NSW Respiratory Surveillance Report - week ending 19 August 2023

COVID-19 activity is stable at low levels, influenza activity has further declined and respiratory syncytial virus (RSV) activity is stable.

Summary

There was no change in COVID-19 and RSV activity across most indicators in the past week. Influenza notifications declined by 10% and emergency department presentations for influenza-like illness continue to decrease. Polymerase chain reaction (PCR) test positivity for human metapneumovirus (HPMV), rhinovirus and parainfluenza in respiratory specimens continues to increase.

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: The number of COVID-19 presentations to EDs remained stable with the proportion requiring admission declining further in the past week. ED presentations for influenza-like illness declined, with the proportion requiring admission remaining stable. Bronchiolitis presentations in young children were stable.

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

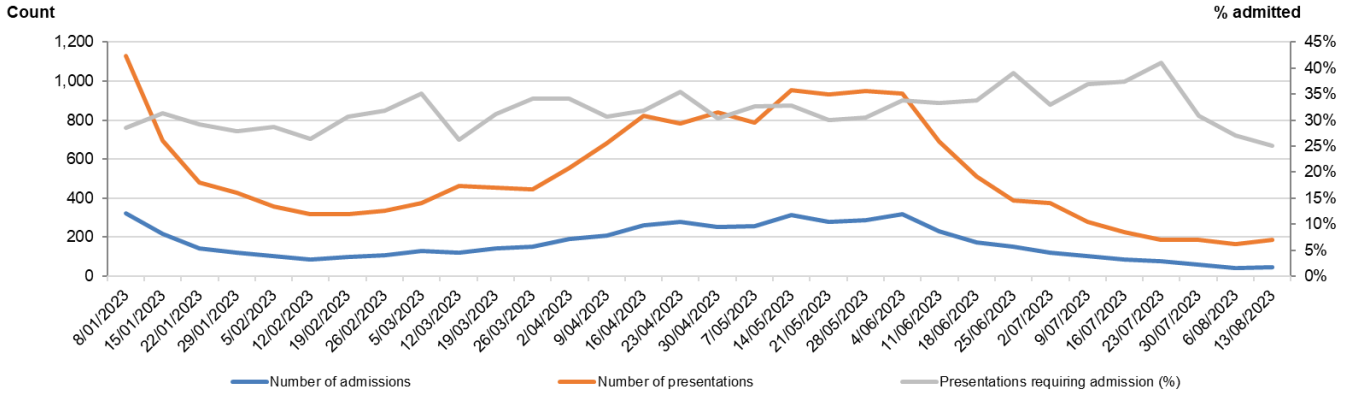


Figure 2. 'Influenza-like illness' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons of all ages.

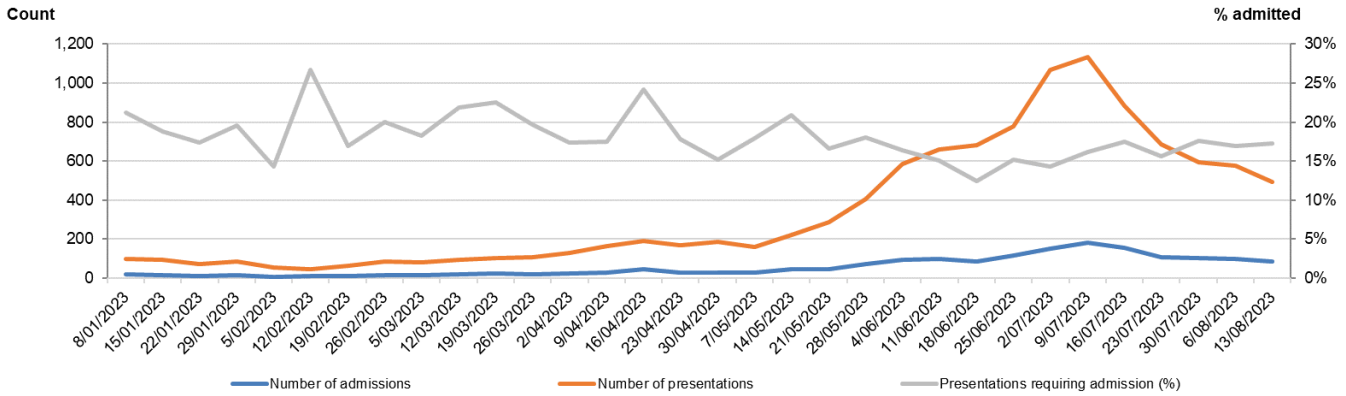
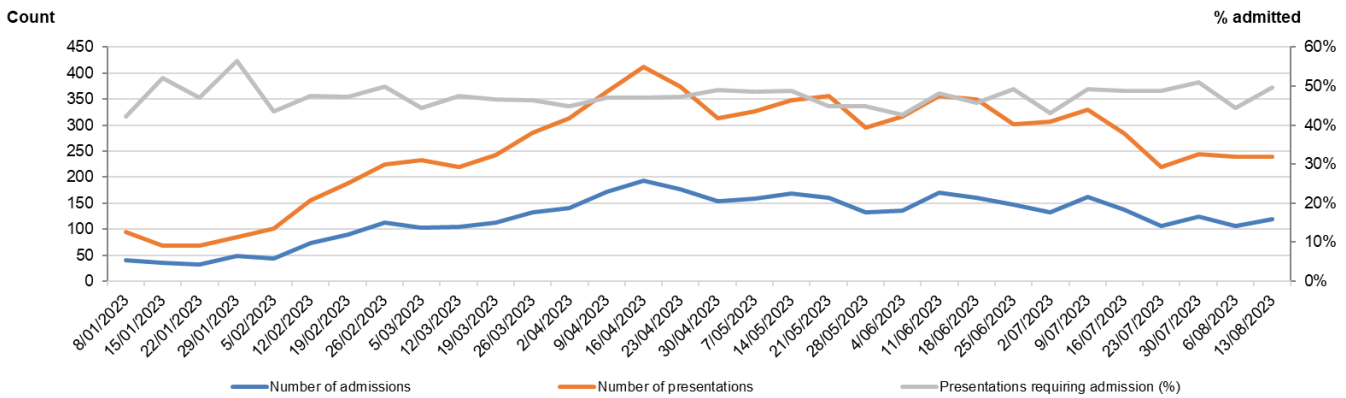


Figure 3. Bronchiolitis weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, children aged 0-4 years.



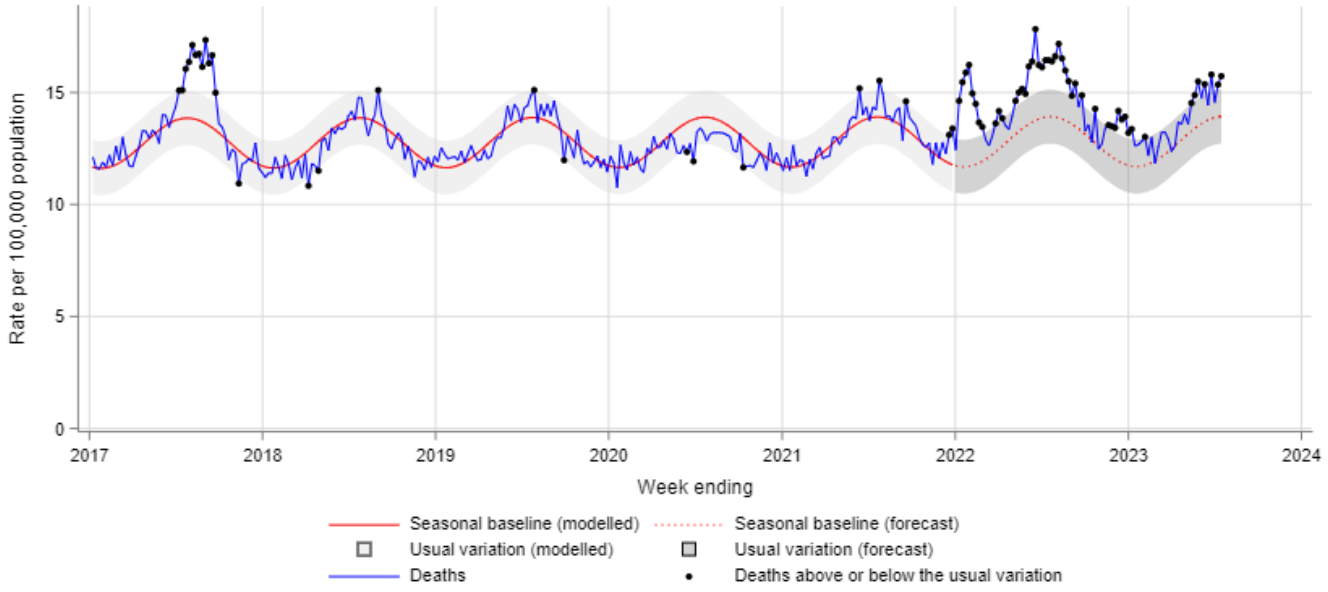
Death surveillance

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 was above the usual variation based on the seasonal baseline for 2017 – 2021.

Figure 4. All-cause death rate per 100,000 population, all ages, 2017 to 16 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 11 June 2023 to 16 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.

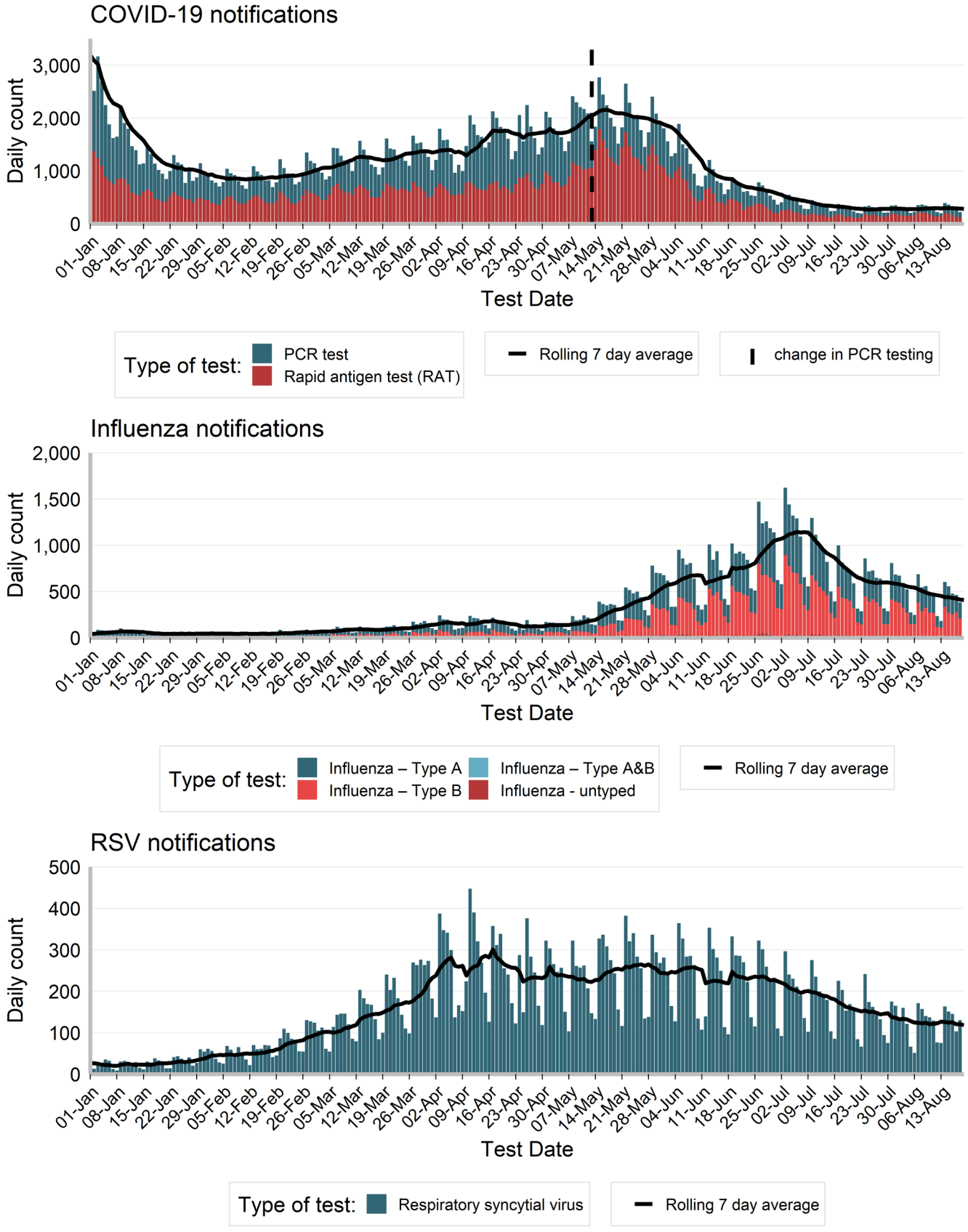
Interpretation: Influenza continues to be the most common respiratory virus notified. The distribution of COVID-19, influenza and RSV notifications by gender, age, Local Health District and Aboriginal status in the past week was similar to previous weeks.

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

	COVID		Influenza		RSV	
	Week ending 19 August 2023	Year to Date	Week ending 19 August 2023	Year to Date	Week ending 19 August 2023	Year to Date
Gender						
Female	1,125	151,231(58%)	1,423	38,832(50%)	417	19,418(52%)
Male	833	110,219(42%)	1,435	38,037(49%)	409	17,924(48%)
Age group (years)						
0-4	102	8,909(3%)	366	10,741(14%)	351	20,175(54%)
5-9	78	8,135(3%)	599	16,465(21%)	56	2,033(5%)
10-19	191	21,406(8%)	638	15,083(20%)	62	1,646(4%)
20-29	192	29,531(11%)	229	5,972(8%)	32	1,350(4%)
30-39	299	39,246(15%)	392	9,883(13%)	44	1,752(5%)
40-49	263	38,287(15%)	295	7,974(10%)	38	1,357(4%)
50-59	229	35,989(14%)	139	4,153(5%)	57	1,857(5%)
60-69	204	32,814(13%)	88	3,013(4%)	51	2,205(6%)
70-79	188	24,856(9%)	65	2,129(3%)	65	2,222(6%)
80-89	147	15,863(6%)	36	1,152(1%)	51	1,917(5%)
90+	75	6,691(3%)	12	321(0%)	20	827(2%)
Local Health District of residence						
Central Coast	116	12,378(5%)	65	2,589(3%)	48	1,791(5%)
Far West	6	749(0%)	6	118(0%)	8	196(1%)
Hunter New England	214	33,930(13%)	211	5,859(8%)	82	3,339(9%)
Illawarra Shoalhaven	110	16,511(6%)	201	3,486(5%)	35	1,821(5%)
Mid North Coast	57	5,951(2%)	40	1,885(2%)	16	673(2%)
Murrumbidgee	52	8,206(3%)	74	2,311(3%)	36	1,794(5%)
Nepean Blue Mountains	107	12,817(5%)	137	4,915(6%)	55	2,236(6%)
Northern NSW	43	7,592(3%)	78	2,843(4%)	17	779(2%)
Northern Sydney	295	31,736(12%)	337	9,529(12%)	119	4,885(13%)
South Eastern Sydney	192	27,763(11%)	295	6,518(8%)	85	3,453(9%)
South Western Sydney	244	27,435(10%)	493	12,017(16%)	95	5,337(14%)
Southern NSW	45	6,953(3%)	94	1,237(2%)	25	740(2%)
Sydney	161	21,825(8%)	195	4,876(6%)	44	2,367(6%)
Western NSW	45	10,456(4%)	94	1,940(3%)	22	1,643(4%)
Western Sydney	239	34,429(13%)	494	16,434(21%)	132	6,177(17%)
Aboriginal status						
Aboriginal and/or Torres Strait Islander	57	8,484(3%)	86	2,685(3%)	26	1,333(4%)
Not Aboriginal or Torres Strait Islander	1,402	192,046(73%)	1,520	40,071(52%)	425	17,996(48%)
Not Stated / Unknown	504	61,239(23%)	1,254	34,170(44%)	376	18,036(48%)
Total	1,963	261,769(100%)	2,860	76,926(100%)	827	37,365(100%)

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

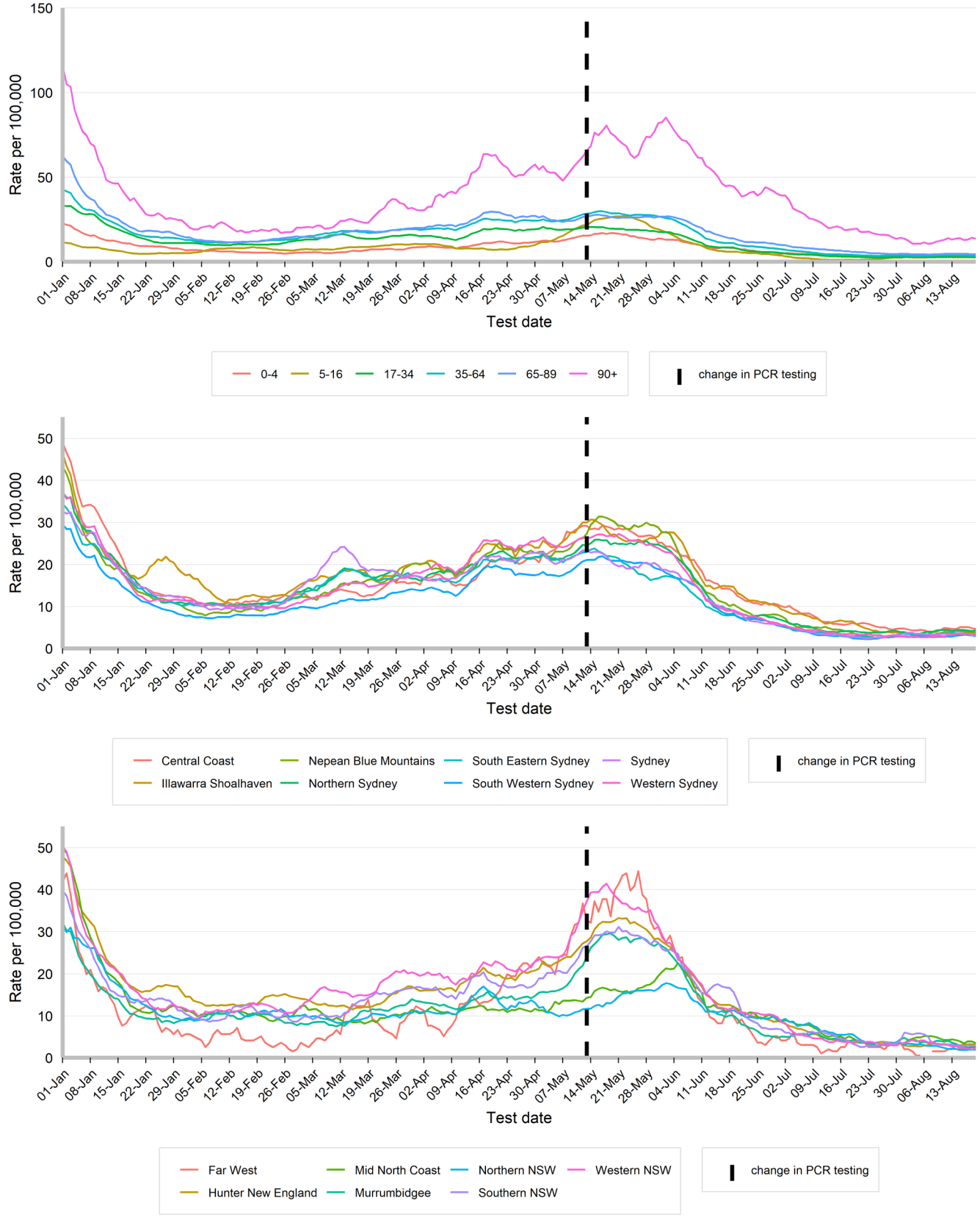
Figure 5. People notified with COVID-19, Influenza and RSV, by date of test and type of test performed, NSW, 01 January 2023 to 19 August 2023.



Rates of COVID-19 notifications per 100,000 population

Interpretation: COVID-19 notification rates are stable across all age-groups and LHDs.

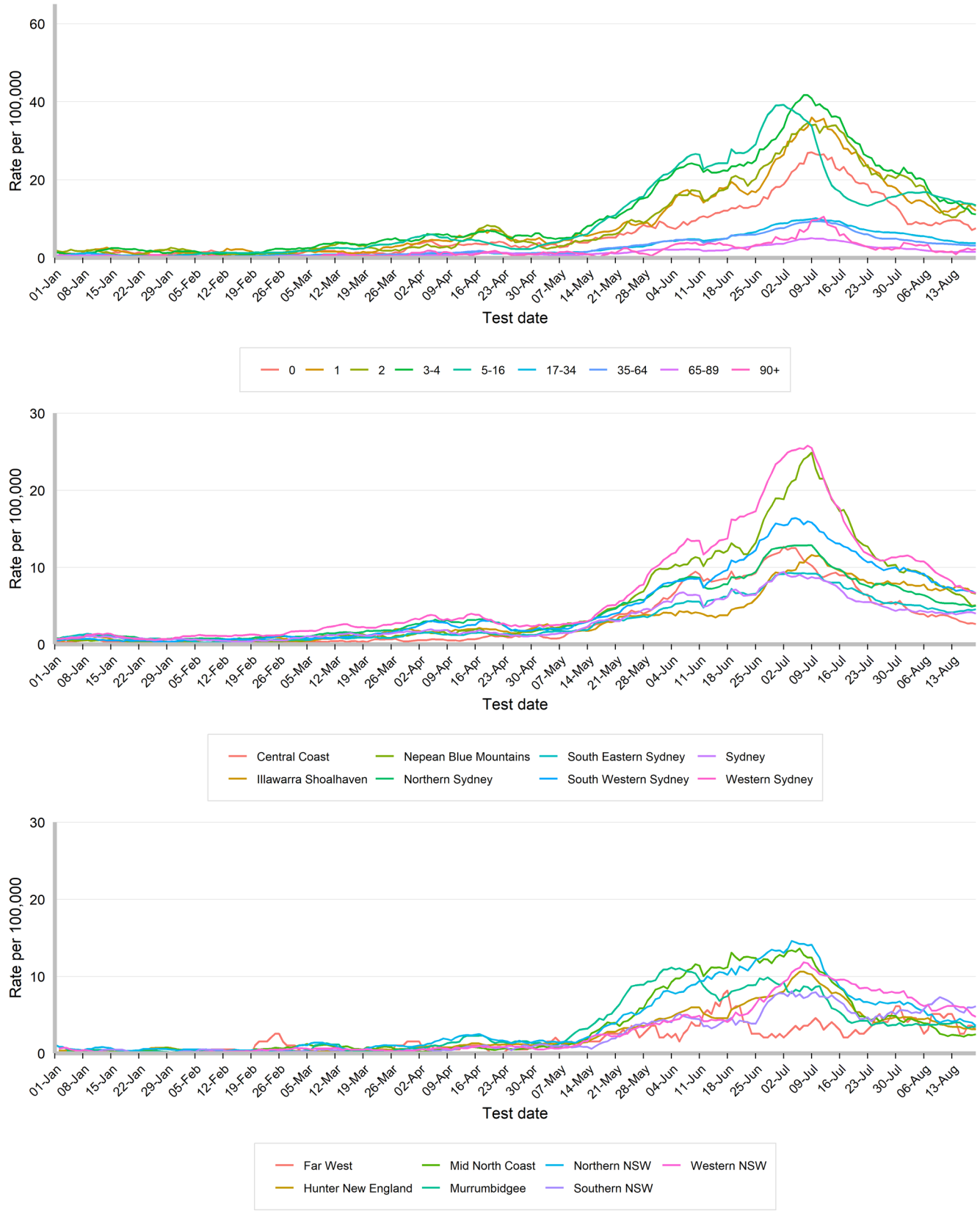
Figure 6. Daily seven-day rolling average rate of COVID-19 notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 19 August 2023.



Rates of influenza notifications per 100,000 population

Interpretation: Influenza notification rates are stable or declining across most age groups and LHDs.

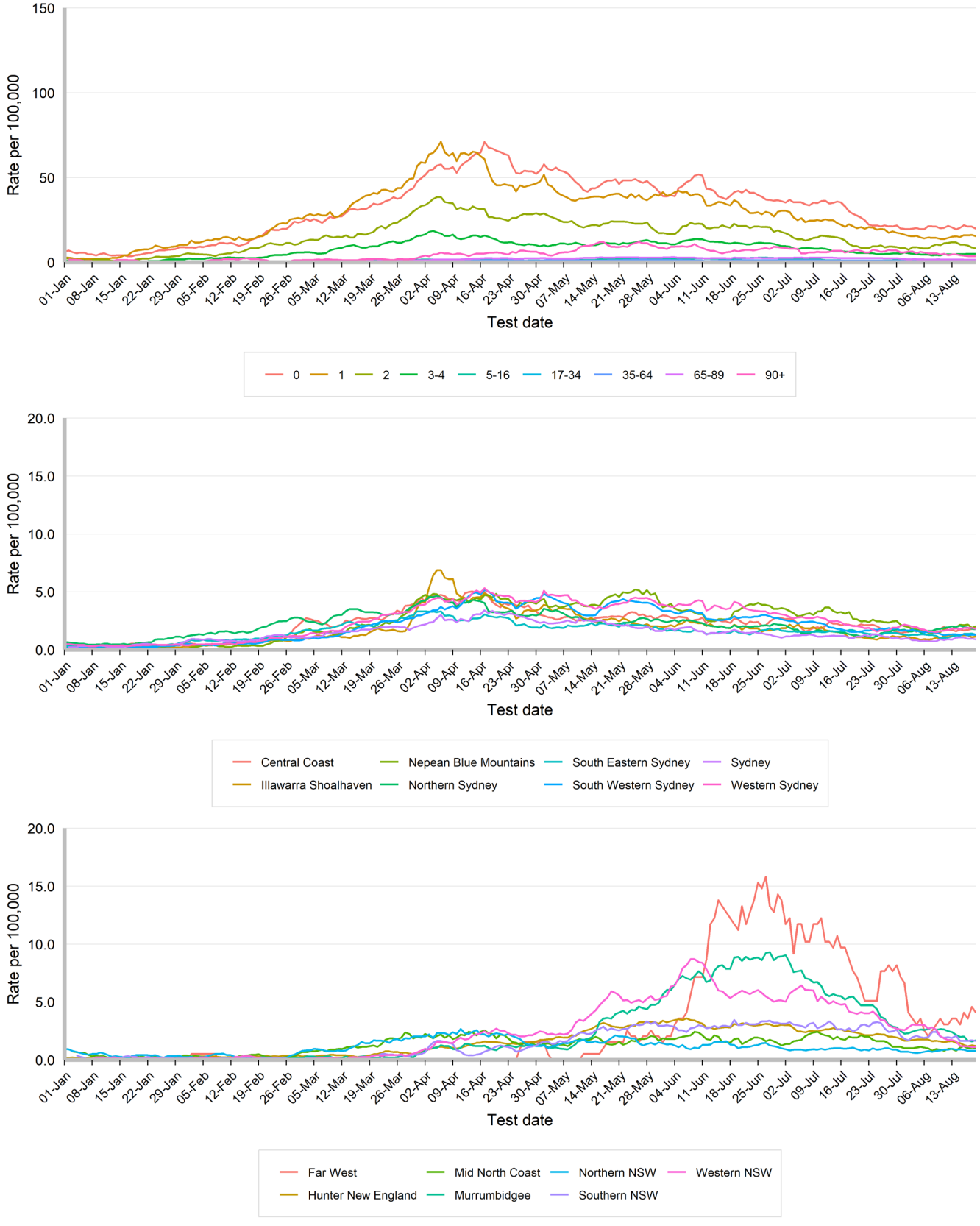
Figure 7. Daily seven-day rolling average rate of influenza notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 19 August 2023.



Rates of respiratory syncytial virus notifications per 100,000 population

Interpretation: RSV notification rates are stable across most age-groups and LHDs.

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 19 August 2023.

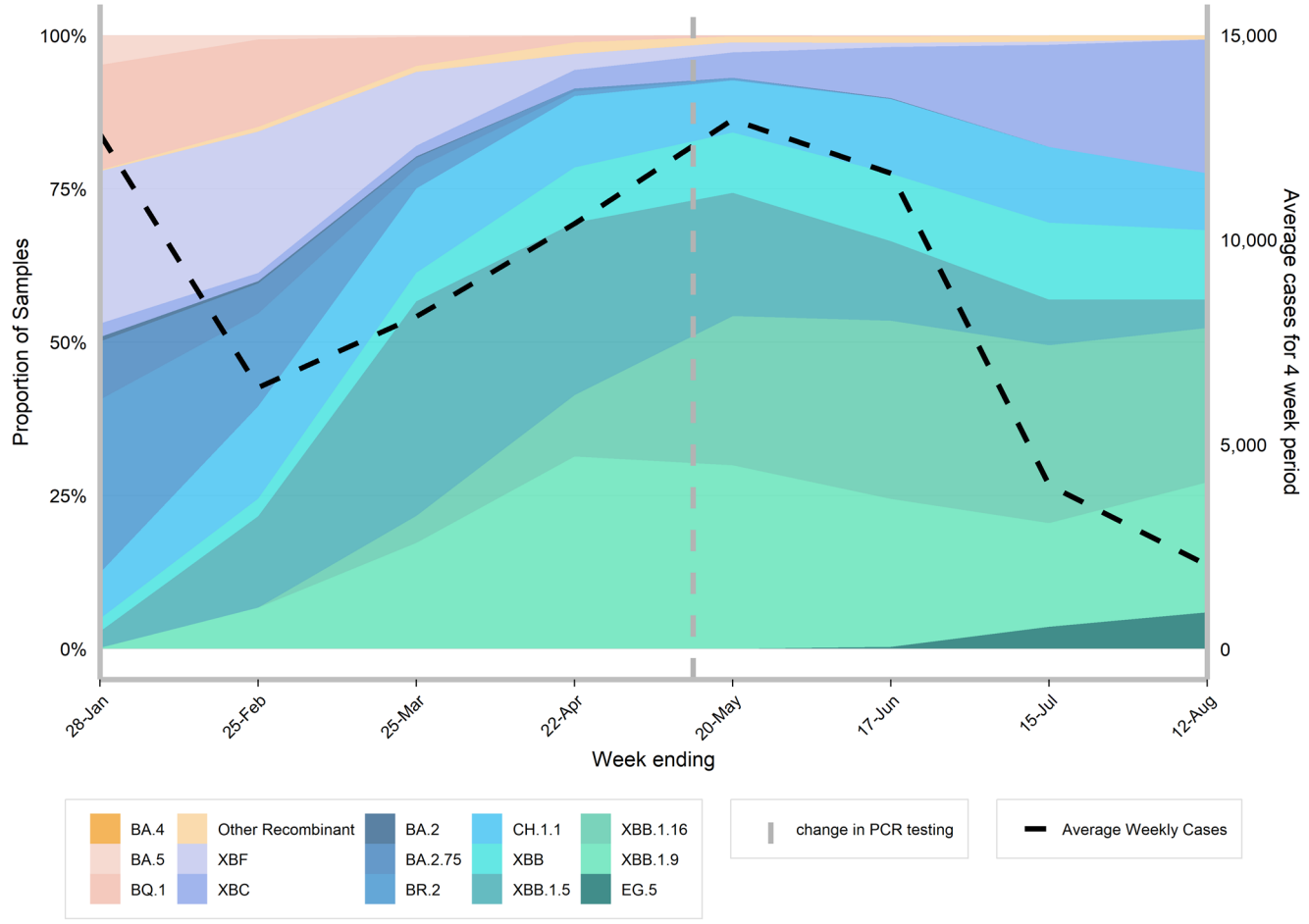


COVID-19 Whole Genome Sequencing

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 sub-lineages continue to dominate the variants circulating in the community. The EG.5 variant was first identified by WGS in May 2023 and there have been 26 detections reported to 12 August 2023.

Figure 9. Estimated distribution of COVID-19 sub-lineages in the community, 01 January 2023 to 12 August 2023.



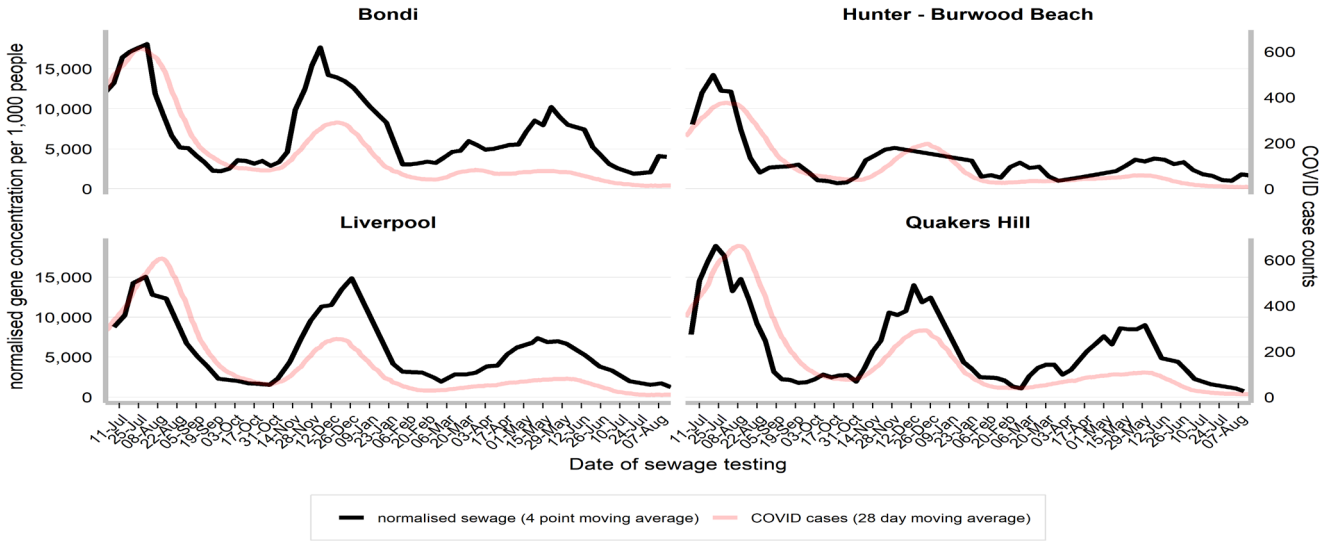
Other surveillance indicators

COVID-19 Sewage surveillance program

Trends are presented for Bondi, Quakers Hills, Liverpool and Burwood Beach sewage catchments from 5 February 2022 to the week ending 16 August 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: There was minimal change in gene concentrations per 1,000 people at the four catchment sites in the past week.

Figure 10. Gene concentration, per 1,000 people in each sewage catchment, 1 January 2023 to 16 August 2023.

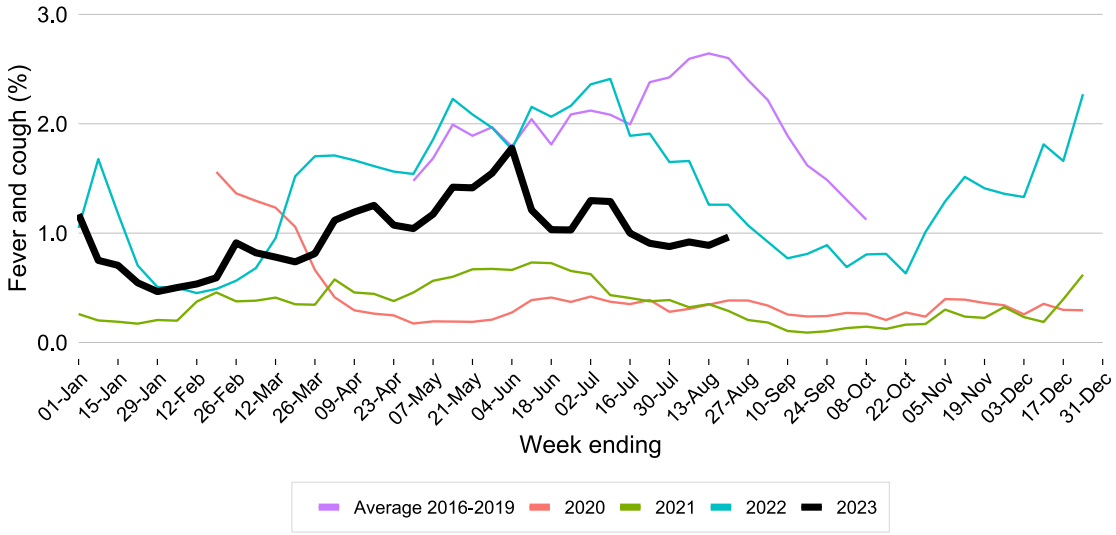


FluTracking and NSW sentinel laboratory network

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: Influenza-like illness reports to FluTracking are stable.

Figure 11. Proportion of FluTracking participants reporting influenza-like illness, NSW, 1 January to 20 August 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 proportion of tests positive for COVID-19 and influenza is stable and RSV continues to decline. Human metapneumovirus (HPMV), rhinovirus and parainfluenza test positivity continues to increase.

Figure 12. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 January 2023 to 20 August 2023.

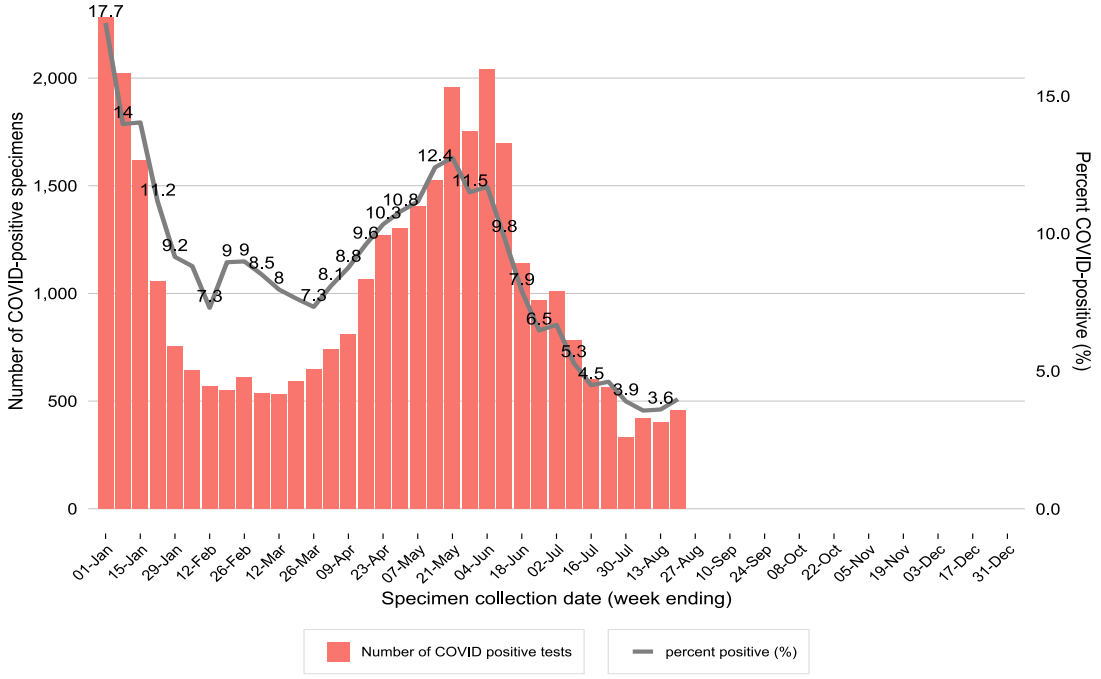


Figure 13. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 January 2023 to 20 August 2023.

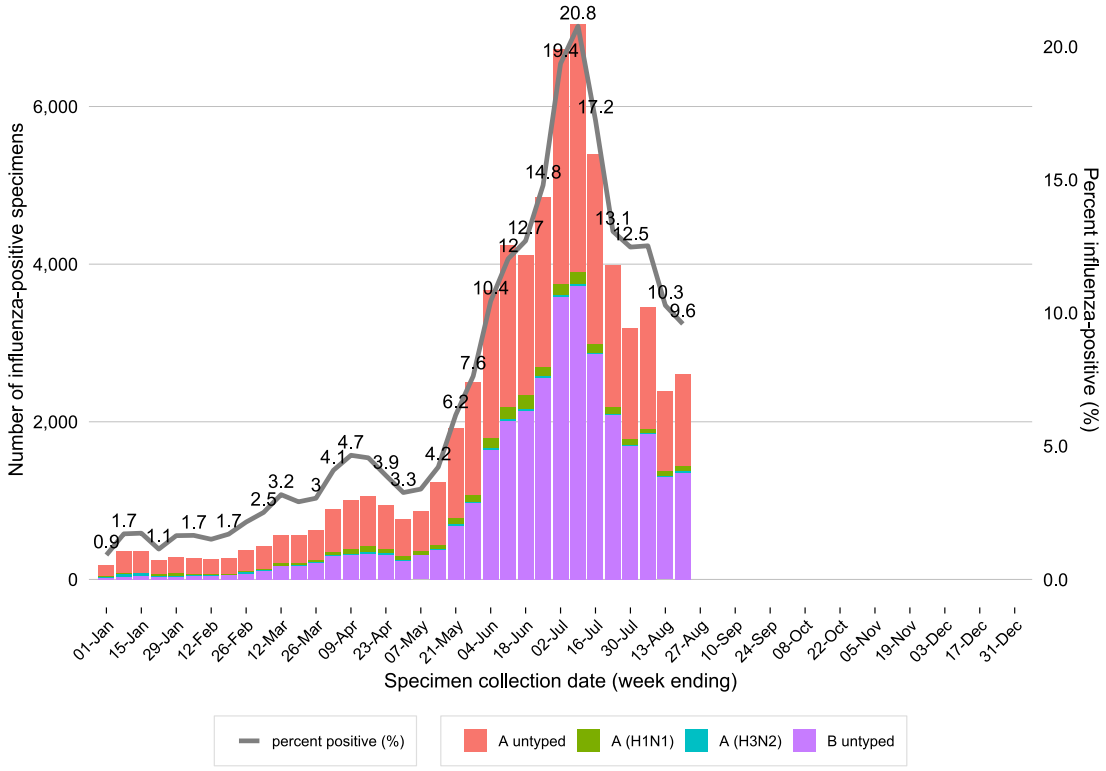


Figure 14. Number of positive PCR test results and proportion of tests positive for other respiratory viruses at sentinel NSW laboratories, 1 January 2023 to 20 August 2023.

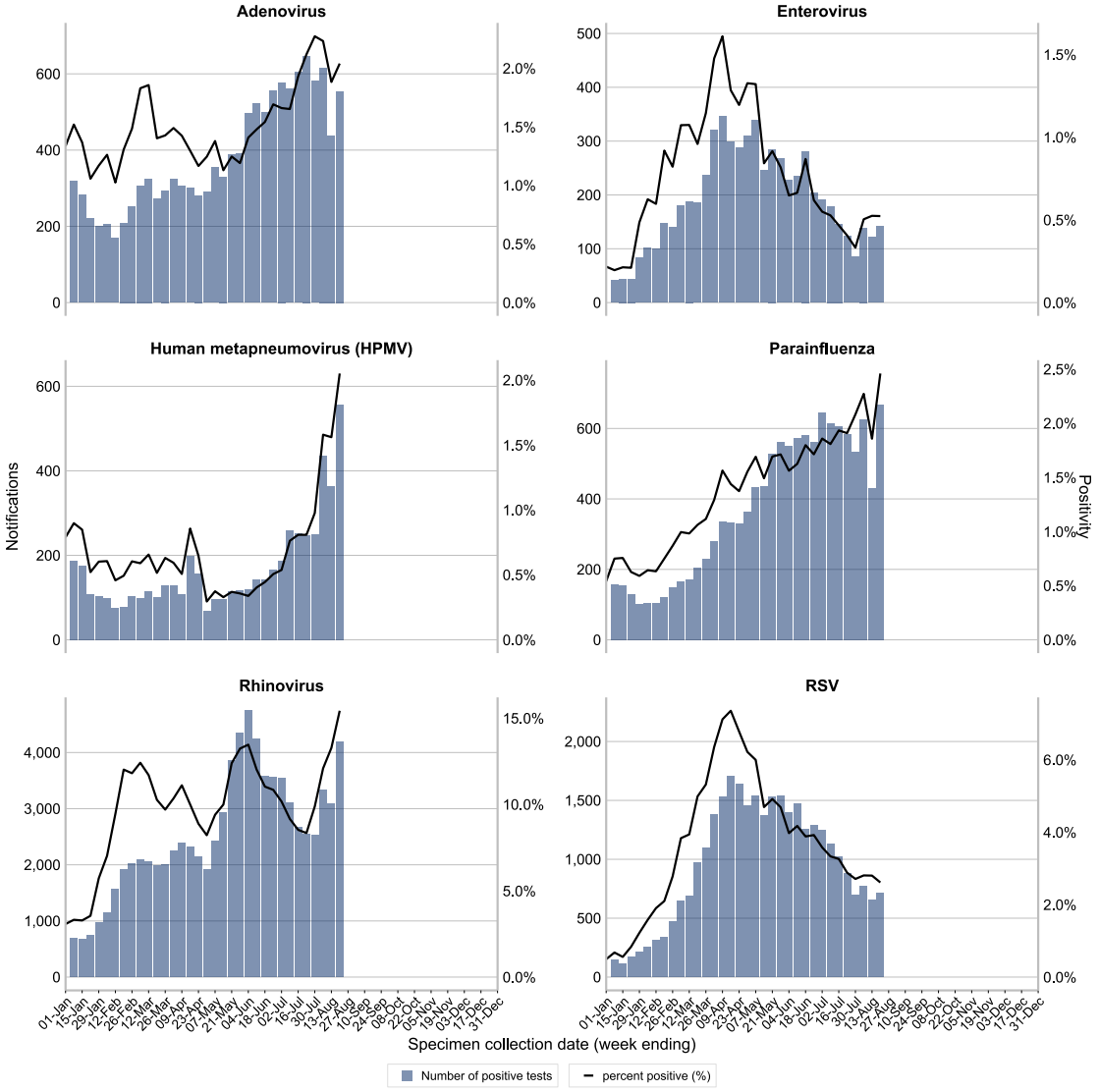


Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 20 August 2023.

	Week ending				Year to date
	30 July	06 August	13 August	20 August	
	n(% pos)	n(% pos)	n(% pos)	n(% pos)	n
Influenza	3,192 (12.5%)	3,454 (12.5%)	2,391 (10.3%)	2,603 (9.6%)	67,577
Adenovirus	582 (2.3%)	616 (2.2%)	438 (1.9%)	554 (2.0%)	12,924
Respiratory syncytial virus (RSV)	694 (2.7%)	775 (2.8%)	652 (2.8%)	710 (2.6%)	31,731
Rhinovirus	2,532 (9.9%)	3,338 (12.1%)	3,090 (13.3%)	4,192 (15.4%)	84,156
Human metapneumovirus (HMPV)	250 (1.0%)	436 (1.6%)	363 (1.6%)	557 (2.1%)	5,734
Enterovirus	85 (0.3%)	139 (0.5%)	122 (0.5%)	142 (0.5%)	6,306
Number of PCR tests conducted	25,594	27,587	23,252	27,147	840,881
SARS-CoV-2	331 (3.9%)	418 (3.6%)	402 (3.6%)	457 (4.0%)	34,659
Number of COVID PCR tests	8,477	11,718	11,144	11,479	385,856

Recent data is subject to change. For the week ending 20 August 2023, 11 out of 13 sentinel laboratories provided PCR testing data related to influenza and 4 out 4 sentinel laboratories provided PCR data related to COVID.