

NSW Respiratory Surveillance Report - week ending 02 September 2023

COVID-19 activity is at low levels; influenza and (RSV) indicators are at moderate levels.

Summary

There were declines in notifications for COVID-19 (-15%), influenza (-17%) and RSV (-9%) in the past week. Small declines in other indicators were observed for COVID-19 and influenza however ED presentations and subsequent admissions for influenza-like illness and bronchiolitis in young children (commonly caused by RSV) persist at moderate levels. Sewage surveillance for COVID-19 indicates transmission is continuing to occur at low levels.

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: Small declines in ED presentations and subsequent hospital admissions for COVID-19, influenza-like illness and bronchiolitis in young children occurred in the past week. The proportion requiring admission for influenza-like illness and bronchiolitis remained stable. Other common respiratory viruses circulating at this time of year (for example rhinovirus and human metapneumovirus – see Figure 14, page 12) also cause bronchiolitis and this may partly explain the persistence of ED presentations at moderate levels.

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

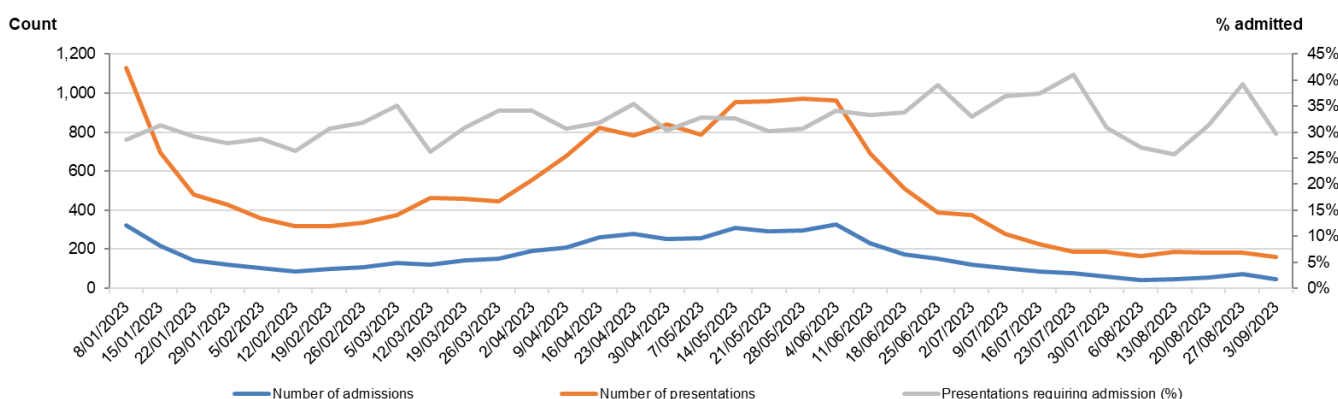


Figure 2. ‘Influenza-like illness’ weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons of all ages.

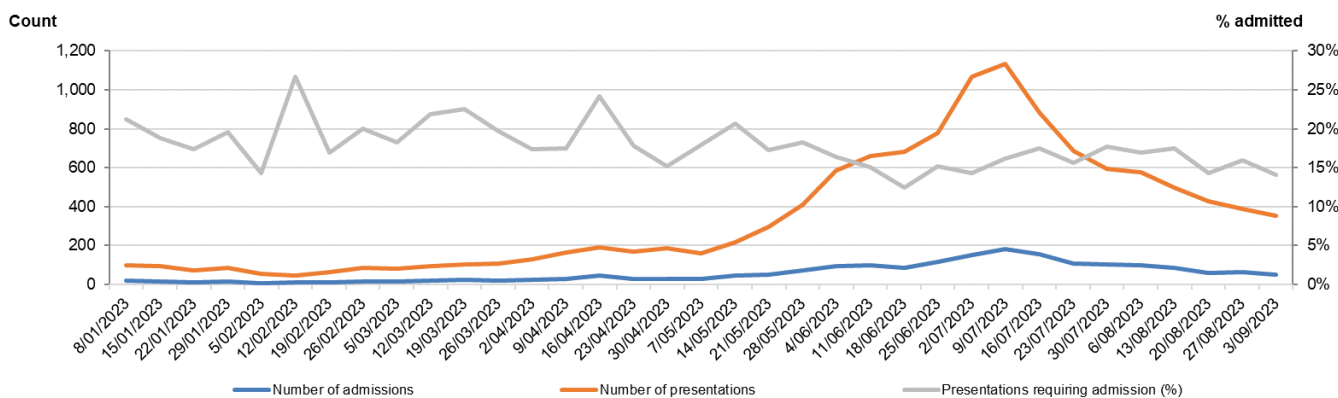
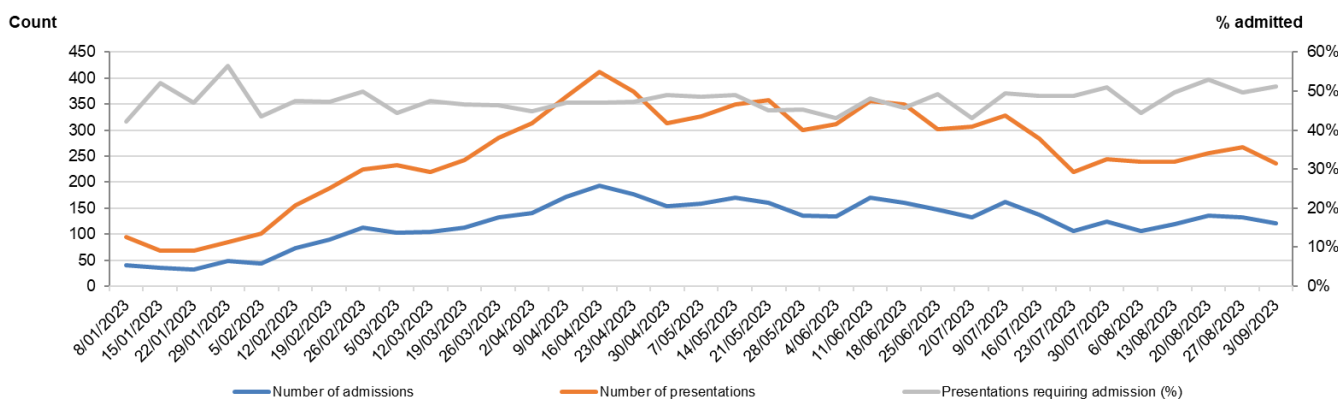


Figure 3. Bronchiolitis weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, children aged 0-4 years.



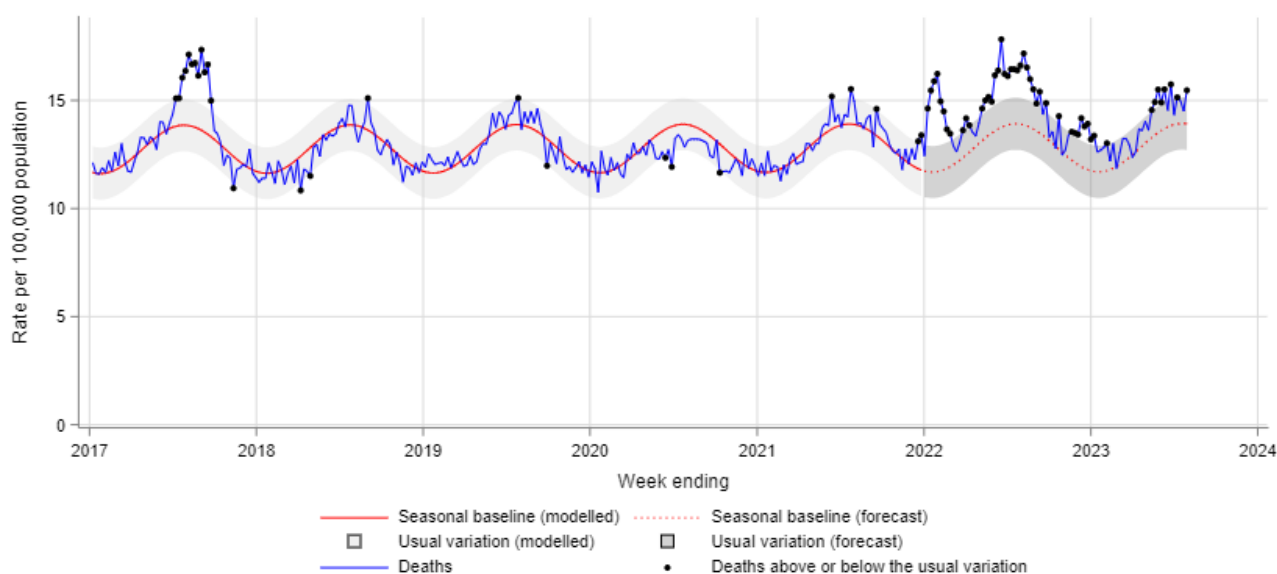
Death surveillance

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 lag adjusted all-cause mortality is above the seasonal baseline.

Figure 4. All-cause death rate per 100,000 population, all ages, 2017 to 30 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 25 June 2023 to 30 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.

Epidemiological week 35, ending 02 September 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.

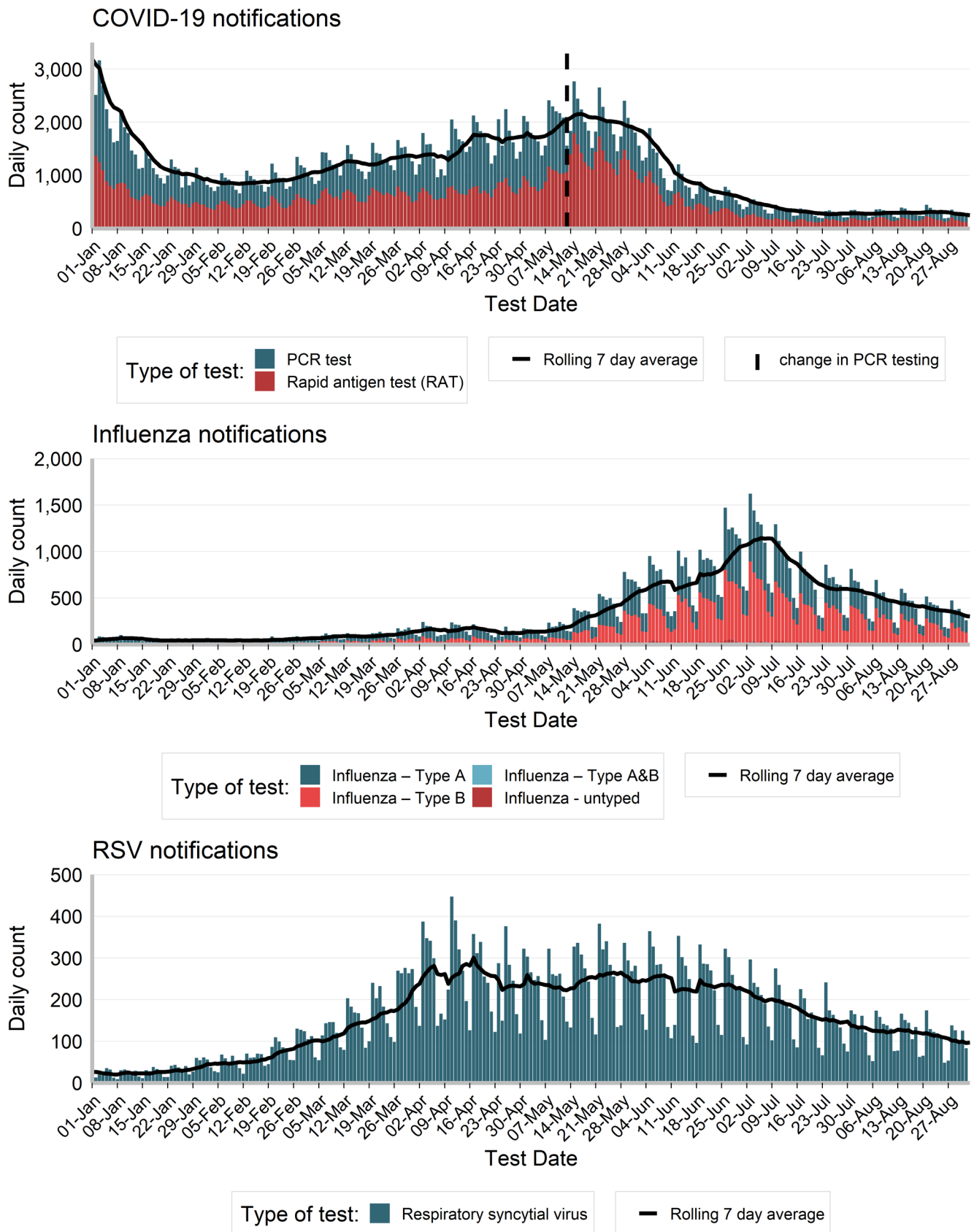
Interpretation: COVID-19, influenza and RSV notifications continue to decline and the distributions by gender, age, Local Health District and Aboriginal status in the past week was similar to previous weeks.

Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the week ending 02 September 2023.

	COVID		Influenza		RSV	
	Week ending 02 September 2023	Year to Date	Week ending 02 September 2023	Year to Date	Week ending 02 September 2023	Year to Date
Gender						
Female	1,039	153,625(58%)	1,090	41,238(51%)	336	20,133(52%)
Male	705	111,842(42%)	1,019	40,322(49%)	340	18,670(48%)
Age group (years)						
0-4	91	9,099(3%)	243	11,293(14%)	304	20,836(54%)
5-9	46	8,276(3%)	443	17,443(21%)	44	2,130(5%)
10-19	140	21,742(8%)	433	16,060(20%)	56	1,772(5%)
20-29	160	29,904(11%)	179	6,404(8%)	38	1,420(4%)
30-39	256	39,841(15%)	264	10,498(13%)	31	1,813(5%)
40-49	254	38,865(15%)	220	8,436(10%)	29	1,415(4%)
50-59	236	36,531(14%)	125	4,420(5%)	36	1,940(5%)
60-69	226	33,328(13%)	98	3,201(4%)	42	2,306(6%)
70-79	173	25,245(9%)	66	2,253(3%)	47	2,330(6%)
80-89	119	16,124(6%)	33	1,230(2%)	33	1,983(5%)
90+	53	6,793(3%)	5	334(0%)	17	858(2%)
Local Health District of residence						
Central Coast	85	12,603(5%)	41	2,683(3%)	20	1,835(5%)
Far West	3	756(0%)	15	147(0%)	0	204(1%)
Hunter New England	152	34,326(13%)	167	6,251(8%)	67	3,498(9%)
Illawarra Shoalhaven	89	16,727(6%)	178	3,858(5%)	52	1,903(5%)
Mid North Coast	35	6,036(2%)	27	1,947(2%)	6	693(2%)
Murrumbidgee	59	8,330(3%)	111	2,557(3%)	26	1,861(5%)
Nepean Blue Mountains	146	13,093(5%)	89	5,109(6%)	38	2,315(6%)
Northern NSW	29	7,664(3%)	55	2,964(4%)	23	822(2%)
Northern Sydney	306	32,359(12%)	259	10,158(12%)	99	5,105(13%)
South Eastern Sydney	187	28,204(11%)	229	7,026(9%)	88	3,631(9%)
South Western Sydney	187	27,876(10%)	310	12,724(16%)	75	5,507(14%)
Southern NSW	51	7,081(3%)	57	1,372(2%)	22	787(2%)
Sydney	133	22,171(8%)	129	5,160(6%)	36	2,451(6%)
Western NSW	44	10,560(4%)	53	2,068(3%)	14	1,673(4%)
Western Sydney	229	34,909(13%)	362	17,225(21%)	106	6,402(16%)
Aboriginal status						
Aboriginal and/or Torres Strait Islander	51	8,594(3%)	77	2,846(3%)	20	1,378(4%)
Not Aboriginal or Torres Strait Islander	1,353	195,179(73%)	1,089	42,655(52%)	334	18,704(48%)
Not Stated / Unknown	342	62,010(23%)	943	36,116(44%)	323	18,745(48%)
Total	1,746	265,783(100%)	2,109	81,617(100%)	677	38,827(100%)

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

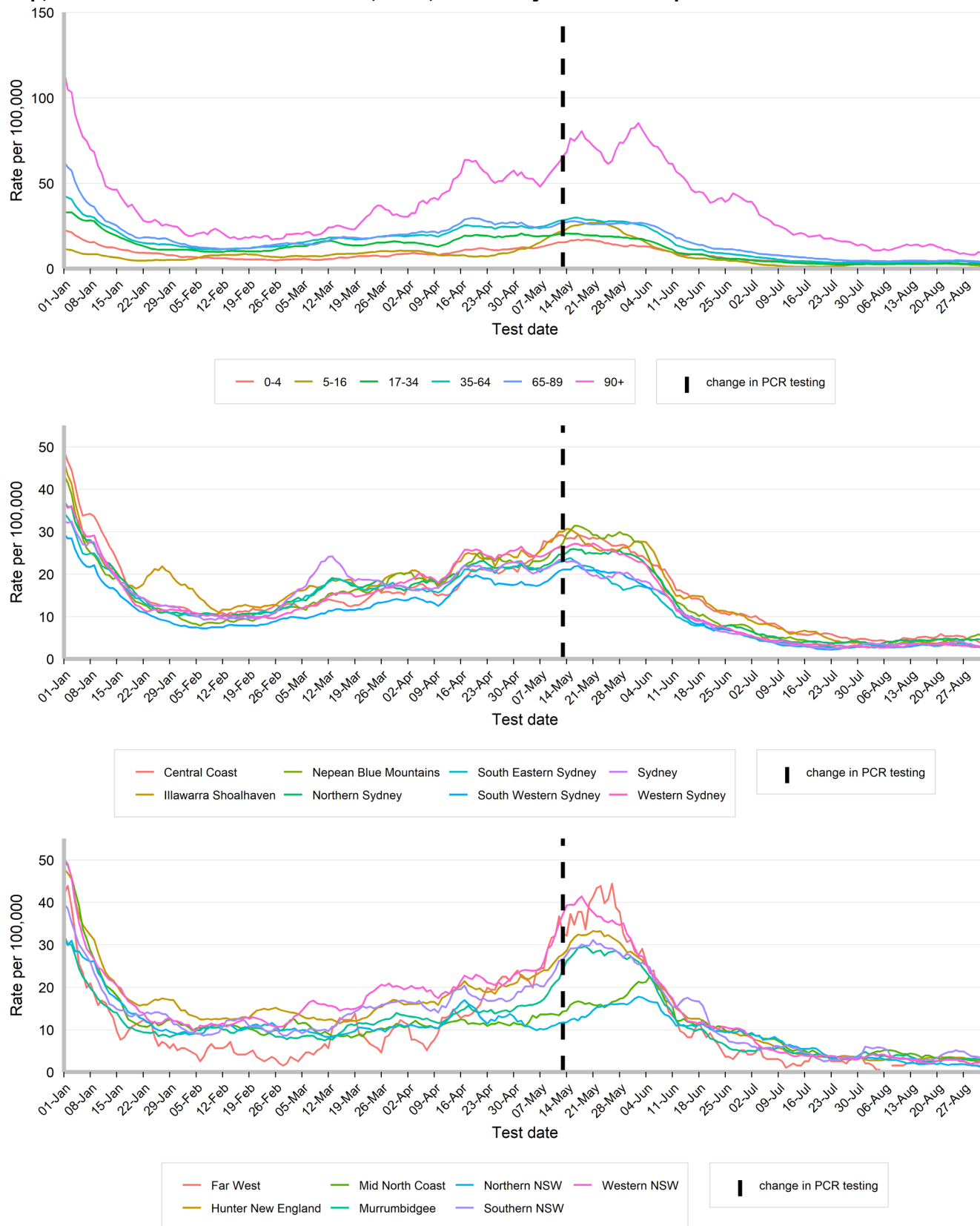
Figure 5. People notified with COVID-19, Influenza and RSV, by date of test and type of test performed, NSW, 01 January 2023 to 02 September 2023.



Rates of COVID-19 notifications per 100,000 population

Interpretation: COVID-19 notification rates are at low levels cross all age groups and Local Health Districts.

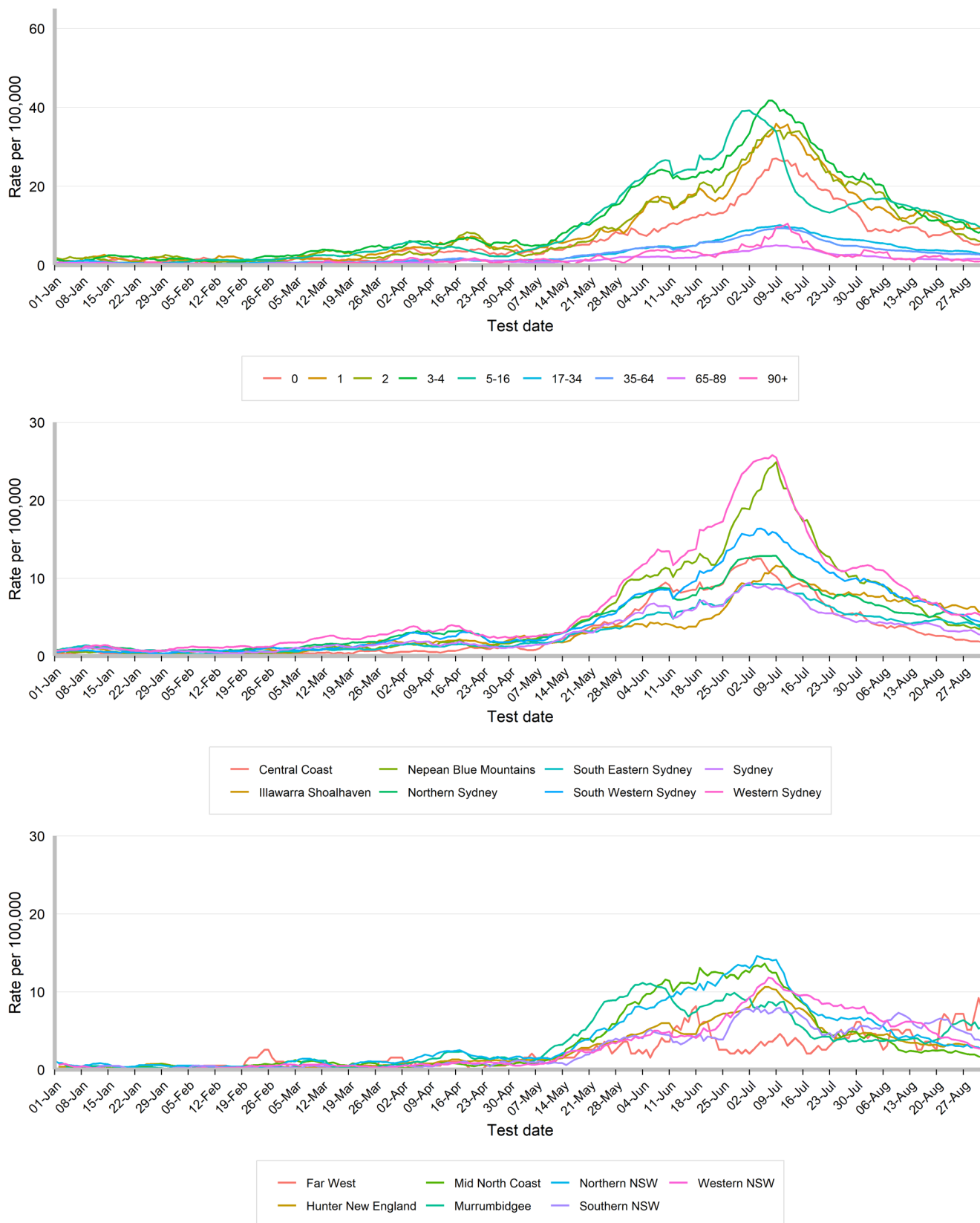
Figure 6. Daily seven-day rolling average rate of COVID-19 notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 02 September 2023.



Rates of influenza notifications per 100,000 population

Interpretation: Influenza notification rates are stable or declining across all age groups and Local Health Districts, consistent with the end of the winter period.

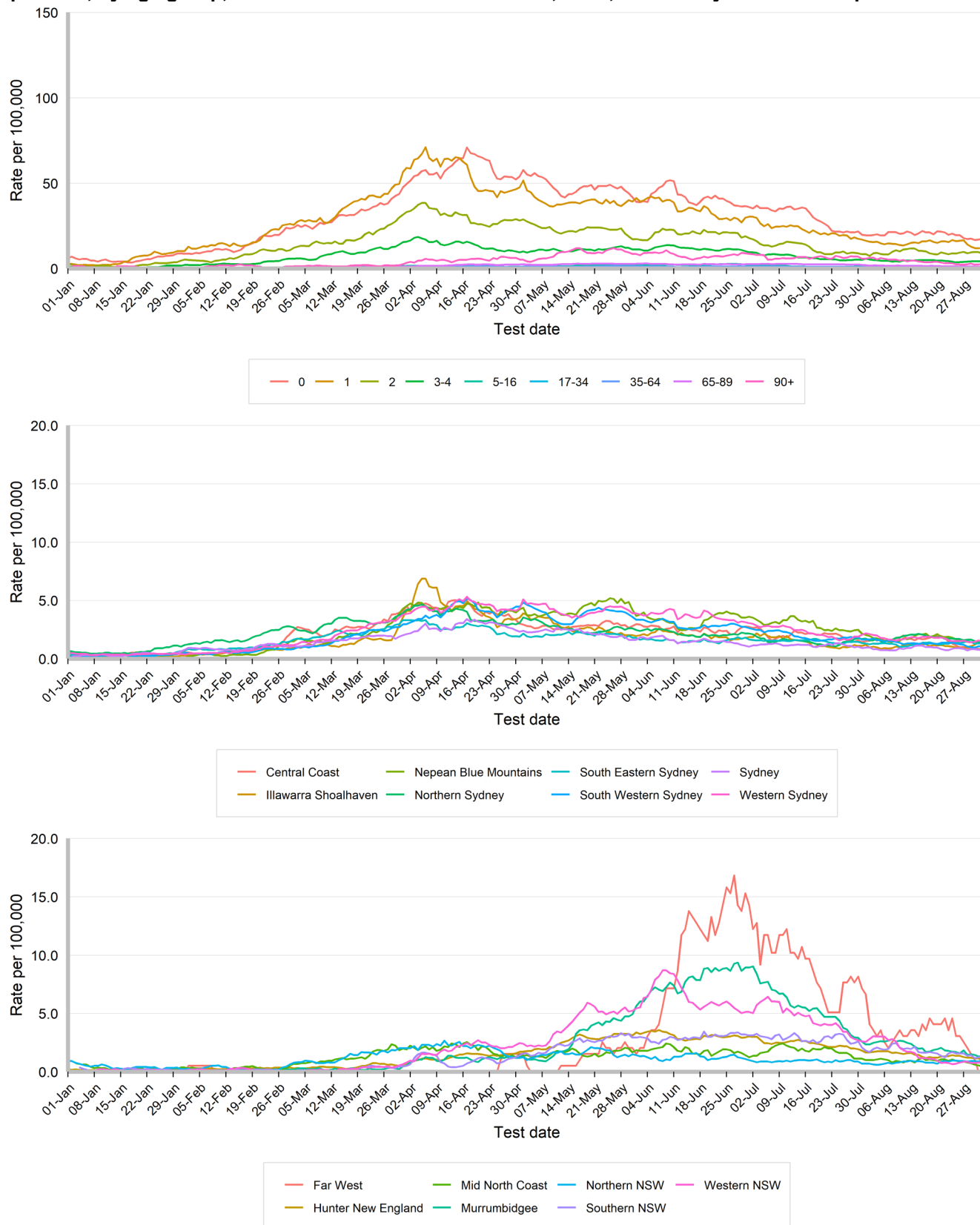
Figure 7. Daily seven-day rolling average rate of influenza notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 02 September 2023.



Rates of respiratory syncytial virus notifications per 100,000 population

Interpretation: RSV notification rates are stable or declining across most age groups and Local Health Districts. The high notification rates previously observed in Murrumbidgee, Western and Far West NSW have declined to levels comparable with other 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 02 September 2023.

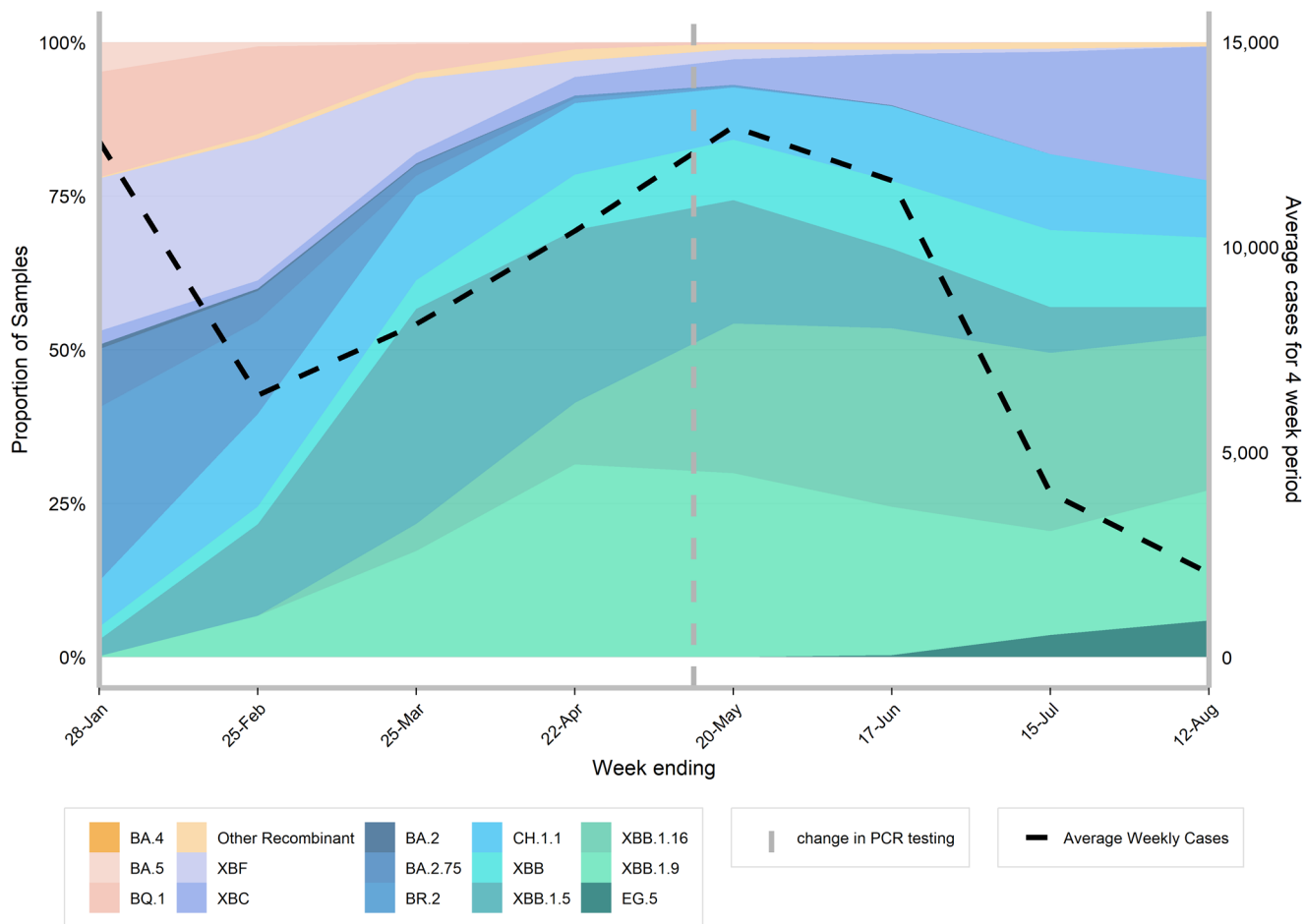


COVID-19 Whole Genome Sequencing

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. BA.2.86 has been detected in multiple countries but has not been detected in local samples.

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



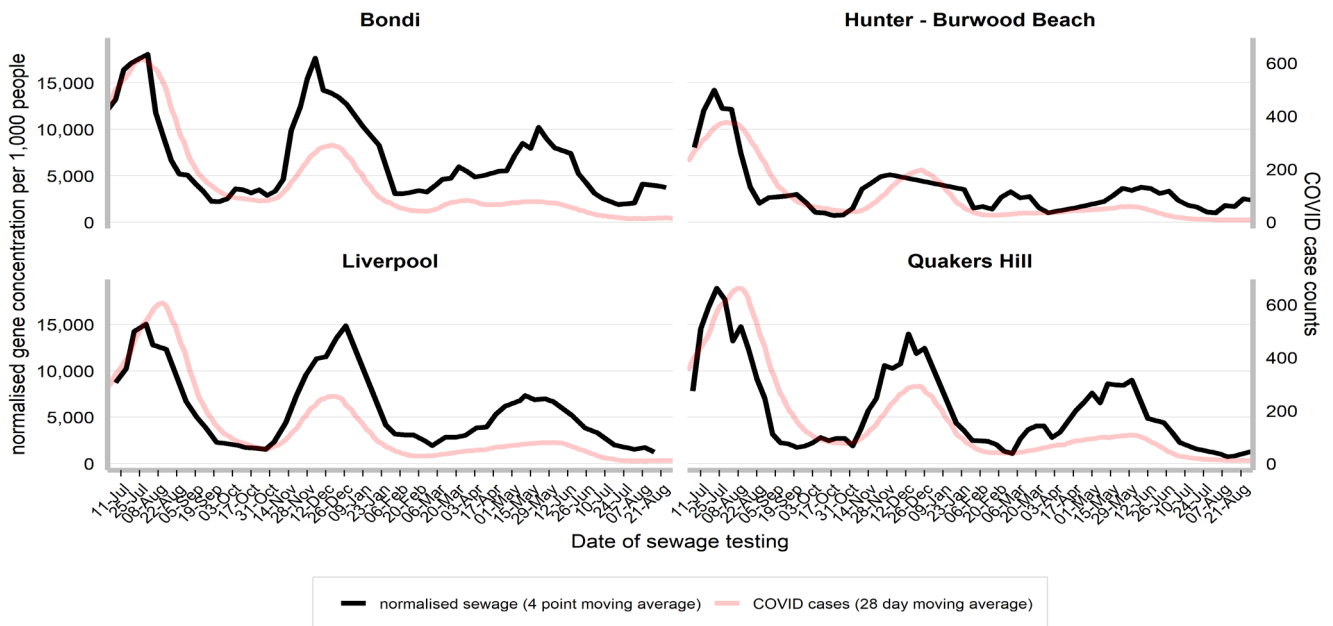
Other surveillance indicators

COVID-19 Sewage surveillance program

Trends are presented for Sydney Bondi, Quakers Hills, Liverpool and Burwood Beach sewage catchments from 1 July 2022 to the week ending 30 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: Gene concentrations per 1,000 people vary across the four sewage surveillance sites. This indicates transmission continues to occur in the community despite decreases in case notifications.

Figure 10. Gene concentration, per 1,000 people in each sewage catchment, 1 July 2022 to 30 August 2023.

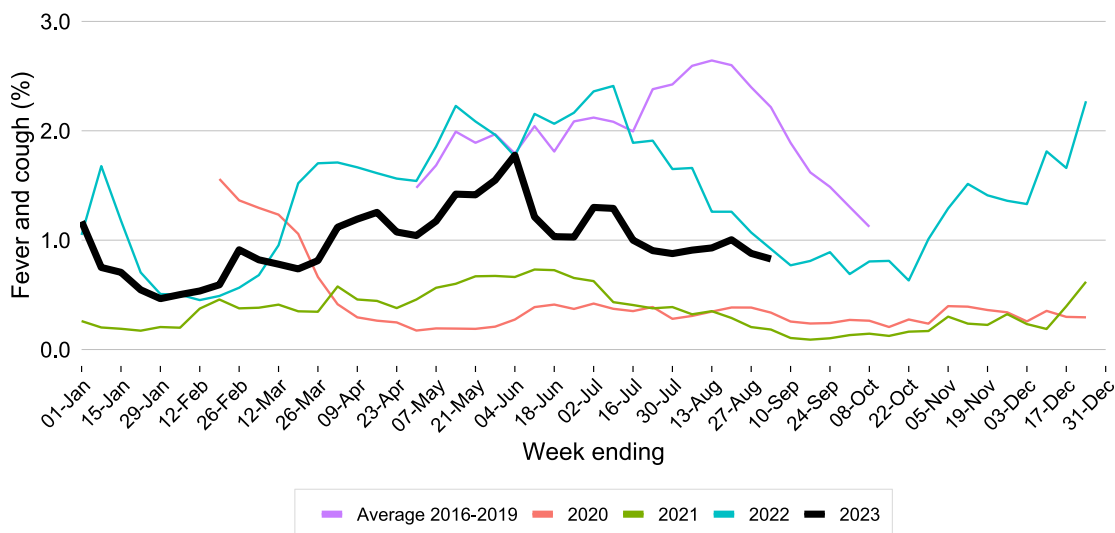


FluTracking and NSW sentinel laboratory network

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: The proportion of FluTracking participants reporting fever and cough is stable and remains well below the average for 2016 – 2019.

Figure 11. Proportion of FluTracking participants reporting influenza-like illness, NSW, 1 January to 03 September 2023.



Epidemiological week 35, ending 02 September 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 positive PCR tests for COVID-19 has stabilised at approximately 4% and influenza positivity continues to decline. The rapid increases observed over recent weeks for adenovirus, rhinovirus, and parainfluenza appear to have slowed or begun to decline in the past week; human metapneumovirus positivity continues to increase and is now 3%.

Figure 12. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 January 2023 to 03 September 2023.

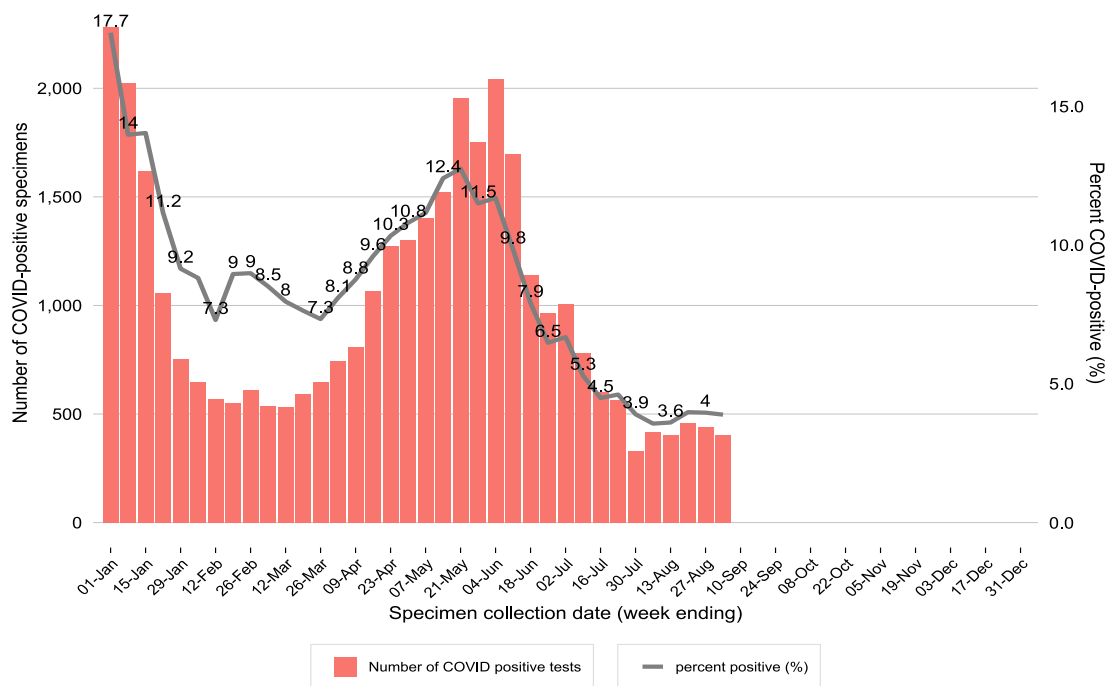


Figure 13. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 January 2023 to 03 September 2023.

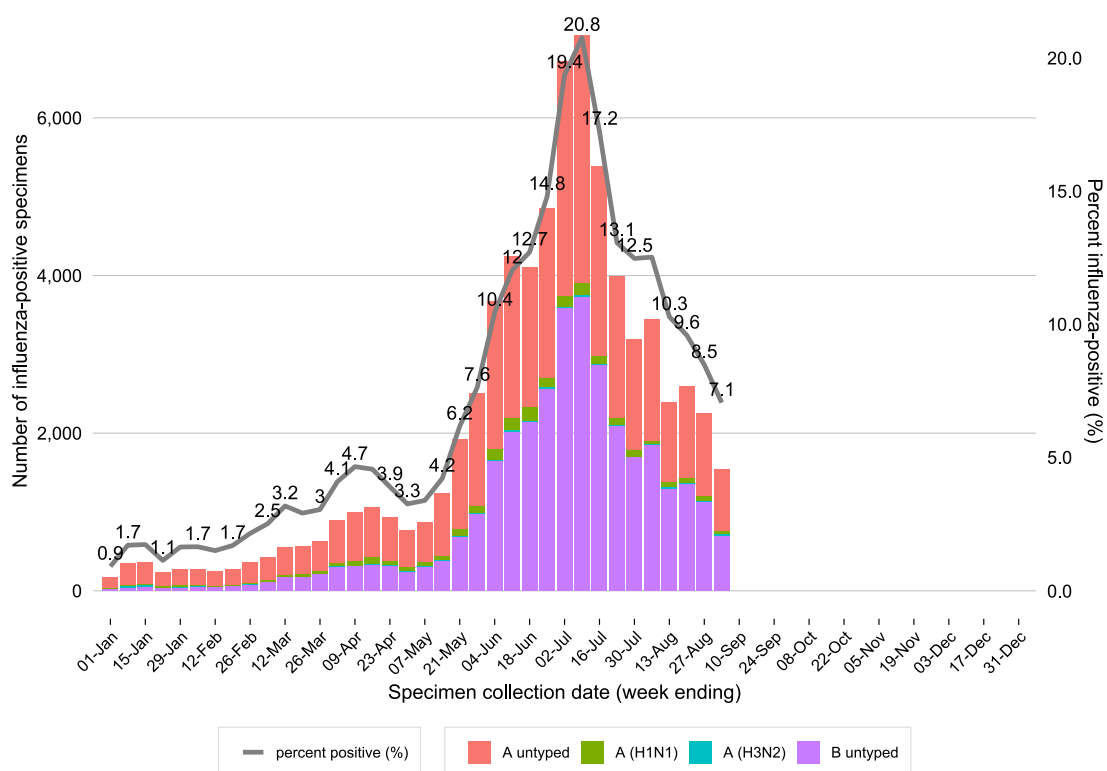


Figure 14. Number of positive PCR test results and proportion of tests positive for other respiratory viruses at sentinel NSW laboratories, 1 January 2023 to 03 September 2023.

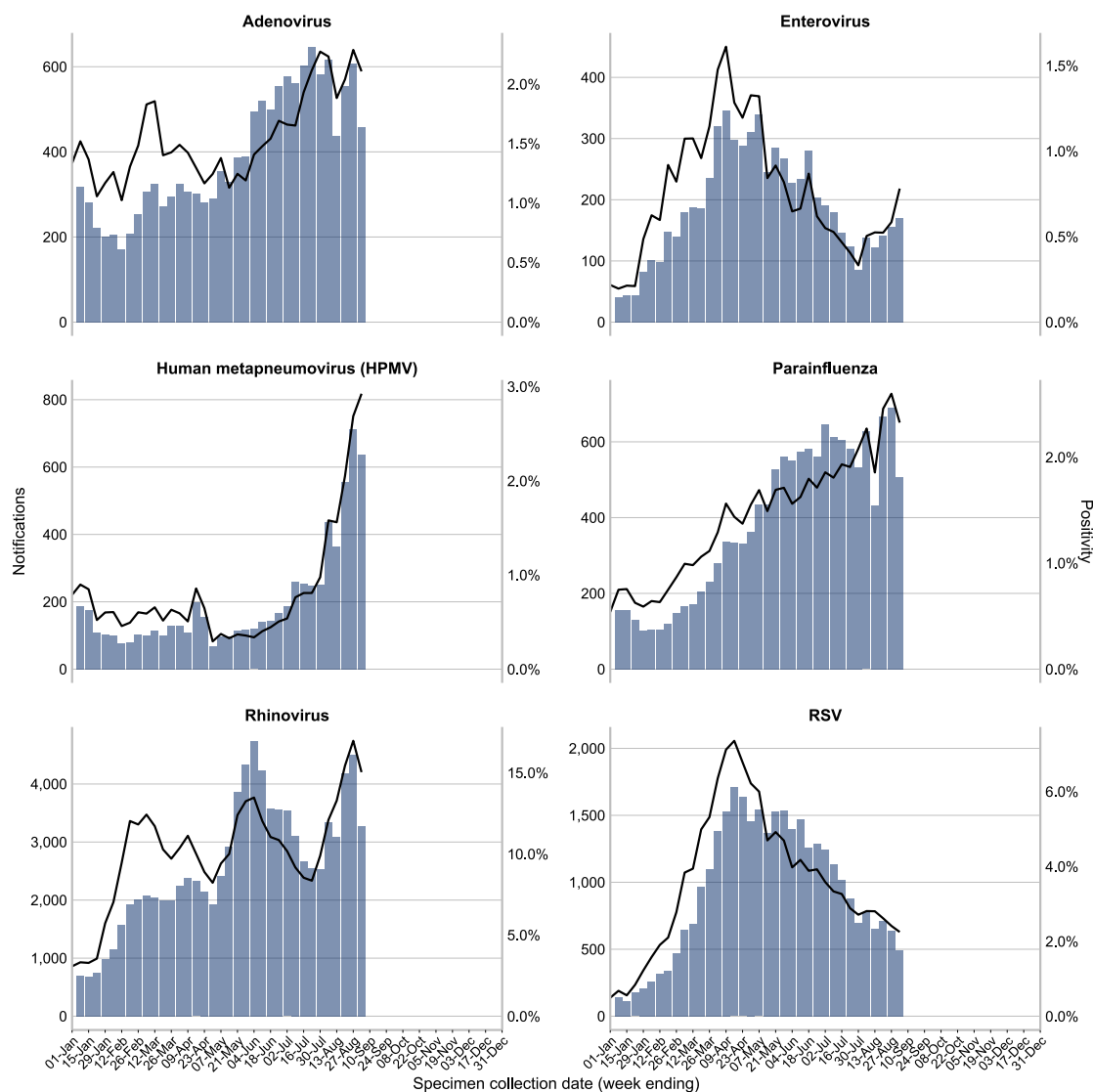


Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 03 September 2023.

	Week ending				Year to date
	13 August	20 August	27 August	03 September	
	n(% pos)	n(% pos)	n(% pos)	n(% pos)	n
Influenza	2,391 (10.3%)	2,603 (9.6%)	2,250 (8.5%)	1,537 (7.1%)	71,364
Adenovirus	438 (1.9%)	554 (2.0%)	607 (2.3%)	459 (2.1%)	13,990
Respiratory syncytial virus (RSV)	652 (2.8%)	710 (2.6%)	640 (2.4%)	490 (2.3%)	32,861
Rhinovirus	3,090 (13.3%)	4,192 (15.4%)	4,503 (17.0%)	3,275 (15.0%)	91,934
Human metapneumovirus (HMPV)	363 (1.6%)	557 (2.1%)	713 (2.7%)	637 (2.9%)	7,084
Enterovirus	122 (0.5%)	142 (0.5%)	155 (0.6%)	170 (0.8%)	6,631
Number of PCR tests conducted	23,252	27,147	26,525	21,770	889,176
SARS-CoV-2	402 (3.6%)	457 (4.0%)	438 (4.0%)	404 (3.9%)	35,501
Number of COVID PCR tests	11,144	11,479	11,055	10,383	407,294

Recent data is subject to change. For the week ending 03 September 2023, 9 out of 13 sentinel laboratories provided PCR testing data related to influenza and 3 out of 4 sentinel laboratories provided PCR data related to COVID.