

COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 22, ENDING 5 June 2021

Published 10 June 2021

Overview

Table 1. Number and proportion of COVID-19 cases in NSW by likely source of infection to week ending 5 June 2021

	2020		2021		
	Jan – Jun	July – Dec	year to date 1 Jan – 5 June	last 4 weeks 9 May – 5 June	last 7 days 30 May – 5 June
Overseas acquired	1,893 (59 %)	714 (46 %)	615 (92 %)	64 (100 %)	12 (100 %)
Interstate acquired	67 (2 %)	23 (1 %)	0	0	0
Locally acquired	1,237 (39 %)	808 (52 %)	51 (8 %)	0	0
Total	3,197 (100 %)	1,545 (100 %)	666 (100 %)	64 (100 %)	12 (100 %)
Variants of concern*	–	10	274 (41 %)	26 (41 %)	1 (8 %)
Deaths	52	4	0	0	0

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

Summary for the week ending 5 June 2021

- There were no locally acquired cases reported in the week ending 5 June 2021.
- There were 12 cases reported in overseas returned travellers this week, down 20% compared to the previous week.
- In the four weeks ending 5 June 2021, 41% (26/64) of overseas acquired cases 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]).
- Since March 2021, eight (2%) overseas acquired COVID-19 cases self-reported being fully vaccinated prior to arrival in Australia.
- Testing rates increased compared to the previous week in most LHDs. There were large testing rates in the Illawarra Shoalhaven, Southern and Murrumbidgee LHDs.
- The NSW Sewage Surveillance Program reported five detections – taken from the Bondi, Malabar and Castle Hill - Cattai sewage treatment plants and the sewage network at Paddington (within the Bondi catchment) and Botany (within the Malabar catchment). The Bondi and Malabar catchments include quarantine hotels. Although no active cases were identified in Castle Hill sewage catchment area, 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.
- On 24 May 2021 the state of Victoria reported a new locally acquired case. The locally acquired case was shown to have the kappa variant, with the same genomic sequencing of a case that returned from South Australia after spending time in hotel quarantine for returned overseas travellers in early May. In the week ending 5 June, a total of 70 locally acquired cases and more than 380 exposure locations were reported. For updated information on the Victorian outbreak please see <https://www.dhhs.vic.gov.au/covid-19-chief-health-officer-update>.
- Among the Victorian locally acquired cases is a family of four who travelled to NSW during their infectious period. The family visited locations in Gundagai, Goulburn, and the Jervis Bay area (including Huskisson, Vincentia, and Hyams Beach) between 19 and 24 May 2021. Contact tracing has been undertaken for the exposure venues visited by the family; no additional cases have been identified in NSW. Whole genome sequencing indicates that the family have the delta variant of the virus, which matches genomically to a returned traveller who was in hotel quarantine in Victoria from 8 to 23 May.

Indicators of effective prevention measure for COVID-19 in NSW for the week ending 5 June 2021

In the week ending 5 June 2021, there were no locally acquired cases.

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](#)

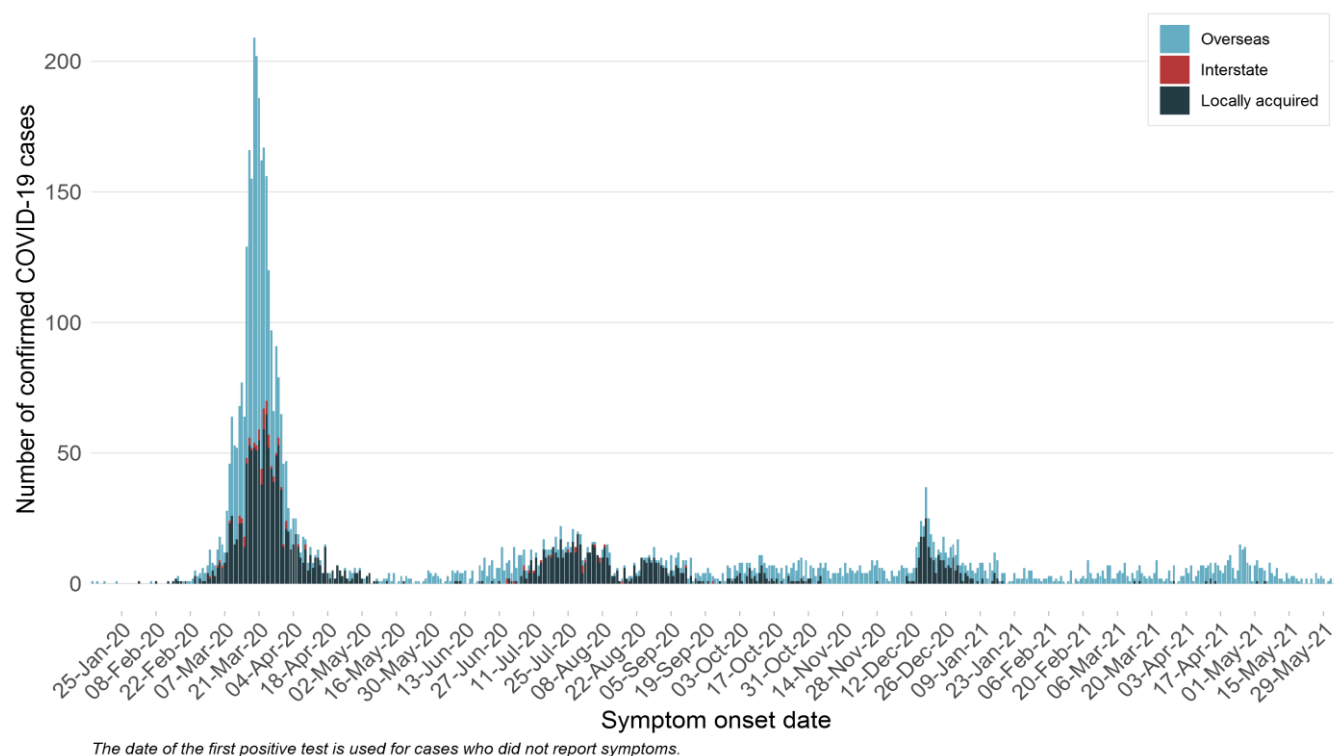
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Section 1: How is the outbreak tracking in NSW?

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 5 June 2021



Interpretation: Between 13 January 2020 and 5 June 2021, there were 5,408 confirmed COVID-19 cases. Of those, 3,222 (60%) were overseas acquired, 90 (2%) were interstate acquired, and 2,096 (39%) 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 5 June 2021

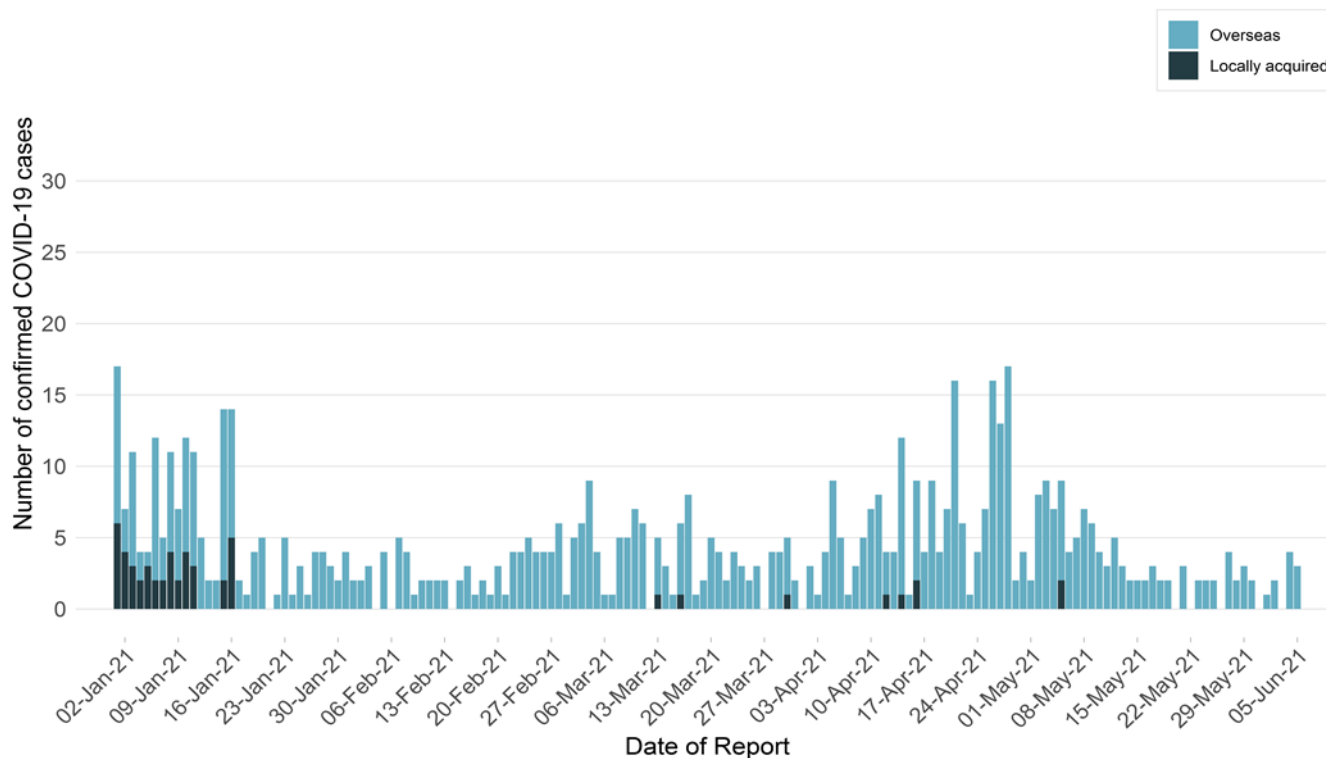


Table 2. COVID-19 cases and tests reported, NSW, from 1 January 2021 to 5 June 2021

	Week ending 5 June	Week ending 29 May	% change	Total 2021
Number of cases	12	15	↓ 20 %	666
Overseas acquired	12	15	↓ 20 %	615
Interstate acquired	0	0	-	0
Locally acquired	0	0	-	51
Known epidemiological links to other cases or clusters	0	0	-	44
No epidemiological links to other cases or clusters	0	0	-	7
Number of tests	122,826	106,825	↑ 15%	2,033,902

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

Between 1 January and 5 June 2021, 51 locally acquired COVID-19 cases have been reported in NSW, of these:

- 11 were associated with the Avalon cluster
- 31 were associated with the Berala cluster
- Two cases, a guest and a security guard, were associated with a Sydney hotel quarantine cluster in mid-March
- One case acquired their infection from an infectious Queensland resident who was visiting a Byron Bay pub, detected as part of extensive contact tracing in late March
- Three cases in one family acquired their infection in hotel quarantine in mid-April
- One person also acquired their infection in hotel quarantine in mid-April, in a different hotel
- Two cases, one a household contact of the other, from South Eastern Sydney acquired their infection from an unknown source in early May.

Interpretation: Since the elimination of local transmission in January, nine locally acquired cases have been identified and linked to five separate incursions of SARS-CoV-2 into NSW. All the cases reported in the last four weeks in NSW were overseas acquired (64/64, 100%).

Section 2: 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 week ending 5 June 2021, the WHO updated their list (and naming structure) to only recognise the delta (B.1.617.2) sub-lineage of B.1.617 as a VoC.

In the four weeks ending 5 June 2021, there have been:

- 26 returned travellers diagnosed with a VoC. Of these:
 - 19 (73%) with the alpha (B.1.1.7) variant
 - 7 (27%) with the kappa/delta (B.1.617) variant
- Of the 26 returned travellers diagnosed with a VoC, 42% likely acquired their infection in either Iran (4, 15%), Pakistan (4, 15%) or Saudi Arabia (3, 11%).

Table 3a. Locally acquired COVID-19 cases by VoC and week reported, NSW, 29 November 2020 to 5 June 2021

	Week ending				29 Nov to 8 May	Total since 29 November
	5 June*	29 May*	22 May	15 May		
Total locally acquired cases	0	0	0	0	225	227
Local cases with VoC	0	0	0	0	9	9
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
B.1.617**	0	0	0	0	2	2
kappa (B.1.617.1)	0	0	0	0	0	0
delta (B.1.617.2)	0	0	0	0	2	2
% locally acquired cases with VoC	-	-	-	-	3 %	4 %

*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.

**B.1.617 refers to the overall VoC B.1.617 lineage, including the sub-lineages kappa (B.1.617.1) and delta (B.1.617.2)

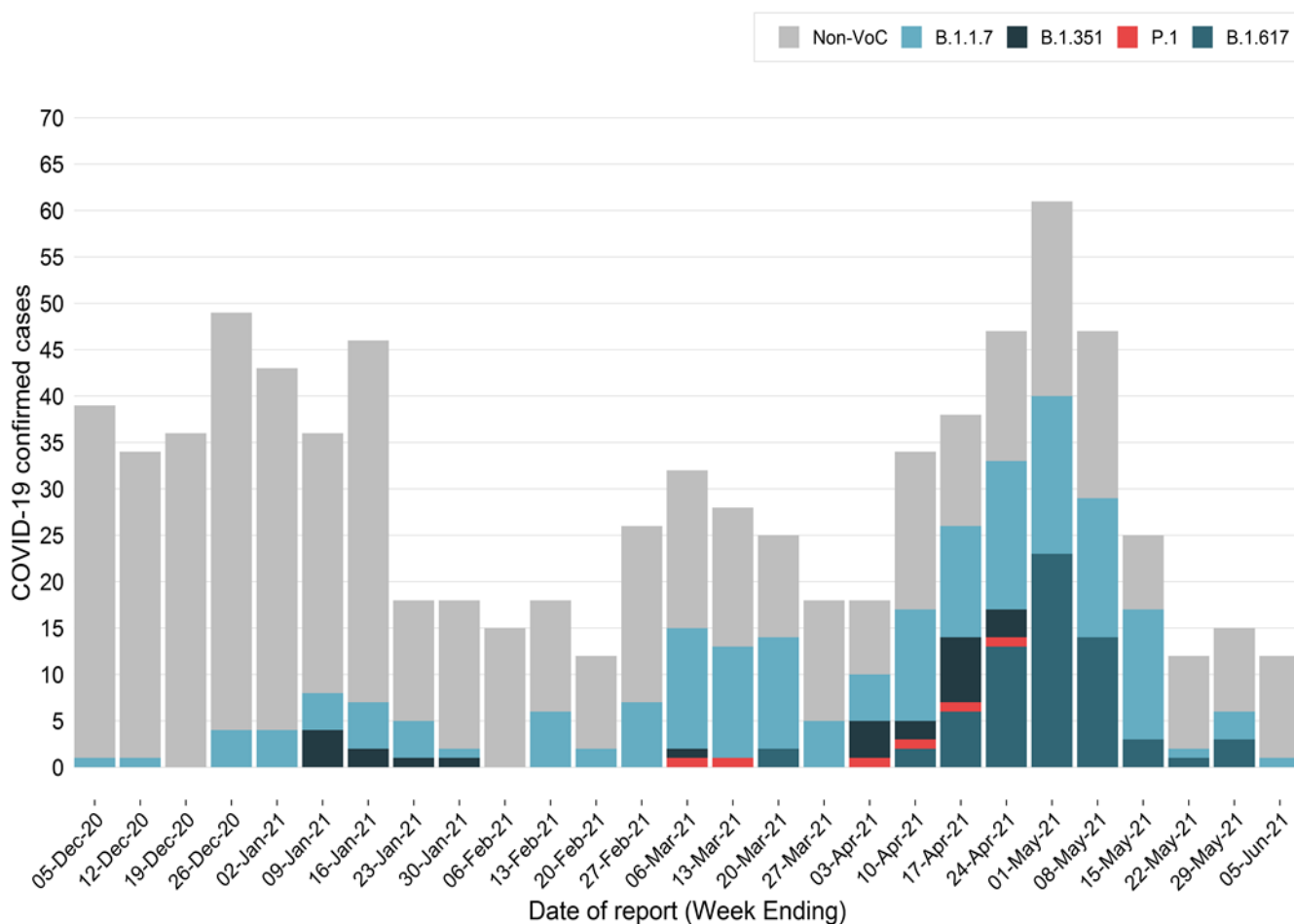
Table 3b. Overseas acquired COVID-19 cases by VoC and week reported, NSW, 29 November 2020 to 5 June 2021

	Week ending				29 Nov to 8 May	Total since 29 November
	5 June*	29 May*	22 May	15 May		
Total overseas acquired cases	12	15	12	25	738	802
Overseas cases with VoC	1	6	2	17	249	275
B.1.1.7 (alpha)	1	3	1	14	158	177
B.1.351 (beta)	0	0	0	0	25	25
P.1 (gamma)	0	0	0	0	6	6
B.1.617**	0	3	1	3	60	67
B.1.617.1 (kappa)	0	0	0	0	8	8
B.1.617.2 (delta)	0	3	1	3	44	51
% overseas acquired cases with VoC	8 %	40 %	17 %	68 %	34 %	32 %

*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.

**B.1.617 refers to the overall VoC lineage (B.1.617) and the sub-lineages B.1.617.1 and B.1.617.2. there are overseas acquired 8 cases reported with the B.1.167 lineage not further specified.

Figure 3. Overseas acquired COVID-19 cases by VoC and week reported, NSW, 29 November 2020 to 5 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 275 returned travellers diagnosed with a COVID-19 VoC. In the four weeks ending 5 June 2021, 41% (26/64) of overseas acquired cases have been identified as having COVID-19 variants of concern.

Section 3: 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 4. Locally acquired COVID-19 cases by LHD of residence and week reported, NSW, 9 May to 5 June 2021

Local Health District	Week ending				Total	Days since last case reported
	5 June	29 May	22 May	15 May		
Central Coast	0	0	0	0	0	158
Illawarra Shoalhaven	0	0	0	0	0	154
Nepean Blue Mountains	0	0	0	0	0	263
Northern Sydney	0	0	0	0	0	50
South Eastern Sydney	0	0	0	0	0	31
South Western Sydney	0	0	0	0	0	148
Sydney	0	0	0	0	0	145
Western Sydney	0	0	0	0	0	140
Far West	0	0	0	0	0	429
Hunter New England	0	0	0	0	0	50
Mid North Coast	0	0	0	0	0	410
Murrumbidgee	0	0	0	0	0	271
Northern NSW	0	0	0	0	0	67
Southern NSW	0	0	0	0	0	229
Western NSW	0	0	0	0	0	310
NSW*	0	0	0	0	0	31

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

Interpretation: In the week ending 5 June 2021, there were no locally acquired cases.

Section 4: 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

There were no cases reported in the last week who were linked to recent clusters.

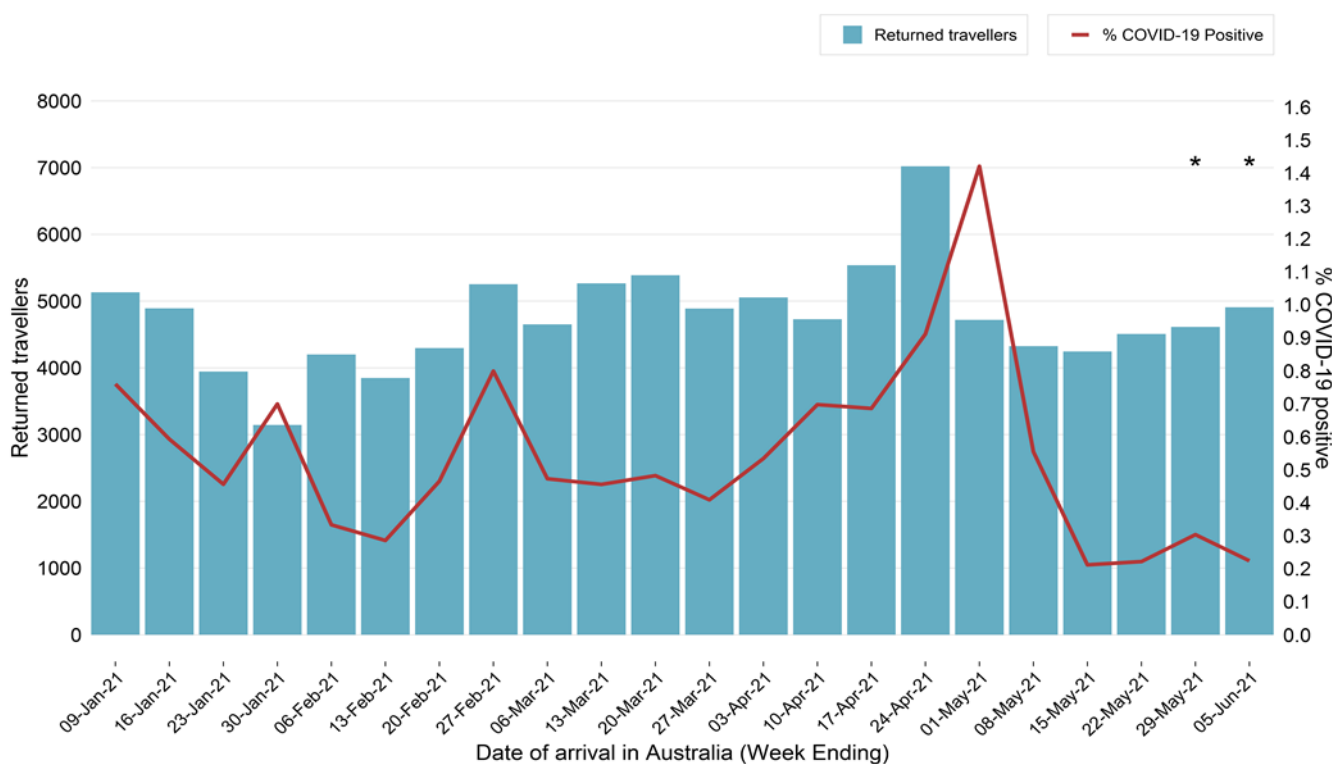
Section 5: COVID-19 in returned travellers

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 4. Returned travellers screened at Sydney International Airport by week of arrival and percent COVID-19 positive, NSW, 3 January 2021 to 5 June 2021



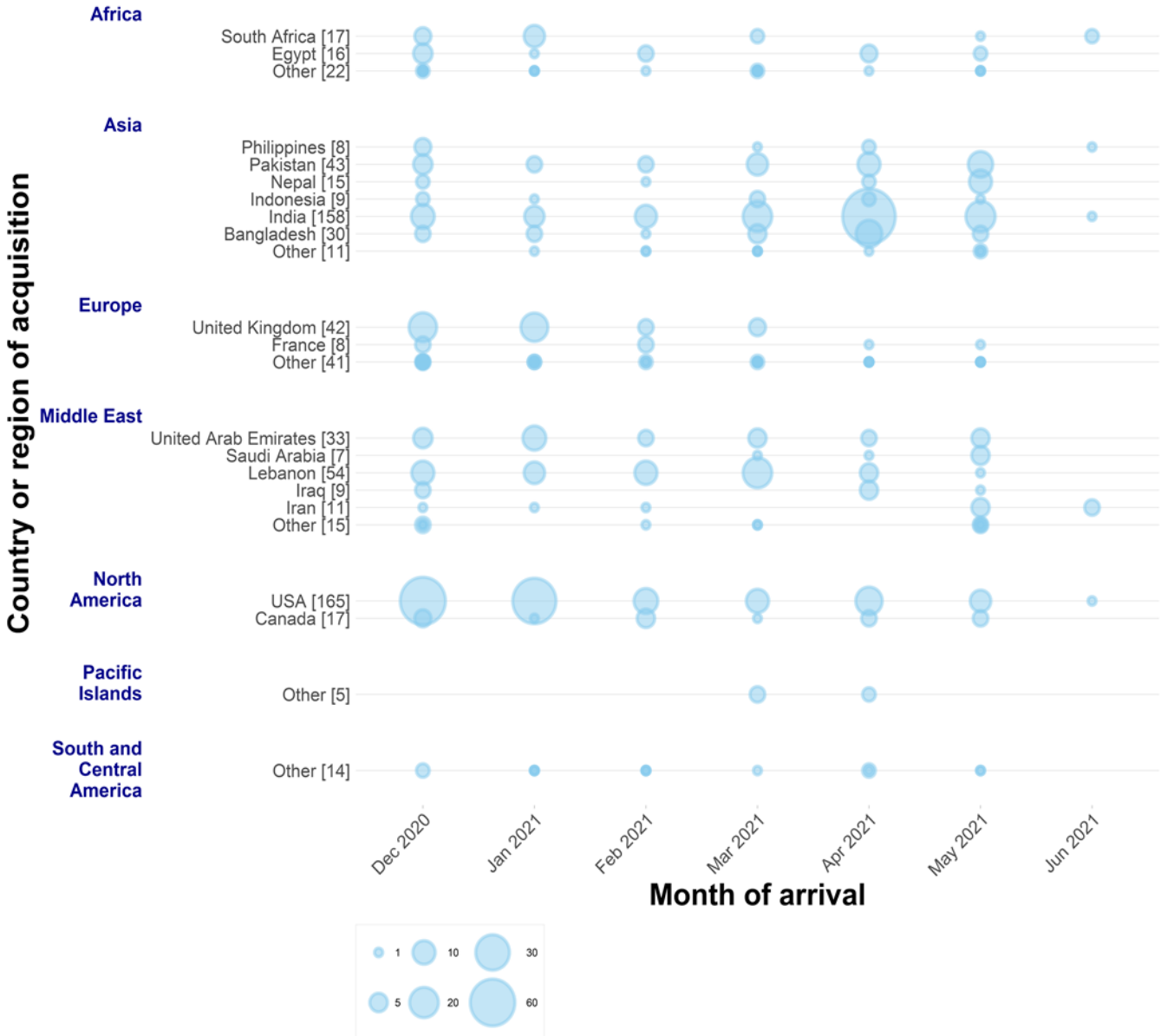
*Returned travellers entering Australia in the past 14 days are still in quarantine and may return a positive result prior to the end of their hotel quarantine period.

Interpretation: Since 3 January 2021, there has been on average 679 people screened on arrival through Sydney International Airport daily. In the last four weeks, 64 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 overseas travellers

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

Figure 5. Overseas acquired COVID-19 cases by country of acquisition and arrival month, NSW, 1 December 2020 to 5 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 restriction introduced in May. The pattern seen in COVID-positive 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 64 COVID-positive travellers in NSW. The table below lists of countries of acquisition for these travellers.

Table 5. Top countries of acquisition for overseas acquired cases that have tested positive in the last four weeks, 9 May 2021 to 5 June 2021

Country of acquisition of COVID-19	Number (%) of cases in the last four weeks
Iran	8 (12 %)
Pakistan	8 (12 %)
United Arab Emirates	5 (8 %)
USA	5 (8 %)
Saudi Arabia	4 (6 %)
India	3 (5 %)
South Africa	3 (5 %)
Afghanistan	2 (3 %)
Canada	2 (3 %)
Egypt	2 (3 %)
Jordan	2 (3 %)
Nepal	2 (3 %)
Qatar	2 (3 %)
Other	16 (25 %)
Total	64

Interpretation: In the last four weeks, travellers returning from Iran and Pakistan accounted for the largest number of overseas acquired cases (16, 25%), followed by travellers returning from United Arab Emirates and USA (10, 16%), Saudi Arabia (4, 6%), and the India (3, 5%).

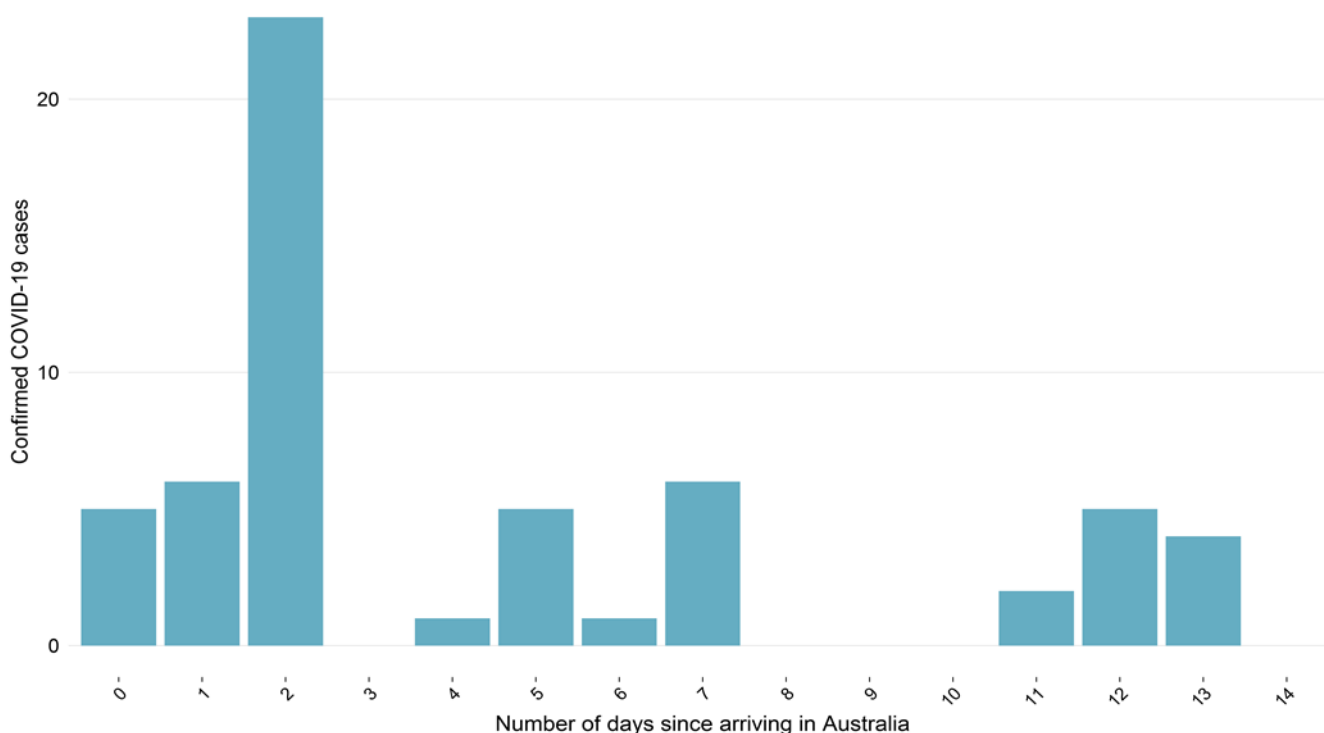
Cases among returned travellers in quarantine

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. Testing is also carried out on individuals that became symptomatic in addition to these two tests, including those that are symptomatic on arrival.

Overseas returned travellers complete their quarantine in several facilities with 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 who are household-like contacts of overseas acquired cases within hotel quarantine.

Figure 6. Number of overseas acquired cases in the last four weeks who tested positive for SARS-CoV-2 during the 14-day quarantine period, by days since arrival in NSW, 9 May to 5 June 2021



Interpretation: In the four weeks ending 5 June 2021, 53% 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 6: 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, with variable efficacy, 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 6a. Overseas acquired COVID-19 cases by vaccination status and week reported, NSW, 1 March to 5 June 2021

Self-reported Vaccination Status	Week ending				1 Mar to 8 May	Total from 1 Mar 2021
	5 Jun	29 May	22 May	15 May		
Total overseas acquired cases	12 (100%)	15 (100%)	12 (100%)	25 (100%)	342 (100 %)	406 (100 %)
Fully Vaccinated	0	1 (7 %)	1 (8 %)	2 (8 %)	4 (1 %)	8 (2 %)
Partially Vaccinated	0	0	0	0	7 (2 %)	7 (2 %)
Single dose within 14 days	0	2 (13 %)	1 (8 %)	0	12 (4 %)	15 (4 %)
None	11 (92 %)	11 (73 %)	10 (83 %)	23 (92 %)	309 (90 %)	364 (90 %)
Unknown	0	1 (7 %)	0	0	8 (2 %)	9 (2 %)
Missing	1 (8 %)	0	0	0	2 (1 %)	3 (1 %)

Table 6b. Locally acquired COVID-19 cases by vaccination status and week reported, NSW, 1 March to 5 June 2021

Self-reported Vaccination Status	Week ending				1 Mar to 8 May	Total from 1 Mar 2021
	5 June	29 May	22 May	15 May		
Total locally acquired cases	0	0	0	0	9 (100 %)	9 (100 %)
Fully Vaccinated	0	0	0	0	0	0
Partially Vaccinated	0	0	0	0	1 (14 %)	1 (11 %)
Single dose within 14 days	0	0	0	0	1 (14 %)	1 (14 %)
None	0	0	0	0	7 (71 %)	7 (78 %)
Unknown/missing	0	0	0	0	0	0

Interpretation: Since 1 March 2021, eight (2%) 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. There have been no locally acquired cases reported as being fully vaccinated.

Section 7: 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 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.

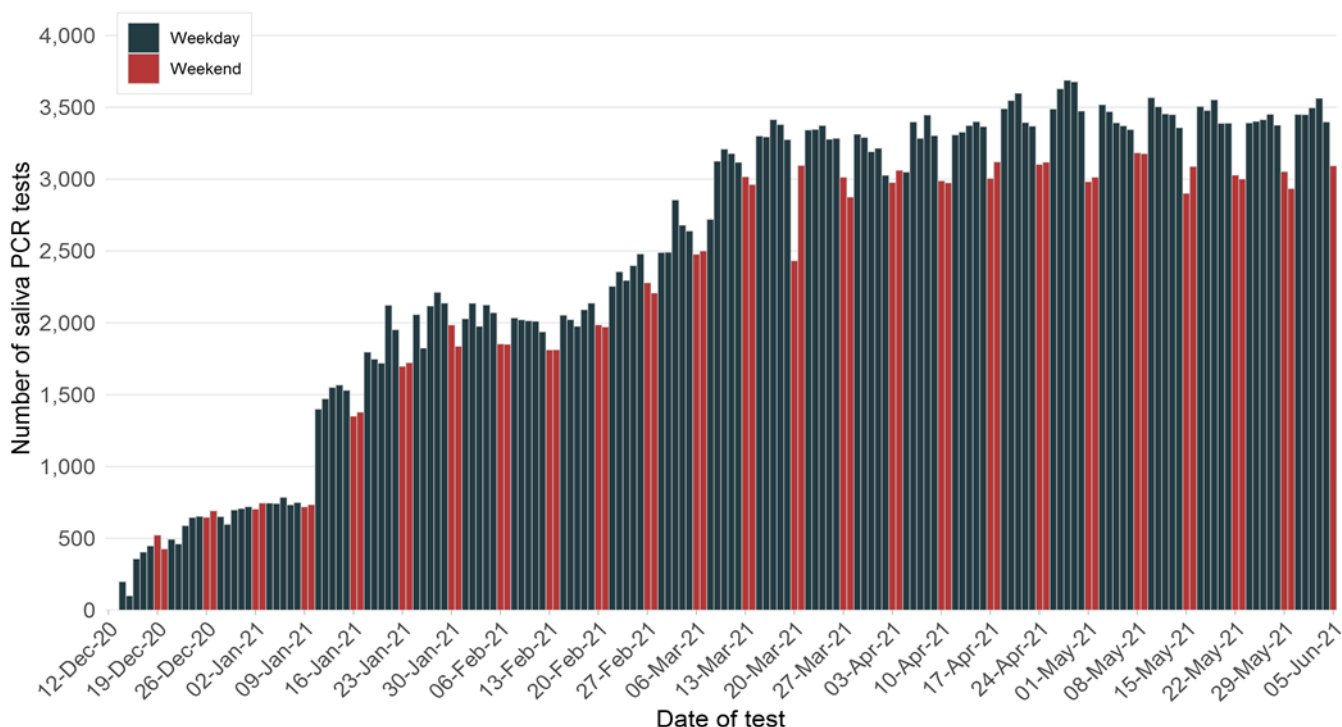
There were no locally acquired cases of COVID-19 reported in HCWs in the week ending 5 June 2021.

In total there have been 48 cases of COVID-19 in health care workers since 1 August 2020. Of these, 25 HCWs were potentially infected in healthcare settings. A further nine 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](#)).

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 5 June 2021



* The number of saliva PCR tests on 15 May 2021 is incomplete due to delays in reporting negative results.

Interpretation: Since screening of quarantine workers began in December 2020, a total of 421,642 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. One confirmed case of COVID-19 has been reported through saliva PCR testing, reported on 13 March 2021.

The daily number of saliva PCR tests is not included in the total PCR testing numbers reported.

Section 8: 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 5 June 2021.

Table 7. Deaths as a result of COVID-19, by age group, NSW, from 25 January 2020 to 5 June 2021

Age group (years)	Number of deaths	Number of cases	Case fatality rate
0-4	0	147	0%
5-11	0	140	0%
12-17	0	170	0%
18-29	0	1,218	0%
30-49	0	1,809	0%
50-59	1	710	0.1%
60-69	4	657	0.6%
70-79	15	393	3.8%
80+	36	164	22.0%
Total	56	5,408	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.

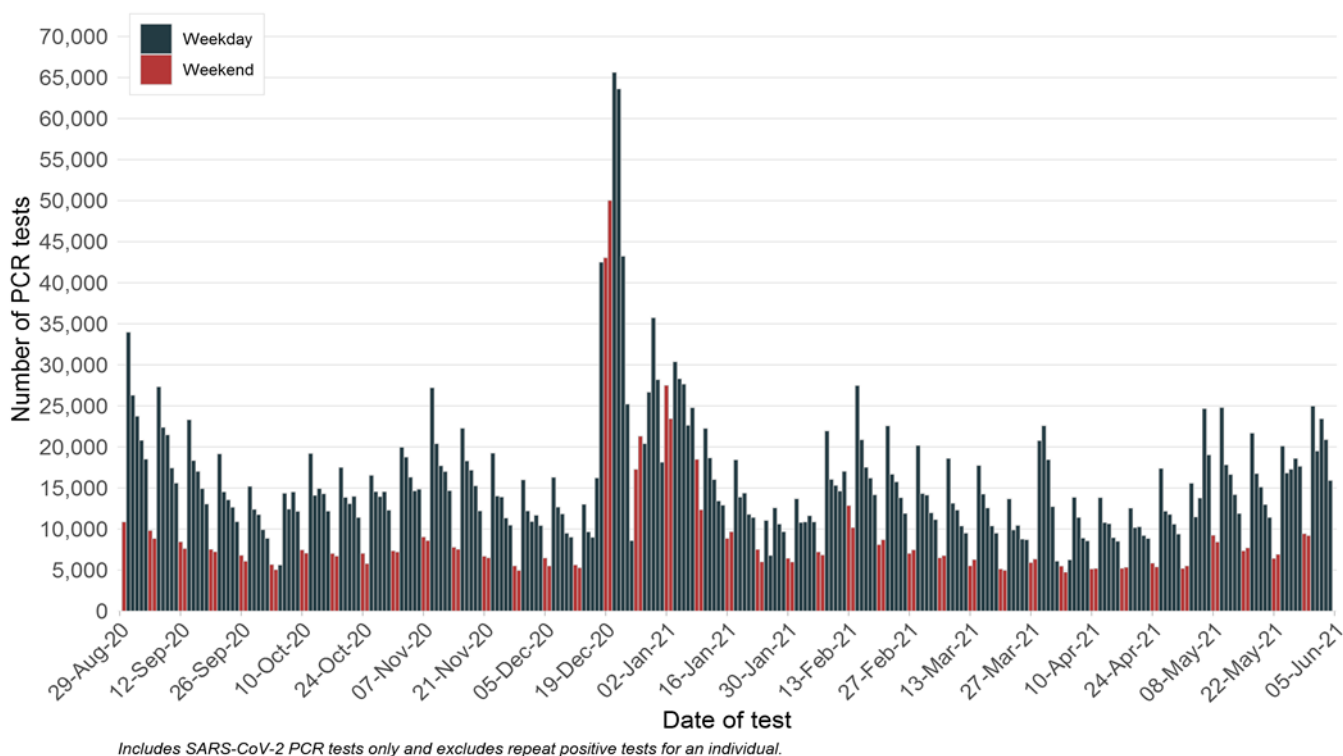
Section 9: COVID-19 testing in NSW

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 8. Number of PCR tests per day, NSW, 11 July 2020 to 5 June 2021

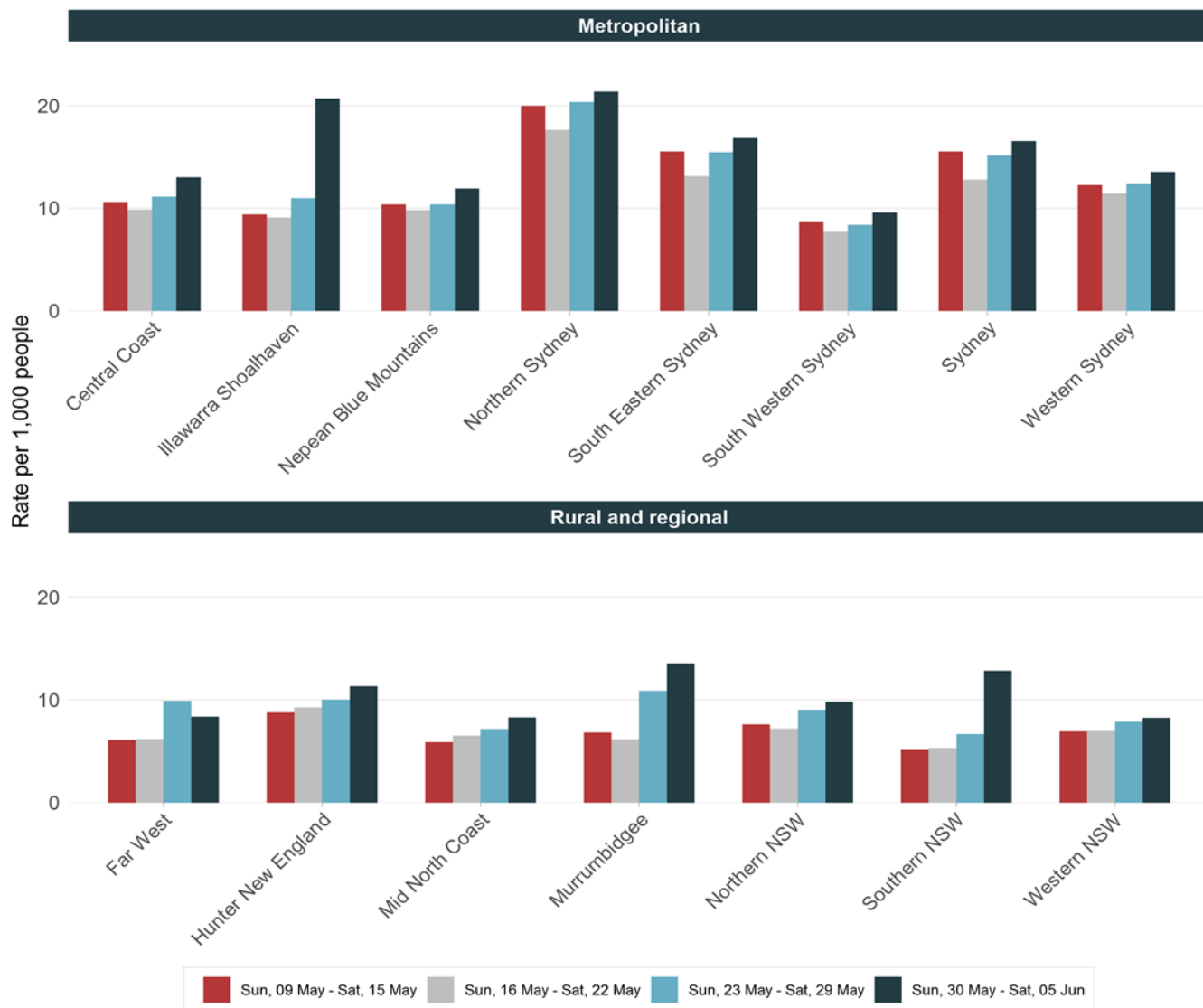


Interpretation: Testing numbers increased in the week ending 5 June 2021 (up 15%) compared to the previous week. The average daily testing rate of 2.2 per 1,000 people in NSW each day increased compared to the previous week of 1.9 per 1,000 people.

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

Figure 9. Rates of COVID-19 testing by LHD of residence, NSW, 9 May to 5 June 2021

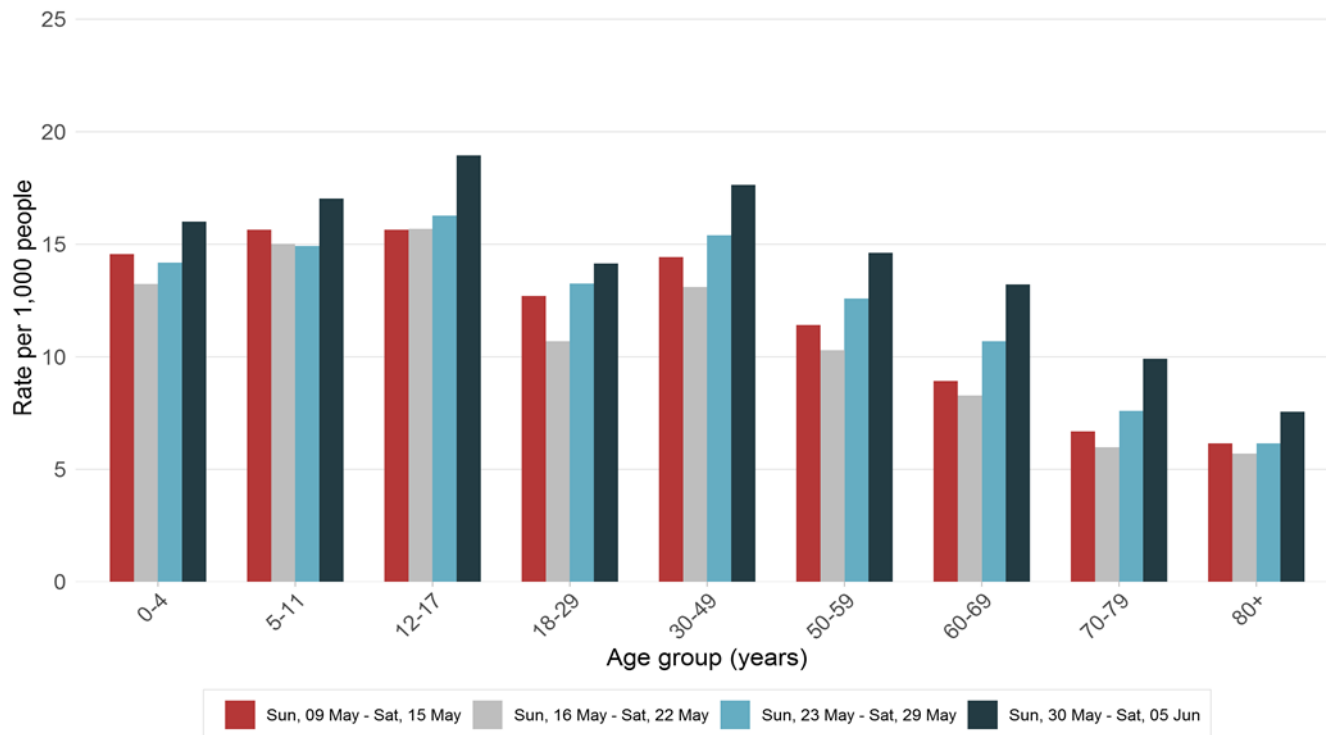


Includes SARS-CoV-2 PCR tests only and excludes notifications with missing postcode of residence.

Interpretation: State-wide weekly testing rates in the week ending 5 June increased when compared to the previous week (15.2 per 1,000 people compared to 13.2 per 1,000 people). There were large testing rates in the Illawarra Shoalhaven, Southern and Murrumbidgee LHDs. This increase in testing was likely due to the exposure locations in those areas associated with the family of four who travelled to NSW during their infectious period.

Testing by age group

Figure 10. Rates of COVID-19 testing by age group and week, NSW, 9 May to 5 June 2021



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

Interpretation: In the week ending 5 June 2021, testing rates increased across all age groups when compared to the previous week, and were generally higher than in early May.

Section 10: 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. Vincentia, Buronga, Balranald and Gundagai sewage treatment plants have been added as new sites. The results from all sites across NSW are available in Appendix D.

Table 8. Locations with SARS-CoV-2 detections in sewage samples in the last 10 weeks, NSW, 28 March to 5 June 2021

		3- Apr	10-Apr	17-Apr	24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun
Pop.	Location	13	14	15	16	17	18	19	20	21	22
Sydney sewage treatment plant (inlet sites)											
318,810	Bondi										
1,857,740	Malabar 1										
	Malabar 2										
26,997	Castle Hill Cattai										
Sydney network sites											
Bondi	Paddington										
Malabar	Marrickville 1										
Malabar	Marrickville 2										
Malabar	Homebush SPS										
Malabar	Olympic Park										
Malabar	Botany										
North Head	Allambie Heights										
Regional sites											
15,500	Merimbula										
225,834	Hunter - Burwood Beach										
7,700	Lennox Head										

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 5 June, 164 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were five detections – taken from the Bondi, Malabar and Castle Hill - Cattai sewage treatment plants and the sewage network at Paddington (within the Bondi catchment) and Botany (within the Malabar catchment). The Bondi and Malabar catchments include quarantine hotels. Although no active cases were identified in Castle Hill sewage catchment area, 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.

Section 11: Other respiratory infections in NSW

Influenza and other respiratory virus cases and tests reported in NSW, up to 30 May 2021

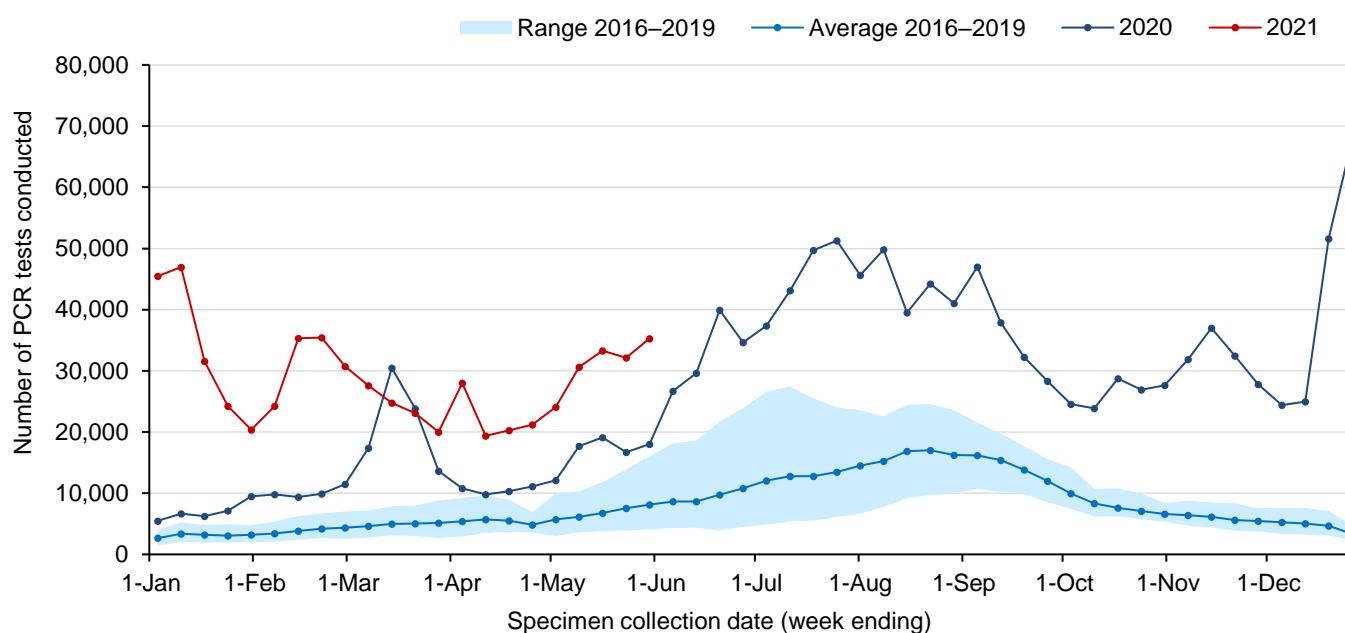
In NSW, routine surveillance for influenza and other respiratory viruses is conducted through sentinel laboratories. The number of all PCR tests (positive and negative) are provided to NSW Health by participating laboratories each week. Testing counts reflect the number of influenza PCR tests conducted;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

The most recent data available is for testing carried out to 30 May 2021. A total of 634,050 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 11. Testing for influenza by week, NSW, 1 January 2016 to 30 May 2021

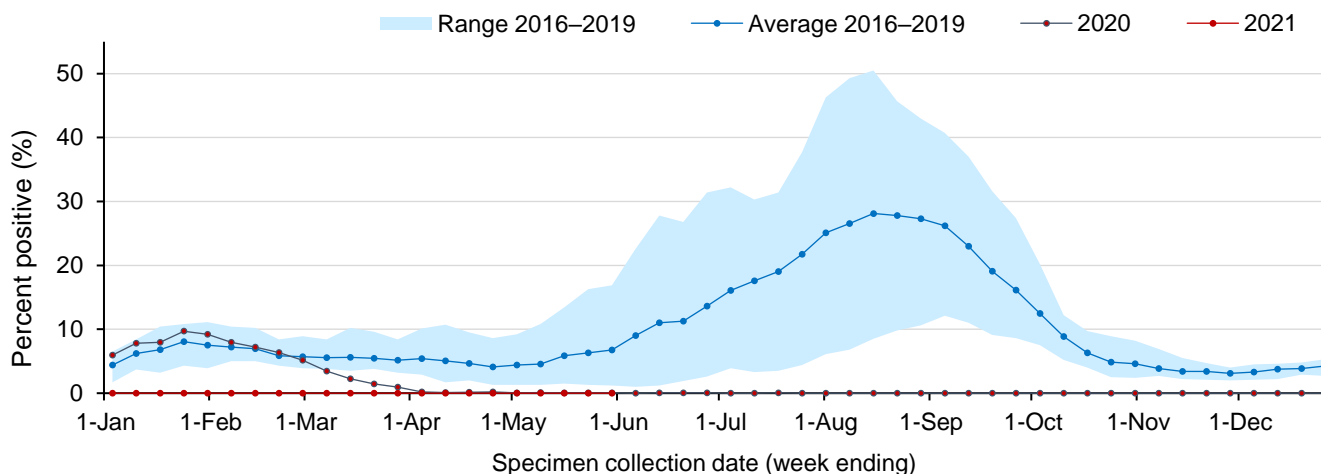


Interpretation: In the week ending 30 May, the number of influenza tests increased, with 35,280 influenza tests performed across participating laboratories compared with 32,116 the previous week. Testing for influenza continues to exceed the four-year average for this time of year.

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 12. Proportion of tests positive for influenza, NSW, 1 January 2016 to 30 May 2021

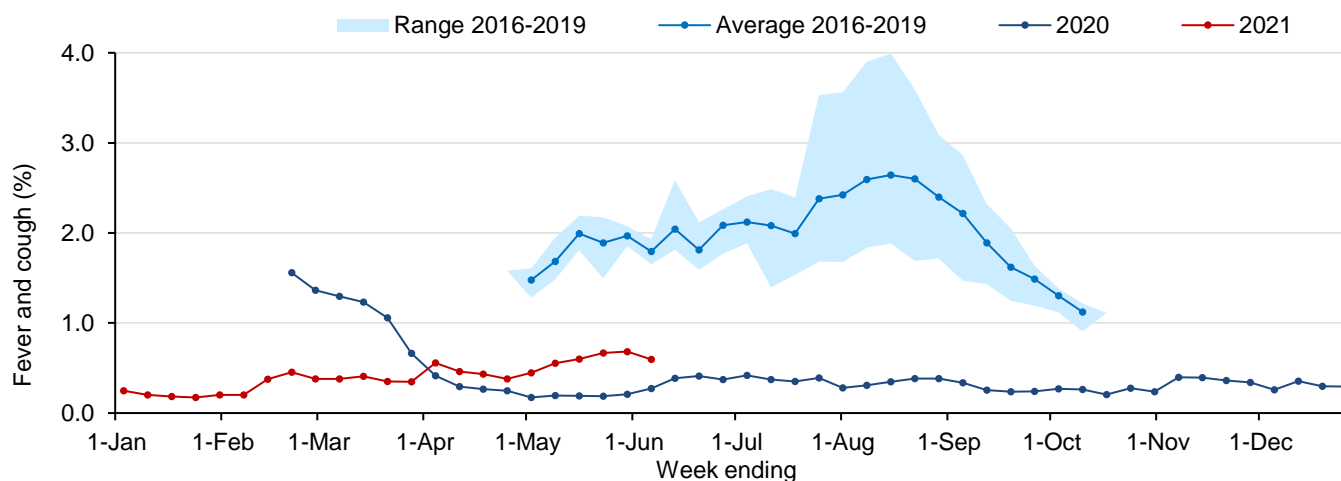


Interpretation: In the week ending 30 May, the percent of influenza tests that were positive continued to be very low (<0.01%), indicating limited influenza transmission in the community. Since early March 2020, this percentage has remained far lower than the usual range for the time of year. There have been 12 influenza cases reported in 2021. Investigations into the source of these cases are ongoing, and further confirmatory testing is underway.

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 13. Proportion of FluTracker participants reporting influenza-like illness, NSW, 1 January 2016 to 6 June 2021



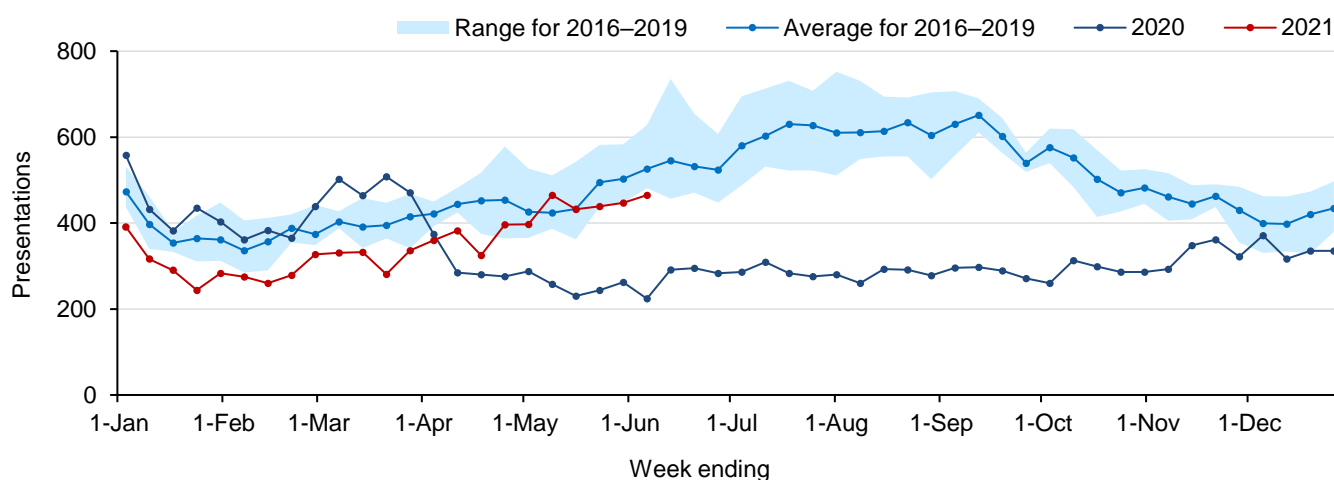
Interpretation: In NSW in the week ending 6 June 2021, of the 21,481 people surveyed, 128 people (0.60%) reported flu-like symptoms. In the last four weeks, 48% (294/616) of new cases of flu-like illness reported having a COVID-19 test. The proportion of people being tested for COVID-19 has decreased 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.

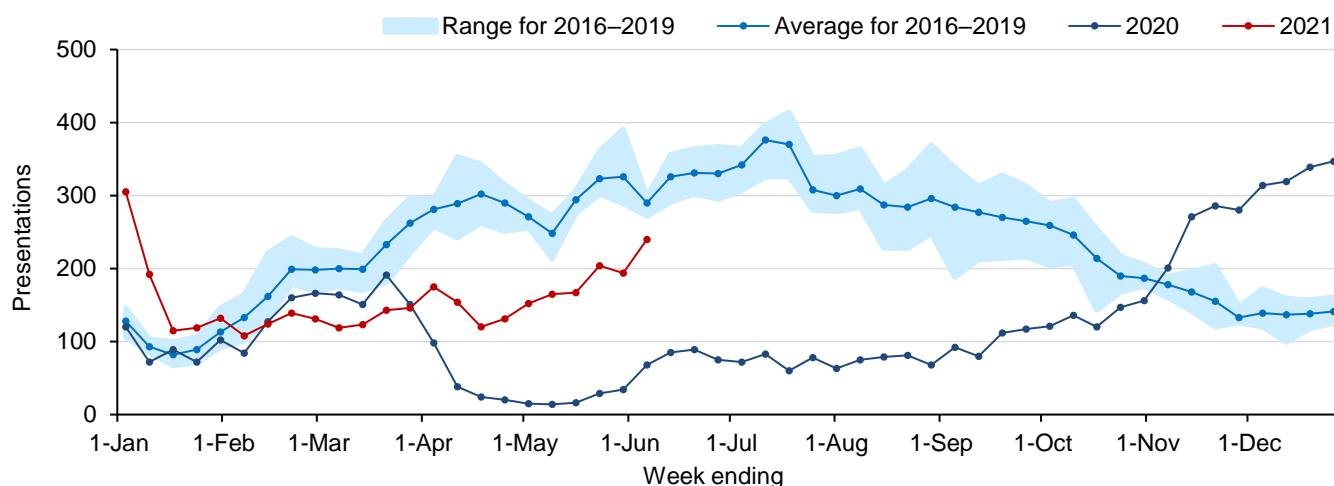
The figures below show weekly pneumonia and bronchiolitis presentations to Emergency Departments in NSW, using PHREDSS². The red line shows the weekly counts for 2021, the dark blue line showing counts for 2020, the light blue line showing the average for 2016 to 2019 and the shaded area showing the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

Figure 14. Emergency Department pneumonia presentations, NSW, 1 January 2016 to 6 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 6 June, pneumonia presentations increased but remained below the seasonal average for this time of year.

Figure 15. Emergency Department bronchiolitis presentations, NSW, 1 January 2016 to 6 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 6 June 2021, bronchiolitis presentations increased but remain below the seasonal range for this time of year.

² NSW Health Public Health Rapid, Emergency Disease and Syndromic Surveillance (PHREDSS) system, CEE, NSW Ministry of Health. Comparisons are made with data for the preceding 5 years. Includes unplanned presentations to 67 NSW emergency departments (accounts for 87% of total public ED activity).

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

Local Health District	Local Government Area	Week ending				Total since January 2021	
		5-June		29-May		No.	Tests per 1,000 population
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Central Coast	<i>LHD Total²</i>	4602	13.04	3936	11.15	227036	643.41
	Balranald	22	9.41	38	16.25	769	328.91
	Broken Hill	145	8.30	171	9.78	9945	568.97
Far West	Central Darling	11	5.98	4	2.18	592	321.91
	Wentworth	74	10.49	86	12.19	3649	517.37
	<i>LHD Total²</i>	252	8.36	299	9.92	14955	496.12
	Armidale Regional	331	10.75	271	8.80	15901	516.62
	Cessnock	319	5.32	329	5.48	23038	384.06
	Dungog	76	8.07	67	7.11	3902	414.09
	Glen Innes Severn	33	3.72	31	3.49	2812	316.99
	Gunnedah	68	5.36	67	5.28	4880	384.83
	Gwydir	18	3.36	23	4.30	1098	205.12
	Inverell	133	7.87	141	8.35	6546	387.57
	Lake Macquarie	3003	14.58	2580	12.53	141264	686.08
	Liverpool Plains	49	6.20	48	6.07	3191	403.77
	Maitland	1179	13.84	1141	13.40	63358	743.94
	Mid-Coast	765	8.15	546	5.82	37080	395.16
Hunter New England	Moree Plains	55	4.15	67	5.05	4535	341.98
	Muswellbrook	127	7.75	129	7.88	6896	421.08
	Narrabri	55	4.19	49	3.73	3811	290.14
	Newcastle	2725	16.46	2415	14.59	136933	827.03
	Port Stephens	753	10.25	663	9.02	43051	585.88
	Singleton	230	9.80	187	7.97	14122	601.94
	Tamworth Regional	692	11.06	613	9.80	34476	551.25
	Tenterfield	23	3.49	26	3.94	1756	266.30
	Upper Hunter Shire	110	7.76	106	7.48	6245	440.41
	Uralla	46	7.65	24	3.99	1936	322.02
	Walcha	18	5.74	24	7.66	1379	440.01
	<i>LHD Total²</i>	10808	11.35	9549	10.03	557789	585.68
	Kiama	453	19.37	310	13.26	16104	688.62
Illawarra Shoalhaven	Shellharbour	1132	15.46	722	9.86	48493	662.17
	Shoalhaven	3494	33.07	875	8.28	55504	525.37
	Wollongong	3610	16.55	2715	12.45	155608	713.43
	<i>LHD Total²</i>	8689	20.71	4622	11.01	275709	657.05
	Bellingen	136	10.46	116	8.93	6177	475.30
	Coffs Harbour	524	6.78	515	6.66	32028	414.46
Mid North Coast	Kempsey	242	8.14	201	6.76	13959	469.29
	Nambucca	135	6.82	94	4.75	7540	380.71
	Port Macquarie-Hastings	835	9.88	692	8.19	41161	486.97
	<i>LHD Total²</i>	1872	8.30	1618	7.17	100865	446.97
	Albury	1096	20.16	903	16.61	28812	530.09
	Berrigan	77	8.80	36	4.11	2623	299.77
Murrumbidgee	Bland	34	5.69	25	4.19	2141	358.51
	Carrathool	10	3.57	9	3.22	474	169.35
	Coolamon	40	9.21	34	7.83	1926	443.68

		Week ending				Total since January 2021		
		5-June		29-May				
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population	
	Cootamundra-Gundagai	314	27.95	67	5.96	4592	408.72	
	Edward River	82	9.03	72	7.93	3633	399.93	
	Federation	150	12.06	135	10.85	4646	373.56	
	Greater Hume Shire	141	13.10	147	13.66	4858	451.32	
	Griffith	313	11.58	265	9.80	13683	506.23	
	Hay	20	6.78	15	5.09	748	253.65	
	Hilltops	240	12.83	158	8.45	8036	429.64	
	Junee	28	4.19	29	4.34	2099	314.08	
	Lachlan ¹	17	2.80	20	3.29	1328	218.60	
	Leeton	96	8.39	65	5.68	3983	348.01	
	Lockhart	45	13.70	21	6.39	1189	361.95	
	Murray River	41	3.38	153	12.63	1305	107.69	
	<i>LHD Total²</i>	16	4.08	26	6.64	1176	300.23	
	Narrandera	21	3.56	20	3.39	1508	255.64	
	Snowy Valleys	158	10.91	83	5.73	6129	423.30	
	Temora	34	5.39	28	4.44	1825	289.36	
	Wagga Wagga	1075	16.47	925	14.17	40514	620.83	
	<i>LHD Total²</i>	4039	13.55	3243	10.88	136349	457.38	
	Nepean Blue Mountains	Blue Mountains	1229	15.53	1088	13.75	67458	852.63
		Hawkesbury	945	14.04	799	11.87	46427	689.89
Lithgow		161	7.45	100	4.63	9322	431.47	
Penrith		2368	11.12	2110	9.91	160991	755.91	
<i>LHD Total²</i>		4670	11.94	4072	10.41	282016	721.29	
Northern NSW	Ballina	581	13.02	579	12.97	33190	743.70	
	Byron	443	12.63	431	12.29	26160	745.70	
	Clarence Valley	301	5.83	276	5.34	18013	348.67	
	Kyogle	54	6.14	47	5.34	2935	333.67	
	Lismore	524	11.99	491	11.24	25599	585.90	
	Richmond Valley	270	11.51	219	9.33	11319	482.38	
	Tenterfield	23	3.49	26	3.94	1756	266.30	
	Tweed	870	8.97	759	7.82	41960	432.57	
	<i>LHD Total²</i>	3050	9.83	2808	9.05	159573	514.15	
Northern Sydney	Hornsby	2435	16.01	2322	15.27	112281	738.40	
	Hunters Hill	559	37.32	563	37.58	25333	1691.12	
	Ku-ring-gai	3294	25.91	3158	24.84	148602	1168.69	
	Lane Cove	1588	39.55	1464	36.46	71541	1781.62	
	Mosman	699	22.56	639	20.63	30329	978.95	
	North Sydney	1089	14.52	1112	14.82	55894	745.04	
	Northern Beaches	6001	21.94	5569	20.36	369036	1349.31	
	Parramatta ¹	3512	13.65	3315	12.89	164651	640.17	
	Ryde	2676	20.39	2514	19.15	106650	812.44	
	Willoughby	1322	16.28	1336	16.46	58109	715.73	
	<i>LHD Total²</i>	20419	21.36	19461	20.36	1011652	1058.30	
South Eastern Sydney	Bayside	2201	12.34	2054	11.51	108518	608.30	
	Georges River	1830	11.48	1612	10.11	91898	576.27	
	Randwick	3055	19.63	2783	17.88	148003	950.88	
	Sutherland Shire	3773	16.36	3325	14.42	189422	821.39	
	Sydney ¹	5243	21.28	4874	19.79	244288	991.66	
	Waverley	1680	22.61	1542	20.76	85450	1150.14	

		Week ending				Total since January 2021	
		5-June		29-May			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Woollahra	1572	26.47	1544	26.00	75341	1268.64
	<i>LHD Total²</i>	16179	16.87	14830	15.46	788017	821.62
South Western Sydney	Camden	1615	15.92	1328	13.09	96584	952.16
	Campbelltown	1985	11.61	1835	10.73	130078	760.94
	Canterbury-Bankstown ¹	3690	9.76	3361	8.89	228846	605.55
	Fairfield	1280	6.05	1146	5.41	99282	468.99
	Liverpool	2079	9.14	1906	8.37	155818	684.66
	Wingecarribee	821	16.06	600	11.73	41317	808.01
	Wollondilly	497	9.35	390	7.34	27752	522.15
	<i>LHD Total²</i>	9979	9.61	8701	8.38	661995	637.43
	Southern NSW	Bega Valley	375	10.88	307	8.90	15009
Eurobodalla		433	11.25	263	6.84	22053	573.21
Goulburn Mulwaree		995	31.96	203	6.52	16237	521.55
Queanbeyan-Palerang		471	7.71	354	5.79	21933	358.97
Snowy Monaro Regional		249	11.97	162	7.79	9565	459.97
Upper Lachlan Shire		139	17.25	56	6.95	3599	446.58
Yass Valley		120	7.02	101	5.91	5359	313.63
<i>LHD Total²</i>		2785	12.83	1446	6.66	93790	432.07
Sydney	Burwood	396	9.75	309	7.61	21569	531.10
	Canada Bay	1723	17.93	1530	15.93	83883	873.11
	Canterbury-Bankstown ¹	3690	9.76	3361	8.89	228846	605.55
	Inner West	3630	18.08	3338	16.62	193253	962.36
	Strathfield	678	14.45	658	14.02	37922	808.12
	<i>LHD Total²</i>	5243	21.28	4874	19.79	244288	991.66
	<i>LHD Total²</i>	11541	16.56	10557	15.15	604897	868.14
Western NSW	Bathurst Regional	455	10.43	449	10.29	26380	604.80
	Blayney	98	13.28	85	11.52	4326	586.26
	Bogan	13	5.04	19	7.36	1133	439.15
	Bourke	3	1.16	5	1.93	684	264.09
	Brewarrina	4	2.48	3	1.86	395	245.19
	Cabonne	70	5.13	89	6.53	4493	329.54
	Cobar	32	6.87	33	7.08	1522	326.75
	Coonamble	12	3.03	7	1.77	1197	302.43
	Cowra	121	9.50	112	8.79	5004	392.69
	Dubbo Regional	423	7.87	382	7.11	25399	472.81
	Forbes	48	4.85	40	4.04	2939	296.69
	Gilgandra	27	6.37	9	2.12	1254	295.82
	Lachlan ¹	17	2.80	20	3.29	1328	218.60
	Mid-Western Regional	247	9.78	250	9.90	12125	480.18
	Narromine	47	7.21	34	5.22	2436	373.79
	Oberon	49	9.06	45	8.32	2269	419.33
	Orange	478	11.26	501	11.80	30145	710.11
	Parkes	108	7.28	72	4.85	5542	373.53
	Walgett	12	2.02	21	3.53	1980	332.61
	Warren	20	7.42	21	7.79	1720	637.75
Warrumbungle Shire	49	5.28	49	5.28	3663	394.80	
Weddin	24	6.64	15	4.15	1153	319.13	
<i>LHD Total²</i>	2350	8.25	2251	7.90	136704	479.64	

		Week ending				Total since January 2021	
		5-June		29-May			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Western Sydney	Blacktown	4990	13.33	4531	12.10	270685	722.88
	Cumberland	2432	10.07	2440	10.10	169514	701.86
	Parramatta ¹	3512	13.65	3315	12.89	164651	640.17
	The Hills Shire	4027	22.63	3495	19.64	180051	1011.70
	<i>LHD Total²</i>	14289	13.56	13075	12.41	757697	719.26
NSW Total³		122826	15.18	106825	13.20	2033902	251.42

Appendix B: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 30 May 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 2020–30 May 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	634,050	3	<0.01%	9	<0.01%	3,090	5,192	10,714	38,222	189	4,628
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
Week ending											
9 May	30,643	0	–	1	<0.01%	211	490	336	2,112	8	174
16 May	33,277	0	–	1	<0.01%	228	739	379	2,306	10	202
23 May	32,116	0	–	2	<0.01%	244	852	368	2,249	20	240
30 May	35,280	0	–	2	<0.01%	263	1,048	409	2,315	40	228

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

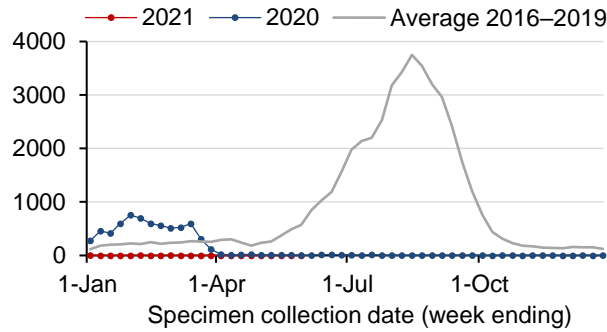
RSV - Respiratory syncytial virus

*Five-week period

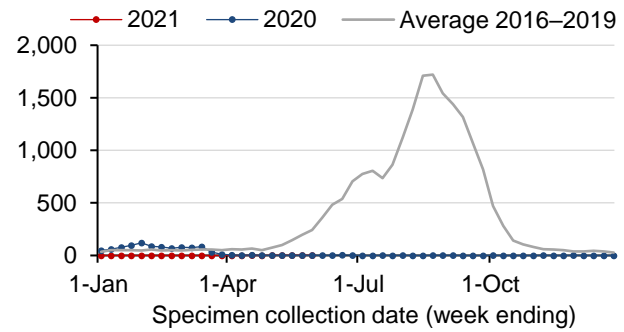
Appendix C: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 30 May 2021

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.

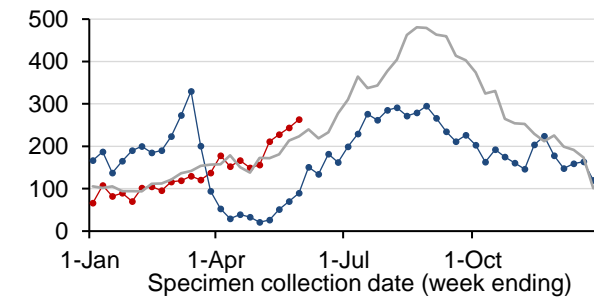
Influenza A



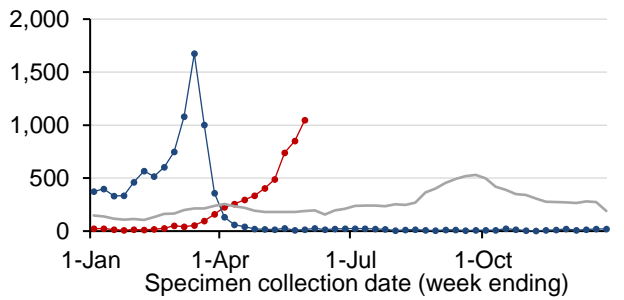
Influenza B



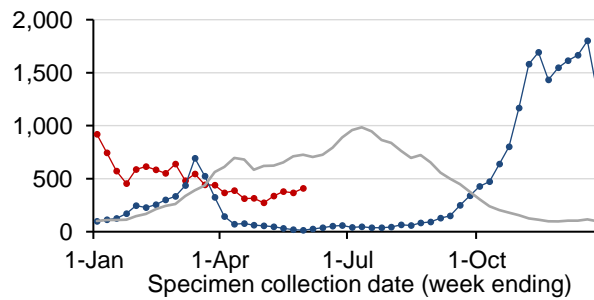
Adenovirus



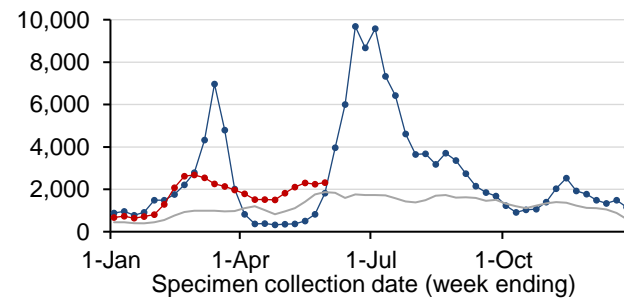
Parainfluenza



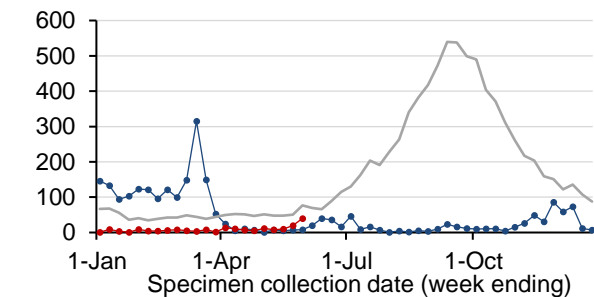
Respiratory syncytial virus (RSV)



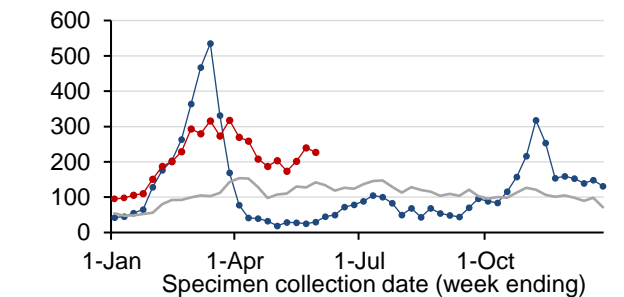
Rhinovirus



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 5 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. Vincentia, Buronga, Balranald and Gundagai sewage treatment plants have been added as new sites. The table below shows results for the last 10 weeks of samples collected across all sites in NSW.

Sydney Sites		3-Apr	10-Apr	17-Apr	24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun
Pop.	Location	13	14	15	16	17	18	19	20	21	22
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		3-Apr	10-Apr	17-Apr	24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun
Network	Location	13	14	15	16	17	18	19	20	21	22
Bondi	Paddington Sewage Network	Red	Red	Red	Red	Red	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	Green
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	Green	Green	Green	Red	Green	Green	Green	Green
Malabar	Marrickville Sewage Network 2	Green	Green	Green	Green	Green	Red	Green	Green	Green	Green
Malabar	Bardwell Creek Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
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	Red	Green	Green	Green	Green	Green	Green	Red	Red	Green
Malabar	Olympic Park	Red	Green	Green	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	Green
North Head	Camellia SPS - North	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
North Head	Camellia SPS - South	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
North Head	Auburn Sewage Network	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
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	Green	Green	Green	Red	Red	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	Green
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		3-Apr	10-Apr	17-Apr	24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun
Pop.	Location	13	14	15	16	17	18	19	20	21	22
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										
	Griffith										

Regional Sites (con't)		3-Apr	10-Apr	17-Apr	24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun
Pop.	Location	13	14	15	16	17	18	19	20	21	22
2,050	Bourke										
	Nyngan										
40,000	Orange										
12,000	Mudgee										
36,603	Bathurst										
	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										
18,958 (both plants total)	Byron Bay - Ocean Shores										
	Byron Bay										
2,000	Bangalow										

Regional Sites (con't)		3-Apr	10-Apr	17-Apr	24-Apr	1-May	8-May	15-May	22-May	29-May	5-Jun
Pop.	Location	13	14	15	16	17	18	19	20	21	22
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
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>