COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 29, ENDING 24 July 2021

Published 6 August 2021

Overview

Table 1. Number and proportion of COVID-19 cases in NSW by likely source of infection to week ending 24 July 2021

	2020		2021			
	Jan – Jun	July – Dec	Jan – Jun	last 4 weeks	last 7 days	Year to date
				27Jun - 24 Jul	18 Jul - 24 Jul	
Locally acquired	1,236 (39%)	808 (52%)	255 (27%)	1,996 (97%)	859 (99%)	2,163 (75%)
Interstate acquired	67 (2%)	23 (1%)	1 (<1%)	0	0	1 (<1%)
Overseas acquired	1,892 (59%)	714 (46%)	672 (72%)	71 (3%)	8 (1%)	730 (25%)
Total	**3,195 (100%)**	**1,545 (10 %)**	**928 (100%)**	**2,067 (100%)**	**867 (100%)**	**2,894 (100%)**
Deaths	51	5	0	6	2	6

Summary for the week ending 24 July 2021

- There were 859 locally acquired cases reported in the week ending 24 Jul 2021. Of these:
  - 249 (29%) cases were residents of Fairfield LGA
  - 168 (20%) cases were residents of Canterbury-Bankstown LGA
  - 125 (15%) cases were residents of Cumberland LGA
  - 317 (37%) cases were residents across 25 other LGAs
- There were 8 cases reported in overseas returned travellers in the last week (down 68%).
- There were two deaths as a result of COVID-19 reported this week including a male in his 80s and a woman in her 50s. Both people were household contacts of previously reported cases and unvaccinated.
- In the four weeks ending 24 July 2021, 100% (1247/1247) of the locally acquired cases sequenced, were the delta variant of concern. For overseas-acquired cases, 54% (38/71) of sequenced cases were COVID-19 variants of concern.
- Since March 2021, 16 (1%) of 2121 locally acquired cases have reported being fully vaccinated. Twenty-three (4%) of overseas acquired COVID-19 cases self-reported being fully vaccinated prior to arrival in Australia.
- Testing rates increased across most Local Health Districts (LHDs) compared to the previous week (up 18%) with high testing rates in the South Western Sydney and Western NSW LHDs in response to targeted public health messaging.
- Since late June, there have been declines in lab diagnoses of several common respiratory viruses including parainfluenza, adenovirus, rhinovirus and enterovirus.
- In the week ending 24 July, 195 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 63 detections. These were taken from the sewage treatment sites (including pumping stations) in Byron Bay, Bowral, Moss Vale, Winmalee, Penrith, McGraths Hill, Warriewood, Hornsby Heights, Bondi, Cronulla, Malabar, Liverpool, Glenfield, North Head, Quakers Hill, Rouse Hill, Riverstone, St Marys, Wollongong, Rozelle, Caringbah, Miranda, Earlwood, Marrickville 1 & 2, Blakehurst, Arncliffe 1 & 2, Padstow 1 & 2, Fairfield pumping station 1 & 2, Dulwich Hill, Maroubra, Homebush, Tunks Park, Camellia North and South, Northmead, Vineyard Creek , Boronia Park, West Lindfield, Allambie Heights, Minto, Ropes Creek, Eastern Creek, Port Kembla, Bellambi.

  The positive detection was Moss Vale is not associated with known cases living in the area. This detection may be due to undetected cases, the movement of cases in neighbouring areas whilst unknowingly infectious or the presence of people in the

community who have recently been infected with the virus that causes COVID-19 but may no longer be infectious. People can continue to shed fragments of the virus for several weeks. All other catchments were associated with known cases in the area.

Indicators of effective prevention for COVID-19 in NSW for the week ending 24 July 2021

Cases' community risk

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

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

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

Community exposure risk	24-Jul	23-Jul	22-Jul	21-Jul	20-Jul	19-Jul	18-Jul	Total Week Ending 24 Jul
Low risk	71	83	52	62	37	31	64	400 (47%)
Medium risk	26	28	28	26	21	11	11	151 (18%)
High risk	45	40	62	54	48	23	36	308 (36%)
Total	**142**	**151**	**142**	**142**	**106**	**65**	**111**	**859 (100%)**

Interpretation: In the week ending 24 July, 47% of total cases reported this week had low risk of community exposures, 18% had medium risk and 36% had high risk of community exposures.

Measures of Public Health Action

	Week ending 24 July	Week ending 17 July
Proportion locally acquired cases notified to NSW Health by the laboratory within 24 hours of specimen collection	83%	93%
Locally acquired cases interviewed by public health staff within 1 day of notification to NSW Health*	96%	97%
Close contacts (identified by the case) contacted by public health within 48 hours of case notification	100%	100%

Interpretation: In the week ending 24 July, 83% of cases were notified to NSW Health within a day of test and 96% of cases were interviewed within one day of notification and all close contacts were contacted by public health within 48 hours of case notification. NSW health has been working closely with laboratory providers to minimise the turn-around times for test results.

NSW Health arranges for a complete interview to be done on patients within 24 hours of notification. Where there are a large number of 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.

Table of Contents

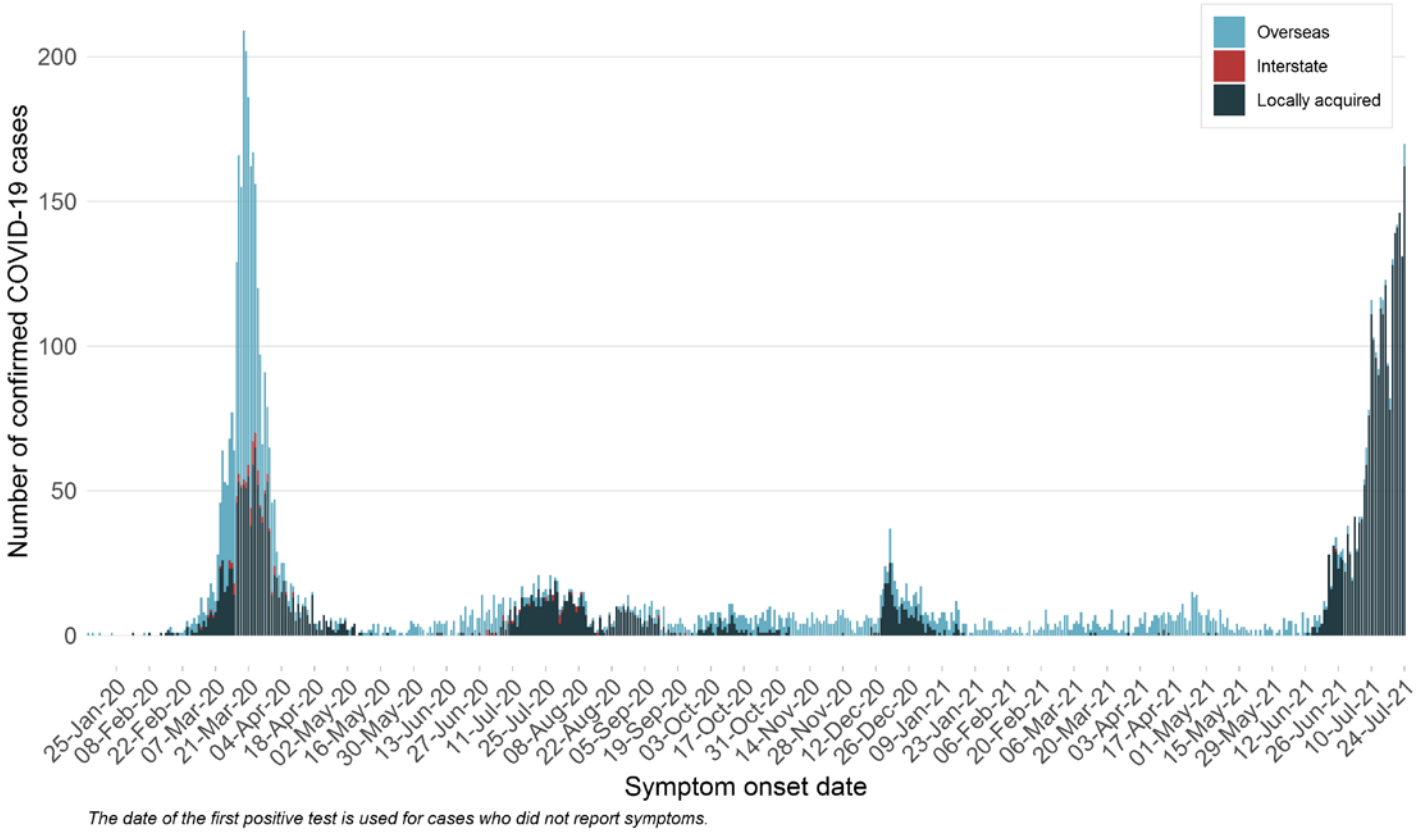
COVID-19 Vaccination program

- 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 24 July 2021



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

Interpretation: Between 13 January 2020 and 24 Jul 2021, there were 7,634 confirmed COVID-19 cases. Of those, 4,207 (55%) were overseas acquired, 91 (1%) were interstate acquired, and 3,336 (44%) 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 24 July 2021

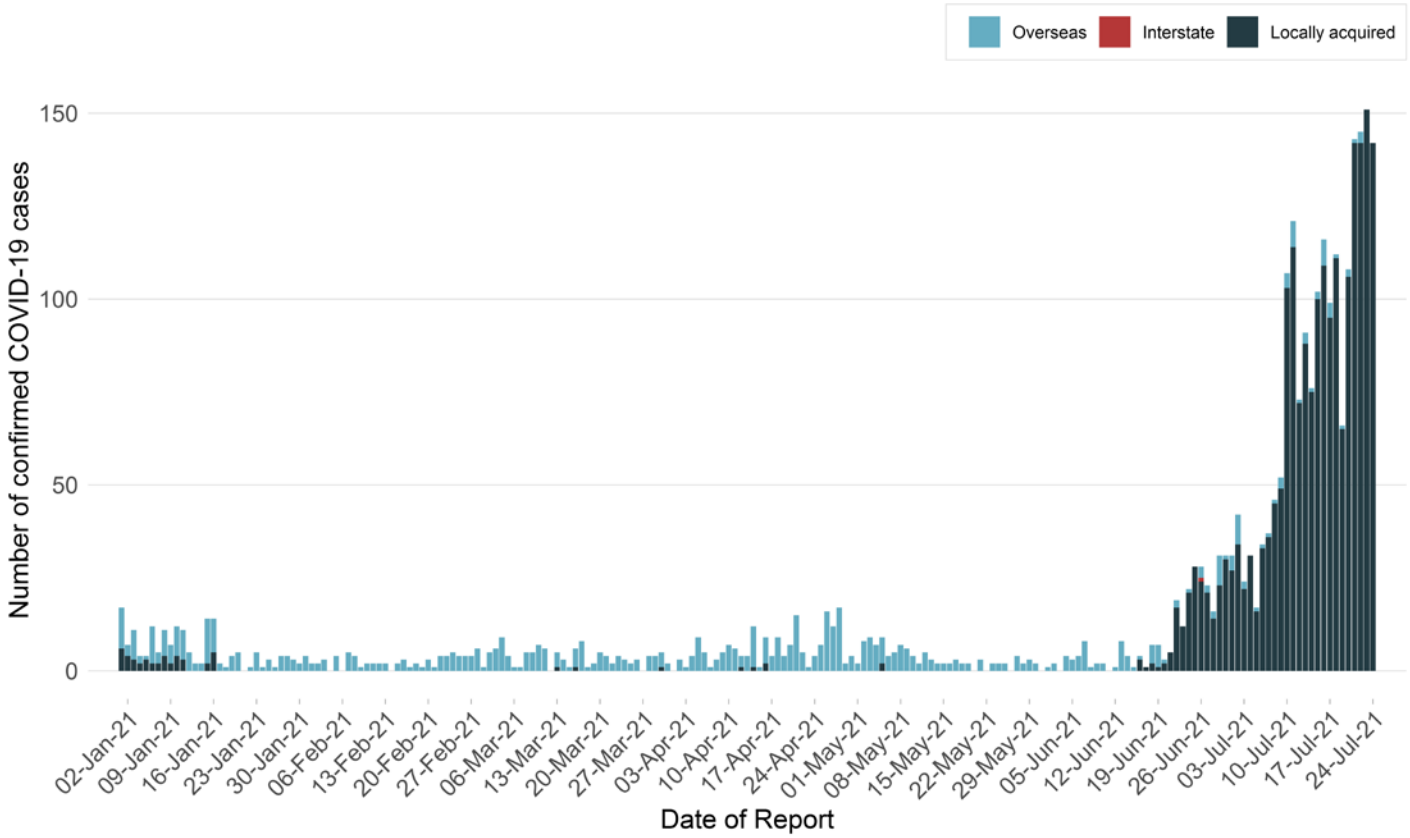


Table 2. COVID-19 cases and tests reported, NSW, from 1 January 2021 to 24 July 2021

	Week ending 24 Jul	Week ending 17 Jul	% change	Total 2021
Number of cases	867	678	28%	2,894
Locally acquired	859	653	32%	2,168
Known epidemiological links to other cases or clusters	607 (71%)	519 (79%)	17%	1,719
No epidemiological links to other cases or clusters identified	252 (29%)	134 (21%)	88%	444
Overseas acquired	8	25	-68%	730
Interstate acquired	0	0	-	1
Number of tests	592,227	499,965	18%	4,447,965

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 1,996 (97%). All locally acquired cases sequenced had the same Delta variant of concern. Of the 859 locally acquired cases associated with the Greater Sydney outbreak reported in the week ending 24 July 2021,

- 249 (29%) cases were residents of Fairfield LGA
- 168 (20%) cases were residents of Canterbury-Bankstown LGA
- 125 (15%) cases were residents of Cumberland LGA
- 317 (37%) cases were residents across 25 other LGAs

In the week ending 24 July, the majority of cases with no epidemiological links were residents of Fairfield LGA (66/252, 26%) followed by Cumberland-Bankstown LGA (64/252, 25%).

There were 8 cases that acquired their infection overseas.

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

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

Table 3. Locally acquired COVID-19 cases by LHD of residence and week reported, NSW, 27 June to 24 July 2021

	Week ending					
Local Health District	**24 Jul**	**17 Jul**	**10 Jul**	**03 Jul**	**Total**	**Days since last case reported**
Central Coast	4	0	1	2	7	1
Illawarra Shoalhaven	6	0	0	1	7	2
Nepean Blue Mountains	4	11	7	0	22	0
Northern Sydney	15	5	4	6	30	0
South Eastern Sydney	82	80	76	80	318	0
South Western Sydney	411	468	162	35	1076	0
Sydney	113	39	33	25	210	0
Western Sydney	223	50	30	22	325	0
Far West	0	0	0	0	0	478
Hunter New England	0	0	0	0	0	99
Mid North Coast	0	0	0	0	0	459
Murrumbidgee	0	0	0	0	0	320
Northern NSW	0	0	0	0	0	116
Southern NSW	0	0	0	0	0	278
Western NSW	1	0	0	0	1	4
NSW*	859	653	313	171	1996	0

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

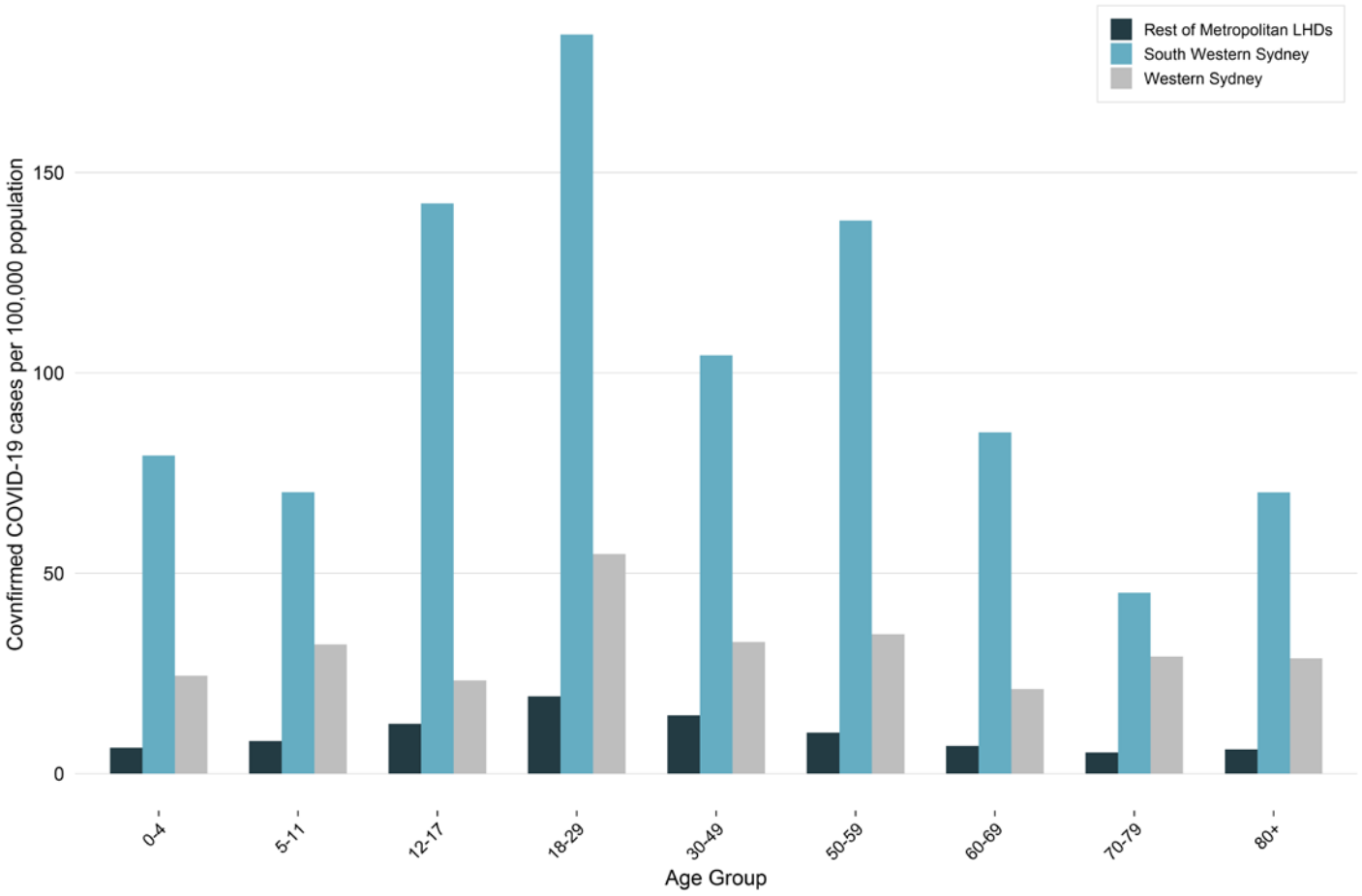
Interpretation: There were 859 locally acquired cases reported in the week ending 24 July. Most cases were residents of South Western Sydney LHD (411, 48%) followed by Western Sydney LHD (223, 26%), and Sydney (113, 13%).

Section 3: Epidemiology of local cases with COVID-19 from 16 June 2021 to 24 July 2021

Age breakdown of locally acquired cases

Since 16 June 2021, 2,112 locally acquired cases have been diagnosed with COVID-19 in NSW. The rate of COVID-19 diagnosed in each age group allows the risk of infection by age to be compared between areas. The largest number of cases were reported in South Western Sydney (52%, 1,102/2,112). Overall rates in the South Western Sydney are 114.3 per 100,000 people compared with 34.4 per 100,000 people in Western Sydney LHD and 11.7 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 24 July 2021



Interpretation: Since July 16, the highest rate of people diagnosed with COVID-19 was in people aged 18-29. The rate for this age group was almost ten times higher in South Western Sydney and more than 3 times higher in Western Sydney when compared with the rest of metropolitan LHDs (184.4, 54.8 and 19.3 per 100,000 people respectively).

Source of infection for locally acquired cases in NSW

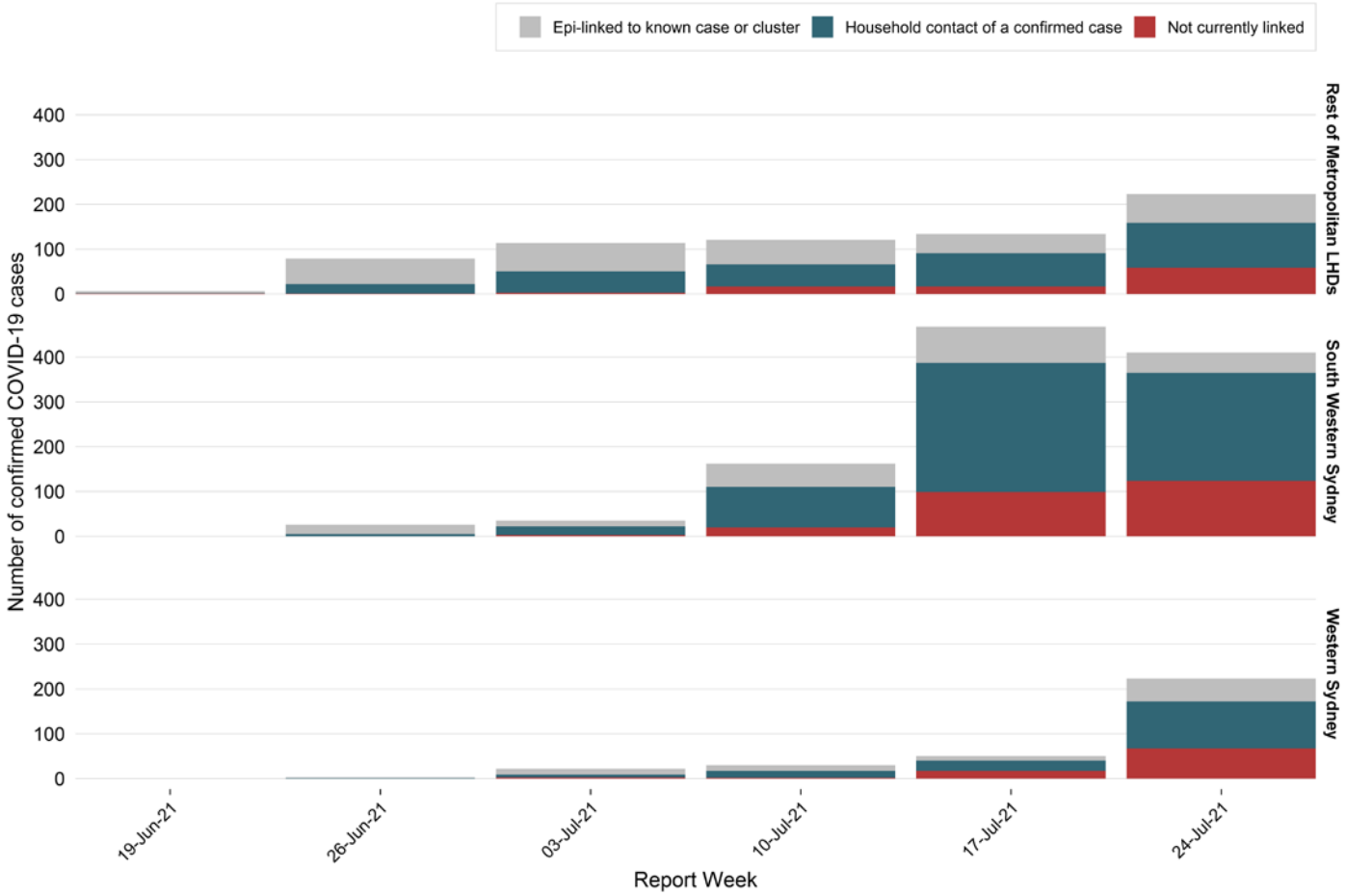
In the week ending 24 July, the majority of cases diagnosed with COVID-19 acquired their infection in a household setting 446/859 (52%) compared with 58% the previous week.

Of the 411 case reported this week in South Western Sydney LHD, 241(59%) were household contacts, 45 (11%) were epidemiologically linked but not household contacts and 125 (30%) were not currently linked to a case or cluster.

There were 223 cases reported this week in Western Sydney LHD. Of these 105 (47%) are household contacts, 51 (23%) are epidemiologically linked but not household contacts and 67 (30%) have not currently been linked to a case or cluster.

Of the remaining 225 cases reported this week in the rest of Metropolitan LHDs, 100 (44%) are household contacts, 65 (29%) are epidemiologically linked but not household contacts and 60 (27%) have 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 24 July 2021



Interpretation: In the week ending 24 July, case numbers have increased significantly in the Western Sydney area (223 cases compared with 50 the previous week) and remain elevated in South Western Sydney. In the last week, South Western Sydney has the highest proportion of household contacts being infected with COVID-19 (59%) compared with Western Sydney (48%) and the rest of metropolitan LHDs (44%).

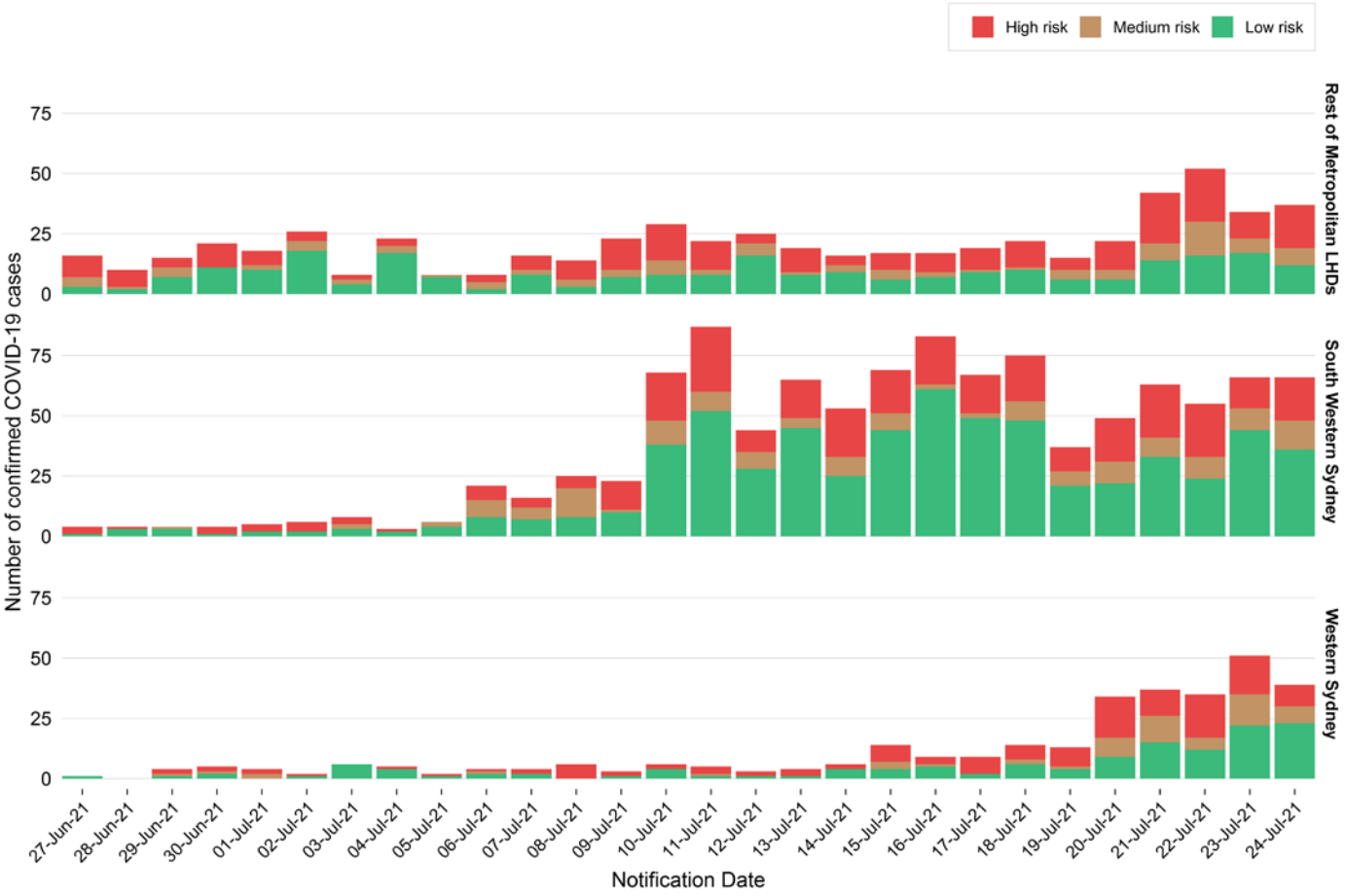
Measurement of risk of community exposure by LHD

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. A case's risk status is determined using the following guidelines:

- **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

In the week ending 24 July, 228 (55%) cases were classified as low risk, 61 (15%) as medium risk and 122 (30%) as high risk in South Western Sydney. This compares to 91 (41%) classified as low risk, 47 (21%) as medium risk and 85 (38%) as high risk in Western Sydney and 81 (36%) classified as low risk, 43 (19%) as medium risk and 100 (44%) 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, 27 June to 24 July 2021.



Interpretation: While 47% of cases reported in South Western Sydney, Western Sydney and the rest of metropolitan LHDs were considered low risk in the community (385/827), 53% were infectious in the community for at least part of their infectious period.

Section 4: COVID-19 in specific populations

Aboriginal people

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

There were six locally acquired cases of COVID-19 reported in Aboriginal people in the week ending 24 July 2021. Of the six cases, one is partially vaccinated and five are unvaccinated.

Since the 16th June, there have been 18 Aboriginal people diagnosed with COVID-19 in the current Greater Sydney outbreak.

Since the beginning of the pandemic in January 2020, there have been 67 Aboriginal people diagnosed with COVID-19, representing 2% 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.

In the week ending 24 July there were 28 healthcare workers diagnosed with COVID-19. Of these, 6 (21%) were potentially infected in a healthcare setting, 11 (39%) were social or household contacts of previously reported cases and 11 (39%) are currently not linked. Five (18%) cases were fully vaccinated and seven were partially vaccinated.

In total there have been 113 cases of COVID-19 in health care workers since 1 August 2020. Of these, 42 HCWs were potentially infected in healthcare settings. A further 46 cases were social or household contacts of a known case, and for 25 cases the source of infection is either unknown or under investigation. Prior to August 2020, there were 26 cases identified in HCWs who had worked in a health facility in the 14 days prior to symptom onset or date of testing (see COVID-19 in healthcare workers in NSW).

Table 4. Number of healthcare worker infections by source of infection and proportion fully vaccinated

Healthcare workers	Last 7 days			Current Greater Sydney outbreak (16 Jun - 24 Jul 2021)		
	Number of HCWs	Fully vaccinated	Partially vaccinated	Number of HCWs	Fully vaccinated	Partially vaccinated
Healthcare acquired	6	2 (33%)	1 (17%)	17	4 (24%)	4 (24%)
Community acquired	11	1 (9%)	4 (36%)	29	2 (7%)	5 (17%)
Not currently linked	11	1 (9%)	3 (27%)	19	1 (5%)	7 (37%)
Total	**28**	**4 (14%)**	**8 (29%)**	**65**	**7 (11%)**	**16 (25%)**

Interpretation: Since 16 June, 74% of healthcare workers associated with the Greater Sydney outbreak have been infected in the community and outside of a healthcare setting whilst 26% were potentially infected in healthcare settings. Of the 65 healthcare workers that have been diagnosed with COVID-19 in the current outbreak, 7 (11%) have been fully vaccinated and 16 (25%) have been partially vaccinated.

Aged care workers

There were five locally acquired cases in aged care workers in the week ending 24 July 2021. One case, who was unvaccinated, acquired their infection while working in an aged care facility. and two cases were social or household contacts of a known case and two cases the source of infection is under investigation.

Since 1 January 2021, there have been 17 cases reported in aged care workers. Of these, six (29%) people have reported being partially vaccinated. There have been no aged care workers diagnosed with COVID-19 that have been fully vaccinated.

Table 5. 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 - 24 Jul 2021)		
	Number of ACWs	Fully vaccinated	Partially Vaccinated	Number of ACWs	Fully vaccinated	Partially Vaccinated
Acquired at aged care facility	1	0	0	6	0	3 (50%)
Community acquired	2	0	0	8	0	2 (25%)
Not currently linked	2	0	1 (50%)	3	0	1 (33%)
Total	**5**	**0**	**1 (20%)**	**17**	**0**	**6 (35%)**

Interpretation: In the week ending 24 July there were five aged care workers diagnosed with COVID-19. Of these, one (20%) was potentially infected in an aged care setting, 2 (40%) were social or household contacts of previously reported cases and 2 (40%) are not currently linked.

Pregnant women

There were 10 cases in pregnant women in the week ending 24 July 2021. Since January 2020, 66 pregnant women have been diagnosed with COVID-19 in NSW. As those who test negative are not interviewed, testing rates among pregnant women are not available.

Section 5: COVID-19 vaccination status

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

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

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

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

Table 6a. Locally acquired COVID-19 cases by vaccination status and week reported, NSW, 1 March to 24 July 2021

	Week ending					
Vaccination status	**24-Jul**	**17-Jul**	**10-Jul**	**3-Jul**	**01 Mar-23 Jun**	**Total from 1 Mar 2021**
Total locally acquired cases	859	653	313	171	125	2121
Fully Vaccinated	7(1%)	2 (<1%)	2 (1%)	5 (3%)	0	16 (1%)
Partially Vaccinated	52 (6%)	24 (4%)	21 (7%)	8 (5%)	10 (8%)	115 (5%)
None	790 (92%)	623 (95%)	288 (92%)	157 (92%)	113 (90%)	1,971 (93%)
Unknown/Missing	10 (1%)	4 (1%)	2 (1%)	1 (1%)	2 (2%)	19 (1%)

Table 6b. Overseas acquired COVID-19 cases by vaccination status and week reported, NSW, 1 March to 24 July 2021

	Week ending					
Vaccination status	**24-Jul**	**17-Jul**	**10-Jul**	**3-Jul**	**01 Mar-19 Jun**	**Total from 1 Mar 2021**
Total overseas acquired cases	8	25	11	27	450	521
Fully Vaccinated	2 (25%)	7 (28%)	0	3 (11%)	11 (2%)	23 (4%)
Partially Vaccinated	1 (13%)	5 (20%)	3 (27%)	1 (4%)	24 (5%)	34 (7%)
None	5 (63%)	10 (40%)	5 (46%)	21 (78%)	402 (89%)	443 (85%)
Unknown /Missing	0	3 (12%)	3 (27%)	2 (7%)	13 (3%)	21 (4%)

Interpretation: In the past week 1% of locally acquired cases were fully vaccinated. This compares with around 13% of the NSW population who had received two doses of vaccine by July 24. Since 1 March 2021, there have been 16 (1%) locally acquired cases reported as being fully vaccinated and 115 (5%) 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 24 July 2021, there were 142 people admitted to hospital as a result of being diagnosed with COVID-19. In total, there have been 371 people hospitalised as a result of the current Greater Sydney outbreak.

Table 7. Hospitalisations and ICU admissions as a result of COVID-19, by age group, NSW, from 13 June to 24 July 2021

Age-group (years)	Hospitalised (%)	Hospitalised and in ICU (%)
0-4	3 (1%)	0
5-11	4 (1%)	0
12-17	11 (3%)	2 (3%)
18-29	58 (16%)	11 (15%)
30-49	104 (28%)	10 (14%)
50-59	75 (20%)	18 (25%)
60-69	50 (13%)	20 (27%)
70-79	34 (9%)	8 (11%)
80+	32 (9%)	4 (5%)
Total	**371**	**73**

Interpretation: The highest number of cases hospitalised are aged 30-49 (104, 28%) years, followed by those aged 50-59 years (75, 20%). Of the 371 hospitalised cases, six were residents an aged care facility and have been admitted for close monitoring and not due to deteriorating health concerns. Five of the six aged care residents are fully vaccinated.

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

Of the 371 people hospitalised as a result of COVID-19 in the current outbreak, 73 (20%) people were in ICU of which 65 (89%) were unvaccinated and seven (10%) were partially vaccinated or had a single dose within 14 days. There have been no fully vaccinated cases in ICU.

Table 8. Hospitalisations and ICU admissions due to COVID-19, by vaccination status, NSW, from 13 June to 24 July 2021

Vaccination status	Hospitalised (%)	Hospitalised and in ICU (%)
Fully Vaccinated	5 (1%)	0
Partially Vaccinated / one dose	29 (8%)	7 (10%)
Not vaccinated	335 (90%)	66 (90%)
Vaccination status unknown	2 (1%)	0
Total locally acquired cases	**371 (100%)**	**73 (100%)**

Interpretation: Of the 371 people hospitalised, 5 (1%) are fully vaccinated aged care residents who were admitted for public health reasons rather than clinical need, 29 (8%) were partially vaccinated and 335 (85%) were not vaccinated.

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

Since the start of the pandemic, <1% of cases (62 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% (12/62) of the deaths were in overseas acquired cases.

There were two deaths reported as a result of COVID-19 in the week ending 24 July including a man in his 80s and a woman in her 50s. Both people were household contacts of previously reported cases and were unvaccinated. Since 16 December, there have been six deaths reported as a result of COVID-19.

Table 9. Deaths as a result of COVID-19, by age group, NSW, from 25 January 2020 to 24 July 2021

Age group (years)	Current Outbreak	Since January 2020		
	Number of deaths	Number of deaths	Number of cases	Case fatality rate
0-4	0	0	253	0
5-11	0	0	293	0
12-17	0	0	352	0
18-29	0	0	1835	0
30-49	0	0	2442	0
50-59	1	2	1000	0.2%
60-69	0	4	798	0.5%
70-79	1	16	453	3.5%
80+	4	40	208	19.2%
Total	6	62	7634	0.8%

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.

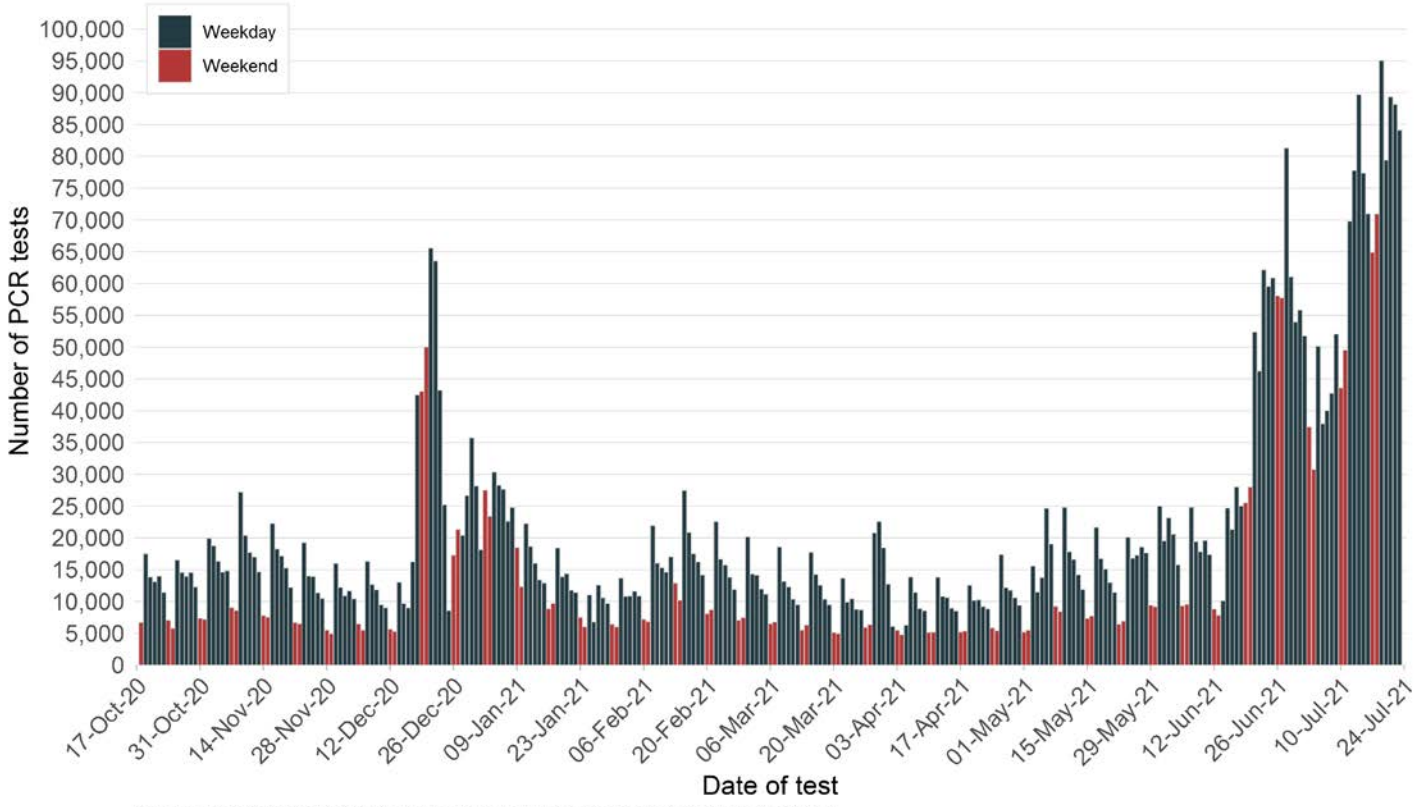
Section 7: COVID-19 testing in NSW

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 6. Number of PCR tests per day, NSW, 12 September 2020 to 24 July 2021



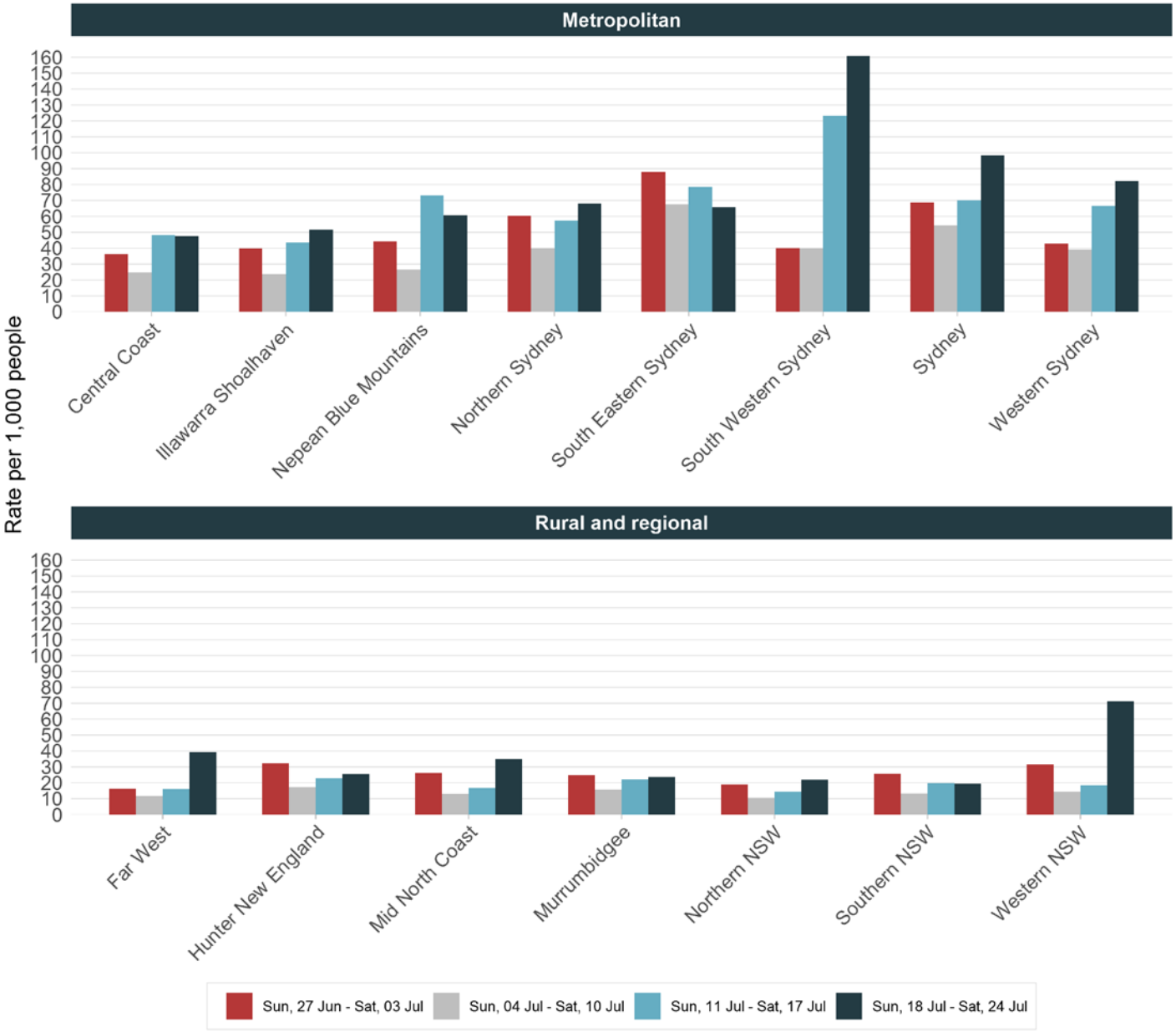
Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.

Interpretation: Testing numbers increased in the week ending 24 July 2021 (up 18%) compared to the previous week. The average daily testing rate of 10.5 per 1,000 people in NSW each day increased compared to the previous week of 8.8 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 7. Rates of COVID-19 testing by LHD of residence, NSW, 27 June to 24 July 2021

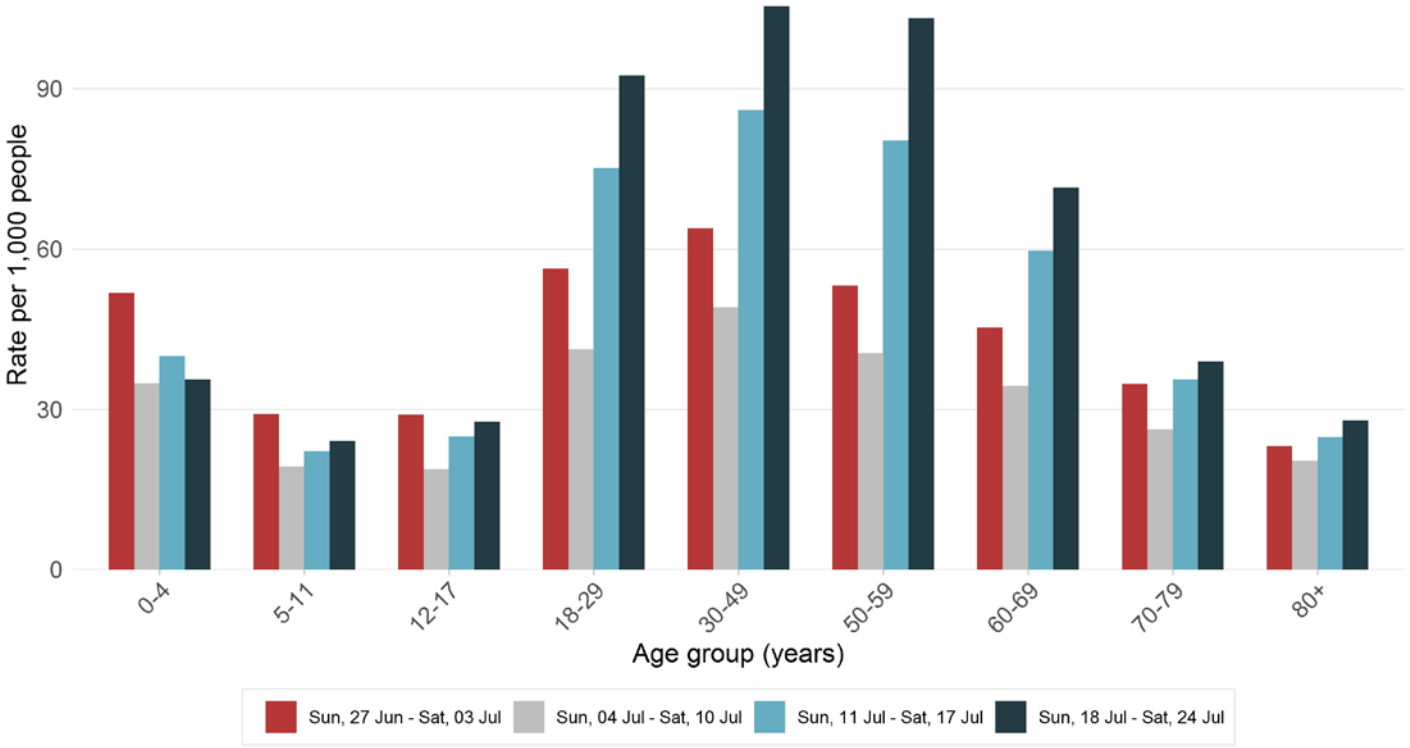


Includes SARS-CoV-2 PCR tests only and excludes notifications with missing postcode of residence.

Interpretation: State-wide weekly testing rates in the week ending 24 July increased or remained steady in most LHDs compared to the previous week (73.2 per 1,000 people compared to 61.8 per 1,000 people). Testing rates remain high in South Western Sydney LHD as a result of targeted public health messaging to residents of the Fairfield, Canterbury Bankstown and Liverpool LGAs. High testing rates were also seen in Western NSW LHD in response to reports of transmission occurring between a delivery driver from Sydney and an Orange resident who later visited several shops and venues in the regional area (70.5 per 1,000 people compared to 18.6 per 1,000 people).

Testing by age group

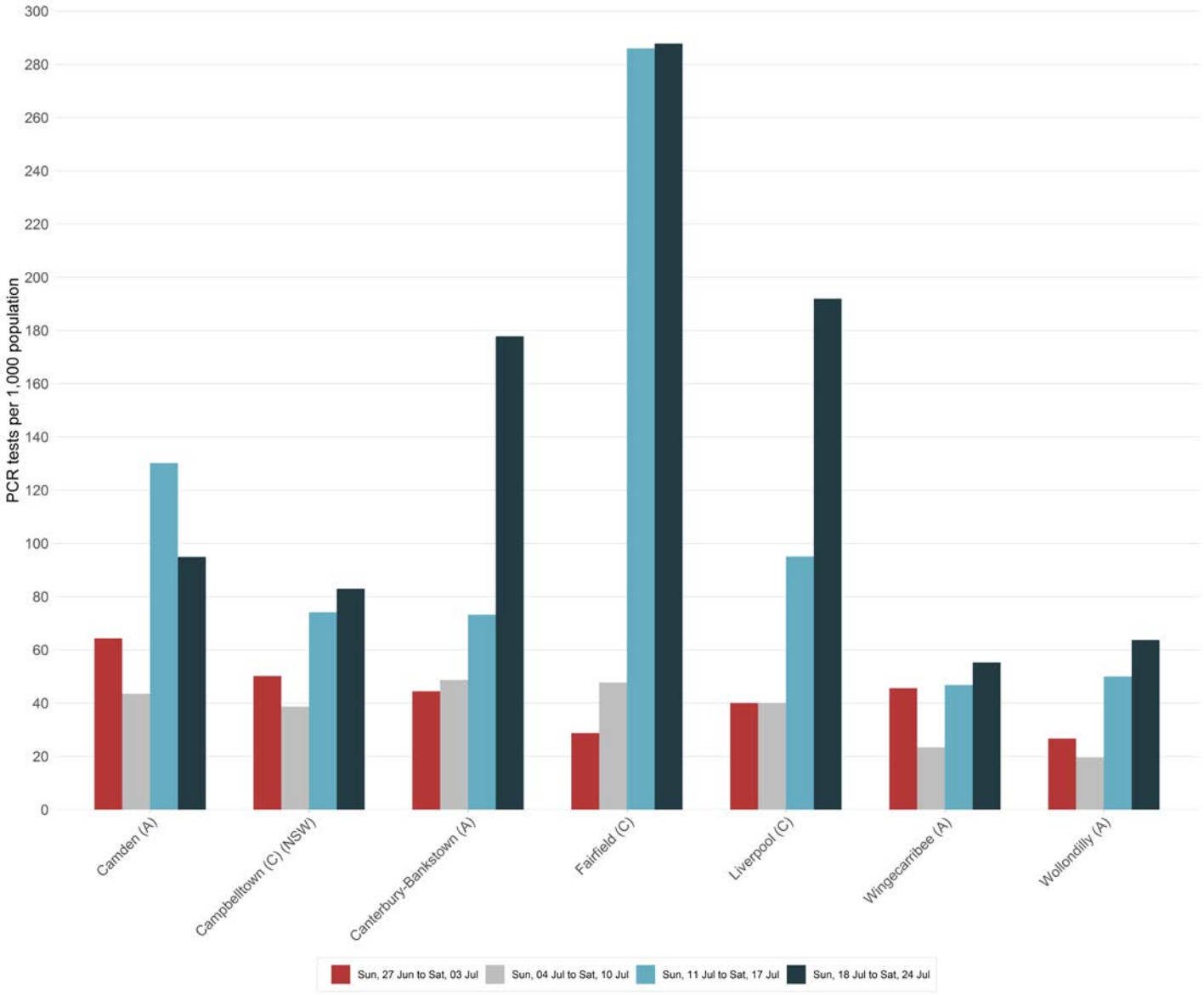
Figure 8. Rates of COVID-19 testing by age group and week, NSW, 27 June to 24 July 2021



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

Interpretation: In the week ending 24 July 2021, testing rates increased or remained steady across most age groups with the greatest increase seen in adults aged 18-69.

Figure 9. Rates of COVID-19 testing by LGA in South Western Sydney, NSW, 27 June to 24 July 2021

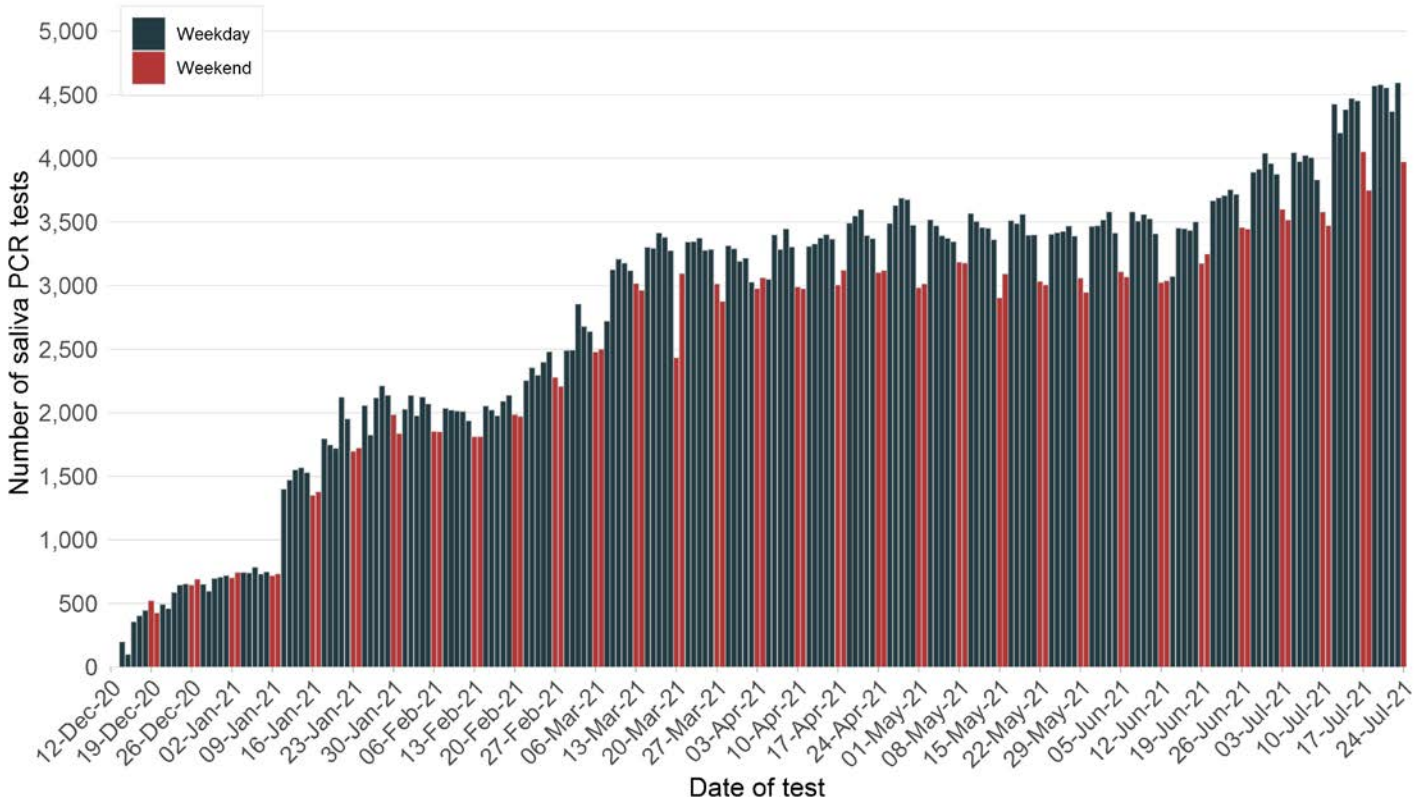


Interpretation: Testing rates surged in the Canterbury-Bankstown and Liverpool LGAs in response to targeted public health messaging advising residents in the area to get tested. The greatest relative change was in Canterbury-Bankstown which was 2.4 times the rate in the previous week (175.2 tests per 1,000 people compared with 73.2 per 1,000 last week respectively).

Border and quarantine workers – saliva testing screening program

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

Figure 10. Daily numbers of saliva PCR test results reported for border and quarantine workers, NSW, 12 December 2020 to 24 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 606,358 saliva PCR tests have been conducted to 24 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 24 July 2021, there have been:

- 1247 locally acquired cases diagnosed with a VOC. All of these cases have been diagnosed with infection by the Delta variant.
- 38 returned travellers diagnosed with a VoC. Of these:
  - 10 (26%) with the alpha variant
  - 3 (8%) with the beta variant
  - 25 (66%) with the delta variant.
- The countries of likely acquisition of the 38 returned travellers diagnosed with a VoC are: Fiji (4, 11%), UK (3, 8%), USA (3, 9%), Afghanistan (2, 5%), Bangladesh (2, 5%), Cambodia (2, 5%), China (2, 5%), India (2 5%), Indonesia (2, 5%), Lebanon (2, 5%), Pakistan (2, 5%), UAE (2, 5%), Algeria (1, 3%), Germany (1, 3%), Myanmar (1, 3%), Philippines (1, 3%), Sri Lanka (1, 3%), and unknown (5, 13%).

Table 10a. Variants identified among locally acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 24 July 2021

Variant	Week ending				29 Nov to 19-Jun	Total since 29 November
	24 July*	17 July*	10-Jul	3-Jul		
Total variants identified	384	454	272	137	116	1363
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)	384	454	272	137	109	1356

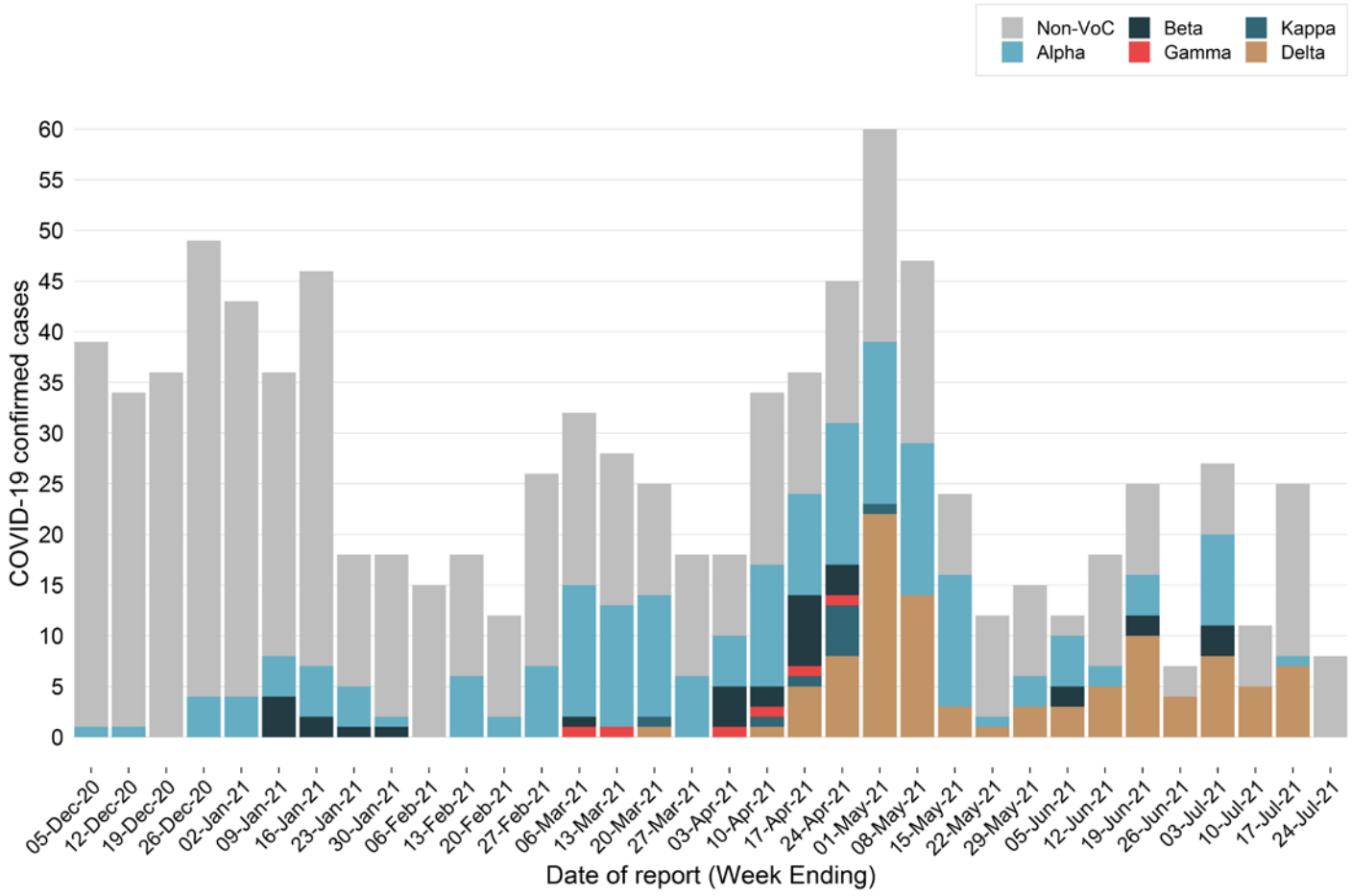
***Note:** identification of variants of concern is through whole genome sequencing. Results for reported cases in the most recent week may not be available at the time of reporting. 100% of locally acquired cases sequenced in the week ending 24 July have been the Delta variant of concern.

Table 10b. Variants identified among overseas acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 24 July 2021

Variant	Week ending				29 Nov to 26-Jun	Total since 29 November
	24-Jul*	17-Jul*	10-Jul	3-Jul		
Total variants identified	3	10	5	20	306	344
Alpha (B.1.1.7)	0	1	0	9	182	192
Beta (B.1.351)	0	0	0	3	29	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)	3	9	5	8	80	105

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

Figure 11. Overseas acquired COVID-19 cases by VoC and week reported, NSW, 29 November 2020 to 24 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 344 returned travellers diagnosed with a COVID-19 VoC. In the four weeks ending 24 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.

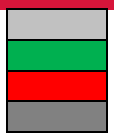
Table 11. Locations with SARS-CoV-2 detections in sewage samples in the last 10 weeks, NSW, 11 April to 24 July 2021

		22 May	29 May	5 June	12 June	19 June	26 June	3 July	10 July	17 July	24 July
Pop.	**Location**	20	21	22	23	24	25	26	27	28	29
60,514	Blue Mountains (Winmalee)										
110,114	Penrith										
8,000	McGraths Hill										
69,245	Warriewood										
1,241	Brooklyn										
31,924	Hornsby Heights										
318,810	Bondi										
233,176	Cronulla										
1,857,740	Malabar 1										
	Malabar 2										
181,005	Liverpool										
98,743	West Camden										
161,200	Glenfield										
1,341,986	North Head										
26,997	Castle Hill Cattai										
	Castle Hill Glenhaven										
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 24 July 2021

		22 May	29 May	5 June	12 June	19 June	26 June	3 July	10 July	17 July	24 July
Catchment	**Location**	20	21	22	23	24	25	26	27	28	29
Sydney network sites											
Bondi	Paddington										
Bondi	Rozelle										
Cronulla	Caringbah										
Cronulla	Miranda										
Malabar	Earlwood										
Malabar	Marrickville										
Malabar	Marrickville										
Malabar	Arncliffe 1										
Malabar	Arncliffe 2										
Malabar	Blakehurst										
Malabar	Padstow 1										
Malabar	Padstow 2										
Malabar	Fairfield SPS 1										
Malabar	Fairfield SPS 2										
Malabar	Homebush SPS										
Malabar	Croydon										
Malabar	Dulwich Hill										
Malabar	Canterbury										
Malabar	Botany										
Malabar	Maroubra										
North Head	Camellia SPS - North										
North Head	Camellia SPS - South										
North Head	Auburn										
North Head	Northmead SPS										
North Head	Tunks Park										
North Head	Vineyard Creek										
North Head	Boronia										
North Head	West Lindfield										
North Head	Allambie Heights										
Glenfield	Minto										
Liverpool	Ireland Park										
Quakers Hill	Eastern Creek										
St Marys	Ropes Creek										
Regional Sites											
14,700	Bowral										
9,000	Moss Vale										
38,900	Bateau Bay										
2,050	Bourke										
	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 24 July, 195 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 63 detections. There were five detections outside Sydney taken from the Byron Bay, Bowral (2) and Moss Vale (2) sewage treatment plants. Wyong South, Gwandalan-Mannering Park, Hay, Blayney, Molong and Wentworth sewage treatment plants were added as new sites.

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

- Winmalee (2), Penrith (2), McGraths Hill, Warriewood, Hornsby Heights (2), Bondi, Cronulla, Malabar (2), Liverpool, Glenfield, North Head, Quakers Hill (2), Rouse Hill (2), Riverstone, St Marys, Wollongong (3)
- There were also detections from the sewage networks and pumping stations within:
- the Bondi catchment including Rozelle
- the Cronulla catchment including Caringbah and Miranda
- the Malabar catchment including Earlwood, Marrickville 1, Marrickville 2, Blakehurst, Arncliffe 1, Arncliffe 2, Padstow 1, Padstow 2, Fairfield pumping station 1, Fairfield pumping station 2, Dulwich Hill, Maroubra and Homebush
- the North Head catchment including Tunks Park, Camellia South and Camellia North, Northmead sewage pumping station, Northmead sewage network, Vineyard Creek, Boronia Park, West Lindfield and Allambie Heights
- the Glenfield catchment including Minto (2)
- the St Marys catchment including Ropes Creek (2)
- the Quakers Hill catchment including Eastern Creek (2)
- Port Kembla (2)
- Bellambi

The positive detection in Moss Vale is not associated with known cases living in the area. This detection 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.

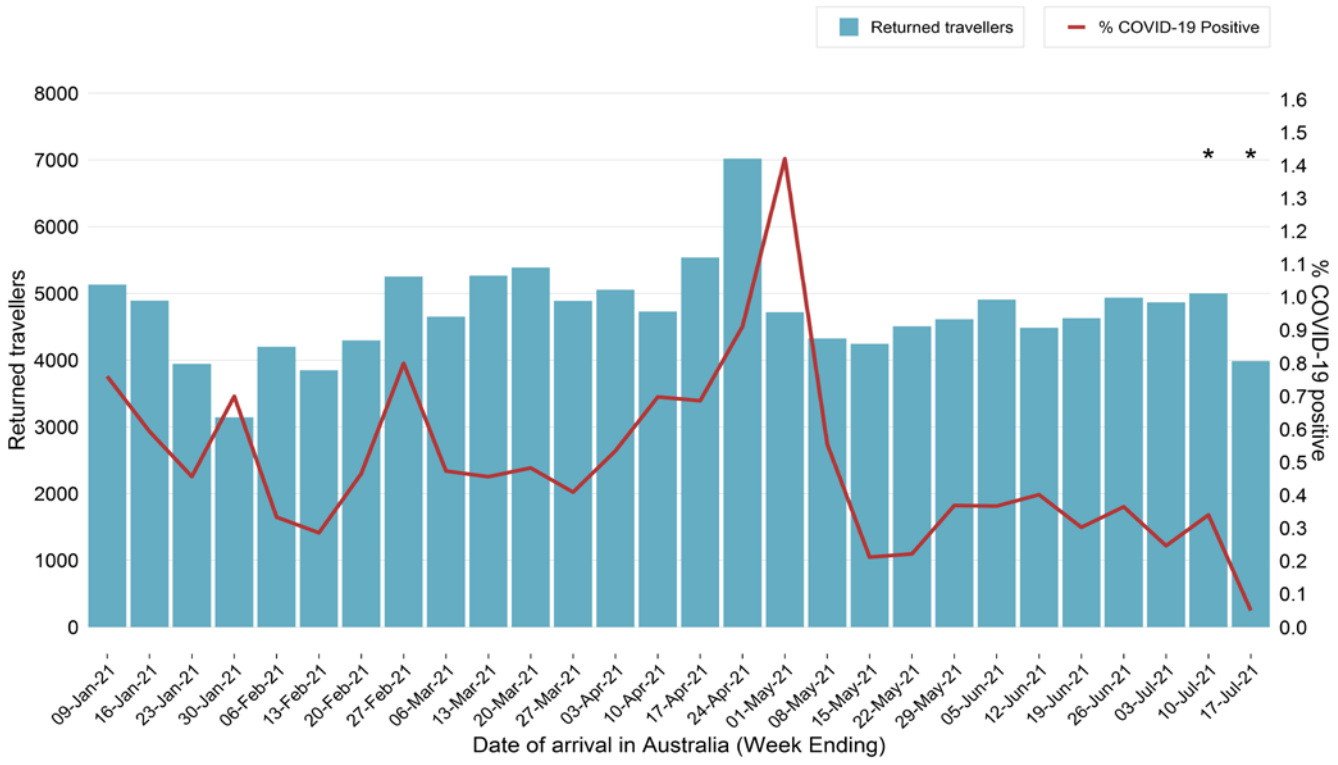
Section 10: COVID-19 in returned travellers

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 12. Returned travellers screened at Sydney International Airport by week of arrival and percent COVID-19 positive, NSW, 3 January 2021 to 24 July 2021



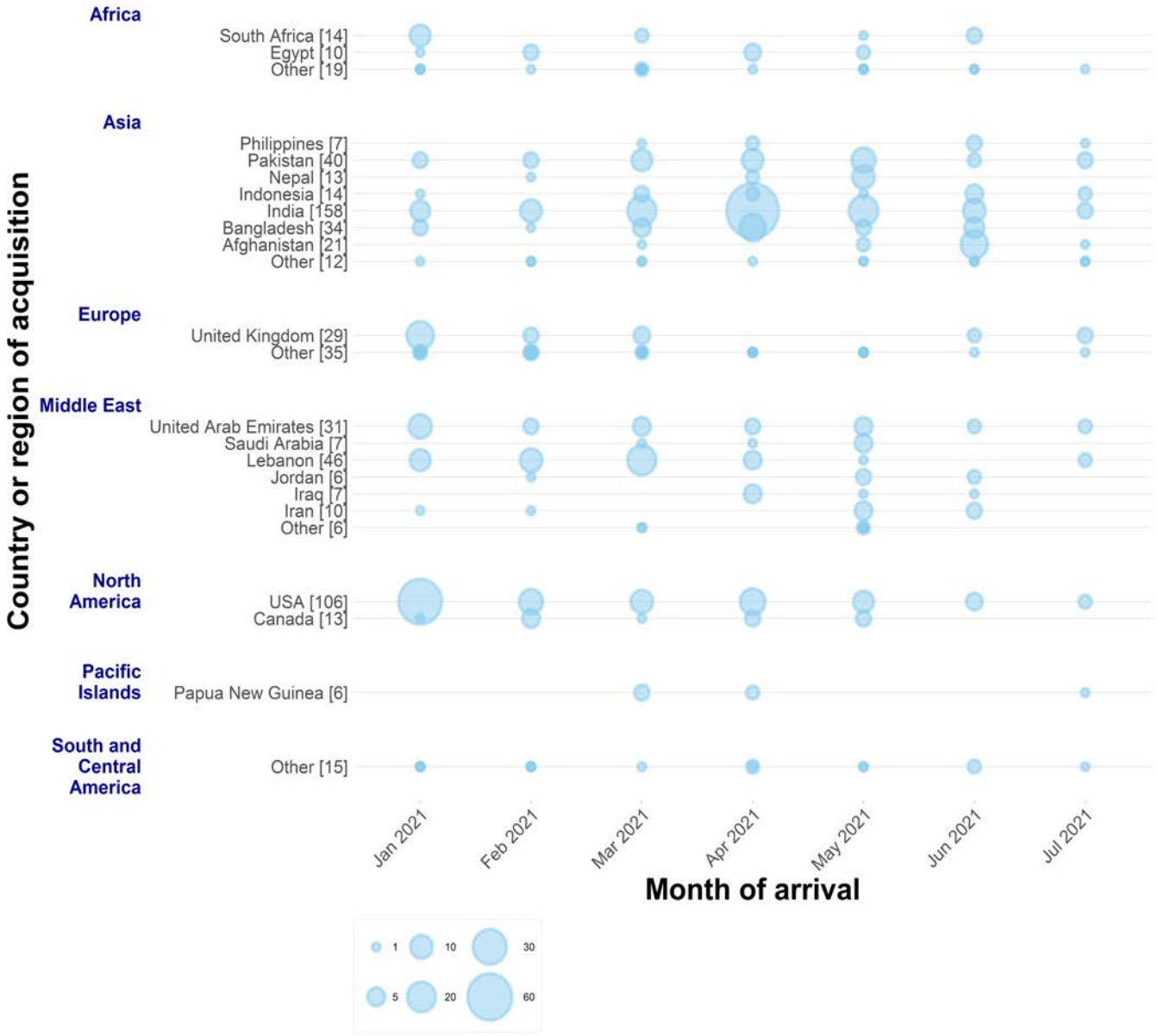
*Returned travellers entering Australia in the past 14 days are still in quarantine and may return a positive result prior to the end of their hotel quarantine period.

Interpretation: Since 3 January 2021, there has been on average 680 people screened on arrival through Sydney International Airport daily. In the last four weeks, 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 13. Overseas acquired COVID-19 cases by country of acquisition and arrival month, NSW, 1 December 2020 to 24 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 71 COVID-positive returned travellers in NSW. The table below lists countries of acquisition for these travellers.

Table 12. Top countries of acquisition for overseas acquired cases that have tested positive in the last four weeks, 26 June 2021 to 24 July 2021

Country of acquisition of COVID-19	Number (%) of cases in the last four weeks
India	7 (10%)
Afghanistan	6 (8%)
Indonesia	6 (8%)
United Kingdom	5 (7%)
Fiji	4 (6%)
United Arab Emirates	4 (6%)
Egypt	3 (4%)
Pakistan	3 (4%)
USA	3 (4%)
Other	30 (42%)
Total	**71 (100%)**

Interpretation: In the four weeks to 24 July 2021, travellers returning from India accounted for the largest number of overseas acquired cases (7, 10%).

Cases among returned travellers in quarantine

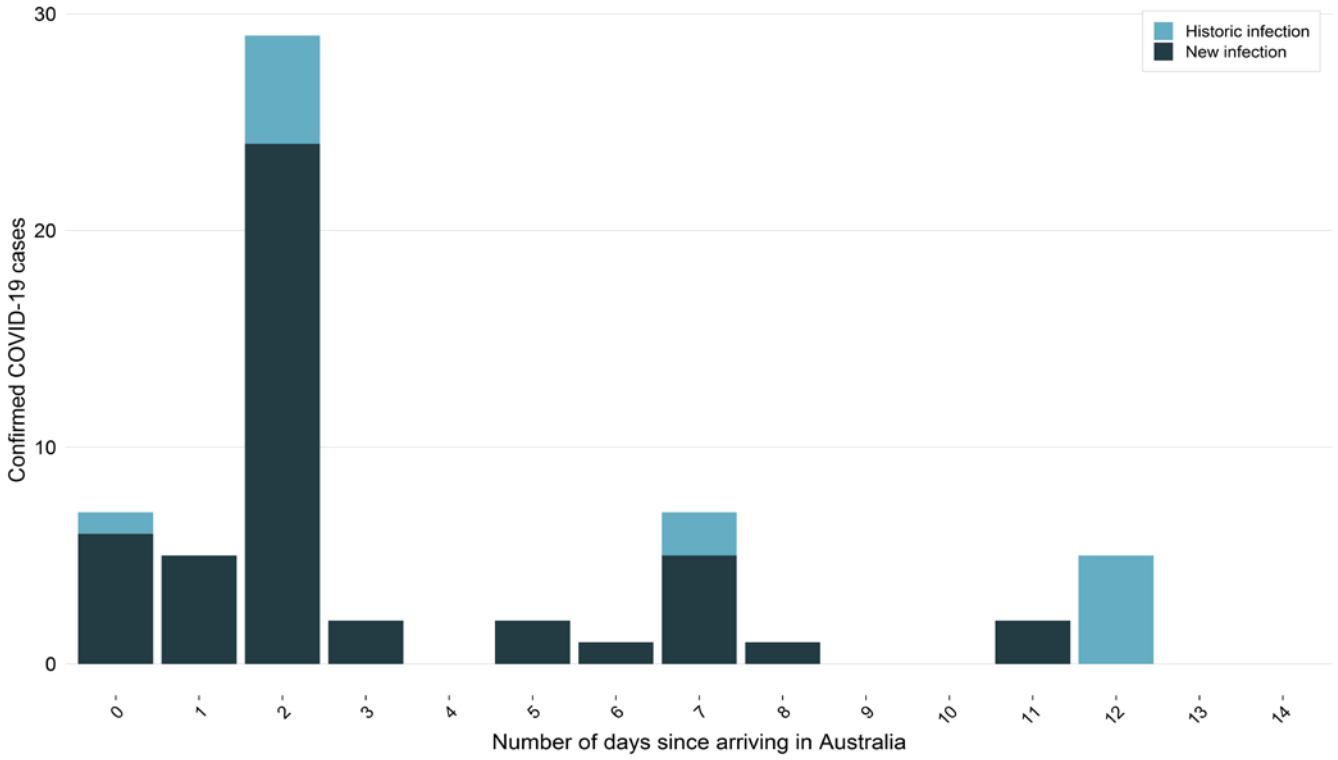
The program of screening all overseas travellers after arrival in NSW commenced on 15 May 2020. From 30 June 2020, the program was extended to include screening of travellers on entry to quarantine, day 2 after arrival, and exit of quarantine. On 11 January 2021, exit screening of travellers was moved 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 14. Number of overseas acquired cases in the last four weeks who tested positive for SARS-CoV-2 within 14 days since arrival in NSW by COVID-19 infection status, 26 Jun to 24 July 2021



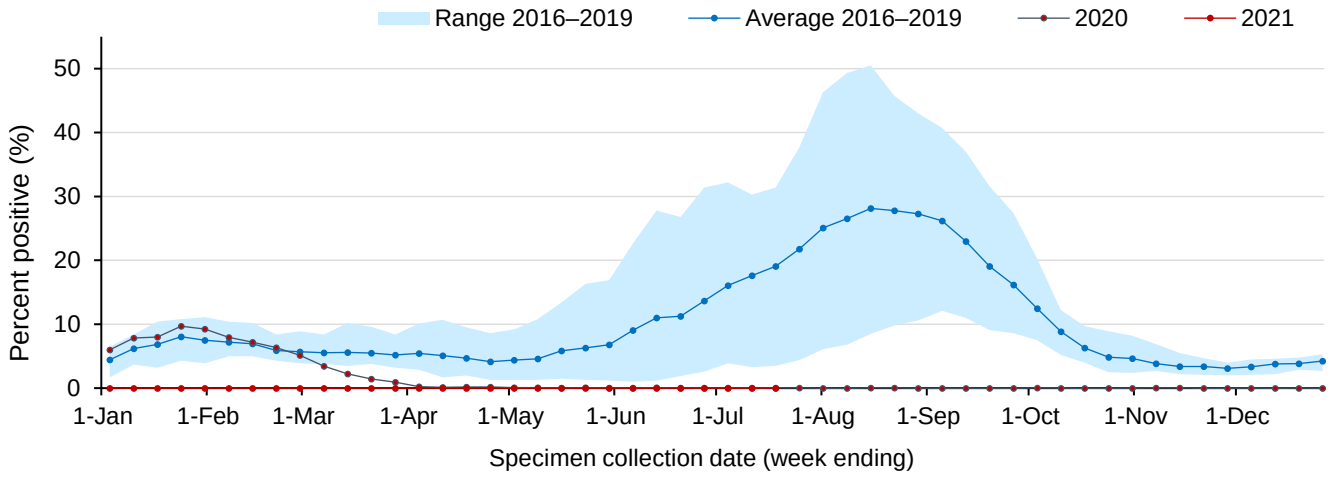
Interpretation: In the four weeks ending 24 July 2021, 59% of overseas acquired COVID-19 cases have tested positive within two days of arriving to Australia, with most people testing positive on day two screening.

Section 11: Other respiratory infections in NSW

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 18 July 2021

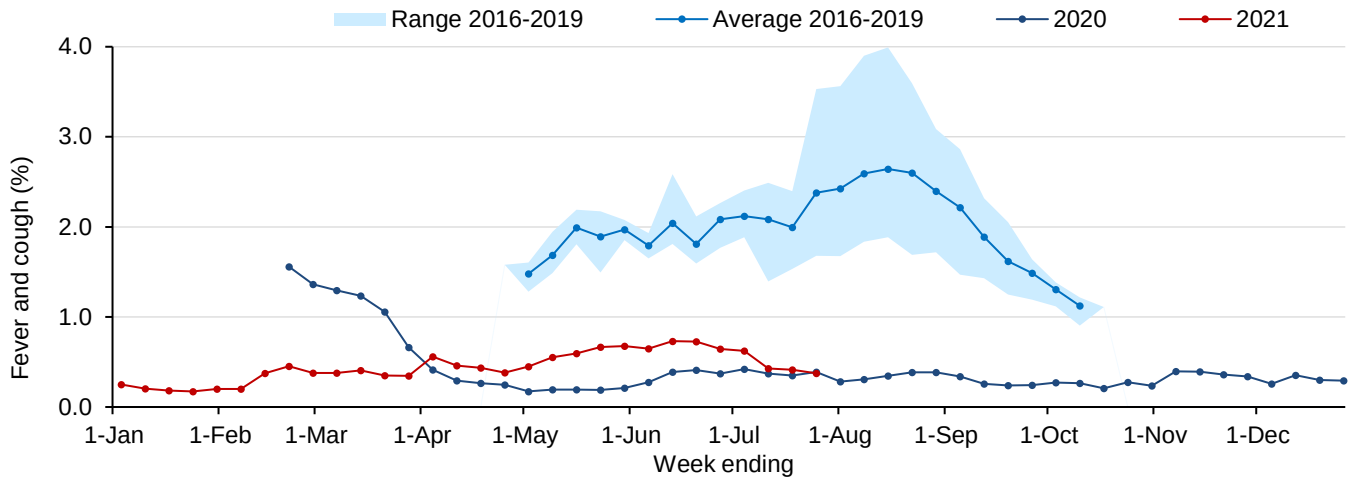


Interpretation: In the week ending 18 July, the percent of influenza tests that were positive continued to be very low (<0.01%), indicating limited influenza transmission in the community. Since early March 2020, this percentage has remained far lower than the usual range for the time of year. There have been 13 influenza cases reported in 2021 and none were reported in the week ending 18 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 25 July 2021



Interpretation: In NSW in the week ending 25 July 2021, of the 23,268 people surveyed, 87 people (0.37%) reported flu-like symptoms. In the last four weeks, 59% (259/442) 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

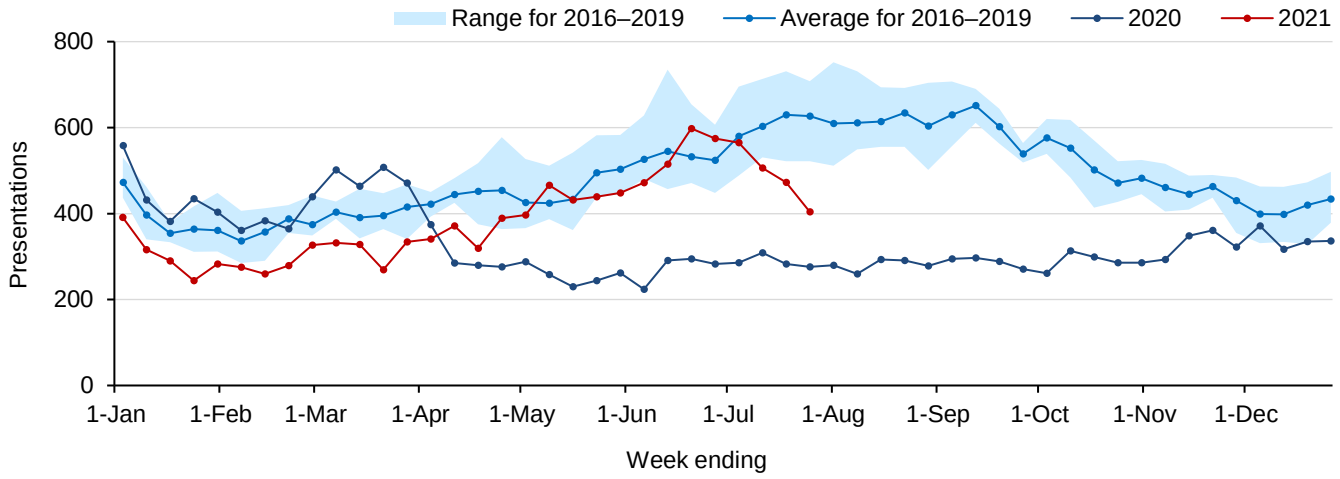
has remained at around 50% since early April 2021.

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.

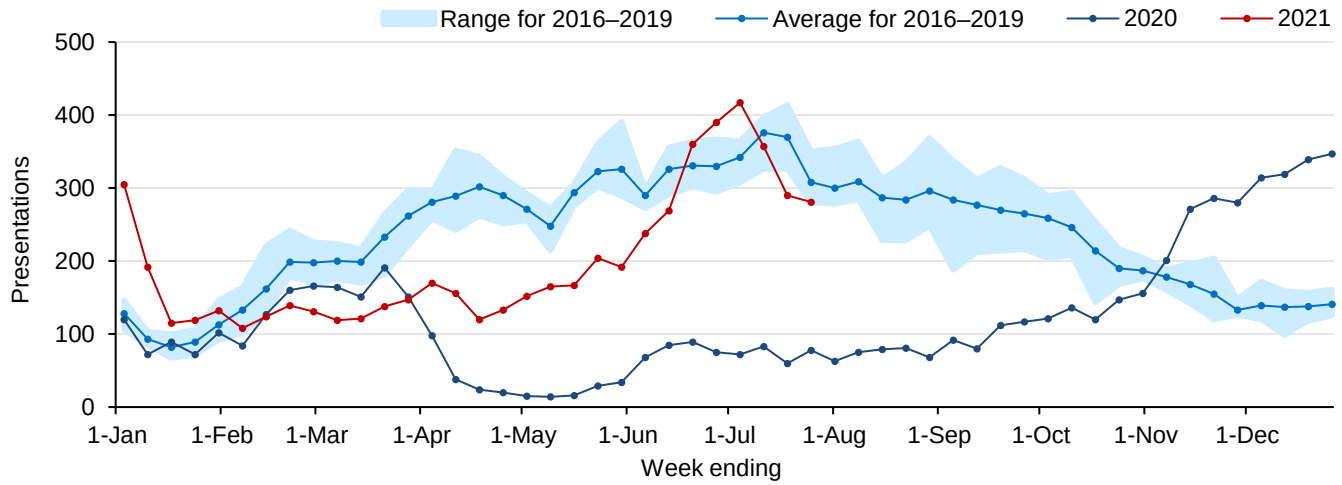
The figures below show weekly pneumonia and bronchiolitis presentations to Emergency Departments in NSW, using PHREDSS[2]. The red line shows the weekly counts for 2021, the dark blue line showing counts for 2020, the light blue line showing the average for 2016 to 2019 and the shaded area showing the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

Figure 18. Emergency Department pneumonia presentations, NSW, 1 January 2016 to 25 July 2021



Interpretation: Pneumonia presentations include people with diagnoses of viral, bacterial, atypical or unspecified pneumonia, and Legionnaires' disease, but excludes 'pneumonia with influenza' and provides an indicator of more severe respiratory conditions. In the week ending 25 July, pneumonia presentations decreased and are below the seasonal range for this time of year.

Figure 19. Emergency Department bronchiolitis presentations, NSW, 1 January 2016 to 25 July 2021



Interpretation: Bronchiolitis is a common disease of infants often caused by respiratory syncytial virus (RSV). Public health measures introduced last year around social distancing and improved hygiene practices coincided with a large decrease in bronchiolitis presentations for the majority of 2020. A rise in bronchiolitis presentations in the later part of 2020 corresponds to an increase in RSV detections. In the week ending 25 July 2021, bronchiolitis presentations decreased and is within the seasonal

[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).

range for this time of year.

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

		Week ending				Total since January 2021	
		24-Jul		17-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]	17016	48.22	17007	48.20	301897	855.56
Far West	Balranald	126	53.89	42	17.96	1037	443.54
	Broken Hill	453	25.92	257	14.70	11730	671.09
	Central Darling	31	16.86	24	13.05	717	389.89
	Wentworth	529	75.00	158	22.40	4743	672.48
	LHD Total[2]	1139	37.79	481	15.96	18227	604.66
Hunter New England	Armidale Regional	711	23.10	490	15.92	19556	635.37
	Cessnock	1084	18.07	1022	17.04	28281	471.47
	Dungog	155	16.45	150	15.92	4768	506.00
	Glen Innes Severn	116	13.08	70	7.89	3363	379.10
	Gunnedah	198	15.61	163	12.85	6062	478.04
	Gwydir	60	11.21	42	7.85	1444	269.76
	Inverell	247	14.62	158	9.35	8056	476.97
	Lake Macquarie	6751	32.79	6451	31.33	177442	861.78
	Liverpool Plains	122	15.44	85	10.76	3826	484.12
	Maitland	3285	38.57	3019	35.45	79681	935.60
	Mid-Coast	1640	17.48	1381	14.72	45243	482.15
	Moree Plains	107	8.07	131	9.88	7518	566.93
	Muswellbrook	393	24.00	256	15.63	8609	525.68
	Narrabri	124	9.44	125	9.52	4677	356.07
	Newcastle	5222	31.54	4496	27.15	167002	1008.64
	Port Stephens	1402	19.08	1361	18.52	52029	708.06
	Singleton	637	27.15	614	26.17	17153	731.13
	Tamworth Regional	1356	21.68	1180	18.87	42954	686.81
	Tenterfield	61	9.25	49	7.43	2035	308.61
	Upper Hunter Shire	222	15.66	210	14.81	7641	538.86
	Uralla	88	14.64	52	8.65	2396	398.54
	Walcha	47	15.00	40	12.76	1720	548.82
	LHD Total[2]	24014	25.21	21542	22.62	691010	725.56
Illawarra Shoalhaven	Kiama	925	39.55	919	39.30	21545	921.28
	Shellharbour	4669	63.76	3976	54.29	66151	903.29
	Shoalhaven	2828	26.77	2641	25.00	70867	670.78
	Wollongong	12706	58.25	10694	49.03	209177	959.03
	LHD Total[2]	21128	50.35	18230	43.44	367740	876.38
Mid North Coast	Bellingen	448	34.47	207	15.93	7743	595.80
	Coffs Harbour	4139	53.56	1078	13.95	42011	543.64
	Kempsey	717	24.10	554	18.62	17153	576.67
	Nambucca	744	37.57	297	15.00	9632	486.34
	Port Macquarie-Hastings	1692	20.02	1630	19.28	51293	606.84
	LHD Total[2]	7740	34.30	3766	16.69	127832	566.47
Murrumbidgee	Albury	1532	28.19	1560	28.70	36370	669.14
	Berrigan	103	11.77	61	6.97	3081	352.11
	Bland	104	17.41	72	12.06	2664	446.08

		Week ending				Total since January 2021	
		24-Jul		17-Jul			
Local Health District	Local Government Area	No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Carrathool	31	11.08	39	13.93	651	232.58
	Coolamon	81	18.66	96	22.11	2400	552.87
	Cootamundra-Gundagai Regional	537	47.80	251	22.34	6171	549.27
	Edward River	146	16.07	156	17.17	4281	471.27
	Federation	272	21.87	248	19.94	5855	470.77
	Greater Hume Shire	336	31.22	648	60.20	6616	614.64
	Griffith	466	17.24	512	18.94	17177	635.50
	Hay	35	11.87	93	31.54	991	336.05
	Hilltops	418	22.35	320	17.11	10146	542.45
	Junee	122	18.26	82	12.27	2758	412.69
	Lachlan[1]	121	19.92	61	10.04	1731	284.94
	Leeton	193	16.86	173	15.12	5034	439.84
	Lockhart	85	25.88	62	18.87	1529	465.45
	Murray River	47	3.88	69	5.69	1590	131.21
	LHD Total[2]	62	15.83	62	15.83	1500	382.95
	Narrandera	62	10.51	80	13.56	1998	338.70
	Snowy Valleys	229	15.82	239	16.51	7456	514.95
	Temora	96	15.22	67	10.62	2225	352.78
	Wagga Wagga	1930	29.57	1711	26.22	50997	781.47
	LHD Total[2]	6922	23.22	6622	22.21	172057	577.16
	Blue Mountains	3957	50.01	5189	65.59	89955	1136.97
	Hawkesbury	4617	68.61	6496	96.53	65531	973.77
Nepean Blue Mountains	Lithgow	630	29.16	413	19.12	11606	537.19
	Penrith	14394	67.58	16950	79.59	218240	1024.71
	LHD Total[2]	23091	59.06	28611	73.18	381658	976.14
	Ballina	857	19.20	596	13.35	38232	856.68
	Byron	954	27.19	613	17.47	30554	870.96
	Clarence Valley	983	19.03	613	11.87	21915	424.20
	Kyogle	96	10.91	102	11.60	3489	396.66
Northern NSW	Lismore	967	22.13	743	17.01	30255	692.46
	Richmond Valley	622	26.51	599	25.53	13791	587.73
	Tenterfield	61	9.25	49	7.43	2035	308.61
	Tweed	2275	23.45	1257	12.96	50480	520.41
	LHD Total[2]	6767	21.80	4535	14.61	189172	609.52
	Hornsby	5571	36.64	6287	41.35	146822	965.56
	Hunters Hill	1234	82.38	1578	105.34	34420	2297.73
	Ku-ring-gai	6867	54.01	7809	61.41	192816	1516.41
	Lane Cove	3504	87.26	3621	90.18	94257	2347.33
	Mosman	1037	33.47	1516	48.93	39615	1278.69
Northern Sydney	North Sydney	2638	35.16	3079	41.04	74924	998.71
	Northern Beaches	31655	115.74	18098	66.17	477415	1745.58
	Parramatta[1]	12787	49.72	13656	53.10	231299	899.31
	Ryde	6626	50.48	7547	57.49	150221	1144.36
	Willoughby	2673	32.92	3129	38.54	76627	943.81
	LHD Total[2]	63568	66.50	54798	57.33	1332626	1394.08

		Week ending				Total since January 2021	
		24-Jul		17-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
South Eastern Sydney	Bayside	11167	62.60	12866	72.12	170563	956.09
	Georges River	12623	79.16	13362	83.79	145359	911.51
	Randwick	9555	61.39	12043	77.37	244413	1570.28
	Sutherland Shire	14747	63.95	19887	86.24	269682	1169.42
	Sydney[1]	17201	69.83	20504	83.23	355522	1443.20
	Waverley	4769	64.19	6170	83.05	145186	1954.18
	Woollahra	3677	61.92	4600	77.46	116735	1965.67
	LHD Total[2]	62322	64.98	75328	78.54	1220334	1272.37
South Western Sydney	Camden	9414	92.81	13209	130.22	140742	1387.48
	Campbelltown	14026	82.05	12671	74.12	182467	1067.41
	Canterbury-Bankstown[1]	66214	175.21	27653	73.17	377200	998.10
	Fairfield	60326	284.97	60468	285.64	242401	1145.05
	Liverpool	42696	187.60	21643	95.10	249402	1095.86
	Wingecarribee	2800	54.76	2395	46.84	52989	1036.28
	Wollondilly	3336	62.77	2661	50.07	38366	721.86
	LHD Total[2]	164500	158.40	127864	123.12	1089271	1048.85
Southern NSW	Bega Valley	512	14.85	539	15.63	18318	531.33
	Eurobodalla	655	17.02	629	16.35	26234	681.88
	Goulburn Mulwaree	1155	37.10	1302	41.82	21266	683.09
	Queanbeyan-Palerang Regional	906	14.83	942	15.42	27338	447.43
	Snowy Monaro Regional	411	19.76	402	19.33	12170	585.24
	Upper Lachlan Shire	183	22.71	219	27.17	4594	570.05
	Yass Valley	206	12.06	224	13.11	6654	389.42
	LHD Total[2]	4032	18.57	4259	19.62	116636	537.32
Sydney	Burwood	1951	48.04	1756	43.24	31350	771.94
	Canada Bay	5003	52.07	5282	54.98	115304	1200.16
	Canterbury-Bankstown[1]	66214	175.21	27653	73.17	377200	998.10
	Inner West	11420	56.87	11826	58.89	262175	1305.58
	Strathfield	4310	91.85	3296	70.24	56403	1201.96
	LHD Total[2]	17201	69.83	20504	83.23	355522	1443.20
	LHD Total[2]	67405	96.74	48855	70.12	880429	1263.59
Western NSW	Bathurst Regional	3202	73.41	1054	24.16	34905	800.24
	Blayney	1368	185.39	137	18.57	6487	879.12
	Bogan	38	14.73	30	11.63	1320	511.63
	Bourke	63	24.32	36	13.90	1109	428.19
	Brewarrina	21	13.04	22	13.66	498	309.12
	Cabonne	1260	92.42	306	22.44	6878	504.47
	Cobar	87	18.68	53	11.38	1875	402.53
	Coonamble	66	16.68	61	15.41	1571	396.92
	Cowra	491	38.53	172	13.50	6499	510.01
	Dubbo Regional	1868	34.77	870	16.20	35050	652.47
	Forbes	311	31.40	105	10.60	4550	459.32
	Gilgandra	82	19.34	34	8.02	1668	393.49
	Lachlan[1]	121	19.92	61	10.04	1731	284.94
	Mid-Western Regional	684	27.09	597	23.64	15496	613.68
	Narromine	132	20.25	85	13.04	3157	484.43

		Week ending				Total since January 2021	
		24-Jul		17-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
	Oberon	174	32.16	86	15.89	2863	529.11
	Orange	8681	204.49	1096	25.82	44936	1058.54
	Parkes	1004	67.67	203	13.68	7833	527.94
	Walgett	75	12.60	85	14.28	2435	409.04
	Warren	135	50.06	62	22.99	2274	843.16
	Warrumbungle Shire	138	14.87	119	12.83	4641	500.22
	Weddin	124	34.32	49	13.56	1528	422.92
	LHD Total[2]	20100	70.52	5308	18.62	188840	662.57
Western Sydney	Blacktown	32935	87.96	24684	65.92	377822	1009.00
	Cumberland	26385	109.25	20067	83.09	252813	1046.75
	Parramatta[1]	12787	49.72	13656	53.10	231299	899.31
	The Hills Shire	12481	70.13	13292	74.69	245230	1377.94
	LHD Total[2]	84355	80.08	70256	66.69	1071794	1017.43
NSW Total[3]		592227	73.21	499965	61.80	4447965	549.82

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

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

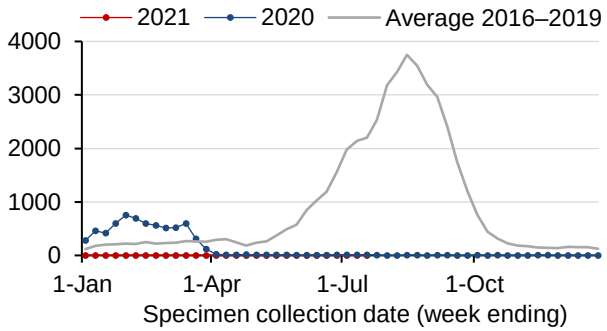
2 Local Health District total counts and rates includes tests for LHD residents only. Murrumbidgee includes Albury LGA residents.

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

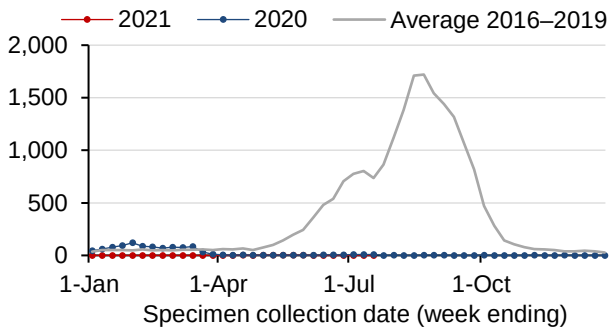
Appendix B: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 18 July 2021

Not all samples are tested for all of the other respiratory viruses. Therefore, data presented may tend to under-represent current respiratory virus activity in NSW.

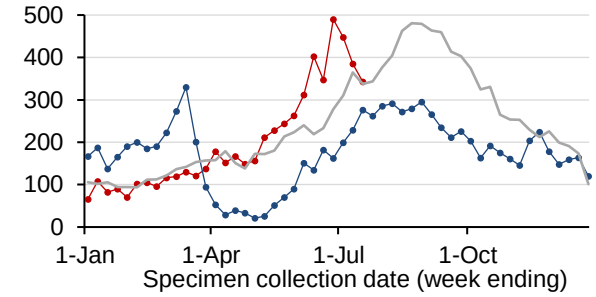
Influenza A



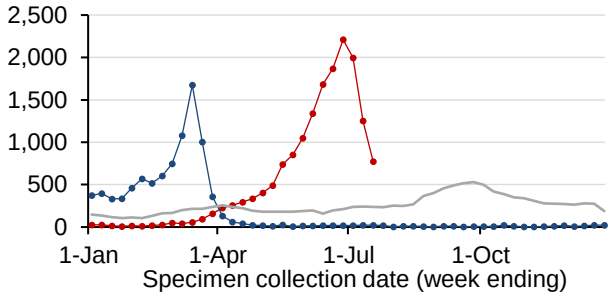
Influenza B



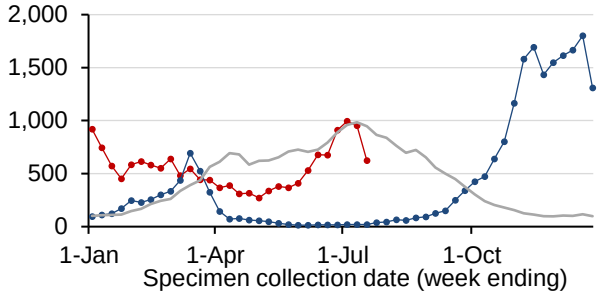
Adenovirus



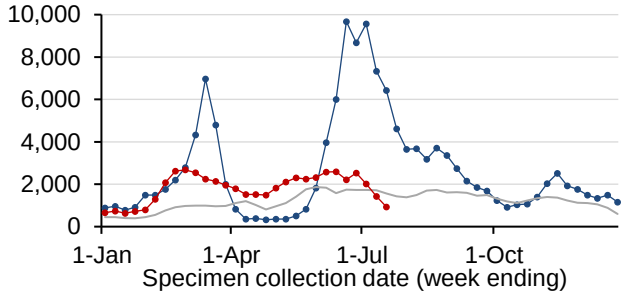
Parainfluenza



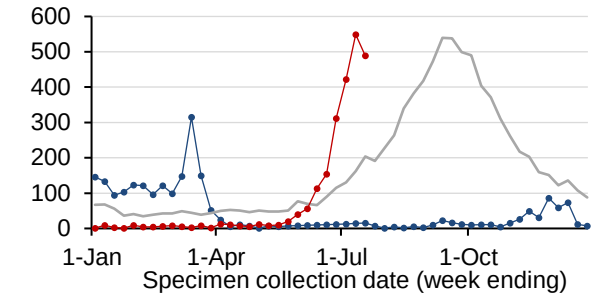
Respiratory syncytial virus (RSV)



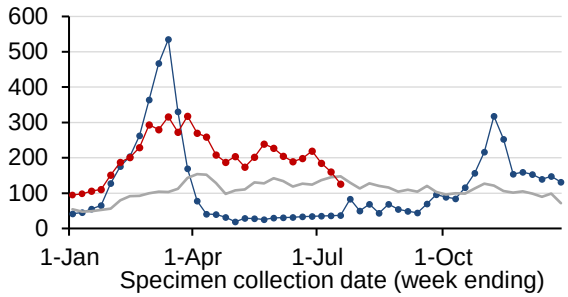
Rhinovirus



Human metapneumovirus (HMPV)



Enterovirus



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

Appendix C: SARS-CoV-2 testing in sewage samples collected in the previous 10 weeks, week ending 24 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		22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July	17-July	24-July
Pop.	Location	20	21	22	23	24	25	26	27	28	29
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		22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July	17-July	24-July
Network	Location	20	21	22	23	24	25	26	27	28	29
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		22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July	17-July	24-July
Pop.	Location	20	21	22	23	24	25	26	27	28	29
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)		22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July	17-July	24-July
Pop.	Location	20	21	22	23	24	25	26	27	28	29
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)		22-May	29-May	5-June	12-June	19-June	26-June	3-July	10-July	17-July	24-July
Pop.	Location	20	21	22	23	24	25	26	27	28	29
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.