

NSW Respiratory Surveillance Report - week ending 01 July 2023

COVID-19 has plateaued at a low to moderate level, influenza continues to increase and is at moderate to high level, RSV is at moderate level.

Summary

Respiratory viruses continue to circulate in the community. COVID-19 emergency department presentations and admissions, healthcare worker furloughing and test positivity continued to decrease. Influenza activity continues to rise rapidly (31% increase in notifications the previous week) with children and young people accounting for 57% of notifications. Influenza virus test positivity is now 20%. Respiratory syncytial virus activity, including ED presentations and hospitalisations for young children with bronchiolitis, was stable.

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 and subsequent admission to hospital categorised by symptom profile. Here we report on COVID-19, influenza-like illness and bronchiolitis (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: Emergency department presentations and subsequent admissions for influenza-like illness continue to increase however there has been minimal change in the proportion requiring admission suggesting the severity of illness is unchanged. COVID-19 activity continues to decline. There was minimal change 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.

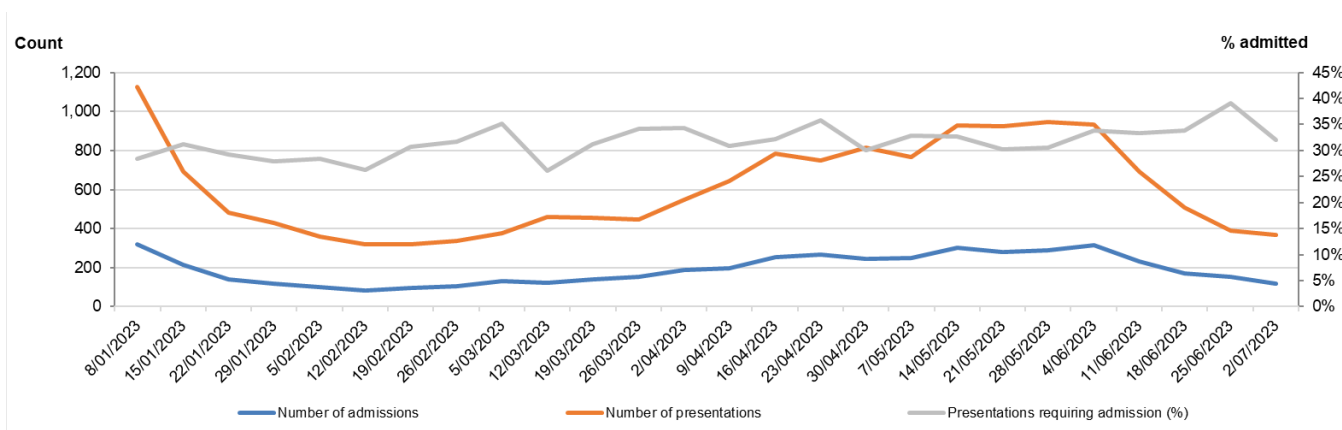


Figure 2. 'Influenza-like illness' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons of all ages.

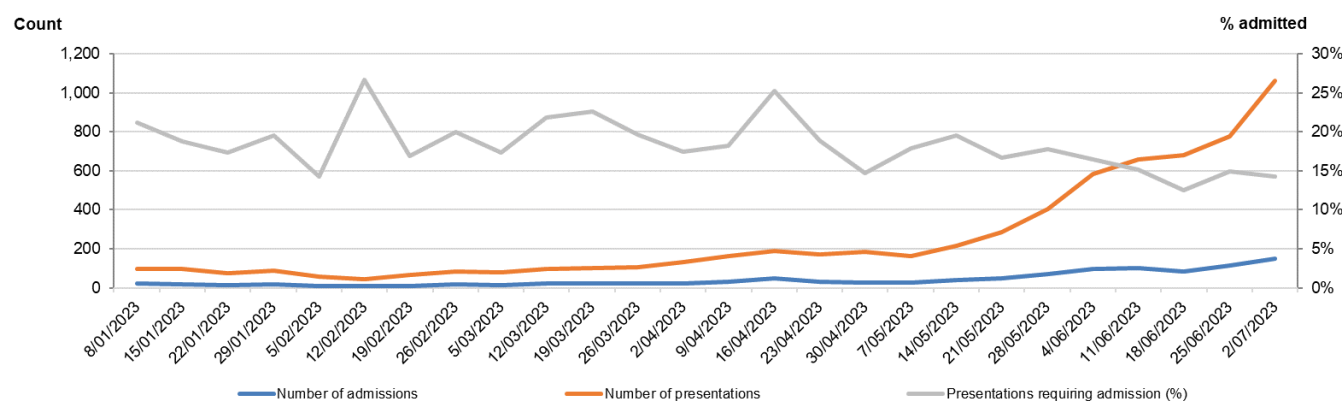
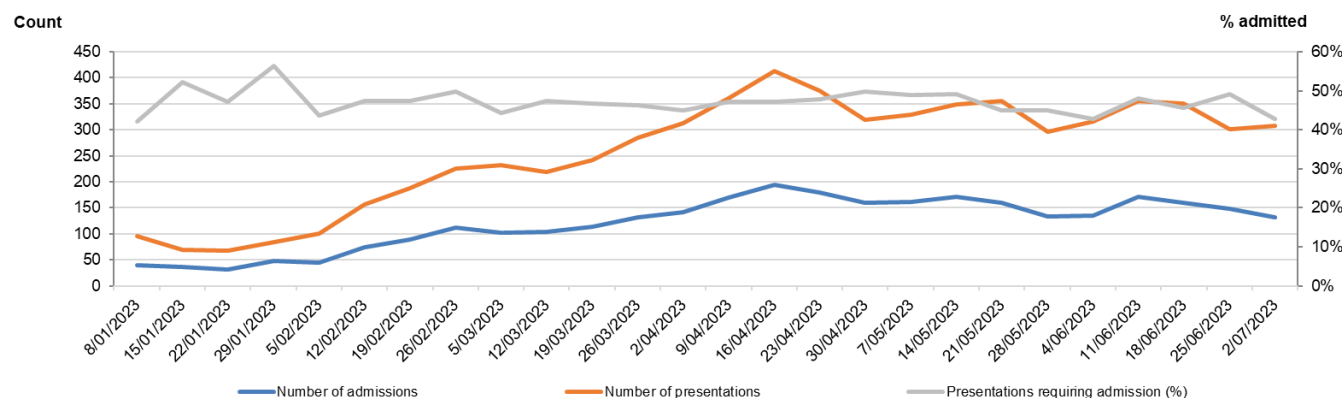


Figure 3. Bronchiolitis weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, children aged 0-4 years.



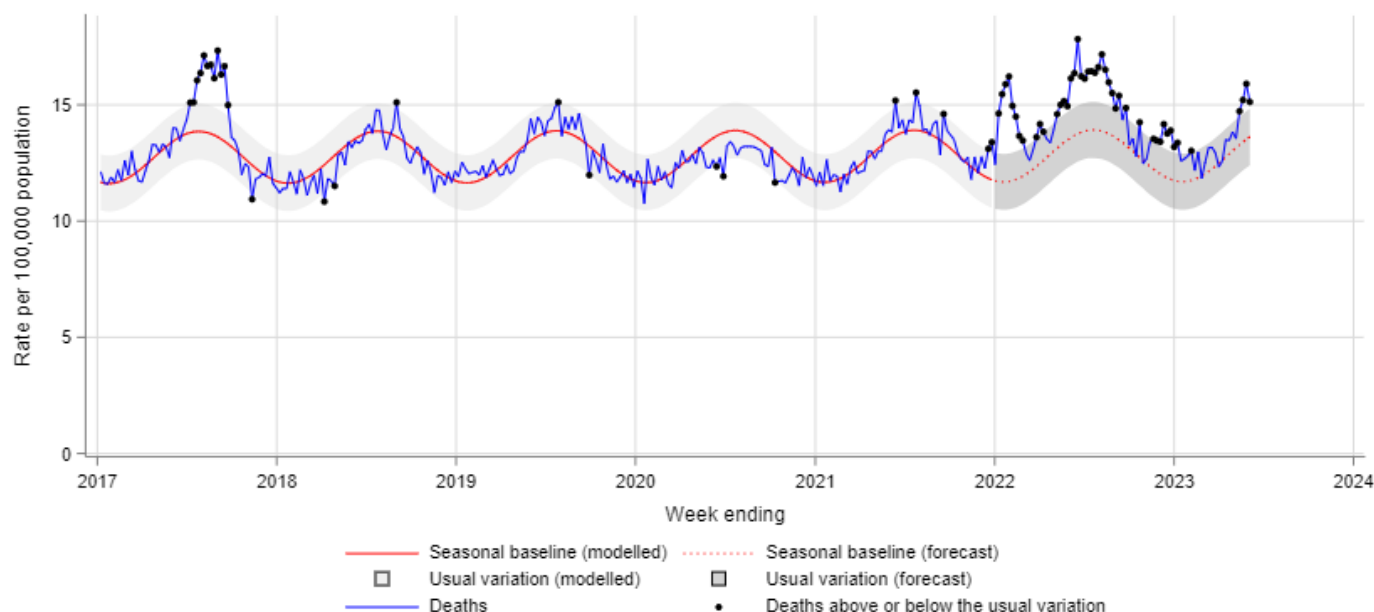
Death surveillance

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 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 all-cause mortality remains above the usual seasonal variation.

Figure 4. All-cause death rate per 100,000 population, all ages, 2017 to 04 June 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 30 April 2023 to 04 June 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.

Epidemiological week 26, ending 01 July 2023

Notifications of COVID-19, influenza and RSV

Notification data is obtained from laboratory tests for infections. For COVID-19 only, notifications also include tests reported by the public to NSW Health (eg. RATs) to provide information about community infection. Changes in COVID-19 notifications should be interpreted in the context of changes to testing requirements, particularly the cessation of PCR testing in May 2023 for all but specific risk groups. **For this week's report, COVID-19 case numbers have been affected by system delays in the ingestion of some data and are likely to have contributed to some of the decline observed.**

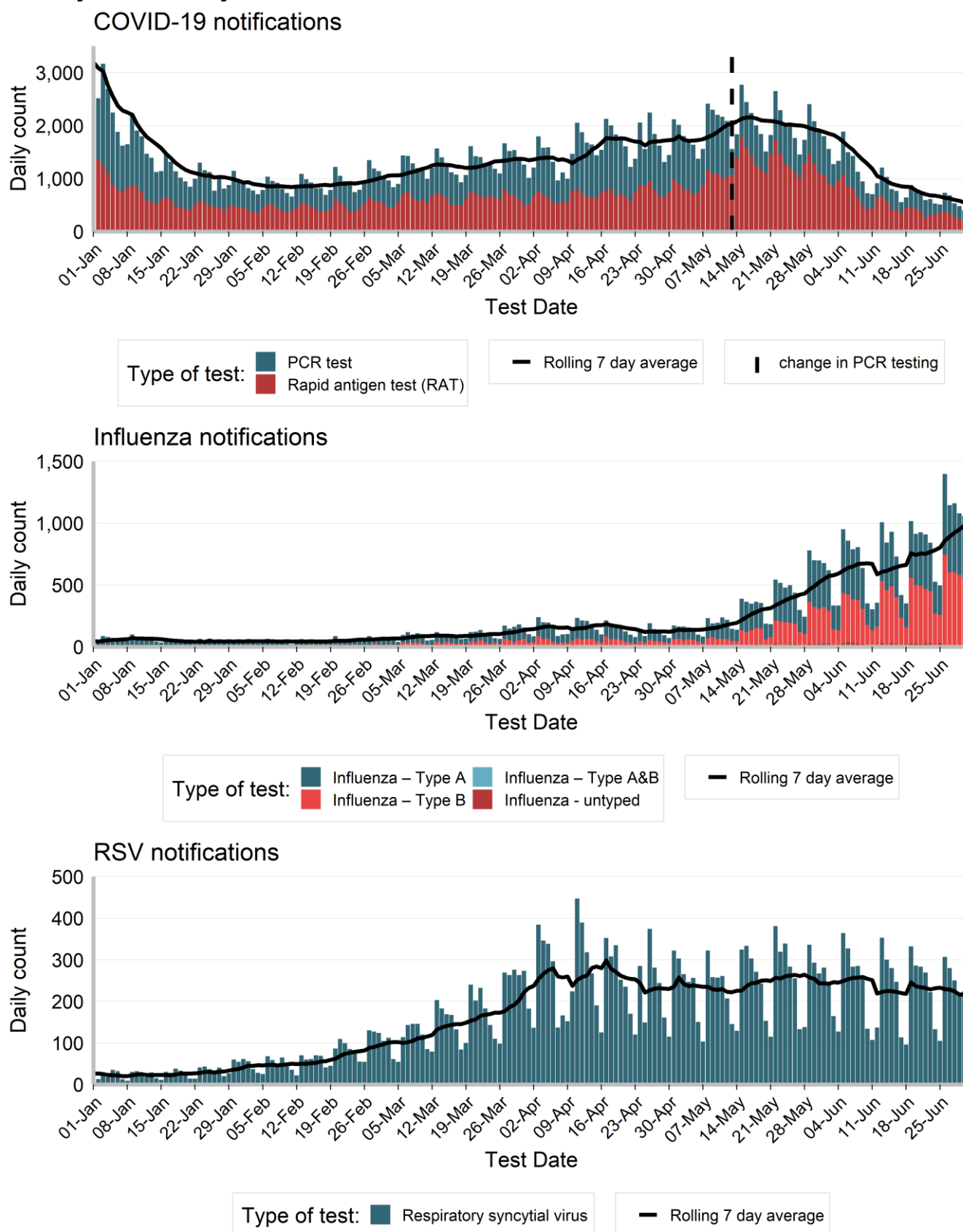
Interpretation: There the distribution of COVID-19, influenza and RSV notifications across gender, age, Local Health District and Aboriginal status in the past week is similar to previous weeks. More than half (57%) of influenza notifications were for those aged less than 20 years of age.

Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the week ending 01 July 2023.

	COVID		Influenza		RSV	
	Week ending 01 July 2023	Year to Date	Week ending 01 July 2023	Year to Date	Week ending 01 July 2023	Year to Date
Gender						
Female	2,187	142,061(58%)	3,429	21,836(50%)	826	15,363(52%)
Male	1,406	103,609(42%)	3,422	21,542(50%)	656	14,434(48%)
Age group (years)						
0-4	144	8,111(3%)	797	5,617(13%)	646	17,040(57%)
5-9	113	7,642(3%)	1,736	10,065(23%)	113	1,590(5%)
10-19	262	20,338(8%)	1,612	9,255(21%)	86	1,235(4%)
20-29	323	27,911(11%)	464	2,967(7%)	79	1,045(4%)
30-39	463	37,042(15%)	829	5,085(12%)	58	1,357(5%)
40-49	497	36,205(15%)	659	4,324(10%)	71	1,020(3%)
50-59	448	33,908(14%)	283	2,369(5%)	92	1,360(5%)
60-69	422	30,975(13%)	220	1,723(4%)	106	1,593(5%)
70-79	370	23,212(9%)	146	1,185(3%)	87	1,586(5%)
80-89	366	14,536(6%)	84	629(1%)	96	1,356(5%)
90+	200	6,045(2%)	22	169(0%)	47	611(2%)
Local Health District of residence						
Central Coast	234	11,403(5%)	286	1,546(4%)	64	1,470(5%)
Far West	8	716(0%)	5	64(0%)	25	107(0%)
Hunter New England	542	32,084(13%)	448	3,158(7%)	202	2,404(8%)
Illawarra Shoalhaven	258	15,454(6%)	267	1,671(4%)	54	1,549(5%)
Mid North Coast	132	5,421(2%)	189	1,228(3%)	19	505(2%)
Murrumbidgee	90	7,601(3%)	181	1,592(4%)	189	1,215(4%)
Nepean Blue Mountains	190	12,079(5%)	455	2,512(6%)	93	1,783(6%)
Northern NSW	174	6,941(3%)	269	1,728(4%)	22	650(2%)
Northern Sydney	415	29,702(12%)	803	5,795(13%)	138	4,135(14%)
South Eastern Sydney	309	26,246(11%)	566	3,716(9%)	104	2,816(9%)
South Western Sydney	372	25,859(11%)	1,087	6,488(15%)	176	4,342(15%)
Southern NSW	91	6,490(3%)	118	582(1%)	48	482(2%)
Sydney	238	20,663(8%)	412	2,961(7%)	46	2,003(7%)
Western NSW	148	9,930(4%)	155	827(2%)	94	1,165(4%)
Western Sydney	366	32,644(13%)	1,578	9,386(22%)	196	5,092(17%)
Aboriginal status						
Aboriginal and/or Torres Strait Islander	127	7,965(3%)	223	1,389(3%)	56	1,024(3%)
Not Aboriginal or Torres Strait Islander	2,483	180,258(73%)	3,548	22,532(52%)	725	14,233(48%)
Not Stated / Unknown	990	57,729(23%)	3,082	19,485(45%)	702	14,559(49%)
Total	3,600	245,952(100%)	6,853	43,406(100%)	1,483	29,816(100%)

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

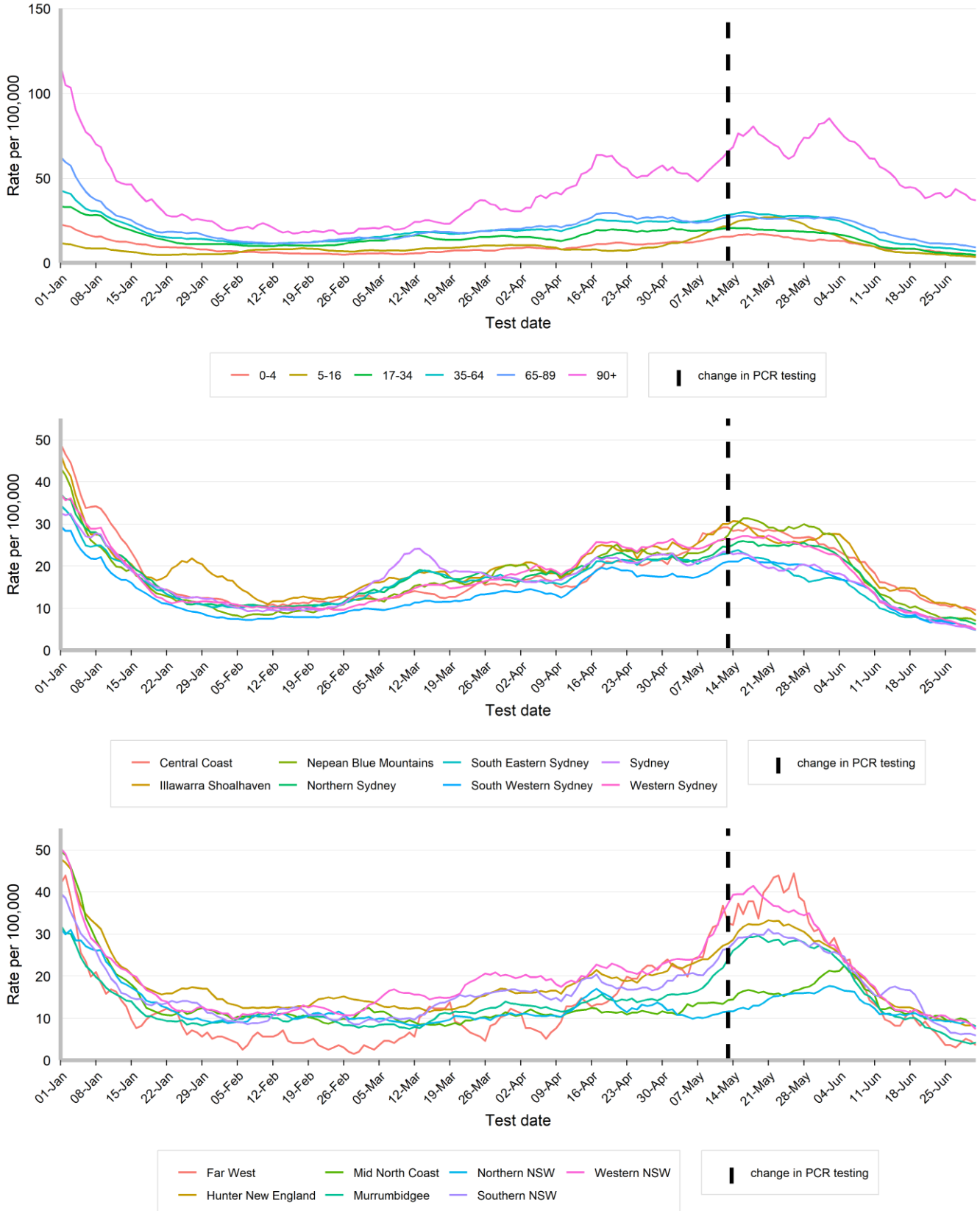
Figure 5. People notified with COVID-19, Influenza and RSV, by date of test and type of test performed, NSW, 01 January 2023 to 01 July 2023.



Rates of COVID-19 notifications per 100,000 population

Interpretation: COVID-19 notification rates continue to decline, although the rate of decline has slowed compared to early June, across age-groups and most Local Health Districts.

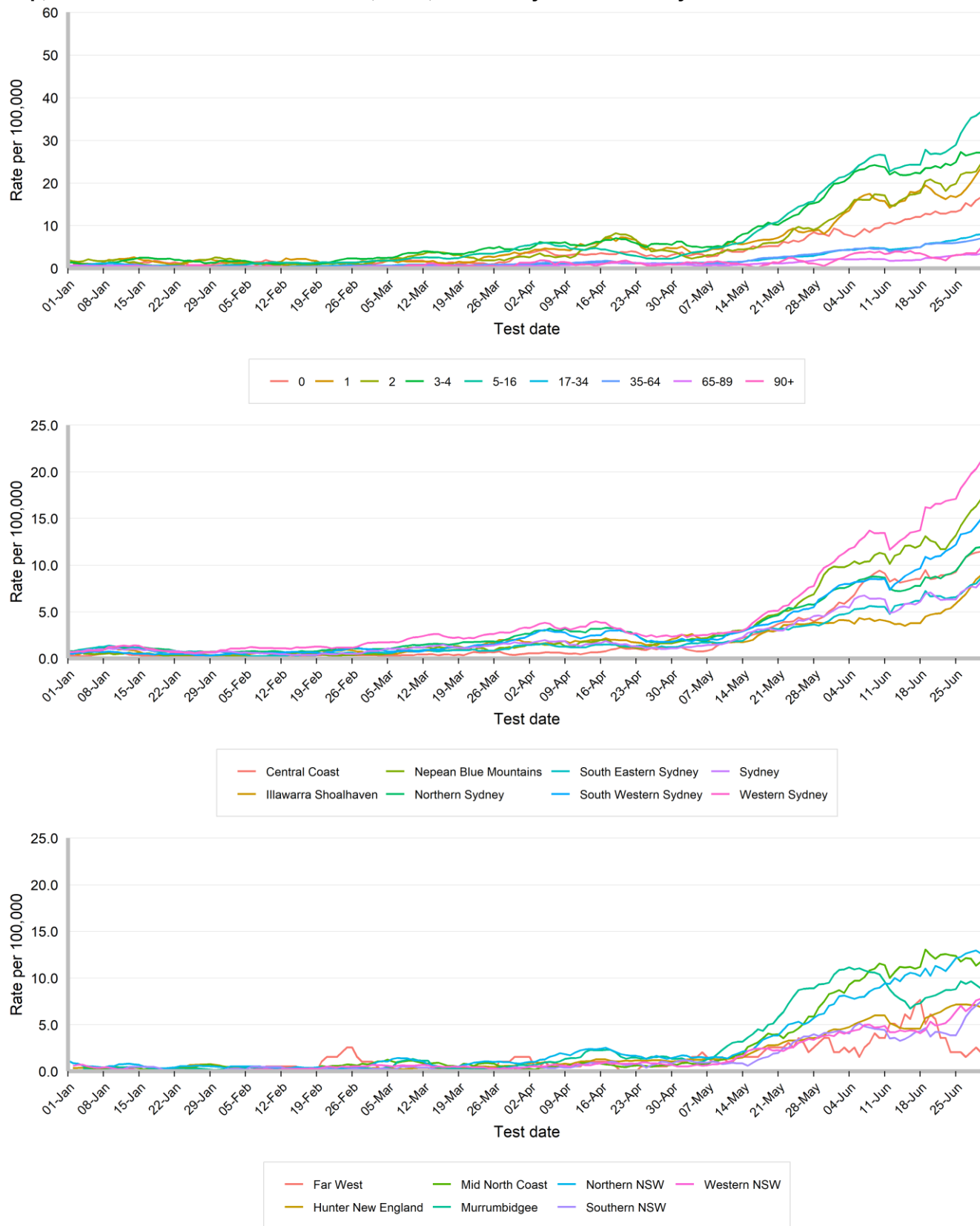
Figure 6. Daily seven-day rolling average rate of COVID-19 notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 01 July 2023.



Rates of influenza notifications per 100,000 population

Interpretation: Influenza notification rates increased across all age-groups and the majority of Local Health Districts in the past week. Rates continue to be highest in young children and adolescents reflecting transmission in pre-school and school settings, lower vaccine uptake and potentially an increased likelihood of testing if unwell.

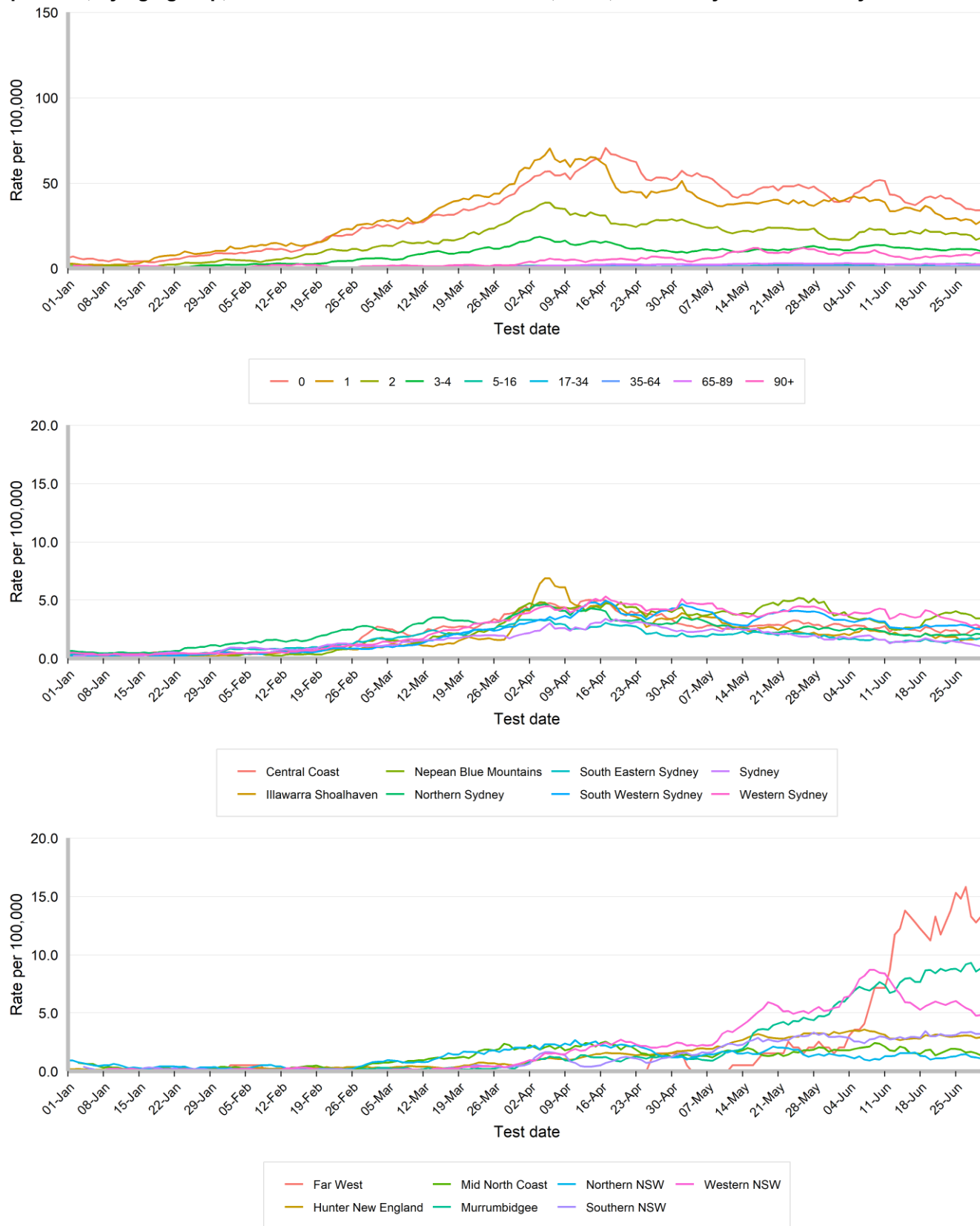
Figure 7. Daily seven-day rolling average rate of influenza notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 01 July 2023.



Rates of respiratory syncytial virus notifications per 100,000 population

Interpretation: RSV notification rates are stable across age-groups and the majority of 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 01 July 2023.

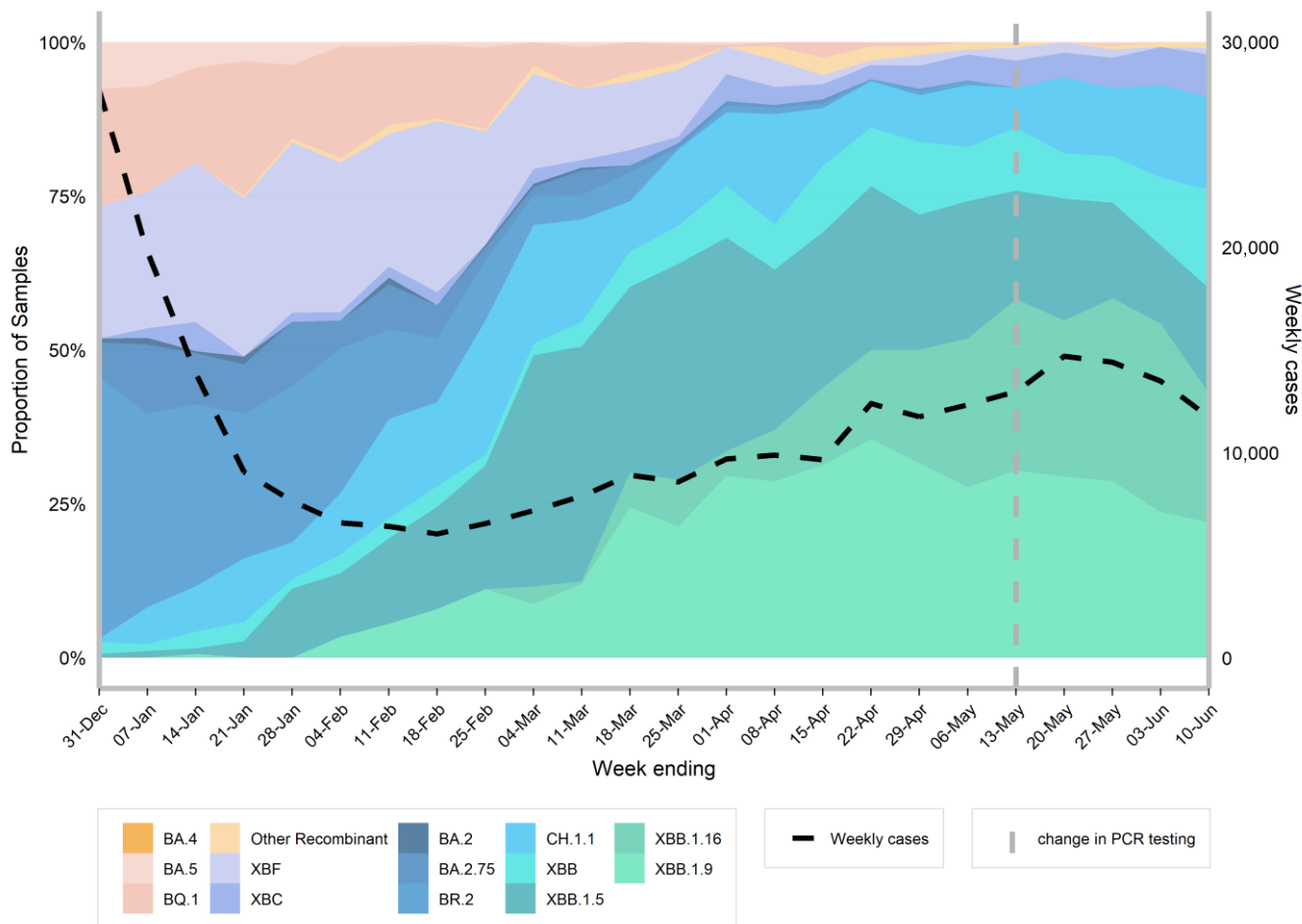


COVID-19 Whole Genome Sequencing

Specimens from people with COVID-19 undergo whole genome sequencing 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.

Interpretation: XBB sublineages continue to dominate the variants circulating in the community.

Figure 9. Estimated distribution of COVID-19 sub-lineages in the community, 01 January 2023 to 10 June 2023. (data for the current week are not available)



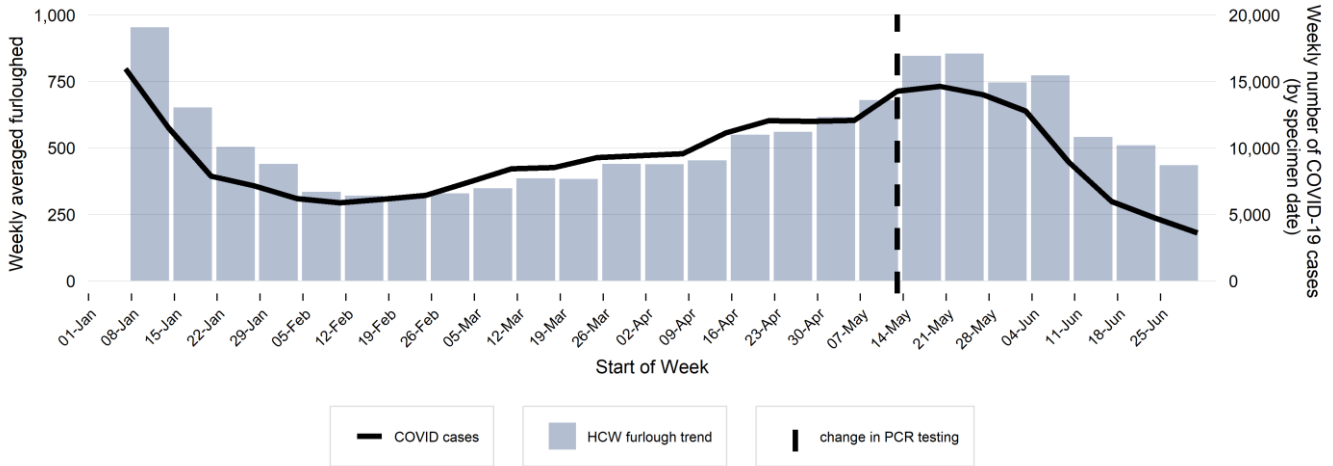
Other surveillance indicators

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 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 number of healthcare workers furloughed due to COVID-19 illness or exposure continues to decline, consistent with declining notifications of COVID-19 cases.

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

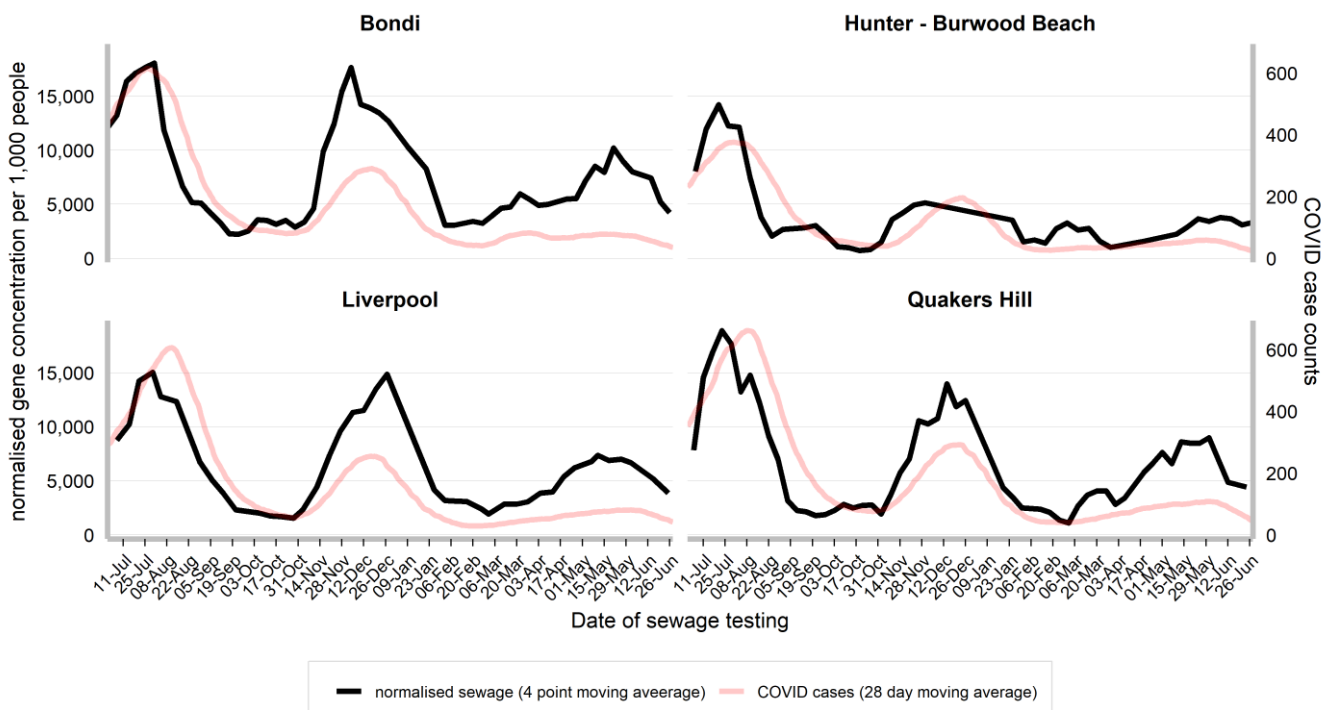


COVID-19 Sewage surveillance program

Trends are presented for Sydney Bondi, Quakers Hills, Liverpool and Burwood Beach sewage catchments from 5 February 2022 to the week ending 26 June 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 three of the four sewerage testing sites however still reflect ongoing community transmission.

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



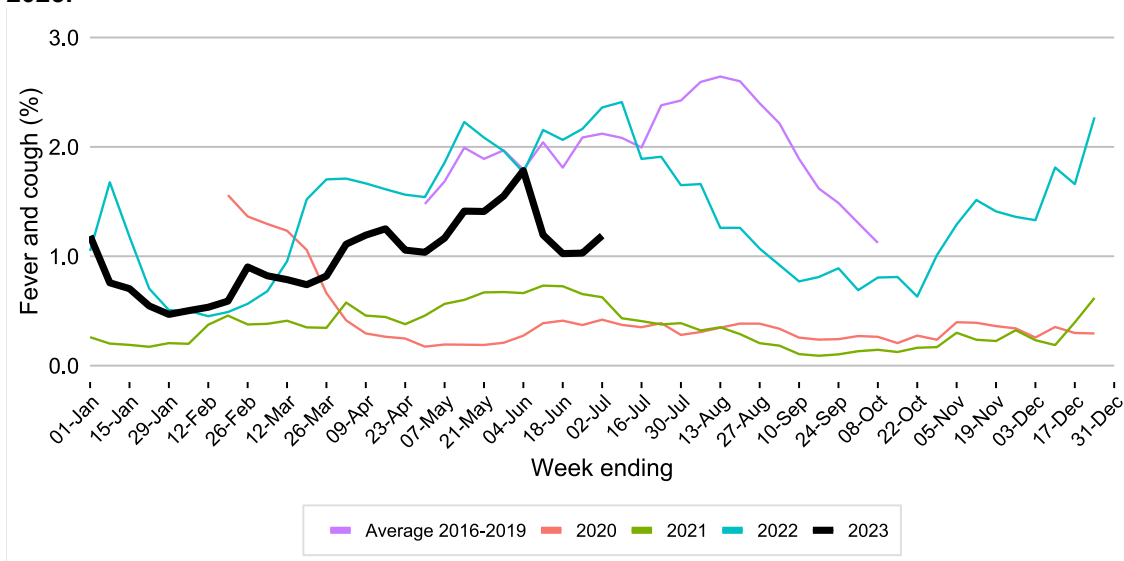
FluTracking and NSW sentinel laboratory network

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. As influenza-like illness has symptoms similar to COVID-19, reports of influenza-like illness during the COVID period can be influenced by COVID-19 activity. More information about FluTracking and ways to be involved are available here:

<https://info.flutracking.net/about/>

Interpretation: The decline in the proportion of FluTracking participants reporting influenza-like illness observed in late May and early June has slowed, potentially reflecting stabilising COVID-19 activity. Reports remain well below the 2022 peak and the average for the same time of year for the period 2016 – 2019.

Figure 12. Proportion of FluTracking participants reporting influenza-like illness, NSW, 1 January to 02 July 2023.



Epidemiological week 26, ending 01 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 were further declines in the number of COVID-positive PCR tests in the past week however positivity was similar. One in five (19.8%) PCR tests for influenza returned positive results.

Figure 13. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 January 2023 to 02 July 2023.

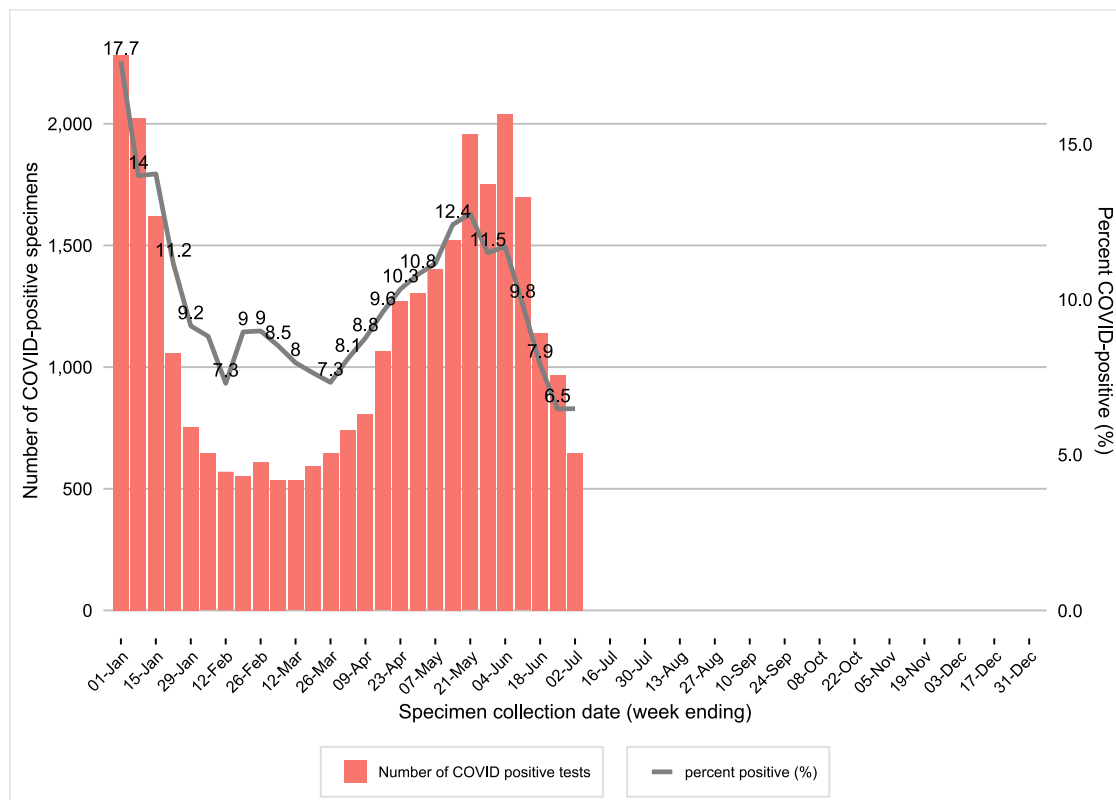


Figure 14. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 January 2023 to 02 July 2023.

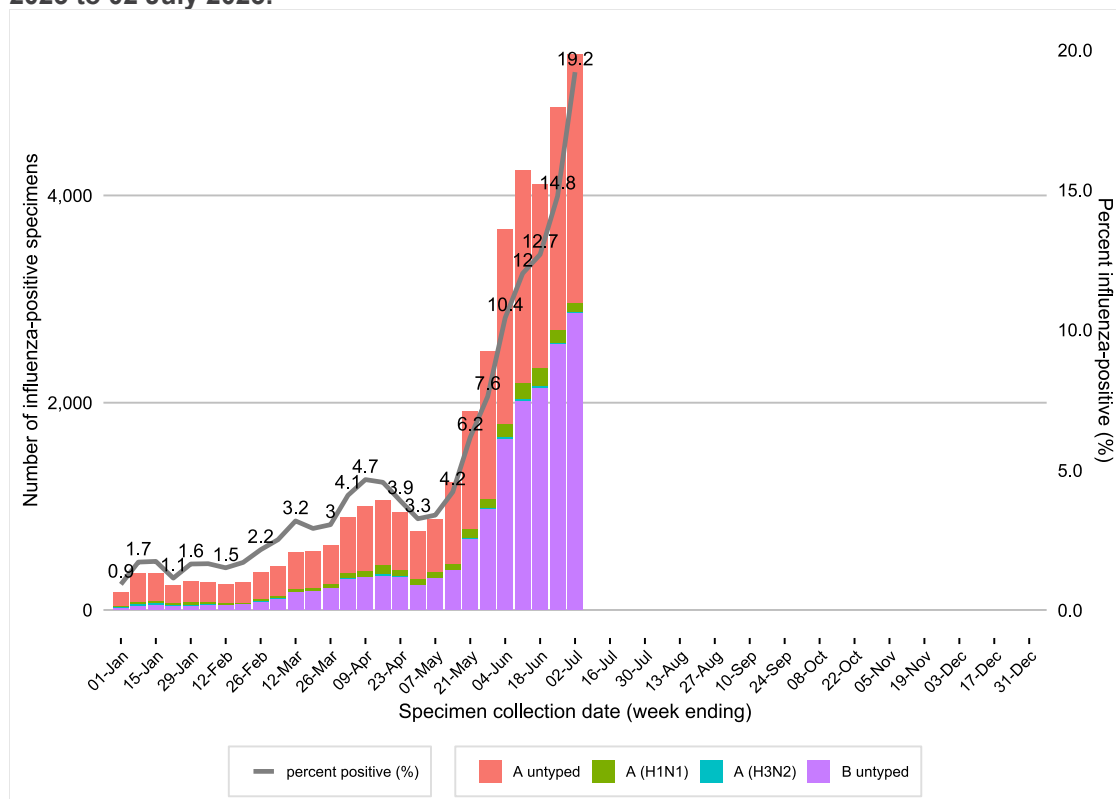


Figure 15. Number of positive PCR test results and proportion of tests positive for other respiratory viruses at sentinel NSW laboratories, 1 January 2023 to 02 July 2023.

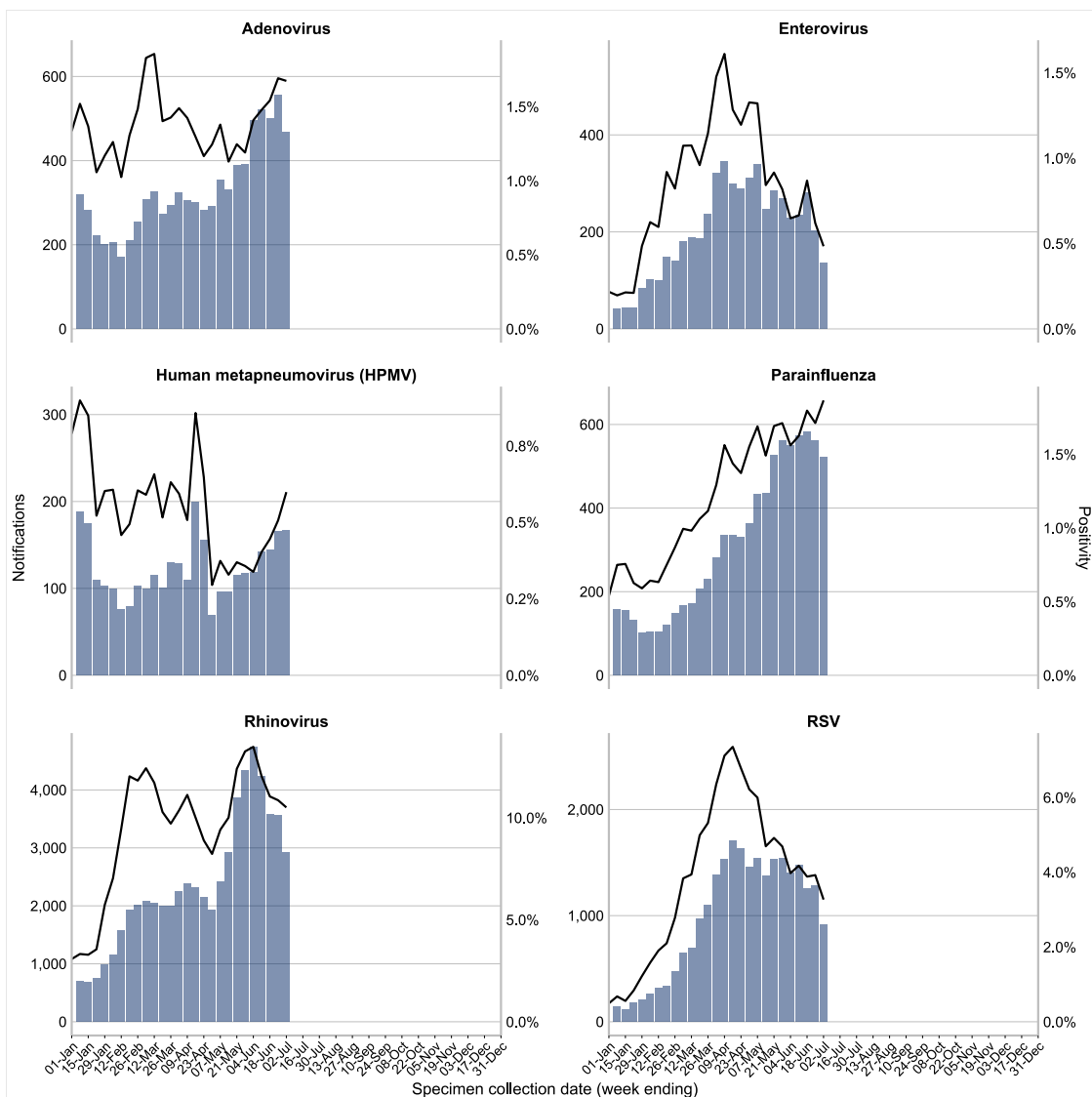


Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 02 July 2023.

	Week ending				Year to date
	11 June	18 June	25 June	02 July	
	n(% pos)	n(% pos)	n(% pos)	n(% pos)	n
Influenza	4,239 (12.0%)	4,111 (12.7%)	4,850 (14.8%)	5,361 (19.2%)	38,151
Adenovirus	521 (1.5%)	499 (1.5%)	555 (1.7%)	467 (1.7%)	8,812
Respiratory syncytial virus (RSV)	1,472 (4.2%)	1,257 (3.9%)	1,287 (3.9%)	912 (3.3%)	25,533
Rhinovirus	4,241 (12.0%)	3,573 (11.0%)	3,560 (10.9%)	2,930 (10.5%)	62,066
Human metapneumovirus (HMPV)	142 (0.4%)	144 (0.4%)	166 (0.5%)	167 (0.6%)	3,349
Enterovirus	234 (0.7%)	281 (0.9%)	203 (0.6%)	135 (0.5%)	5,313
Number of PCR tests conducted	35,238	32,354	32,788	27,890	634,706
SARS-CoV-2	1,697 (9.8%)	1,140 (7.9%)	967 (6.5%)	646 (6.5%)	30,743
Number of COVID PCR tests	17,238	14,408	14,924	9,956	297,560

Recent data is subject to change. For the week ending 02 July 2023, 7 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.