

COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 38, ENDING 19 SEPTEMBER 2020

Published 23 September 2020

SUMMARY FOR THE WEEK ENDING 19 SEPTEMBER

- There were 12 locally-acquired COVID-19 cases reported in NSW this week (down 65%). There were no cases of COVID-19 reported this week with an unknown source and no new clusters reported.
- Of the eight cases with symptoms at diagnosis, three were in isolation at least 48 hours before onset (while considered infectious), three were in isolation within two days of symptoms, and two cases entered isolation more than three days after onset of illness.
- Of the 46 locally-acquired cases reported in the last two weeks, most were reported in residents of South Eastern Sydney (26%, 12/46) and Sydney (20%, 9/46) LHDs.
- There was one death reported this week in a person previously reported with COVID-19.
- Testing has again decreased for the third consecutive week (down 17%), though overall testing rates remain high.
- It is essential that people get tested and isolate as soon as symptoms develop (even mild symptoms).
- If symptoms develop even within a day of a negative test result, it is important to re-test without delay and continue to self-isolate.
- The NSW Sewage Surveillance Program found two of 42 sewage samples detected SARS-CoV-2. These samples were taken from Bondi and Malabar and are expected given the presence of known COVID-19 cases in the sewerage catchment areas.

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.
- Be vigilant in the use of personal protective equipment.

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 19 Sep	Week ending 12 Sep
Number of cases with symptoms at diagnosis	67% (8/12)	74% (25/34)
Proportion of cases in isolation at least 48 hours before symptoms	38% (3/8)	24% (6/25)
Proportion tested (swabbed) within:		
• 1 day of symptom onset	40% (2/5)	63% (12/19)
• 2 days of symptom onset	60% (3/5)	74% (14/19)
• 3 days of symptom onset	60% (3/5)	84% (16/19)
Proportion tested more than 3 days after symptom onset	40% (2/5)	16% (3/19)
Proportion who entered isolation within:		
• 1 day of symptom onset	40% (2/5)	79% (15/19)
• 2 days of symptom onset	60% (3/5)	89% (17/19)
• 3 days of symptom onset	60% (3/5)	95% (18/19)
Proportion who entered isolation more than 3 days after symptom onset	40% (2/5)	5% (1/19)
Number of tests conducted	100,878	120,976
Proportion notified to NSW Health by the laboratory within:		
• 1 day of swab collection	92% (11/12)	97% (33/34)
• 2 days of swab collection	100% (12/12)	97% (33/34)
• 3 days of swab collection	100% (12/12)	97% (33/34)
Proportion notified to NSW Health by the laboratory more than 3 days after the swab collection	0% (0/12)	3% (1/34)
Proportion of locally-acquired cases interviewed by public health staff within 1 day of notification to NSW Health	100% (12/12)	100% (34/34)
Proportion of close contacts (identified by the case) contacted by public health within 48 hours of case notification	100%	100%

Interpretation: Of eight cases reported in the last week who reported symptoms at diagnosis, three were in isolation at the time of diagnosis and for at least 48 hours before developing symptoms. Of the remaining five cases, three (60%) sought testing within two days of developing symptoms. Most (60%) of these cases had begun isolation within two days of their onset of illness. Unfortunately, there were two cases reported this week who went into isolation more than three days after symptom onset. It is important that people seek testing immediately if mild symptoms develop, even one or two days after a negative test result.

The time taken to notify cases remains stable with 92% of new cases in the week ending 19 September notified to NSW Health within one day of swab collection. For the case 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?

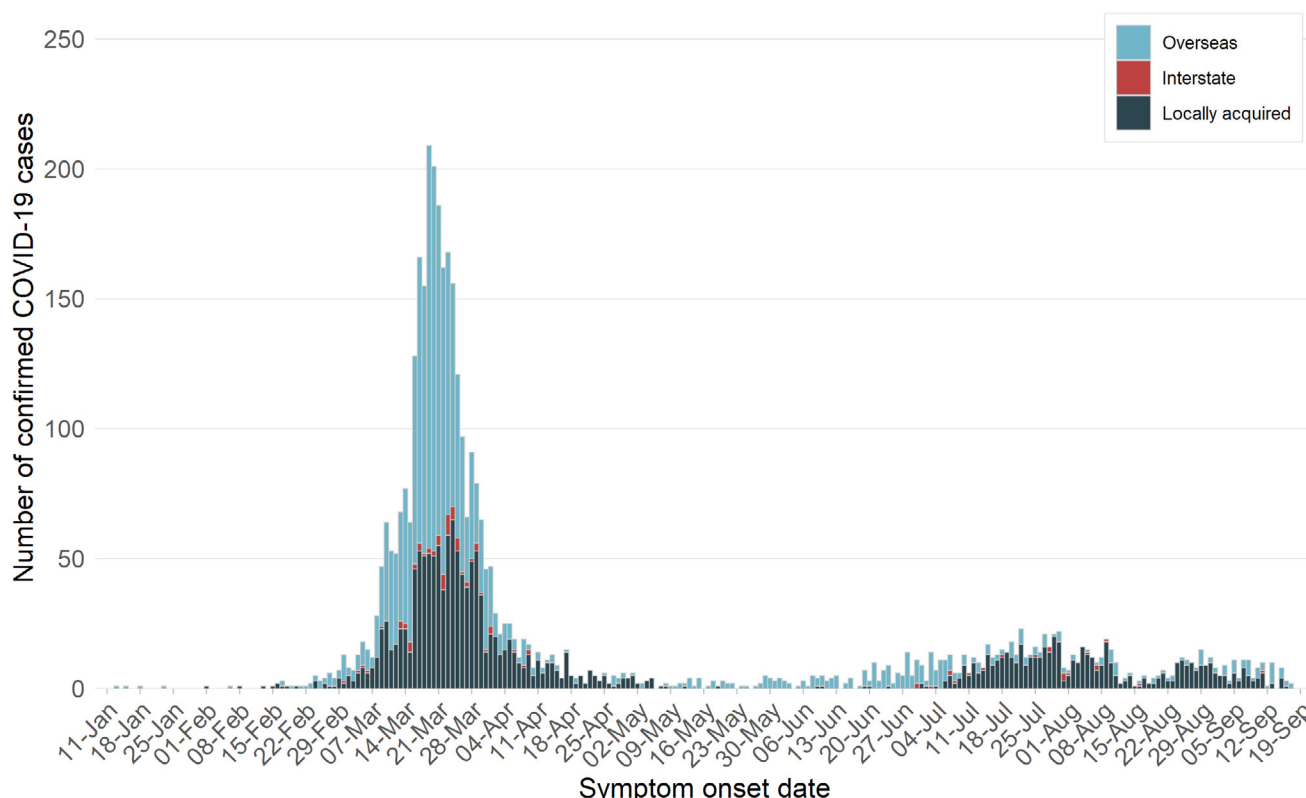
Table 1. COVID-19 cases and tests reported in NSW, up to 19 September 2020

	Week ending 19 Sep	Week ending 12 Sep	% change	Total to 19 Sep
Number of cases	34	52	↓ 35%	4,011
Overseas acquired	21	18	↑ 17%	2,126
Interstate acquired	1	0	-	90
Locally acquired	12	34	↓ 65%	1,795
Number of deaths	1	0	-	55
Number of tests	100,970	120,976	↓17%	2,595,428

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: 45% 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. An increase in locally-acquired cases was reported from early July – early cases were linked to the outbreak in Victoria at the time.

How many NSW cases were infected in Victoria?

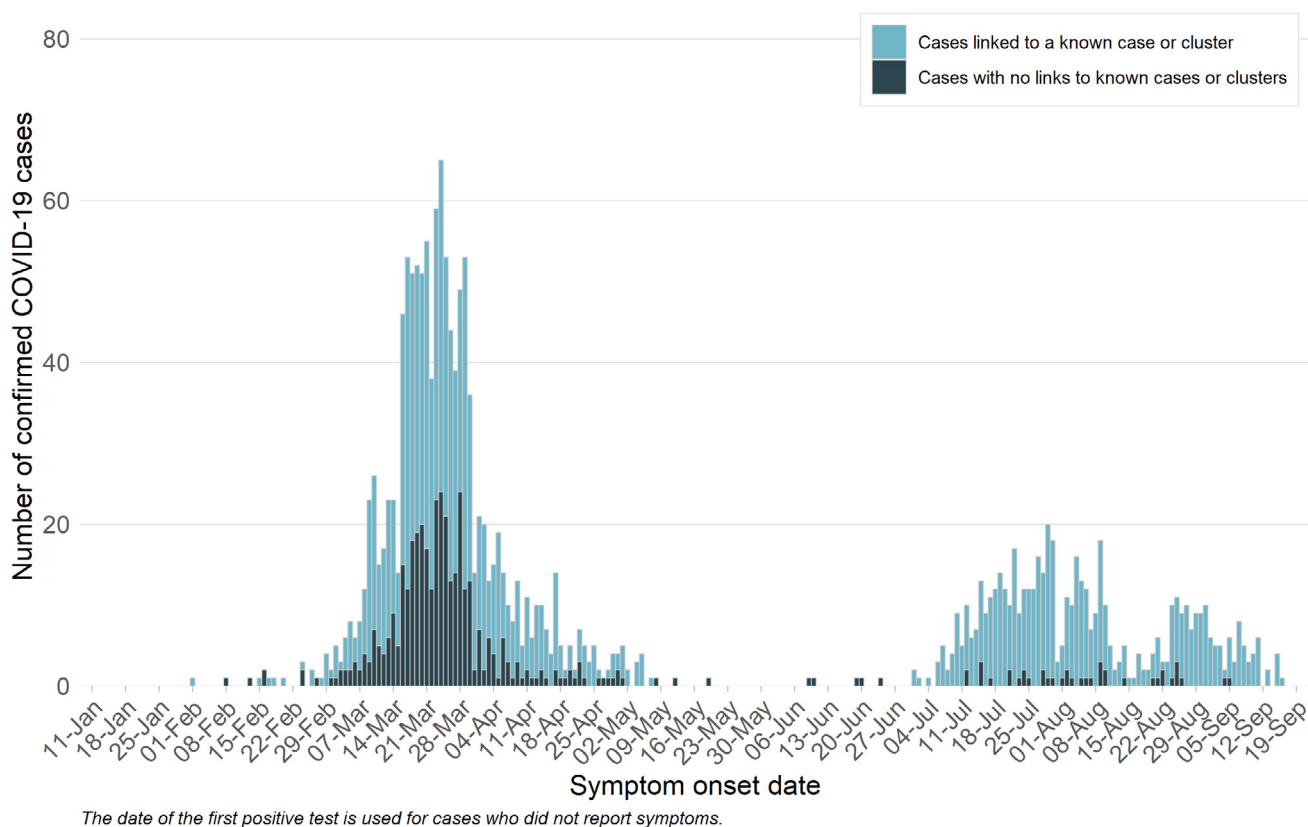
In response to the continued community transmission in Victoria, border measures have been introduced to limit the spread of infection into NSW. From 8 July, under the Public Health (COVID-19 Border Control) Order 2020, a person who has been in Victoria within the last 14 days must not travel to NSW 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 19 September, one case newly diagnosed with COVID-19 acquired their infection in Victoria. This case entered hotel quarantine upon arrival in NSW.

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

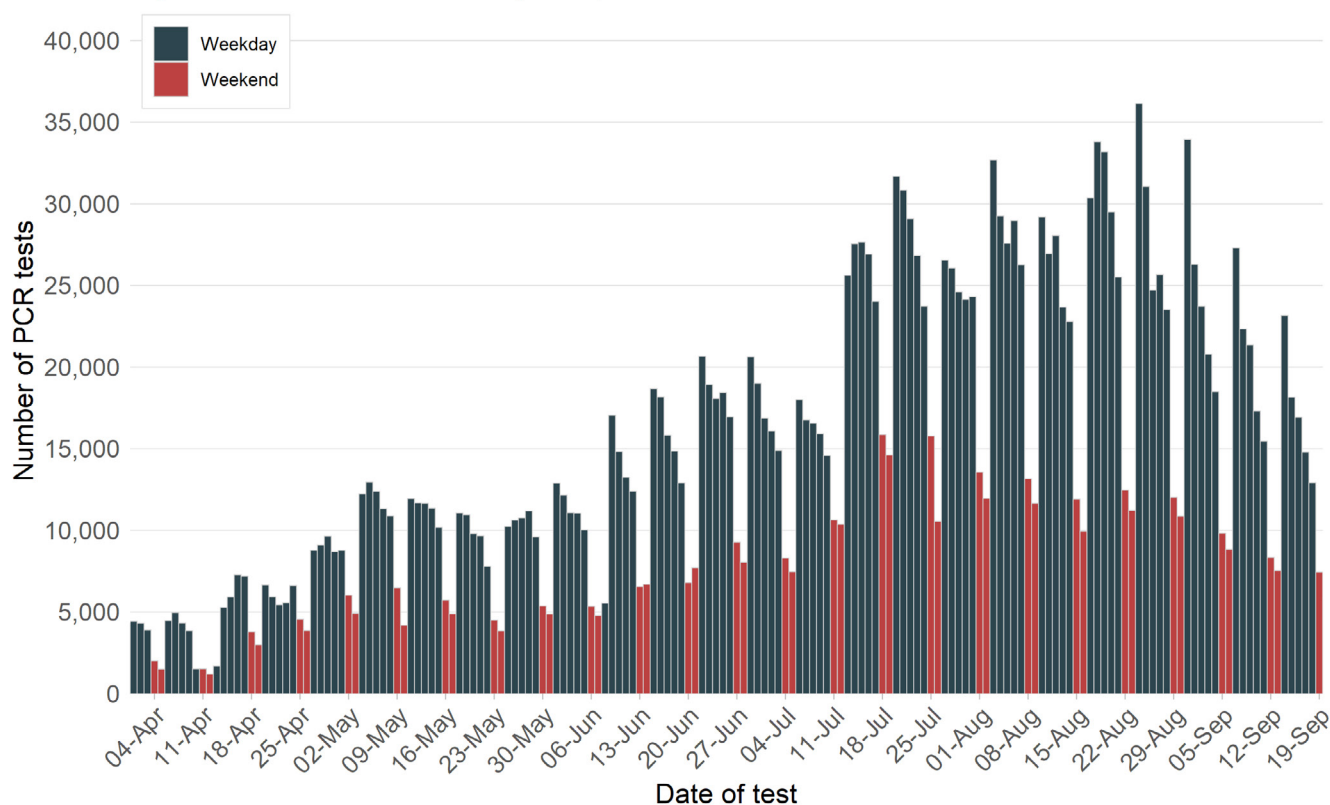


Interpretation: Of the locally-acquired cases with an onset in the last four weeks, 95% (131/138) were linked to known cases or clusters.

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.

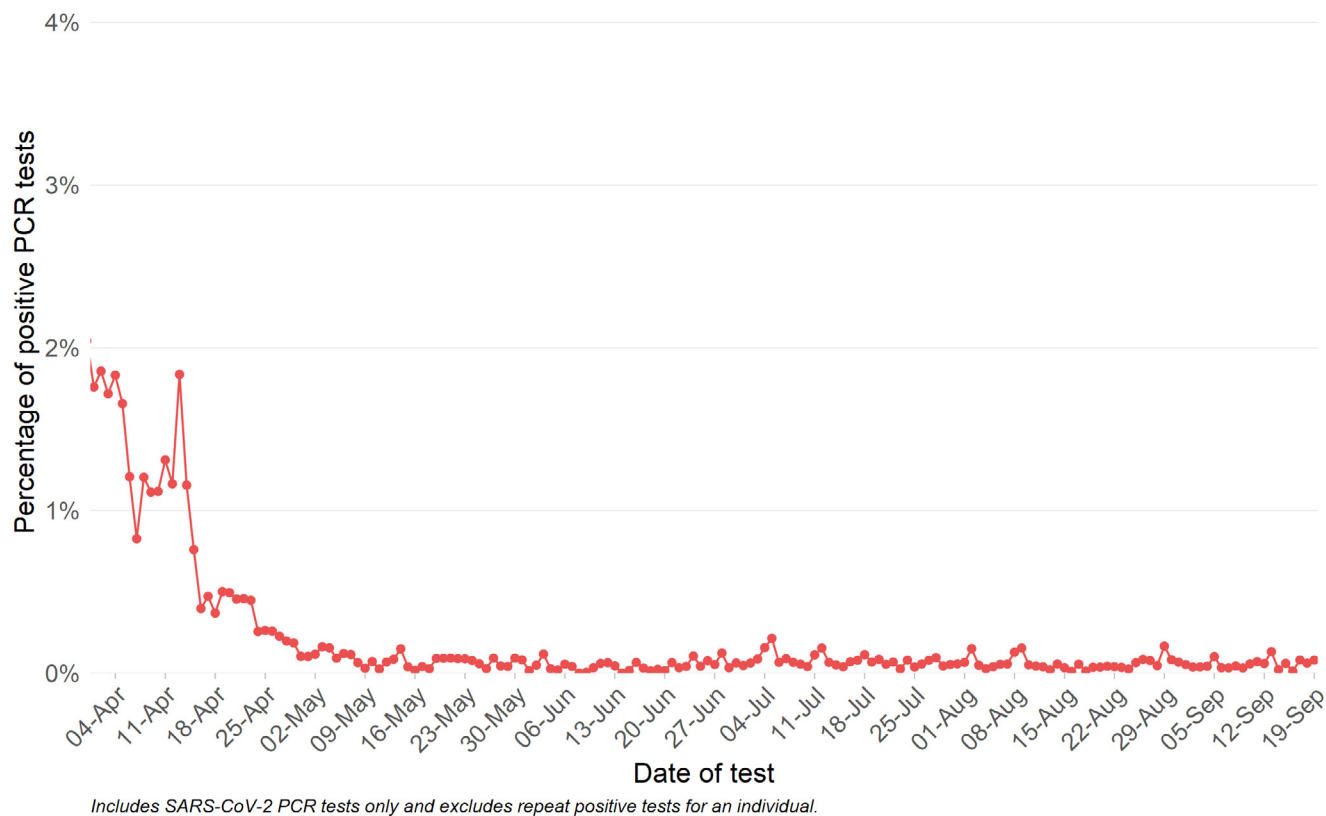
Figure 3. Number of PCR tests per day, NSW, 2020



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. A 17% decrease in testing was reported in the week ending 19 September compared with the previous week. An average of 1.8 tests were conducted per 1,000 people in NSW each day in the week ending 19 September, compared to a daily average of 2.1 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.

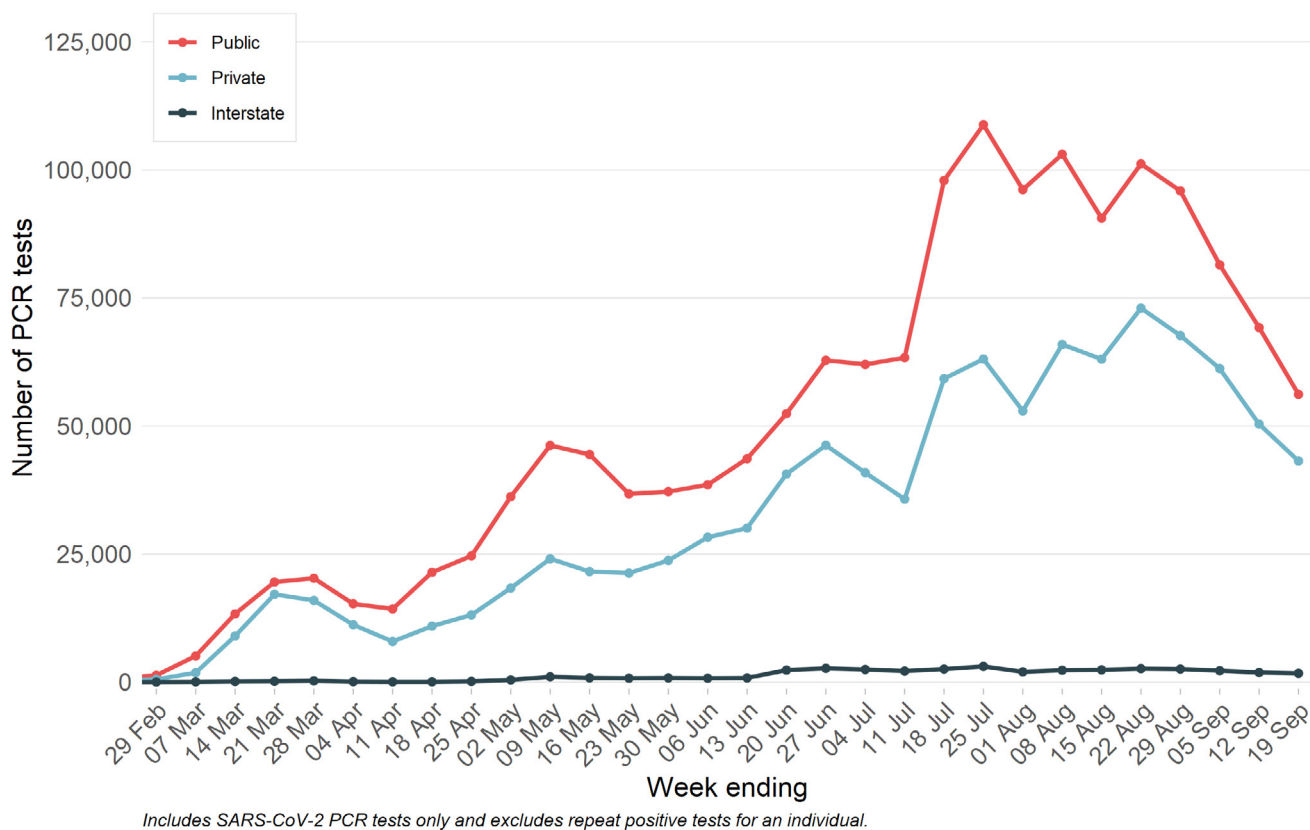
Figure 4. Proportion of PCR tests positive for COVID-19, NSW, 2020



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



Interpretation: In the week ending 19 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, 23 August to 19 September 2020

Locally-acquired cases	Week ending				Total
	19 Sep	12 Sep	5 Sep	29 Aug	
Cases who are linked to a known case or cluster	12	33	50	44	139
Cases with no links to other cases or clusters	0	1	3	6	10
Total	12	34	53	50	149

Interpretation: The majority (93%) of cases in the four weeks ending 19 September were linked to known cases or clusters. The last case with an unknown source was reported on 7 September.

Table 3. Locally-acquired COVID-19 cases by LHD of residence, 23 August to 19 September 2020

Local Health District	Week ending				Total	Days since last case
	19 Sep	12 Sep	5 Sep	29 Aug		
Central Coast	0	0	1	1	2	19
Illawarra Shoalhaven	0	0	1	0	1	15
Nepean Blue Mountains	3	4	0	0	7	4
Northern Sydney	1	3	10	10	24	4
South Eastern Sydney	3	9	16	15	43	1
South Western Sydney	4	1	8	9	22	0
Sydney	1	8	4	6	19	6
Western Sydney	0	8	12	9	29	8
Far West	0	0	0	0	0	170
Hunter New England	0	0	0	0	0	44
Mid North Coast	0	0	0	0	0	151
Murrumbidgee	0	1	0	0	1	12
Northern NSW	0	0	0	0	0	56
Southern NSW	0	0	0	0	0	40
Western NSW	0	0	1	0	1	18
Total	12	34	53	50	149	

Interpretation: The majority of locally-acquired cases reported in the two weeks up to 19 September have been residents of South Eastern Sydney LHD (26%, 12/46) and Sydney LHD (20%, 9/46).

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, 23 August to 19 September 2020

Local Health District	Week ending				Total
	19 Sep	12 Sep	5 Sep	29 Aug	
Central Coast	0	0	0	0	0
Illawarra Shoalhaven	0	0	0	0	0
Nepean Blue Mountains	0	0	0	0	0
Northern Sydney	0	0	1	0	1
South Eastern Sydney	0	1	0	0	1
South Western Sydney	0	0	1	3	4
Sydney	0	0	0	0	0
Western Sydney	0	0	0	3	3
Far West	0	0	0	0	0
Hunter New England	0	0	0	0	0
Mid North Coast	0	0	0	0	0
Murrumbidgee	0	0	0	0	0
Northern NSW	0	0	0	0	0
Southern NSW	0	0	0	0	0
Western NSW	0	0	1	0	1
Total	0	1	3	6	10

Interpretation: Extensive public health investigations were able to identify a source of infection for all cases in the week ending 19 September. There was only one case with an unknown source in the two weeks up to 19 September; this indicates that there was only one transmission event not linked to a known case or cluster in the last two 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.

Cases in community settings

In total, 12 cases reported in the last week were linked to known cases or clusters including Liverpool Hospital (3 cases), City Tattersalls gym (1 case), Concord Hospital (6 cases) and Eastern Suburbs Legion Club (2 cases).

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.

In the week ending 19 September, there was one case linked to this cluster in a close contact of a previous case associated with CBD Workplace 2. This person had completed their isolation one day prior to symptom onset and was not in quarantine for one day while considered infectious.

Table 5. Cases linked to City Tattersalls gym cluster by setting of exposure

Setting of exposure	Exposure site	Exposure site	No. cases	Total cases
		Local area		
Primary exposure location				
Gym	City Tattersalls (Gym 1)	CBD	15	15
Secondary exposure locations				
Office building	Workplace 1	CBD	2	18
	Workplace 2	CBD	5	
Community class	Dance studio	Inner East Sydney	4	
	Art school	East Sydney	1	
Gym	Gym 2	Inner East Sydney	3	
Healthcare	Medical centre	Inner West Sydney	1	
Transport	Bus X39, CBD to Clovelly Road	Bus route	1	
Food service	Cafe	CBD	1	
Tertiary exposure locations				
Educational facility	Primary school	East Sydney	1	8
	Childcare	Northern Sydney	2	
Healthcare	Medical centre	CBD	1	
	Physiotherapy	CBD	2	
Personal service	Hair salon	East Sydney	1	
Gym	Gym 3	East Sydney	1	
Onward transmission in a residential home				
Household contacts	Own home		17	24
Non-household contacts	Own home/house of a friend		7	
Total				65

Interpretation: Almost a third (29%, 19/65) of transmission within this cluster occurred in a gym setting and (11%, 7/65) in an office-type workplace setting. Excluding the source, who is unlinked to any known case or cluster, there are 65 people linked to this cluster. Forty-one cases are linked to public settings and 24 cases were exposed in a household setting.

Liverpool Hospital

On 10 August, South Western Sydney Public Health Unit was notified of a case in a healthcare worker that worked at Liverpool Hospital. The source of their infection was a previously reported 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 19 September, there were three additional cases linked to this cluster including two healthcare workers and a household contact of a previous case. Two of the three cases were in quarantine prior to being tested and symptom onset. One case, who was a casual contact, had tested negative whilst asymptomatic then later tested positive after symptoms developed.

Table 6. Cases linked to Liverpool Hospital cluster by setting of exposure

Setting of exposure	Exposure site	Exposure site	No. cases	Total cases
		Local area		
Primary exposure location				
Healthcare	Liverpool Hospital	Liverpool	10	10
Onward transmission in a residential home				
Household contacts	Own home		7	9
Non-household contacts	Own home/house of a friend		2	
Total				19

Interpretation: Excluding the source, a healthcare worker who was exposed in a household setting, there are 19 cases linked to this cluster. In total, seven healthcare workers, two patients and one visitor were exposed at the hospital and nine people were exposed in home settings.

Concord Hospital cluster

On 5 September, Sydney Public Health Unit was notified of a healthcare worker who worked in the Concord and Liverpool Emergency Departments whilst infectious. A further three cases were reported to the Public Health Unit on 6 September: two associated with Concord Hospital (a healthcare worker and a visitor) and a healthcare worker at Liverpool Hospital.

In the week ending 19 September, there were six new cases linked to this cluster: two healthcare workers who acquired their infection at Concord Hospital, a household contact of a case who had visited Concord Hospital, one case associated with a school in the Blue Mountains, and two cases who were close contacts of a student. The source for the school was a household contact of a case from Concord Hospital. Of the six new cases linked to this cluster, four were in isolation at symptom onset or on the day they were tested, and one case was in isolation at least two days prior to symptom onset while considered infectious.

Table 7. Cases linked to Concord Hospital cluster by setting of exposure

Setting of exposure	Exposure site	Exposure site	No. cases	Total cases
		Local area		
Primary exposure location				
Healthcare	Concord Hospital	Concord	9	9
Secondary exposure locations				
Healthcare	Liverpool Hospital	Liverpool	1	2
Bar/Club	Hotel	Parramatta	1	
Tertiary exposure location				
Educational facility	K-12 school	Blue Mountains	1	1
Onward transmission in a residential home				
Household contacts	Own home		8	9
Non-household contacts	Own home/house of a friend		1	
Total				21

Interpretation: In total, there are 21 cases (excluding the source who was a healthcare worker at both hospitals) linked to this cluster. There are eight healthcare workers linked to the cluster, including seven at Concord Hospital and one at Liverpool Hospital. There were nine cases exposed in residential settings who were from five separate households.

Eastern Suburbs Legion Club

On 8 September, South Eastern Sydney Public Health Unit was notified of one case of COVID-19 in an eastern suburbs resident who has an unidentified source despite public health investigation. The case had attended the Eastern Suburbs Legion Club while infectious and over the next two days the Public Health Unit was notified of four additional cases who had attended the club during their incubation periods.

On 9 September NSW Health issued advice confirming that two cases of COVID-19 visited the club and for people who attended on 28 August to immediately get tested and isolate until they received a negative result. Those who attended 1, 4, 5, 6 September were to monitor for symptoms and get tested immediately should symptoms develop. Following notification on 16 September of a sixth case who had visited the club while infectious on 7 September, people who attended the club that evening were also considered close contacts.

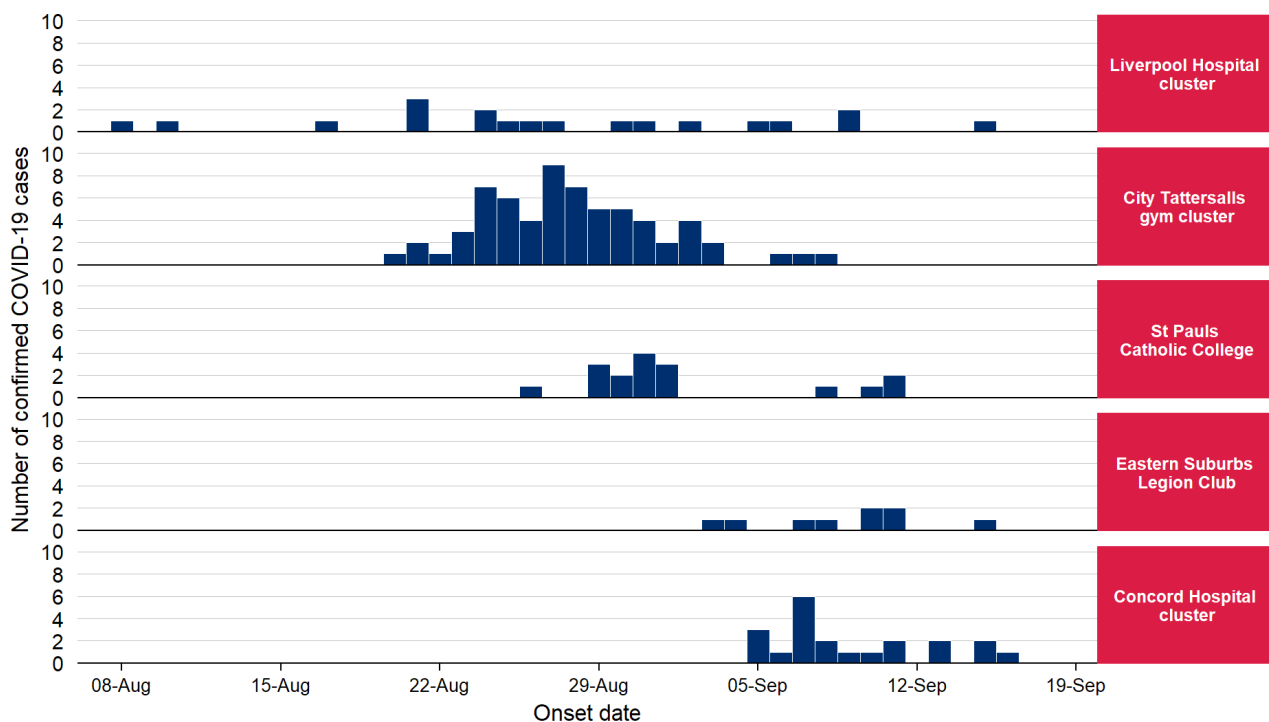
In the week ending 19 September, there were two new cases linked to this cluster; one case was a club patron, and one case was a household contact of a previously reported case. Both cases were in isolation at least two days prior to symptom onset or while considered infectious.

Table 8. Cases linked to Eastern Suburbs Legion Club cluster by setting of exposure

Setting of exposure	Exposure site	Exposure site	No. cases	Total cases
		Local area		
Primary exposure location				
Bar/Club	Eastern Suburbs Legion Club	Waverley	6	6
Onward transmission in a residential home				
Household contacts	Own home		2	2
Non-household contacts	Own home/house of a friend		1	1
Total				9

Interpretation: There are nine cases linked to this cluster: six cases were exposed at the club and three in household settings. The source for this cluster is currently unknown, however genome sequencing of virus from cases suggests the outbreak was likely seeded by the City Tattersalls outbreak.

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.

Clusters with no ongoing public health risk

There have been no new cases linked to clusters at Thai Rock Restaurant Potts Point, Bankstown area funerals, Tangara school, Our Lady of Mercy school, Lidcombe club, Smithfield club or Sydney quarantine hotel for more than four weeks. There have now been more than two incubation periods that have passed since the last case and there is no ongoing public health risk. These clusters are now closed.

St Paul's Catholic College, Greystanes

The last cases of COVID-19 associated with this cluster were notified on 12 September in two household contacts associated with a cafe in South Western Sydney. A thorough public health investigation has not been able to identify the source of the cluster. In the week ending 19 September, there were no new cases linked to this cluster.

Table 9. Previously reported clusters with no new cases identified in the week ending 19 September 2020

Date cluster first identified	Cluster	Cases linked in the week ending 19 Sep	Date of last case
30 August	St Paul's Catholic College, Greystanes	0	12 Sep

SECTION 5: COVID-19 IN SPECIFIC POPULATIONS

COVID-19 in healthcare workers

The following describes infections of COVID-19 in healthcare workers (HCWs) that were potentially acquired in healthcare settings in NSW. HCWs are defined as individuals who work within a hospital or other healthcare settings, including staff in direct or indirect contact with patients or infectious materials. HCWs in this section includes roles such as doctor, nurse, orderly, paramedic, laboratory technician, pharmacist, administrative staff, cleaners, and other support staff. Public health units routinely undertake investigations of cases of COVID-19 infections in healthcare to identify ongoing risks in healthcare settings.

Since 1 August 2020, there have been 18 HCWs who were potentially infected in healthcare settings. In the last week, there were three cases in healthcare workers that were potentially acquired in healthcare settings in NSW. All three cases were in NSW public health settings.

Table 10. Potential healthcare-acquired infections for HCWs by occupation in the past four weeks

Healthcare setting	Week ending				Total
	19 Sep	12 Sep	5 Sep	29 Aug	
NSW public health setting	3	7	0	2	12
Private health setting	0	0	2	0	2
Total	3	7	2	2	14

Interpretation: Most healthcare-acquired cases in healthcare workers in the last four weeks were reported in NSW public health settings associated with current clusters.

Clusters in healthcare settings

Of the 18 potentially healthcare-acquired infections in HCWs reported since 1 August, 16 were associated with four clusters in healthcare settings: two from Hornsby Hospital, six from Liverpool Hospital, one from Liverpool Emergency Department, and seven from Concord Hospital.

Table 11. Potential healthcare-acquired infections for HCWs by Local Health District of exposure setting, 1 August to 19 September 2020

Location of exposure setting	Private health setting	NSW public health setting
Northern Sydney	0	2
South Western Sydney	0	7
Sydney	2	7
Total	2	16

Interpretation: Recent cases in HCWs potentially acquired in healthcare settings have been associated with clusters in South Western Sydney and Sydney LHDs.

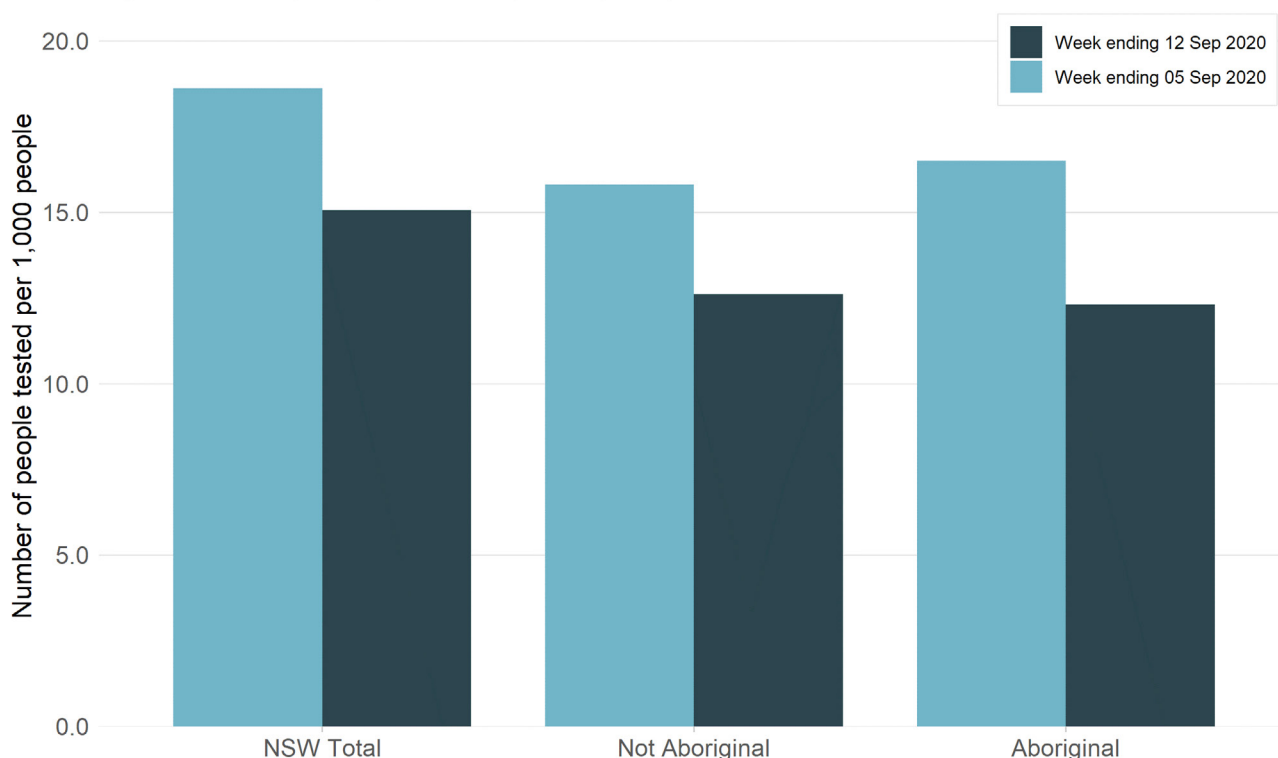
Aboriginal people

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.

No cases in Aboriginal people were reported in the week ending 19 September. In total, 45 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 12 September 2020, with Aboriginal status ascertained for approximately 90% of all COVID-19 test records.

Figure 7. Testing Rate per 1,000 by Aboriginality and week, NSW



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

Interpretation: Testing rates decreased in the week ending 12 September compared with the previous week for Aboriginal and non-Aboriginal people.

Pregnant women

No cases in pregnant women were reported in the week ending 19 September. 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 (55 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 12. Deaths as a result of COVID-19, by age group, NSW, 2020

Age group	Number of deaths	Number of cases	Case fatality rate
0-4 years	0	55	0%
5-11 years	0	66	0%
12-17 years	0	116	0%
18-29 years	0	917	0%
30-49 years	0	1212	0%
50-59 years	1	572	0.2%
60-69 years	4	560	0.7%
70-79 years	14	354	4.0%
80+ years	36	159	22.6%
Total	55	4,011	1.4%

Interpretation: Cases older than 80 years of age had both the highest number of deaths and the highest case fatality rate. No cases below the 50-59 age group have died as a result of COVID-19.

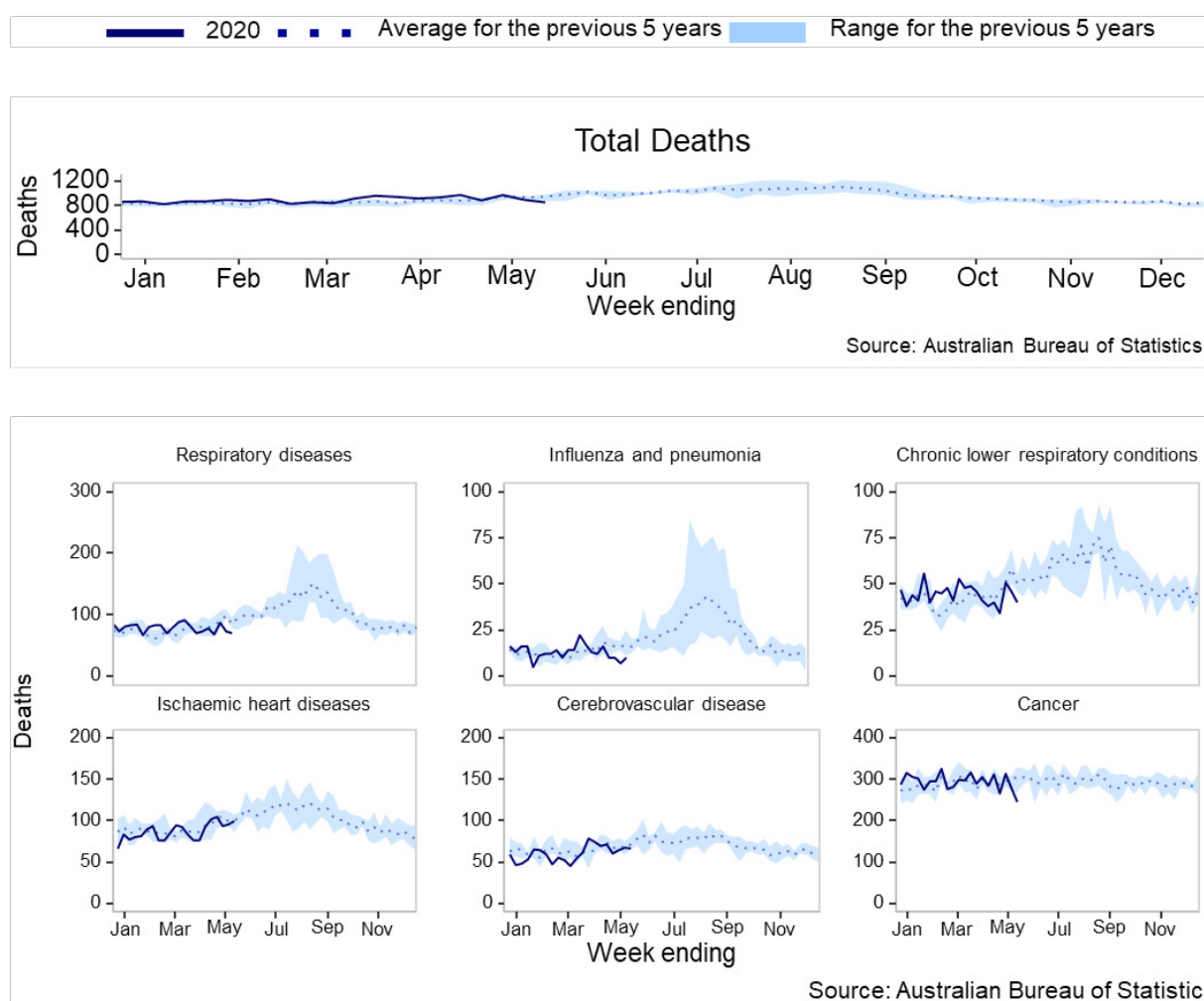
Internationally it is estimated that 3.1% of COVID-19 cases are reported to have died as a result of their infection.² Countries such as Italy, the United Kingdom and Spain have reported higher mortality rates (12.0%, 10.7% and 4.8%), while NSW reports similar rates to South Korea (1.7%) and New Zealand (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 – 21 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?

The Australian Bureau of Statistics (ABS) has published Provisional Mortality Statistics for all of Australia for January to May 2020 (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/3303.0.55.004>) and provides data for NSW-registered deaths to NSW Health on a monthly basis around three months after the close of the month. The reported counts are doctor-certified deaths and excludes those referred to a coroner, such as suicides, accidents and assaults. In Australia approximately 86-89% of deaths are certified by a doctor. Deaths from any cause are seasonal, increasing in winter and decreasing in summer.

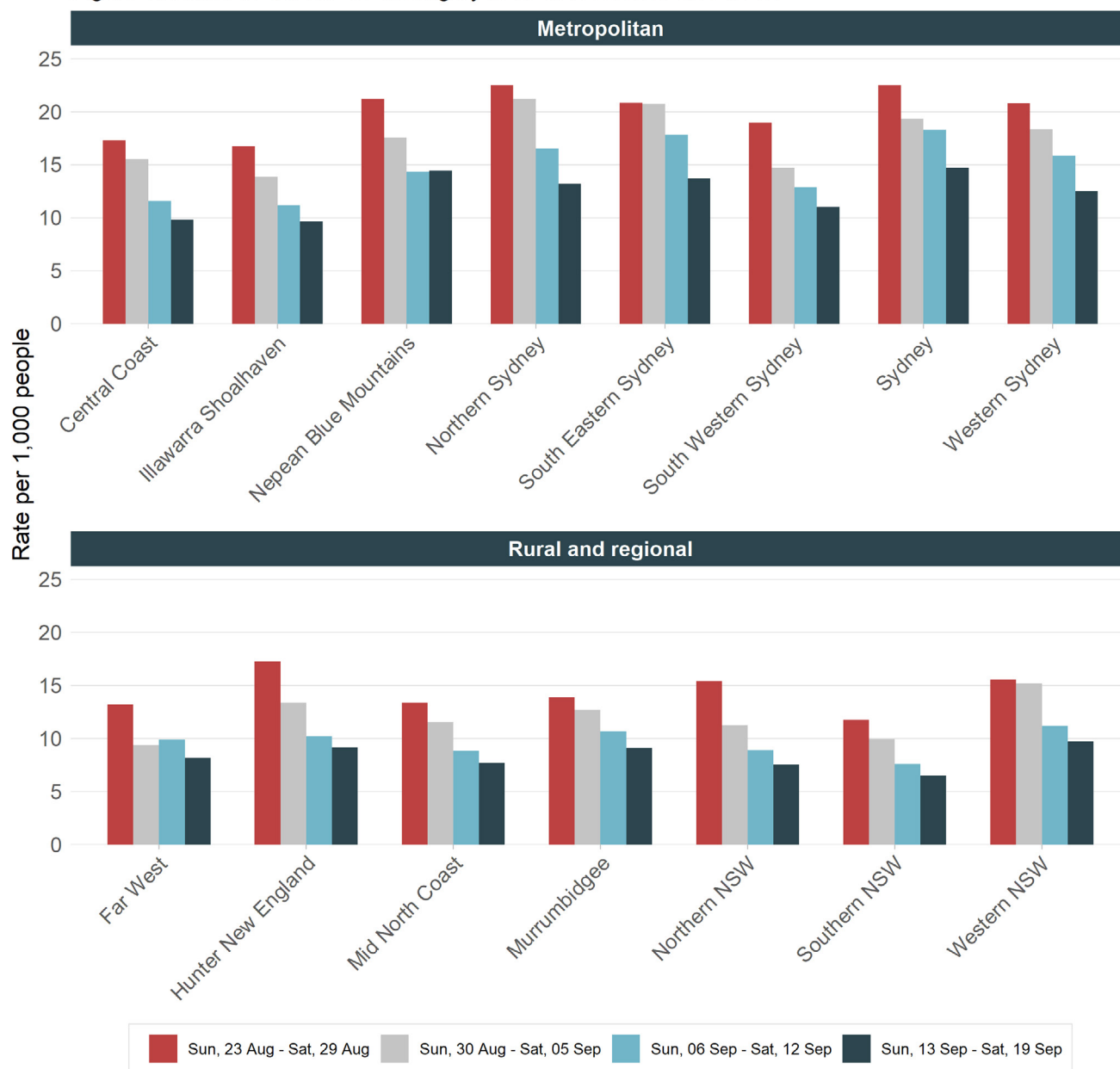
Figure 8. Deaths from any cause in NSW from January to 26 May 2020



Interpretation: When compared to previous years, there have been fewer deaths due to respiratory diseases generally, and in particular pneumonia, to date in 2020. This is likely to be due, at least in part, to the physical distancing and hand hygiene measures that have been put in place to help control the pandemic which have reduced person-to-person transmission of infections generally. The patterns of deaths from heart attack, stroke and cancer are similar to previous years.

SECTION 7: COVID-19 TESTING IN NSW

Figure 9. Rates of COVID-19 testing by LHD of residence and week

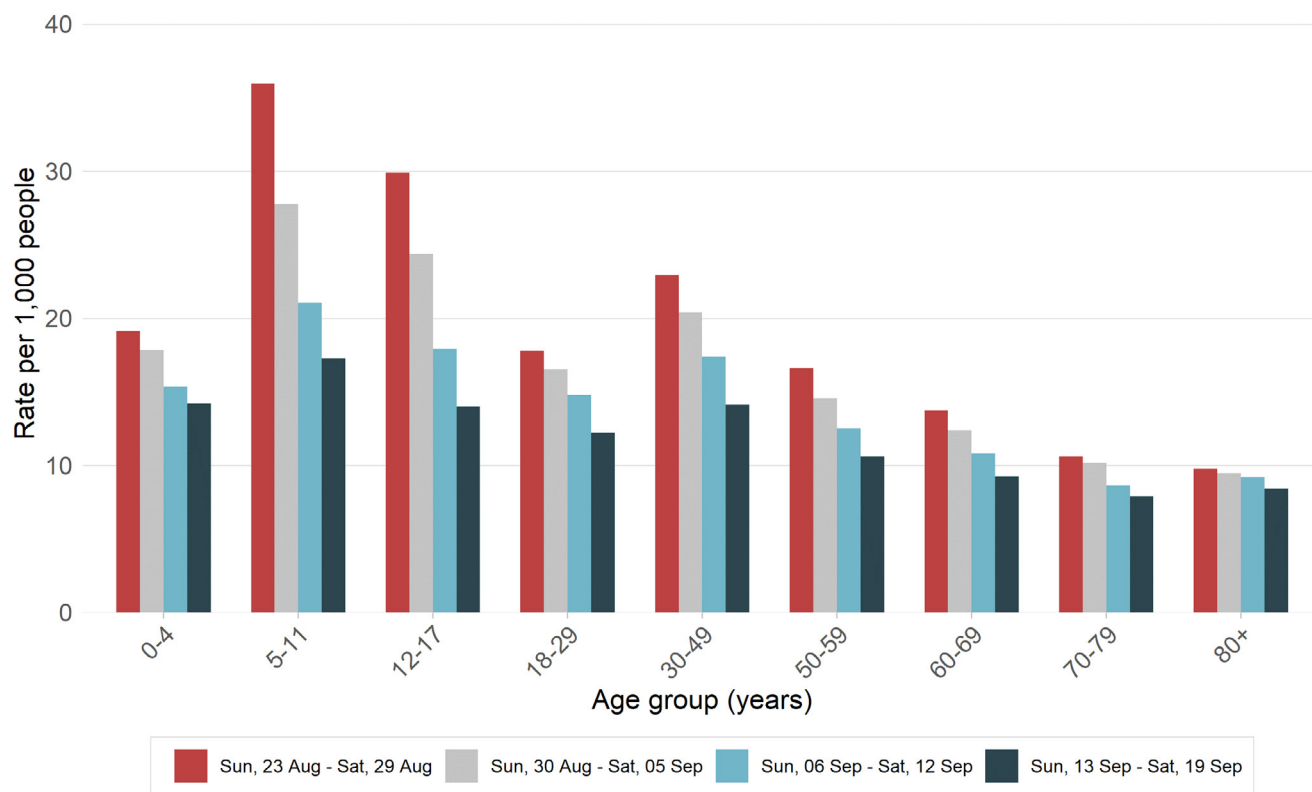


Includes SARS-CoV-2 PCR tests only and excludes notifications with missing postcode of residence.

Interpretation: Statewide testing rates in the week ending 19 September were lower compared to the previous week (13 per 1,000 vs 15 per 1,000). Testing rates decreased in all LHDs except Nepean Blue Mountains; this is largely associated with higher testing rates in school-aged children.

Testing by age group

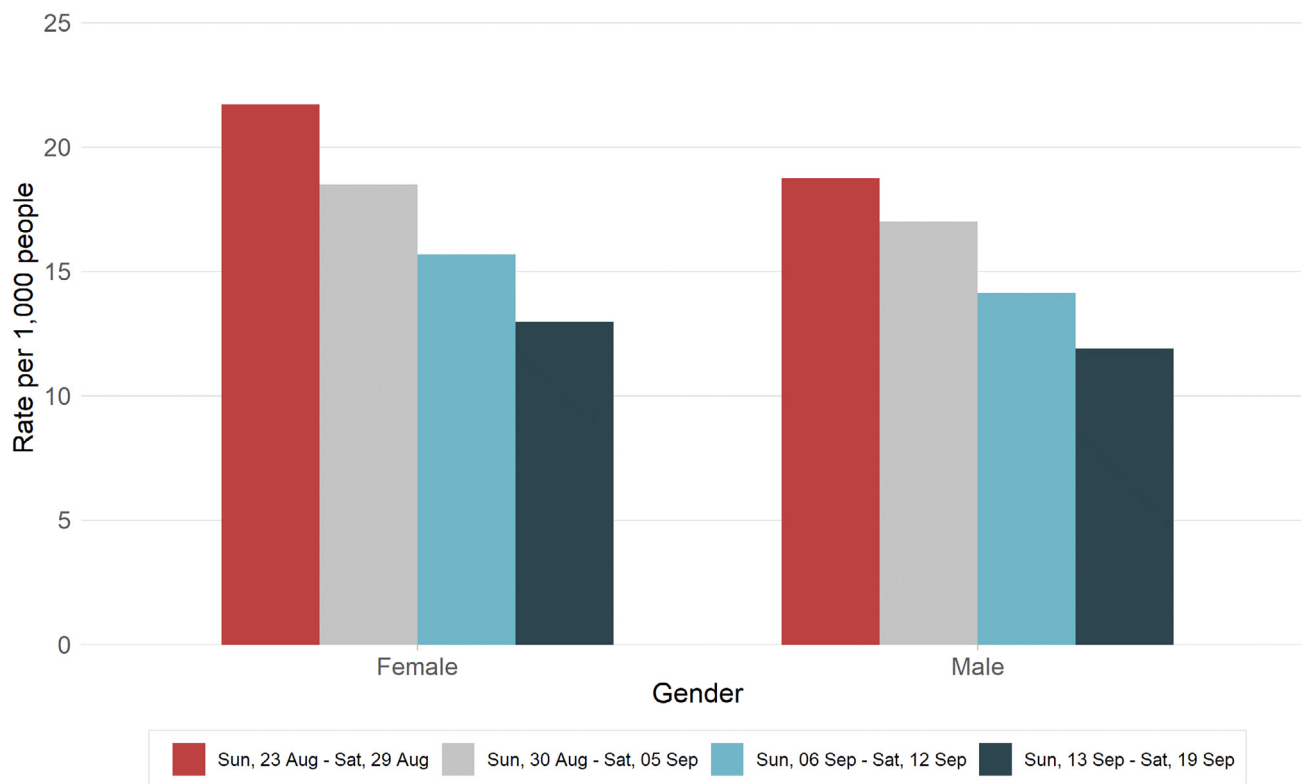
Figure 10. Rates of COVID-19 testing by age group and week



Interpretation: Testing rates decreased in all age groups for the week ending 19 September. However, testing in primary school-aged children remains higher compared to those in other groups.

Testing by gender

Figure 11. 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 19 September compared with the previous week.

NSW Sewage Surveillance Program

The NSW Sewage Surveillance Program tests untreated sewage for fragments of the COVID-19 (SARS-CoV-2) virus at 42 sites across NSW. Testing sewage can help to track infections in the community and provide early warning of an increase in infections. These tests provide data to support NSW Health's response to COVID-19.

An infected person can shed virus in their faeces even if they do not have any symptoms, and shedding can continue for several weeks after they are no longer infectious. To date, the sewage surveillance for SARS-CoV-2 is in the preliminary stages, and further analysis is required to assess the significance of the results.

To date there have been detections of the virus fragments in samples from multiple locations in NSW including Perisher, Newcastle, Byron Bay, Blue Mountains and Metropolitan Sydney sites. NSW Health follows a protocol to follow up any positive results with local COVID-19 response teams. All detections to date, with the exception of Perisher, were in areas of known COVID-19 cases.

Table 13. Locations of detections SARS-CoV-2 in sewerage sample testing, 23 August to 19 September

Location	Week ending			
	29 Aug	5 Sep	12 Sep	19 Sep
Hunter-Burwood Beach				
Malabar 1				
Bondi				
Blue Mountains				
Total	1	0	3	2

	not sampled
	SARS-CoV-2 not detected
	SARS-CoV-2 detected

Interpretation: In the last four weeks, of the 42 locations tested there were four that had detections of SARS-CoV-2. These results aligned with known cases in those areas.

It is not currently known how many cases can be detected per population. A small number of cases in a large sewage catchment may not be detected by sewage surveillance due to factors such as dilution, inhibition, reduction in shedding over the infection period or movement of cases.

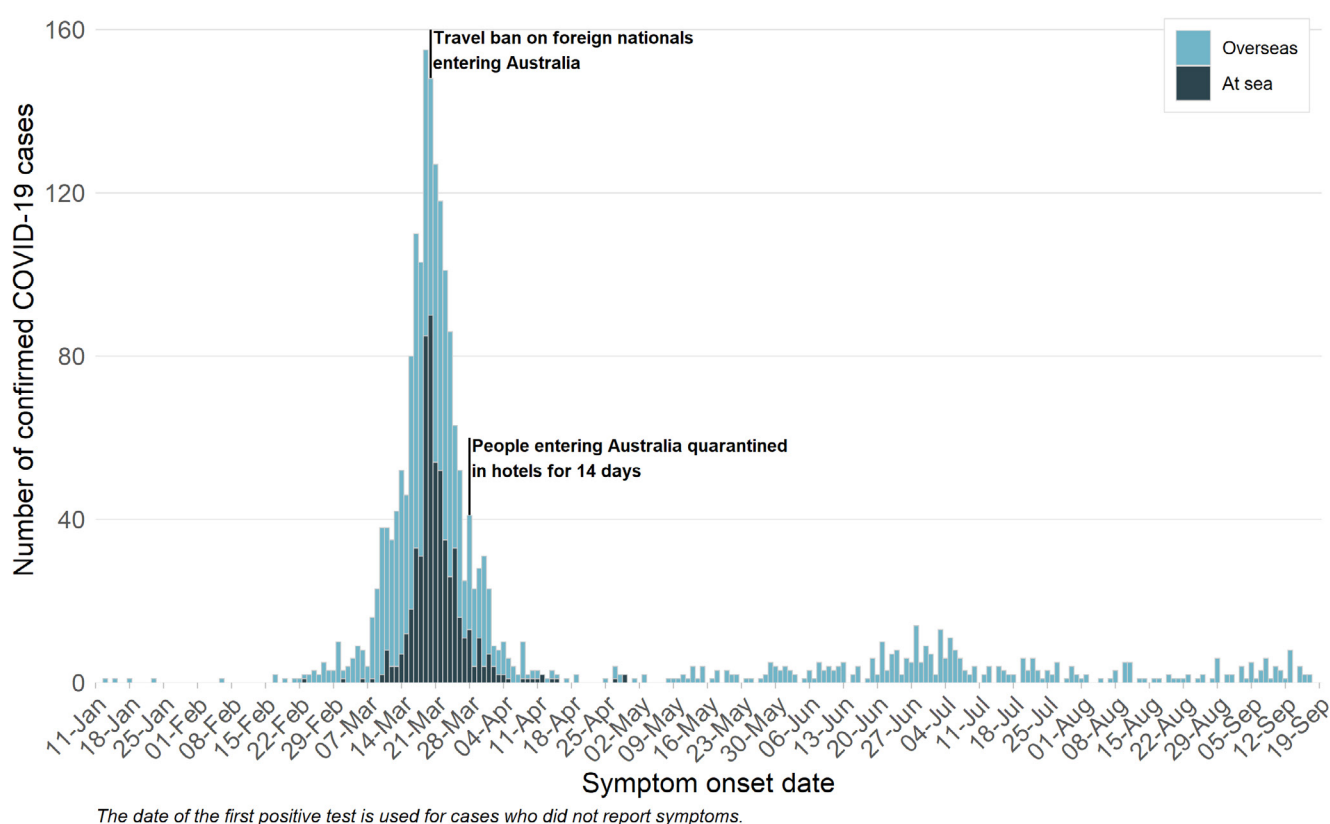
In the week ending 19 September 2020, two of 42 sewage samples detected SARS-CoV-2. These samples were taken from Bondi and Malabar which serve over 2 million people, including Sydney city and quarantine hotels. The table in [Appendix D](#) shows results for previous weeks from various sites across NSW.

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

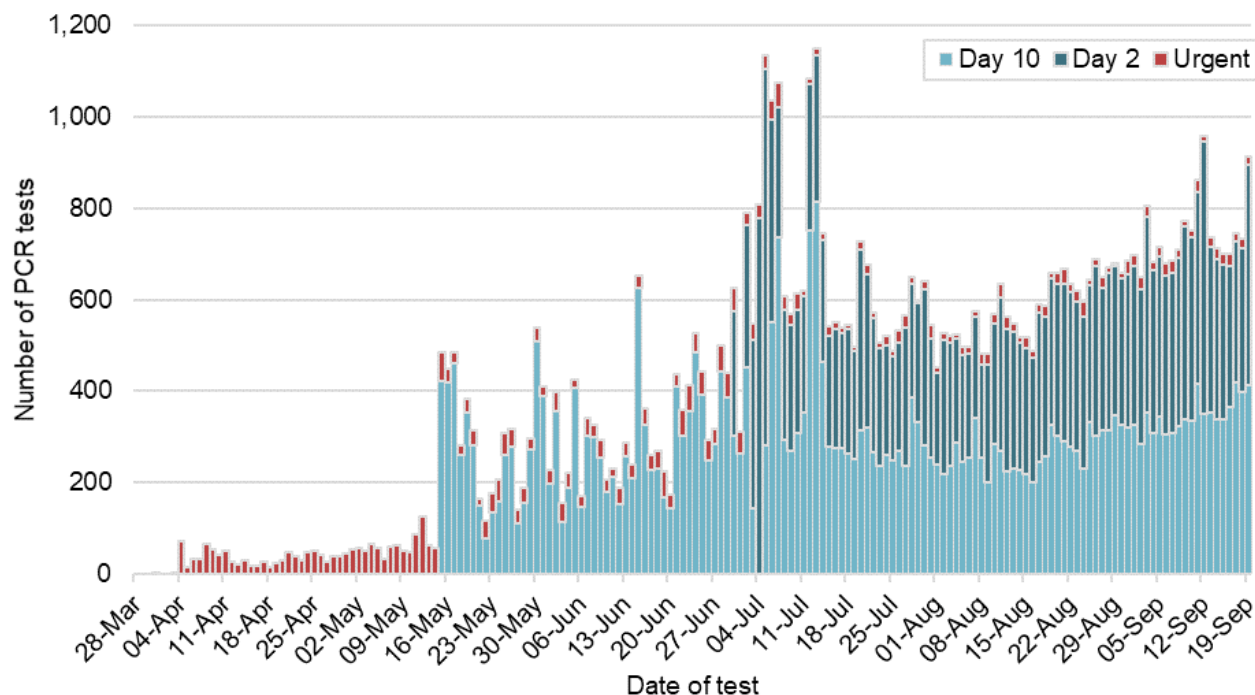


Interpretation: The number of new cases in returned travellers has decreased markedly since March in line with travel restrictions and declined further again since mid-July. There were 21 overseas-acquired cases reported in the week ending 19 September, 17% more than the previous week.

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 13. COVID-19 testing in returned travellers in hotel quarantine, reported from 28 March to 19 September, NSW, 2020



Interpretation: There were 5,420 tests conducted through the hotel quarantine screening programs in the week ending 19 September, of which 18% were screening tests for domestic travellers from Victoria. Since screening began on 28 March, a total of 70,220 PCR tests have been conducted and 381 COVID-19 cases have been detected.

SECTION 9: OTHER RESPIRATORY INFECTIONS IN NSW

Influenza and other respiratory virus cases and tests reported in NSW, up to 13 September 2020

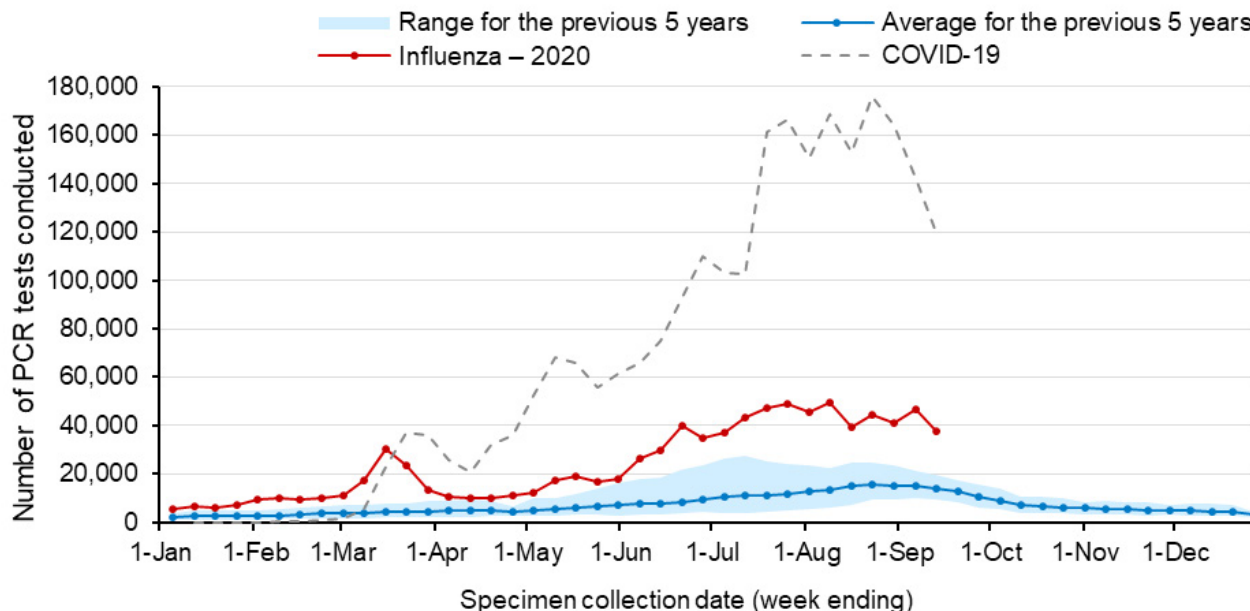
In NSW, routine surveillance for influenza and other respiratory viruses is conducted through sentinel laboratories. The number of all PCR tests (positive and negative) are provided to NSW Health by participating laboratories each week. Testing counts reflect the number of influenza PCR tests conducted;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

The most recent data available is for testing carried out to 6 September. A total of 899,280 influenza tests have been performed at participating laboratories to 13 September, with 37,909 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 14. Testing for influenza and COVID-19 by week, to 13 September 2020

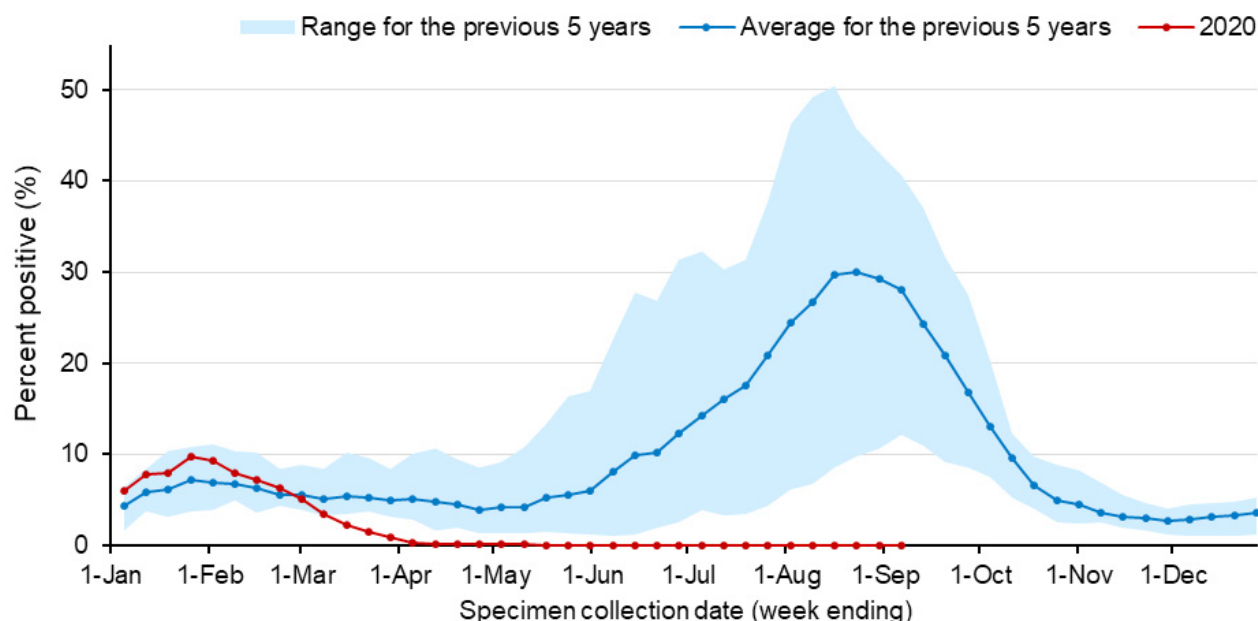


Interpretation: The number of influenza tests performed has exceeded the previous five-year average every week this year.

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.

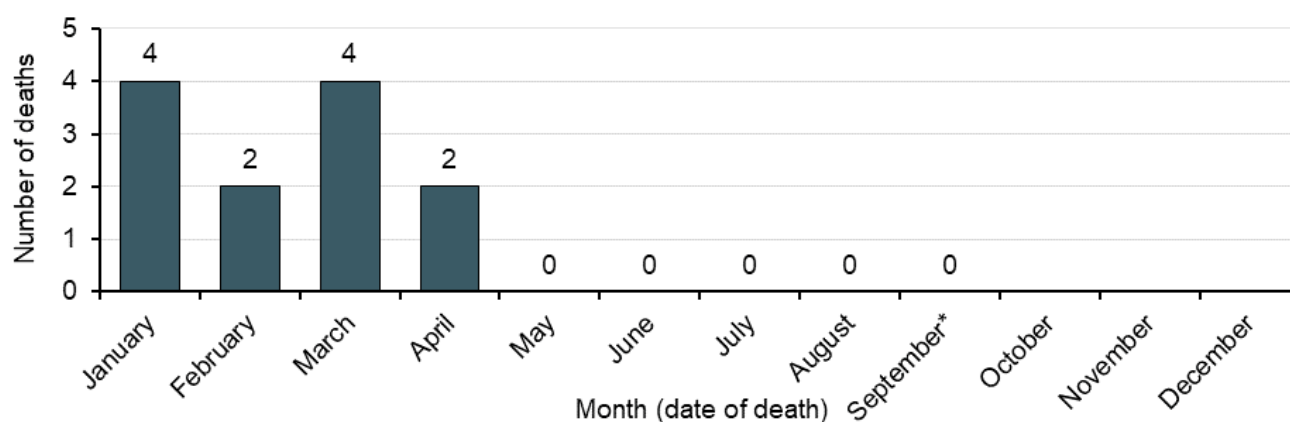
Figure 15. Proportion of tests positive for influenza, to 13 September 2020



Interpretation: The percent of influenza tests that were positive in the week ending 13 September 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 16. Laboratory-confirmed influenza deaths by month of death, to 13 September 2020



Interpretation: No influenza deaths were reported in the week ending 13 September. The number of influenza-related deaths identified via Coroner's reports and death registrations from 1 January to 13 September 2020 is lower than the same period last year (12 deaths in 2020 compared with 235 in 2019).³ Two-thirds of the deaths were in people aged 65 years and over.

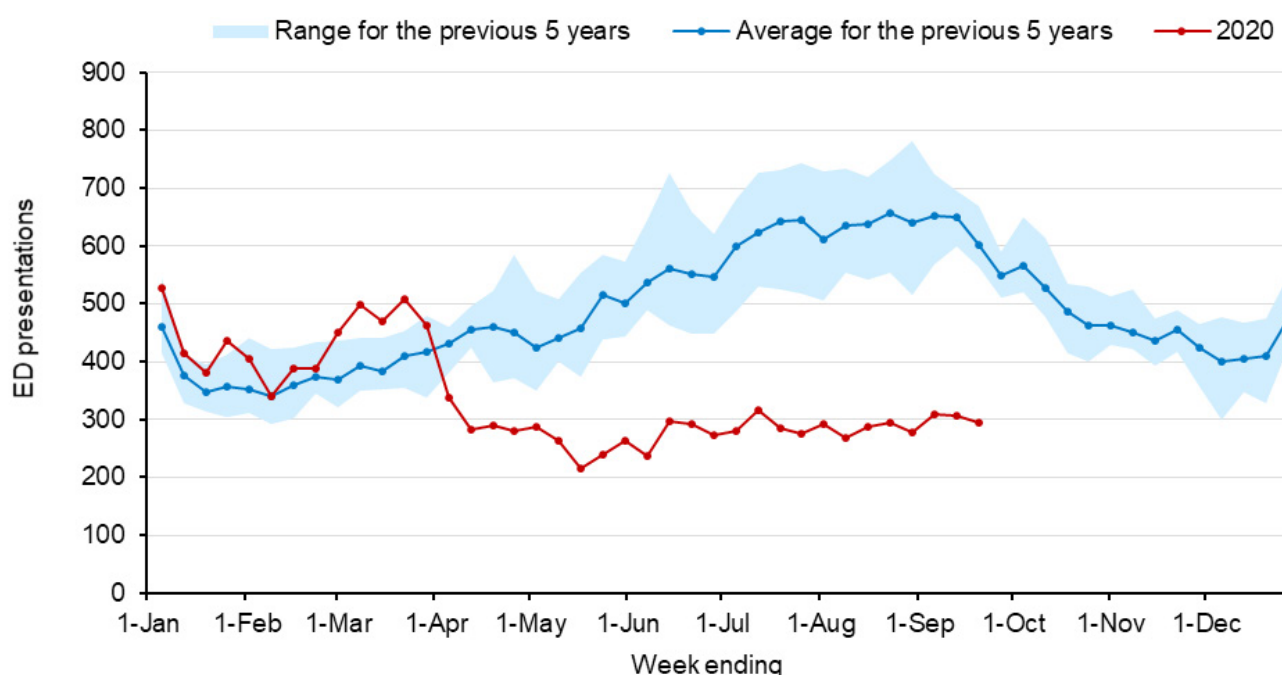
³ Includes deaths in people with laboratory-confirmed influenza.

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 17. Emergency Department pneumonia presentations in NSW by week, to 20 September 2020



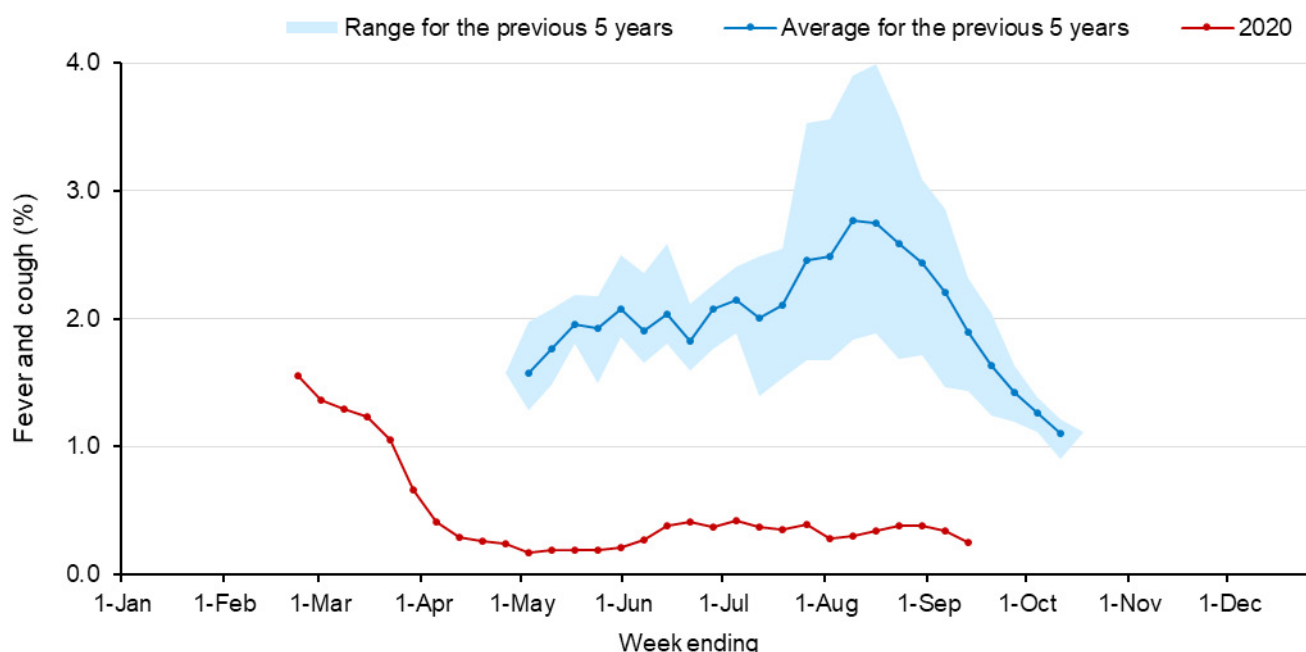
Interpretation: Pneumonia presentations decreased from the end of March and have continued to remain well below the usual range for this time of year.

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 18. Proportion of FluTracker participants in NSW reporting influenza-like illness, to 13 September 2020



Interpretation: In NSW in the week ending 13 September, of the 23,190 people surveyed, 59 people (0.25%) 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	
		19 September		12 September			
		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	3459	9.8	4088	11.6	98195	278.3
Far West	Balranald	13	5.6	20	8.6	364	155.7
	Broken Hill	144	8.2	179	10.2	3923	224.4
	Central Darling	11	6.0	17	9.2	284	154.4
	Wentworth	78	11.1	83	11.8	1627	230.7
	LHD Total ²	246	8.2	299	9.9	6198	205.6
Hunter New England	Armidale Regional	220	7.2	271	8.8	7667	249.1
	Cessnock	378	6.3	465	7.8	12907	215.2
	Dungog	70	7.4	73	7.8	1949	206.8
	Glen Innes Severn	47	5.3	44	5.0	1529	172.4
	Gunnedah	103	8.1	109	8.6	2643	208.4
	Gwydir	22	4.1	21	3.9	541	101.1
	Inverell	128	7.6	119	7.1	3486	206.4
	Lake Macquarie	2226	10.8	2400	11.7	67357	327.1
	Liverpool Plains	53	6.7	78	9.9	1724	218.2
	Maitland	996	11.7	1102	12.9	31385	368.5
	Mid-Coast	571	6.1	638	6.8	18558	197.8
	Moree Plains	53	4.0	111	8.4	2414	182.0
	Muswellbrook	119	7.3	140	8.6	3742	228.5
	Narrabri	74	5.6	88	6.7	2281	173.7
	Newcastle	2051	12.4	2230	13.5	67740	409.1
	Port Stephens	594	8.1	619	8.4	23624	321.5
	Singleton	220	9.4	235	10.0	7610	324.4
	Tamworth Regional	617	9.9	816	13.1	17699	283.0
	Tenterfield	35	5.3	42	6.4	898	136.2
	Upper Hunter Shire	102	7.2	121	8.5	3323	234.3
	Uralla	29	4.8	36	6.0	978	162.7
	Walcha	20	6.4	16	5.1	727	232.0
		LHD Total ²	8720	9.2	9756	10.2	280551
Illawarra Shoalhaven	Kiama	236	10.1	329	14.1	7267	310.7
	Shellharbour	713	9.7	817	11.2	22527	307.6
	Shoalhaven	913	8.6	1098	10.4	25580	242.1
	Wollongong	2195	10.1	2453	11.3	59736	273.9
	LHD Total ²	4057	9.7	4697	11.2	115110	274.3

Local Health District	Local Government Area	Week ending				Total	
		19 September		12 September			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Mid North Coast	Bellingen	101	7.8	102	7.9	2733	210.3
	Coffs Harbour	526	6.8	698	9.0	15376	199.0
	Kempsey	278	9.4	244	8.2	6995	235.2
	Nambucca	106	5.4	135	6.8	3824	193.1
	Port Macquarie-Hastings	718	8.5	813	9.6	19658	232.6
	LHD Total ²	1729	7.7	1992	8.8	48586	215.3
Murrumbidgee	Albury	623	11.5	741	13.6	11905	219.0
	Berrigan	57	6.5	67	7.7	1430	163.4
	Bland	39	6.5	57	9.5	1178	197.3
	Carrathool	12	4.3	17	6.1	247	88.3
	Coolamon	54	12.4	40	9.2	956	220.2
	Cootamundra-Gundagai Regional	83	7.4	90	8.0	2193	195.2
	Edward River	63	6.9	83	9.1	1979	217.9
	Federation	82	6.6	73	5.9	1951	156.9
	Greater Hume Shire	101	9.4	116	10.8	2332	216.7
	Griffith	315	11.7	386	14.3	6351	235.0
	Hay	17	5.8	24	8.1	405	137.3
	Hilltops	190	10.2	210	11.2	3861	206.4
	Junee	32	4.8	33	4.9	967	144.7
	Lachlan ¹	25	4.1	34	5.6	762	125.4
	Leeton	84	7.3	89	7.8	1926	168.3
	Lockhart	16	4.9	14	4.3	611	186.0
	Murray River	27	2.2	44	3.6	583	48.1
	Murrumbidgee	11	2.8	35	8.9	606	154.7
	Narrandera	35	5.9	40	6.8	845	143.2
	Snowy Valleys	108	7.5	167	11.5	3263	225.4
	Temora	22	3.5	40	6.3	988	156.7
	Wagga Wagga	744	11.4	804	12.3	18420	282.3
	LHD Total ²	2719	9.1	3177	10.7	63253	212.2
Nepean Blue Mountains	Blue Mountains	1749	22.1	1451	18.3	31467	397.7
	Hawkesbury	892	13.3	952	14.2	22635	336.4
	Lithgow	176	8.2	200	9.3	4989	230.9
	Penrith	2890	13.6	3053	14.3	80464	377.8
	LHD Total ²	5661	14.5	5613	14.4	138419	354.0

Local Health District	Local Government Area	Week ending				Total	
		19 September		12 September			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Northern NSW	Ballina	343	7.7	391	8.8	10996	246.4
	Byron	405	11.5	481	13.7	9926	283.0
	Clarence Valley	301	5.8	368	7.1	8707	168.5
	Kyogle	58	6.6	67	7.6	1346	153.0
	Lismore	405	9.3	476	10.9	11380	260.5
	Richmond Valley	211	9.0	221	9.4	5345	227.8
	Tenterfield	35	5.3	42	6.4	898	136.2
	Tweed	605	6.2	743	7.7	18661	192.4
	LHD Total ²	2336	7.5	2762	8.9	66584	214.5
Northern Sydney	Hornsby	1759	11.6	2081	13.7	42550	279.8
	Hunters Hill	430	28.7	521	34.8	10091	673.6
	Ku-ring-gai	2198	17.3	2974	23.4	52072	409.5
	Lane Cove	1036	25.8	1264	31.5	27721	690.4
	Mosman	370	11.9	493	15.9	10792	348.3
	North Sydney	711	9.5	860	11.5	20338	271.1
	Northern Beaches	3249	11.9	3832	14.0	86403	315.9
	Parramatta ¹	2946	11.5	3717	14.5	63432	246.6
	Ryde	1557	11.9	2092	15.9	37575	286.2
	Willoughby	785	9.7	987	12.2	20556	253.2
	LHD Total ²	12634	13.2	15803	16.5	319956	334.7
South Eastern Sydney	Bayside	1919	10.8	2258	12.7	43500	243.8
	Georges River	1569	9.8	1956	12.3	38402	240.8
	Randwick	2631	16.9	3829	24.6	61640	396.0
	Sutherland Shire	3075	13.3	3699	16.0	83655	362.8
	Sydney ¹	3941	16.0	4865	19.8	91591	371.8
	Waverley	1365	18.4	1995	26.9	35717	480.8
	Woollahra	1055	17.8	1472	24.8	29066	489.4
	LHD Total ²	13153	13.7	17111	17.8	323763	337.6
South Western Sydney	Camden	1737	17.1	1943	19.2	44488	438.6
	Campbelltown	2342	13.7	2535	14.8	61718	361.0
	Canterbury-Bankstown ¹	3819	10.1	4891	12.9	100770	266.7
	Fairfield	1640	7.8	2083	9.8	54991	259.8
	Liverpool	2790	12.3	3197	14.1	78944	346.9
	Wingecarribee	615	12.0	716	14.0	18055	353.1
	Wollondilly	496	9.3	525	9.9	13654	256.9
	LHD Total ²	11462	11.0	13370	12.9	323057	311.1

Local Health District	Local Government Area	Week ending				Total	
		19 September		12 September			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Southern NSW	Bega Valley	236	6.9	255	7.4	7184	208.4
	Eurobodalla	314	8.2	367	9.5	12396	322.2
	Goulburn Mulwaree	263	8.5	262	8.4	7416	238.2
	Queanbeyan-Palerang Regional	315	5.2	429	7.0	10408	170.3
	Snowy Monaro Regional	140	6.7	179	8.6	4605	221.5
	Upper Lachlan Shire	61	7.6	59	7.3	1603	198.9
	Yass Valley	77	4.5	103	6.0	2641	154.6
	LHD Total ²	1407	6.5	1655	7.6	46278	213.2
Sydney	Burwood	418	10.3	508	12.5	8250	203.1
	Canada Bay	1574	16.4	2056	21.4	34519	359.3
	Canterbury-Bankstown ¹	3819	10.1	4891	12.9	100770	266.7
	Inner West	3200	15.9	3783	18.8	82136	409.0
	Strathfield	759	16.2	984	21.0	15167	323.2
	Sydney ¹	3941	16.0	4865	19.8	91591	371.8
	LHD Total ²	10278	14.8	12753	18.3	248321	356.4
Western NSW	Bathurst Regional	491	11.3	615	14.1	12154	278.7
	Blayney	91	12.3	94	12.7	2111	286.1
	Bogan	17	6.6	22	8.5	461	178.7
	Bourke	18	7.0	11	4.3	363	140.2
	Brewarrina	8	5.0	8	5.0	249	154.6
	Cabonne	91	6.7	77	5.7	2106	154.5
	Cobar	29	6.2	34	7.3	672	144.3
	Coonamble	32	8.1	31	7.8	688	173.8
	Cowra	82	6.4	104	8.2	2288	179.6
	Dubbo Regional	556	10.4	642	12.0	12202	227.1
	Forbes	71	7.2	123	12.4	1518	153.2
	Gilgandra	24	5.7	20	4.7	689	162.5
	Lachlan ¹	25	4.1	34	5.6	762	125.4
	Mid-Western Regional	236	9.4	246	9.7	5557	220.1
	Narromine	54	8.3	72	11.1	1205	184.9
	Oberon	33	6.1	46	8.5	1206	222.9
	Orange	627	14.8	619	14.6	13312	313.6
	Parkes	123	8.3	172	11.6	3049	205.5
	Walgett	37	6.2	56	9.4	1241	208.5
	Warren	36	13.4	50	18.5	938	347.8
	Warrumbungle Shire	67	7.2	80	8.6	1997	215.2
	Weddin	29	8.0	34	9.4	610	168.8
	LHD Total ²	2773	9.7	3184	11.2	65150	228.6

Local Health District	Local Government Area	Week ending				Total	
		19 September		12 September			
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Western Sydney	Blacktown	4736	12.7	5739	15.3	116120	310.1
	Cumberland	2821	11.7	4124	17.1	68812	284.9
	Parramatta ¹	2946	11.5	3717	14.5	63432	246.6
	The Hills Shire	3118	17.5	3738	21.0	69692	391.6
	LHD Total ²	13183	12.5	16723	15.9	308484	292.8
NSW Total ³		100,970	12.5	120,976	15.0	2,595,428	320.8

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 13 SEPTEMBER 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—13 Sep 2020											
Total	899,280	6,613	0.74%	950	0.11%	6,367	9,019	5,334	113,976	2,013	4,167
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
30 August	174,594	9	0.01%	2	<0.01%	1,137	37	299	13,926	14	235
Week ending											
6 September	47,013	2	<0.01%	1	<0.01%	266	11	127	2,741	10	49
13 September	37,909	2	0.01	0	-	235	12	149	2,152	23	44

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

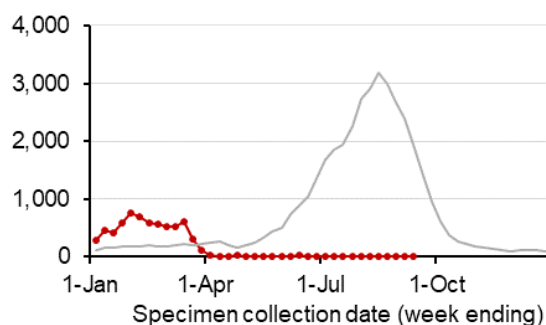
RSV - Respiratory syncytial virus

*Five-week period

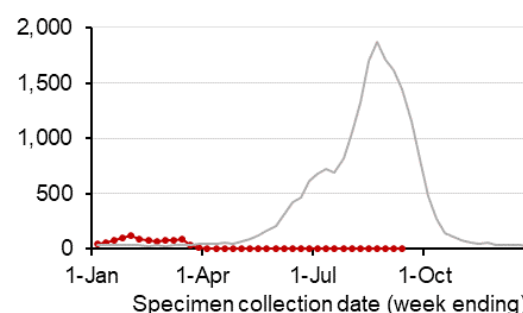
APPENDIX C: NUMBER OF POSITIVE PCR TEST RESULTS FOR INFLUENZA AND OTHER RESPIRATORY VIRUSES AT SENTINEL NSW LABORATORIES, 1 JANUARY TO 13 SEPTEMBER 2020

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

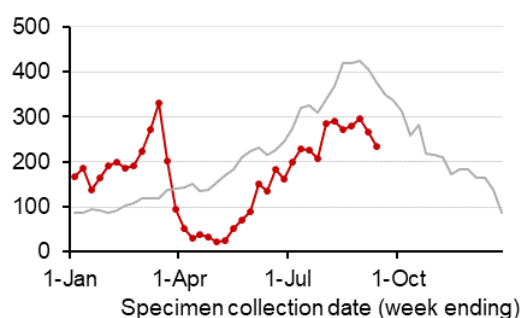
Influenza A



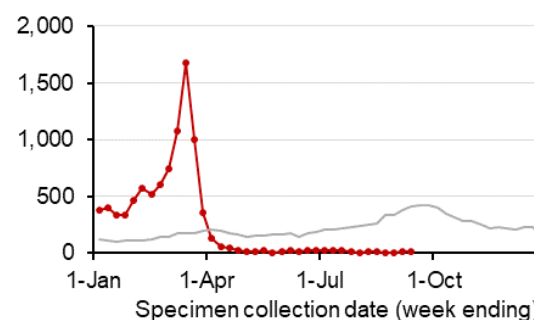
Influenza B



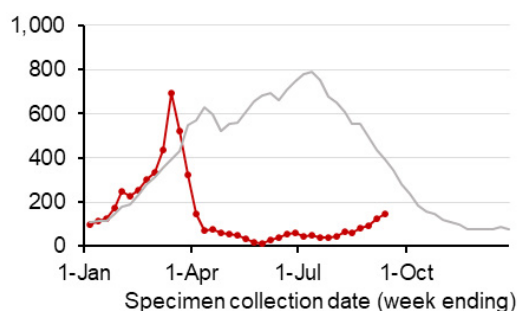
Adenovirus



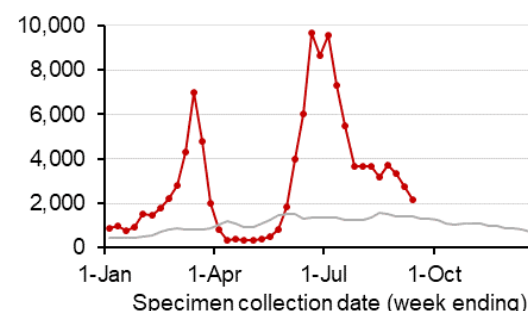
Parainfluenza



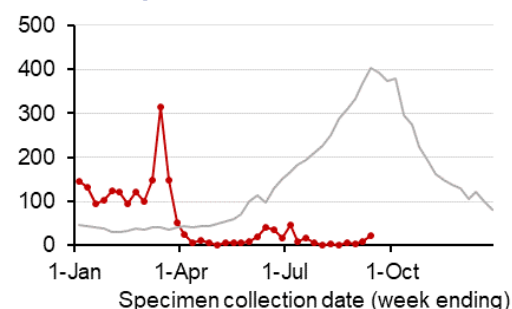
Respiratory syncytial virus (RSV)



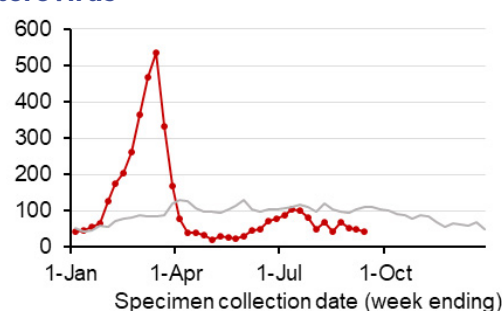
Rhinovirus



Human metapneumovirus (HPMV)



Enterovirus

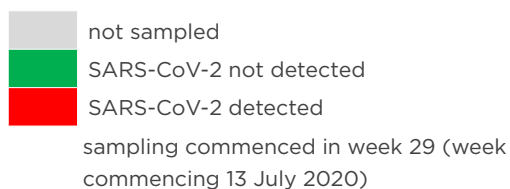


Notes: Preliminary laboratory data is provided by participating sentinel laboratories on a weekly basis and are subject to change. Serological diagnoses are not included.

APPENDIX D: LOCATIONS FOR SARS-CoV-2 SEWERAGE SAMPLE TESTING, 12 JULY TO 19 SEPTEMBER 2020

Pop.	Location	LHD	12	19	26	2	9	16	23	30	6	13
			Jul	Jul	Jul	Aug	Aug	Aug	Aug	Aug	Sep	Sep
			Week									
			29	30	31	32	33	34	35	36	37	38
60, 514	Blue Mountains (Winmalee)	NBMLHD										
318,810	Bondi	S&SESLHD										
233,176	Cronulla	SESLHD										
	Malabar 1	S&SES&SWSLHD										
1,857,740	Malabar 2	S&SES&SWSLHD										
1,341,986	North Head	NS&WSLHD										
110,114	Penrith	NBMLHD										
163,374	Quakers Hill	WSLHD										
119,309	Rouse Hill	WSLHD										
73,686	Shellharbour	ISHLHD										
163,147	St Marys	NBM&WSLHD										
147,500	Gosford-Kincumber	CCLHD										
-	Wyong-Toukley	CCLHD										
5,000	Perisher	M&SLHD										
8,400	Thredbo	M&SLHD										
3,000	Jindabyne	M&SLHD										
8,000	Cooma	M&SLHD										
500	Charlottes Pass	M&SLHD										
51,750	Albury Kremer St	M&SLHD										
	Albury Waterview	M&SLHD										
21,000	Batemans Bay	M&SLHD										
48,000	Queanbeyan	M&SLHD										
50,000	Wagga Wagga- inlet 1	M&SLHD										
	Wagga Wagga- inlet 2	M&SLHD										
	Wagga Wagga second plant	M&SLHD										
2,050	Bourke	W&FWLHD										
19,000	Broken Hill	W&FWLHD										
500	Dareton	W&FWLHD										
11,600	Parkes	W&FWLHD										
37,000	Dubbo	W&FWLHD										
24,000	Armidale	HNELHD										
45,000	Tamworth	HNELHD										
10,000	Moree	HNELHD										
225,834	Hunter - Burwood Beach	HNELHD										
60,000	Hunter - Shortland	HNELHD										
115,000	Hunter - Belmont	HNELHD										
60,000	Hunter - Morpeth	HNELHD										

58,300	Hunter - Boulder Bay	HNELHD											
35,000	Hunter - Raymond Terrace	HNELHD											
2,500	Hunter - Karuah	HNELHD											
18,958 (both plants total)	Byron Bay - Ocean Shores	N&MNCLHD											
	Byron Bay	N&MNCLHD											
31,104	Ballina	N&MNCLHD											
72,000 (Tweed District)	Tweed - Kingscliff	N&MNCLHD											
	Tweed - Hastings Point	N&MNCLHD											



GLOSSARY

Term	Description
Case	<p>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).</p> <p>Case counts include:</p> <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	<p>This date is provided to NSW Health by the laboratory. Laboratories prioritise notification of positive results to allow prompt public health action.</p> <p>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.</p> <p>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.</p>