

# COVID-19 WEEKLY SURVEILLANCE IN NSW

## EPIDEMIOLOGICAL WEEK 5, ENDING 6 FEBRUARY 2021

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### SUMMARY FOR THE WEEK ENDING 6 FEBRUARY 2021

- There were no locally acquired cases reported in the week ending 6 February.
- Testing rates in school-age children aged 5–17 years increased significantly this week with overall testing numbers increasing slightly when compared to the previous week.
- The Avalon and Inner West clusters are now closed as at least two incubation periods (28 days) have passed since the last epidemiologically linked case was notified.
- The NSW Sewage Surveillance Program reported four detections – these samples were taken from the Glenfield, Bondi and Malabar treatment plants and the sewage network at Ireland Park. All detections were associated with known locally acquired cases and returned travellers.
- There have been no COVID-19 Variants of Concern (VoC) cases detected in the week ending 6 February. There have been 30 returned travellers with a VoC since 30 November 2020.

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## SECTION 1: HOW IS THE OUTBREAK TRACKING IN NSW?

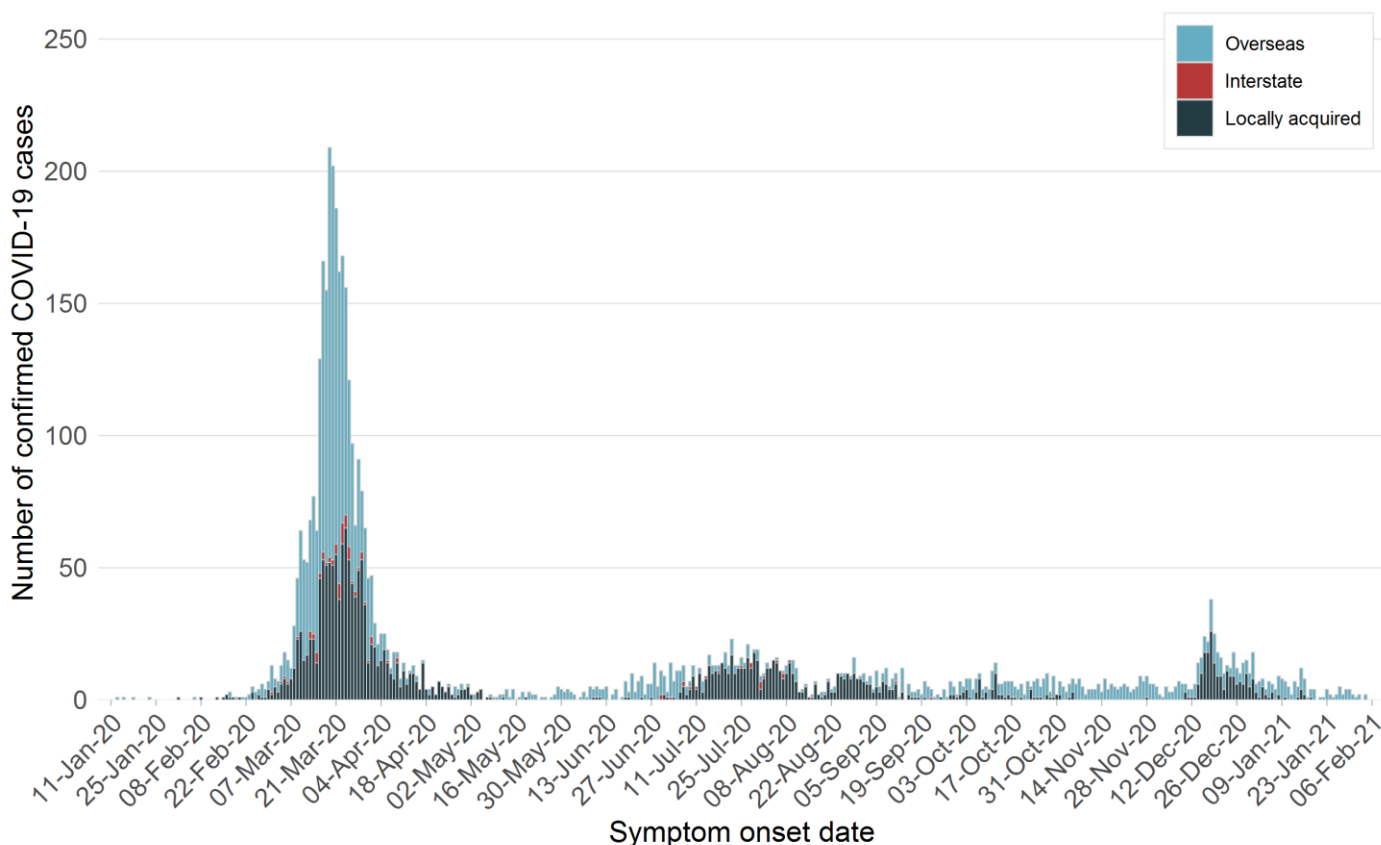
Table 1. COVID-19 cases and tests reported in NSW, up to 6 February 2021

	Week ending 6 Feb	Week ending 30 Jan	% change	Pandemic total
Number of cases	15	18	↓ 17%	4,931
Overseas acquired	15	18	↓ 17%	2,754
Interstate acquired	0	0	-	90
Locally acquired	0	0	-	2,087
No epidemiological links to other cases or clusters	0	0	-	445
Number of deaths	0	0	-	56
Number of tests	70,080	63,155	↑12%	4,709,447

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

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 & illness onset, NSW, week ending 06 February



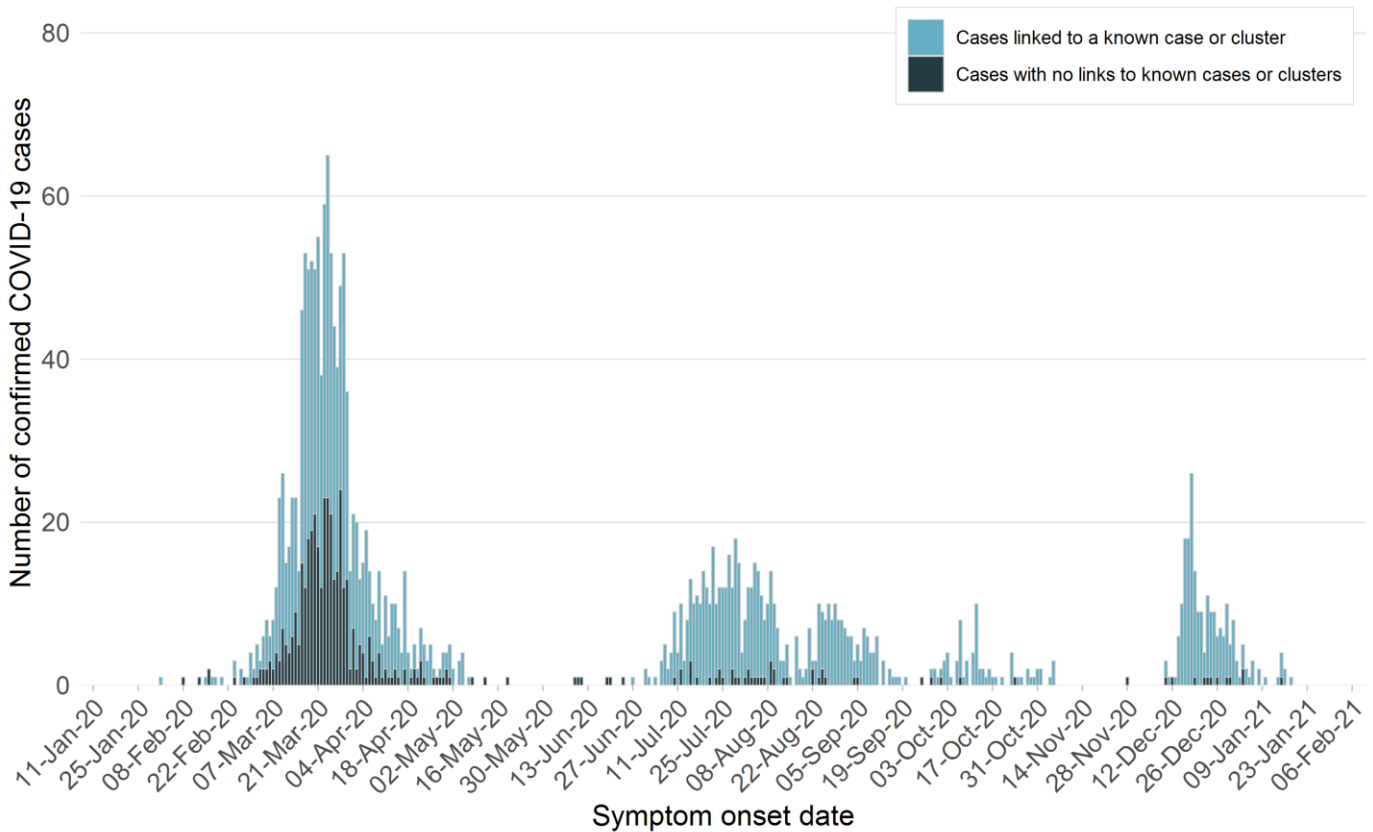
The date of the first positive test is used for cases who did not report symptoms.

**Interpretation:** The majority (90%) of COVID-19 cases diagnosed in the last four weeks in NSW have been overseas acquired.

## How much local transmission is occurring in NSW?

Public health efforts are focused on contact tracing to limit further spread in the community and identifying the source of infection for every case. To understand the extent of community transmission, locally acquired cases who have had contact with a case or who are part of a known cluster are considered separately to those with an unidentified source of infection. Cases with no links to other cases or clusters suggest that there are people infected with COVID-19 in the community who have not been diagnosed.

Figure 2. COVID-19 cases by likely infection source and illness onset, NSW, week ending 06 February



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

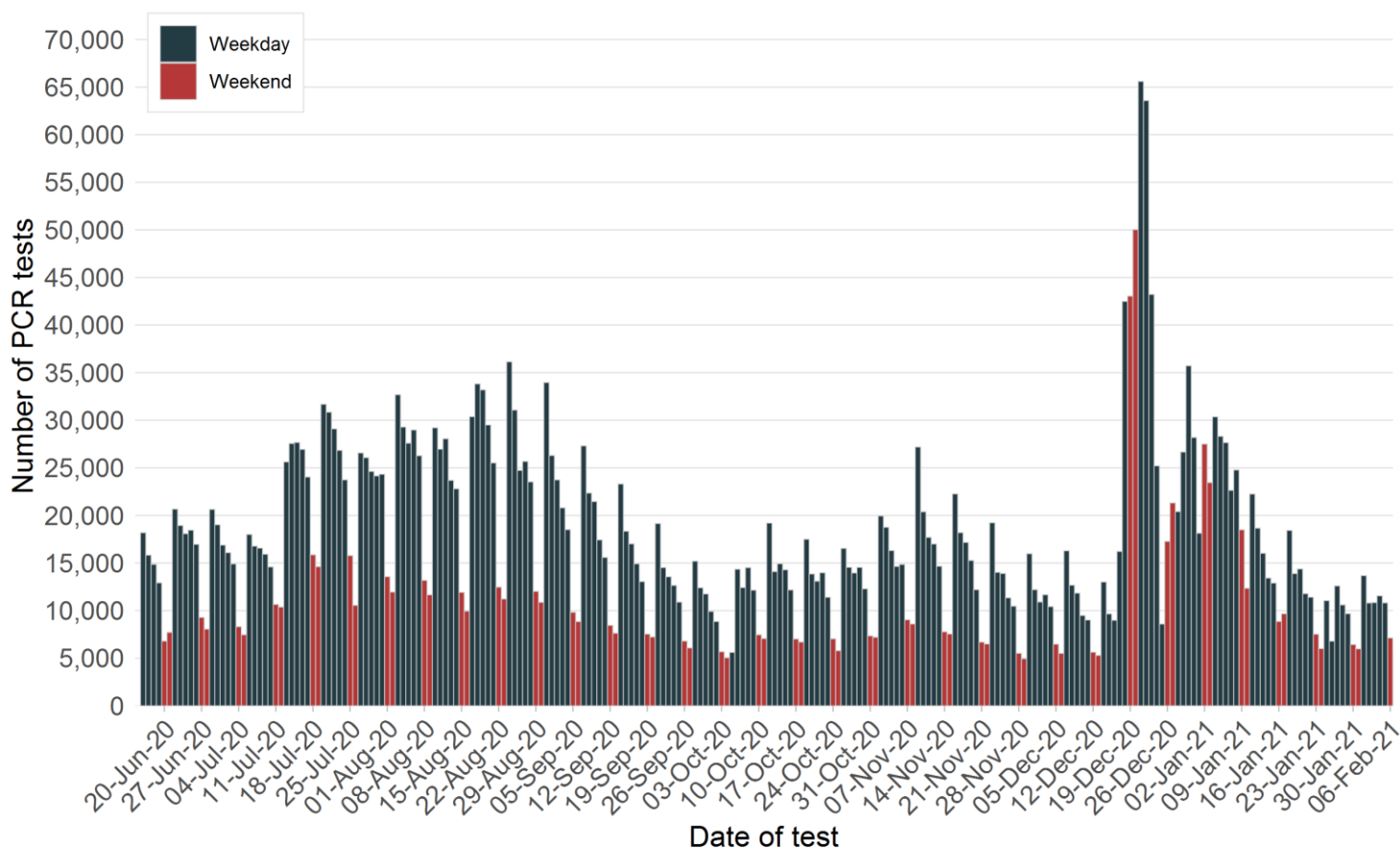
**Interpretation:** Of the 9 locally acquired cases with an illness onset in the last four weeks, 8 (90%) were linked to known cases or clusters. As at 6 February, it has been nineteen days since the last locally acquired case recorded onset of symptoms in NSW, and twenty-two days since the last unlinked locally acquired case recorded onset of symptoms in NSW. The latest symptom onset date was on 18 January 2021 (after being diagnosed while pre symptomatic on 11 January 2021). The last locally acquired case was reported on 16 January 2021.

## SECTION 2: 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.<sup>1</sup> While public health facilities are generally open seven days a week, less testing occurs through GPs and private collection centres on weekends and public holidays. This explains the lower number of tests on weekends.

Figure 3. Number of PCR tests per day, NSW, 06 February



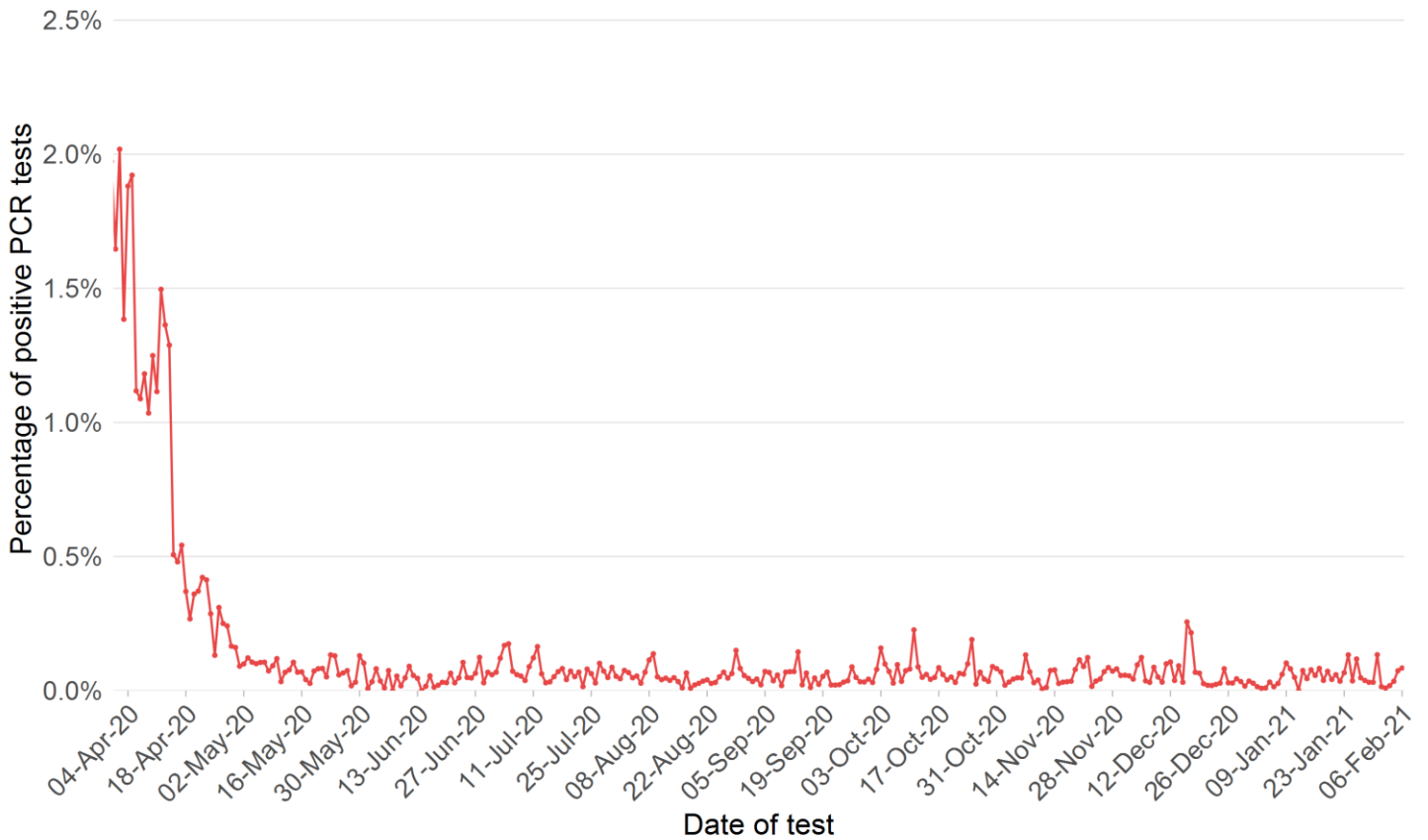
*Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.*

**Interpretation:** Testing numbers increased in the week ending 6 February (up 12%) compared to the previous week, despite an overall decreasing trend since January 2021. The average daily testing rate of 1.3 per 1,000 people in NSW each day has slightly increased compared to the previous week of 1.1 per 1,000 people. A high testing rate in the NSW population is essential to provide confidence that cases will be detected.

<sup>1</sup> 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.

### What proportion of tests are positive?

Figure 4. Proportion of positive PCR tests per day, NSW, 06 February

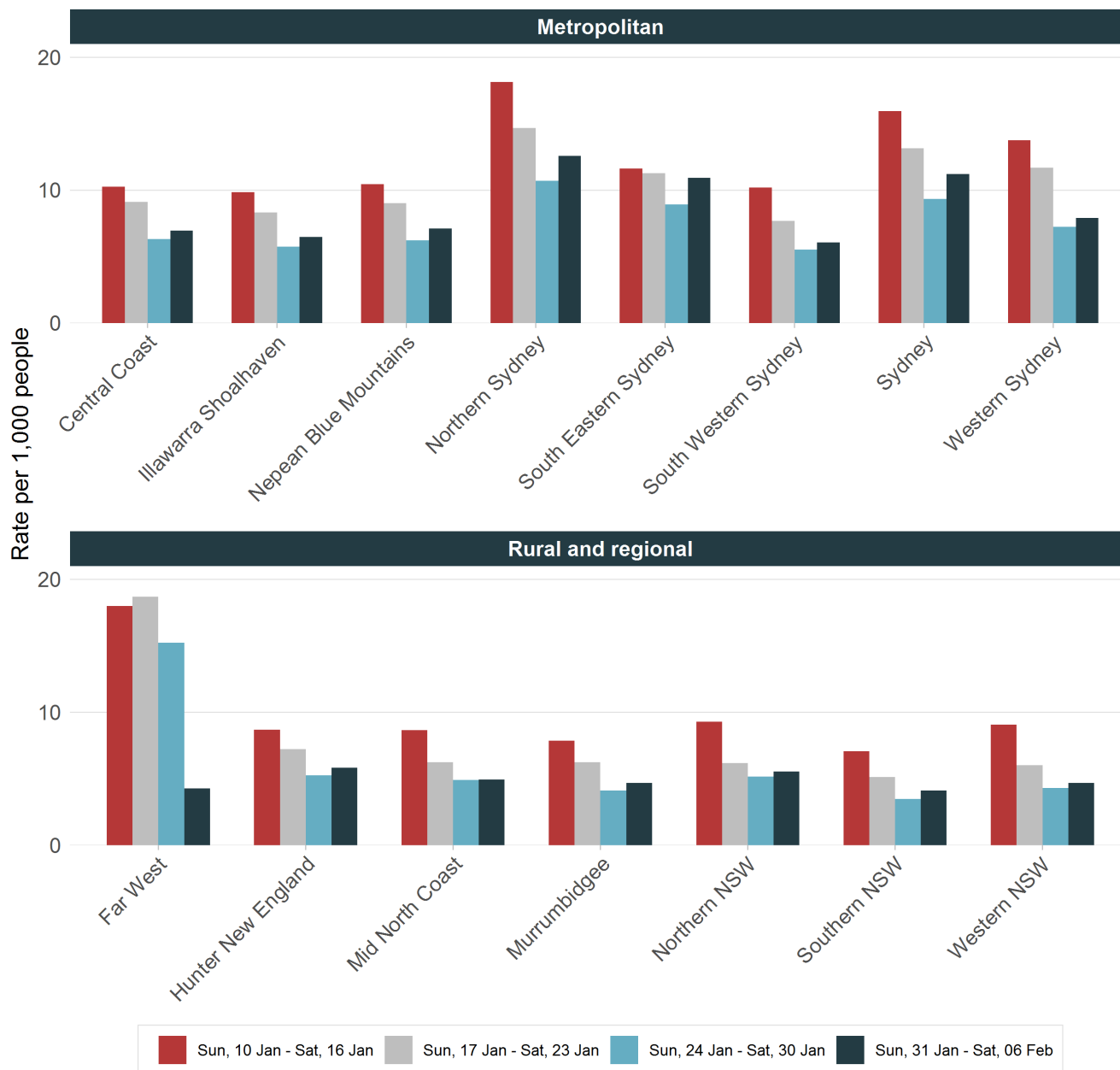


*Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.*

**Interpretation:** The proportion of tests positive for COVID-19 in NSW declined in mid-March to early May 2020, and then stabilised at very low levels. This includes PCR testing of returned travellers in hotel quarantine and excludes saliva testing for people working in hotel quarantine.

## Testing by Local Health District

Figure 5. Rates of COVID-19 testing by LHD of residence and week

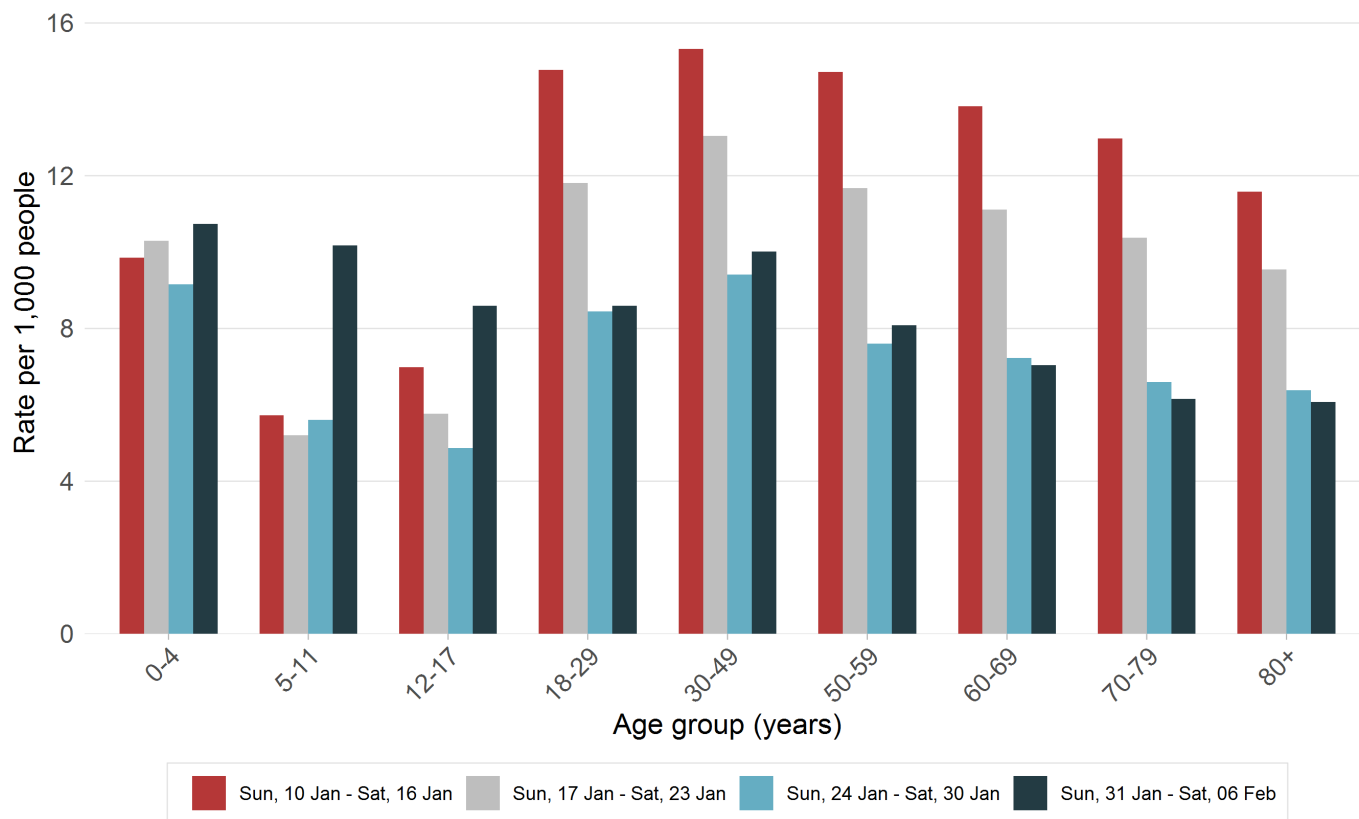


Includes SARS-CoV-2 PCR tests only and excludes notifications with missing postcode of residence.

**Interpretation:** State-wide testing rates in the week ending 6 February were slightly higher compared to the previous week (9 per 1,000 people). A decrease in the testing rate was seen in Far West LHD, after a surge in testing during January 2021 following reports of a positive case who had visited the region while unknowingly infectious.

## Testing by age group

Figure 6. Rates of COVID-19 testing by age group and week



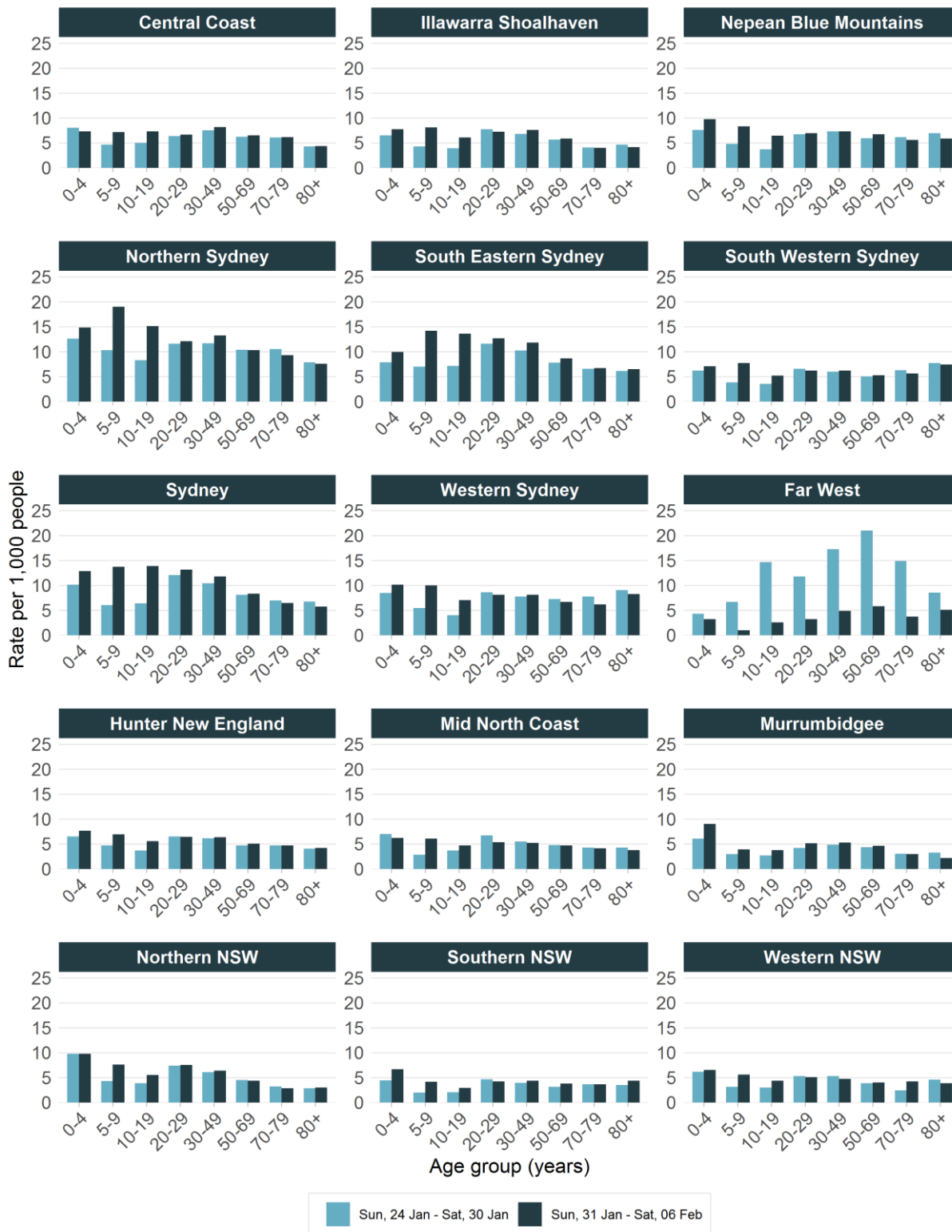
*Includes SARS-CoV-2 PCR tests only and excludes notifications with age missing.*

**Interpretation:** In the week ending 6 February, testing rates in school-age children aged 5–17 years increased significantly compared to the previous week, which may relate to the start of the 2021 school year. In accordance with advice from NSW Health, students with flu-like symptoms will need to be tested and be symptom-free before being permitted to return to school.



Testing by LHD and age group

Figure 7. Rates of COVID-19 testing by age group, LHD of residence and week



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

**Interpretation:** State-wide testing rates increased or remained steady across all LHDs and most age groups in the week ending 6 February. Testing rates in children aged 5–19 years increased in all LHDs except Far West.

## SECTION 3: 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 2. Locally acquired COVID-19 cases in NSW, by notification week and source of infection, 16 January to 6 February 2021

Locally acquired cases	Week ending				Total
	6 Feb	30 Jan	23 Jan	16 Jan	
Cases who are linked to a known case or cluster	0	0	0	11	11
Cases with no epidemiological links to other cases or clusters	0	0	0	3	3
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>

**Interpretation:** There were no new locally acquired cases reported in the week ending 6 February. No locally acquired cases have been reported in the last three weeks. The majority of cases in the last four weeks (79%, 11/14) were epidemiologically linked to a known case or cluster.

Table 3. Locally acquired COVID-19 cases by LHD of residence and week reported, 16 January to 6 February 2021

Local Health District	Week ending				Total	Days since last case reported
	6 Feb	30 Jan	23 Jan	16 Jan		
Central Coast	0	0	0	0	0	41
Illawarra Shoalhaven	0	0	0	0	0	39
Nepean Blue Mountains	0	0	0	0	0	144
Northern Sydney	0	0	0	2	2	27
South Eastern Sydney	0	0	0	0	0	37
South Western Sydney	0	0	0	0	0	34
Sydney	0	0	0	2	2	29
Western Sydney	0	0	0	10	10	19
Far West	0	0	0	0	0	322
Hunter New England	0	0	0	0	0	185
Mid North Coast	0	0	0	0	0	310
Murrumbidgee	0	0	0	0	0	154
Northern NSW	0	0	0	0	0	194
Southern NSW	0	0	0	0	0	117
Western NSW	0	0	0	0	0	185
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>212</b>

**Interpretation:** There were no locally acquired cases reported in the week ending 6 February. The majority of locally acquired cases reported in the four weeks up to 6 February were residents of Western Sydney LHD (71%; 10/14).

Table 4. Locally acquired COVID-19 cases with no identified links to known cases or cluster by LHD of residence and week reported, 16 January to 6 February 2021

Local Health District	Week ending				Total
	6 Feb	30 Jan	23 Jan	16 Jan	
Central Coast	0	0	0	0	0
Illawarra Shoalhaven	0	0	0	0	0
Nepean Blue Mountains	0	0	0	0	0
Northern Sydney	0	0	0	1	1
South Eastern Sydney	0	0	0	0	0
South Western Sydney	0	0	0	0	0
Sydney	0	0	0	0	0
Western Sydney	0	0	0	2	2
Far West	0	0	0	0	0
Hunter New England	0	0	0	0	0
Mid North Coast	0	0	0	0	0
Murrumbidgee	0	0	0	0	0
Northern NSW	0	0	0	0	0
Southern NSW	0	0	0	0	0
Western NSW	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>

**Interpretation:** There have been three locally acquired COVID-19 cases reported in the last four weeks with no identified links to known cases or clusters. Whole genome sequencing has linked one of the three cases to the Avalon cluster, and two to the Berala cluster. The latest symptom onset date for an unlinked case in NSW was 15 January 2021.

## SECTION 4: CURRENT COVID-19 CLUSTERS IN NSW

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

Clusters are defined as a group of cases that are infected with the same virus (with the identical genetic sequence) that are linked epidemiologically to each other. This means that a direct source of infection can be identified for each case in the cluster, through contact with a known case where transmission likely occurred.

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

### Cases in community settings

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

### Previously reported active clusters with no new cases identified this week

#### Berala cluster

The latest symptom onset date of a case linked to the Berala cluster was on 8 January in a person who likely acquired their infection when they attended a bottle shop in Berala. Epidemiological investigations supported by whole genome sequencing has revealed that this cluster is associated with a patient transport worker who acquired their infection transporting positive COVID-19 travellers from Sydney airport to a quarantine hotel. Excluding the source, there are 28 cases linked to this cluster. The last case reported in this cluster was notified on 11 January.

There are nine additional cases that have been identified with whole genome sequencing that match the Berala cluster for which epidemiological links to other cases in this cluster have not been identified. The latest symptom onset date for an unlinked case with the Berala sequence was on 16 January and was also notified on the same day.

### Clusters with no ongoing public health risk

There have been no new cases associated with the Avalon and Inner West clusters for more than four weeks. At least two incubation periods have passed since the last notified case and there is no ongoing public health risk. These two clusters are now closed.

## SECTION 5: COVID-19 IN SPECIFIC POPULATIONS

### COVID-19 in healthcare workers

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

There were no locally acquired cases of COVID-19 reported in HCWs in the week ending the 6 February.

In total, there have been 48 cases of COVID-19 in health care workers since 1 August 2020. Of these, 25 HCWs were potentially infected in healthcare settings. A further nine cases were social or household contacts of a known case, eight were exposed in community settings, and for six cases the source of infection is unknown. Prior to August 2020, there were 206 cases identified in HCWs who had worked in a health facility in the 14 days prior to symptom onset or date of testing (see [COVID-19 in healthcare workers in NSW](#)).

### 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 no locally acquired cases of COVID-19 reported in an Aboriginal person reported in the week ending 6 February.

In total, 46 Aboriginal people have been diagnosed with COVID-19, representing 0.9% of all cases in NSW. While Aboriginal status is collected by public health staff on interview with the case at the time of diagnosis, those who test negative are not interviewed. Aboriginal status for those tested can be ascertained through linkage with other health information systems but there is a delay in getting this information.

### Pregnant women

There were no locally acquired cases of COVID-19 reported in pregnant women in the week ending 6 February.

In total, 39 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 6: DEATHS

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

Since the start of the pandemic, 1.1% of cases (56 people) have died as a result of COVID-19, most of whom were 70 years of age or older, including 28 residents of aged care facilities with known COVID-19 outbreaks. Approximately 21% (12/56) of the deaths were in overseas-acquired cases.

There were no deaths reported in the week ending 6 February.

Table 5. Deaths as a result of COVID-19, by age group, NSW, 2020 and 2021

Age group (years)	Number of deaths	Number of cases	Case fatality rate
0–4	0	109	0%
5–11	0	115	0%
12–17	0	160	0%
18–29	0	1,111	0%
30–49	0	1,581	0%
50–59	1	674	0.1%
60–69	4	636	0.6%
70–79	15	382	3.9%
80+	36	163	22.1%
<b>Total</b>	<b>56</b>	<b>4,931</b>	<b>1.1%</b>

**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: 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. 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.

In the week ending 6 February, 112 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 4 detections – these samples were taken from the Glenfield, Bondi and Malabar treatment plants and the sewage network at Ireland Park (within the Liverpool catchment). There were no regional detections. Narrabri has been added as a new site.

The table below shows results for previous weeks from various sites across NSW.

Table 6. Locations with positive SARS-CoV-2 detections in sewage samples since December 2020 for the week ending 6 February 2021

Greater Sydney Sites		5-Dec	12-Dec	19-Dec	26-Dec	2-Jan	9-Jan	16-Jan	23-Jan	30-Jan	6-Feb
Pop.	Location	49	50	51	52	53	1	2	3	4	5
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										n
98,743	West Camden										
6,882	Wallacia										
14,600	Picton										
161,200	Glenfield										
1,341,986	North Head										
26,997	Castle Hill Cattai										
	Castle Hill Glenhaven										
163,374	Quakers Hill										
119,309	Rouse Hill										
37,061	Riverstone										
163,147	St Marys										
73,686	Shellharbour										
55,000	Wollongong										
68,000	Port Kembla										
93,000	Bellambi										

Regional sites		5-Dec	12-Dec	19-Dec	26-Dec	2-Jan	9-Jan	16-Jan	23-Jan	30-Jan	6-Feb
Pop.	Location	49	50	51	52	53	1	2	3	4	5
14,700	Bowral										
14,000	Mittagong										
9,000	Moss Vale										
1,000	Berrima										
2,000	Bundanoon										
900	Robertson										
16,068	Bombo										
7,200	Gerrington/Gerroa										
32,000	Ulladulla										
18,000	Bomaderry										
37,500	Nowra										
16,000	St Georges Basin										
11,000	Cullburra Beach										
139,500	Gosford-Kincumber										
59,060	Charmhaven										
29,300	Wyong-Toukley										
38,900	Bateau Bay										
41,300	Woy Woy										
5,000	Perisher										
8,400	Thredbo										
3,000	Jindabyne										
8,000	Cooma										
500	Gunning										
500	Charlottes Pass										
51,750	Albury composite	c			c			c	c	c	c
	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
	Wagga Wagga- inlet 1										
	Wagga Wagga- inlet 2										
	Wagga Wagga -Koorringal STP										
2,050	Bourke										
40,000	Orange										
36,603	Bathurst										
19,000	Broken Hill										
500	Dareton										
11,600	Parkes										
37,000	Dubbo										
24,000	Armidale										
45,000	Tamworth										
	Narrabri										
	Tenterfield										
	Urbenville										



Regional sites (cont.)		5-Dec	12-Dec	19-Dec	26-Dec	2-Jan	9-Jan	16-Jan	23-Jan	30-Jan	6-Feb
Pop.	Location	49	50	51	52	53	1	2	3	4	5
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										
17,000	East Lismore										
15,500	South Lismore										
18,958	Byron Bay - Ocean Shores										
	Byron Bay										
31,104	Ballina										
16,000	Tweed - Murwillumbah										
75,000	Tweed - Banora Point										
25,000	Tweed - Kingscliff										
18,000	Tweed - Hastings Point										
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 not analysed
	SARS-CoV-2 not detected
	SARS-CoV-2 detected
	site moved to composite sample or ceased

- c composite of the separate influent samples
- n result from network sites

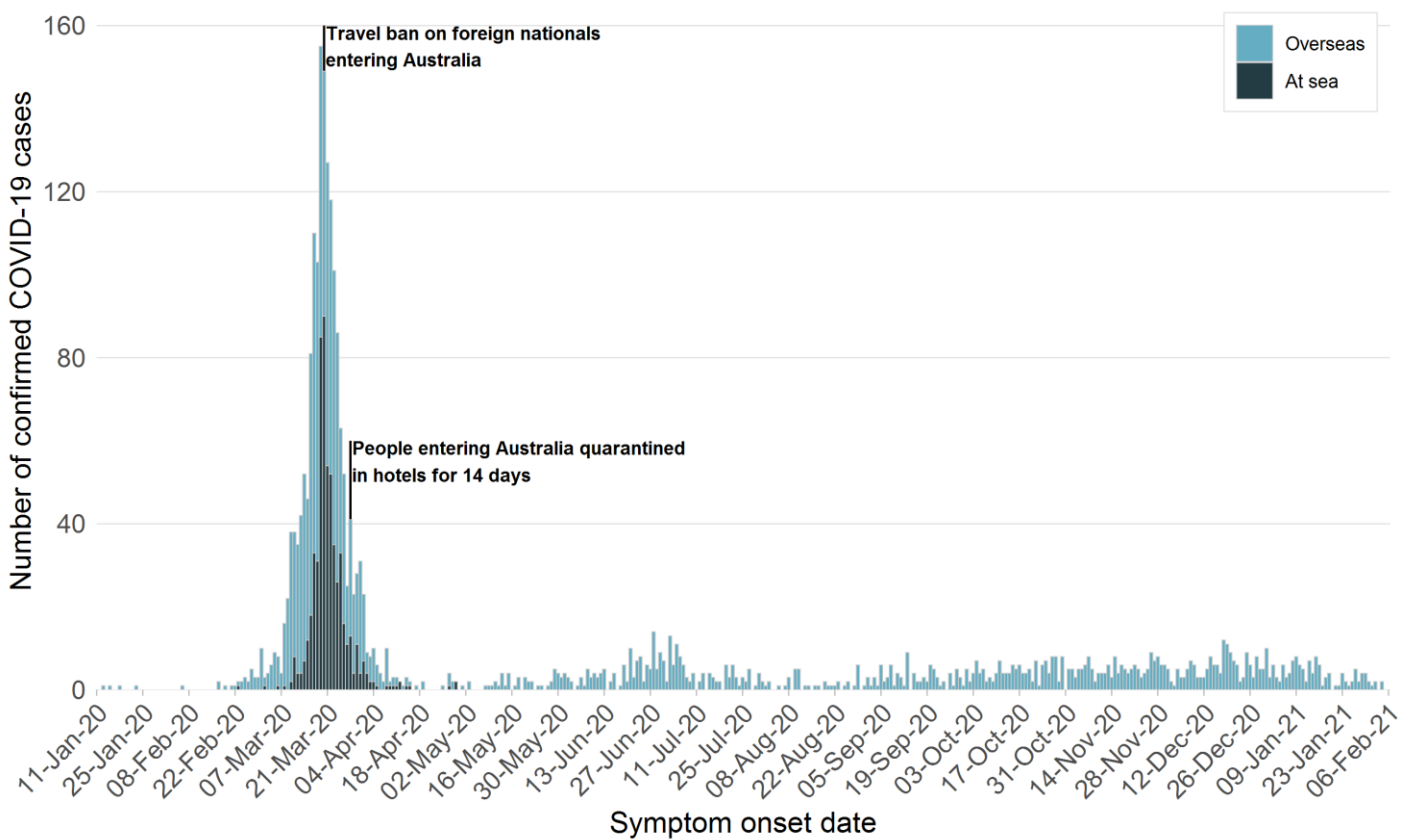
**Interpretation:** In the week ending 6 February, there were four detections of SARS-CoV-2 in sewage samples. These samples were taken from the Glenfield, Bondi and Malabar treatment plants and the sewage network at Ireland Park (within the Liverpool catchment). The Malabar and Bondi treatment plants serve over two million people, including quarantine hotels and known cases. All detections were associated with known locally acquired cases and returned travellers.

## SECTION 8: 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 addition, since 29 March returned travellers have been quarantined in hotels for a 14-day period and travellers who develop symptoms are isolated until no longer infectious.

The graph below shows the number of cases in returned travellers by the date of symptom onset. Cases acquired at sea refers to those cruise ship passengers who acquired their infection prior to disembarking in NSW.

Figure 8. Overseas acquired COVID-19 cases by infection source & illness onset, NSW, 06 February



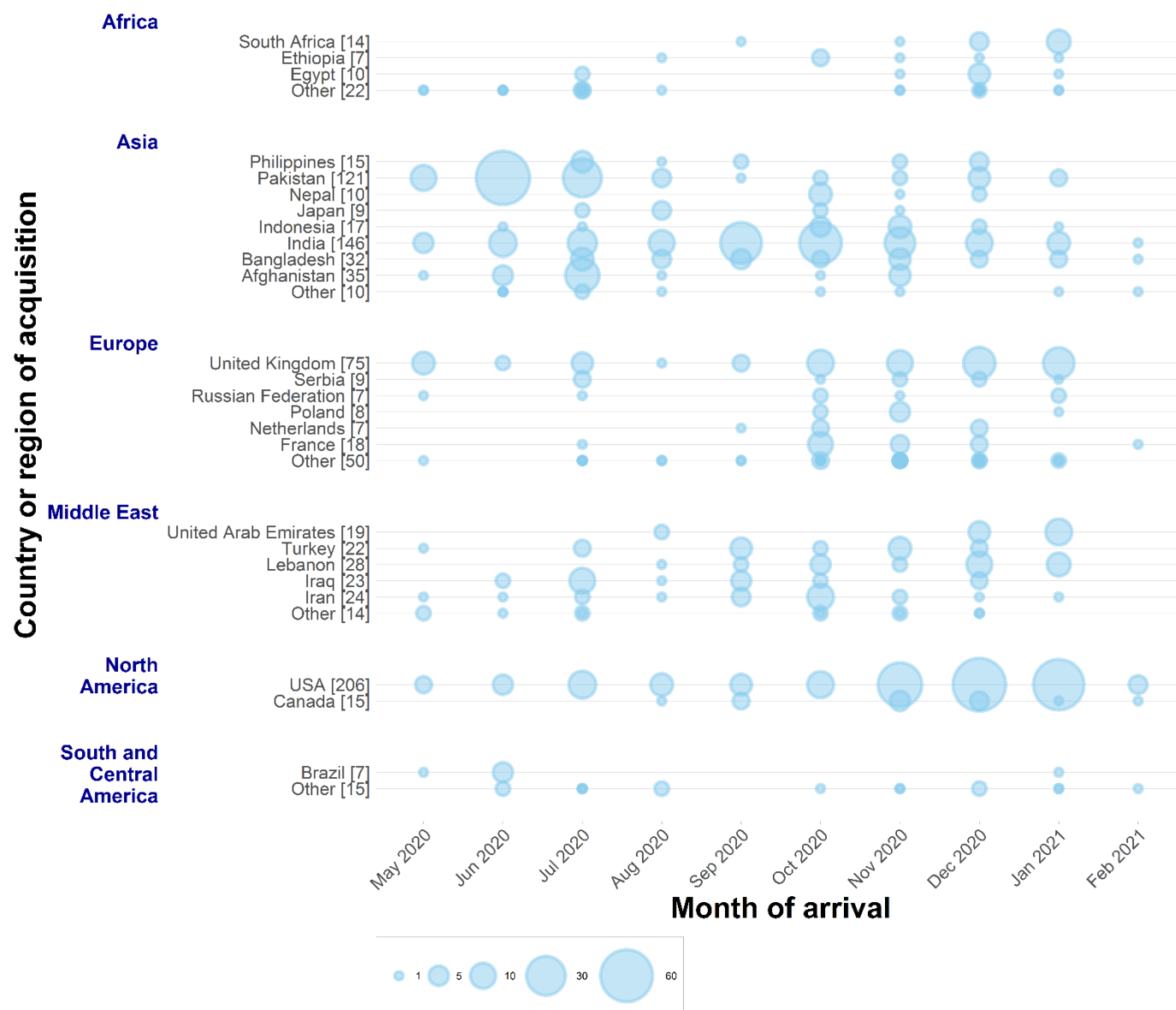
The date of the first positive test is used for cases who did not report symptoms.

**Interpretation:** The number of new cases in returned travellers has decreased markedly and remained low since March 2020 in line with travel restrictions. There were 15 overseas acquired cases reported in the week ending 6 February (down 17% compared to the previous week).

## Country of acquisition of COVID-19 for overseas travellers

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

Figure 9. Overseas acquired COVID-19 cases by country of acquisition and arrival month, reported from May 2020 to 6 February 2021, NSW



**Interpretation:** Since May 2020, the majority of international travellers diagnosed in NSW were likely infected in Asia or North America. In recent months, there has been a steady increase in the number of positive return travellers from the United States of America and the United Kingdom. The pattern seen in COVID-positive travellers over time reflects the evolving nature of the pandemic in those areas.

In the last four weeks, there have been 97 COVID-positive travellers who have arrived in NSW. The table below lists the top 10 countries of acquisition for these travellers.

Table 7. Top 10 countries of acquisition for overseas travellers that have tested positive in the last four weeks, 16 January to 6 February 2021

Country of acquisition of COVID-19	Number (%) of cases in the last four weeks
USA	40 (41%)
United Kingdom	11 (11%)
United Arab Emirates	9 (9%)
Lebanon	6 (6%)
India	4 (4%)
Bangladesh	3 (3%)
Russian Federation	2 (2%)
South Africa	2 (2%)
Sri Lanka	2 (2%)
Other	18 (19%)
Total	97 (100%)

**Interpretation:** In the last four weeks, travellers returning from the United States of America accounted for the largest number of overseas acquired cases (40, 41%), followed by travellers returning from the United Kingdom (11, 11%), and the United Arab Emirates (9, 9%).

## COVID-19 Variants of Concern (VoC) in returned travellers

Mutations of the COVID-19 virus are the basis for new genetic variants and the changing prevalence of variant viruses over time. New variants of COVID-19 may be of concern if they demonstrate to be more infectious than other strains. In the last few weeks NSW Health Pathology has identified two Variants of Concern (B.1.1.7 and B.1.351) in returned travellers in hotel quarantine. VoC B.1.1.7 originated in the United Kingdom and VoC B.1.351 has origins in South Africa. Both strains can now be found in other parts of the world and are defined by multiple mutations, including a shared mutation in the spike protein that binds to the human ACE2 receptor.

NSW Health has strict protocols in place for managing the health of returned travellers and staff which have been further strengthened to address the additional risk associated with the new variants. Since 30 November, 30 returned travellers have tested positive with the two Variants of Concern.

Table 8. Overseas travellers that have tested positive by VoC and week of COVID-19 diagnosis, 30 November 2020 to 6 February 2021

	Previous four weeks (week ending)				30 Nov – 9 Jan	Total since 30 November
	6 Feb	30 Jan	23 Jan	16 Jan		
<b>Overseas acquired cases</b>	15	18	18	46	238	335
Cases with VoC	0	2	4	7	17	30
B.1.1.7	0	1	3	5	13	22
B.1.351	0	1	1	2	4	8
% of overseas cases with VoC	–	11%	22%	15%	7%	9%

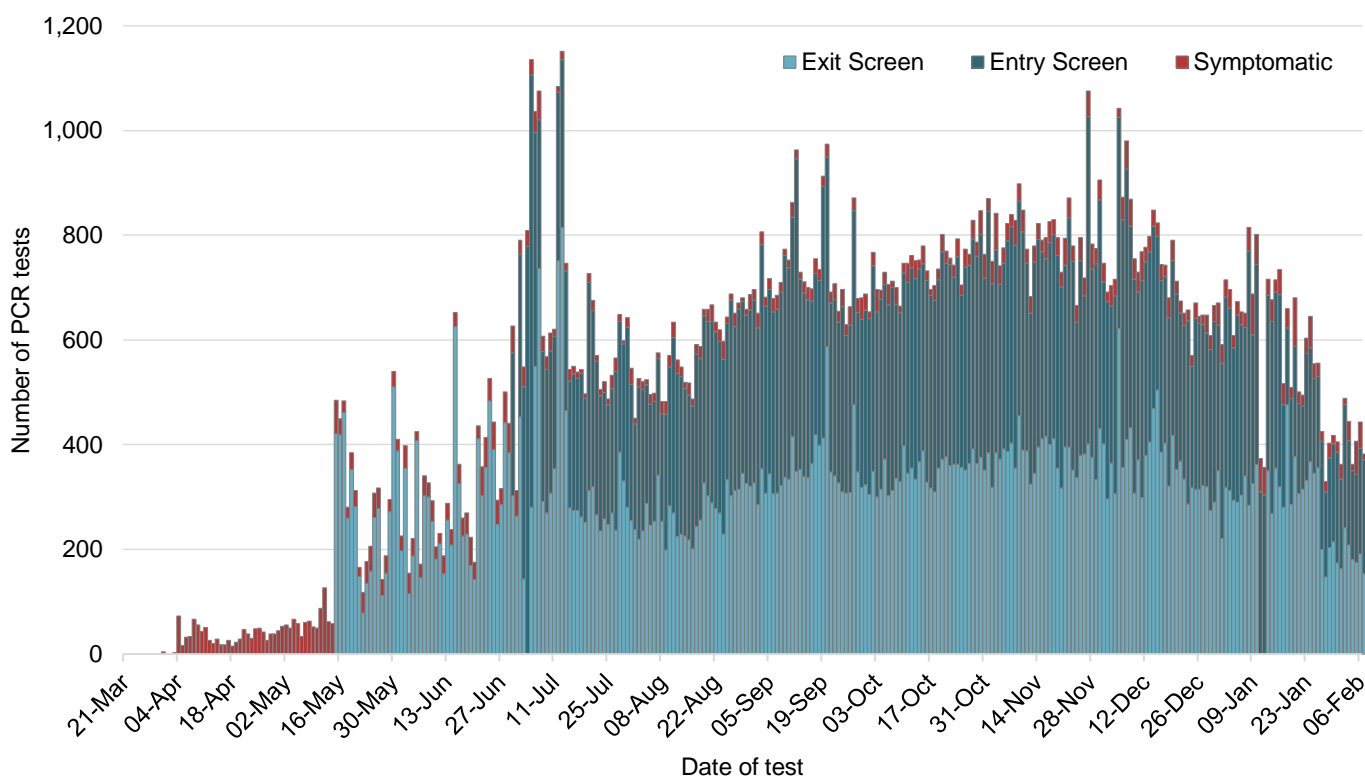
**Interpretation:** In the week ending 6 February, no returned travellers in hotel quarantine have been identified as having a COVID-19 Variant of Concern (B.1.1.7 or B.1.351). Since 30 November 2020, travellers with a VoC likely acquired their infection in the United Kingdom (12), South Africa (7), Lebanon (4), the United Arab Emirates (4) and one case in each India and Nigeria. For one case the likely country of acquisition was unable to be determined.

## Hotel quarantine

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

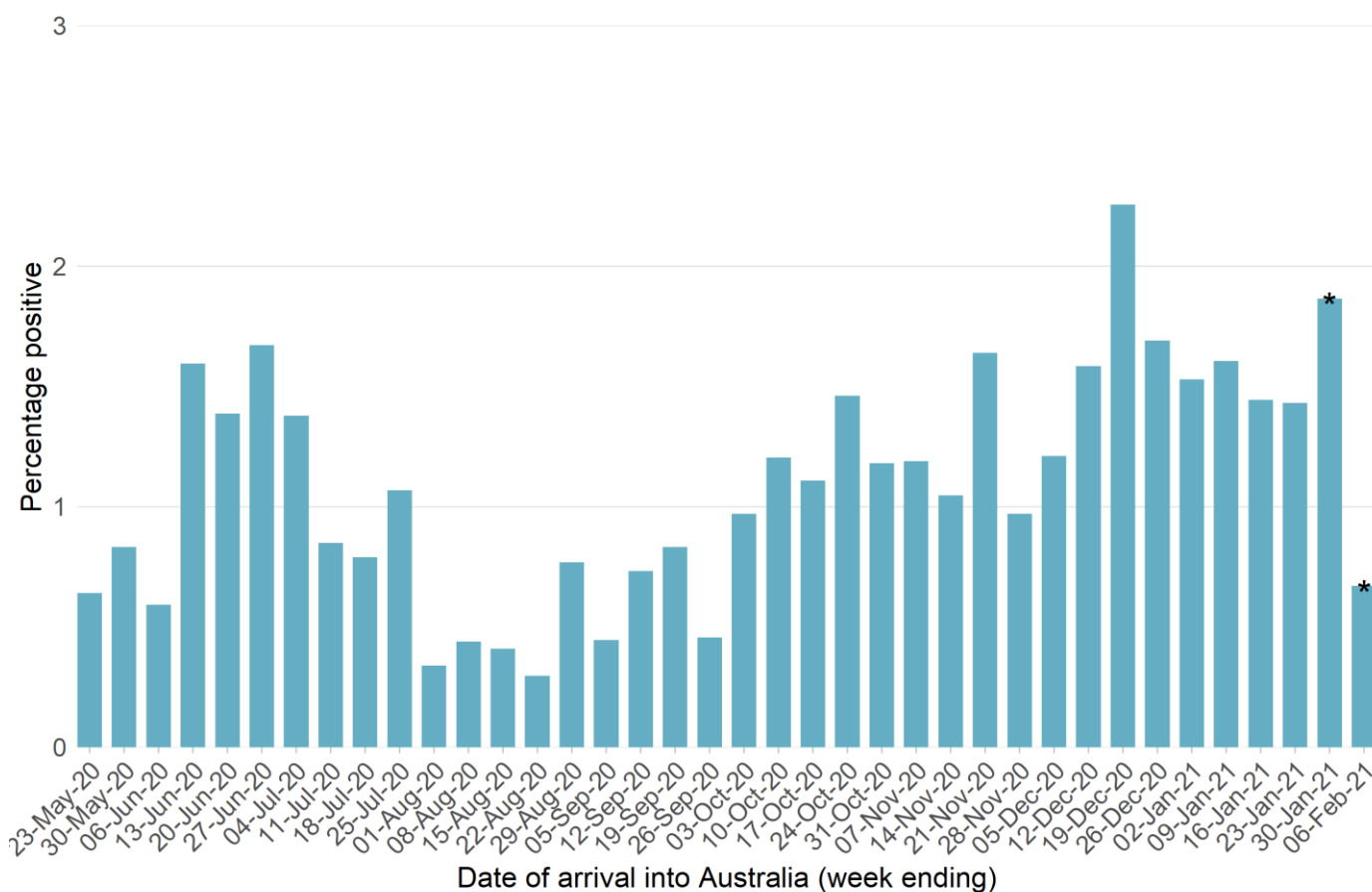
Since hotel quarantine began on 29 March 2020, a total of 169,000 PCR tests have been conducted with 855 overseas acquired cases and 4 interstate acquired COVID-19 cases detected while in hotel quarantine. In the last four weeks, 6,390 returned travellers received an entry swab on day two in hotel quarantine and 7,193 returned travellers received an exit swab.

Figure 10. COVID-19 testing in returned travellers in hotel quarantine, reported from 21 March 2020 to 6 February 2021, NSW



**Interpretation:** In the week ending 6 February, there were 2,912 tests of travellers conducted through the hotel quarantine screening programs.

Figure 11. COVID-19 percentage positive in returned travellers in hotel quarantine by week of arrival in Australia, reported from week ending 23 May 2020 to week ending 6 February, NSW, 2020 and 2021



\*Returned travellers in the past 14 days are still in hotel quarantine and may return a positive result

**Interpretation:** The increase in returned travellers testing positive during their quarantine period since September 2020 is consistent with the current high numbers of COVID-19 cases being reported worldwide. Data is likely incomplete for returned travellers who have arrived within the last two weeks as they are still in hotel quarantine.

## SECTION 9: OTHER RESPIRATORY INFECTIONS IN NSW

### Influenza and other respiratory virus cases and tests reported in NSW, up to 31 January 2021

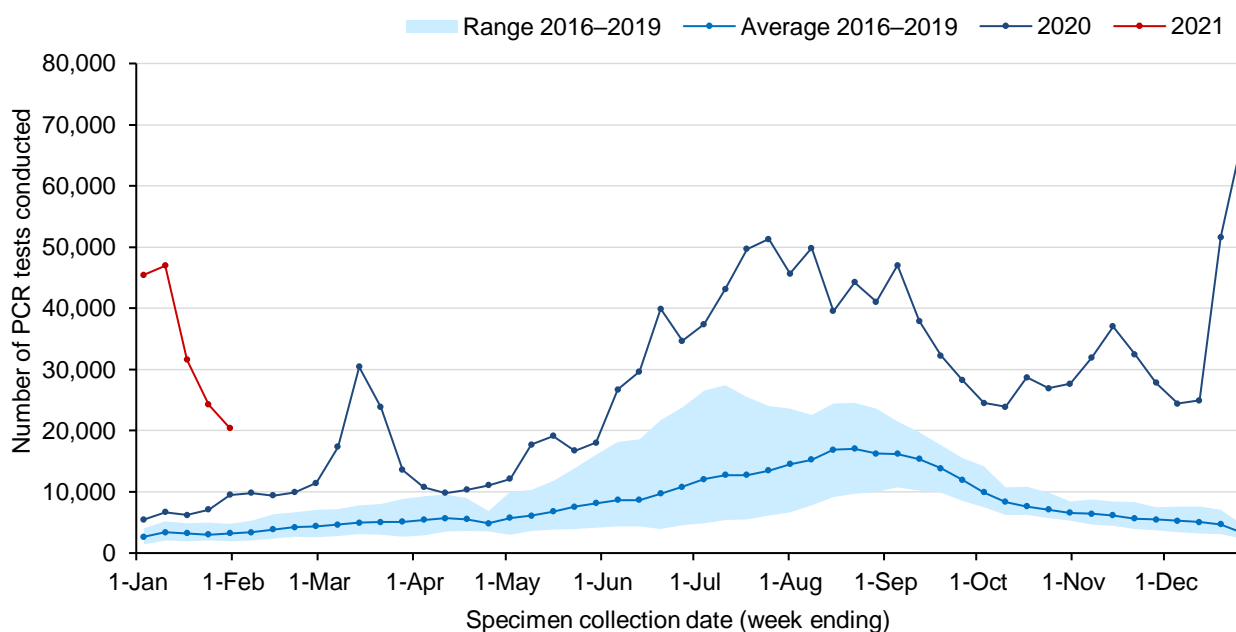
In NSW, routine surveillance for influenza and other respiratory viruses is conducted through sentinel laboratories. The number of all PCR tests (positive and negative) are provided to NSW Health by participating laboratories each week. Testing counts reflect the number of influenza PCR tests conducted;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

The most recent data available is for testing carried out to 31 January 2021. A total of 168,596 influenza tests have been performed at participating laboratories in the four weeks from 4 January to 31 January 2021. Refer to Appendix B for PCR testing results for a range of respiratory viruses.

#### How much influenza testing is happening?

The red line in the figure below shows the number of PCR tests for influenza carried out each week in 2021 and the black line shows the testing numbers for 2020. The blue line shows the average number of tests carried out for the same week in the previous four years (2016–2019) and the shaded area shows the range of counts reported in the same time period.

Figure 12. Testing for influenza by week, to 31 January 2021

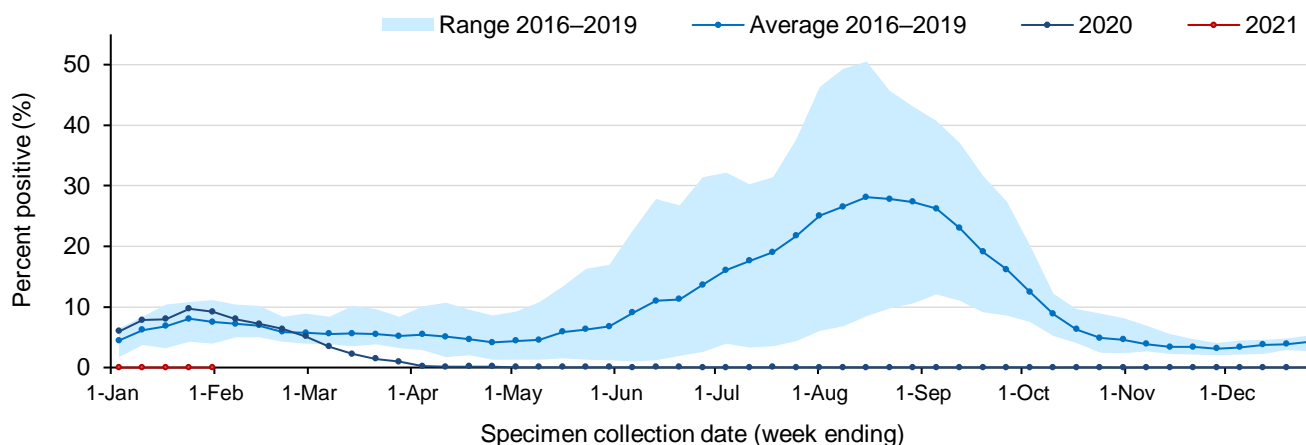


**Interpretation:** In the week ending 31 January, the number of influenza tests performed decreased significantly but continues to exceed the four-year average for this time of year.

## How much influenza is circulating?

The graph below shows the proportion of tests found to be positive for influenza with the red line showing weekly counts for 2021, the black line showing counts for 2020, the blue line showing the average for 2016 to 2019 and the shaded area showing the range recorded for 2016 to 2019.

Figure 13. Proportion of tests positive for influenza, to 31 January 2021

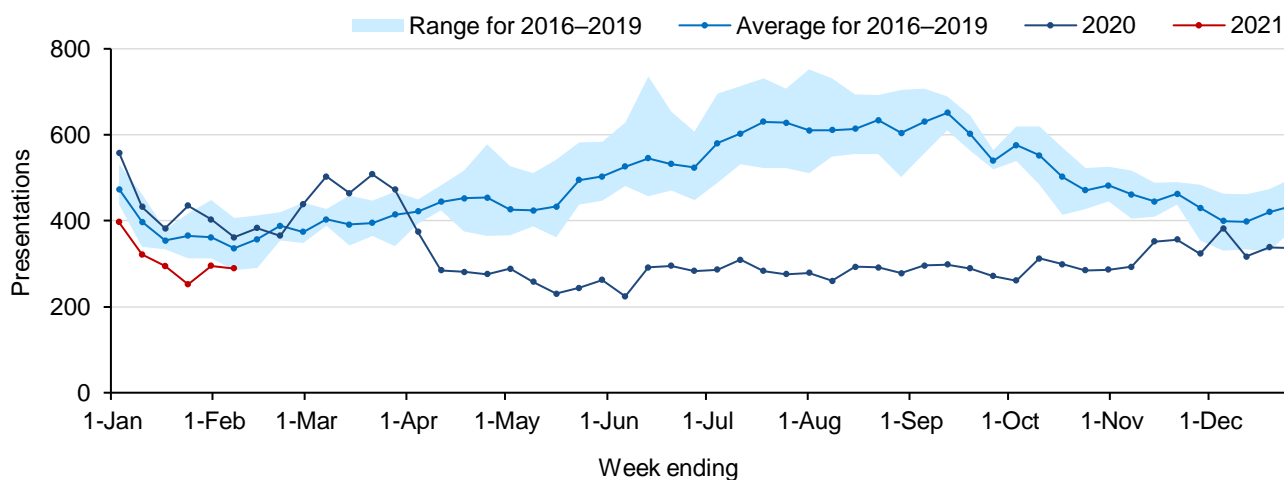


**Interpretation:** In the week ending 31 January, the percent of influenza tests that were positive continued to be very low (<0.01%), indicating limited influenza transmission in the community. Since early March 2020, this percentage has remained far lower than the usual range for the time of year.

## How are emergency department presentations for respiratory infections tracking?

The figure below shows weekly pneumonia presentations to Emergency Departments in NSW, using PHREDSS<sup>2</sup>. The red line shows the weekly counts for 2021, the black line showing counts for 2020, the blue line showing the average for 2016 to 2019 and the shaded area showing the range recorded for 2016 to 2019.

Figure 14. Emergency Department pneumonia presentations in NSW by week, to 7 February 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 7 February, pneumonia presentations decreased slightly while still remaining below the seasonal range for this time of year.

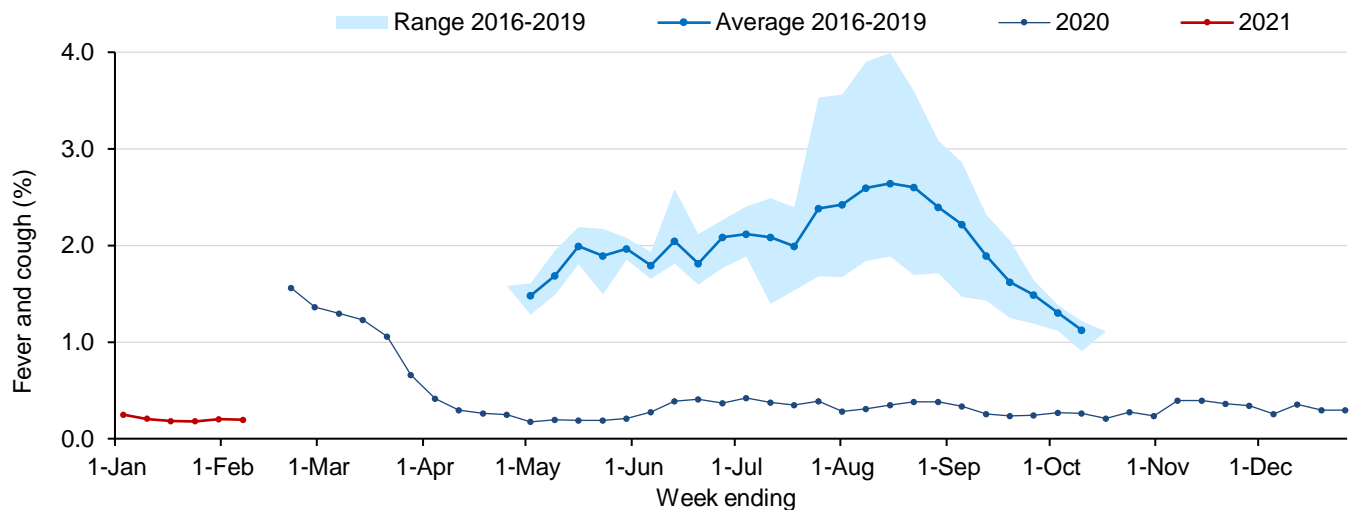
<sup>2</sup> NSW Health Public Health Rapid, Emergency Disease and Syndromic Surveillance (PHREDSS) system, CEE, NSW Ministry of Health. Comparisons are made with data for the preceding 5 years. Includes unplanned presentations to 67 NSW emergency departments (accounts for 87% of total public ED activity).



## 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 commenced at the end of February this year given the COVID-19 outbreak.

Figure 15. Proportion of FluTracker participants in NSW reporting influenza-like illness, to 7 February 2021



**Interpretation:** In NSW in the week ending 7 February of the 16,034 people surveyed, 31 people (0.19%) reported flu-like symptoms. In the last four weeks, 78% (95/122) of new cases of flu-like illness also reported having a COVID-19 test.

## APPENDIX A: COVID-19 PCR TESTS IN NSW BY LOCAL GOVERNMENT AREA

Local Health District	Local Government Area	Week ending				Total since January 2020	
		6-February		30-January		No.	Tests per 1,000 population
		No.	Tests per 1,000 population	No.	Tests per 1,000 population		
<b>Central Coast</b>	Central Coast / LHD Total <sup>2</sup>	2458	6.97	2231	6.32	174869	495.57
<b>Far West</b>	Balranald	3	1.28	7	2.99	600	256.63
	Broken Hill	87	4.98	369	21.11	7993	457.29
	Central Darling	4	2.18	6	3.26	500	271.89
	Wentworth	35	4.96	77	10.92	2979	422.37
	LHD Total <sup>2</sup>	129	4.28	459	15.23	12072	400.48
<b>Hunter New England</b>	Armidale Regional	165	5.36	138	4.48	11870	385.65
	Cessnock	223	3.72	223	3.72	18648	310.88
	Dungog	34	3.61	27	2.87	2907	308.5
	Glen Innes Severn	19	2.14	26	2.93	2189	246.76
	Gunnedah	44	3.47	45	3.55	3878	305.81
	Gwydir	7	1.31	9	1.68	823	153.75
	Inverell	83	4.91	62	3.67	4952	293.19
	Lake Macquarie	1418	6.89	1305	6.34	106037	514.99
	Liverpool Plains	34	4.3	28	3.54	2512	317.85
	Maitland	700	8.22	578	6.79	47443	557.07
	Mid-Coast	356	3.79	337	3.59	29507	314.45
	Moree Plains	53	4	23	1.73	3560	268.46
	Muswellbrook	63	3.85	74	4.52	5426	331.32
	Narrabri	20	1.52	30	2.28	3123	237.76
	Newcastle	1332	8.04	1260	7.61	104130	628.91
	Port Stephens	397	5.4	322	4.38	34256	466.19
	Singleton	129	5.5	129	5.5	11238	479.01
	Tamworth Regional	377	6.03	300	4.8	26634	425.86
	Tenterfield	15	2.27	13	1.97	1275	193.36
	Upper Hunter Shire	63	4.44	59	4.16	4875	343.79
	Uralla	18	2.99	17	2.83	1469	244.34
	Walcha	2	0.64	7	2.23	1053	335.99
	LHD Total <sup>2</sup>	5548	5.83	5010	5.26	427483	448.86
<b>Illawarra Shoalhaven</b>	Kiama	158	6.76	135	5.77	12343	527.79
	Shellharbour	459	6.27	388	5.3	37647	514.07
	Shoalhaven	545	5.16	484	4.58	41861	396.23
	Wollongong	1558	7.14	1416	6.49	115452	529.32
	LHD Total <sup>2</sup>	2720	6.48	2423	5.77	207303	494.03
<b>Mid North Coast</b>	Bellingen	60	4.62	60	4.62	4515	347.41
	Coffs Harbour	356	4.61	372	4.81	24713	319.8
	Kempsey	178	5.98	165	5.55	10766	361.94
	Nambucca	88	4.44	91	4.59	5976	301.74
	Port Macquarie-Hastings	431	5.1	418	4.95	31741	375.52
LHD Total <sup>2</sup>	1113	4.93	1106	4.9	77711	344.36	

Local Health District	Local Government Area	Week ending				Total since January 2020	
		6-February		30-January		No.	Tests per 1,000 population
		No.	Tests per 1,000 population	No.	Tests per 1,000 population		
Murrumbidgee	Albury	267	4.91	233	4.29	20988	386.14
	Berrigan	13	1.49	17	1.94	2181	249.26
	Bland	27	4.52	14	2.34	1734	290.35
	Carrathool	2	0.71	1	0.36	395	141.12
	Coolamon	28	6.45	17	3.92	1515	349
	Cootamundra-Gundagai Regional	23	2.05	38	3.38	3515	312.86
	Edward River	45	4.95	35	3.85	2952	324.97
	Federation	55	4.42	52	4.18	3423	275.23
	Greater Hume Shire	42	3.9	42	3.9	3645	338.63
	Griffith	149	5.51	120	4.44	10729	396.94
	Hay	6	2.03	4	1.36	619	209.9
	Hilltops	69	3.69	58	3.1	6163	329.5
	Junee	24	3.59	31	4.64	1522	227.74
	Lachlan <sup>1</sup>	16	2.63	9	1.48	1119	184.2
	Leeton	41	3.58	34	2.97	3178	277.68
	Lockhart	7	2.13	13	3.96	912	277.63
	Murray River	9	0.74	4	0.33	982	81.04
	Murrumbidgee	19	4.85	10	2.55	943	240.75
	Narrandera	8	1.36	10	1.7	1295	219.53
	Snowy Valleys	47	3.25	46	3.18	4937	340.98
Temora	18	2.85	21	3.33	1478	234.34	
Wagga Wagga	493	7.55	418	6.41	30400	465.84	
<i>LHD Total<sup>2</sup></i>	1398	4.69	1222	4.1	103883	348.47	
Nepean Blue Mountains	Blue Mountains	691	8.73	610	7.71	52847	667.95
	Hawkesbury	461	6.85	406	6.03	36652	544.64
	Lithgow	73	3.38	60	2.78	7637	353.48
	Penrith	1581	7.42	1380	6.48	128681	604.2
	<i>LHD Total<sup>2</sup></i>	2787	7.13	2437	6.23	224022	572.96
Northern NSW	Ballina	266	5.96	258	5.78	16800	376.45
	Byron	267	7.61	239	6.81	16398	467.43
	Clarence Valley	215	4.16	192	3.72	13689	264.97
	Kyogle	35	3.98	30	3.41	2164	246.02
	Lismore	265	6.07	248	5.68	17345	396.98
	Richmond Valley	139	5.92	117	4.99	7982	340.17
	Tenterfield	15	2.27	13	1.97	1275	193.36
	Tweed	527	5.43	511	5.27	29494	304.06
<i>LHD Total<sup>2</sup></i>	1718	5.54	1597	5.15	104169	335.64	
Northern Sydney	Hornsby	1379	9.07	1161	7.64	82149	540.24
	Hunters Hill	329	21.96	285	19.03	18494	1234.58
	Ku-ring-gai	1916	15.07	1606	12.63	107193	843.02
	Lane Cove	852	21.22	725	18.06	52835	1315.78
	Mosman	439	14.17	283	9.13	22327	720.67
	North Sydney	674	8.98	595	7.93	41018	546.75

Local Health District	Local Government Area	Week ending				Total since January 2020	
		6-February		30-January		No.	Tests per 1,000 population
		No.	Tests per 1,000 population	No.	Tests per 1,000 population		
	Northern Beaches	4018	14.69	3471	12.69	293231	1072.15
	Parramatta <sup>1</sup>	1904	7.4	1704	6.63	120692	469.26
	Ryde	1228	9.35	1099	8.37	74765	569.55
	Willoughby	800	9.85	643	7.92	41379	509.66
	<i>LHD Total<sup>2</sup></i>	12040	12.6	10233	10.7	757338	792.26
South Eastern Sydney	Bayside	1431	8.02	1176	6.59	80201	449.57
	Georges River	1124	7.05	908	5.69	67881	425.66
	Randwick	2322	14.92	1786	11.47	110538	710.17
	Sutherland Shire	2209	9.58	1821	7.9	144123	624.96
	Sydney <sup>1</sup>	3322	13.49	2857	11.6	178839	725.98
	Waverley	1222	16.45	1016	13.68	63180	850.39
	Woollahra	1068	17.98	853	14.36	53162	895.18
	<i>LHD Total<sup>2</sup></i>	10506	10.95	8552	8.92	584070	608.98
South Western Sydney	Camden	991	9.77	814	8.02	77079	759.87
	Campbelltown	1275	7.46	1090	6.38	103547	605.74
	Canterbury-Bankstown <sup>1</sup>	2530	6.69	2274	6.02	179348	474.57
	Fairfield	865	4.09	821	3.88	81674	385.81
	Liverpool	1477	6.49	1299	5.71	127651	560.89
	Wingecarribee	331	6.47	347	6.79	32488	635.35
	Wollondilly	235	4.42	261	4.91	22208	417.84
	<i>LHD Total<sup>2</sup></i>	6313	6.08	5730	5.52	533138	513.36
Southern NSW	Bega Valley	93	2.7	104	3.02	11724	340.06
	Eurobodalla	198	5.15	161	4.18	17940	466.3
	Goulburn Mulwaree	187	6.01	134	4.3	12275	394.29
	Queanbeyan-Palerang Regional	228	3.73	198	3.24	16977	277.86
	Snowy Monaro Regional	85	4.09	86	4.14	7497	360.52
	Upper Lachlan Shire	56	6.95	34	4.22	2679	332.42
	Yass Valley	47	2.75	38	2.22	4132	241.82
	<i>LHD Total<sup>2</sup></i>	894	4.12	755	3.48	73254	337.47
Sydney	Burwood	203	5	214	5.27	16599	408.72
	Canada Bay	1049	10.92	863	8.98	63252	658.37
	Canterbury-Bankstown <sup>1</sup>	2530	6.69	2274	6.02	179348	474.57
	Inner West	2567	12.78	2041	10.16	148057	737.3
	Strathfield	457	9.74	400	8.52	28917	616.23
	Sydney <sup>1</sup>	3322	13.49	2857	11.6	178839	725.98
	<i>LHD Total<sup>2</sup></i>	7823	11.23	6523	9.36	457996	657.31
Western NSW	Bathurst Regional	272	6.24	249	5.71	20780	476.41
	Blayney	41	5.56	26	3.52	3410	462.12
	Bogan	7	2.71	7	2.71	944	365.89
	Bourke	5	1.93	5	1.93	560	216.22
	Brewarrina	3	1.86	7	4.35	342	212.29
	Cabonne	33	2.42	32	2.35	3367	246.96
	Cobar	16	3.43	14	3.01	1157	248.39

Local Health District	Local Government Area	Week ending				Total since January 2020	
		6-February		30-January		No.	Tests per 1,000 population
		No.	Tests per 1,000 population	No.	Tests per 1,000 population		
	Coonamble	7	1.77	16	4.04	1009	254.93
	Cowra	55	4.32	29	2.28	3724	292.24
	Dubbo Regional	272	5.06	251	4.67	20066	373.54
	Forbes	20	2.02	28	2.83	2371	239.35
	Gilgandra	16	3.77	13	3.07	1036	244.4
	Lachlan <sup>1</sup>	16	2.63	9	1.48	1119	184.2
	Mid-Western Regional	129	5.11	115	4.55	9160	362.76
	Narromine	33	5.06	28	4.3	1901	291.7
	Oberon	8	1.48	10	1.85	1813	335.06
	Orange	272	6.41	283	6.67	23263	548
	Parkes	40	2.7	34	2.29	4441	299.32
	Walgett	21	3.53	12	2.02	1697	285.07
	Warren	21	7.79	18	6.67	1412	523.54
	Warrumbungle Shire	41	4.42	37	3.99	2880	310.41
	Weddin	15	4.15	11	3.04	865	239.41
	<i>LHD Total<sup>2</sup></i>	1337	4.69	1231	4.32	106987	375.38
<b>Western Sydney</b>	Blacktown	2864	7.65	2766	7.39	206261	550.84
	Cumberland	1831	7.58	1760	7.29	134224	555.74
	Parramatta <sup>1</sup>	1904	7.4	1704	6.63	120692	469.26
	The Hills Shire	2089	11.74	1730	9.72	131860	740.92
	<i>LHD Total<sup>2</sup></i>	8342	7.92	7650	7.26	574526	545.38
<b>NSW Total<sup>3</sup></b>		70800	8.75	63155	7.81	4709447	582.15

<sup>1</sup>Local Government Area (LGA) spans multiple Local Health Districts.

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

<sup>3</sup>NSW Total counts and rates 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 31 January 2021

The reported testing numbers reflect the number of influenza PCR tests conducted. Not all samples are tested for all of the other respiratory viruses. Therefore, data presented may tend to under-represent current respiratory virus activity in NSW.

### Testing numbers in NSW from 28 December 2020 – 31 January 2021

Specimen collection date	PCR tests conducted	Influenza A		Influenza B		Adeno-virus	Para-influenza	RSV	Rhino-virus	HMPV**	Entero-virus
		No.	%Pos.	No.	%Pos.						
Total	168,596	2	0.00%	0	0.00%	416	88	3,275	3,541	23	560
<b>Month ending</b>											
31 January*	168,596	2	0.00%	0	0.00%	416	88	3,275	3,541	23	560
<b>Week ending</b>											
3 January	45,456	1	0.00%	0	0.00%	66	25	919	664	1	95
10 January	46,948	0	0.00%	0	0.00%	108	25	744	729	9	98
17 January	31,565	1	0.00%	0	0.00%	82	14	573	634	3	106
24 January	24,257	0	0.00%	0	0.00%	90	9	453	713	1	110
31 January	20,370	0	0.00%	0	0.00%	70	15	586	801	9	151

### Testing numbers in NSW from January – 27 December 2020

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

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

HMPV – Human metapneumovirus

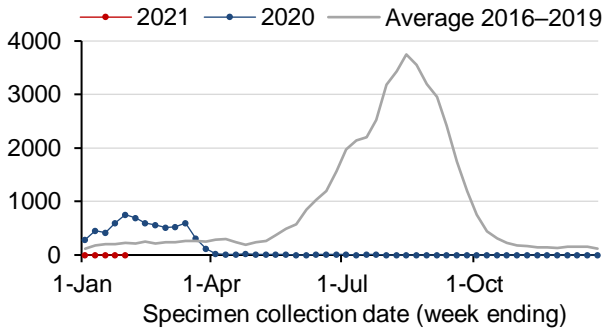
RSV - Respiratory syncytial virus

\*Five-week period

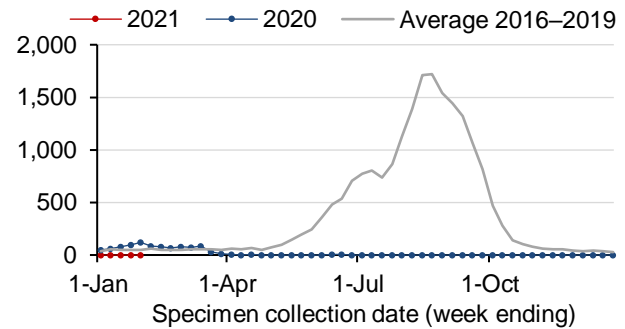
## APPENDIX C: NUMBER OF POSITIVE PCR TEST RESULTS FOR INFLUENZA AND OTHER RESPIRATORY VIRUSES AT SENTINEL NSW LABORATORIES, January 2020 to 31 January 2021

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.

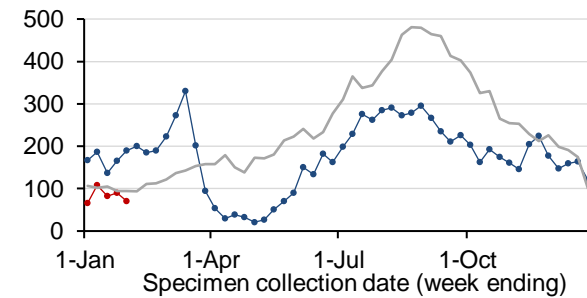
Influenza A



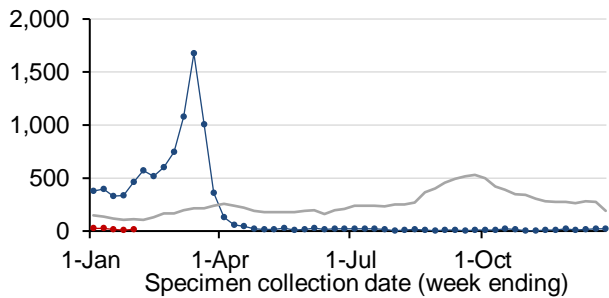
Influenza B



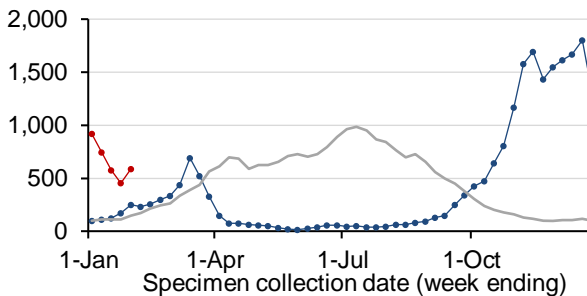
Adenovirus



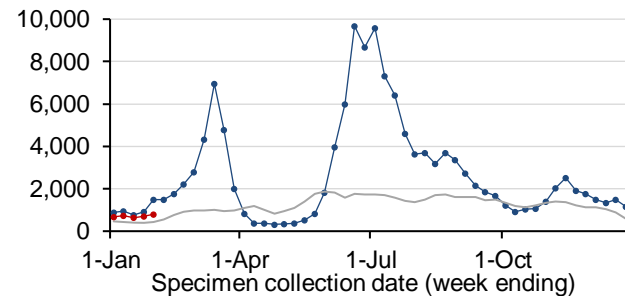
Parainfluenza



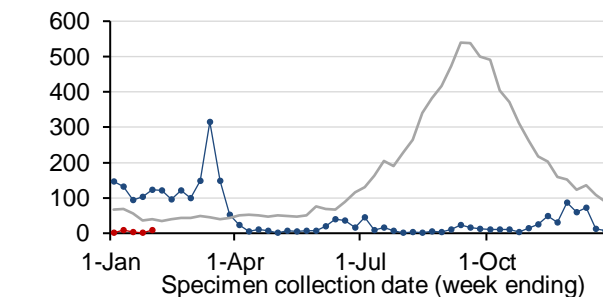
Respiratory syncytial virus (RSV)



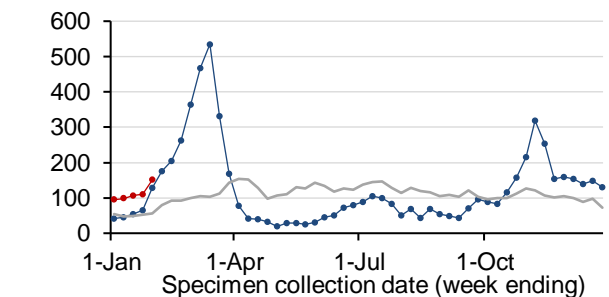
Rhinovirus



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.

## 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.