

## NSW Respiratory Surveillance Report - week ending 30 September 2023

**COVID activity is at low levels with gradual increases being observed in some indicators. Influenza activity persists at moderate levels. RSV activity is at moderate levels and is declining.**

### Summary

NSW School Holidays commenced 25 September 2023, potentially impacting respiratory virus activity, testing patterns and notifications. Robust indicators of COVID-19 activity, emergency department presentations (Figure 1) and sewage surveillance (Figure 10), suggest COVID-19 transmission is gradually increasing. Influenza-like illness activity is persisting at moderate levels. The proportion of influenza notifications that are type B has declined rapidly and is now at 17%. The gradual decline in RSV activity over the past few weeks increased pace with a 19.6% decrease in notifications in the past week and early signs of decreasing ED presentations for young children with bronchiolitis.

### Data sources and methods

NSW Health continually reviews the methods used to monitor respiratory virus activity in New South Wales. This is due to the changes in testing, notification patterns and levels of respiratory virus, including COVID-19, in the community. These changes affect the usefulness of notifications for monitoring virus activity and community transmission over time. The Public Health, Rapid, Emergency and Syndromic Surveillance (PHREDSS) data, COVID-19 sewage surveillance program, whole genome sequencing (WGS) data and sentinel laboratory respiratory virus test results are currently of most value for monitoring COVID-19 and other respiratory viruses of importance in the community.

This report will be published fortnightly from 13 October 2023. The scope of data reported may vary as required for effective public health messaging and action.

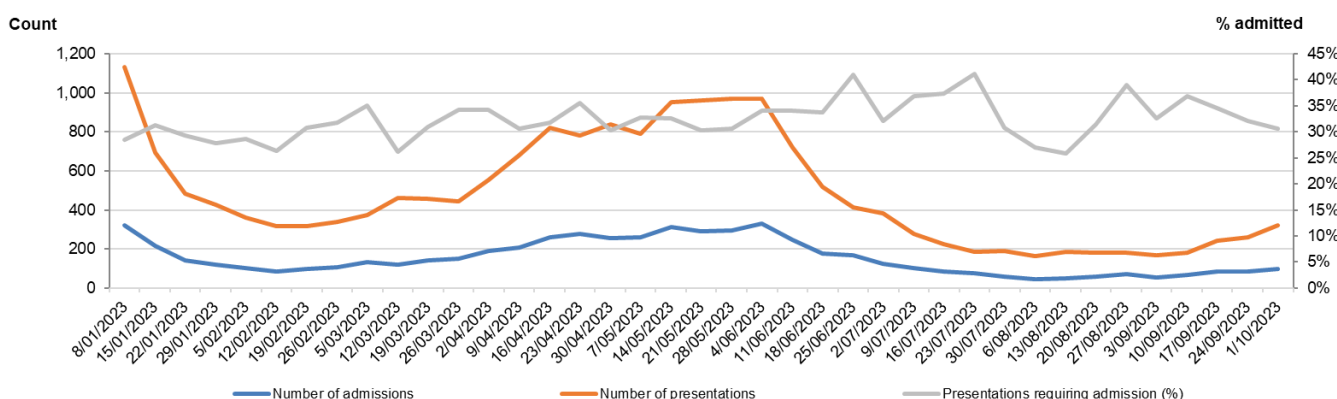
The data source for this report updates as new information becomes available. Therefore, this report cannot be directly compared to previous versions of the NSW Respiratory Surveillance Report or to previous reporting periods. For additional information on the data sources and methods presented within this report please refer to [COVID-19 surveillance report data sources and methodology](#).

## Public Health Rapid, Emergency, Disease and Syndromic Surveillance

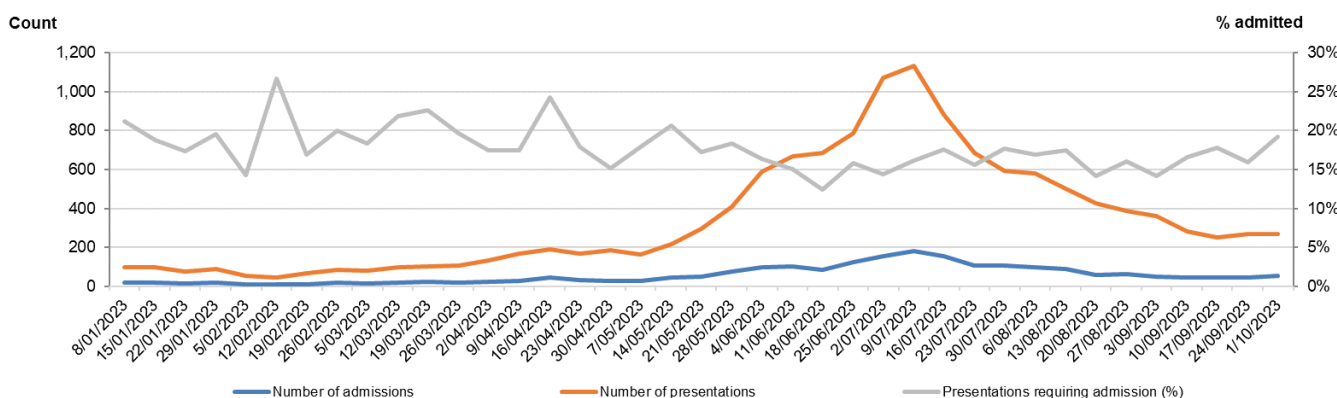
The PHREDSS system provides daily information about presentations to NSW public hospital emergency departments and subsequent admission to hospital categorised by symptom profile. Here we report on COVID-19, influenza-like illness and bronchiolitis (which is mainly caused by respiratory syncytial virus, 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:** An increase in ED presentations for COVID-19 was observed in the past week. This occurred across all age-groups other than children aged 5 – 16 years. Presentations for influenza-like illness are stable. Bronchiolitis presentations in young children declined last week but persist at moderate levels. As bronchiolitis can be due to several other circulating respiratory viruses (Figure 14 and Table 2), caution is required in attributing activity to RSV alone.

**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.**



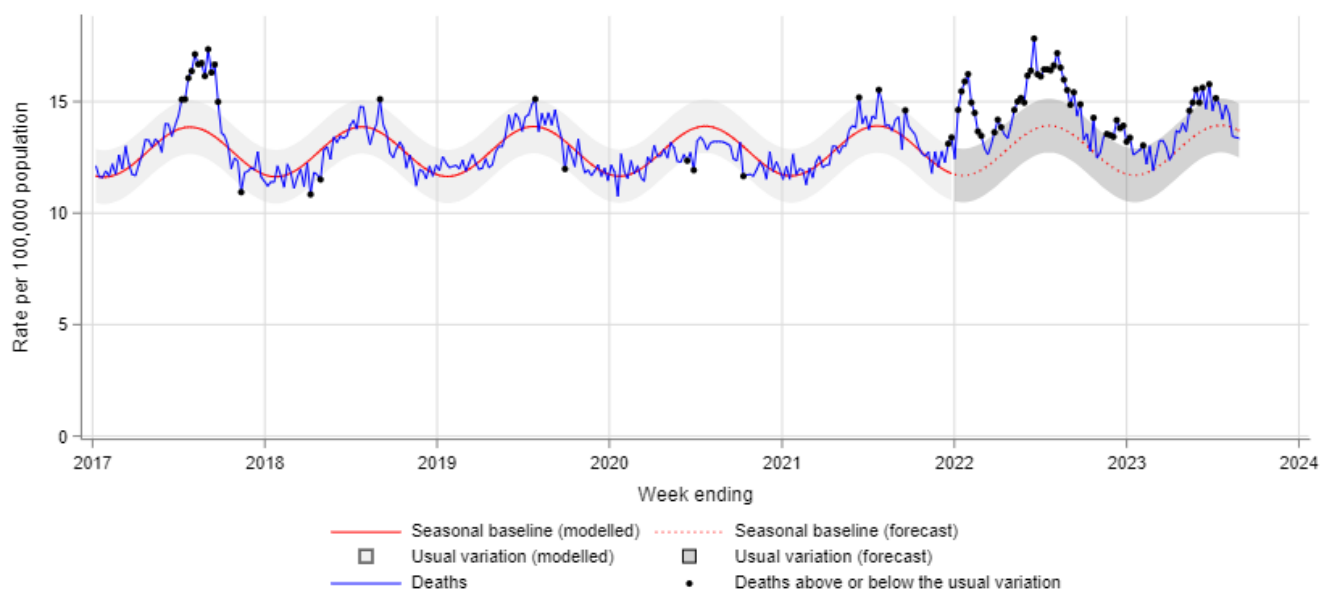
## Death surveillance

### 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 within the usual variation.

**Figure 4. All-cause death rate per 100,000 population, all ages, 2017 to 27 August 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 23 July 2023 to 27 August 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 39, ending 30 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.

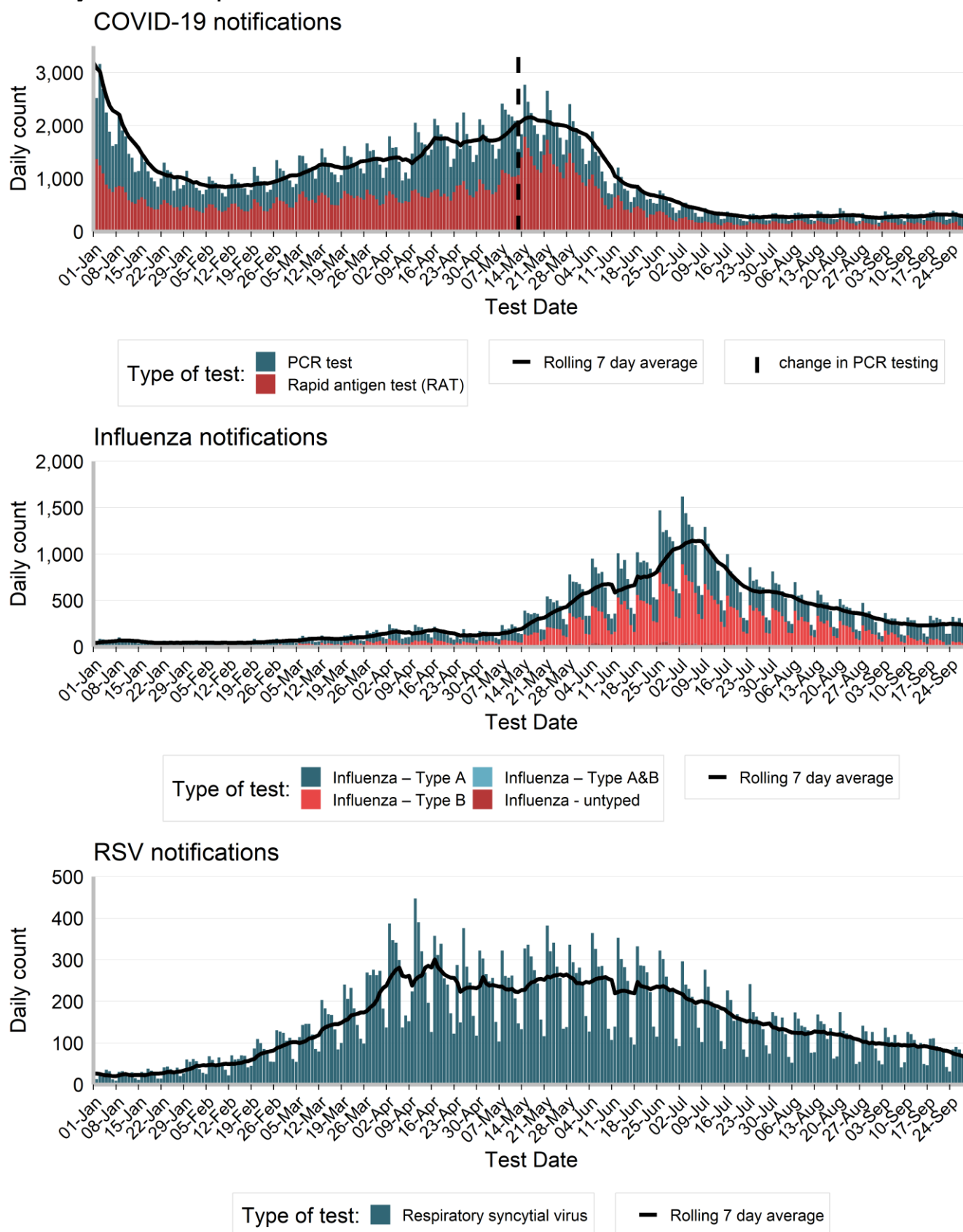
**Interpretation:** COVID-19 notifications declined by 16.5% in the past week with decreases observed across all age-groups. A small decline (-6.8%) was observed for influenza and RSV notifications decreased by 19.6%. The year-to-date distribution of COVID-19, influenza and RSV across age-groups and Local Health Districts remains unchanged.

**Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the week ending 30 September 2023.**

	COVID		Influenza		RSV	
	Week ending 30 September 2023	Year to Date	Week ending 30 September 2023	Year to Date	Week ending 30 September 2023	Year to Date
Gender						
Female	1,074	158,364(58%)	827	44,656(51%)	240	21,397(52%)
Male	775	115,175(42%)	754	43,604(49%)	214	19,760(48%)
Age group (years)						
0-4	119	9,547(3%)	195	12,114(14%)	201	21,947(53%)
5-9	34	8,452(3%)	214	18,565(21%)	30	2,293(6%)
10-19	97	22,235(8%)	252	17,348(20%)	34	1,934(5%)
20-29	171	30,673(11%)	200	7,170(8%)	15	1,500(4%)
30-39	216	40,914(15%)	220	11,397(13%)	23	1,940(5%)
40-49	222	40,013(15%)	158	9,105(10%)	21	1,506(4%)
50-59	257	37,646(14%)	105	4,816(5%)	24	2,067(5%)
60-69	254	34,385(13%)	82	3,508(4%)	34	2,458(6%)
70-79	228	26,121(10%)	71	2,474(3%)	30	2,493(6%)
80-89	173	16,758(6%)	58	1,383(2%)	30	2,114(5%)
90+	90	7,079(3%)	26	387(0%)	13	910(2%)
Local Health District of residence						
Central Coast	92	12,971(5%)	41	2,794(3%)	24	1,945(5%)
Far West	15	799(0%)	11	181(0%)	0	208(1%)
Hunter New England	154	35,113(13%)	54	6,636(8%)	25	3,654(9%)
Illawarra Shoalhaven	102	17,212(6%)	99	4,339(5%)	29	2,065(5%)
Mid North Coast	42	6,185(2%)	7	2,005(2%)	13	743(2%)
Murrumbidgee	59	8,544(3%)	60	2,909(3%)	14	1,949(5%)
Nepean Blue Mountains	92	13,557(5%)	74	5,402(6%)	12	2,389(6%)
Northern NSW	54	7,851(3%)	24	3,107(4%)	20	903(2%)
Northern Sydney	262	33,507(12%)	213	11,025(12%)	70	5,459(13%)
South Eastern Sydney	212	29,249(11%)	162	7,660(9%)	72	3,953(10%)
South Western Sydney	237	28,861(11%)	306	13,843(16%)	52	5,768(14%)
Southern NSW	40	7,266(3%)	21	1,530(2%)	10	842(2%)
Sydney	131	22,835(8%)	108	5,618(6%)	36	2,647(6%)
Western NSW	64	10,880(4%)	39	2,256(3%)	4	1,723(4%)
Western Sydney	302	36,114(13%)	361	18,665(21%)	74	6,803(17%)
Aboriginal status						
Aboriginal and/or Torres Strait Islander	56	8,822(3%)	26	3,057(3%)	8	1,447(4%)
Not Aboriginal or Torres Strait Islander	1,354	201,458(74%)	921	46,476(53%)	246	19,893(48%)
Not Stated / Unknown	443	63,586(23%)	634	38,789(44%)	201	19,851(48%)
<b>Total</b>	<b>1,853</b>	<b>273,866(100%)</b>	<b>1,581</b>	<b>88,322(100%)</b>	<b>455</b>	<b>41,191(100%)</b>

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

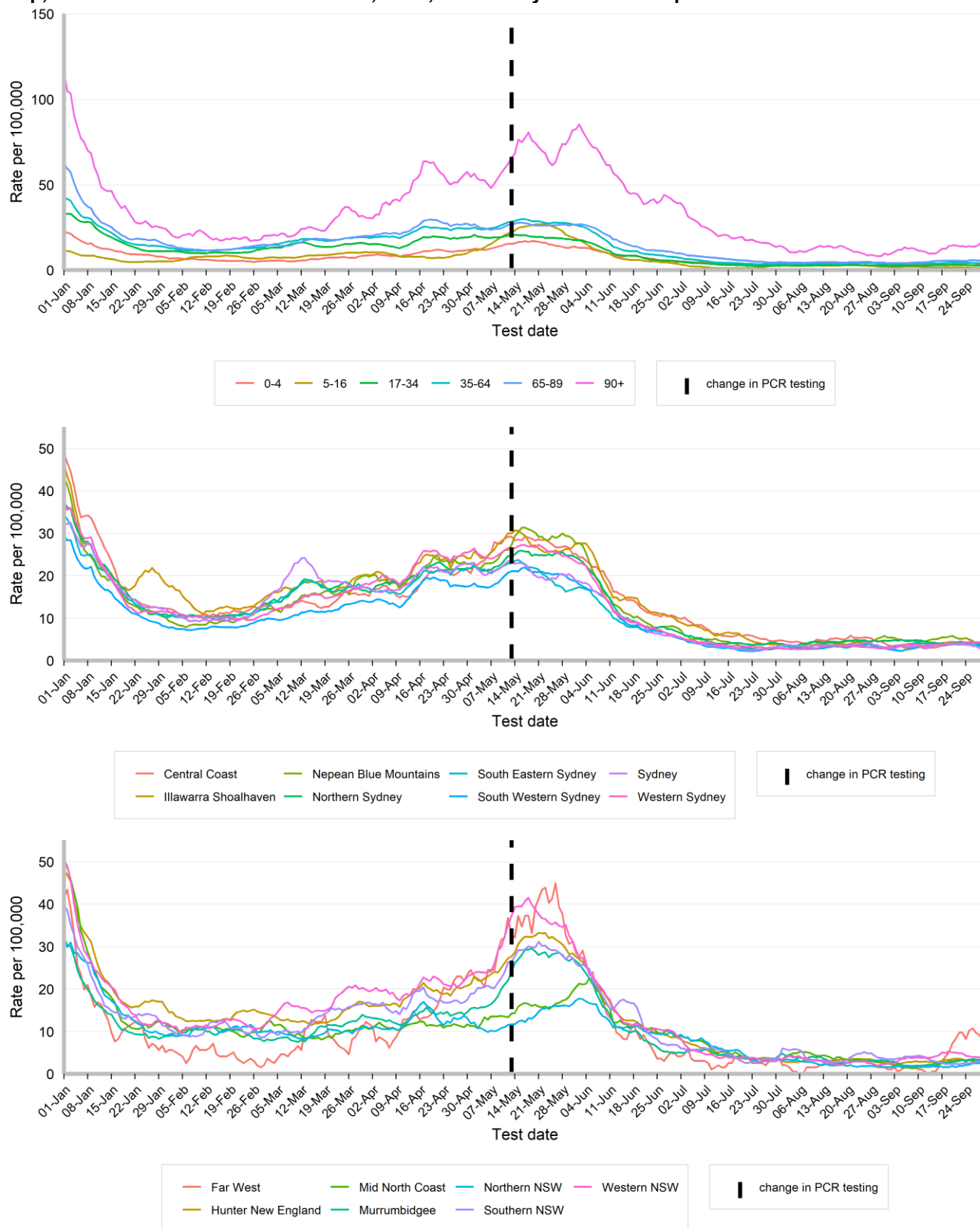
Figure 5. People notified with COVID-19, Influenza and RSV, by date of test and type of test performed, NSW, 01 January 2023 to 30 September 2023.



## Rates of COVID-19 notifications per 100,000 population

**Interpretation:** COVID-19 notification rates are gradually increasing in persons aged 65-years and older, with the highest rates continuing to be for those 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 30 September 2023.**

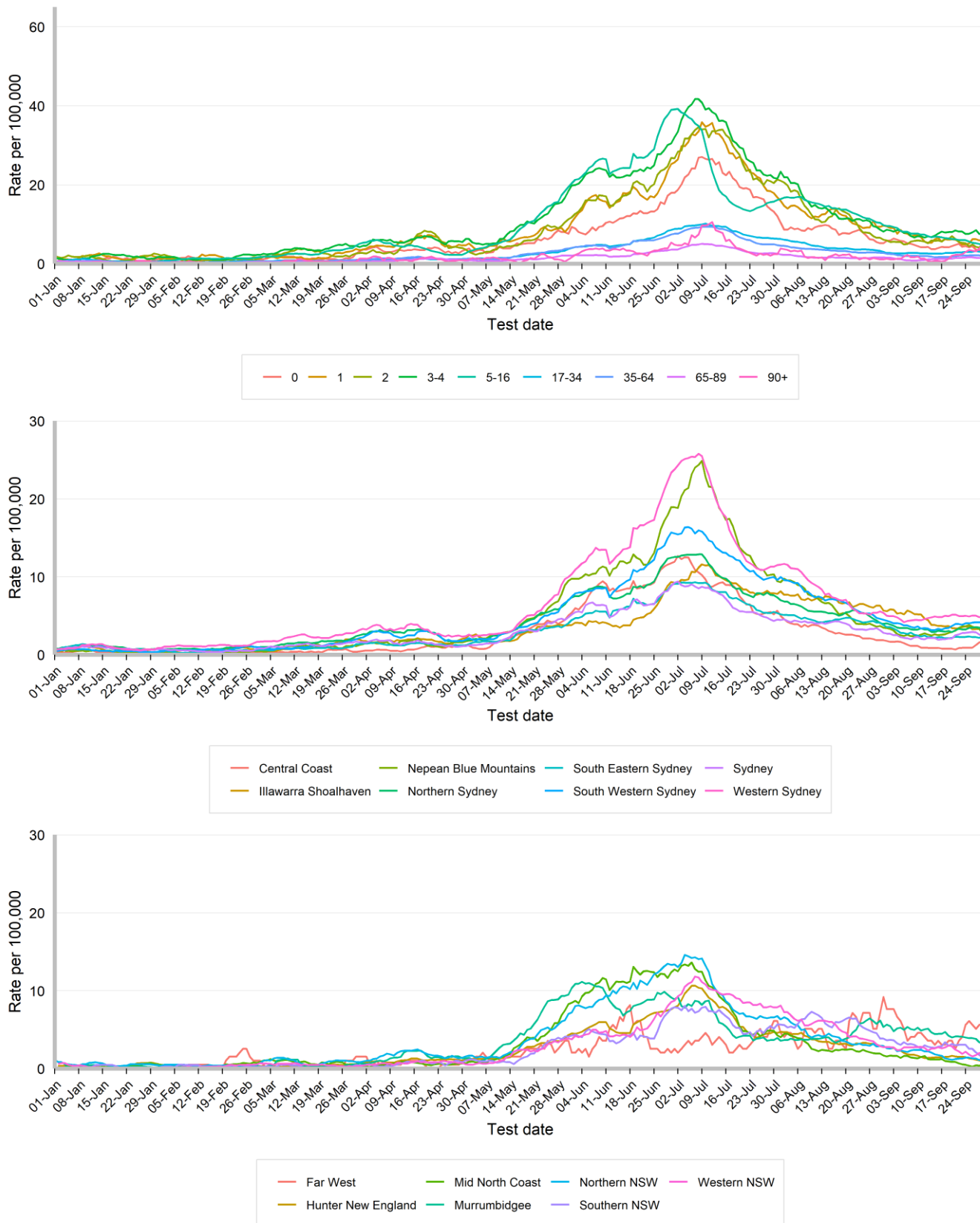




### Rates of influenza notifications per 100,000 population

**Interpretation:** Trends in influenza notification rates varied across age-groups and Local Health Districts in the past week. Rates are increasing in those aged 90 years and older.

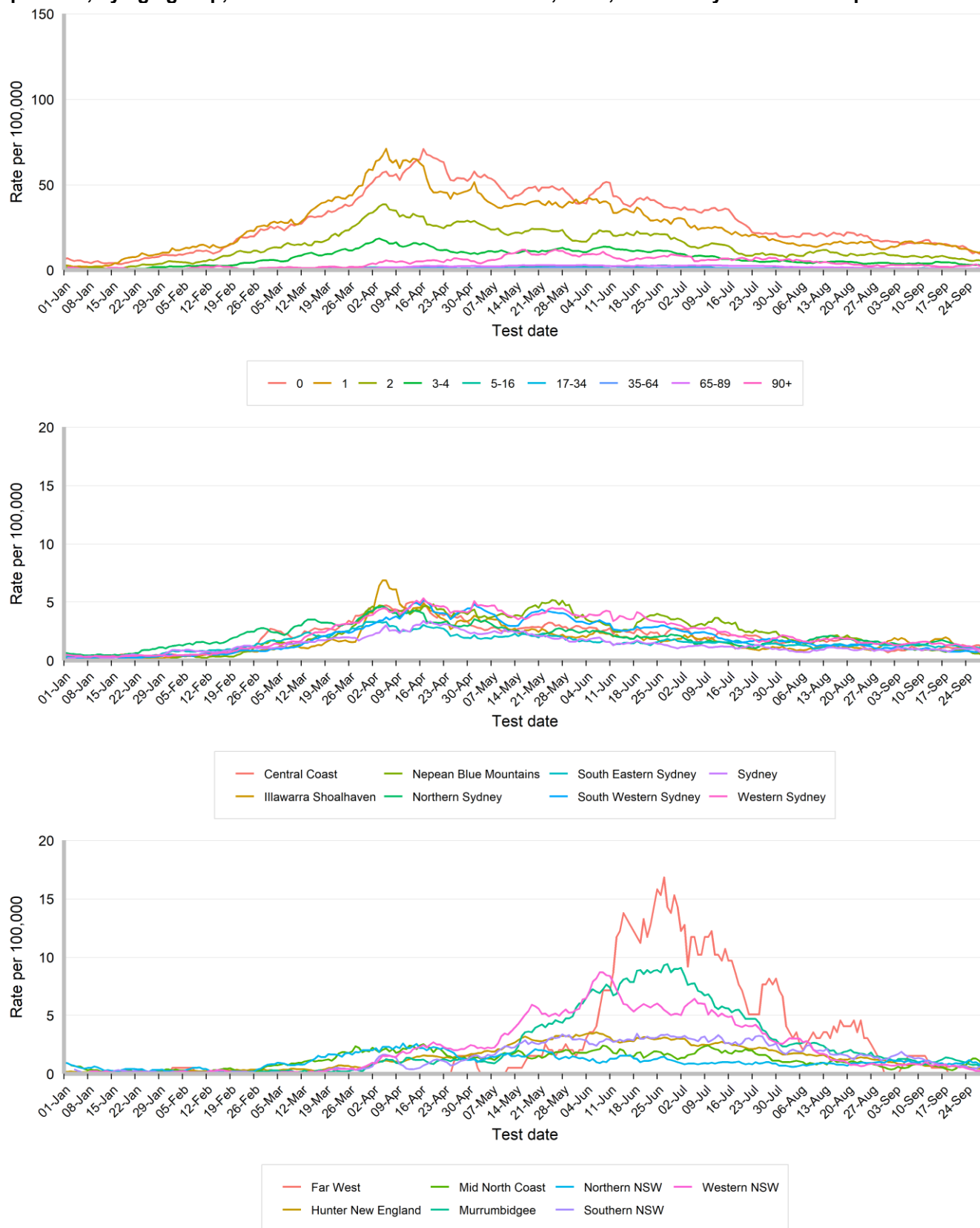
**Figure 7. Daily seven-day rolling average rate of influenza notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 January 2023 to 30 September 2023.**



## Rates of respiratory syncytial virus notifications per 100,000 population

**Interpretation:** RSV notification rates are stable or declining across all ages and Local Health Districts and approaching pre-season levels.

**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 30 September 2023.**



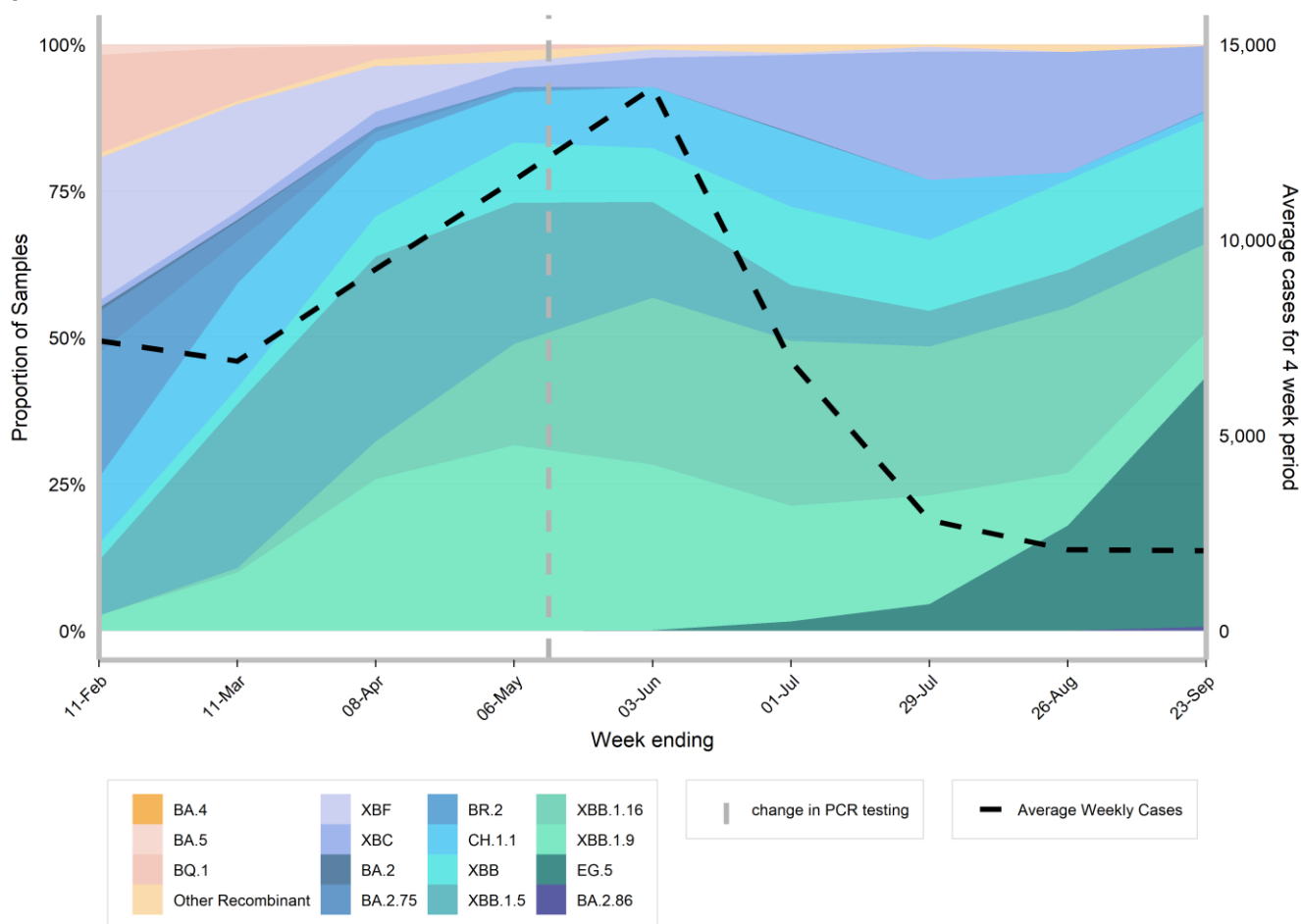


## COVID-19 Whole Genome Sequencing

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:** The proportion of samples identified with the EG.5 lineage is increasing. BA.2.86 has been detected in multiple countries with the first Australian case identified in Western Australia in mid-September 2023. Four cases have been detected in NSW since 15 September 2023.

**Figure 9. Estimated distribution of COVID-19 sub-lineages in the community, 01 January 2023 to 23 September 2023.**



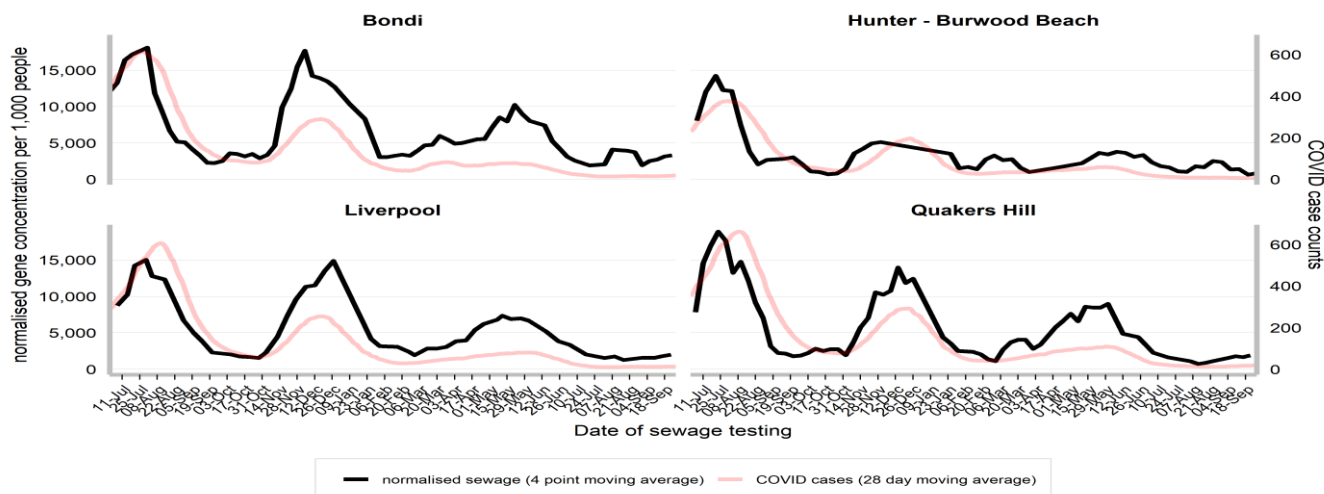
## Other surveillance indicators

### COVID-19 Sewage surveillance program

Trends are presented for Sydney Bondi, Quakers Hill, Liverpool and Burwood Beach sewage catchments from 5 February 2022 to the week ending 24 September 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 are gradually increasing in Bondi, Liverpool and Quakers Hill, consistent with recent increases in other COVID-19 indicators.

**Figure 10. Gene concentration, per 1,000 people in each sewage catchment, 1 July 2022 to 27 September 2023.**

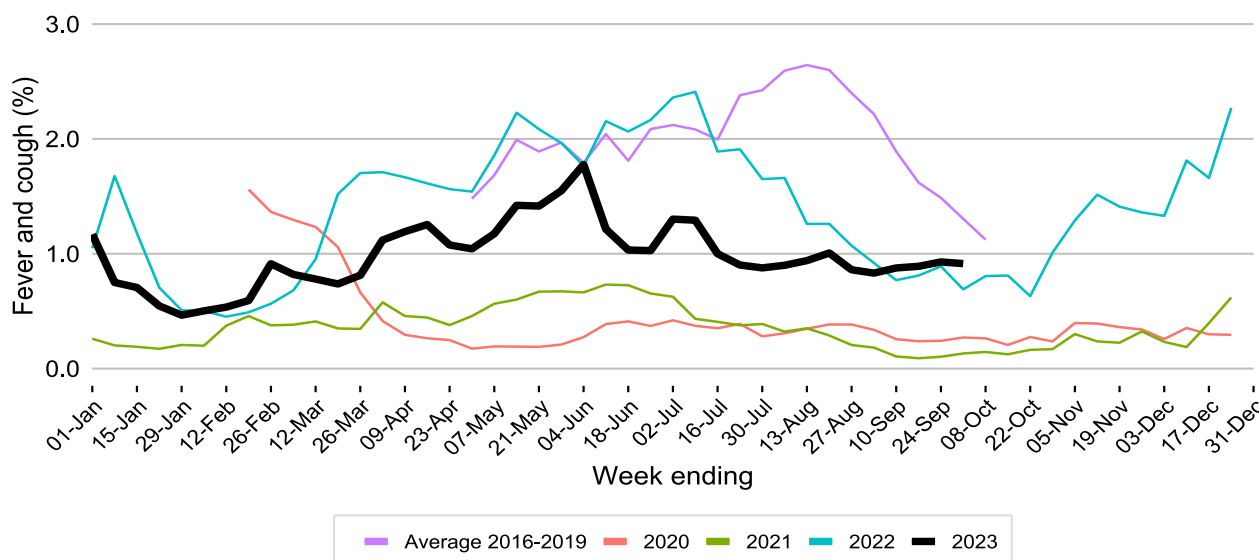


## FluTracking and NSW sentinel laboratory network

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 participants reporting fever and cough is stable and comparable to the same time in 2022. As cough and fever are associated with many acute viral respiratory illnesses, caution is required in attributing the data to influenza alone.

**Figure 11. Proportion of FluTracking participants reporting influenza-like illness, NSW, 1 January to 01 October 2023.**

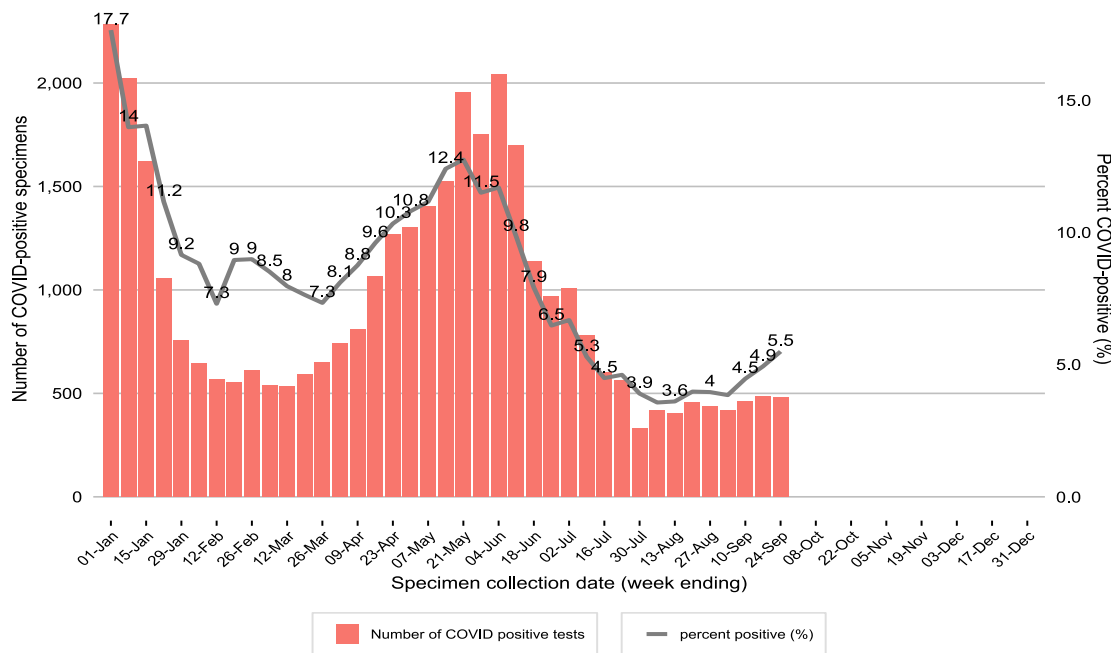


Epidemiological week 39, ending 30 September 2023

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.

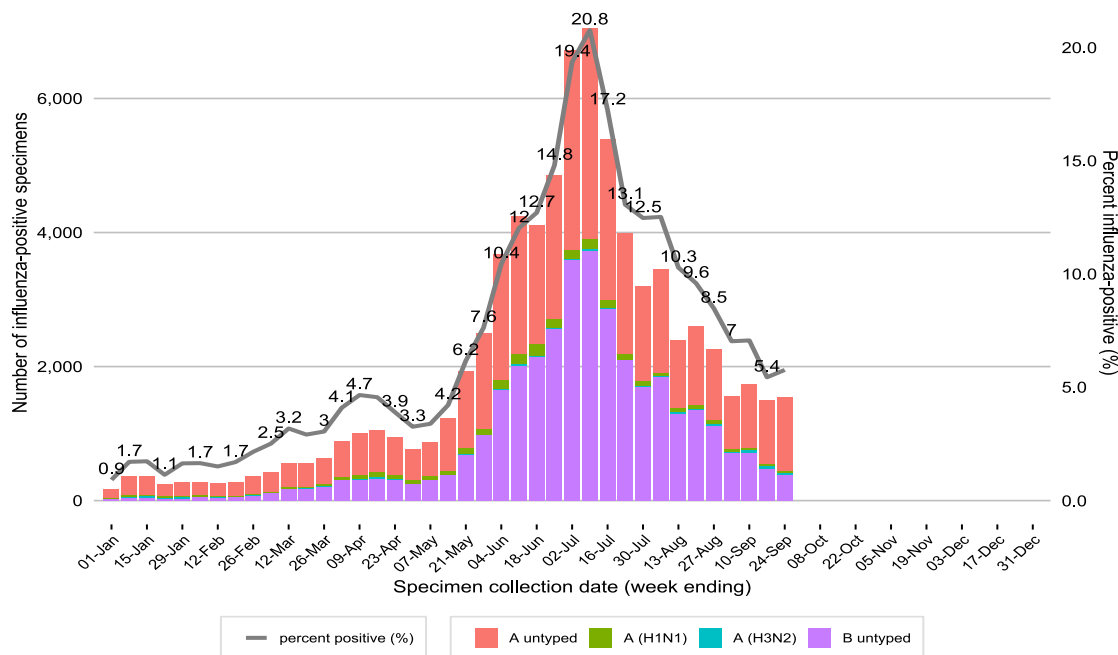
**Interpretation:** The number of COVID-19 tests reported declined by 62% and by 26% for other respiratory viruses in the past week. Given the uncertainty this introduces to estimates, data have not been updated from the week ending 24 September 2023.

**Figure 12. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 January 2023 to 24 September 2023\*.**



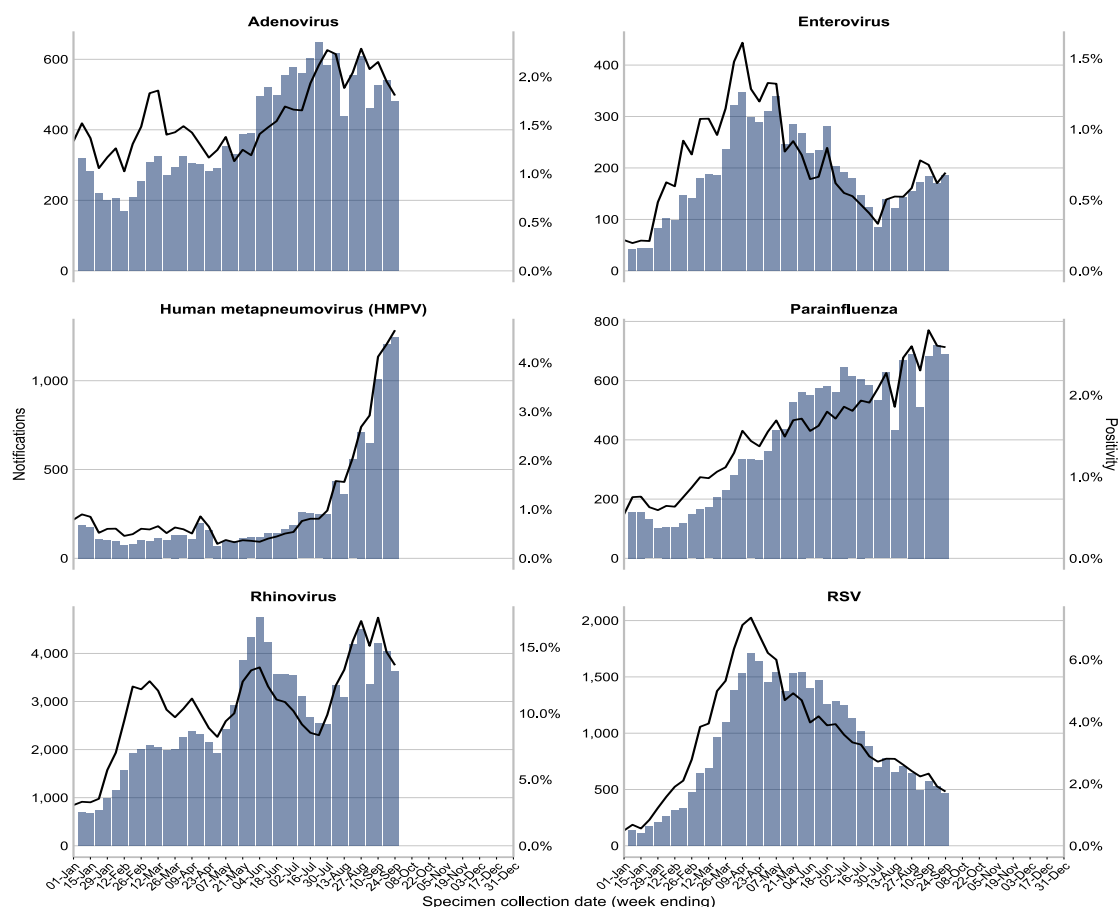
\*This figure has not been updated this week due to declines in testing and delays in data receipt due to the public holiday in NSW.

**Figure 13. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 January 2023 to 24 September 2023\*.**



\*This figure has not been updated this week due to declines in testing and delays in data receipt due to the public holiday in NSW.

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 24 September 2023.\*



\*This figure has not been updated this week due to declines in testing and delays in data receipt due to the public holiday in NSW.

Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 24 September 2023.\*

	Week ending				Year to date n
	03 September n(% pos)	10 September n(% pos)	17 September n(% pos)	24 September n(% pos)	
Influenza	1,560 (7.0%)	1,728 (7.1%)	1,503 (5.4%)	1,539 (5.8%)	76,157
Adenovirus	461 (2.1%)	526 (2.2%)	539 (2.0%)	482 (1.8%)	15,539
Parainfluenza	511 (2.3%)	684 (2.8%)	720 (2.6%)	691 (2.6%)	15,774
Respiratory syncytial virus (RSV)	496 (2.2%)	569 (2.3%)	529 (1.9%)	467 (1.8%)	34,432
Rhinovirus	3,349 (15.1%)	4,212 (17.2%)	4,042 (14.6%)	3,639 (13.6%)	103,901
Human metapneumovirus (HMPV)	648 (2.9%)	1,008 (4.1%)	1,208 (4.4%)	1,245 (4.7%)	10,556
Enterovirus	173 (0.8%)	183 (0.7%)	171 (0.6%)	185 (0.7%)	7,173
<b>Number of PCR tests conducted</b>	<b>22,181</b>	<b>24,444</b>	<b>27,612</b>	<b>26,683</b>	<b>968,326</b>
SARS-CoV-2	416 (3.8%)	460 (4.5%)	488 (4.9%)	483 (5.5%)	36,944
<b>Number of COVID PCR tests</b>	<b>10,813</b>	<b>10,296</b>	<b>9,890</b>	<b>8,787</b>	<b>436,697</b>

Recent data is subject to change. For the week ending 24 September 2023, 10 out of 13 sentinel laboratories provided PCR testing data related to influenza and 3 out 4 sentinel laboratories provided PCR data related to COVID.

\*This table has not been updated this week due to declines in testing and delays in data receipt due to the public holiday in NSW.