

NSW Respiratory Surveillance Report - week ending 24 June 2023

COVID-19 activity continues to decline rapidly. Influenza activity remains high and RSV activity is stable at moderate levels.

Summary

COVID-19 notifications declined by 32% in the previous week. This has been accompanied by decreases in all other indicators of COVID-19 activity (emergency department presentations, healthcare worker furloughing and test positivity) and an early indication of some decline in SARS-CoV-2 gene detection in sewage. Influenza notifications increased by 15% in the past week and presentations to emergency departments for influenza-like illness remain high. Overall respiratory syncytial virus (RSV) notifications are stable although trends in notification rates vary between Local Health Districts; RSV test positivity continues to decline.

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 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 coronavirus continue to decrease. The number of presentations and admissions for influenza-like illness now exceeds those for coronavirus but the proportion requiring admission is lower. There was a small decline in ED presentations for bronchiolitis.

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

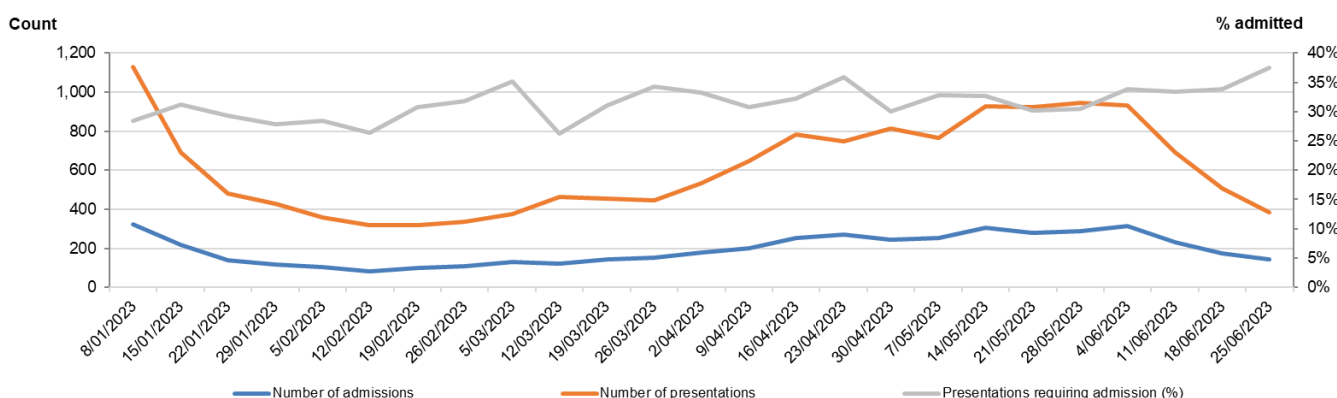


Figure 2. 'Influenza-like illness' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons of all ages.

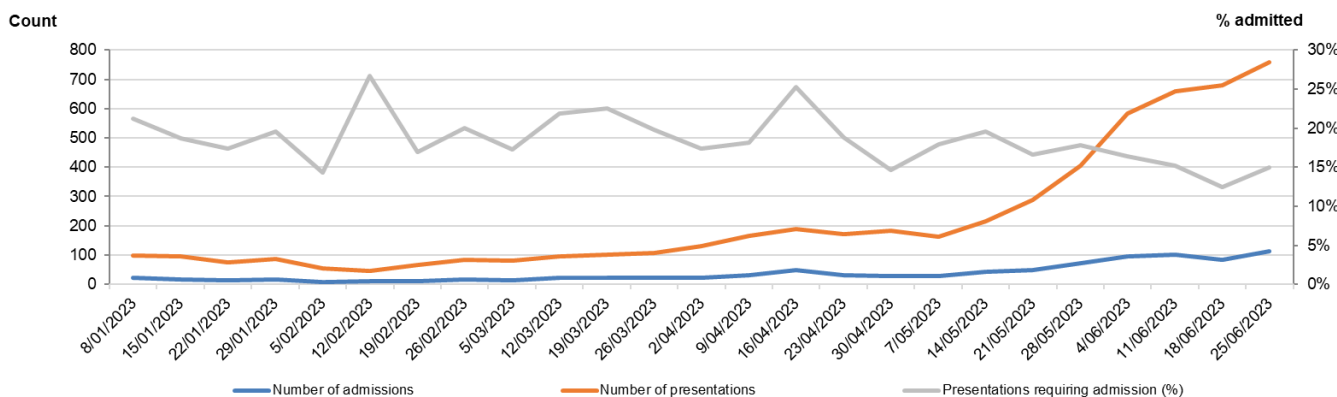
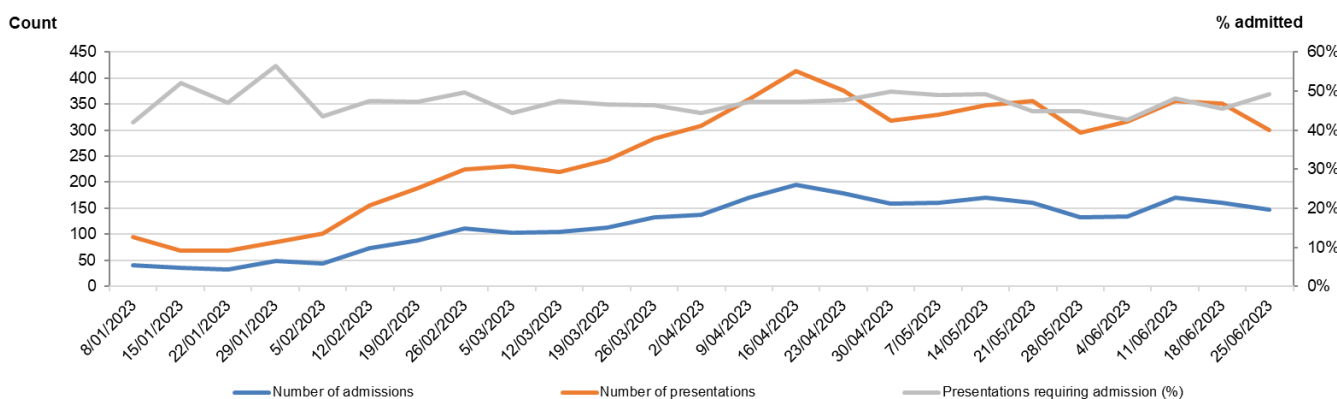


Figure 3. Bronchiolitis weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, children aged 0-4 years.



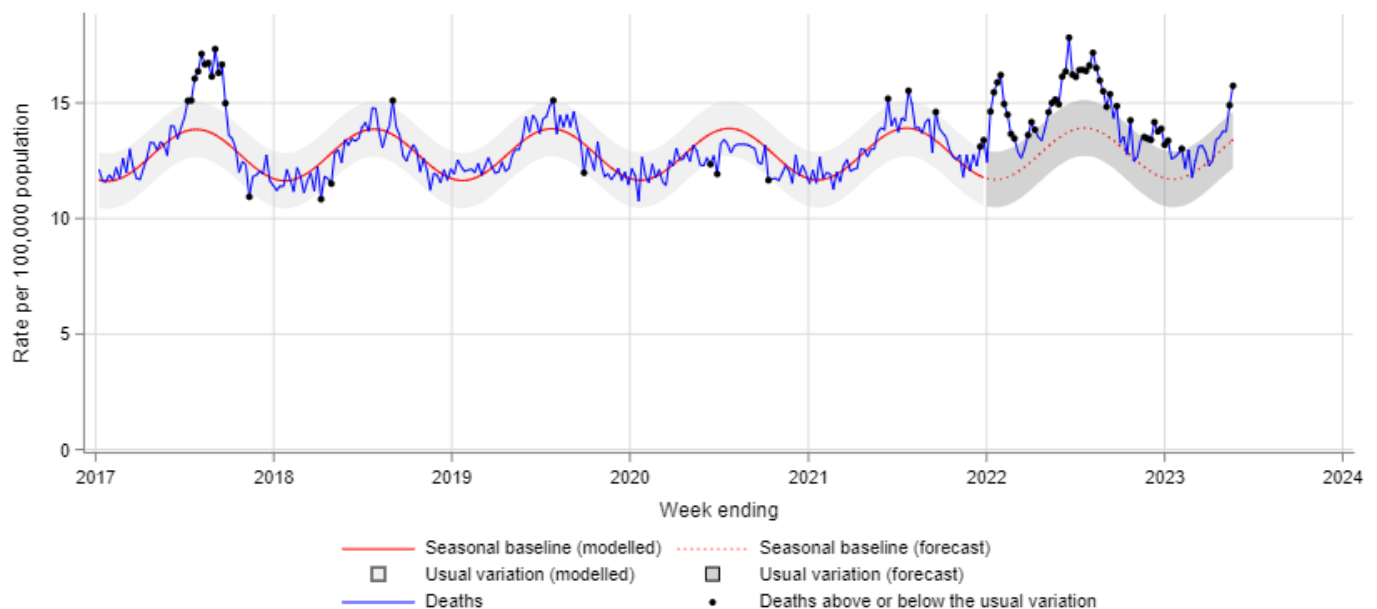
Death surveillance

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: All-cause mortality in mid-May 2023 was above the seasonal baseline and usual variation for mortality rates based on the period 2017 to 2021.

Figure 4. All-cause death rate per 100,000 population, all ages, 2017 to 21 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 16 April 2023 to 21 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.

Epidemiological week 25, ending 24 June 2023

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.

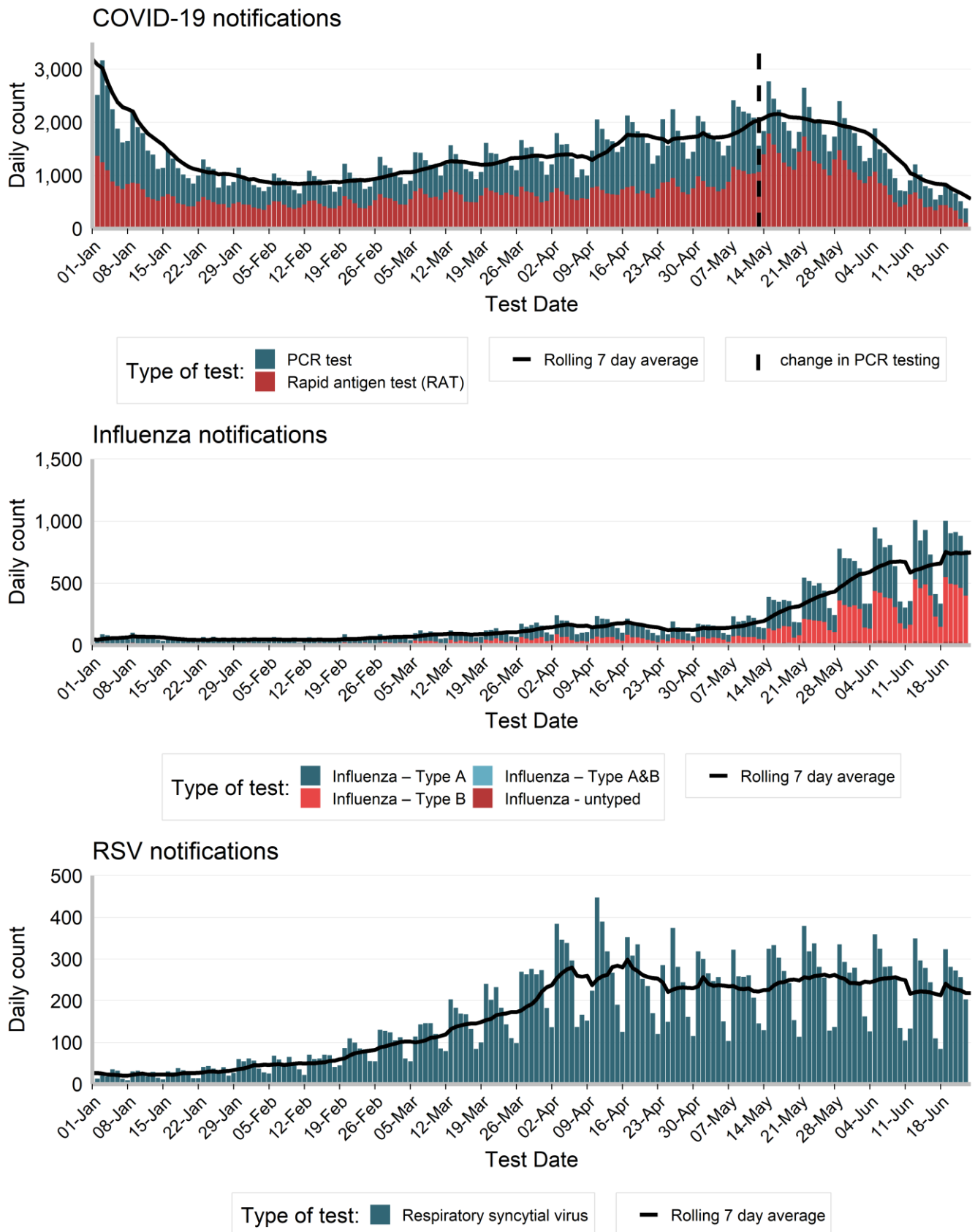
Interpretation: There have been minimal changes in the distribution of COVID-19, influenza and RSV notifications across gender, age, Local Health District and Aboriginal status in the past week compared to previous weeks.

Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the week ending 24 June 2023.

	COVID		Influenza		RSV	
	Week ending 24 June 2023	Year to Date	Week ending 24 June 2023	Year to Date	Week ending 24 June 2023	Year to Date
Gender						
Female	2,311	139,310(58%)	2,681	18,259(50%)	773	14,460(51%)
Male	1,606	101,846(42%)	2,539	17,985(50%)	754	13,694(49%)
Age group (years)						
0-4	192	7,943(3%)	599	4,765(13%)	684	16,301(58%)
5-9	125	7,507(3%)	1,191	8,254(23%)	127	1,467(5%)
10-19	283	19,985(8%)	1,250	7,579(21%)	105	1,148(4%)
20-29	335	27,486(11%)	373	2,487(7%)	51	963(3%)
30-39	518	36,414(15%)	651	4,237(12%)	91	1,294(5%)
40-49	546	35,567(15%)	516	3,646(10%)	59	943(3%)
50-59	473	33,317(14%)	273	2,072(6%)	86	1,264(4%)
60-69	466	30,435(13%)	173	1,497(4%)	96	1,471(5%)
70-79	425	22,771(9%)	118	1,032(3%)	101	1,490(5%)
80-89	353	14,143(6%)	62	537(1%)	89	1,249(4%)
90+	214	5,837(2%)	15	147(0%)	38	561(2%)
Local Health District of residence						
Central Coast	212	11,109(5%)	221	1,258(3%)	57	1,404(5%)
Far West	8	706(0%)	4	59(0%)	27	82(0%)
Hunter New England	530	31,399(13%)	438	2,678(7%)	195	2,198(8%)
Illawarra Shoalhaven	284	15,129(6%)	156	1,396(4%)	54	1,493(5%)
Mid North Coast	130	5,249(2%)	195	1,034(3%)	29	484(2%)
Murrumbidgee	127	7,495(3%)	163	1,389(4%)	176	1,016(4%)
Nepean Blue Mountains	175	11,850(5%)	327	2,046(6%)	101	1,686(6%)
Northern NSW	168	6,723(3%)	217	1,428(4%)	22	623(2%)
Northern Sydney	438	29,213(12%)	597	4,980(14%)	131	3,994(14%)
South Eastern Sydney	398	25,848(11%)	419	3,146(9%)	92	2,707(10%)
South Western Sydney	437	25,405(11%)	839	5,350(15%)	186	4,082(14%)
Southern NSW	109	6,378(3%)	56	460(1%)	45	432(2%)
Sydney	255	20,364(8%)	290	2,527(7%)	70	1,953(7%)
Western NSW	162	9,725(4%)	107	665(2%)	115	1,068(4%)
Western Sydney	473	32,176(13%)	1,186	7,738(21%)	223	4,868(17%)
Aboriginal status						
Aboriginal and/or Torres Strait Islander	130	7,801(3%)	188	1,152(3%)	65	962(3%)
Not Aboriginal or Torres Strait Islander	2,775	176,948(73%)	2,700	18,846(52%)	752	13,439(48%)
Not Stated / Unknown	1,018	56,683(23%)	2,337	16,276(45%)	710	13,771(49%)
Total	3,923	241,432(100%)	5,225	36,274(100%)	1,527	28,172(100%)

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

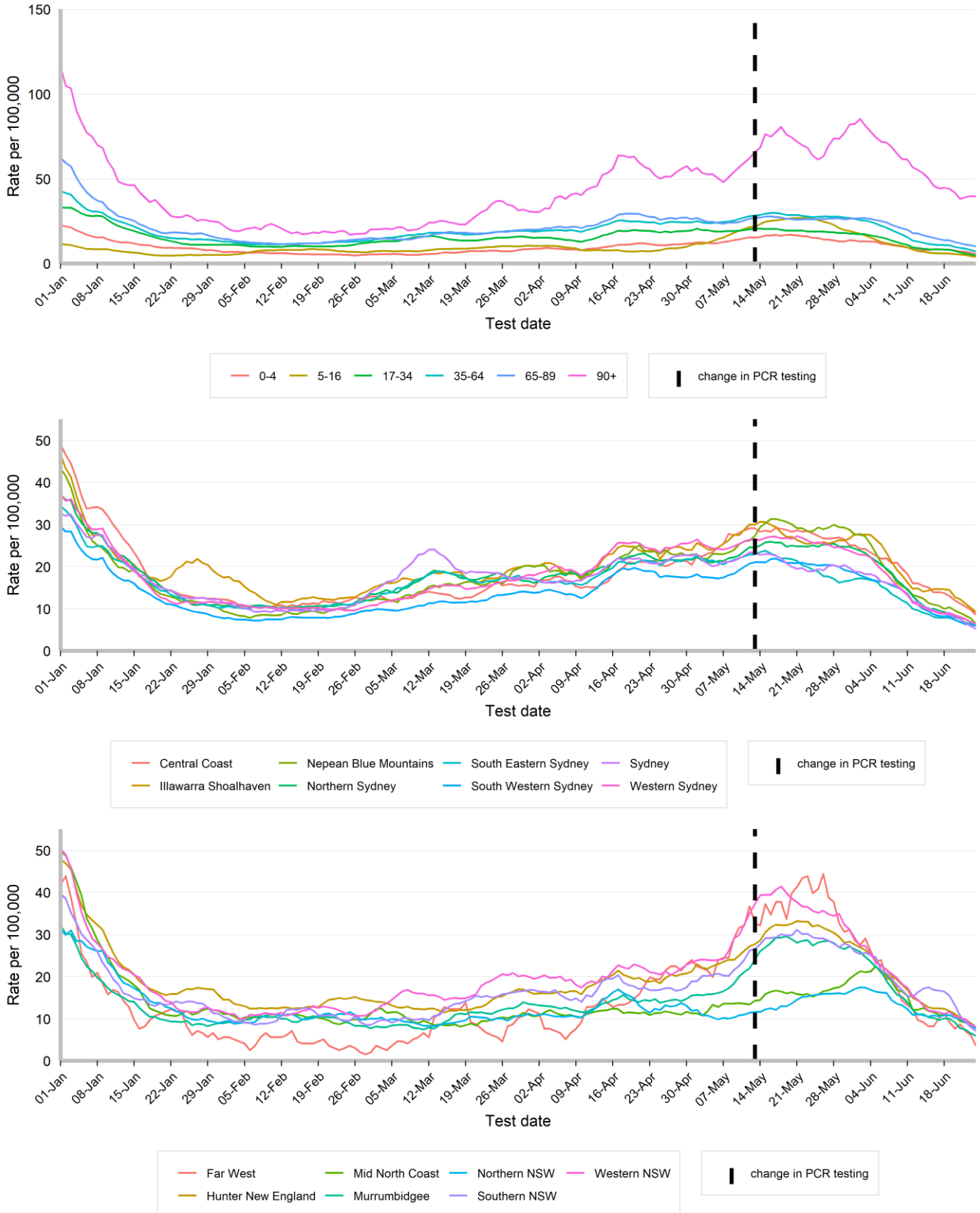
Figure 5. People notified with COVID-19, Influenza and RSV, by date of test and type of test performed, NSW, 01 January 2023 to 24 June 2023.



Rates of COVID-19 notifications per 100,000 population

Interpretation: Rates of COVID-19 notifications are declining across all age groups and Local Health Districts. Those aged 90 years and older continue to experience the highest rate of notification.

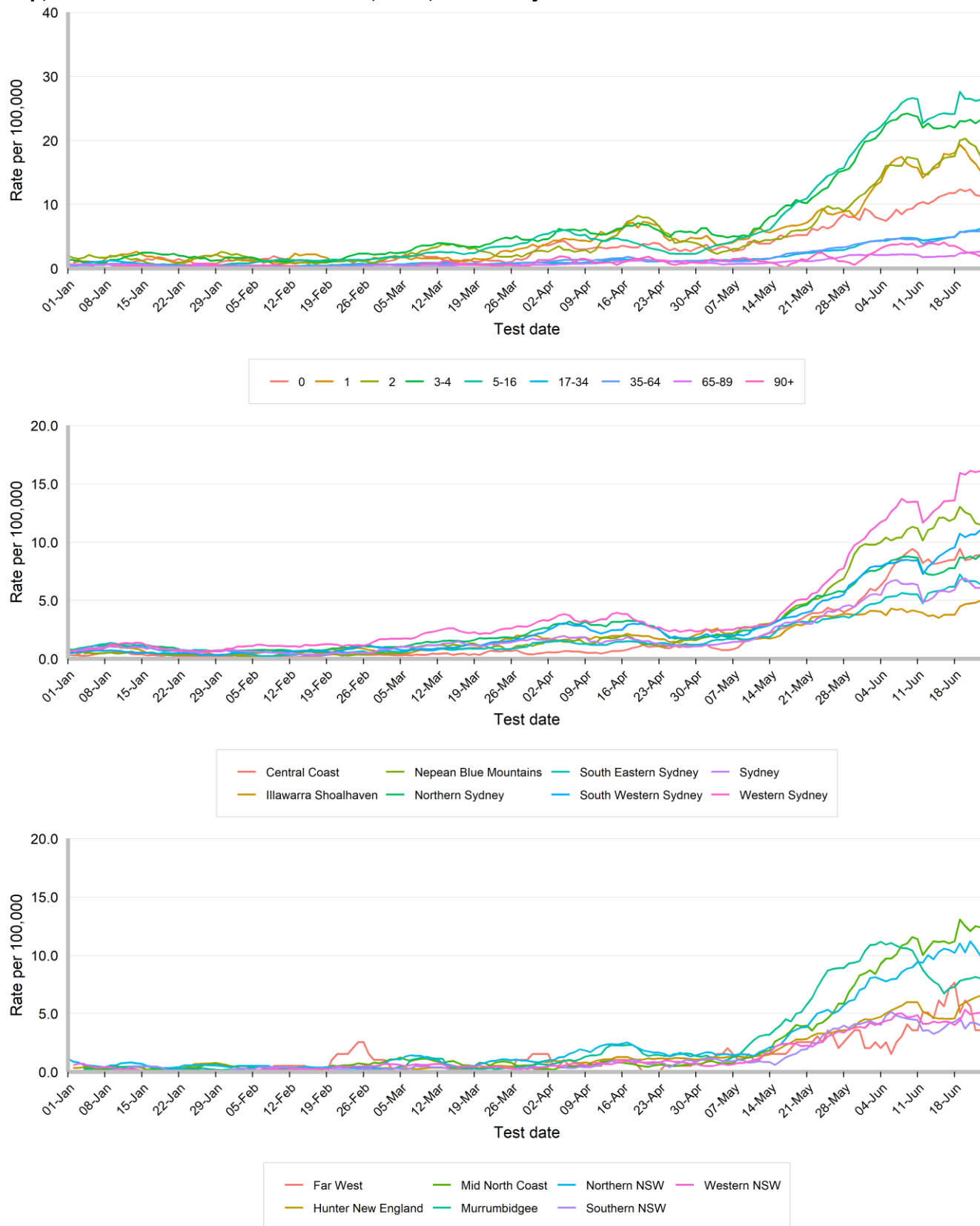
Figure 6. Daily seven-day rolling average rate of COVID-19 notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 24 June 2023.



Rates of influenza notifications per 100,000 population

Interpretation: Rates of influenza notifications remain highest for children and young people aged less than 17 years. Rates are variable across Local Health Districts and are highest in the Western Sydney LHD.

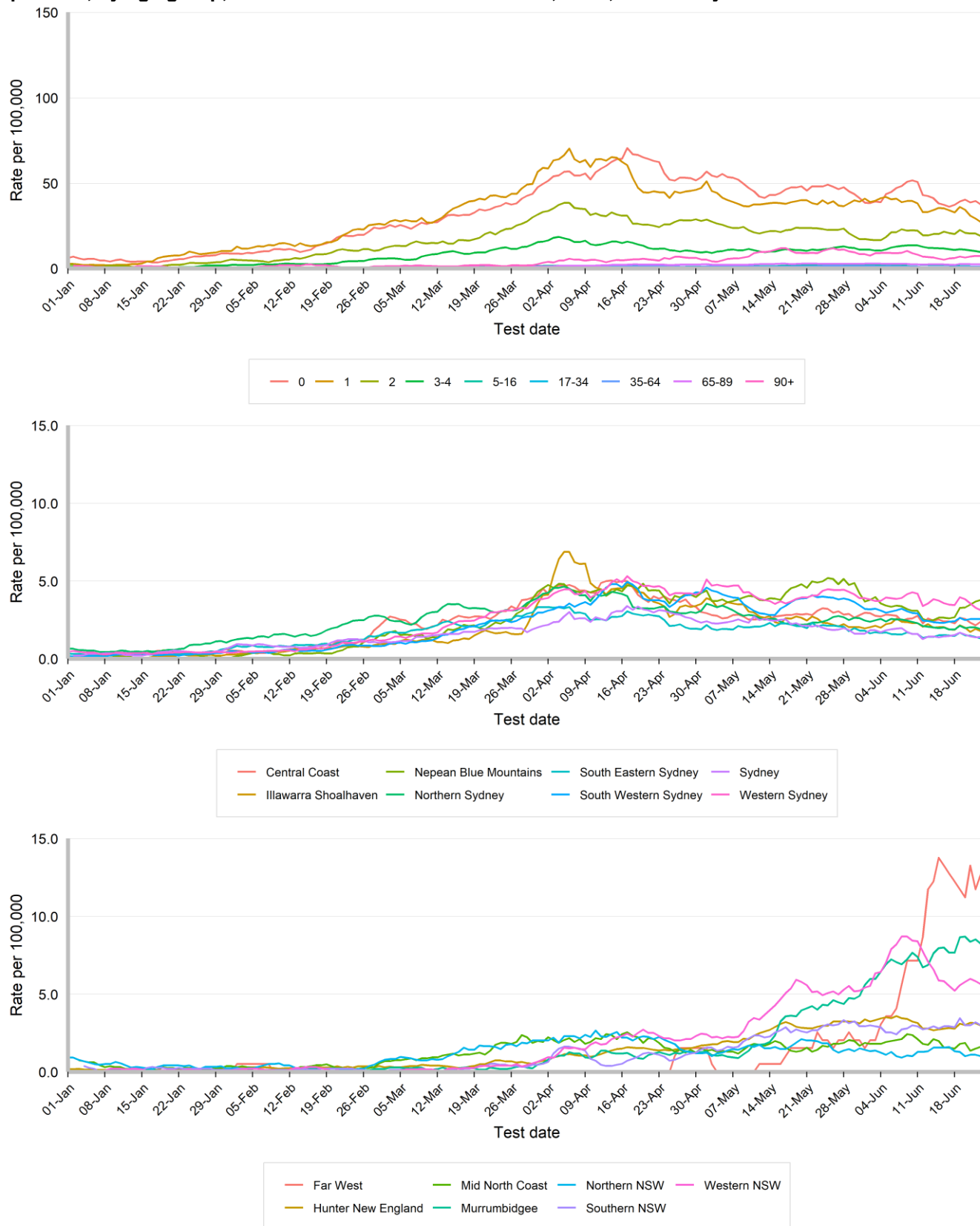
Figure 7. Daily seven-day rolling average rate of influenza notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 24 June 2023.



Rates of respiratory syncytial virus notifications per 100,000 population

Interpretation: RSV notification rates are relatively stable across age groups although a small decline was observed in 1-year-olds in the past week. Rates continue to be highest in the Far West Local Health District.

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 24 June 2023.

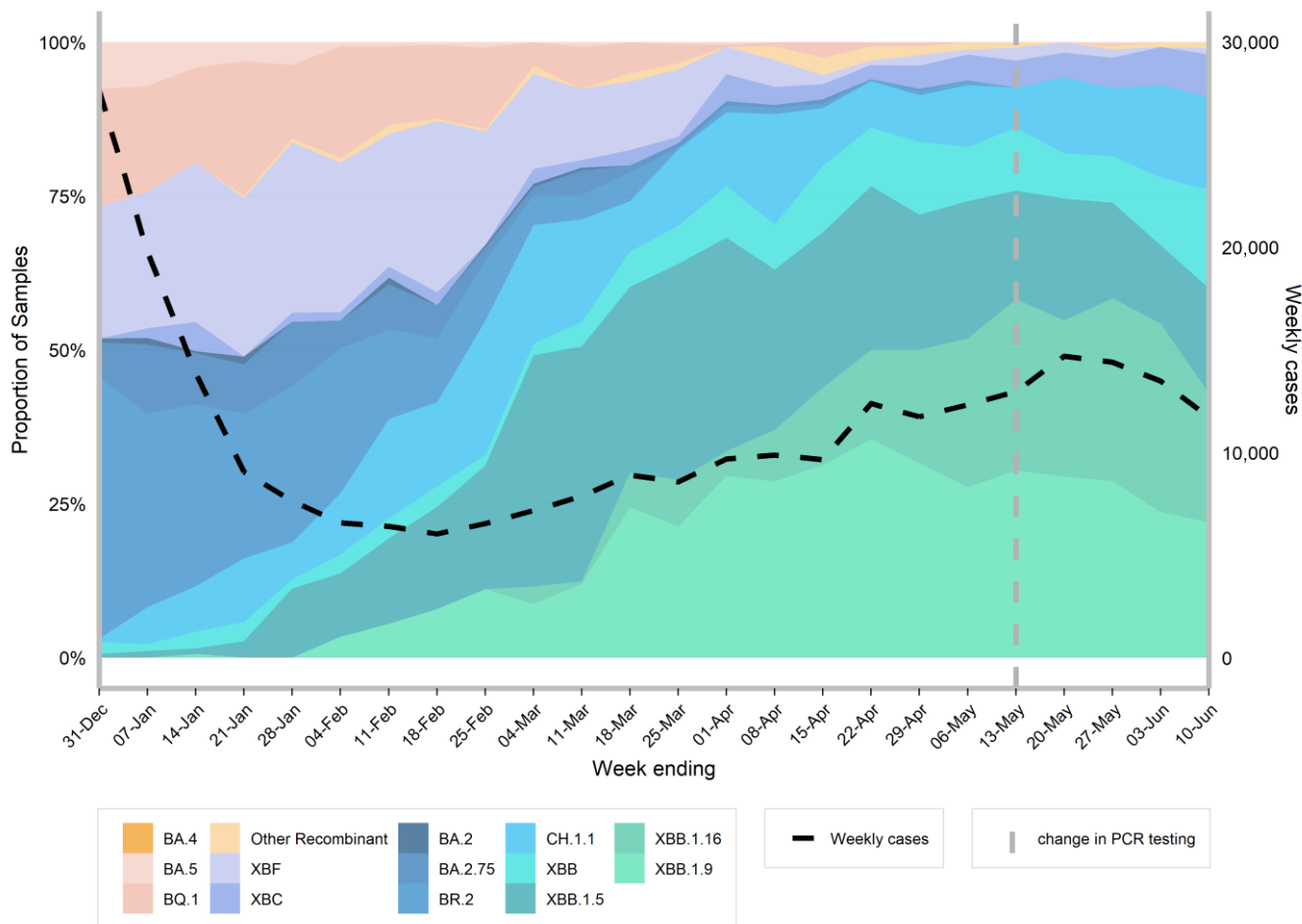


COVID-19 Whole Genome Sequencing

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 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 97.7% of SARS-CoV-2 positive specimens.

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.



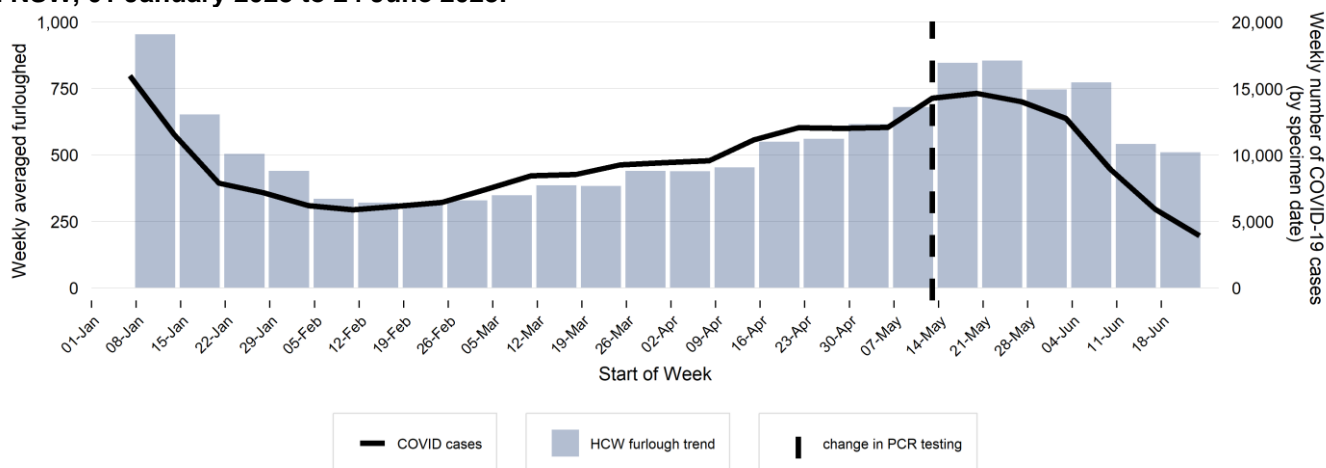
Other surveillance indicators

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: While a small decline was observed in the previous week, approximately 500 healthcare workers were unable to work due to COVID-19 illness or exposure.

Figure 10. Average number of healthcare worker furloughing and number of COVID-19 notifications by week in NSW, 01 January 2023 to 24 June 2023.

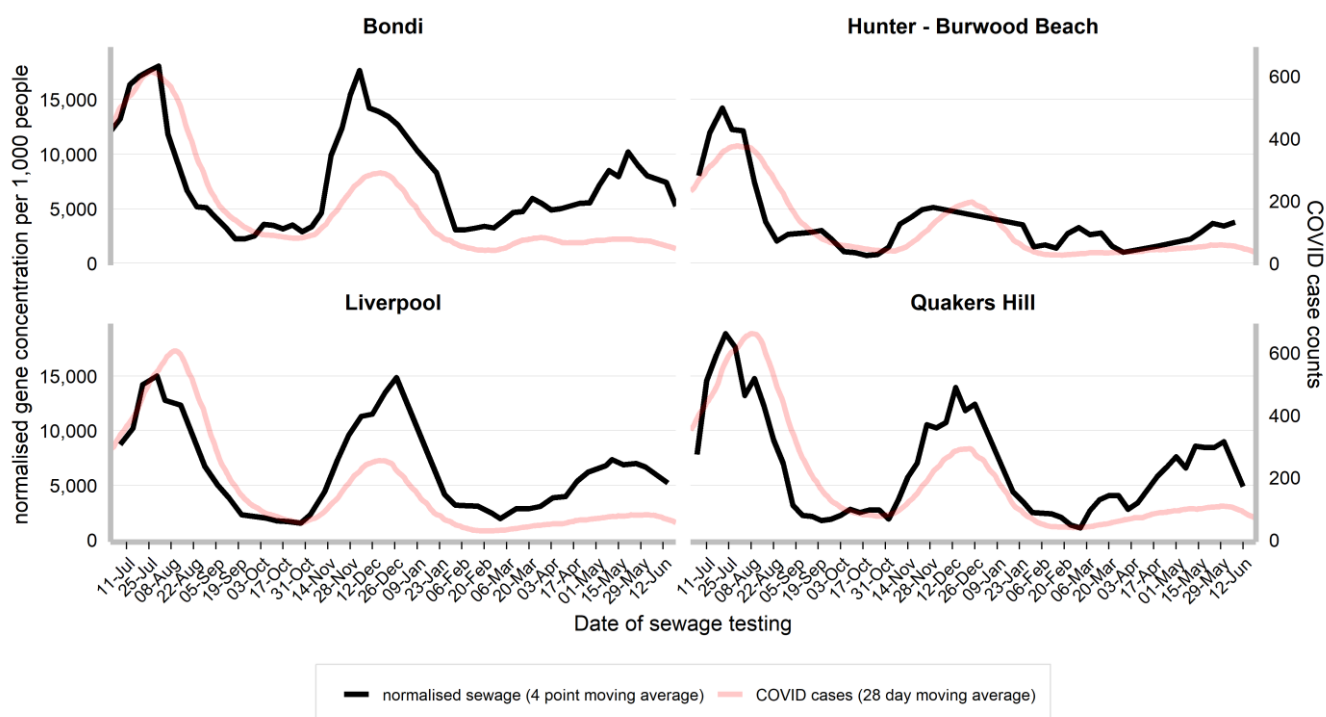


COVID-19 Sewage surveillance program

Trends are presented for Sydney Bondi, Quakers Hills, Liverpool and Burwood Beach sewage catchments from 5 February 2022 to the week ending 20 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 20 June 2023.

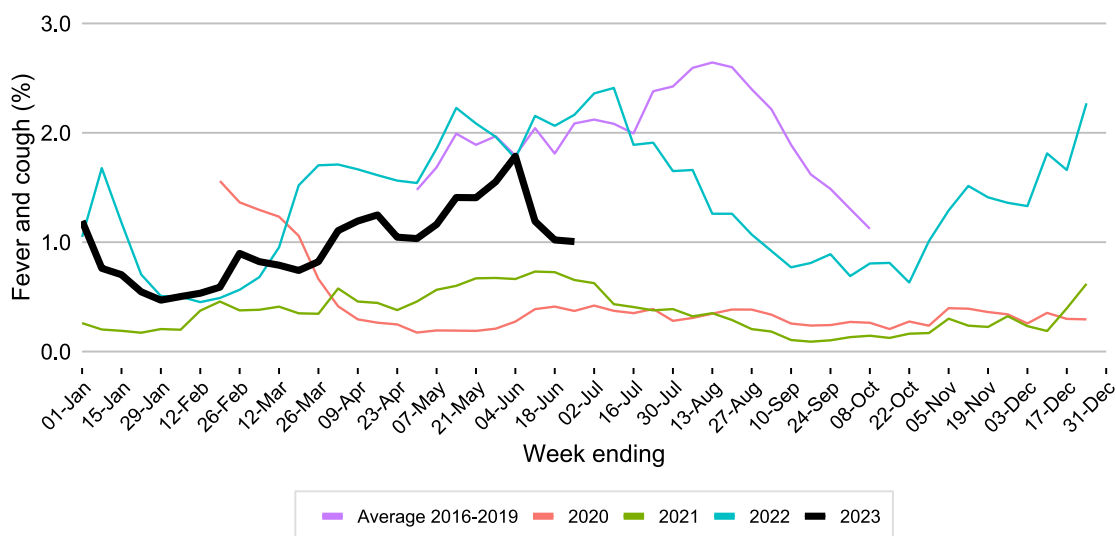


FluTracking and NSW sentinel laboratory network

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: The recent, sharp decline in participants reporting fever and cough (influenza-like illness) slowed in the previous week and remains below the average for the same time-period for 2016 – 2019.

Figure 12. Proportion of FluTracking participants reporting influenza-like illness, NSW, 1 January to 25 June 2023.



Epidemiological week 25, ending 24 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: The number of tests performed, and the proportion positive, continue to decline for COVID-19 and RSV. There was a small decline in the number of tests performed for influenza however test positivity continues to increase and now approximates 15%. Influenza and rhinovirus account for the highest proportions of PCR positive tests (Table 2).

Figure 13. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 January 2023 to 25 June 2023.

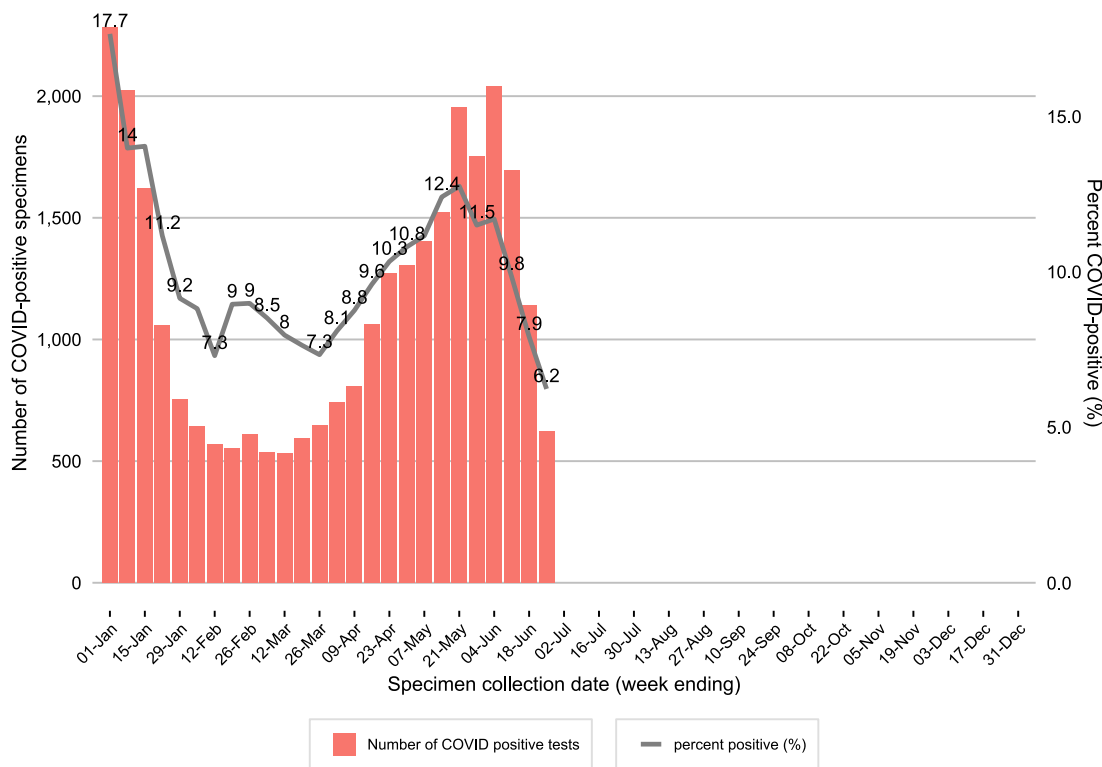


Figure 14. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 January 2023 to 25 June 2023.

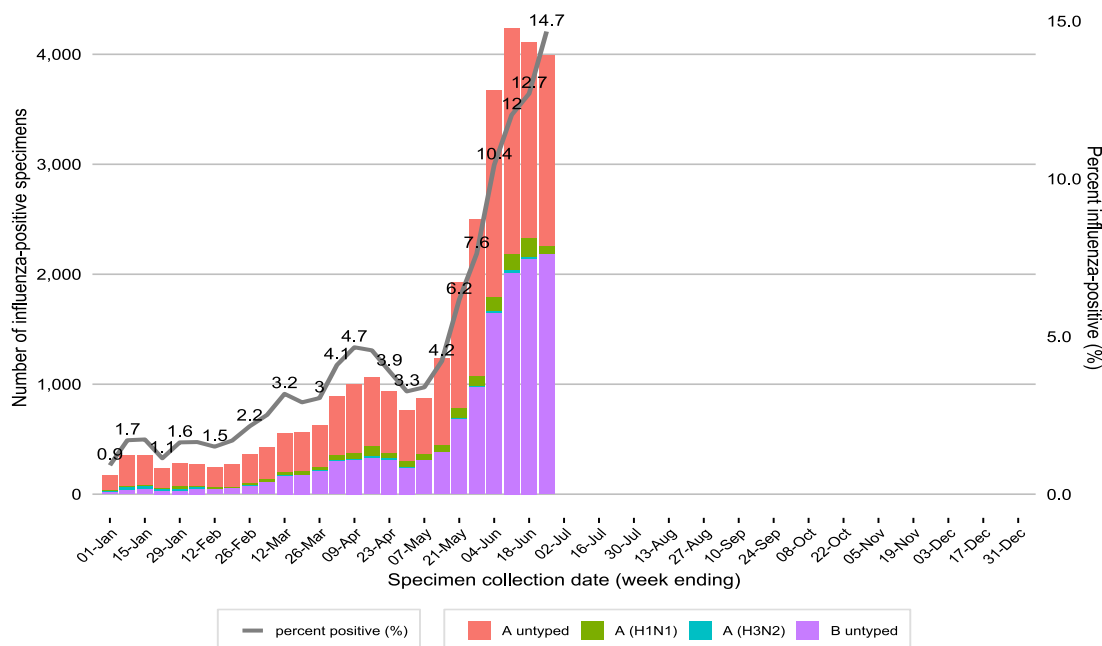


Figure 15. Number of positive PCR test results and proportion of tests positive for other respiratory viruses at sentinel NSW laboratories, 1 January 2023 to 25 June 2023.

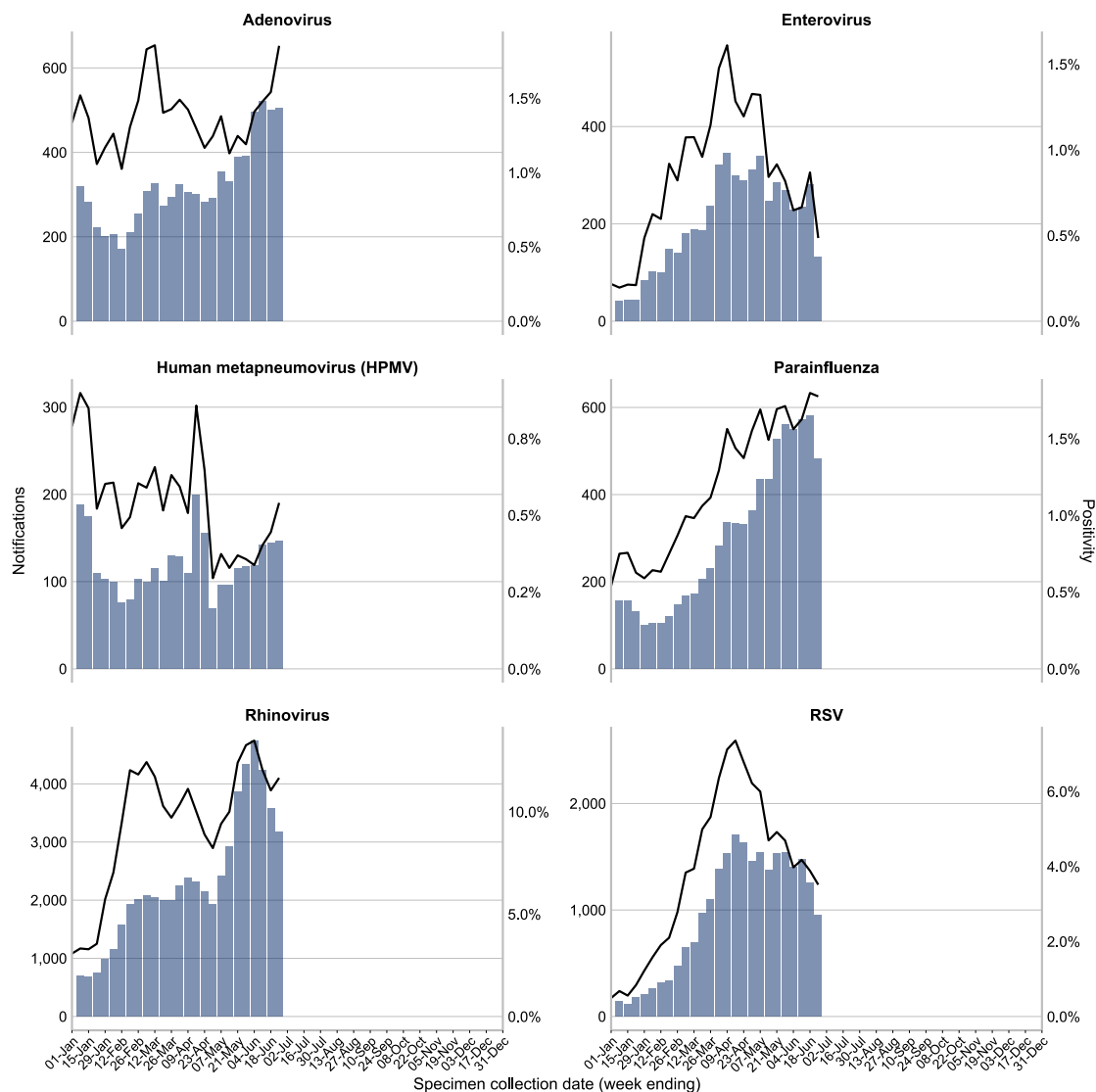


Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 25 June 2023.

	Week ending				Year to date
	04 June	11 June	18 June	25 June	
	n(% pos)	n(% pos)	n(% pos)	n(% pos)	n
Influenza	3,676 (10.4%)	4,239 (12.0%)	4,111 (12.7%)	3,991 (14.7%)	31,931
Adenovirus	496 (1.4%)	521 (1.5%)	499 (1.5%)	504 (1.9%)	8,294
Respiratory syncytial virus (RSV)	1,400 (4.0%)	1,472 (4.2%)	1,257 (3.9%)	956 (3.5%)	24,290
Rhinovirus	4,744 (13.5%)	4,241 (12.0%)	3,573 (11.0%)	3,169 (11.7%)	58,745
Human metapneumovirus (HMPV)	119 (0.3%)	142 (0.4%)	144 (0.4%)	147 (0.5%)	3,163
Enterovirus	228 (0.6%)	234 (0.7%)	281 (0.9%)	132 (0.5%)	5,107
Number of PCR tests conducted	35,204	35,238	32,354	27,193	601,221
SARS-CoV-2	2,042 (11.7%)	1,697 (9.8%)	1,140 (7.9%)	622 (6.2%)	29,752
Number of COVID PCR tests	17,452	17,238	14,408	9,975	282,655

Recent data is subject to change. For the week ending 25 June 2023, 7 out of 13 sentinel laboratories provided PCR testing data related to influenza and 1 out of 4 sentinel laboratories provided PCR data related to COVID.