COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 36, ENDING 5 SEPTEMBER 2020

Published 9 September 2020

SUMMARY FOR THE WEEK ENDING 5 SEPTEMBER

- The number of locally-acquired COVID-19 cases in NSW increased this week (up 8%).
- Most locally-acquired cases reported this week were linked to known cases or clusters (89%, 48/54).
- Almost two-thirds of cases reported this week were tested within two days of symptom onset.
- Of the 103 locally-acquired cases reported in the last two weeks most were reported in residents of metropolitan Sydney, including 31 from South Eastern Sydney (30%), 21 from Western Sydney (20%), 20 from Northern Sydney (19%) and 17 from South Western Sydney (17%).
- Twenty-eight new cases and several new exposure locations have been associated with the City Tattersalls gym cluster.
- Testing has decreased this week (down 13%) though overall testing rates remain high.
- All people are reminded to help reduce the risk of infection from COVID-19 through physical distancing and good hand hygiene. This is particularly important in venues that are open to the public such as gyms, bars and restaurants. It is important that people **do not attend** these venues if they are experiencing any symptoms, however mild.

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.

Indicators of effective prevention measure for COVID-19 in NSW in the past two weeks

	Week of reporting	
	Week ending 5 Sep	Week ending 29 Aug
Number of cases with symptoms at diagnosis	85% (45/53)	82% (41/50)
Proportion of cases in isolation at least 48 hours before symptoms	27% (12/45)	17% (7/41)
Proportion tested (swabbed) within:		
• 1 day of symptom onset	45% (15/33)	41% (14/34)
• 2 days of symptom onset	64% (21/33)	65% (22/34)
• 3 days of symptom onset	79% (26/33)	94% (32/34)
Proportion tested more than 3 days after symptom onset	21% (7/33)	6% (2/34)
Proportion who entered isolation within:		
• 1 day of symptom onset	64% (21/33)	47% (16/34)
• 2 days of symptom onset	79% (26/33)	65% (22/34)
• 3 days of symptom onset	85% (28/33)	88% (30/34)
Proportion who entered isolation more than 3 days after symptom onset	15% (5/33)	12% (4/34)
Number of tests conducted	143,817	164,378
Proportion notified to NSW Health by the laboratory within:		
• 1 day of swab collection	94% (50/53)	94% (47/50)
• 2 days of swab collection	100% (53/53)	98% (49/50)
• 3 days of swab collection	100% (53/53)	98% (49/50)
Proportion notified to NSW Health by the laboratory more than 3 days after the swab collection	0% (0/53)	2% (1/50)
Proportion of locally-acquired cases interviewed by public health staff within 1 day of notification to NSW Health	100% (53/53)	100% (50/50)
Proportion of close contacts (identified by the case) contacted by public health within 48 hours of case notification	100%	100%

Interpretation: Of 45 symptomatic cases reported in the last week, 12 were in isolation at the time of diagnosis and for at least 48 hours before developing symptoms. Of the remaining 33 cases, more than half (64%) sought testing within two days of developing symptoms. Over 80% of these cases had begun isolation within three days of their onset of illness.

Despite the high volume of testing, the time taken to notify cases remains stable with all new cases in the week ending 5 September notified to NSW Health within two days of swab collection. For cases notified more than one day after testing, NSW Health was notified of a preliminary result so that 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?

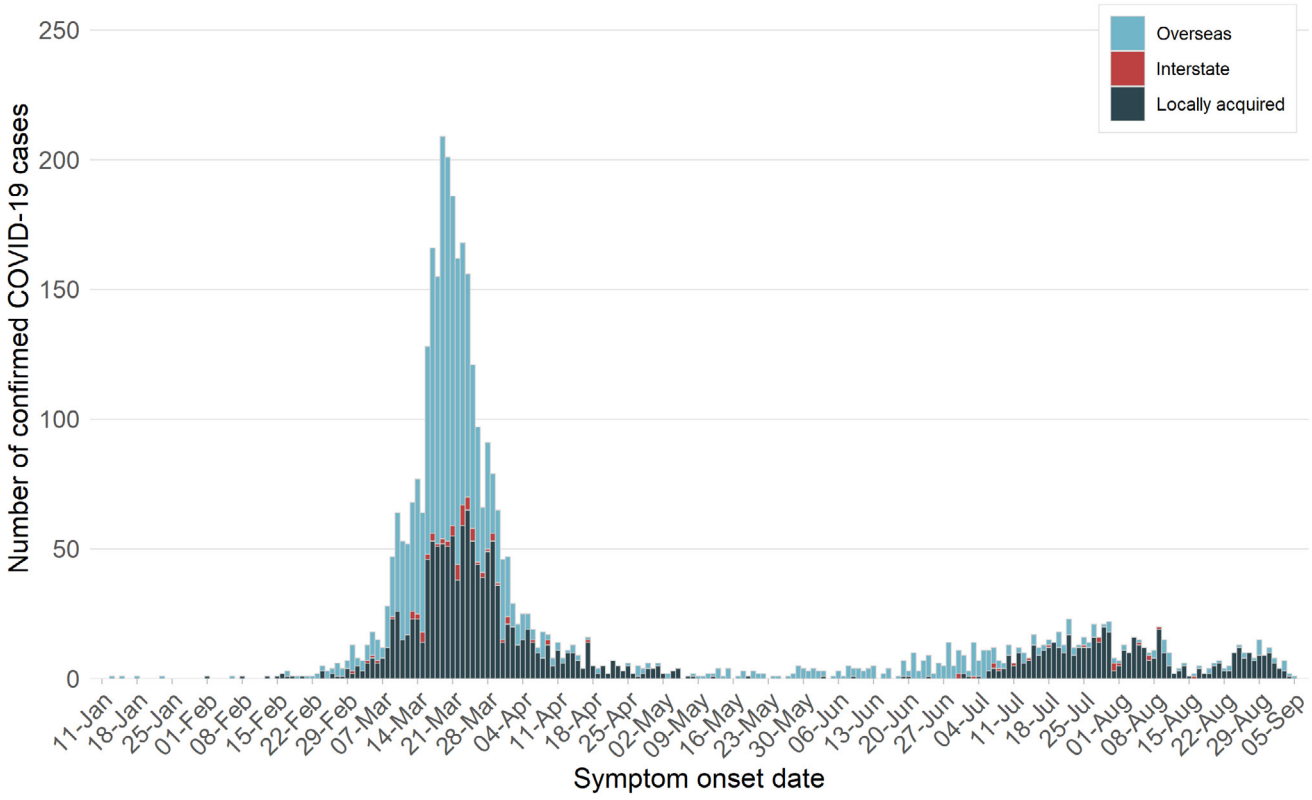
Table 1. COVID-19 cases and tests reported in NSW, up to 5 September 2020

	Week ending 5 Sep	Week ending 29 Aug	% change	Total to 5 Sep
Number of cases	71	58	↑ 22%	3,925
Overseas acquired	18	8	↑125%	2,087
Interstate acquired	0	0	-	89
Locally acquired	53	50	↑6%	1,749
Number of deaths	0	0	-	54
Number of tests	143,817	164,378	↓13%	2,346,186

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: 80% of COVID-19 infections diagnosed in the last two weeks in NSW have been **locally acquired**. The number of new cases diagnosed in NSW decreased significantly following a peak in mid-March. An 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.

How many NSW cases were infected in Victoria?

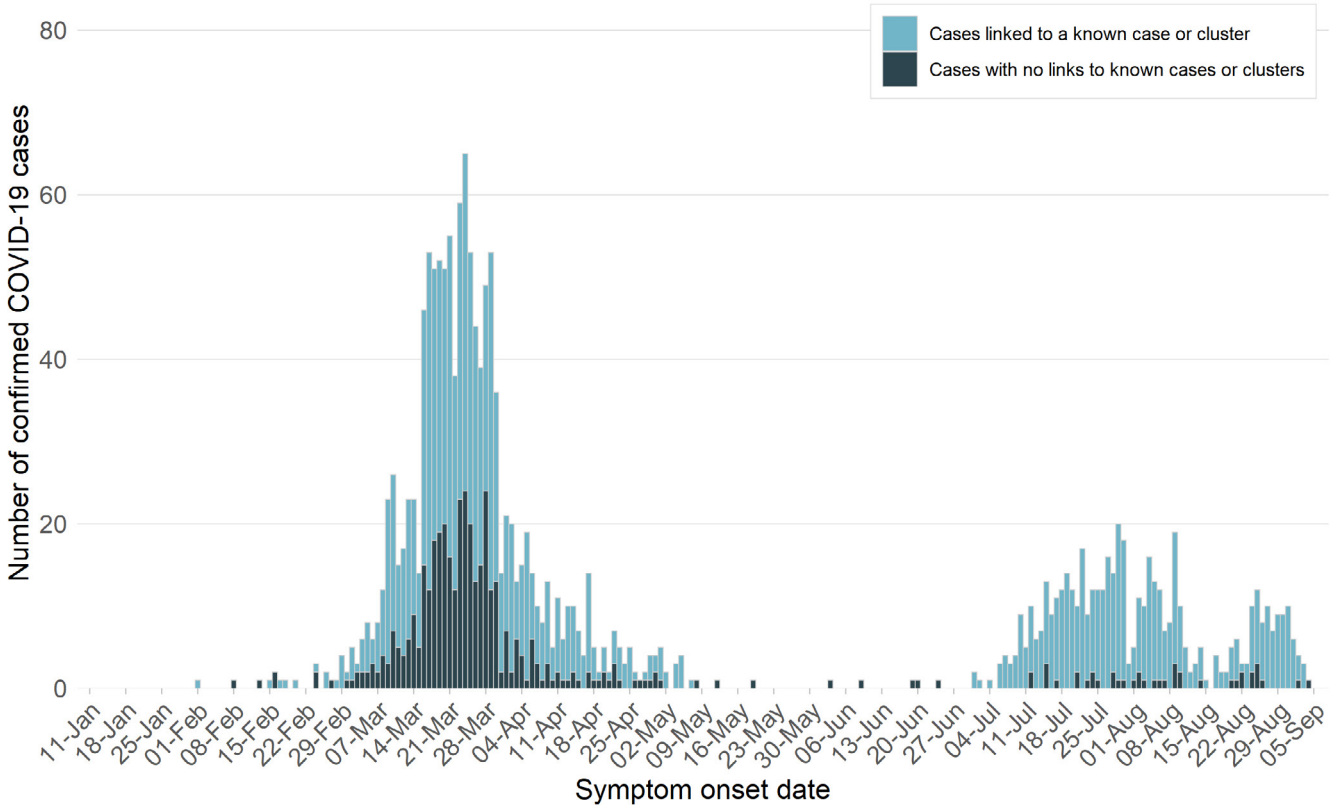
In response to the continued community transmission in Victoria, border measures have been introduced to limit the spread of infection into NSW. From 8 July, under the Public Health (COVID-19 Border Control) Order 2020, a person who has been in Victoria within the last 14 days must not travel to NSW without a permit. The order was updated on 4 September to redefine the border region. Exemptions to the Order are given in very limited circumstances.

In the week ending 5 September, no cases newly diagnosed with COVID-19 acquired their infection in Victoria.

How much transmission is occurring in NSW?

All new cases are investigated by public health staff to determine the likely source of infection and to 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



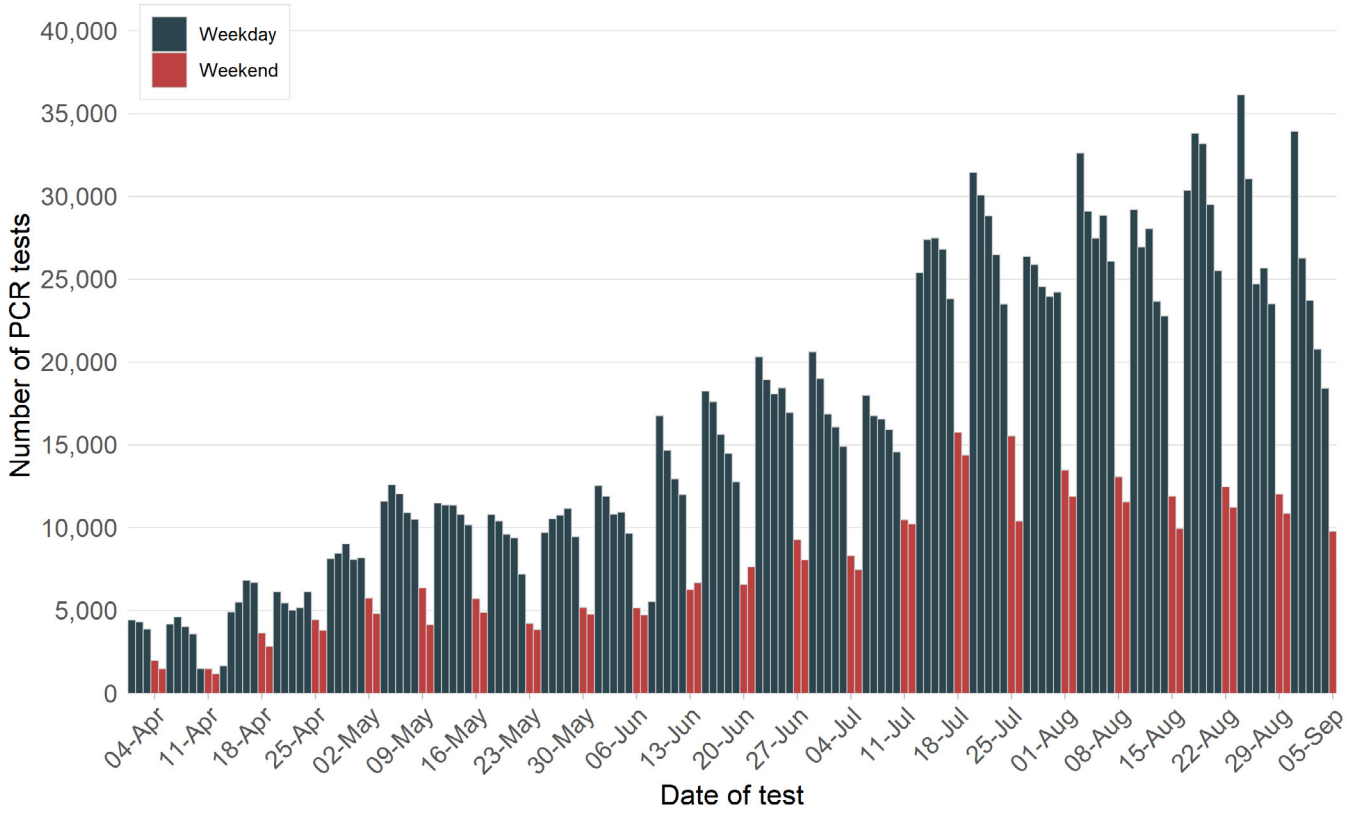
The date of the first positive test is used for cases who did not report symptoms.

Interpretation: Of the locally-acquired cases with an onset in the last four weeks, 89% (141/159) 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

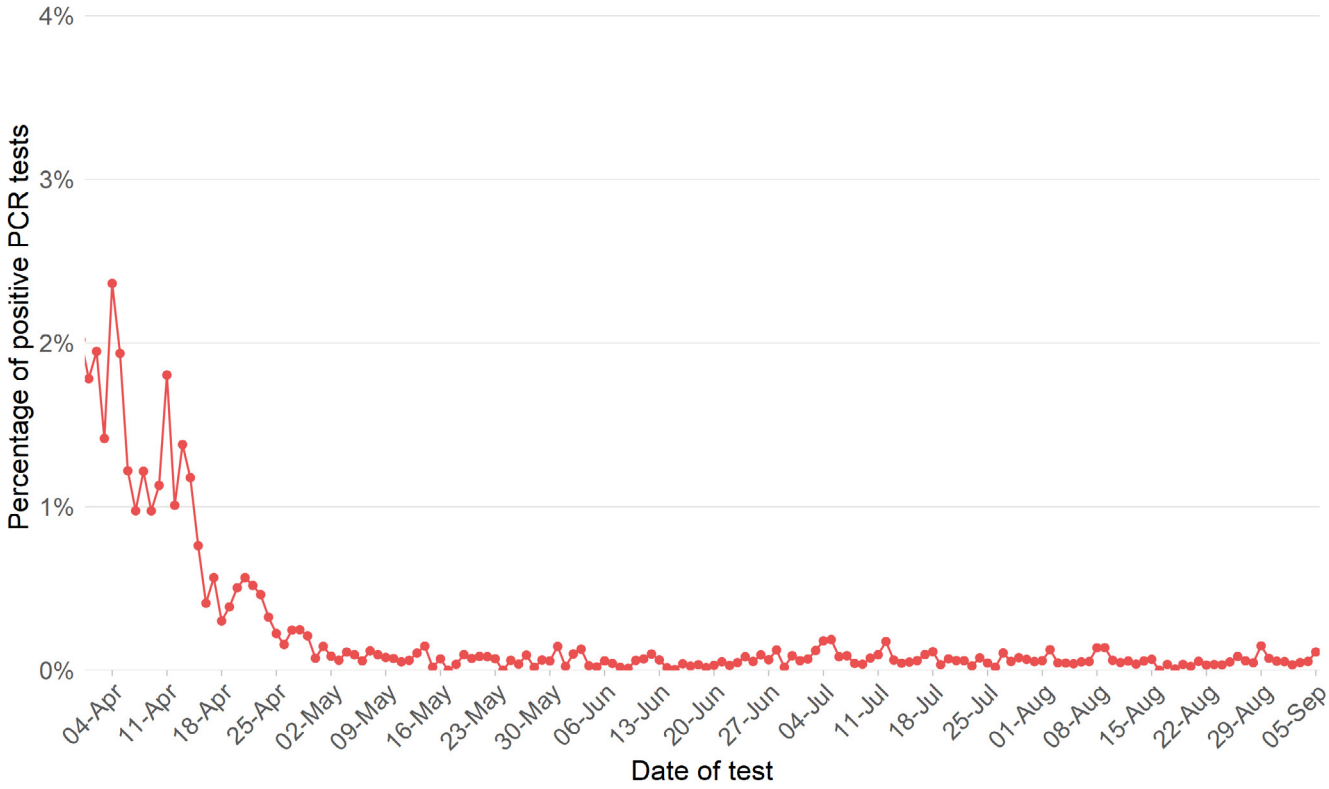


Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.

Interpretation: Early in the outbreak the focus of testing 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. Though a 13% decrease in testing was reported in the week ending 5 September compared with the previous week, the trend of considerably higher testing in July, August and into September compared to previous months continues. An average of 2.5 tests were conducted per 1,000 people in NSW each day in the week ending 5 September, compared to a daily average of 2.9 per 1,000 people in the previous week.

[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

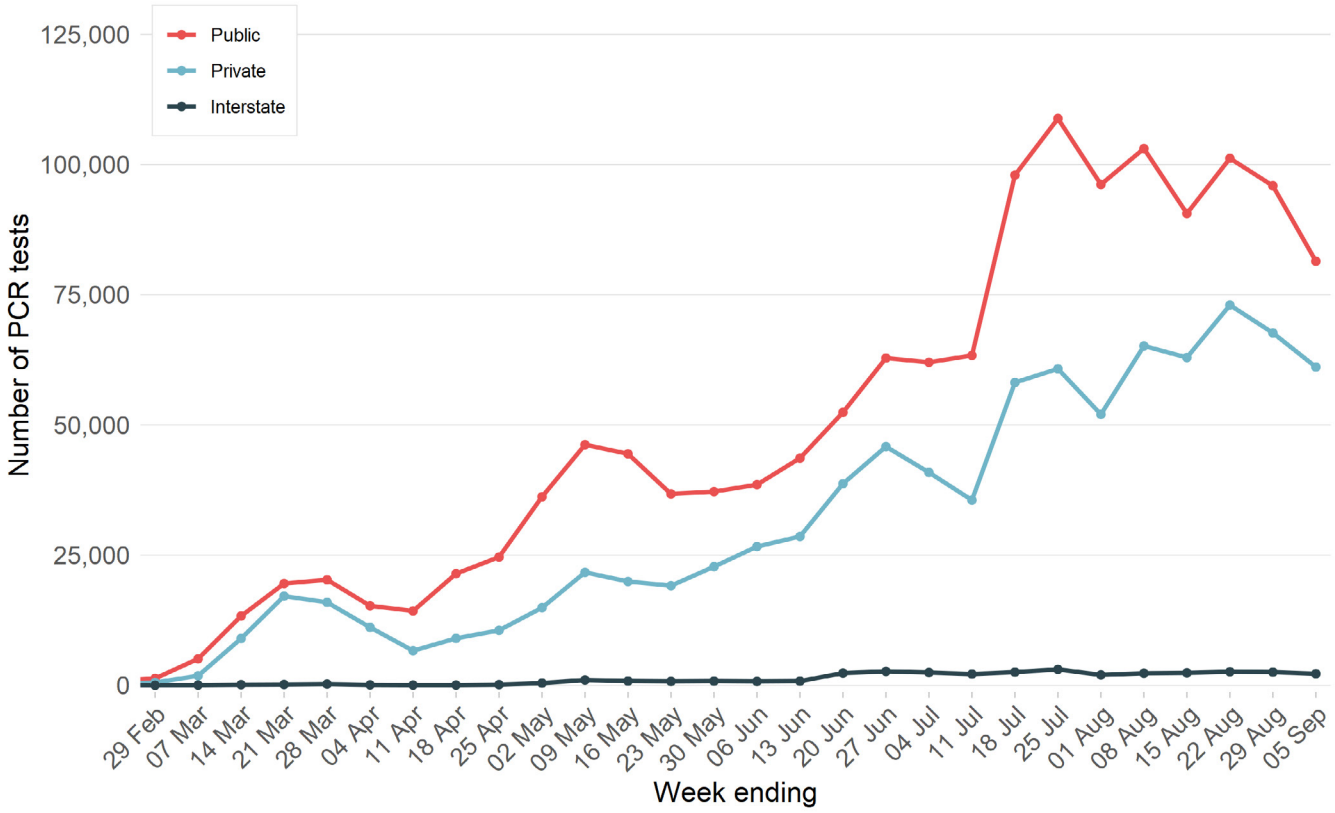


Includes SARS-CoV-2 PCR tests only and excludes repeat positive tests for an individual.

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, 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 5 September, testing in both public and private facilities decreased compared to the previous week. Approximately 60% of PCR tests were conducted at public laboratories during this period.

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.

Table 2. Locally-acquired COVID-19 cases in NSW, by week and source of infection, 9 August to 5 September 2020

Locally-acquired cases	Week ending				Total
	5 Sep	29 Aug	22 Aug	15 Aug	
Cases who are linked to a known case or cluster	48	44	19	63	**174**
Cases with no links to other cases or clusters	5	6	5	6	**22**
Total	**53**	**50**	**24**	**69**	**196**

Interpretation: The majority (89%) of cases in the four weeks ending 5 September were linked to known cases or clusters.

Table 3. Locally-acquired COVID-19 cases by LHD of residence, 9 August to 5 September 2020

Local Health District	Week ending				Total
	5 Sep	29 Aug	22 Aug	15 Aug	
Central Coast	1	1	0	0	**2**
Far West	0	0	0	0	**0**
Hunter New England	0	0	0	0	**0**
Illawarra Shoalhaven	1	0	0	0	**1**
Mid North Coast	0	0	0	0	**0**
Murrumbidgee	0	0	0	0	**0**
Nepean Blue Mountains	0	0	0	1	**1**
Northern NSW	0	0	0	0	**0**
Northern Sydney	10	10	1	5	**26**
South Eastern Sydney	16	15	0	3	**34**
South Western Sydney	8	9	13	33	**63**
Southern NSW	0	0	0	3	**3**
Sydney	4	6	2	0	**12**
Western NSW	1	0	0	0	**1**
Western Sydney	12	9	8	24	**53**
Total	**53**	**50**	**24**	**69**	**196**

Interpretation: The majority of locally-acquired cases reported in the four weeks up to 5 September have been residents of South Western Sydney LHD (32%, 63/196) and Western Sydney LHD (27%, 53/196).

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 4. Locally-acquired COVID-19 cases with no identified links to known cases or clusters by LHD of residence, 9 August to 5 September 2020

Local Health District	Week ending				Total
	5 Sep	29 Aug	22 Aug	15 Aug	
Central Coast	0	0	0	0	**0**
Far West	0	0	0	0	**0**
Hunter New England	0	0	0	0	**0**
Illawarra Shoalhaven	0	0	0	0	**0**
Mid North Coast	0	0	0	0	**0**
Murrumbidgee	0	0	0	0	**0**
Nepean Blue Mountains	0	0	0	0	**0**
Northern NSW	0	0	0	0	**0**
Northern Sydney	1	0	0	0	**1**
South Eastern Sydney	1	0	0	0	**1**
South Western Sydney	2	3	4	2	**11**
Southern NSW	0	0	0	0	**0**
Sydney	0	0	1	0	**1**
Western NSW	1	0	0	0	**1**
Western Sydney	0	3	0	4	**7**
Total	**5**	**6**	**5**	**6**	**22**

Interpretation: Extensive public health investigations were unable to identify a source of infection for six cases in the week ending 5 September. Over the past four weeks, 50% (11/22) cases with an unknown source were reported in South Western Sydney LHD.

Among the 22 cases with an unknown source there were four family groups (total of eight cases) who had similar onsets, suggesting a common exposure. This indicates that there were at least 18 transmission events not linked to a known case or cluster in the last four weeks.

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.

Table 5. Previously reported clusters with no new cases identified in the week ending 5 September 2020

Date cluster first identified	Cluster	Cases linked in the week ending 5 Sept	Date of last case
17 July	Thai Rock Restaurant Wetherill Park and linked clusters	0	11 August
18 July	Batemans Bay club	0	10 August
24 July	Bankstown area funeral services and linked clusters	0	21 August
27 July	Thai Rock Restaurant Potts Point and linked clusters	0	21 August
2 August	Tangara School and associated cases	0	21 August
3 August	Our Lady of Mercy School in Western Sydney	0	24 August
5 August	Smithfield club	0	15 August
9 August	Lidcombe club	0	13 August
18 August	Sydney quarantine hotel	0	18 August

Cases in community settings

In total, 48 cases reported in the last week were linked to known cases or clusters including Liverpool Hospital (three cases), City Tattersalls gym (28 cases), and St Paul's Catholic College (13 cases), and a further four cases were linked to known cases exposed in their own home or the home of a friend. There were five cases not linked to a known case or cluster, which are all under investigation.

City Tattersalls gym cluster

On 25 August South Eastern Sydney Public Health Unit was notified of two cases of COVID-19 in eastern suburbs residents. While there were no initial links between the two people, further investigations, including of new cases notified in the subsequent days, revealed they belonged to a new cluster of infections related to City Tattersalls gym on Pitt Street in Sydney. People attending City Tattersalls gym unknowingly spread the infection to other workplaces, businesses, homes and on public transport. Infectious people linked to the cluster, prior to their onset of symptoms, attended Double Bay Public School and Ryde High School, resulting in the quarantining of some students and staff.

In response to this emerging cluster, NSW Health has issued multiple public health alerts asking people who had attended affected venues to be alert for symptoms, and if anyone developed symptoms to get tested and self-isolate immediately. All close contacts have been contacted and asked to self-isolate and get tested.

As of 5 September, there were 28 new cases from 13 exposure locations associated with this cluster. Almost a third (28%, 17/61) of transmission within this cluster occurred in a gym setting. Of the 28 cases reported this week, 18 were in quarantine at the time of symptom onset, including 12 cases who were in

quarantine for at least two days prior to symptom onset. A total of 62 cases (including the source case) are associated with this cluster. Thirty-eight cases are linked to public settings, 14 cases are household contacts and nine cases were exposed in another household setting.

Table 6. Cases linked to City Tattersalls gym cluster by setting of exposure

Setting of exposure	Type of contact			Total
	Cases at location	Household	Other home setting	
City Tattersalls gym	**14**	**6**	**5**	**25**
Workplace 1 – Sydney CBD	2	1	0	**3**
Dance studio, Surry Hills	4	0	0	**4**
Gym, Zetland	3	0	0	**3**
Medical Centre, Drummoyne	1	0	0	**1**
Art school, Waverley	1	0	3	**4**
Cafe, CBD	1	0	0	**1**
Double Bay school	1	0	0	**1**
Bus X39, CBD to Clovelly Rd	1	1	0	**2**
Hyde Park Medical Practice	1	0	0	**1**
Physico City Physiotherapy	2	1	0	**3**
Workplace 2 – Sydney CBD	4	4	1	**9**
Hair salon, Bondi	1	1	0	**2**
Early learning centre, Lindfield	2	0	0	**2**
Total	**38**	**14**	**9**	**61**

Liverpool Hospital

On 10 August South Western Sydney Public Health Unit were notified of a case in a healthcare worker that worked at Liverpool Hospital. The source of infection was a previously known case from a known cluster. A public health investigation identified that the staff member had worked two days whilst infectious. All close contacts were advised to isolate and get tested immediately. In the week ending 5 September there were an additional three cases reported, including a patient at Liverpool Hospital and two household contacts of this case. Including the source there are 14 cases linked to this cluster, including five healthcare workers, two patients and seven people exposed in home settings.

Table 7. Cases linked to Liverpool Hospital

Setting of exposure	Type of contact			Total
	Cases at location	Household	Other home setting	
Liverpool Hospital	**6**	**5**	**2**	**13**

St Paul's Catholic College, Greystanes

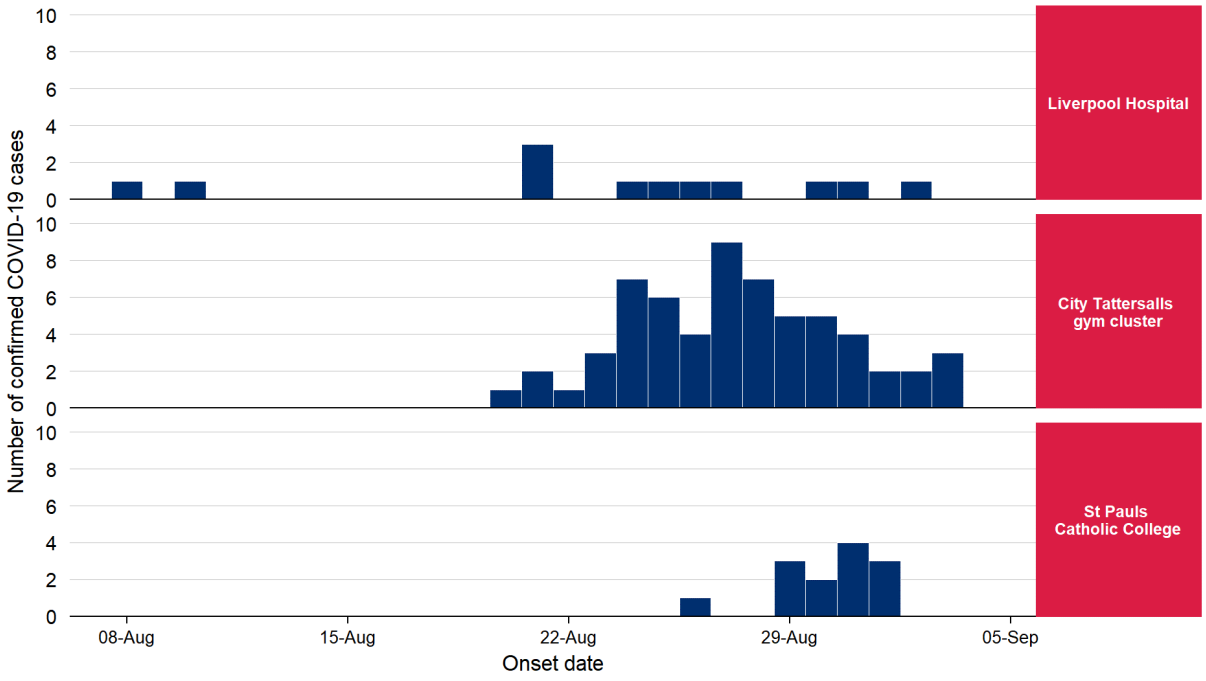
On 29 August a case of COVID-19 was notified in a student that attended St Paul's Catholic College, Greystanes. Students in the same classes as the case and the case's teachers were identified as close contacts and asked to quarantine, and the school was planned to be non-operational on 31 August. On 31 August, four further cases were reported in students from the school, in the same year group as the index case. Following the fifth case, all students in the year were considered close contacts, as well as students from other year groups who shared homeroom or sporting activities with the cases. A sixth case in the same year as the index case was notified on 1 September. The school was closed for a further two days and reopened on 3 September. There are three exposure locations, including Girraween Public School, linked to this cluster. A thorough public health investigation has not been able to identify the source of the cluster.

In total, there are 14 cases linked to this cluster including the source case. Of the 13 cases reported this week, two were in quarantine at the time of symptom onset, however, no cases were in quarantine in the two days prior to symptom onset and while considered infectious.

Table 8. Cases linked to St Paul's Catholic College by setting of exposure

Setting of exposure	Type of contact			Total
	Cases at location	Household	Other home setting	
St Paul's Catholic College, Greystanes	**5**	**0**	**5**	**10**
Girraween Public School	1	0	0	1
Cafe, Lidcombe	1	0	0	1
Workplace, Revesby	1	0	0	1
Total	**8**	**0**	**5**	**13**

Figure 6. COVID-19 cases by cluster and onset date, NSW, 2020.



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

SECTION 5: 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.

One Aboriginal case was notified in the week ending 5 September. In total, 44 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 22 August 2020, with Aboriginal status ascertained for approximately 90% of all COVID-19 test records.

Pregnant women

One case in a pregnant woman was reported in the week ending 5 September; she acquired her infection overseas and was in hotel quarantine at diagnosis. 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, 1.4% 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 9. 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 3.3% 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 (12.9%, 12.1% and 5.9%), while NSW reports similar rates to South Korea (1.6%) 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.

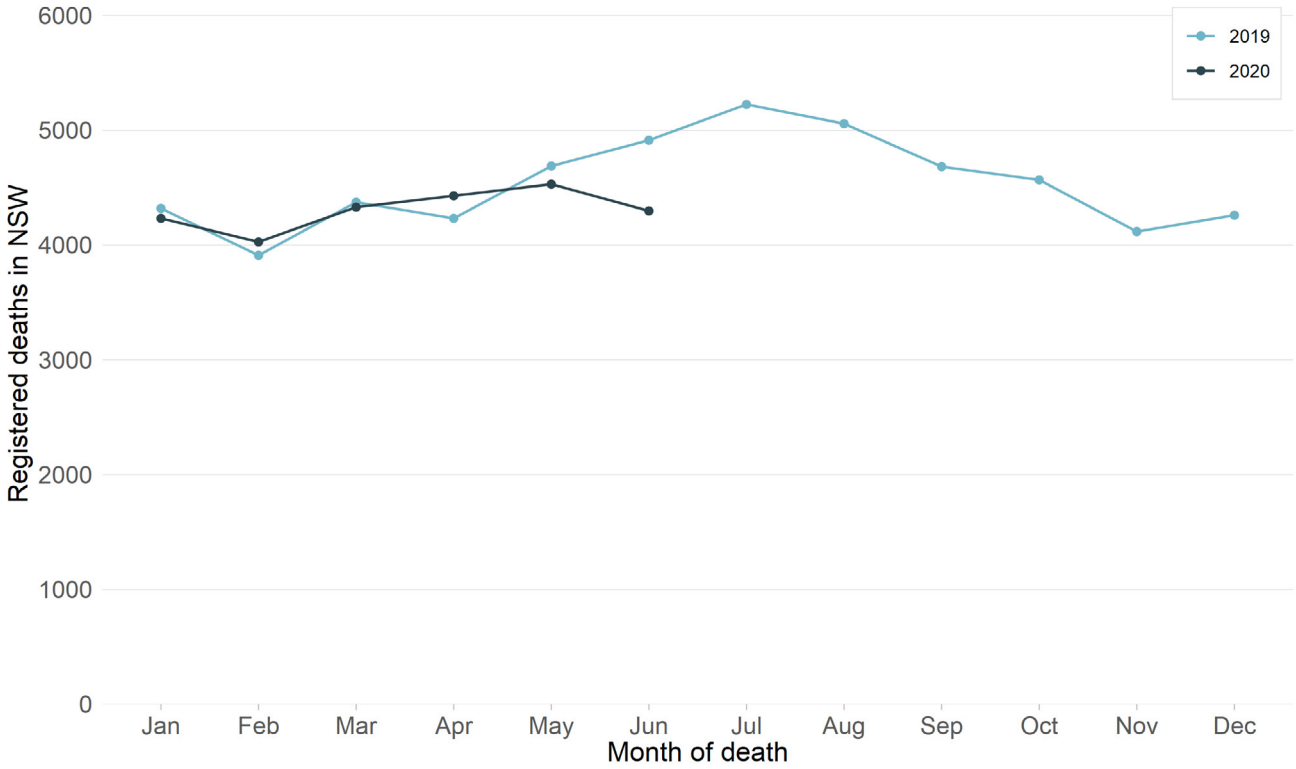
[2] WHO Coronavirus disease (COVID-19) Weekly Epidemiological Update – 7 September 2020
https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports

How many people have died in NSW from any cause of death?

NSW Health receives notifications of all deaths notified to the NSW Registry of Births Deaths and Marriages. Deaths from any cause are seasonal, increasing in winter and decreasing in summer. On average, there is a delay of about 14 days for a death to be registered and notified to NSW Health, and deaths referred to a coroner may take longer to register.

Of deaths registered in each month of January to April 2020, 95% were registered within 6-7 weeks, and almost all (99% of deaths) were registered within 10-14 weeks. To ensure reasonable completeness of mortality data, monthly deaths are reported seven weeks after the end of the month.

Figure 7. Deaths from any cause registered in NSW from January 2019 to June 2020

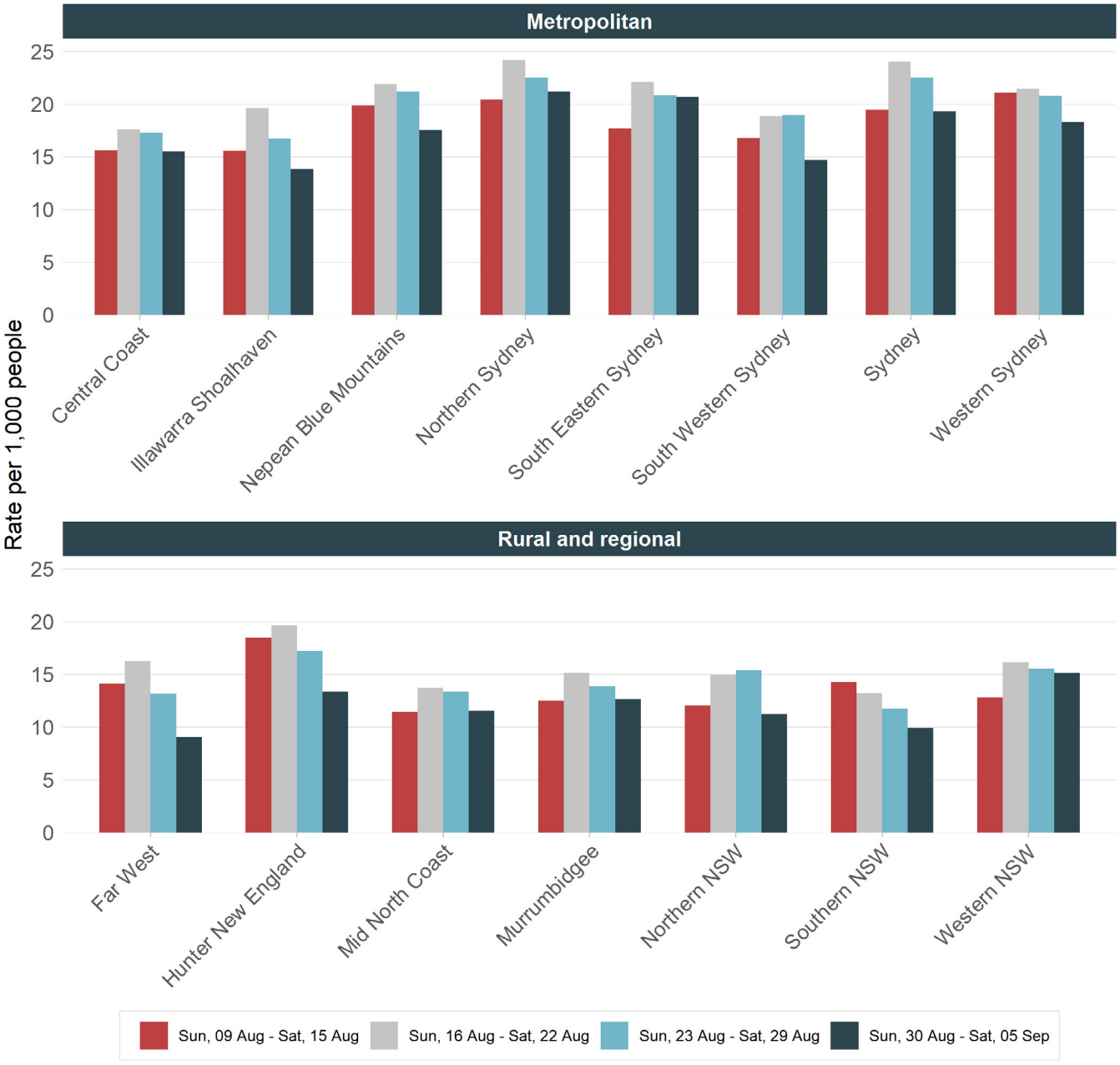


Based on deaths registered in NSW up to 03 September, 2020

Interpretation: When compared to the same period in 2019, the numbers of registered deaths were lower in May and June. While there is a lag in notification of deaths, there is no indication to date that the COVID-19 pandemic in NSW is causing an overall increase in mortality from any cause.

SECTION 7: COVID-19 TESTING IN NSW

Figure 8. Rates of COVID-19 testing by LHD of residence and week

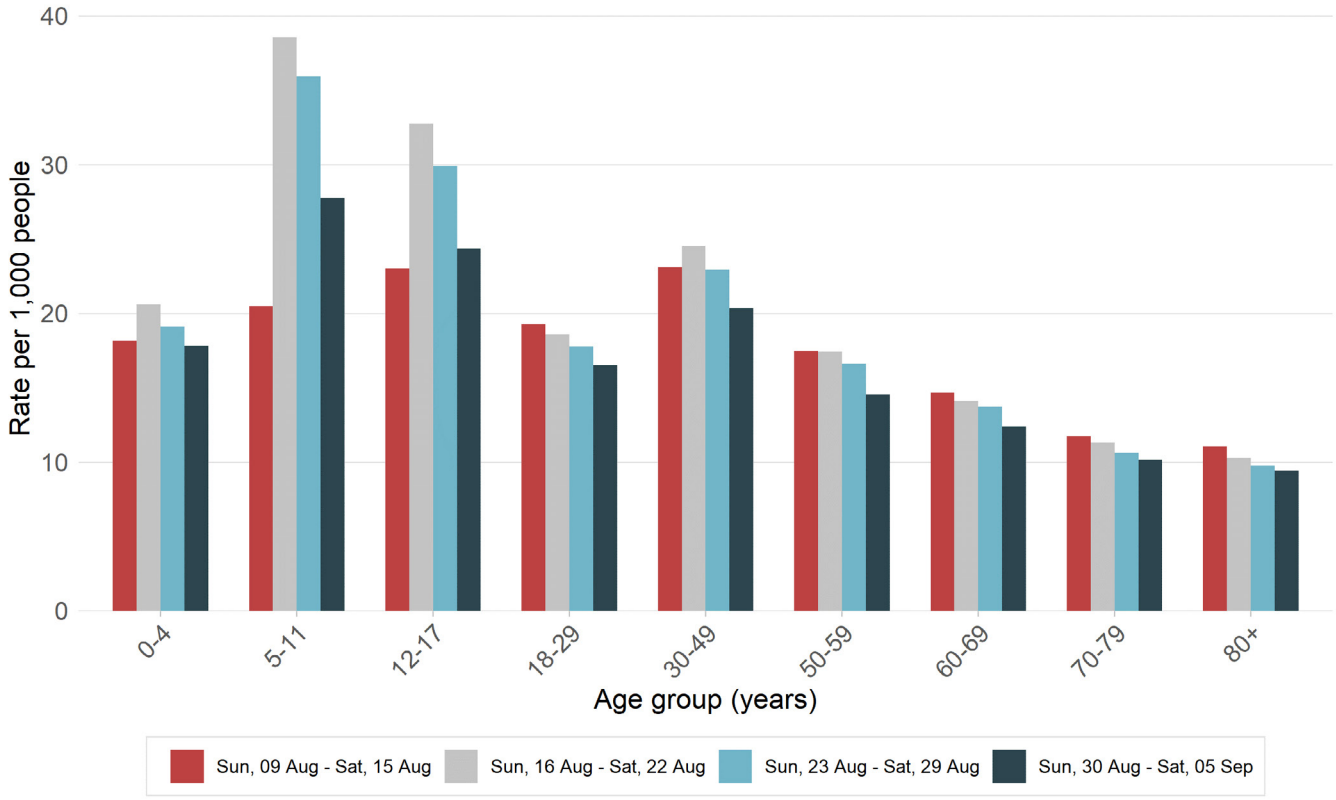


Includes SARS-CoV-2 PCR tests only and excludes notifications with missing postcode of residence.

Interpretation: Statewide testing rates in the week ending 5 September were lower compared to the previous week (18 per 1,000 vs 20 per 1,000). Testing rates decreased in all LHDs.

Testing by age group

Figure 9. Rates of COVID-19 testing by age group and week

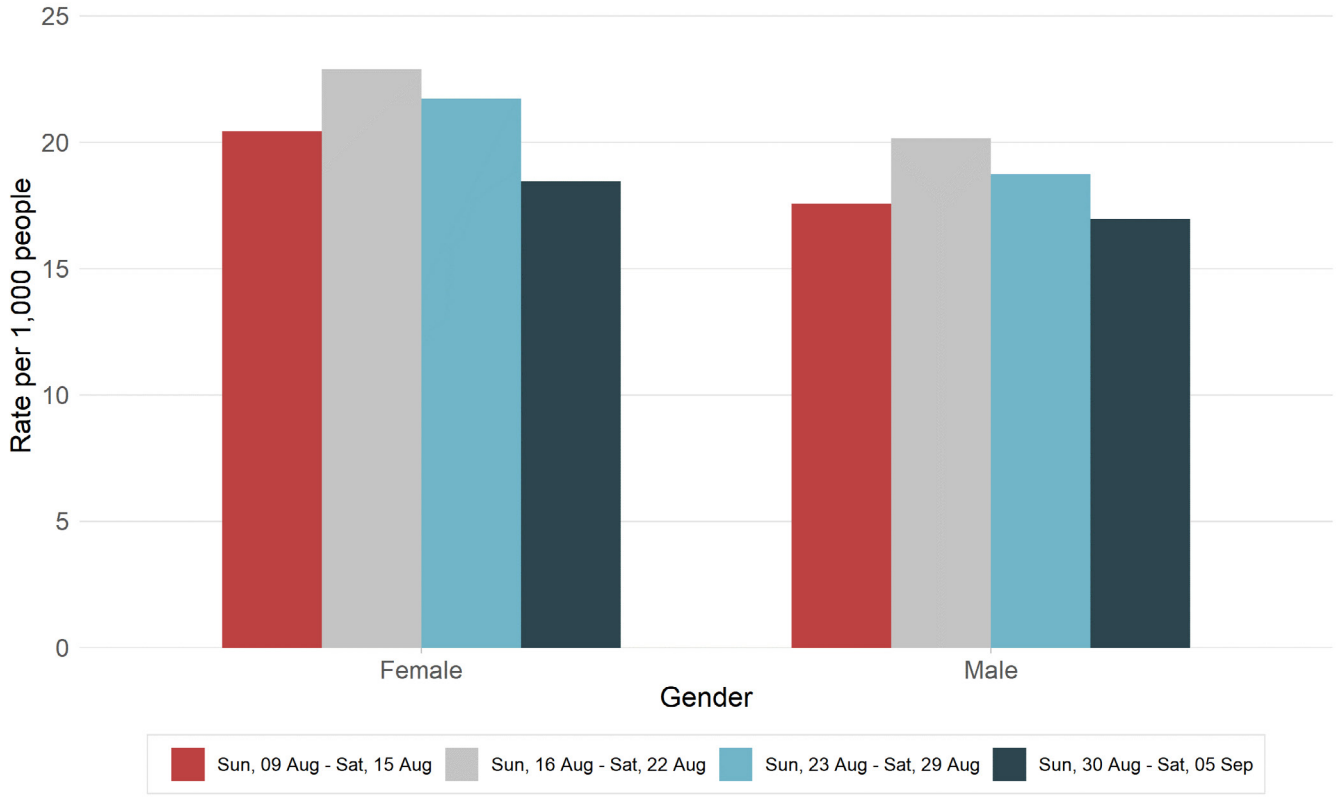


Includes SARS-CoV-2 PCR tests only and excludes notifications with age missing.

Interpretation: Testing rates decreased in all age groups for the week ending 5 September. However, testing in primary and high school-aged children remains higher compared with those in other groups.

Testing by gender

Figure 10. Rates of COVID-19 testing by gender and week



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

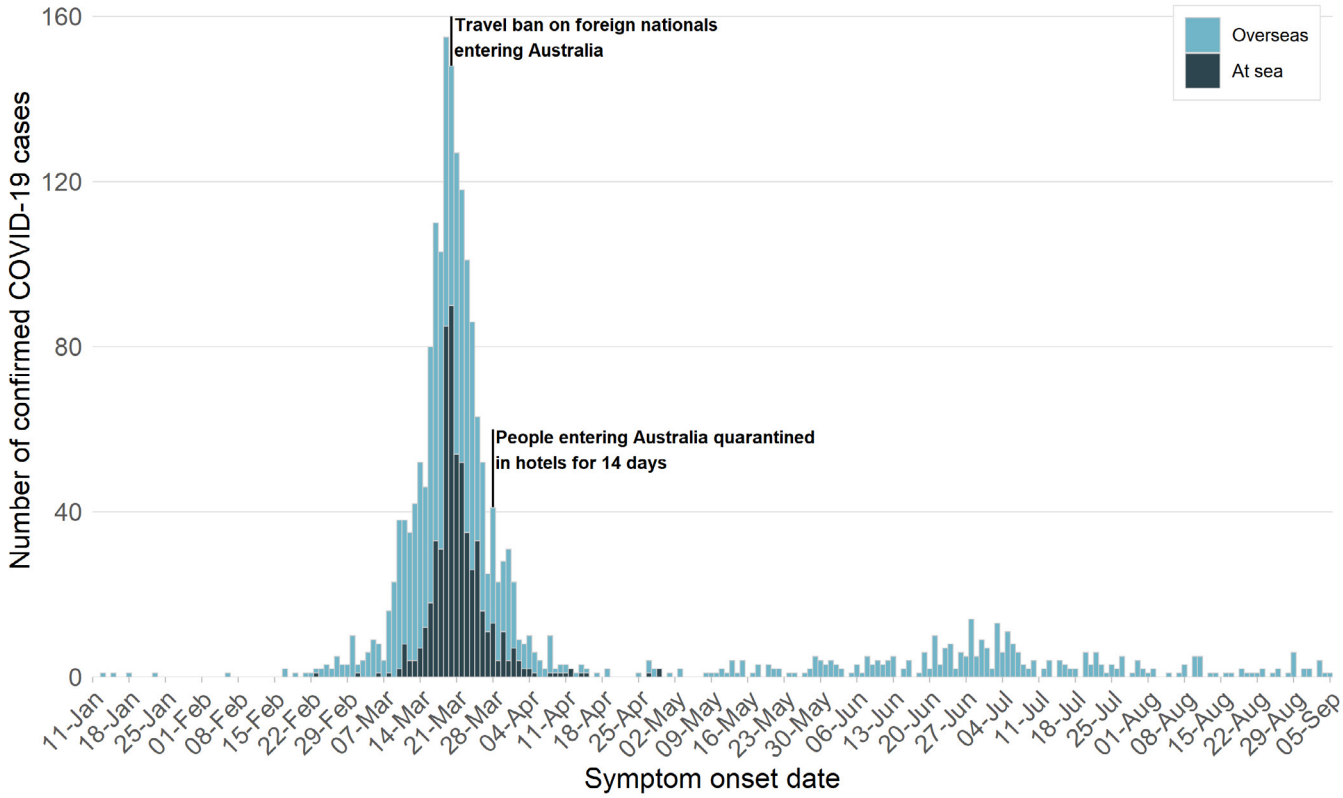
Interpretation: Testing rates are consistently higher in females compared with males. In both groups, rates decreased in the week ending 5 September compared with the previous week.

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



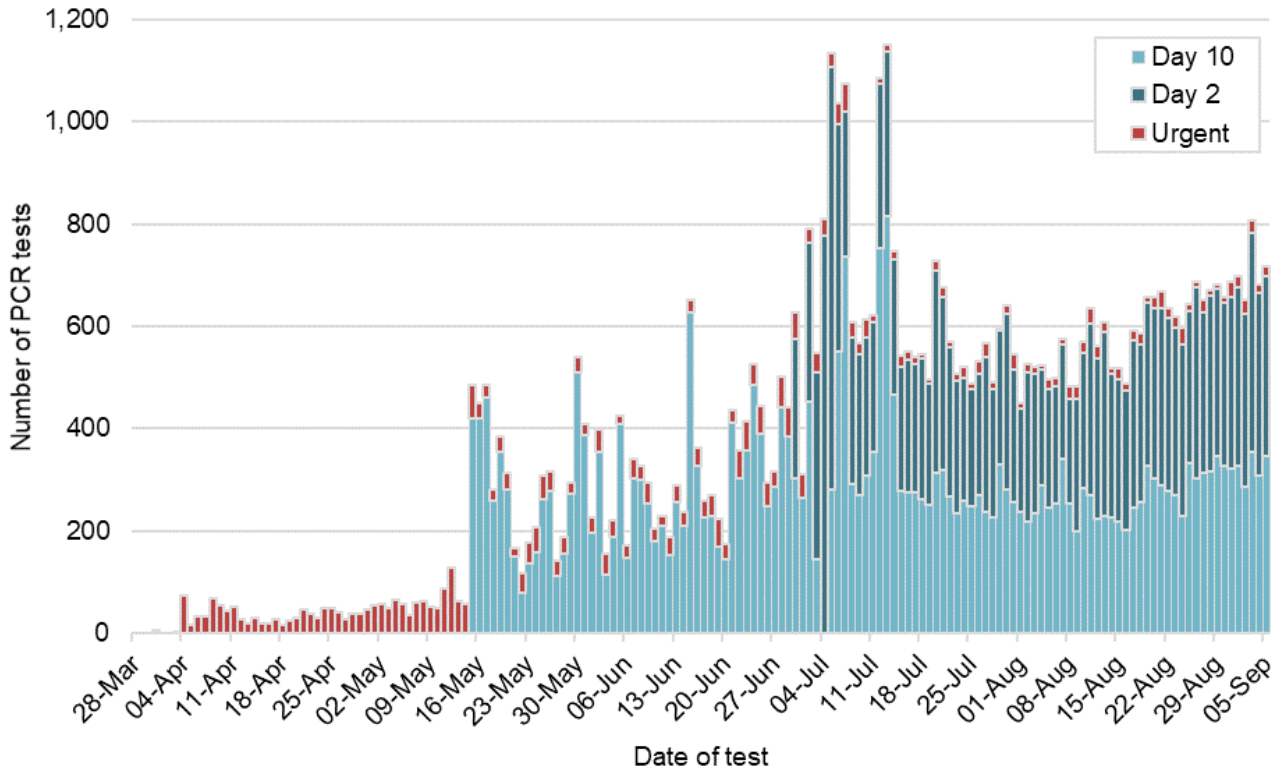
The date of the first positive test is used for cases who did not report symptoms.

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. There were 18 overseas-acquired cases reported in the week ending 5 September, over 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 12. COVID-19 testing in returned travellers in hotel quarantine, reported from 28 March to 5 September, NSW, 2020



Interpretation: There were 4,899 tests conducted through the hotel quarantine screening programs in the week ending 5 September, of which 13% were screening tests for domestic travellers from Victoria. Since screening began on 28 March, a total of 59,455 PCR tests have been conducted and 344 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 5 September, a total of 3,867 people were screened at Sydney International Airport and 46 were referred for testing. Since screening began on 2 February, a total of 123,523 people have been screened with 1,342 referred for onsite health assessment and testing.

SECTION 9: OTHER RESPIRATORY INFECTIONS IN NSW

Influenza and other respiratory virus cases and tests reported in NSW, up to 30 August 2020

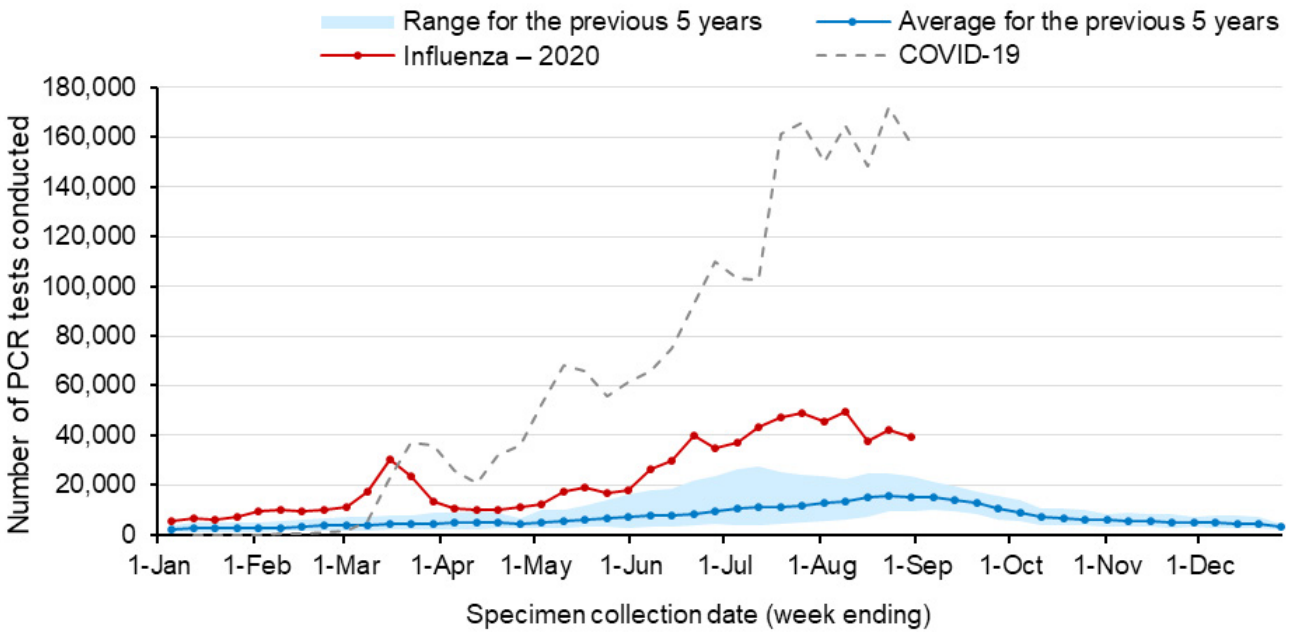
In NSW, routine surveillance for influenza and other respiratory viruses is conducted through sentinel laboratories. The number of all PCR tests (positive and negative) are provided to NSW Health by participating laboratories each week. Testing counts reflect the number of influenza PCR tests conducted;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

The most recent data available is for testing carried out to 30 August. A total of 809,029 influenza tests have been performed at participating laboratories to 30 August, with 39,308 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 30 August 2020

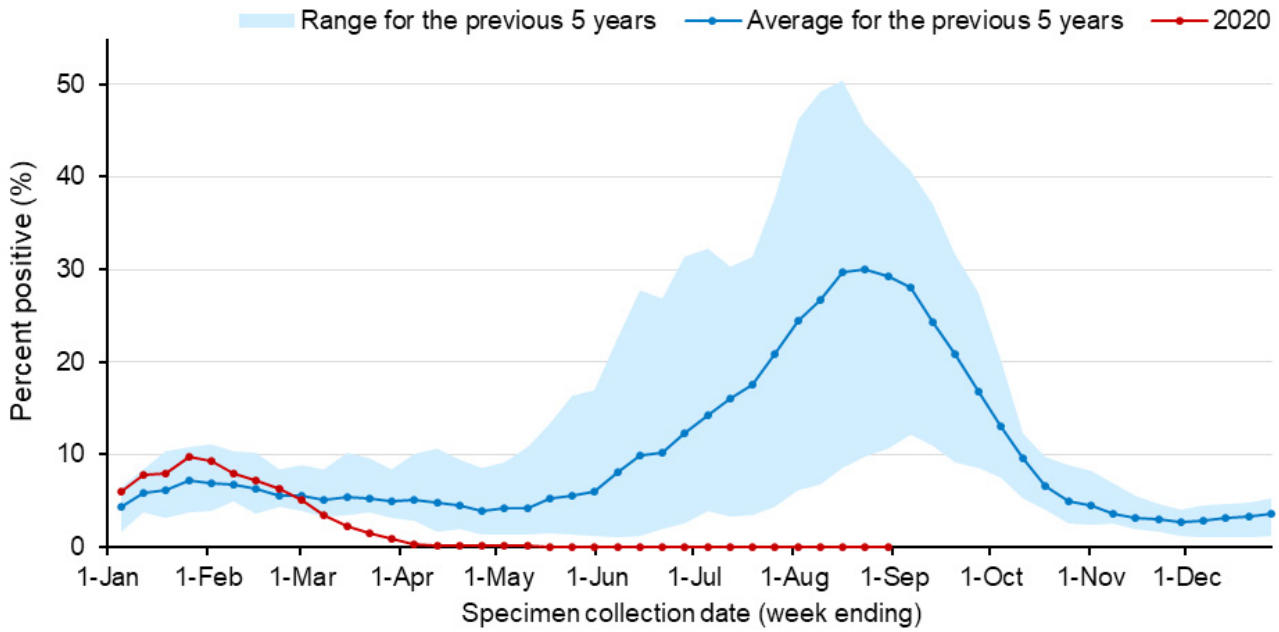


Interpretation: The number of influenza tests performed has exceeded the previous five-year average every week this year.

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.

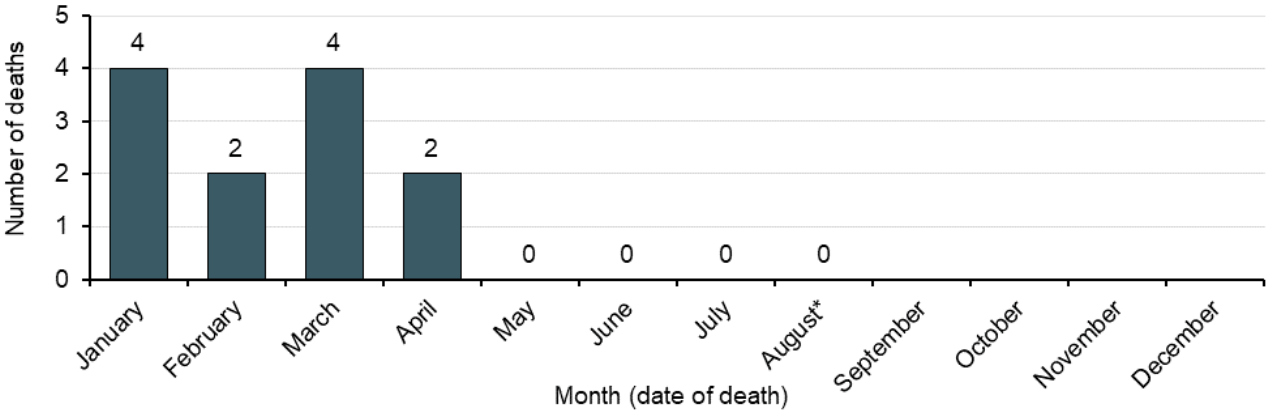
Figure 14. Proportion of tests positive for influenza, to 30 August 2020



Interpretation: The percent of influenza tests that were positive in the week ending 30 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 15. Laboratory-confirmed influenza deaths by month of death, to 30 August 2020



Interpretation: No influenza deaths were reported in the week ending 30 August. The number of influenza-related deaths identified via Coroner's reports and death registrations from 1 January to 30 August 2020 is lower than the same period last year (12 deaths in 2020 compared with 202 in 2019).[3] Two-thirds of the deaths were in people aged 65 years and over.

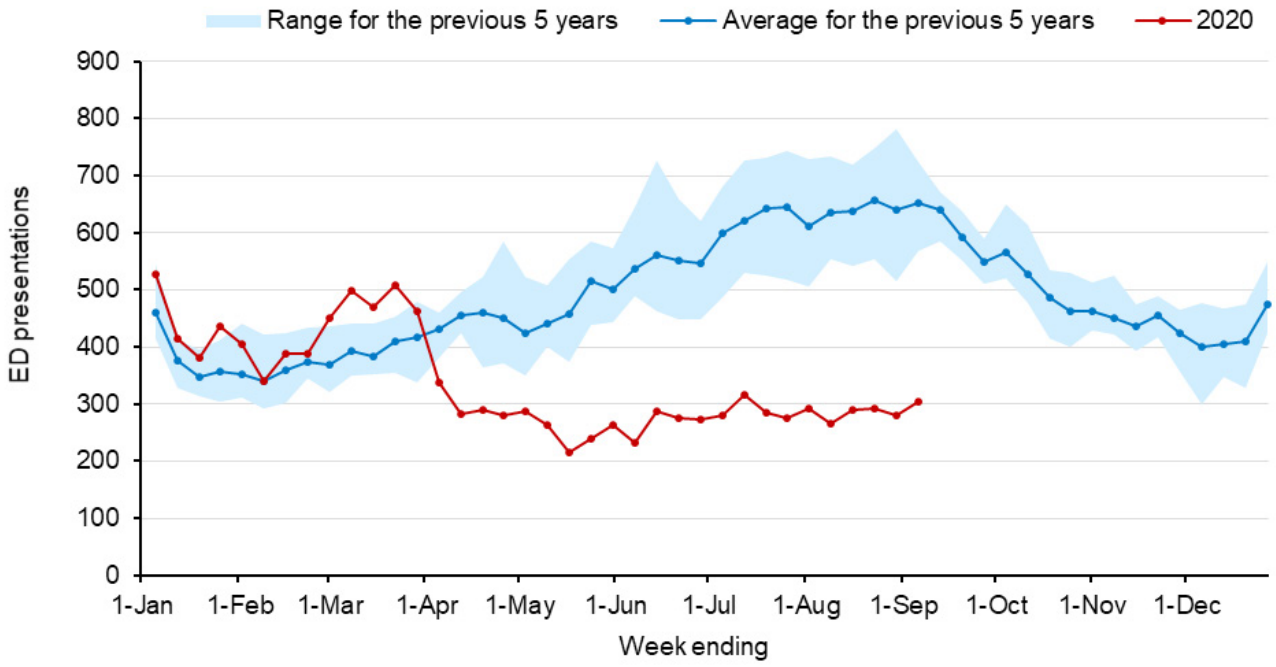
[3] Includes deaths in people with laboratory-confirmed influenza.

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 16. Emergency Department pneumonia presentations in NSW by week, to 6 September 2020



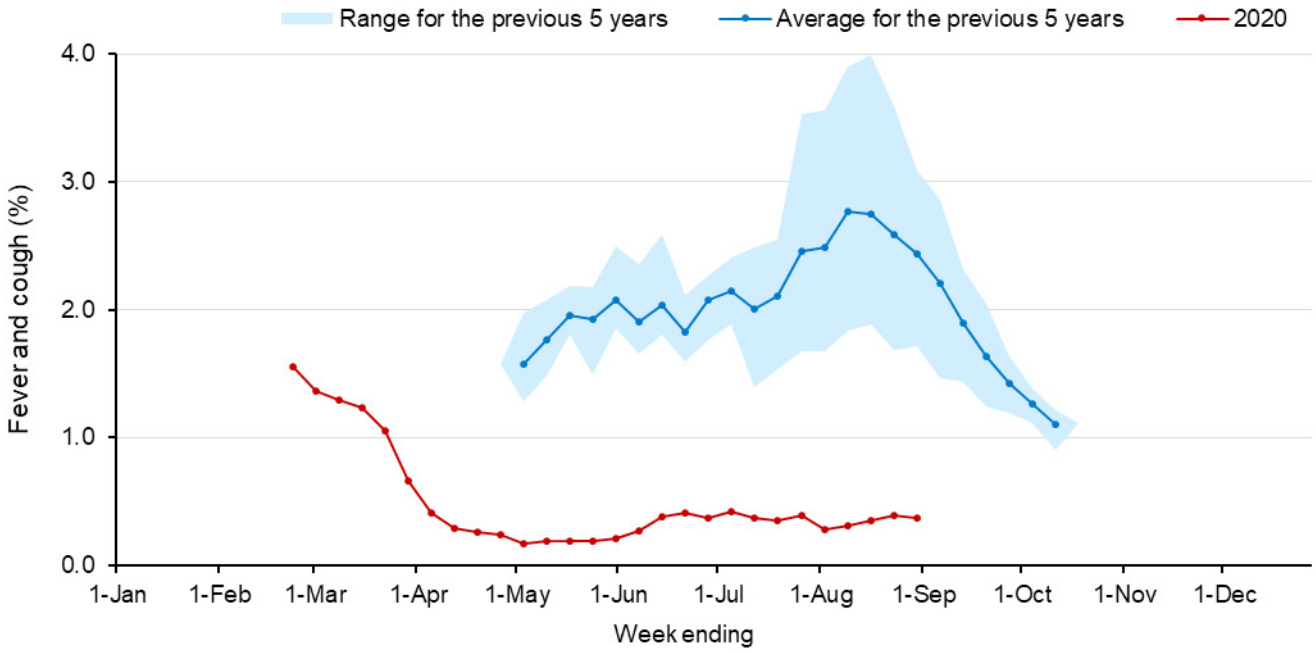
Interpretation: Pneumonia presentations decreased from the end of March and have continued to remain well below the usual range for this time of year.

[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 17. Proportion of FluTracker participants in NSW reporting influenza-like illness, to 30 August 2020



Interpretation: In NSW in the week ending 30 August, of the 23,735 people surveyed, 89 people (0.4%) 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	
		5 September		29 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]	5479	15.5	6109	17.3	89849	254.6
Far West	Balranald	26	11.1	24	10.3	330	141.2
	Broken Hill	173	9.9	254	14.5	3599	205.9
	Central Darling	14	7.6	21	11.4	256	139.2
	Wentworth	61	8.7	99	14.0	1458	206.7
	LHD Total[2]	274	9.1	398	13.2	5643	187.2
Hunter New England	Armidale Regional	375	12.2	463	15.0	7170	233.0
	Cessnock	597	10.0	806	13.4	12030	200.6
	Dungog	127	13.5	160	17.0	1804	191.5
	Glen Innes Severn	64	7.2	82	9.2	1437	162.0
	Gunnedah	177	14.0	208	16.4	2106	166.1
	Gwydir	41	7.7	40	7.5	498	93.0
	Inverell	190	11.3	227	13.4	3234	191.5
	Lake Macquarie	3218	15.6	4224	20.5	62111	301.7
	Liverpool Plains	96	12.2	130	16.5	1562	197.7
	Maitland	1373	16.1	1980	23.3	29223	343.1
	Mid-Coast	801	8.5	1042	11.1	16524	176.1
	Moree Plains	141	10.6	108	8.1	2085	157.2
	Muswellbrook	185	11.3	292	17.8	3478	212.4
	Narrabri	133	10.1	186	14.2	2061	156.9
	Newcastle	2776	16.8	3555	21.5	63121	381.2
	Port Stephens	868	11.8	1049	14.3	22260	302.9
	Singleton	345	14.7	437	18.6	7138	304.3
	Tamworth Regional	945	15.1	1095	17.5	15847	253.4
	Tenterfield	35	5.3	61	9.3	820	124.4
	Upper Hunter Shire	168	11.9	232	16.4	3087	217.7
	Uralla	56	9.3	55	9.2	911	151.5
	Walcha	22	7.0	25	8.0	560	178.7
	LHD Total[2]	12723	13.4	16441	17.3	258862	271.8
Illawarra Shoalhaven	Kiama	408	17.5	406	17.4	6653	284.5
	Shellharbour	1121	15.3	1428	19.5	20917	285.6
	Shoalhaven	1294	12.3	1584	15.0	23546	222.9
	Wollongong	2999	13.8	3623	16.6	54502	249.9
	LHD Total[2]	5822	13.9	7041	16.8	105618	251.7

Local Health District	Local Government Area	Week ending				Total	
		5 September		29 August			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Mid North Coast	Bellingen	153	11.8	198	15.2	2525	194.3
	Coffs Harbour	864	11.2	1116	14.4	14139	183.0
	Kempsey	366	12.3	501	16.8	6386	214.7
	Nambucca	223	11.3	255	12.9	3510	177.2
	Port Macquarie-Hastings	1002	11.9	945	11.2	16013	189.5
	LHD Total[2]	2608	11.6	3015	13.4	42573	188.7
Murrumbidgee	Albury	814	15.0	949	17.5	10530	193.7
	Berrigan	69	7.9	73	8.3	1306	149.3
	Bland	81	13.6	75	12.6	1072	179.5
	Carrathool	31	11.1	20	7.2	214	76.5
	Coolamon	51	11.8	68	15.7	857	197.4
	Cootamundra-Gundagai Regional	124	11.0	110	9.8	1996	177.7
	Edward River	100	11.0	111	12.2	1831	201.6
	Federation	104	8.4	124	10.0	1794	144.3
	Greater Hume Shire	147	13.7	182	16.9	2115	196.5
	Griffith	350	13.0	332	12.3	5434	201.0
	Hay	27	9.2	26	8.8	345	117.0
	Hilltops	242	12.9	258	13.8	3171	169.5
	Junee	50	7.5	52	7.8	845	126.4
	Lachlan[1]	56	9.2	36	5.9	691	113.7
	Leeton	138	12.1	154	13.5	1730	151.2
	Lockhart	39	11.9	27	8.2	576	175.3
	Murray River	34	2.8	41	3.4	512	42.3
	Murrumbidgee	37	9.5	40	10.2	544	138.9
	Narrandera	42	7.1	61	10.3	757	128.3
	Snowy Valleys	207	14.3	254	17.5	2981	205.9
	Temora	52	8.2	58	9.2	924	146.5
	Wagga Wagga	1031	15.8	1122	17.2	16648	255.1
	LHD Total[2]	3775	12.7	4144	13.9	56424	189.3
Nepean Blue Mountains	Blue Mountains	1522	19.2	1753	22.2	28244	357.0
	Hawkesbury	1292	19.2	1583	23.5	20665	307.1
	Lithgow	259	12.0	361	16.7	4611	213.4
	Penrith	3845	18.1	4651	21.8	74260	348.7
	LHD Total[2]	6868	17.6	8292	21.2	126750	324.2

Local Health District	Local Government Area	Week ending				Total	
		5 September		29 August			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Northern NSW	Ballina	512	11.5	705	15.8	10260	229.9
	Byron	495	14.1	695	19.8	9029	257.4
	Clarence Valley	408	7.9	570	11.0	8034	155.5
	Kyogle	67	7.6	106	12.1	1219	138.6
	Lismore	667	15.3	993	22.7	10498	240.3
	Richmond Valley	307	13.1	395	16.8	4913	209.4
	Tenterfield	35	5.3	61	9.3	820	124.4
	Tweed	1031	10.6	1314	13.6	17300	178.4
	LHD Total[2]	3494	11.3	4790	15.4	61453	198.0
Northern Sydney	Hornsby	2670	17.6	3013	19.8	38325	252.0
	Hunters Hill	538	35.9	794	53.0	9040	603.5
	Ku-ring-gai	4106	32.3	3445	27.1	45932	361.2
	Lane Cove	1430	35.6	1610	40.1	25153	626.4
	Mosman	589	19.0	735	23.7	9872	318.7
	North Sydney	1136	15.1	1193	15.9	18622	248.2
	Northern Beaches	5489	20.1	5643	20.6	78611	287.4
	Parramatta[1]	3591	14.0	4282	16.7	56110	218.2
	Ryde	2207	16.8	2834	21.6	33492	255.1
	Willoughby	1426	17.6	1508	18.6	18463	227.4
	LHD Total[2]	20261	21.2	21518	22.5	288036	301.3
South Eastern Sydney	Bayside	2577	14.5	2796	15.7	38854	217.8
	Georges River	2325	14.6	2521	15.8	34614	217.1
	Randwick	4171	26.8	3677	23.6	54215	348.3
	Sutherland Shire	5185	22.5	5128	22.2	75364	326.8
	Sydney[1]	5259	21.4	5864	23.8	82330	334.2
	Waverley	2034	27.4	1989	26.8	32192	433.3
	Woollahra	1662	28.0	1868	31.5	26342	443.6
	LHD Total[2]	19843	20.7	19984	20.8	289754	302.1
South Western Sydney	Camden	2104	20.7	2910	28.7	40575	400.0
	Campbelltown	2938	17.2	3986	23.3	55723	326.0
	Canterbury-Bankstown[1]	5745	15.2	6425	17.0	91039	240.9
	Fairfield	2336	11.0	3192	15.1	50124	236.8
	Liverpool	3704	16.3	4497	19.8	70853	311.3
	Wingecarribee	806	15.8	1144	22.4	16678	326.2
	Wollondilly	578	10.9	815	15.3	12306	231.5
	LHD Total[2]	15313	14.7	19725	19.0	292662	281.8

Local Health District	Local Government Area	Week ending				Total	
		5 September		29 August			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Southern NSW	Bega Valley	313	9.1	413	12.0	6690	194.1
	Eurobodalla	488	12.7	539	14.0	11122	289.1
	Goulburn Mulwaree	360	11.6	403	12.9	6859	220.3
	Queanbeyan-Palerang Regional	526	8.6	634	10.4	9626	157.6
	Snowy Monaro Regional	262	12.6	269	12.9	4269	205.3
	Upper Lachlan Shire	60	7.5	122	15.1	1472	182.7
	Yass Valley	146	8.5	176	10.3	2424	141.9
	LHD Total[2]	2157	9.9	2558	11.8	42485	195.7
Sydney	Burwood	454	11.2	658	16.2	7282	179.3
	Canada Bay	1812	18.9	2118	22.1	30443	316.9
	Canterbury-Bankstown[1]	5745	15.2	6425	17.0	91039	240.9
	Inner West	4155	20.7	4673	23.3	74766	372.3
	Strathfield	929	19.8	1250	26.6	13339	284.3
	Sydney[1]	5259	21.4	5864	23.8	82330	334.2
	LHD Total[2]	13476	19.3	15705	22.5	223614	320.9
Western NSW	Bathurst Regional	795	18.2	847	19.4	10827	248.2
	Blayney	137	18.6	116	15.7	1918	259.9
	Bogan	16	6.2	35	13.6	420	162.8
	Bourke	16	6.2	31	12.0	333	128.6
	Brewarrina	8	5.0	5	3.1	232	144.0
	Cabonne	130	9.5	170	12.5	1930	141.6
	Cobar	46	9.9	29	6.2	549	117.9
	Coonamble	33	8.3	29	7.3	623	157.4
	Cowra	110	8.6	162	12.7	2100	164.8
	Dubbo Regional	734	13.7	813	15.1	10889	202.7
	Forbes	164	16.6	136	13.7	1324	133.7
	Gilgandra	51	12.0	65	15.3	644	151.9
	Lachlan[1]	56	9.2	36	5.9	691	113.7
	Mid-Western Regional	304	12.0	363	14.4	5069	200.7
	Narromine	71	10.9	104	16.0	1076	165.1
	Oberon	90	16.6	153	28.3	1124	207.7
	Orange	693	16.3	815	19.2	11875	279.7
	Parkes	622	41.9	192	12.9	2744	184.9
	Walgett	51	8.6	67	11.3	1141	191.7
	Warren	82	30.4	65	24.1	842	312.2
	Warrumbungle Shire	104	11.2	164	17.7	1834	197.7
	Weddin	16	4.4	40	11.1	541	149.7
	LHD Total[2]	4324	15.2	4430	15.5	58510	205.3

Local Health District	Local Government Area	Week ending				Total	
		5 September		29 August			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Western Sydney	Blacktown	6882	18.4	8771	23.4	104926	280.2
	Cumberland	5127	21.2	4360	18.1	61010	252.6
	Parramatta[1]	3591	14.0	4282	16.7	56110	218.2
	The Hills Shire	4180	23.5	5084	28.6	62193	349.5
	LHD Total[2]	19305	18.3	21909	20.8	275777	261.8
NSW Total[3]		**143,817**	**17.8**	**164,378**	**20.3**	**2,346,186**	**290.0**

[1]Local Government Area (LGA) spans multiple Local Health Districts.
[2]Local Health District total counts and rates includes tests for LHD residents only. Murrumbidgee includes Albury LGA residents.
[3]NSW Total counts and rates 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 30 AUGUST 2020

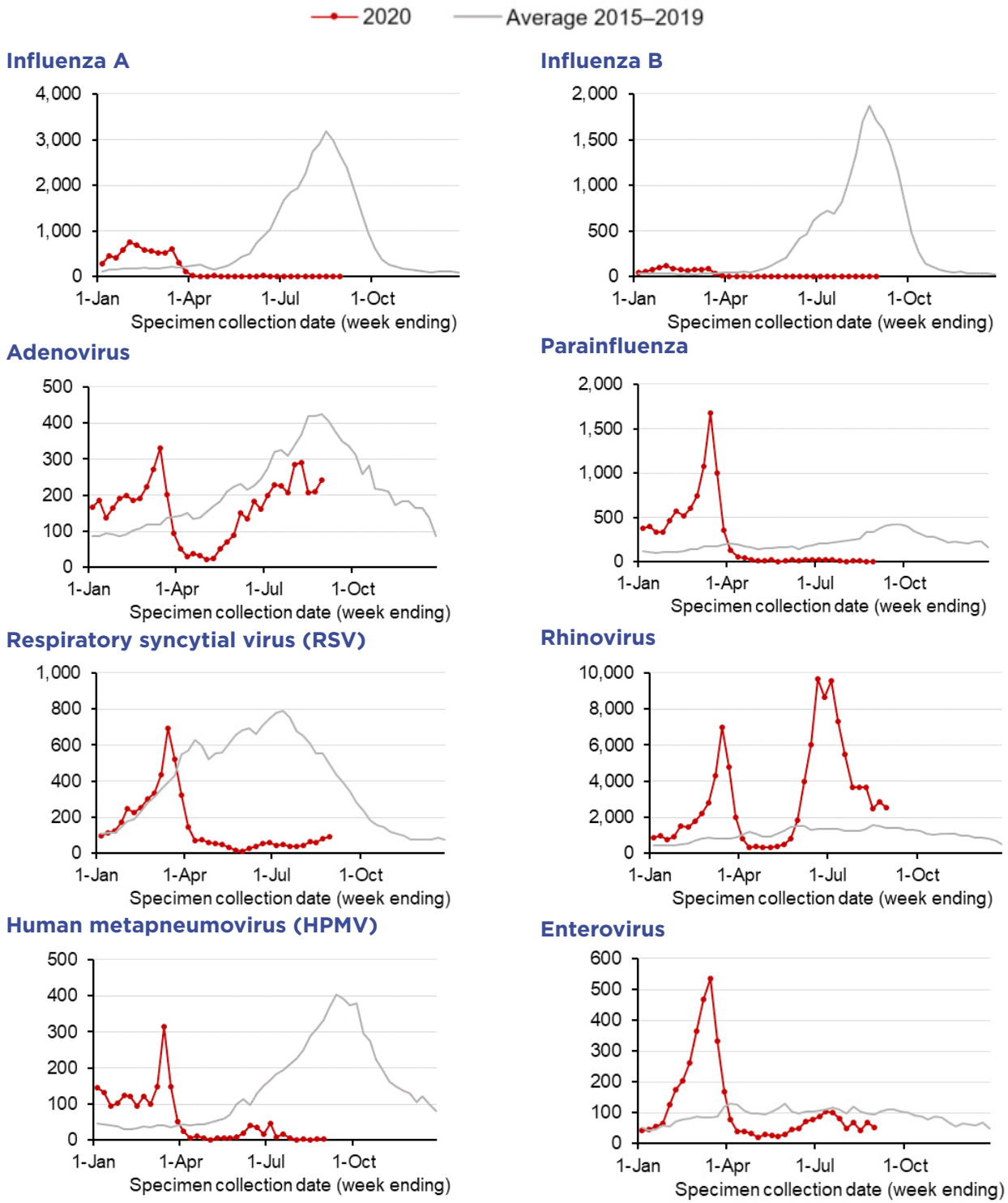
The reported testing numbers reflect the number of influenza PCR tests conducted. Not all samples are tested for all of the other respiratory viruses. Therefore, data presented may tend to under-represent current respiratory virus activity in NSW.

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—30 August 2020											
Total	809,029	6,608	0.82%	949	0.12%	5,679	8,996	5,058	106,734	1,978	4,074
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*	222,423	33	0.01%	1	<0.01%	1,146	89	209	29,706	79	427
Week ending											
9 August	49,835	1	<0.01%	0	-	291	12	65	3,682	4	69
16 August	37,799	4	0.01%	0	-	208	13	60	2,495	2	43
23 August	42,323	2	<0.01%	1	<0.01%	209	7	82	2,838	3	69
30 August	39,308	1	<0.01%	1	<0.01%	242	5	92	2,562	3	54

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 30 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: - 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.