COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 24, ENDING 13 JUNE 2020

Published 17 June 2020

SUMMARY FOR THE WEEK ENDING 13 JUNE

- There were 22 COVID-19 cases reported in the week ending 13 June 2020; largely in people who had travelled overseas, though there were three locally acquired cases.
- Testing rates were higher this week across all local health districts and continued to increase in school aged children; testing also increased in young adults.
- The proportion of tests positive for COVID-19 remains low, suggesting there is currently limited transmission in the community.
- Two of the newly notified cases worked at separate schools during their infectious period. The cases were promptly isolated and close contacts at the schools have been quarantined.
- Community restrictions and physical distancing measures in place to control the spread of COVID-19 have had a positive impact on the transmission of other respiratory illnesses:
    - The percent positive rate for influenza continues at very low rates
    - Presentations for pneumonia to NSW emergency departments have decreased below the usual range for this time of year
    - There is a decrease in reported typical flu-like symptoms for this time of year
    - However, the number of rhinovirus cases doubled this week, increasing above the usual range for this time of year.
- Continued high rates of testing are essential to detect and reduce the spread of COVID-19 in the community.
- NSW Health urges people of all ages, including children, to undergo COVID-19 testing and isolate themselves as soon as mild symptoms of respiratory infection or fever appear.

SECTION 1: HOW IS THE OUTBREAK TRACKING IN NSW?

Confirmed COVID-19 cases (people infected with the SARS-CoV-2 virus) includes NSW residents diagnosed in NSW who were infected overseas and in Australia (in NSW and interstate) and interstate or international visitors diagnosed in NSW who are under the care of NSW Health.

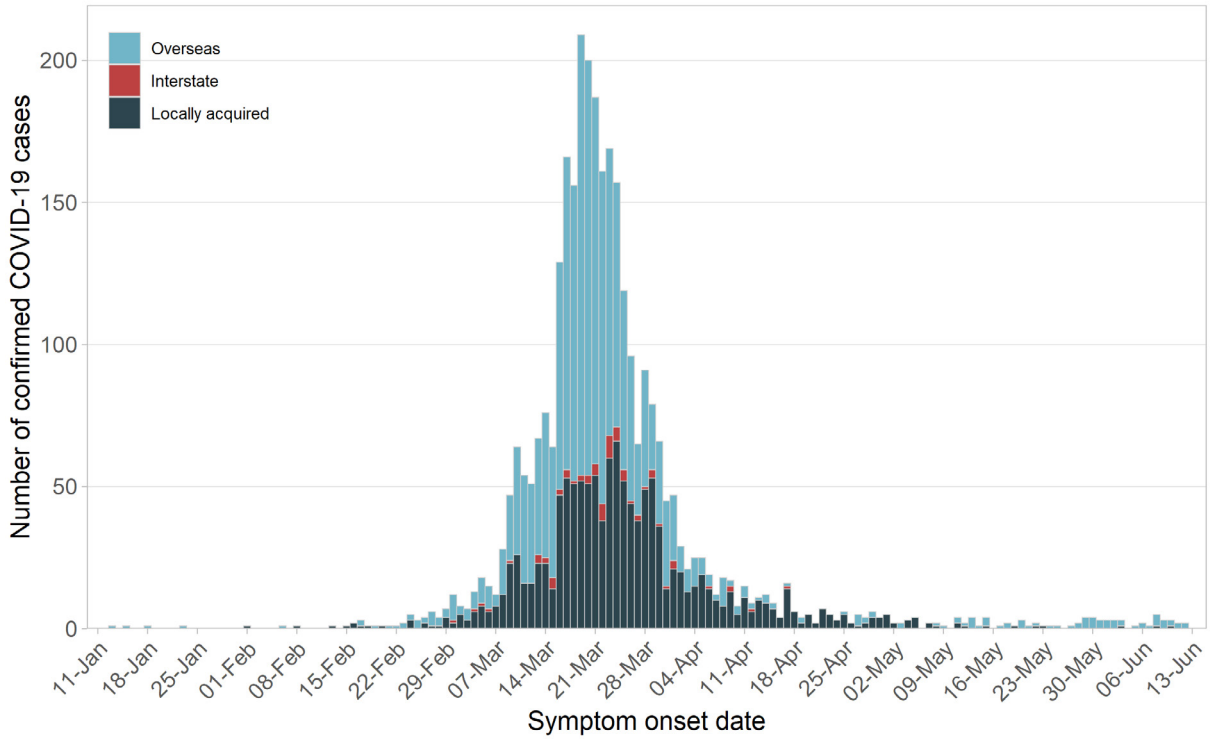
Table 1. COVID-19 cases and tests reported in NSW, up to 13 June 2020

	Week ending 13 June	Week ending 6 June	% change	Total to 13 June
Number of cases	22	16	+37.5%	3,128
Overseas acquired	*19*	*16*	*+18.8%*	*1,816*
Interstate acquired	*0*	*0*	-	*69*
Locally acquired	*3*	*0*	-	*1,243*
Under investigation	*0*	*0*	-	*0*
Number of deaths	0	0	-	50
Number of tests	71,579	63,505	+12.7%	647,989

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 the case started to feel unwell (known as the date of symptom onset). This information is collected by public health staff on interview with the case at the time of diagnosis.

Figure 1. COVID-19 cases by onset of illness per day, NSW, 2020



Note: For asymptomatic cases or where symptom onset date is not available, the onset date is calculated from the earliest specimen collection date.

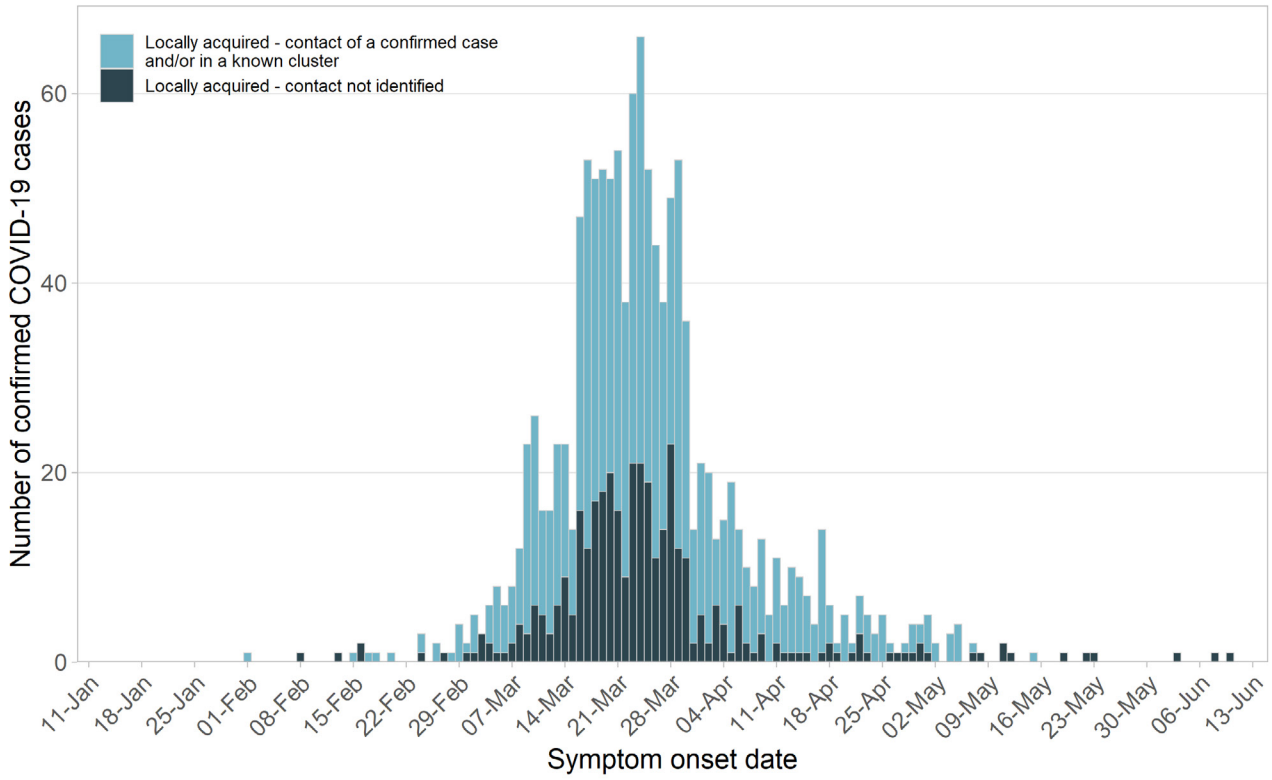
Interpretation: Approximately 60% of COVID-19 infections diagnosed in NSW to 13 June were acquired outside of NSW (almost all overseas) and the remaining 40% have been acquired locally (in NSW). The number of new cases reported in NSW has decreased significantly since the peak in mid-March. The number of cases with an overseas source in recent weeks is largely due to a program of screening all overseas travellers 10 days after arrival in NSW.

How much transmission is occurring in NSW?

All new cases who have not travelled outside of NSW are investigated by public health staff to determine the likely source of infection and identify clusters (group of cases sharing a common source or links). To understand the extent of community transmission, locally acquired cases who have had contact with a confirmed case or who are part of a known cluster are considered separately to those with an unidentified source of infection. Cases with no source identified suggest that there are people infected with COVID-19 in the community who have not been diagnosed.

In March, when the number of new cases diagnosed each day was high, public health efforts were focussed on contact tracing to limit further spread in the community. With a decline in cases, increased attention is given to identifying the source of infection for every case. High rates of testing are needed to ensure cases are identified as quickly as possible. Careful attention is given to understanding where transmission is occurring as social distancing measures are relaxed.

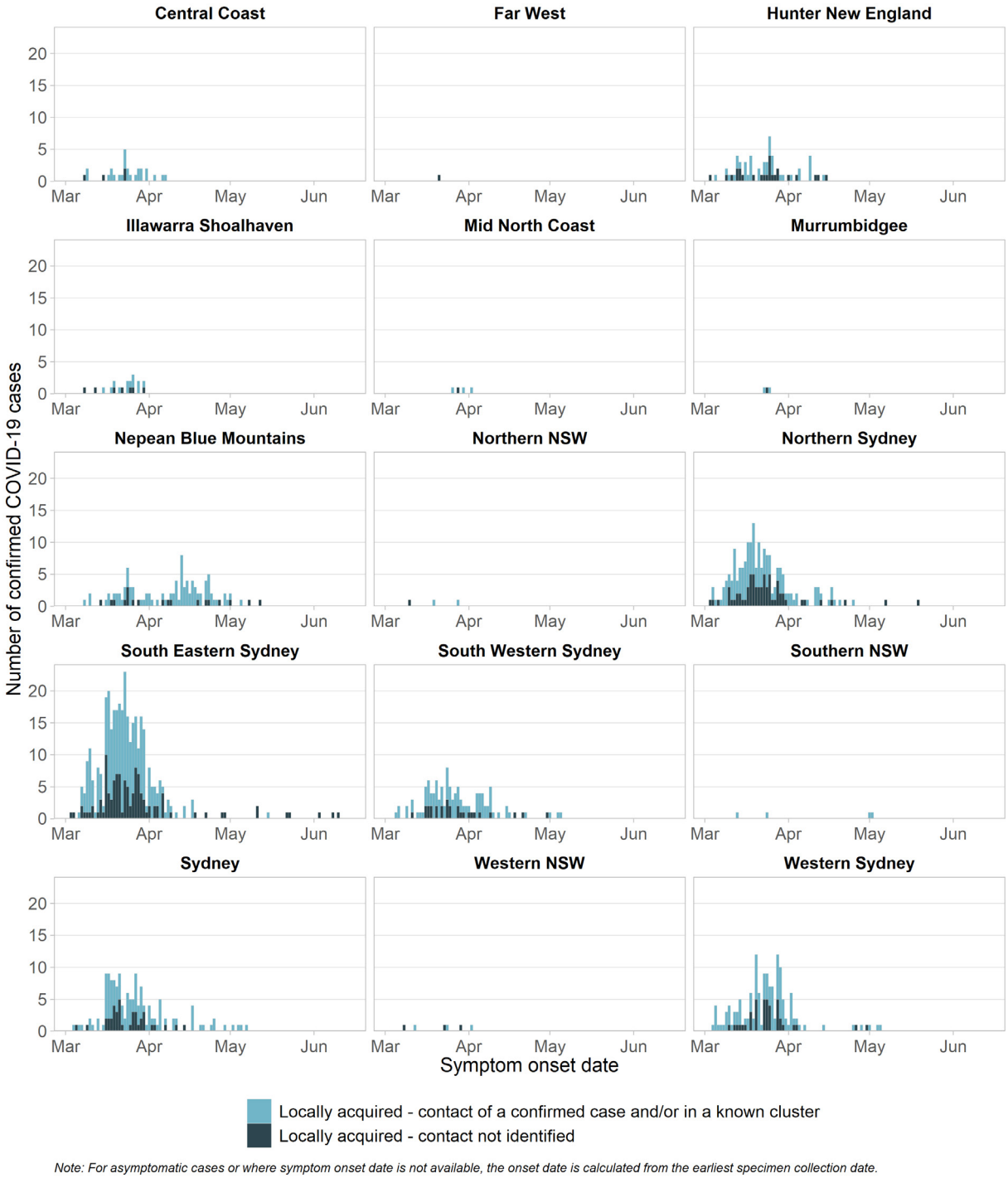
Figure 2. Locally acquired COVID-19 cases by onset of illness per day, NSW, 2020



Note: For asymptomatic cases or where symptom onset date is not available, the onset date is calculated from the earliest specimen collection date.

Interpretation: Larger clusters occurred in NSW before many of the strict social distancing rules were introduced. Since this time, there has been a decline in both the COVID-19 cases known to have had contact with a confirmed case or who are part of a cluster and those with an unknown source.

Figure 3. Locally acquired COVID-19 cases by onset of illness per day, NSW, 2020



Note: For asymptomatic cases or where symptom onset date is not available, the onset date is calculated from the earliest specimen collection date.

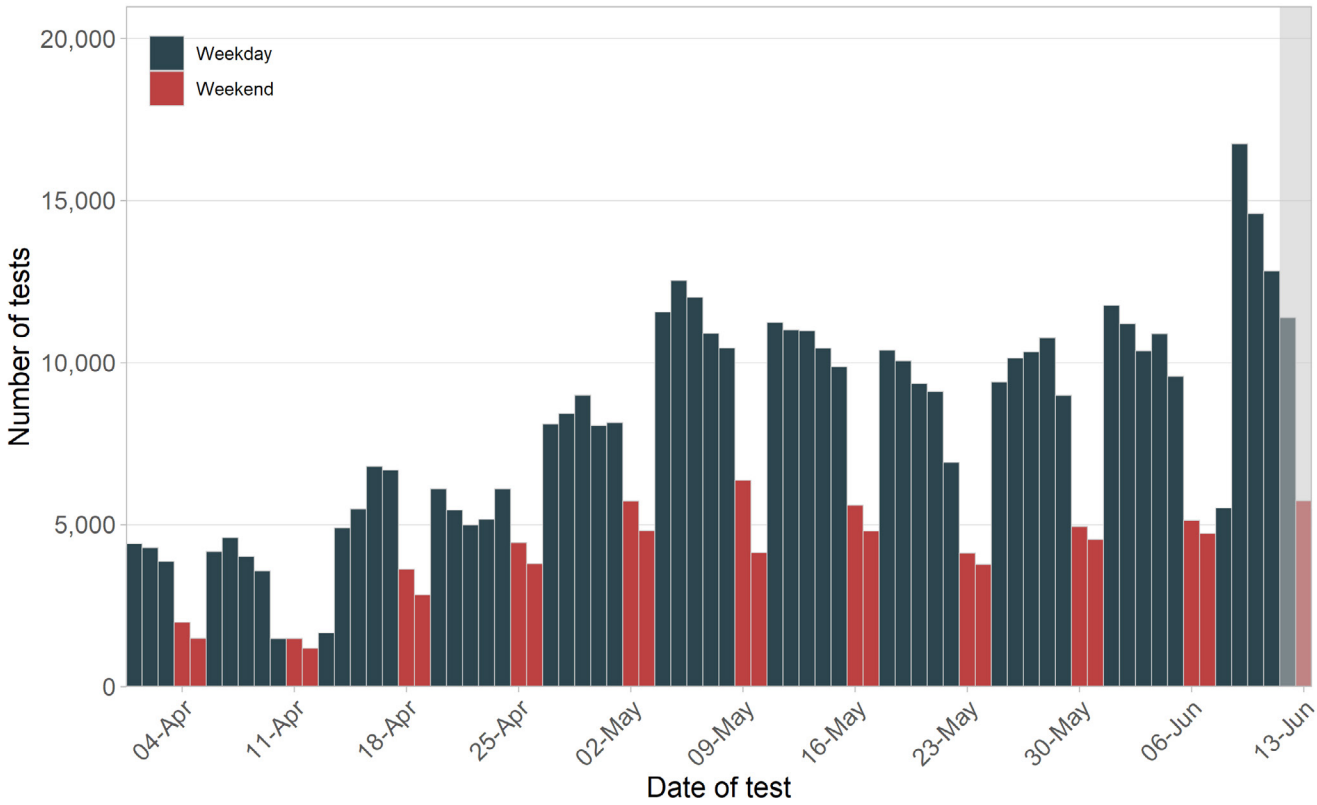
Interpretation: Early in the outbreak infection more commonly occurred in people living in metropolitan Sydney (particularly in South Eastern Sydney and Northern Sydney LHDs) and this likely reflected the residence of travellers who returned from countries with COVID-19 transmission. During April there was an increase in cases in Nepean Blue Mountains LHD, largely due to an outbreak in the Anglicare Newmarch House aged care facility. The last case associated with this outbreak had an onset on 4 May. There has been very limited transmission detected in regional and rural areas and minimal transmission identified throughout all of NSW in recent weeks.

How much testing is happening?

The number and rates of diagnostic tests in the population are monitored very closely in NSW. The bars on the graph below show the number of tests by the date a person presented for the test. It is important to note that:

- To enable prompt public health action, laboratories prioritise notification of all positive results to Public Health over negative test results.
- 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.
- The shaded area in the graph below indicates dates where counts may be incomplete due to a delay in the reporting of negative tests.
- 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.

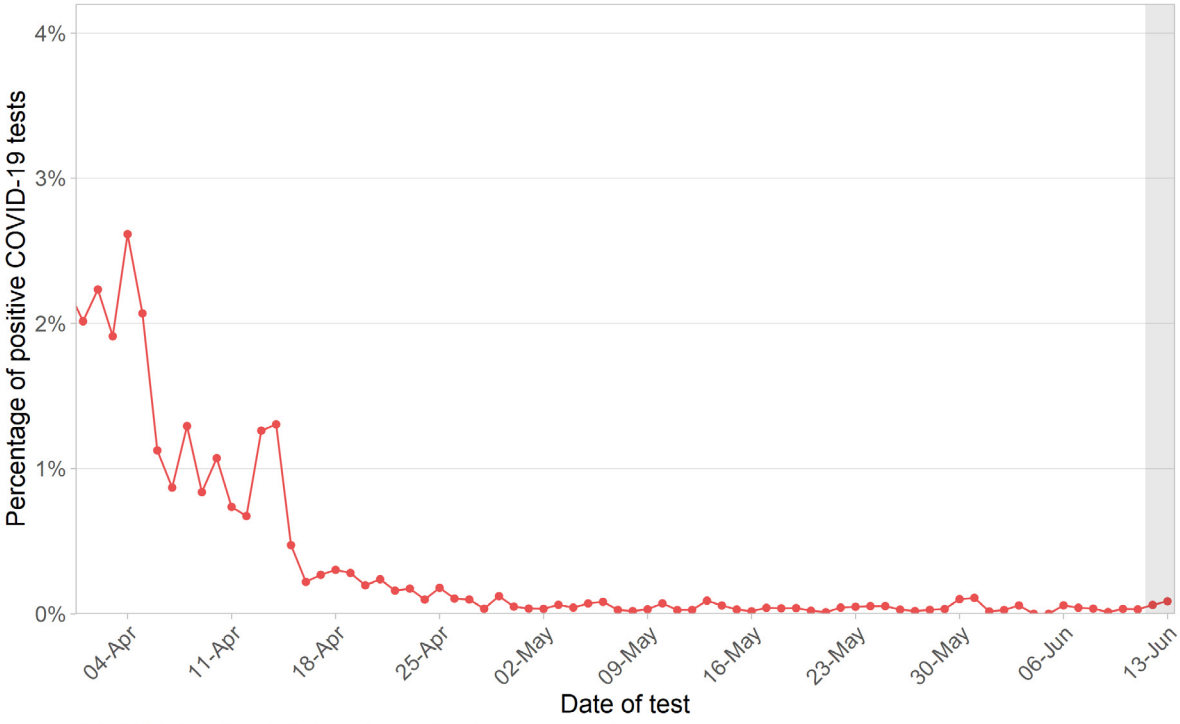
Figure 4. Number of tests per day, NSW, 2020



Note: PCR tests performed after becoming a confirmed case are excluded.

Interpretation: COVID-19 testing increased significantly in April and early May in line with the changes in the criteria for testing and increased availability of testing. Early in the outbreak the focus was on returned travellers and close contacts of confirmed cases, whereas now testing is recommended for anyone with even mild respiratory symptoms or unexplained fever. Tuesday and Wednesday this week had the largest number of tests in a day.

Figure 5. Proportion of tests positive for COVID-19, NSW, 2020



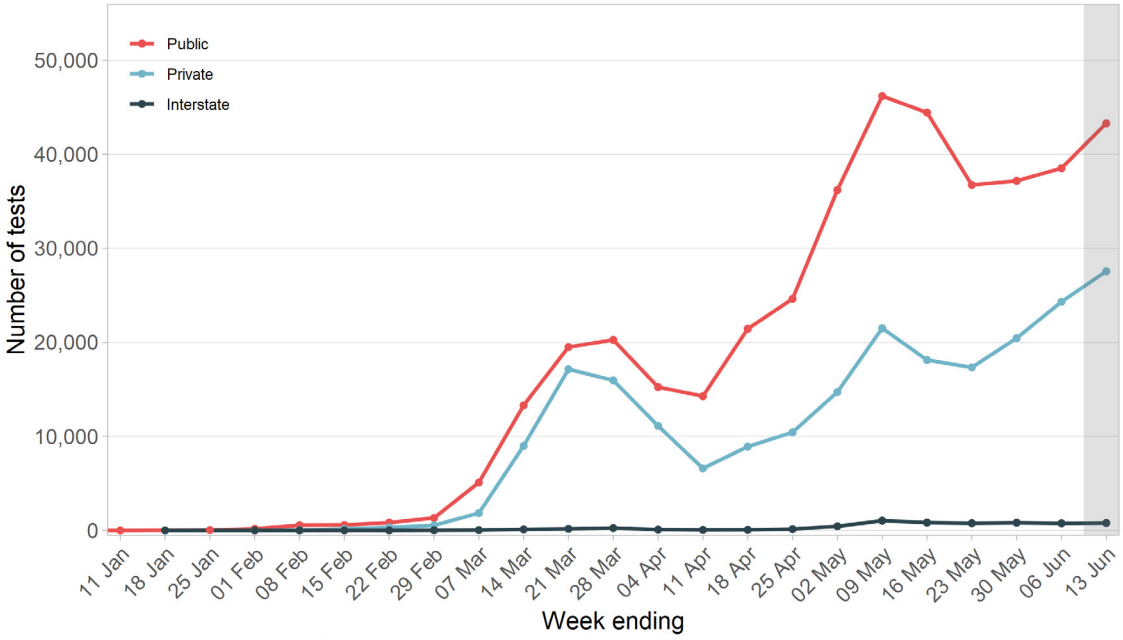
Note: PCR tests performed after becoming a confirmed case are excluded.

Interpretation: The number of people diagnosed and proportion of tests positive for COVID-19 in NSW declined since mid-March to early May, and has stabilised at very low levels since, despite the high rates of testing. This suggests there is currently limited transmission in the community.

High rates of testing are essential to identify and isolate people who are infectious and to allow contact tracing (quarantining of all people potentially infected by a case) to limit the spread of infection. Testing is not recommended for those without symptoms except in special settings when cases have been identified such as aged care, health care, disability homes and schools.

Which laboratories are doing the testing?

Figure 6. Number of tests by week and facility type, NSW, 2020



Note: This includes retests and is not person unique.
Once confirmed as a case, a person's further tests are not counted
Shading indicates current week, which underestimates testing due to a delay in importation or receipt of negative results
Weeks with less than three cases by facility type have been excluded

Interpretation: In the week ending 13 June, approximately 60% of tests were done in public laboratories. The number of tests performed in both public and private laboratories increased this week.

SECTION 2: COVID-19 TRANSMISSION IN NSW IN THE LAST FOUR WEEKS

To understand the extent of COVID-19 transmission in the community, public health staff carefully consider information collected from each new case at the time of diagnosis. The following analysis is for people who acquired their infections locally and reported by the date of their onset of illness. This analysis differs from Table 1, which is presented by date of report.

COVID-19 has an incubation period of up to 14 days which means that cases were exposed to COVID-19 in the 14 days prior to the day their symptoms started. Information from cases who became unwell in the last 28 days is used to understand where COVID-19 is spreading in the community. This takes into account the time it takes for people to be tested and the laboratory to perform the test. Some people who have tested positive to COVID-19 do not report having any symptoms despite thorough investigation. As it is not possible to determine when these cases were infected they are excluded in a review of recent transmission.

Table 2. Symptomatic locally acquired COVID-19 cases in NSW, by week of onset and source of infection, 17 May to 13 June 2020

Locally acquired cases	Week of onset			
	13 June	6 June	30 May	23 May
Contact of a confirmed case and/or part of a known cluster	0	0	0	0
Source not identified	2	1	0	3
Total	2	1	0	3

Interpretation: There were three locally acquired cases reported with onset of illness in the last two weeks. None of the locally acquired cases who developed symptoms within the last four weeks are part of a known cluster or report recent contact with another person diagnosed with COVID-19. No source of infection has been identified for these cases.

Of the six recent cases, two were young adults who worked at separate schools during their infectious period. Three were students who each attended a different school during their infectious period. All five schools are in metropolitan Sydney and the cases were promptly isolated once their test results were known and close contacts were quarantined.

While it is encouraging that the number of cases without a known source of infection remains low, high rates of testing are required to rapidly identify cases to prevent the spread of infection. This is especially important as social distancing rules relax. Maintaining 1.5 m distance between people outside the household limits the opportunity for transmission between people.

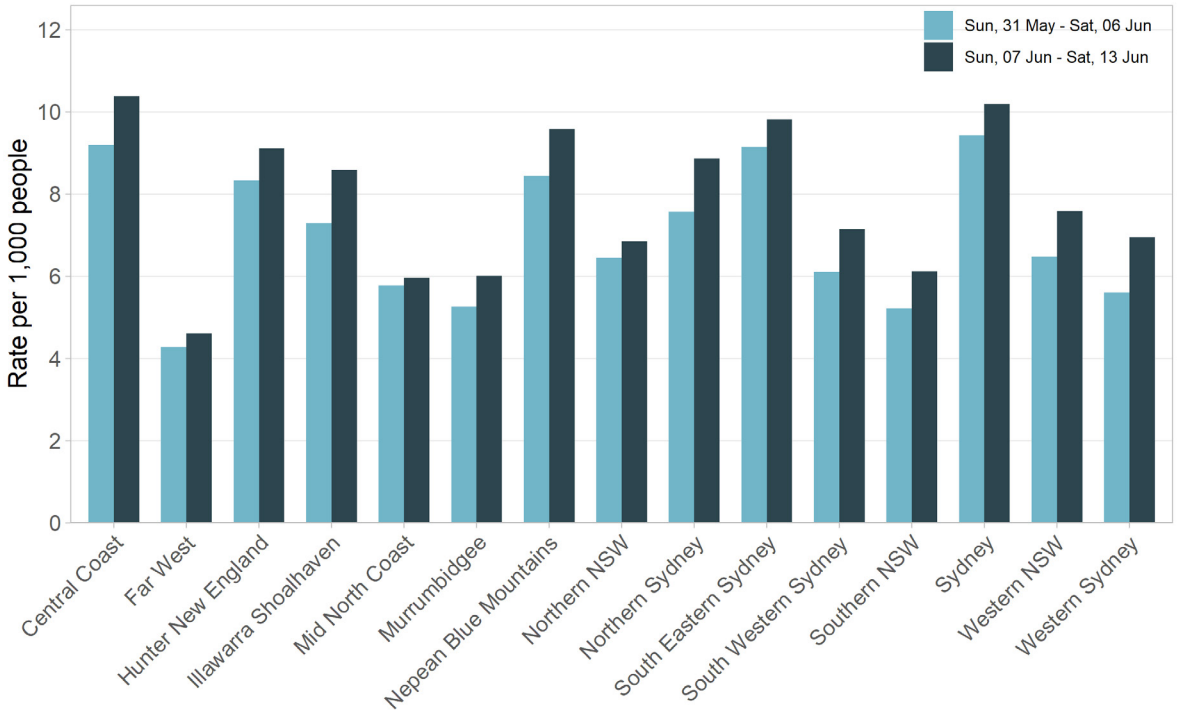
Cases and testing by Local Health District of residence

Table 3. Symptomatic locally acquired COVID-19 cases by Local Health District of residence and week of onset, 17 May to 13 June 2020

Local Health District	Week of onset				Total
	13 June	6 June	30 May	23 May	
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	0	0	0	1	**1**
South Eastern Sydney	2	1	0	2	**5**
South Western Sydney	0	0	0	0	**0**
Southern NSW	0	0	0	0	**0**
Sydney	0	0	0	0	**0**
Western NSW	0	0	0	0	**0**
Western Sydney	0	0	0	0	**0**
Grand Total	**2**	**1**	**0**	**3**	**6**

Interpretation: Five cases with symptom onset in the last four weeks were reported from South Eastern Sydney.

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



In the week ending 13 June, the rate of tests in NSW was 8.9 per 1,000, slightly higher when compared to the rate of 7.9 per 1,000 tests in the previous week.

Interpretation: All LHDs reported higher rates of testing in the week ending 13 June when compared to the previous week with the highest rates reported in Sydney, South Eastern Sydney and Central Coast LHDs. A table of testing rates by LGA for the last two weeks is in Appendix A.

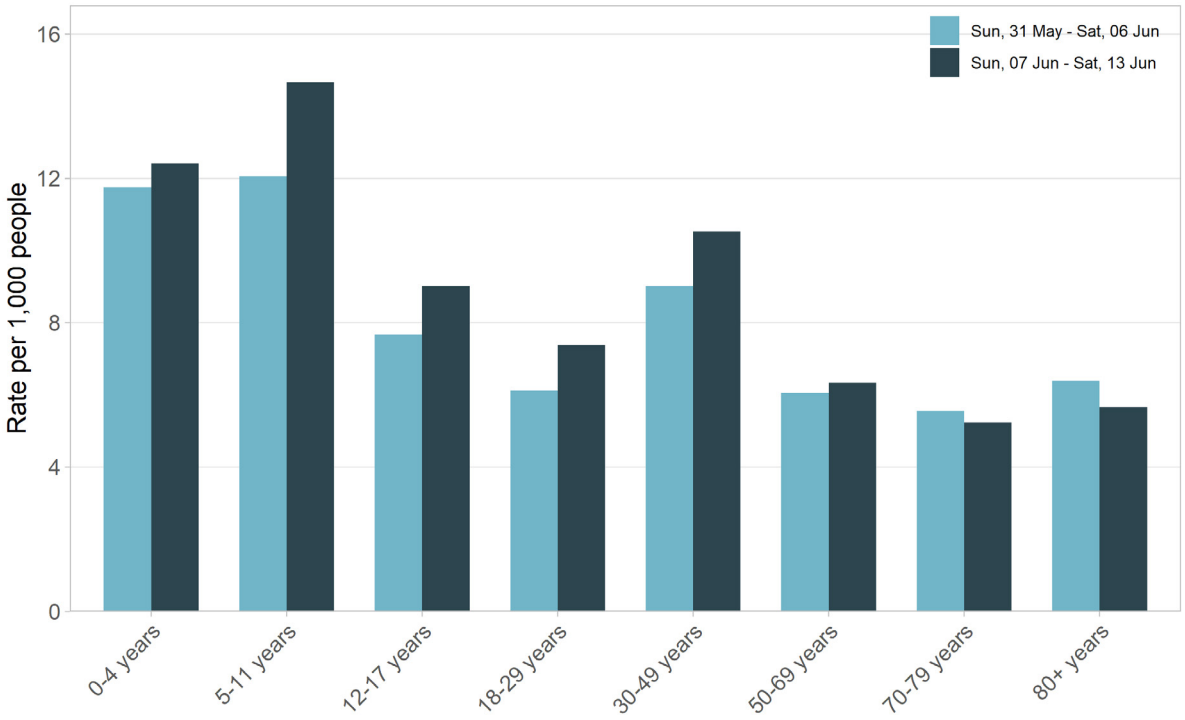
Testing by age group

Table 4. Symptomatic locally acquired COVID-19 cases by age group and week of onset, 17 May to 13 June 2020

Age group	Week ending				Total
	13 June	6 June	30 May	23 May	
0-4 years	0	0	0	0	**0**
5-11 years	0	0	0	1	**1**
12-17 years	0	0	0	2	**2**
18-29 years	1	1	0	0	**2**
30-49 years	1	0	0	0	**1**
50-69 years	0	0	0	0	**0**
70-79 years	0	0	0	0	**0**
80+ years	0	0	0	0	**0**
All ages	**2**	**1**	**0**	**3**	**6**

Interpretation: The three recent cases were adults aged less than 50 years. Two high school and one primary school aged child had symptoms in the week ending 23 May.

Figure 8. Rates of COVID-19 testing by age group and week



Interpretation: Testing rates increased in the week ending 13 June in all people aged under 70 years compared to the previous week.

How long does it take to get a positive COVID-19 test result?

To enable prompt public health action, laboratories prioritise the notification of positive COVID-19 test results to NSW Health. In certain circumstances, NSW Health may be informed of a potential positive result in samples undergoing further laboratory investigation prior to the final diagnosis.

Despite marked increases in testing since January, the time from testing to notification of a positive result (measured in whole days) has remained stable at one day from test to notification for cases reported each week in the period 28 March to 16 May. The time taken to receive a negative result is typically longer.

Table 5. Time from testing to notification for locally acquired COVID-19 cases reported from 17 May to 13 June 2020

Time from test to notification[1]	Cases
1 day	4
2 days	2
3 days	0
4 days	1

Interpretation: Four of the seven newly diagnosed cases diagnosed in the four weeks ending 13 June were notified to NSW Health the day after the test was conducted. The time to notification was four days for one case as the initial result was indeterminate and required further testing at a reference laboratory prior to final diagnosis.

Areas with COVID-19 cases (by report date) where no source was identified

Cases with no source identified suggest that there may be people infected with COVID-19 in the community who have not been diagnosed. High rates of testing are necessary to identify other cases and enable public health action to limit the spread of infection. Where clusters are identified, public health staff actively look for cases for two incubation periods (four weeks for COVID-19) before the outbreak is considered closed. The following analysis is based on the date that the case was reported to NSW Health.

Table 6. Testing in areas for locally acquired cases where no source was identified, reported from 17 May to 13 June 2020

LGA	Cases				Tests				Tests per 1,000 population			
	13 June	6 June	30 May	23 May	13 June	6 June	30 May	23 May	13 June	6 June	30 May	23 May
Woollahra	1	0	1	0	832	804	784	661	14.0	13.5	13.2	11.1
Sutherland Shire	2	0	0	0	2528	2532	2203	1838	11.0	11.0	9.6	8.0

Interpretation: Rates of testing in the two LGAs of residence for the recently reported cases with an unknown source of infection exceeded the state rate each week for the last four weeks. The small proportion of those tested who were positive indicates low rates of illness in the community.

How quickly are locally acquired cases getting tested after symptoms begin?

All people who undergo testing are advised to isolate themselves while they are waiting for test results to avoid spreading infection to others should they be confirmed to have COVID-19. Diagnosis as close as possible to the time symptoms develop is important as it enables close contacts to be in self-quarantine early, which reduces the risk of further transmission. Of the three cases reported in the week ending 13 June, one was tested within a day, one within two days and the third after seven days of symptoms.

Cases in pregnant women

There have been no new cases in pregnant women in the week ending 13 June.

Cases and testing in Aboriginal people

There have been no new cases among Aboriginal people in the week ending 13 June. The most recent COVID-19 case in an Aboriginal person was reported in the week ending 30 May, who acquired their infection overseas.

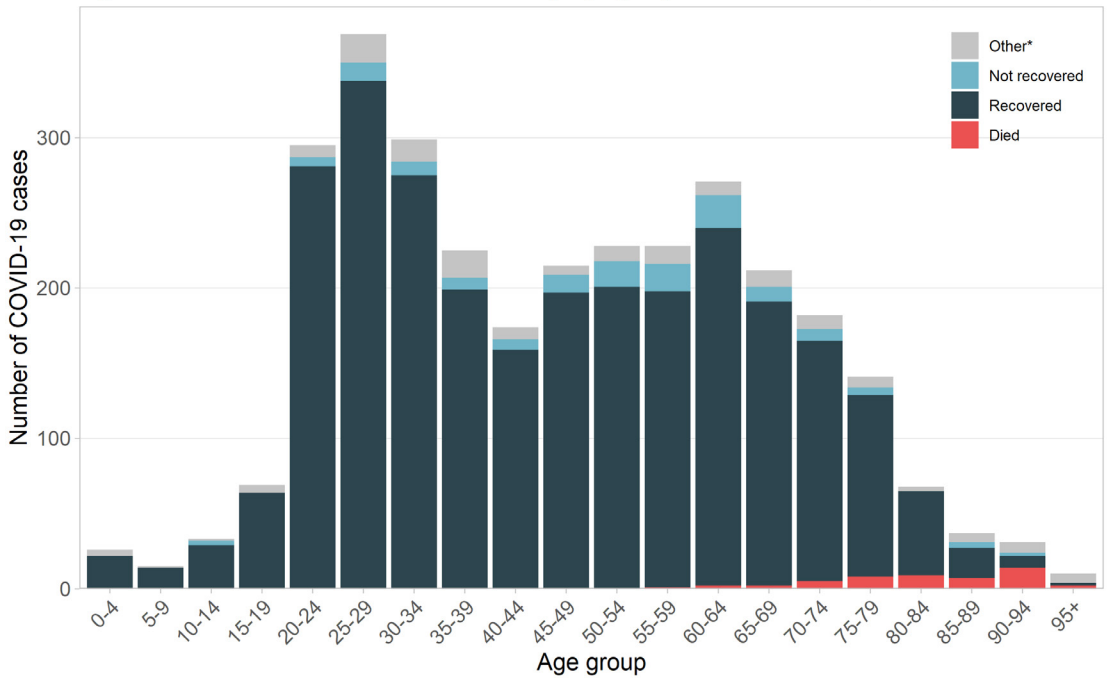
While Aboriginal status is collected by public health staff on interview with the case at the time of diagnosis, those who test negative are not interviewed. Aboriginal status for those tested can be ascertained through linkage with other health information systems but there is a delay in getting this information.

SECTION 3: RECOVERY AND DEATHS

How many cases have recovered?

In NSW, recovery status for COVID-19 is assessed three weeks after the onset of illness by interviewing the case. Cases reporting resolution of all COVID-19 symptoms are considered to have recovered. Cases who have not recovered at three weeks are called in the following weeks until recovery. At the time of interview, the date of recovery is collected to understand the duration of symptoms. The bars on the figure below show the total number of cases by age group and health status up to 13 June. This includes all cases reported in NSW (acquired locally and overseas).

Figure 9. Total number of COVID-19 cases by age group and health status, NSW, 2020



*Less than 3 weeks from symptom onset and/or recovery data not available

Interpretation: Overall, more than 85% of cases have recovered.

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

In total, 1.6% of cases (50 people) have died as a result of COVID-19 infection, most of whom were 70 years of age or older including 27 were residents of aged care facilities with known COVID-19 outbreaks. Approximately one-quarter of the deaths were in people who acquired COVID-19 overseas.

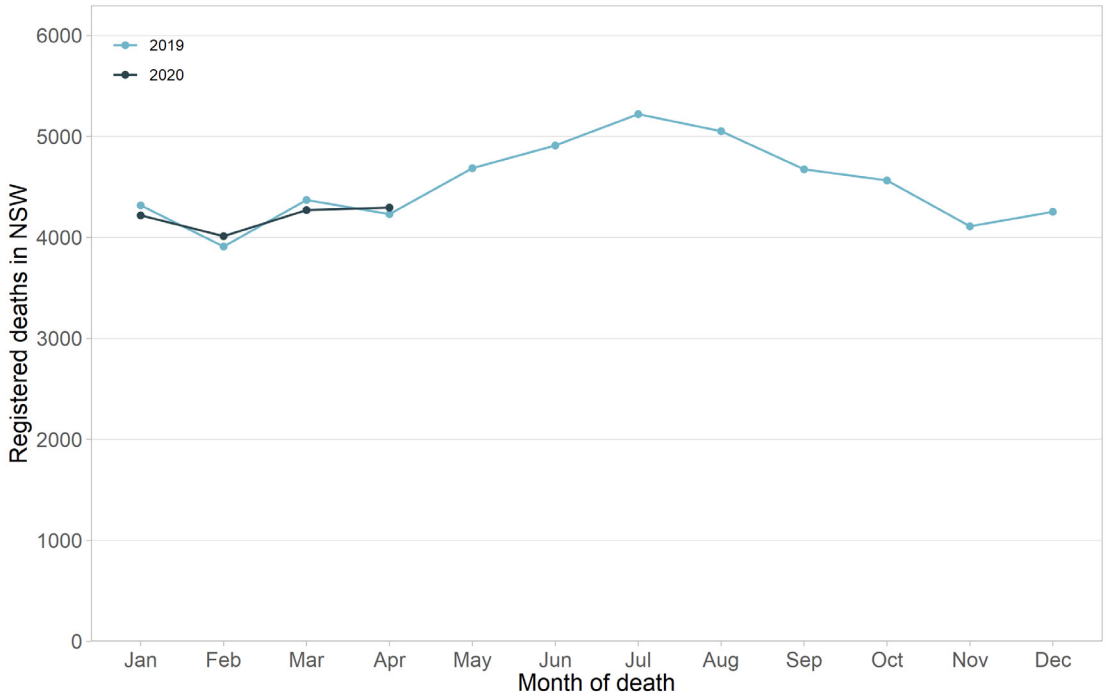
Internationally it is estimated that 5.5% of COVID-19 cases are reported to have died as a result of their infection.[1] Countries such as Italy, the United Kingdom and Spain have reported higher mortality rates (14.5%, 14.1% and 11.1%), while NSW reports similar rates to South Korea (2.3%) and New Zealand (1.9%).

[1] WHO Coronavirus disease (COVID-19) Situation Report – 147
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.

Figure 10. Deaths from any cause registered in NSW up to 11 June, 2020



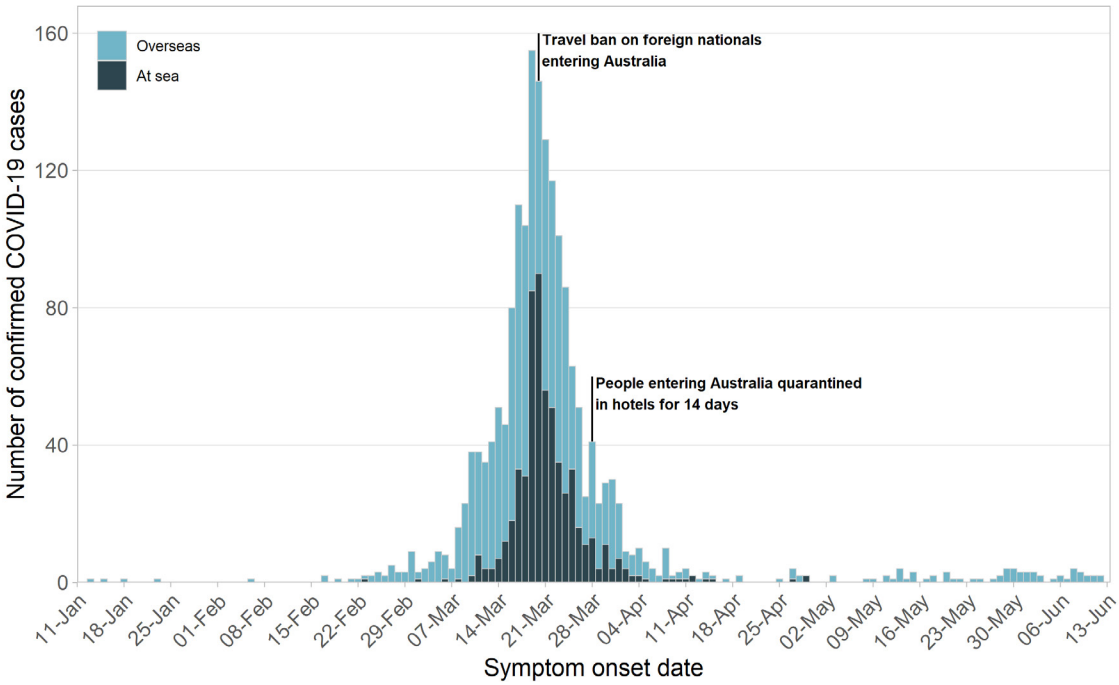
Interpretation: In March 2020, the numbers of deaths registered to date are lower compared to the same period in 2019, while it is almost the same for April. While there is a lag in notification of deaths, there is no indication to date that the COVID-19 pandemic in NSW is causing an overall increase in mortality.

SECTION 4: 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. Number of overseas acquired COVID-19 cases reported per day, NSW, 2020



Note: For asymptomatic cases or where symptom onset is unavailable, the onset date is calculated from the earliest specimen collection date.

Interpretation: Overall the number of new cases in returned travellers has decreased markedly in line with travel restrictions. However, given the low level of community transmission, returned travellers account for almost all cases (89%, n=55) reported in NSW in the last four weeks (n=62). In this time period, most had returned from Pakistan (n=27), followed by the United Kingdom (n=5), Afghanistan and India (n=3). The country where people acquired their infection in recent weeks can be influenced by large repatriation flights.

Since January to 13 June, cruise ship passengers accounted for the largest number of overseas acquired infections (582 cases). Following this, cases were most commonly returning from the United Kingdom (323 cases), United States (272 cases) and New Zealand (54 cases).

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 of Sunday 7 June to Saturday 13 June, 3,239 people were screened at Sydney International Airport and 43 were referred for testing. Since screening began on 2 February, a total of 78,187 people have been screened and 883 were referred for onsite health assessment and testing.

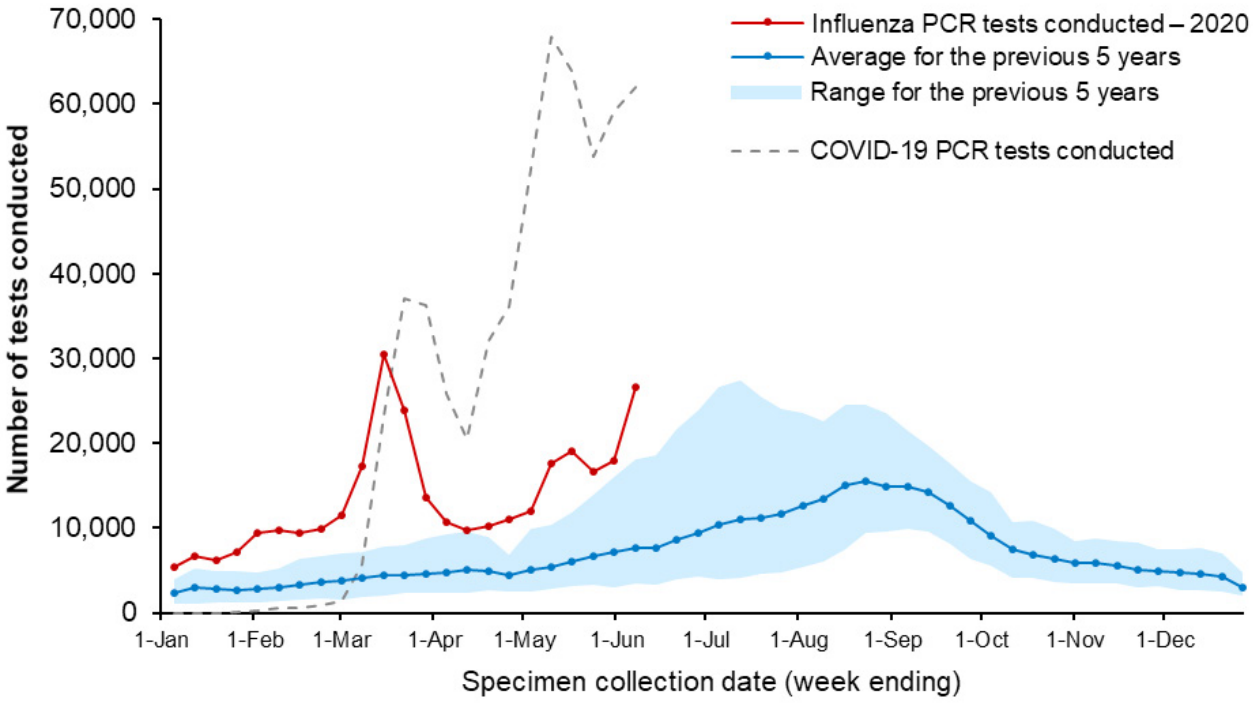
SECTION 5: OTHER RESPIRATORY INFECTIONS IN NSW

Influenza and other respiratory virus cases and tests reported in NSW, up to 7 June 2020

In NSW, sentinel laboratory surveillance for influenza and other respiratory viruses is conducted throughout the year. The number of PCR tests conducted and the results are provided by participating sentinel laboratories on a weekly basis. The reported testing numbers reflect the number of influenza PCR tests conducted; not all samples are tested for all of the other respiratory viruses.

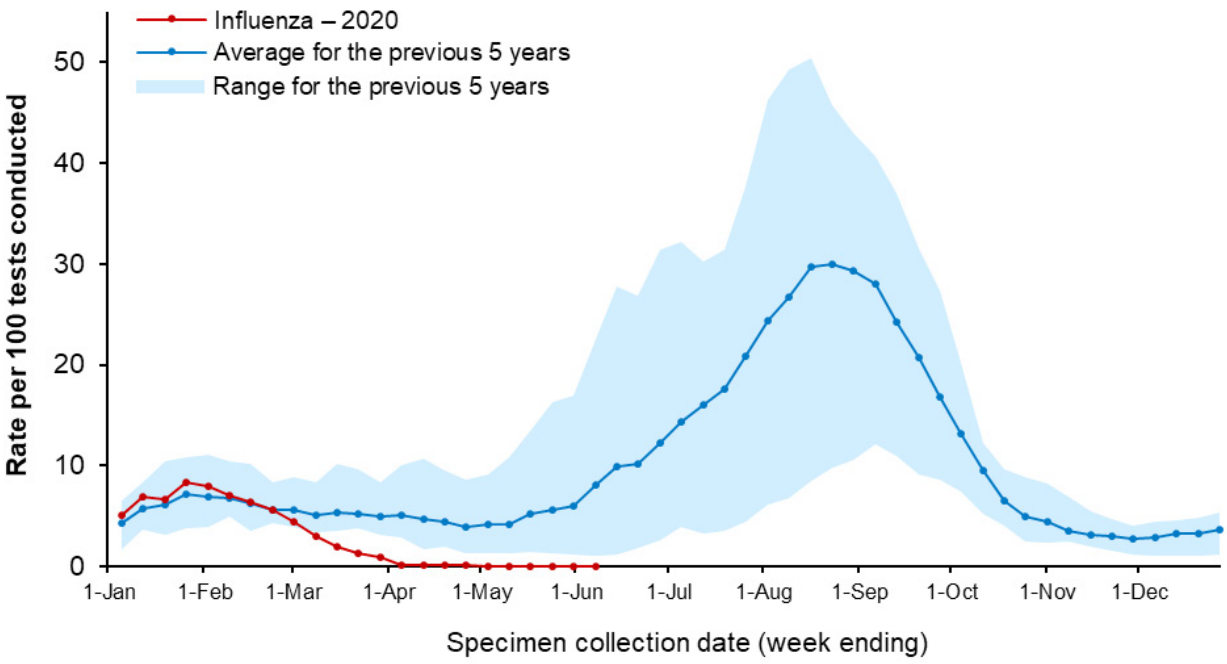
A total of 312,542 tests for influenza have been performed at sentinel NSW laboratories in 2020, with 26,596 PCR tests conducted in the week ending 7 June 2020. Rhinovirus is the most common respiratory virus identified by laboratories this year. In the week ending 7 June, the number of rhinovirus cases doubled, increasing above the usual seasonal range for this time of year (see Appendix B for table of test results).

Figure 12. Number of influenza tests conducted at sentinel NSW laboratories per week, 1 January to 7 June 2020 (red line), compared with the previous 5 years



Interpretation: There is an increase in influenza testing activity overall for this time of year. The peak in influenza testing during March corresponds to testing for COVID-19 virus. The subsequent decline of influenza testing, and sharp increase in COVID-19 testing from early April, reflects changes in testing practices for COVID-19 introduced in late March so that testing for influenza and other respiratory viruses was by exception to enable laboratories to increase COVID-19 testing using common equipment. Influenza testing has increased since then, and testing rates remain high in comparison to previous years.

Figure 13. Weekly rate of influenza detected by PCR per 100 tests conducted at sentinel NSW laboratories, 1 January to 7 June 2020 (red line), compared with the previous 5 years



Interpretation: This graph shows weekly number of positive PCR tests for influenza for every 100 tests conducted at sentinel NSW laboratories between 1 January and 7 June 2020. The influenza percent positive rate for the week ending 7 June was 0.04%, remaining at a very low rate since the beginning of April. This suggests there is currently limited influenza transmission in the community.

How many people have died as a result of influenza?

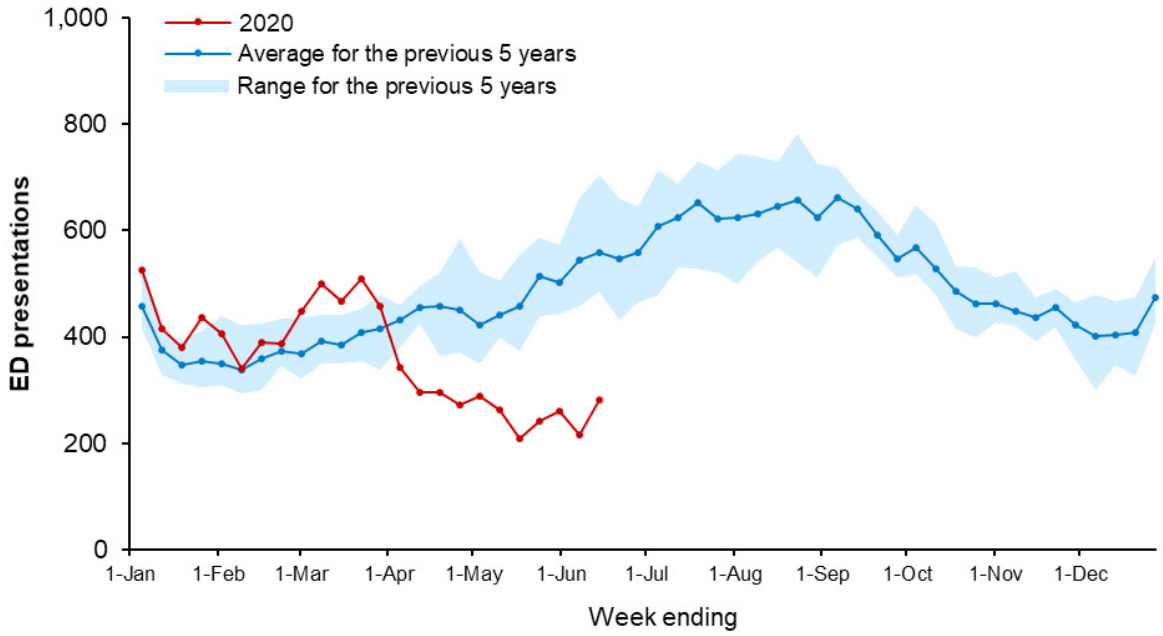
There were no influenza deaths reported in the week ending 7 June. Since 1 January 2020 there have been 12 influenza deaths identified using Coroner's reports and death registrations with laboratory-confirmed influenza. Two-thirds of the deaths were in people aged 65 years and over. In 2019, for same period of time, there had been 49 laboratory-confirmed influenza deaths.

How many emergency department presentations have there been for pneumonia?

NSW emergency department (ED) surveillance for presentations of pneumonia includes ED presentations with diagnoses of viral, bacterial, atypical or unspecified pneumonia, and Legionnaires' disease, but excludes 'pneumonia with influenza' and provides and indicator of more severe respiratory conditions using PHREDSS.[2]

[2] 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).

Figure 14. Total weekly counts of NSW ED visits for pneumonia, all ages, 1 January to 7 June 2020 (red line), compared with the 5 previous years

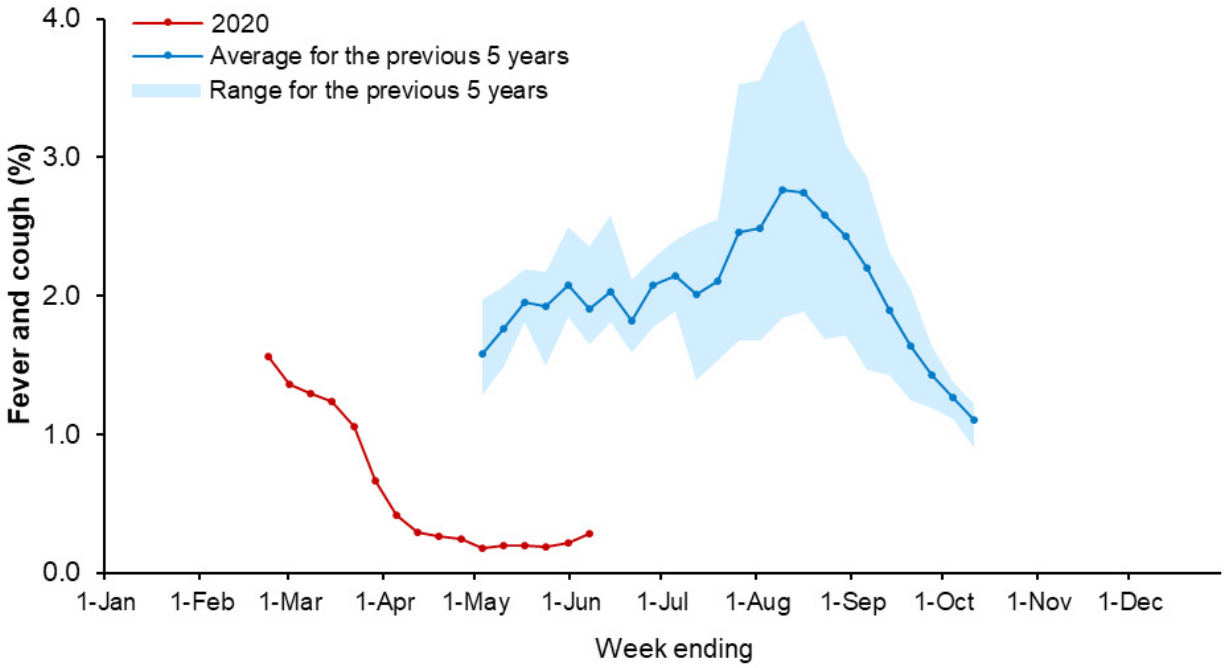


Interpretation: Pneumonia presentations decreased from the end of March and remain below the usual range for this time of year.

How many people have flu-like symptoms in the community?

FluTracking is an online survey that asks if you have had typical flu-like symptoms, such as fever or cough, in the last week. Across NSW approximately 25,000-30,000 people participate each week. Due to the COVID-19 outbreak the FluTracking survey started at the end of February. In previous years the survey commenced at the beginning of the regular flu season in May.

Figure 15. Proportion of people reporting influenza-like illness, 1 January to 7 June 2020 (red line), compared with the 5 previous years, NSW



Interpretation: In NSW in the week ending 7 June, of the 25,282 people surveyed, 71 people (0.28%) reported typical flu-like symptoms. The proportion of people reporting symptoms remains below the usual range for this time of year, likely partly due to the response to the COVID-19 outbreak, in particular the decrease in overseas travel, community restrictions and social distancing.

APPENDIX A: COVID-19 PCR TESTS IN NSW

Local Health District	Local Government Area	Week ending					
		13 June		06 June		Total	
		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]	3665	10.39	3248	9.2	28600	81.05
Far West	Balranald	3	1.28	2	0.86	72	30.8
	Broken Hill	101	5.78	100	5.72	1131	64.71
	Central Darling	5	2.72	5	2.72	65	35.35
	Wentworth	30	4.25	22	3.12	337	47.78
	LHD Total[2]	139	4.61	129	4.28	1605	53.24
Hunter New England	Armidale Regional	207	6.73	250	8.12	2868	93.18
	Cessnock	506	8.44	452	7.54	3750	62.52
	Dungog	80	8.49	72	7.64	548	58.16
	Glen Innes Severn	52	5.86	60	6.76	534	60.2
	Gunnedah	85	6.7	49	3.86	512	40.38
	Gwydir	25	4.67	12	2.24	161	30.08
	Inverell	120	7.1	167	9.89	1131	66.96
	Lake Macquarie	2049	9.95	1904	9.25	19514	94.77
	Liverpool Plains	38	4.81	50	6.33	518	65.54
	Maitland	1225	14.38	1156	13.57	8829	103.67
	Mid-Coast	497	5.3	465	4.96	5769	61.48
	Moree Plains	61	4.6	71	5.35	811	61.16
	Muswellbrook	101	6.17	59	3.6	838	51.17
	Narrabri	79	6.01	75	5.71	702	53.44
	Newcastle	1902	11.49	1732	10.46	18737	113.17
	Port Stephens	714	9.72	547	7.44	5716	77.79
	Singleton	288	12.28	229	9.76	1956	83.37
	Tamworth Regional	485	7.75	451	7.21	6420	102.65
	Tenterfield	40	6.07	21	3.18	244	37
	Upper Hunter Shire	84	5.92	75	5.29	856	60.37
	Uralla	35	5.82	27	4.49	349	58.05
	Walcha	12	3.83	20	6.38	232	74.03
	LHD Total[2]	8680	9.11	7931	8.33	80937	84.98
Illawarra Shoalhaven	Kiama	230	9.83	196	8.38	1833	78.38
	Shellharbour	759	10.36	582	7.95	5566	76
	Shoalhaven	843	7.98	701	6.64	7386	69.91
	Wollongong	1773	8.13	1583	7.26	14717	67.47
	LHD Total[2]	3605	8.59	3062	7.3	29502	70.31

Local Health District	Local Government Area	Week ending					
		13 June		06 June		Total	
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Mid North Coast	Bellingen	62	4.77	44	3.39	775	59.63
	Coffs Harbour	410	5.31	346	4.48	4408	57.04
	Kempsey	218	7.33	233	7.83	2032	68.31
	Nambucca	86	4.34	76	3.84	1055	53.27
	Port Macquarie-Hastings	570	6.74	606	7.17	4627	54.74
	LHD Total[2]	1346	5.96	1305	5.78	12897	57.15
Murrumbidgee	Albury	282	5.19	259	4.77	2000	36.8
	Berrigan	25	2.86	29	3.31	335	38.29
	Bland	16	2.68	16	2.68	258	43.2
	Carrathool	5	1.79	4	1.43	63	22.51
	Coolamon	32	7.37	31	7.14	258	59.43
	Cootamundra-Gundagai Regional	89	7.92	67	5.96	562	50.02
	Edward River	55	6.05	44	4.84	422	46.46
	Federation	44	3.54	28	2.25	410	32.97
	Greater Hume Shire	53	4.92	36	3.34	424	39.39
	Griffith	181	6.7	163	6.03	1327	49.1
	Hay	6	2.03	8	2.71	127	43.07
	Hilltops	125	6.68	80	4.28	737	39.4
	Junee	24	3.59	40	5.99	193	28.88
	Lachlan[1]	5	0.82	7	1.15	128	21.07
	Leeton	58	5.07	35	3.06	478	41.76
	Lockhart	17	5.18	12	3.65	182	55.4
	Murray River	12	0.99	6	0.5	36	2.97
	Murrumbidgee	14	3.57	13	3.32	153	39.06
	Narrandera	16	2.71	15	2.54	195	33.06
	Snowy Valleys	99	6.84	79	5.46	696	48.07
	Temora	48	7.61	27	4.28	298	47.25
	Wagga Wagga	587	9	577	8.84	5015	76.85
	LHD Total[2]	1796	6.02	1572	5.27	14246	47.79
Nepean Blue Mountains	Blue Mountains	862	10.9	782	9.88	9087	114.85
	Hawkesbury	678	10.07	529	7.86	5896	87.61
	Lithgow	101	4.67	105	4.86	1480	68.5
	Penrith	2131	10.01	1900	8.92	23113	108.52
	LHD Total[2]	3744	9.58	3299	8.44	39376	100.71

Local Health District	Local Government Area	Week ending					
		13 June		06 June		Total	
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Northern NSW	Ballina	402	9.01	343	7.69	3477	77.91
	Byron	259	7.38	222	6.33	2808	80.04
	Clarence Valley	247	4.78	261	5.05	2676	51.8
	Kyogle	22	2.5	33	3.75	310	35.24
	Lismore	371	8.49	340	7.78	3009	68.87
	Richmond Valley	203	8.65	170	7.24	1360	57.96
	Tenterfield	40	6.07	21	3.18	244	37
	Tweed	619	6.38	622	6.41	5431	55.99
	LHD Total[2]	2127	6.85	2001	6.45	19132	61.64
Northern Sydney	Hornsby	1114	7.33	840	5.52	9891	65.05
	Hunters Hill	244	16.29	259	17.29	2826	188.65
	Ku-ring-gai	1132	8.9	1134	8.92	11236	88.37
	Lane Cove	788	19.62	710	17.68	7281	181.32
	Mosman	299	9.65	307	9.91	3220	103.93
	North Sydney	613	8.17	513	6.84	5875	78.31
	Northern Beaches	2519	9.21	1776	6.49	23911	87.43
	Parramatta[1]	1434	5.58	1169	4.55	14018	54.5
	Ryde	963	7.34	912	6.95	10478	79.82
	Willoughby	541	6.66	579	7.13	5022	61.86
	LHD Total[2]	8477	8.87	7240	7.57	82457	86.26
South Eastern Sydney	Bayside	1257	7.05	1063	5.96	11105	62.25
	Georges River	1106	6.94	849	5.32	9311	58.39
	Randwick	1987	12.77	1780	11.44	17733	113.93
	Sutherland Shire	2528	10.96	2532	10.98	20987	91.01
	Sydney[1]	2152	8.74	2112	8.57	23445	95.17
	Waverley	1179	15.87	1189	16	12304	165.61
	Woollahra	832	14.01	804	13.54	8950	150.71
	LHD Total[2]	9416	9.82	8777	9.15	87751	91.49
South Western Sydney	Camden	1111	10.95	967	9.53	9313	91.81
	Campbelltown	1519	8.89	1236	7.23	12710	74.35
	Canterbury-Bankstown[1]	2724	7.21	2471	6.54	24272	64.23
	Fairfield	844	3.99	813	3.84	8442	39.88
	Liverpool	1735	7.62	1400	6.15	13670	60.07
	Wingecarribee	519	10.15	382	7.47	4749	92.87
	Wollondilly	330	6.21	269	5.06	2800	52.68
	LHD Total[2]	7425	7.15	6341	6.11	63508	61.15

Local Health District	Local Government Area	Week ending					
		13 June		06 June		Total	
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Southern NSW	Bega Valley	153	4.44	124	3.6	1561	45.28
	Eurobodalla	252	6.55	249	6.47	2392	62.17
	Goulburn Mulwaree	240	7.71	184	5.91	2176	69.9
	Queanbeyan-Palerang Regional	430	7.04	308	5.04	3242	53.06
	Snowy Monaro Regional	118	5.67	107	5.15	1065	51.21
	Upper Lachlan Shire	46	5.71	68	8.44	412	51.12
	Yass Valley	90	5.27	93	5.44	809	47.35
	LHD Total[2]	1329	6.12	1133	5.22	11658	53.71
Sydney	Burwood	232	5.71	191	4.7	1987	48.93
	Canada Bay	943	9.82	878	9.14	9522	99.11
	Canterbury-Bankstown[1]	2724	7.21	2471	6.54	24272	64.23
	Inner West	2597	12.93	2421	12.06	22388	111.49
	Strathfield	367	7.82	358	7.63	3450	73.52
	Sydney[1]	2152	8.74	2112	8.57	23445	95.17
	LHD Total[2]	7098	10.19	6571	9.43	65607	94.16
Western NSW	Bathurst Regional	381	8.73	288	6.6	3032	69.51
	Blayney	69	9.35	50	6.78	606	82.12
	Bogan	29	11.24	15	5.81	120	46.51
	Bourke	14	5.41	8	3.09	46	17.76
	Brewarrina	21	13.04	8	4.97	76	47.18
	Cabonne	60	4.4	66	4.84	526	38.58
	Cobar	14	3.01	9	1.93	119	25.55
	Coonamble	19	4.8	20	5.05	233	58.87
	Cowra	104	8.16	99	7.77	580	45.52
	Dubbo Regional	493	9.18	345	6.42	2692	50.11
	Forbes	32	3.23	30	3.03	215	21.7
	Gilgandra	27	6.37	20	4.72	144	33.97
	Lachlan[1]	5	0.82	7	1.15	128	21.07
	Mid-Western Regional	208	8.24	278	11.01	1345	53.27
	Narromine	53	8.13	35	5.37	242	37.13
	Oberon	20	3.7	20	3.7	339	62.65
	Orange	411	9.68	389	9.16	3442	81.08
	Parkes	73	4.92	49	3.3	588	39.63
	Walgett	22	3.7	31	5.21	319	53.59
	Warren	42	15.57	17	6.3	205	76.01
	Warrumbungle Shire	60	6.47	34	3.66	457	49.26
	Weddin	11	3.04	27	7.47	139	38.47
	LHD Total[2]	2163	7.59	1844	6.47	15529	54.49

Local Health District	Local Government Area	Week ending					
		13 June		06 June		Total	
		No.	Tests per 1,000 population	No.	Tests per 1,000 population	No.	Tests per 1,000 population
Western Sydney	Blacktown	2931	7.83	2355	6.29	26548	70.9
	Cumberland	1581	6.55	1382	5.72	14118	58.45
	Parramatta[1]	1434	5.58	1169	4.55	14018	54.5
	The Hills Shire	1601	9	1178	6.62	14191	79.74
	LHD Total[2]	7334	6.96	5917	5.62	66634	63.25
NSW Total[3]		**71,579**	**8.85**	**63,505**	**7.85**	**647,989**	**80.1**

[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 7 JUNE 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	Adenovirus	Para-influenza	RSV	Rhinovirus	HMPV	Enterovirus
1 Jan — 7 June 2020									
Count	312,542	6,533	936	3,090	8,800	4,372	40,986	1,793	3,206
% Positive		2.1%	0.3%	1.0%	2.8%	1.4%	13.1%	0.6%	1.0%
Month ending									
3/02/2020*	34,953	2,508	401	846	1,900	752	5,036	599	335
1/03/2020	40,272	2,363	315	798	2,435	1,118	8,245	437	1,007
29/03/2020	80,234	1,549	200	898	4,117	1,977	18,088	664	1,502
3/05/2020*	53,809	70	13	171	264	399	2,213	46	210
31/05/2020	71,371	35	5	231	62	100	3,465	27	108
Week ending									
31/05/2020	17,956	4	2	87	15	14	1,783	8	29
7/06/2020	26,596	8	2	146	22	26	3,939	20	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