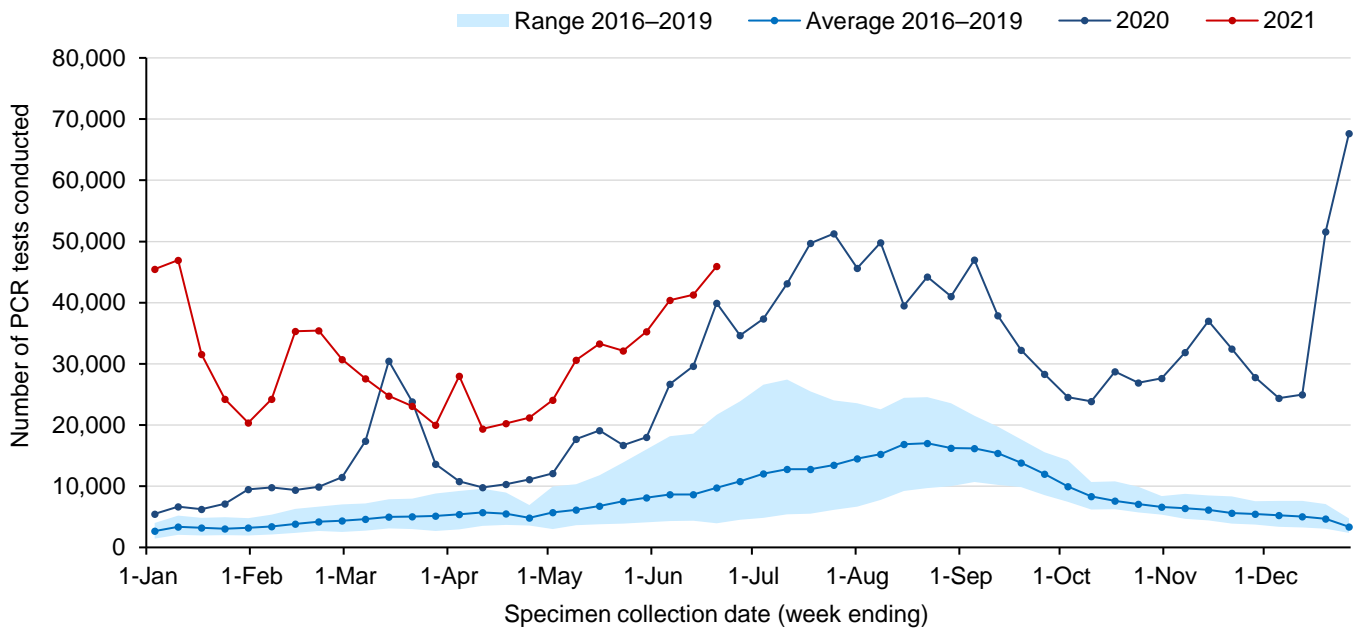
In NSW, routine surveillance for influenza and other respiratory viruses is conducted through sentinel laboratories. The number of all PCR tests (positive and negative) are provided to NSW Health by participating laboratories each week. Testing counts reflect the number of influenza PCR tests conducted;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

The most recent data available is for testing carried out to 20 June 2021. A total of 761,697 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 20 June 2021

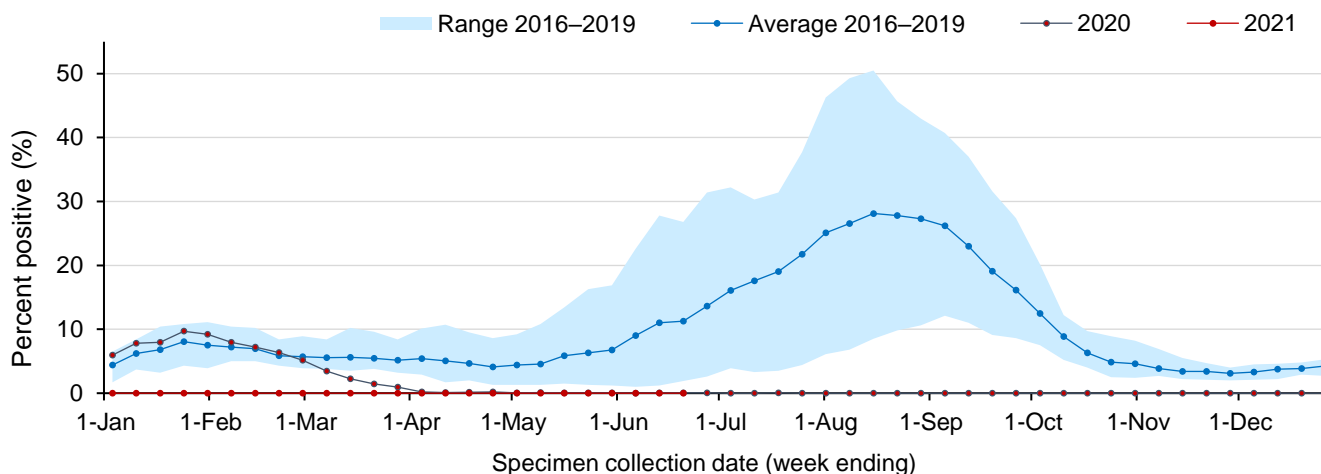


Interpretation: In the week ending 20 June, the number of influenza tests increased, with 45,936 influenza tests performed across participating laboratories compared with 41,306 the previous week. Testing for influenza continues to exceed the four-year average for this time of year.

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 20 June 2021

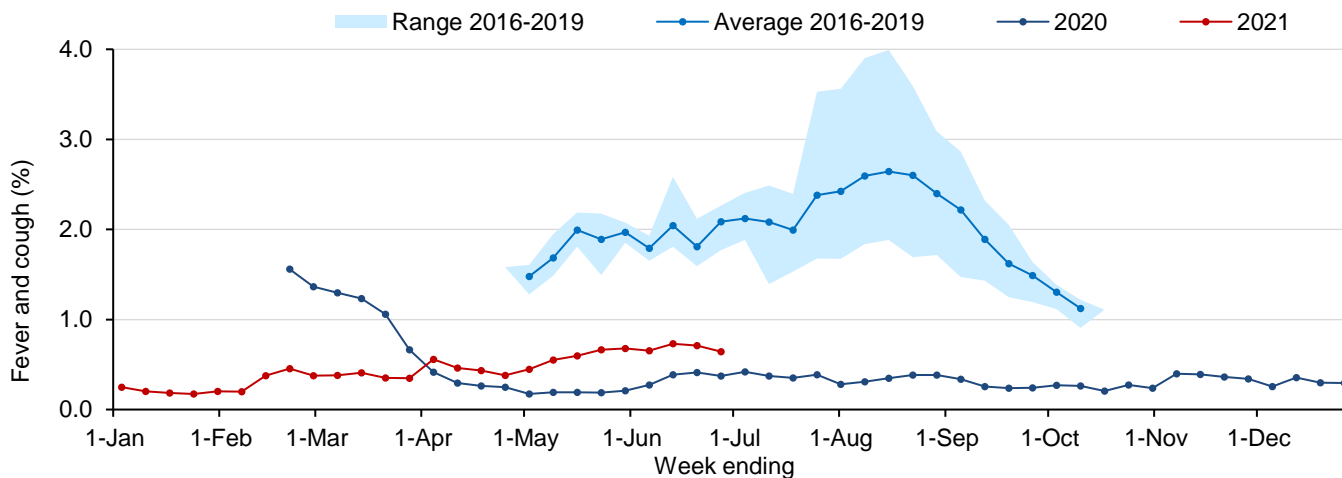


Interpretation: In the week ending 20 June, the percent of influenza tests that were positive continued to be very low (<0.01%), indicating limited influenza transmission in the community. Since early March 2020, this percentage has remained far lower than the usual range for the time of year. There have been 13 influenza cases reported in 2021.

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 27 June 2021



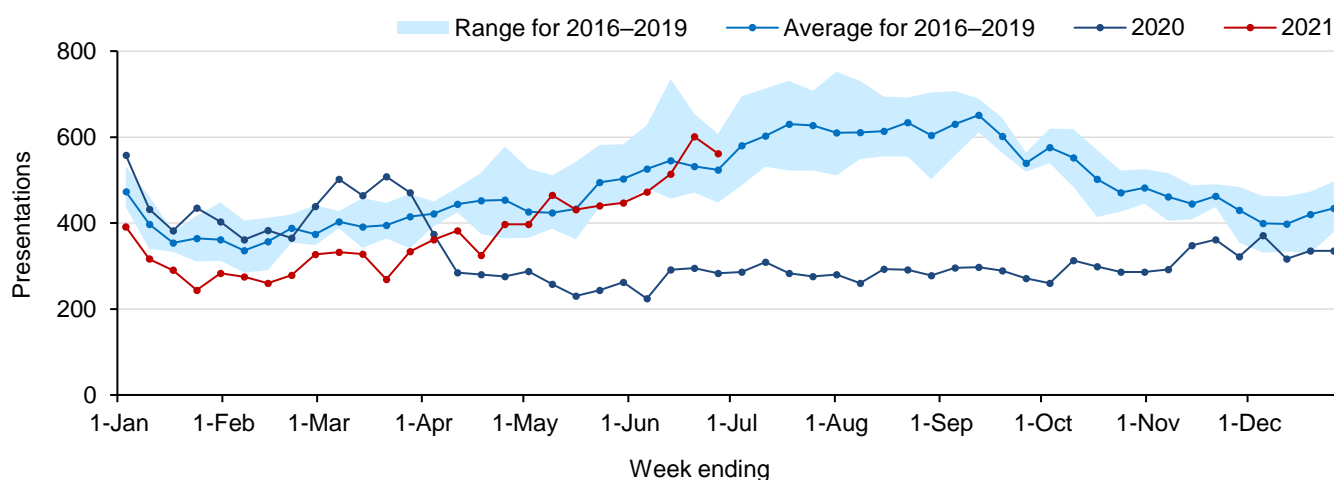
Interpretation: In NSW in the week ending 27 June 2021, of the 21,647 people surveyed, 139 people (0.64%) reported flu-like symptoms. In the last four weeks, 59% (394/664) of new cases of flu-like illness reported having a COVID-19 test. The proportion of people being tested for COVID-19 has decreased 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.

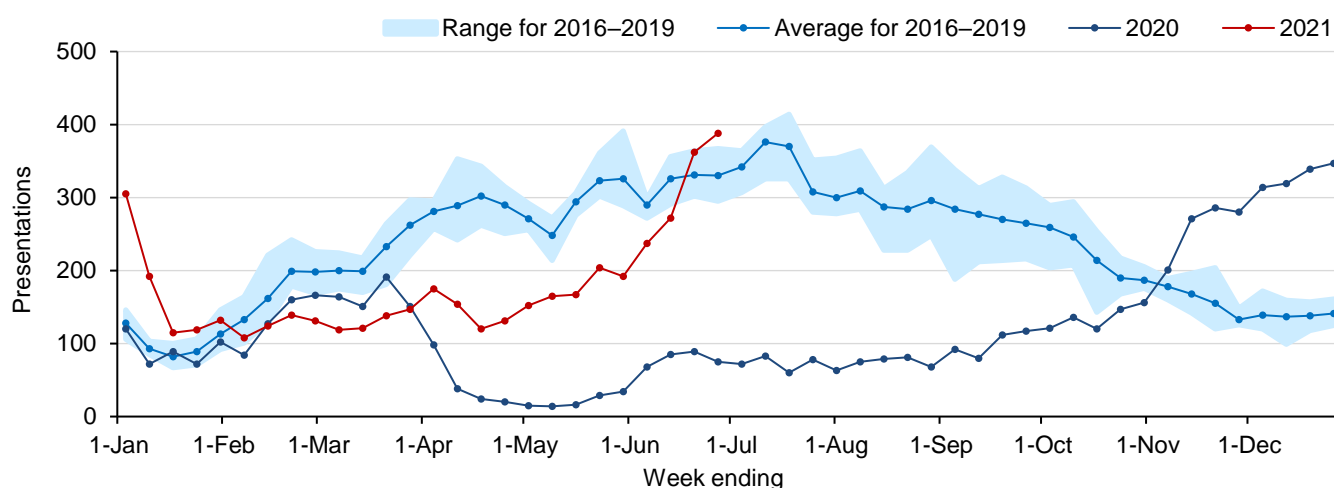
The figures below show weekly pneumonia and bronchiolitis presentations to Emergency Departments in NSW, using PHREDSS². The red line shows the weekly counts for 2021, the dark blue line showing counts for 2020, the light blue line showing the average for 2016 to 2019 and the shaded area showing the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

Figure 15. Emergency Department pneumonia presentations, NSW, 1 January 2016 to 27 June 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 20 June, pneumonia presentations decreased and remain within the seasonal range for this time of year.

Figure 16. Emergency Department bronchiolitis presentations, NSW, 1 January 2016 to 27 June 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 20 June 2021, bronchiolitis presentations increased and are above 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	
		26-Jun		19-Jun			
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>	9506	26.94	4634	13.13	245539	695.85
	Balranald	28	11.98	12	5.13	827	353.72
	Broken Hill	151	8.64	124	7.09	10446	597.63
Far West	Central Darling	9	4.89	4	2.18	614	333.88
	Wentworth	48	6.81	45	6.38	3805	539.49
	<i>LHD Total</i>	236	7.83	185	6.14	15692	520.57
	Armidale Regional	417	13.55	277	9.00	17023	553.07
	Cessnock	540	9.00	280	4.67	24184	403.17
	Dungog	98	10.40	58	6.16	4126	437.86
	Glen Innes Severn	58	6.54	40	4.51	2978	335.70
	Gunnedah	167	13.17	91	7.18	5238	413.06
	Gwydir	37	6.91	31	5.79	1258	235.01
	Inverell	147	8.70	137	8.11	7099	420.31
	Lake Macquarie	4363	21.19	2801	13.60	151202	734.34
	Liverpool Plains	91	11.51	56	7.09	3391	429.08
	Maitland	2002	23.51	1112	13.06	67534	792.97
	Mid-Coast	903	9.62	598	6.37	39171	417.44
	Hunter New England	Moree Plains	123	9.28	540	40.72	6908
Muswellbrook		176	10.75	126	7.69	7369	449.96
Narrabri		84	6.40	78	5.94	4095	311.76
Newcastle		4424	26.72	2338	14.12	146040	882.04
Port Stephens		1218	16.58	663	9.02	45583	620.34
Singleton		307	13.09	185	7.89	14812	631.35
Tamworth Regional		1145	18.31	689	11.02	37228	595.26
Tenterfield		22	3.34	22	3.34	1835	278.28
Upper Hunter Shire		172	12.13	111	7.83	6687	471.58
Uralla		47	7.82	29	4.82	2052	341.32
Walcha		80	25.53	9	2.87	1494	476.71
<i>LHD Total</i>	16619	17.45	10269	10.78	596886	626.73	
Illawarra Shoalhaven	Kiama	791	33.82	402	17.19	17636	754.13
	Shellharbour	2585	35.30	909	12.41	52865	721.87
	Shoalhaven	1886	17.85	1100	10.41	59837	566.38
	Wollongong	8577	39.32	3473	15.92	170740	782.80
	<i>LHD Total</i>	13839	32.98	5884	14.02	301078	717.51
Mid North Coast	Bellingen	171	13.16	120	9.23	6585	506.69
	Coffs Harbour	834	10.79	585	7.57	34038	440.47
	Kempsey	300	10.09	249	8.37	14754	496.02
	Nambucca	172	8.68	129	6.51	8003	404.09
	Port Macquarie-Hastings	1141	13.50	774	9.16	43872	519.04
	<i>LHD Total</i>	2618	11.60	1857	8.23	107252	475.27
Murrumbidgee	Albury	679	12.49	558	10.27	30768	566.08

		Week ending				Total since January 2021	
		26-Jun		19-Jun			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Berrigan	24	2.74	30	3.43	2735	312.57
	Bland	66	11.05	39	6.53	2306	386.14
	Carrathool	13	4.64	7	2.50	520	185.78
	Coolamon	46	10.60	47	10.83	2054	473.16
	Cootamundra-Gundagai Regional	128	11.39	94	8.37	4923	438.18
	Edward River	26	2.86	27	2.97	3766	414.58
	Federation	72	5.79	79	6.35	4917	395.35
	Greater Hume Shire	115	10.68	108	10.03	5247	487.46
	Griffith	445	16.46	312	11.54	14787	547.08
	Hay	14	4.75	6	2.03	786	266.53
	Hilltops	250	13.37	155	8.29	8645	462.20
	Junee	42	6.28	52	7.78	2336	349.54
	Lachlan ¹	31	5.10	19	3.13	1405	231.28
	Leeton	99	8.65	79	6.90	4274	373.44
	Lockhart	26	7.91	12	3.65	1263	384.47
	Murray River	14	1.16	14	1.16	1342	110.74
	<i>LHD Total</i>	31	7.91	21	5.36	1256	320.65
	Narrandera	47	7.97	32	5.42	1729	293.10
	Snowy Valleys	159	10.98	94	6.49	6496	448.65
	Temora	32	5.07	26	4.12	1923	304.90
	Wagga Wagga	1231	18.86	845	12.95	43606	668.21
	<i>LHD Total</i>	3565	11.96	2642	8.86	146148	490.25
	Nepean Blue Mountains	Blue Mountains	2314	29.25	1162	14.69	71991
Hawkesbury		1857	27.59	1018	15.13	50258	746.82
Lithgow		228	10.55	117	5.42	9820	454.52
Penrith		5841	27.43	2635	12.37	171823	806.77
<i>LHD Total</i>		10145	25.95	4878	12.48	301537	771.22
Northern NSW	Ballina	942	21.11	554	12.41	35222	789.24
	Byron	550	15.68	371	10.58	27471	783.07
	Clarence Valley	404	7.82	301	5.83	19036	368.47
	Kyogle	64	7.28	62	7.05	3102	352.66
	Lismore	559	12.79	419	9.59	27027	618.58
	Richmond Valley	198	8.44	180	7.67	11950	509.27
	Tenterfield	22	3.34	22	3.34	1835	278.28
	Tweed	872	8.99	671	6.92	44261	456.29
	<i>LHD Total</i>	3593	11.58	2564	8.26	168483	542.86
Northern Sydney	Hornsby	6539	43.00	2827	18.59	124006	815.51
	Hunters Hill	1778	118.69	696	46.46	28309	1889.79
	Ku-ring-gai	9009	70.85	3764	29.60	164563	1294.21
	Lane Cove	4738	117.99	1852	46.12	79566	1981.47
	Mosman	1909	61.62	815	26.31	33724	1088.54
	North Sydney	4139	55.17	1600	21.33	62772	836.73
	Northern Beaches	15858	57.98	6809	24.90	397194	1452.27
	Parramatta ¹	9335	36.30	4258	16.56	181830	706.97

		Week ending				Total since January 2021	
		26-Jun		19-Jun			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Ryde	7601	57.90	3359	25.59	120138	915.19
	Willoughby	3749	46.18	1542	18.99	64631	796.06
	<i>LHD Total</i>	57364	60.01	24236	25.35	1112576	1163.88
South Eastern Sydney	Bayside	10834	60.73	3314	18.58	124755	699.32
	Georges River	5788	36.30	2037	12.77	101405	635.88
	Randwick	21455	137.84	6124	39.34	178364	1145.94
	Sutherland Shire	11689	50.69	4029	17.47	208646	904.75
	Sydney ¹	22671	92.03	9400	38.16	281155	1141.32
	Waverley	20073	270.18	6706	90.26	113726	1530.74
	Woollahra	13734	231.26	4145	69.80	94545	1592.02
	<i>LHD Total</i>	92277	96.21	29399	30.65	924545	963.97
	South Western Sydney	Camden	6930	68.32	1653	16.30	106526
Campbelltown		6240	36.50	2069	12.10	140238	820.38
Canterbury-Bankstown ¹		10416	27.56	4281	11.33	246817	653.10
Fairfield		2983	14.09	1302	6.15	104658	494.38
Liverpool		5896	25.91	2280	10.02	165977	729.30
Wingecarribee		1193	23.33	718	14.04	43868	857.90
Wollondilly		1076	20.24	466	8.77	29793	560.56
<i>LHD Total</i>		29013	27.94	10431	10.04	710353	684.00
Southern NSW	Bega Valley	415	12.04	245	7.11	15955	462.79
	Eurobodalla	479	12.45	341	8.86	23249	604.29
	Goulburn Mulwaree	457	14.68	247	7.93	17290	555.38
	Queanbeyan-Palerang Regional	562	9.20	475	7.77	23336	381.93
	Snowy Monaro Regional	300	14.43	184	8.85	10291	494.88
	Upper Lachlan Shire	113	14.02	70	8.69	3848	477.48
	Yass Valley	145	8.49	92	5.38	5697	333.41
	<i>LHD Total</i>	2477	11.41	1655	7.62	99708	459.33
Sydney	Burwood	1420	34.97	464	11.43	23746	584.70
	Canada Bay	6318	65.76	2426	25.25	94104	979.49
	Canterbury-Bankstown ¹	10416	27.56	4281	11.33	246817	653.10
	Inner West	12506	62.28	4644	23.13	213619	1063.78
	Strathfield	2456	52.34	869	18.52	41912	893.15
	<i>LHD Total</i>	22671	92.03	9400	38.16	281155	1141.32
	<i>LHD Total</i>	42214	60.59	17049	24.47	674364	967.84
Western NSW	Bathurst Regional	742	17.01	411	9.42	28012	642.21
	Blayney	106	14.37	65	8.81	4580	620.68
	Bogan	21	8.14	19	7.36	1193	462.40
	Bourke	125	48.26	10	3.86	830	320.46
	Brewarrina	9	5.59	10	6.21	422	261.95
	Cabonne	144	10.56	99	7.26	4852	355.88
	Cobar	31	6.66	37	7.94	1625	348.86
	Coonamble	56	14.15	18	4.55	1297	327.69
	Cowra	155	12.16	106	8.32	5377	421.96
	Dubbo Regional	1009	18.78	1004	18.69	29725	553.34
	Forbes	95	9.59	158	15.95	3843	387.95

		Week ending				Total since January 2021	
		26-Jun		19-Jun			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Gilgandra	52	12.27	36	8.49	1425	336.16
	Lachlan ¹	31	5.10	19	3.13	1405	231.28
	Mid-Western Regional	395	15.64	267	10.57	13103	518.91
	Narromine	90	13.81	79	12.12	2713	416.30
	Oberon	57	10.53	38	7.02	2397	442.99
	Orange	920	21.67	487	11.47	32034	754.61
	Parkes	173	11.66	161	10.85	6162	415.31
	Walgett	34	5.71	46	7.73	2106	353.77
	Warren	55	20.39	51	18.91	1914	709.68
	Warrumbungle Shire	98	10.56	67	7.22	4058	437.38
	Weddin	42	11.62	13	3.60	1245	344.59
	<i>LHD Total²</i>	4436	15.56	3196	11.21	149920	526.01
Western Sydney	Blacktown	11123	29.70	5323	14.22	291922	779.60
	Cumberland	7075	29.29	3164	13.10	182085	753.91
	Parramatta ¹	9335	36.30	4258	16.56	181830	706.97
	The Hills Shire	9784	54.98	4976	27.96	198881	1117.50
	<i>LHD Total²</i>	35553	33.75	16857	16.00	824187	782.38
NSW Total³	332802	41.14	142578	17.62	2626489	324.67	

Appendix B: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 20 June 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 2020–20 June 2021

Specimen collection date	PCR tests conducted	Influenza A		Influenza B		Adeno-virus	Para-influenza	RSV	Rhino-virus	HMPV**	Entero-virus
		No.	%Pos.	No.	%Pos.						
Total	761,697	4	<0.01%	9	<0.01%	4,140	10,034	12,552	45,575	507	5,220
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	1	–	6	<0.01%	946	3,129	1,491	8,982	78	843
Week ending											
6 June	40,405	1	<0.01%	0	–	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

Testing numbers in NSW from January–27 December 2020

Specimen collection date	PCR tests conducted	Influenza A		Influenza B		Adeno-virus	Para-influenza	RSV	Rhino-virus	HMPV**	Entero-virus
		No.	%Pos.	No.	%Pos.						
Total	1,393,182	6,631	0.48%	955	0.07%	9,139	9,193	22,004	138,737	2,435	6,434
Month ending											
3 February *	34,953	2,508	7.18%	401	1.15%	846	1,900	752	5,036	599	335
1 March	40,575	2,363	5.82%	315	0.78%	798	2,435	1,118	8,245	437	1,007
29 March	85,238	1,549	1.82%	200	0.23%	898	4,117	1,977	18,088	664	1,502
3 May *	54,128	70	0.13%	13	0.02%	175	273	410	2,250	48	210
31 May	71,525	35	0.05%	6	0.01%	237	62	115	3,511	27	112
28 June	130,922	42	0.03%	11	0.01%	629	83	178	28,321	112	246
2 August *	227,152	34	0.01%	2	<0.01%	1,251	89	209	31,589	79	427
30 August	174,594	9	0.01%	2	<0.01%	1,137	37	299	13,926	14	235
27 September	145,489	6	0.00%	1	<0.01%	938	35	866	8,416	61	259
1 November *	131,686	7	0.01%	1	<0.01%	894	56	3,508	5,632	51	662
29 November	129,164	6	<0.01%	3	<0.01%	752	42	6,255	8,252	192	884
27 December	167,756	2	<0.01%	0	–	584	64	6,317	5,471	151	555

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

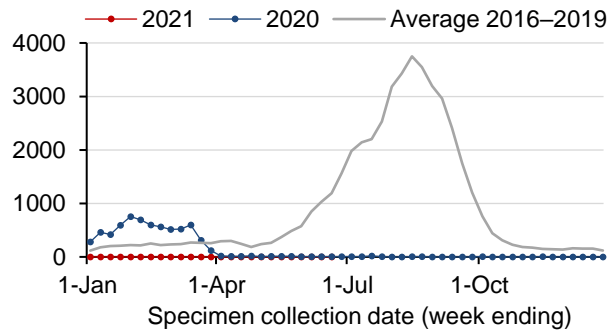
RSV - Respiratory syncytial virus

*Five-week period

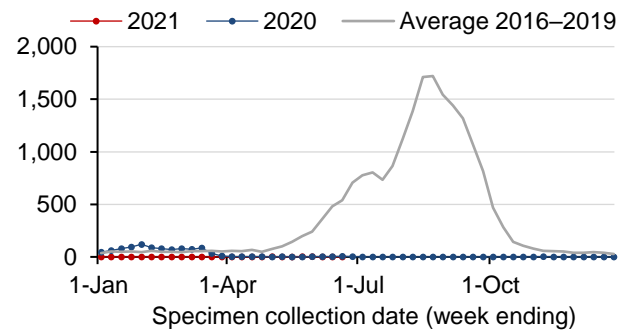
Appendix C: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 20 June 2021

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.

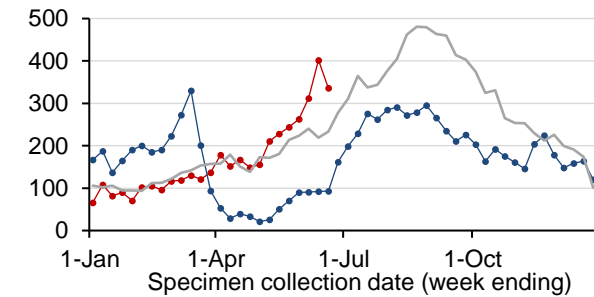
Influenza A



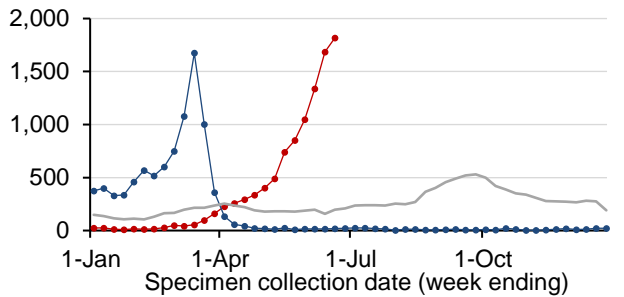
Influenza B



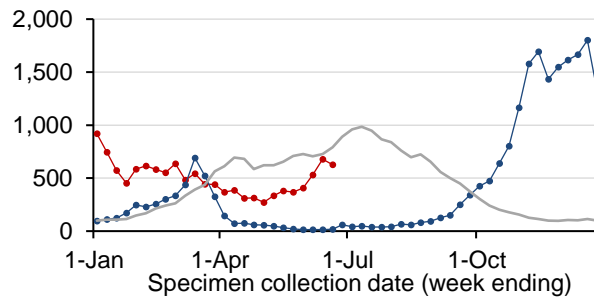
Adenovirus



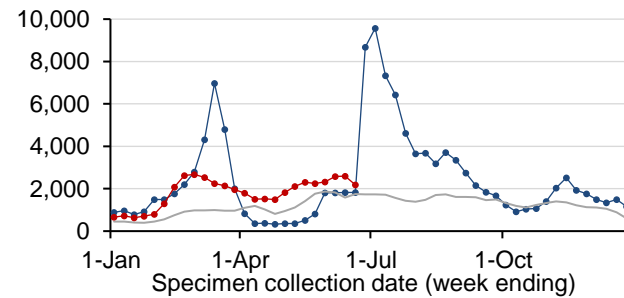
Parainfluenza



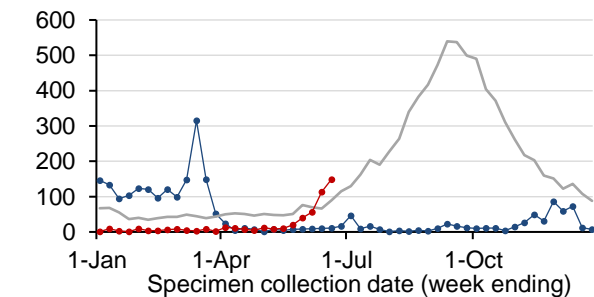
Respiratory syncytial virus (RSV)



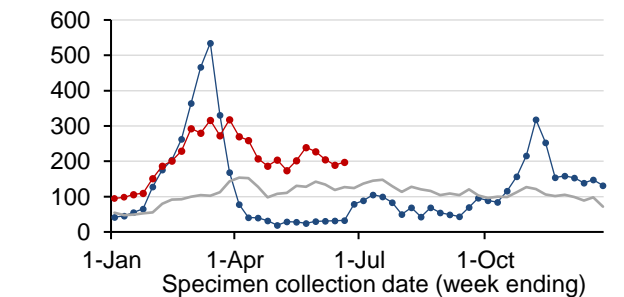
Rhinovirus



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 26 June 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		24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun	12-Jun	19-Jun	26-Jun
Pop.	Location	16	17	18	19	20	21	22	23	24	25
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										
37,061	Riverstone										
163,147	St Marys										
73,686	Shellharbour										
55,000	Wollongong										
68,000	Port Kembla										
93,000	Bellambi										

Sydney Network Sites		24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun	12-Jun	19-Jun	26-Jun
Network	Location	16	17	18	19	20	21	22	23	24	25
Bondi	Paddington Sewage Network	Red	Red	Red	Red	Green	Red	Red	Green	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	Green	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	Green	Green
Malabar	Marrickville Sewage Network 1	Green	Green	Red	Green	Green	Green	Green	Green	Green	Green
Malabar	Marrickville Sewage Network 2	Green	Green	Red	Green	Green	Green	Green	Green	Green	Green
Malabar	Bardwell Creek Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Grey
Malabar	Arncliffe Sewage Network 1	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Malabar	Arncliffe Sewage Network 2	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Malabar	Blakehurst Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Malabar	Padstow Sewage Network 1	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Malabar	Padstow Sewage Network 2	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Malabar	Fairfield SPS 1	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Malabar	Fairfield SPS 2	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Malabar	Homebush SPS	Green	Green	Green	Green	Red	Red	Green	Green	Green	Green
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	Green	Green
Malabar	Dulwich Hill Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Malabar	Canterbury Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
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	Green	Green	Red
North Head	Camellia SPS - North	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
North Head	Camellia SPS - South	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red
North Head	Auburn Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red
North Head	Northmead SPS	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
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	Green	Green
North Head	Vineyard Creek Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
North Head	Boronia Park Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
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	Red	Red	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	Green
Liverpool	Ireland Park Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	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		24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun	12-Jun	19-Jun	26-Jun
Pop.	Location	16	17	18	19	20	21	22	23	24	25
14,700	Bowral										
14,000	Mittagong										
9,000	Moss Vale										
1,000	Berrima										
2,000	Bundanoon										
900	Robertson										
16,068	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										
59,060	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
	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 -Koorlingal STP										
	Gundagai										
	Narrandera										

Regional Sites (con't)		24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun	12-Jun	19-Jun	26-Jun
Pop.	Location	16	17	18	19	20	21	22	23	24	25
	Griffith										
2,050	Bourke										
	Nyngan										
40,000	Orange										
12,000	Mudgee										
36,603	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										
17,000	East Lismore										
15,500	South Lismore										

Regional Sites (con't)		24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun	12-Jun	19-Jun	26-Jun
Pop.	Location	16	17	18	19	20	21	22	23	24	25
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	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 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	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.