

NSW Respiratory Surveillance Report - week ending 08 July 2023

Influenza activity continues to increase. COVID-19 activity declined further in the past week and RSV activity is stable

Summary

Influenza continues to dominate respiratory virus activity in NSW. A small decline in influenza notification rates for children and young people aged 5 – 16 years was observed in the previous week, though this coincided with the start of school holidays. Emergency department presentations and subsequent admissions for influenza-like illness remain high, particularly in children and young people aged less than 17 years, and test positivity is now 21%. COVID-19 activity continues to decline across all indicators. There was a decline (11.5%) in RSV notifications in the past week; emergency department presentations and subsequent admissions for bronchiolitis in young children remain 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 (ILI) 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:

COVID-19 presentations continue to decline and the proportion requiring admission is stable (Figure 1).

Emergency department presentations and subsequent admissions for ILI for all ages combined continue to increase (Figure 2a). In children aged less than 5 years, there is marked increase in ED presentations and subsequent admissions; 1 in 5 young children presenting to ED with ILI required admission in the past week (Figure 2b).

Influenza can be serious in young children and vaccine is available free of charge for those aged < 5 years as well as for pregnant women to protect themselves and their infants. In children and young people aged 5 – 16 years, there was a decline in presentations in the previous week (Figure 2c), likely due to school holidays, however an increase in the number and proportion requiring admission was observed.

Presentation and admission for bronchiolitis in young children remains stable (Figure 3).

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

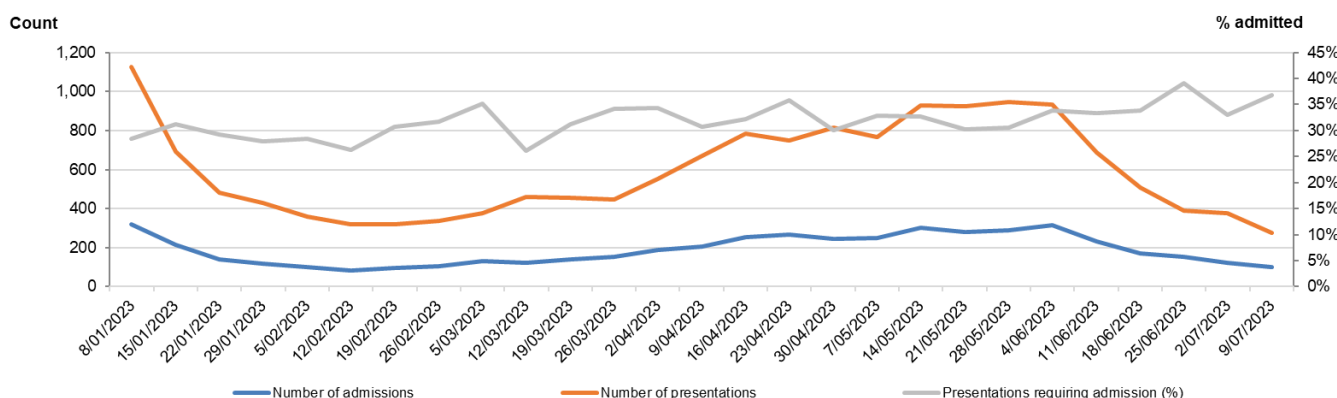


Figure 2a. ‘Influenza-like illness’ weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons of all ages.

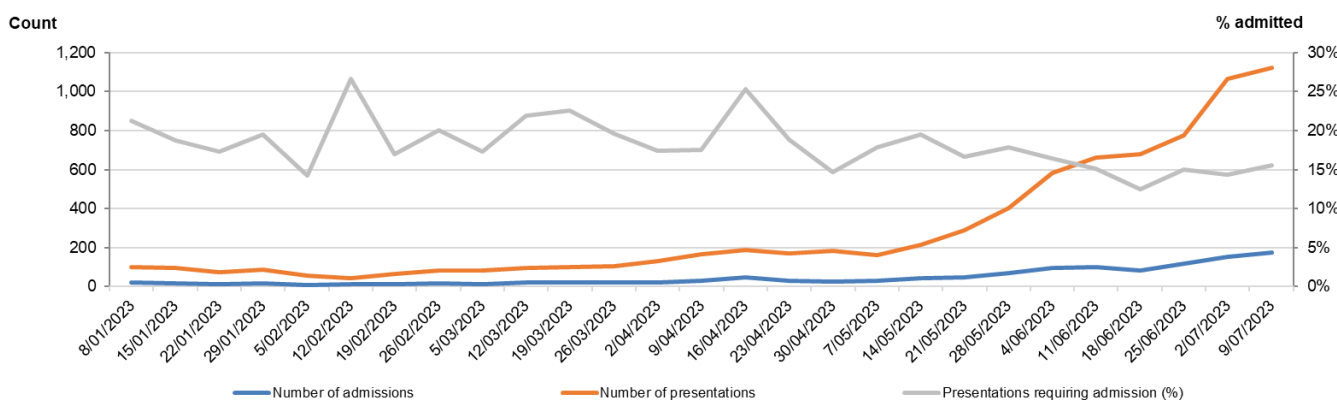


Figure 2b. 'Influenza-like illness' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons aged 0 - 4 years.

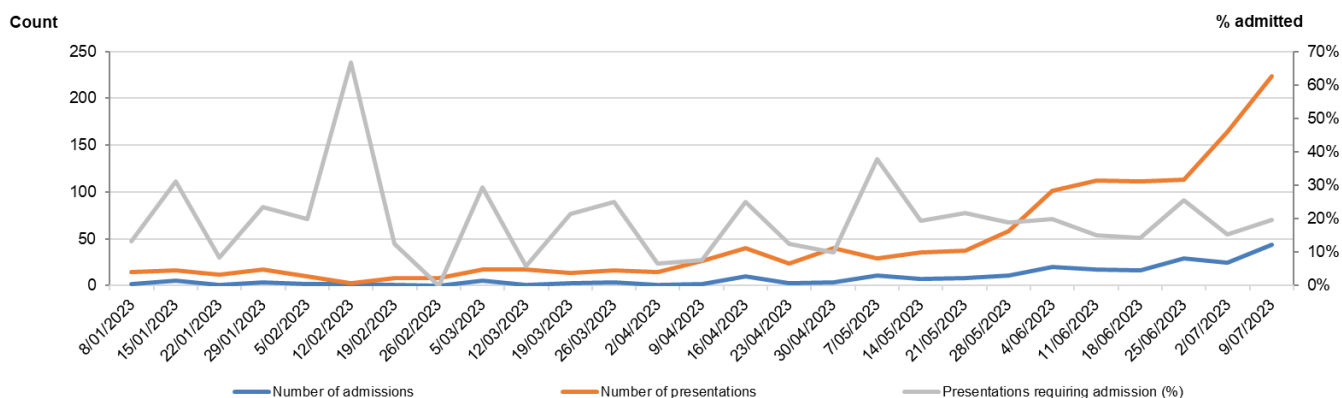


Figure 2c. 'Influenza-like illness' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons aged 5 – 16 years.

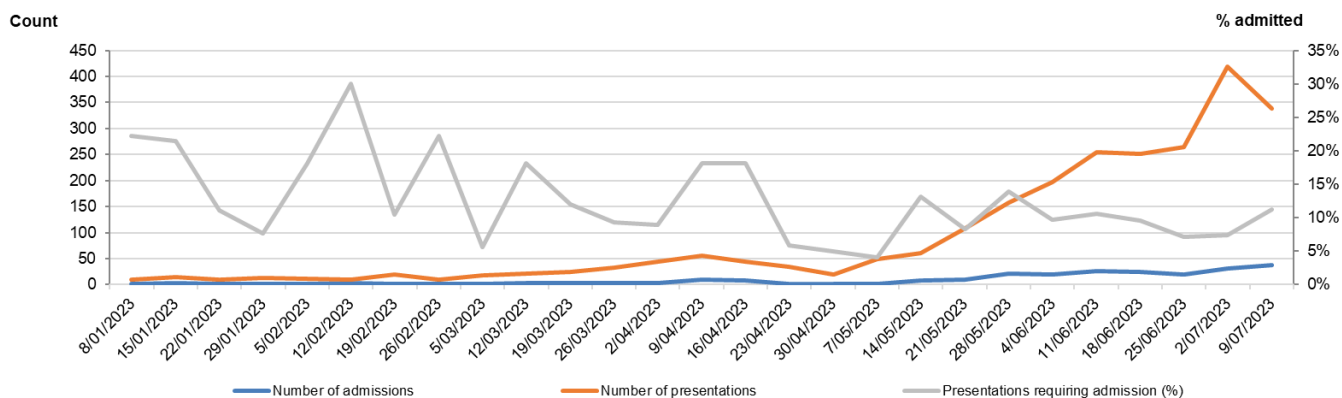
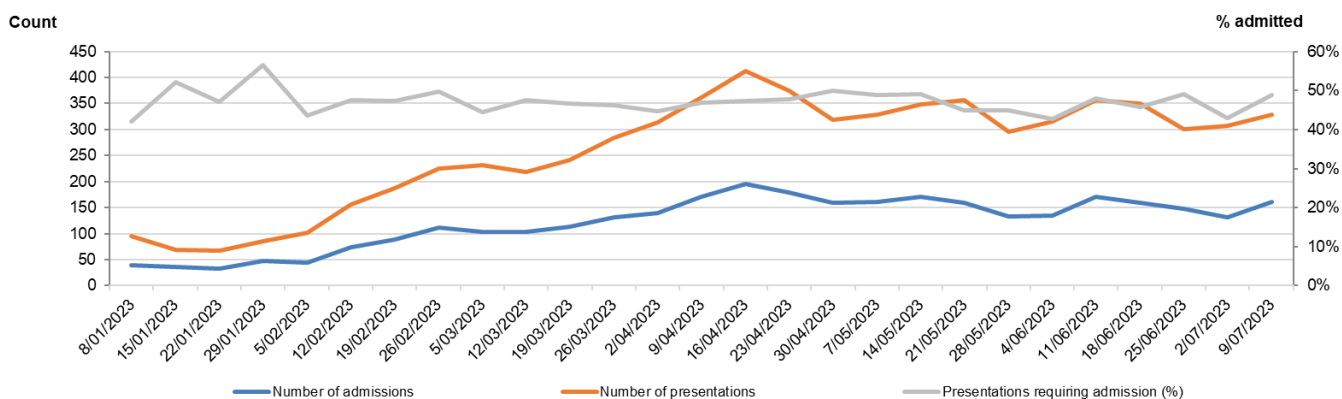


Figure 3. Bronchiolitis weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, children aged 0-4 years.



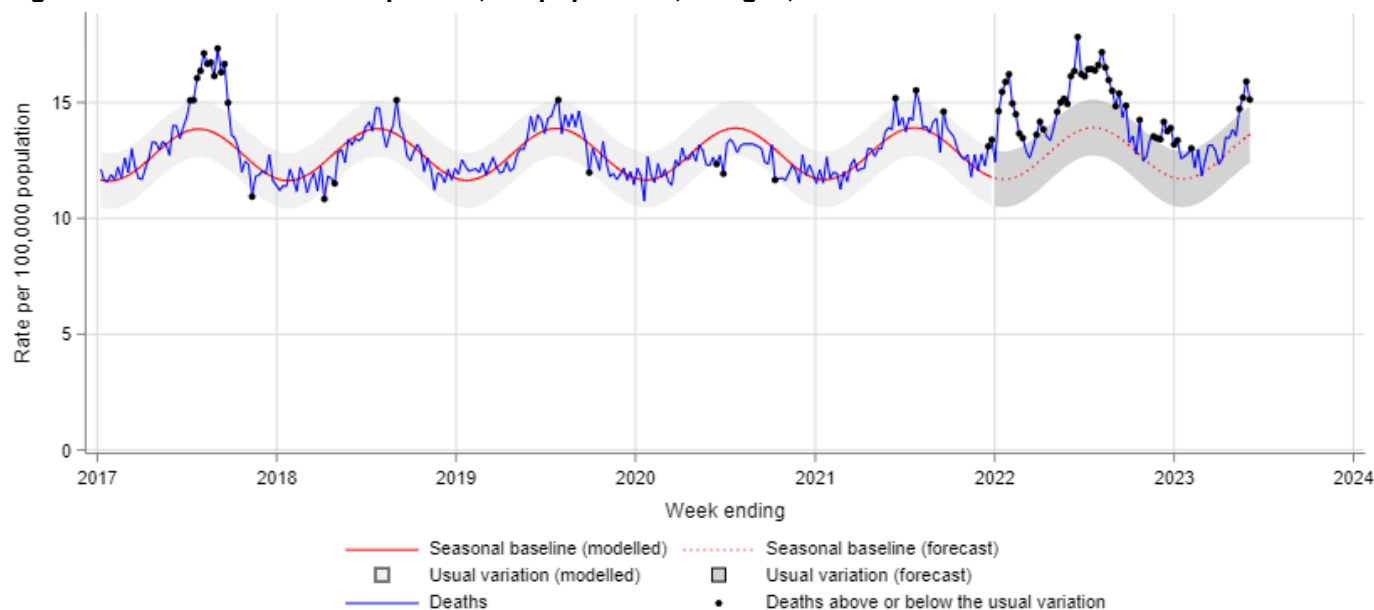
Death surveillance

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: To 4 June 2023, weekly all-cause mortality remained 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 4 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.

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 (e.g. 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.

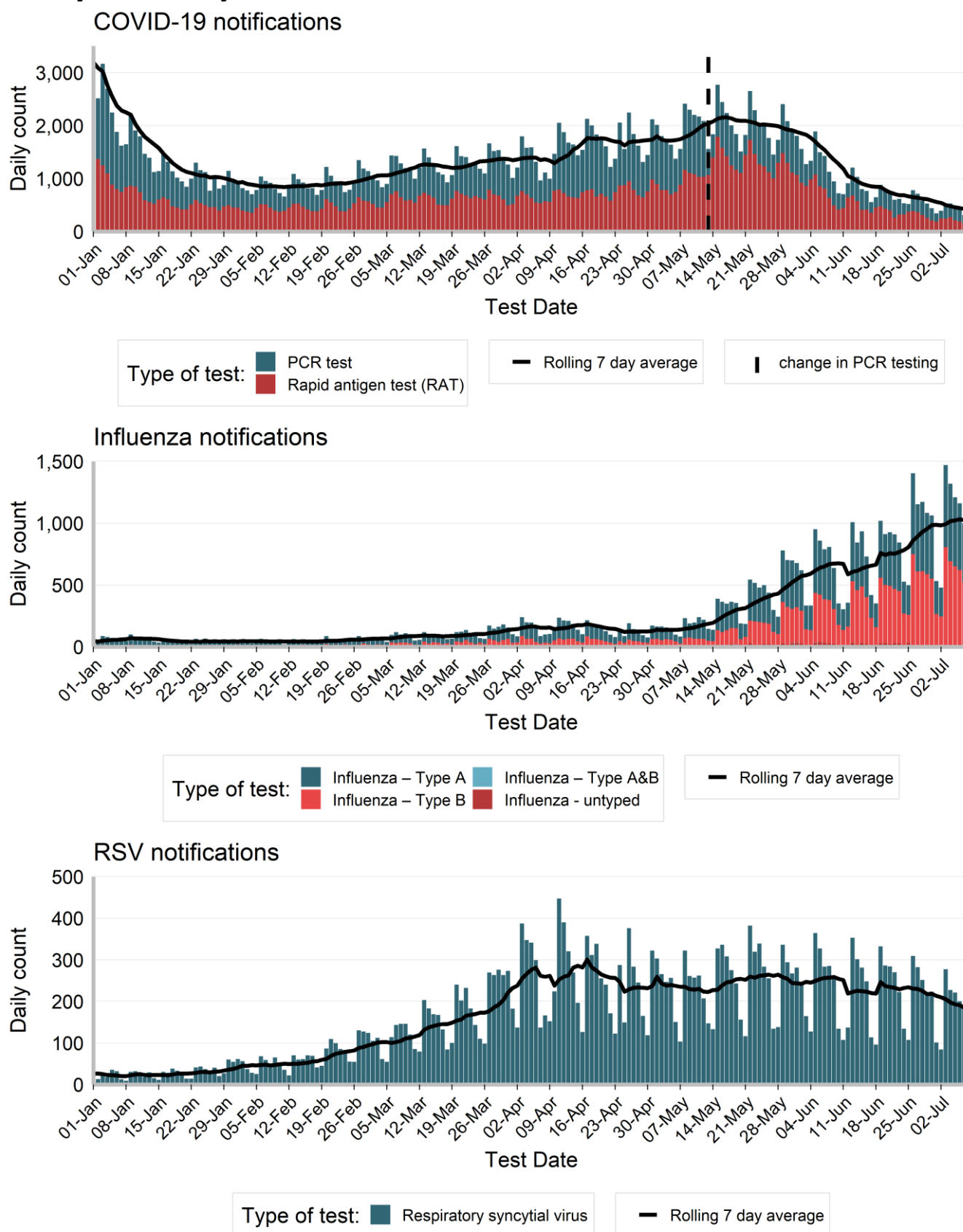
Interpretation: Influenza accounted for 63.4% of notifications for COVID-19, influenza and RSV combined in the past week. The distribution of COVID-19, influenza and RSV notifications across gender, age, Local Health District and Aboriginal status in the past week is similar to previous weeks.

Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the week ending 08 July 2023.

	COVID		Influenza		RSV	
	Week ending 08 July 2023	Year to Date	Week ending 08 July 2023	Year to Date	Week ending 08 July 2023	Year to Date
Gender						
Female	1,675	143,948(58%)	3,659	25,533(50%)	679	16,093(52%)
Male	1,163	104,925(42%)	3,543	25,120(50%)	634	15,123(48%)
Age group (years)						
0-4	147	8,266(3%)	1,049	6,683(13%)	551	17,654(57%)
5-9	79	7,727(3%)	1,600	11,676(23%)	94	1,690(5%)
10-19	116	20,467(8%)	1,327	10,596(21%)	66	1,304(4%)
20-29	294	28,248(11%)	547	3,526(7%)	47	1,093(3%)
30-39	396	37,493(15%)	957	6,047(12%)	68	1,430(5%)
40-49	348	36,603(15%)	751	5,084(10%)	58	1,079(3%)
50-59	413	34,388(14%)	354	2,727(5%)	84	1,448(5%)
60-69	368	31,396(13%)	276	1,998(4%)	119	1,720(6%)
70-79	298	23,539(9%)	191	1,377(3%)	116	1,708(5%)
80-89	262	14,817(6%)	110	740(1%)	81	1,446(5%)
90+	131	6,189(2%)	37	206(0%)	29	641(2%)
Local Health District of residence						
Central Coast	194	11,613(5%)	255	1,801(4%)	39	1,510(5%)
Far West	7	722(0%)	5	70(0%)	16	124(0%)
Hunter New England	398	32,523(13%)	456	3,615(7%)	168	2,572(8%)
Illawarra Shoalhaven	233	15,716(6%)	326	1,998(4%)	54	1,603(5%)
Mid North Coast	116	5,546(2%)	160	1,391(3%)	36	541(2%)
Murrumbidgee	104	7,728(3%)	181	1,776(4%)	147	1,367(4%)
Nepean Blue Mountains	121	12,212(5%)	602	3,117(6%)	78	1,861(6%)
Northern NSW	153	7,117(3%)	221	1,949(4%)	18	668(2%)
Northern Sydney	337	30,077(12%)	827	6,629(13%)	93	4,230(14%)
South Eastern Sydney	243	26,515(11%)	578	4,298(8%)	95	2,911(9%)
South Western Sydney	264	26,147(10%)	1,114	7,636(15%)	162	4,606(15%)
Southern NSW	84	6,583(3%)	111	695(1%)	46	528(2%)
Sydney	181	20,879(8%)	361	3,337(7%)	57	2,061(7%)
Western NSW	92	10,048(4%)	220	1,052(2%)	113	1,278(4%)
Western Sydney	299	32,981(13%)	1,737	11,129(22%)	182	5,274(17%)
Aboriginal status						
Aboriginal and/or Torres Strait Islander	95	8,074(3%)	255	1,647(3%)	59	1,087(3%)
Not Aboriginal or Torres Strait Islander	2,003	182,574(73%)	3,716	26,319(52%)	671	14,946(48%)
Not Stated / Unknown	750	58,516(23%)	3,235	22,719(45%)	583	15,203(49%)
Total	2,848	249,164(100%)	7,206	50,685(100%)	1,313	31,236(100%)

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

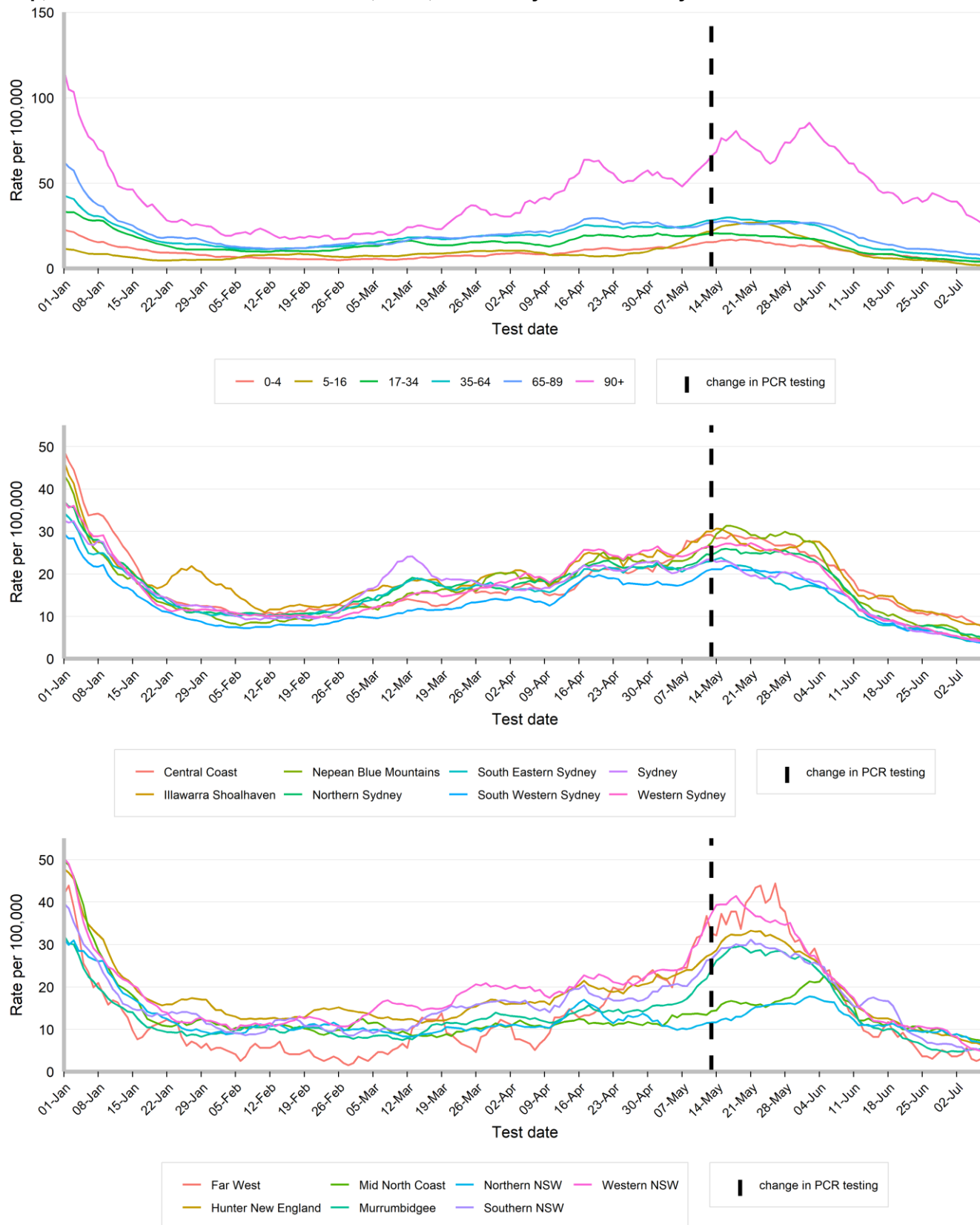
Figure 5. People notified with COVID-19, Influenza and RSV, by date of test and type of test performed, NSW, 01 January 2023 to 08 July 2023.



Rates of COVID-19 notifications per 100,000 population

Interpretation: COVID-19 notification rates are declining across all age-groups, with rapid declines in those aged 90 years and older. COVID-19 notification rates need to be interpreted in the context of other indicators of COVID-19 given changes in testing methods in May 2023.

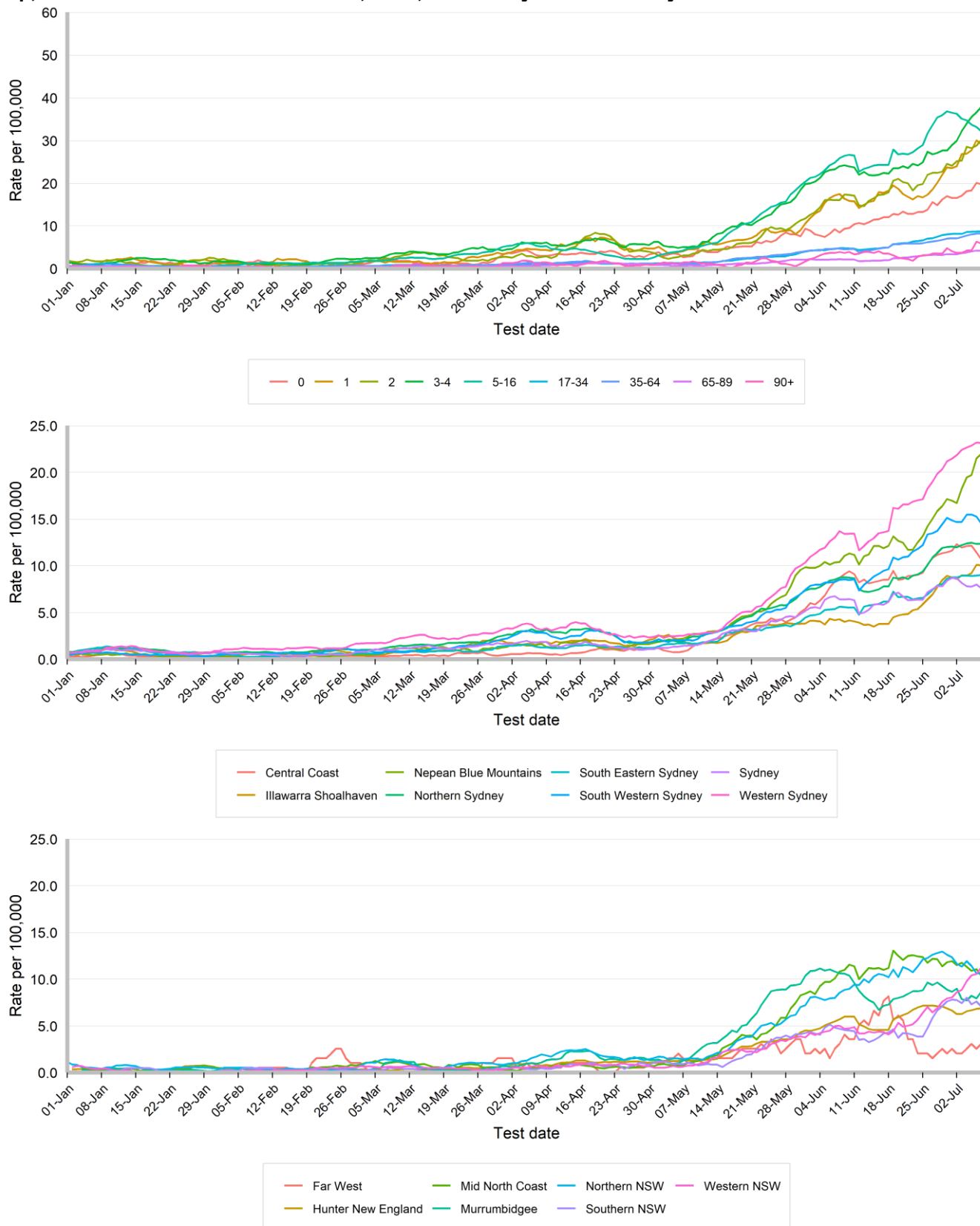
Figure 6. Daily seven-day rolling average rate of COVID-19 notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 08 July 2023.



Rates of influenza notifications per 100,000 population

Interpretation: Influenza notification rates continued to increase in most age-groups. A decline was observed in children and young people aged 5-16 years and this may reflect the start of the school holidays. Trends varied across Local Health Districts (LHD) and rates remain highest in the Western Sydney and Nepean Blue Mountains LHDs.

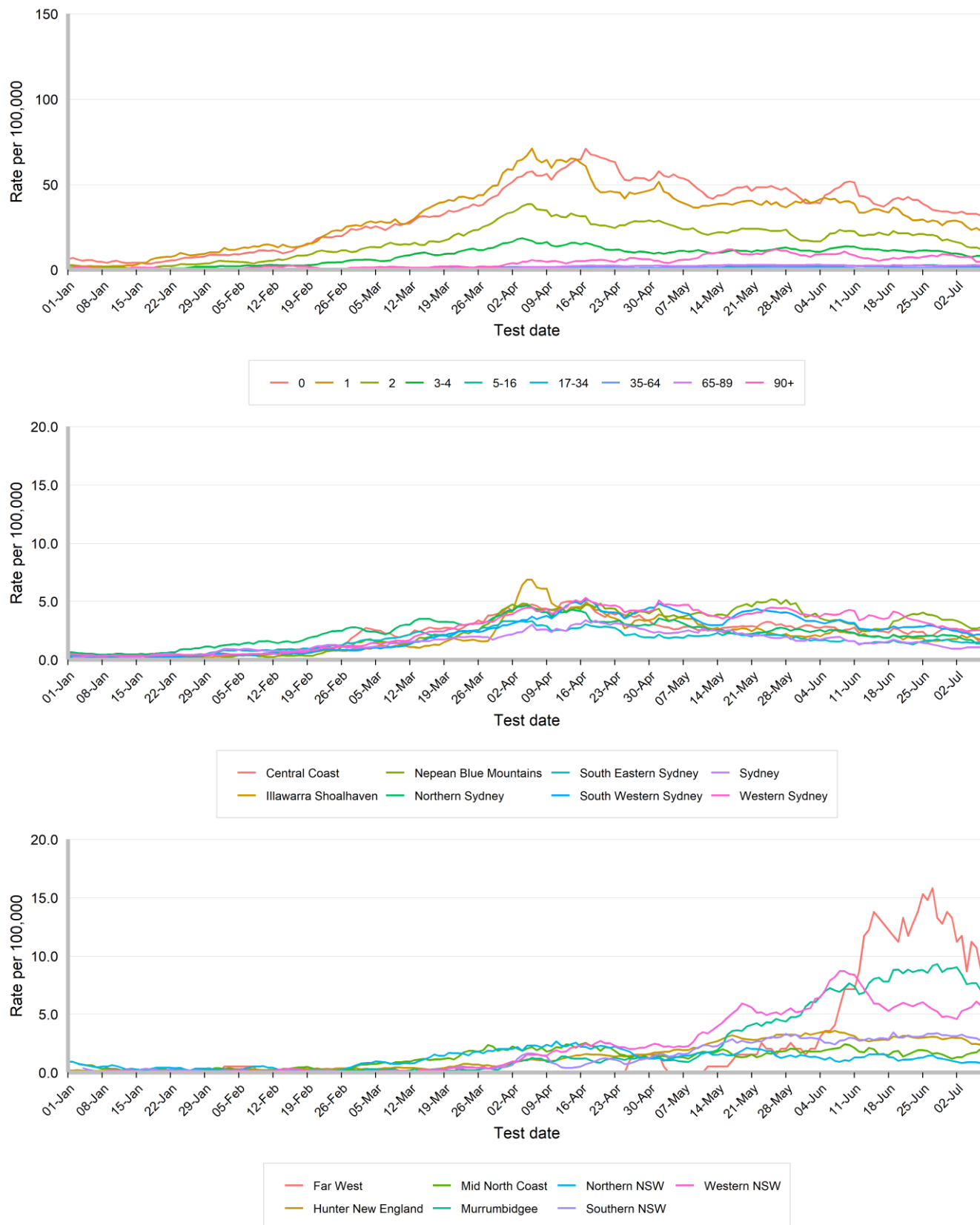
Figure 7. Daily seven-day rolling average rate of influenza notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 08 July 2023.



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 (LHD). Notification rates in the Far West LHD are continuing to decline from the peaks observed in June 2023.

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 08 July 2023.

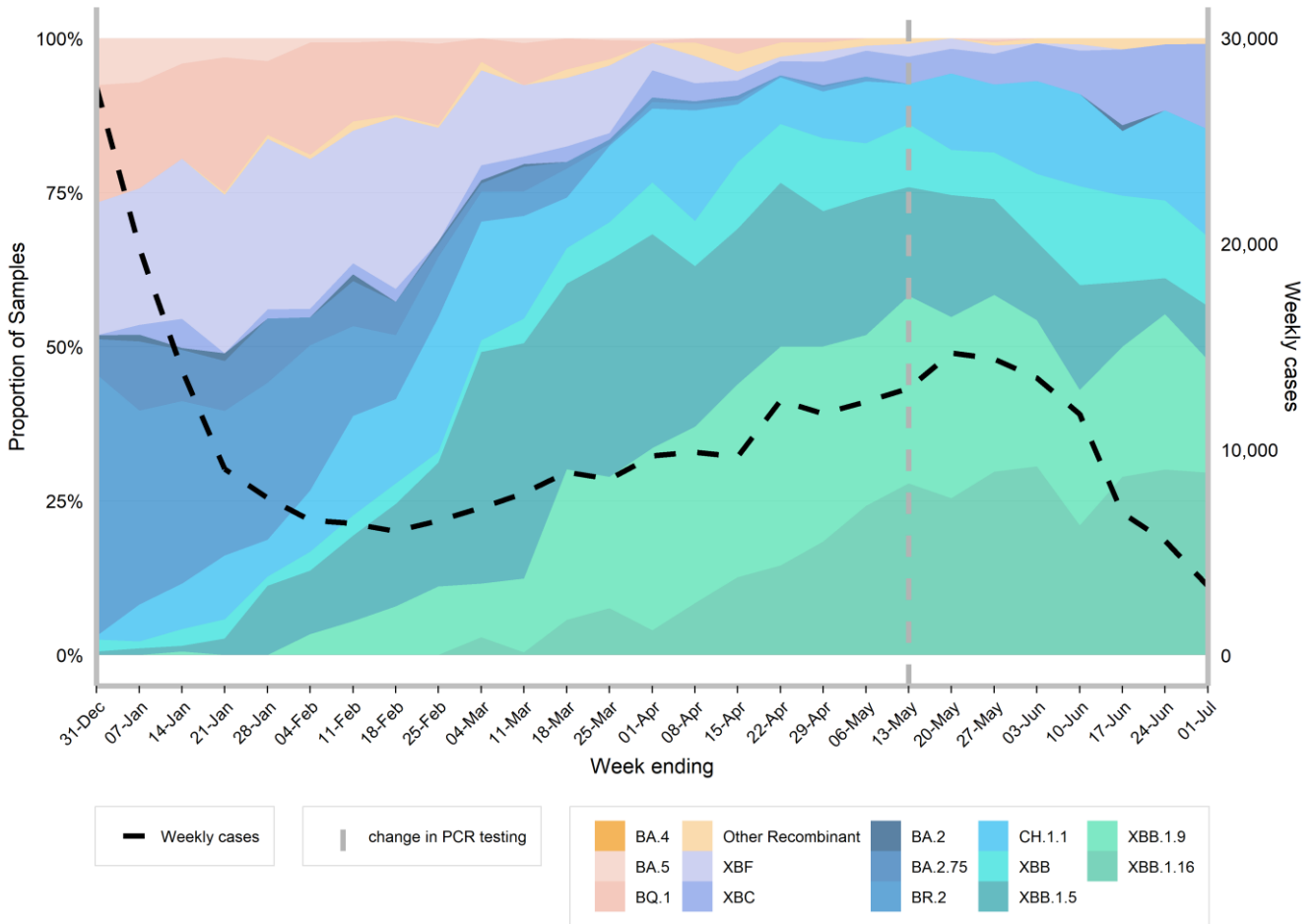


COVID-19 Whole Genome Sequencing

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 01 July 2023.



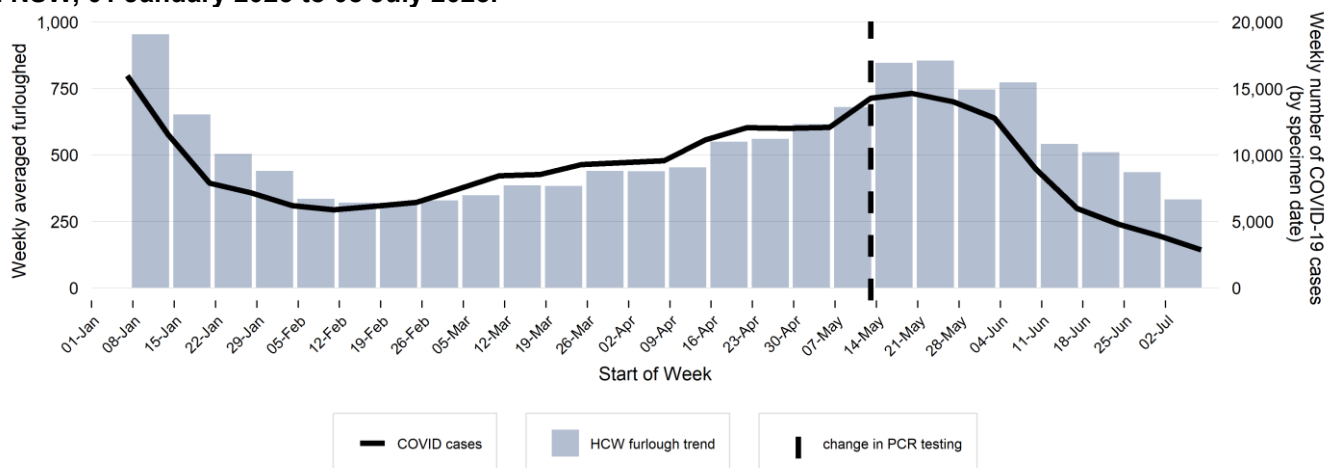
Other surveillance indicators

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 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 decrease.

Figure 10. Average number of healthcare worker furloughing and number of COVID-19 notifications by week in NSW, 01 January 2023 to 08 July 2023.

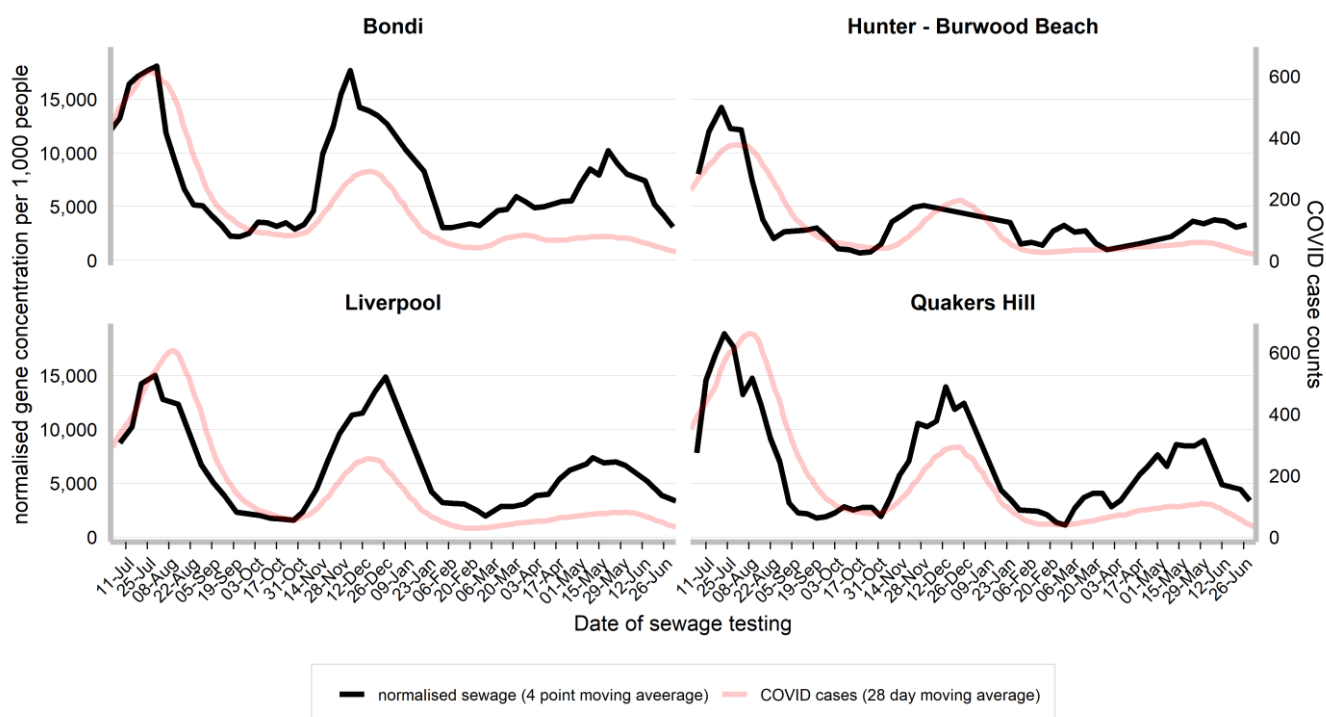


COVID-19 Sewage surveillance program

Trends are presented for Sydney Bondi, Quakers Hills, Liverpool and Burwood Beach sewage catchments from 5 February 2022 to the week ending 04 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 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 04 July 2023.

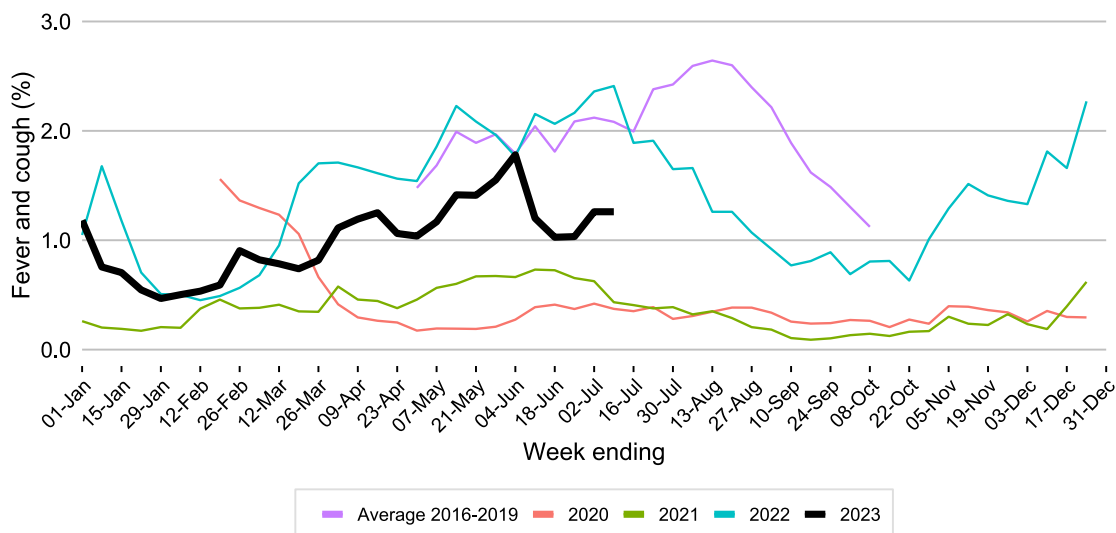


FluTracking and NSW sentinel laboratory network

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 remains 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 09 July 2023.



Epidemiological week 27, ending 08 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: The total number of PCR tests for respiratory viruses at sentinel laboratories decreased in the past week. COVID positivity is now at 5.2%, the lowest for 2023 to date (Figure 13). Influenza positivity increased to 21% of tests performed (Figure 14). The drop in the number of influenza positive samples in the past week (Figure 14) likely reflects the start of the school holidays.

Figure 13. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 January 2023 to 09 July 2023.

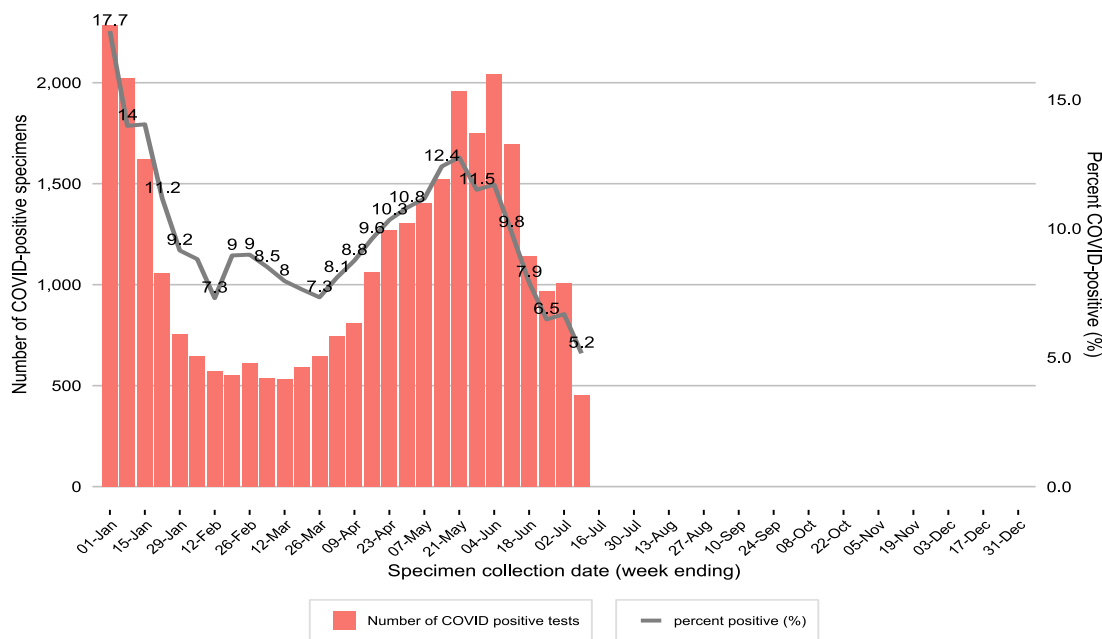


Figure 14. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 January 2023 to 09 July 2023.

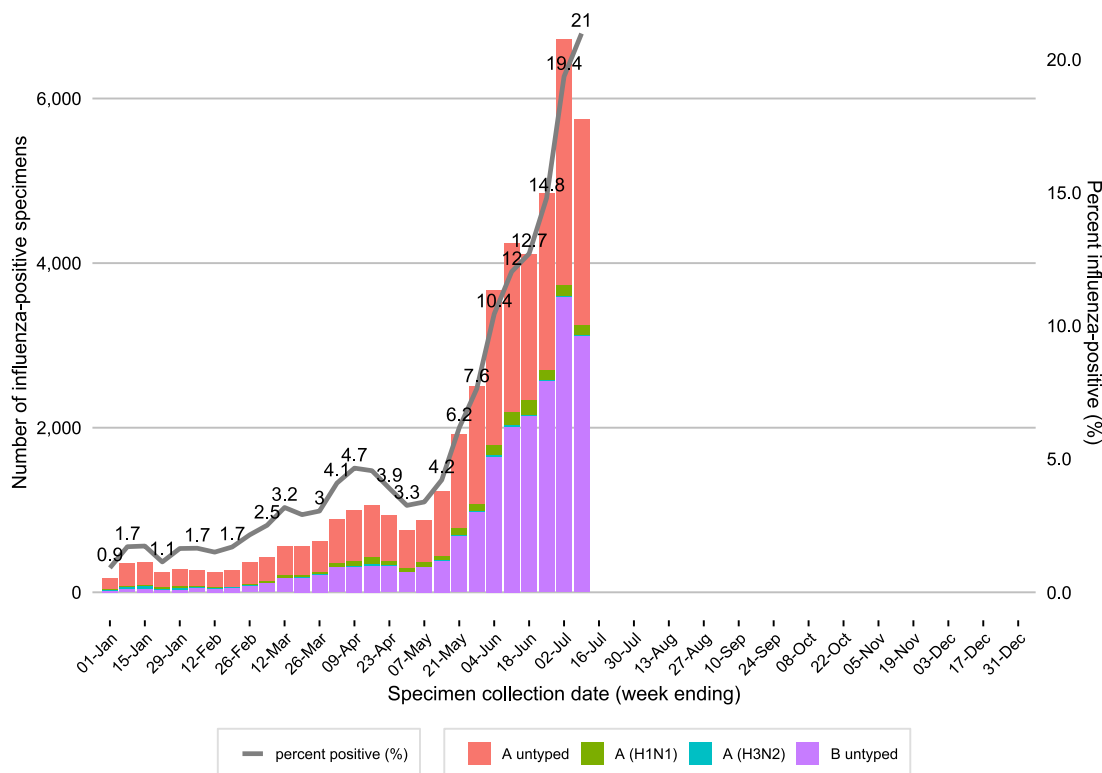


Figure 15. Number of positive PCR test results and proportion of tests positive for other respiratory viruses at sentinel NSW laboratories, 1 January 2023 to 09 July 2023.

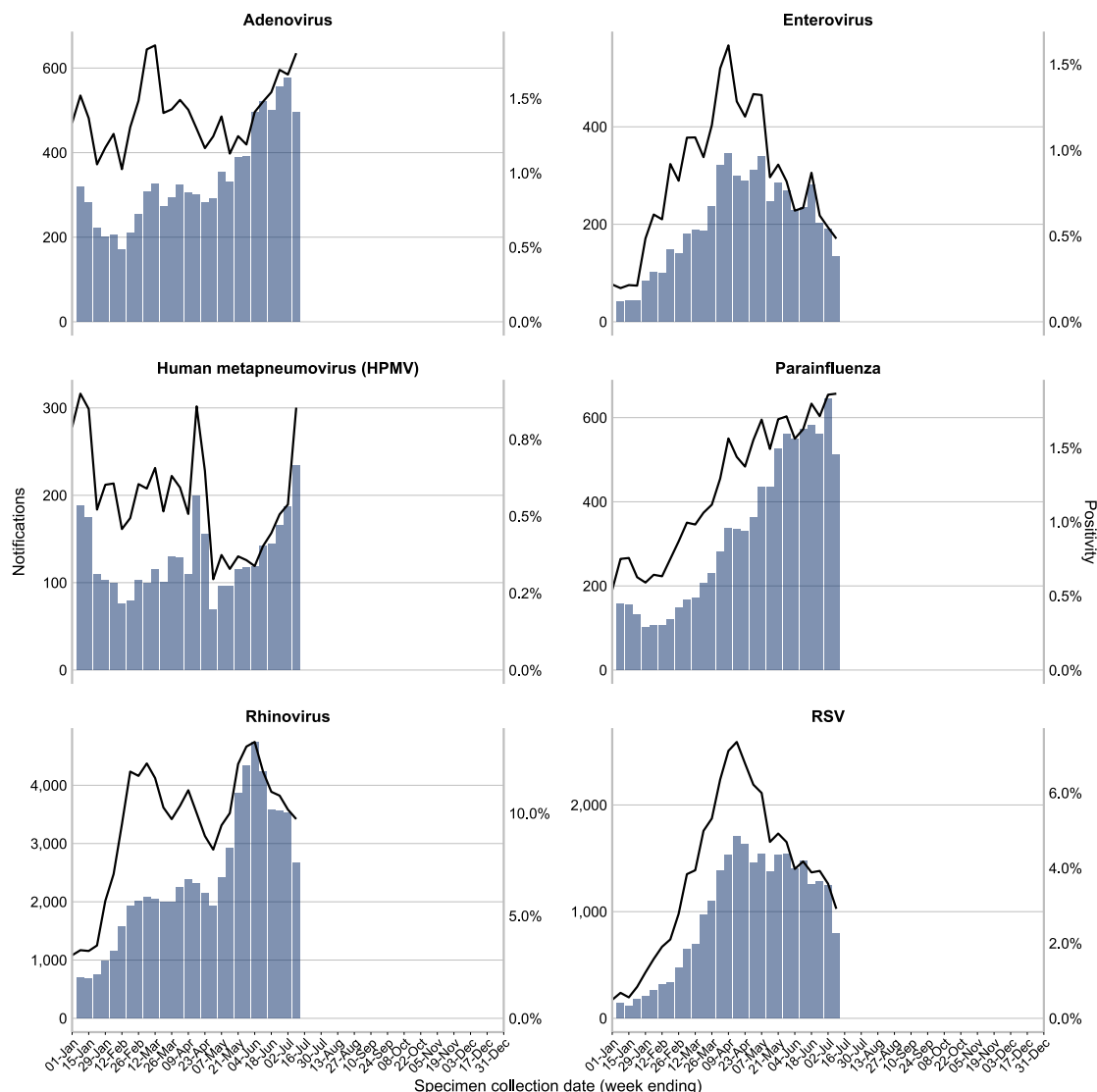


Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 09 July 2023.

	Week ending				Year to date
	18 June	25 June	02 July	09 July	
	n(% pos)	n(% pos)	n(% pos)	n(% pos)	n
Influenza	4,111 (12.7%)	4,850 (14.8%)	6,724 (19.4%)	5,752 (21.0%)	45,266
Adenovirus	499 (1.5%)	555 (1.7%)	577 (1.7%)	495 (1.8%)	9,417
Respiratory syncytial virus (RSV)	1,257 (3.9%)	1,287 (3.9%)	1,245 (3.6%)	800 (2.9%)	26,666
Rhinovirus	3,573 (11.0%)	3,560 (10.9%)	3,536 (10.2%)	2,665 (9.7%)	65,337
Human metapneumovirus (HMPV)	144 (0.4%)	166 (0.5%)	187 (0.5%)	234 (0.9%)	3,603
Enterovirus	281 (0.9%)	203 (0.6%)	191 (0.5%)	133 (0.5%)	5,502
Number of PCR tests conducted	32,354	32,788	34,743	27,433	668,992
SARS-CoV-2	1,140 (7.9%)	967 (6.5%)	1,008 (6.7%)	455 (5.2%)	31,560
Number of COVID PCR tests	14,408	14,924	15,078	8,808	311,490

Recent data is subject to change. For the week ending 09 July 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.