

COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 33, ENDING 15 AUGUST 2020

Published 19 August 2020

SUMMARY FOR THE WEEK ENDING 15 AUGUST

- The number of locally-acquired COVID-19 cases in NSW increased this week, most of which have been linked to new or known clusters.
- Investigations to date have been unable to link seven cases reported this week with known cases or clusters.
- Three new clusters have been identified in venues in South Western Sydney and one in a high school in Parramatta.
- There were two deaths recorded this week, bringing the total number of deaths in NSW to 54.
- Overall testing rates declined slightly this week and the proportion of people who waited longer than three days from symptom onset to isolation increased from last week (28% vs 12%).
- NSW Health urges anyone who develops respiratory symptoms, regardless of how mild, to get tested immediately for COVID-19 and stay at home until symptoms have resolved and a COVID-19 infection has been excluded.
- People identified as close contacts should:
 - seek testing regardless of symptoms
 - repeat testing despite a previous negative test if symptoms (even mild) develop
 - remain isolated for 14 days from last exposure to the case, regardless of a negative test result.

SECTION 1: PREVENTING THE SPREAD OF COVID-19 – WE ALL PLAY A ROLE

Everyone has an important role to play to prevent the spread of COVID-19. For the public health response to be effective, members of the community, laboratories, clinicians and public health staff all have to play their part.

The sooner we can diagnose cases, the faster we can identify other people who may have been infected, and the better we can limit the spread of infection across our community.

The roles we all play are outlined below.

Everyone

- Seek medical attention and get tested quickly every time you develop respiratory symptoms (even if mild) or unexplained fever.
- Stay at home to avoid spreading infection to others as soon as you:
 - develop symptoms and until you are told that you do not have COVID-19 and you are well
 - are told that you are a close contact of a COVID-19 case and until your quarantine period has ended (even if you test negative before then).
- Follow the advice given in public health alerts regarding the need to self-isolate and seek testing if you attended a location at a time where a cluster has been identified.

People who are diagnosed with COVID-19

- Provide information to public health staff at the time of interview on the locations visited and people you have been in contact with in your **incubation period** and while infectious.
- Stay at home until you are told your isolation period has ended.

Clinicians

- Promote COVID-19 testing amongst symptomatic people to ensure a COVID-19 diagnosis as close as possible to the time symptoms start.
- Encourage testing in people without symptoms when advised to do so for public health purposes.
- Support cases to self-isolate until their isolation period has ended.

Laboratories

- Notify NSW Health of new diagnoses promptly so public health staff can interview cases and identify people potentially infected by a case (close contacts).

Public health staff

- Interview cases as quickly as possible after diagnosis and collect information from cases to detect new clusters and enable contact tracing.
- Quarantine close contacts as quickly as possible.

Here is a snapshot of our locally-acquired cases to show how effective we've been in preventing the spread of COVID-19 in NSW in the past two weeks:

	Measure	Week of reporting	
		Week ending 15 August	Week ending 8 August
Cases with no links to known case or cluster	Proportion tested (swabbed) within:		
	• 1 day of symptom onset	17% (1/6)	100% (3/3)
	• 2 days of symptom onset	50% (3/6)	100% (3/3)
	• 3 days of symptom onset	83% (5/6)	100% (3/3)
	Proportion tested more than 3 days after symptom onset	17% (1/6)	0% (0/3)
	Proportion who entered isolation within:		
	• 1 day of symptom onset	33% (2/6)	100% (3/3)
	• 2 days of symptom onset	50% (3/6)	100% (3/3)
Cases linked to known case or cluster	• 3 days of symptom onset	67% (4/6)	100% (3/3)
	Proportion who entered isolation more than 3 days after symptom onset	33% (2/6)	0% (0/3)
	Proportion tested (swabbed) within:		
	• 1 day of symptom onset	40% (21/52)	35% (20/57)
	• 2 days of symptom onset	52% (27/52)	58% (33/57)
	• 3 days of symptom onset	65% (34/52)	72% (41/57)
	Proportion tested more than 3 days after symptom onset	35% (18/52)	28% (16/57)
	Proportion who entered isolation within:		
	• 1 day of symptom onset	50% (26/52)	61% (35/57)
	• 2 days of symptom onset	65% (34/52)	75% (43/57)
	• 3 days of symptom onset	73% (38/52)	88% (50/57)
	Proportion who entered isolation more than 3 days after symptom onset	27% (14/52)	12% (7/57)
	Number of tests conducted	149,533	164,803
	Proportion notified to NSW Health by the laboratory within:		
	• 1 day of swab collection	77% (54/70)	76% (50/66)
	• 2 days of swab collection	99% (69/70)	98% (65/66)
	• 3 days of swab collection	99% (69/70)	98% (65/66)
	Proportion notified to NSW Health by the laboratory more than 3 days after the swab collection	1% (1/70)	2% (1/66)
	Proportion of locally-acquired cases interviewed by public health staff within 1 day of notification to NSW Health	100% (70/70)	100% (66/66)

Interpretation: Only half of the six cases with no links to known clusters or cases sought testing and isolated within two days of developing symptoms. Furthermore, 35% of cases who have been linked to a known case or cluster were tested more than three days after symptom onset and 27% of these cases isolated more than three days after symptom onset. All people are reminded of the need to isolate and seek testing as soon as any symptoms develop, to limit spread to other people.

Despite the high volume of testing, the time taken to notify cases remains stable with most new cases in the week ending 15 August notified to NSW Health within two days of swab collection. One case was notified more than three days after the swab collection, however, NSW Health was notified of a preliminary result so public health action was undertaken prior to confirmation of the final diagnosis. Public health staff are responding quickly, with all cases interviewed within one day of notification.

SECTION 2: HOW IS THE OUTBREAK TRACKING IN NSW?

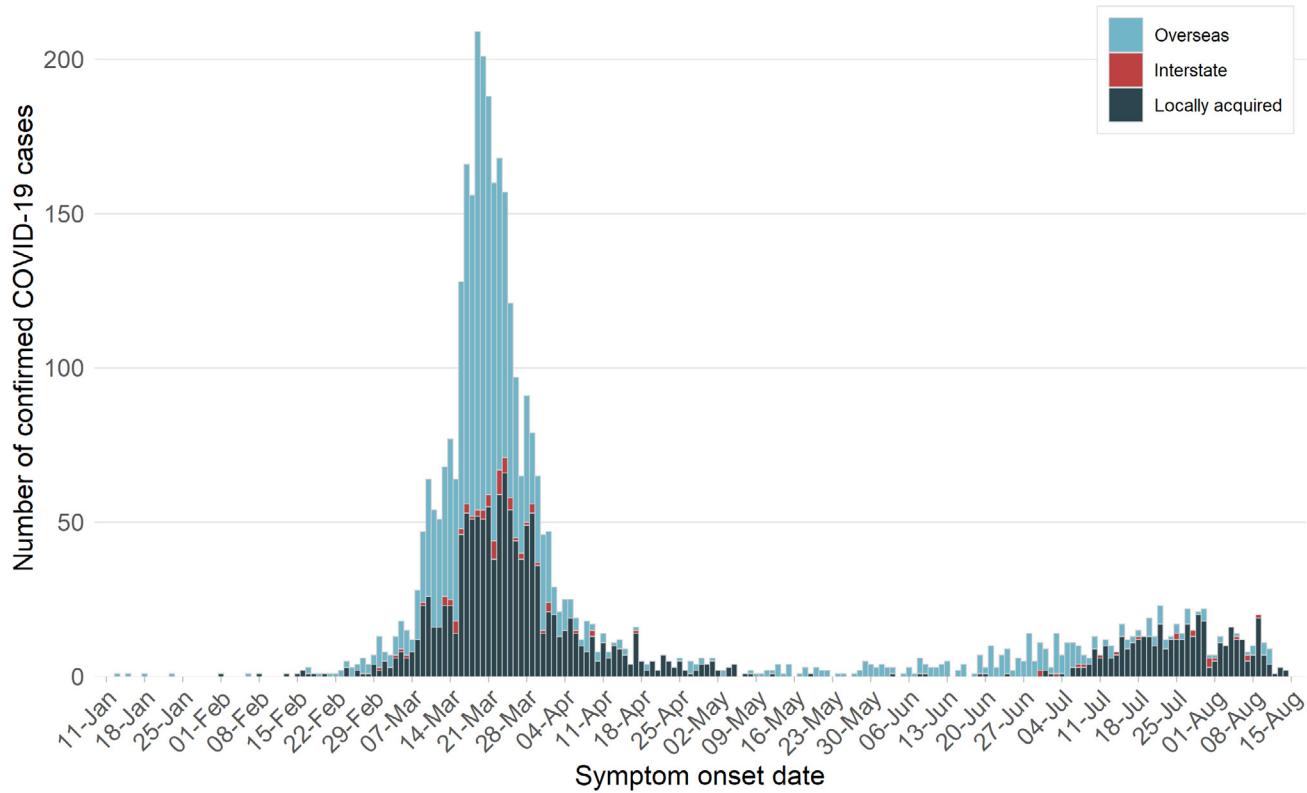
Table 1. COVID-19 cases and tests reported in NSW, up to 15 August 2020

	Week ending 15 August	Week ending 8 August	% change	Total to 15 August
Number of cases	87	78	↑ 12%	3,764
Overseas acquired	14	7	↑100%	2,053
Interstate acquired	3	5	↓40%	88
Locally acquired	70	66	↑ 6%	1,623
Number of deaths	2	0		54
Number of tests	149,533	164,803	↓ 9%	1,853,160

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: Approximately 55% of COVID-19 infections diagnosed in NSW to 15 August have been **overseas acquired** and the remaining 45% have been **locally acquired**. The number of new cases diagnosed in NSW decreased significantly following a peak in mid-March. The increase in overseas-acquired cases during June was largely due to a program of screening all overseas travellers two days and 10 days after arrival in NSW. In recent weeks, the number of overseas-acquired cases has decreased while the number of locally-acquired cases has increased.

How many NSW cases were infected in Victoria?

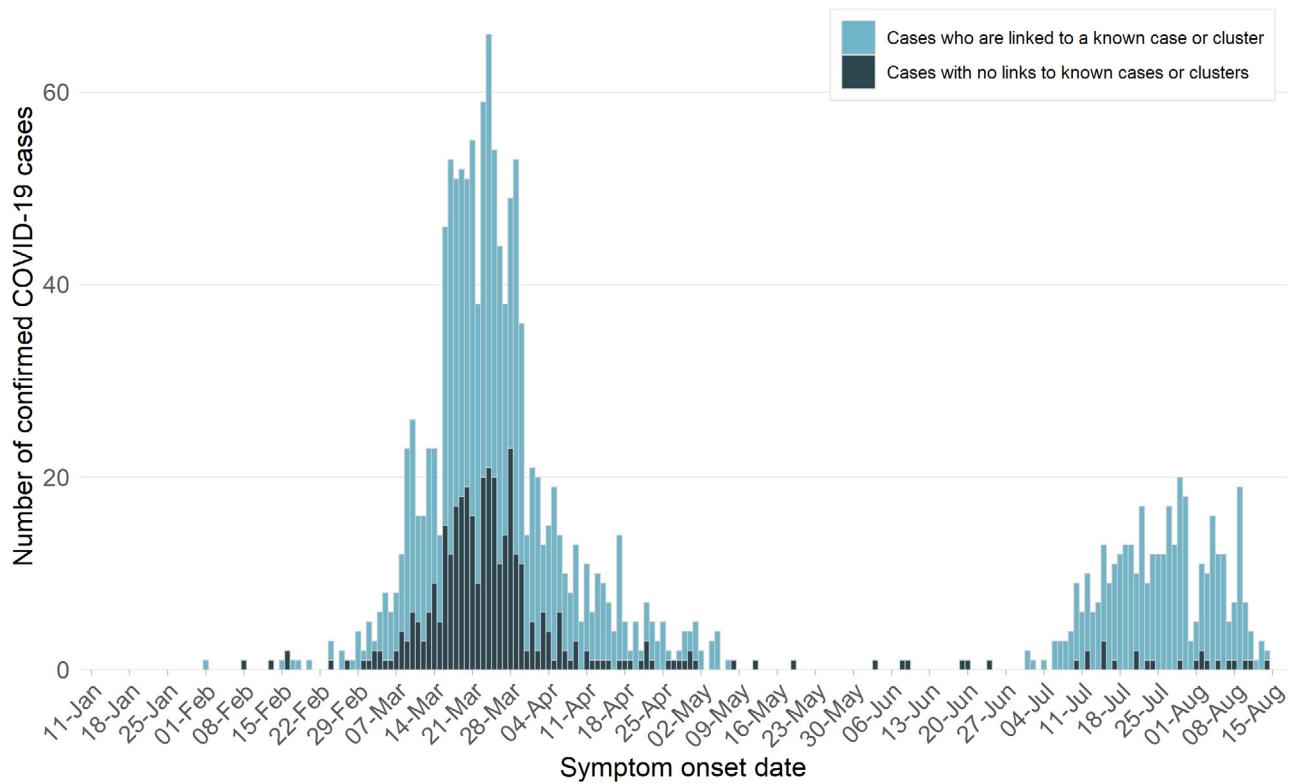
In response to the continued community transmission in Victoria, border measures have been introduced to limit the spread of infection into NSW. From 8 July, under the Public Health (COVID-19 Border Control) Order 2020, a person who has been in Victoria within the last 14 days must not travel to NSW. This was updated on 22 July to further restrict travel to NSW from Victoria and redefine border zone residents. Exceptions are only given in very limited circumstances and those authorised to enter NSW from Victoria must self-isolate for 14 days from arrival in NSW. NSW Health staff, along with the wider community, are strongly discouraged from travelling to Victoria whilst the outbreak of COVID-19 continues in Victoria.

In the week ending 15 August, three people from the same household who acquired their infection in Victoria were confirmed to have COVID-19. All three cases were isolated on arrival into NSW before their onset of illness.

How much transmission is occurring in NSW?

All new cases who have not travelled outside of NSW are investigated by public health staff to determine the likely source of infection and identify **clusters**. 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. Currently, public health efforts are focussed on contact tracing to limit further spread in the community, and identifying the source of infection for every case.

Figure 2. Locally acquired COVID-19 cases by likely infection source and illness onset, NSW, 2020



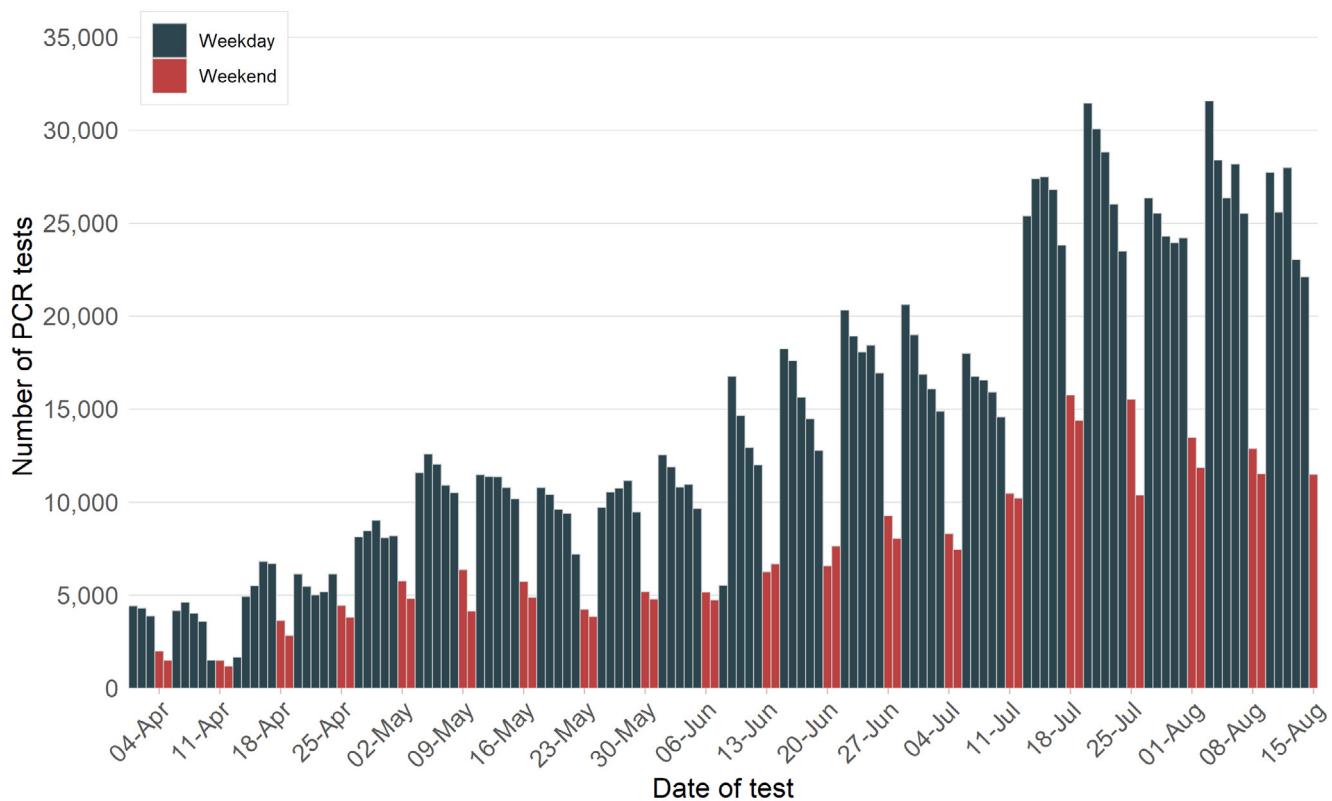
The date of the first positive test is used for cases who did not report symptoms.

Interpretation: Of the locally-acquired cases with an onset in the last four weeks, 95% (268/283) were linked to known cases or clusters.

How much testing is happening?

The bars on the graph below show the number of tests by the date a person presented for the test.¹ While public health facilities are 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

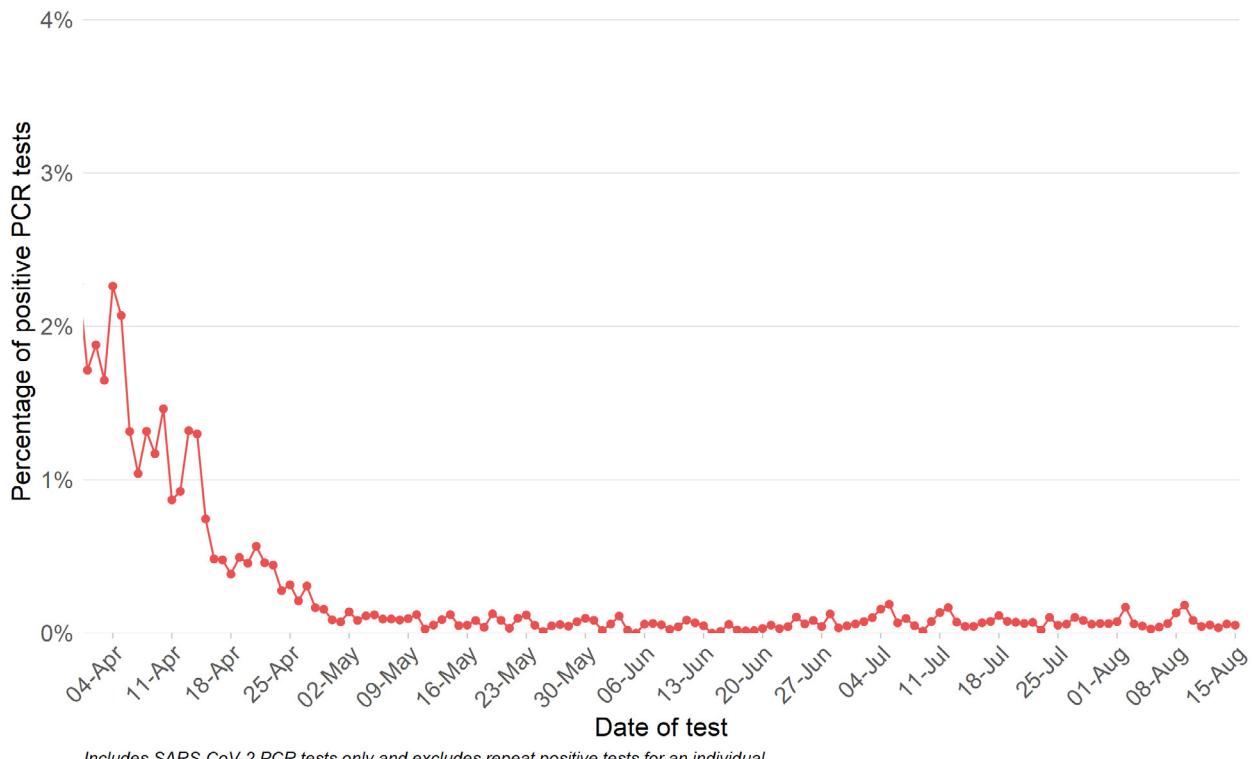


Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.

Interpretation: COVID-19 testing increased significantly in April and again during July in line with the changes in testing criteria and increased availability of testing. Early in the outbreak the focus was on returned travellers and close contacts of confirmed cases, whereas now testing is recommended for anyone with even mild respiratory symptoms or unexplained fever. A 9% decrease in testing was reported in the week ending 15 August compared with the previous week. The trend of considerably higher testing in July and August compared to previous months continues. An average of 2.6 tests were conducted per 1,000 people in NSW each day in the week ending 15 August.

¹ The number of tests per day displayed below is different to the 24 hour increase in tests reported each day as there are delays in some laboratories providing negative results to NSW Health.

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

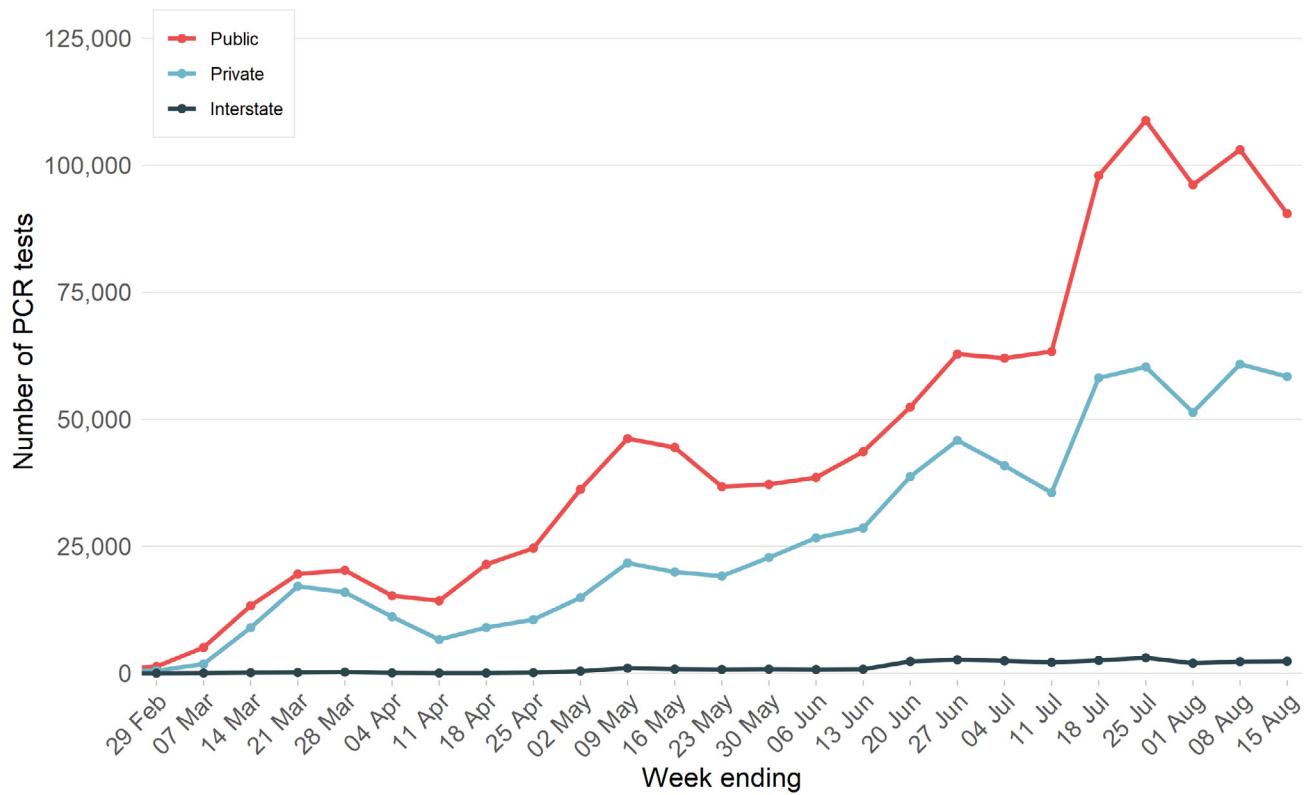


Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.

Interpretation: The proportion of tests positive for COVID-19 in NSW declined in mid-March to early May, and then stabilised at very low levels. Despite high rates of testing, particularly in areas where clusters have been identified, the overall proportion of tests found to be positive indicate low levels of transmission in the community.

Which laboratories are doing the testing?

Figure 5. Number of PCR tests by week and facility type, NSW, 2020



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

Interpretation: In the week ending 15 August, testing in both public and private facilities remains high with approximately 60% of PCR tests conducted at public laboratories during this period.

SECTION 3: COVID-19 TRANSMISSION IN NSW IN THE LAST FOUR WEEKS

Information from cases who became unwell 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 the laboratory to perform the test.

Table 2. Locally-acquired COVID-19 cases in NSW, by week and source of infection, 19 July to 15 August 2020

Locally-acquired cases	Week ending				Total
	15 August	8 August	1 August	25 July	
Cases who are linked to a known case or cluster	63	63	89	82	297
Cases with no links to other cases or clusters	7	3	2	4	16
Total	70	66	91	86	313

Interpretation: The majority (95%) of cases in the four weeks ending 15 August were linked to known cases or clusters.

COVID-19 cases with no links to known cases or clusters

Cases with no identified links to known cases or clusters suggest that there are people infected with COVID-19 in the community who have not been diagnosed. Testing of people with whom they have been in contact in the 14 days prior to symptom onset, and more broadly in the local community, is important to identify the source of the infection, detect other cases and prevent further transmission in the community.

Table 3. Locally-acquired COVID-19 cases with no identified links to known cases or clusters by LHD of residence and week of onset, 19 July to 15 August 2020

Local Health District	Week ending				Total
	15 August	8 August	1 August	25 July	
Central Coast	0	0	0	0	0
Far West	0	0	0	0	0
Hunter New England	0	1	0	0	1
Illawarra Shoalhaven	0	0	0	0	0
Mid North Coast	0	0	0	0	0
Murrumbidgee	0	0	0	0	0
Nepean Blue Mountains	1	0	0	0	1
Northern NSW	0	0	0	0	0
Northern Sydney	0	0	0	0	0
South Eastern Sydney	0	0	0	0	0
South Western Sydney	3	1	1	4	9
Southern NSW	0	0	0	0	0
Sydney	0	1	0	0	1
Western NSW	0	0	0	0	0
Western Sydney	3	0	1	0	4
Total	7	3	2	4	16

Interpretation: Extensive public health investigations were unable to identify a source of infection for seven cases in the week ending 15 August. In total, 16 cases were reported in the last four weeks with no links to known cases. Among the 16 cases there were eight who were the source for transmission amongst 13 household contacts and five other social contacts.

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. Information on all cases with no obvious source of infection is compared to identify new clusters. 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.

Clusters in high-risk settings

Three cases were reported in staff from Liverpool Hospital in the last two weeks. One staff member was linked to a known cluster and the sources of the other two cases are under investigation. All close contacts of the staff members have been identified and advised to isolate for 14 days, get tested for COVID-19, and monitor their health. A new cluster in a school in Western Sydney was also identified this week and is further described below.

Community clusters

In total, 320 cases with an onset in the four weeks up to 15 August were linked to known clusters.

Table 4. COVID-19 community clusters, 1 July to 15 August 2020

Date cluster first identified	Cluster	Cases linked in the week ending 15 Aug	Number of linked cases	Source of cluster
10 July	Crossroads Hotel Casula and linked clusters	0	57*	Victorian-acquired case
17 July	Thai Rock Restaurant Wetherill Park and linked clusters	4	114*	Source not identified
18 July	Batemans Bay club	3	11	Source not identified
24 July	Bankstown area funeral services and linked clusters	11	71*	Source not identified
27 July	Thai Rock Restaurant Potts Point and linked clusters	3	36*	Thai Rock Wetherill Park case
2 August	School in Northern Sydney LHD	18	24*	Under investigation
3 August	School in Western Sydney LHD	3	3*	Under investigation
5 August	Smithfield club	3	3*	Under investigation
9 August	Lidcombe club	1	1*	Under investigation
Total		46	320	

* Excludes the source cases.

Crossroads Hotel Casula

No additional cases were linked to the Crossroads Hotel Casula cluster.

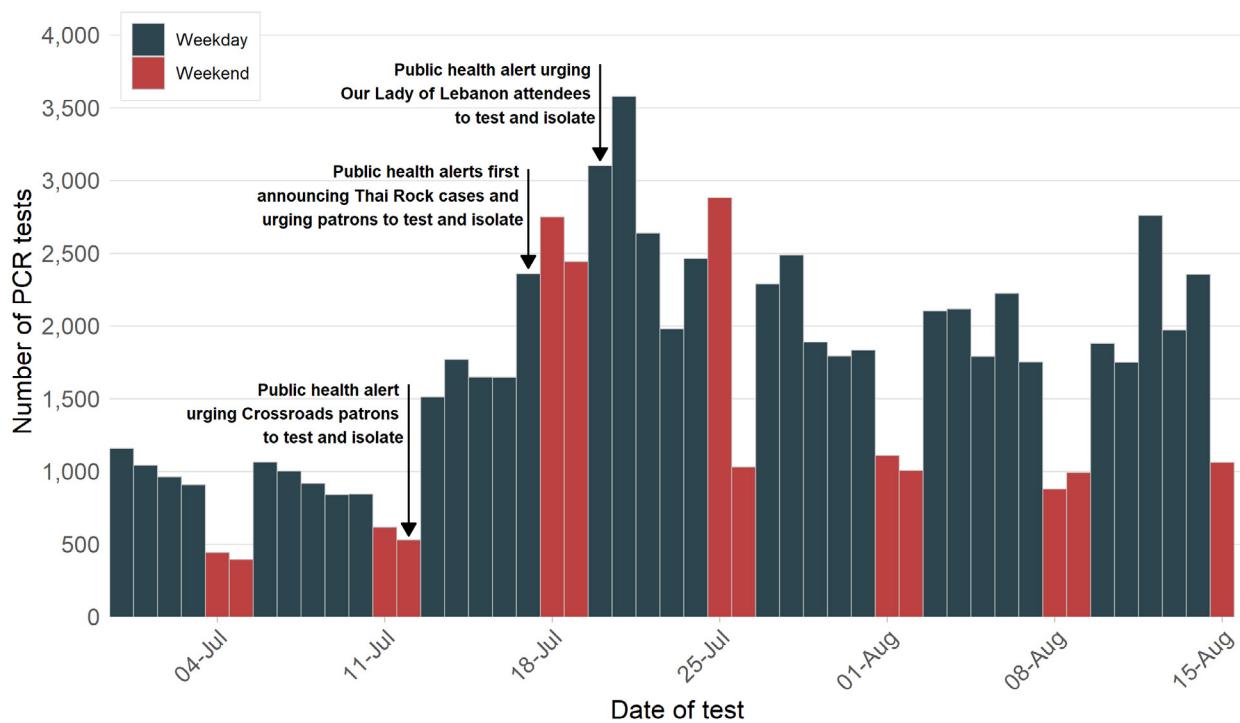
Thai Rock Restaurant Wetherill Park and linked clusters

Three secondary cluster events have been linked to the cluster at Thai Rock Restaurant, including two workplace locations and Our Lady of Lebanon Cathedral, Harris Park. There were four new cases reported in the week ending 15 August including one case who was a household contact of a Fairfield workplace case, two cases that are linked to the Fairfield primary school, and one case linked to the sporting match. There is a total of 115 cases linked to this cluster, including the source case.

Table 5. Clusters linked to Thai Rock Restaurant Wetherill Park cluster

Setting of exposure	Type of contact			Total
	Location	Household	Other	
Thai Rock Restaurant Wetherill Park	20	26	9	55
Our Lady of Lebanon Cathedral, Harris Park	11	12	1	24
Sporting match, Canterbury-Bankstown LGA	5	6	0	11
Primary school, Fairfield LGA	1	2	2	5
Workplace in Fairfield LGA	10	7	0	17
Workplace in Cumberland LGA	2	0	0	2
Total	49	48	11	114

Figure 6. COVID-19 PCR tests in Thai Rock Wetherill Park cluster associated areas, NSW, 2020



Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.
Counts in the shaded area may be incomplete due to a delay in reporting negative results.
Areas included: Cumberland, Fairfield and Parramatta LGAs.

Interpretation: Testing rates in residents of Cumberland, Fairfield and Parramatta LGAs increased following the messaging (including public health alerts and phone calls by contact tracers) to those identified as close contacts. The low proportion of additional cases identified indicates low levels of COVID-19 in these LGAs.

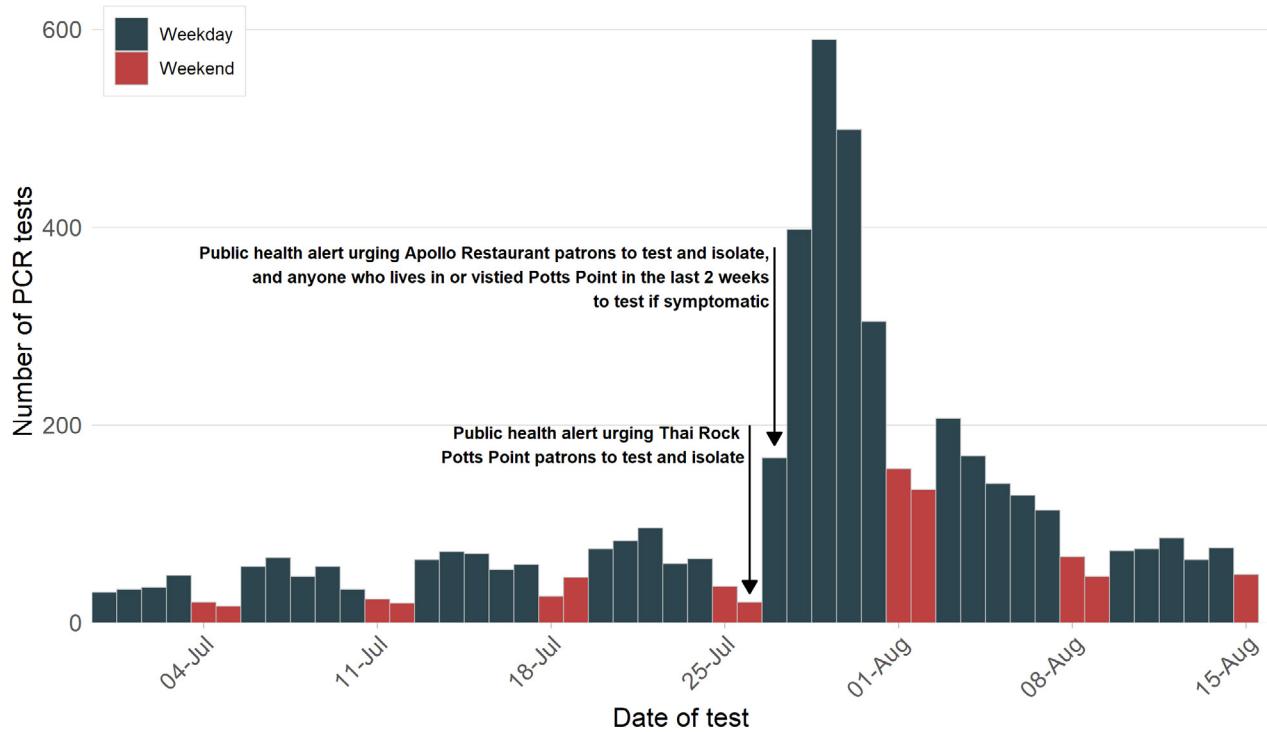
Thai Rock Restaurant Potts Point and linked clusters

In response to the two restaurant clusters, NSW Health issued a public health alert on 28 July to encourage testing in residents and recent visitors to Potts Point with even mild respiratory symptoms. In the week ending 15 August, an additional three cases were linked to the cluster including one case who was a close contact of a Thai Rock patron and their two household contacts. There is a total of 37 cases linked to this cluster, including the source case.

Table 6. Clusters linked to Thai Rock Restaurant Potts Point

Setting of exposure	Type of contact			Total
	Location	Household	Other	
Thai Rock Restaurant Potts Point	4	2	2	8
Apollo Restaurant Potts Point	24	4	0	28
Total	28	6	2	36

Figure 7. COVID-19 PCR tests in Potts Point and surrounding suburbs, 2020



Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.
Counts in the shaded area may be incomplete due to a delay in reporting negative results.
Areas included: postcode 2011.

Interpretation: A marked increase in the number of tests conducted in residents of Sydney LGA was observed following the public health alerts and information given to those who had attended Thai Rock and Apollo restaurants at the date and time of the outbreaks. Testing numbers in the area have since returned to levels reported prior to the alerts being issued.

Bankstown area funeral services and linked clusters

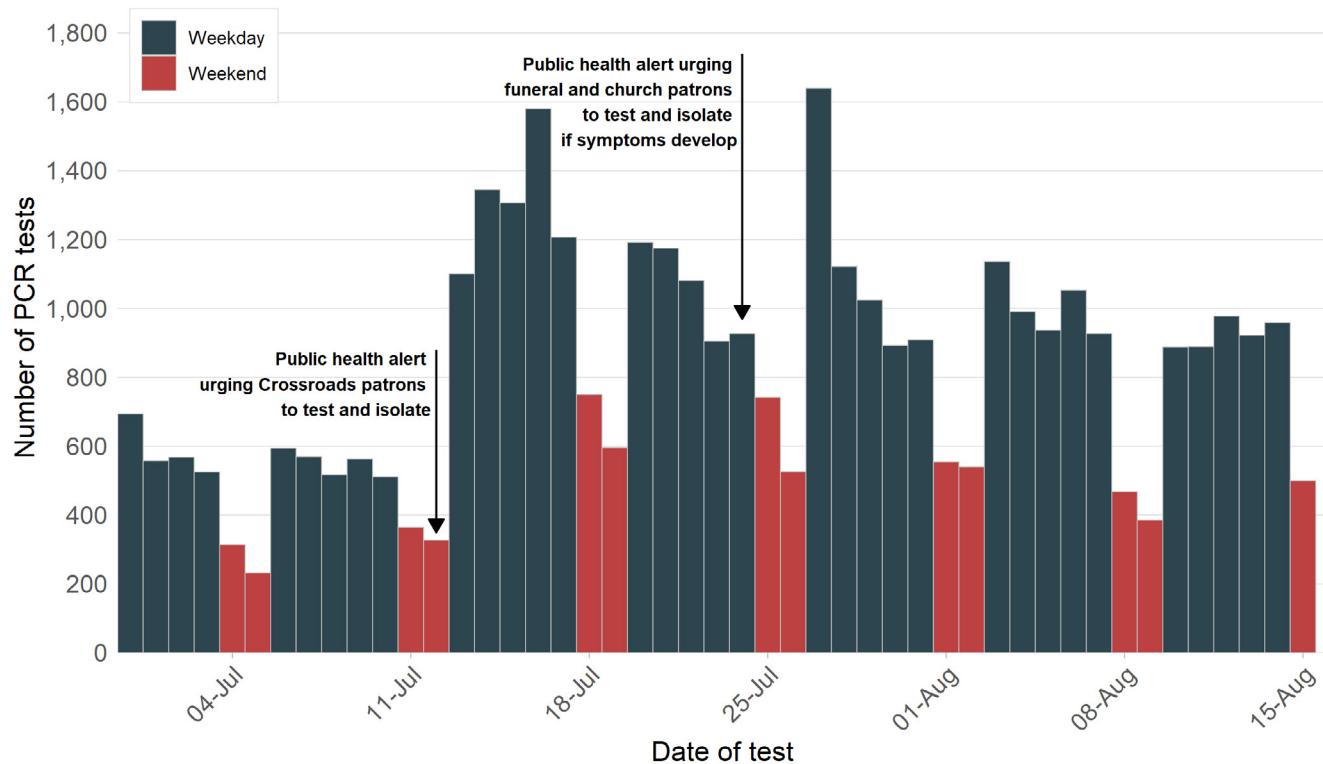
A case, whose source of infection is not known, attended multiple events in their exposure and infectious period in the week ending 25 July, including services at St Brendan's Catholic Church Bankstown. A public health investigation identified that one of the funeral attendees attended a club in Mt Pritchard on multiple occasions while infectious. One of the cases, a club patron, had driven several farm workers from South Western Sydney to the Central Coast during their infectious period. Seven cases have since been identified in farm workers and a further 15 cases in household and social contacts of farm workers.

There are two secondary cluster locations that have been identified linked to this cluster, with a total of 72 cases including the source case. In this reporting week an additional 11 cases have been identified including three cases linked to the club and eight cases linked to the Central Coast farm workers.

Table 7. Clusters linked to Bankstown area funeral services

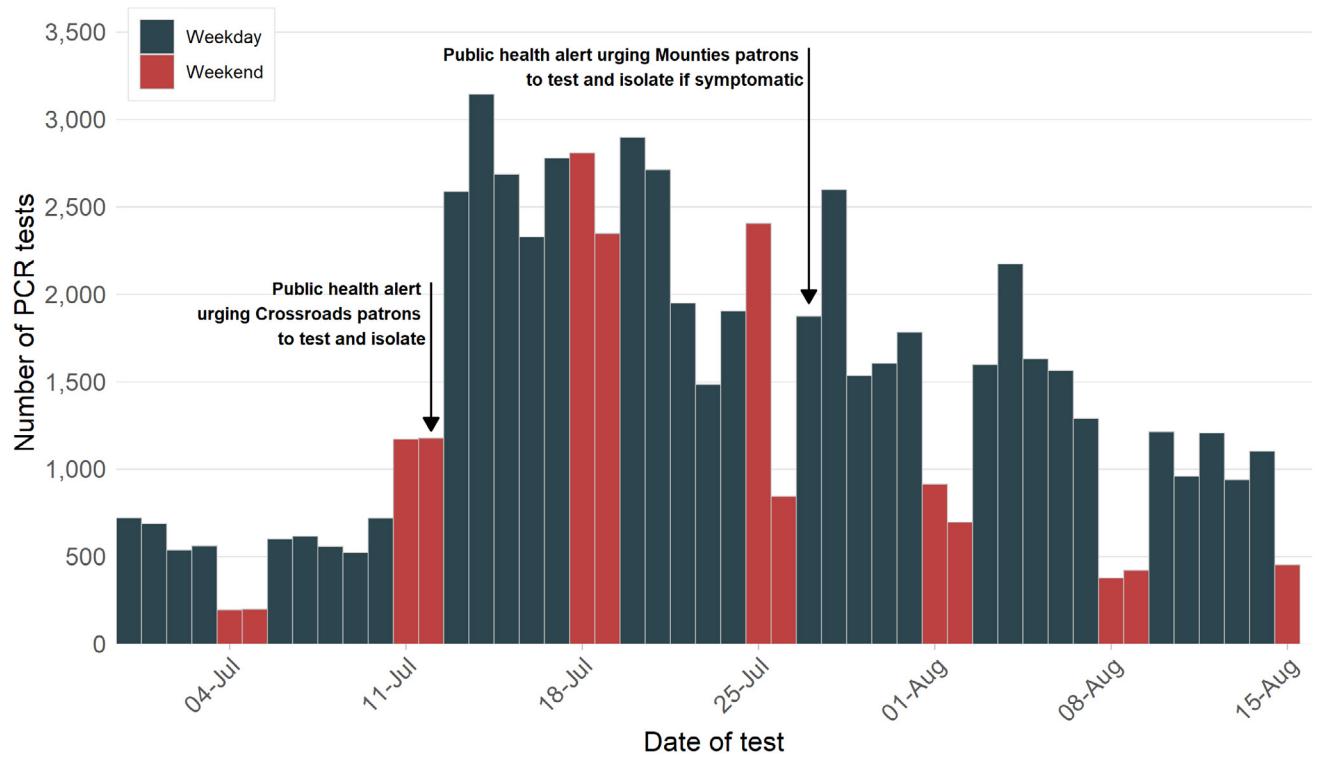
Setting of exposure	Type of contact			Total
	Location	Household	Other	
Bankstown area funeral services	13	11	2	26
Mounties, Mt Pritchard	11	8	4	23
Farm, Central Coast LHD	7	8	7	22
Total	33	27	11	71

Figure 8. COVID-19 PCR tests in Canterbury-Bankstown LGA, NSW, 2020



Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.
Counts in the shaded area may be incomplete due to a delay in reporting negative results.
Areas included: Canterbury-Bankstown LGA.

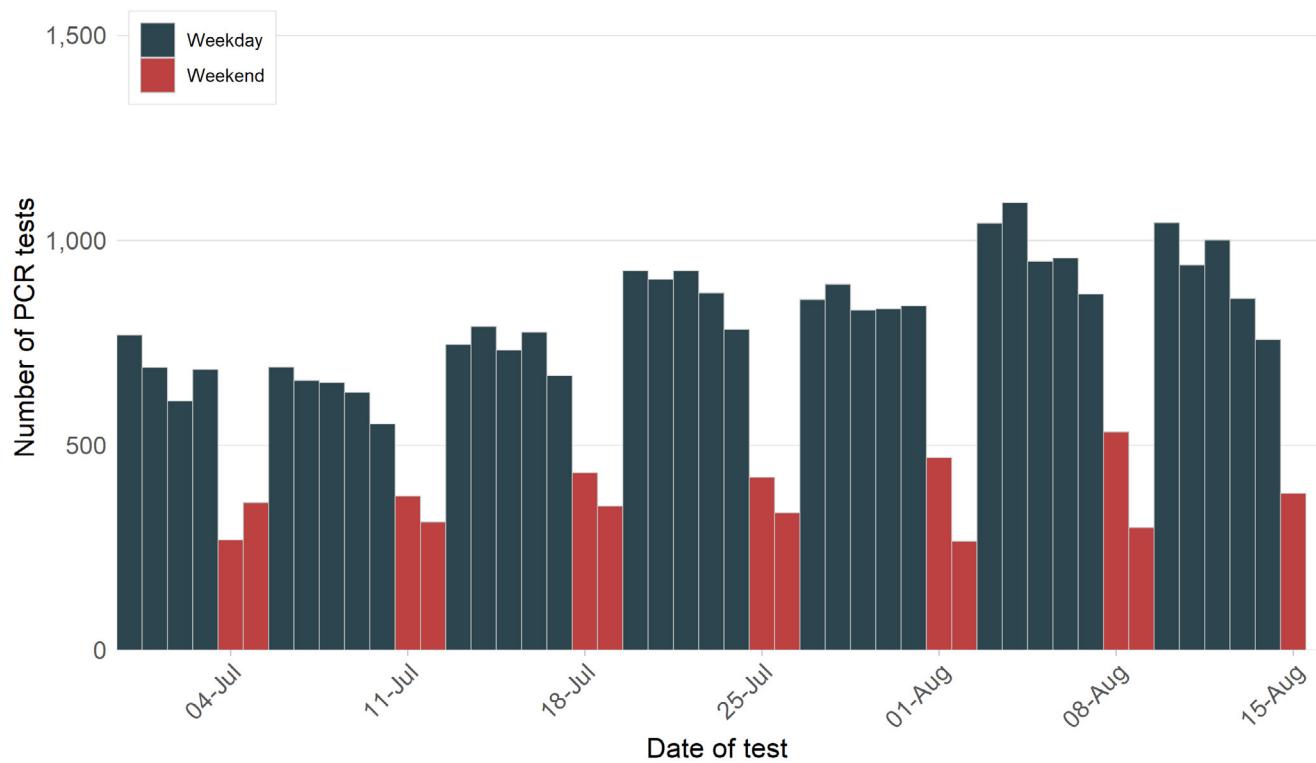
Figure 9. COVID-19 PCR tests in areas associated with the Mounties cluster, NSW, 2020



*Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.
Counts in the shaded area may be incomplete due to a delay in reporting negative results.
Areas included: Fairfield and Liverpool LGAs.*

Interpretation: Testing rates increased markedly in mid-July following the media alerts and calls to close contacts of the identified clusters. Test numbers have trended downward in the recent week but remain higher than prior to the public health alerts.

Figure 10. COVID-19 PCR tests in areas associated with the farm cluster, NSW, 2020



*Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.
Counts in the shaded area may be incomplete due to a delay in reporting negative results.
Areas included: Central Coast LGA.*

Interpretation: The high rates of testing in the Central Coast LHD and low case counts suggests limited transmission into the community following the recent cluster identified in farm workers.

School in Northern Sydney LHD and associated cases

On 7 August the Public Health Unit was notified of a student from a school who had tested positive to SARS-CoV-2. Contact tracing and further testing among other students subsequently identified several additional cases, including five students who attended a non-school retreat the previous weekend. One of these students attended a music lesson on 6 August at the school whilst infectious which led to six cases of COVID-19 being diagnosed among other attendees.

In the week ending 15 August, 18 cases were reported that were found to have links to this cluster. Including the source there are 25 cases of COVID-19 associated with the school cluster, including 14 at the school, four household contacts and six others.

Table 8. Cluster associated with a school in Northern Sydney LHD

Setting of exposure	Type of contact			Total
	Location	Household	Other	
School in Northern Sydney LHD	14	4	6	24

School in Western Sydney LHD

On 8 August, a case of COVID-19 was notified in a student that attends a school in Parramatta. Close contacts at the school were identified and asked to quarantine, and the school was planned to be non-operational on 10 and 11 August. On 10 August, two further cases were reported in students from the school. Following the third case, all staff and students were considered close contacts and were asked to have a test for COVID-19, regardless of symptoms. The school has remained closed and plans to reopen on 24 August. There are currently four cases linked to this cluster including the source case.

Table 9. Cluster linked to school in Western Sydney LHD

Setting of exposure	Type of contact			Total
	Location	Household	Other	
School in Western Sydney LHD	2	1	0	3

Lidcombe club

On 11 August, Liverpool Public Health Unit was notified of a resident of Canterbury-Bankstown LGA who had tested positive for COVID-19. The case worked at the club while infectious. The source for this case remains unknown. A close work contact of the case tested positive on 13 August. In response, NSW Health issued a public health alert on 13 August to ask people who had attended the venue for one hour or more to self-isolate and get tested. There are currently two cases linked to this cluster including the source case.

Smithfield club

On 13 August, Liverpool Public Health Unit was informed of a confirmed case of COVID-19 in a staff member from a club in Smithfield with no links to a known case or cluster. A media alert was issued on 15 August for patrons to monitor for symptoms. Other staff who worked with the infectious staff member have been identified as close contacts and are in 14-day quarantine. There are currently four people linked to this cluster including the source case.

Table 10. Cluster linked to Smithfield club

Setting of exposure	Type of contact			Total
	Location	Household	Other	
Smithfield club	1	2	0	3

Batemans Bay club

A family group diagnosed with COVID-19 reported visiting Batemans Bay, including attending a club. In the week up to 15 August, an additional three cases were reported in household contacts of a previously reported case. The cases attended a high school and a primary school. The schools were closed for cleaning and no additional cases have been reported at the schools. A thorough public health investigation has not been able to identify the source of the cluster, however, whole genome sequencing of samples collected from cases suggests the strain is similar to that circulating in Victoria.

SECTION 6: COVID-19 IN SPECIFIC POPULATIONS

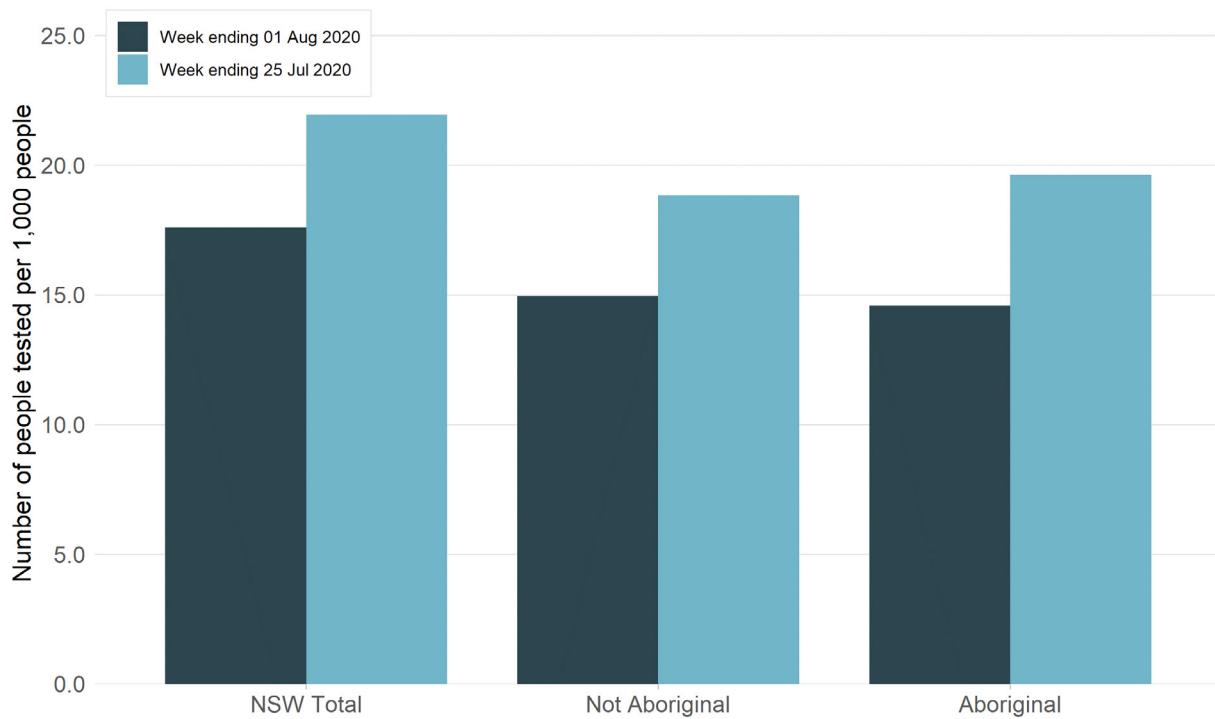
Aboriginal people

Aboriginal people are considered to be a vulnerable group for serious COVID-19 disease due to their high burden of chronic disease. Additionally, transmission within Aboriginal communities is likely to be high due to factors such as high number of people per household and barriers to accessing health care.

Four Aboriginal cases were notified in the week ending 15 August. All four cases were household contacts of previously reported cases. In total, 41 Aboriginal people have been diagnosed with COVID-19, representing 1% 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. Results of the most recent linkage are available for people tested up to 1 August 2020 with Aboriginal status ascertained for approximately 90% of all COVID-19 test records.

Figure 11. Testing Rate per 1,000 by Aboriginality and week, NSW



Note: NSW Total includes persons tested in NSW without Aboriginality recorded.

* Total rates include people with unknown Aboriginality status.

Interpretation: Testing rates decreased in the week ending 1 August compared with the previous week for Aboriginal and non-Aboriginal people.

Pregnant women

One case in a pregnant woman was reported in the week ending 15 August; her source of infection is still under investigation. As those who test negative are not interviewed, testing rates among pregnant women are not available.

SECTION 7: DEATHS

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

In total, 1.4% of cases (54 people) have died as a result of COVID-19 infection, most of whom were 70 years of age or older, including 28 residents of aged care facilities with known COVID-19 outbreaks. Approximately one-quarter of the deaths were in overseas-acquired cases.

Table 11. Deaths as a result of COVID-19, by age group, NSW, 2020

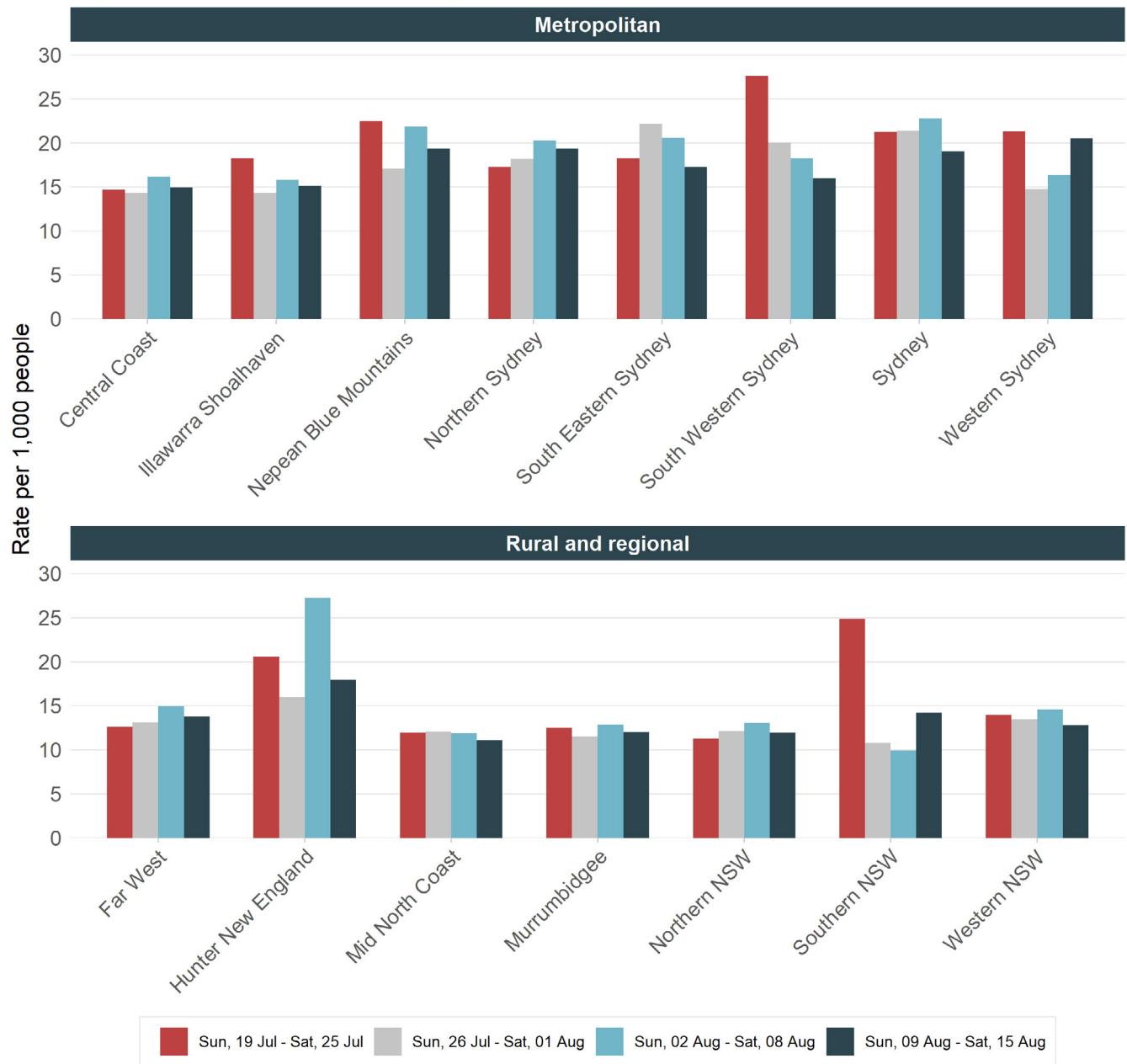
Age group	Number of deaths	Proportion
0-4 years	0	0%
5-11 years	0	0%
12-17 years	0	0%
18-29 years	0	0%
30-49 years	0	0%
50-59 years	1	2%
60-69 years	4	7%
70-79 years	13	24%
80+ years	36	67%
Total	54	100%

Internationally it is estimated that 3.6% of COVID-19 cases are reported to have died as a result of their infection.² Countries such as Italy, the United Kingdom and Spain have reported higher mortality rates (14.0%, 13.1% and 8.3%), while NSW reports similar rates to South Korea (2.0%) and New Zealand (1.7%). Mortality rates are heavily influenced by the testing criteria, with lower rates of COVID-19-related deaths reported in countries where testing is recommended for all cases, including those with mild illness.

² WHO Coronavirus disease (COVID-19) Weekly Epidemiological Update – 1
<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

SECTION 8: COVID-19 TESTING IN NSW

Figure 12. Rates of COVID-19 testing by LHD of residence and week

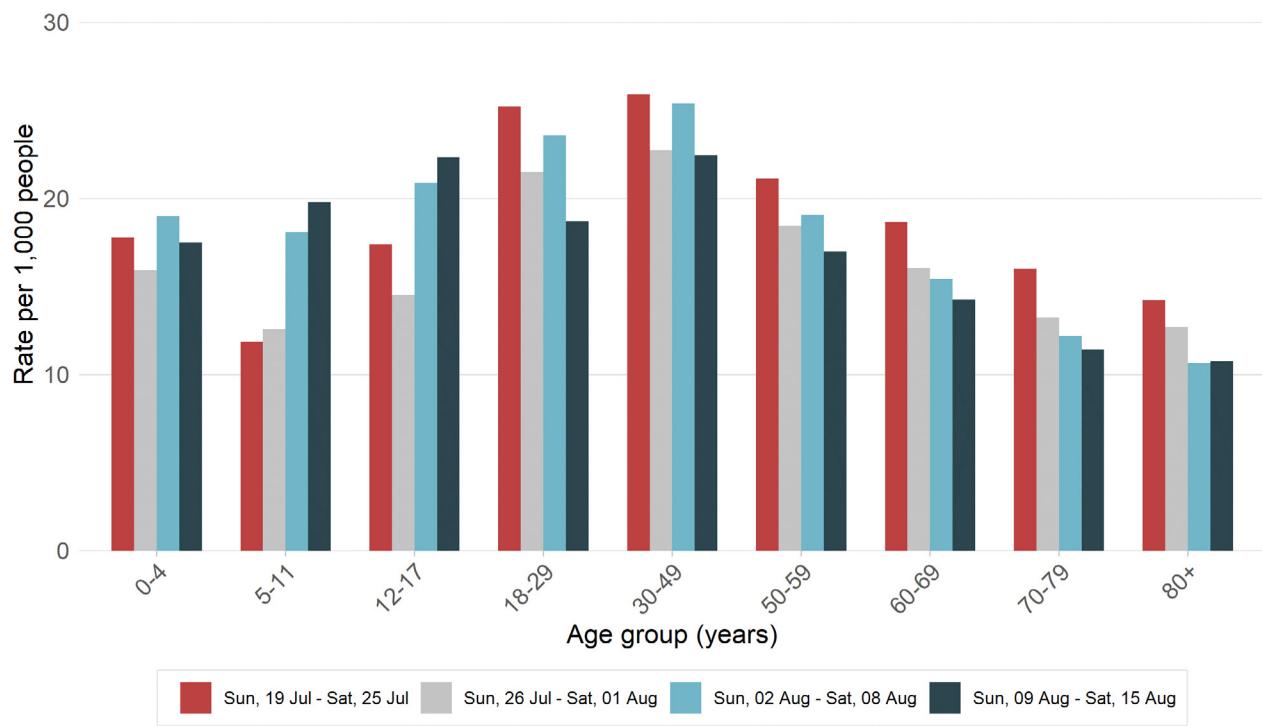


Includes SARS-CoV-2 PCR tests only and excludes notifications with missing postcode of residence.

Interpretation: Statewide testing rates in the week ending 15 August were lower compared to the previous week (19 per 1,000 vs 20 per 1,000). Testing rates increased in Western Sydney and Southern NSW LHDs. Testing rates have continued to decline in South Western Sydney after an initial peak associated with a call for community testing appearing in the media.

Testing by age group

Figure 13. Rates of COVID-19 testing by age group and week

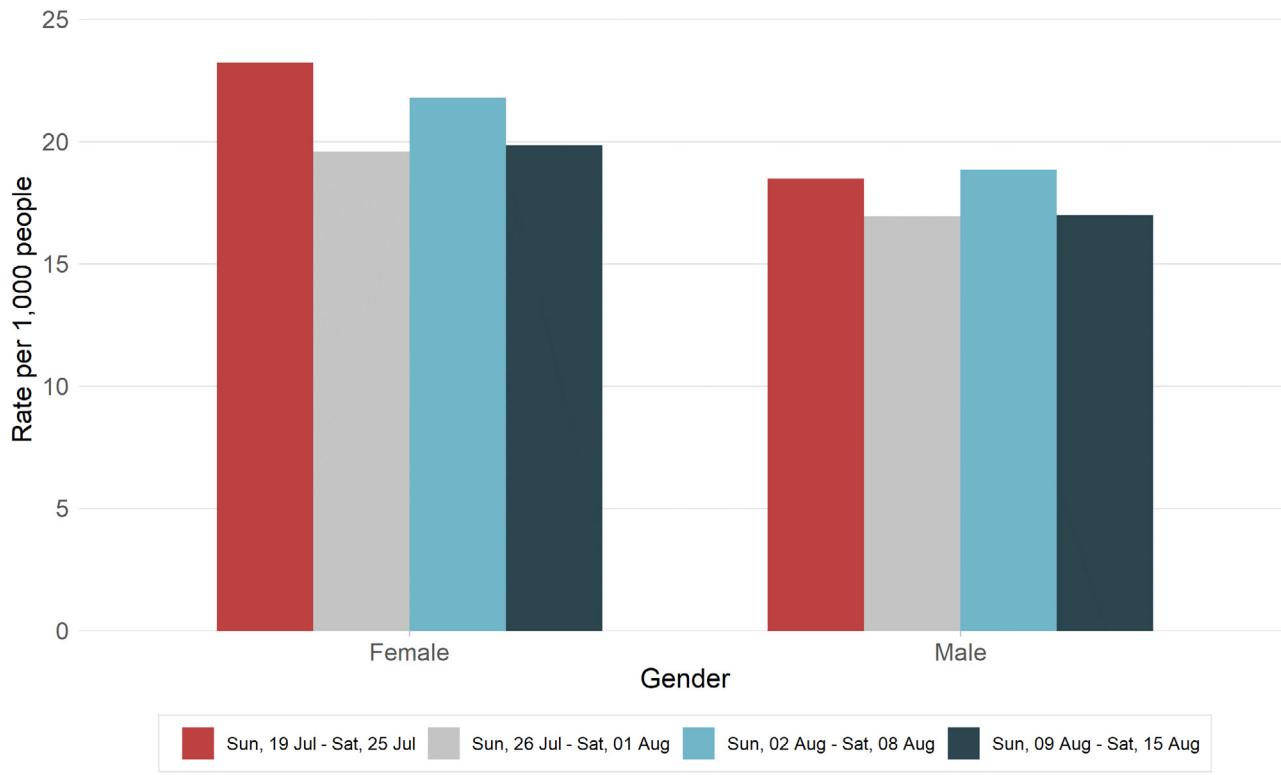


Includes SARS-CoV-2 PCR tests only and excludes notifications with age missing.

Interpretation: Testing rates decreased in almost all age groups for the week ending 15 August. However, testing in primary and high school-aged children increased and remained stable for those 80 years or older.

Testing by gender

Figure 14. Rates of COVID-19 testing by gender and week



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

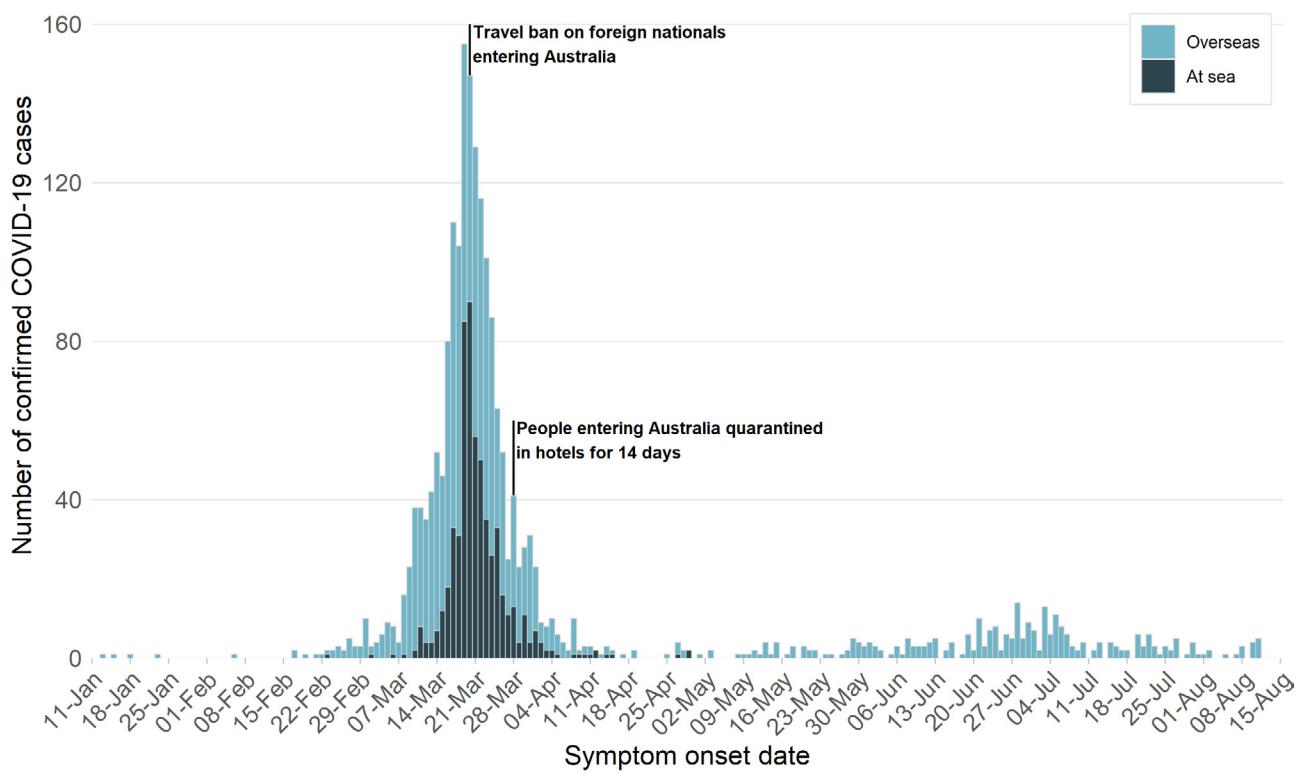
Interpretation: Testing rates are consistently higher in females compared with males. In both groups, rates increased in the week ending 15 August compared with the previous week.

SECTION 9: 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 28 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 15. 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.

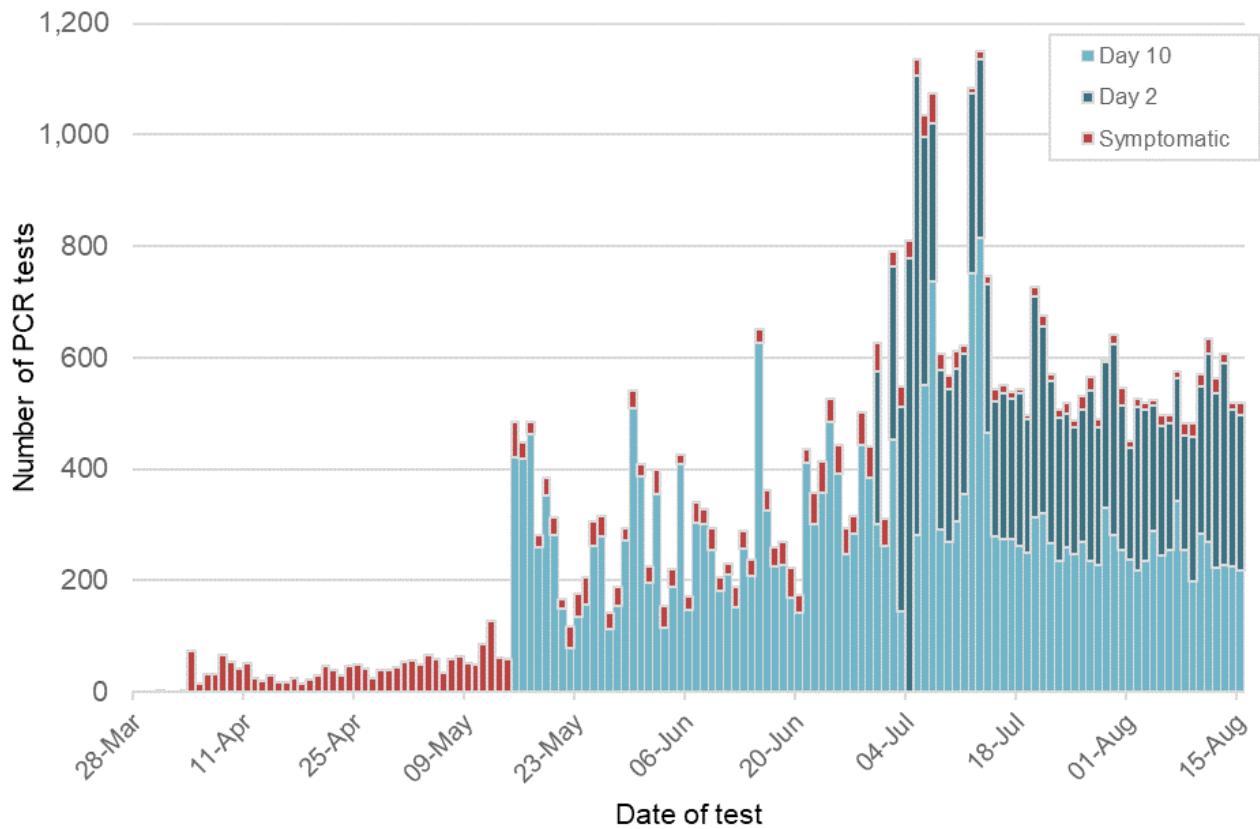
Interpretation: The number of new cases in returned travellers has decreased markedly since March in line with travel restrictions and declined further again since mid-July. The recent decline is related to a reduction in the number of returning travellers due to the introduction of paid hotel quarantine on 18 July and a limit of 350 passengers per day arriving into Sydney from 20 July following a new agreement with the Commonwealth Government.

There were 14 overseas-acquired cases reported in the week ending 15 August, twice as many as the previous week.

Hotel quarantine

The program of screening all overseas travellers after arrival in NSW commenced on 15 May 2020. The program was extended to include screening on both day two and day 10 after arrival from 30 June 2020.

Figure 16. COVID-19 testing in returned travellers in hotel quarantine, reported from 28 March to 15 August, NSW, 2020



Interpretation: There were 519 tests conducted through the hotel quarantine screening programs in the week ending 15 August. Since screening began on 28 March, a total of 45,027 PCR tests have been conducted and 319 COVID-19 cases have been detected.

Airport screening

Health screening of returning travellers was introduced for people returning from particular countries early in the outbreak but was expanded to all returning travellers on 21 March 2020. As part of the health screening passengers are asked to complete a questionnaire about their health upon arrival into Sydney International Airport. People with symptoms are assessed by an onsite health team and tested for COVID-19.

During the week ending 15 August, a total of 3,410 people were screened at Sydney International Airport and 26 were referred for testing. Since screening began on 2 February, a total of 112,301 people have been screened with 1,248 referred for onsite health assessment and testing.

SECTION 10: OTHER RESPIRATORY INFECTIONS IN NSW

Influenza and other respiratory virus cases and tests reported in NSW, up to 9 August 2020

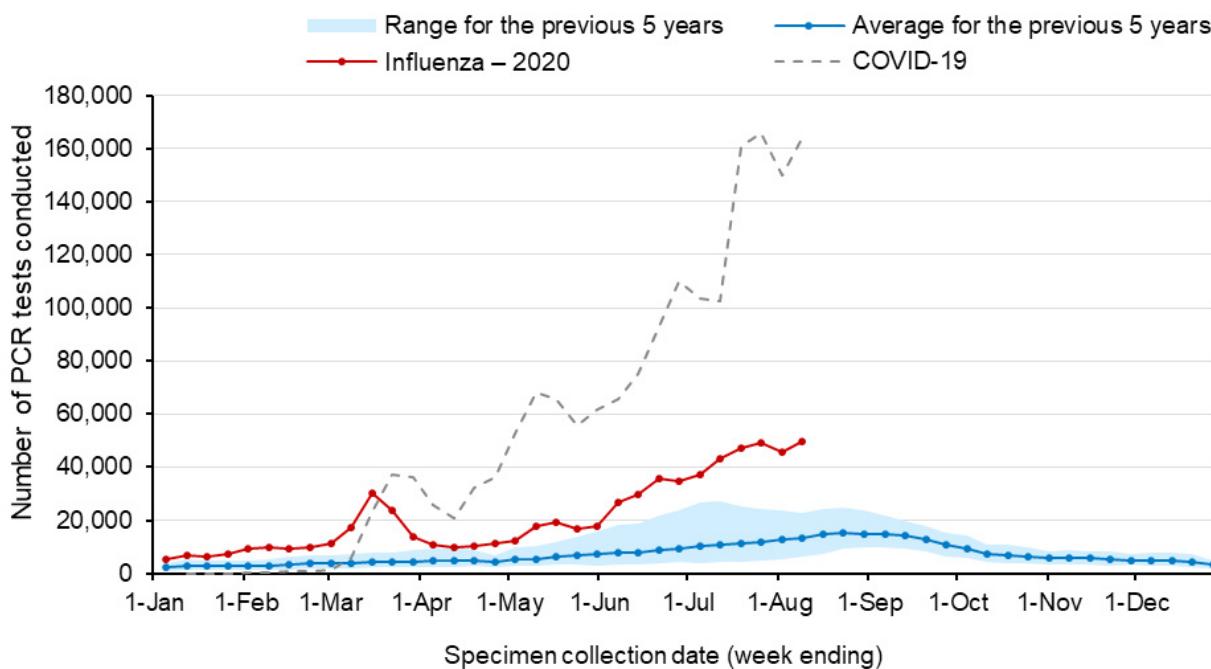
In NSW, routine surveillance for influenza and other respiratory viruses is conducted through sentinel laboratories. The number of all PCR tests (positive and negative) are provided to NSW Health by participating laboratories each week. Testing counts reflect the number of influenza PCR tests conducted;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

The most recent data available is for testing carried out to 9 August. A total of 685,256 influenza tests have been performed at participating laboratories to 9 August, with 49,742 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 17. Testing for influenza and COVID-19 by week, to 9 August 2020

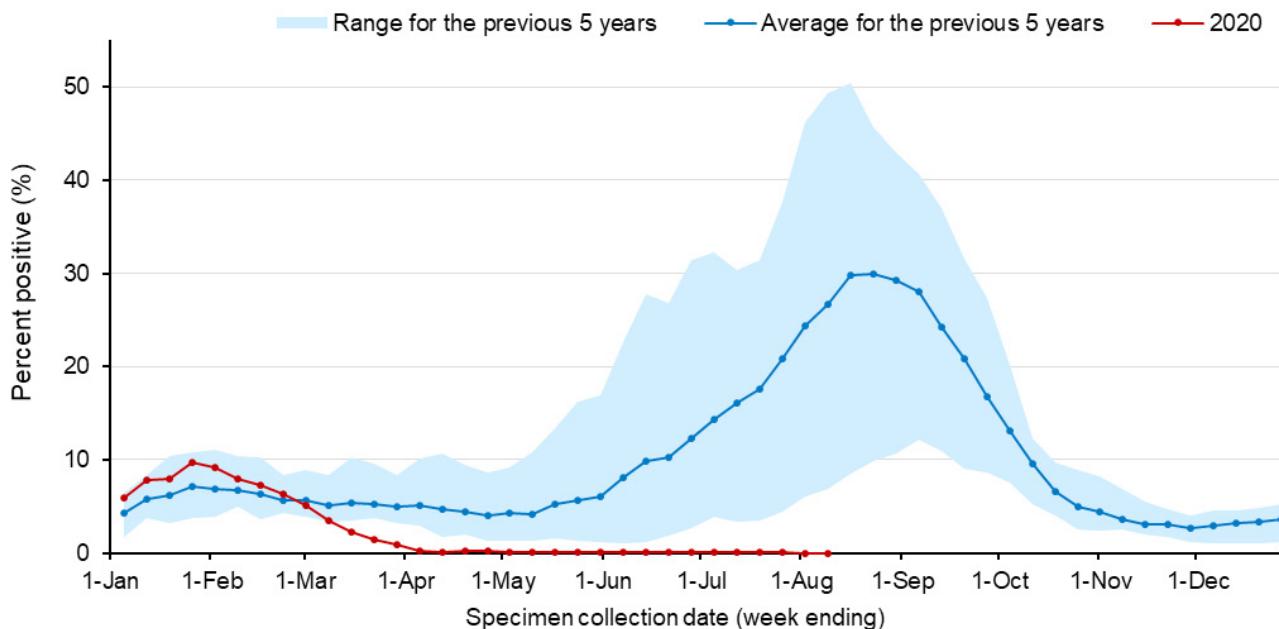


Interpretation: The number of influenza tests performed has exceeded the previous five-year average every week this year.

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 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.

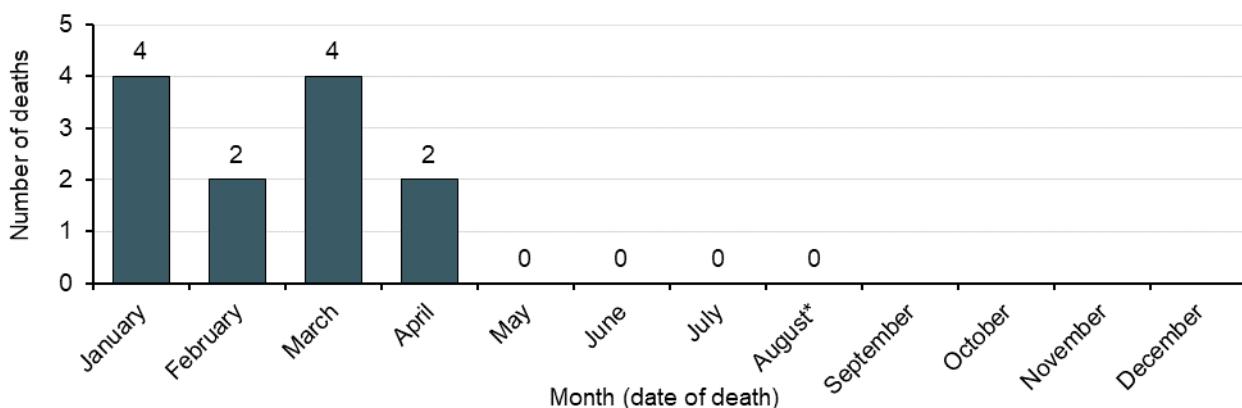
Figure 18. Proportion of tests positive for influenza, to 9 August 2020



Interpretation: The percent of influenza tests that were positive in the week ending 9 August continues to be very low (less than 0.1%), indicating limited influenza transmission in the community.

How many people have died as a result of influenza?

Figure 19. Laboratory-confirmed influenza deaths by month of death, to 9 August 2020



Interpretation: No influenza deaths were reported in the week ending 9 August. The number of influenza-related deaths identified via Coroner's reports and death registrations from 1 January to 9 August 2020 is lower than the same period last year (12 deaths in 2020 compared with 147 in 2019).³ Two-thirds of the deaths were in people aged 65 years and over.

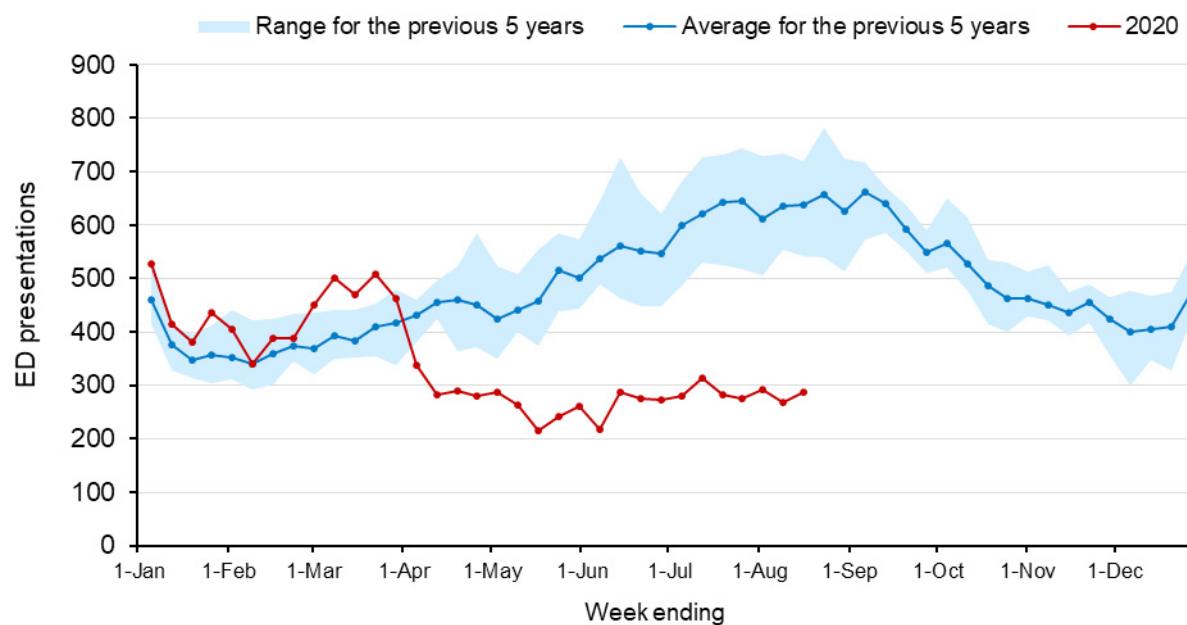
³ Includes deaths in people with laboratory-confirmed influenza.

How are emergency department presentations for pneumonia tracking?

The figure below shows weekly pneumonia presentations to Emergency Departments in NSW. This includes presentations 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 using PHREDSS.⁴

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 20. Emergency Department pneumonia presentations in NSW by week, to 16 August 2020



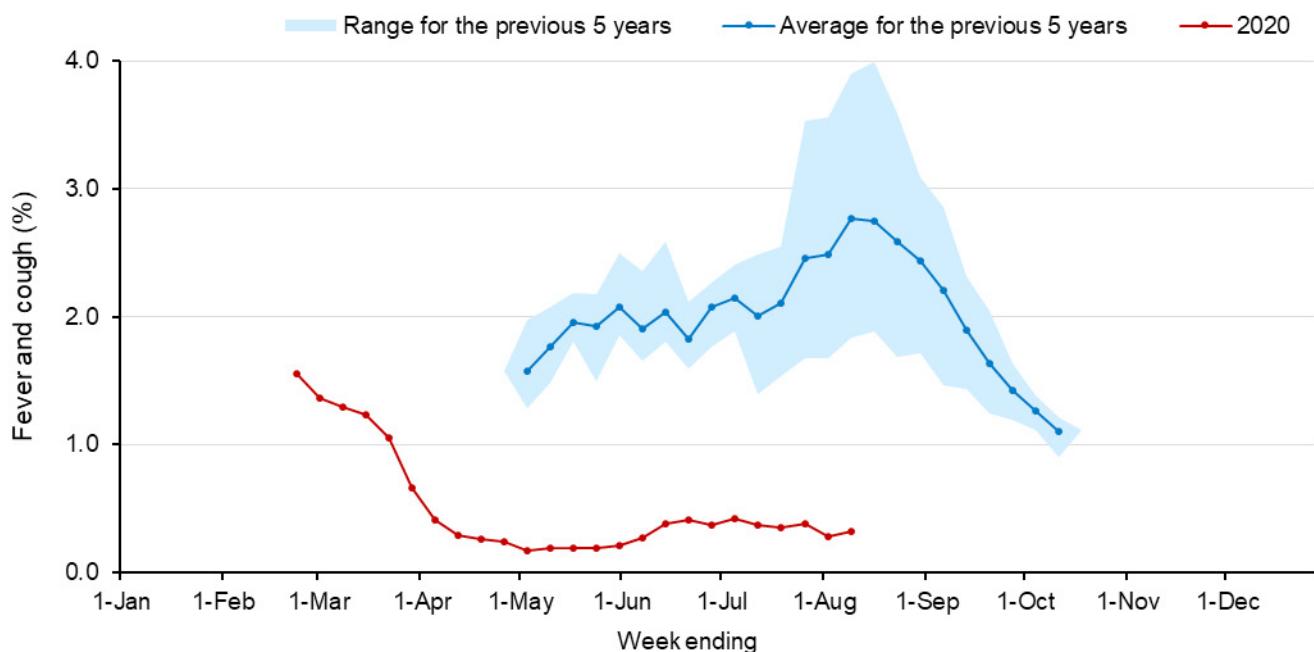
Interpretation: Pneumonia presentations decreased from the end of March and have continued to remain well below the usual range for this time of year.

⁴ 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 21. Proportion of FluTracker participants in NSW reporting influenza-like illness, to 9 August 2020



Interpretation: In NSW in the week ending 9 August, of the 24,383 people surveyed, 80 people (0.3%) reported flu-like symptoms. The proportion of people reporting symptoms remains well below the usual range for this time of year.

APPENDIX A: COVID-19 PCR TESTS IN NSW

Local Health District	Local Government Area	Week ending				Total	
		15 August		8 August			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Central Coast	Central Coast / LHD Total ²	5282	15.0	5708	16.2	71578	202.9
Far West	Balranald	7	3.0	23	9.8	236	100.9
	Broken Hill	279	16.0	301	17.2	2830	161.9
	Central Darling	15	8.2	22	12.0	212	115.3
	Wentworth	115	16.3	105	14.9	1194	169.3
	LHD Total ²	416	13.8	451	15.0	4472	148.4
Hunter New England	Armidale Regional	453	14.7	513	16.7	5861	190.4
	Cessnock	787	13.1	964	16.1	9629	160.5
	Dungog	120	12.7	127	13.5	1376	146.0
	Glen Innes Severn	62	7.0	91	10.3	1172	132.1
	Gunnedah	104	8.2	157	12.4	1515	119.5
	Gwydir	18	3.4	26	4.9	388	72.5
	Inverell	192	11.4	206	12.2	2603	154.1
	Lake Macquarie	4589	22.3	6755	32.8	49546	240.6
	Liverpool Plains	86	10.9	79	10.0	1185	149.9
	Maitland	2060	24.2	2624	30.8	23563	276.7
	Mid-Coast	946	10.1	1067	11.4	13398	142.8
	Moree Plains	104	7.8	133	10.0	1698	128.0
	Muswellbrook	218	13.3	289	17.7	2694	164.5
	Narrabri	99	7.5	123	9.4	1582	120.4
	Newcastle	4376	26.4	9351	56.5	51673	312.1
	Port Stephens	1203	16.4	1639	22.3	19006	258.7
	Singleton	504	21.5	552	23.5	5732	244.3
	Tamworth Regional	833	13.3	914	14.6	12595	201.4
Illawarra Shoalhaven	Tenterfield	57	8.6	70	10.6	646	98.0
	Upper Hunter Shire	213	15.0	220	15.5	2433	171.6
	Uralla	55	9.2	53	8.8	715	118.9
	Walcha	33	10.5	26	8.3	450	143.6
	LHD Total ²	17094	18.0	25966	27.3	209307	219.8
	Kiama	352	15.1	400	17.1	5301	226.7
	Shellharbour	1189	16.2	1336	18.2	16783	229.2
	Shoalhaven	1646	15.6	1294	12.3	18751	177.5
	Wollongong	3166	14.5	3608	16.5	43378	198.9
	LHD Total ²	6353	15.1	6638	15.8	84213	200.7

COVID-19 WEEKLY SURVEILLANCE IN NSW
www.health.nsw.gov.au/coronavirus
Epidemiological week 33, ending 15 August 2020

Local Health District	Local Government Area	Week ending				Total	
		15 August		8 August			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Mid North Coast	Bellingen	141	10.9	163	12.5	1987	152.9
	Coffs Harbour	848	11.0	855	11.1	11225	145.3
	Kempsey	439	14.8	411	13.8	4931	165.8
	Nambucca	211	10.7	255	12.9	2739	138.3
	Port Macquarie-Hastings	868	10.3	1000	11.8	12720	150.5
	LHD Total ²	2507	11.1	2684	11.9	33602	148.9
Murrumbidgee	Albury	661	12.2	700	12.9	7976	146.7
	Berrigan	71	8.1	74	8.5	1070	122.3
	Bland	53	8.9	80	13.4	825	138.1
	Carrathool	13	4.6	6	2.1	152	54.3
	Coolamon	61	14.1	54	12.4	668	153.9
	Cootamundra-Gundagai Regional	129	11.5	116	10.3	1632	145.3
	Edward River	123	13.5	128	14.1	1478	162.7
	Federation	113	9.1	116	9.3	1432	115.1
	Greater Hume Shire	116	10.8	130	12.1	1571	146.0
	Griffith	358	13.3	387	14.3	4253	157.4
	Hay	11	3.7	21	7.1	260	88.2
	Hilltops	199	10.6	231	12.4	2403	128.5
	Junee	66	9.9	66	9.9	664	99.4
	Lachlan ¹	54	8.9	47	7.7	512	84.3
	Leeton	113	9.9	100	8.7	1275	111.4
	Lockhart	49	14.9	42	12.8	457	139.1
	Murray River	55	4.5	47	3.9	379	31.3
	Murrumbidgee	24	6.1	29	7.4	425	108.5
	Narrandera	51	8.7	33	5.6	594	100.7
	Snowy Valleys	248	17.1	189	13.1	2250	155.4
	Temora	63	10.0	46	7.3	752	119.2
	Wagga Wagga	1002	15.4	1219	18.7	13075	200.4
	LHD Total ²	3585	12.0	3825	12.8	43771	146.8
Nepean Blue Mountains	Blue Mountains	1675	21.2	1948	24.6	23156	292.7
	Hawkesbury	1313	19.5	1299	19.3	16219	241.0
	Lithgow	288	13.3	310	14.4	3643	168.6
	Penrith	4341	20.4	5063	23.8	60438	283.8
	LHD Total ²	7577	19.4	8563	21.9	102616	262.5

COVID-19 WEEKLY SURVEILLANCE IN NSW
www.health.nsw.gov.au/coronavirus
Epidemiological week 33, ending 15 August 2020

Local Health District	Local Government Area	Week ending				Total	
		15 August		8 August			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Northern NSW	Ballina	598	13.4	669	15.0	8323	186.5
	Byron	545	15.5	552	15.7	7123	203.0
	Clarence Valley	502	9.7	525	10.2	6398	123.8
	Kyogle	66	7.5	80	9.1	931	105.8
	Lismore	638	14.6	626	14.3	7938	181.7
	Richmond Valley	320	13.6	360	15.3	3835	163.4
	Tenterfield	57	8.6	70	10.6	646	98.0
	Tweed	1026	10.6	1235	12.7	13785	142.1
	LHD Total ²	3712	12.0	4060	13.1	48490	156.2
Northern Sydney	Hornsby	3651	24.0	2411	15.9	28879	189.9
	Hunters Hill	529	35.3	537	35.9	6993	466.8
	Ku-ring-gai	3107	24.4	3078	24.2	33726	265.2
	Lane Cove	1356	33.8	1757	43.8	20073	499.9
	Mosman	553	17.9	728	23.5	7812	252.2
	North Sydney	1007	13.4	1408	18.8	14908	198.7
	Northern Beaches	4489	16.4	5562	20.3	61221	223.8
	Parramatta ¹	4874	19.0	3439	13.4	42940	167.0
	Ryde	1975	15.1	2089	15.9	25642	195.3
South Eastern Sydney	Willoughby	986	12.1	1220	15.0	13640	168.0
	LHD Total ²	18522	19.4	19431	20.3	220966	231.2
	Bayside	2324	13.0	2921	16.4	30354	170.2
	Georges River	1936	12.1	2251	14.1	26902	168.7
	Randwick	3060	19.7	3620	23.3	42306	271.8
	Sutherland Shire	4106	17.8	4419	19.2	59279	257.1
	Sydney ¹	5146	20.9	6786	27.6	64889	263.4
	Waverley	1852	24.9	2093	28.2	25895	348.5
	Woollahra	1492	25.1	1830	30.8	20996	353.6
South Western Sydney	LHD Total ²	16604	17.3	19750	20.6	227732	237.4
	Camden	2285	22.5	2189	21.6	32811	323.5
	Campbelltown	3729	21.8	2959	17.3	44575	260.8
	Canterbury-Bankstown ¹	5521	14.6	6052	16.0	71094	188.1
	Fairfield	2693	12.7	4106	19.4	41046	193.9
	Liverpool	3521	15.5	5149	22.6	57492	252.6
	Wingecarribee	770	15.1	808	15.8	13665	267.2
	Wollondilly	662	12.5	644	12.1	10156	191.1
	LHD Total ²	16628	16.0	18950	18.3	236190	227.4

COVID-19 WEEKLY SURVEILLANCE IN NSW
www.health.nsw.gov.au/coronavirus
Epidemiological week 33, ending 15 August 2020

Local Health District	Local Government Area	Week ending				Total	
		15 August		8 August			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Southern NSW	Bega Valley	375	10.9	370	10.7	5464	158.5
	Eurobodalla	1302	33.8	317	8.2	9533	247.8
	Goulburn Mulwaree	374	12.0	443	14.2	5607	180.1
	Queanbeyan-Palerang Regional	541	8.9	497	8.1	7817	127.9
	Snowy Monaro Regional	252	12.1	303	14.6	3337	160.5
	Upper Lachlan Shire	99	12.3	68	8.4	1171	145.3
	Yass Valley	143	8.4	156	9.1	1924	112.6
	LHD Total ²	3087	14.2	2159	10.0	34872	160.7
Sydney	Burwood	434	10.7	455	11.2	5521	136.0
	Canada Bay	1802	18.8	1968	20.5	24043	250.3
	Canterbury-Bankstown ¹	5521	14.6	6052	16.0	71094	188.1
	Inner West	4407	22.0	5575	27.8	60713	302.3
	Strathfield	899	19.2	822	17.5	9937	211.8
	Sydney ¹	5146	20.9	6786	27.6	64889	263.4
	LHD Total ²	13276	19.1	15878	22.8	177084	254.2
	Bathurst Regional	615	14.1	661	15.2	8283	189.9
Western NSW	Blayney	120	16.3	109	14.8	1497	202.9
	Bogan	28	10.9	34	13.2	351	136.1
	Bourke	19	7.3	21	8.1	259	100.0
	Brewarrina	14	8.7	11	6.8	209	129.7
	Cabonne	115	8.4	151	11.1	1478	108.4
	Cobar	42	9.0	23	4.9	430	92.3
	Coonamble	33	8.3	29	7.3	498	125.8
	Cowra	123	9.7	132	10.4	1643	128.9
	Dubbo Regional	651	12.1	822	15.3	8391	156.2
	Forbes	78	7.9	75	7.6	906	91.5
	Gulgandra	37	8.7	39	9.2	467	110.2
	Lachlan ¹	54	8.9	47	7.7	512	84.3
	Mid-Western Regional	251	9.9	369	14.6	4071	161.2
	Narromine	84	12.9	69	10.6	807	123.8
	Oberon	54	10.0	45	8.3	815	150.6
	Orange	876	20.6	1079	25.4	9403	221.5
	Parkes	185	12.5	204	13.8	1743	117.5
	Walgett	82	13.8	81	13.6	952	159.9
	Warren	57	21.1	45	16.7	615	228.0
	Warrumbungle Shire	97	10.5	104	11.2	1398	150.7
	Weddin	35	9.7	28	7.8	439	121.5
	LHD Total ²	3644	12.8	4168	14.6	45013	157.9

COVID-19 WEEKLY SURVEILLANCE IN NSW
Epidemiological week 33, ending 15 August 2020

www.health.nsw.gov.au/coronavirus

Local Health District	Local Government Area	Week ending				Total	
		15 August		8 August			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Western Sydney	Blacktown	6524	17.4	5990	16.0	81362	217.3
	Cumberland	5212	21.6	4335	18.0	46075	190.8
	Parramatta ¹	4874	19.0	3439	13.4	42940	167.0
	The Hills Shire	5715	32.1	3971	22.3	47057	264.4
	LHD Total ²	21632	20.5	17221	16.4	210887	200.2
NSW Total³		149,533	18.5	164,803	20.4	1,853,160	229.1

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

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

³NSW 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 9 AUGUST 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	Total PCR tests conducted	Influenza A		Influenza B		Adeno-virus	Para-influenza	RSV	Rhinovirus	HMPV	Enterovirus
		No.	%Pos.	No.	%Pos.						
1 Jan–9 August 2020											
Total	685,256	6,611	0.96%	947	0.14%	5,017	8,969	4,823	98,675	1,970	3,903
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	126,768	48	0.04%	10	0.01%	628	81	178	28,191	112	241
2 August*	222,327	37	0.02%	2	<0.01%	1,146	89	209	29,688	79	427
Week ending											
9 August	49,742	1	<0.01%	0	-	289	12	64	3,666	4	69

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

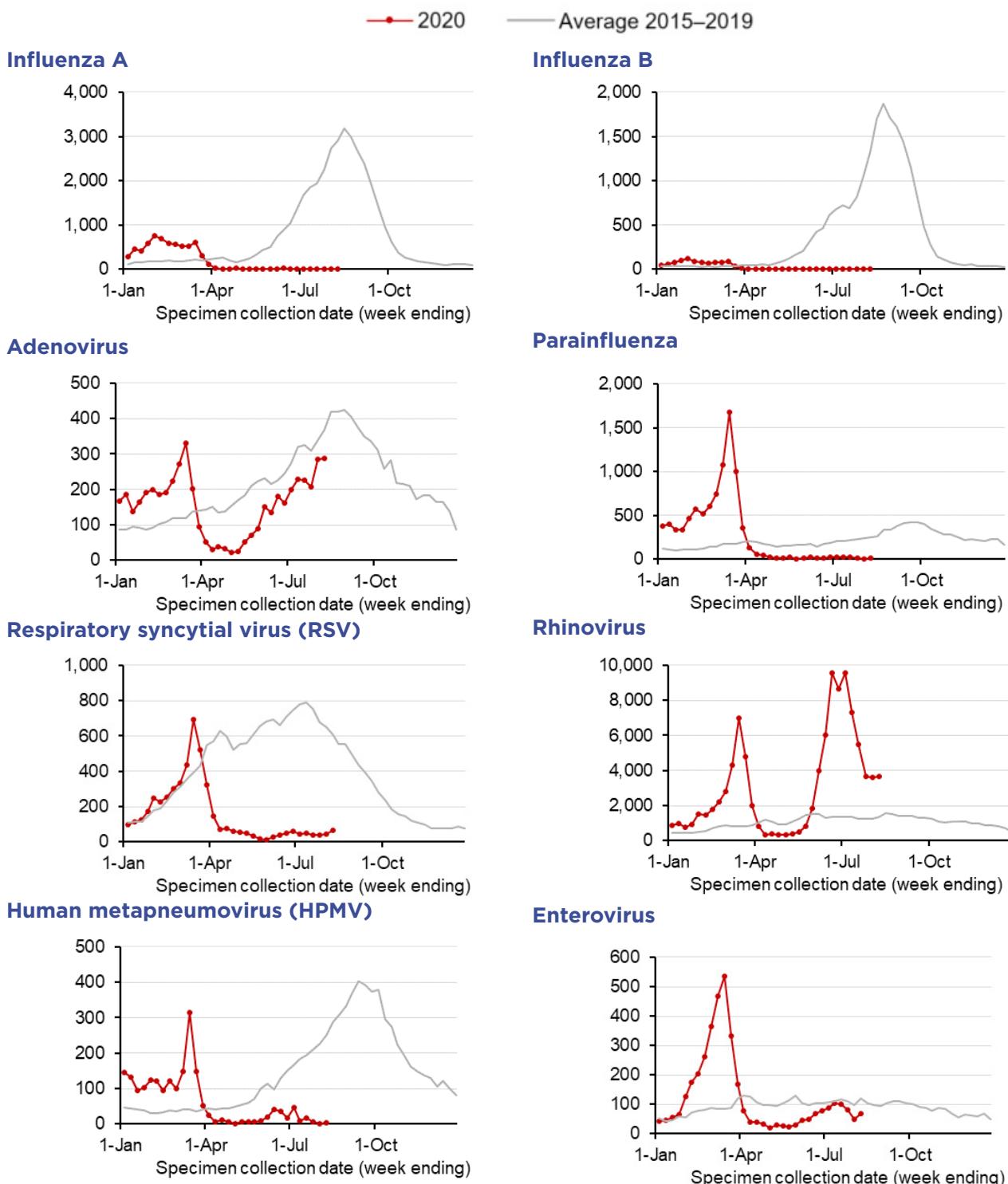
HMPV - Human metapneumovirus

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 9 AUGUST 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.



Notes: 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: <ul style="list-style-type: none">- NSW residents diagnosed in NSW who were infected overseas or in Australia (in NSW or interstate), and- interstate or international visitors diagnosed in NSW who were under the care of NSW Health at the time of diagnosis.
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 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.