

COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 28, ENDING 11 JULY 2020

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SUMMARY FOR THE WEEK ENDING 11 JULY

- There has been a recent increase in locally-acquired cases reported in NSW, mostly due to an outbreak associated with the Crossroads Hotel in South Western Sydney. These cases were promptly isolated and contact tracing is underway to ensure all contacts are quarantined.
- Though testing rates remain high, NSW Health urges anyone who develops respiratory symptoms, regardless of how mild, to get tested for COVID-19 and stay at home until symptoms have resolved and a COVID-19 infection has been excluded.
- Current data indicates limited influenza transmission, even though influenza testing is higher than usual for this time of year.
- Measures to prevent the spread of infection including handwashing, covering coughs and social distancing are especially important as we are now in the school holiday period and people may be mixing more with others.

SECTION 1: HOW IS THE OUTBREAK TRACKING IN NSW?

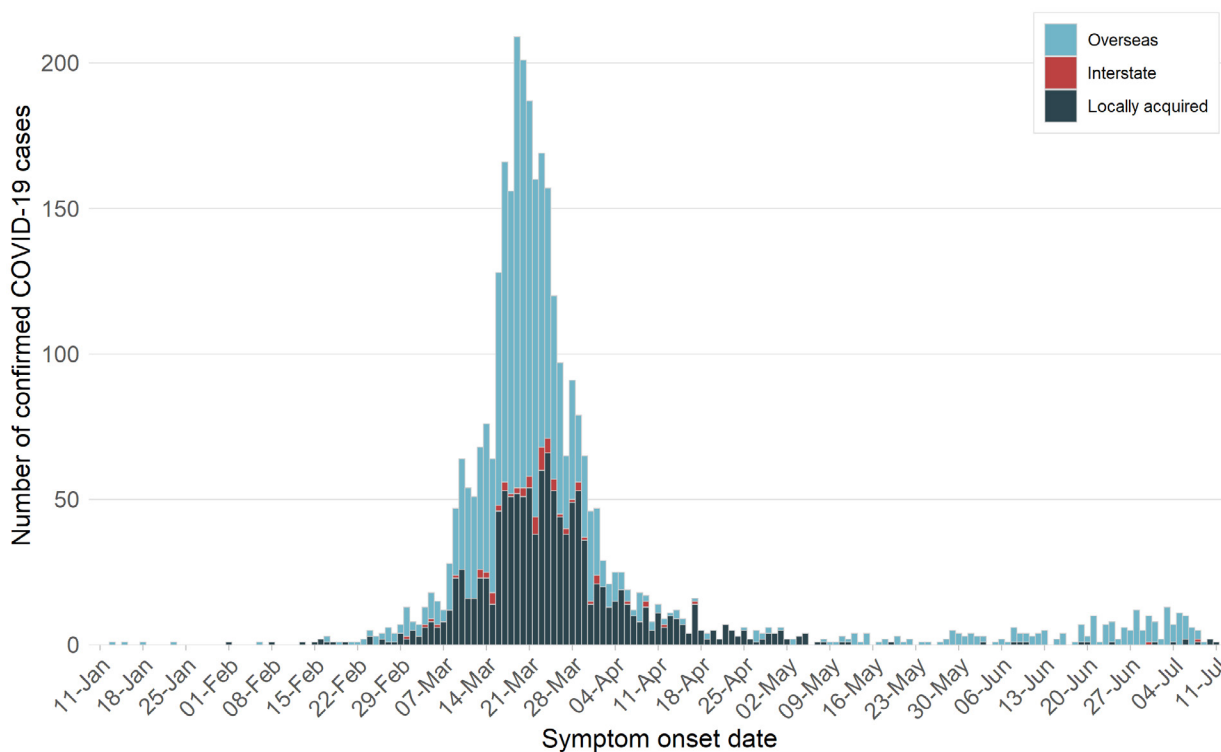
Table 1. COVID-19 cases and tests reported in NSW, up to 11 July 2020

	Week ending 11 July	Week ending 4 July	Total to 11 July
Number of cases	59	51	3,290
<i>Overseas acquired</i>	49	50	1,970
<i>Interstate acquired</i>	2	0	71
<i>Locally acquired</i>	8	1	1,249
Number of deaths	0	0	51
Number of tests	98,563	103,605	1,058,605

Note: The case numbers reported for previous weeks is based on the most up to date information from public health investigations.

To understand how the outbreak is tracking we look at how many new cases are reported each day and the number of people being tested. Each bar in the graph below represents the number of new cases based on the **date of symptom onset**.

Figure 1. COVID-19 cases by likely infection source and illness onset, NSW, 2020



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

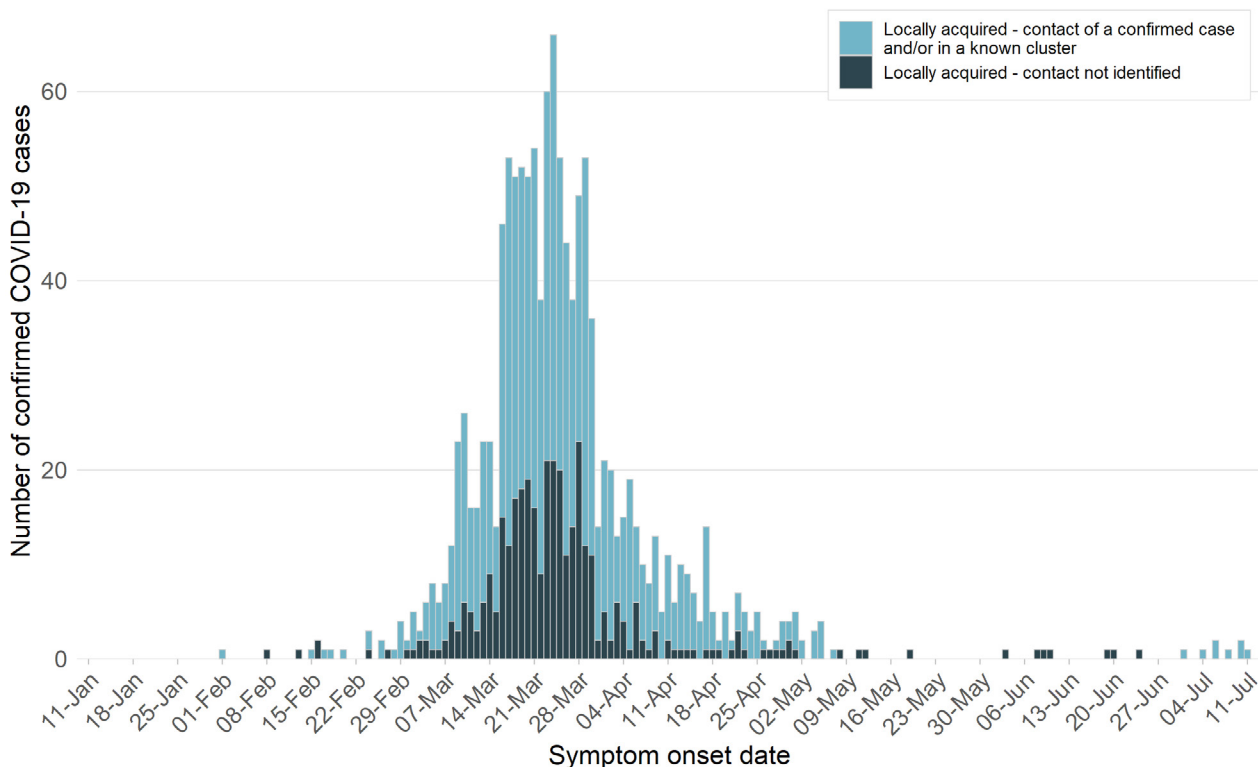
Interpretation: Approximately 60% of COVID-19 infections diagnosed in NSW to 11 July have been **overseas acquired** and the remaining 40% have been **locally acquired**. The number of new cases diagnosed in NSW decreased significantly since the peak in mid-March. The recent increase in overseas-acquired cases is largely due to a program of screening all overseas travellers 2 days and 10 days after arrival in NSW. In the last week, eight locally-acquired cases were reported; most of these were associated with a cluster at the Crossroads Hotel in Casula. Two were household contacts of a case who returned from Melbourne.

How much transmission is occurring in NSW?

All new cases who have not travelled outside of NSW are investigated by public health staff to determine the likely source of infection and identify **clusters**. To understand the extent of community transmission, locally-acquired cases who have had contact with a case or who are part of a known cluster are considered separately to those with an unidentified source of infection. Cases with no 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.

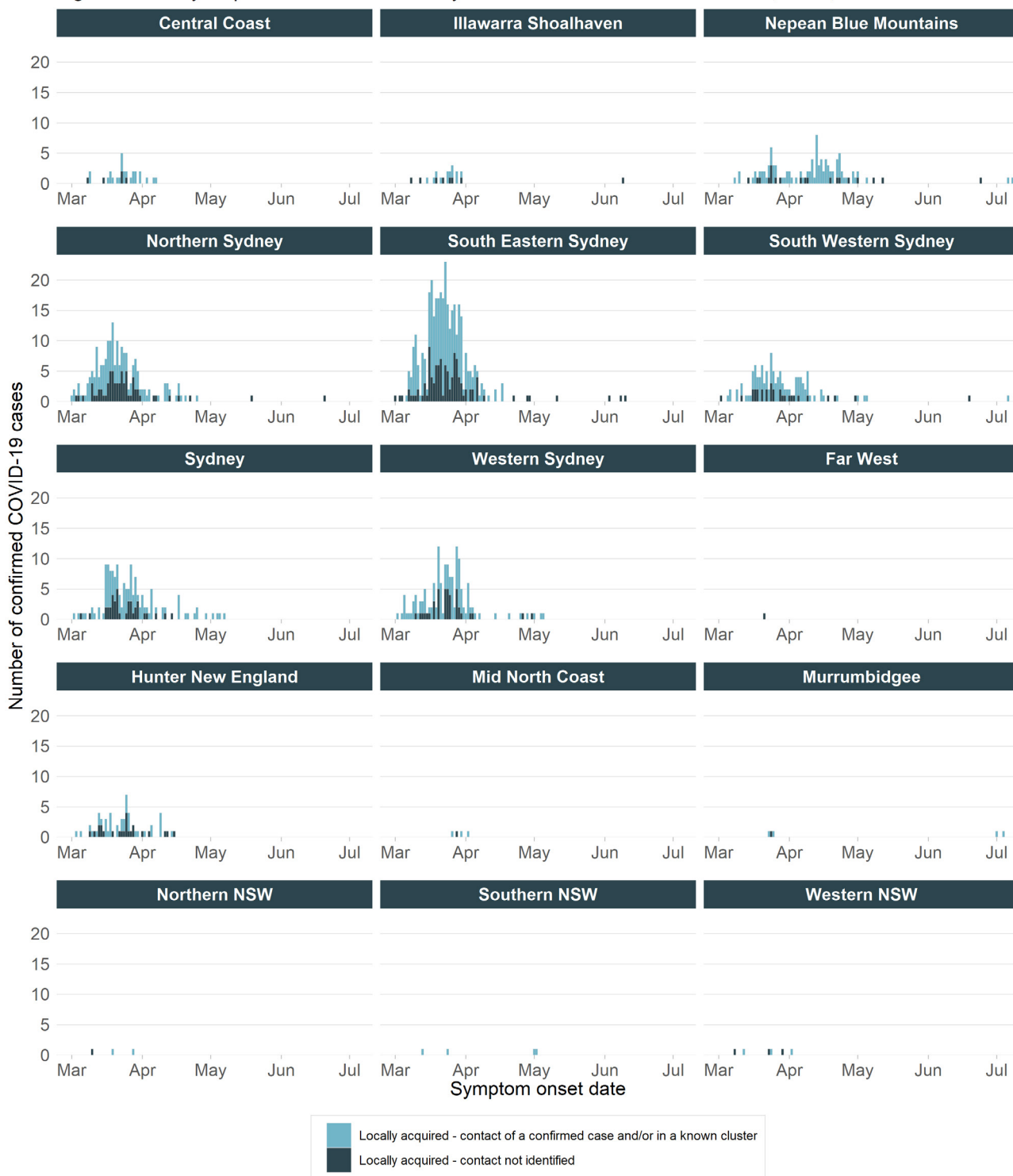
Figure 2. Locally acquired COVID-19 cases by likely infection source and illness onset, NSW, 2020



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

Interpretation: Larger clusters occurred in NSW before many of the strict social distancing rules were introduced. Since this time, there has been a decline in COVID-19 cases both with a known and unknown source of infection. However, a cluster associated with the Crossroads Hotel has led to an increase in locally-acquired cases this week.

Figure 3. Locally acquired COVID-19 cases by LHD of residence and illness onset, NSW, 2020



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

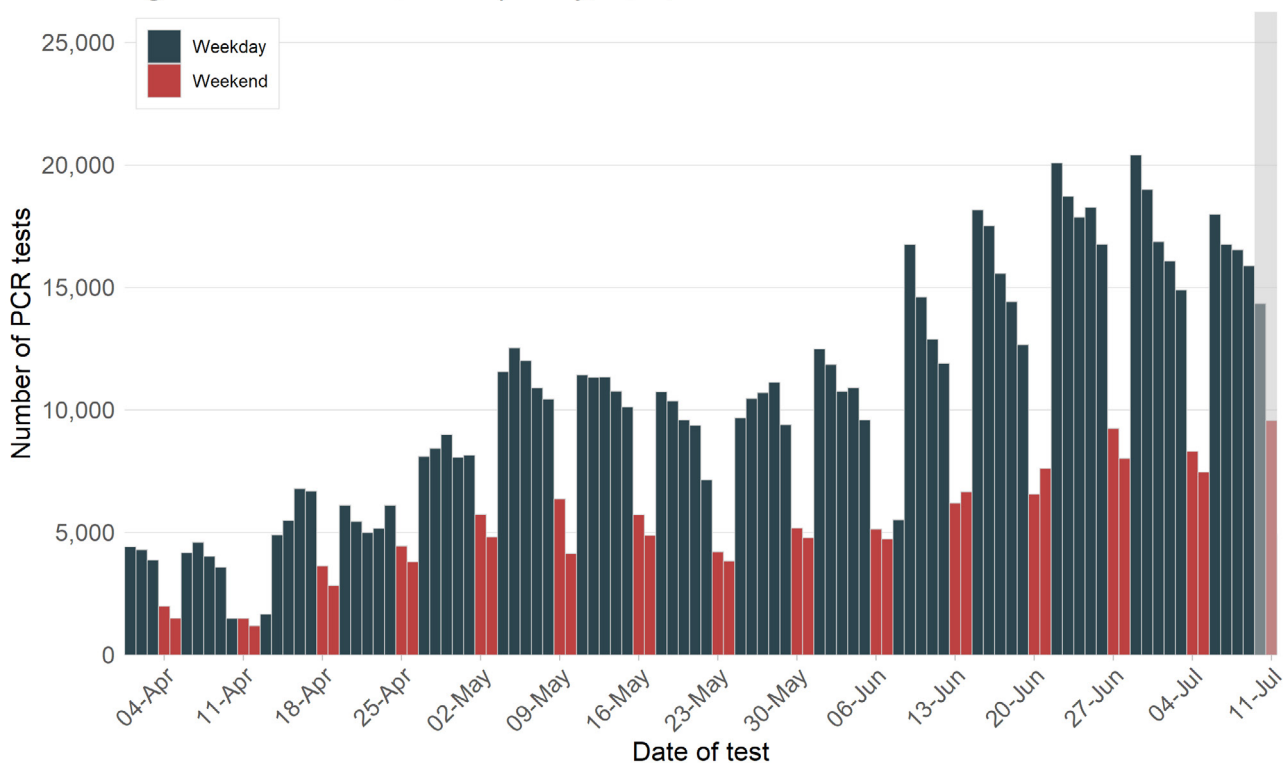
Interpretation: Early in the outbreak, infections were more common in residents of metropolitan Sydney (particularly in South Eastern Sydney and Northern Sydney Local Health Districts (LHDs)) and this likely reflected the residence of travellers who returned from countries with COVID-19 transmission. This week, cases in Nepean Blue Mountains and South Western Sydney LHDs have been associated with a cluster at the Crossroads Hotel. A further two cases in Murrumbidgee were household contacts of a case who had returned from Melbourne.

How much testing is happening?

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 in the community without symptoms except in special settings when cases have been identified such as aged care, health care, disability homes and schools.

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.

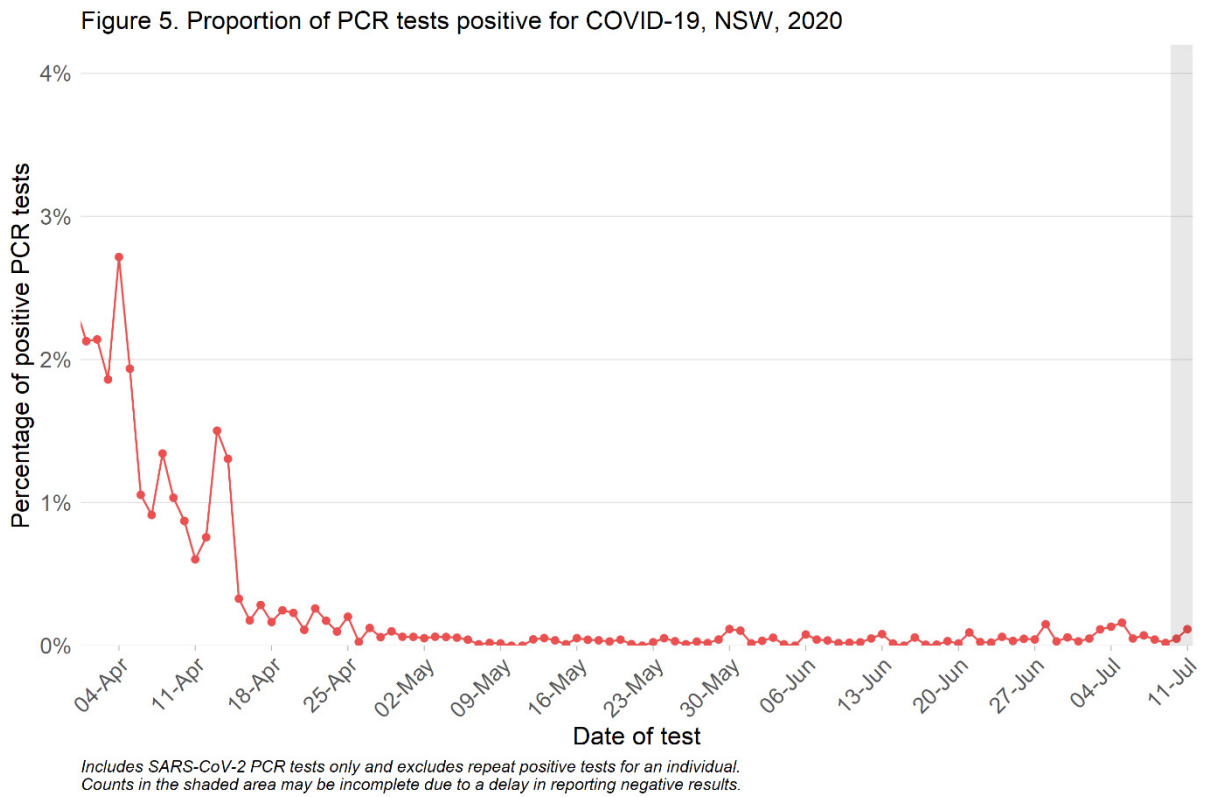
Figure 4. Number of PCR tests per day, NSW, 2020



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

Interpretation: COVID-19 testing has increased significantly since April in line with the changes in testing criteria and increased availability of testing. Early in the outbreak the focus was on returned travellers and close contacts of confirmed cases, whereas now testing is recommended for anyone with even mild respiratory symptoms or unexplained fever. Throughout June and July testing rates remain high.

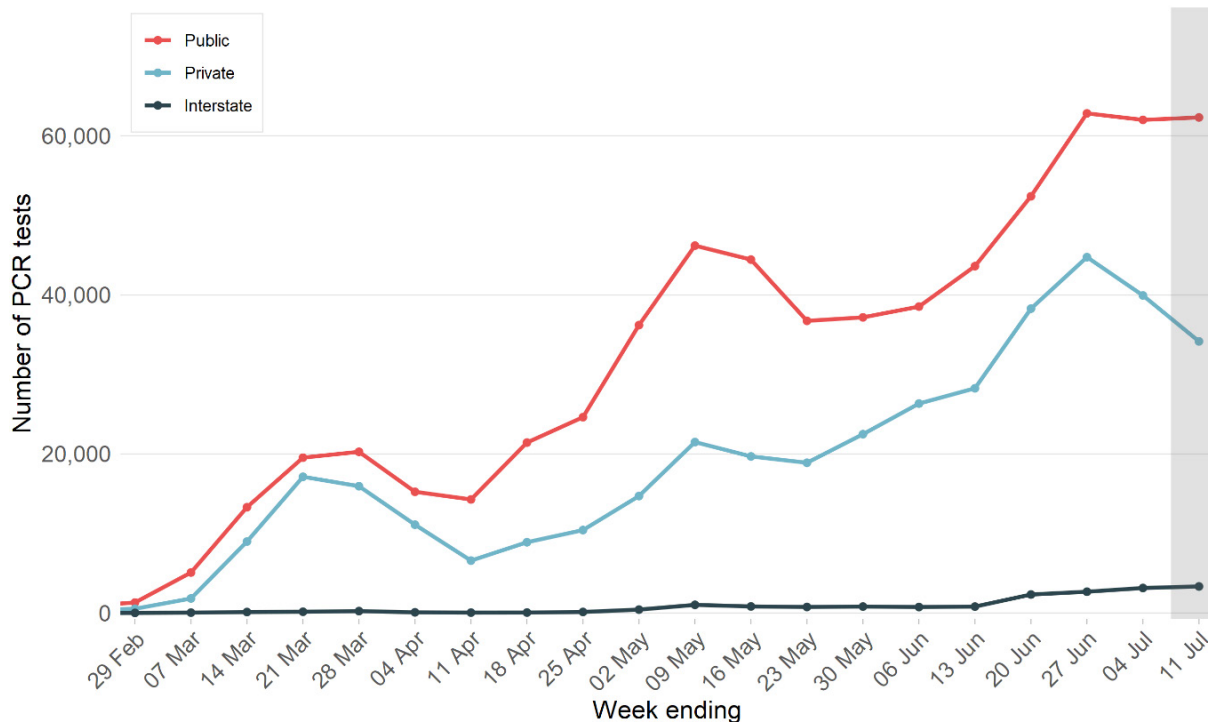
¹ The number of tests per day displayed below is different to the 24 hour increase in tests reported each day as there are delays in some laboratories providing negative results to NSW Health.



Interpretation: The 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.

Which laboratories are doing the testing?

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



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

Interpretation: In the week ending 11 July, approximately 60% of tests were done in public laboratories.

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 is a review of locally-acquired cases based on the date of symptom onset.²

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 **incubation period** and the time it takes for people to seek testing and the laboratory to perform the test. Some people who test 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, 14 June to 11 July 2020

Locally-acquired cases	Week of symptom onset			
	11 July	4 July	27 June	20 June
Contact of a confirmed case and/or part of a known cluster	5	2	0	0
Source not identified	0	0	0	2
Total	5	2	0	2

Interpretation: For the week ending 11 July, three symptomatic cases were reported as part of the Crossroads Hotel cluster and two cases were household contacts of a known case from the same cluster. Two cases with onset in the week ending 4 July were household contacts of a returned traveller from Melbourne. The two cases reported with onset in the week ending 20 June attended different schools during their infectious period.

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.

² This analysis differs from Table 1, which is presented by date of report.

Cases and testing by gender

Nine cases had symptom onset during the four-week period; four males and five females.

Table 3. Rates of COVID-19 testing by gender, up to 11 July 2020*

Gender	Week ending 11 July		Week ending 4 July		Total to 11 July	
	No. tests	No. tests per 1,000 population	No. tests	No. tests per 1,000 population	No. tests	No. tests per 1,000 population
Female	53,784	13.2	56,486	13.9	591,652	145.2
Male	44,525	11.1	46,902	11.7	463,647	115.5

*Excludes cases with unavailable information on gender.

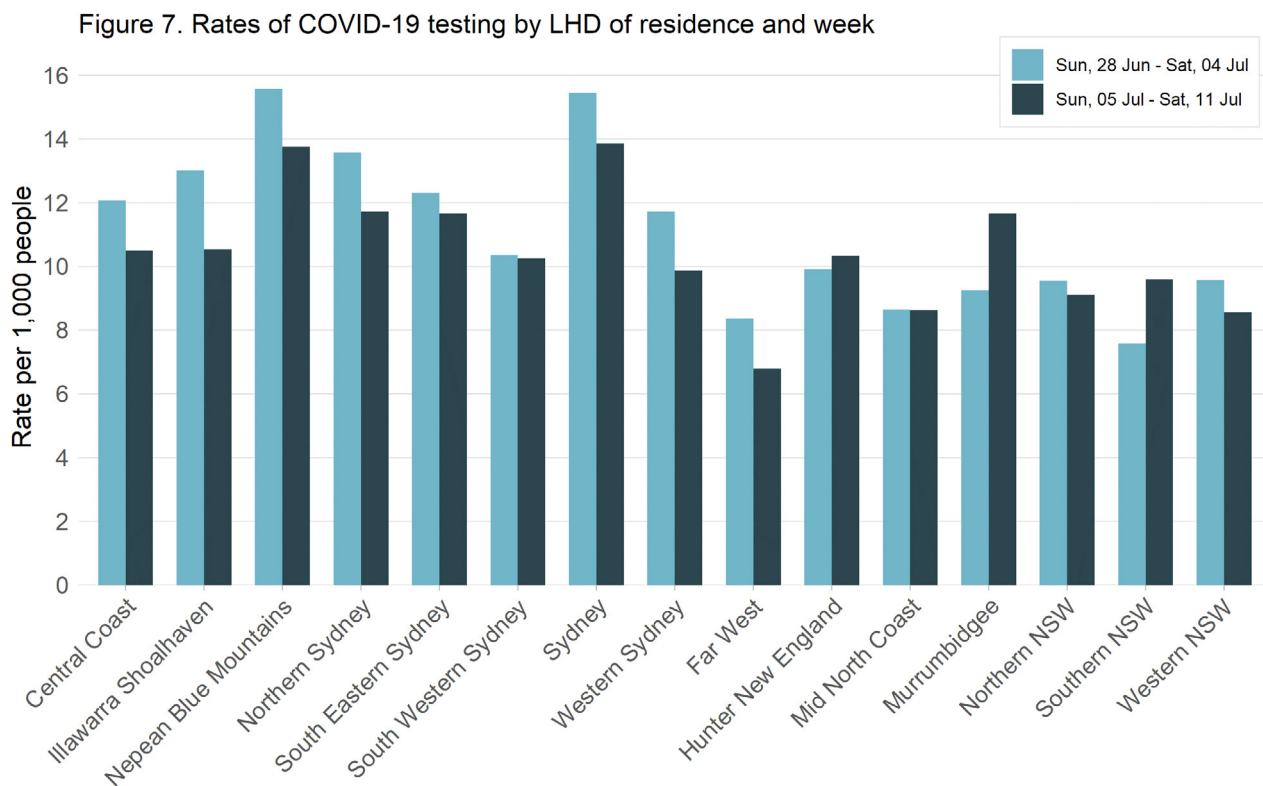
Interpretation: Testing was similar for both males and females in the week ending 11 July compared with the previous week. Females continue to have a higher rate of testing compared to males.

Cases and testing by Local Health District of residence

Table 4. Symptomatic locally-acquired COVID-19 cases by LHD of residence and week of onset, 14 June to 11 July 2020

Local Health District	Week of symptom onset				Total
	11 July	4 July	27 June	20 June	
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	2	0	0	2
Nepean Blue Mountains	3	0	0	0	3
Northern NSW	0	0	0	0	0
Northern Sydney	0	0	0	1	1
South Eastern Sydney	0	0	0	0	0
South Western Sydney	2	0	0	1	3
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	5	2	0	2	9

Interpretation: The nine cases with symptom onset in the last four weeks included three residents each from Nepean Blue Mountains and South Western Sydney LHDs, two residents from Murrumbidgee LHD and one from Northern Sydney LHD.



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

Interpretation: Statewide testing rates in the week ending 11 July were similar when compared to the previous week (12 per 1,000 vs 13 per 1,000). Hunter New England, Murrumbidgee and Southern NSW LHDs reported higher rates of testing in the week ending 11 July when compared to the previous week.

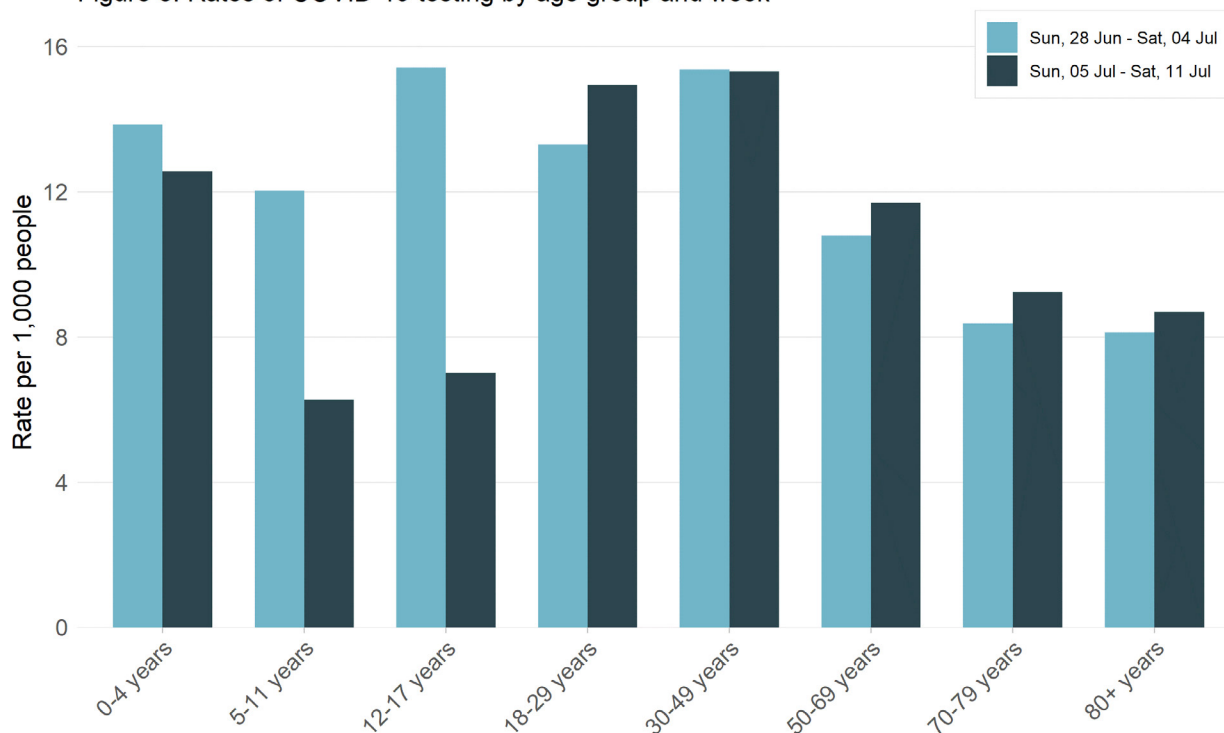
Cases and testing by age group

Table 5. Symptomatic locally-acquired COVID-19 cases by age group and week of onset, 14 June to 11 July 2020

Age group	Week ending				Total
	11 July	4 July	27 June	20 June	
0-4 years	0	0	0	0	0
5-11 years	0	0	0	1	1
12-17 years	1	0	0	1	2
18-29 years	1	0	0	0	1
30-49 years	2	1	0	0	3
50-69 years	1	1	0	0	2
70-79 years	0	0	0	0	0
80+ years	0	0	0	0	0
All ages	5	2	0	2	9

Interpretation: There were nine symptomatic cases reported in recent weeks, including a primary school-aged child, two secondary school-aged children, four adults aged less than 50 years and two adults over 50 years old.

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



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

Interpretation: Testing rates decreased significantly in school-aged children in the week ending 11 July and increased in young adults and those older than 50 years.

Testing for COVID-19 in areas with locally-acquired cases

High rates of testing are necessary to identify other cases and enable public health action to limit the spread of infection. The following analysis is based on the date that the case was reported to NSW Health.

Table 6. Testing in areas with locally-acquired cases, reported from 14 June to 11 July 2020

LGA	Cases				Tests				Tests per 1,000 population			
	11 July	4 July	27 June	20 June	11 July	4 July	27 June	20 June	11 July	4 July	27 June	20 June
Albury	2	0	0	0	1,033	435	411	323	19.0	8.0	7.6	5.9
Blue Mountains	4	0	0	0	1,299	1,424	1,514	1,226	16.4	18.0	19.1	15.5
Campbelltown	1	0	0	0	2,135	2,186	2,579	2,214	12.5	12.8	15.1	13.0
Liverpool	1	0	0	0	2,858	2,282	2,595	2,463	12.6	10.0	11.4	10.8

Interpretation: Rates of testing in the four LGAs with local cases were higher than or similar to the state rate each week for the last four weeks, except for Albury LGA. In Albury LGA, the testing rate doubled in the week ending 11 July compared to the previous three weeks. This is likely to be in response to the increasing number of COVID-19 cases in Victoria. These high rates of testing and low number of cases throughout NSW suggest low rates of transmission in the community.

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

All people who undergo testing are advised to stay at home while they are waiting for test results to avoid spreading infection to others. Diagnosis as close as possible to the time symptoms start is important as it enables close contacts to be quarantined early, which reduces the risk of further transmission. Of the eight cases reported in the week ending 11 July, four were tested on or before the day their symptoms started and the remaining four were tested two days after their symptoms began.

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. The time taken to receive a negative result is typically longer (data not shown).

Despite marked increases in testing since January, the median 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. Since 14 June, a total of 13 locally-acquired cases have been diagnosed out of 402,338 tests.

Table 7. Time from testing to notification for locally-acquired COVID-19 cases reported from 14 June to 11 July 2020

Time from test to notification	Cases
Same day	5
1 day	4
2 days	2
3 days	2

Interpretation: Nine of the thirteen newly diagnosed cases reported in the four weeks ending 11 July were notified to NSW Health within one day of the test being conducted.

Cases in Aboriginal people

There was one case in an Aboriginal person in the week ending 11 July. The most recent case prior to this was an overseas-acquired infection reported in the week ending 30 May.

Cases in pregnant women

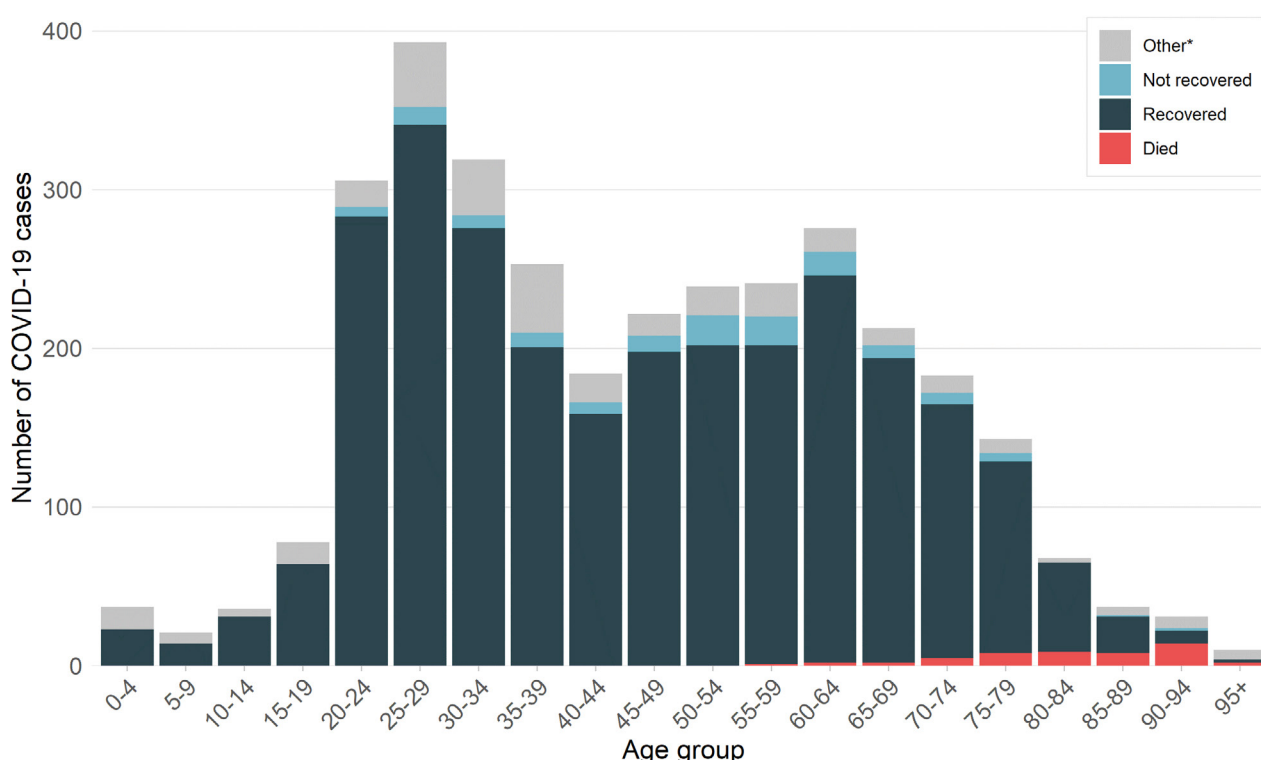
There was one case in a pregnant woman reported in the week ending 11 July.

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. The bars on the figure below show the total number of cases by age group and health status up to 11 July. This includes all cases reported in NSW (acquired locally and overseas).

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



*Cases with recovery data unavailable (including those within 3 weeks of symptom onset). Includes both local and overseas acquired cases.

Interpretation: Overall, approximately 85% of cases have recovered.

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

In total, 1.6% of cases (51 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.

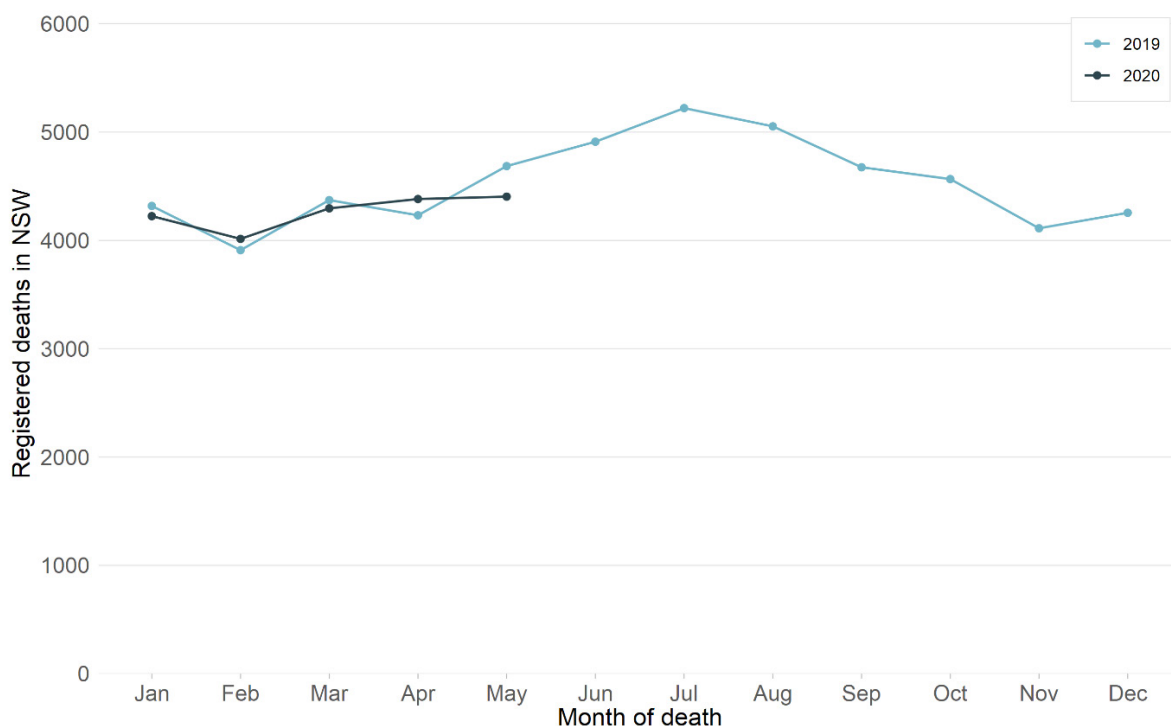
Internationally it is estimated that 4.4% of COVID-19 cases are reported to have died as a result of their infection.³ Countries such as Italy, the United Kingdom and Spain have reported higher mortality rates (14.4%, 15.5% and 11.2%), while NSW reports similar rates to South Korea (2.1%) and New Zealand (1.8%).

³ WHO Coronavirus disease (COVID-19) Situation Report - 175
<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 09 July, 2020

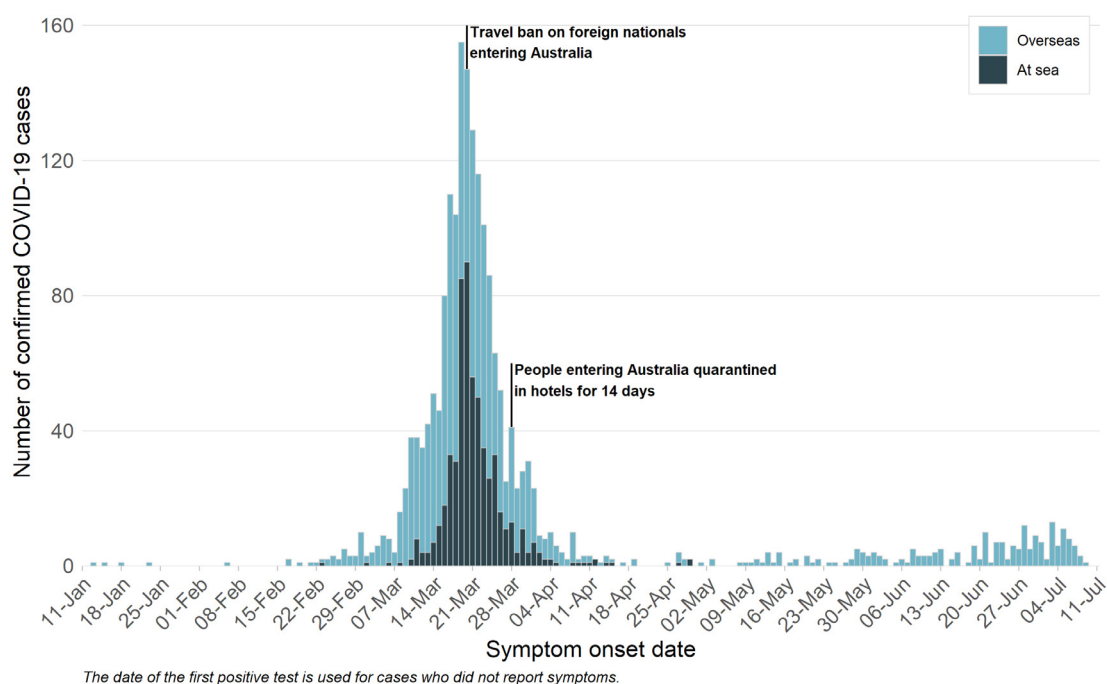


Interpretation: When compared to the same period in 2019, the numbers of registered deaths were slightly higher in April, but lower in May. While there is a lag in notification of deaths, there is no indication to date that the COVID-19 pandemic in NSW is causing an overall increase in mortality.

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



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

Interpretation: Up to 11 July, cruise ship passengers accounted for the largest number of overseas-acquired infections (581 cases). Following this, cases were most commonly returning from the United Kingdom (331 cases), United States (279 cases) and Pakistan (105 cases).

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 (91%, 154 cases) reported in NSW in the last four weeks.

Most travellers diagnosed in quarantine are returning Australian nationals and the country where people acquired their infection in recent weeks can be influenced by the numbers and size of arriving repatriation flights. Effective hotel quarantine minimises the risk of transmission to the community. In the four weeks ending 11 July, cases had most commonly returned from Pakistan (71 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 ending 11 July, a total of 3,661 people were screened at Sydney International Airport and 39 were referred for testing. Since screening began on 2 February, a total of 95,865 people have been screened with 1,134 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 5 July 2020

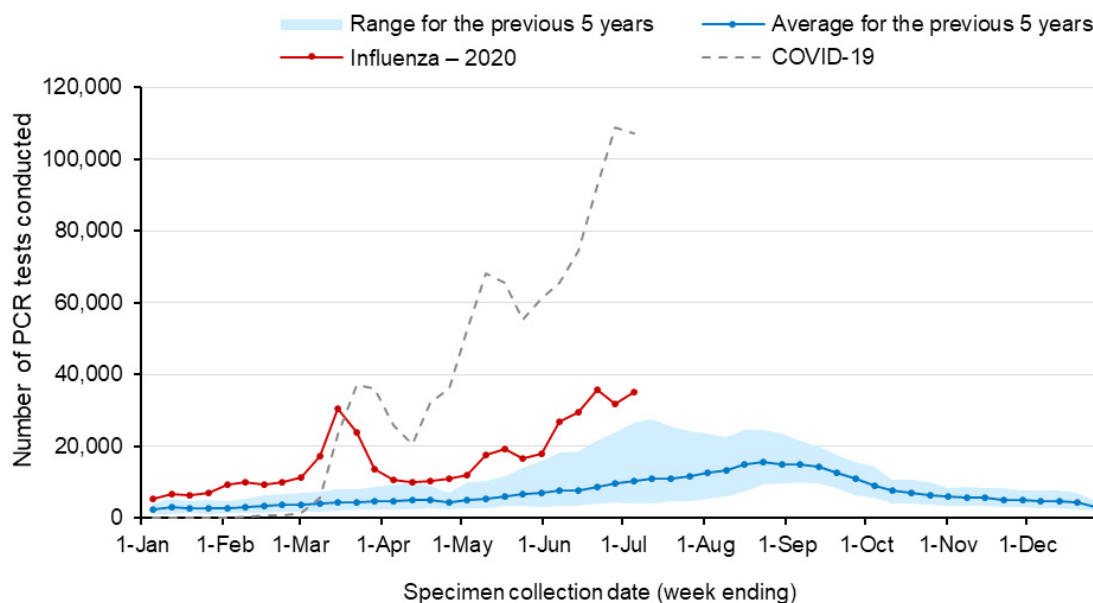
In NSW, routine surveillance for influenza and other respiratory viruses is conducted through sentinel laboratories. The number of all PCR tests (positive and negative) are provided to NSW Health by participating laboratories each week. Testing counts reflect the number of influenza PCR tests conducted;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

The most recent data available is for testing carried out to 5 July. A total of 445,605 influenza tests have been performed at participating laboratories to 5 July, with 35,188 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 12. Testing for influenza and COVID-19 by week, to 5 July 2020

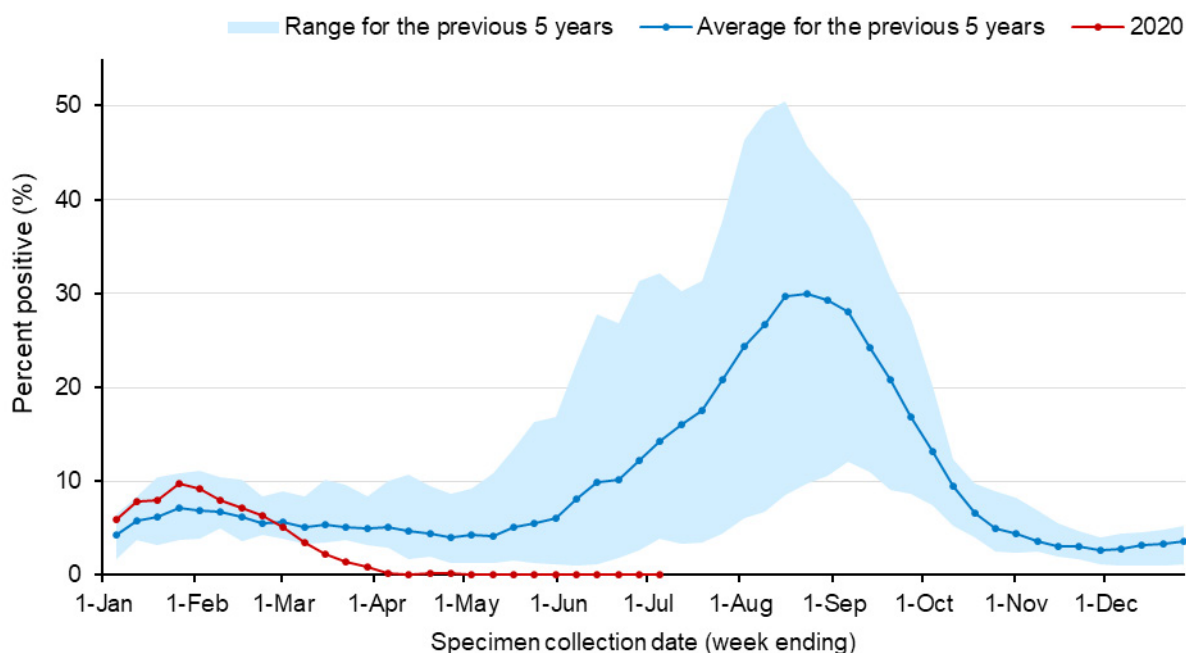


Interpretation: The number of influenza tests performed has exceeded the previous five-year average every week this year. The peak in March corresponds to an increase in testing for COVID-19 virus. The subsequent decline of influenza testing, and sharp increase in COVID-19 testing from early April, reflects 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.

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 13. Proportion of tests positive for influenza, to 5 July 2020



Interpretation: The percent of influenza tests that were positive in the week ending 5 July 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?

No influenza deaths were reported in the week ending 5 July. The number of influenza-related deaths identified via Coroner’s reports and death registrations from 1 January to 5 July 2020 is lower than the same period last year (12 deaths in 2020 compared with 70 in 2019).⁴ Two-thirds of the deaths were in people aged 65 years and over.

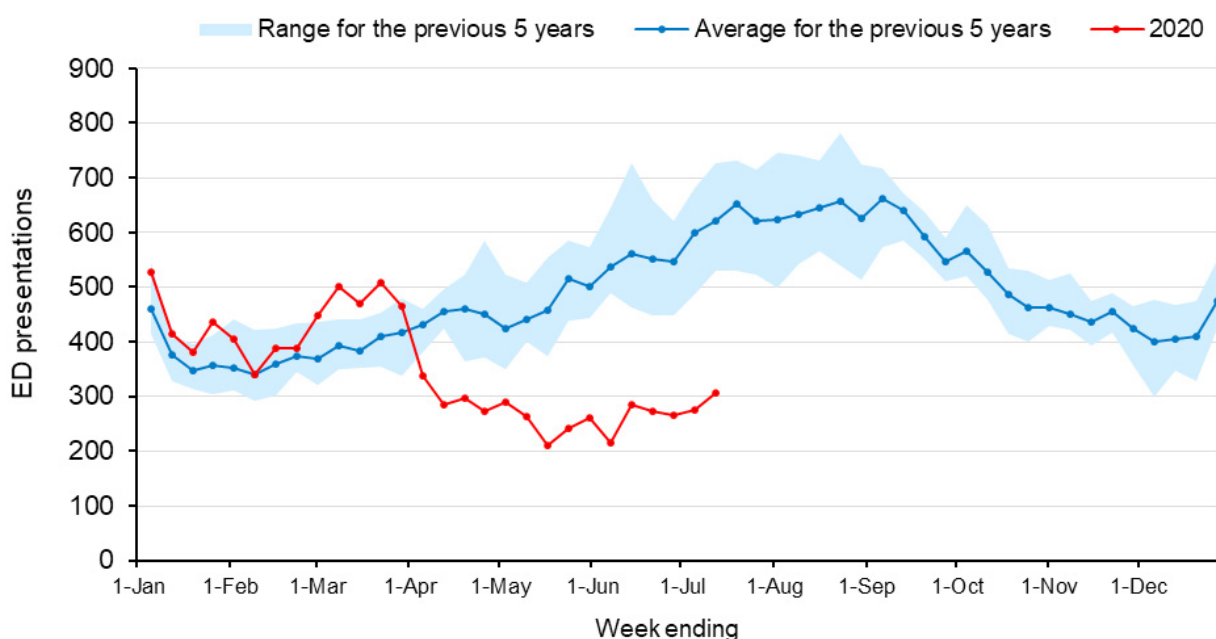
⁴ Includes deaths in people with laboratory-confirmed influenza.

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.⁵

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 14. Emergency Department pneumonia presentations in NSW by week, to 12 July 2020



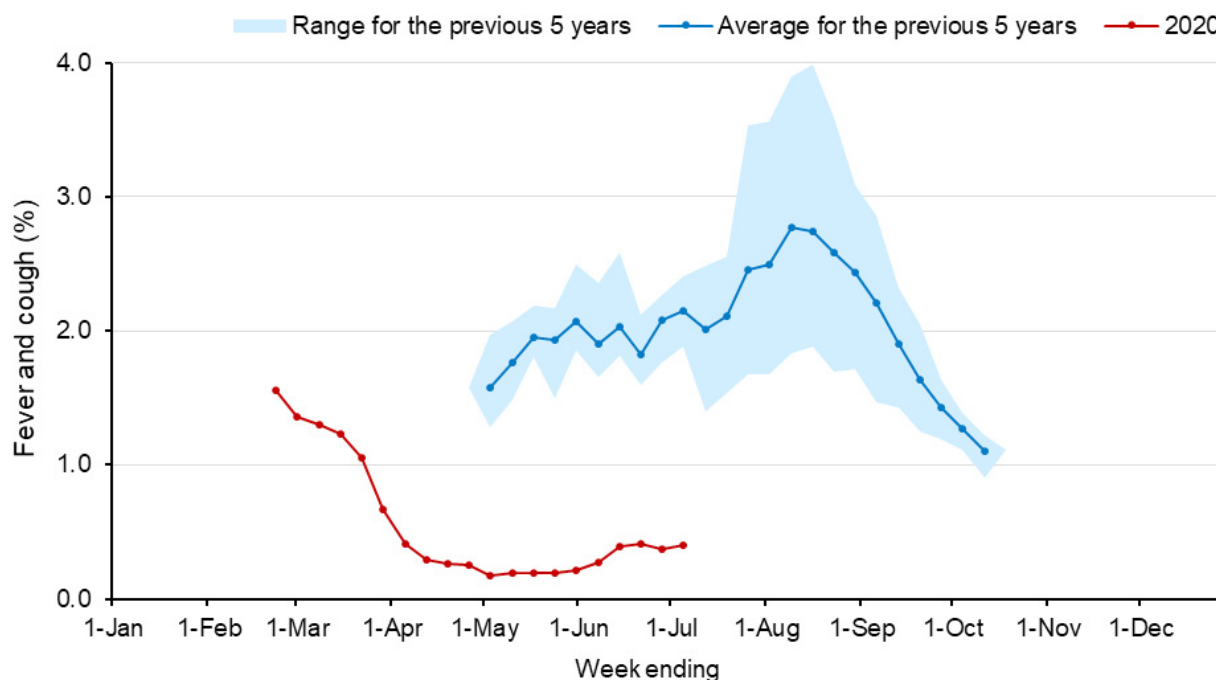
Interpretation: Pneumonia presentations decreased from the end of March and have continued to remain well below the usual range for this time of year.

⁵ 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 15. Proportion of FluTracker participants in NSW reporting influenza-like illness, to 5 July 2020



Interpretation: In NSW in the week ending 5 July, of the 24,345 people surveyed, 98 people (0.4%) reported flu-like symptoms. The proportion of people reporting symptoms has increased in recent weeks but 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	
		11 July		4 July		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	3705	10.5	4260	12.1	45655	129.4
Far West	Balranald	20	8.6	12	5.1	118	50.5
	Broken Hill	112	6.4	143	8.2	1602	91.7
	Central Darling	14	7.6	8	4.4	106	57.6
	Wentworth	59	8.4	89	12.6	633	89.8
	LHD Total ²	205	6.8	252	8.4	2459	81.6
Hunter New England	Armidale Regional	235	7.6	243	7.9	3807	123.7
	Cessnock	492	8.2	489	8.2	5870	97.9
	Dungog	60	6.4	67	7.1	794	84.3
	Glen Innes Severn	63	7.1	80	9.0	791	89.2
	Gunnedah	89	7.0	82	6.5	856	67.5
	Gwydir	31	5.8	13	2.4	248	46.3
	Inverell	132	7.8	108	6.4	1600	94.7
	Lake Macquarie	2307	11.2	2113	10.3	28282	137.4
	Liverpool Plains	40	5.1	69	8.7	786	99.5
	Maitland	1137	13.4	1036	12.2	13195	154.9
	Mid-Coast	623	6.6	727	7.8	8561	91.2
	Moree Plains	86	6.5	89	6.7	1142	86.1
	Muswellbrook	161	9.8	164	10.0	1521	92.9
	Narrabri	69	5.3	58	4.4	991	75.5
	Newcastle	2494	15.1	2232	13.5	27598	166.7
	Port Stephens	790	10.8	792	10.8	8937	121.6
	Singleton	301	12.8	317	13.5	3274	139.6
	Tamworth Regional	527	8.4	543	8.7	8673	138.7
	Tenterfield	31	4.7	31	4.7	377	57.2
	Upper Hunter Shire	131	9.2	140	9.9	1460	103.0
	Uralla	38	6.3	27	4.5	468	77.8
Walcha	12	3.8	18	5.7	308	98.3	
LHD Total ²	9842	10.3	9434	9.9	119459	125.4	
Illawarra Shoalhaven	Kiama	311	13.3	392	16.8	3326	142.2
	Shellharbour	871	11.9	1127	15.4	10201	139.3
	Shoalhaven	930	8.8	1089	10.3	11673	110.5
	Wollongong	2311	10.6	2855	13.1	25785	118.2
	LHD Total ²	4423	10.5	5463	13.0	50985	121.5

Local Health District	Local Government Area	Week ending				Total	
		11 July		4 July		No.	Tests per 1,000 population
		No.	Tests per 1,000 population	No.	Tests per 1,000 population		
Mid North Coast	Bellingen	110	8.5	137	10.5	1241	95.5
	Coffs Harbour	630	8.2	685	8.9	6973	90.2
	Kempsey	261	8.8	232	7.8	2965	99.7
	Nambucca	151	7.6	136	6.9	1616	81.6
	Port Macquarie-Hastings	795	9.4	761	9.0	7698	91.1
	<i>LHD Total²</i>	1947	8.6	1951	8.7	20493	90.8
Murrumbidgee	Albury	1033	19.0	435	8.0	4215	77.6
	Berrigan	89	10.2	93	10.6	628	71.8
	Bland	36	6.0	59	9.9	449	75.2
	Carrathool	11	3.9	1	0.4	82	29.3
	Coolamon	37	8.5	38	8.8	387	89.2
	Cootamundra-Gundagai Regional	99	8.8	100	8.9	976	86.9
	Edward River	131	14.4	140	15.4	900	99.1
	Federation	146	11.7	78	6.3	802	64.5
	Greater Hume Shire	192	17.8	104	9.7	892	82.9
	Griffith	295	10.9	332	12.3	2448	90.6
	Hay	21	7.1	7	2.4	176	59.7
	Hilltops	141	7.5	165	8.8	1344	71.9
	Junee	44	6.6	35	5.2	349	52.2
	Lachlan ¹	35	5.8	65	10.7	290	47.7
	Leeton	66	5.8	69	6.0	761	66.5
	Lockhart	30	9.1	22	6.7	282	85.8
	Murray River	38	3.1	38	3.1	122	10.1
	Murrumbidgee	36	9.2	32	8.2	265	67.7
	Narrandera	34	5.8	21	3.6	331	56.1
	Snowy Valleys	130	9.0	142	9.8	1234	85.2
	Temora	46	7.3	37	5.9	476	75.5
	Wagga Wagga	802	12.3	800	12.3	7986	122.4
<i>LHD Total²</i>	3477	11.7	2758	9.3	25231	84.6	
Nepean Blue Mountains	Blue Mountains	1299	16.4	1424	18.0	14567	184.1
	Hawkesbury	875	13.0	1016	15.1	9942	147.7
	Lithgow	188	8.7	216	10.0	2251	104.2
	Penrith	3056	14.4	3473	16.3	36392	170.9
	<i>LHD Total²</i>	5380	13.8	6092	15.6	62802	160.6

Local Health District	Local Government Area	Week ending				Total	
		11 July		4 July		No.	Tests per 1,000 population
		No.	Tests per 1,000 population	No.	Tests per 1,000 population		
Northern NSW	Ballina	499	11.2	493	11.1	5303	118.8
	Byron	439	12.5	408	11.6	4404	125.5
	Clarence Valley	360	7.0	364	7.1	4009	77.6
	Kyogle	48	5.5	69	7.8	507	57.6
	Lismore	473	10.8	515	11.8	4879	111.7
	Richmond Valley	269	11.5	227	9.7	2242	95.6
	Tenterfield	31	4.7	31	4.7	377	57.2
	Tweed	733	7.6	880	9.1	8619	88.9
	<i>LHD Total²</i>	2827	9.1	2966	9.6	30054	96.8
Northern Sydney	Hornsby	1360	8.9	1813	11.9	16862	110.9
	Hunters Hill	361	24.1	435	29.0	4452	297.2
	Ku-ring-gai	1750	13.8	2024	15.9	19566	153.9
	Lane Cove	1077	26.8	1207	30.1	12220	304.3
	Mosman	388	12.5	408	13.2	4863	157.0
	North Sydney	734	9.8	825	11.0	9044	120.6
	Northern Beaches	3083	11.3	3540	12.9	38496	140.8
	Parramatta ¹	2175	8.5	2456	9.6	23610	91.8
	Ryde	1306	10.0	1416	10.8	15962	121.6
	Willoughby	701	8.6	794	9.8	8291	102.1
<i>LHD Total²</i>	11203	11.7	12983	13.6	134412	140.6	
South Eastern Sydney	Bayside	1542	8.6	1633	9.2	17656	99.0
	Georges River	1337	8.4	1540	9.7	15403	96.6
	Randwick	2023	13.0	2142	13.8	26443	169.9
	Sutherland Shire	3296	14.3	3651	15.8	36132	156.7
	Sydney ¹	3335	13.5	3026	12.3	35028	142.2
	Waverley	1090	14.7	1063	14.3	16828	226.5
	Woollahra	929	15.6	934	15.7	12843	216.3
	<i>LHD Total²</i>	11181	11.7	11804	12.3	135787	141.6
South Western Sydney	Camden	1547	15.3	1887	18.6	16966	167.3
	Campbelltown	2135	12.5	2186	12.8	21931	128.3
	Canterbury-Bankstown ¹	3313	8.8	3649	9.7	38420	101.7
	Fairfield	1356	6.4	1383	6.5	14232	67.2
	Liverpool	2858	12.6	2282	10.0	24453	107.5
	Wingecarribee	667	13.0	694	13.6	7662	149.8
	Wollondilly	419	7.9	509	9.6	4801	90.3
	<i>LHD Total²</i>	10646	10.3	10755	10.4	108875	104.8

Local Health District	Local Government Area	Week ending				Total	
		11 July		4 July		No.	Tests per 1,000 population
		No.	Tests per 1,000 population	No.	Tests per 1,000 population		
Southern NSW	Bega Valley	570	16.5	264	7.7	2904	84.2
	Eurobodalla	389	10.1	359	9.3	3774	98.1
	Goulburn Mulwaree	301	9.7	293	9.4	3486	112.0
	Queanbeyan-Palerang Regional	441	7.2	364	6.0	5006	81.9
	Snowy Monaro Regional	213	10.2	202	9.7	1808	86.9
	Upper Lachlan Shire	63	7.8	55	6.8	712	88.4
	Yass Valley	106	6.2	109	6.4	1219	71.3
	<i>LHD Total²</i>	2084	9.6	1647	7.6	18912	87.1
Sydney	Burwood	299	7.4	330	8.1	3261	80.3
	Canada Bay	1215	12.7	1481	15.4	14827	154.3
	Canterbury-Bankstown ¹	3313	8.8	3649	9.7	38420	101.7
	Inner West	3613	18.0	4416	22.0	36521	181.9
	Strathfield	542	11.6	563	12.0	5632	120.0
	Sydney ¹	3335	13.5	3026	12.3	35028	142.2
	<i>LHD Total²</i>	9667	13.9	10768	15.5	103959	149.2
Western NSW	Bathurst Regional	457	10.5	543	12.5	5016	115.0
	Blayney	58	7.9	65	8.8	893	121.0
	Bogan	12	4.7	17	6.6	195	75.6
	Bourke	10	3.9	57	22.0	157	60.6
	Brewarrina	25	15.5	7	4.4	135	83.8
	Cabonne	96	7.0	63	4.6	851	62.4
	Cobar	34	7.3	32	6.9	224	48.1
	Coonamble	14	3.5	23	5.8	310	78.3
	Cowra	106	8.3	93	7.3	984	77.2
	Dubbo Regional	474	8.8	547	10.2	4755	88.5
	Forbes	49	5.0	43	4.3	454	45.8
	Gilgandra	25	5.9	17	4.0	219	51.7
	Lachlan ¹	35	5.8	65	10.7	290	47.7
	Mid-Western Regional	271	10.7	302	12.0	2481	98.3
	Narromine	45	6.9	46	7.1	430	66.0
	Oberon	32	5.9	48	8.9	490	90.6
	Orange	449	10.6	501	11.8	5428	127.9
	Parkes	80	5.4	93	6.3	931	62.8
	Walgett	54	9.1	40	6.7	501	84.2
	Warren	31	11.5	35	13.0	353	130.9
Warrumbungle Shire	70	7.5	81	8.7	794	85.6	
Weddin	32	8.9	16	4.4	227	62.8	
<i>LHD Total²</i>	2440	8.6	2727	9.6	26009	91.3	

Local Health District	Local Government Area	Week ending				Total	
		11 July		4 July		No.	Tests per 1,000 population
		No.	Tests per 1,000 population	No.	Tests per 1,000 population		
Western Sydney	Blacktown	4195	11.2	5098	13.6	48441	129.4
	Cumberland	2100	8.7	2320	9.6	23375	96.8
	Parramatta ¹	2175	8.5	2456	9.6	23610	91.8
	The Hills Shire	2307	13.0	2913	16.4	26591	149.4
	<i>LHD Total²</i>	10395	9.9	12348	11.7	118138	112.2
NSW Total³		98,563	12.2	103,605	12.8	1,058,605	130.9

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 5 JULY 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 — 5 July 2020									
Count	445,605	6,584	946	3,715	8,892	4,592	71,584	1,933	3,496
% Positive		1.5%	0.2%	0.8%	2.0%	1.0%	16.1%	0.4%	0.8%
Month ending									
3 February*	34,953	2,508	401	846	1,900	752	5,036	599	335
1 March	40,575	2,363	315	798	2,435	1,118	8,245	437	1,007
29 March	85,238	1,549	200	898	4,117	1,977	18,088	664	1,502
3 May*	54,128	70	13	175	273	410	2,250	48	210
31 May	71,525	35	6	237	62	115	3,511	27	112
28 June	123,998	47	10	591	81	178	26,285	112	241
Week ending									
5 July	35,188	12	1	170	24	42	8,169	46	89

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

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>