

NSW Respiratory Surveillance Report - week ending 29 July 2023

Overall influenza activity has stabilised in the past week however remains at moderate levels. Both COVID-19 and respiratory syncytial virus (RSV) activity are stable.

Summary

The rapid decline in influenza activity observed in recent weeks has stabilised. The number of influenza notifications declined by 9% overall and notification rates were declined or were stable in most age-groups. A small increase occurred in those aged 5 – 16 years. Influenza positivity in PCR tests was 12.5%. Children and young people continue to dominate influenza notification rates. RSV activity is stable and COVID-19 activity is now at low levels across all indicators however transmission is continuing to occur.

Data sources and methods

The data source for this report updates as new information becomes available. Therefore, this report cannot be directly compared to previous versions of the NSW Respiratory Surveillance Report or to previous reporting periods. For additional information on the data sources and methods presented within this report please refer to [COVID-19 surveillance report data sources and methodology](#).

Public Health Rapid, Emergency, Disease and Syndromic Surveillance

The PHREDSS system provides daily information about presentations to NSW public hospital emergency departments (EDs) and subsequent admission to hospital categorised by symptom profile. Here we report on COVID-19, influenza-like illness and bronchiolitis in young children (which is mainly caused by respiratory syncytial virus, RSV). These PHREDSS indicators, particularly number of people admitted to hospital, are useful for monitoring the severity of illness and impact on the health system.

Interpretation: Presentations to EDs for COVID-19 stabilised in the past week and there was a decline in the proportion requiring admission. The activity for influenza-like illness appears to be stabilising. There was a small increase in presentations and subsequent admissions for bronchiolitis in young children.

Figure 1. 'COVID-19' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons of all ages.

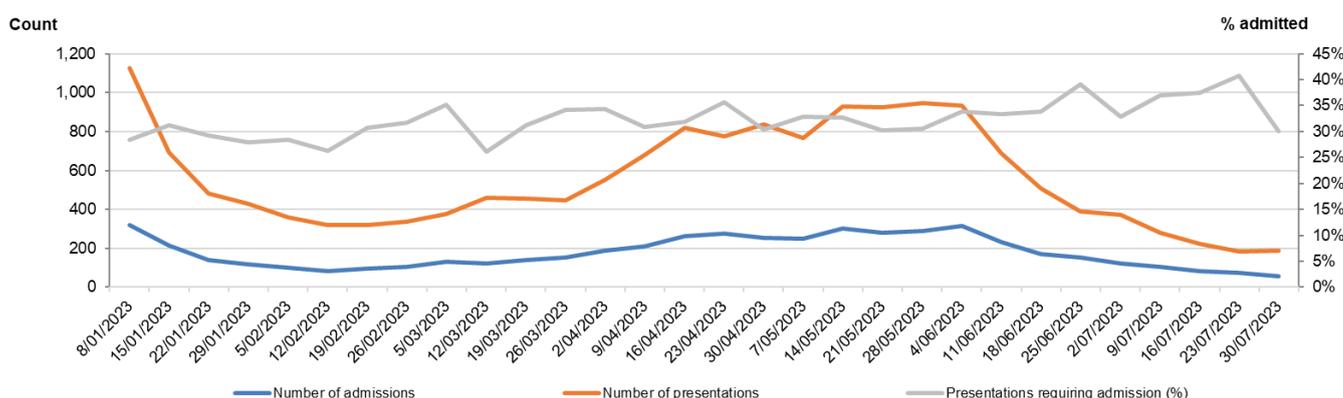


Figure 2. 'Influenza-like illness' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons of all ages.

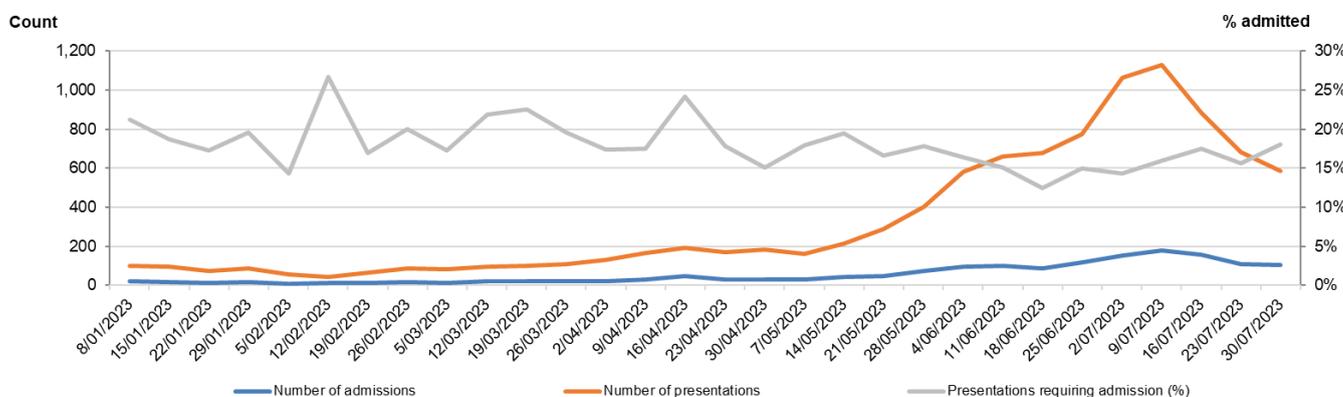
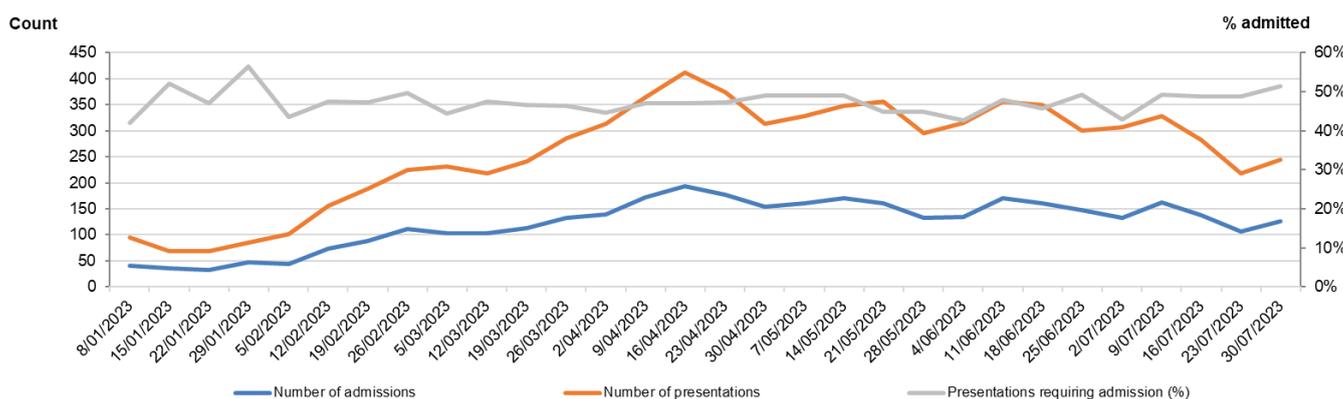


Figure 3. Bronchiolitis weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, children aged 0-4 years.



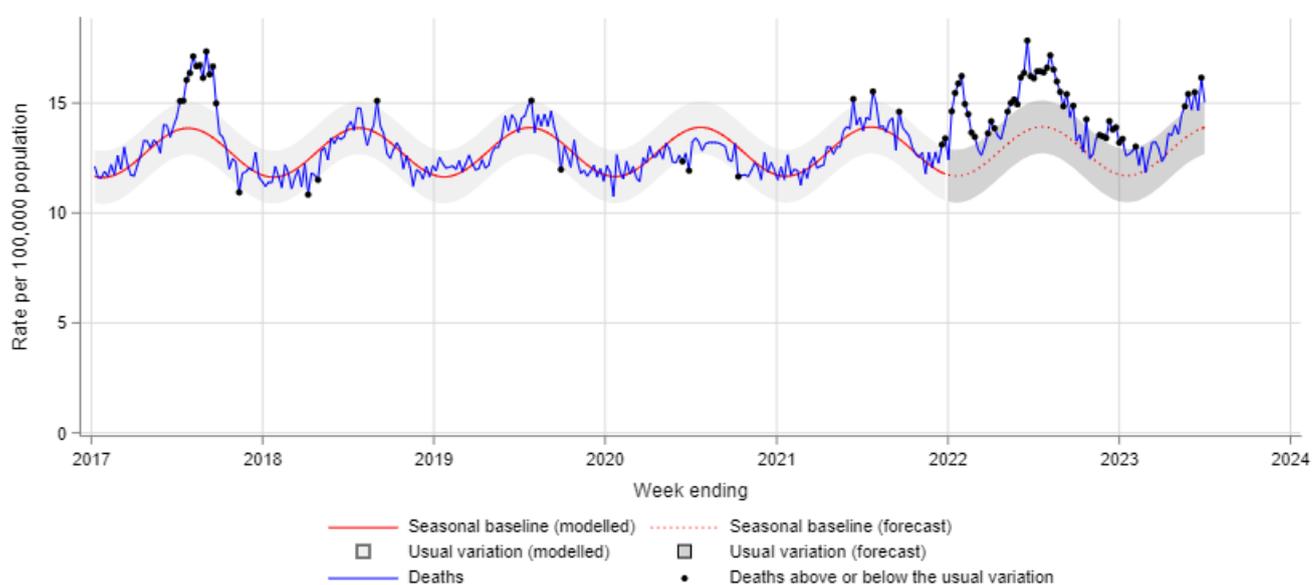
Death surveillance

All-cause mortality

All-cause mortality provides a comprehensive measure of total impact of health threats, such as severe influenza period, COVID-19 and heatwaves, by counting both deaths directly attributable and indirectly associated with the threat. Monitoring all-cause mortality allows rapid assessment of changing patterns of mortality, and whether the number of deaths in a period is more or less than expected. In this report mortality is determined from counts of deaths in the NSW Registry of Births Deaths & Marriages. The rate of death per week is presented with the seasonal baseline, which summarises the historic (2017-2021) rate of deaths for the corresponding week (red dashed line, grey shading indicates the 95% confidence interval). This indicator provides a signal of the impact from any significant and prolonged cause on the NSW population.

Interpretation: Weekly lag adjusted all-cause mortality is at the upper limit of the interval for usual variation based on the seasonal baseline for 2017 – 2021.

Figure 4. All-cause death rate per 100,000 population, all ages, 2017 to 02 July 2023.



Notes:

In this report, due to the time interval between a death occurring and the date on which the death is registered, only deaths reported 4 weeks prior to the date of analysis are used. Deaths are lag adjusted for the weeks ending 28 May 2023 to 2 July 2023. For additional information see data sources and methods for details.

Death rates presented in this report are not directly translatable to analyses in the ABS Provisional Mortality Statistics and Actuaries Institute COVID-19 Working Group reports which make specific comparisons of mortality in the pre and during pandemic periods.

Notifications of COVID-19, influenza and RSV

Notification data is obtained from laboratory tests for infections, and for COVID-19 only includes tests reported by the public to NSW Health. This indicator provides information about community infection.

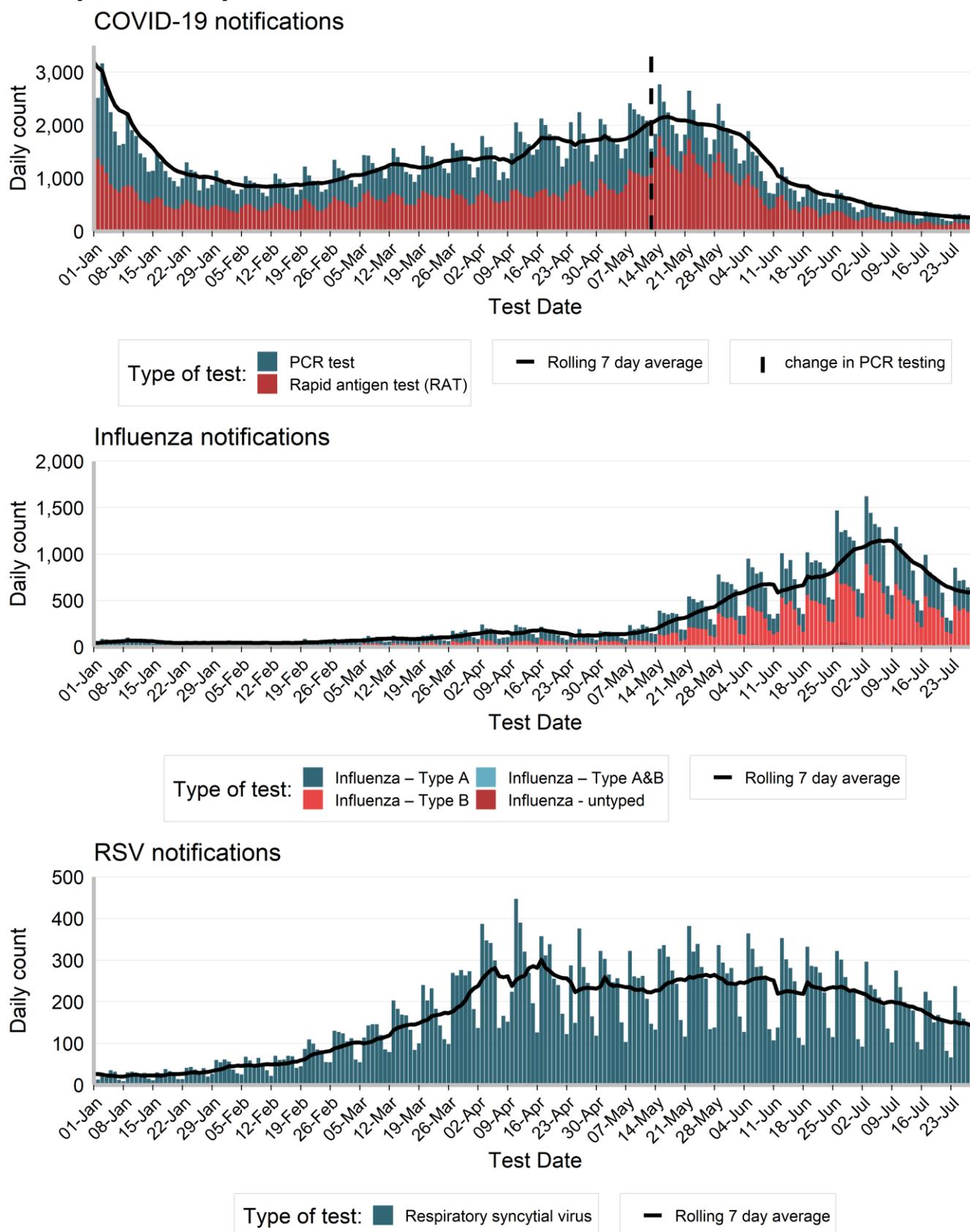
Interpretation: Influenza continues to be the most commonly notified of the three respiratory viruses. The distribution of COVID-19, influenza and RSV notifications by gender, age, Local Health District and Aboriginal status in the past week was similar to previous weeks.

Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the week ending 29 July 2023.

| | COVID | | Influenza | | RSV | |
|--|--------------------------|----------------------|--------------------------|---------------------|--------------------------|---------------------|
| | Week ending 29 July 2023 | Year to Date | Week ending 29 July 2023 | Year to Date | Week ending 29 July 2023 | Year to Date |
| Gender | | | | | | |
| Female | 1,069 | 147,707(58%) | 2,125 | 33,868(51%) | 555 | 18,025(52%) |
| Male | 782 | 107,683(42%) | 1,994 | 33,019(49%) | 445 | 16,704(48%) |
| Age group (years) | | | | | | |
| 0-4 | 97 | 8,611(3%) | 638 | 9,420(14%) | 378 | 19,095(55%) |
| 5-9 | 71 | 7,891(3%) | 737 | 14,327(21%) | 56 | 1,847(5%) |
| 10-19 | 149 | 20,830(8%) | 755 | 12,968(19%) | 57 | 1,477(4%) |
| 20-29 | 186 | 28,901(11%) | 405 | 5,099(8%) | 47 | 1,246(4%) |
| 30-39 | 240 | 38,354(15%) | 580 | 8,550(13%) | 41 | 1,609(5%) |
| 40-49 | 248 | 37,459(15%) | 441 | 6,983(10%) | 47 | 1,240(4%) |
| 50-59 | 251 | 35,255(14%) | 202 | 3,659(5%) | 75 | 1,698(5%) |
| 60-69 | 203 | 32,172(13%) | 166 | 2,700(4%) | 73 | 2,005(6%) |
| 70-79 | 172 | 24,267(9%) | 129 | 1,882(3%) | 96 | 2,020(6%) |
| 80-89 | 169 | 15,429(6%) | 58 | 1,029(2%) | 93 | 1,740(5%) |
| 90+ | 78 | 6,487(3%) | 10 | 282(0%) | 37 | 749(2%) |
| Local Health District of residence | | | | | | |
| Central Coast | 110 | 12,028(5%) | 135 | 2,339(3%) | 36 | 1,658(5%) |
| Far West | 5 | 737(0%) | 10 | 94(0%) | 15 | 174(1%) |
| Hunter New England | 234 | 33,309(13%) | 295 | 5,097(8%) | 135 | 3,032(9%) |
| Illawarra Shoalhaven | 107 | 16,174(6%) | 240 | 2,825(4%) | 36 | 1,722(5%) |
| Mid North Coast | 42 | 5,741(2%) | 78 | 1,743(3%) | 18 | 624(2%) |
| Murrumbidgee | 65 | 7,981(3%) | 78 | 2,075(3%) | 61 | 1,647(5%) |
| Nepean Blue Mountains | 73 | 12,511(5%) | 267 | 4,318(6%) | 64 | 2,089(6%) |
| Northern NSW | 73 | 7,428(3%) | 142 | 2,547(4%) | 19 | 729(2%) |
| Northern Sydney | 262 | 30,885(12%) | 515 | 8,397(13%) | 113 | 4,535(13%) |
| South Eastern Sydney | 197 | 27,124(11%) | 342 | 5,621(8%) | 94 | 3,211(9%) |
| South Western Sydney | 192 | 26,761(10%) | 725 | 10,278(15%) | 125 | 5,013(14%) |
| Southern NSW | 48 | 6,766(3%) | 77 | 952(1%) | 38 | 655(2%) |
| Sydney | 141 | 21,315(8%) | 216 | 4,269(6%) | 43 | 2,236(6%) |
| Western NSW | 59 | 10,271(4%) | 154 | 1,590(2%) | 56 | 1,527(4%) |
| Western Sydney | 223 | 33,756(13%) | 811 | 14,482(22%) | 138 | 5,780(17%) |
| Aboriginal status | | | | | | |
| Aboriginal and/or Torres Strait Islander | 63 | 8,282(3%) | 157 | 2,318(3%) | 34 | 1,252(4%) |
| Not Aboriginal or Torres Strait Islander | 1,339 | 187,485(73%) | 2,102 | 34,640(52%) | 493 | 16,714(48%) |
| Not Stated / Unknown | 454 | 59,922(23%) | 1,865 | 29,973(45%) | 473 | 16,784(48%) |
| Total | 1,856 | 255,689(100%) | 4,124 | 66,931(100%) | 1,000 | 34,750(100%) |

Note: Total includes all cases including those with missing gender, age, LHD; or who interstate or overseas residents.

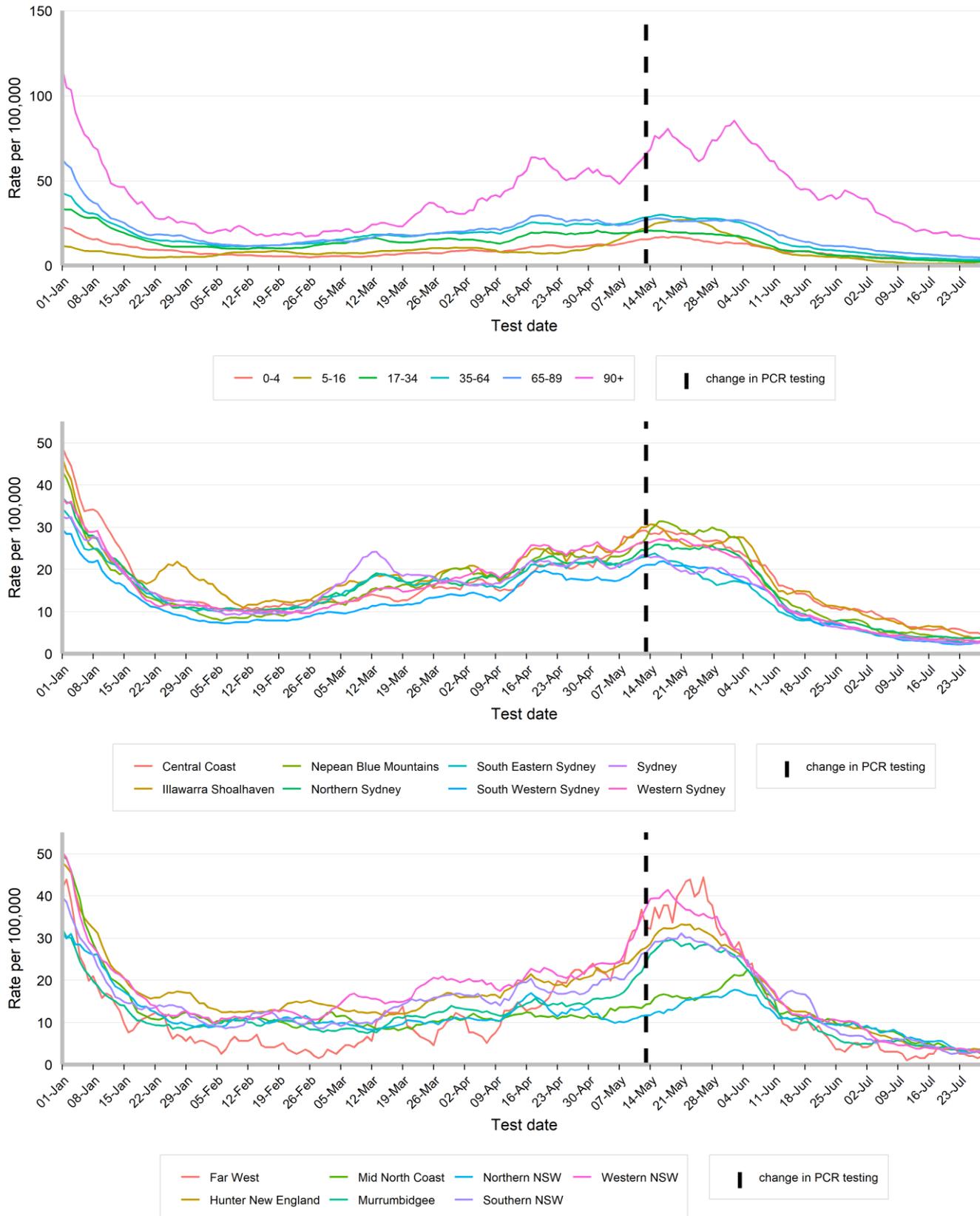
Figure 5. People notified with COVID-19, influenza and RSV, by date of test and type of test performed, NSW, 01 January 2023 to 29 July 2023.



Rates of COVID-19 notifications per 100,000 population

Interpretation: COVID-19 notification rates have stabilised across most age-groups and Local Health Districts.

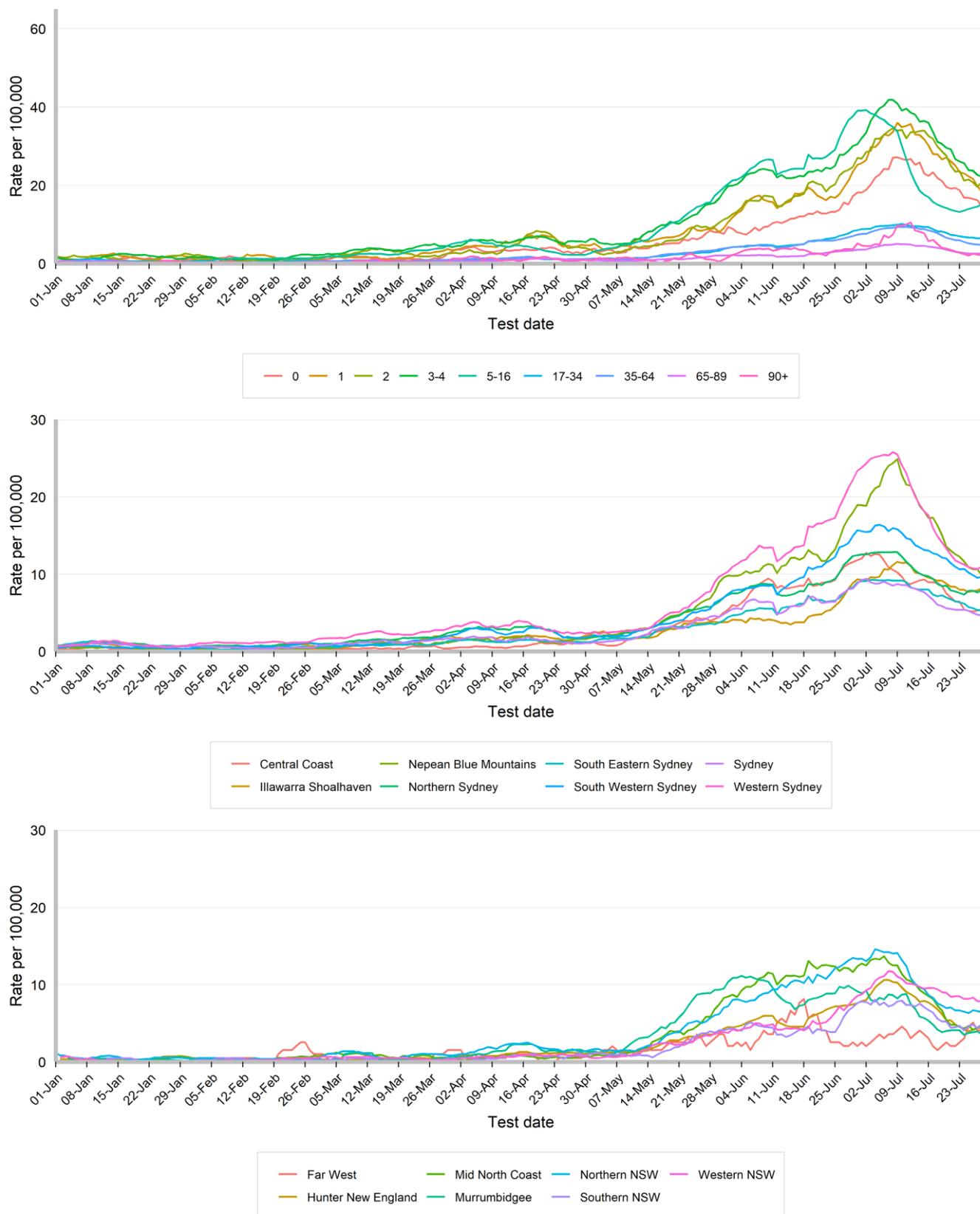
Figure 6. Daily seven-day rolling average rate of COVID-19 notifications per 100,000 population, by age-group, Local Health District and test date, NSW, 01 January 2023 to 29 July 2023.



Rates of influenza notifications per 100,000 population

Interpretation: Influenza notification rates continued to decline or stabilised across all age-groups except for those aged 5 – 16 years in which a small increase was observed in the past week.

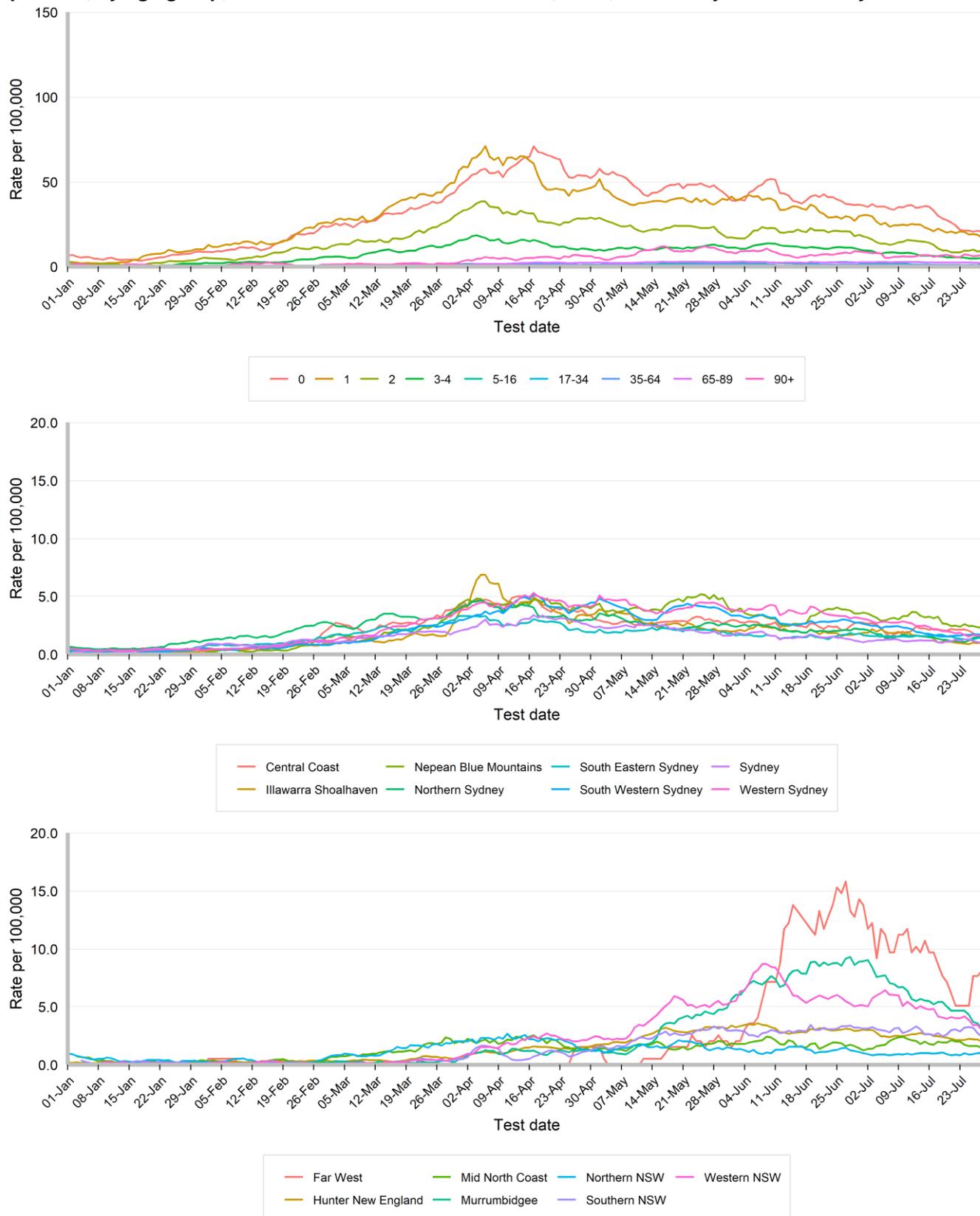
Figure 7. Daily seven-day rolling average rate of influenza notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 29 July 2023.



Rates of respiratory syncytial virus notifications per 100,000 population

Interpretation: Rates of RSV notifications have stabilised across all age-groups and most Local Health Districts.

Figure 8. Daily seven-day rolling average rate of respiratory syncytial virus notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 29 July 2023.

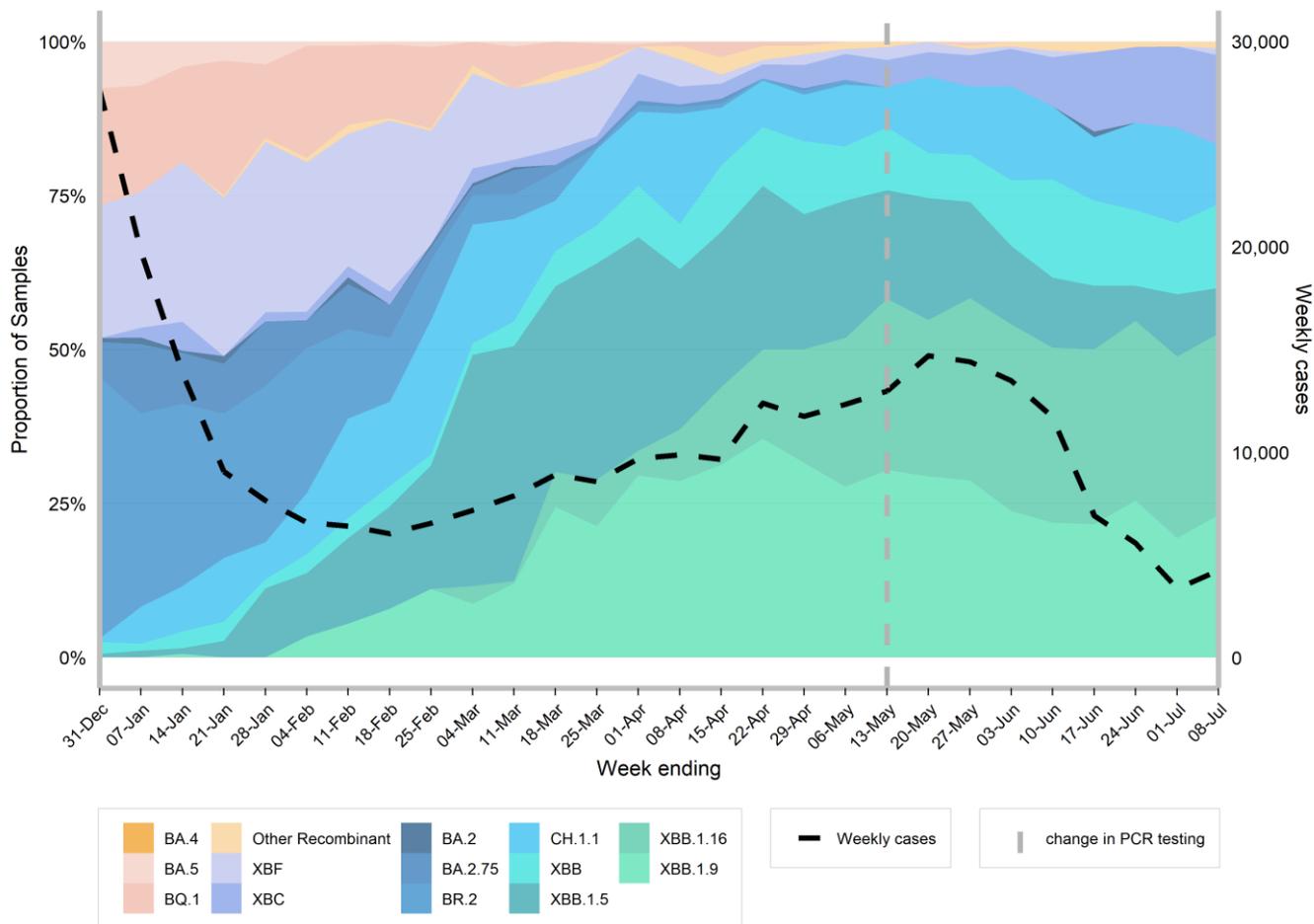


COVID-19 Whole Genome Sequencing

Specimens from people with COVID-19 undergo whole genome sequencing (WGS) to identify and understand the behaviour of circulating variants. Community samples are sourced from cases who test via PCR at community pathology services and may not necessarily reflect the distribution in all cases across NSW. NSW continues to monitor results from cases who are admitted from ICU to monitor for increased disease severity and from cases who return from overseas to monitor for new variants introduced into NSW. There is a lag between the date a PCR test is taken and the date that the results of WGS are reported. As the number of samples provided for WGS has declined considerably, the data should be interpreted with caution. WGS data for this report is now updated every four weeks, next due in the week ending 5 August 2023.

Interpretation: There was minimal change in the distribution of circulating sublineages up to 8 July 2023.

Figure 9. Estimated distribution of COVID-19 sublineages in the community, 01 January 2023 to 08 July 2023.



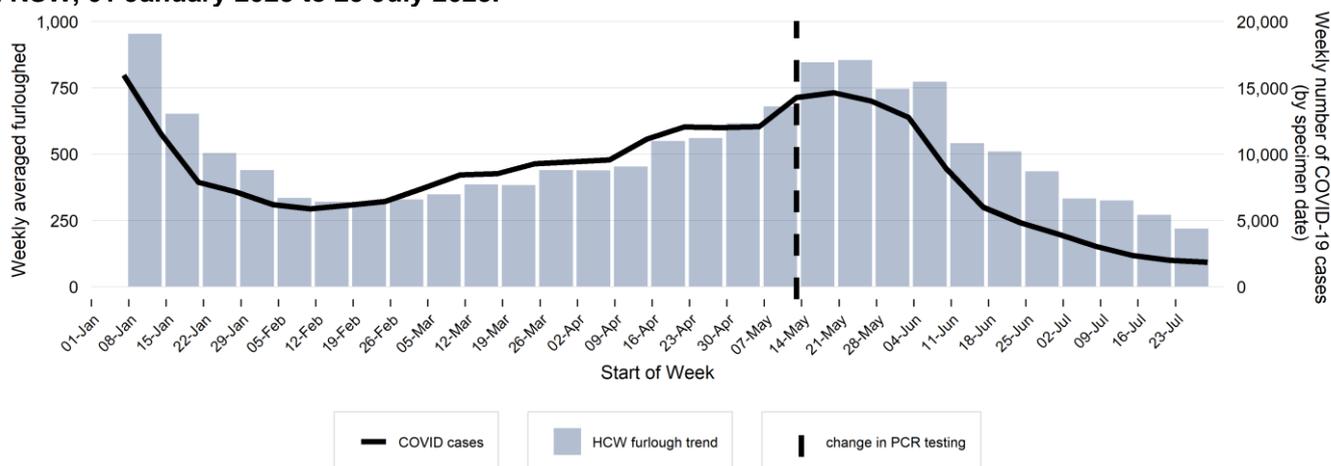
Other surveillance indicators

NSW Healthcare worker furloughing

Healthcare workers are included in these statistics if they are in isolation and unable to work due to testing positive to COVID-19, exposure to COVID-19, and/or whilst waiting for a negative test result. This indicator is helpful to assess the level of COVID-19 circulating in the community when community testing decreases.

Interpretation: The proportion of healthcare workers furloughing has continued to decline.

Figure 10. Average number of healthcare worker furloughing and number of COVID-19 notifications by week in NSW, 01 January 2023 to 29 July 2023.

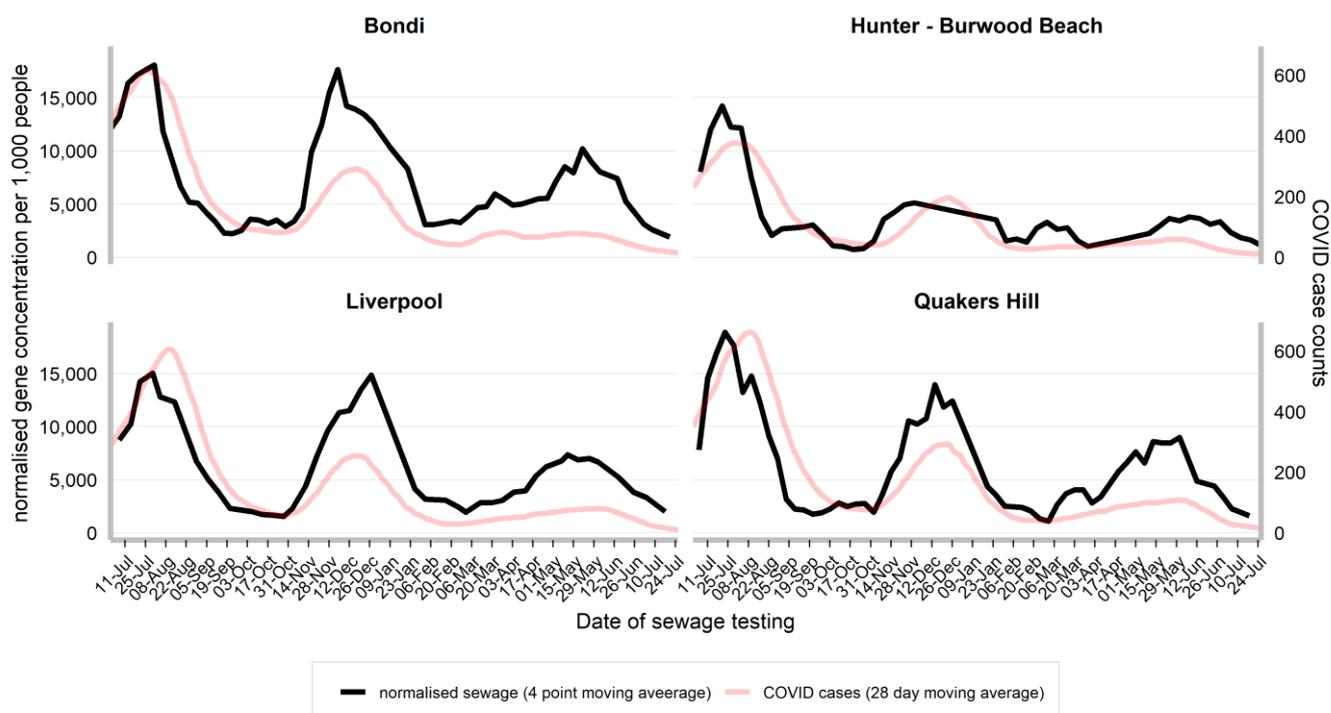


COVID-19 Sewage surveillance program

Trends are presented for Sydney Bondi, Quakers Hills, Liverpool and Burwood Beach sewage catchments from 5 February 2022 to the week ending 20 July 2023. For more information, please see the COVID-19 Sewage Surveillance Program website: <https://www.health.nsw.gov.au/Infectious/covid-19/Pages/sewage-surveillance.aspx>.

Interpretation: Gene concentrations per 1,000 people have declined in all sewage testing sites.

Figure 11. Gene concentration, per 1,000 people in each sewage catchment, 1 January 2023 to 26 July 2023.

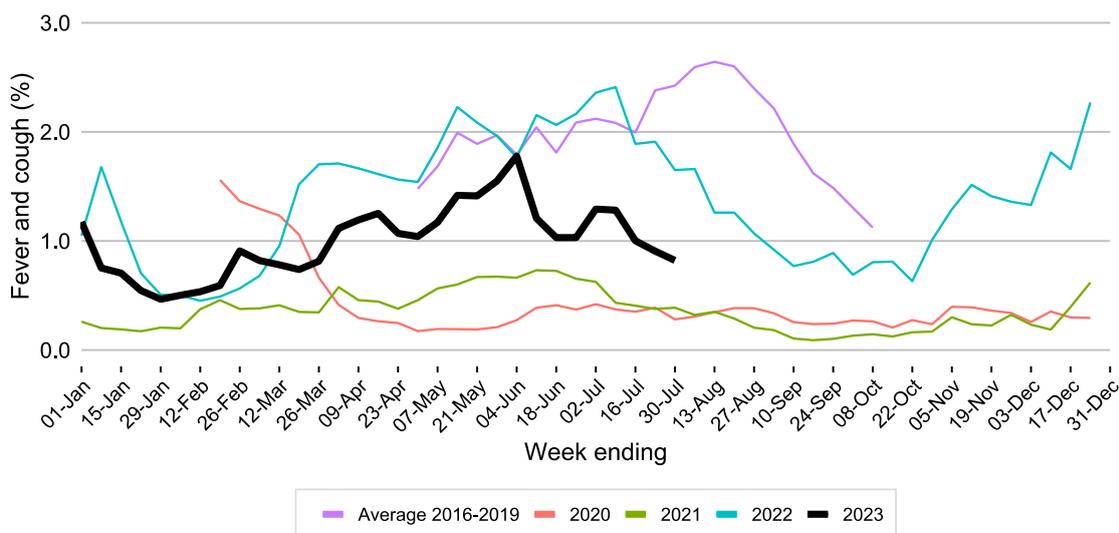


FluTracking and NSW sentinel laboratory network

FluTracking is an online health surveillance system used to detect epidemics of influenza across Australia and New Zealand. Participants complete an online survey each week to provide community level influenza-like illness surveillance, consistent surveillance of influenza activity across all jurisdictions over time, and year to year comparisons of the timing, attack rates and seriousness of influenza in the community. More information about FluTracking and ways to be involved are available here: <https://info.flutracking.net/about/>

Interpretation: The proportion of FluTracking participants reporting influenza-like illness declined again in the previous week and remains well below the average for 2016 – 2019 and for the same time of year in 2022.

Figure 12. Proportion of FluTracking participants reporting influenza-like illness, NSW, 1 January to 30 July 2023.



Epidemiological week 30, ending 29 July 2023

The NSW sentinel laboratory network comprises of 13 public and private laboratories throughout NSW who provide additional data on positive and negative test results. This helps us to understand which respiratory viruses are circulating as well as how much.

Interpretation: There have been further declines in test positivity at sentinel laboratories for COVID-19, influenza and RSV in the past week. Test positivity for adenovirus, parainfluenza and human metapneumovirus have continued to increase.

Figure 13. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 January 2023 to 30 July 2023.

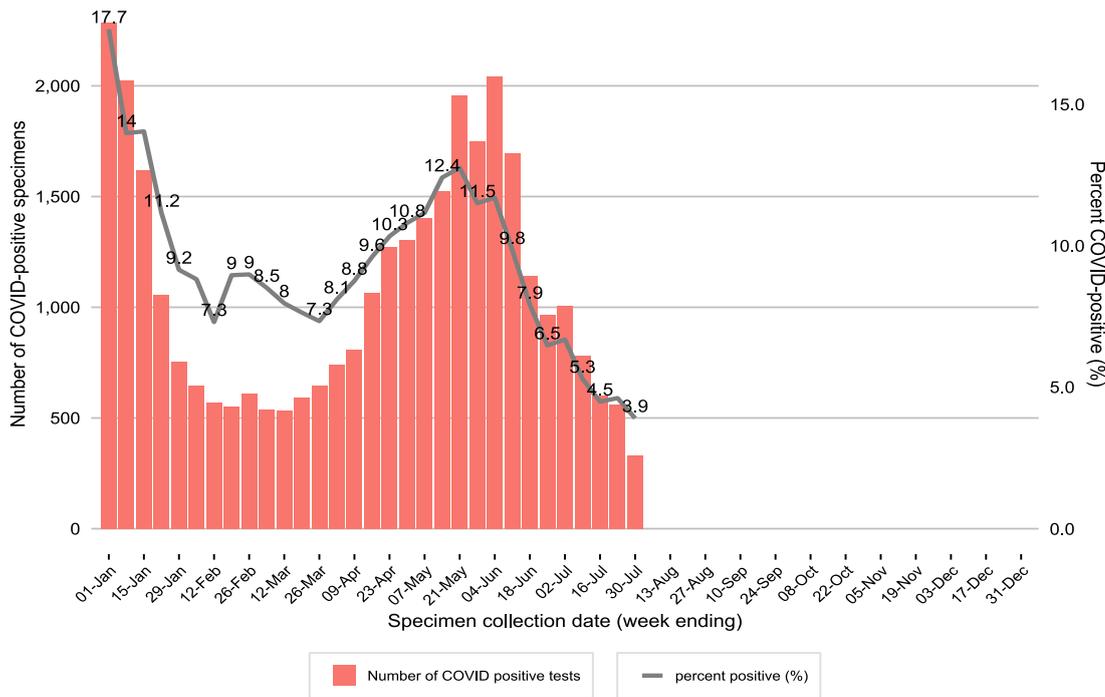


Figure 14. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 January 2023 to 30 July 2023.

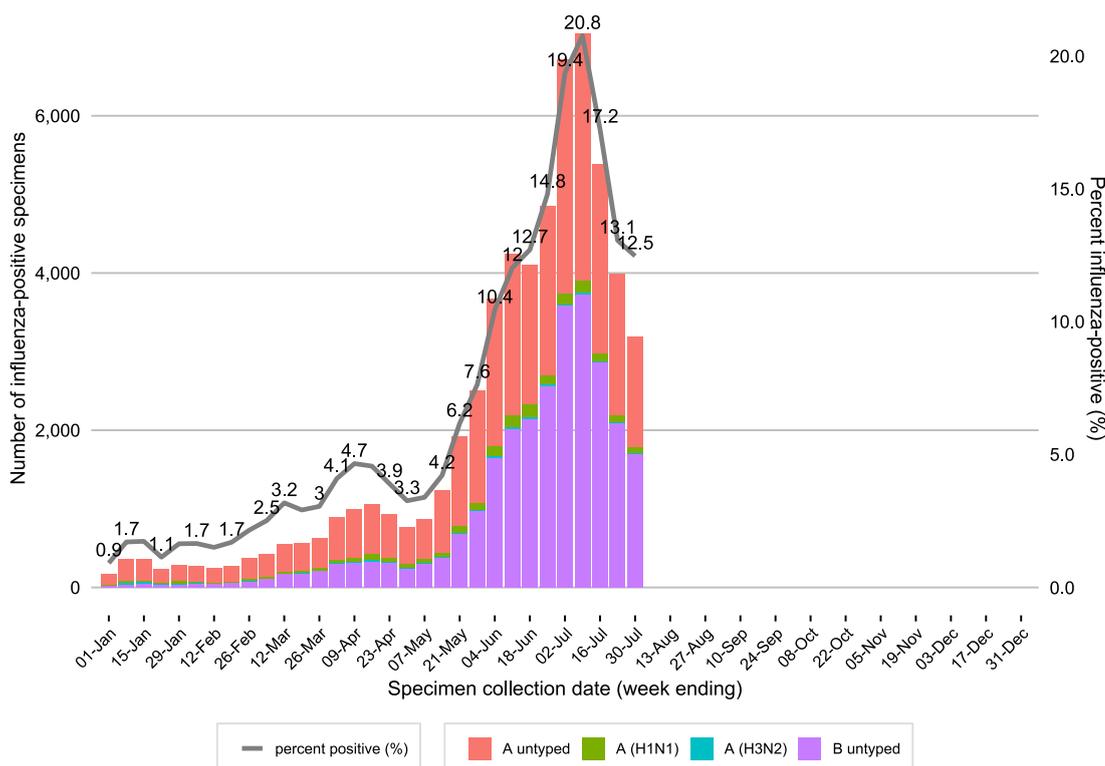


Figure 15. Number of positive PCR test results and proportion of tests positive for other respiratory viruses at sentinel NSW laboratories, 1 January 2023 to 30 July 2023.

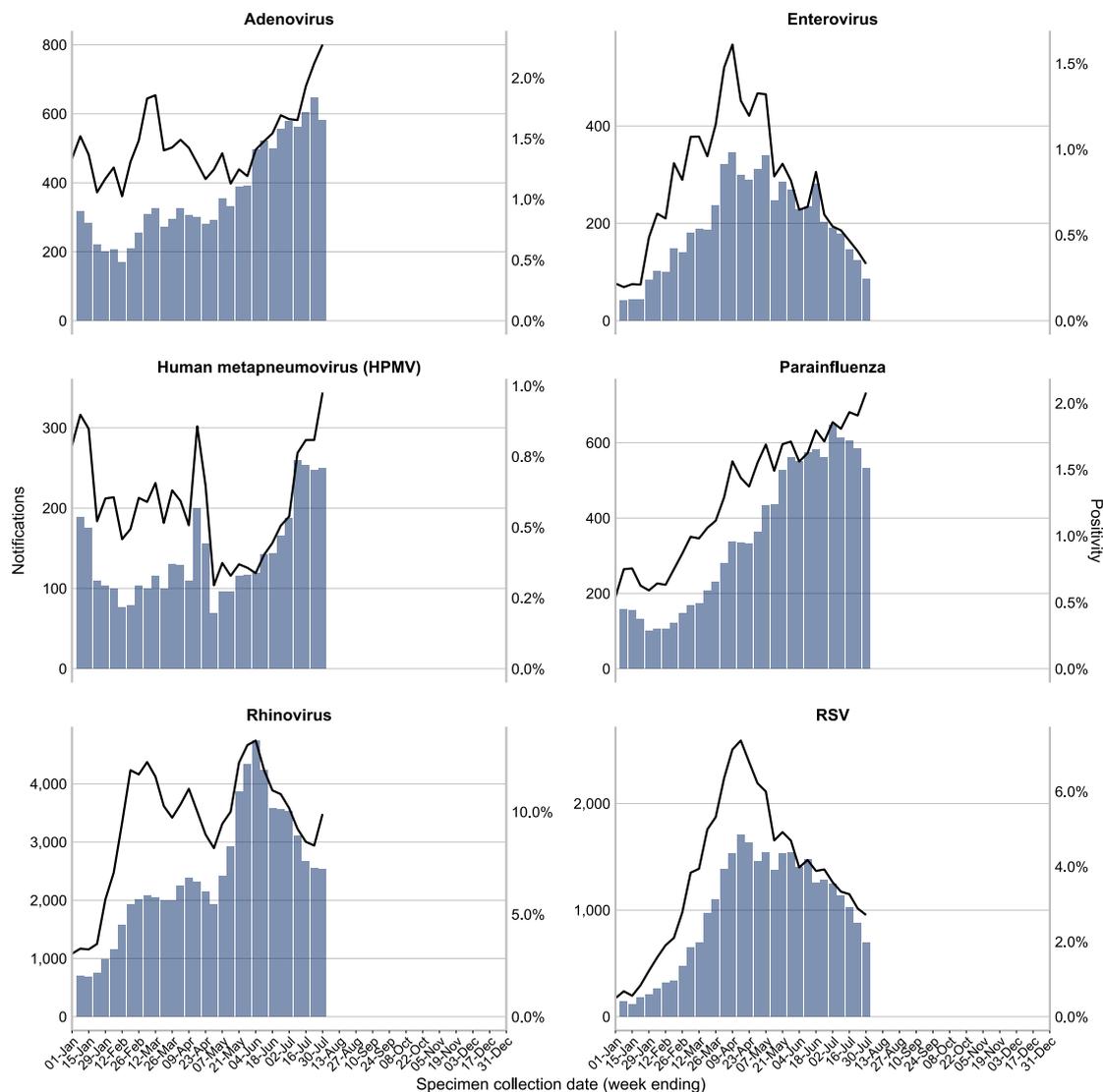


Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 30 July 2023.

| | Week ending | | | | Year to date |
|--------------------------------------|---------------|---------------|---------------|---------------|----------------|
| | 09 July | 16 July | 23 July | 30 July | |
| | n(% pos) | n(% pos) | n(% pos) | n(% pos) | n |
| Influenza | 7,047 (20.8%) | 5,389 (17.2%) | 3,987 (13.1%) | 3,192 (12.5%) | 59,129 |
| Adenovirus | 561 (1.7%) | 604 (1.9%) | 647 (2.1%) | 582 (2.3%) | 11,316 |
| Respiratory syncytial virus (RSV) | 1,132 (3.3%) | 1,021 (3.3%) | 881 (2.9%) | 694 (2.7%) | 29,594 |
| Rhinovirus | 3,113 (9.2%) | 2,669 (8.5%) | 2,550 (8.4%) | 2,532 (9.9%) | 73,536 |
| Human metapneumovirus (HMPV) | 259 (0.8%) | 253 (0.8%) | 247 (0.8%) | 250 (1.0%) | 4,378 |
| Enterovirus | 179 (0.5%) | 146 (0.5%) | 124 (0.4%) | 85 (0.3%) | 5,903 |
| Number of PCR tests conducted | 33,944 | 31,268 | 30,530 | 25,594 | 762,895 |
| SARS-CoV-2 | 781 (5.3%) | 603 (4.5%) | 562 (4.6%) | 331 (3.9%) | 33,382 |
| Number of COVID PCR tests | 14,751 | 13,427 | 12,178 | 8,477 | 351,515 |

Recent data is subject to change. For the week ending 30 July 2023, 10 out of 13 sentinel laboratories provided PCR testing data related to influenza and 2 out of 4 sentinel laboratories provided PCR data related to COVID.