

NSW Respiratory Surveillance Report - week ending 10 June 2023

Influenza notifications and presentations to hospitals continue to rise. There are early signs that COVID-19 activity has declined in the previous week. RSV activity remains stable.

Summary

COVID-19 notifications, emergency department (ED) presentations and subsequent admissions and test positivity all declined in the last week. COVID-19 notifications declined by 37.7% and notification rates decreased in all age groups and Local Health Districts. Furloughing for healthcare workers is stable. Influenza notifications (12.6% increase) and ED presentations for influenza-like illness continue to rise reflecting increasing community transmission. RSV notifications are stable. Small increases in ED presentations and subsequent hospital admissions for bronchiolitis in young children were observed in the past week.

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 (ED) 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 the number of people admitted to hospital, are useful for monitoring the severity of illness and impact on the health system.

Interpretation: Consistent with declines in notifications, COVID-19 presentations to EDs decreased in the previous week. ED presentations for influenza-like illness continue to increase, however the proportion requiring admission decreased indicating no increase in disease severity. Bronchiolitis presentations for young children increased slightly.

Figure 1. ‘COVID-19’ weekly counts of unplanned emergency department presentations and admission following presentation, 2023, persons of all ages.

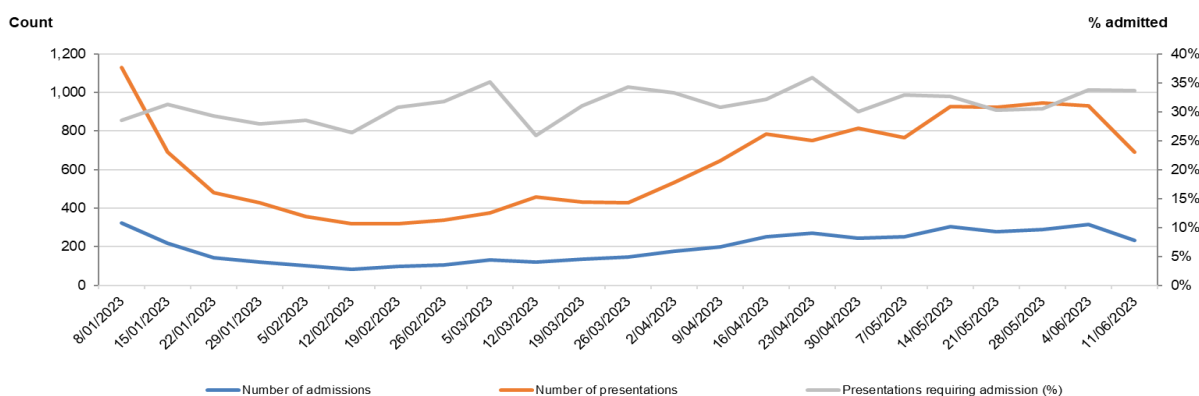


Figure 2. ‘Influenza-like illness’ weekly counts of unplanned emergency department presentations and admission following presentation, 2023, persons of all ages.

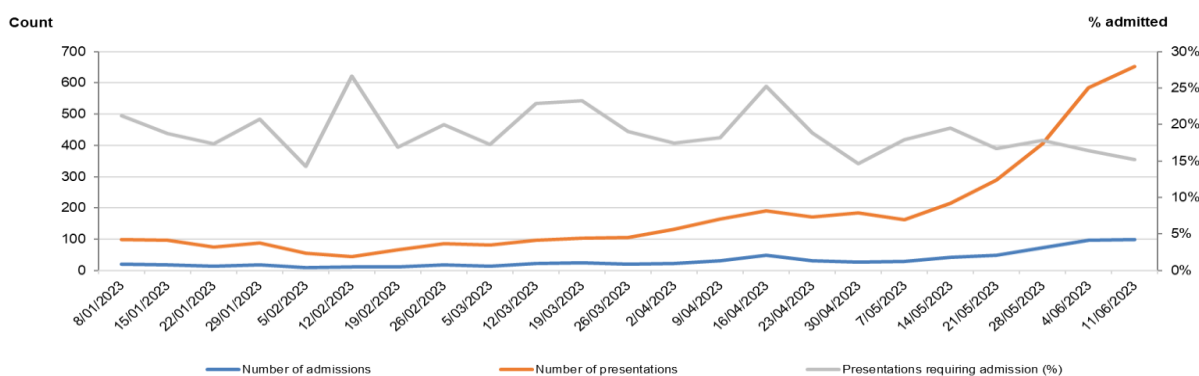
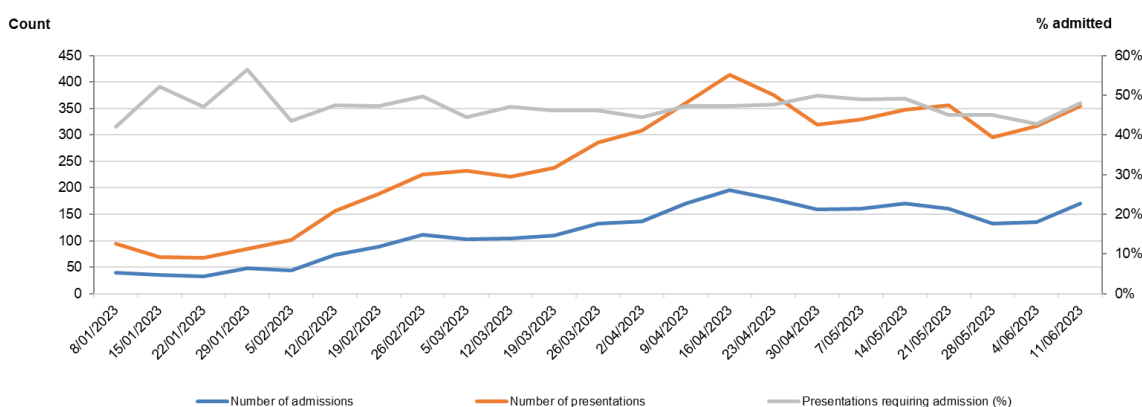


Figure 3. Bronchiolitis weekly counts of unplanned emergency department presentations and admission following presentation, 2023, children aged 0-4 years.



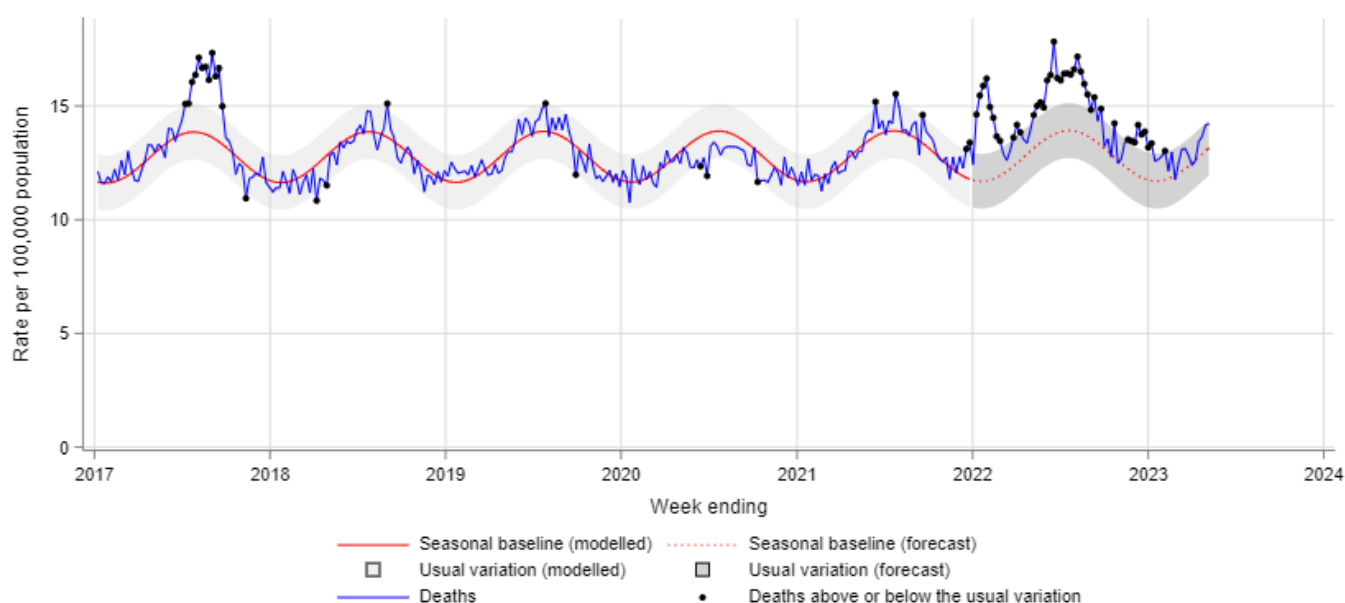
Death surveillance

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 lag adjusted all-cause mortality is within the usual variation.

Figure 4. All-cause death rate per 100,000 population, all ages, 2017 to 07 May 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 02 April 2023 to 07 May 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.

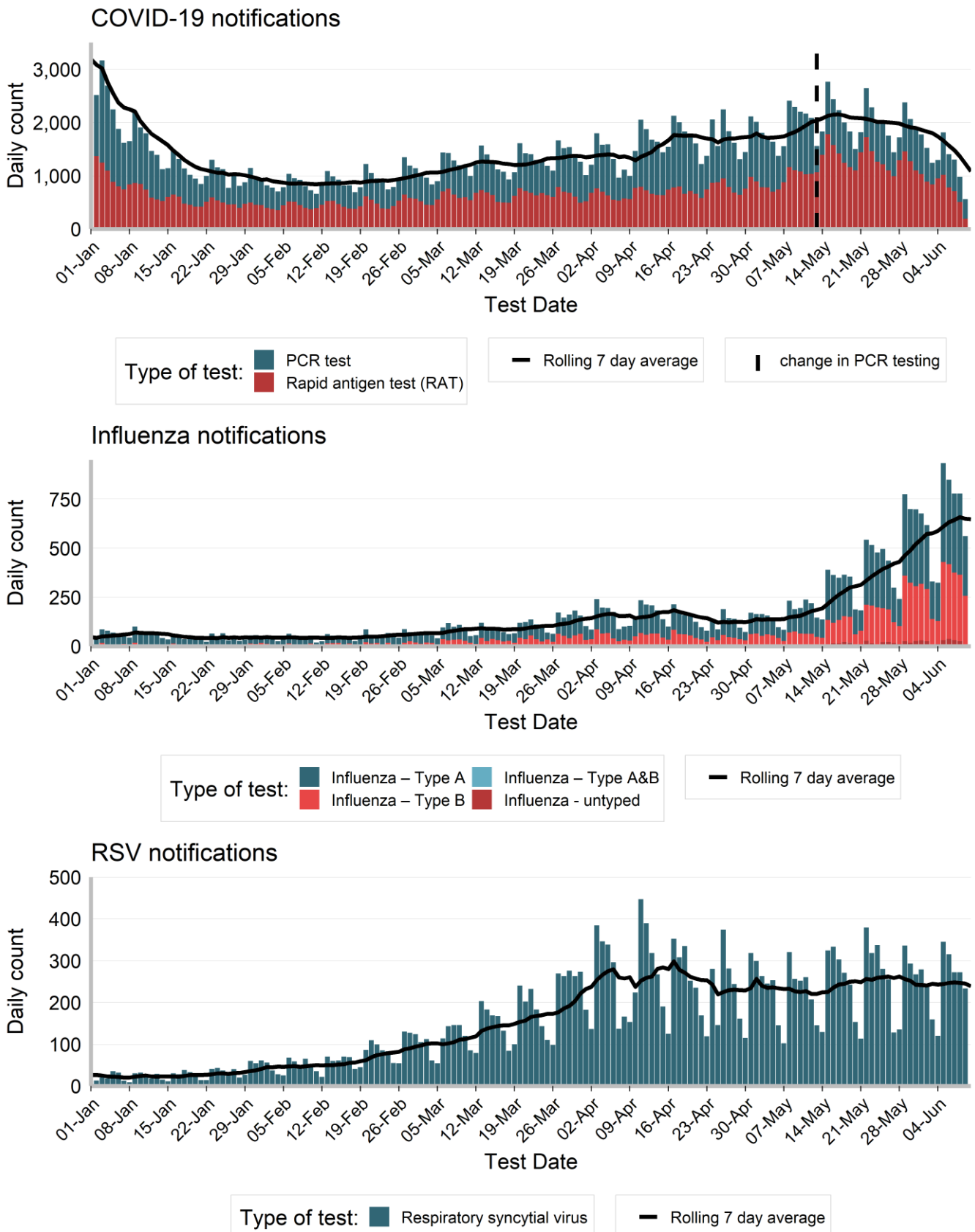
Interpretation: Adults aged 20 – 69 years account for most COVID-19 notifications and 58% of notifications are for females (Table 1). Most influenza notifications are for children and young people aged less than 20 years and young children continue to dominate RSV notifications

Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the week ending 10 June 2023.

	COVID		Influenza		RSV	
	Week ending 10 June 2023	Year to Date	Week ending 10 June 2023	Year to Date	Week ending 10 June 2023	Year to Date
Gender						
Female	4,469	132,579(58%)	2,221	13,227(50%)	869	12,843(51%)
Male	3,104	97,172(42%)	2,308	13,019(50%)	805	12,142(49%)
Age group (years)						
0-4	307	7,442(3%)	569	3,526(13%)	865	14,774(59%)
5-9	265	7,152(3%)	1,141	5,930(23%)	122	1,233(5%)
10-19	664	19,081(8%)	1,151	5,133(20%)	90	937(4%)
20-29	679	26,425(11%)	264	1,820(7%)	59	854(3%)
30-39	1,029	34,839(15%)	488	3,066(12%)	67	1,121(4%)
40-49	1,074	33,953(15%)	405	2,657(10%)	63	829(3%)
50-59	991	31,881(14%)	221	1,585(6%)	71	1,100(4%)
60-69	853	29,041(13%)	127	1,187(5%)	90	1,280(5%)
70-79	775	21,620(9%)	92	820(3%)	110	1,279(5%)
80-89	648	13,200(6%)	51	420(2%)	89	1,084(4%)
90+	305	5,350(2%)	20	112(0%)	48	492(2%)
Local Health District of residence						
Central Coast	410	10,473(5%)	229	826(3%)	64	1,288(5%)
Far West	26	676(0%)	6	39(0%)	14	30(0%)
Hunter New England	1,046	29,822(13%)	382	1,912(7%)	218	1,811(7%)
Illawarra Shoalhaven	466	14,300(6%)	124	1,118(4%)	68	1,379(6%)
Mid North Coast	233	4,903(2%)	184	660(3%)	36	428(2%)
Murrumbidgee	272	7,101(3%)	205	1,058(4%)	153	667(3%)
Nepean Blue Mountains	337	11,301(5%)	296	1,391(5%)	85	1,517(6%)
Northern NSW	228	6,247(3%)	170	958(4%)	19	563(2%)
Northern Sydney	908	27,952(12%)	576	3,852(15%)	155	3,731(15%)
South Eastern Sydney	651	24,789(11%)	356	2,323(9%)	103	2,516(10%)
South Western Sydney	944	24,205(11%)	602	3,790(14%)	206	3,673(15%)
Southern NSW	206	5,955(3%)	66	337(1%)	43	337(1%)
Sydney	580	19,533(8%)	298	1,943(7%)	71	1,805(7%)
Western NSW	319	9,260(4%)	94	473(2%)	164	839(3%)
Western Sydney	933	30,880(13%)	934	5,492(21%)	272	4,344(17%)
Aboriginal status						
Aboriginal and/or Torres Strait Islander	246	7,413(3%)	150	802(3%)	86	825(3%)
Not Aboriginal or Torres Strait Islander	5,456	168,335(73%)	2,309	13,780(52%)	822	11,882(48%)
Not Stated / Unknown	1,883	54,262(24%)	2,070	11,689(44%)	766	12,296(49%)
Total	7,585	230,010(100%)	4,529	26,271(100%)	1,674	25,003(100%)

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

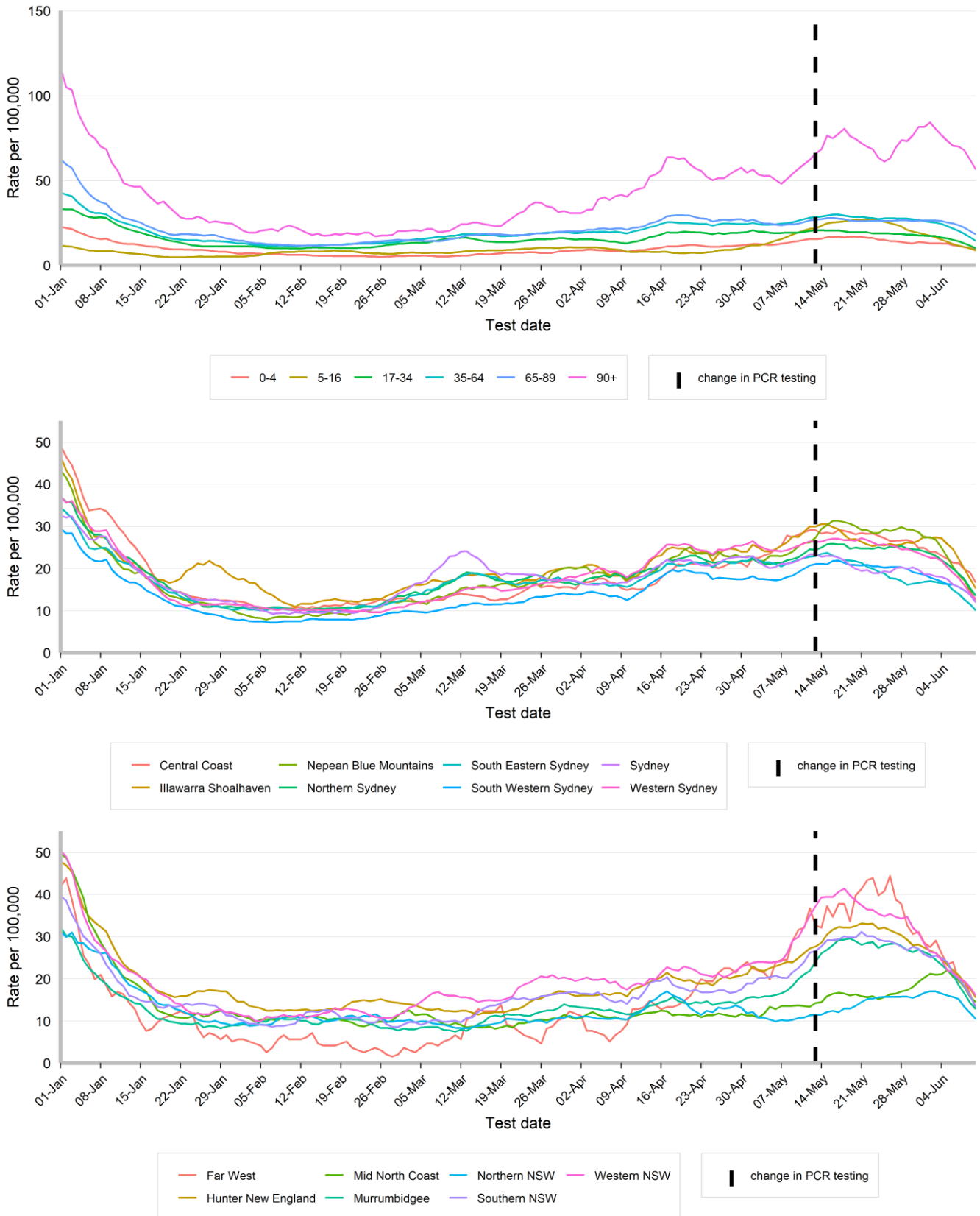
Figure 5. People notified with COVID-19, Influenza and RSV, by date of test and type of test performed, NSW, 01 January 2023 to 10 June 2023.



Rates of COVID-19 notifications per 100,000 population

Interpretation: COVID-19 notification rates have declined across all age groups and Local Health Districts in the past two weeks, with the decline most prominent in people aged 90 years and older.

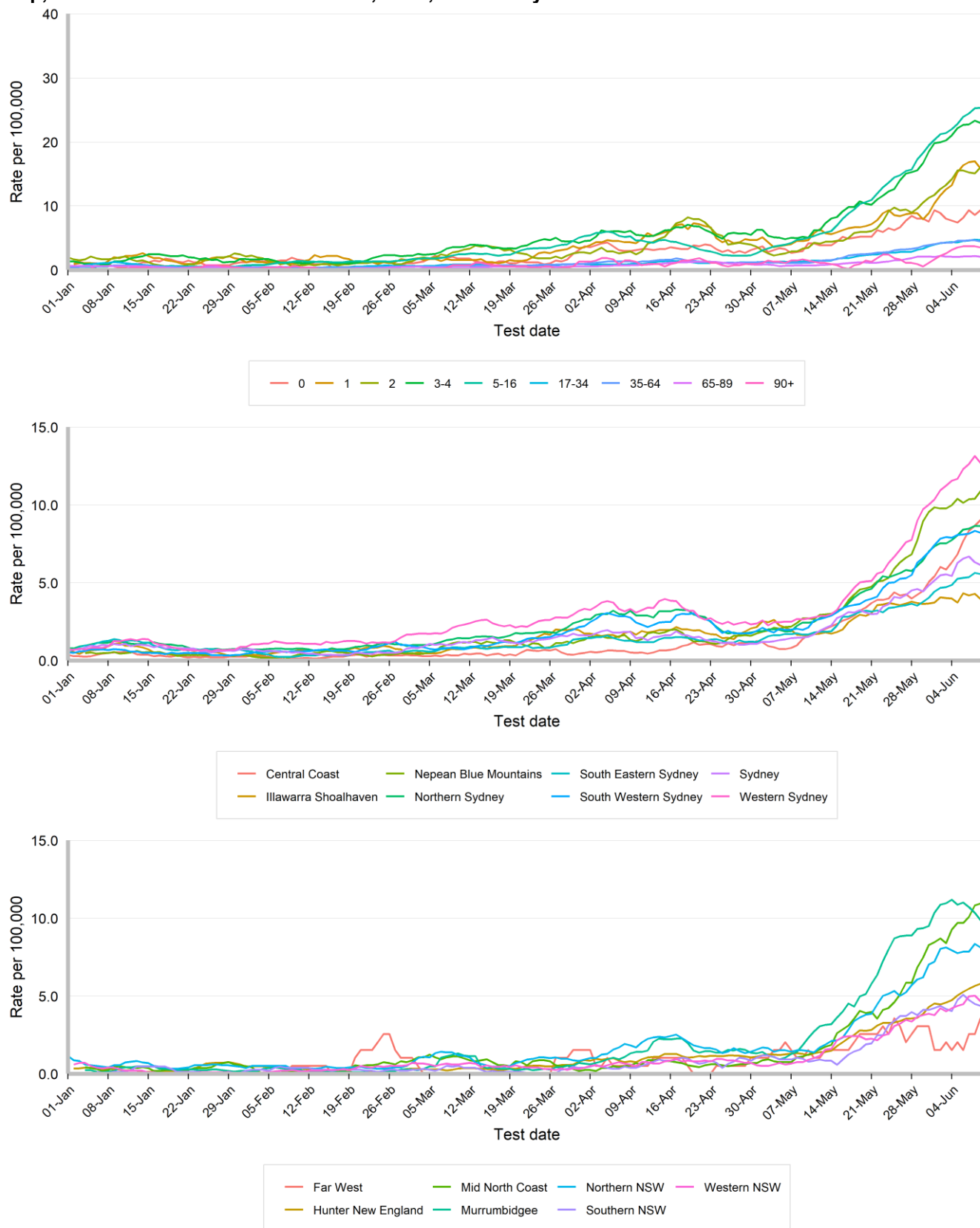
Figure 6. Daily seven-day rolling average rate of COVID-19 notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 10 June 2023.



Rates of influenza notifications per 100,000 population

Interpretation: Influenza notification rates continue to be highest in children and young people aged less than 17 years.

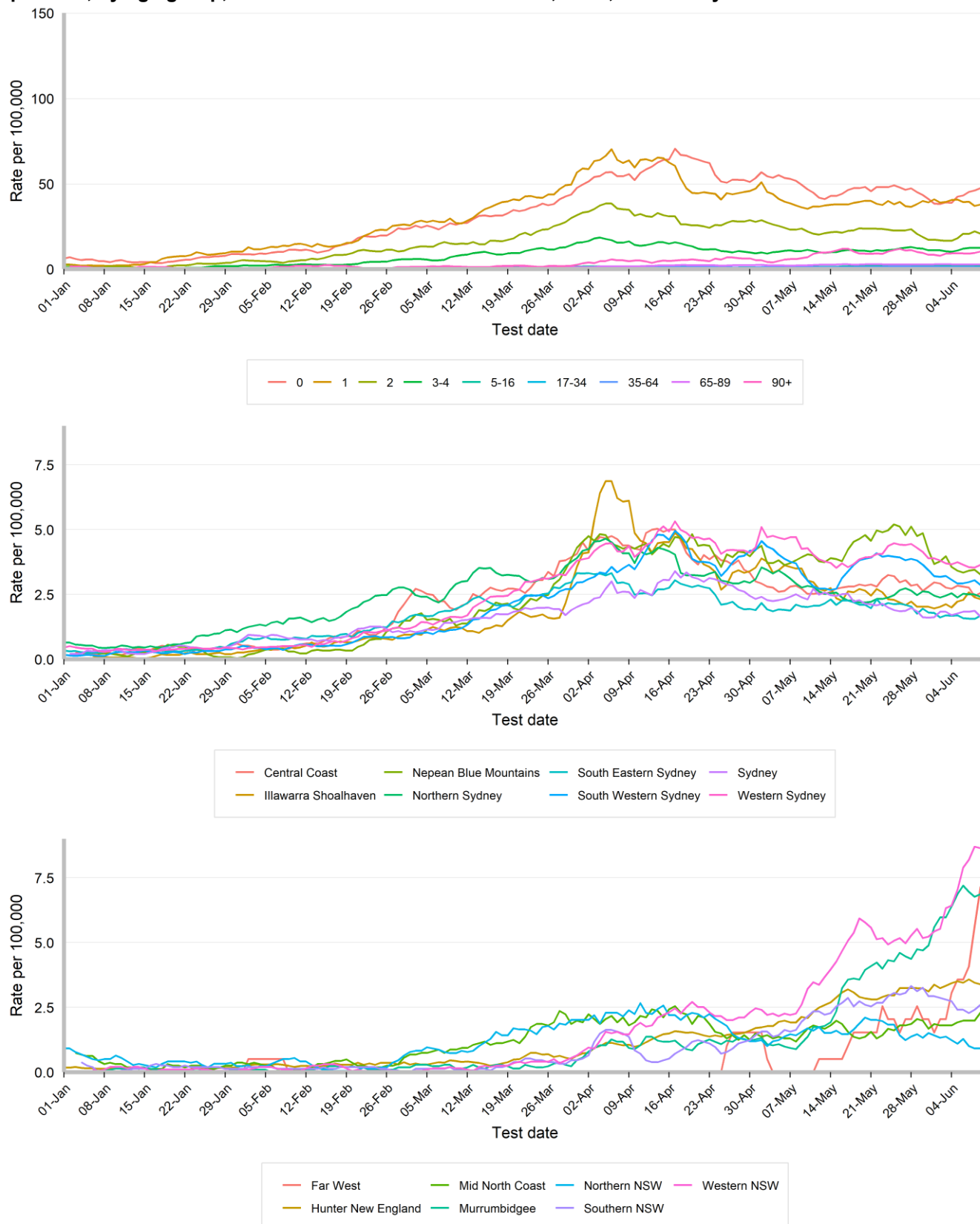
Figure 7. Daily seven-day rolling average rate of influenza notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 10 June 2023.



Rates of respiratory syncytial virus notifications per 100,000 population

Interpretation: Rates of RSV notifications have been stable across all ages except for a small increase in infants aged less than 12-months. Notification rates are highest in the Western NSW, Far West and Murrumbidgee Local Health Districts and this may reflect patterns of testing in those regions.

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 10 June 2023.

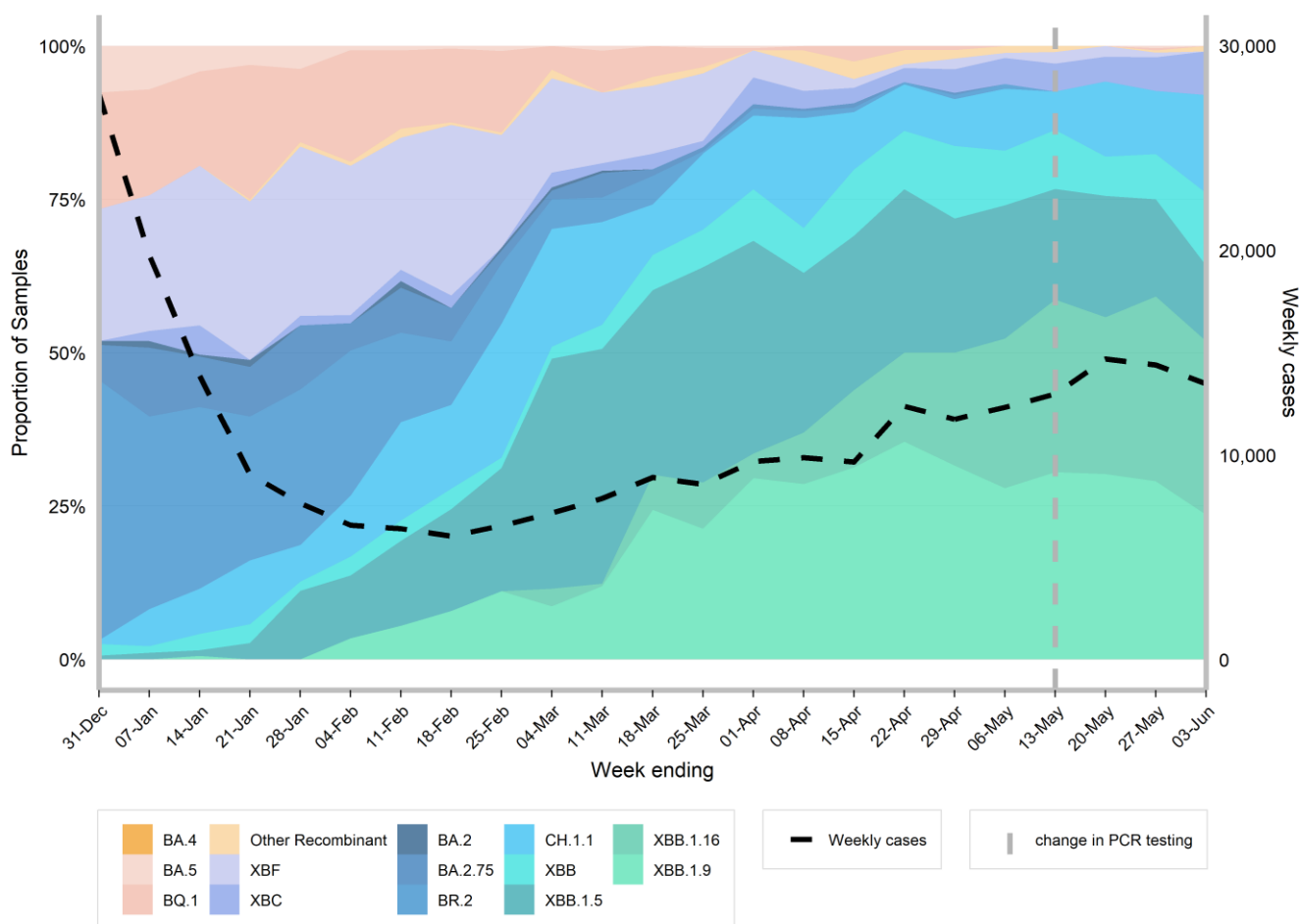


COVID-19 Whole Genome Sequencing

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 Health 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. S genes were detected in 98.7% of SARS-CoV-2 positive specimens.

Interpretation: XBB sub-lineages account for most variants circulating in the community.

Figure 9. Estimated distribution of COVID-19 sub-lineages in the community, 01 January 2023 to 27 May 2023.



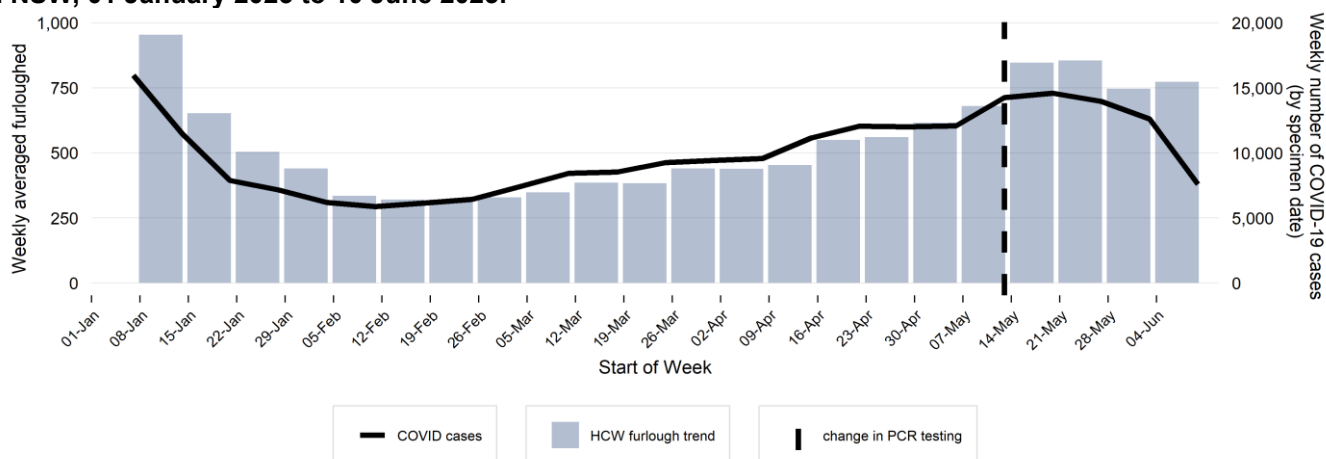
Other surveillance indicators

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 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 continues to occur at stable moderate to high levels. The lag in any changes to furloughing despite a decline in COVID-19 cases is likely due to the length of time staff are required to be off work.

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

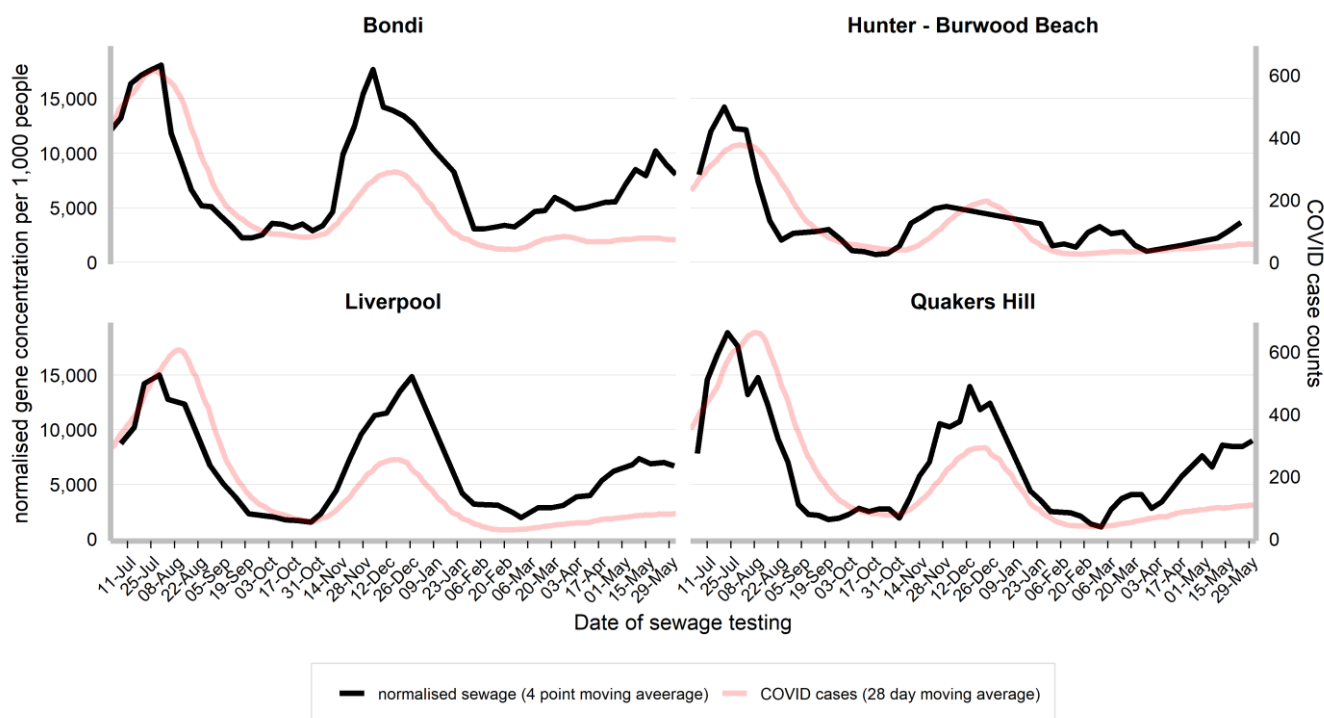


COVID-19 Sewage surveillance program

Trends are presented for Sydney Bondi, Quakers Hills, Liverpool and Burwood Beach sewage catchments from 5 February 2022 to the week ending 02 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 continued to increase over the previous weeks particularly in Burwood Beach and Quakers Hill. This indicates that transmission continues to occur in the community despite decreases in case notifications.

Figure 11. Gene concentration, per 1,000 people in each sewage catchment, 1 January 2023 to 02 June 2023.

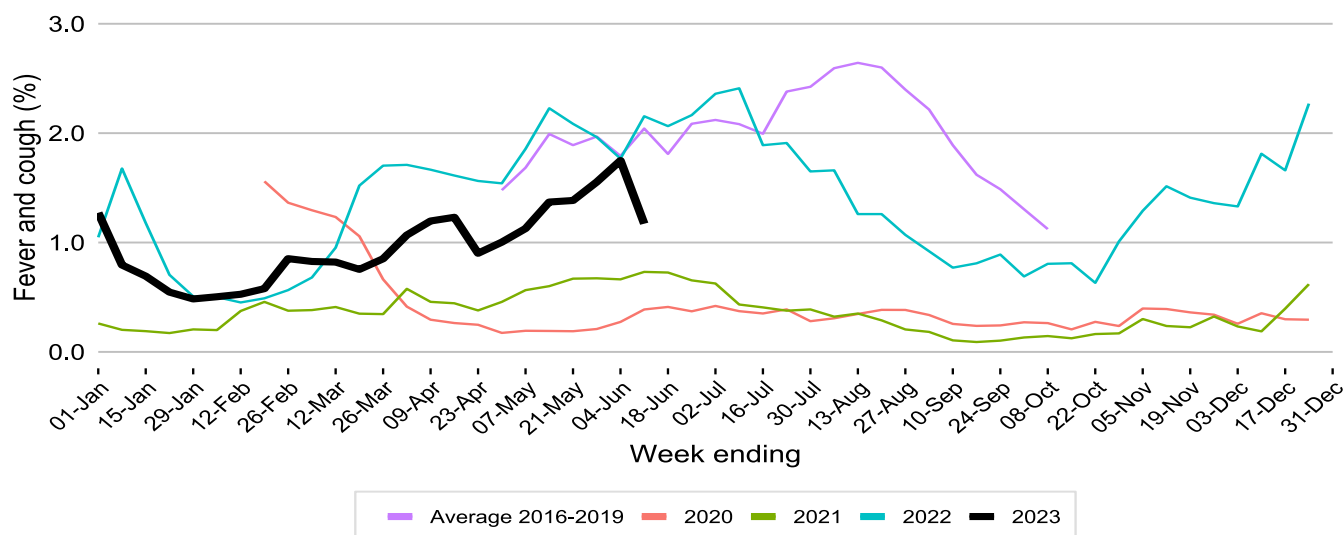


FluTracking and NSW sentinel laboratory network

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. More information about FluTracking and ways to be involved are available here: <https://info.flutracking.net/about/>

Interpretation: Despite the rises in other indicators of influenza activity in NSW, the proportion of FluTracking participants reporting fever and cough declined in the past week. A similar trend was observed in all jurisdictions other than Queensland and the Northern Territory ([Australia Reports | Flutracking.net](#)). Further weekly data are required to determine if this change in trajectory is sustained. Note that fever and cough are also associated with respiratory infections other than influenza, some of which have declined this week

Figure 12. Proportion of FluTracking participants reporting influenza-like illness, NSW, 1 January to 11 June 2023.



Epidemiological week 23, ending 10 June 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: Influenza positivity remains high at approximately 12% of specimens tested. COVID-19 and RSV positivity are continuing to decline.

Figure 13. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 January 2023 to 11 June 2023.

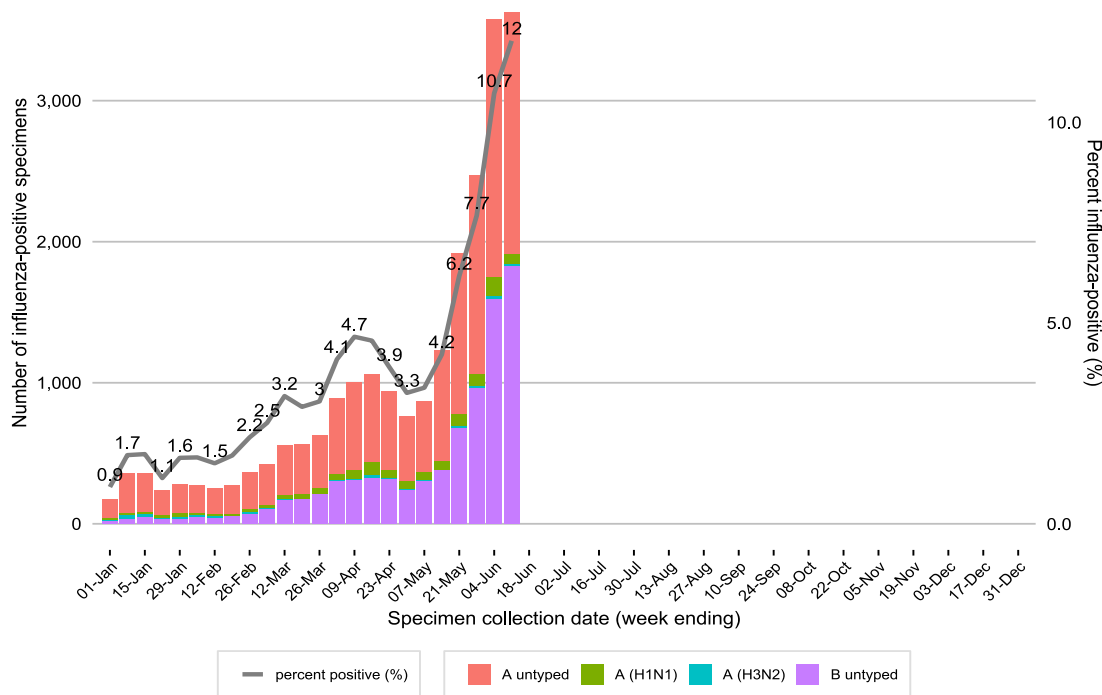


Figure 14. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 January 2023 to 11 June 2023.

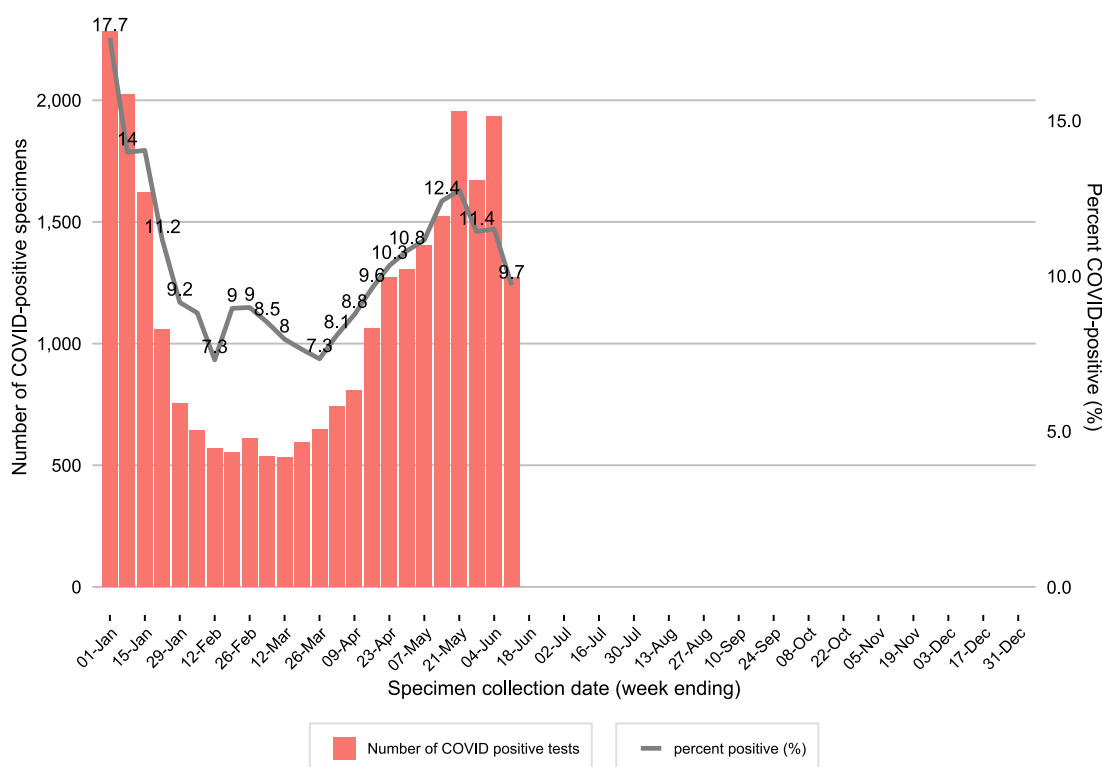


Figure 15. Number of positive PCR test results and proportion of tests positive for other respiratory viruses at sentinel NSW laboratories, 1 January 2023 to 11 June 2023.

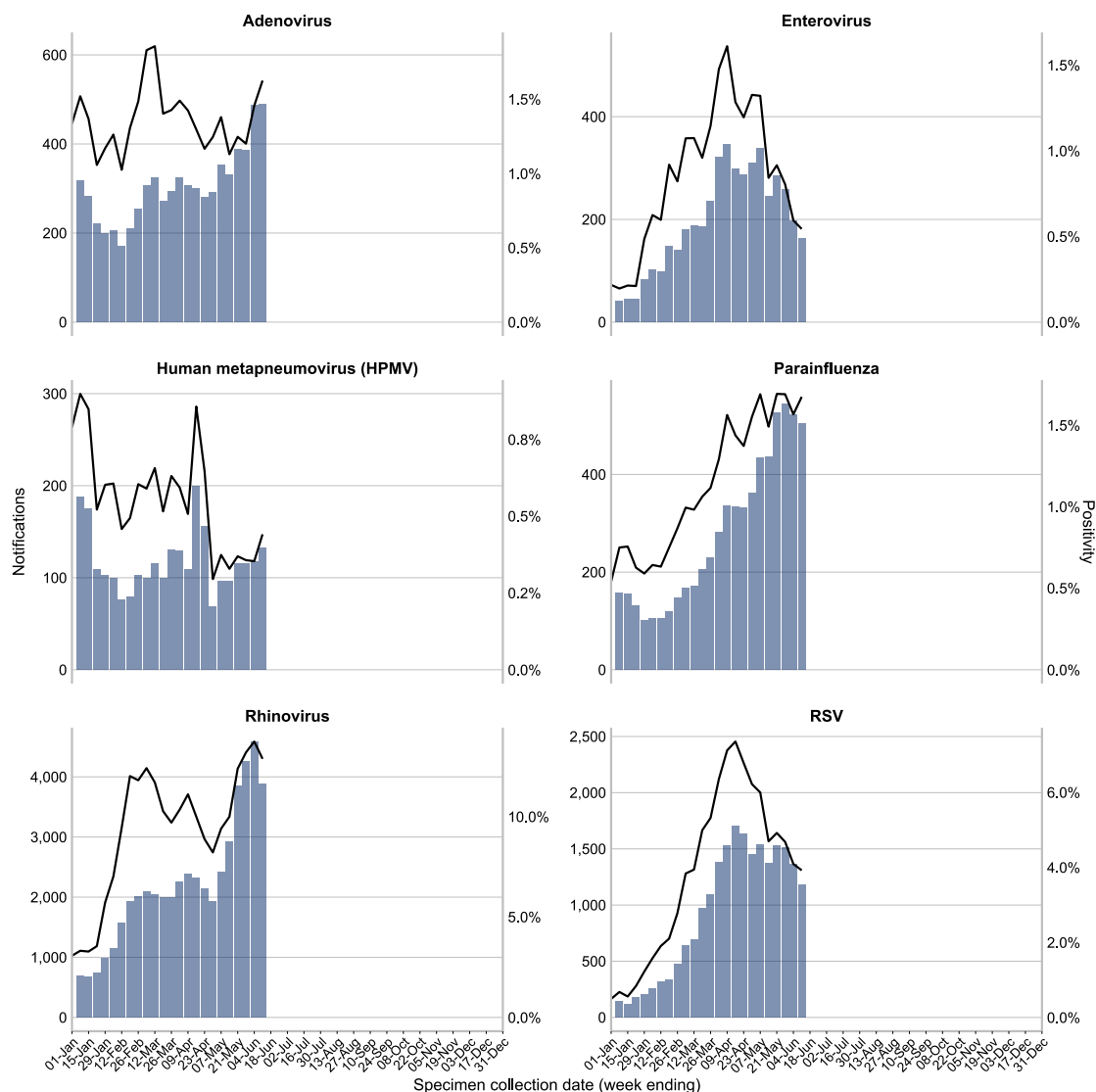


Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 11 June 2023.

	Week ending				Year to date
	21 May	28 May	04 June	11 June	
	n(% pos)	n(% pos)	n(% pos)	n(% pos)	n
Influenza	1,921 (6.2%)	2,474 (7.7%)	3,578 (10.7%)	3,627 (12.0%)	23,094
Adenovirus	388 (1.2%)	387 (1.2%)	486 (1.5%)	490 (1.6%)	7,247
Respiratory syncytial virus (RSV)	1,531 (4.9%)	1,509 (4.7%)	1,365 (4.1%)	1,183 (3.9%)	21,725
Rhinovirus	3,858 (12.4%)	4,256 (13.2%)	4,588 (13.8%)	3,887 (12.9%)	51,410
Human metapneumovirus (HMPV)	115 (0.4%)	115 (0.4%)	118 (0.4%)	133 (0.4%)	2,860
Enterovirus	285 (0.9%)	259 (0.8%)	198 (0.6%)	164 (0.5%)	4,585
Number of PCR tests conducted	31,116	32,222	33,360	30,147	534,213
SARS-CoV-2	1,956 (12.8%)	1,671 (11.4%)	1,935 (11.5%)	1,270 (9.7%)	27,376
Number of COVID PCR tests	15,334	14,618	16,811	13,089	252,878

Recent data is subject to change. For the week ending 11 June 2023, 9 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.