

COVID-19 WEEKLY SURVEILLANCE IN NSW

EPIDEMIOLOGICAL WEEK 20, ENDING 16 MAY 2020

Published 19 May 2020

SUMMARY FOR THE WEEK ENDING 16 MAY

- Currently, NSW has high rates of testing (including in Aboriginal people) and low case counts which suggests that COVID-19 transmission in the community is limited.
- However, while the number of locally acquired cases remain low, the source of infection was unable to be identified for 9 of the 10 new cases diagnosed in this week. This suggests there is community transmission, albeit at limited levels.
- No new cases were identified in children, pregnant women or Aboriginal people this week.
- While testing rates remain higher in NSW compared with other countries, a decrease was observed this week when compared to last week. This was consistent across almost all Local Health Districts and in all age groups over 30 years of age.
- High rates of testing early in the illness are key to understanding the extent of illness in the community and enable continued suppression of transmission. This is critically important now as the potential for transmission increases with the relaxation of social distancing measures.
- Public health efforts are continuing to focus on:
 - early identification and isolation of infectious people and quarantining of all close contacts to limit the spread of infection
 - identification of the source of infection for all new cases so that areas of concern for potentially undetected community transmission can be targeted for testing
 - strongly encouraging people 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?

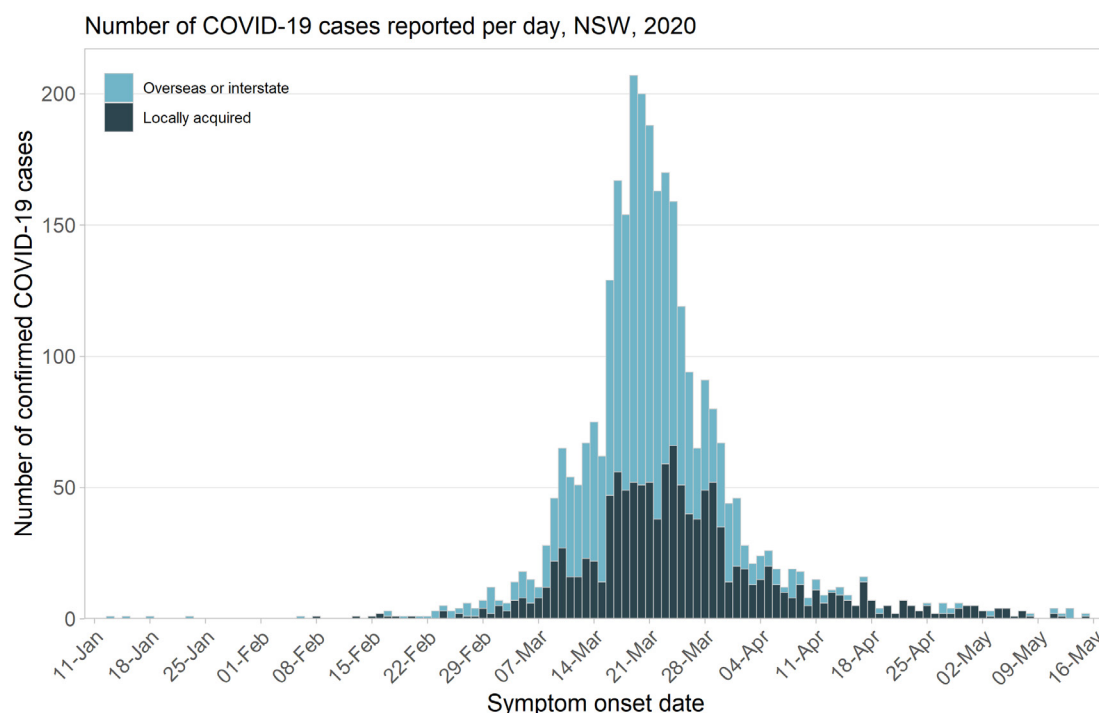
COVID-19 cases and tests reported in NSW, up to 16 May 2020

	Week ending 16 May	Week ending 9 May	% change	Total to 16 May
Number of cases	23	25	-8%	3,075
<i>Overseas acquired</i>	8	5	+60%	1,770
<i>Interstate acquired</i>	0	1	-100%	71
<i>Locally acquired</i>	15	19	-25%	1,234
Number of deaths	1	2	-50%	48
Number tested	60,648	67,779	-6.46%	374,556

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.

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.

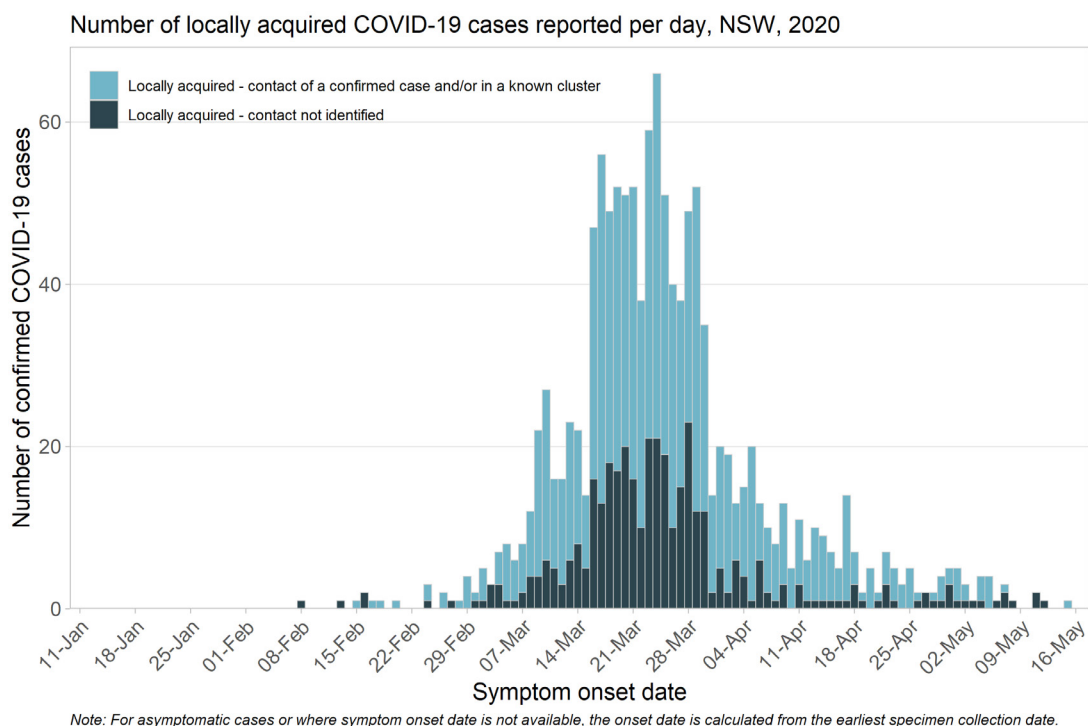


Interpretation: Approximately 60% of COVID-19 infections diagnosed in NSW to 16 May were acquired outside of NSW (almost all overseas) and the remaining 40% have been acquired locally (in NSW). The number of new cases reported in NSW has decreased significantly since the peak in mid-March.

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 indicate that there are people infected with COVID-19 in the community who have not been diagnosed.

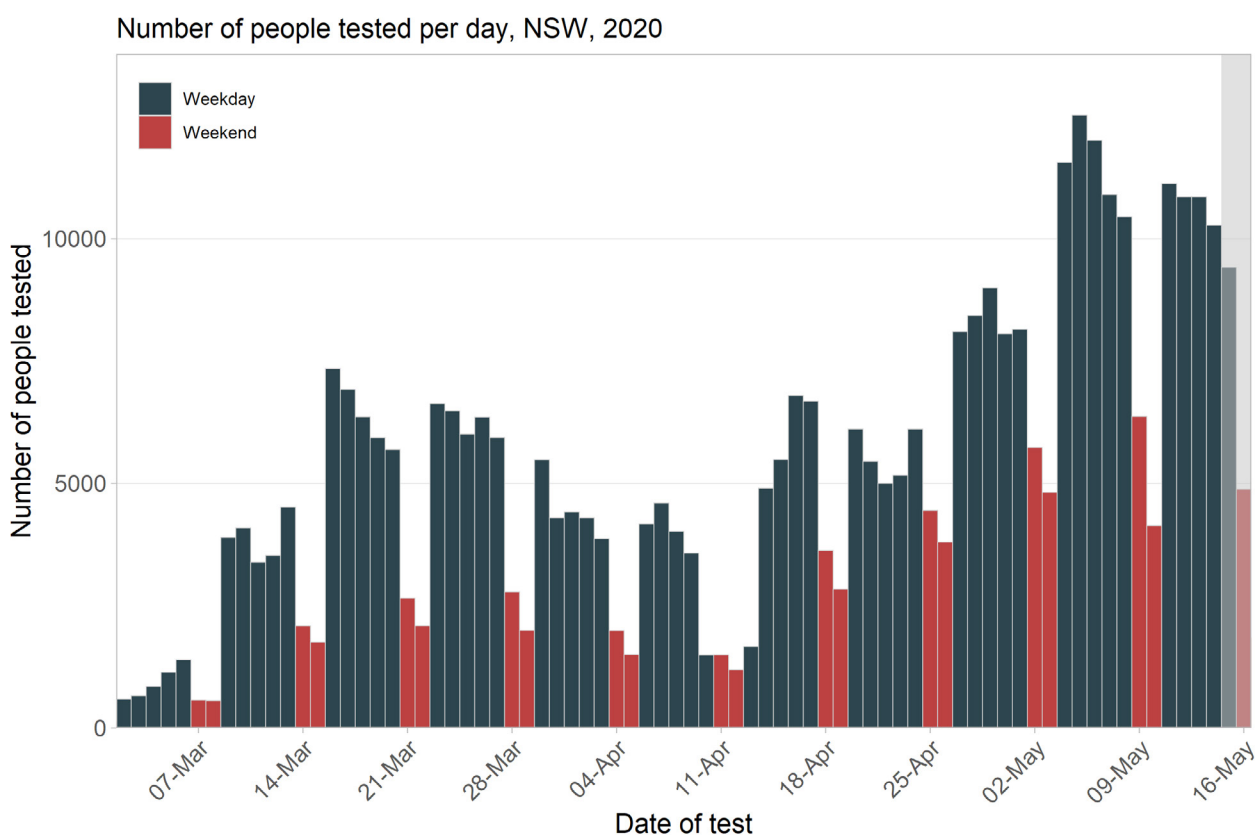
In March, when the number of new cases diagnosed each day was high, public health efforts were focussed on contact tracing to limit further spread in the community. With a decline in cases, increased attention is given to identifying the source of infection for every case. High rates of testing are needed 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.



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. The number and size of clusters will be closely monitored as changes to social distancing rules are implemented.

How much testing is happening?

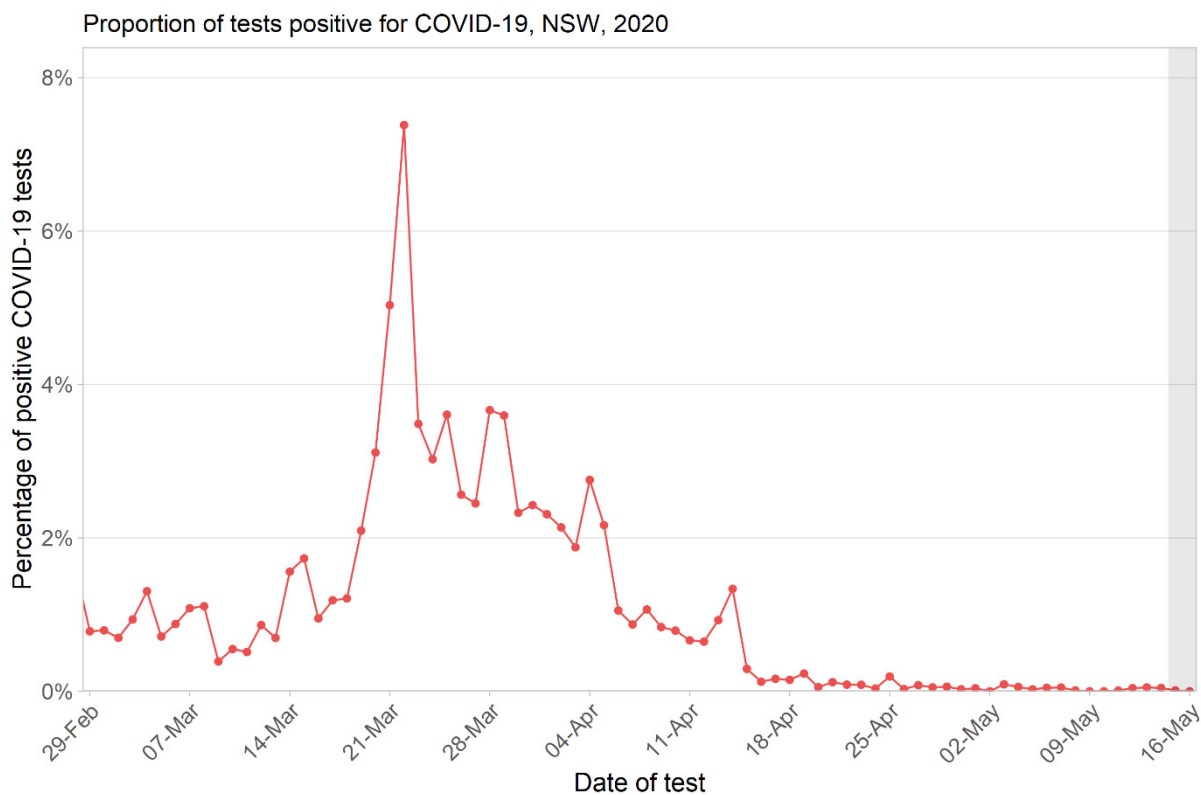
The bars on the graph below show the number of people tested by the date the person presented for the test. This number is different to the number of results notified to NSW Health each day as the laboratory needs time to conduct the test. To enable prompt public health action, laboratories prioritise notification of all positive results to Public Health over negative test results. 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.



Interpretation: COVID-19 testing has increased significantly in April and May in line with the changes in the criteria for testing and increased availability of testing. Early in the outbreak the focus was on returning travellers whereas now testing is now recommended for anyone with even mild respiratory symptoms or unexplained fever.

Testing rates in NSW continue to remain high at 46 tests per 1,000 population (NSW cases = 3074). This is similar to rates reported in New Zealand (47 per 1,000; 1,499 cases), and higher than in countries such as South Korea (15 per 1000 population; 11,050 cases), USA (36 per 1000; 1,526,215 cases), the UK (38 per 1000; 243,695 cases), Singapore (42 per 1,000; 28,038 cases); Germany (38 per 1,000; 176,651 cases), or Canada (36 per 1,000; 77,002 cases).

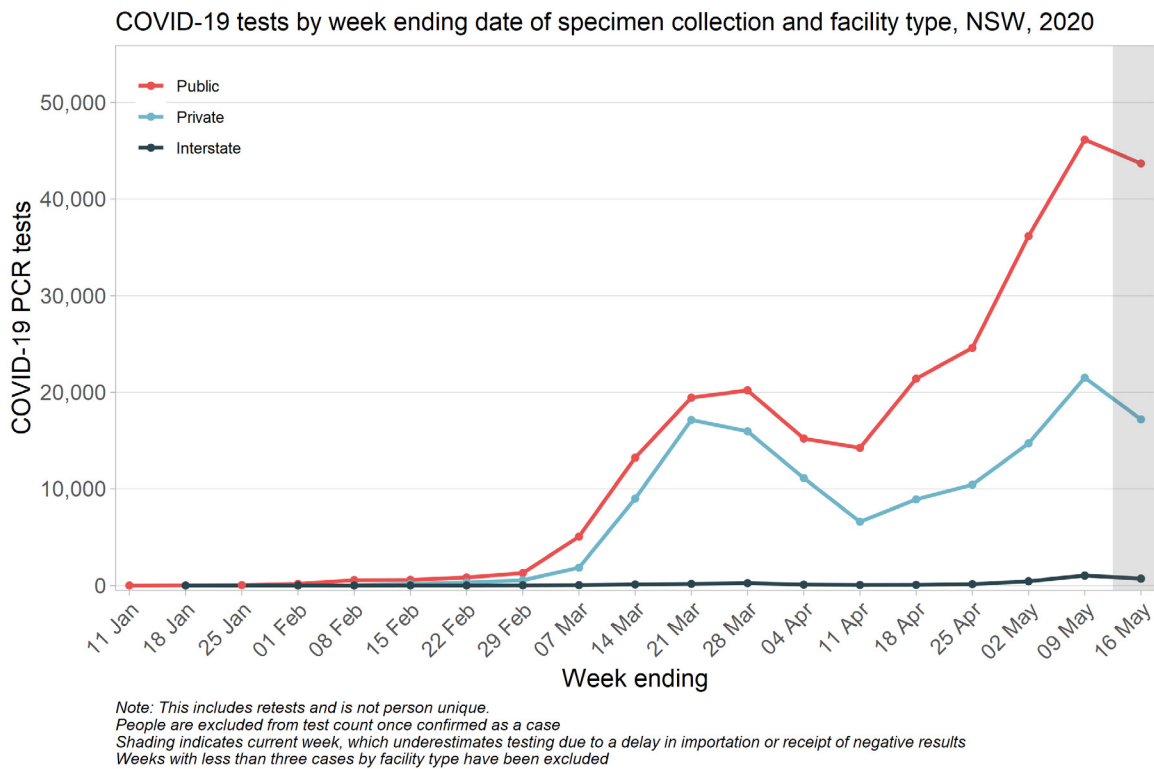
Some of the highest testing rates in the world are currently being reported in countries such as Iceland (167 per 1,000; 1,802 cases), the United Arab Emirates (162 per 1,000; 23,358 cases), Lithuania (84 per 1,000; 1,541 cases), and Denmark (79 per 1,000; 10,927 cases). There is continued investment both at the state and federal level to ensure all symptomatic people in NSW have access to timely testing.



Interpretation: The number of people diagnosed and proportion of tests positive for COVID-19 in NSW has been declining since mid-March, despite the marked increase in testing. This suggests there is currently limited transmission in the community.

High rates of testing are critically important 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?



Interpretation: Recent increases in testing have occurred in both public and private laboratories.

SECTION 2: COVID-19 TRANSMISSION IN NSW IN THE LAST 2 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. Cases whose symptoms developed some time ago are excluded when considering how much transmission is happening in the last week.

Locally acquired COVID-19 cases diagnosed in NSW by source of infection, 3 May to 16 May 2020*

Locally acquired cases	Case count week ending 16 May	Case count week ending 9 May
Contact of a confirmed case and/or part of a known cluster	1	15
Source not identified	9	5
Total	10	20

*Excludes five cases reported in the week ending 16 May who had earlier symptom onsets and includes an additional case tested in the week ending 9 May who was notified the week ending 16 May.

Interpretation: While the number of locally acquired cases remain low, the source of infection was unable to be identified for 9 of the 10 new cases diagnosed in the week ending 16 May. Two of the cases with an unknown source are pending further laboratory testing to confirm the diagnosis. It is encouraging that these cases sought testing despite having no links to known cases. Rapid identification of cases in the community is critical to enable continued suppression of transmission.

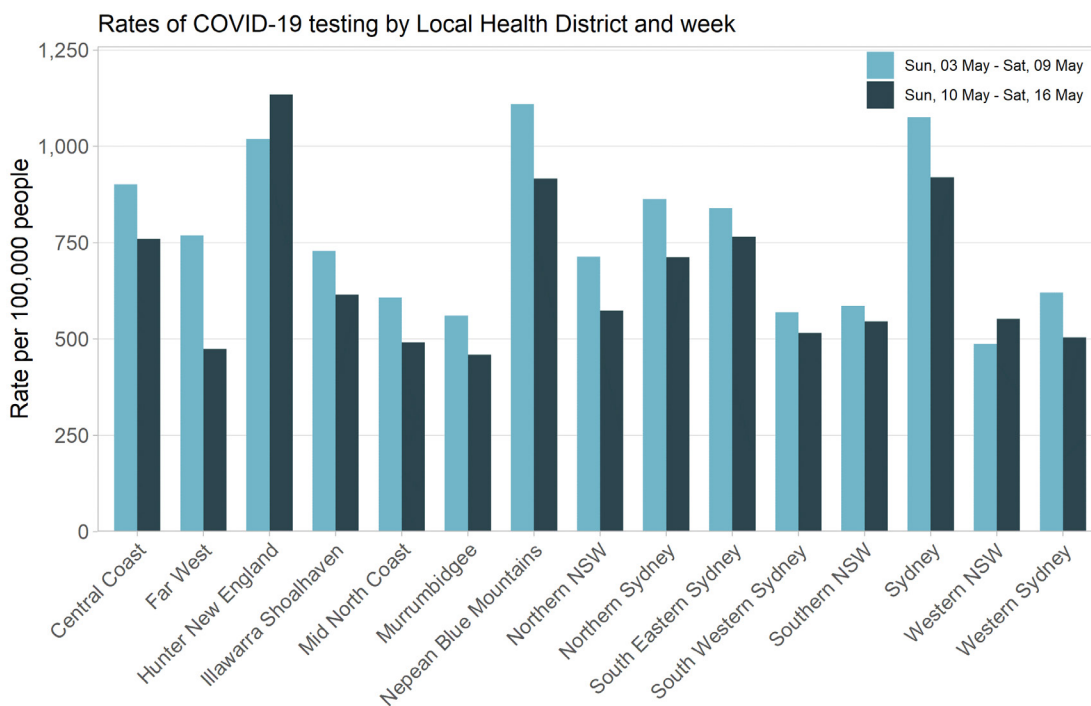
Cases and testing by Local Health District of residence

Locally acquired COVID-19 cases by Local Health District of residence, 3 May to 16 May 2020

Local Health District	Week ending 16 May	Week ending 9 May
Central Coast	0	1
Illawarra Shoalhaven	0	1
Nepean Blue Mountains	2	2
Northern NSW	1	0
Northern Sydney	2	0
South Eastern Sydney	4	1
South Western Sydney	0	3
Southern NSW	0	2
Sydney	0	6
Western Sydney	1	2
Liverpool	0	1
Parramatta	0	1
Grand Total	10	20

Interpretation: This table shows the number of cases acquired in NSW according to the person's Local Health District (LHD) of residence. This does not mean that the infection was acquired in that district, as many people travel outside their place of residence for work or other reasons. Cases notified in the week

ending 16 May were from areas across metropolitan Sydney and do not appear to have had common exposures. The low case numbers indicate low levels of undiagnosed illness in the community.



Interpretation: Hunter New England LHD reported the highest rates of testing in the week ending 16 May. With the exception of Hunter New England and Western NSW, testing rates were lower this week in all LHDs when compared with the previous week.

Areas identified for increased COVID-19 testing

NSW Health is encouraging testing for all people with respiratory symptoms or unexplained fever but especially those who live in locations identified as an area of concern for potentially undetected community transmission. Public health staff identify these areas based on an understanding of the recently reported cases and the local testing rates. For the week ending 16 May, this included Canada Bay, Canterbury-Bankstown and Cumberland Local Government Areas (LGAs).

COVID-19 cases and testing in areas identified for increased testing, 3 May to 16 May 2020

LGA	Week ending 16 May			Week ending 9 May			% change in tests
	No. cases	No. tests	No. tested per 100,000 population	No. cases	No. tests	No. tested per 100,000 population	
Canada Bay	0	1102	1147	2	1272	1324	-13%
Canterbury-Bankstown	0	2367	626	2	2389	632	-1%
Cumberland	0	1134	470	1	1190	493	-5%

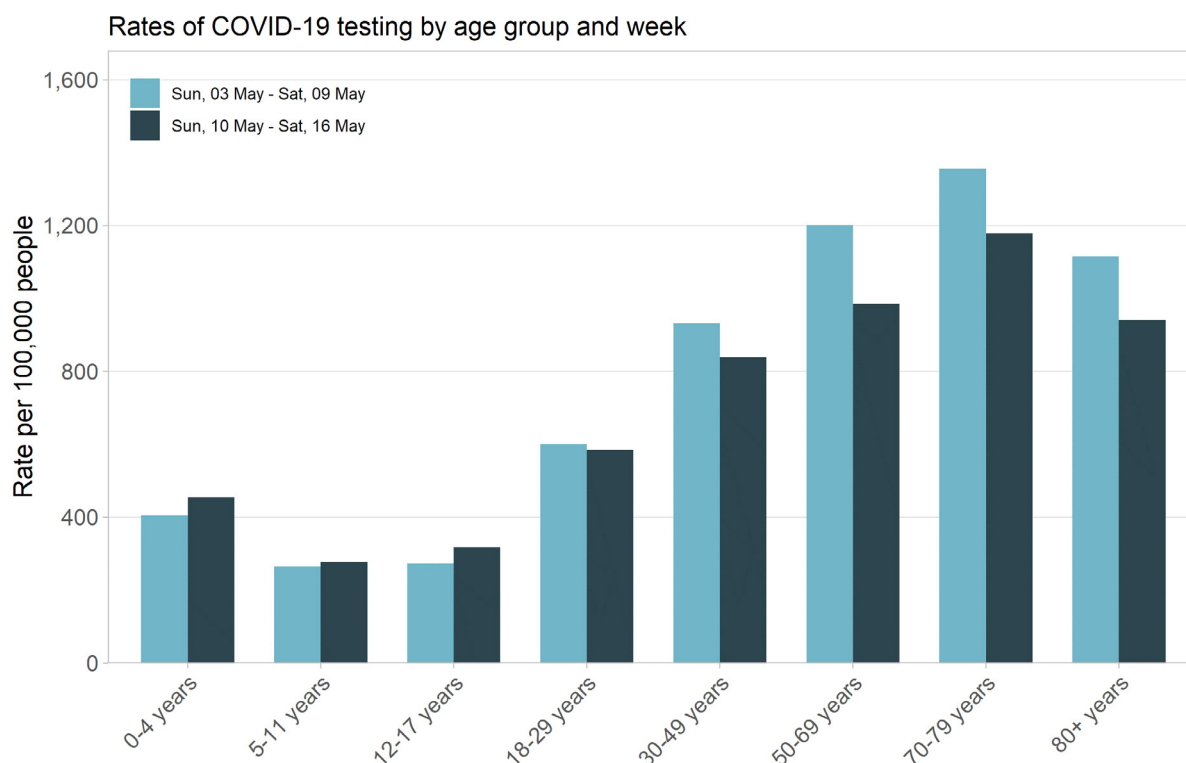
Interpretation: Despite being identified as areas for increased testing in the week ending 16 May, the number of people tested was similar to the week ending 9 May. It is encouraging, however, that no new cases were identified amongst those tested this week.

Cases and testing by age group

Locally acquired COVID-19 cases by age group, 3 May to 16 May 2020

Age group	Case count week ending 16 May	Case count week ending 9 May
0-4 years	0	0
5-11 years	0	1
12-17 years	0	1
18-29 years	1	5
30-49 years	6	8
50-69 years	2	4
70-79 years	1	0
80+ years	0	1
All ages	10	20

Interpretation: No new cases were identified in children this week. In the week ending 16 May, cases were most commonly aged 30-49 years.



Interpretation: While lower testing rates continue to be observed in children, rates remained relatively stable in the week ending 16 May when compared to the previous week. Lower testing rates were observed in the week ending 16 May in all age groups over 29 years.

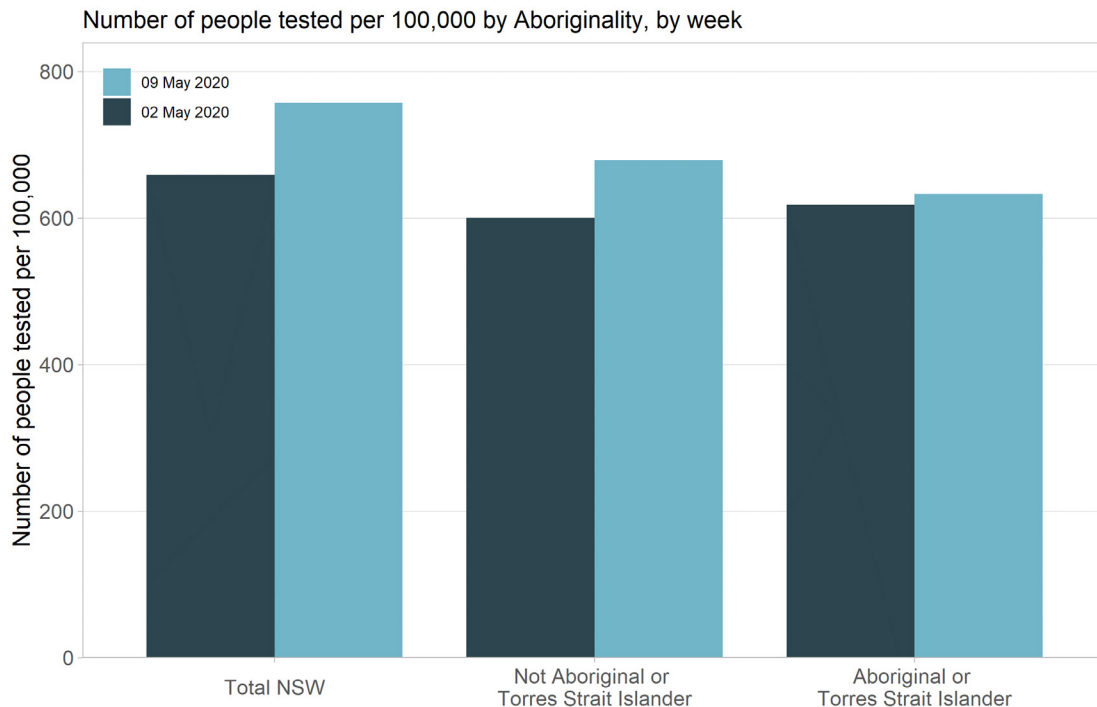
Cases in pregnant women

There have been no new cases in pregnant women in week ending 16 May.

Cases and testing in Aboriginal people

There have been no new cases among Aboriginal people in the week ending 16 May. The most recent COVID-19 case in an Aboriginal person was reported in the week ending 2 May 2020.

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 9 May 2020. Aboriginal status was ascertained for approximately 90% of all COVID-19 records for both the week ending 2 May and 9 May.

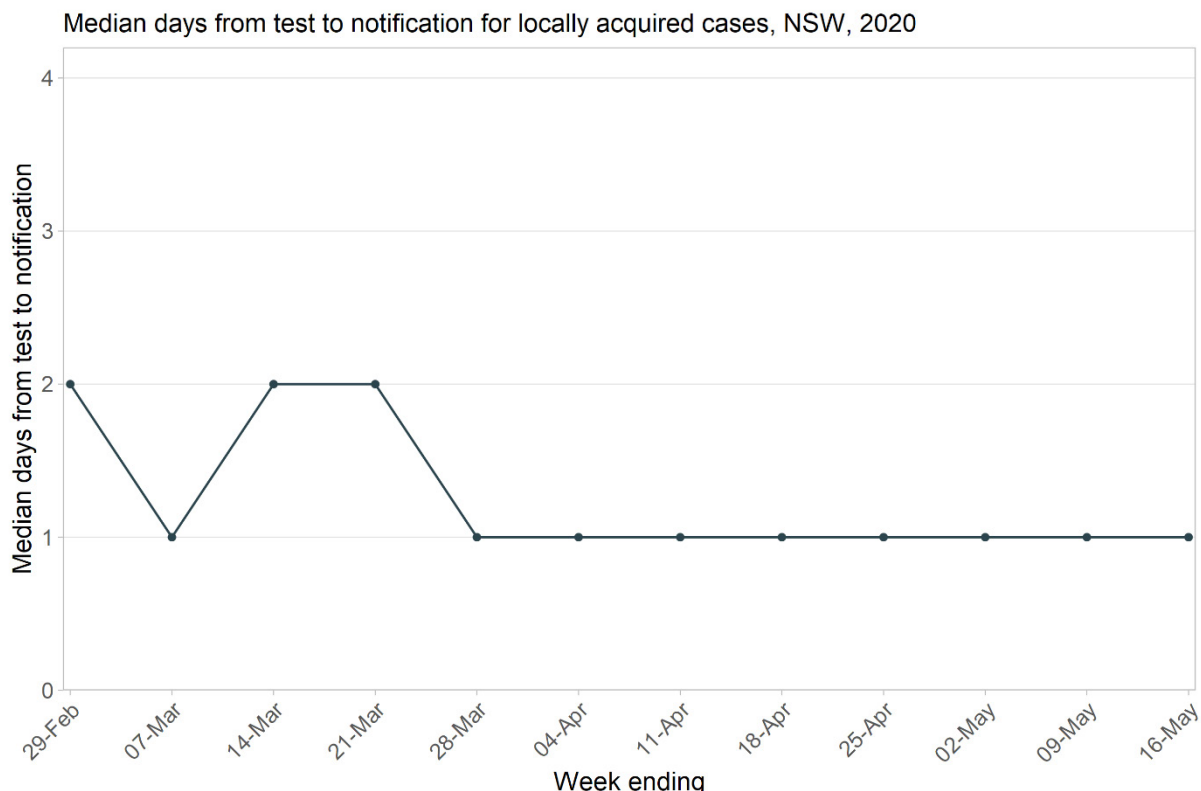


*Total rates include people with unknown Aboriginality status.

Interpretation: Similar rates of testing occurred in Aboriginal people in the week ending 9 May compared with the previous week. Testing rates in Aboriginal people are comparable with non-Aboriginal people. The high rates of testing and low case counts suggest limited COVID-19 transmission is occurring amongst Aboriginal people currently. Continued testing of symptomatic people is critical to prevent transmission in the community in general and is especially important in the Aboriginal population. Higher rates of chronic disease and factors such as high numbers of people per household and barriers to accessing health care make Aboriginal people a vulnerable group.

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. This graph shows median time (measured in whole days) from test date to COVID-19 diagnosis (test result) by week. The time taken to receive a negative result is typically longer.

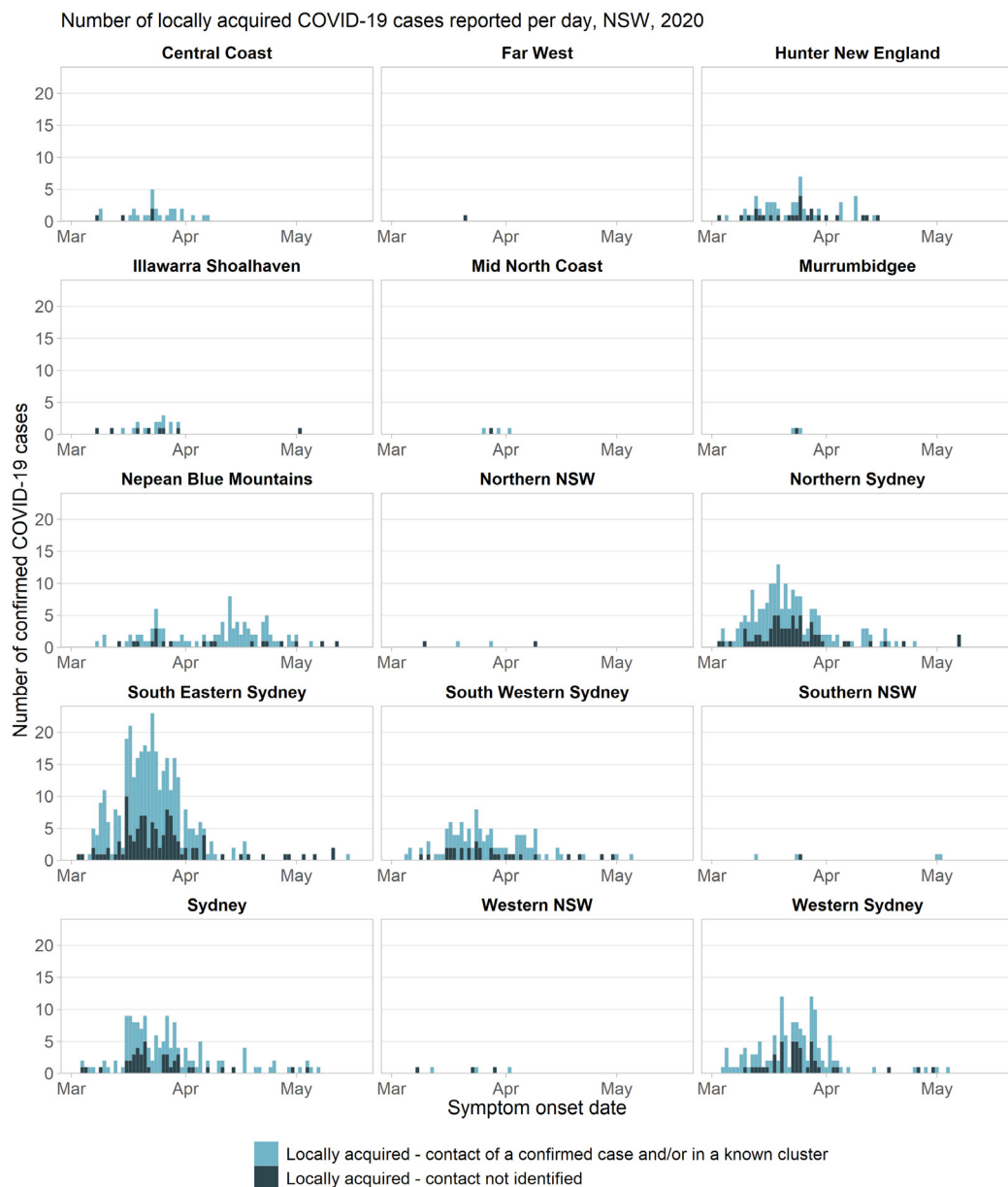


Interpretation: Despite marked increases in testing overall, the median time to notification has remained at one day since the end of March.

SECTION 3: OVERVIEW OF COVID-19 TRANSMISSION IN NSW

While the previous section focussed on most recent weeks, this section considers COVID-19 transmission in NSW more broadly.

Where has transmission occurred in NSW?



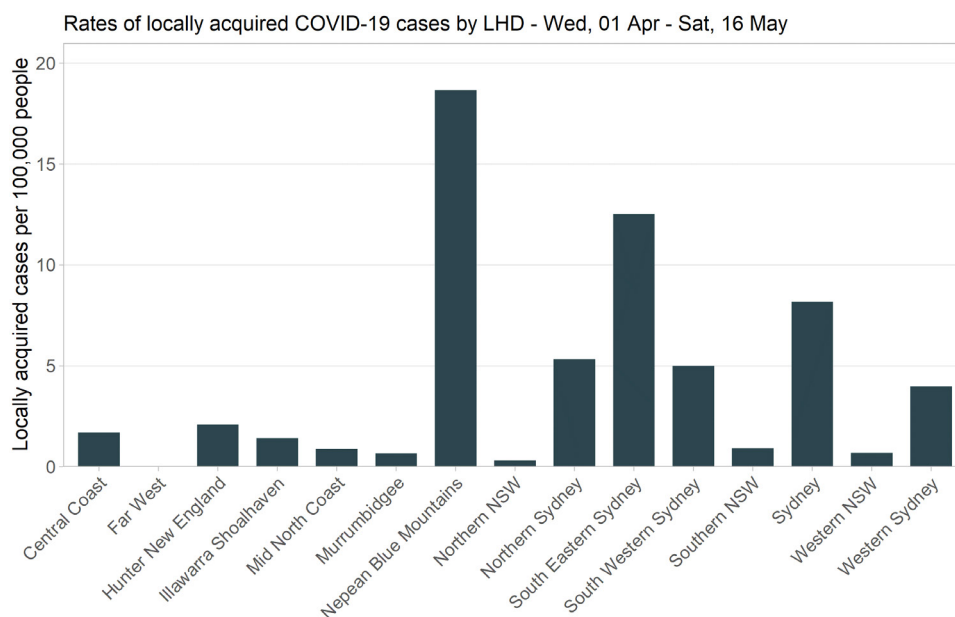
Note: For asymptomatic cases or where symptom onset date is not available, the onset date is calculated from the earliest specimen collection date.

Interpretation: Early in the outbreak cases 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 high risk countries. More recently, there was an increase in cases in Nepean Blue Mountains LHD, largely due to an outbreak in the Anglicare Newmarch House aged care facility. Currently very limited transmission has been detected in people living in regional and rural NSW.

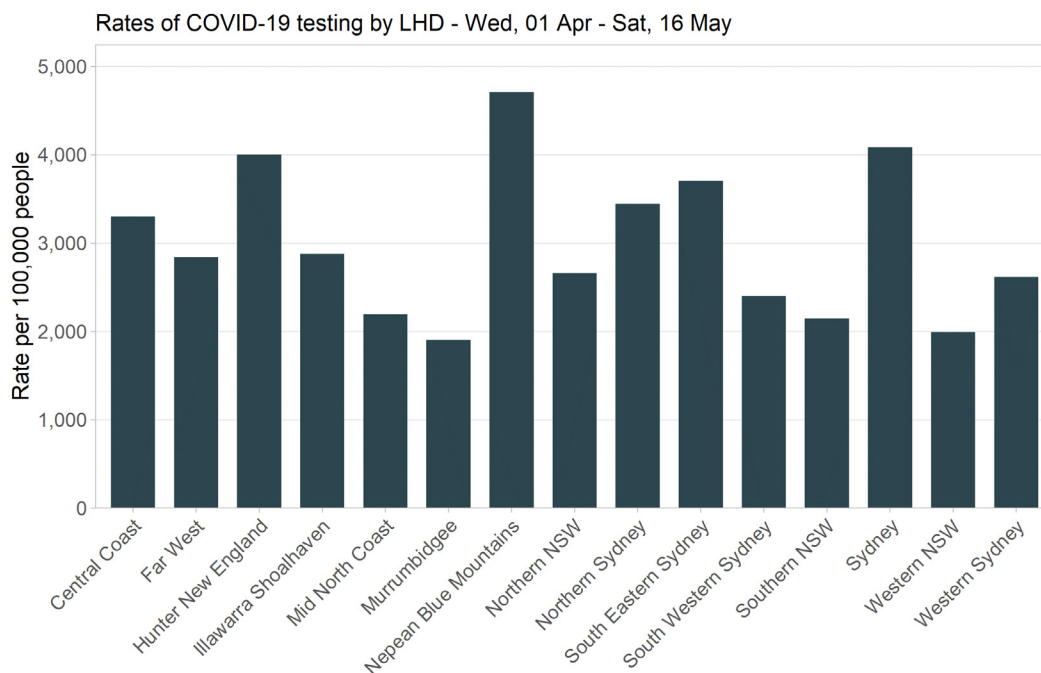
COVID-19 transmission in NSW, April 1 to May 16

Analysis of local cases and testing data was conducted from the period 1 April to 16 May as almost all testing in this period was for people who had not travelled outside of NSW (due to the travel restrictions that were introduced in March). It is not possible to separate testing that was done to detect COVID-19 infection that was acquired overseas from testing done to detect community transmission prior to this time period.

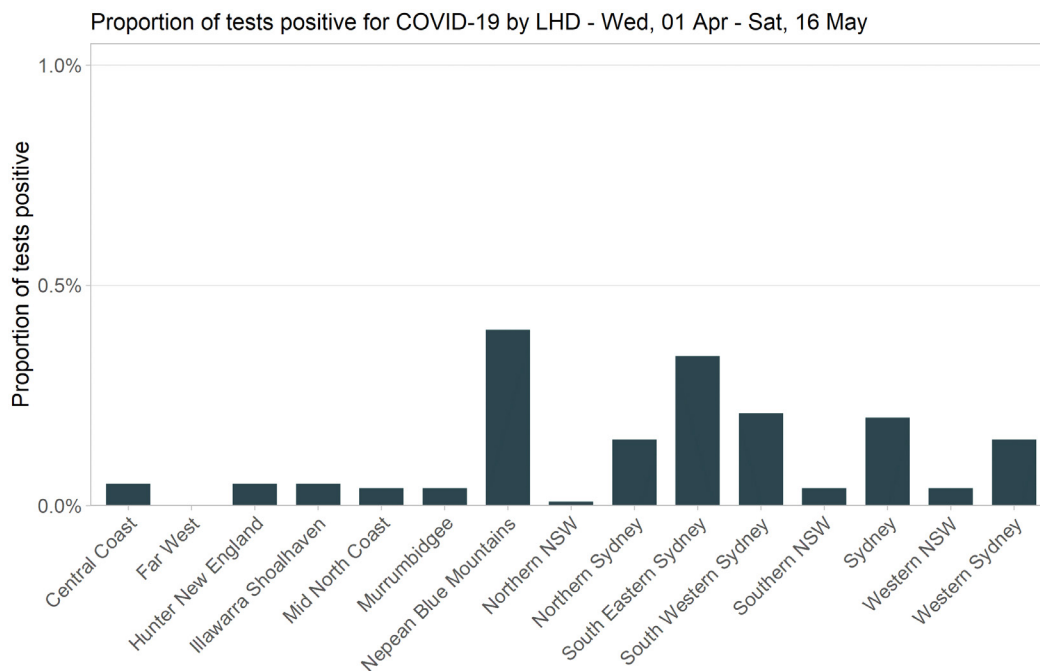
Cases and testing by Local Health District of residence



Interpretation: Taking into account the differences in population size between LHDs, Nepean Blue Mountains had a significantly higher rate of COVID-19 diagnosis compared with other LHDs in the period 1 April to 16 May. This is largely a result of the Anglicare Newmarch House aged care facility outbreak. The next highest rates were in South Eastern Sydney LHDs, however most of the locally acquired cases were notified in the first week of April, with similar rates to the rest of NSW for the remainder of the period.

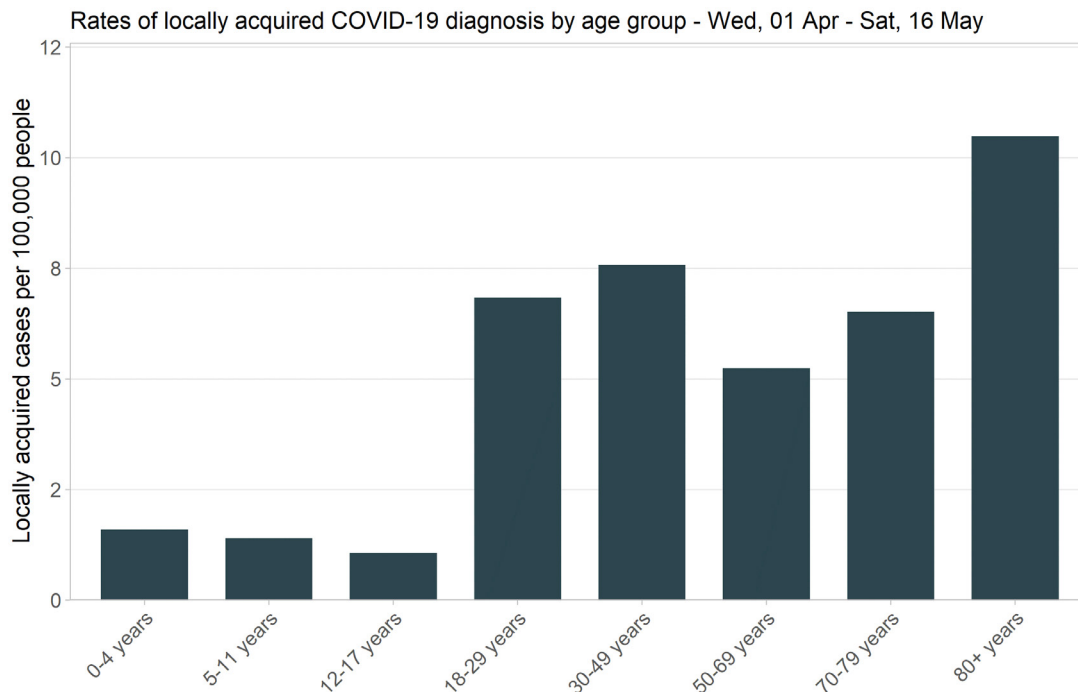


Interpretation: The highest rate of testing since 1 April was in residents of the Nepean Blue Mountains LHD. This is due to the regular, repeated testing of residents and staff as part of the investigation in the Anglicare Newmarch House outbreak, as well as other initiatives to increase local testing.

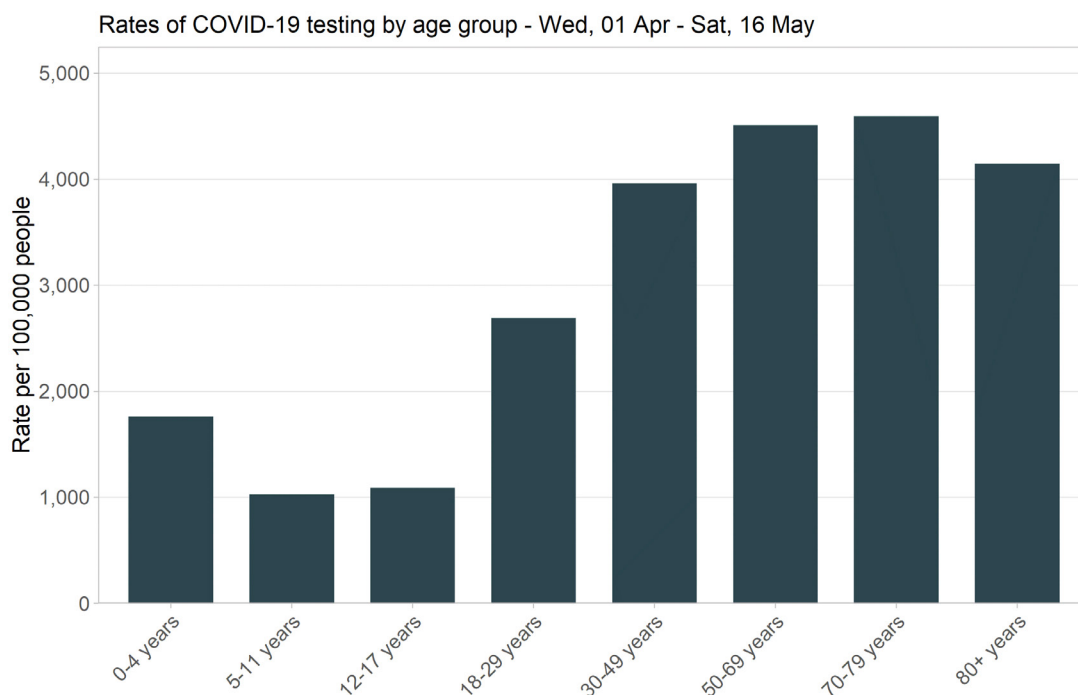


Interpretation: While testing has increased, the proportion of people tested that are diagnosed with COVID-19 is low throughout the state indicating low levels of transmission.

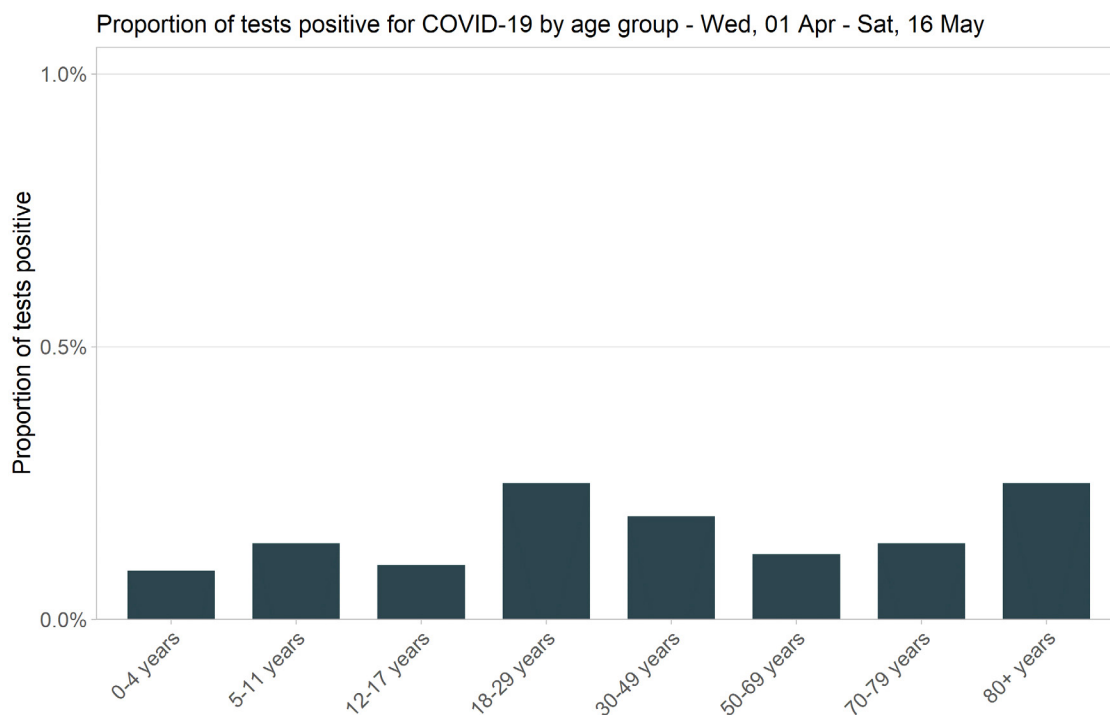
Cases and testing by age group



Interpretation: Taking into account the number of people in each age group, rates of infection have been highest in people over 80 years of age and young adults. Infection rates have been significantly lower in children compared with older age groups.



Interpretation: Since the beginning of April, testing rates were highest in people over 30 years of age with the lowest rates of testing in school aged children.

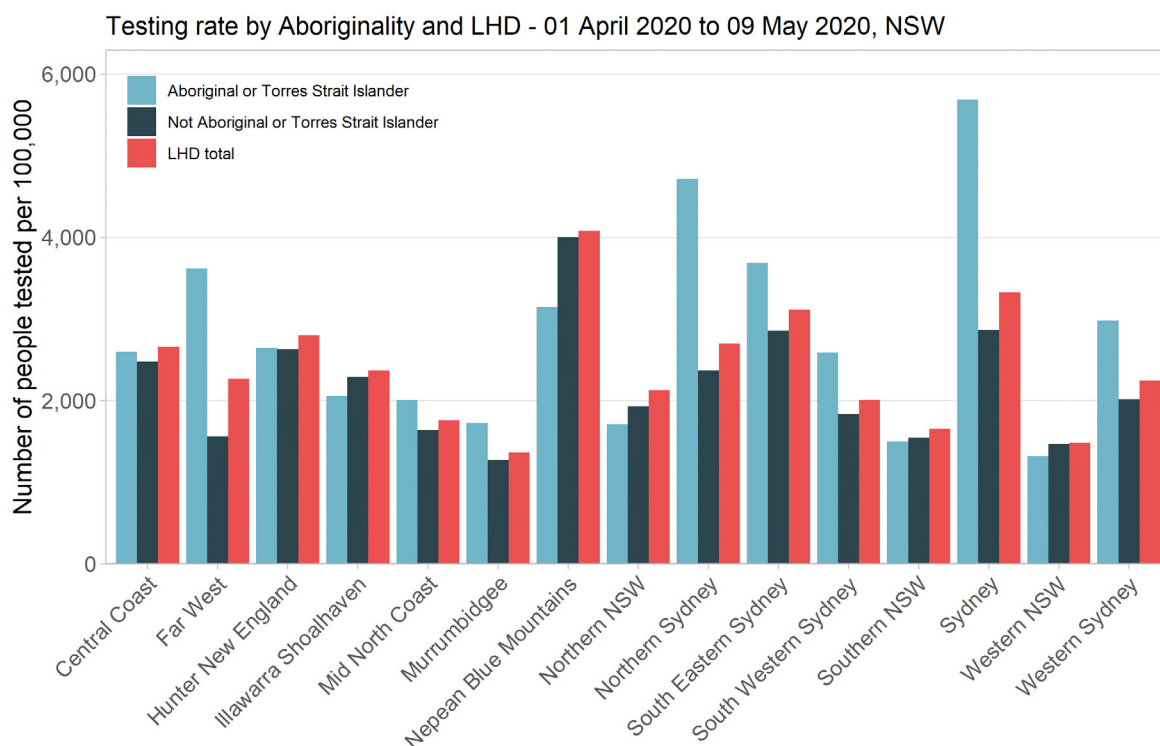


Interpretation: While testing rates are lower in children, so is the test positivity, suggesting that there may be lower rates of COVID-19 illness in children than adults. It is possible that children experience less severe illness than adults and consequently may be less likely to be tested. Continued testing and serological studies will be important to monitor local community transmission and to better understand the level of infection in children.

Cases and testing in Aboriginal people

Thirteen locally acquired infections have been reported in Aboriginal people since 1 April. Of these, the source of infection was identified for 10 people including eight people who shared a house with known COVID-19 case/s and two people who acquired their infection from contact with a known case outside the home. No common links or source of infection was identified for each of the remaining three cases. There have been no deaths from COVID-19 in Aboriginal people 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 has been 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 9 May 2020. Aboriginal status was ascertained for approximately 90% of all COVID-19 records for both the week ending 2 May and 9 May.



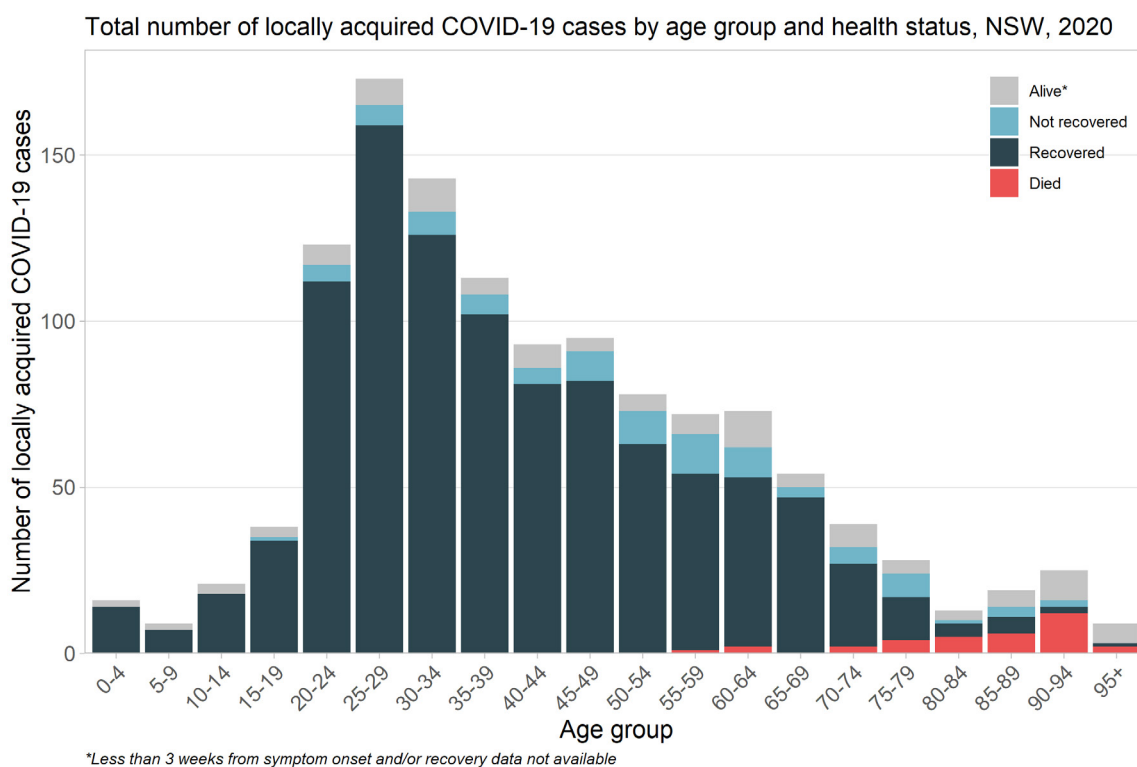
*Total rates include people with unknown Aboriginality status.

Interpretation: Since 1 April to 9 May highest rates of testing amongst Aboriginal people were reported in Sydney Local Health District. In almost all Local Health Districts rates of testing amongst Aboriginal people were higher than non-Aboriginal people. While it appears transmission amongst Aboriginal people is limited as present, continued high rates of testing are important to understand the true extent of illness in the community and enable public health action to limit the spread of infection.

SECTION 4: 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. While people may have recovered within three weeks of onset, recovery information is only reported on cases after three weeks as this is the time the interview is done. 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 acquired by age group and health status up to 16 May.



Interpretation: The majority of cases have recovered.

How many people have died?

In total, 48 people (2%) have died as a result of COVID-19 infection, most of whom were 70 years of age or older. Of the 48 people who have died, more than half were residents of aged care facilities.

How long does it take to recover from COVID-19?

Analysis on information collected from over 2,800 case interviews found that 50% of cases had recovered after 16 days, 75% had recovered after 23 days and 95% had recovered after six weeks. Time to recovery by age group is shown in the table below.

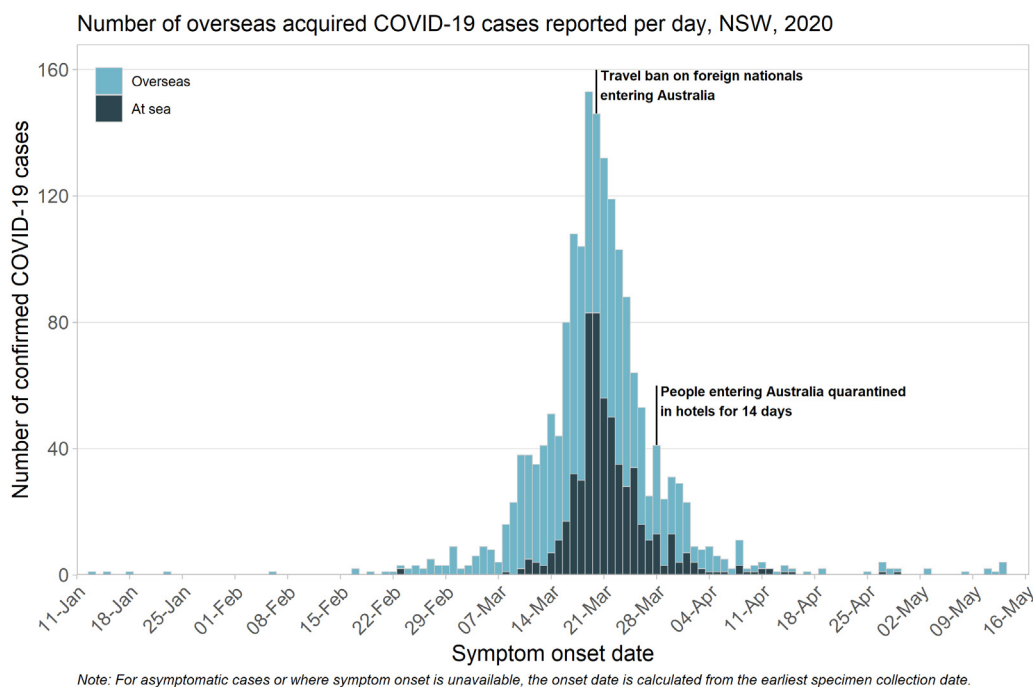
Age group	Time taken for 50% of cases to recover	Time taken for 75% of cases to recover
	Days	Days
≤ 40 years	14	20
41–70 years	17	24
71+ years	19	27
Total	16	23

Interpretation: Older people take longer to recover than younger people.

SECTION 5: COVID-19 IN RETURNED TRAVELLERS

To limit the spread of COVID-19 into NSW, travel restrictions were introduced to all foreigners. 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 on board prior to disembarking in NSW.



Interpretation: The number of new cases in returned travellers has decreased markedly in line with travel restrictions. Among cases notified since 1 April, returned travellers account for 39% (n=359) of cases reported in NSW. Cruise ship passengers (including cruises which disembarked outside Australia) accounted for the largest number of overseas acquired infections (94 cases) in this period. Following this, cases were most commonly returning from the United States (48 cases), United Kingdom (43 cases), and Chile (27 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 10 May to Saturday 16 May, 2,770 people were screened at Sydney International Airport and 41 were referred for testing. Since screening began on 2 February, a total of 64,913 people have been screened and 677 were referred for onsite health assessment and testing.