COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 30, ENDING 31 July 2021

Published 13 August 2021

Overview

Table 1. Number and proportion of COVID-19 cases in NSW by likely source of infection to week ending 31 July 2021

	2020		2021			
	Jan – Jun	July – Dec	Jan – Jun	last 4 weeks	last 7 days	year to date
				25 Jul - 31 Jul	04 Jul - 31 Jul	
Locally acquired	1,236 (39%)	808 (52%)	255 (27%)	3,185 (98%)	1,360 (99%)	3,523 (82%)
Interstate acquired	67 (2%)	23 (1%)	1 (<1%)	0	0	1 (<1%)
Overseas acquired	1,892 (59%)	714 (46%)	672 (72%)	61 (2%)	16 (1%)	747 (17%)
Total	**3,195**	**1,545**	**928**	**3,246**	**1,376**	**4,271**
Deaths	51	5	0	14	8	14

Summary for the week ending 31 July 2021

- There were 1,360 locally acquired cases reported in the week ending 31 Jul 2021. Of these:
    - 352 (26%) cases were residents of Canterbury-Bankstown LGA
    - 214 (16%) cases were residents of Fairfield LGA
    - 177 (13%) cases were residents of Cumberland LGA
    - 617 (45%) cases were residents across 29 other LGAs
- There were 16 cases reported in overseas returned travellers in the last week (up 100%).
- There were eight deaths as a result of COVID-19 reported this week including a female in her 30s, a man in his 60s, a woman in her 70s, a man and two women in their 80s and two women in their 90s. One person was partially vaccinated and seven were unvaccinated.
- In the four weeks ending 31 July 2021, 100% (1,118/1,118) of the locally acquired cases sequenced, were the delta variant of concern. For overseas-acquired cases, 31% (19/61) of sequenced cases were COVID-19 variants of concern.
- Since March 2021, 30 (1%) locally acquired cases have reported being fully vaccinated. Twenty-three (4.3%) overseas acquired COVID-19 cases self-reported being fully vaccinated prior to arrival in Australia. This compares with around 19% of the NSW population who had received two doses of vaccine by July 31.
- Testing rates increased compared to the previous week (up 16%) with high testing rates in the Western Sydney, Sydney and Central Coast LHDs in response to targeted public health messaging.
- In recent weeks there have been declines in laboratory diagnoses of several common respiratory viruses as well as emergency presentations for pneumonia and bronchiolitis.
- In the week ending 31 July, 176 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 50 detections. These were taken from the sewage treatment sites (including pumping stations) in Armidale, Bowral, Molong, Toukley, Bondi, Castle Hill-Cattai, Cronulla, Glenfield, Liverpool, Malabar, McGraths Hill, North Head, Penrith, Quakers Hill, Riverstone, Rouse Hill, South Windsor, St Marys, Warriewood, West Camden, West Hornsby, Wilmalee, Wollongong, Rozelle, Paddington, Caringbah, Marrickville 1, Arncliffe 2, Padstow 2, Canterbury, Botany, Homebush, Auburn, Vineyard Creek , Boronia Park, Lane Cove West, Buffalo Creek Reserve and Allambie Heights, Ireland Park, Port Kembla and Bellambi.

  Detections from Armidale, Molong, Toukley, Wollongong, South Windsor, Port Kembla, Lane Cove West and Castle Hill – Cattai occurred with no known or recent cases in the catchment at the time, although cases were identified subsequently in all catchments except Toukley, South Windsor and Castle Hill - Cattai.

Indicators of effective prevention for COVID-19 in NSW for the week ending 31July 2021

Cases' community risk

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

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

Locally acquired cases by risk of community exposure during their infectious period

Community exposure risk	31-Jul	30-Jul	29-Jul	28-Jul	27-Jul	26-Jul	25-Jul	Total Week Ending 31 Jul
Low risk	130	110	91	114	73	67	57	642 (47%)
Medium risk	44	23	23	33	26	18	32	199 (15%)
High risk	59	56	61	107	60	54	77	474 (35%)
Risk not determined	15	11	8	5	3	1	2	45 (3%)
Total	248	200	183	259	162	140	168	1,360 (100%)

Interpretation: In the week ending 31 July, 47% of total cases reported this week had low risk of community exposures, 15% had medium risk, 35% had high risk of community exposures. Three percent (45/1360) of cases have a risk status that has not yet been identified.

Measures of Public Health Action

	Week ending 31 July	Week ending 24 July
Proportion locally acquired cases notified to NSW Health by the laboratory within 1 day of specimen collection	78%	83%
Locally acquired cases interviewed by public health staff within 1 day of notification to NSW Health	90%	96%
Close contacts (identified by the case) contacted by public health within 2 days of case notification	100%	100%

Interpretation: In the week ending 31 July, 78% of cases were notified to NSW Health within a day of test and 90% of cases were interviewed within one day of notification. All close contacts were contacted by public health within two days of case notification. NSW health has been working closely with laboratory providers to minimise the turn-around times for test results.

Where there are many cases, NSW Health may conduct a shorter preliminary interview with some patients upon confirmation of a positive COVID-19 result. In this preliminary interview the patient's result is confirmed, their welfare and medical needs are assessed, their need to isolate is reinforced, and their close contacts are identified to arrange urgent testing.

For those cases who have a short preliminary interview, further details are collected in a follow up interview. Only once the follow up interview is completed will cases be considered interviewed for the measures described in the table above.

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

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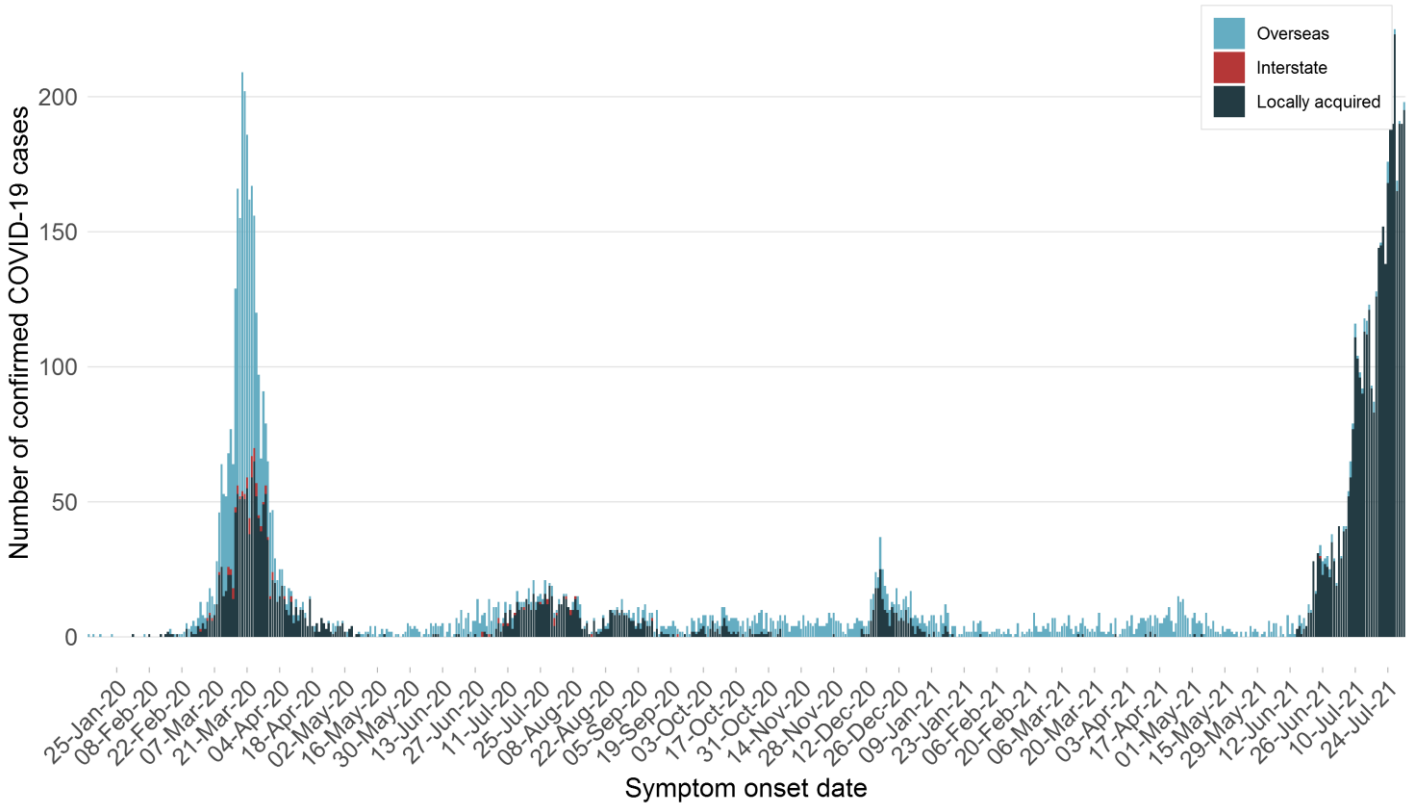
COVID-19 Vaccination program

- Australian Government Department of Health reports the number of vaccine doses administered across Australia — Daily COVID-19 vaccine rollout numbers
- Therapeutic Goods Administration (TGA) report data on received reports of suspected side effects (also known as adverse events) and other safety information from Australia and overseas — Weekly COVID-19 vaccine safety report
- AusVaxSafety is conducting active vaccine safety surveillance of the vaccines in use. Surveillance data have been provided by Vaxtracker, SmartVax and the Victorian Department of Health COVID-19 Vaccine Management System based on surveys sent on Day 3 after the vaccination — Weekly COVID-19 vaccine safety surveillance report

Section 1: How is the outbreak tracking in NSW?

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

Figure 1. COVID-19 cases by likely infection source and illness onset, NSW, from 25 January 2020 to 31 July 2021



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

Interpretation: Between 13 January 2020 and 31 Jul 2021, there were 9,011 confirmed COVID-19 cases. Of those, 3,353 (37%) were overseas acquired, 91 (1%) were interstate acquired, and 5,567 (62%) 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 31 July 2021

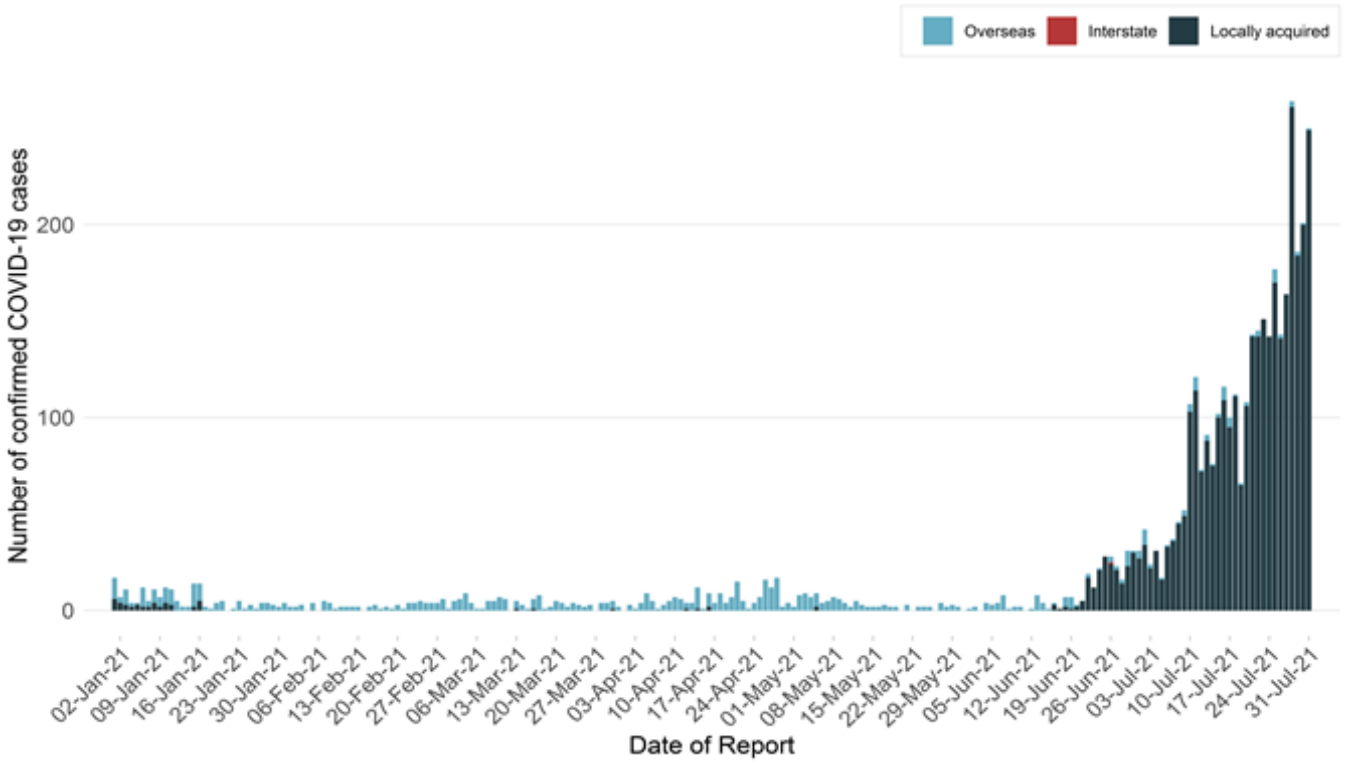


Table 2. COVID-19 cases and tests reported, NSW, from 1 January 2021 to 31 July 2021

	Week ending 31 Jul	Week ending 24 Jul	% change	Total 2021
Number of cases	1,376	867	59%	4,271
Locally acquired	1,360	859	58%	3,523
Known epidemiological links to other cases or clusters	838	616	36%	2,571
No epidemiological links to other cases or clusters	522	243	115%	952
Overseas acquired	16	8	100%	747
Interstate acquired	0	0	-	1
Number of tests	709,016	608,938	16%	5,175,843

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

Interpretation: Most cases reported in the last four weeks in NSW were locally acquired 3,185 (98%). All locally acquired cases sequenced had the same delta variant of concern. Of the 1,360 locally acquired cases associated with the Greater Sydney outbreak reported in the week ending 31 Jul 2021:

- 352 (26%) cases were residents of Canterbury-Bankstown LGA
- 214 (16%) cases were residents of Fairfield LGA
- 177 (13%) cases were residents of Cumberland LGA
- 617 (45%) cases were residents across 29 other LGAs

In the week ending 31 July, the majority of cases with no epidemiological links were residents of Canterbury-Bankstown LGA (158/522, 30%). There were 16 cases that acquired their infection overseas.

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

Information from cases who were diagnosed in the last four weeks is used to understand where COVID-19 is spreading in the community. This considers 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, 4 July to 31 July 2021

	Week ending					
Local Health District	31 Jul	24 Jul	17 Jul	10 Jul	Total	Days since last case reported
Central Coast	2	4	0	1	7	1
Illawarra Shoalhaven	7	6	0	0	13	3
Nepean Blue Mountains	14	4	11	7	36	0
Northern Sydney	32	15	5	4	56	0
South Eastern Sydney	79	82	80	76	317	0
South Western Sydney	597	411	468	162	1,638	0
Sydney	271	113	39	33	456	0
Western Sydney	356	223	50	30	657	0
Far West	0	0	0	0	0	485
Hunter New England	0	0	0	0	0	106
Mid North Coast	0	0	0	0	0	466
Murrumbidgee	0	0	0	0	0	327
Northern NSW	0	0	0	0	0	123
Southern NSW	1	0	0	0	1	5
Western NSW	1	1	0	0	2	2
NSW*	1,360	859	653	313	3,185	0

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

Interpretation: There were 1360 locally acquired cases reported in the week ending 31 Jul 2021. Most cases were residents of South Western Sydney LHD (597, 44%) followed by Western Sydney LHD (356, 26%), and Sydney LHD (271, 20%)

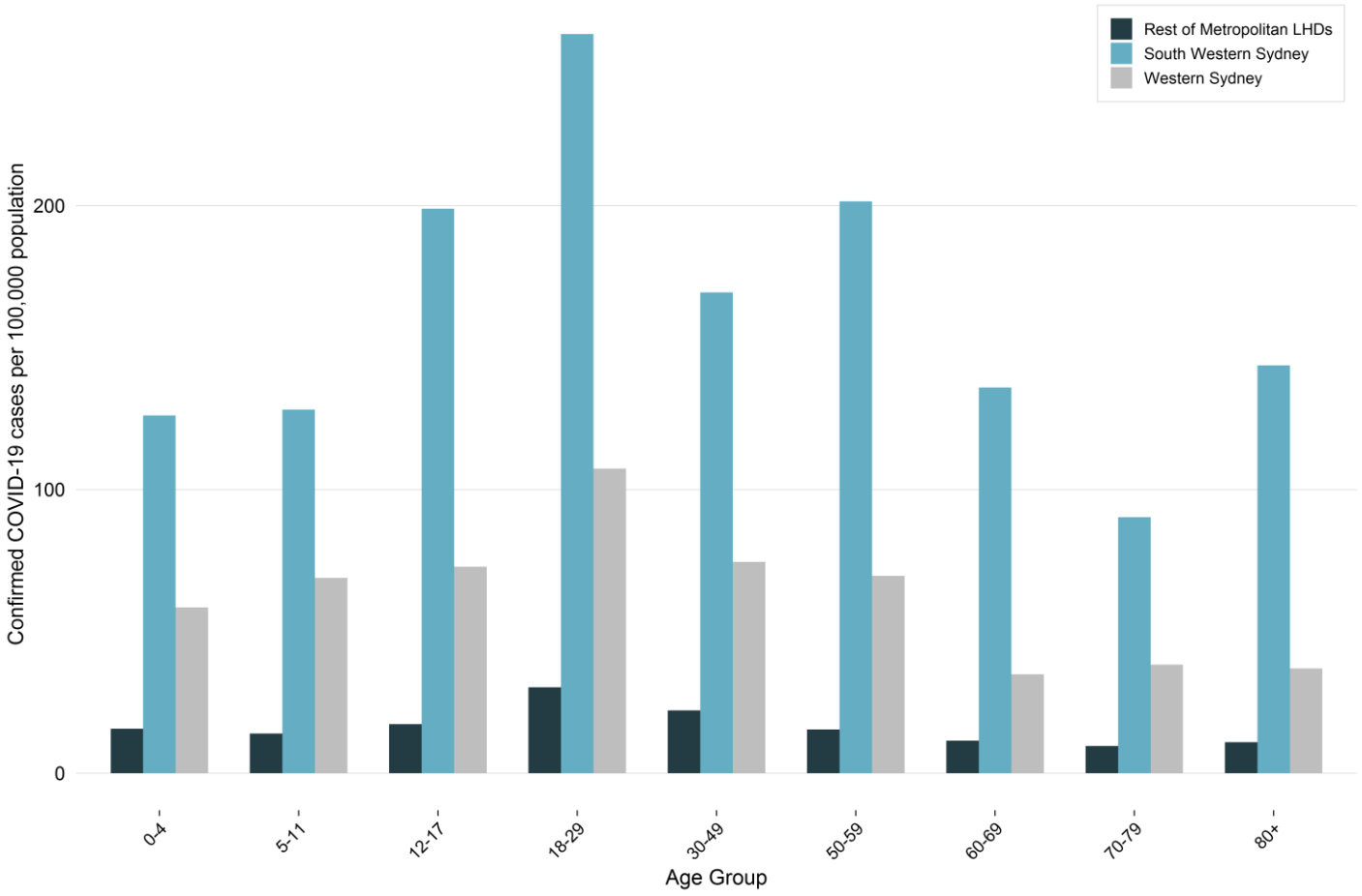
Section 3: Epidemiology of local cases with COVID-19 from 16 June 2021 to 31 July 2021

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

Age breakdown of locally acquired cases

Since 16 June 2021, 3,472 locally acquired cases have been diagnosed with COVID-19 in NSW with 3,469 cases residing in eight metropolitan LHD areas*. The rate of COVID-19 diagnosed in each age group allows the risk of infection by age to be compared between areas. The largest number of cases were reported in South Western Sydney (49%, 1,699/3,469). Overall rates in the South Western Sydney are 176.2 per 100,000 people compared with 71.9 per 100,000 people in Western Sydney LHD and 18.6 per 100,000 people in the rest of the metropolitan local health districts (LHD).

Figure 3. Rates of COVID-19 infection by age group, South Western Sydney LHD, Western Sydney LHD and rest of Metropolitan LHDs, NSW, 16 June to 31 July 2021



Interpretation: From 16 June to 31 July, the highest rate of people diagnosed with COVID-19 was in people aged 18-29. The rate was almost ten times higher in South Western Sydney and 3.5 times higher in Western Sydney when compared with the rest of metropolitan LHDs (260.5, 107.3 and 30.3 per 100,000 people respectively).

*Metropolitan LHDs include: Central Coast LHD, Illawarra Shoalhaven LHD, Nepean Blue Mountains LHD, Northern Sydney LHD, South Eastern Sydney LHD, South Western Sydney LHD, Sydney LHD and Western Sydney LHD.

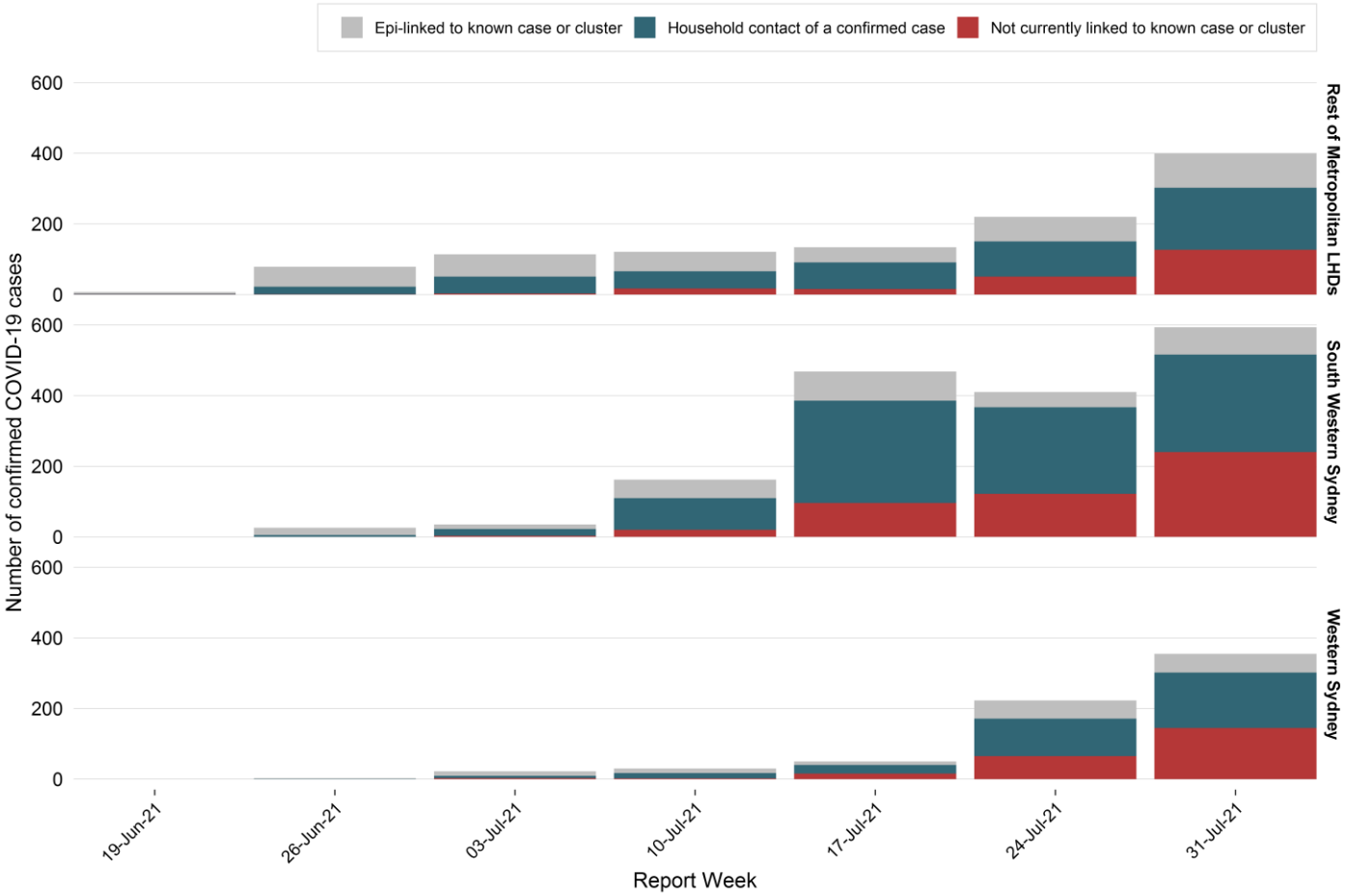
Source of infection for locally acquired cases in NSW

In the week ending 31 July, 45% of cases diagnosed with COVID-19 acquired their infection in a household setting (609/1360) compared with 52% the previous week. Of the 597 cases reported this week in South Western Sydney LHD, 276 (46%) were household contacts, 78 (13%) were epidemiologically linked but not household contacts and 243 (41%) were not currently linked to a case or cluster.

There were 356 cases reported this week in Western Sydney LHD. Of these 157 (44%) were household contacts, 53 (15%) were epidemiologically linked but not household contacts and 146 (41%) were not currently been linked to a case or cluster.

Of the remaining 405 cases reported this week in the rest of Metropolitan LHDs, 176 (43%) were household contacts, 97 (24%) were epidemiologically linked but not household contacts and 132 (32%) were not currently been linked to a case or cluster.

Figure 4. Source of infection for locally acquired cases, South Western Sydney LHD, Western Sydney LHD and rest of metropolitan LHDs, week ending 19 June to 31 July 2021

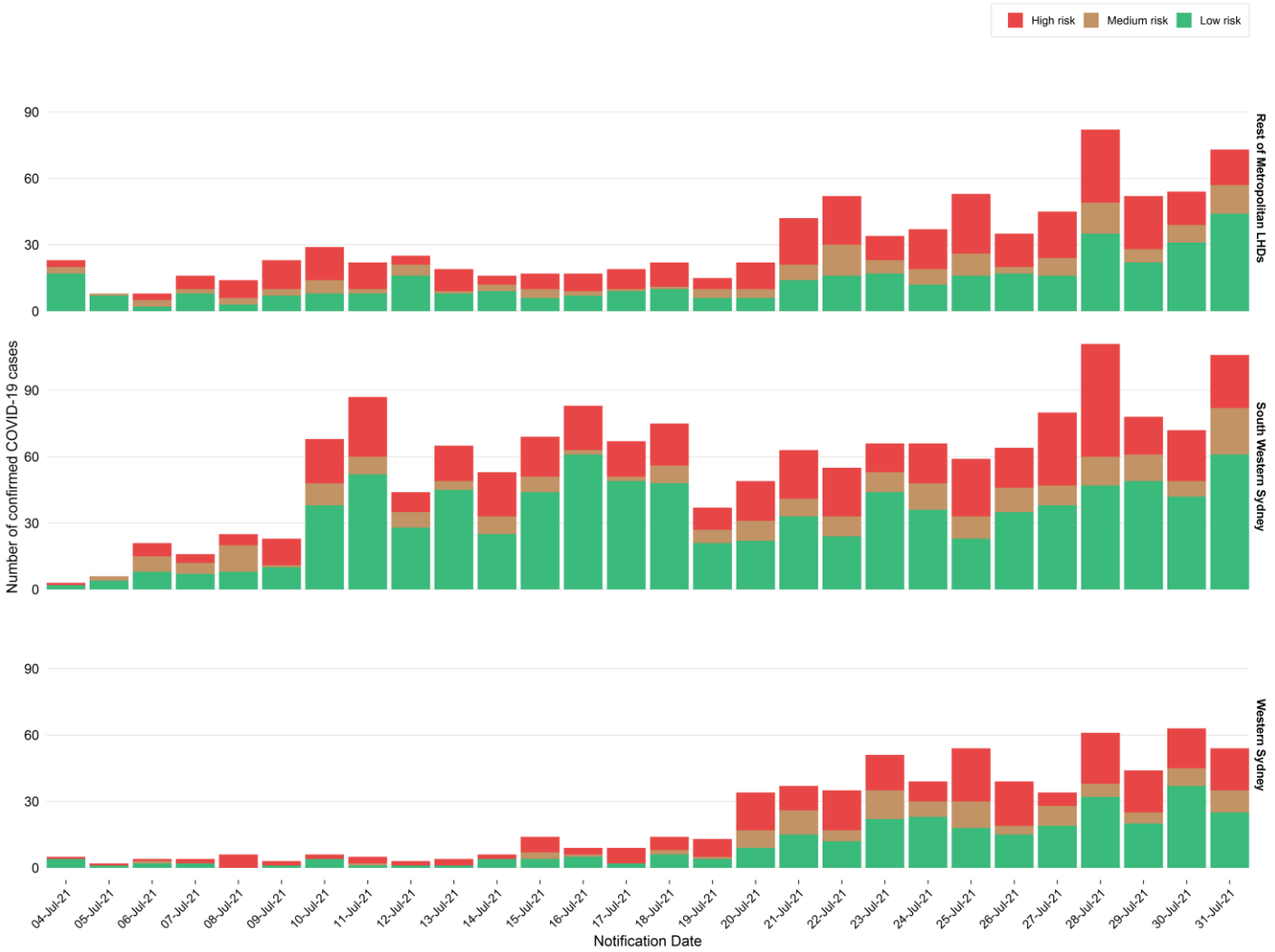


Interpretation: In the week ending 31 July, cases increased significantly in the South Western Sydney area (597 compared to 411 the previous week) and Western Sydney area (356 cases compared with 223 the previous week), and almost doubled in the rest of metropolitan LHDs (405 cases compared with 225). In the last week, South Western Sydney has the highest proportion of household contacts being infected with COVID-19 (46%) compared with Western Sydney (44%) and the rest of metropolitan LHDs (43%).

Measurement of risk of community exposure by LHD

In the week ending 31 July, 295 (49%) cases were classified as low risk, 83 (14%) as medium risk and 192 (32%) as high risk in South Western Sydney. This compares to 166 (47%) classified as low risk, 54 (15%) as medium risk and 129 (36%) as high risk in Western Sydney and 181 (45%) classified as low risk, 62 (15%) as medium risk and 151(37%) as high risk in the rest of the metropolitan LHDs during the same period.

Figure 5. Daily number of locally acquired cases by community risk level, South Western Sydney LHD, Western Sydney LHD and rest of Metropolitan LHDs, 4 July to 31 July 2021.



Note: Graph does not include cases where risk has not yet been identified (45 cases, 3%)

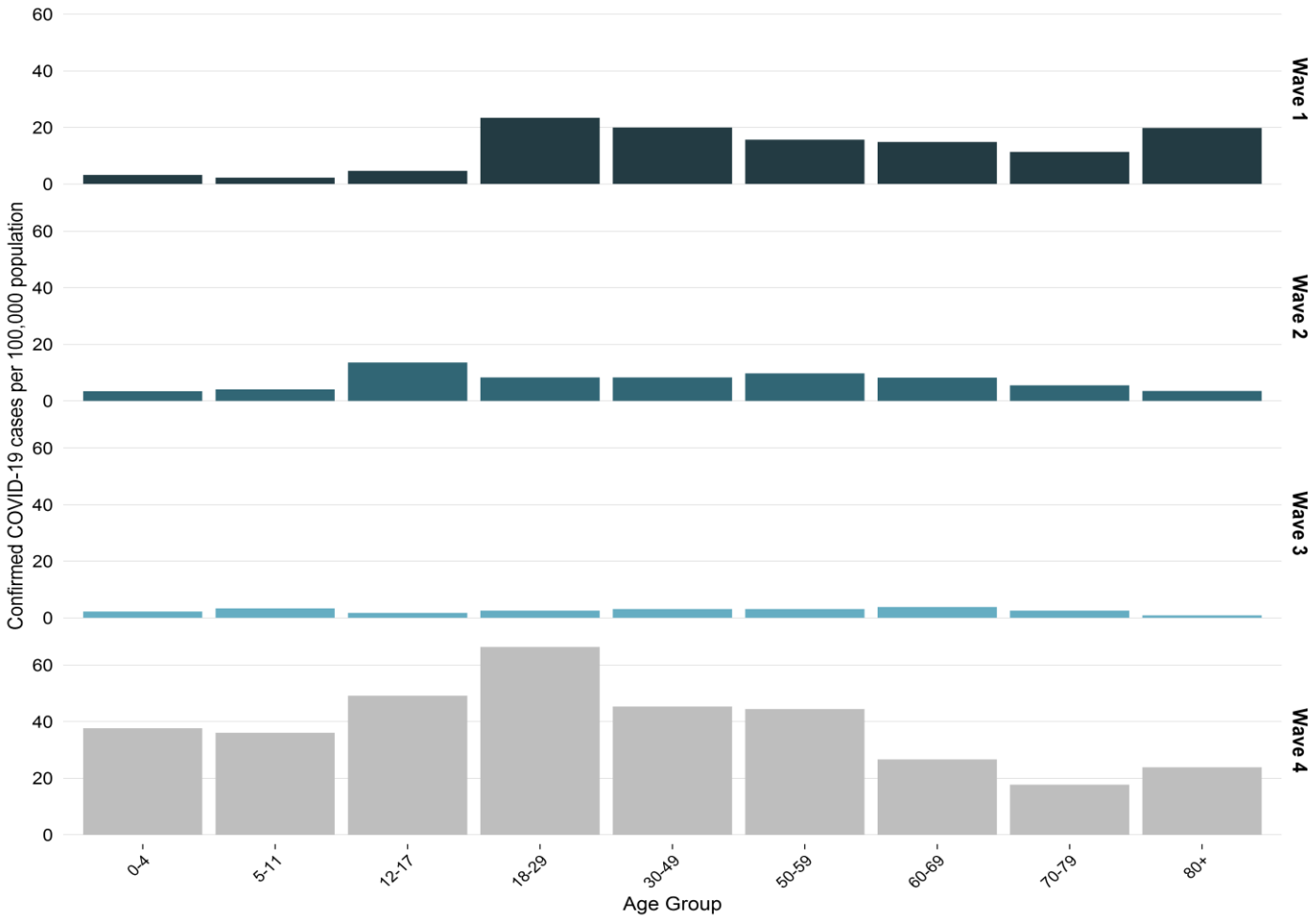
Interpretation: Forth-seven per cent (642/1360), of cases reported in South Western Sydney, Western Sydney and the rest of metropolitan LHDs were considered low risk in the community and 53% were infectious in the community for at least part of their infectious period.

Age breakdown of locally acquired cases across four waves, NSW, from 1 January 2020 - 31 July 2021

There have been four distinct waves in reported cases of COVID-19 in NSW since 1 January 2020. Each wave captures a sharp rise in cases after a prolonged period of very few or no cases. Each wave is distinct and are described below:

- The first wave represents the period from 1 January to 31 May 2020 and includes the period prior to international borders being closed. In this period, there were 1,230 locally acquired cases with residents of South Eastern Sydney mainly affected (350/1230, 29%). The median age and interquartile range (IRQ) for cases diagnosed in this period was 39 years (IQR = 27-56 years).
- The second wave represents the period from 1 June to 31 October 2020. In this period there were 627 locally acquired cases and mainly affected residents of South Western Sydney and Western Sydney mainly affected (407/627, 65%). %). The median age was 37 years (IQR = 22-55 years).
- The third wave represents the period from 1 November 2020 to 31 January 2021 and was seeded in the Northern Beaches and Berala area from two distinct outbreak sources. In this period there were 229 locally acquired cases and mainly affected residents of Northern Sydney (125/229, 55%). The median age was 39 years (IQR = 20-58 years).
- The current fourth is considered the period between 1 June to 31 July 2021. There were 3,472 locally acquired cases in this period with 69% (2,399/3,472) of cases residing in South Western Sydney and Western Sydney areas. The median age was 31 years (IQR = 19-49 years).

Figure 6. Rates of COVID-19 infection by age group, four waves, NSW, from 25 January 2020 to 31 July 2021



Interpretation: The fourth wave of COVID-19 has had significantly higher rates of infections across all age groups when compared with previous waves which has been mainly driven by the more transmissible delta variant. The highest rate of people diagnosed with COVID-19 in the fourth wave is in people aged 18-29 years (66.5 per 100,000 people) however and high rates are also seen in people aged 12-17 years of age (49.2 per 100,000 people) and 30-59 years (45.5 per 100,000 people).

How many close contacts have been followed up by NSW health?

Every COVID-19 case is infectious because the virus replicates inside the cells in our bodies that it infects. When the virus replicates, the virus particles that are produced are exhaled when infected people breathe, talk, sing, cough or sneeze. Because people who are exposed to virus particles can become infected, it is very important to find out who was in contact with the case while they were infectious. Contacts need to get tested, quarantine or monitor for symptoms, depending on how close their contact was to a person with COVID-19.

Contacts can be close or casual. A close contact is someone who has been close to a person with infectious COVID-19 and might have become infected with the COVID-19 virus. A casual contact is someone who has been near a person with infectious COVID-19 but who is at lower risk of getting COVID-19 than a close contact. Contacts are contacted by NSW Health to ensure that they get tested and quarantine for the required amount of time and are given other instructions on what to do if symptoms develop and how to manage their quarantine (see Series of National Guidelines). Contacts who become cases are not included in counts of contacts.

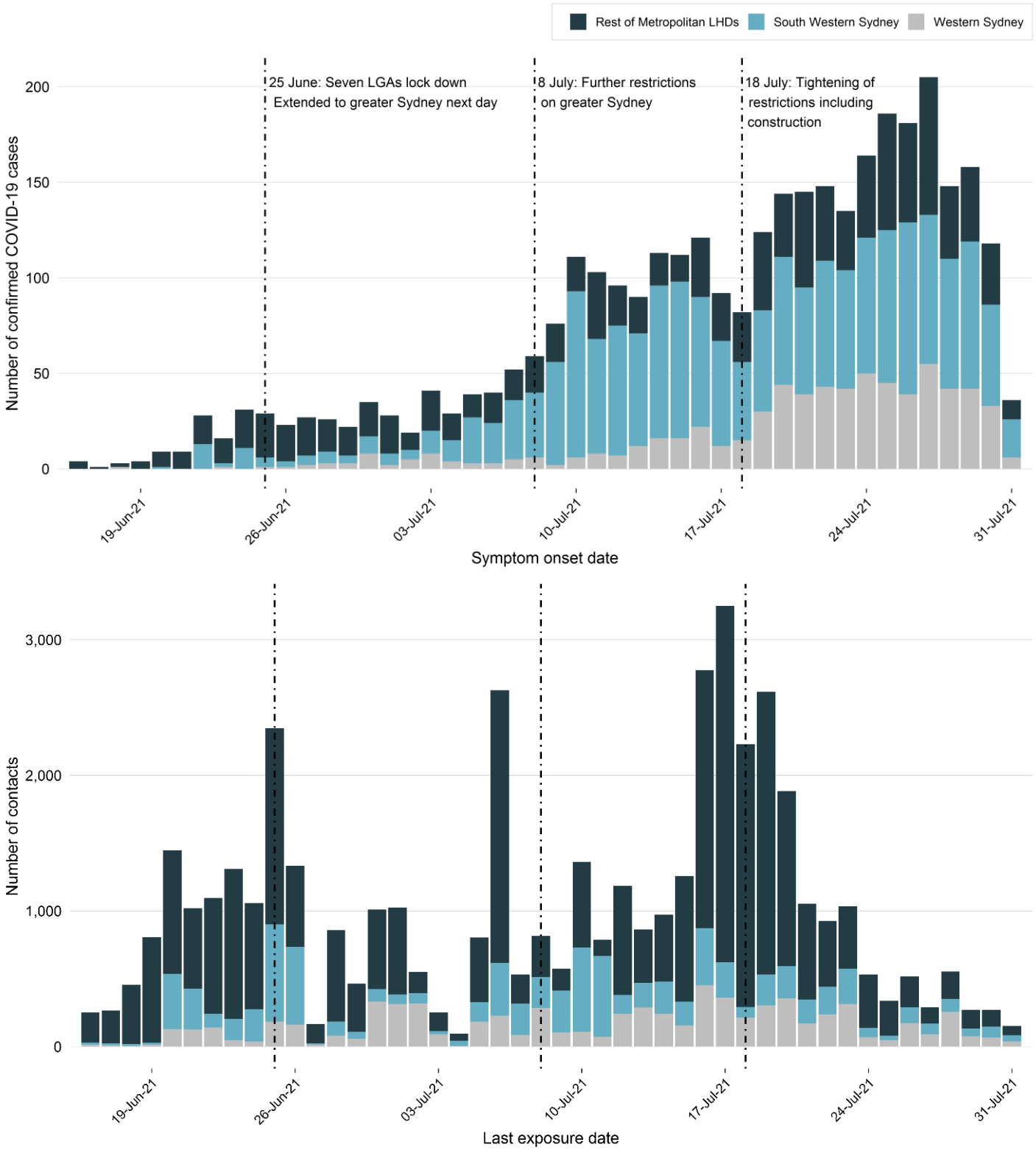
There have been 29,889 close contacts identified by NSW Health who have had a possible exposure to someone diagnosed with COVID-19 the last four weeks.

Table 4. Close contacts by LHD of residence and week reported, NSW, 4 July to 31 July 2021

Local Health District	Week ending				Total
	31-Jul	24-Jul	17-Jul	10-Jul	
Western Sydney	751	1,666	1,817	1,007	5,241
South Western Sydney	500	1,253	2,012	1,956	5,721
Sydney	464	2,608	1,910	1,137	6,119
South Eastern Sydney	218	768	1,369	1,609	3,964
Nepean Blue Mountains	200	201	351	495	1,247
Northern Sydney	156	3,376	2,637	320	6,489
Central Coast	23	67	43	47	180
Illawarra Shoalhaven	10	40	101	86	237
Hunter New England	3	13	44	18	78
Western NSW	3	7	315	2	327
Murrumbidgee	2	5	7	21	35
Northern NSW	2	2	81	5	90
Mid North Coast	1	1	115	2	119
Southern NSW	0	29	7	4	40
Far West	0	0	1	1	2
NSW*	2,333	10,036	10,810	6,710	29,889

Interpretation: The majority of close contacts that have been identified by NSW health in the last four weeks reside in Northern Sydney LHD (22%) followed by Sydney LHD (20%). This follows a surge in close contacts identified at a Belrose supermarket after transmission had occurred amongst customers and staff at the venue. All contacts have been followed up by NSW Health and undergone testing and quarantine for 14 days from the last exposure to a person with COVID-19.

Figure 7. Confirmed COVID-19 cases and close contacts associated with the current Greater Sydney outbreak by illness onset, South Western Sydney LHD, Western Sydney LHD and rest of metropolitan LHDs, week ending 19 June to 31 July 2021 and LHD.



Interpretation: Since the beginning of the Greater Sydney outbreak on 16 June 2021, the daily number of cases has steadily increased peaking at 205 cases on the 27 June. The number of close contacts followed up by NSW Health has changed over time and corresponds to the tightening of restrictions. The strengthening of Public Health Orders on the 26 June, 9 July and 18 of July corresponding with a significant decrease in the number of close contacts per case exposed to COVID-19 in the subsequent days. In total, 46,296 contacts have been followed up associated with the current outbreak.

Section 4: COVID-19 in specific populations

Aboriginal people

Aboriginal and Torres Strait Islander communities are recognised as a priority group due to key drivers of increased risk of transmission and severity of COVID-19 which include mobility, remoteness, barriers to access including institutional racism and mistrust of mainstream health services, crowded and inadequate housing, and burden of disease.

There were seven locally acquired cases of COVID-19 reported in Aboriginal people in the week ending 31 July 2021. Of the seven cases, one was fully vaccinated. In total there have been 24 Aboriginal people diagnosed with COVID-19 in the current Greater Sydney outbreak.

Since the beginning of the pandemic in January 2020, there have been 74 Aboriginal people diagnosed with COVID-19, representing 1% of all cases in NSW. This compares to 3.4% of the NSW population identifying as Aboriginal people.

Healthcare workers

The following describes infections of COVID-19 in healthcare workers (HCWs). HCWs in this section includes roles such as doctor, nurse, orderly, paramedic, laboratory technician, pharmacist, administrative staff, cleaners, and other support staff. Public health units routinely undertake investigations of COVID-19 cases in healthcare workers to identify ongoing risks in healthcare settings.

In the week ending 31 July, there were 28 healthcare workers diagnosed with COVID-19. Of these, 5 (18%) were potentially infected in a healthcare setting, 13 (46%) were social or household contacts of previously reported cases and 10 (36%) are currently not linked. Five (18%) cases were fully vaccinated and seven were partially vaccinated.

In total there have been 141 cases of COVID-19 in health care workers since 31 July 2020. Of these, 47 HCWs were potentially infected in healthcare settings. A further 59 cases were social or household contacts of a known case, and for 35 cases the source of infection is either unknown or under investigation. Prior to August 2020, there were 35 cases identified in HCWs who had worked in a health facility in the 14 days prior to symptom onset or date of testing (see COVID-19 in healthcare workers in NSW).

Table 5. Number of healthcare worker infections by source of infection and proportion fully vaccinated

Healthcare workers	Last 7 days			Current Greater Sydney outbreak (16 Jun - 31 Jul 2021)		
	Number of HCWs	Fully vaccinated	Partially vaccinated	Number of HCWs	Fully vaccinated	Partially vaccinated
Healthcare acquired	5	1 (20%)	3 (60%)	22	5 (23%)	7 (32%)
Community acquired	13	2 (15%)	6 (46%)	42	4 (10%)	11 (26%)
Not currently linked	10	2 (20%)	5 (50%)	29	3 (10%)	12 (42%)
Total	**28**	**5 (18%)**	**14 (50%)**	**93**	**12 (13%)**	**30 (32%)**

Interpretation: Since 16 June, most healthcare workers associated with the Greater Sydney outbreak have been infected in the community and outside of a healthcare setting (71/93, 76%). Of the 93 healthcare workers that have been diagnosed with COVID-19 in the current outbreak, 12 (13%) have been fully vaccinated and 30 (32%) have been partially vaccinated.

Aged care workers

There were five locally acquired cases in aged care workers in the week ending 31 July 2021. One case, who was unvaccinated, acquired their infection while working in an aged care facility, two cases were social or household contacts of a known case and for two cases the source of infection is under investigation.

Since 1 January 2021, there have been 26 cases reported in aged care workers. Of these, 13 (50%) people have reported being partially vaccinated. There have been no aged care workers diagnosed with COVID-19 who have been fully vaccinated.

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

Aged care workers	Last 7 days			Current Greater Sydney outbreak (16 Jun - 31 Jul 2021)		
	Number of ACWs	Fully vaccinated	Partially Vaccinated	Number of ACWs	Fully vaccinated	Partially Vaccinated
Acquired at aged care facility	0	0	0	6	0	3 (50%)
Community acquired	5	0	4 (80%)	13	0	6 (46%)
Not currently linked	4	0	3 (75%)	7	0	4 (57%)
Total	**9**	**0**	**7 (78%)**	**26**	**0**	**13 (50%)**

Interpretation: In the week ending 31 July there were nine aged care workers diagnosed with COVID-19. Of these, five (56%) were social or household contacts of previously reported cases and four (44%) are not currently linked. There were no aged care workers reported this week who were infected in an aged care facility.

Pregnant women

There were 11 cases in pregnant women in the week ending 31 July 2021. Since January 2020, 77 pregnant women have been diagnosed with COVID-19 in NSW. As those who test negative are not interviewed, testing rates among pregnant women are not available.

Section 5: COVID-19 vaccination status

COVID-19 vaccinations began in Australia on 22 February 2021. The first people to receive the COVID-19 vaccines were priority groups at a higher risk of COVID-19 infection, including quarantine and border workers, frontline healthcare workers, and aged and disability care residents and staff.

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

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

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

Table 7a. Locally acquired COVID-19 cases by vaccination status and week reported, NSW, 1 March to 31 July 2021

Vaccination Status	Week					Total from 1 Mar 2021
	31 Jul 21	24 Jul 21	17 Jul 21	10 Jul 21	03 Jul 21	
Total locally acquired cases	1,360	859	653	313	296	3,481
Fully Vaccinated	14 (1%)	7 (0.8%)	2 (0.3%)	2 (0.6%)	5 (1.7%)	30 (0.9%)
Partially Vaccinated	132 (9.7%)	52 (6.1%)	24 (3.7%)	21 (6.7%)	18 (6.1%)	247 (7.1%)
None	1,006 (74.0%)	791 (92.1%)	624 (95.6%)	288 (92%)	270 (91.2%)	2,979 (85.6%)
Unknown/Missing	208 (15.3%)	9 (1%)	3 (0.5%)	2 (0.6%)	3 (1%)	225 (6.5%)

Table 7b. Overseas acquired COVID-19 cases by vaccination status and week reported, NSW, 1 March to 31 July 2021

Vaccination Status	Week					Total from 1 Mar 2021
	31 Jul 21	24 Jul 21	17 Jul 21	10 Jul 21	03 Jul 21	
Total overseas acquired cases	16	8	26	11	477	538
Fully Vaccinated	0 (0%)	2 (25%)	7 (26.9%)	0 (0%)	14 (2.9%)	23 (4.3%)
Partially Vaccinated	2 (12.5%)	1 (12.5%)	5 (19.2%)	3 (27.3%)	25 (5.2%)	36 (6.7%)
None	3 (18.8%)	5 (62.5%)	11 (42.3%)	5 (45.5%)	423 (88.7%)	447 (83.1%)
Unknown/Missing	11 (68.8%)	0 (0%)	3 (11.5%)	3 (27.3%)	15 (3.1%)	32 (5.9%)

Interpretation: In the past week 1% of locally acquired cases were fully vaccinated. This compares with around 19% of the NSW population who had received two doses of vaccine by July 31. Since 1 March 2021, there have been 30 (1%) locally acquired cases reported as being fully vaccinated and 247 (7%) partially vaccinated. Twenty-three (4%) overseas acquired cases have 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 hospitalisations and deaths

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

In the week ending 31 July 2021, of the 1,360 locally acquired cases, there were 162 people admitted to hospital as a result of being diagnosed with COVID-19. In total, there have been 538 people hospitalised as a result of the current Greater Sydney outbreak.

Table 8. Hospitalisations and ICU admissions as a result of COVID-19, by age group, NSW, from 16 June to 31 July 2021

Age-group (years)	Hospitalised (%)	Hospitalised and in ICU (%)	Rate of hospitalisations per 100,000 people, NSW
0-4	9 (1.7%)	0 (0.0%)	1.8
5-11	5 (0.9%)	0 (0.0%)	0.7
12-17	11 (2.0%)	2 (2.1%)	2.0
18-29	83 (15.4%)	12 (12.6%)	6.0
30-49	158 (29.4%)	15 (15.8%)	7.2
50-59	106 (19.7%)	25 (26.3%)	10.9
60-69	68 (12.6%)	23 (24.2%)	8.1
70-79	49 (9.1%)	13 (13.7%)	8.4
80+	49 (9.1%)	5 (5.3%)	14.3
Total	538 (100.0%)	95 (100%)	6.7

Interpretation: The highest number of cases hospitalised are aged 30-49 (158, 29.4%) years, followed by those aged 50-59 years (106, 19.7%). In NSW, cases aged 80 years and over have the highest rate of hospitalisation (14.3 per 100,000 people).

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

Of the 538 people hospitalised as a result of COVID-19 in the current outbreak, 95 (18%) people were in ICU. Of the people in ICU 87 (91.6%) were unvaccinated and 8 (8.4%) were partially vaccinated or had a single dose within 14 days. There have been no fully vaccinated cases in ICU.

Table 9. Hospitalisations and ICU admissions due to COVID-19, by vaccination status, NSW, from 16 June to 31 July 2021

Vaccination status	Hospitalised (%)	Hospitalised and in ICU (%)
Fully Vaccinated	9 (1.7%)	0 (0.0%)
Partially Vaccinated	46 (8.6 %)	8 (8.4%)
None	475 (88.3%)	87 (91.6%)
Unknown/Missing	8 (1.5%)	0 (0.0%)
Total	538 (100.0%)	95 (100.0%)

Interpretation: Of the 538 people hospitalised, 9 (1.7%) were fully vaccinated, 46 (8.6%) were partially vaccinated and 475 (88.3%) were not vaccinated.

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

Since the start of the pandemic, <1% of cases (70 people) have died as a result of COVID-19, most of whom were 80 years of age or older, including 28 residents of aged care facilities with known COVID-19 outbreaks. Approximately 20% (12/70) of the deaths were in overseas acquired cases.

There were eight deaths in people with COVID-19 reported in the week ending the 31 July including a female in her 30s, a man in his 60s, a woman in her 70s, a man and two women in their 80s and two women in their 90s. Six of the eight cases were household contacts of previously reported cases and for two cases their source of infection has not yet been identified. One person was partially vaccinated and seven were unvaccinated.

Table 10. Deaths as a result of COVID-19, by age group, NSW, from 25 January 2020 to 31 July 2021

Age group (years)	Current outbreak	Since January 2020		
	Number of deaths	Total number of deaths	Number of cases	Case fatality rate
0-4	0	0	344	0%
5-11	0	0	413	0%
12-17	0	0	452	0%
18-29	0	0	2160	0%
30-49	1	1	2855	<0.1%
50-59	1	2	1158	0.2%
60-69	1	5	884	0.6%
70-79	2	17	498	3.4%
80+	9	45	247	18.2%
Total	14	70	9011	0.8%

Interpretation: Cases older than 80 years of age had both the highest number of deaths and the highest case fatality rate. Only one case under 50 years of age has died as a result of COVID-19 in NSW.

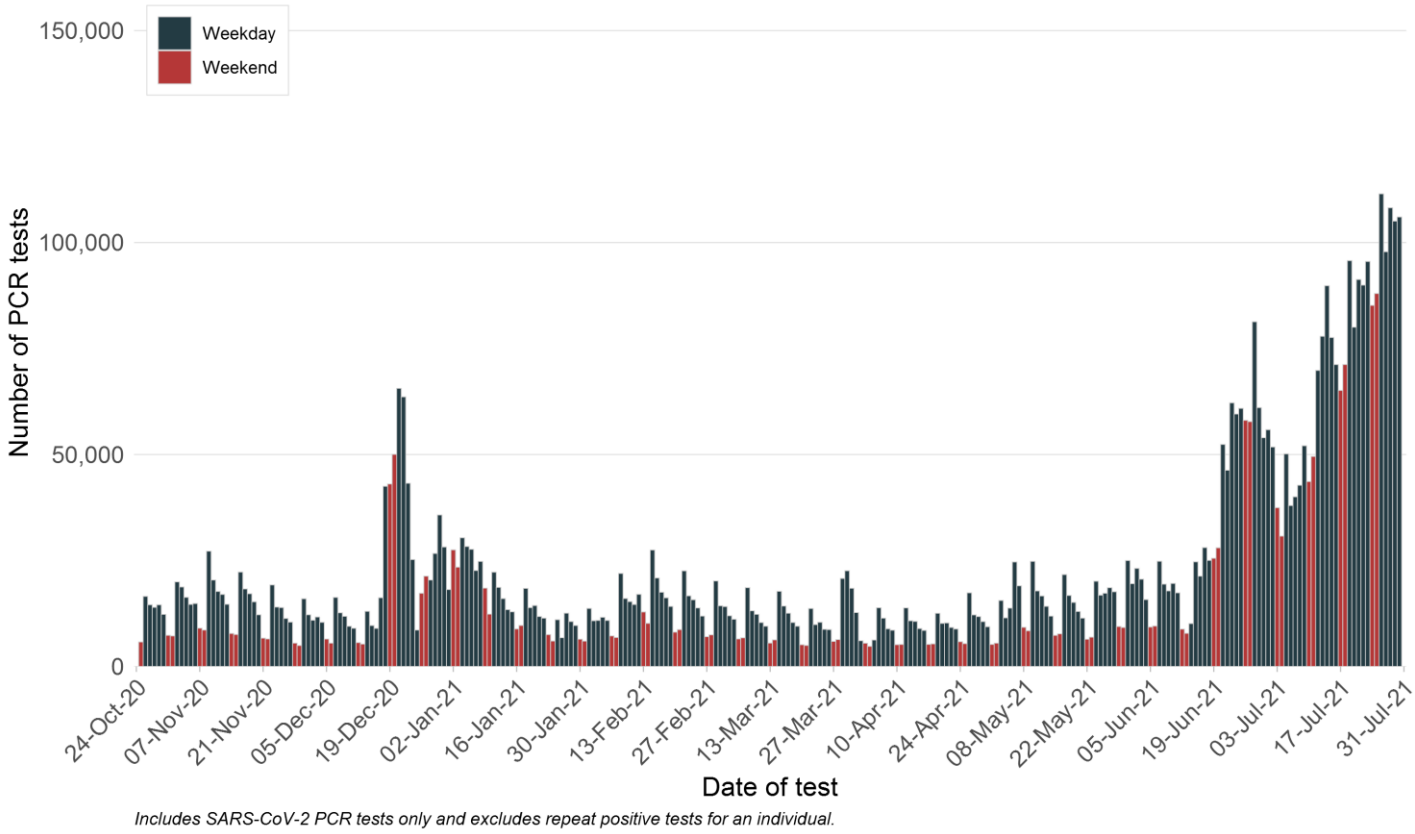
Section 7: COVID-19 testing in NSW

How much testing is happening?

The bars on the graph below show the number of tests by the date a person presented for the test.[1] While public health facilities are generally open seven days a week, there may be less demand and availability for testing through GPs and private collection centres on weekends and public holidays. This likely explains lower testing numbers on weekends.

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

Figure 8. Number of PCR tests per day, NSW, 24 October 2020 to 31 July 2021



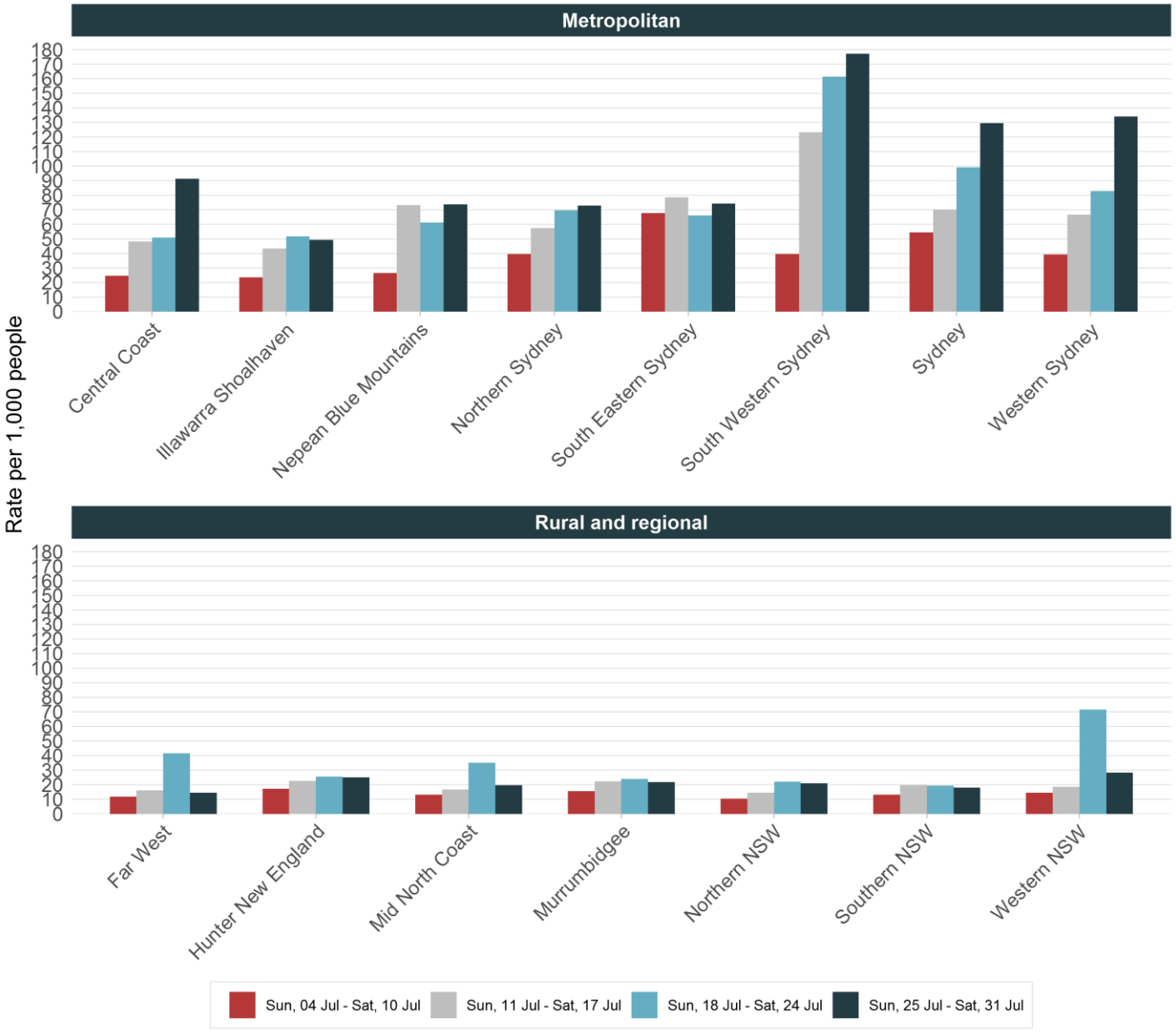
Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.

Interpretation: Testing numbers increased in the week ending 31 July 2021 (up 16%) compared to the previous week. The average daily testing rate of 12.5 per 1,000 people in NSW each day increased compared to the previous week of 10.8 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 Local Government Areas

Figure 9. Rates of COVID-19 testing by LHD of residence, NSW, 4 July to 31 July 2021

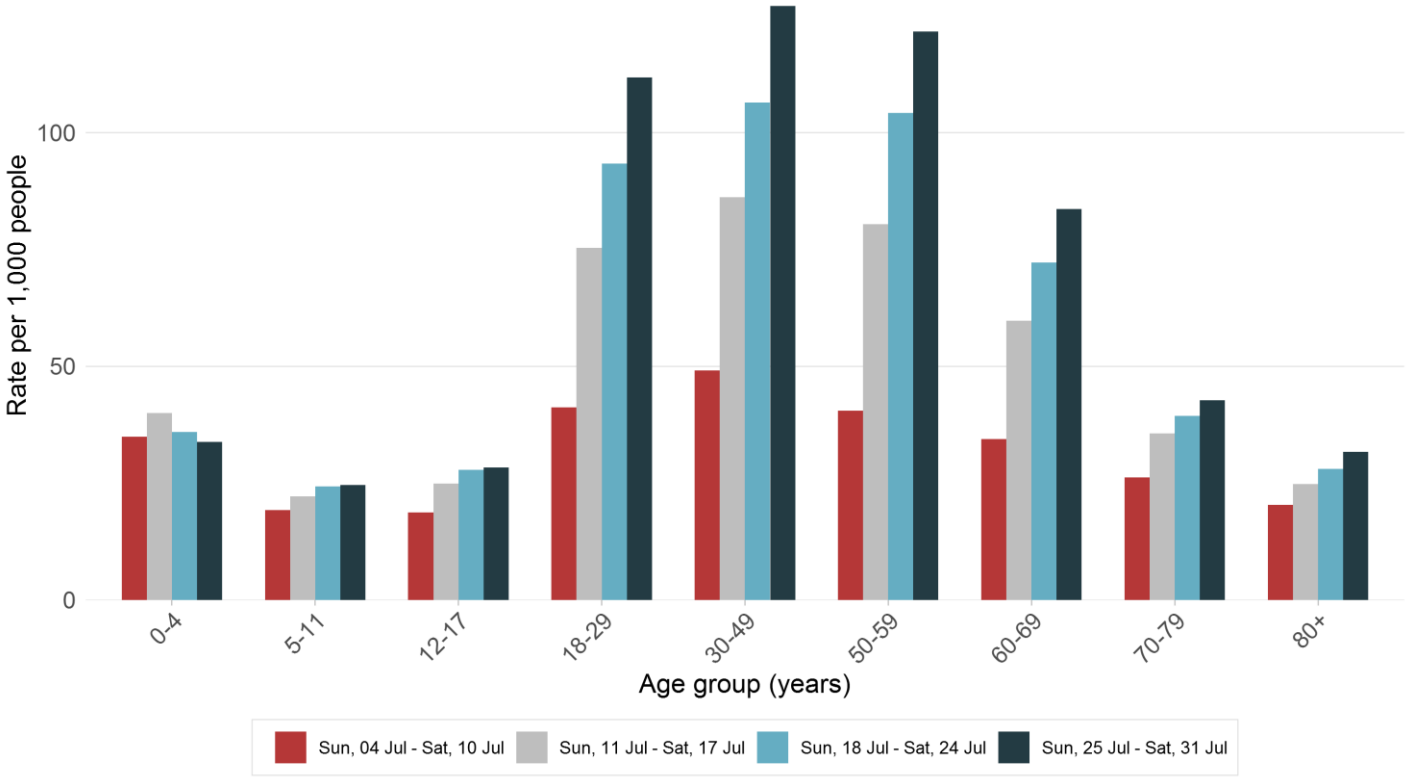


Includes SARS-CoV-2 PCR tests only and excludes notifications with missing postcode of residence.

Interpretation: State-wide weekly testing rates in the week ending 31 July increased or remained steady across most LHDs compared to the previous week (87.6 per 1,000 people compared to 75.3 per 1,000 people). Testing rates almost doubled in Central Coast LHD in response to targeted public health messaging urging residents to get tested (91.3 per 1,000 people compared to 51.1 per 1,000 the previous week). This followed reports of several COVID-19 exposure sites in the area and a positive sewage detection in Toukley reported on 29 June. Increased rates of testing were also seen in Western Sydney and Sydney LHDs.

Testing by age group

Figure 10. Rates of COVID-19 testing by age group and week, NSW, 4 July to 31 July 2021



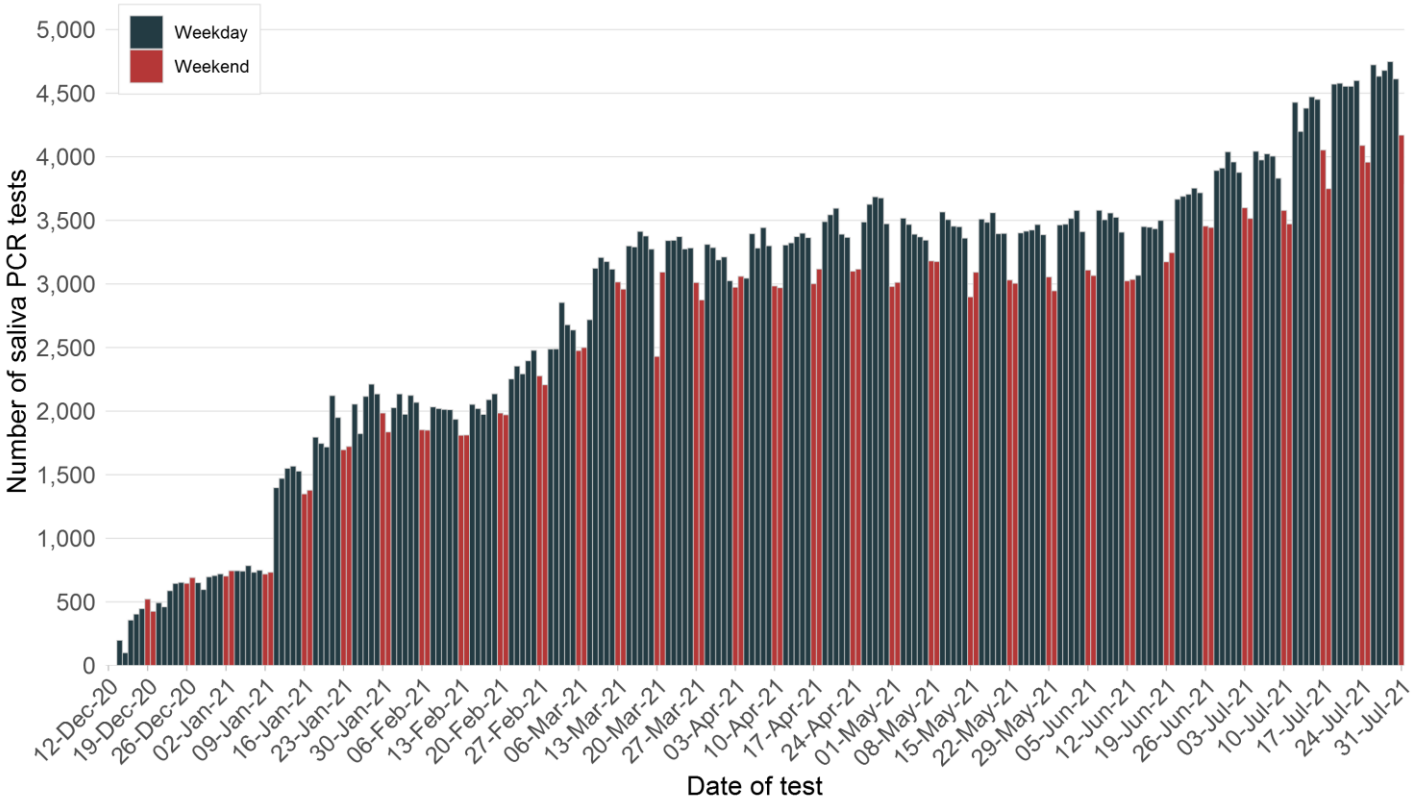
Includes SARS-CoV-2 PCR tests only and excludes notifications with age missing.

Interpretation: In the week ending 31 July 2021, testing rates increased or remained steady across most age groups with the greatest increase seen in adults aged 18-69.

Border and quarantine workers – saliva testing screening program

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

Figure 11. Daily numbers of saliva PCR test results reported for border and quarantine workers, NSW, 12 December 2020 to 31 July 2021



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

Interpretation: Since screening of quarantine workers began in December 2020, a total of 637,973 saliva PCR tests have been conducted to 31 July 2021. The number of saliva PCR tests increased significantly on 11 January 2021, which corresponds to the expansion of the NSW quarantine hotel worker surveillance and testing program. Two confirmed cases of COVID-19 have been reported through saliva PCR testing, reported on 13 March and 16 June 2021. The daily number of saliva PCR tests is not included in the total PCR testing numbers reported.

Section 8: Variants of Concern (VoC)

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

This report reflects the recommendations of 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). The B.1.617 lineage was first detected in India in October 2020. The delta lineage (B.1.617.2) was internationally recognised as a VoC on 11 May 2021.

In the four weeks ending 31 July 2021, there have been:

- 1118 locally acquired cases diagnosed with a VOC. All of these cases have been diagnosed with infection by the Delta variant.
- 19 returned travellers diagnosed with a VoC. Of these:
  - 1 (5%) with the alpha variant
  - 18 (95%) with the delta variant.
- The countries of likely acquisition of the 38 returned travellers diagnosed with a VoC are: Fiji (4, 21%), UK (3, 11%), China (2, 11%), Lebanon (2, 11%), UAE (2, 11%), France (1, 5%), India (1, 5%), Indonesia (1, 5%), Sri Lanka (1, 5%), and unknown (3, 16%).

Table 11a. Variants identified among locally acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 31 July 2021

Variant	Week ending				29 Nov to 3-Jul	Total since 29 November
	31 July*	24-July*	17-Jul	10-Jul		
Total variants identified	8	384	454	272	253	1,371
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)	8	384	454	272	246	1,364

***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 24 July have been the delta variant of concern.

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

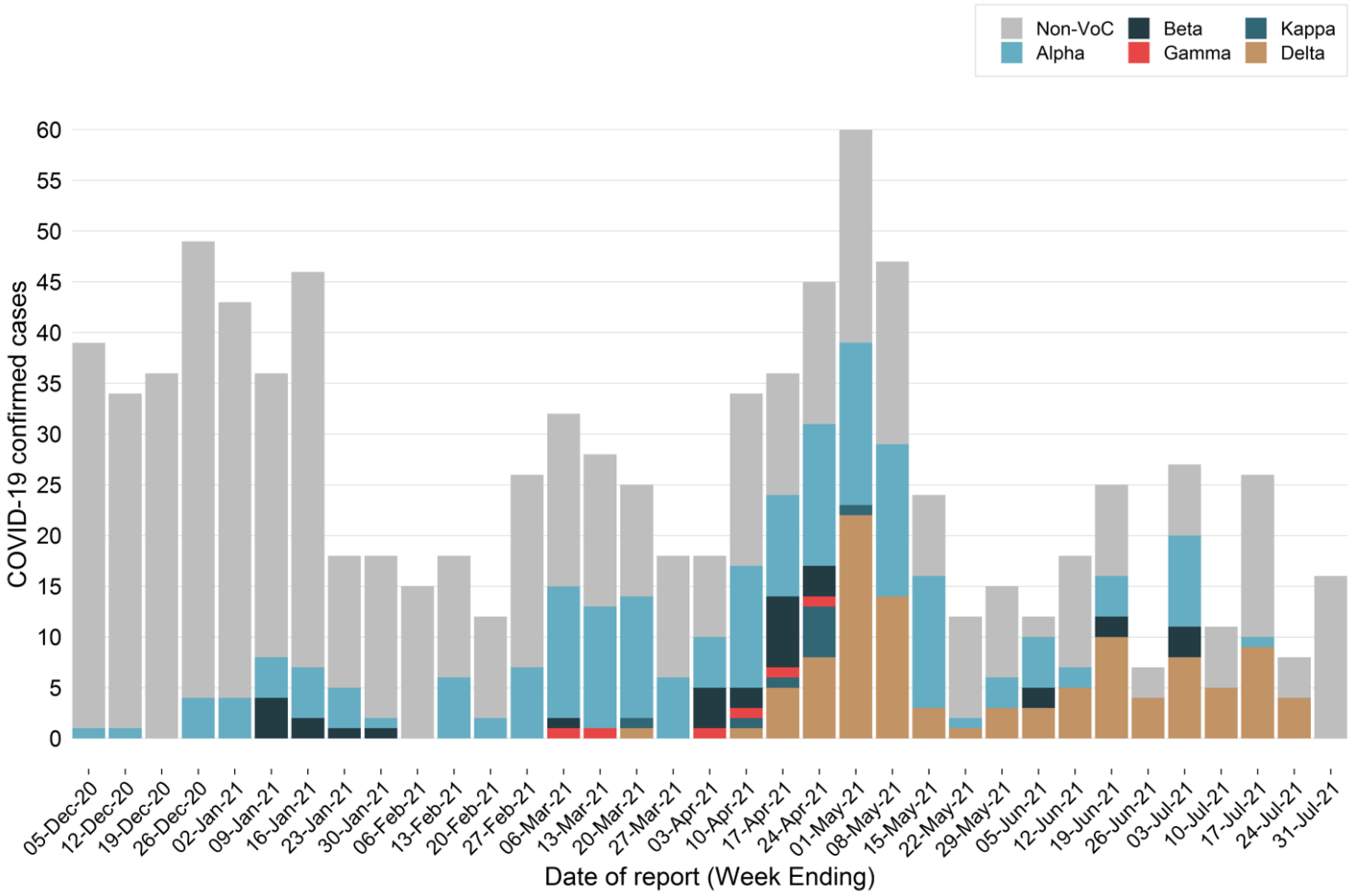
Table 11b. Variants identified among overseas acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 31 July 2021

Variant	Week ending				29 Nov to 3-Jul	Total since 29 November
	31 July*	24-July*	17-Jul	10-Jul		
Total variants identified	0	4	10	5	326	345
Alpha (B.1.1.7)	0	0	1	0	191	192
Beta (B.1.351)	0	0	0	0	32	32
Gamma (P.1)	0	0	0	0	6	6
Kappa (B.1.617.1)	0	0	0	0	9	9
Delta (B.1.617.2)	0	4	9	5	88	106

***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: In the last four weeks, the delta variant has been the most commonly detected variant among cases who acquired their infections overseas (18/19, 95%). These results are consistent with the increasing incidence of infections caused by the delta variant in many countries.

Figure 12. Overseas acquired COVID-19 cases by VoC and week reported, NSW, 29 November 2020 to 31 July 2021



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

Interpretation: Since 29 November 2020 there have been 345 returned travellers diagnosed with a COVID-19 VoC. In the four weeks ending 31 July 2021, 54% (38/71) of overseas acquired cases have been identified as having COVID-19 variants of concern.

Section 9: NSW Sewage Surveillance Program

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

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

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

Table 12. Locations with SARS-CoV-2 detections in sewage samples in the last 10 weeks, NSW, 23 May to 31 July 2021

		29 May	5 June	12 June	19 June	26 June	3 July	10 July	17 July	24 July	31 July
Pop.	**Location**	21	22	23	24	25	26	27	28	29	30
60,514	Blue Mountains (Winmalee)										
110,114	Penrith										
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										
161,200	Glenfield										
1,341,986	North Head										
26,997	Castle Hill Cattai										
	Castle Hill Glenhaven										
163,147	Quakers Hill										
119,309	Rouse Hill										
37,061	Riverstone										
163,147	St Marys										
55,000	Wollongong										
68,000	Port Kembla										
93,000	Bellambi										

(Continued). Locations with SARS-CoV-2 detections in sewage samples in the last 10 weeks, NSW, 11 April to 31 July 2021

		29 May	5 June	12 June	19 June	26 June	3 July	10 July	17 July	24 July	31 July
Catchment	**Location**	21	22	23	24	25	26	27	28	29	30
Sydney network sites											
Bondi	Paddington										
Bondi	Rozelle										
Cronulla	Caringbah										
Cronulla	Miranda										
Malabar	Earlwood										
Malabar	Marrickville 1										
Malabar	Marrickville 2										
Malabar	Arncliffe 1										
Malabar	Arncliffe 2										
Malabar	Blakehurst										
Malabar	Padstow 1										
Malabar	Padstow 2										
Malabar	Fairfield SPS 1										
Malabar	Fairfield SPS 2										
Malabar	Homebush SPS										
Malabar	Croydon										
Malabar	Dulwich Hill										
Malabar	Canterbury										
Malabar	Botany										
Malabar	Maroubra										
North Head	Camellia SPS - North										
North Head	Camellia SPS - South										
North Head	Auburn										
North Head	Northmead SPS										
North Head	Northmead										
North Head	Tunks Park										
North Head	Vineyard Creek										
North Head	Boronia										
North Head	West Lindfield										
North Head	Allambie Heights										
North Head	Buffalo Creek Reserve										
Glenfield	Minto										
Liverpool	Ireland Park										
Quakers Hill	Eastern Creek										
St Marys	Ropes Creek										
Regional Sites											
14,700	Bowral										
9,000	Moss Vale										
29,300	Wyong-Toukley										
38,900	Bateau Bay										

2,050	Bourke										
1,700	Molong										
24,000	Armidale										
	Byron Bay										

Sampling commenced week ending 18 July 2020

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

Interpretation: In the week ending 31 July, 176 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were fifty detections. There were eight detections outside Sydney taken from the Armidale, Bowral (2), Molong (2) and Toukley (3) sewage treatment plants.

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

- Bondi, Castle Hill-Cattai, Cronulla, Glenfield, Liverpool, Malabar (2), McGraths Hill, North Head, Penrith, Quakers Hill, Riverstone, Rouse Hill, South Windsor, St Marys, Warriewood, West Camden, West Hornsby, Wilmalee and Wollongong (2).
- There were also detections from the sewage networks and pumping stations within:
- the Bondi catchment including Rozelle and Paddington
- the Cronulla catchment including Caringbah
- the Malabar catchment including Marrickville 1, Arncliffe 2, Padstow 2, Canterbury, Botany and Homebush
- the North Head catchment including Auburn, Northmead sewage pumping station, Northmead sewage network, Vineyard Creek, Boronia Park, Lane Cove West, Buffalo Creek Reserve and Allambie Heights
- the Liverpool catchment including Ireland Park
- Port Kembla
- Bellambi (2)

Detections from Armidale, Molong, Toukley, Wollongong, South Windsor, Port Kembla, Lane Cove West and Castle Hill – Cattai occurred with no known or recent cases in the catchment at the time of the detection. These detections may be due to undetected cases, the movement of cases in neighbouring areas whilst unknowingly infectious or the presence of people in the community who have recently been infected with the virus that causes COVID-19 but may no longer be infectious. People can continue to shed fragments of the virus for several weeks. All other catchments were associated with known cases in the area.

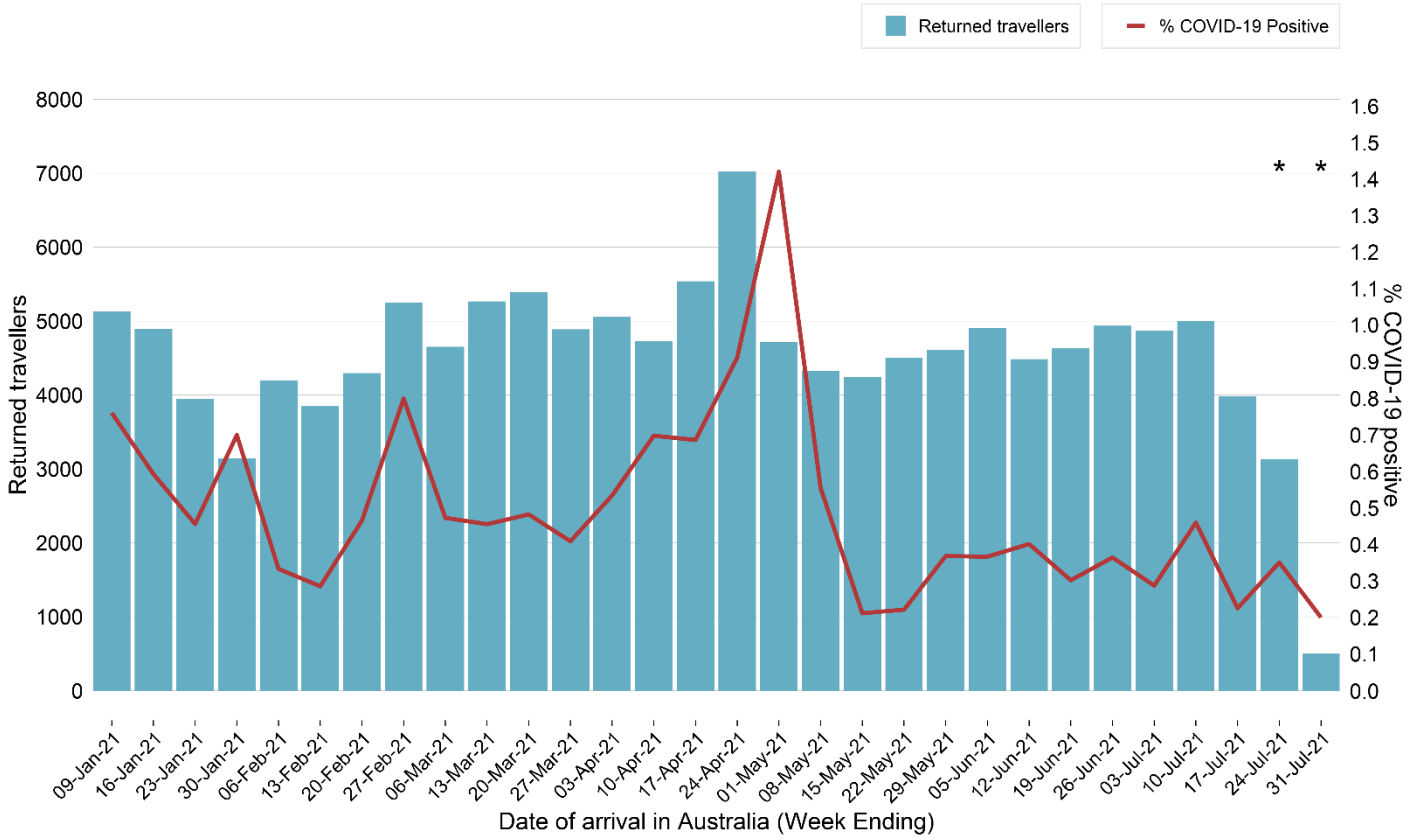
Section 10: COVID-19 in returned travellers

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 13. Returned travellers screened at Sydney International Airport by week of arrival and percent COVID-19 positive, NSW, 3 January 2021 to 31 July 2021



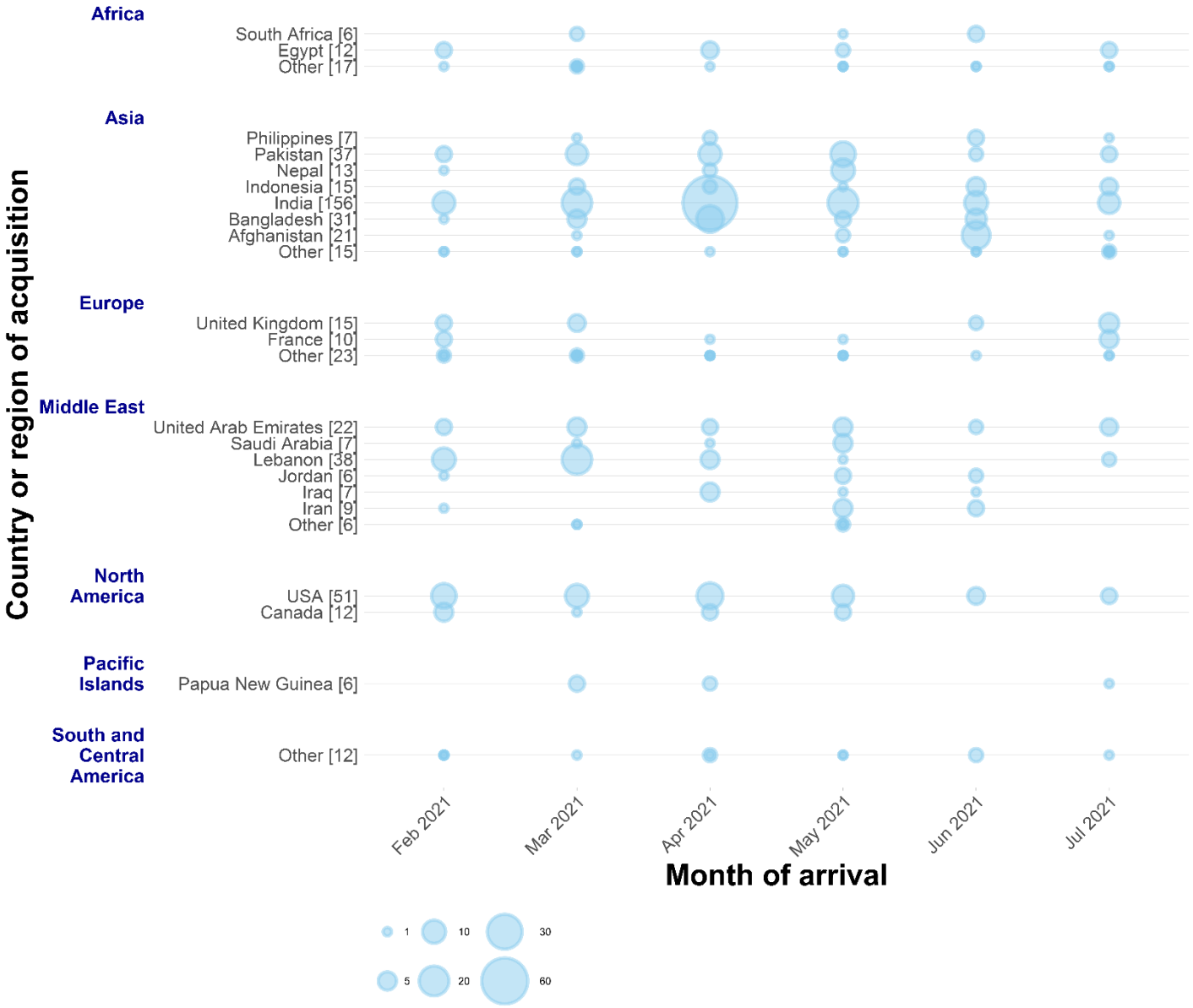
*Returned travellers entering Australia in the past 14 days are still in quarantine and may return a positive result prior to the end of their hotel quarantine period.

Interpretation: Since 3 January 2021, there has been on average 660 people screened on arrival through Sydney International Airport daily. In the last four weeks, 71 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 14. Overseas acquired COVID-19 cases by country of acquisition and arrival month, NSW, 1 February 2021 to 31 July 2021*



* Data for current month is incomplete

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

In the last four weeks, there have been 61 COVID-positive returned travellers in NSW. The table below lists countries of acquisition for these travellers.

Table 13. Top countries of acquisition for overseas acquired cases that have tested positive in the last four weeks, 4 July 2021 to 31 July 2021

Country of acquisition of COVID-19	Number (%) of cases in the last four weeks
India	7 (12%)
United Kingdom	5 (8%)
France	5 (8%)
Indonesia	5 (8%)
United Arab Emirates	5 (8%)
Fiji	4 (7%)
Lebanon	3 (5%)
Egypt	3 (5%)
USA	2 (3%)
Kenya	2 (3%)
China (excludes SARs and Taiwan)	2 (3%)
Papua New Guinea	2 (3%)
Other	16 (26%)
Total	**61 (100%)**

Interpretation: In the four weeks to 31 July 2021, travellers returning from India accounted for the largest number of overseas acquired cases (7, 12%).

Cases among returned travellers in quarantine

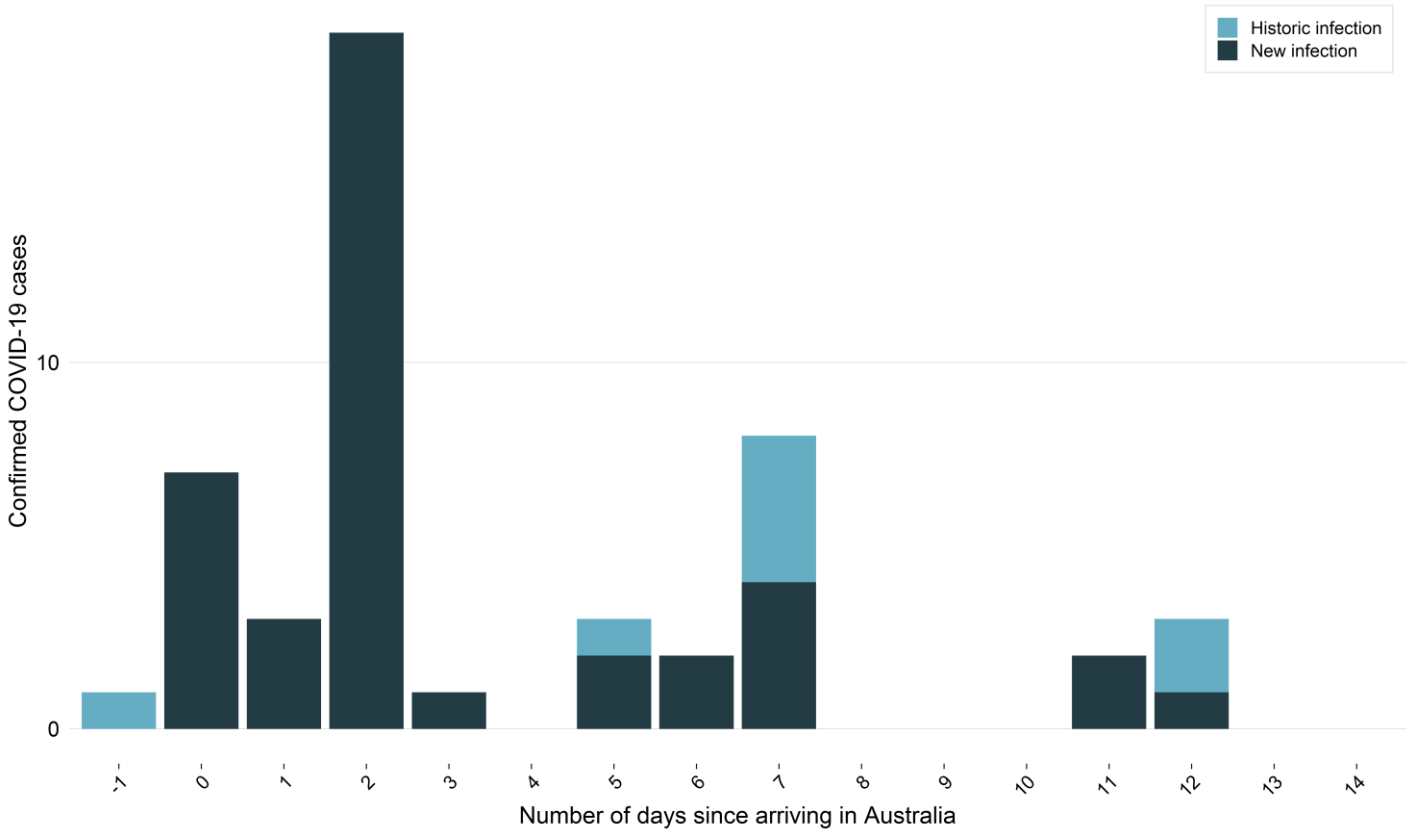
The program of screening all overseas travellers after arrival in NSW commenced on 15 May 2020. From 30 June 2020, the program was extended to include screening of travellers on entry to quarantine, day 2 after arrival, and exit of quarantine. On 11 January 2021, exit screening of travellers was moved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

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

The figure below shows the number of overseas acquired cases in returned travellers within the quarantine program, by the number of days since they arrived in Australia. Overseas acquired cases include people with likely exposure overseas, in flight or are 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 15. 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, 4 July to 31 July 2021



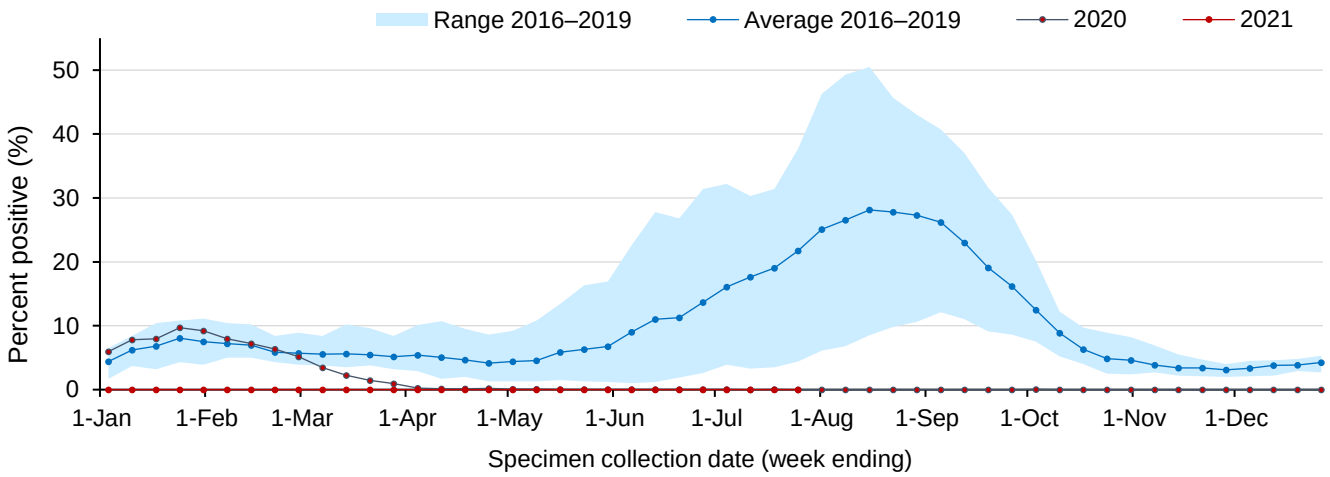
Interpretation: In the four weeks ending 31 July 2021, 48% of overseas acquired COVID-19 cases have tested positive within two days of arriving to Australia, with most people testing positive on day two screening.

Section 11: Other respiratory infections in NSW

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 16. Proportion of tests positive for influenza, NSW, 1 January 2016 to 25 July 2021

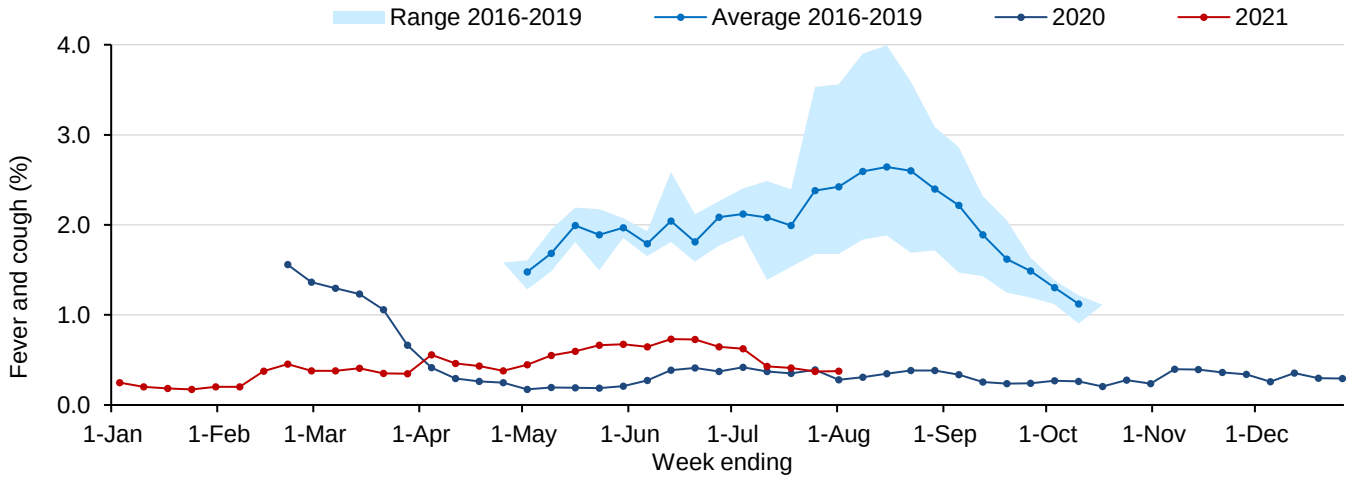


Interpretation: In the week ending 25 July, the percent of influenza tests that were positive continued to be very low (<0.01%), indicating limited influenza transmission in the community. Since early March 2020, this percentage has remained far lower than the usual range for the time of year. There have been 13 influenza cases reported in 2021 and none were reported in the week ending 25 July.

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

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

Figure 17. Proportion of FluTracker participants reporting influenza-like illness, NSW, 1 January 2016 to 01 August 2021



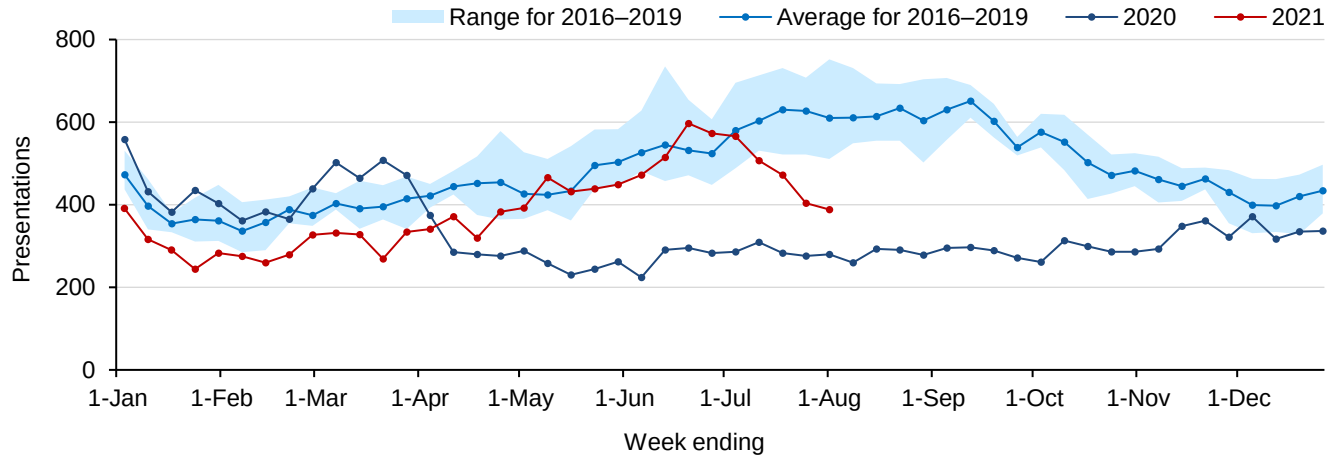
Interpretation: In NSW in the week ending 1 August 2021, of the 23,837 people surveyed, 90 people (0.38%) reported flu-like symptoms. In the last four weeks, 51% (189/374) of new cases of flu-like illness reported having a COVID-19 test. The proportion of people with flu-like symptoms being tested for COVID-19 has decreased since January, when 80% reported being tested, and has remained at around 50% since early April 2021.

How are emergency department presentations tracking?

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

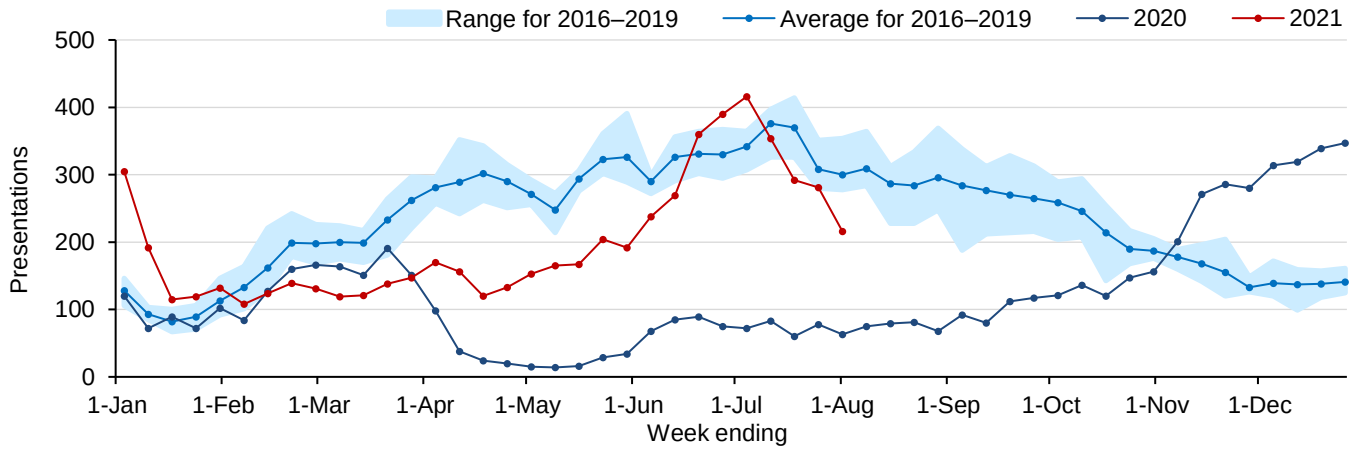
The figures below show weekly pneumonia and bronchiolitis presentations to Emergency Departments in NSW, using PHREDSS[2]. The red line shows the weekly counts for 2021, the dark blue line showing counts for 2020, the light blue line showing the average for 2016 to 2019 and the shaded area showing the range recorded for 2016 to 2019.

Figure 18. Emergency Department pneumonia presentations, NSW, 1 January 2016 to 1 August 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 1 August, pneumonia presentations decreased for the sixth week in a row and are significantly below the seasonal range for this time of year.

Figure 19. Emergency Department bronchiolitis presentations, NSW, 1 January 2016 to 1 August 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 1 August 2021, bronchiolitis presentations decreased and are below the seasonal range for this time of year.

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

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

		Week ending				Total since January 2021	
		31-Jul		24-Jul			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Central Coast	*LHD Total*[2]	32203	91.26	18027	51.09	335172	949.86
Far West	Balranald	36	15.4	127	54.32	1072	458.51
	Broken Hill	268	15.33	530	30.32	12081	691.17
	Central Darling	17	9.24	35	19.03	740	402.39
	Wentworth	120	17.01	560	79.4	4894	693.89
	LHD Total[2]	441	14.63	1252	41.53	18787	623.24
Hunter New England	Armidale Regional	846	27.49	775	25.18	20467	664.97
	Cessnock	1165	19.42	1128	18.8	29504	491.86
	Dungog	157	16.66	156	16.56	4926	522.76
	Glen Innes Severn	102	11.5	116	13.08	3466	390.71
	Gunnedah	231	18.22	214	16.88	6307	497.36
	Gwydir	60	11.21	61	11.4	1505	281.15
	Inverell	217	12.85	254	15.04	8281	490.29
	Lake Macquarie	6823	33.14	6836	33.2	184392	895.54
	Liverpool Plains	137	17.34	128	16.2	3969	502.21
	Maitland	2920	34.29	3313	38.9	82643	970.38
	Mid-Coast	1723	18.36	1654	17.63	46991	500.78
	Moree Plains	182	13.72	145	10.93	7740	583.67
	Muswellbrook	328	20.03	394	24.06	8938	545.77
	Narrabri	172	13.09	125	9.52	4849	369.17
	Newcastle	4843	29.25	5265	31.8	171930	1038.41
	Port Stephens	1516	20.63	1420	19.32	53570	729.03
	Singleton	623	26.55	649	27.66	17791	758.32
	Tamworth Regional	1334	21.33	1428	22.83	44374	709.52
	Tenterfield	76	11.53	61	9.25	2111	320.14
	Upper Hunter Shire	230	16.22	222	15.66	7870	555.01
	Uralla	123	20.46	93	15.47	2524	419.83
	Walcha	44	14.04	51	16.27	1768	564.14
	LHD Total[2]	23835	25.03	24475	25.7	715454	751.23
Illawarra Shoalhaven	Kiama	1012	43.27	940	40.19	22575	965.32
	Shellharbour	4368	59.65	4807	65.64	70670	965
	Shoalhaven	2816	26.65	2896	27.41	73763	698.2
	Wollongong	12523	57.41	13144	60.26	222163	1018.56
	LHD Total[2]	20719	49.38	21787	51.92	389171	927.45
Mid North Coast	Bellingen	243	18.7	455	35.01	7994	615.11
	Coffs Harbour	1553	20.1	4177	54.05	43607	564.29
	Kempsey	600	20.17	736	24.74	17773	597.51
	Nambucca	289	14.59	748	37.77	9925	501.14
	Port Macquarie-Hastings	1769	20.93	1821	21.54	53197	629.36
	LHD Total[2]	4454	19.74	7937	35.17	132496	587.14
Murrumbidgee	Albury	1483	27.28	1565	28.79	37902	697.33
	Berrigan	125	14.29	109	12.46	3213	367.2

		Week ending				Total since January 2021	
		31-Jul		24-Jul			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Bland	74	12.39	106	17.75	2740	458.81
	Carrathool	39	13.93	31	11.08	691	246.87
	Coolamon	86	19.81	86	19.81	2492	574.06
	Cootamundra-Gundagai Regional	274	24.39	546	48.6	6452	574.28
	Edward River	134	14.75	152	16.73	4422	486.79
	Federation	266	21.39	282	22.67	6131	492.96
	Greater Hume Shire	290	26.94	344	31.96	6921	642.98
	Griffith	563	20.83	478	17.68	17755	656.89
	Hay	33	11.19	35	11.87	1024	347.24
	Hilltops	346	18.5	430	22.99	10501	561.43
	Junee	131	19.6	126	18.85	2894	433.04
	Lachlan[1]	83	13.66	132	21.73	1823	300.08
	Leeton	175	15.29	195	17.04	5213	455.48
	Lockhart	95	28.92	90	27.4	1629	495.89
	Murray River	43	3.55	49	4.04	1635	134.92
	LHD Total[2]	64	16.34	63	16.08	1566	399.8
	Narrandera	65	11.02	63	10.68	2064	349.89
	Snowy Valleys	213	14.71	239	16.51	7677	530.22
	Temora	103	16.33	99	15.7	2331	369.59
	Wagga Wagga	1918	29.39	1995	30.57	52988	811.98
	LHD Total[2]	6541	21.94	7120	23.88	178831	599.88
Nepean Blue Mountains	Blue Mountains	4000	50.56	4109	51.94	94115	1189.55
	Hawkesbury	5088	75.61	4850	72.07	70867	1053.06
	Lithgow	431	19.95	634	29.35	12046	557.56
	Penrith	19903	93.45	14886	69.89	238724	1120.89
	LHD Total[2]	28869	73.84	23954	61.27	411506	1052.48
Northern NSW	Ballina	1047	23.46	865	19.38	39293	880.46
	Byron	949	27.05	962	27.42	31514	898.32
	Clarence Valley	836	16.18	992	19.2	22764	440.63
	Kyogle	105	11.94	98	11.14	3596	408.82
	Lismore	984	22.52	975	22.32	31253	715.3
	Richmond Valley	701	29.87	629	26.81	14504	618.11
	Tenterfield	76	11.53	61	9.25	2111	320.14
	Tweed	1862	19.2	2288	23.59	52361	539.8
	LHD Total[2]	6504	20.96	6822	21.98	195761	630.75
Northern Sydney	Hornsby	6472	42.56	5847	38.45	153567	1009.92
	Hunters Hill	1479	98.73	1350	90.12	36020	2404.54
	Ku-ring-gai	7959	62.59	7128	56.06	201077	1581.38
	Lane Cove	3850	95.88	3633	90.47	98275	2447.39
	Mosman	1352	43.64	1311	42.32	41247	1331.36
	North Sydney	2811	37.47	2876	38.34	77989	1039.56
	Northern Beaches	30150	110.24	32818	119.99	509068	1861.32
	Parramatta[1]	22399	87.09	13151	51.13	254060	987.8
	Ryde	10164	77.43	7037	53.61	160886	1225.6

		Week ending				Total since January 2021	
		31-Jul		24-Jul			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Willoughby	2908	35.82	2741	33.76	79623	980.71
	LHD Total[2]	69799	73.02	66550	69.62	1405960	1470.8
South Eastern Sydney	Bayside	13633	76.42	11322	63.47	184425	1033.8
	Georges River	16579	103.96	12927	81.06	162316	1017.84
	Randwick	10592	68.05	9664	62.09	255124	1639.1
	Sutherland Shire	15613	67.7	14935	64.76	285536	1238.17
	Sydney[1]	18516	75.16	17863	72.51	375122	1522.76
	Waverley	5119	68.9	4853	65.32	150372	2023.99
	Woollahra	3792	63.85	3737	62.93	120572	2030.28
	LHD Total[2]	71272	74.31	63495	66.2	1293120	1348.26
South Western Sydney	Camden	14685	144.77	9664	95.27	155727	1535.21
	Campbelltown	22493	131.58	14232	83.26	205192	1200.35
	Canterbury-Bankstown[1]	89382	236.51	67686	179.1	468232	1238.98
	Fairfield	57221	270.3	61171	288.96	300748	1420.67
	Liverpool	41949	184.32	43955	193.14	292746	1286.32
	Wingecarribee	2745	53.68	2834	55.42	55788	1091.02
	Wollondilly	4617	86.87	3394	63.86	43054	810.06
	LHD Total[2]	183903	177.08	167769	161.54	1277056	1229.67
Southern NSW	Bega Valley	464	13.46	529	15.34	18800	545.31
	Eurobodalla	625	16.25	686	17.83	26894	699.04
	Goulburn Mulwaree	1034	33.21	1226	39.38	22385	719.04
	Queanbeyan-Palerang Regional	985	16.12	929	15.2	28355	464.08
	Snowy Monaro Regional	397	19.09	416	20	12575	604.71
	Upper Lachlan Shire	194	24.07	198	24.57	4805	596.23
	Yass Valley	223	13.05	223	13.05	6890	403.23
	LHD Total[2]	3927	18.09	4211	19.4	120771	556.37
Sydney	Burwood	2909	71.63	1989	48.98	34294	844.43
	Canada Bay	5823	60.61	5113	53.22	121223	1261.77
	Canterbury-Bankstown[1]	89382	236.51	67686	179.1	468232	1238.98
	Inner West	14520	72.31	11673	58.13	276990	1379.36
	Strathfield	6659	141.9	4398	93.72	63183	1346.44
	LHD Total[2]	18516	75.16	17863	72.51	375122	1522.76
	LHD Total[2]	90177	129.42	69139	99.23	972740	1396.07
Western NSW	Bathurst Regional	1388	31.82	3255	74.63	36358	833.55
	Blayney	246	33.34	1377	186.61	6744	913.94
	Bogan	25	9.69	38	14.73	1346	521.71
	Bourke	36	13.9	64	24.71	1143	441.31
	Brewarrina	11	6.83	22	13.66	510	316.57
	Cabonne	431	31.61	1279	93.81	7329	537.55
	Cobar	34	7.3	87	18.68	1909	409.83
	Coonamble	68	17.18	68	17.18	1641	414.6
	Cowra	262	20.56	495	38.84	6765	530.88
	Dubbo Regional	1205	22.43	1898	35.33	36293	675.61
	Forbes	168	16.96	321	32.4	4728	477.29

		Week ending				Total since January 2021	
		31-Jul		24-Jul			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Gilgandra	51	12.03	82	19.34	1720	405.76
	Lachlan[1]	83	13.66	132	21.73	1823	300.08
	Mid-Western Regional	556	22.02	705	27.92	16081	636.85
	Narromine	123	18.87	132	20.25	3280	503.3
	Oberon	138	25.5	183	33.82	3010	556.27
	Orange	2606	61.39	8779	206.8	47644	1122.33
	Parkes	287	19.34	1009	68.01	8127	547.75
	Walgett	77	12.93	94	15.79	2532	425.33
	Warren	58	21.51	139	51.54	2336	866.15
	Warrumbungle Shire	151	16.28	142	15.31	4794	516.71
	Weddin	85	23.53	126	34.87	1615	447
	LHD Total[2]	8073	28.33	20400	71.58	197246	692.06
Western Sydney	Blacktown	55226	147.49	34371	91.79	434569	1160.55
	Cumberland	45832	189.76	27178	112.53	299569	1240.34
	Parramatta[1]	22399	87.09	13151	51.13	254060	987.8
	The Hills Shire	18446	103.65	12792	71.88	264059	1483.74
	LHD Total[2]	141309	134.14	87231	82.81	1216276	1154.58
NSW Total[3]		709016	87.64	608938	75.27	5175843	639.8

Source - Notifiable condition information management System, accessed as at 8pm04 Aug 2021

[1]Local Government Area (LGA) spans multiple Local Health Districts.

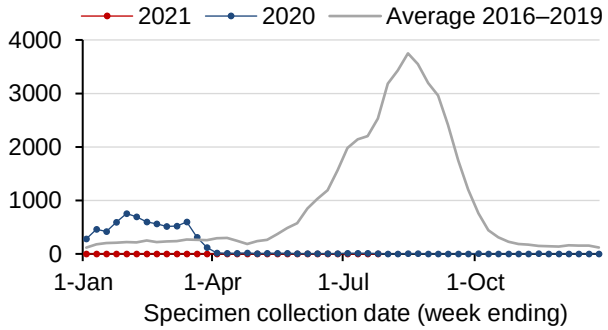
[2]Local Health District total counts and rates includes tests for LHD residents only. Murrumbidgee includes Albury LGA residents.

[3]NSW Total counts and rates since January 2021 include tests where residential information is incomplete. See https://www.health.nsw.gov.au/Infectious/covid-19/Pages/counting-tests.aspx for detail on how tests are counted.

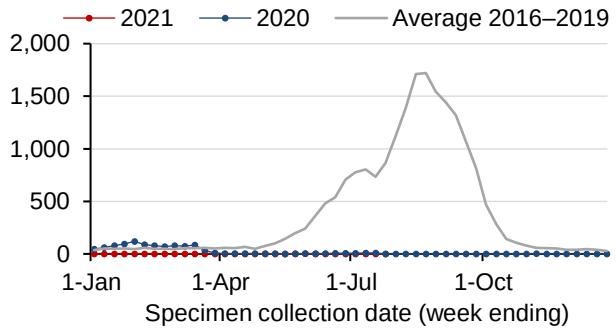
Appendix C: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 01 August 2021

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.

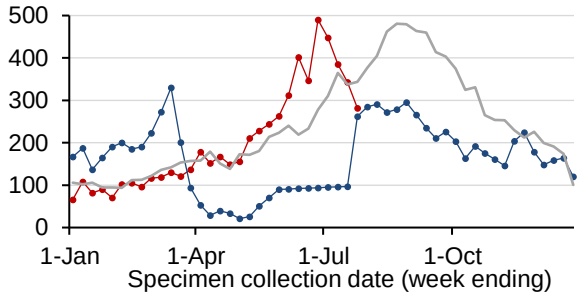
Influenza A



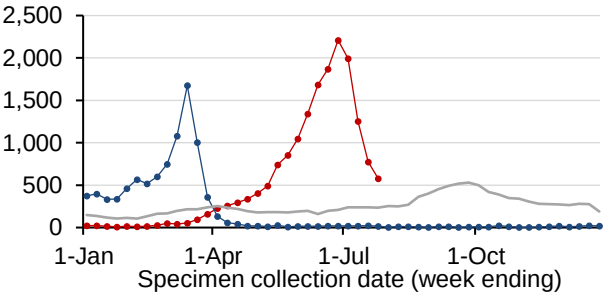
Influenza B



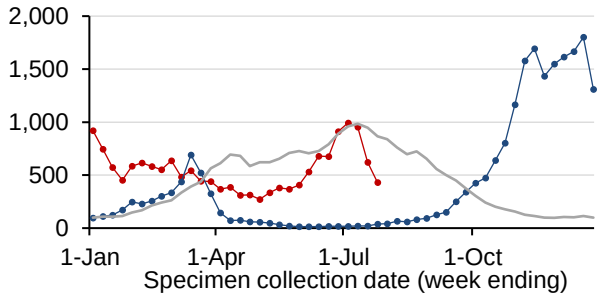
Adenovirus



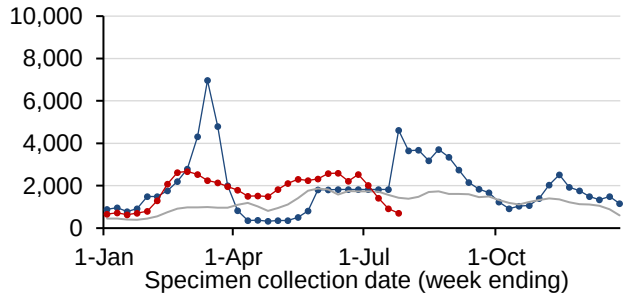
Parainfluenza



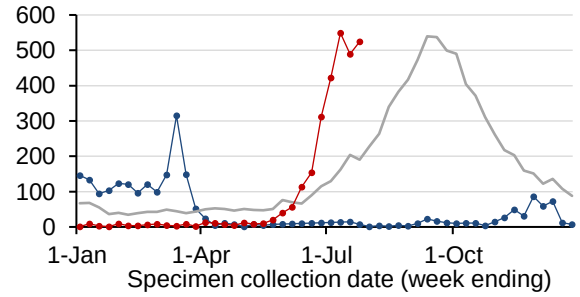
Respiratory syncytial virus (RSV)



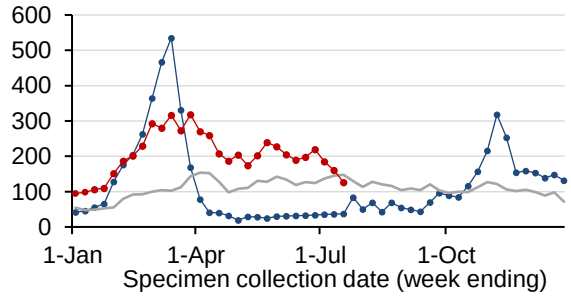
Rhinovirus



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 31 July 2021

The NSW Sewage Surveillance Program tests untreated sewage for fragments of the COVID-19 (SARS-CoV-2) virus at sewage treatment plant locations across NSW. Charlotte Pass has recommenced sampling. The table below shows results for the last 10 weeks of samples collected across all sites in NSW.

Sydney Sites		29-May	5-June	12-June	19-June	26-June	3-July	10-July	17-July	24-July	31-July
Pop.	Location	21	22	23	24	25	26	27	28	29	30
60, 514	Blue Mountains (Winmalee)										
4,681	North Richmond										
13,052	Richmond										
110,114	Penrith										
12,000	Lithgow										
19,000	South Windsor										
8,000	McGraths Hill										
69,245	Warriewood										
1,241	Brooklyn										
31,924	Hornsby Heights										
57,933	West Hornsby										
318,810	Bondi										
233,176	Cronulla										
1,857,740	Malabar 1										
	Malabar 2										
181,005	Liverpool										
98,743	West Camden										
6,882	Wallacia										
14,600	Picton										
161,200	Glenfield										
1,341,986	North Head										
26,997	Castle Hill Cattai										
	Castle Hill Glenhaven										
163,374	Quakers Hill										
119,309	Rouse Hill										
37,61	Riverstone										
163,147	St Marys										
73,686	Shellharbour										
55,000	Wollongong										
68,000	Port Kembla										
93,000	Bellambi										

Sydney Network Sites		29-May	5-June	12-June	19-June	26-June	3-July	10-July	17-July	24-July	31-July
Network	Location	21	22	23	24	25	26	27	28	29	30
Bondi	Paddington Sewage Network										
Bondi	Rozelle Sewage Network										
Cronulla	Caringbah Sewage Network										
Cronulla	Miranda Sewage Network										
Malabar	Earlwood Sewage Network										
Malabar	Marrickville Sewage Network 1										
Malabar	Marrickville Sewage Network 2										
Malabar	Bardwell Creek Sewage Network										
Malabar	Arncliffe Sewage Network 1										
Malabar	Arncliffe Sewage Network 2										
Malabar	Blakehurst Sewage Network										
Malabar	Padstow Sewage Network 1										
Malabar	Padstow Sewage Network 2										
Malabar	Fairfield SPS 1										
Malabar	Fairfield SPS 2										
Malabar	Homebush SPS										
Malabar	Olympic Park										
Malabar	Croydon Sewage Network										
Malabar	Dulwich Hill Sewage Network										
Malabar	Canterbury Sewage Network										
Malabar	Botany Sewage Network										
Malabar	Maroubra Sewage Network										
North Head	Camellia SPS - North										
North Head	Camellia SPS - South										
North Head	Auburn Sewage Network										
North Head	Northmead SPS										
North Head	Northmead Sewage Network										
North Head	Tunks Park Sewage Network										
North Head	Vineyard Creek Sewage Network										
North Head	Boronia Park Sewage Network										
North Head	West Lindfield Sewage Network										
North Head	Lane Cove West Sewage Network										
North Head	Allambie Heights Sewage Network										
North Head	Buffalo Creek Reserve Sewage Network										
Glenfield	Minto Sewage Network										
Liverpool	Ireland Park Sewage Network										
Quakers Hill	Eastern Creek Sewage Network										
St Marys	Ropes Creek Sewage Network										

Regional Sites		29-May	5-June	12-June	19-June	26-June	3-July	10-July	17-July	24-July	31-July
Pop.	Location	21	22	23	24	25	26	27	28	29	30
14,700	Bowral										
14,000	Mittagong										
9,000	Moss Vale										
1,000	Berrima										
2,000	Bundanoon										
900	Robertson										
16,68	Bombo										
7,200	Gerringong/Gerroa										
32,000	Ulladulla										
18,000	Bomaderry										
37,500	Nowra										
14,000	Vincentia										
16,000	St Georges Basin										
11,000	Cullburra Beach										
139,500	Gosford-Kincumber										
59,60	Charmhaven										
29,300	Wyong-Toukley										
15,800	Gwandalan-Mannering										
40,500	Wyong South										
38,900	Bateau Bay										
41,300	Woy Woy										
5,000	Perisher										
8,400	Thredbo										
3,000	Jindabyne										
8,000	Cooma										
500	Gunning										
500	Charlottes Pass										
51,750	Albury composite	C	C	C	C	C	C	C	C	C	C
	Albury Kremer St										
	Albury Waterview										
22,419	Goulburn										
21,000	Batemans Bay										
18,000	Moruya										
17,000	Narooma										
8,000	Eden										
15,500	Merimbula										
5,000	Bermagui										
7,800	Deniliquin										
48,000	Queanbeyan										
50,000	Wagga Wagga composite	C	C	C	C	C	C	C	C	C	C
	Wagga Wagga- inlet 1										
	Wagga Wagga- inlet 2										
	Wagga Wagga -Kooringal STP										

2,300	Gundagai										
2,800	Hay										
5,000	Narrandera										

Regional Sites (con't)		29-May	5-June	12-June	19-June	26-June	3-July	10-July	17-July	24-July	31-July
Pop.	Location	21	22	23	24	25	26	27	28	29	30
2,050	Griffith										
2,050	Bourke										
2,500	Nyngan										
40,000	Orange										
12,000	Mudgee										
36,603	Bathurst										
3,700	Blayney										
1,700	Molong										
8,000	Forbes										
2,500	Coonabarabran										
1,100	Balranald										
19,000	Broken Hill										
500	Dareton										
1,100	Buronga										
1,200	Wentworth										
11,600	Parkes										
37,000	Dubbo										
24,000	Armidale										
45,000	Tamworth										
11,000	Muswellbrook										
7,400	Narrabri										
3,300	Tenterfield										
750	Urbenville										
10,000	Moree										
26,394	Taree										
12,000	Forster										
7,582	Hallidays Point										
5,180	Harrington										
10,715	Hawks Nest										
225,834	Hunter - Burwood Beach										
60,000	Hunter - Shortland										
115,000	Hunter - Belmont										
60,000	Hunter - Morpeth										
58,300	Hunter - Boulder Bay										
35,000	Hunter - Raymond Terrace										
32,000	Hunter - Dora Creek										
42,000	Hunter - Toronto										
70,000	Hunter - Edgeworth										
2,500	Hunter - Karuah										

3,000	Hunter -Dungog										
21,500	Hunter - Kurri Kurri										
32,000	Hunter - Cessnock										
40,000	Hunter - Farley										
32500	Lismore composite	c	c	c	c		c	c	c	c	c
17,000	East Lismore										
15,500	South Lismore										

Regional Sites (con't)		29-May	5-June	12-June	19-June	26-June	3-July	10-July	17-July	24-July	31-July
Pop.	Location	21	22	23	24	25	26	27	28	29	30
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.