# COVID-19 WEEKLY SURVEILLANCE IN NSW

## EPIDEMIOLOGICAL WEEK 43 ENDING 30 October 2021

**Published 11 November 2021**

## Overview

**Table 1. Number and proportion of COVID-19 cases in NSW by likely source of infection to week ending 30 October 2021**

| | 2020 | | 2021 | | Total |
|---|---|---|---|---|---|
| | Jan – Jun | Jul – Dec | 01 Jan – 15 Jun | 16 Jun – 30 Oct | |
| Locally acquired | 1,236 (39 %) | 807 (52 %) | 51 (7 %) | 69,418 (100 %) | 71,512 (95 %) |
| Interstate acquired | 67 (2 %) | 23 (1 %) | 0 (0%) | 23 (<1 %) | 113 (<1 %) |
| Overseas acquired | 1,892 (59 %) | 714 (46 %) | 641 (93 %) | 240 (<1 %) | 3,487 (5 %) |
| Total | 3,195 (100 %) | 1,544 (100 %) | 692 (100 %) | 69,681 (100 %) | 75,112 (100 %) |
| Deaths | 51 | 5 | 0 | 518 | 574 |

## Summary for the week 24 October to 30 October 2021 (inclusive)

In the week ending 30 October 2021:

- There were 1,754 locally acquired cases reported.
- The ten LGAs with the highest number of cases were:
    - Albury LGA with 201 (11%) cases
    - Canterbury-Bankstown LGA with 119 (7%) cases
    - Newcastle LGA with 98 (6%) cases
    - Kempsey LGA with 78 (4%) cases
    - Campbelltown LGA with 75 (4%) cases
    - Lake Macquarie LGA with 74 (4%) cases
    - Liverpool LGA with 69 (4%) cases
    - Cessnock LGA with 60 (3%) cases
    - Blacktown LGA with 54 (3%) cases
    - Cumberland LGA with 53 (3%) cases
    - 868 (49%) cases were residents across 64 other LGAs
- There were 5 cases in overseas returned travellers (an increase of 25% from the previous week).
- There were 16 deaths in people diagnosed with COVID.
- 30.9% of locally acquired cases aged 12 and over were fully vaccinated. This compares with around 77.7% of the NSW population aged 12 and over who had been fully vaccinated (that is, had completed their recommended vaccine schedule more than 2 weeks before, by 16 October).
- Testing rates increased compared to the previous week (up 6%), with the highest testing rates in the Nepean Blue Mountains, South Western Sydney, and Western Sydney LHDs, sustained testing in the Murrumbidgee LHD, and strong increases in the Hunter New England and Mid North Coast LHDs.
- 336 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 150 detections. Detections from Byron Bay, Dungog, Young, Inverell, Uralla, Mullumbimby, Moruya, Leeton, Wauchope, Quirindi, Coonabarabran, Nyngan, Cobar, Curlewis, Corowa, Holbrook, Moree, Griffith, Gulgong, Barraba, and Coffs Harbour occurred with no known or recent cases in the catchment. Cases were also identified in Armidale, Jerilderie, Corowa, Woolgoolga, Buronga, Coffs Harbour, and Old Bar following recent sewage detections. Note that cases may have been identified in these catchments after 30 October.

# Indicators of effective prevention for COVID-19 in NSW for the week ending 30 October 2021

On receipt of a laboratory notification diagnosis of COVID-19, NSW Health now sends a text message to the case informing them that they and their close contacts are required to isolate and asking them to answer a short questionnaire.

Where a mobile number is not available, NSW Health works with the NSW Police to locate and inform the case as soon as possible.

**Table 2. Measures of public health action, NSW, for the period from 17 October to 30 October 2021**

| | Week ending 30 Oct | Week ending 23 Oct |
|---|---|---|
| Proportion locally acquired cases notified to NSW Health by the laboratory within 1 day of specimen collection | 82% (1447/1754) | 84% (1836/2182) |
| Locally acquired cases contacted by text message within 1 day of notification to NSW Health | 97% (1704/1754) | 95% (2075/2182) |
| Number of high-risk cases fully interviewed by public health staff within 1 day of responding to the NSW Health text message | 92% (488/533) | 88% (493/562) |
| Locally acquired cases fully interviewed by public health staff within 1 day of notification to NSW Health | 93% (1639/1754) | 92% (2007/2182) |

**Interpretation:** In the week ending 30 October, 82% of cases were notified to NSW Health within a day of test, 93% of cases were fully interviewed within one day of notification and 97% of cases were sent a text message to advise of their positive result, provide isolation requirements and to identify high risk exposure settings. Of those who responded to this message and were identified as high-risk cases, 92% were interviewed within one day of notification. The results indicate that the public health response is contacting the majority of cases with sufficient speed to isolate cases. NSW Health uses this information to adjust methods and prioritisation of cases.

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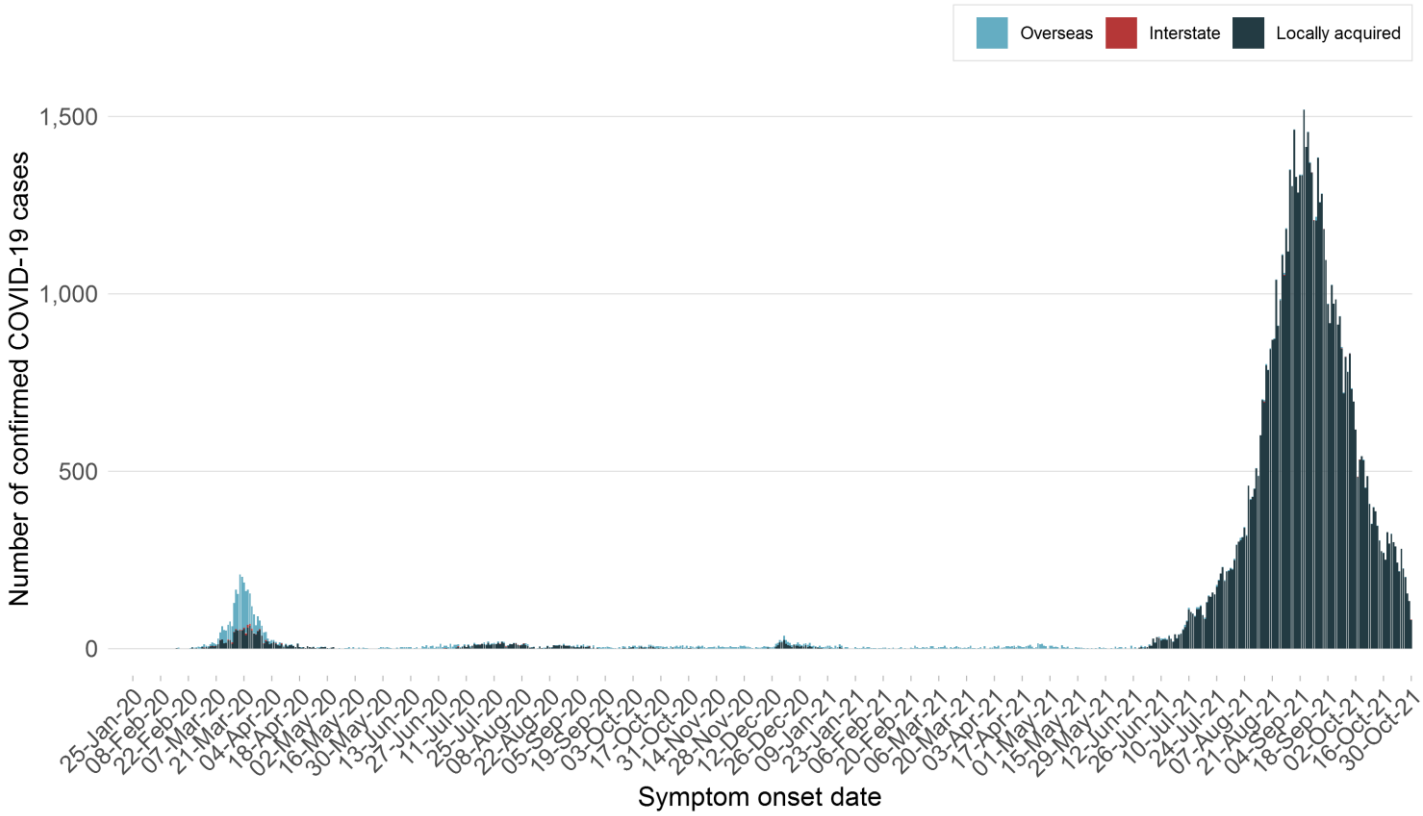
## COVID-19 Vaccination program

- Australian Government Department of Health reports the number of vaccine doses administered across Australia — Daily COVID-19 vaccine rollout numbers
- Australian Government Department of Health also reports the percentage of fully vaccinated individuals by LGA — Vaccination rate by LGA
- Therapeutic Goods Administration (TGA) report data on received reports of suspected side effects (also known as adverse events) and other safety information from Australia and overseas — Weekly COVID-19 vaccine safety report
- AusVaxSafety is conducting active vaccine safety surveillance of the vaccines in use. Surveillance data have been

# Section 1: How is the outbreak tracking in NSW?

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 reported illness onset, NSW, from 13 January 2020 to 30 October 2021**




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

**Interpretation:** Between 13 January 2020 and 30 October 2021, there were 75,112 confirmed COVID-19 cases in NSW. Of those, 3,487 (5%) were overseas acquired, 113 (<1%) were interstate acquired, and 71,512 (95%) were locally acquired. Cases who tested positive by 30 October are included, but are plotted by earliest symptom onset date. As cases typically develop symptoms prior to being notified, the number of cases reported by symptom onset date will appear to decline in more recent days, even if the total number of cases reported on that day does not.

## Four major waves of COVID-19 cases

The epidemiology of COVID-19 in NSW continued to evolve since the first three cases were reported in NSW on 25 January 2020 in people who acquired their infection in China. The first locally acquired COVID-19 case in NSW was reported on 2 March 2020 and by mid-March case numbers had increased rapidly in overseas returned travellers and their contacts and within localised community outbreaks. In NSW, the number of reported daily cases peaked on 27 March 2020 at 213 cases. Public health action and the introduction of a range of stringent control measures, including the closure of international borders, 14-day mandatory quarantine for returned travellers and restrictions of movement within NSW lead to a decline in cases. Community transmission was interrupted by the end of May 2020.

In early July seeding of SARS-CoV-2 into South Western Sydney from an outbreak in Melbourne led to a second wave of infection. Following intensive public health action community transmission was again interrupted by the end of November 2020.

In December 2020 two new introductions of SARS-CoV-2 caused outbreaks in Sydney's Northern Beaches and Berala in Sydney's West. Community transmission was again interrupted by the end of January 2021.

The current outbreak across NSW began in mid-June 2021 in Sydney's east, and spread from there to West and South Western Sydney. Clusters have developed in the Central Coast, Hunter New England, Western NSW, Far Western NSW, and Southern NSW regions.

# Section 2: Locally acquired COVID-19 transmission in NSW in the last four weeks

**Table 3. Locally acquired COVID-19 cases by LHD of residence and week reported, NSW, 3 October to 30 October 2021**

| | Local Health District | Week ending | | | | Total | Days since last case reported |
|---|---|---|---|---|---|---|---|
| | | 30 Oct | 23 Oct | 16 Oct | 09 Oct | | |
| Metropolitan Local Health Districts | South Western Sydney | 275 | 469 | 631 | 958 | 2,333 | 0 |
| | Western Sydney | 154 | 248 | 439 | 680 | 1,521 | 0 |
| | Sydney | 139 | 140 | 232 | 313 | 824 | 0 |
| | South Eastern Sydney | 121 | 142 | 196 | 340 | 799 | 0 |
| | Illawarra Shoalhaven | 64 | 102 | 198 | 381 | 745 | 0 |
| | Nepean Blue Mountains | 53 | 82 | 105 | 202 | 442 | 0 |
| | Northern Sydney | 46 | 55 | 49 | 124 | 274 | 0 |
| | Central Coast | 32 | 83 | 114 | 203 | 432 | 0 |
| Rural and Regional Local Health Districts | Hunter New England | 409 | 432 | 490 | 564 | 1,895 | 0 |
| | Murrumbidgee | 241 | 230 | 47 | 10 | 528 | 0 |
| | Mid North Coast | 129 | 93 | 14 | 11 | 247 | 0 |
| | Southern NSW | 37 | 20 | 27 | 118 | 202 | 0 |
| | Western NSW | 32 | 40 | 83 | 89 | 244 | 0 |
| | Far West | 9 | 11 | 12 | 15 | 47 | 0 |
| | Northern NSW | 8 | 18 | 29 | 40 | 95 | 1 |
| | Correctional settings | 5 | 12 | 12 | 20 | 49 | 0 |
| | NSW* | 1,754 | 2,182 | 2,681 | 4,075 | 10,692 | |

*Includes people with a usual place of residence outside of NSW, and those for whom LHD was not available at the time of data extraction.

**Interpretation:** There were 1,754 locally acquired cases reported in the week ending 30 October 2021. The largest proportion of cases were residents of Hunter New England LHD (409, 23%) followed by South Western Sydney LHD (275, 16%), Murrumbidgee LHD (241, 14%) and Western Sydney LHD (154, 9%). Correctional settings include all cases diagnosed while residing in NSW correctional facilities. Case numbers in metropolitan LHDs have continued to fall over the last four weeks, while some regional LHDs are experiencing continued outbreaks (Hunter New England, Murrumbidgee and Mid North Coast LHDs).

# Section 3: Epidemiology of local cases with COVID-19 from 16 June 2021 to 30 October 2021

Since 16 June 2021, NSW has experienced a cluster of COVID-19 infections caused only by the delta variant of the SARS-CoV-2 virus. This section describes some of the epidemiological features of this cluster.

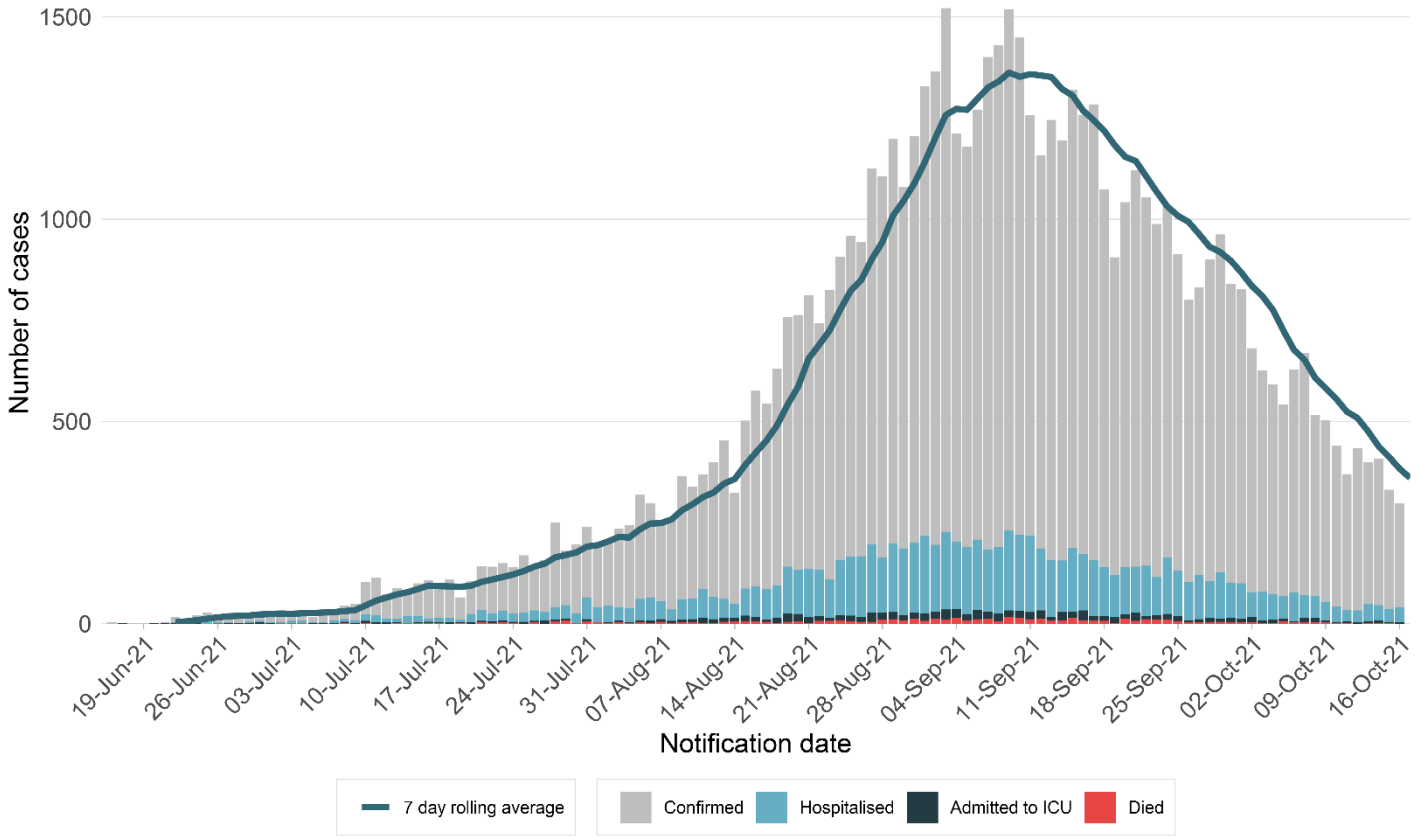
**Table 4. COVID-19 cases and tests reported, NSW, from 16 June 2021 to 30 October 2021**

| | Week ending 30 Oct | Week ending 23 Oct | % change | Since 16 Jun |
|---|---|---|---|---|
| Number of cases | 1,760 | 2,186 | -19 % | 69,681 |
| Locally acquired | 1,754 | 2,182 | -20 % | 69,418 |
| Known epidemiological links to other cases or clusters | 1,301 | 1,500 | -13 % | 31,305 |
| No epidemiological links to other cases or clusters | 453 | 682 | -34 % | 38,113 |
| Overseas acquired | 5 | 4 | 25 % | 240 |
| Interstate acquired | 1 | 0 | - | 23 |
| Number of Tests | 549,100 | 520,085 | 6 % | 13,936,376 |

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

**Interpretation:** Almost all cases reported in the last two weeks in NSW were locally acquired (3,936/3,946 cases, or 99.7%).

**Figure 2. COVID-19 cases by outcome and notification date with 7 day backward rolling average, NSW, from 16 June 2021 to 16 October 2021**




**Interpretation**: This graph shows the number of COVID-19 cases notified each day to NSW Health, as of 16 October and their outcome. All dates are based on the date of the case's notification rather than the date they were hospitalised, admitted to ICU or died. Because there can be a delay between a person becoming ill with COVID-19 and when they may require hospitalisation (currently, a median of 5 days) or between becoming ill and dying (currently, a median of 11 days), data is provided to 16 October, allowing sufficient time to capture the development of severe illness or death among the most recently notified cases. Since mid-September, there has been a steady decline in the number of cases, and the number of hospitalised cases. See Section 6 for further details on hospitalisations over time.

## Local Government Areas

**Table 5a. Top 20 metropolitan LGAs of residence, ordered by locally acquired COVID-19 cases in the last 7 days, per 100,000 population rate, NSW, 16 June to 30 October 2021**

| LGA name | Last 7 days | | Current NSW outbreak (16 Jun-30 Oct 2021) | |
|---|---|---|---|---|
| | Cases | Cases per 100,000 population | Cases | Cases per 100,000 population |
| Campbelltown | 75 | 44 | 2,721 | 1,592 |
| Camden | 40 | 39 | 1,033 | 1,018 |
| Waverley | 26 | 35 | 360 | 485 |
| Canterbury-Bankstown | 119 | 31 | 11,251 | 2,977 |
| Liverpool | 69 | 30 | 5,630 | 2,474 |
| Hunters Hill | 4 | 27 | 87 | 581 |
| Strathfield | 12 | 26 | 420 | 895 |
| Shoalhaven | 25 | 24 | 293 | 277 |
| Cumberland | 53 | 22 | 8,924 | 3,695 |
| Fairfield | 42 | 20 | 4,607 | 2,176 |
| Sydney | 48 | 19 | 1,998 | 811 |
| Penrith | 37 | 17 | 3,213 | 1,509 |
| Inner West | 33 | 16 | 891 | 444 |
| Hawkesbury | 10 | 15 | 451 | 670 |
| Bayside | 25 | 14 | 1,535 | 860 |
| Blacktown | 54 | 14 | 6,877 | 1,837 |
| Kiama | 3 | 13 | 35 | 150 |
| Wollongong | 28 | 13 | 1,565 | 718 |
| Lane Cove | 5 | 12 | 105 | 261 |
| Randwick | 18 | 12 | 1,304 | 838 |

**Table 5b. Top 20 regional and rural LGAs of residence, ordered by locally acquired COVID-19 cases in the last 7 days, per 100,000 population rate, NSW, 16 June to 30 October 2021**

| LGA name | Last 7 days | | Current NSW outbreak (16 Jun-30 Oct 2021) | |
|---|---|---|---|---|
| | Cases | Cases per 100,000 population | Cases | Cases per 100,000 population |
| Albury | 201 | 370 | 437 | 804 |
| Kempsey | 78 | 262 | 187 | 629 |
| Cessnock | 60 | 100 | 425 | 709 |
| Greater Hume Shire | 10 | 93 | 27 | 251 |
| Wentworth | 6 | 85 | 36 | 510 |
| Murray River | 10 | 83 | 17 | 140 |
| Murrumbidgee | 3 | 77 | 3 | 77 |
| Dungog | 7 | 74 | 13 | 138 |
| Newcastle | 98 | 59 | 745 | 450 |
| Port Stephens | 41 | 56 | 207 | 282 |
| Queanbeyan-Palerang Regional | 34 | 56 | 206 | 337 |
| Cowra | 7 | 55 | 67 | 526 |
| Tamworth Regional | 33 | 53 | 136 | 217 |
| Maitland | 41 | 48 | 414 | 486 |
| Berrigan | 4 | 46 | 10 | 114 |
| Nambucca | 9 | 45 | 11 | 56 |
| Mid-Coast | 40 | 43 | 185 | 197 |
| Lake Macquarie | 74 | 36 | 817 | 397 |
| Coffs Harbour | 26 | 34 | 36 | 47 |
| Federation | 4 | 32 | 9 | 72 |

**Interpretation:** The top 20 metropolitan LGAs contributed 42% of all locally acquired cases in the week ending 30 October. The five LGAs with the highest case rates per 100,000 population are in a rural and regional area and are associated with known clusters. Although case numbers in most regional LGAs are relatively small, because the population is also small, the case rate is substantially higher than observed in some metropolitan LGAs.

## Source of infection for locally acquired cases in NSW

**Figure 3a. Source of infection for locally acquired cases, Metropolitan LHDs, from 16 June to 30 October 2021**

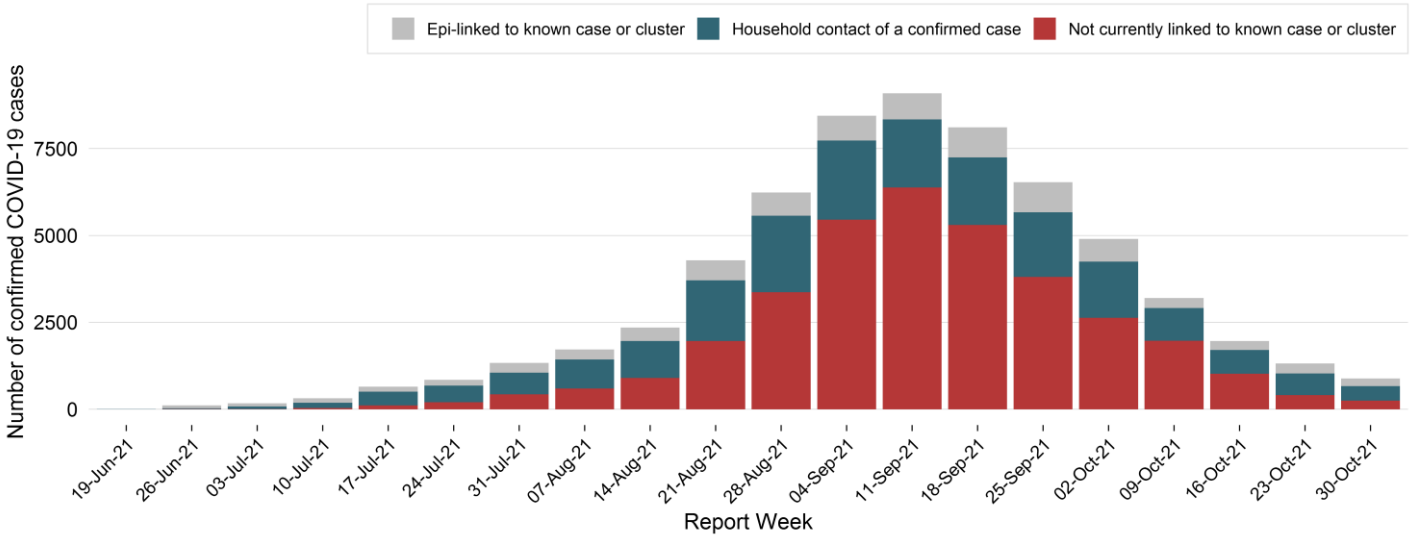
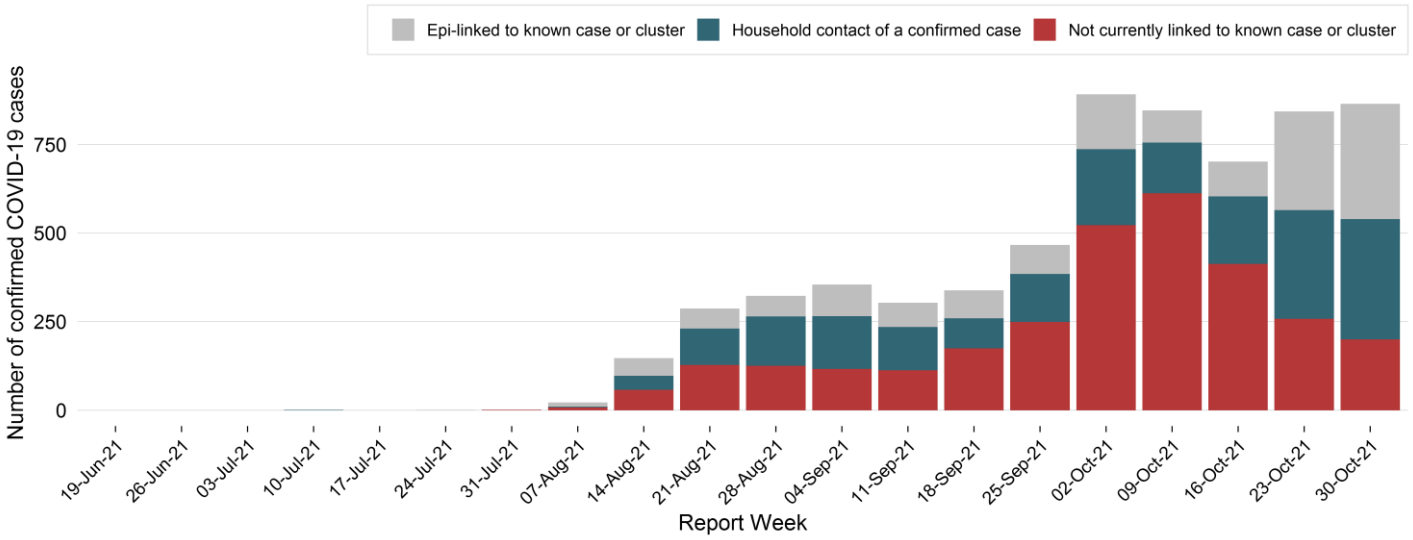



**Figure 3b. Source of infection for locally acquired cases, rural and regional LHDs, from 16 June to 30 October 2021**




Note: This graph does not include cases in Justice Health and correctional facilities and those for whom LHD was not available at the time of data extraction.

**Interpretation:** In the week ending 30 October, cases decreased by 33% in metropolitan LHDs (884 compared to 1,321 the previous week), and increased by 3% in rural and regional LHDs (865 compared to 844 the previous week). Of the 844 cases reported this week in metropolitan LHDs, 417 (47%) were household contacts, 219 (25%) were epidemiologically linked but not household contacts and 248 (28%) were not currently linked to a case or cluster. There were 865 cases reported this week in rural and regional LHDs. Of these, 340 (39%) are household contacts, 325 (38%) are epidemiologically linked but not household contacts and 200 (23%) have not currently been linked to a case or cluster. Although cases have increased in rural and regional LHDs this week, the proportion of unlinked cases has decreased, suggesting that rural and regional LHD contact tracing efforts are identifying the source of infection for the majority of cases.

## Age breakdown of locally acquired cases, NSW, from 16 June - 30 October 2021

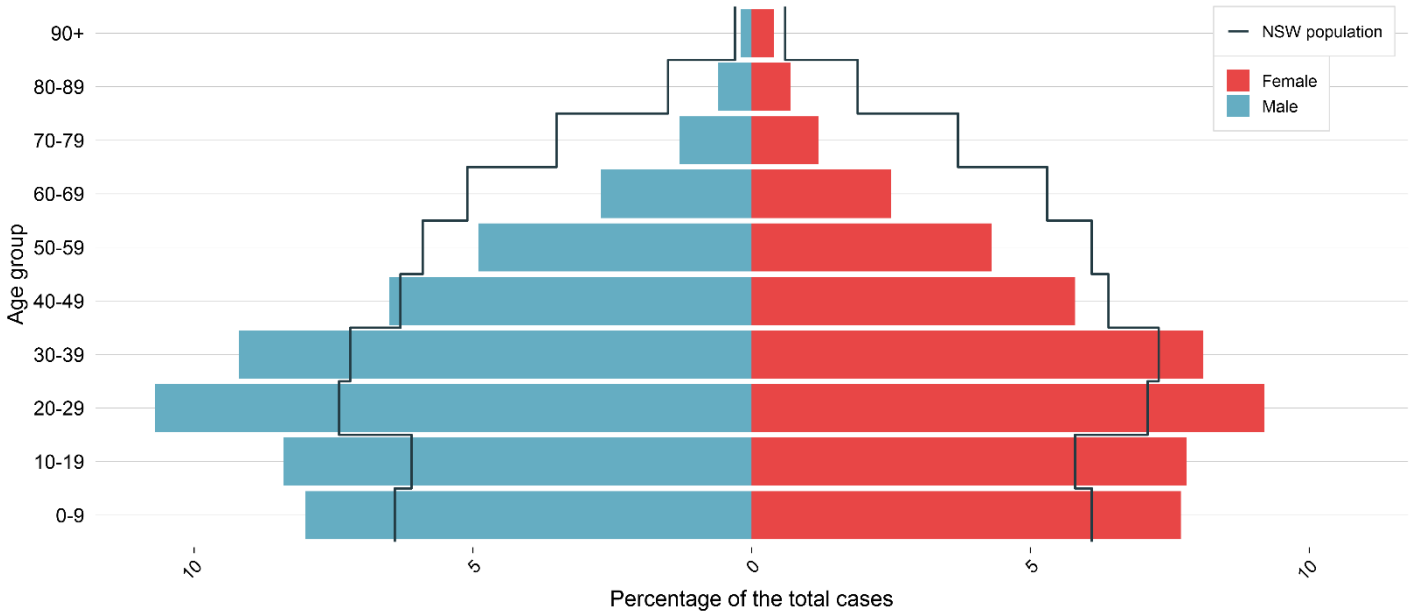
The median age of cases between 1 January 2020 and 15 June 2021 was 37 years (interquartile range (IQR) = 25-55 years). By contrast, between 16 June and 30 October 2021, there have been 69,418 locally acquired cases. The median age was 29 years (IQR = 15-44 years).

**Table 6. Demographics of infections among locally acquired cases by gender and age, NSW, 16 June to 30 October 2021**

| Locally acquired cases | | Number of cases | |
|---|---|---|---|
| Gender | | | |
| | Female | 32,902 | (47.4%) |
| | Male | 36,389 | (52.4%) |
| Age group | | | |
| | 0-9 | 10,946 | (15.8%) |
| | 10-19 | 11,260 | (16.2%) |
| | 20-29 | 13,841 | (19.9%) |
| | 30-39 | 11,962 | (17.2%) |
| | 40-49 | 8,577 | (12.4%) |
| | 50-59 | 6,330 | (9.1%) |
| | 60-69 | 3,615 | (5.2%) |
| | 70-79 | 1,768 | (2.5%) |
| | 80-89 | 891 | (1.3%) |
| | 90+ | 228 | (0.3%) |
| Vaccination status | | | |
| | Fully vaccinated | 5,014 | (7.2%) |
| | Partially vaccinated | 6,322 | (9.1%) |
| | No effective dose | 35,523 | (51.2%) |
| | Under investigation* | 9,483 | (13.7%) |
| | Not eligible for vaccination (aged 0-11 years) | 13,076 | (18.8%) |
| Total | | 69,418 | (100.0%) |

Note: Gender breakdown does not include cases for whom gender is non-specified or non-binary.

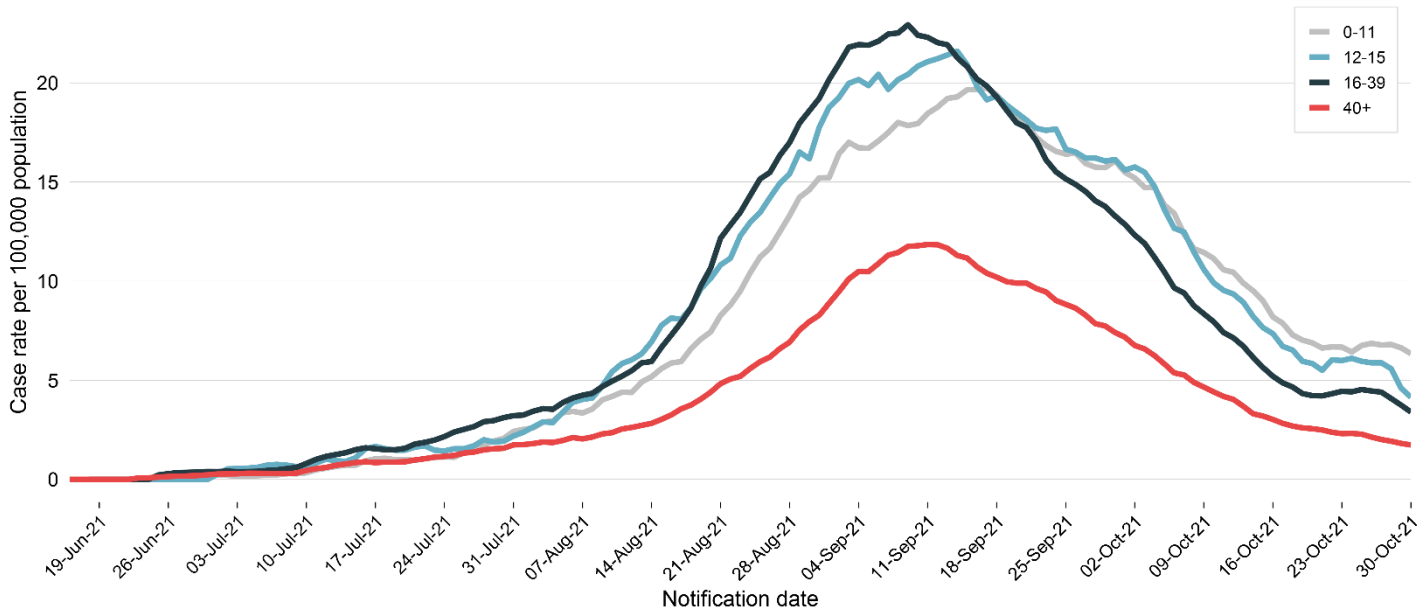
**Figure 4. Current wave locally acquired case percentage (n = 69,291) by age and gender, NSW, from 16 June to 30 October 2021**




Note that the figure does not include cases for whom gender is non-specified.

**Interpretation:** In the current outbreak from 16 June 2021, the majority of cases are 20-29 and all age groups under 40 are over-represented among the cases, relative to their proportion in the NSW population. The over-representation of younger age group and under-representation among older groups may be due to increased social mixing amongst younger groups and higher vaccination rates in older groups.

**Figure 5. Seven day backward rolling average of COVID-19 cases rate per 100,000 population by age and notification date, NSW, from 16 June 2021 to 30 October 2021**




**Interpretation:** The graph shows the rolling average of the rate of cases notified per day by age group. The peak of infections per day for those aged 40+ and those aged 16-39 occurs around 10 September and has steadily declined since that time. People aged 12-15 became eligible for vaccination from 13 September and children aged 11 years and under are not yet eligible for vaccination in Australia. Rates of cases in all groups peaked in mid-September, and have been decreasing, except for children under 12 years whose rates have flattened since mid-October. The rates in children aged 12-15 years flattened in late October but have declined further recently, as immunisation rates in this group have increased.

# Section 4: COVID-19 in specific populations

## Aboriginal people

Aboriginal and Torres Strait Islander communities are recognised as a priority group due to key drivers of increased risk of transmission and severity of COVID-19 which include mobility, remoteness, barriers to access including institutional racism and mistrust of mainstream health services, crowded and inadequate housing, and burden of disease.

In the week ending 30 October 2021 there were 363 locally acquired cases of COVID-19 reported in Aboriginal people. Of the 363 cases, 28 (7.7%) were fully vaccinated (see Section 5 for a full description of vaccination status). Since 16 June 2021 there have been 5,782 Aboriginal people diagnosed with COVID-19, representing 8.3% of all locally acquired cases in that time. This is an over-representation among Aboriginal and Torres Strait Islander people, who represent 3.4% of the NSW population, according to the Australian Bureau of Statistics.

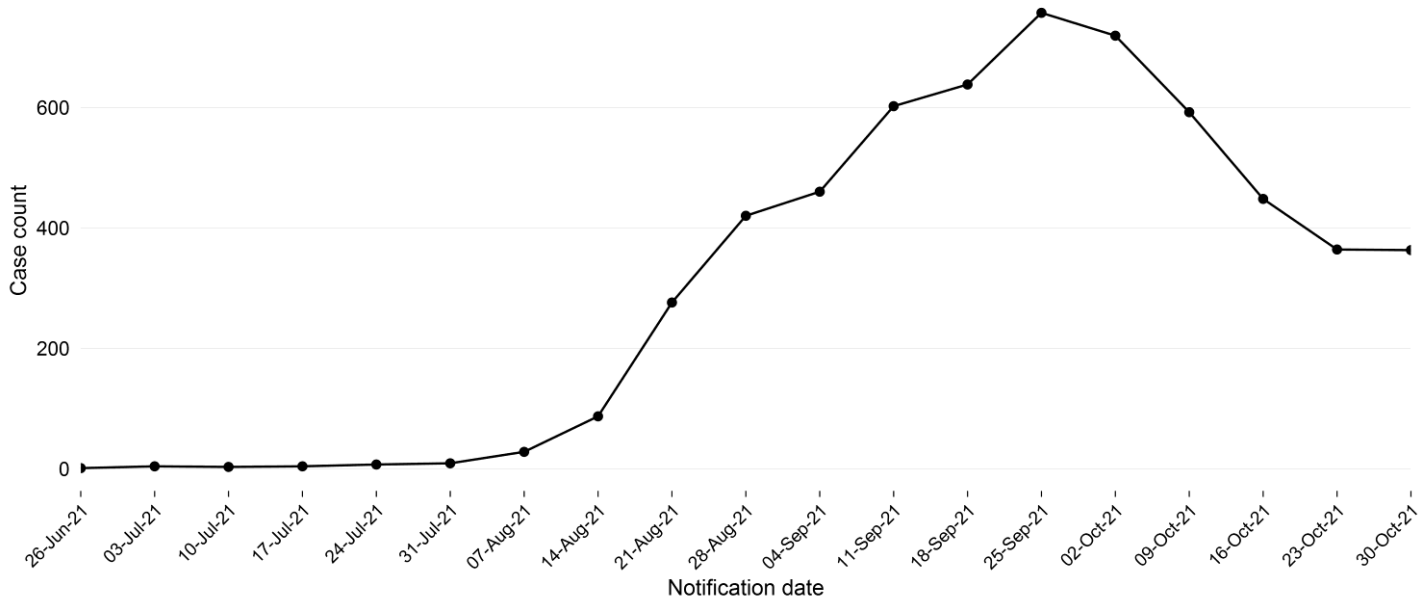
**Table 7. Demographics of infections among Aboriginal people by gender, age, and vaccination status, NSW, 16 June to 30 October, 2021**

| Aboriginal people | | Number of cases | |
|---|---|---|---|
| Gender | | | |
| | Female | 2,898 | (50.1%) |
| | Male | 2,876 | (49.7%) |
| Age group | | | |
| | 0-9 | 1,438 | (24.9%) |
| | 10-19 | 1,315 | (22.7%) |
| | 20-29 | 1,065 | (18.4%) |
| | 30-39 | 837 | (14.5%) |
| | 40-49 | 570 | (9.9%) |
| | 50-59 | 347 | (6.0%) |
| | 60-69 | 155 | (2.7%) |
| | 70-79 | 43 | (0.7%) |
| | 80-89 | 10 | (0.2%) |
| | 90+ | 2 | (0.0%) |
| Vaccination status | | | |
| | Fully vaccinated | 235 | (4.1%) |
| | Partially vaccinated | 395 | (6.8%) |
| | Un-vaccinated | 2,813 | (48.7%) |
| | Under investigation* | 627 | (10.8%) |
| | Not eligible for vaccination (aged 0-11 years) | 1,712 | (29.6%) |
| Total | | 5,782 | (100.0%) |

* Vaccination status is updated regularly using both the Australian Immunisation Register and the patient's interview. Note: Gender breakdown does not include cases for whom gender is non-specified or non-binary.

**Interpretation:** Since 16 June, almost a quarter of cases of COVID-19 among Aboriginal people have been in children aged 0-9 years. The Aboriginal population in NSW is younger than the non-Aboriginal population, and therefore a higher proportion of the Aboriginal population are too young to be eligible for vaccination.

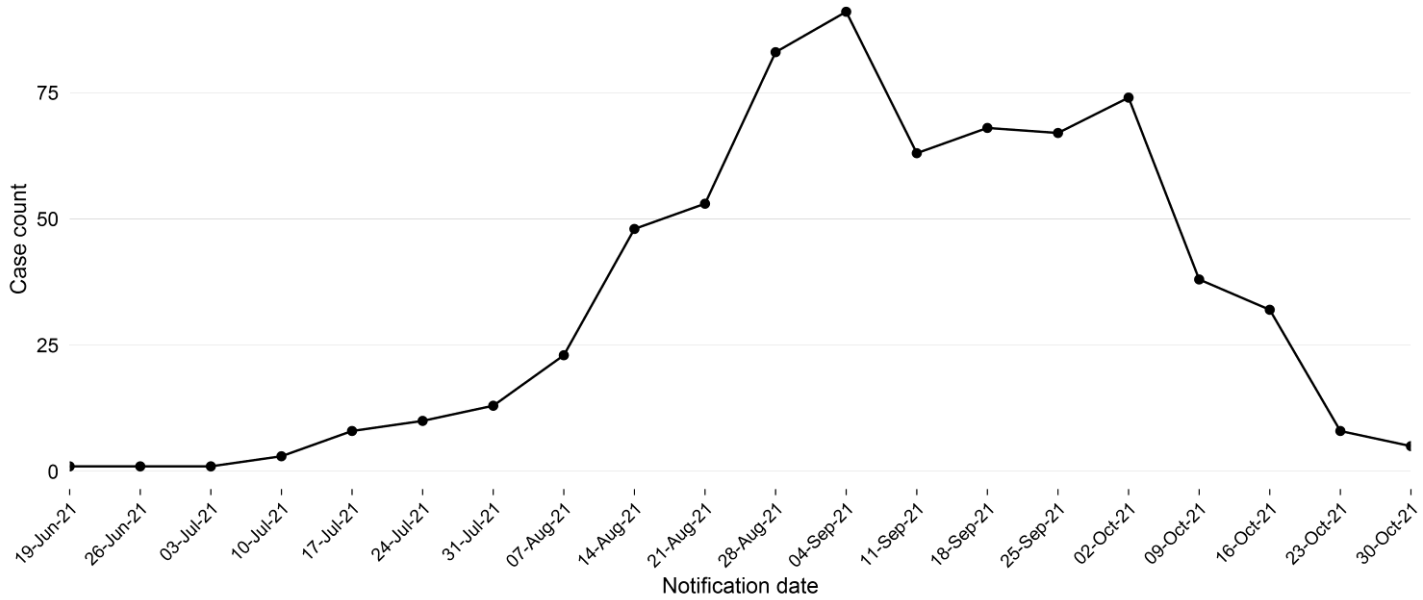
**Figure 6. Number of confirmed COVID-19 infections among Aboriginal people by date, NSW, 16 June to 30 October 2021**




## Pregnant women

In the week ending 30 October 2021 there were 5 locally acquired cases of COVID-19 reported in pregnant women. Of the 5 cases, 1 (20%) was fully vaccinated. Since 16 June 2021 there have been 690 pregnant women have been diagnosed with COVID-19, representing 1% of all locally acquired cases in that time.

**Figure 7. Number of confirmed COVID-19 infections among pregnant women by date, NSW, 16 June to 30 October 2021**



## Correctional settings

In the week ending 30 October there were 5 locally acquired cases of COVID-19 reported in people residing in correctional settings. Of the 5 cases, none were fully vaccinated. Since 16 June 2021 there have been 466 people residing in correctional settings diagnosed with COVID-19, representing 0.7% of all locally acquired cases.

**Table 8. Demographics of infections in correctional settings by gender, age, and vaccination status, NSW, 16 June t**

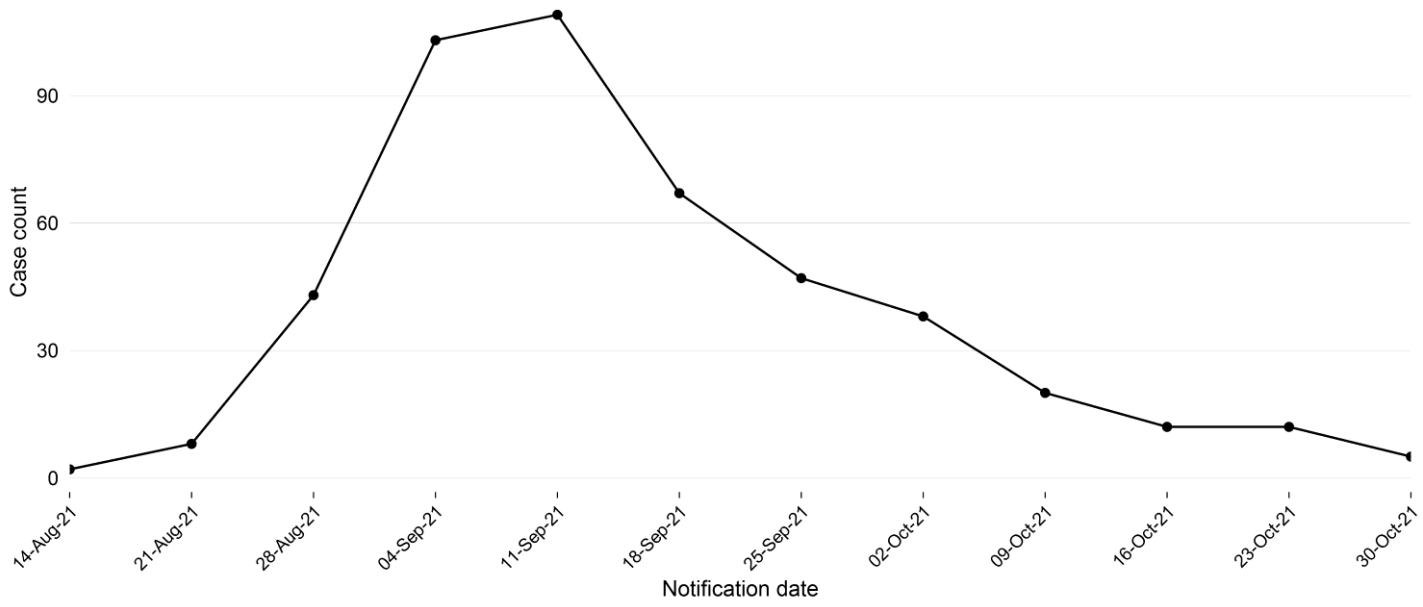
**o 30 October, 2021**

| Cases residing in correctional settings | | Number of cases | |
|---|---|---|---|
| Gender | | | |
| | Female | 25 | (5.4%) |
| | Male | 441 | (94.6%) |
| Age group | | | |
| | 0-9 | 0 | (0.0%) |
| | 10-19 | 27 | (5.8%) |
| | 20-29 | 135 | (28.8%) |
| | 30-39 | 167 | (36.0%) |
| | 40-49 | 92 | (19.4%) |
| | 50-59 | 34 | (7.5%) |
| | 60-69 | 7 | (1.5%) |
| | 70-79 | 3 | (0.9%) |
| | 80-89 | 1 | (0.2%) |
| | 90+ | 0 | (0.0%) |
| Vaccination status | | | |
| | Fully vaccinated | 22 | (4.7%) |
| | Partially vaccinated | 55 | (11.8%) |
| | Un-vaccinated | 256 | (54.9%) |
| | Under investigation* | 133 | (28.5%) |
| Total | | 466 | (100.0%) |

* Vaccination status is updated regularly using both the Australian Immunisation Register and the patient's interview.

**Interpretation:** Since 16 June, most cases of COVID-19 among people residing in correctional settings were male and aged 30-39 years, consistent with the demographics of correctional populations generally.

**Figure 8. Number of confirmed COVID-19 infections among people residing in correctional settings by date, NSW, 16 June to 30 October 2021**



## Healthcare workers

The following describes infections of COVID-19 in healthcare workers (HCWs). HCWs in this section includes roles such as doctor, nurse, orderly, paramedic, laboratory technician, pharmacist, administrative staff, cleaners, and other support staff. Public health units routinely undertake investigations of COVID-19 cases in healthcare workers to identify ongoing risks in healthcare settings.

In the week ending 30 October, there were 5 healthcare workers diagnosed with COVID-19. Of these, none were potentially infected in a healthcare setting, 2 (40%) were social or household contacts of previously reported cases and 3 (60%) are currently not linked. Three (60%) cases were fully vaccinated and none were partially vaccinated.

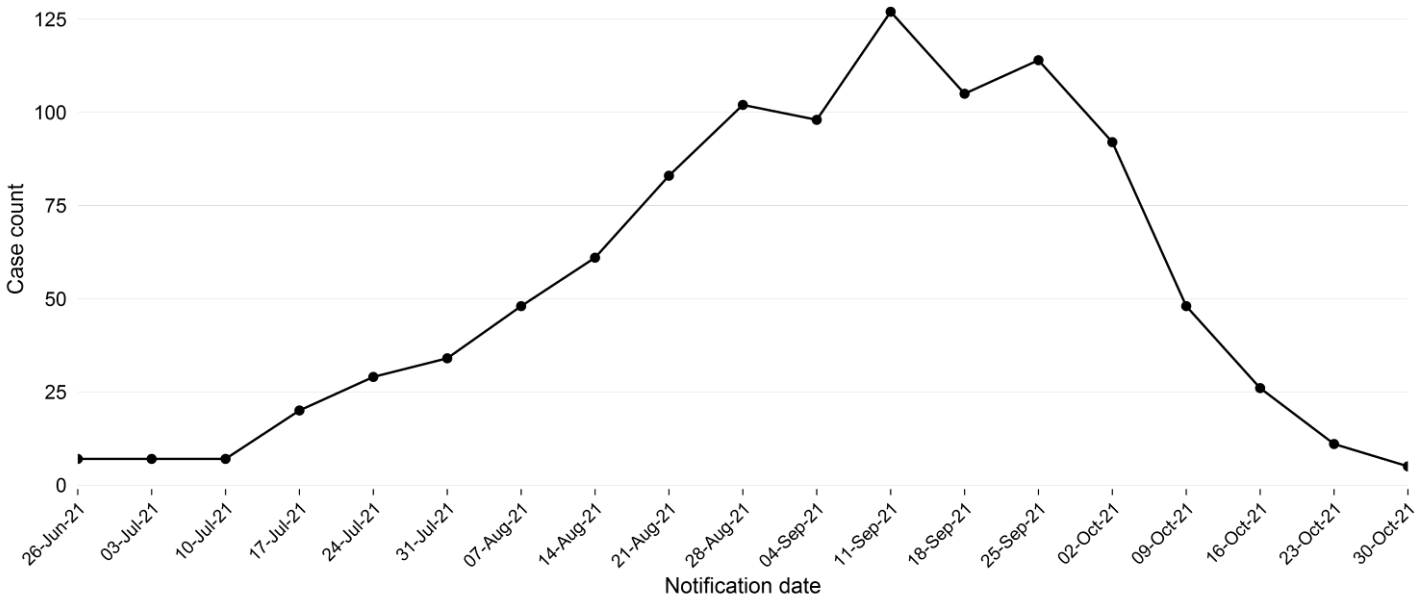
In total there have been 1072 cases of COVID-19 in health care workers since August 2020. Of these, 200 were potentially infected in healthcare settings. A further 348 cases were linked to social or household contacts, and for 524 cases the source of infection is either unknown or under investigation. Prior to August 2020, there were 35 cases identified in HCWs who had worked in a health facility in the 14 days prior to symptom onset or date of testing (see COVID-19 in healthcare workers in NSW).

**Table 9. Number of healthcare worker infections by source of infection and proportion fully vaccinated, NSW, 16 June to 30 October, 2021**

| Healthcare workers | Last 7 days | | | Current NSW outbreak (16 Jun-30 Oct 2021) | | |
|---|---|---|---|---|---|---|
| | Number of HCWs | Fully vaccinated | Partially vaccinated | Number of HCWs | Fully vaccinated | Partially vaccinated |
| Healthcare acquired | 0 | 0 (0%) | 0 (0%) | 175 | 70 (40%) | 17 (10%) |
| Community acquired | 2 | 1 (50%) | 0 (0%) | 331 | 134 (40%) | 41 (12%) |
| Not currently linked | 3 | 2 (67%) | 0 (0%) | 518 | 220 (42%) | 51 (10%) |
| Total | 5 | 3 (60%) | 0 (0%) | 1024 | 424 (41%) | 109 (11%) |

**Interpretation:** Since 16 June, most healthcare workers associated with the current NSW outbreak have been infected in the community and outside of a healthcare setting (849/1024, 83%). Of the 1024 healthcare workers that have been diagnosed with COVID-19 in the current outbreak, 424 (41%) have been fully vaccinated and 109 (11%) have been partially vaccinated.

**Figure 9. Number of confirmed COVID-19 infections among healthcare workers by date, NSW, 16 June to 30 October 2021**



## Aged care workers

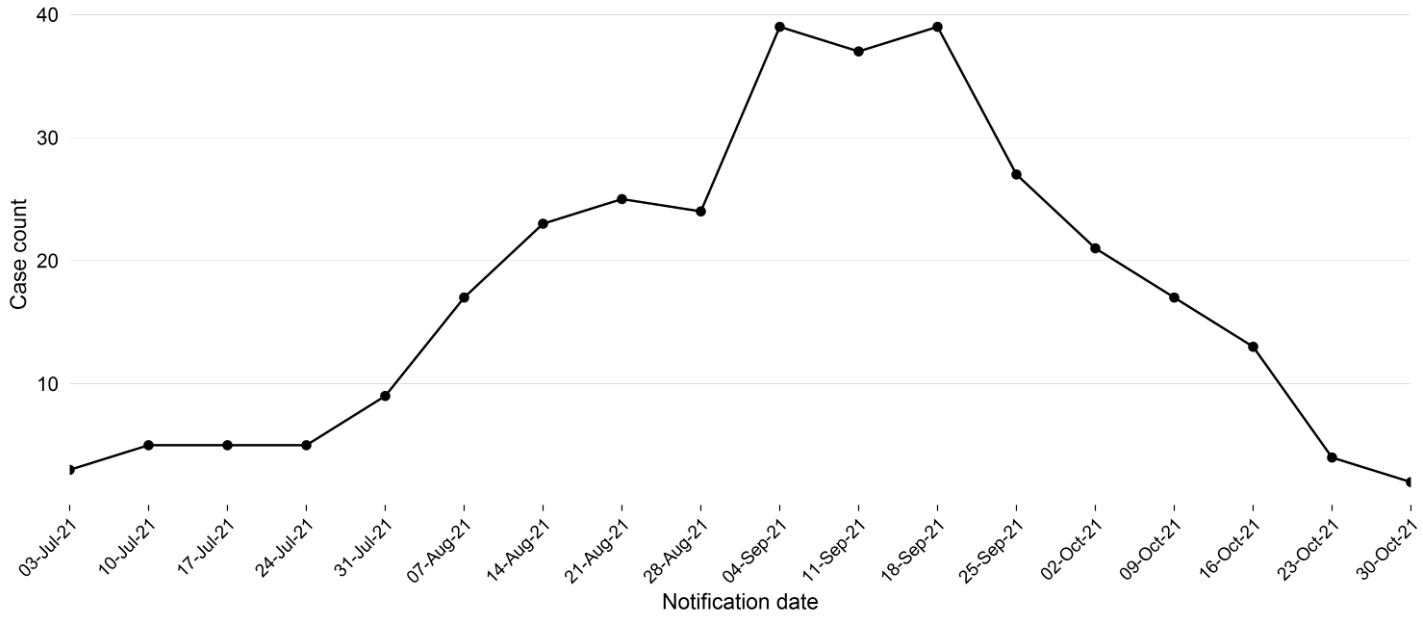
Since 16 June 2021, there have been 315 cases reported in aged care workers. Of these, 122 (39%) were fully vaccinated, and 63 (20%) people had received one effective dose.

**Table 10. Number of aged care worker infections by source of infection and proportion fully vaccinated, NSW, 16 June to 30 October 2021**

| Aged care workers | Last 7 days | | | Current NSW outbreak (16 Jun-30 Oct 2021) | | |
|---|---|---|---|---|---|---|
| | Number of ACWs | Fully vaccinated | Partially Vaccinated | Number of ACWs | Fully vaccinated | Partially Vaccinated |
| Acquired at aged care facility | 1 | 1 (100%) | 0 (0%) | 65 | 20 (31%) | 17 (26%) |
| Community acquired | 0 | 0 (0%) | 0 (0%) | 107 | 40 (37%) | 15 (14%) |
| Not currently linked | 1 | 1 (100%) | 0 (0%) | 143 | 62 (43%) | 31 (22%) |
| Total | 2 | 2 (100%) | 0 (0%) | 315 | 122 (39%) | 63 (20%) |

**Interpretation:** In the week ending 30 October there were 2 aged care workers diagnosed with COVID-19. Of these, one was infected in an aged care facility, and one is not currently linked. Most aged care workers since 16 June have acquired their infection outside of an aged care facility (250/315, 79%), and many were fully vaccinated, indicating that efforts to stop transmission within aged care facilities, including high vaccination rates among staff, have been successful.

**Figure 10. Number of confirmed COVID-19 infections among aged care workers by date, NSW, 16 June to 30 October 2021**



# Section 5: COVID-19 vaccination status

COVID-19 vaccinations began in Australia on 22 February 2021. The first people to receive the COVID-19 vaccines were priority groups at a higher risk of COVID-19 infection, including quarantine and border workers, frontline healthcare workers, and aged and disability care residents and staff. People receiving vaccines are considered fully vaccinated two weeks after they complete the recommended course for that vaccine. All the vaccines being administered in Australia, and most from overseas, recommend a two-dose course.

The tables below show the number of COVID-19 cases by their COVID-19 vaccination status. Definitions of status are as follows:

- Cases reported as **fully vaccinated** completed the recommended vaccine course at least 14 days prior to known exposure to COVID-19 or arrival in Australia.
- Cases reported as **partially vaccinated** (one effective dose)**:**
  - received their first dose of a two-dose vaccination course at least 21 days prior to known exposure to COVID-19 or arrival in Australia, or
  - received their second dose of a two-dose vaccination course less than 14 days prior to known exposure to COVID-19 or arrival in Australia, or
  - received a single-dose vaccination course (currently only Johnson & Johnson vaccine) less than 14 days prior to known exposure to COVID-19 or arrival in Australia.
- Cases reported as **no effective dose:**
  - received their first dose of a two-dose vaccination course less than 21 days prior to known exposure to COVID-19 or arrival in Australia, or
  - have not received any vaccine dose.

Using the phrase “no effective dose” indicates that an insufficient period of time has elapsed to allow for maximal immune response provided by the vaccine. It does not indicate that vaccines are ineffective.

**Table 11. Locally acquired COVID-19 cases by vaccination status and week reported, NSW, 16 June to 30 October 2021**

| Vaccination Status | Week ending | | | | 16 Jun to 2 Oct 2021 | Total from 16 Jun 2021 |
|---|---|---|---|---|---|---|
| | 30 Oct 21 | 23 Oct 21 | 16 Oct 21 | 9 Oct 21 | | |
| Fully Vaccinated | 376 (21.4%) | 393 (18.0%) | 391 (14.6%) | 502 (12.3%) | 3,352 (5.7%) | 5,014 (7.2%) |
| Partially Vaccinated | 162 (9.2%) | 261 (12.0%) | 350 (13.1%) | 661 (16.2%) | 4,888 (8.3%) | 6,322 (9.1%) |
| No effective dose | 646 (36.8%) | 913 (41.8%) | 1,112 (41.5%) | 1,664 (40.8%) | 31,188 (53.1%) | 35,523 (51.2%) |
| Under investigation* | 32 (1.8%) | 49 (2.2%) | 133 (5.0%) | 277 (6.8%) | 8,992 (15.3%) | 9,483 (13.7%) |
| Not eligible for vaccination (aged 0-11 years) | 538 (30.7%) | 566 (25.9%) | 695 (25.9%) | 971 (23.8%) | 10,306 (17.5%) | 13,076 (18.8%) |
| Total | 1,754 | 2,182 | 2,681 | 4,075 | 58,726 | 69,418 |

* Vaccination status is updated regularly using both the Australian Immunisation Register and the patient’s interview.

**Interpretation:** In the past week 376 locally acquired cases were fully vaccinated. This represents 21.4% of all cases, and 30.9% of all 1,216 cases who were eligible for vaccination (aged 12 years and over). This compares with around 77.7% of the NSW population aged 12 and over who had been fully vaccinated (that is, had completed their recommended vaccine schedule by 16 October). The proportion of cases who are fully or partially vaccinated will continue to increase as the rates of vaccination continue to increase in the community.

## Clinical severity and COVID-19 vaccination

The COVID-19 vaccines available in Australia are very effective with evidence showing that people who are fully vaccinated are 70–95% less likely to get sick with COVID-19 compared with those who are not vaccinated. However, a small proportion of fully vaccinated people may still get the disease. As the proportion of the population who are vaccinated increases, the numbers of cases who are fully vaccinated will increase but this does not mean the vaccines are not working.

Of the 9,971 people hospitalised, 544 (5.5%) were too young to be vaccinated, 637 (6.4%) had received two effective doses, 774 (7.8%) had received one effective dose, and 8,016 (80.4%) had either received no effective doses or vaccination status has not yet been determined.

Of the 9,971 people hospitalised with COVID-19 in the current outbreak, 1,330 (13.3%) people were in ICU. Of these, 9 (0.7%) were too young to be vaccinated, 898 (67.5%) had not received an effective dose, and 89 (6.7%) were partially vaccinated. There were 51 (3.8%) fully vaccinated cases in ICU. For the remaining 283 (21.3%) people in ICU, vaccination status could not be determined, either through interview or searching the Australian Immunisation Register, suggesting they were unlikely to have been vaccinated in Australia, or that their Medicare registration is outside NSW.

**Table 12. Hospitalisations, ICU admissions and deaths among locally acquired cases diagnosed with COVID-19, by vaccination status, NSW, from 16 June to 30 October 2021**

| Vaccination status | Hospitalised (%) | Hospitalised and in ICU (%) | Death (%) |
|---|---|---|---|
| Fully Vaccinated | 637 (6.4%) | 51 (3.8%) | 71 (13.8%) |
| Partially vaccinated | 774 (7.8%) | 89 (6.7%) | 63 (12.2%) |
| No effective dose | 6,185 (62.0%) | 898 (67.5%) | 371 (71.9%) |
| Under investigation | 1,831 (18.4%) | 283 (21.3%) | 11 (2.1%) |
| Not eligible for vaccination (aged 0-11 years) | 544 (5.5%) | 9 (0.7%) | 0 (0.0%) |
| Total | 9,971 (100.0%) | 1,330 (100.0%) | 516 (100.0%) |

**Table 13. Number of cases with a severe outcome (ICU and/or death), and proportion of cases with a severe outcome amongst all cases, by age, time of infection, and vaccination status**

| Age-group (years) | Number of cases with severe outcomes (ICU and/or death) | | | Percentage of total cases by age group (%) | | |
|---|---|---|---|---|---|---|
| | Jan 2020 - 15 Jun 2021 | 16 Jun - 30 Oct 2021: Fully vaccinated | 16 Jun - 30 Oct 2021: Un-vaccinated | Jan 2020 - 15 Jun 2021 | 16 Jun - 30 Oct 2021: Fully vaccinated | 16 Jun - 30 Oct 2021: Un-vaccinated |
| 0-9 | 0 | - | 7 | 0 % | - | < 1 % |
| 10-19 | 1 | 0 | 24 | < 1 % | 0 % | < 1 % |
| 20-29 | 4 | 1 | 83 | < 1 % | < 1 % | 1 % |
| 30-39 | 15 | 3 | 121 | 1 % | < 1 % | 2 % |
| 40-49 | 12 | 3 | 156 | 2 % | < 1 % | 3 % |
| 50-59 | 30 | 12 | 222 | 4 % | 1 % | 6 % |
| 60-69 | 44 | 14 | 199 | 7 % | 2 % | 12 % |
| 70-79 | 46 | 33 | 149 | 12 % | 7 % | 21 % |
| 80-89 | 26 | 26 | 120 | 21 % | 10 % | 33 % |
| 90+ | 16 | 21 | 26 | 38 % | 19 % | 38 % |
| Total | 194 | 113 | 1,107 | 4 % | 2 % | 2 % |

**Interpretation:** Prior to 15 June 2021, 4% of cases had a severe outcome, with an increasing risk of severe outcome with increasing age. Although vaccination was available in Australia for elderly groups before 15 June, there were very few locally acquired cases between February 22 (when vaccination began) and 15 June. Since 16 June, the likelihood of a severe outcome for un-vaccinated individuals is similar to the pre-delta period, while the likelihood of a severe outcome is substantially reduced amongst fully vaccinated individuals. Increased age remains a significant predictor of increased risk of a severe outcome, but the protective effects of vaccination are also more apparent as age increases. The total proportion of cases with a severe outcome is lower (2%) since 16 June 2021 compared to before this date; this is because infections have been in a younger cohort since 16 June (see Section 3). Further, the total proportions are similar between fully vaccinated and un-vaccinated groups because the fully vaccinated group contains a greater proportion of elderly people, who have greater risk of severe outcomes, while the un-vaccinated group contains many young people, with a much lower risk of severe outcomes, resulting in a similar overall risk. The analysis does not take into account the reduced risk of contracting COVID-19 amongst fully-vaccinated individuals.

# Section 6: COVID-19 hospitalisations and deaths

## How many people were in hospital each day with COVID-19?

**Figure 11a. Estimated active cases (number of cases notified last 14 days), number of cases in hospital, in ICU and ventilated by date, NSW, from 16 June to 30 October 2021**

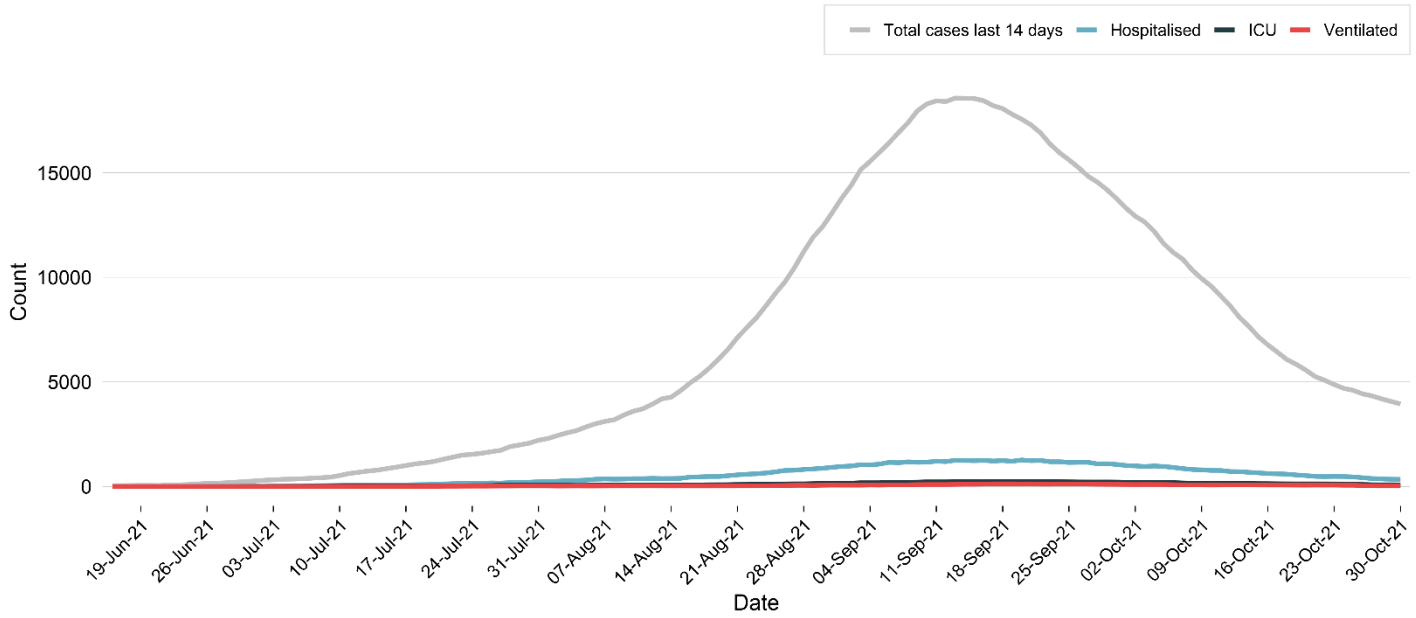
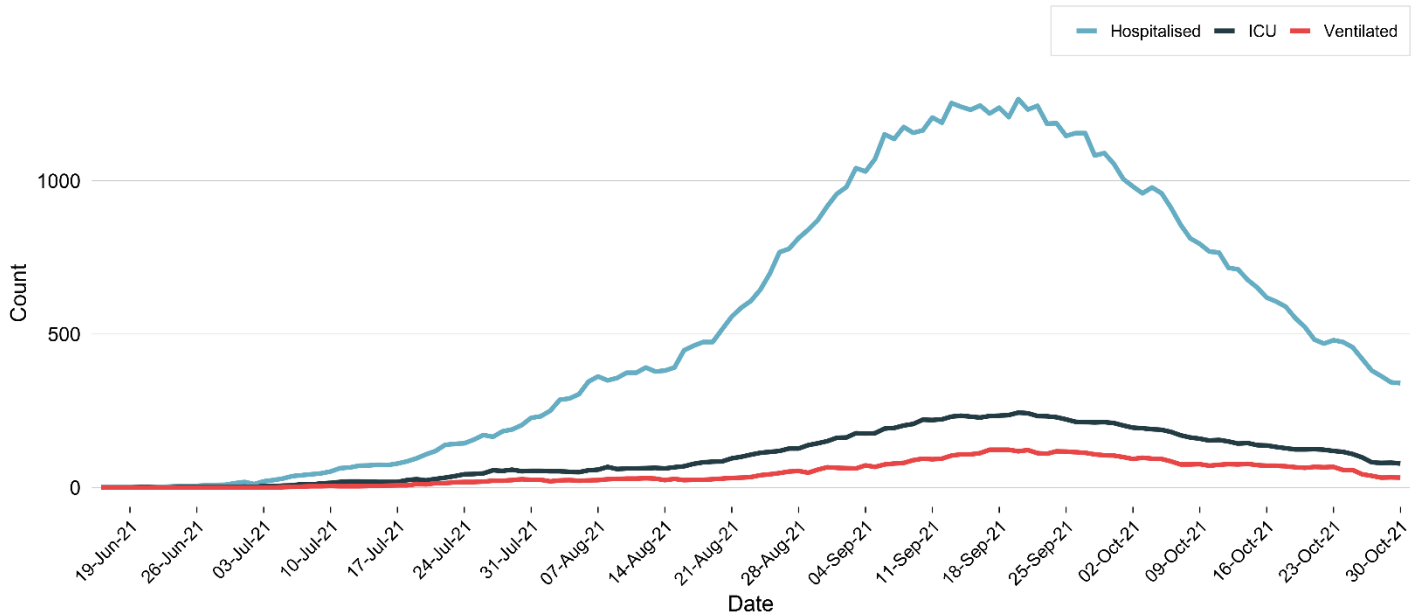



**Figure 11b. Number of cases in hospital, in ICU and ventilated by date, NSW, from 16 June to 30 October 2021**




**Interpretation:** Cases are considered active for 14 days from symptom onset; during this time a person may become increasingly ill and require hospitalisation. The top panel shows the total number of COVID-19 cases in the last 14 days, the number currently hospitalised, the number in ICU and the number ventilated. The bottom panel shows the number of COVID-19 cases in hospital each day, the number of cases in ICU each day and the number requiring ventilation each day. There can be a delay between a person becoming ill with COVID-19 and subsequently requiring a hospitalisation and people may be hospitalised before becoming cases. Additionally, people may require hospitalisation for long periods of time therefore reporting the number of cases hospitalised on any given date does not reflect the true proportion that will require hospitalisation. Currently there is a median delay of 5 days between a person becoming ill with COVID-19 and being admitted to hospital, and 11 days between becoming ill and dying.

## How many people with a COVID-19 diagnosis were admitted to hospital wards?

People with COVID-19 can be hospitalised because of the disease but may also be hospitalised for other reasons not related to their COVID-19 diagnosis. For the purposes of surveillance, reported hospitalisation counts include all people who were admitted to any hospital ward, including emergency departments, around the time of their COVID-19 diagnosis. This does not mean that all the hospitalisations reported are due to a worsening of COVID-19 symptoms. The count does not include people managed in the community (e.g. including Hospital in the Home schemes).

In the week ending 30 October 2021, of the 1,754 locally acquired cases, there were 77 people who had a diagnosis of COVID-19 who were also admitted to a hospital ward, and 4 of those were admitted to ICU. In total, there have been 9,971 people with COVID-19 who were also hospitalised since the beginning of the current NSW outbreak.

**Table 14. Hospitalisations among people diagnosed with COVID-19, by age group, NSW**

| Age-group (years) | Current outbreak since 16 Jun 2021 (Locally acquired only) | | | Jan 2020 – 15 Jun 2021 (All cases) | |
|---|---|---|---|---|---|
| | Hospitalised | Percentage of cases hospitalised[1] | Hospitalised per 100,000 population | Hospitalised | Percentage of cases hospitalised[1] |
| 0-9 | 476 | 4% | 47.1 | 4 | 2% |
| 10-19 | 571 | 5% | 59.2 | 10 | 3% |
| 20-29 | 1,495 | 11% | 127.5 | 27 | 2% |
| 30-39 | 1,690 | 14% | 144.3 | 46 | 4% |
| 40-49 | 1,597 | 19% | 154.6 | 48 | 7% |
| 50-59 | 1,485 | 23% | 152.7 | 78 | 11% |
| 60-69 | 1,158 | 32% | 137.8 | 117 | 18% |
| 70-79 | 818 | 46% | 140.4 | 92 | 23% |
| 80-89 | 541 | 61% | 197.3 | 52 | 43% |
| 90+ | 140 | 61% | 201.8 | 16 | 38% |
| Total | 9,971 | 14% | 123.3 | 490 | 9% |

**Interpretation:** The highest number of cases hospitalised are aged 30-39 years (1,690, 14% of cases in that age range), followed by those aged 40-49 years (1,597, 19%). In NSW, cases aged 90 years and over have the highest rate of hospitalisation (201.8 per 100,000 people), followed by those aged 80-89 years (197.3 per 100,000 people).

## How many people with a COVID-19 diagnosis admitted to ICU wards?

**Table 15. ICU hospitalisations among people diagnosed with COVID-19, by age group, NSW**

| Age-group (years) | Current outbreak since 16 Jun 2021 (Locally acquired only) | | | Jan 2020 – 15 Jun 2021 (All cases) | |
|---|---|---|---|---|---|
| | Admitted to ICU | Percentage of cases admitted to ICU[1] | ICU admission per 100,000 population (keep) | Admitted to ICU | Percentage of cases admitted to ICU[1] |
| 0-9 | 7 | <1% | 0.7 | 0 | 0% |
| 10-19 | 30 | <1% | 3.1 | 1 | <1% |
| 20-29 | 109 | 1% | 9.3 | 4 | <1% |
| 30-39 | 161 | 1% | 13.8 | 15 | 1% |
| 40-49 | 211 | 2% | 20.4 | 12 | 2% |
| 50-59 | 301 | 5% | 31.0 | 29 | 4% |
| 60-69 | 266 | 7% | 31.6 | 43 | 7% |
| 70-79 | 192 | 11% | 32.9 | 39 | 10% |
| 80-89 | 53 | 6% | 19.3 | 13 | 11% |
| 90+ | 0 | 0% | 0.0 | 0 | 0% |
| Total | 1,330 | 2% | 16.4 | 156 | 3% |

**Interpretation:** The highest number of cases in ICU are aged 50-59 years (301, 5%). The highest rate of admission to ICU is for those aged 70-79 years (192 cases, 32.9 per 100,000 people).

[1] There is often a delay between a person becoming ill with COVID-19 and subsequently requiring a hospitalisation or dying. In the current outbreak the median time between onset and hospitalisation is 5 days and between onset and death is 11 days. Therefore hospitalisations and deaths are under-reported for the most recently notified cases.

## How many people have died following recent infection with COVID-19?

A COVID-19 death is defined for surveillance purposes as a death in a confirmed COVID-19 case, unless there is a clear alternative cause of death that cannot be related to COVID-19 (e.g., trauma). There should be no period of complete recovery from COVID-19 between illness and death.

Since the start of the pandemic, 1% of cases (574 people) have died following a recent infection with COVID-19, most of whom were 80 years of age or older, including 89 residents of aged care facilities with known COVID-19 outbreaks. Approximately 2% (14/574) of the deaths were in overseas acquired cases.

There were 16 deaths in people diagnosed with COVID-19 reported this week including 5 people who were fully vaccinated, 1 person who was partially vaccinated, and 10 who were unvaccinated (see Section 5 for the definitions of vaccination status).

**Table 16. Deaths following recent infection with COVID-19, by age group**

| Age-group (years) | Current outbreak since 16 Jun 2021 (Locally acquired only) | | | Jan 2020 – 15 Jun 2021 (All cases) | |
|---|---|---|---|---|---|
| | Number of deaths | Case fatality rate | Fatality rate per 100,000 population[2] | Number of deaths | Case fatality rate[2] |
| 0-9 | 0 | 0% | 0.0 | 0 | 0% |
| 10-19 | 1 | <1% | 0.1 | 0 | 0% |
| 20-29 | 6 | <1% | 0.5 | 0 | 0% |
| 30-39 | 11 | <1% | 0.9 | 0 | 0% |
| 40-49 | 24 | <1% | 2.3 | 0 | 0% |
| 50-59 | 56 | 1% | 5.8 | 1 | <1% |
| 60-69 | 90 | 2% | 10.7 | 4 | 1% |
| 70-79 | 125 | 7% | 21.5 | 15 | 4% |
| 80-89 | 145 | 16% | 52.9 | 20 | 16% |
| 90+ | 58 | 25% | 83.6 | 16 | 38% |
| Total | 516 | 1% | 6.4 | 56 | 1% |

**Interpretation:** Cases aged 80-89 years of age had the highest number of deaths, while those aged over 90 had the highest case fatality rate. Note that most of the deaths (72%) in the period since 16 June have been unvaccinated (see Table 12); Table 13 provides further details on the risk of severe outcomes (ICU admission and death) by vaccination status and age.

**Table 17. Deaths following recent locally acquired infection with COVID-19, by age group and location, from 16 June to 30 October 2021**

| Age-group (years) | Health care facility | Aged care facility | Home |
|---|---|---|---|
| 0-9 | 0 | 0 | 0 |
| 10-19 | 1 | 0 | 0 |
| 20-29 | 4 | 0 | 2 |
| 30-39 | 7 | 0 | 4 |
| 40-49 | 18 | 0 | 6 |
| 50-59 | 48 | 0 | 8 |
| 60-69 | 78 | 1 | 11 |
| 70-79 | 117 | 5 | 3 |
| 80-89 | 130 | 8 | 7 |
| 90+ | 45 | 13 | 0 |
| Total | 448 | 27 | 41 |

**Interpretation:** The majority of deaths following recent locally acquired COVID-19 infection have occurred in hospital (448/516, 87%). Twenty-seven deaths in aged care facilities have been among people aged 60 years and over, while 41 deaths occurring at home have been in a younger cohort aged 20-89, and 25 (61%) of the deaths at home were tested forensically for infection (following death).

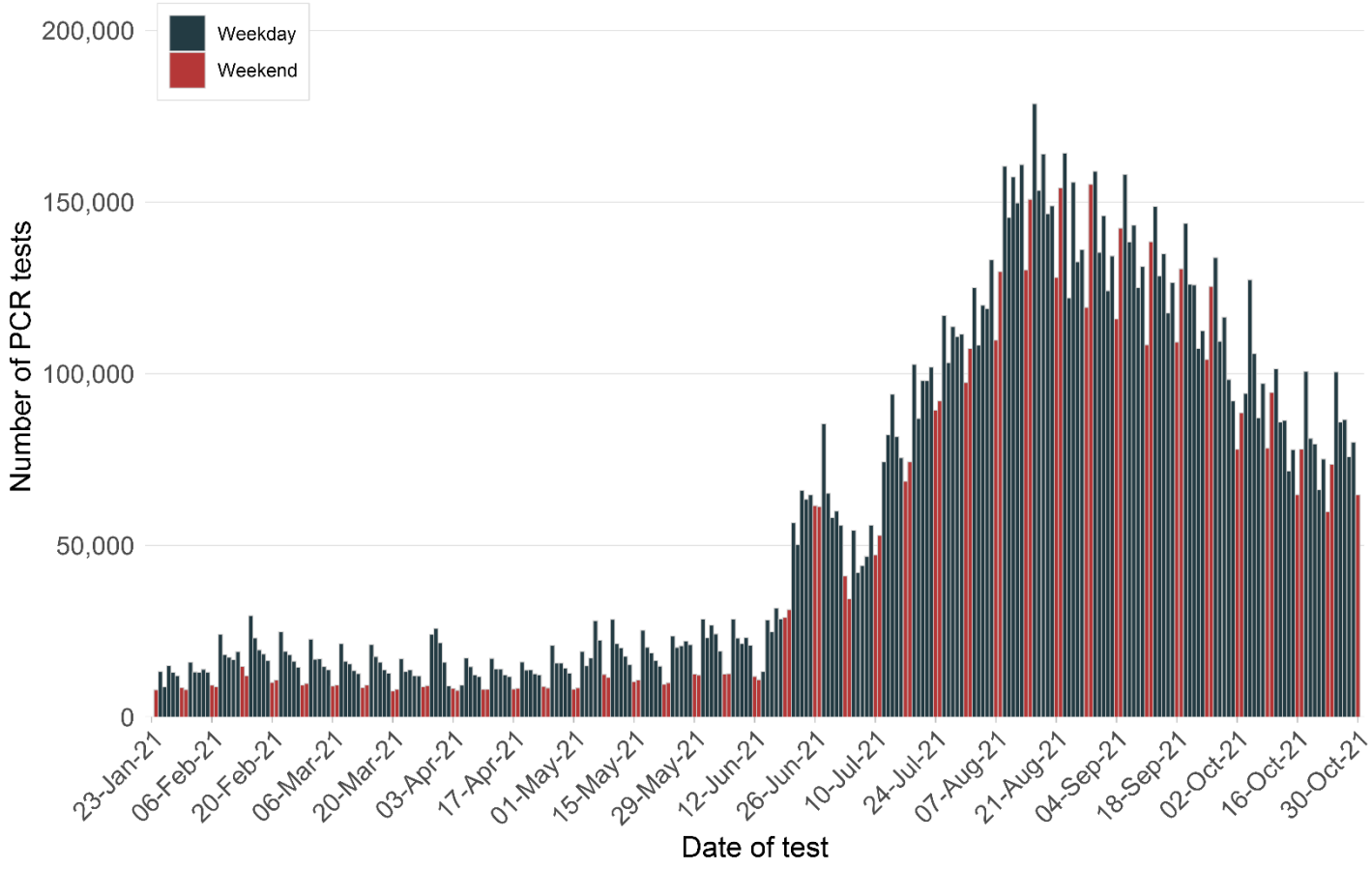
[2] There is often a delay between a person becoming ill with COVID-19 and subsequently requiring a hospitalisation or dying. In the current outbreak the median time between onset and hospitalisation is 5 days and between onset and death is 11 days. Therefore hospitalisations and deaths are under-reported for the most recently notified cases.

# Section 7: COVID-19 testing in NSW

## How much testing is happening?

The bars on the graph below show the number of negative tests by the date a person presented for the test.[3] While public health facilities are generally open seven days a week, there may be less demand and availability for testing through GPs and private collection centres on weekends and public holidays. This likely explains lower testing numbers on weekends.

**Figure 12. Number of negative PCR tests per day, NSW, 9 January 2021 to 30 October 2021**




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

**Interpretation:** Testing numbers increased in the week ending 30 October 2021 (up 6%) compared to the previous week. The average daily testing rate of 9.4 per 1,000 people in NSW each day increased compared to the previous week of 8.9 per 1,000 people.

[3] The number of tests per day displayed 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.

## Testing and positivity rates by Local Health District

**Figure 13a. Cases, testing rates per 1000 population, and percentage of tests which were positive for COVID-19, by LHD of residence, metropolitan LHDs, NSW, 16 June to 30 October 2021**

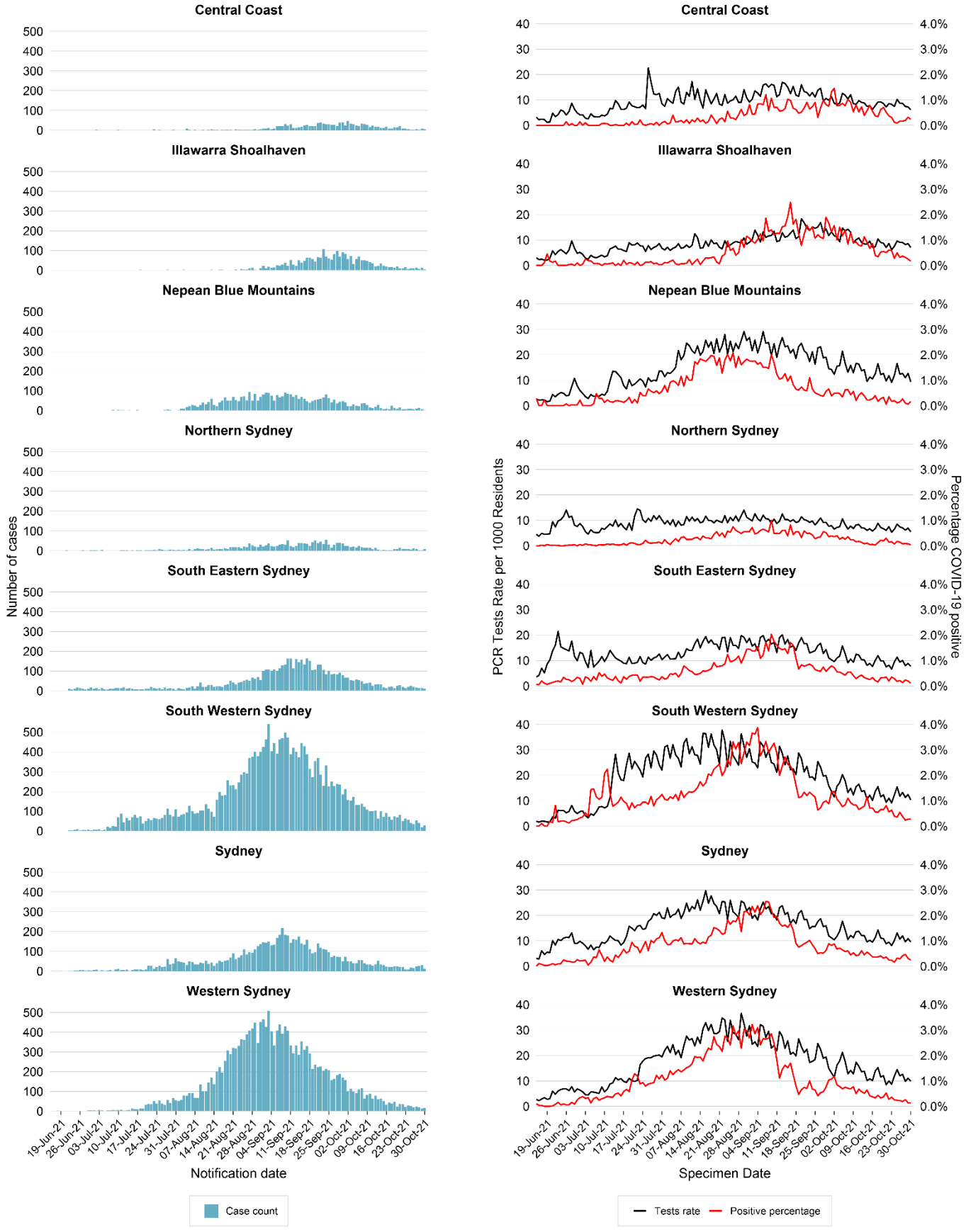
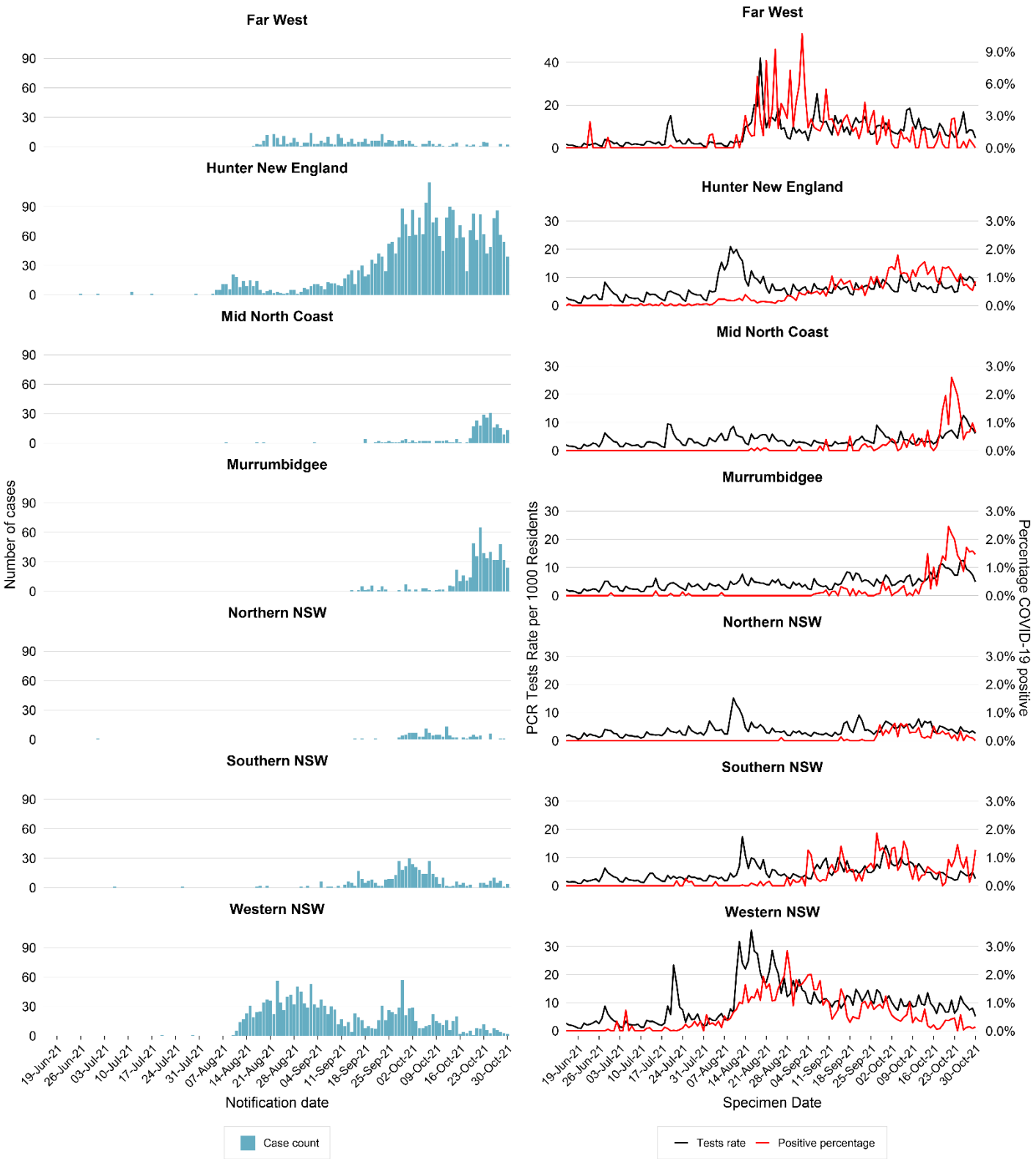


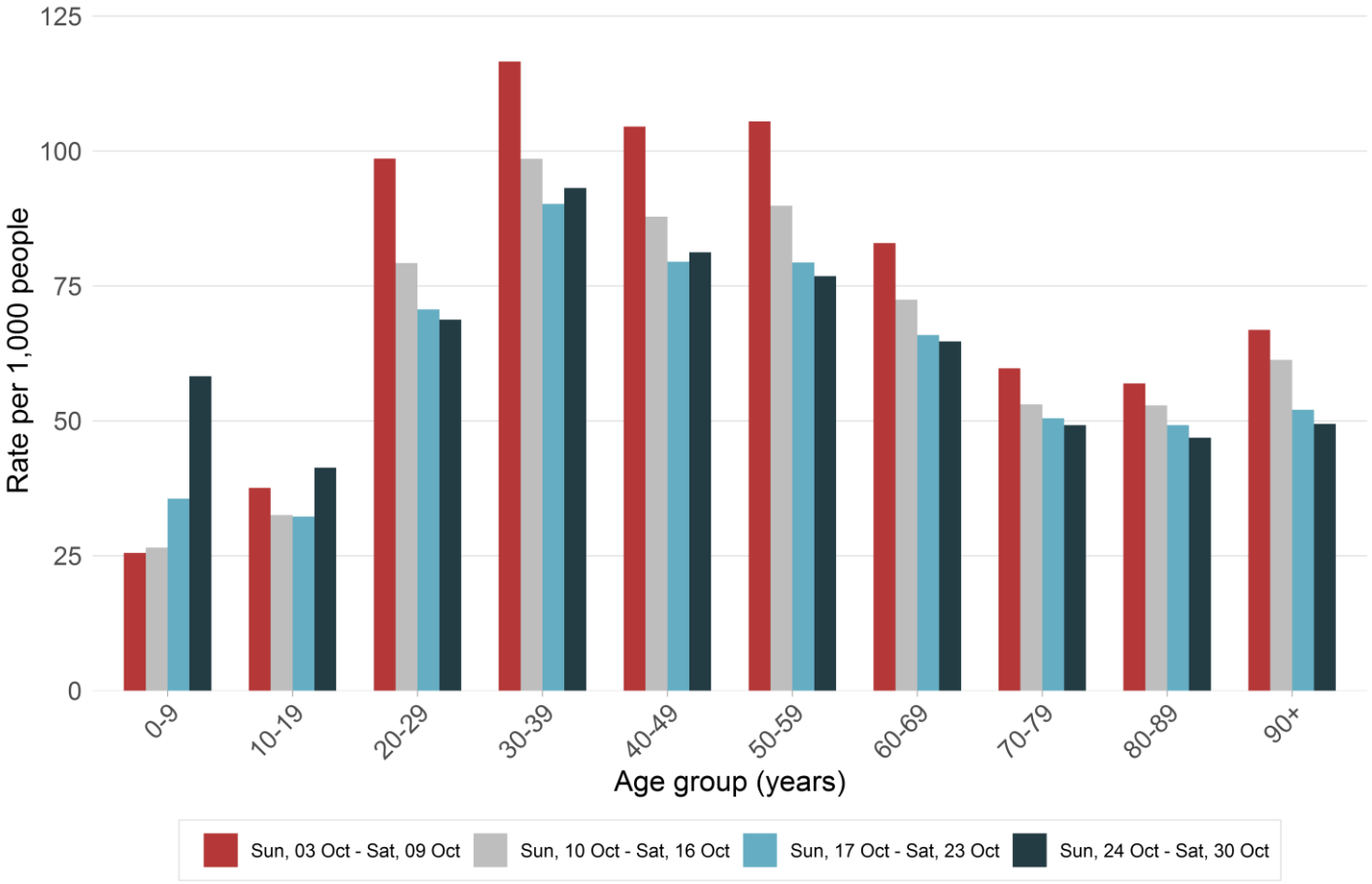
**Figure 13b. Cases, testing rates per 1000 population, and percentage of tests which were positive for COVID-19, by LHD of residence, rural and regional LHDs, NSW, 16 June to 30 October 2021**




**Interpretation:** The left panel shows the number of cases by notification date for each LHD, while the right panel shows the testing rate per 1,000 population (black line and left axis) and the percentage of tests which were positive (red line and right axis) for each LHD, from 16 June to 30 October 2021. Note that the axes differ within and between Figure 13a (metropolitan LHDs) and 13b (rural and regional LHDs). Percent positivity has generally been well below 3%, reflecting a high surveillance capacity and rapid case identification. Positivity generally follows the same trend as testing rates however where testing rates decrease and positivity remains stable or increases it may indicate higher number of cases in the community or be a result of more specific and targeted testing programs. Although case numbers in most regional LHDs are relatively small, because the population is also small, testing rates and positivity rates appear to show larger deviations than observed in some metropolitan LHDs.

## Testing by age group

**Figure 14. Rates of COVID-19 testing by age group and week, NSW, 3 October to 30 October 2021**




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

**Interpretation:** In the week ending 30 October 2021, testing rates remained highest overall among those aged 30-39. All age groups except 0-9 and 10-19 years showed a steady decrease in testing rates over the past month; large increases in testing were seen in those aged 10-19 years, and especially those aged 0-9 years.

# Section 8: Variants of Concern (VoC)

Global surveillance monitors the prevalence of mutations in the SARS-CoV-2 virus, focusing particularly on mutations that may reduce vaccine effectiveness or enable re-infection. This report reflects the recommendations of Australia's Communicable Diseases Genomics Network (CDGN) for reporting of Variants of Concern (VoC) in NSW.

The CDGN reports on the Alpha (B.1.1.7), Beta (B.1.351), Gamma (P.1), Kappa (B.1.617.1) and Delta (B.1.617.2) internationally recognised VoCs. The first recognised VoC was the Alpha variant, in December 2020. The Delta lineage (B.1.617.2) was internationally recognised as a VoC on 11 May 2021 and is responsible for almost all locally acquired cases in the NSW outbreak from 16 June 2021.

**Table 18. Variants identified among locally acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 30 October 2021**

| Variant | Week ending | | | | 29 Nov 2020 to 2 Oct 2021 | Total since 29 Nov 2020 |
|---|---|---|---|---|---|---|
| | 30 Oct* | 23 Oct* | 16 Oct | 9 Oct | | |
| Total variants identified | 2 | 542 | 681 | 633 | 11,173 | 13,031 |
| Alpha (B.1.1.7) | 0 | 0 | 0 | 0 | 6 | 6 |
| Beta (B.1.351) | 0 | 0 | 0 | 0 | 1 | 1 |
| Gamma (P.1) | 0 | 0 | 0 | 0 | 0 | 0 |
| Kappa (B.1.617.1) | 0 | 0 | 0 | 0 | 0 | 0 |
| Delta (B.1.617.2) | 2 | 542 | 681 | 633 | 11,166 | 13,024 |

***Note:** identification of variants of concern is through whole genome sequencing. Results for reported cases in the most recent weeks may not be available at the time of reporting. All locally acquired cases sequenced in the week ending 30 October have been the Delta variant of concern.

**Interpretation:** Only the delta variant has been detected in recent weeks among locally acquired cases, and this is associated with the cluster that emerged in Sydney from 16 June 2021.

**Table 19. Variants identified among overseas acquired COVID-19 cases by week reported, NSW, 29 November 2020 to 30 October 2021**

| Variant | Week ending | | | | 29 Nov 2020 to 2 Oct 2021 | Total since 29 Nov 2020 |
|---|---|---|---|---|---|---|
| | 30 Oct* | 23 Oct* | 16 Oct | 9 Oct | | |
| Total variants identified | 0 | 1 | 3 | 1 | 407 | 412 |
| Alpha (B.1.1.7) | 0 | 0 | 0 | 0 | 194 | 194 |
| Beta (B.1.351) | 0 | 0 | 0 | 0 | 33 | 33 |
| Gamma (P.1) | 0 | 0 | 0 | 0 | 6 | 6 |
| Kappa (B.1.617.1) | 0 | 0 | 0 | 0 | 9 | 9 |
| Delta (B.1.617.2) | 0 | 1 | 3 | 1 | 165 | 170 |

***Note:** identification of variants of concern is through whole genome sequencing. Results for reported cases in the most recent weeks may not be available at the time of reporting.

**Interpretation:** Only the delta variant has been detected in recent weeks among overseas acquired cases.

## Section 9: NSW Sewage Surveillance Program

The NSW Sewage Surveillance Program tests untreated sewage for fragments of the COVID-19 (SARS-CoV-2) virus at sewage treatment plant locations across NSW. In Sydney, testing is undertaken from both the sewage treatment plant (inlet sites) and sites within the network (network sites). Testing sewage can help track infections in the community and provide early warning of an increase in infections. These tests provide data to support NSW Health's response to COVID-19.

An infected person can shed virus in their faeces even if they do not have symptoms, and shedding can continue for several weeks after they are no longer infectious. The NSW sewage surveillance for SARS-CoV-2 is in the preliminary stages of analysis and work is progressing to assess the significance of the results. For example, it is not currently known the minimum number of cases that can be detected in a catchment. A small number of cases in a large sewage catchment may not be detected by sewage surveillance due to factors such as dilution, inhibition, reduction in shedding over the infection period or movement of cases.

In the week ending 30 October, 336 sewage samples were tested for fragments of SARS-CoV-2. Of these, there were 150 detections:

- Detections outside Sydney

There were 135 detections outside Sydney taken from the sewage treatment plants at Albury composite, Alstonville, Armidale (2), Ballina, Barraba, Bateau Bay, Batemans Bay, Bathurst, Bega (2), Bomaderry, Bombo, Bonny Hills (2), Bourke, Broken Hill (2), Broken Hill South (2), Buronga, Byron Bay (2), Charmhaven (2), Cobar, Coffs Harbour (2), Cooma, Coonabarabran, Corowa, Crescent Head, Culburra Beach, Curlewis, Dareton, Dubbo, Dunbogan (2), East Lismore, Forster, Gerroa, Googong, Gosford – Kincumber (2), Goulburn, Griffith, Gulgong, Gunnedah, Gwandalan (2), Hallidays Point, Harrington, Hawks Nest, Holbrook, Hunter – Branxton, Boulder Bay, Burwood Beach, Dora Creek, Edgeworth, Karuah, Morpeth, Raymond Terrace, Shortland, Toronto, Belmont, Cessnock, Farley, Kurri Kurri and Tanilba Bay, Inverell (2), Jindabyne, Leeton (2), Lightning Ridge, Mittagong, Moree (2), Moruya (2), Mullumbimby (2), Mulwala, Muswellbrook, Nambucca Heads, Narromine, North Grafton, Nowra, Nyngan, Oberon, Ocean Shores, Old Bar, Orange, Port Macquarie (2), Queanbeyan, Quirindi, Singleton, South Grafton, South Kempsey, South Lismore, South West Rocks (2), St Georges Basin, Tamworth, Taree, Tweed - Banora Point (2), Ulladulla, Uralla (2), Wagga Wagga - Kooringal (2), Narrung SBR (2) and Narrung Orbal (2), Walgett, Wauchope (2), West Kempsey (3), Wilcannia, Wingham, Woolgoolga (2), Woy Woy (2), Wyong – Toukley, Wyong South (2), Yass, and Young (2).

- Sydney detections

Results for Sydney sites may be delayed to prioritise analysis of regional sites. In Sydney there were detections from the sewage treatment plants at Brooklyn, Lithgow, McGraths Hill and South Windsor. There were also detections from the sewage networks and pumping stations at Caringbah (2), Eastern Creek (2), Miranda (2), Padstow 1 (2) and Rozelle (3).

- Detections with no known cases

Detections from Byron Bay, Dungog, Young, Inverell, Uralla, Mullumbimby, Moruya, Leeton, Wauchope, Quirindi, Coonabarabran, Nyngan, Cobar, Curlewis, Corowa, Holbrook, Moree, Griffith, Gulgong, Barraba, and Coffs Harbour occurred with no known or recent cases in the catchment. Cases were also identified in Armidale, Jerilderie, Corowa, Woolgoolga, Buronga, Coffs Harbour, and Old Bar following recent sewage detections.

- Sampled sites with no SARS-CoV-2 fragment detections

There were no detections in the following catchments: Aberdeen, Ashford, Balranald, Bangalow, Baradine, Bellingen, Bermagui, Bingara, Blayney, Bodalla, Boggabilla, Boggabri, Bombala, Boorowa, Bowral, Bowraville, Brewarrina, Bulahdelah, Canowindra, Casino, Collarenebri, Condobolin, Coolah, Coolamon, Cootamundra, Coraki, Crookwell, Darlington Point, Delungra, Denman, Dunedoo, Eden, Evans Head , Forbes, Frederickton, Gilgandra, Glen Innes, Gloucester, Grenfell, Gundagai, Guyra, Harden, Hay, Jerilderie, Junee, Kyogle, Lake Cargelligo, Lennox Head, Lockhart, Manilla, Mannering Park, Merimbula, Merriwa, Molong, Moss Vale, Mudgee, Mungindi, Murrurundi, Narooma, Narrabri, Narrandera, Parkes, Scone, Temora, Tenterfield, Tomakin, Trangie, Tumut, Tuross, Tweed - Hastings Point, Kingscliff and Murwillumbah, Vincentia, Walcha, Wardell, Warialda, Warren, Wee Waa, Wentworth, Werris Creek, West Wyalong, and Woodenbong.

- New collection sites

The sewage treatment plants at Boggabilla, Curlewis, Bingara, Warialda and Darlington Point were added as new sites.

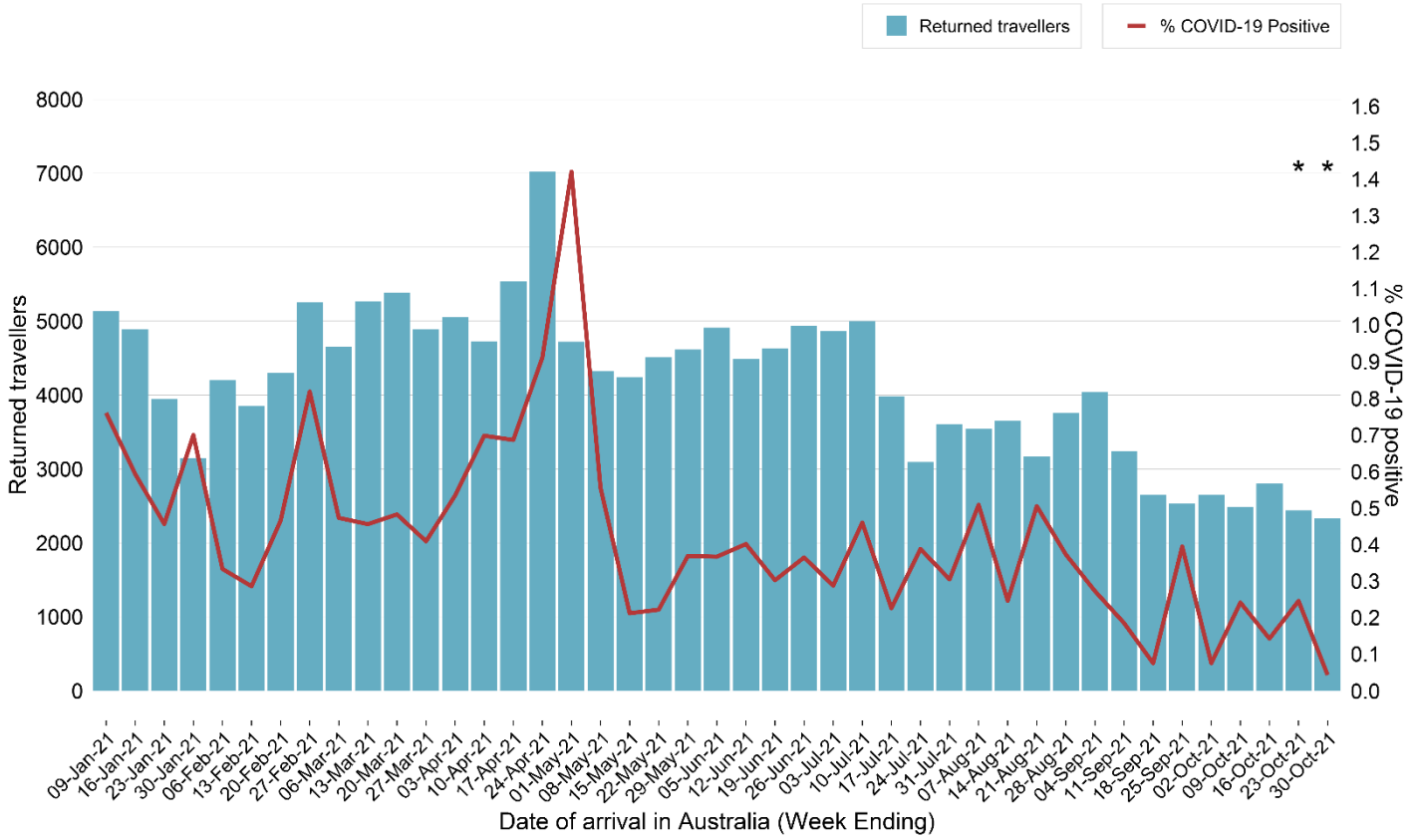
# Section 10: COVID-19 in returned travellers

To limit the spread of COVID-19 into NSW, travel restrictions were introduced for all non-Australian citizens and permanent residents in mid-March 2020. In addition:

- From 29 March 2020 returned travellers have been quarantined in hotels for a 14-day period and travellers who develop symptoms are isolated until no longer infectious. Returned travellers are screened on entry and exit from quarantine and following release from quarantine.
- From 22 January 2021 (local time at departure point) all people travelling to Australia on flights must provide proof of a negative COVID-19 PCR test result at the time of check-in.

The figure below shows the number of returned travellers screened at Sydney International Airport during 2021. Returned travellers include international flight crew who are required to be tested before leaving the airport.

**Figure 15. Returned travellers screened at Sydney International Airport by week of arrival and percent COVID-19 positive, NSW, 3 January 2021 to 30 October 2021**




*Returned travellers entering Australia in the past 14 days are still in quarantine and may return a positive result prior to the end of their hotel quarantine period.

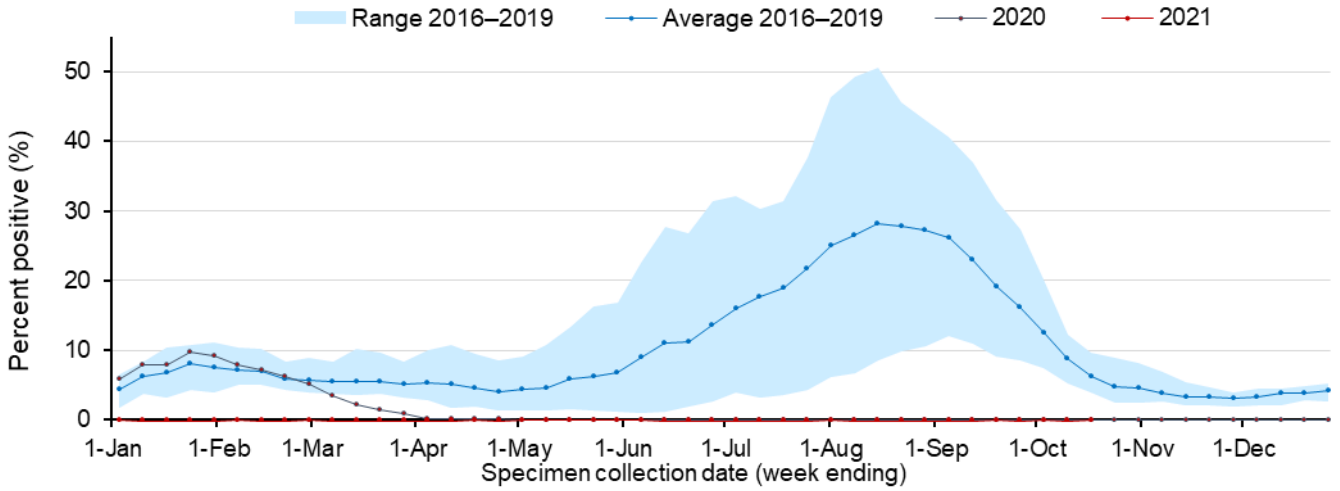
**Interpretation:** Since 3 January 2021, there has been on average 595 people screened on arrival through Sydney International Airport daily. In the last four weeks, 17 returned travellers have subsequently tested positive for COVID-19 while completing quarantine. The proportion of returned travellers who test positive for COVID-19 has been low. In the week ending 1 May 2021 the proportion increased to over 1% (1.4%) of returned travellers testing positive, but this has subsequently fallen back to lower levels.

# Section 11: Other respiratory infections in NSW

## 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 2021, the dark blue line showing counts for 2020, the light blue line showing the average for 2016 to 2019 and the shaded area showing the range recorded for 2016 to 2019.

**Figure 16. Proportion of tests positive for influenza, NSW, 1 January 2016 to 24 October 2021**

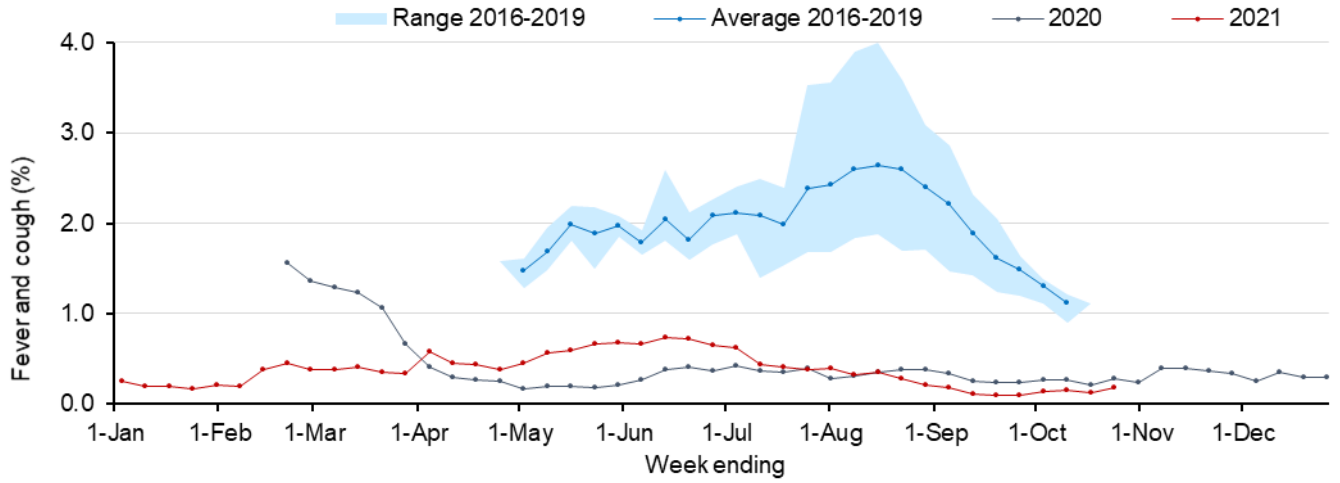



**Interpretation:** In the week ending 24 October, the percent of influenza tests that were positive continued to be very low (0.03%), indicating limited influenza transmission in the community. Since early March 2020, this percentage has remained far lower than the usual range for the time of year. There have been 20 influenza cases reported in 2021.

## 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 has continued throughout the year due to the COVID-19 outbreak.

**Figure 17. Proportion of FluTracker participants reporting influenza-like illness, NSW, 1 January 2016 to 24 October 2021**



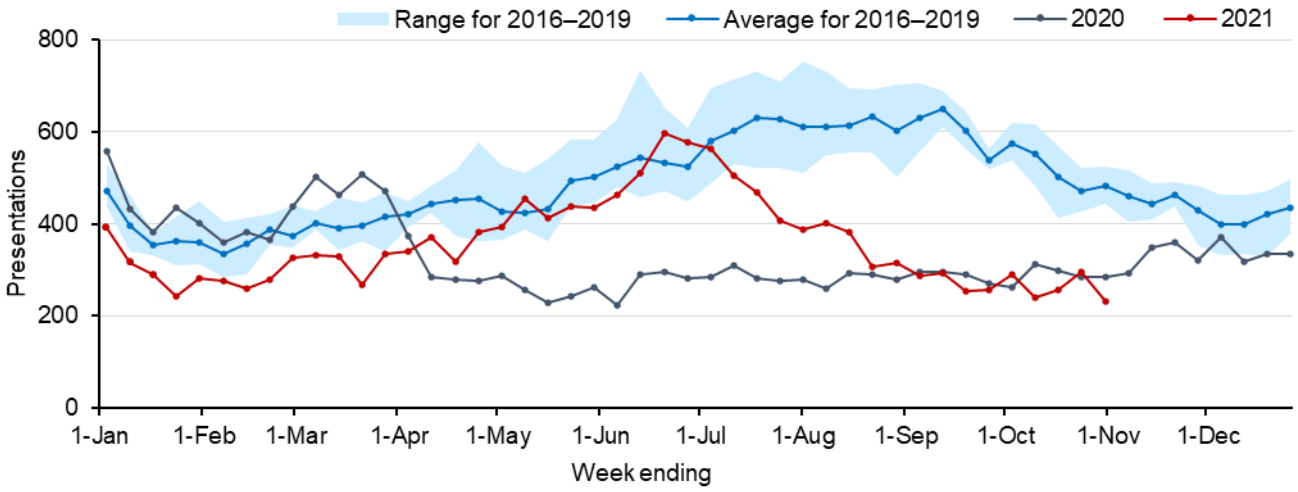

**Interpretation**: In NSW in the week ending 24 October 2021, of the 18,490 people surveyed, 34 people (0.18%) reported flu-like symptoms. In the last four weeks, 71% (95/133) of new cases of flu-like illness reported having a COVID-19 test. The proportion of people with flu-like symptoms being tested for COVID-19 decreased from January 2021, when 80% reported being tested, to around 50% between April and June 2021, and then increased to around 60% from June 2021 onwards.

## How are emergency department presentations tracking?

Improved hygiene and social distancing measures implemented during the COVID-19 pandemic have impacts on a broad range of other viral and bacterial infections.

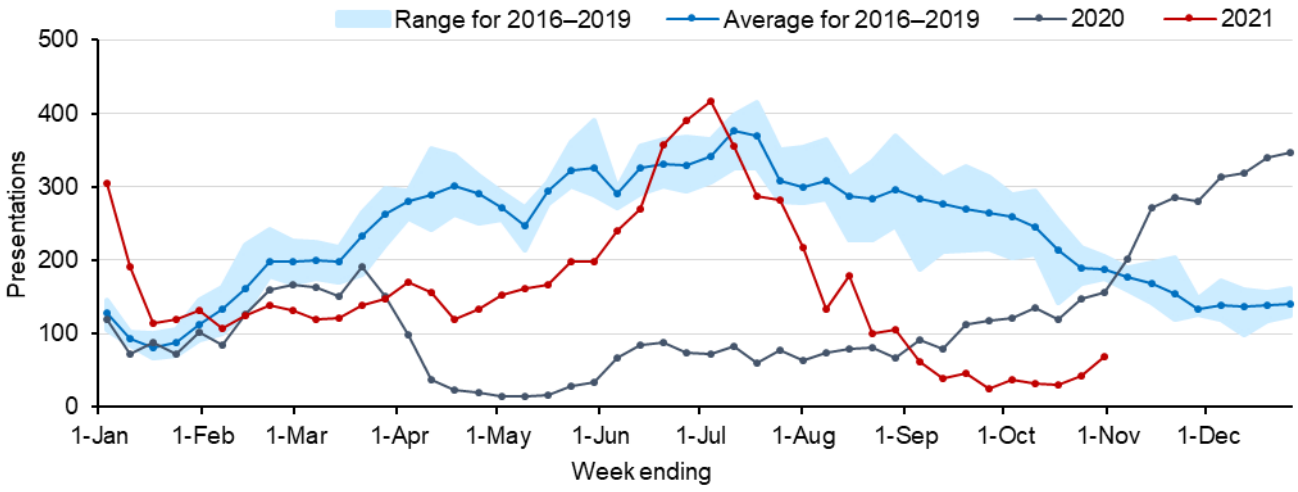
The figures below show weekly pneumonia and bronchiolitis presentations to Emergency Departments in NSW, using PHREDSS[4]. The red line shows the weekly counts for 2021, the dark blue line showing counts for 2020, the light blue line showing the average for 2016 to 2019 and the shaded area showing the range recorded for 2016 to 2019.

**Figure 18. Emergency Department pneumonia presentations, NSW, 1 January 2016 to 31 October 2021**




**Interpretation:** Pneumonia presentations include people 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. Since the beginning of the current outbreak from 16 June 2021, there has been a steady decline in pneumonia presentations, with the number of presentations in the week ending 31 October remaining significantly below the seasonal range for this time of year.

**Figure 19. Emergency Department bronchiolitis presentations, NSW, 1 January 2016 to 31 October 2021**




**Interpretation:** Bronchiolitis is a common disease of infants often caused by respiratory syncytial virus (RSV). Public health measures introduced last year around social distancing and improved hygiene practices coincided with a large decrease in bronchiolitis presentations for the majority of 2020. A rise in bronchiolitis presentations in the later part of 2020 corresponds to an increase in RSV detections (see Appendix C). Since the beginning of the current outbreak from 16 June 2021, there has again been a steady decrease in bronchiolitis presentations, with the number of presentations in the week ending 31 October remaining well below the seasonal range for this time of year.

[4] NSW Health Public Health Rapid, Emergency Disease and Syndromic Surveillance (PHREDSS) system, CEE, NSW Ministry of Health. Comparisons are made with data for the preceding 4 years. Includes unplanned presentations to 67 NSW emergency departments (accounts for 87% of total public ED activity).

# Appendix A: COVID-19 PCR tests in NSW by Local Government Area

| | | Week ending | | | | Total since January 2021 | |
|---|---|---|---|---|---|---|---|
| | | 30 Oct | | 23 Oct | | | |
| Local Health District | Local Government Area | No. | Tests per 1,000 population | No. | Tests per 1,000 population | No. | Tests per 1,000 population |
| **Central Coast** | *LHD Total*[2] | 19,592 | 7.9 | 20,606 | 8.3 | 529,771 | 214.5 |
| **Illawarra Shoalhaven** | Kiama | 967 | 5.9 | 1,130 | 6.9 | 28,631 | 174.9 |
| | Shellharbour | 4,735 | 9.2 | 5,442 | 10.6 | 123,308 | 240.5 |
| | Shoalhaven | 4,888 | 6.6 | 4,237 | 5.7 | 98,007 | 132.5 |
| | Wollongong | 14,169 | 9.3 | 13,146 | 8.6 | 344,717 | 225.8 |
| | *LHD Total*[2] | 24,759 | 8.4 | 23,955 | 8.2 | 594,663 | 202.5 |
| **Nepean Blue Mountains** | Blue Mountains | 5,032 | 9.1 | 4,457 | 8.1 | 131,058 | 236.6 |
| | Hawkesbury | 6,746 | 14.3 | 7,225 | 15.3 | 170,570 | 362.1 |
| | Lithgow | 720 | 4.8 | 864 | 5.7 | 16,819 | 111.2 |
| | Penrith | 21,626 | 14.5 | 20,722 | 13.9 | 569,904 | 382.3 |
| | *LHD Total*[2] | 33,778 | 12.3 | 32,905 | 12.0 | 877,371 | 320.6 |
| **Northern Sydney** | Hornsby | 5,854 | 5.5 | 5,647 | 5.3 | 181,292 | 170.3 |
| | Hunters Hill | 1,678 | 16.0 | 1,404 | 13.4 | 44,775 | 427.0 |
| | Ku-ring-gai | 6,248 | 7.0 | 5,894 | 6.6 | 197,463 | 221.9 |
| | Lane Cove | 3,105 | 11.1 | 3,218 | 11.5 | 101,879 | 362.5 |
| | Mosman | 1,131 | 5.2 | 1,195 | 5.5 | 39,947 | 184.2 |
| | North Sydney | 2,425 | 4.6 | 2,472 | 4.7 | 82,429 | 157.0 |
| | Northern Beaches | 13,255 | 6.9 | 14,549 | 7.6 | 476,289 | 248.8 |
| | Parramatta[1] | 14,911 | 8.3 | 14,345 | 8.0 | 488,563 | 271.4 |
| | Ryde | 7,298 | 7.9 | 6,818 | 7.4 | 249,224 | 271.2 |
| | Willoughby | 2,542 | 4.5 | 2,627 | 4.6 | 83,588 | 147.1 |
| | *LHD Total*[2] | 45,846 | 6.9 | 46,120 | 6.9 | 1,529,111 | 228.5 |
| **South Eastern Sydney** | Bayside | 12,388 | 9.9 | 12,339 | 9.9 | 404,016 | 323.5 |
| | Georges River | 10,170 | 9.1 | 10,759 | 9.6 | 343,768 | 308.0 |
| | Randwick | 12,075 | 11.1 | 11,877 | 10.9 | 362,408 | 332.6 |
| | Sutherland Shire | 13,539 | 8.4 | 13,430 | 8.3 | 397,459 | 246.2 |
| | Sydney[1] | 16,353 | 9.5 | 15,523 | 9.0 | 504,258 | 292.4 |
| | Waverley | 4,743 | 9.1 | 4,587 | 8.8 | 172,259 | 331.2 |
| | Woollahra | 3,712 | 8.9 | 3,422 | 8.2 | 128,862 | 310.0 |
| | *LHD Total*[2] | 61,915 | 9.2 | 61,062 | 9.1 | 1,973,463 | 294.0 |
| **South Western Sydney** | Camden | 12,042 | 17.0 | 9,417 | 13.3 | 281,967 | 397.1 |
| | Campbelltown | 17,158 | 14.3 | 14,713 | 12.3 | 458,202 | 382.9 |
| | Canterbury-Bankstown[1] | 32,291 | 12.2 | 32,533 | 12.3 | 1,250,843 | 472.8 |
| | Fairfield | 17,892 | 12.1 | 18,641 | 12.6 | 714,223 | 482.0 |
| | Liverpool | 20,976 | 13.2 | 20,827 | 13.1 | 676,256 | 424.5 |
| | Wingecarribee | 1,949 | 5.5 | 2,173 | 6.1 | 61,768 | 172.6 |
| | Wollondilly | 2,720 | 7.3 | 2,618 | 7.0 | 78,756 | 211.7 |
| | *LHD Total*[2] | 89,535 | 12.3 | 84,950 | 11.7 | 2,901,491 | 399.1 |
| **Sydney** | Burwood | 2,101 | 7.4 | 2,115 | 7.4 | 73,053 | 257.0 |
| | Canada Bay | 6,561 | 9.8 | 5,855 | 8.7 | 174,684 | 259.8 |
| | Canterbury-Bankstown[1] | 32,291 | 12.2 | 32,533 | 12.3 | 1,250,843 | 472.8 |
| | Inner West | 13,169 | 9.4 | 12,204 | 8.7 | 358,947 | 255.4 |
| | Strathfield | 4,858 | 14.8 | 4,863 | 14.8 | 159,073 | 484.3 |
| | Sydney[1] | 16,353 | 9.5 | 15,523 | 9.0 | 504,258 | 292.4 |

| | | Week ending | | | | Total since January 2021 | |
|---|---|---|---|---|---|---|---|
| | | 30 Oct | | 23 Oct | | | |
| Local Health District | Local Government Area | No. | Tests per 1,000 population | No. | Tests per 1,000 population | No. | Tests per 1,000 population |
| | *LHD Total*[2] | 52,637 | 10.8 | 51,307 | 10.5 | 1,702,110 | 349.0 |
| **Western Sydney** | Blacktown | 35,127 | 13.4 | 33,807 | 12.9 | 1,030,073 | 393.0 |
| | Cumberland | 23,512 | 13.9 | 23,958 | 14.2 | 871,169 | 515.3 |
| | Parramatta[1] | 14,911 | 8.3 | 14,345 | 8.0 | 488,563 | 271.4 |
| | The Hills Shire | 13,707 | 11.0 | 13,069 | 10.5 | 395,610 | 317.6 |
| | *LHD Total*[2] | 85,908 | 11.7 | 83,832 | 11.4 | 2,748,263 | 372.7 |
| **Far West** | Balranald | 68 | 4.2 | 85 | 5.2 | 1,696 | 103.6 |
| | Broken Hill | 956 | 7.8 | 577 | 4.7 | 22,775 | 186.1 |
| | Central Darling | 70 | 5.4 | 111 | 8.6 | 3,487 | 270.9 |
| | Wentworth | 760 | 15.4 | 745 | 15.1 | 7,212 | 146.1 |
| | *LHD Total*[2] | 1,854 | 8.8 | 1,518 | 7.2 | 35,170 | 166.7 |
| **Hunter New England** | Armidale Regional | 1,298 | 6.0 | 605 | 2.8 | 25,891 | 120.2 |
| | Cessnock | 3,655 | 8.7 | 3,102 | 7.4 | 49,395 | 117.6 |
| | Dungog | 348 | 5.3 | 266 | 4.0 | 6,119 | 92.8 |
| | Glen Innes Severn | 125 | 2.0 | 139 | 2.2 | 4,671 | 75.2 |
| | Gunnedah | 317 | 3.6 | 315 | 3.6 | 9,299 | 104.8 |
| | Gwydir | 79 | 2.1 | 100 | 2.7 | 2,095 | 55.9 |
| | Inverell | 425 | 3.6 | 288 | 2.4 | 9,412 | 79.6 |
| | Lake Macquarie | 13,844 | 9.6 | 9,718 | 6.7 | 259,387 | 180.0 |
| | Liverpool Plains | 206 | 3.7 | 224 | 4.1 | 4,981 | 90.0 |
| | Maitland | 8,344 | 14.0 | 5,515 | 9.3 | 129,673 | 217.5 |
| | Mid-Coast | 5,202 | 7.9 | 5,048 | 7.7 | 60,615 | 92.3 |
| | Moree Plains | 317 | 3.4 | 351 | 3.8 | 9,547 | 102.9 |
| | Muswellbrook | 338 | 3.0 | 345 | 3.0 | 11,047 | 96.4 |
| | Narrabri | 218 | 2.4 | 252 | 2.7 | 6,471 | 70.4 |
| | Newcastle | 11,941 | 10.3 | 8,204 | 7.1 | 221,505 | 191.1 |
| | Port Stephens | 4,728 | 9.2 | 2,537 | 4.9 | 71,924 | 139.8 |
| | Singleton | 1,056 | 6.4 | 1,246 | 7.6 | 24,514 | 149.3 |
| | Tamworth Regional | 4,357 | 10.0 | 3,378 | 7.7 | 65,330 | 149.2 |
| | Tenterfield | 126 | 2.7 | 137 | 3.0 | 2,750 | 59.6 |
| | Upper Hunter Shire | 270 | 2.7 | 328 | 3.3 | 8,886 | 89.5 |
| | Uralla | 141 | 3.4 | 112 | 2.7 | 3,343 | 79.4 |
| | Walcha | 73 | 3.3 | 75 | 3.4 | 2,159 | 98.4 |
| | *LHD Total*[2] | 57,391 | 8.6 | 42,280 | 6.3 | 988,552 | 148.3 |
| **Mid North Coast** | Bellingen | 327 | 3.6 | 266 | 2.9 | 7,642 | 84.0 |
| | Coffs Harbour | 2,982 | 5.5 | 1,410 | 2.6 | 43,426 | 80.3 |
| | Kempsey | 5,671 | 27.2 | 4,447 | 21.4 | 31,885 | 153.1 |
| | Nambucca | 937 | 6.8 | 326 | 2.4 | 10,058 | 72.6 |
| | Port Macquarie-Hastings | 3,579 | 6.1 | 2,177 | 3.7 | 58,785 | 99.4 |
| | *LHD Total*[2] | 13,496 | 8.5 | 8,626 | 5.5 | 151,796 | 96.1 |
| **Murrumbidgee** | Albury | 9,580 | 25.2 | 9,920 | 26.1 | 57,972 | 152.4 |
| | Berrigan | 350 | 5.7 | 197 | 3.2 | 3,518 | 57.4 |
| | Bland | 112 | 2.7 | 102 | 2.4 | 3,342 | 79.9 |
| | Carrathool | 19 | 1.0 | 20 | 1.0 | 901 | 46.0 |
| | Coolamon | 131 | 4.3 | 111 | 3.7 | 3,048 | 100.3 |

| | | Week ending | | | | Total since January 2021 | |
|---|---|---|---|---|---|---|---|
| | | 30 Oct | | 23 Oct | | | |
| Local Health District | Local Government Area | No. | Tests per 1,000 population | No. | Tests per 1,000 population | No. | Tests per 1,000 population |
| | Cootamundra-Gundagai Regional | 231 | 2.9 | 277 | 3.5 | 7,450 | 94.7 |
| | Edward River | 308 | 4.8 | 515 | 8.1 | 6,974 | 109.7 |
| | Federation | 628 | 7.2 | 839 | 9.6 | 8,411 | 96.6 |
| | Greater Hume Shire | 951 | 12.6 | 1,305 | 17.3 | 9,906 | 131.5 |
| | Griffith | 495 | 2.6 | 547 | 2.9 | 15,755 | 83.3 |
| | Hay | 65 | 3.2 | 53 | 2.6 | 1,259 | 61.0 |
| | Hilltops | 592 | 4.5 | 620 | 4.7 | 20,154 | 153.9 |
| | Junee | 137 | 2.9 | 140 | 3.0 | 3,828 | 81.8 |
| | Lachlan[1] | 90 | 2.1 | 128 | 3.0 | 3,172 | 74.6 |
| | Leeton | 246 | 3.1 | 223 | 2.8 | 5,488 | 68.5 |
| | Lockhart | 138 | 6.0 | 121 | 5.3 | 2,348 | 102.1 |
| | Murray River | 356 | 4.2 | 507 | 6.0 | 3,092 | 36.5 |
| | Murrumbidgee | 218 | 8.0 | 104 | 3.8 | 1,951 | 71.2 |
| | Narrandera | 119 | 2.9 | 109 | 2.6 | 2,254 | 54.6 |
| | Snowy Valleys | 246 | 2.4 | 342 | 3.4 | 7,403 | 73.0 |
| | Temora | 123 | 2.8 | 117 | 2.7 | 3,140 | 71.1 |
| | Wagga Wagga | 3,297 | 7.2 | 2,721 | 6.0 | 61,950 | 135.6 |
| | *LHD Total*[2] | 18,371 | 8.8 | 18,911 | 9.1 | 231,174 | 110.8 |
| **Northern NSW** | Ballina | 851 | 2.7 | 1,351 | 4.3 | 44,481 | 142.4 |
| | Byron | 651 | 2.7 | 734 | 3.0 | 33,165 | 135.1 |
| | Clarence Valley | 1,201 | 3.3 | 2,707 | 7.5 | 30,656 | 84.8 |
| | Kyogle | 139 | 2.3 | 107 | 1.7 | 5,074 | 82.4 |
| | Lismore | 1,481 | 4.8 | 1,017 | 3.3 | 37,608 | 123.0 |
| | Richmond Valley | 853 | 5.2 | 799 | 4.9 | 20,197 | 123.0 |
| | Tenterfield | 126 | 2.7 | 137 | 3.0 | 2,750 | 59.6 |
| | Tweed | 2,005 | 3.0 | 1,966 | 2.9 | 59,072 | 87.0 |
| | *LHD Total*[2] | 7,200 | 3.3 | 8,701 | 4.0 | 230,907 | 106.3 |
| **Southern NSW** | Bega Valley | 461 | 1.9 | 641 | 2.7 | 19,820 | 82.1 |
| | Eurobodalla | 561 | 2.1 | 550 | 2.0 | 24,471 | 90.9 |
| | Goulburn Mulwaree | 919 | 4.2 | 1,187 | 5.5 | 33,761 | 154.9 |
| | Queanbeyan-Palerang Regional | 2,830 | 6.6 | 1,388 | 3.3 | 47,228 | 110.4 |
| | Snowy Monaro Regional | 528 | 3.6 | 614 | 4.2 | 21,770 | 149.6 |
| | Upper Lachlan Shire | 149 | 2.6 | 171 | 3.0 | 5,788 | 102.6 |
| | Yass Valley | 266 | 2.2 | 427 | 3.6 | 12,471 | 104.3 |
| | *LHD Total*[2] | 5,718 | 3.8 | 4,978 | 3.3 | 165,420 | 108.9 |
| **Western NSW** | Bathurst Regional | 4,883 | 16.0 | 2,866 | 9.4 | 59,413 | 194.6 |
| | Blayney | 365 | 7.1 | 380 | 7.4 | 9,136 | 176.9 |
| | Bogan | 52 | 2.9 | 70 | 3.9 | 2,399 | 132.8 |
| | Bourke | 208 | 11.5 | 312 | 17.2 | 6,066 | 334.6 |
| | Brewarrina | 86 | 7.6 | 73 | 6.5 | 2,243 | 198.9 |
| | Cabonne | 371 | 3.9 | 358 | 3.8 | 10,851 | 113.7 |
| | Cobar | 170 | 5.2 | 198 | 6.1 | 3,597 | 110.3 |
| | Coonamble | 83 | 3.0 | 144 | 5.2 | 3,333 | 120.3 |

| | | Week ending | | | | Total since January 2021 | |
|---|---|---|---|---|---|---|---|
| | | 30 Oct | | 23 Oct | | | |
| Local Health District | Local Government Area | No. | Tests per 1,000 population | No. | Tests per 1,000 population | No. | Tests per 1,000 population |
| | Cowra | 739 | 8.3 | 477 | 5.4 | 17,142 | 192.2 |
| | Dubbo Regional | 4,296 | 11.4 | 4,704 | 12.5 | 140,498 | 373.6 |
| | Forbes | 188 | 2.7 | 191 | 2.8 | 6,584 | 95.0 |
| | Gilgandra | 144 | 4.9 | 146 | 4.9 | 4,418 | 148.9 |
| | Lachlan[1] | 90 | 2.1 | 128 | 3.0 | 3,172 | 74.6 |
| | Mid-Western Regional | 655 | 3.7 | 683 | 3.9 | 28,017 | 158.5 |
| | Narromine | 379 | 8.3 | 379 | 8.3 | 10,325 | 226.3 |
| | Oberon | 348 | 9.2 | 271 | 7.2 | 7,061 | 186.4 |
| | Orange | 2,797 | 9.4 | 2,912 | 9.8 | 70,297 | 236.6 |
| | Parkes | 328 | 3.2 | 289 | 2.8 | 12,360 | 119.0 |
| | Walgett | 209 | 5.0 | 628 | 15.1 | 7,900 | 189.6 |
| | Warren | 171 | 9.1 | 174 | 9.2 | 6,005 | 318.1 |
| | Warrumbungle Shire | 249 | 3.8 | 244 | 3.8 | 6,926 | 106.6 |
| | Weddin | 70 | 2.8 | 82 | 3.2 | 2,512 | 99.3 |
| | *LHD Total*[2] | 16,858 | 8.5 | 15,689 | 7.9 | 419,329 | 210.2 |
| **NSW Total** | **NSW Total**[3] | 534,858 | 9.4 | 505,440 | 8.9 | 15,079,209 | 266.3 |

Source - Notifiable Condition Information Management System, accessed as at 8pm 1 Nov 2021

[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 since January 2021 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, January 2021 to 24 October 2021

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.

**Testing numbers in NSW from 28 December 2020–24 October 2021**

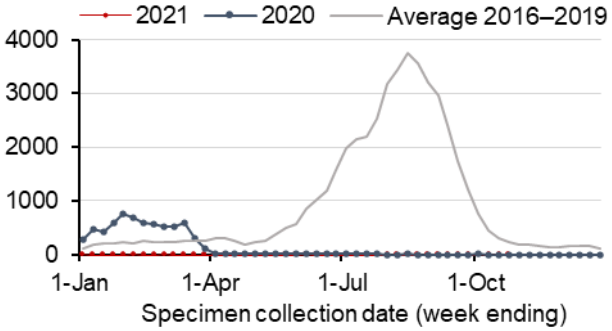
| Specimen collection date | PCR tests conducted | Influenza A | | Influenza B | | Adeno-virus | Para-influenza | RSV | Rhino-virus | HMPV | Entero-virus |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | %Pos. | No. | %Pos. | | | | | | |
| Total | 1,391,603 | 10 | <0.01% | 10 | <0.01% | 7,529 | 18,595 | 17,532 | 57,256 | 5,454 | 6,412 |
| **Month ending** | | | | | | | | | | | |
| 31 January* | 168,596 | 1 | <0.01% | 0 | - | 416 | 88 | 3,275 | 3,541 | 23 | 560 |
| 28 February | 125,718 | 2 | <0.01% | 0 | - | 419 | 106 | 2,386 | 8,667 | 22 | 910 |
| 28 March | 95,458 | 0 | - | 0 | - | 507 | 354 | 1,909 | 8,891 | 18 | 1,187 |
| 2 May* | 112,962 | 0 | - | 3 | <0.01% | 802 | 1,515 | 1,653 | 8,141 | 48 | 1,128 |
| 30 May | 131,316 | 0 | - | 6 | <0.01% | 946 | 3,129 | 1,491 | 8,982 | 78 | 843 |
| 27 June | 243,351 | 1 | <0.01% | 0 | - | 1,551 | 7,104 | 2,794 | 9,915 | 635 | 811 |
| 26 July | 530,698 | 0 | - | 0 | - | 1,463 | 4,603 | 3,014 | 5,089 | 1,991 | 587 |
| 29 August* | 157,063 | 0 | - | 1 | <0.01% | 869 | 1,497 | 852 | 2,252 | 2,035 | 259 |
| 26 September | 75,074 | 0 | - | 0 | - | 321 | 151 | 124 | 715 | 454 | 68 |
| **Week ending** | | | | | | | | | | | |
| 3 October | 24,430 | 1 | <0.01% | 0 | - | 53 | 11 | 14 | 171 | 44 | 16 |
| 10 October | 17,657 | 0 | - | 0 | - | 60 | 13 | 8 | 217 | 34 | 17 |
| 17 October | 15,687 | 5 | 0.03% | 0 | - | 57 | 17 | 6 | 239 | 35 | 10 |
| 24 October | 16,247 | 0 | - | 0 | - | 62 | 7 | 6 | 427 | 37 | 18 |

Notes: Preliminary laboratory data is provided by participating sentinel laboratories on a weekly basis and are subject to change. Serological diagnoses are not included.
HMPV – Human metapneumovirus
RSV - Respiratory syncytial virus
*Five-week period

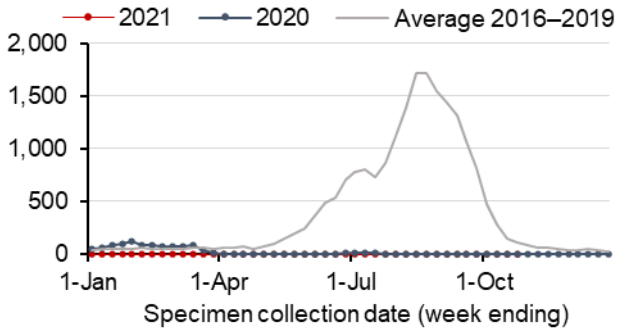
# Appendix C: Number of positive PCR test results for influenza and other respiratory viruses at sentinel NSW laboratories, January 2020 to 24 October 2021

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

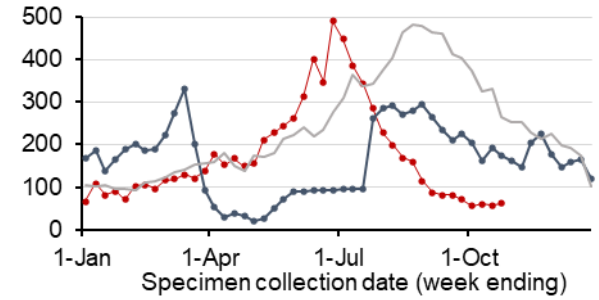
## Influenza A



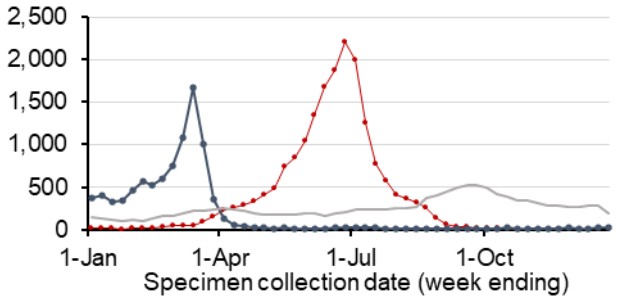

## Influenza B



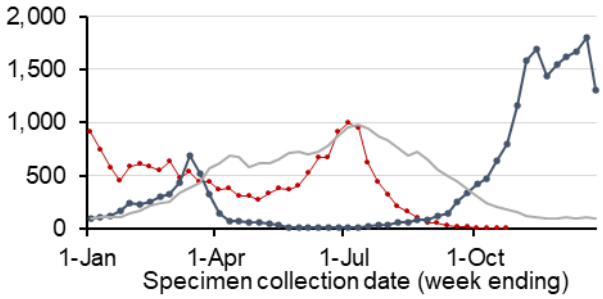

## Adenovirus



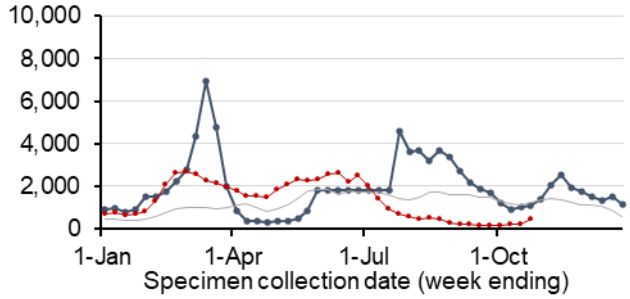

## Parainfluenza



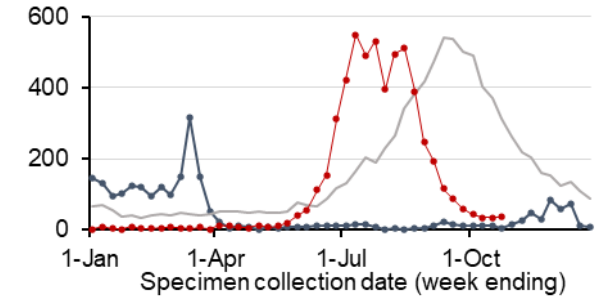

## Respiratory Syncytial Virus



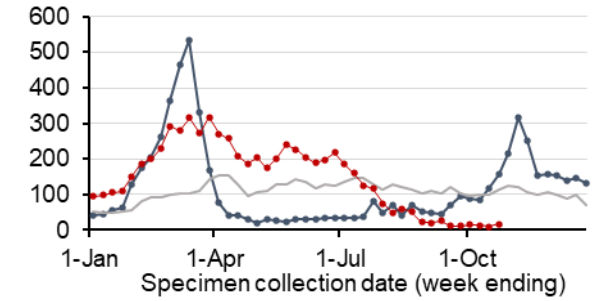

## Rhinovirus




## Human metapneumovirus




## Enterovirus




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

## Glossary

| Term | Description |
|---|---|
| Case | A person infected who has tested positive to a validated specific SARS-CoV-2 nucleic acid test or has had the virus identified by electron microscopy or viral culture. Blood tests (serology) is only used in special situations following a public health investigation and require other criteria to be met in addition to the positive serology result (related to timing of symptoms and contact with known COVID-19 cases).<br>Case counts include:<br>- NSW residents diagnosed in NSW who were infected overseas or in Australia (in NSW or interstate), and<br>- interstate or international visitors diagnosed in NSW who were under the care of NSW Health at the time of diagnosis |
| Health care workers | Individuals who work within a hospital or other healthcare settings, including staff in direct or indirect contact with patients or infectious materials. |
| 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 are linked to each other in some way. |

## Dates used in COVID-19 reporting

| Event | Date name | Source |
|---|---|---|
| Person first starts to feel unwell | Date of symptom onset | Public health staff interview all cases at the time of diagnosis. This is the date provided to NSW Health by the case. |
| Person has a swab taken | Date of test | This date is provided to NSW Health by the laboratory when the test result (positive or negative) is notified. |
| Laboratory notifies NSW Health of result | Date of notification | This date is provided to NSW Health by the laboratory. Laboratories prioritise notification of positive results to allow prompt public health action.<br><br>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.<br><br>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. |