

# COVID-19 WEEKLY SURVEILLANCE IN NSW

## EPIDEMIOLOGICAL WEEK 52, ENDING 26 DECEMBER 2020

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### SUMMARY FOR THE WEEK ENDING 26 December 2020

- There were 63 locally acquired cases reported in NSW this week. Of these:
  - 52 cases were linked to the Avalon cluster.
  - Seven cases were reported in Northern Sydney LHD residents but with no direct links to the Avalon cluster. This includes two cases who are household contacts. Source investigations are still underway for the remaining five cases.
  - Two cases were reported in patient transport workers that were involved in the transportation of returned travellers from Sydney airport to hospital.
  - Two cases were reported in residents of South Eastern Sydney LHD and are under investigation.
- There was one COVID-19 related death reported this week in a man whose infection was diagnosed in March.
- Thirty-five per cent of locally-acquired cases reporting symptoms were in isolation for at least 48 hours before onset of their symptoms and prior to being infectious.
- The majority of locally-acquired cases are residents of Northern Sydney LHD (38, 60%). Of these, 28 cases reside in the Northern zone of the Northern beaches LGA and 5 reside in the southern zone of the Northern Beaches LGA.
- Testing numbers have almost doubled for the second consecutive week (272,488 tests compared with 138,054 last week). Northern Beaches LGA residents account for 27% of total tests conducted.
- The NSW Sewage Surveillance Program reported nine detections of SARS-CoV-2 from eight locations. These samples were taken from Liverpool, Gosford – Kincumber, Hornsby Heights, Brooklyn, Bondi, North Head, Malabar and Warriewood treatment plants. Detections from these catchment areas are associated with reported cases from the Avalon cluster and returned travellers in hotel quarantine.
- All people are reminded of the need to isolate and seek testing as soon as any symptoms develop, to limit spread of COVID-19 to other people.

## TABLE OF CONTENTS

SUMMARY FOR THE WEEK ENDING 26 December 2020 .....	1
TABLE OF CONTENTS .....	2
SECTION 1: HOW IS THE OUTBREAK TRACKING IN NSW? .....	4
SECTION 2: COVID-19 TESTING IN NSW.....	6
SECTION 3: COVID-19 TRANSMISSION IN NSW IN THE LAST FOUR WEEKS.....	12
SECTION 4: CURRENT COVID-19 CLUSTERS IN NSW .....	14
SECTION 5: COVID-19 IN SPECIFIC POPULATIONS.....	16
SECTION 6: DEATHS .....	17
SECTION 7: NSW Sewage Surveillance Program .....	18
SECTION 8: COVID-19 IN RETURNED TRAVELLERS .....	21
SECTION 9: OTHER RESPIRATORY INFECTIONS IN NSW .....	25
APPENDIX A: COVID-19 PCR TESTS IN NSW .....	31
APPENDIX B: NUMBER OF POSITIVE PCR TEST RESULTS FOR INFLUENZA AND OTHER RESPIRATORY VIRUSES AT SENTINEL NSW LABORATORIES, 1 January to 20 December 2020 .....	35
APPENDIX C: NUMBER OF POSITIVE PCR TEST RESULTS FOR INFLUENZA AND OTHER RESPIRATORY VIRUSES AT SENTINEL NSW LABORATORIES, 1 January to 20 December 2020.....	36
GLOSSARY.....	37

## Indicators of effective prevention measure for COVID-19 in NSW per day for the week ending 26 December 2020

	Week of reporting	
	Week ending 26-Dec	Week ending 19-Dec
Number of cases with symptoms at diagnosis	84% (53/63)	74% (54/73)
Proportion of cases in isolation at least 48 hours before symptoms	35% (18/53)	4% (2/54)
Of the cases not in isolation 48 hours prior to symptoms:		
Proportion tested (swabbed) within:		
• 1 day of symptom onset	69% (24/35)	63% (33/52)
• 2 days of symptom onset	86% (30/35)	79% (41/52)
• 3 days of symptom onset	91% (32/35)	92% (48/52)
Proportion tested more than 3 days after symptom onset	9% (3/35)	8% (4/52)
Proportion who entered isolation within:		
• 1 day of symptom onset	74% (26/35)	63% (33/52)
• 2 days of symptom onset	94% (33/35)	81% (42/52)
• 3 days of symptom onset	97% (34/35)	88% (46/52)
Proportion who entered isolation more than 3 days after symptom onset	3% (1/35)	12% (6/52)
Number of tests conducted	272,488	138,054
Proportion notified to NSW Health by the laboratory within:		
• 1 day of swab collection	84% (53/63)	89% (65/73)
• 2 days of swab collection	100% (63/63)	100% (73/73)
• 3 days of swab collection	100% (63/63)	100% (73/73)
Proportion notified to NSW Health by the laboratory more than 3 days after the swab collection	0% (0/63)	0% (0/73)
Proportion of locally-acquired cases interviewed by public health staff within 1 day of notification to NSW Health	100% (63/63)	99% (72/73)
Proportion of close contacts (identified by the case) contacted by public health within 48 hours of case notification	100%	100%

**Interpretation:** In the week ending the 26 December. Ten cases (16%) did not report symptoms at the time of diagnosis and had sought testing because they were either close contacts or had been in a venue that had been visited by confirmed cases of COVID-19. Of the 53 cases who were symptomatic, almost three-quarters (74%) were in isolation within one day of symptom onset. One case entered isolation more than three days after symptom onset. It is important that people seek testing immediately if symptoms develop. Thirty-five per cent of cases were in isolation for at least 48 hours before onset of their symptoms, meaning that they were in isolation while infectious and so did not pose of a risk of transmission to anyone else.

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

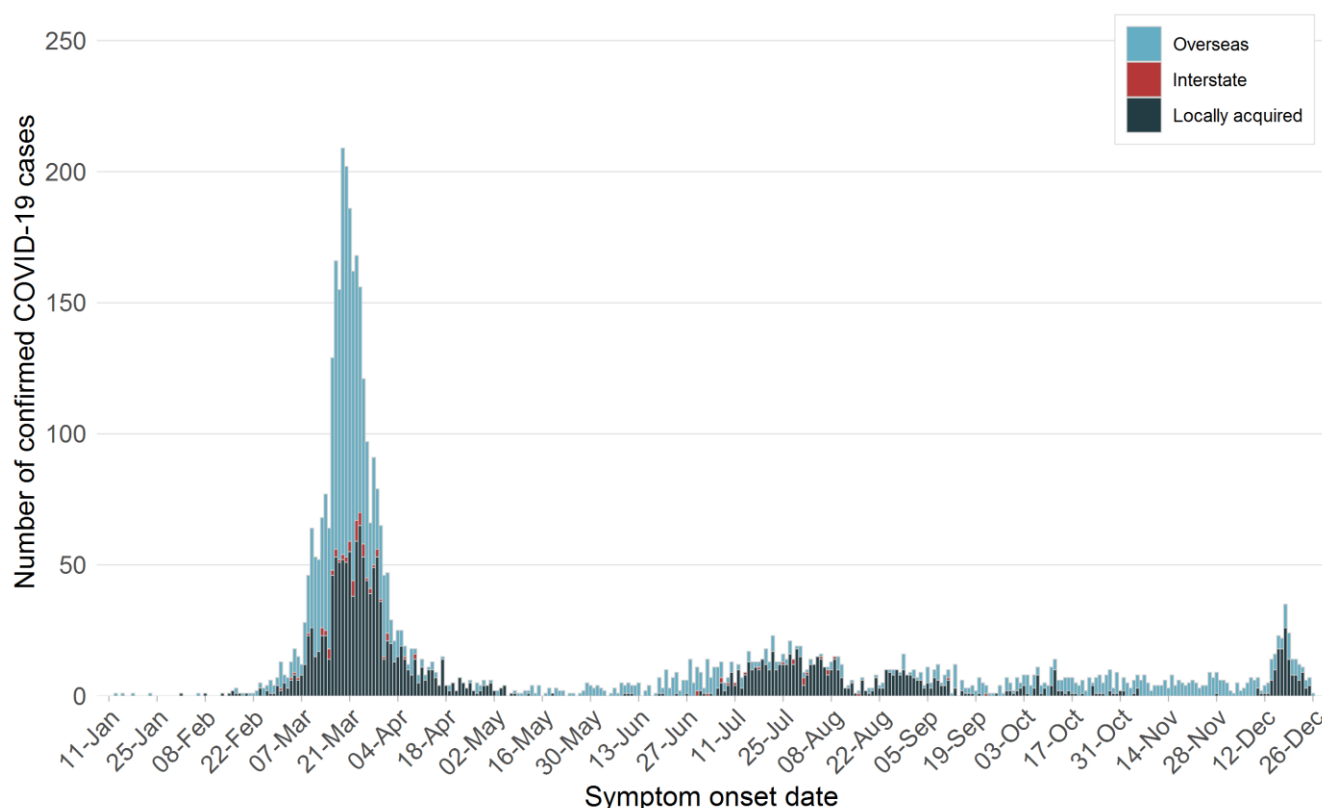
Table 1. COVID-19 cases and tests reported in NSW, up to 26 December 2020

	Week ending 26 Dec	Week ending 19 Dec	% change	Total to 26 Dec
Number of cases	112	109	↑3%	4,674
Overseas acquired	49	36	↑36%	2,578
Interstate acquired	0	0	-	90
Locally acquired	63	73	↓14	2,006
No links to other cases or clusters	7	1	↑600	441
Number of deaths	1	0	-	56
Number of tests	272,488	138,054	↑97%	4,029,185

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 and illness onset, NSW, 2020



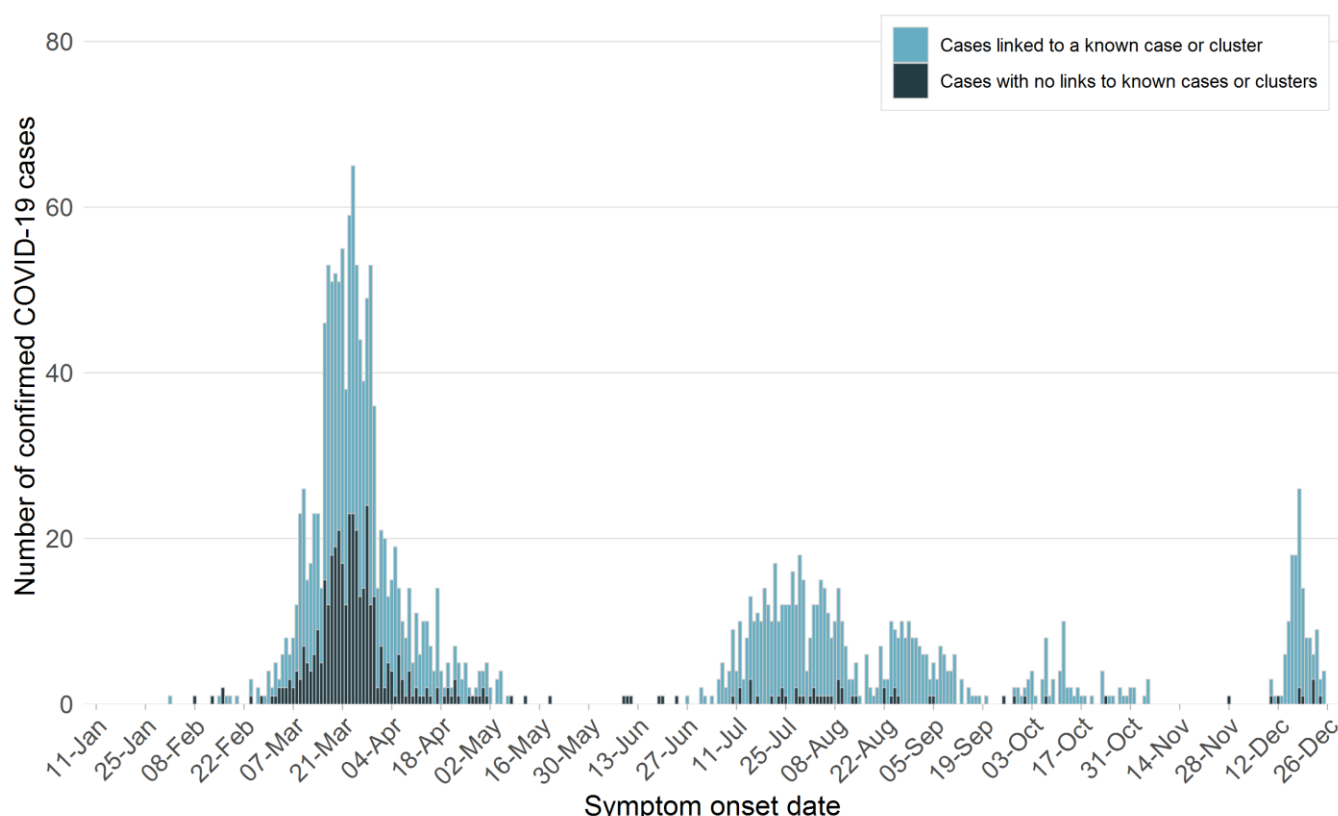
The date of the first positive test is used for cases who did not report symptoms.

**Interpretation:** There were 74 cases of COVID-19 reported in NSW with a symptom onset date in week ending 26 December. Of these, more than half 41/74 (55%) were locally acquired infections.

## 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. Locally acquired COVID-19 cases by likely infection source and illness onset, NSW, 2020



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

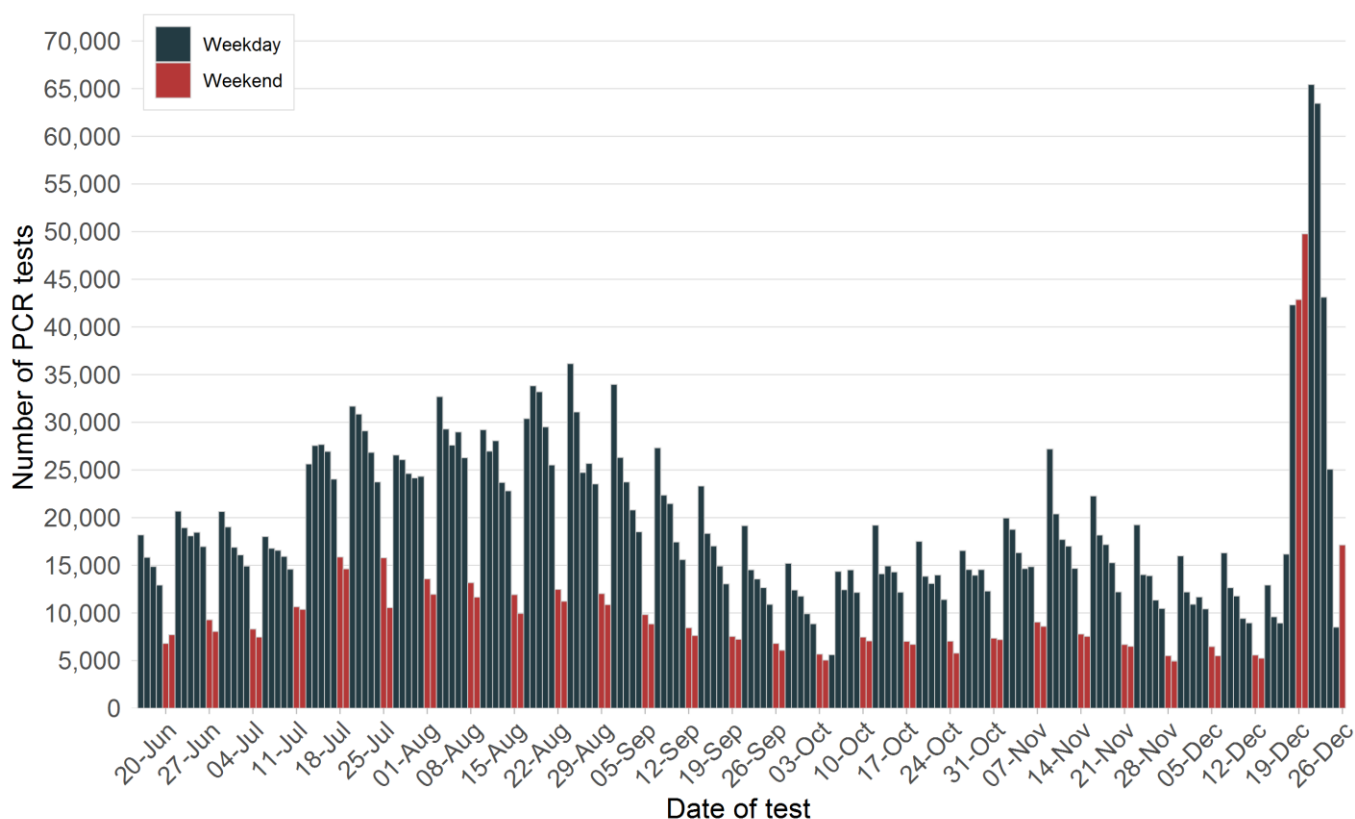
**Interpretation:** There were 136 locally acquired cases with an onset of symptoms in the last two weeks. The number of new cases diagnosed in NSW increased significantly the last two weeks following a large outbreak of COVID-19 in Northern Sydney LHD.

## 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 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, 2020



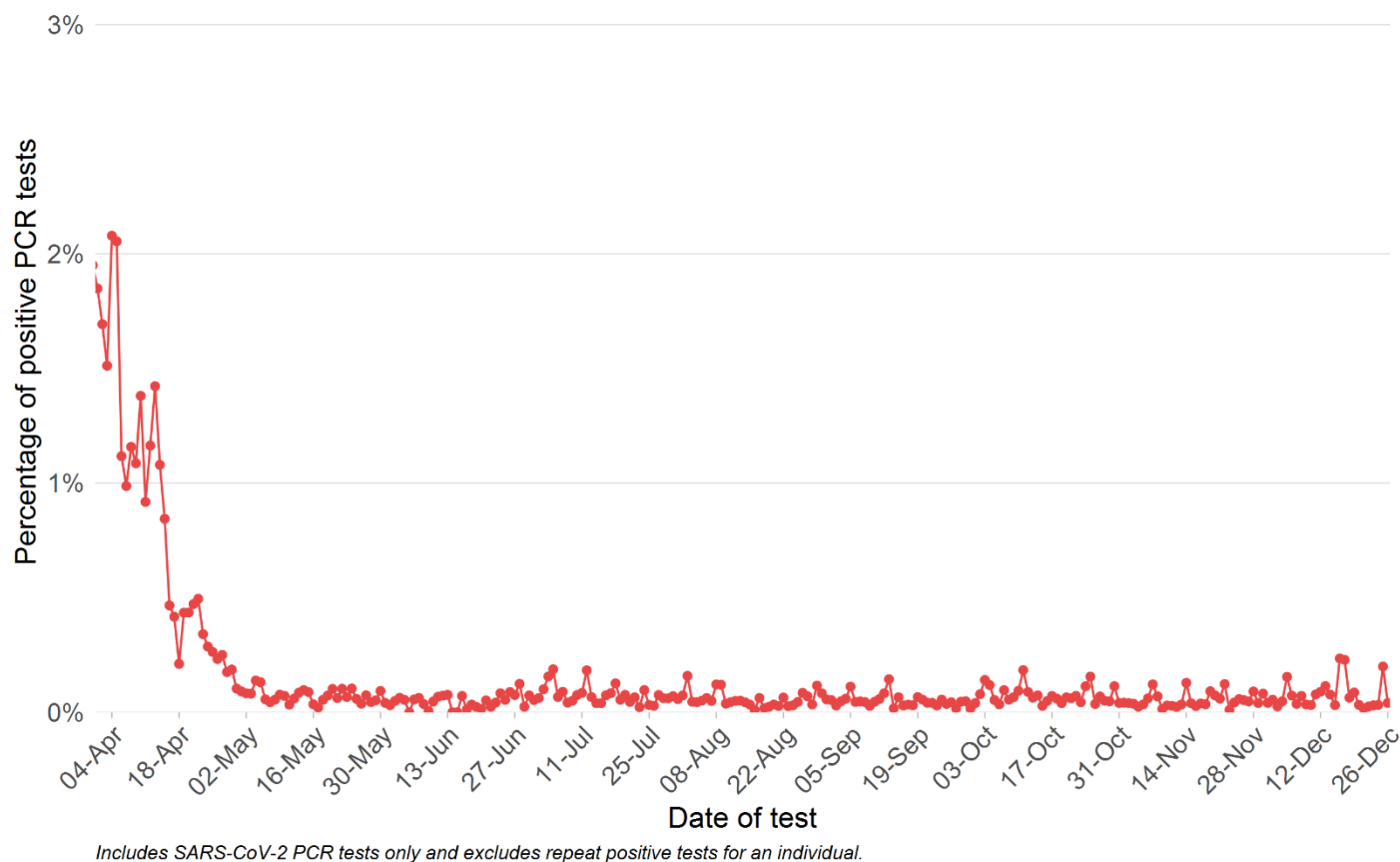
*Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.*

**Interpretation:** In the week ending 26 December, testing rates increased for the second consecutive week in response to an outbreak of COVID-19 in Northern Sydney. An unprecedented level of testing occurred this week across 4 days with 2 days of over 40,000 tests, and 2 days of over 60,000 tests. An average of 4.8 tests were conducted per 1,000 people in NSW each day in the week ending 26 December, compared to a daily average of 2.5 per 1,000 people in the previous week.

<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?

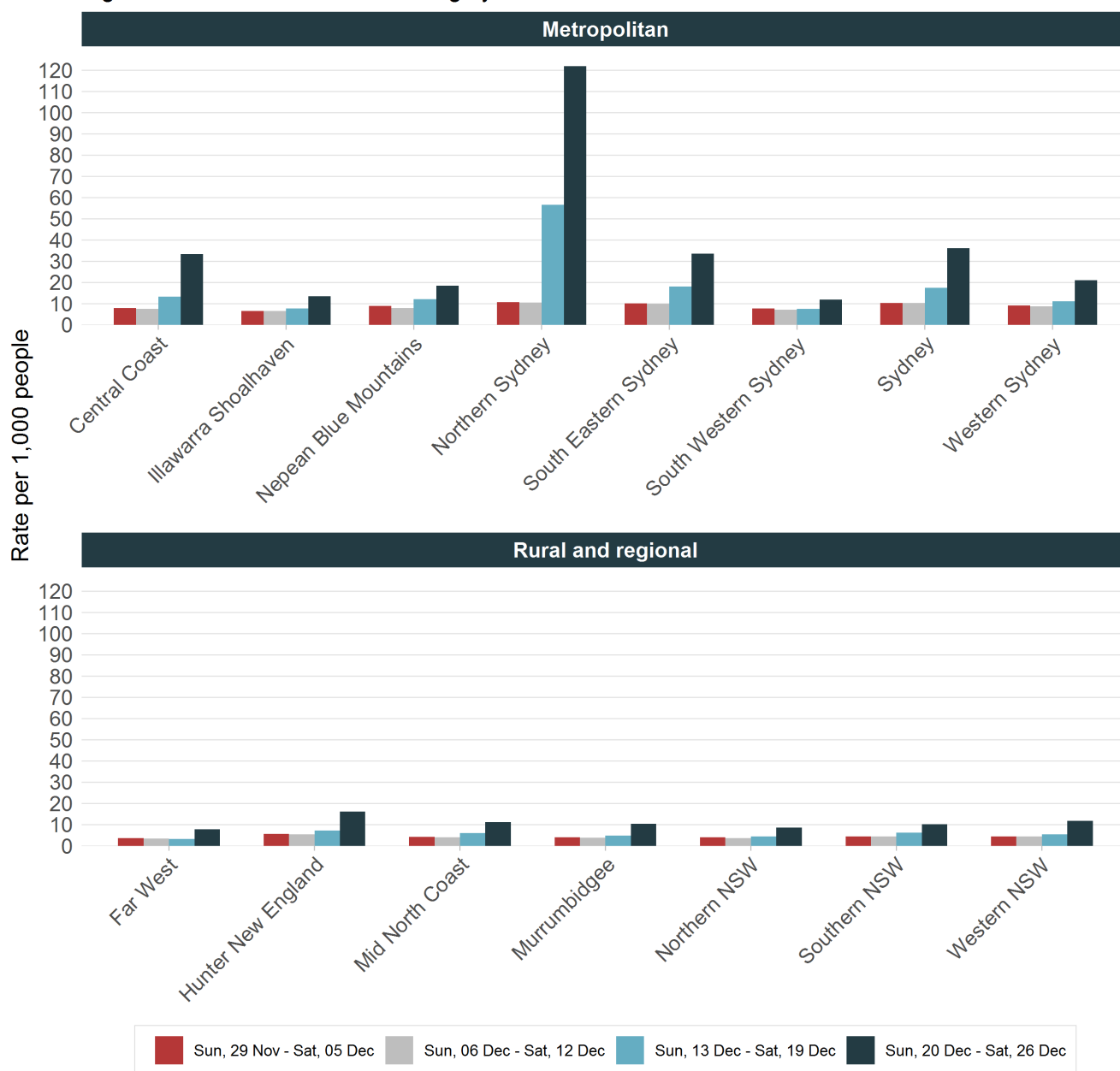
Figure 4. Proportion of PCR tests positive for COVID-19, NSW, 2020



**Interpretation:** In the week ending the 26 December there was a decrease in the in the proportion of tests positive for COVID-19 (0.04%). This reflects the significant increase in the amount of testing in relation to the Avalon cluster.

## 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.

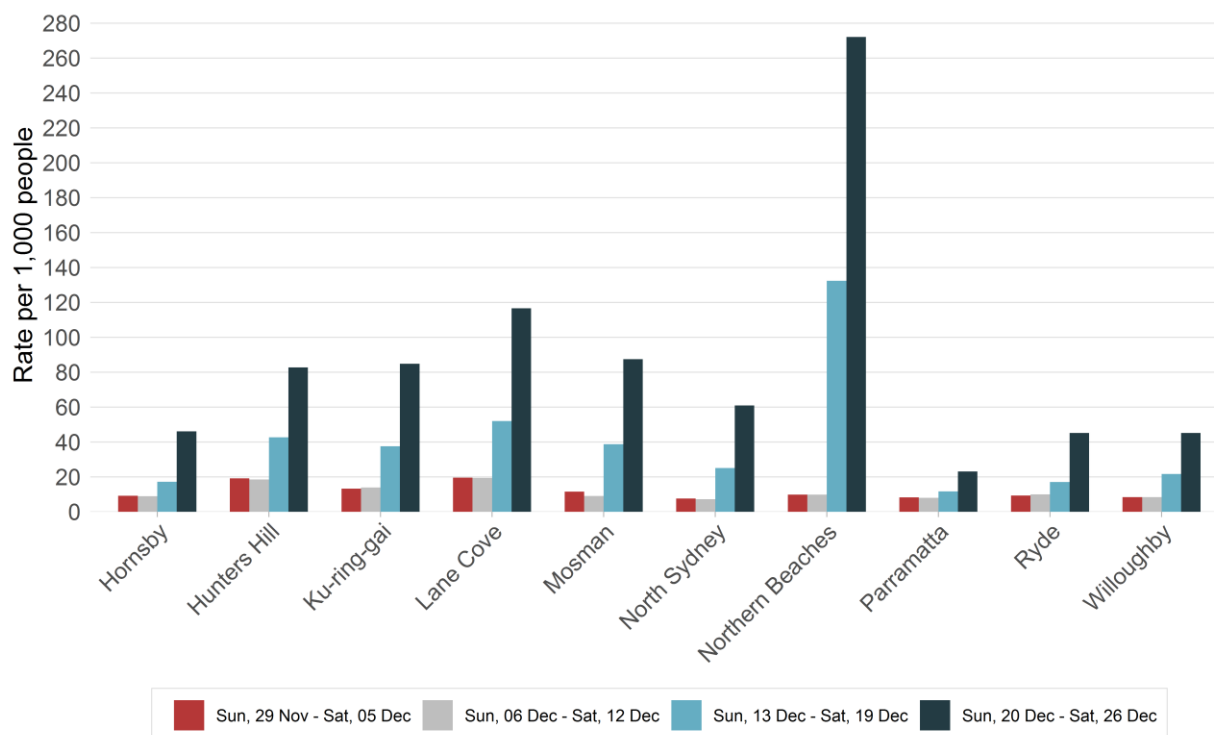
**Interpretation:** Statewide testing rates in the week ending 26 December increased across most LHDs for the second consecutive week. Testing rates surged in Northern Sydney LHD for the second week in response to the recent cluster in the Northern Beaches. Testing rates also increased significantly across Central Coast, Sydney, South Eastern Sydney and Sydney LHDs.



## Testing across Northern Sydney LGAs

The following figure displays the number of tests by Local Government Area across the Northern Sydney Local Health District.

Figure 6. Rates of COVID-19 testing across Northern Sydney LGAs by week

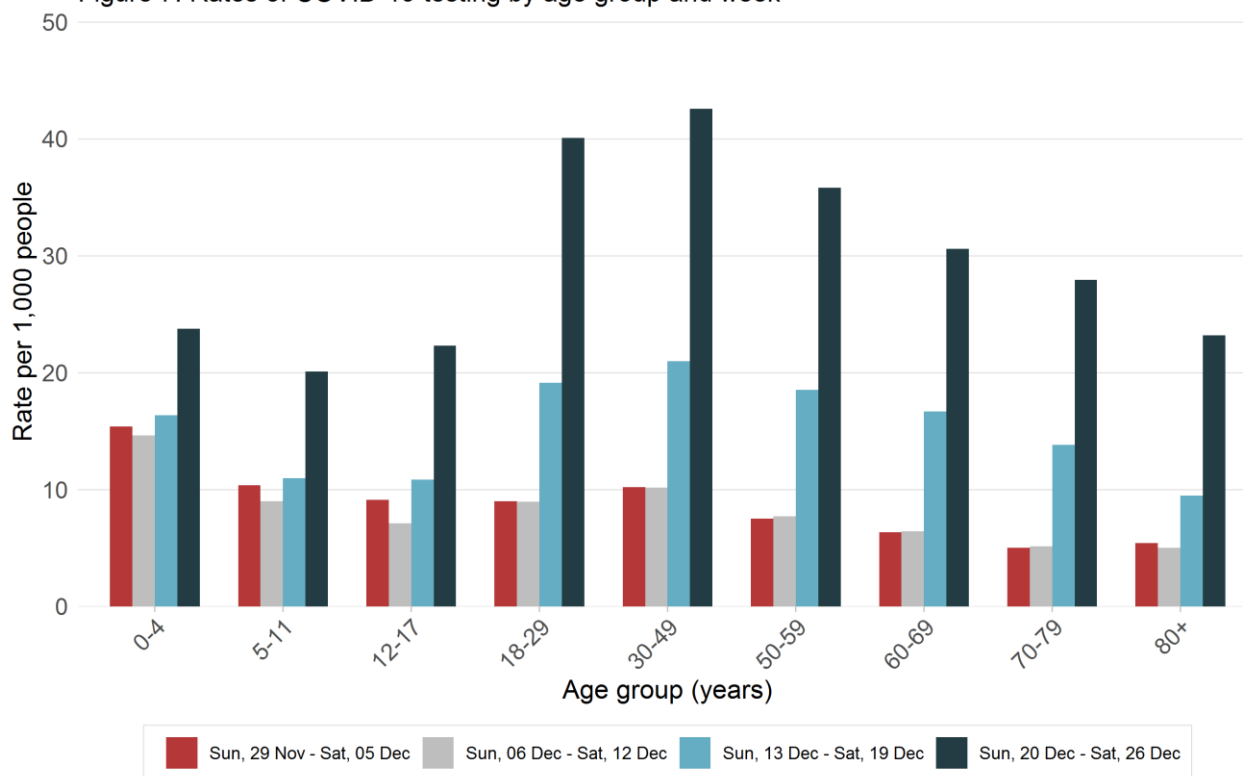


*The date of the first positive is used for cases who did not report symptoms*

**Interpretation:** Testing rates increased for the second consecutive week across most LGAs in Northern Sydney LHD (122.0 tests per 1000 people compared with 56.9 per 1,000 last week) in response to the recent cluster in the Northern Beaches. This was mainly driven by testing in Northern Beaches LGA which almost doubled (272.0 tests per 1000 people compared with 132.4 per 1,000 last week) and accounted for 64% of tests conducted in the Northern Sydney LHD.

## Testing by age group

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

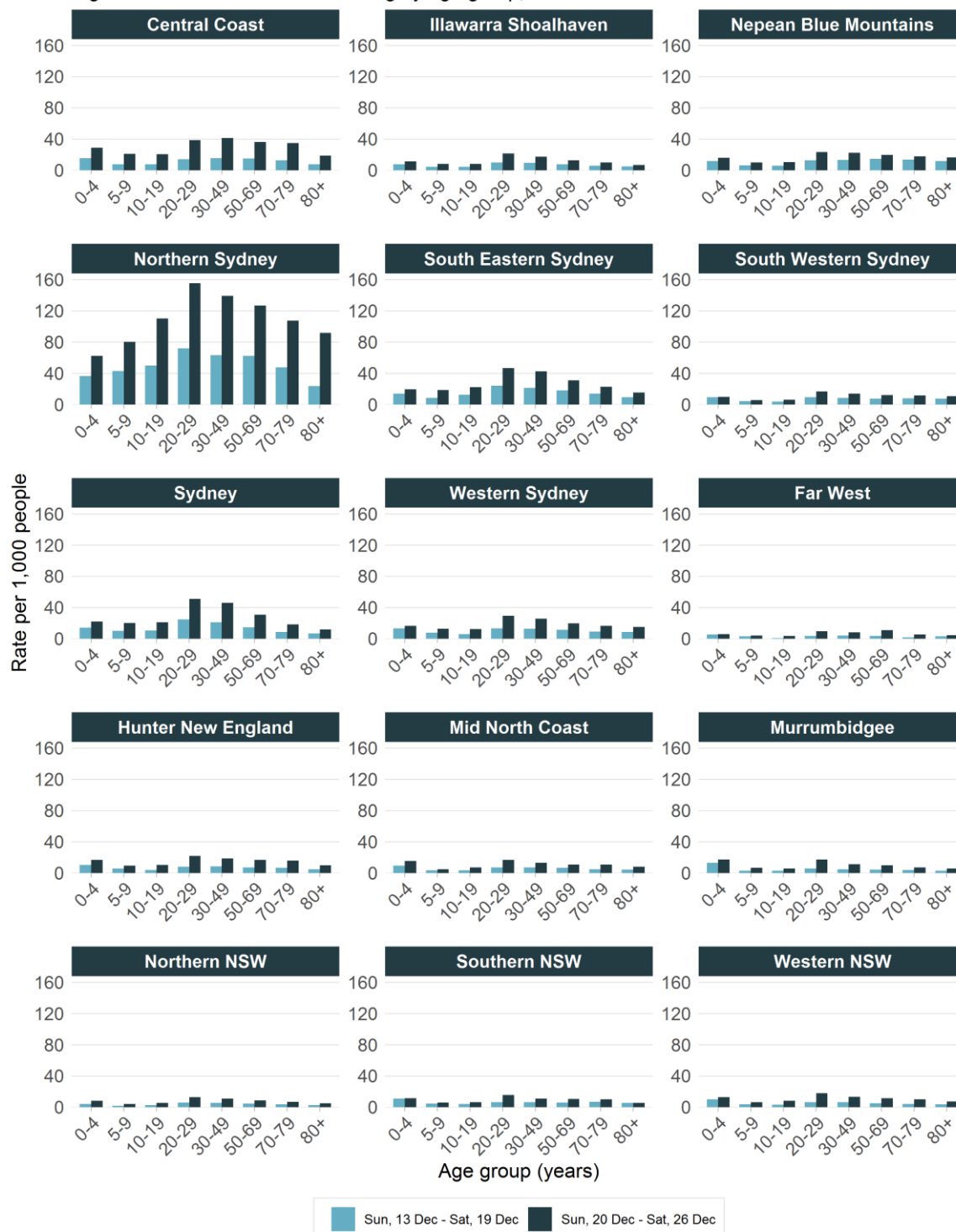


*Includes SARS-CoV-2 PCR tests only and excludes notifications with age missing.*

**Interpretation:** For the week ending 26 December, testing rates increased significantly across all ages with the largest increase in people aged 18-49 years of age.

## Testing by LHD and age group

Figure 8. 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:** In the week ending 26 December, testing rates have significantly increased across all age groups in Northern Sydney, Central Coast, Sydney and South East Sydney LHDs. Overall testing rates have increased or remained steady in all age groups across all LHDs.

## 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, 6 December to 26 December 2020**

Locally-acquired cases	Week ending				Total
	26 Dec	19 Dec	12 Dec	5 Dec	
Cases who are linked to a known case or cluster	56	72	0	0	128
Cases with no links to other cases or clusters	7	1	0	1	9
<b>Total</b>	<b>63</b>	<b>73</b>	<b>0</b>	<b>1</b>	<b>137</b>

**Interpretation:** There were 56 cases that were linked to a known case or cluster and seven cases with no links to a case or cluster in the week ending 26 December. Two of the cases reported this week are patient transport workers from Western Sydney LHD. Genome sequencing of the virus of the patient transport worker reported on 22 December shows it is identical to the virus strain from a family of three who had been transported from the airport to hotel quarantine under this worker's care. The sequence is also identical to the other patient transport worker, who did not have contact with the family of three but who was a close contact with the first worker. The virus sequence for these two workers is different to that seen in the Avalon cluster.

**Table 3. Locally-acquired COVID-19 cases by LHD of residence and week reported, 6 December to 26 December 2020**

Local Health District	Week ending				Total	Days since last case reported
	26 Dec	19 Dec	12 Dec	5 Dec		
Central Coast	0	2	0	0	2	8
Illawarra Shoalhaven	0	0	0	0	0	113
Nepean Blue Mountains	0	0	0	0	0	102
Northern Sydney	38	67	0	0	105	0
South Eastern Sydney	10	3	0	0	13	0
South Western Sydney	3	0	0	1	4	0
Sydney	4	1	0	0	5	2
Western Sydney	8	0	0	0	8	2
Far West	0	0	0	0	0	268
Hunter New England	0	0	0	0	0	142
Mid North Coast	0	0	0	0	0	249
Murrumbidgee	0	0	0	0	0	110
Northern NSW	0	0	0	0	0	154
Southern NSW	0	0	0	0	0	68
Western NSW	0	0	0	0	0	149
<b>Total</b>	<b>63</b>	<b>73</b>	<b>0</b>	<b>1</b>	<b>137</b>	<b>0</b>

**Interpretation:** There were 63 locally-acquired cases reported in the week ending 26 December. The majority of locally-acquired cases are residents of Northern Sydney LHD (38, 60%), of these 28 cases reside in the Northern zone of the Northern beaches LGA and five reside in the southern zone of the Northern Beaches LGA.

Table 4. Locally acquired COVID-19 cases with no identified links to known cases or cluster by LHD of residence and week reported, 6 December to 26 December 2020

Local Health District	Week ending				Total
	26 Dec	19 Dec	12 Dec	5 Dec	
Central Coast	0	0	0	0	0
Illawarra Shoalhaven	0	0	0	0	0
Nepean Blue Mountains	0	0	0	0	0
Northern Sydney	5	0	0	0	5
South Eastern Sydney	2	1	0	0	3
South Western Sydney	0	0	0	1	1
Sydney	0	0	0	0	0
Western Sydney	0	0	0	0	0
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>7</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>9</b>

**Interpretation:** There were seven locally-acquired COVID-19 cases reported this week with no identified direct contact with known cases. Five of these cases reside in the Northern Sydney LHD and are geographically associated with the Avalon cluster, but there is further investigation needed to establish direct epidemiological links.

## 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 (two days prior to symptom onset until the time of isolation). Close contacts are quarantined to limit the spread of infection to others and encouraged to seek testing.

### Cases in community settings

#### Avalon cluster

On 16 December Northern Sydney Public Health Unit was notified of two cases of COVID-19 in Avalon residents. While both cases were known to each other, the source of their infection was unknown. Further investigation following another notification in a Northern Sydney resident revealed that the cases had likely been exposed at the Avalon RSL. Several more cases were reported over subsequent days all associated with a growing cluster of infections related to the Avalon area. There are seven exposure locations outside the Northern Beaches area where transmission has occurred. These locations have been seeded by cases associated with this cluster and include two pubs, two hairdressing salons, an office in the CBD and a café and dinner party in Paddington.

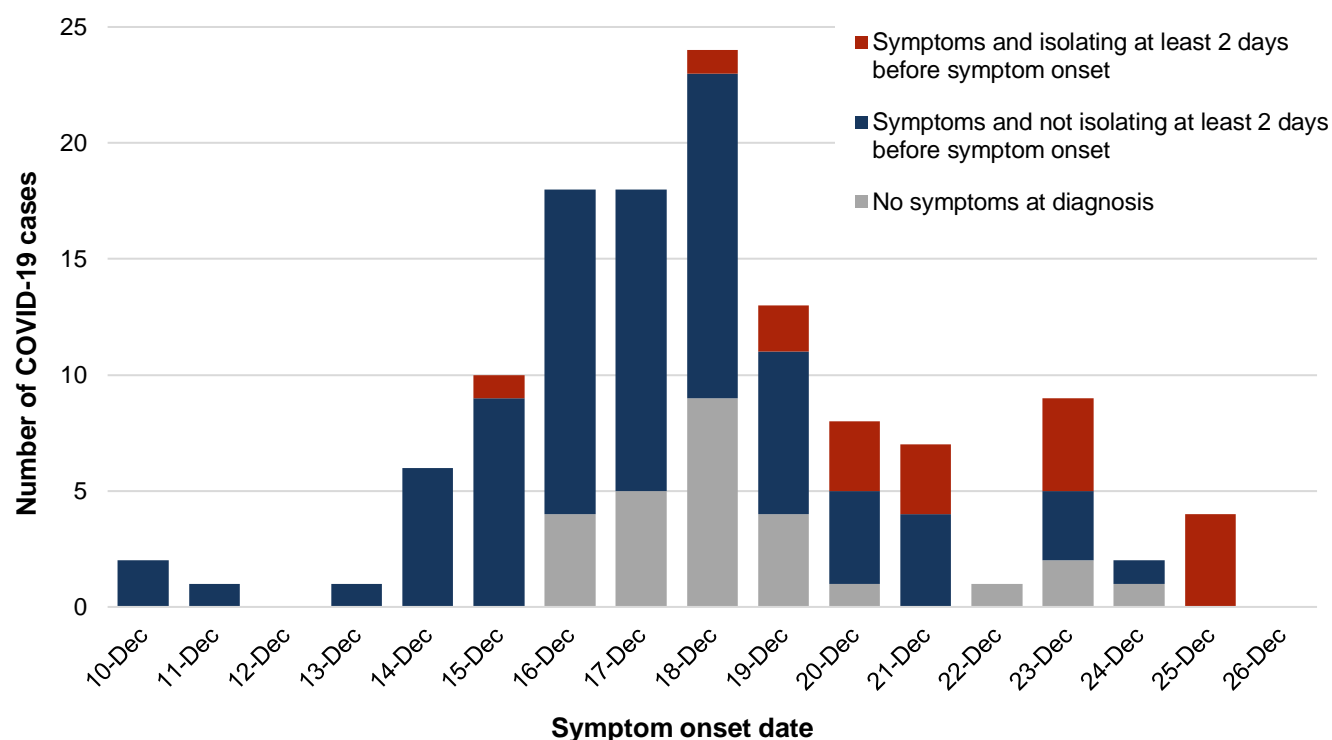
Cases associated with this cluster attended a large number of public venues across Sydney including clubs, restaurants, gyms, hair salons and schools. To limit the spread of COVID-19, NSW Health have issued multiple public health alerts to people who may have been exposed. The list of venues attended by cases is published on the [NSW Government website](#).

In the week ending 26 December there were 52 cases reported with known direct links to the Avalon cluster. In total, there are 124 cases associated with this cluster. Of these, 99 cases are associated with transmission at 15 public exposure locations and one private event and 25 cases were household or social contacts of known cases. Whole genome sequencing of the virus suggests that this is an overseas strain most similar to strains circulating in the United States.

Table 5. Cases linked to Avalon cluster by setting of exposure, reported to week ending 26 December, NSW

Setting of exposure	Exposure site	Location	Primary cases	Secondary cases		Total
				Non-household setting	Household setting	
Restaurant/Bar/Club	RSL	Avalon	24	0	5	29
	Bowling Club	Avalon	28	1	6	35
	RSL / Bowling Club	Avalon	8	1	2	11
	Pub	Ersleville	4	2	3	9
	Pub	Circular Quay	3	0	1	4
	Restaurant	Manly	1	0	0	1
	Pub	Newport	1	0	0	1
Gym	Gym 1	Mona Vale	5	0	0	5
	Gym 2	Avalon	2	0	3	5
School	Primary School	Narrabeen	4	0	0	4
Office Building	Workplace	CBD	5	0	0	5
Food Service	Take-away shop	Avalon	3	0	1	4
	Café	Paddington	2	0	0	2
Personal Service	Hair Salon	Turramurra	6	0	0	6
	Hair Salon	Paddington	1	0	0	1
Private event	Dinner party	Paddington	2	0	0	2
<b>Total</b>			<b>99</b>	<b>4</b>	<b>21</b>	<b>124</b>

Figure 9. Number of confirmed cases linked to the Avalon cluster (n=124) by isolation status and symptom onset date, week ending 26 December 2020



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

**Interpretation:** To date the majority of the cases to the week ending 26 December in the Avalon cluster have had their symptom onset from the 16 to 18 December.

Targeted messaging to people living in the Northern Beaches area advising them isolate and for close contacts to get tested immediately has led larger proportion of asymptomatic cases at diagnosis. These asymptomatic cases may have gone onto develop symptoms. The identification of cases and isolation of their close contacts before they develop symptoms is essential to limit the spread of COVID-19.

## SECTION 5: COVID-19 IN SPECIFIC POPULATIONS

### COVID-19 in healthcare workers

There have been three cases of COVID-19 reported in healthcare workers (HCW) in the week ending the 26 December. Two cases were potentially healthcare-acquired infections involving patient transport workers. One worker was infected by returned travellers that were being transported from Sydney airport to the hospital, and the other was a close contact who had worked multiple shifts with the case. The third case was a HCW who works in a private hospital and is associated with the Avalon cluster. The HCW did not acquire their infection at work and was in isolation and did not work while infectious.

In total, there have been 41 cases of COVID-19 in health care workers since 1 August. Of these, 25 HCWs were potentially infected in healthcare settings. A further eight cases were social or household contacts of a known case, five were exposed in community settings, and for three cases the source of infection is unknown.

#### Clusters associated with healthcare-acquired infections in HCWs

Of the 25 potentially healthcare-acquired infections in HCWs reported since 1 August, 20 were associated with five clusters in healthcare settings: two from Hornsby Hospital, seven from Liverpool Hospital, seven from Concord Hospital, three from two related private health clinics in Bella Vista and Liverpool and one case from a GP clinic in Lakemba.

### 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 in an Aboriginal person reported in the week ending 26 December. In total, 46 Aboriginal people have been diagnosed with COVID-19, representing 1% of all cases in NSW.

### Pregnant women

There were two cases (one locally acquired) in pregnant women in the week ending 26 December. In total, 38 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?

In total, 1.2% 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.

Table 6. Deaths as a result of COVID-19, by age group, NSW, 2020

Age group	Number of deaths	Number of cases	Case fatality rate
0-4 years	0	94	0%
5-11 years	0	95	0%
12-17 years	0	137	0%
18-29 years	0	1057	0%
30-49 years	0	1478	0%
50-59 years	1	650	0.2%
60-69 years	4	623	0.6%
70-79 years	15	378	4.0%
80+ years	36	162	22.2%
<b>Total</b>	<b>56</b>	<b>4674</b>	<b>1.2%</b>

**Interpretation:** In the week ending 26 December, one new COVID-19 death was reported. A man in his 70s died from respiratory complications following a COVID-19 infection diagnosed in March. He was a household contact of a locally acquired case. Although his death is considered to be related to COVID-19, he had recently tested negative, was no longer infectious and posed no risk to the community.

## 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 26 December, 98 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were nine detections from eight locations: Gosford (Kincumber), Hornsby Heights, Brooklyn, Bondi, Liverpool, North Head, Malabar and Warriewood treatment plants.

South West Rocks, Crescent Head, Bellingen, Tweed – Murwillumbah, Tweed – Banora Point and Orange have commenced as new sites. The table below shows results for previous weeks from various sites across NSW.

**Table 7. Locations with positive SARS-CoV-2 detections in sewage samples since September for the week ending 26 December 2020**

Pop.	Location	LHD	24- Oct	31- Oct	7- Nov	14- Nov	21- Nov	28- Nov	5- Dec	12- Dec	19- Dec	26- Dec
			43	44	45	46	47	48	49	50	51	52
60, 514	Blue Mountains (Winmalee)	NBMLHD										
4,681	North Richmond	NBMLHD										
13,052	Richmond	NBMLHD										
110,114	Penrith	NBMLHD										
12,000	Lithgow	NBMLHD										
19,000	South Windsor	NBMLHD										
8,000	McGraths Hill	NBMLHD										
69,245	Warriewood	NSLHD										
1,241	Brooklyn	NSLHD										
31,924	Hornsby Heights	NSLHD										
57,933	West Hornsby	NSLHD										
318,810	Bondi	S&SESLHD										
233,176	Cronulla	SESLHD										
1,857,740	Malabar 1	S&SES&SWSLHD										
	Malabar 2	S&SES&SWSLHD										
181,005	Liverpool	SWSLHD										
98,743	West Camden	SWSLHD										
6,882	Wallacia	SWSLHD										
14,600	Picton	SWSLHD										
161,200	Glenfield	SWSLHD										
1,341,986	North Head	NS&WSLHD										
26,997	Castle Hill Cattai	WSLHD										
	Castle Hill Glenhaven	WSLHD										
163,374	Quakers Hill	WSLHD										

119,309	Rouse Hill	WSLHD										
37,061	Riverstone	WSLHD										
163,147	St Marys	NBM&WSLHD										
73,686	Shellharbour	ISHLHD										
196,488	Wollongong	ISHLHD										

#### Regional sites

14,700	Bowral	SWSLHD										
14,000	Mittagong	SWSLHD										
9,000	Moss Vale	SWSLHD										
1,000	Berrima	SWSLHD										
2,000	Bundanoon	SWSLHD										
900	Robertson	SWSLHD										
16,068	Bombo	ISHLHD										
32,000	Ulladulla	ISHLHD										
18,000	Bomaderry	ISHLHD										
37,500	Nowra	ISHLHD										
16,000	St Georges Basin	ISHLHD										
11,000	Cullburra Beach	ISHLHD										
139,500	Gosford-Kincumber	CCLHD										
29,300	Wyong-Toukley	CCLHD										
38,900	Bateau Bay	CCLHD										
41,300	Woy Woy	CCLHD										
5,000	Perisher	M&SLHD										
8,400	Thredbo	M&SLHD										
3,000	Jindabyne	M&SLHD										
8,000	Cooma	M&SLHD										
500	Gunning	M&SLHD										
500	Charlottes Pass	M&SLHD										
51,750	Albury composite	M&SLHD										
	Albury Kremer St	M&SLHD										
	Albury Waterview	M&SLHD										
22,419	Goulburn	M&SLHD										
21,000	Batemans Bay	M&SLHD										
18,000	Moruya	M&SLHD										
17,000	Narooma	M&SLHD										
8,000	Eden	M&SLHD										
15,500	Merimbula	M&SLHD										
5,000	Bermagui	M&SLHD										
7,800	Deniliquin	M&SLHD										
48,000	Queanbeyan	M&SLHD										
50,000	Wagga Wagga composite	M&SLHD										
	Wagga Wagga- inlet 1	M&SLHD										
	Wagga Wagga- inlet 2	M&SLHD										
	Wagga Wagga - Koorringal STP	M&SLHD										
2,050	Bourke	W&FWLHD										
	Orange	W&FWLHD										
36,603	Bathurst	W&FWLHD										
19,000	Broken Hill	W&FWLHD										
500	Dareton	W&FWLHD										
11,600	Parkes	W&FWLHD										
37,000	Dubbo	W&FWLHD										
24,000	Armidale	HNELHD										
45,000	Tamworth	HNELHD										
10,000	Moree	HNELHD										
12,000	Forster	HNELHD										

7,582	Hallidays Point	HNELHD											
5,180	Harrington	HNELHD											
10,715	Hawks Nest	HNELHD											
225,834	Hunter - Burwood Beach	HNELHD											
60,000	Hunter - Shortland	HNELHD											
115,000	Hunter - Belmont	HNELHD											
60,000	Hunter - Morpeth	HNELHD											
58,300	Hunter - Boulder Bay	HNELHD											
35,000	Hunter - Raymond Terrace	HNELHD											
2,500	Hunter - Karuah	HNELHD											
17,000	East Lismore	N&MNCLHD											
15,500	South Lismore	N&MNCLHD											
18,958 (both plants total)	Byron Bay - Ocean Shores	N&MNCLHD											
	Byron Bay	N&MNCLHD											
31,104	Ballina	N&MNCLHD											
72,000 (Tweed District)	Tweed - Murwillumbah	N&MNCLHD											
	Tweed - Banora Point	N&MNCLHD											
	Tweed - Kingscliff	N&MNCLHD											
	Tweed - Hastings Point	N&MNCLHD											
12,250	North Grafton	N&MNCLHD											
6,300	South Grafton	N&MNCLHD											
6,500	Yamba	N&MNCLHD											
8,730	Nambucca Heads	N&MNCLHD											
54,370	Port Macquarie	N&MNCLHD											
7,010	Bonny Hills	N&MNCLHD											
8,540	Dunbogan	N&MNCLHD											
	South West Rocks	N&MNCLHD											
	Crescent Head	N&MNCLHD											
	Bellingen	N&MNCLHD											
50,000	Coffs Harbour	N&MNCLHD											

	not sampled or not analysed
	SARS-CoV-2 not detected
	SARS-CoV-2 detected
	site moved to composite sample or ceased
	sampling commenced in week 29 (week ending 18 July 2020)
c	composite of the separate influent samples
l	result from another laboratory
p	result pending, not available at time of reporting
n	result from network sites

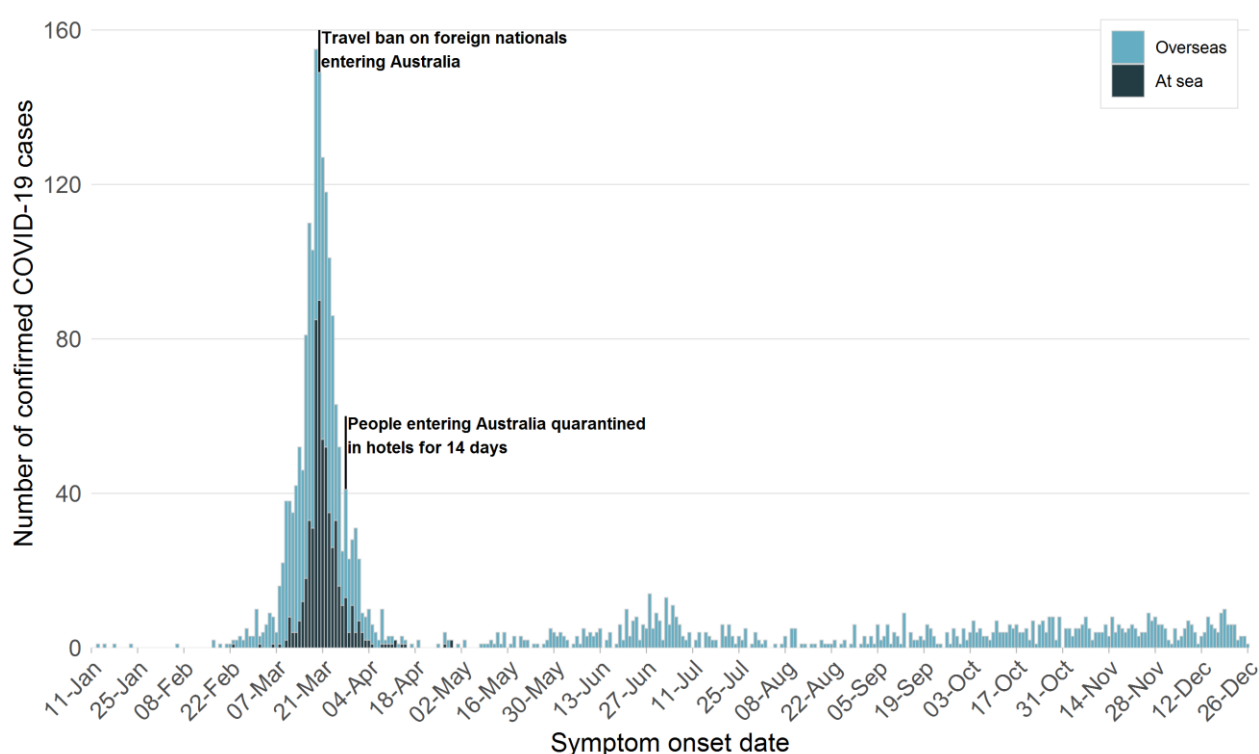
**Interpretation:** In the last week, there nine detections of SARS-CoV-2 from eight locations. The Malabar, Bondi and North Head plants serve around 3.5 million people, including quarantine hotels. The Liverpool, Gosford (Kincumber), Warriewood (tested twice), Hornsby Heights and Brooklyn detections were associated with known locally-acquired cases.

## 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 10. Overseas acquired COVID-19 cases by infection source and illness onset, NSW, 2020



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 since March in line with travel restrictions. There were 49 overseas acquired cases reported in the week ending 26 December, 36% more than the previous week.

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

In the last four weeks, there have been 158 COVID-positive travellers who have arrived in NSW.

The table below lists the top 10 countries of acquisition for these travellers.

**Table 8. Top 10 countries of acquisition for overseas travellers that have tested positive in the last four weeks, 6 December to 26 December 2020**

Country of acquisition of COVID-19	Number (%) of cases in the last four weeks
USA	64 (41%)
United Kingdom	17 (11%)
India	11 (7%)
Lebanon	9 (6%)
Pakistan	7 (4%)
United Arab Emirates	5 (3%)
Canada	4 (3%)
Philippines	4 (3%)
Bangladesh	4 (3%)
Egypt	3 (2%)
Other	30 (219%)
Total	158 (100%)

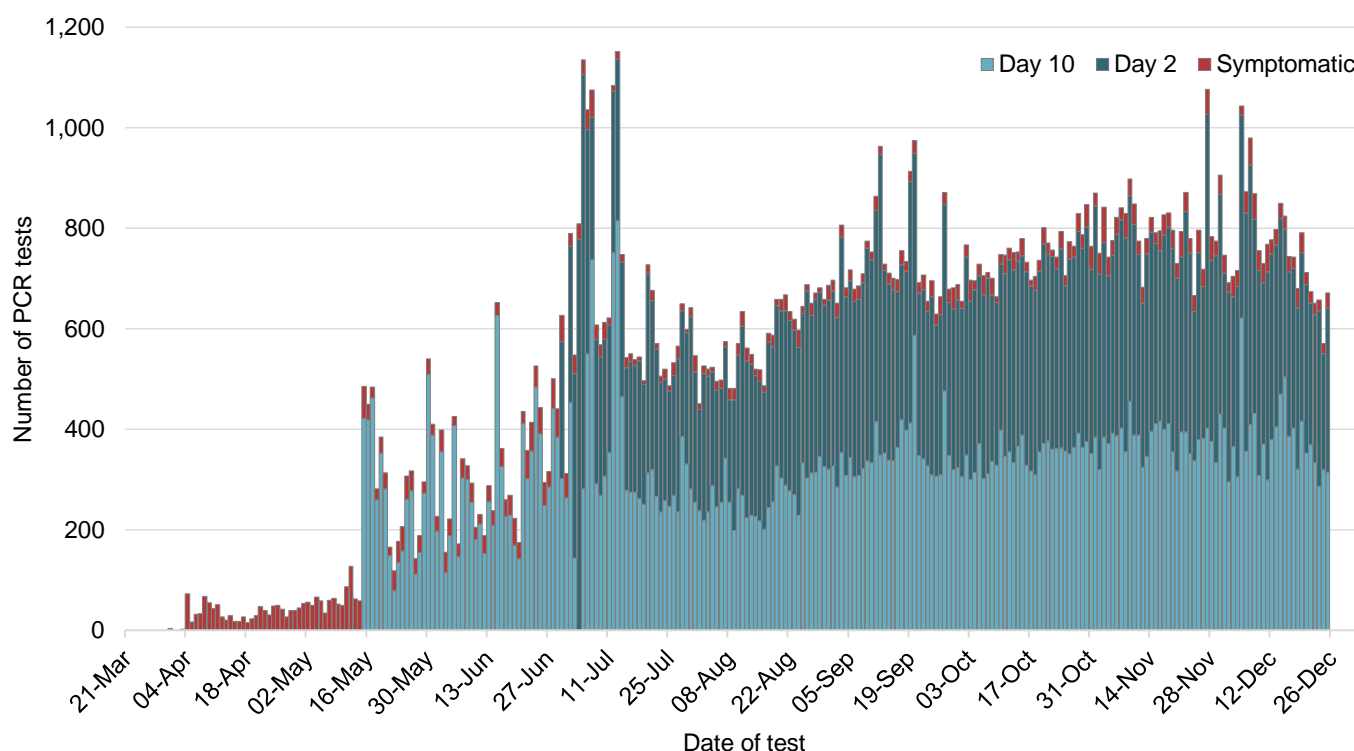
**Interpretation:** In the last four weeks, travellers returning from the United States accounted for the largest number of overseas acquired cases (64, 41%), followed by travellers returning from the United Kingdom (17, 11%), and India (11, 7%).

## 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 on both day two and day ten after arrival. Testing is also carried out on individuals that became symptomatic in addition to the two mandatory tests.

Since hotel quarantine began on 29 March, a total of 145,087 PCR tests have been conducted with 730 overseas acquired cases and 4 interstate acquired COVID-19 cases detected while in hotel quarantine. In the last four weeks, 9,940 returned travellers received a day two swab in hotel quarantine; of these 2.9% reported symptoms at the time of screening. In the same time period, 10,509 returned travellers received a day 10 swab, and 1.1% reported symptoms at the time of screening.

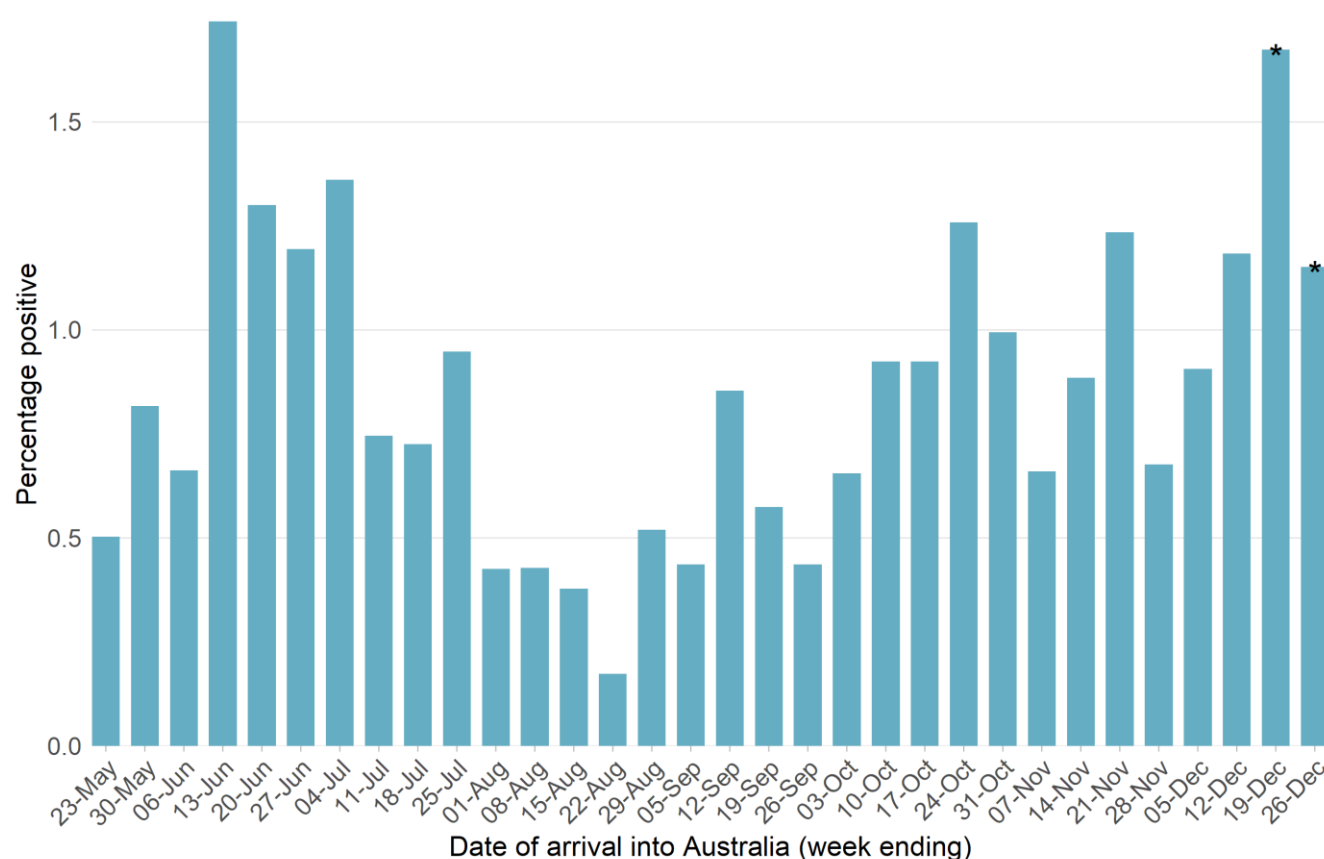
Figure 11. COVID-19 testing in returned travellers in hotel quarantine, reported from 21 March to 26 December, NSW, 2020



**Interpretation:** In the week ending 26 December, there were 4,581 tests of travellers conducted through the hotel quarantine screening programs.

The graph below shows the proportion of international travellers who were diagnosed with COVID-19 during their stay in hotel quarantine in NSW. Percentages are reported by week of arrival in Australia.

Figure 12. COVID-19 percentage positive in returned travellers in hotel quarantine by week of arrival in Australia, reported from week ending 23 May to week ending 26 December, NSW, 2020



**Interpretation:** In the three most recent weeks, slightly more than 1% of returned travellers have tested positive during their stay in hotel quarantine. This increase suggests that more returned travellers are testing positive on arrival into NSW, which 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 20 December 2020

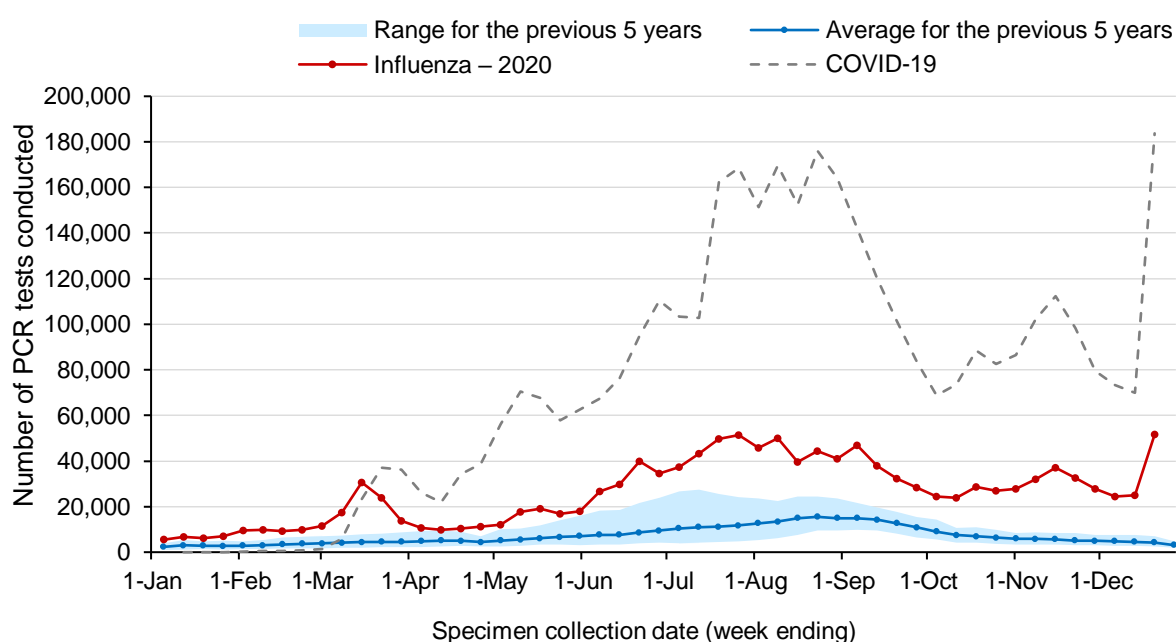
In NSW, routine surveillance for influenza and other respiratory viruses is conducted through sentinel laboratories. The number of all PCR tests (positive and negative) are provided to NSW Health by participating laboratories each week. Testing counts reflect the number of influenza PCR tests conducted;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

The most recent data available is for testing carried out to 20 December. A total of 1,326,406 influenza tests have been performed at participating laboratories to 20 December, with 51,622 tests conducted in the most recent week. 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. The blue line shows the average number of tests carried out for the same week in the last five years and the shaded area shows the range of counts reported in the previous five years. The grey line shows the number of COVID-19 tests.

Figure 13. Testing for influenza and COVID-19 by week, to 20 December 2020

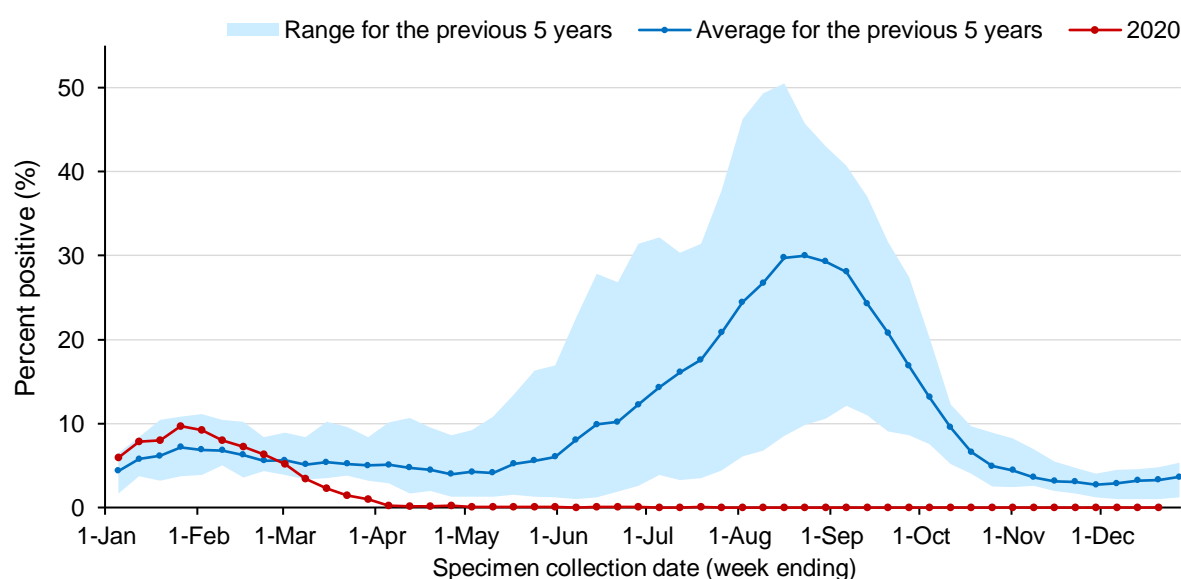


**Interpretation:** The number of influenza tests performed almost doubled this week in line with testing numbers for COVID-19. In every week this year, the number of tests has exceeded the previous five-year average.

## 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 2020, the blue line showing the average for the past five years and the shaded area showing the range recorded in the previous five years.

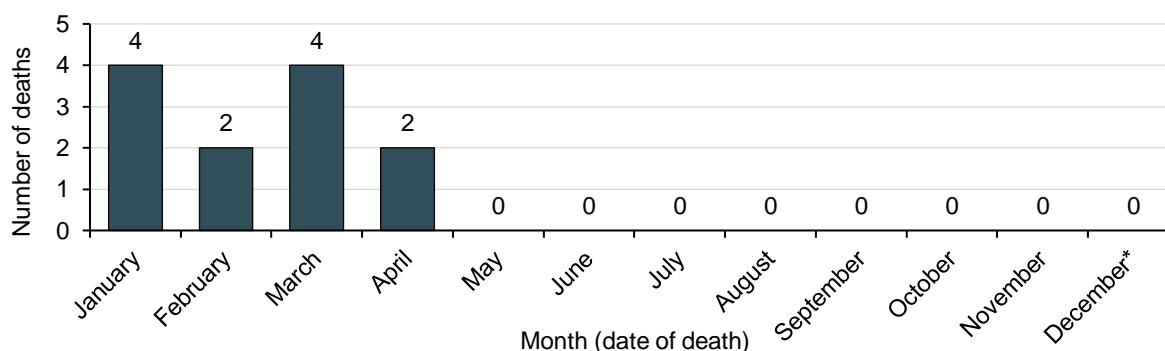
Figure 14. Proportion of tests positive for influenza, to 20 December 2020



**Interpretation:** In the week ending 20 December, 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, this percentage has remained far lower than the usual range for the time of year.

## How many people have died as a result of influenza?

Figure 15. Laboratory-confirmed influenza deaths by month of death, to 20 December 2020



**Interpretation:** No influenza deaths have been reported in NSW since April 2020. The number of influenza-related deaths identified via Coroner's reports and death registrations from 1 January to 20 December 2020 is lower than the same period last year (12 deaths in 2020 compared with 333 in 2019)<sup>2</sup>. Two-thirds of the deaths were in people aged 65 years and over.

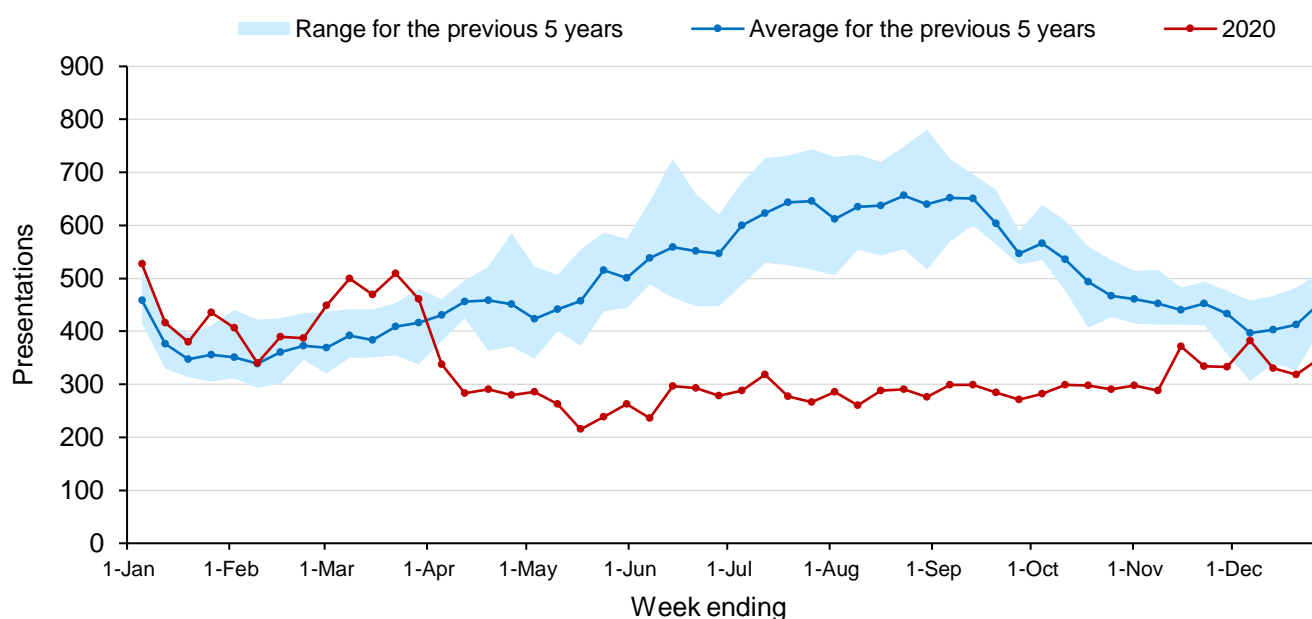
<sup>2</sup> Includes deaths in people with laboratory-confirmed influenza.

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

The figure below shows weekly pneumonia presentations to Emergency Departments in NSW, using PHREDSS<sup>3</sup>.

The red line shows the weekly counts for 2020, the blue line shows the average for the same week for the past five years and the shaded area shows the range recorded in the previous five years.

Figure 16. Emergency Department pneumonia presentations in NSW by week, to 27 December 2020



**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.

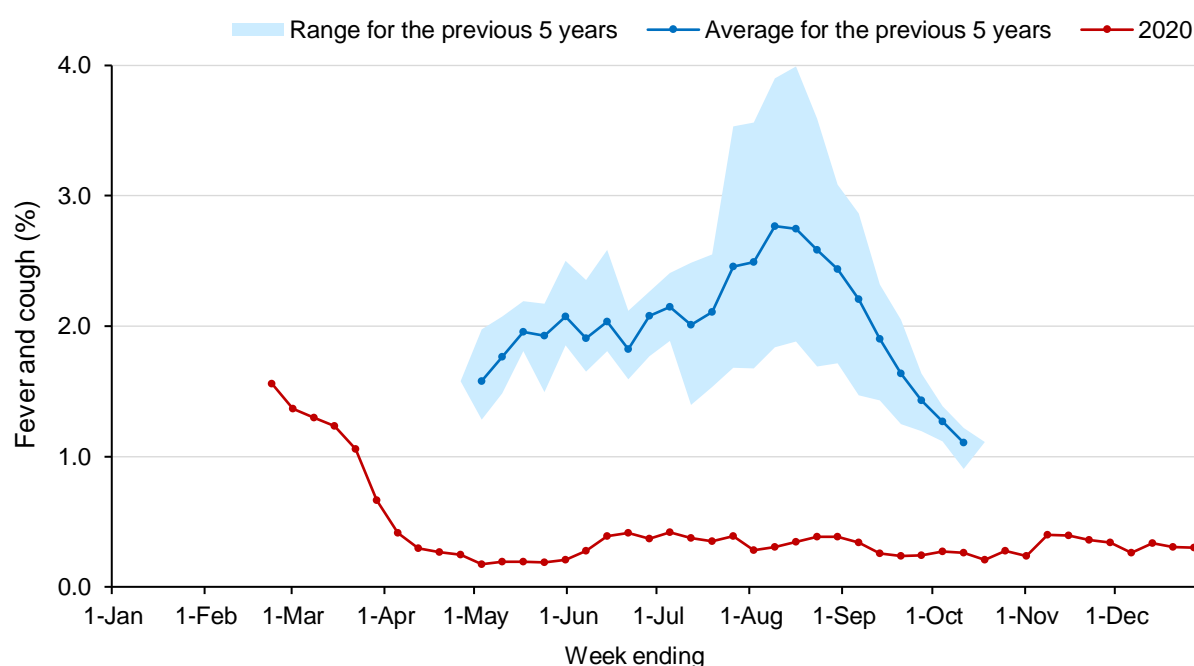
In the week ending 27 December, pneumonia presentations increased but were below the seasonal range for December.

<sup>3</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 17. Proportion of FluTracker participants in NSW reporting influenza-like illness, to 27 December 2020



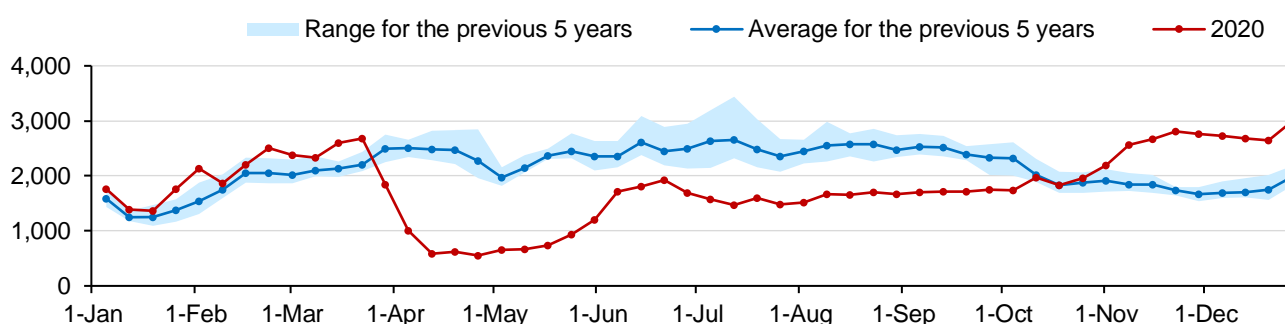
**Interpretation:** In NSW in the week ending 27 December of the 10,394 people surveyed, 31 people (0.30%) reported flu-like symptoms.

## Respiratory infections in children aged 0-4 years

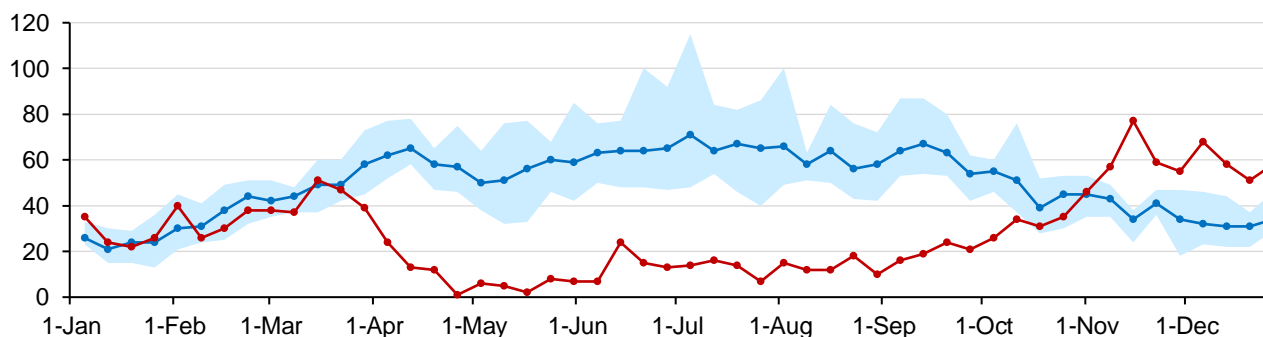
The figures below show weekly any respiratory, pneumonia and bronchiolitis presentations to Emergency Departments in NSW for children under five, using PHREDSS data. Also shown are weekly laboratory notifications for respiratory syncytial virus (RSV) from sentinel surveillance.

Figure 18. Emergency Department presentations in children 0–4 years, for all respiratory problems/fever and unspecified infection, pneumonia and bronchiolitis in NSW by week, to 27 December 2020

All respiratory problems/fever and unspecified infection – total



Pneumonia



Bronchiolitis

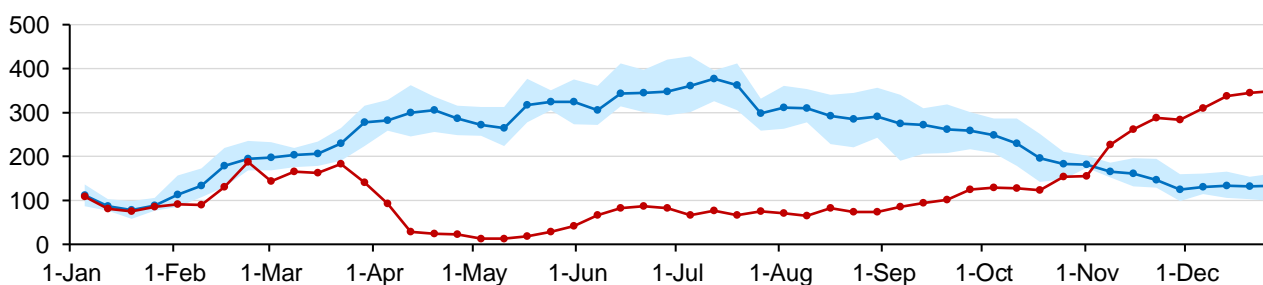
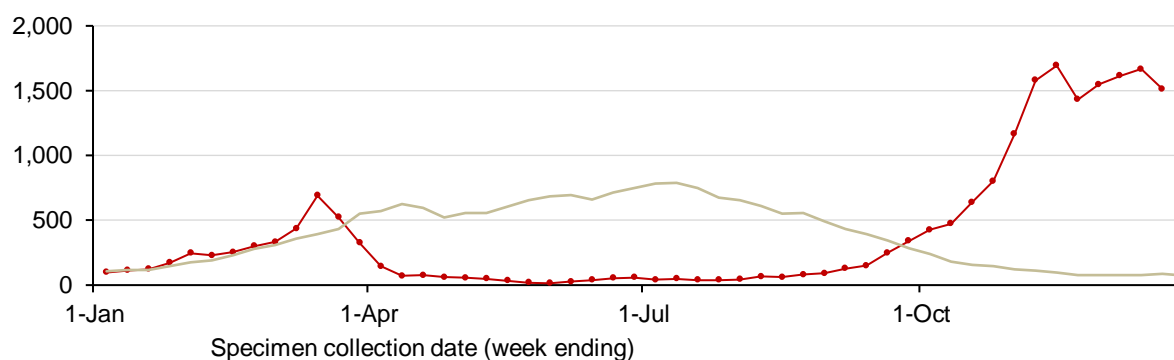


Figure 19. Number of positive PCR test results for all ages, for respiratory syncytial virus (RSV) at sentinel NSW laboratories, 1 January to 20 December 2020



**Interpretation:** Emergency presentations for any respiratory illness among those aged 0–4 years increased this week and have been above the seasonal range since early November.

- Pneumonia presentations increased this week in children aged 0–4 years and have been above the seasonal range since early November. For all other age groups, pneumonia presentations are below the seasonal range for this time of year.
- Bronchiolitis is a common disease of infants often caused by respiratory syncytial virus (RSV). In the week ending 27 December, bronchiolitis presentations increased and remain above the usual five-year average range for December.
- RSV detections decreased but have been above the five-year mean since September. The increase in reported cases in recent weeks corresponds to a steady increase in emergency presentations for bronchiolitis, which has been above the usual seasonal range since early November.

## APPENDIX A: COVID-19 PCR TESTS IN NSW

Local Health District	Local Government Area	Week ending				Total	
		26-December		19-December			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Central Coast	Central Coast / LHD Total <sup>2</sup>	11781	33.4	4676	13.3	150245	425.8
Far West	Balranald	9	3.9	3	1.3	522	223.3
	Broken Hill	175	10.0	68	3.9	5507	315.1
	Central Darling	0	0.0	7	3.8	417	226.8
	Wentworth	51	7.2	24	3.4	2438	345.7
	LHD Total <sup>2</sup>	235	7.8	102	3.4	8884	294.7
Hunter New England	Armidale Regional	336	10.9	169	5.5	10403	338.0
	Cessnock	476	7.9	219	3.7	16785	279.8
	Dungog	94	10.0	36	3.8	2630	279.1
	Glen Innes Severn	36	4.1	25	2.8	1908	215.1
	Gunnedah	84	6.6	59	4.7	3440	271.3
	Gwydir	20	3.7	7	1.3	740	138.2
	Inverell	83	4.9	60	3.6	4362	258.3
	Lake Macquarie	3528	17.1	1972	9.6	93578	454.5
	Liverpool Plains	65	8.2	31	3.9	2209	279.5
	Maitland	1362	16.0	697	8.2	42069	494.0
	Mid-Coast	2686	28.6	422	4.5	25971	276.8
	Moree Plains	73	5.5	42	3.2	3169	239.0
	Muswellbrook	154	9.4	94	5.7	4874	297.6
	Narrabri	76	5.8	19	1.5	2819	214.6
	Newcastle	3676	22.2	1953	11.8	92409	558.1
	Port Stephens	1342	18.3	523	7.1	30737	418.3
	Singleton	315	13.4	158	6.7	10036	427.8
	Tamworth Regional	712	11.4	362	5.8	23345	373.3
	Tenterfield	28	4.3	11	1.7	1129	171.2
	Upper Hunter Shire	171	12.1	65	4.6	4353	307.0
	Uralla	39	6.5	13	2.2	1319	219.4
	Walcha	45	14.4	12	3.8	960	306.3
		LHD Total <sup>2</sup>	15392	16.2	6946	7.3	378948
Illawarra Shoalhaven	Kiama	391	16.7	215	9.2	10400	444.7
	Shellharbour	822	11.2	488	6.7	31710	433.0
	Shoalhaven	1166	11.0	696	6.6	35923	340.0
	Wollongong	3285	15.1	1854	8.5	87433	400.9
	LHD Total <sup>2</sup>	5664	13.5	3253	7.8	165466	394.3
Mid North Coast	Bellingen	163	12.5	79	6.1	3903	300.3
	Coffs Harbour	732	9.5	398	5.2	21157	273.8
	Kempsey	256	8.6	173	5.8	9416	316.6
	Nambucca	179	9.0	94	4.8	5174	261.3

Local Health District	Local Government Area	Week ending				Total	
		26-December		19-December			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Port Macquarie-Hastings	1195	14.1	641	7.6	27402	324.2
	LHD Total <sup>2</sup>	2525	11.2	1385	6.1	67052	297.1
Murrumbidgee	Albury	586	10.8	337	6.2	18120	333.4
	Berrigan	40	4.6	15	1.7	2024	231.3
	Bland	31	5.2	10	1.7	1562	261.6
	Carrathool	7	2.5	3	1.1	345	123.3
	Coolamon	55	12.7	25	5.8	1294	298.1
	Cootamundra-Gundagai Regional	166	14.8	62	5.5	3132	278.8
	Edward River	42	4.6	17	1.9	2652	291.9
	Federation	83	6.7	41	3.3	2967	238.6
	Greater Hume Shire	67	6.2	25	2.3	3224	299.5
	Griffith	415	15.4	159	5.9	9068	335.5
	Hay	13	4.4	2	0.7	546	185.2
	Hilltops	200	10.7	79	4.2	5445	291.1
	Junee	34	5.1	11	1.7	1300	194.5
	Lachlan <sup>1</sup>	24	4.0	6	1.0	944	155.4
	Leeton	97	8.5	38	3.3	2734	238.9
	Lockhart	23	7.0	8	2.4	818	249.0
	Murray River	19	1.6	10	0.8	835	68.9
	Murrumbidgee	25	6.4	7	1.8	809	206.5
	Narrandera	26	4.4	14	2.4	1134	192.2
	Snowy Valleys	132	9.1	70	4.8	4450	307.3
	Temora	21	3.3	12	1.9	1303	206.6
	Wagga Wagga	1009	15.5	500	7.7	26143	400.6
	LHD Total <sup>2</sup>	3095	10.4	1448	4.9	90221	302.6
Nepean Blue Mountains	Blue Mountains	1983	25.1	1199	15.2	46467	587.3
	Hawkesbury	1098	16.3	660	9.8	32886	488.7
	Lithgow	204	9.4	122	5.7	6834	316.3
	Penrith	4050	19.0	2768	13.0	114970	539.8
	LHD Total <sup>2</sup>	7271	18.6	4721	12.1	199548	510.4
Northern NSW	Ballina	473	10.6	252	5.7	14570	326.5
	Byron	511	14.6	245	7.0	14102	402.0
	Clarence Valley	384	7.4	219	4.2	11753	227.5
	Kyogle	67	7.6	31	3.5	1863	211.8
	Lismore	352	8.1	153	3.5	15069	344.9
	Richmond Valley	155	6.6	83	3.5	6916	294.7
	Tenterfield	28	4.3	11	1.7	1129	171.2
	Tweed	741	7.6	390	4.0	25218	260.0
	LHD Total <sup>2</sup>	2689	8.7	1376	4.4	89767	289.2
Northern Sydney	Hornsby	7012	46.1	2612	17.2	70658	464.7
	Hunters Hill	1240	82.8	639	42.7	15954	1065.0



Local Health District	Local Government Area	Week ending				Total	
		26-December		19-December			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Ku-ring-gai	10787	84.8	4782	37.6	91334	718.3
	Lane Cove	4681	116.6	2091	52.1	45605	1135.7
	Mosman	2710	87.5	1202	38.8	19028	614.2
	North Sydney	4572	60.9	1879	25.1	34784	463.7
	Northern Beaches	74404	272.0	36219	132.4	232931	851.7
	Parramatta <sup>1</sup>	5961	23.2	3010	11.7	103054	400.7
	Ryde	5937	45.2	2247	17.1	63607	484.6
	Willoughby	3668	45.2	1755	21.6	35191	433.5
	<i>LHD Total<sup>2</sup></i>	116667	122.1	54105	56.6	629614	658.7
South Eastern Sydney	Bayside	3731	20.9	2065	11.6	68735	385.3
	Georges River	2898	18.2	1653	10.4	59042	370.2
	Randwick	6053	38.9	3113	20.0	94832	609.3
	Sutherland Shire	6979	30.3	4275	18.5	126787	549.8
	Sydney <sup>1</sup>	12164	49.4	6389	25.9	152792	620.2
	Waverley	4313	58.1	2048	27.6	54670	735.9
	Woollahra	4303	72.5	1786	30.1	46023	775.0
	<i>LHD Total<sup>2</sup></i>	32247	33.6	17372	18.1	506372	528.0
South Western Sydney	Camden	1772	17.5	1177	11.6	69684	687.0
	Campbelltown	2130	12.5	1638	9.6	92677	542.2
	Canterbury-Bankstown <sup>1</sup>	5583	14.8	3034	8.0	149077	394.5
	Fairfield	1607	7.6	950	4.5	73327	346.4
	Liverpool	2833	12.5	1807	7.9	113963	500.8
	Wingecarribee	1102	21.6	625	12.2	28889	565.0
	Wollondilly	499	9.4	350	6.6	20017	376.6
	<i>LHD Total<sup>2</sup></i>	12401	11.9	7902	7.6	472306	454.8
Southern NSW	Bega Valley	312	9.1	207	6.0	9931	288.1
	Eurobodalla	486	12.6	329	8.6	15836	411.6
	Goulburn Mulwaree	348	11.2	253	8.1	10824	347.7
	Queanbeyan-Palerang Regional	548	9.0	295	4.8	14787	242.0
	Snowy Monaro Regional	269	12.9	145	7.0	6396	307.6
	Upper Lachlan Shire	103	12.8	62	7.7	2330	289.1
	Yass Valley	175	10.2	76	4.5	3559	208.3
	<i>LHD Total<sup>2</sup></i>	2241	10.3	1367	6.3	63692	293.4
Sydney	Burwood	790	19.5	369	9.1	12866	316.8
	Canada Bay	3392	35.3	1614	16.8	52368	545.1
	Canterbury-Bankstown <sup>1</sup>	5583	14.8	3034	8.0	149077	394.5
	Inner West	8605	42.9	3978	19.8	125556	625.2
	Strathfield	1168	24.9	631	13.5	23572	502.3
	Sydney <sup>1</sup>	12164	49.4	6389	25.9	152792	620.2
	<i>LHD Total<sup>2</sup></i>	25235	36.2	12193	17.5	384588	552.0
Western NSW	Bathurst Regional	617	14.2	351	8.1	18412	422.1

Local Health District	Local Government Area	Week ending				Total	
		26-December		19-December			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
	Blayney	104	14.1	47	6.4	2960	401.1
	Bogan	14	5.4	10	3.9	611	236.8
	Bourke	14	5.4	11	4.3	482	186.1
	Brewarrina	4	2.5	3	1.9	303	188.1
	Cabonne	109	8.0	51	3.7	2942	215.8
	Cobar	36	7.7	13	2.8	979	210.2
	Coonamble	51	12.9	14	3.5	906	228.9
	Cowra	127	10.0	63	4.9	3286	257.9
	Dubbo Regional	573	10.7	301	5.6	17420	324.3
	Forbes	79	8.0	32	3.2	2079	209.9
	Gilgandra	26	6.1	8	1.9	899	212.1
	Lachlan <sup>1</sup>	24	4.0	6	1.0	944	155.4
	Mid-Western Regional	275	10.9	170	6.7	8002	316.9
	Narromine	59	9.1	22	3.4	1641	251.8
	Oberon	48	8.9	23	4.3	1672	309.0
	Orange	900	21.2	347	8.2	19484	459.0
	Parkes	122	8.2	43	2.9	3954	266.5
	Walgett	34	5.7	10	1.7	1539	258.5
	Warren	50	18.5	12	4.5	1232	456.8
	Warrumbungle Shire	74	8.0	40	4.3	2593	279.5
	Weddin	14	3.9	6	1.7	779	215.6
	LHD Total <sup>2</sup>	3350	11.8	1581	5.6	92842	325.8
	Western Sydney	Blacktown	8002	21.4	4083	10.9	178848
Cumberland		3579	14.8	2091	8.7	101512	420.3
Parramatta <sup>1</sup>		5961	23.2	3010	11.7	103054	400.7
The Hills Shire		6203	34.9	3267	18.4	114964	646.0
LHD Total <sup>2</sup>		22197	21.1	11842	11.2	481154	456.8
NSW Total <sup>3</sup>		272,488	33.7	138,054	17.1	4,029,185	498.1

<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, 1 January to 20 December 2020

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.

Specimen collection date	PCR tests conducted	Influenza A No.    %Pos.		Influenza B No.    %Pos.		Adeno-virus	Para-influenza	RSV	Rhino-virus	HMPV**	Entero-virus
1 Jan — 20 Dec 2020											
Total	1,326,406	6,630	0.50%	955	0.07%	9,026	9,174	20,480	137,582	2,428	6,319
Month ending											
3 February *	34,953	2,508	7.18%	401	1.15%	846	1,900	752	5,036	599	335
1 March	40,575	2,363	5.82%	315	0.78%	798	2,435	1,118	8,245	437	1,007
29 March	85,238	1,549	1.82%	200	0.23%	898	4,117	1,977	18,088	664	1,502
3 May *	54,128	70	0.13%	13	0.02%	175	273	410	2,250	48	210
31 May	71,525	35	0.05%	6	0.01%	237	62	115	3,511	27	112
28 June	130,922	42	0.03%	11	0.01%	629	83	178	28,321	112	246
2 August *	227,152	34	0.01%	2	<0.01%	1,251	89	209	31,589	79	427
30 August	174,594	9	0.01%	2	<0.01%	1,137	37	299	13,926	14	235
27 September	145,489	6	<0.01%	1	<0.01%	938	35	866	8,416	61	259
1 November *	131,686	7	0.01%	1	<0.01%	894	56	3,508	5,632	51	662
29 November	129,164	6	<0.01%	3	<0.01%	752	42	6,255	8,252	192	884
Week ending											
6 December	24,404	0	0.00%	0	0.00%	148	9	1,614	1,488	59	153
13 December	24,954	1	<0.01%	0	0.00%	159	14	1,666	1,334	73	139
20 December	51,622	0	0.00%	0	0.00%	164	22	1,513	1,494	12	148

**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

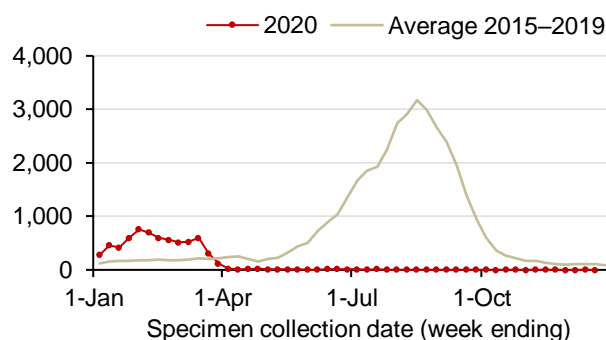
RSV - Respiratory syncytial virus

\*Five-week period

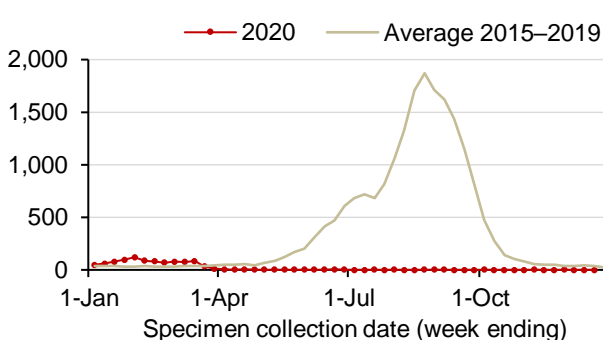
## APPENDIX C: NUMBER OF POSITIVE PCR TEST RESULTS FOR INFLUENZA AND OTHER RESPIRATORY VIRUSES AT SENTINEL NSW LABORATORIES, 1 January to 20 December 2020

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.

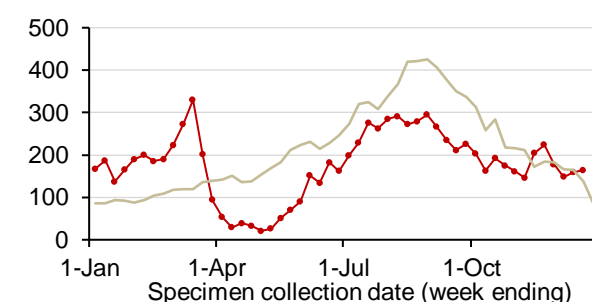
**Influenza A**



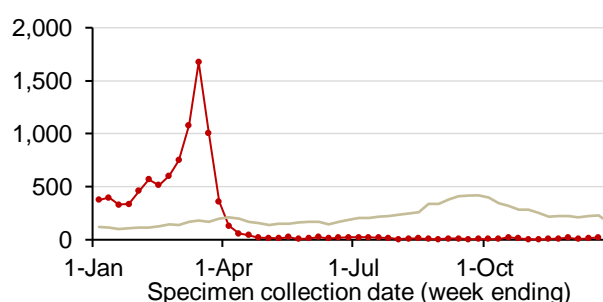
**Influenza B**



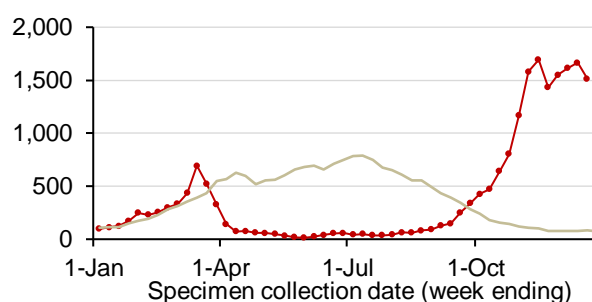
**Adenovirus**



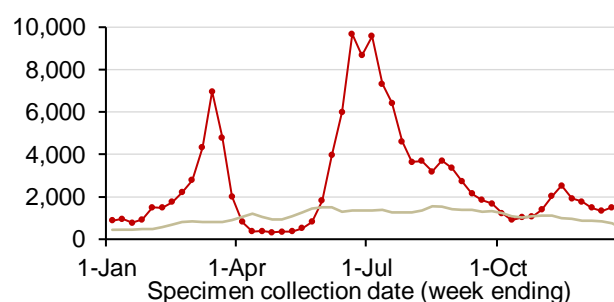
**Parainfluenza**



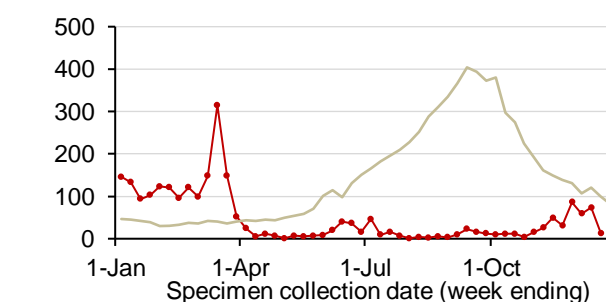
**Respiratory syncytial virus (RSV)**



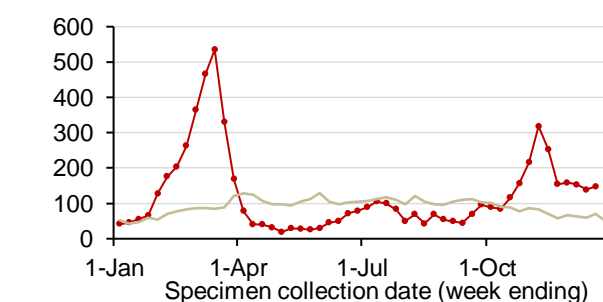
**Rhinovirus**



**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.