

## NSW Respiratory Surveillance Report - fortnight ending 16 December 2023

**COVID-19 activity is at high levels and continuing to increase. Influenza activity is low although above inter-seasonal levels. RSV activity is low.**

### Summary

COVID-19 activity continued to increase across all indicators in the past fortnight, particularly in young children and adults aged 17-49 years. COVID-19 polymerase chain reaction (PCR) test positivity was 13.1%. There was an increase in influenza notifications in adolescents and young adults. Influenza PCR test positivity was 5.2%. RSV notifications increased in children aged 0–4-years, however other indicators such as ED presentations were stable and PCR test positivity was 1.6%.

### 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. Registration of positive COVID-19 rapid antigen tests (RAT) in NSW ceased on 30 September 2023 and notifications now only reflect cases referred by a doctor for PCR. NSW Health also monitors COVID-19 [outbreaks in residential aged-care facilities](#) which are published by the Australian Government and COVID-19 antiviral prescriptions dispensed in NSW.

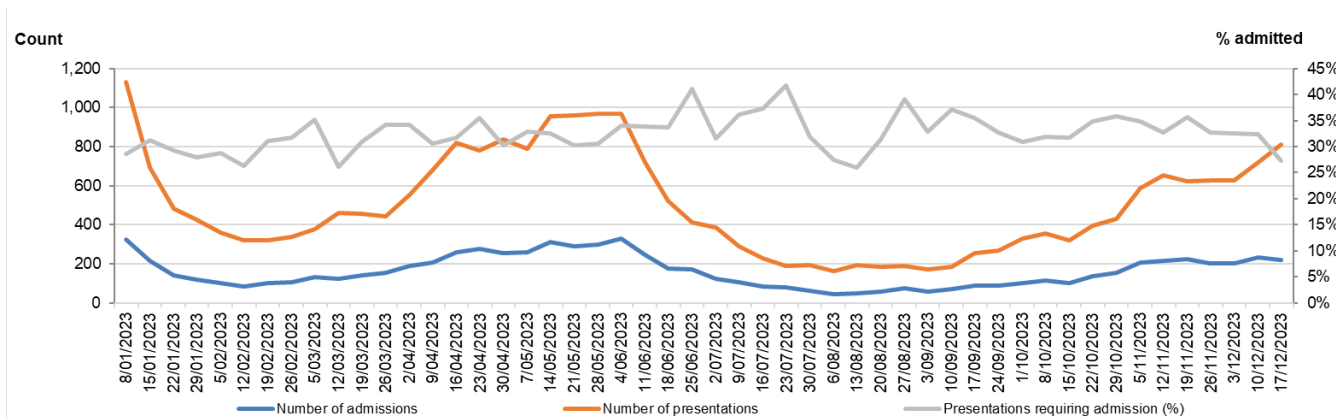
The data source for this report updates as new information becomes available. Therefore, this report cannot be directly compared to previous versions of the NSW Respiratory Surveillance Report or to previous reporting periods. For additional information on the data sources and methods presented within this report please refer to the [COVID19 surveillance report data sources and methodology](#).

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

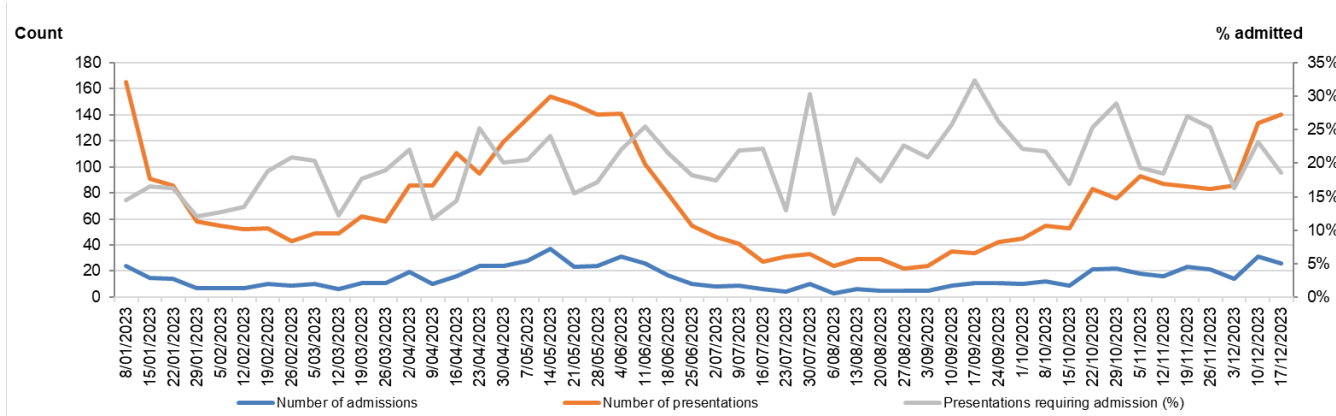
The PHREDSS system provides daily information about presentations to NSW public hospital emergency departments (EDs) and subsequent admission to hospital categorised by symptom profile. Here we report on COVID-19, influenza-like illness (ILI) and bronchiolitis (which is mainly caused by respiratory syncytial virus, RSV). These PHREDSS indicators, particularly the number of people admitted to hospital, are useful for monitoring the severity of illness and impact on the health system.

**Interpretation:** ED presentations for COVID-19 continued to increase in the past fortnight, particularly in young children (Figure 1b), and in people aged 17-34 (Figure 1c) and 65-years and older (Figure 1d). Overall ILI presentations were stable. Bronchiolitis presentations in children aged 0– 4-years were stable.

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



**Figure 1b. ‘COVID-19’ weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, children aged 0-4 years.**



**Figure 1c. ‘COVID-19’ weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons aged 17-34 years.**

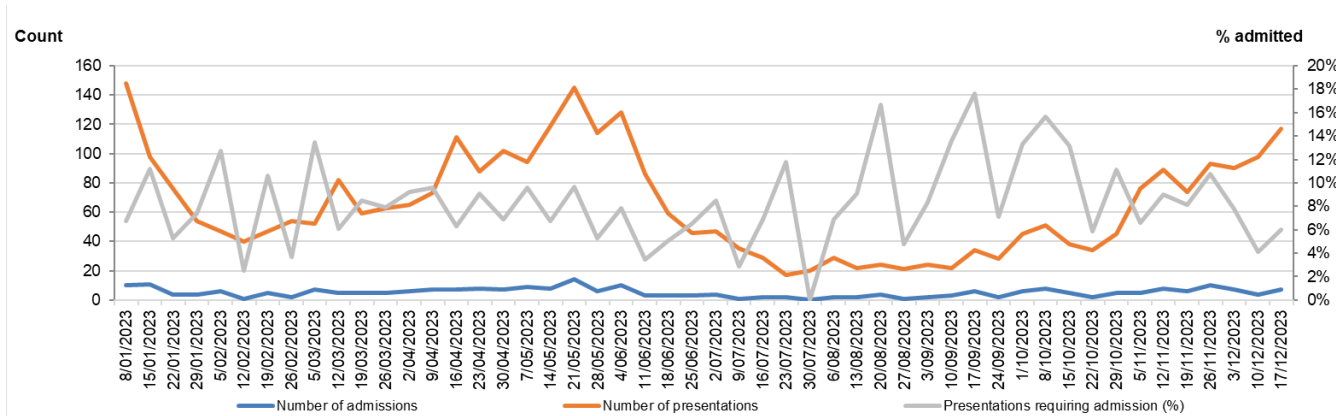


Figure 1d. 'COVID-19' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons aged 65+ years.

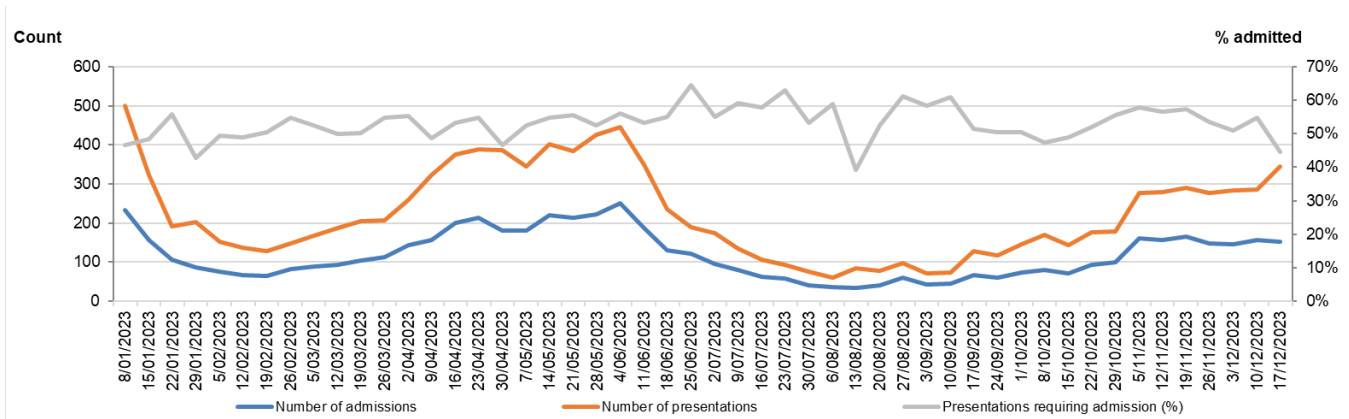


Figure 2. 'Influenza-like illness' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons of all ages.

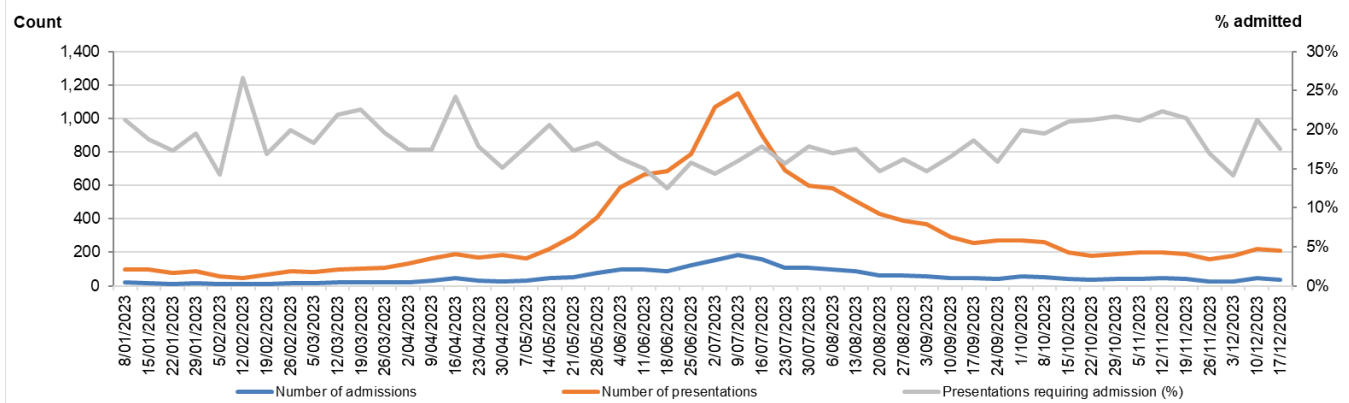
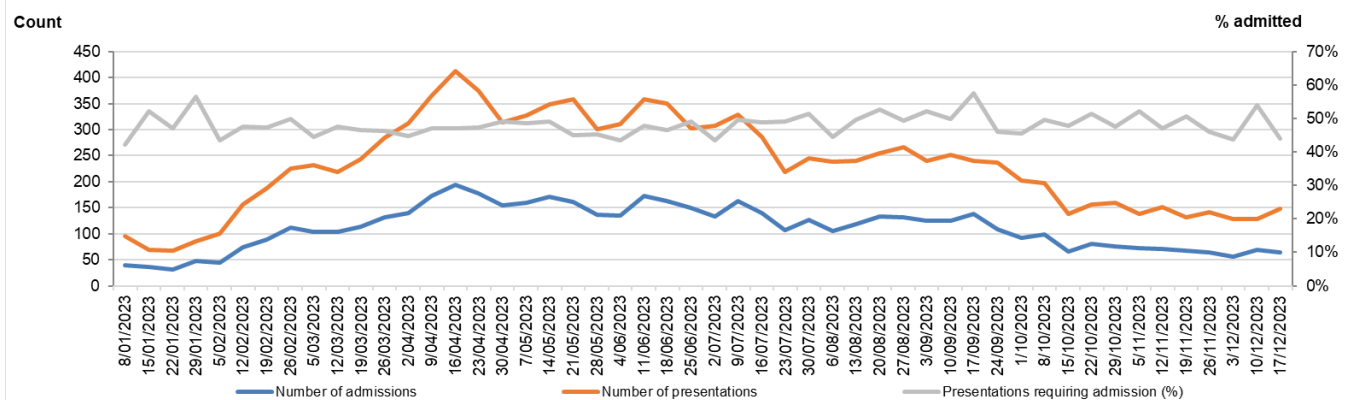


Figure 3. Bronchiolitis weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, children aged 0-4 years.



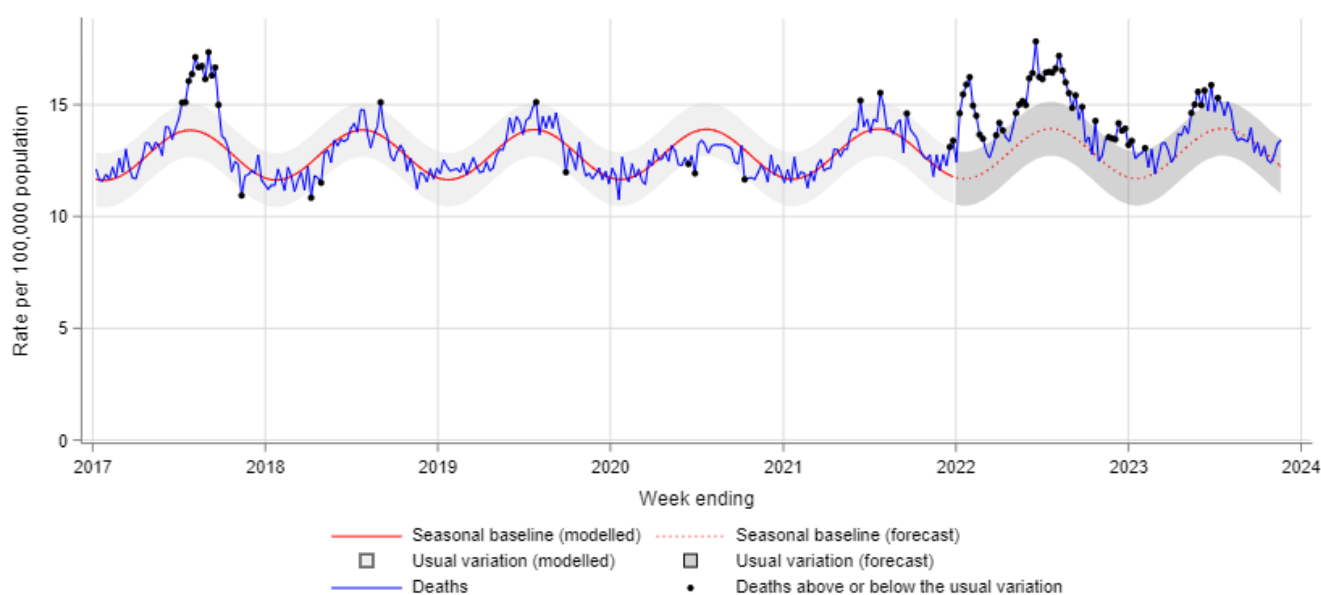
## Death surveillance

### 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 19 November 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 15 October 2023 to 19 November 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 weeks 49 &amp; 50, ending 16 December 2023

## Notifications of COVID-19, influenza and RSV

Notification data is obtained from laboratory tests for infections. This indicator provides information about community infection.

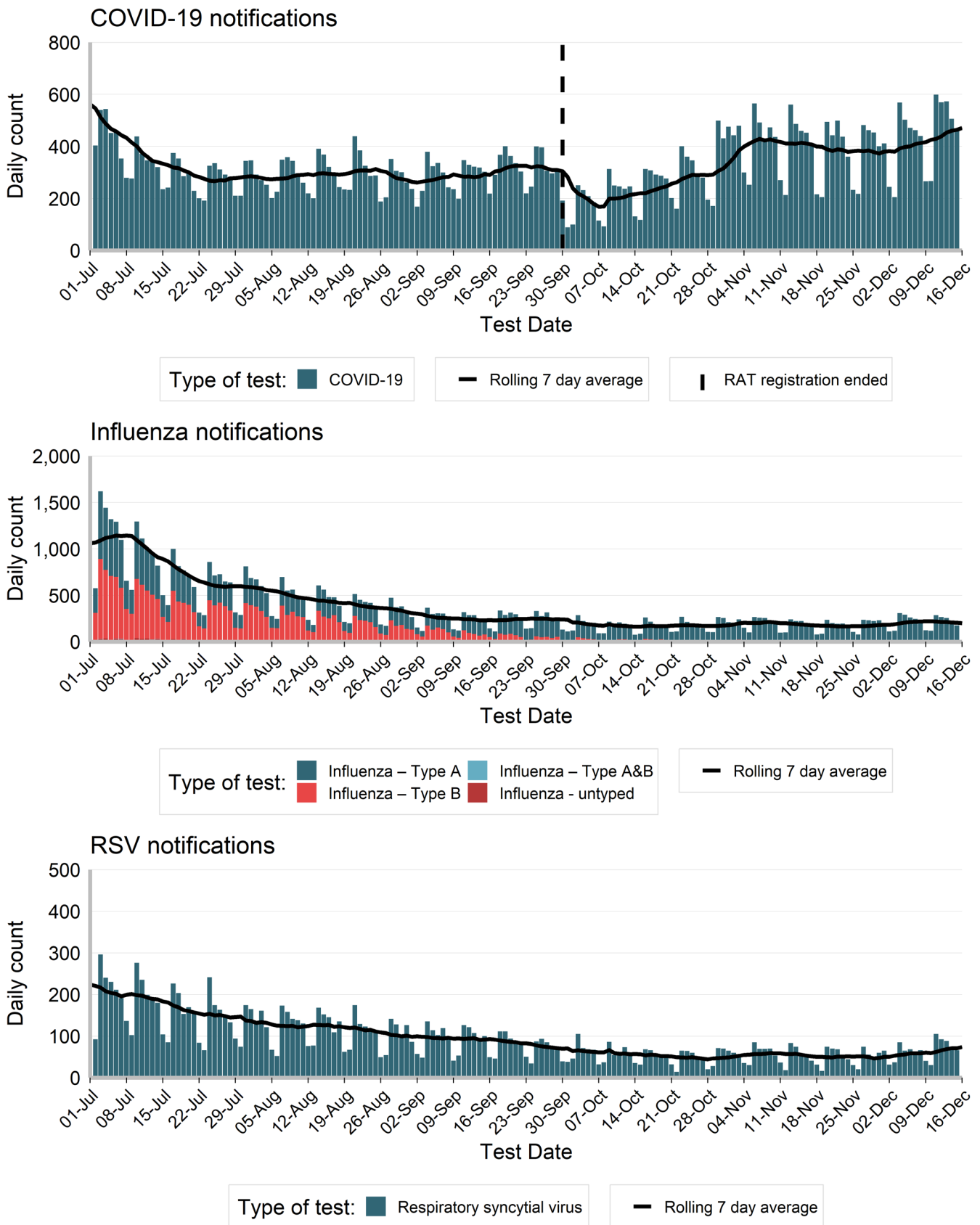
**Interpretation:** Notifications for COVID-19, influenza and RSV all increased in the past fortnight. The largest COVID-19 increases were in people aged 0-4 and 20-49 years. For influenza the largest increases were in those aged 10-29 years. The increase in RSV occurred in children aged 0-4 years.

**Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the fortnight ending 16 December 2023.**

	COVID		Influenza		RSV	
	Fortnight ending 16 December 2023	Year to Date	Fortnight ending 16 December 2023	Year to Date	Fortnight ending 16 December 2023	Year to Date
Gender						
Female	3,499	173,690(58%)	1,534	52,094(51%)	486	23,684(52%)
Male	2,709	126,761(42%)	1,415	50,501(49%)	451	21,812(48%)
Age group (years)						
0-4	540	11,818(4%)	302	13,809(13%)	528	24,112(53%)
5-9	101	8,940(3%)	326	20,275(20%)	45	2,482(5%)
10-19	306	23,664(8%)	553	19,580(19%)	39	2,144(5%)
20-29	543	32,920(11%)	382	8,997(9%)	21	1,659(4%)
30-39	703	43,828(15%)	368	13,287(13%)	44	2,182(5%)
40-49	648	42,669(14%)	280	10,509(10%)	47	1,713(4%)
50-59	669	40,405(13%)	237	5,898(6%)	46	2,296(5%)
60-69	695	37,282(12%)	220	4,528(4%)	70	2,774(6%)
70-79	854	29,817(10%)	171	3,296(3%)	49	2,784(6%)
80-89	775	20,484(7%)	84	1,884(2%)	33	2,337(5%)
90+	384	8,924(3%)	26	547(1%)	16	1,019(2%)
Local Health District of residence						
Central Coast	214	13,933(5%)	96	3,177(3%)	40	2,099(5%)
Far West	12	866(0%)	10	273(0%)	0	213(0%)
Hunter New England	436	36,965(12%)	153	7,238(7%)	68	3,982(9%)
Illawarra Shoalhaven	336	18,659(6%)	122	4,844(5%)	40	2,298(5%)
Mid North Coast	113	6,697(2%)	33	2,134(2%)	22	866(2%)
Murrumbidgee	122	9,427(3%)	69	3,254(3%)	10	2,047(4%)
Nepean Blue Mountains	320	15,034(5%)	114	6,068(6%)	53	2,593(6%)
Northern NSW	298	8,822(3%)	122	3,583(3%)	34	1,063(2%)
Northern Sydney	769	36,629(12%)	428	12,938(13%)	162	6,103(13%)
South Eastern Sydney	709	32,287(11%)	362	9,115(9%)	149	4,551(10%)
South Western Sydney	895	32,760(11%)	419	16,634(16%)	84	6,311(14%)
Southern NSW	102	7,741(3%)	57	1,818(2%)	7	903(2%)
Sydney	473	24,948(8%)	265	6,777(7%)	60	2,960(7%)
Western NSW	131	11,529(4%)	42	2,501(2%)	9	1,783(4%)
Western Sydney	1,256	41,355(14%)	652	21,904(21%)	197	7,607(17%)
Aboriginal status						
Aboriginal and/or Torres Strait Islander	149	9,409(3%)	76	3,436(3%)	28	1,572(3%)
Not Aboriginal or Torres Strait Islander	3,475	216,939(72%)	1,686	54,641(53%)	469	22,151(49%)
Not Stated / Unknown	2,586	74,450(25%)	1,187	44,583(43%)	441	21,807(48%)
<b>Total</b>	<b>6,210</b>	<b>300,798(100%)</b>	<b>2,949</b>	<b>102,660(100%)</b>	<b>938</b>	<b>45,530(100%)</b>

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

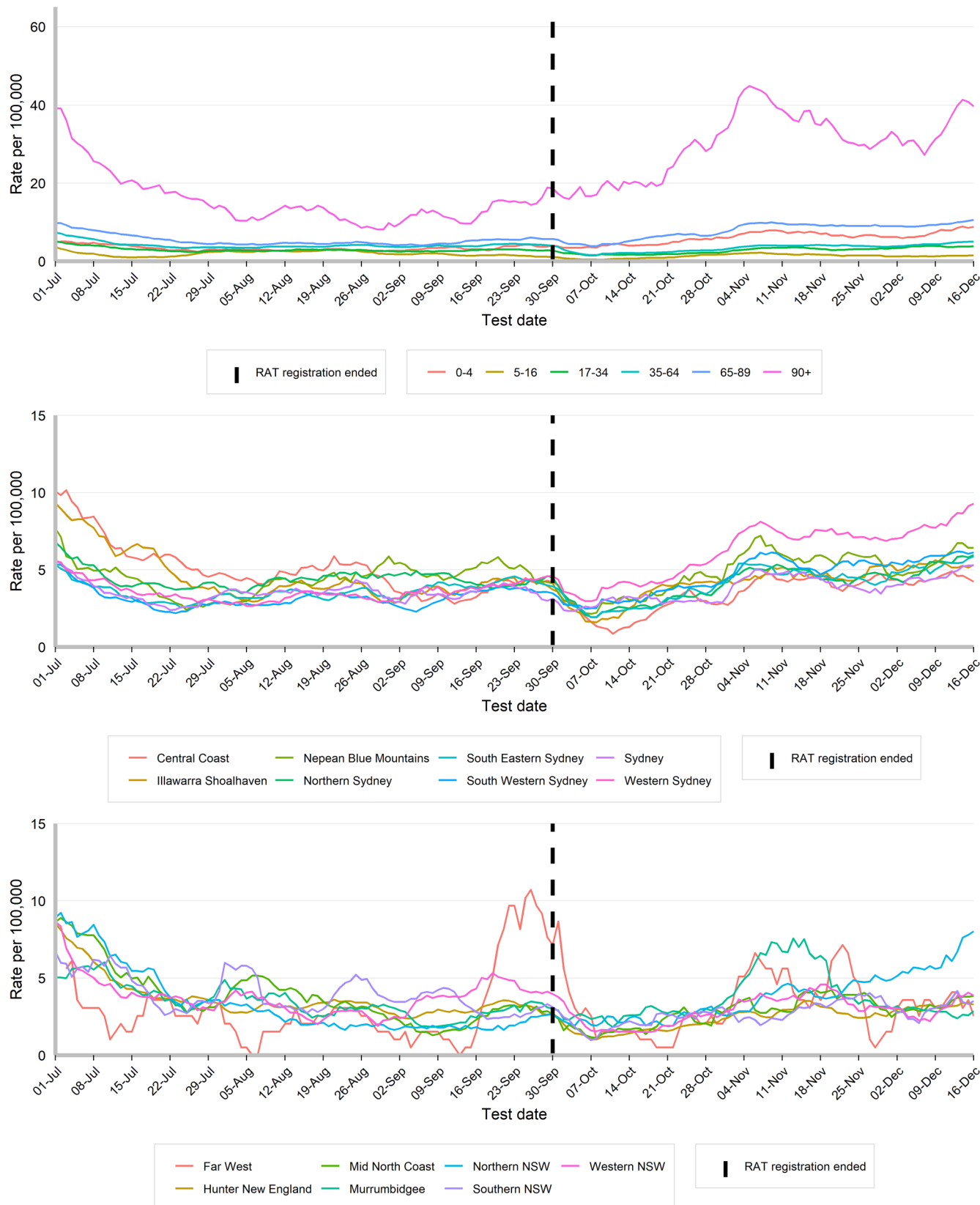
Figure 5. People notified with COVID-19, Influenza and RSV, by date of test and type of test performed, NSW, 01 July 2023 to 16 December 2023.



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

**Interpretation:** Changes in COVID-19 notification rates varied by age-group and Local Health District. Rates remain highest in young children and persons aged 65 years and older, likely reflecting healthcare seeking behaviour and testing patterns.

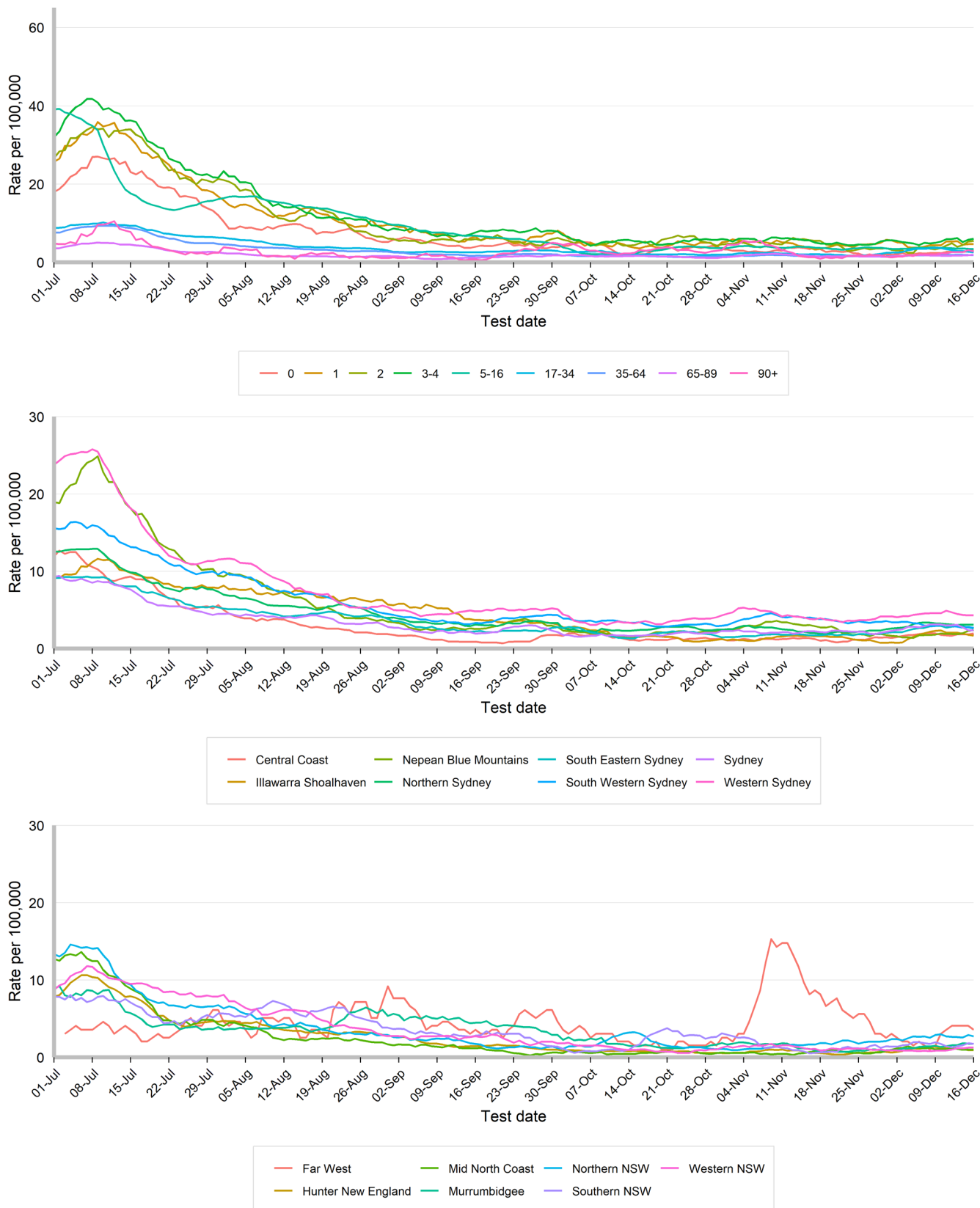
**Figure 6. Daily seven-day rolling average rate of COVID-19 notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 July 2023 to 16 December 2023.**



## Rates of influenza notifications per 100,000 population

**Interpretation:** Influenza notification rates varied by age-group and Local Health District however were stable overall.

**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 July 2023 to 16 December 2023.**

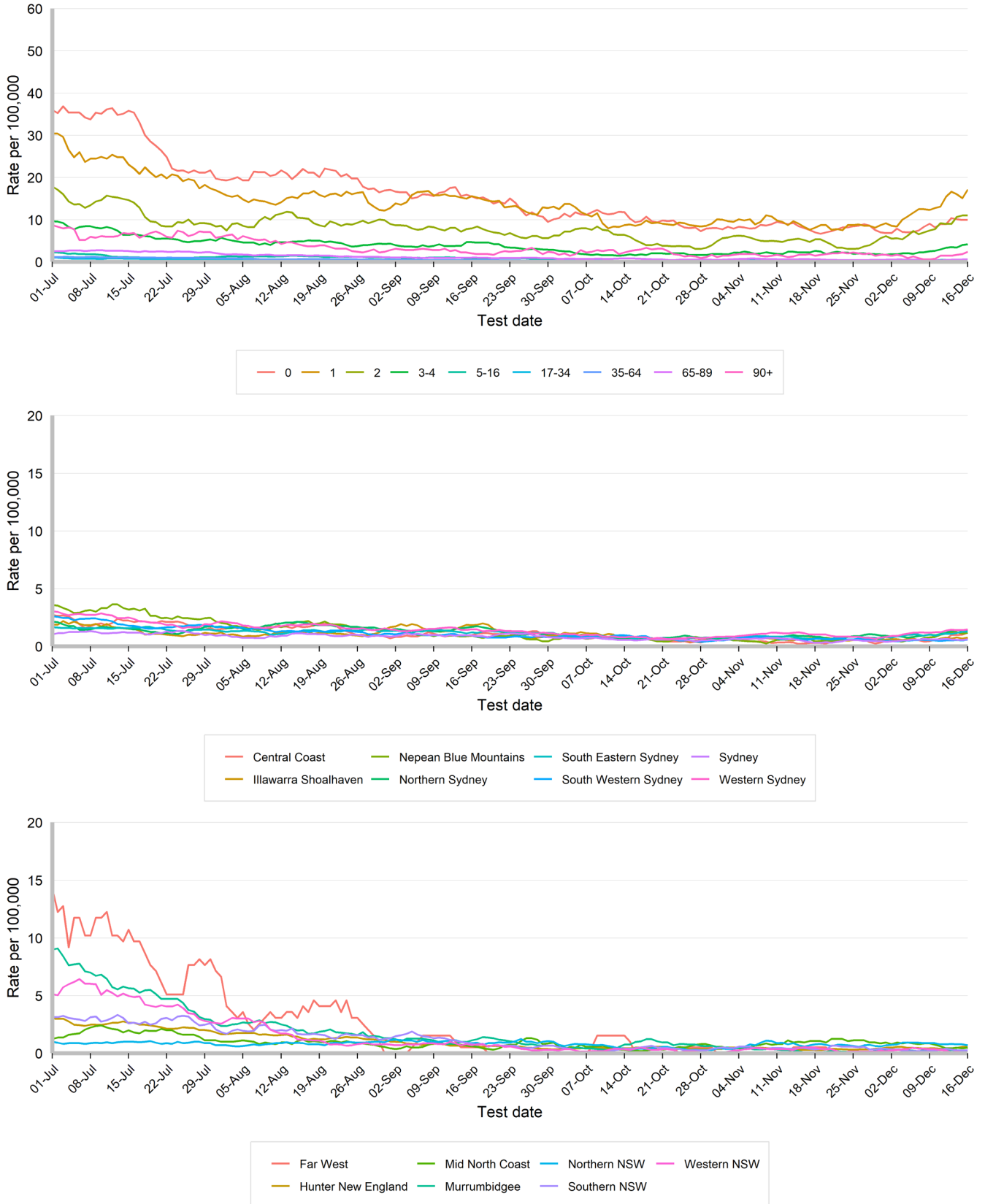




### Rates of respiratory syncytial virus notifications per 100,000 population

**Interpretation:** RSV notification rates increased in young children in the past fortnight, particularly in those aged 1 and 2 years.

**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 July 2023 to 16 December 2023.**

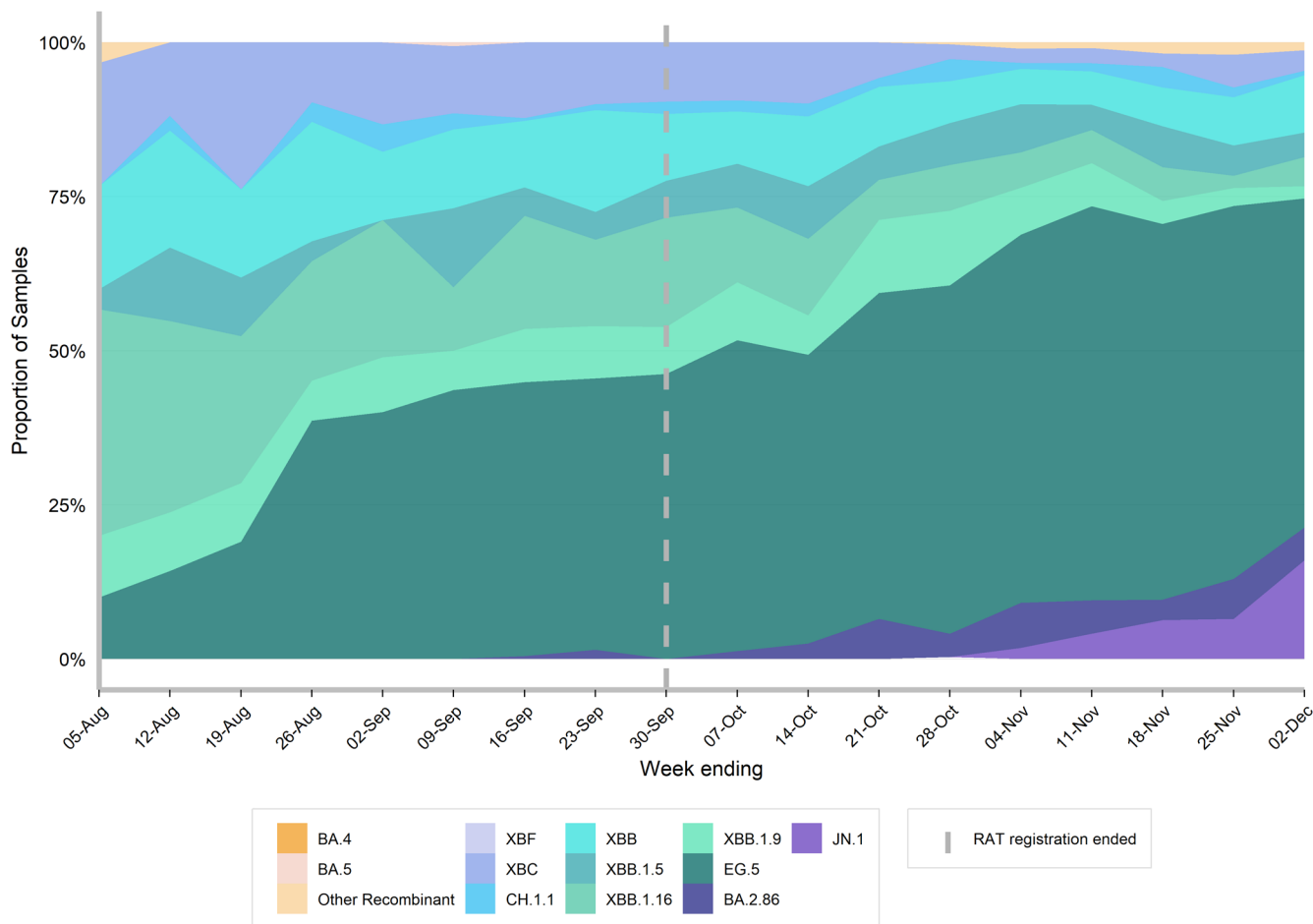


### COVID-19 Whole Genome Sequencing

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. There is a lag between the date a PCR test is taken and the date that the results of WGS are reported.

**Interpretation:** EG.5 continues to dominate circulating sub-lineages and the proportion sequenced as JN.1 is increasing.

**Figure 9. Estimated distribution of COVID-19 sub-lineages in the community, 05 August 2023 to 02 December 2023.**



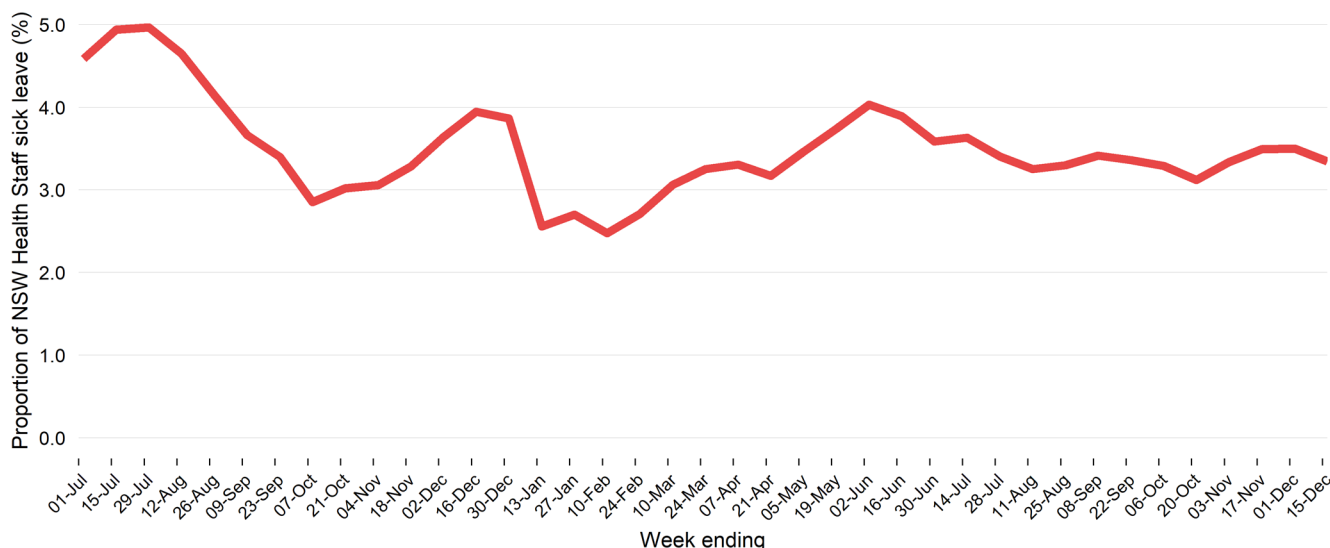
## Other surveillance indicators

### NSW Health Nursing Staff sick leave

NSW Health nursing staff absenteeism is a proxy indicator of illness patterns in the community and the impact of these on healthcare services. Nursing staff leave is used given it is a timelier representation of leave in each week. The data represent the proportion of full-time equivalent staff on sick leave for any reason.

**Interpretation:** Nursing staff sick leave is stable.

**Figure 10. Proportion of NSW Health full-time equivalent nursing staff on sick leave, 1 July 2022 to 17 December 2023.**

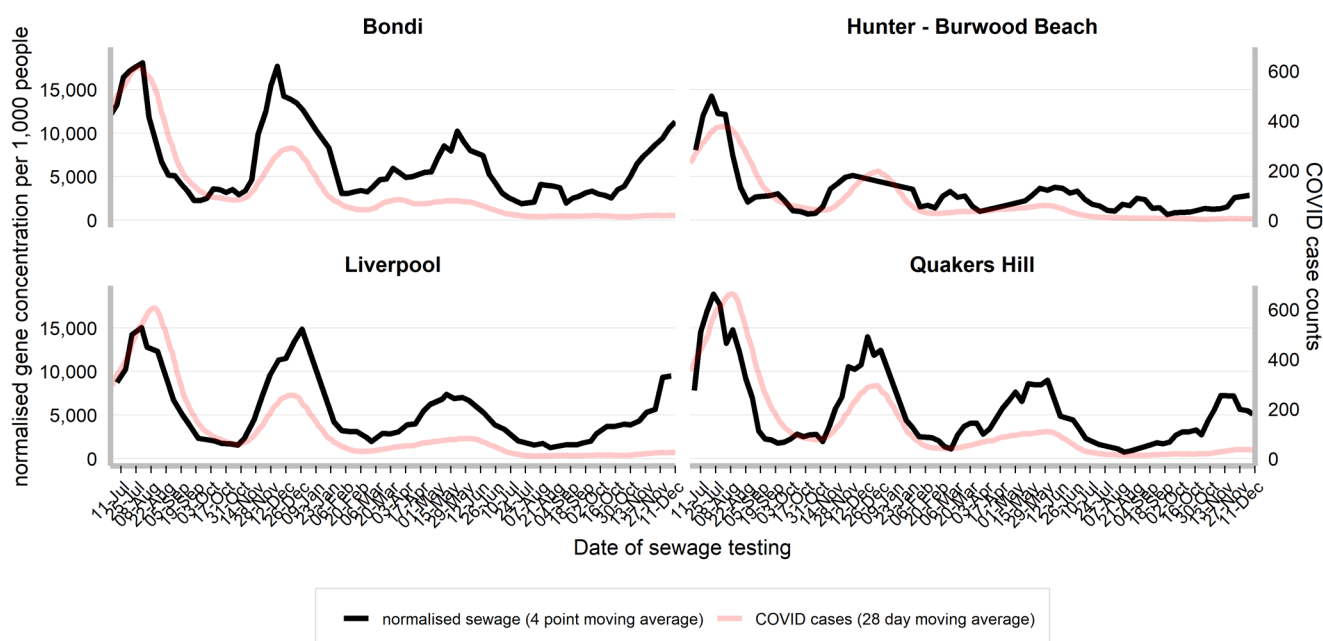


## COVID-19 Sewage surveillance program

Trends are presented for Sydney Bondi, Quakers Hills, Liverpool and Burwood Beach sewage catchments from 5 February 2022 to the week ending 11 December 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 continued to increase, particularly in Bondi and Liverpool. This indicates high levels of community transmission.

**Figure 11. Gene concentration, per 1,000 people in each sewage catchment, 1 July 2022 to 11 December 2023.**



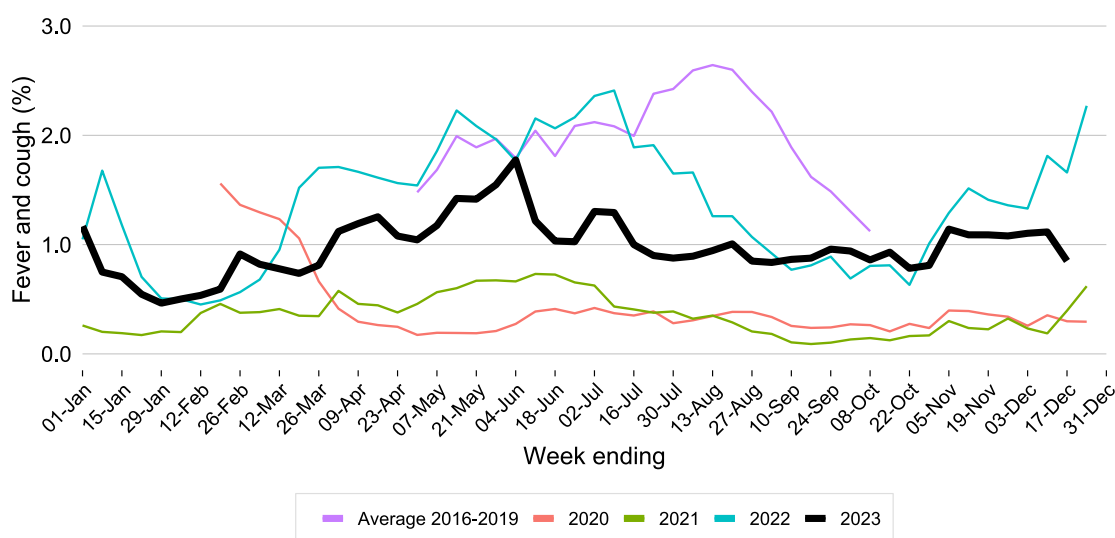
## FluTracking and NSW sentinel laboratory network

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/>

Please note over the summer period there will be a reduced sample size for FluTracking, as participants have been given the option to opt-out until April 2024.

**Interpretation:** There was a small decline the proportion of FluTracking participants reporting fever and cough in the past fortnight. Activity is persisting above 2020 and 2021 levels however is below the trend observed for the same period in 2022.

**Figure 12. Proportion of FluTracking participants reporting influenza-like illness, NSW, 1 January to 17 December 2023.**

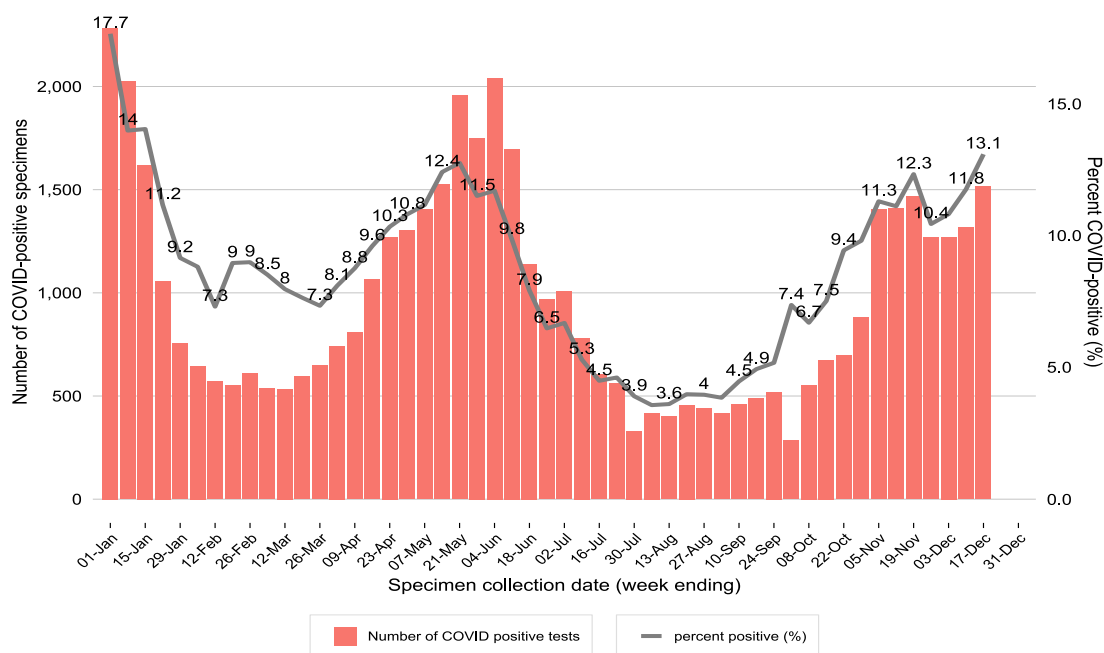


Epidemiological weeks 49 & 50, ending 16 December 2023

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:** PCR Test positivity for COVID-19 continues to increase. Influenza test positivity increased to 6.1% in the week ending 10 December before returning to 5.2% in the week ending 17 December (Table 2). There was a small increase in RSV test positivity (Table 2)

**Figure 13. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 January 2023 to 17 December 2023.**



**Figure 14. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 January 2023 to 17 December 2023.**

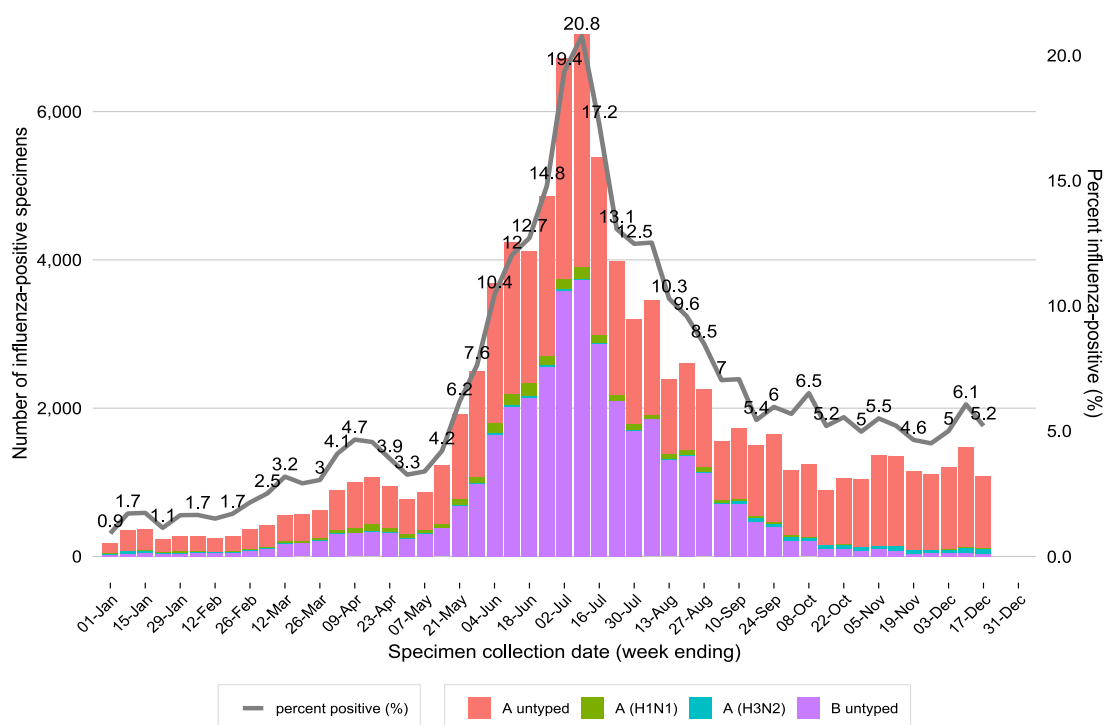


Figure 15. Number of positive PCR test results and proportion of tests positive for other respiratory viruses at sentinel NSW laboratories, 1 January 2023 to 17 December 2023.

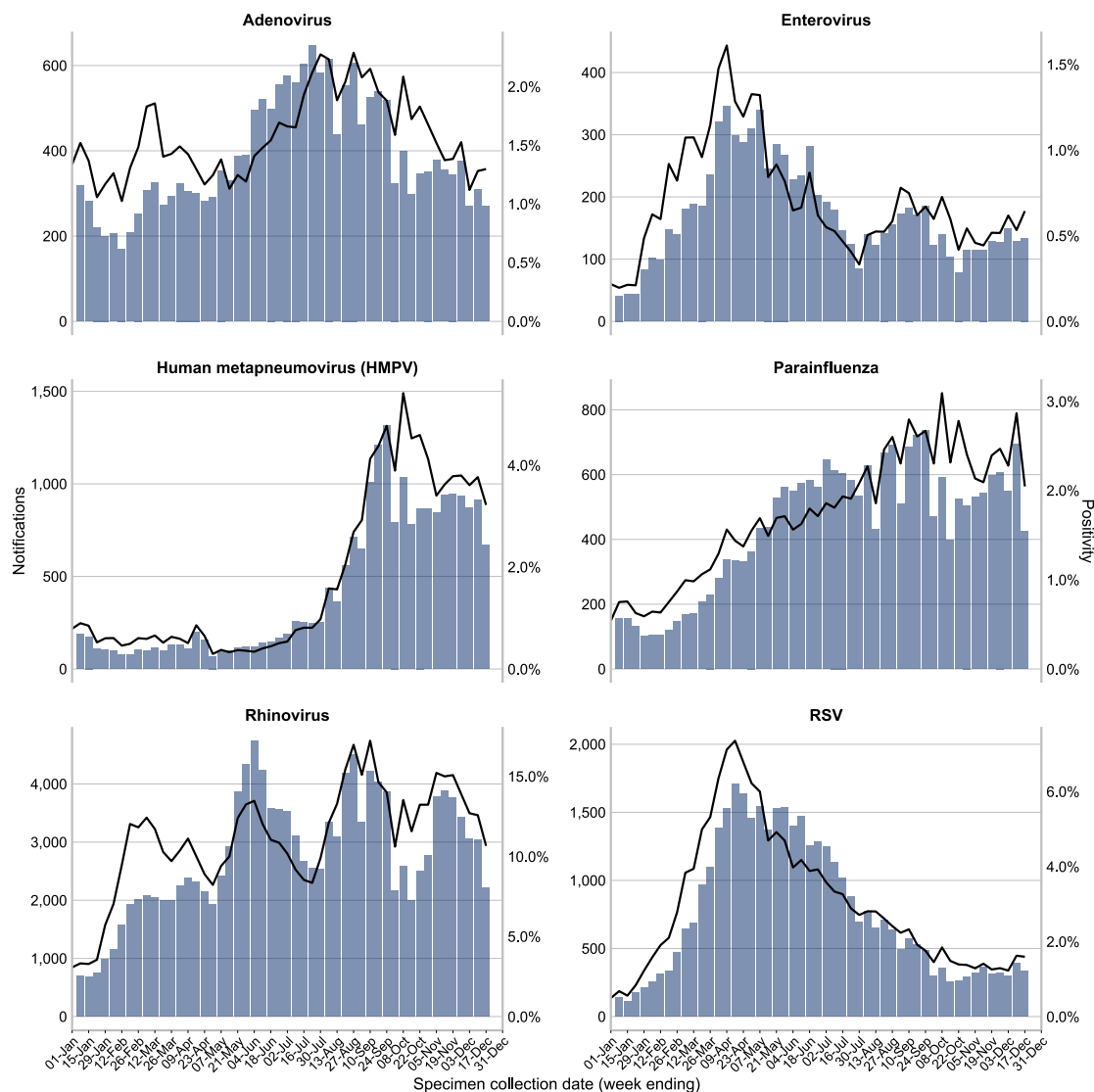


Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 17 December 2023.

	Week ending				Year to date n
	26 November n(% pos)	03 December n(% pos)	10 December n(% pos)	17 December n(% pos)	
Influenza	1,111 (4.5%)	1,207 (5.0%)	1,468 (6.1%)	1,084 (5.2%)	90,410
Adenovirus	376 (1.5%)	270 (1.1%)	310 (1.3%)	270 (1.3%)	19,599
Parainfluenza	608 (2.5%)	550 (2.3%)	694 (2.9%)	426 (2.0%)	22,261
Respiratory syncytial virus (RSV)	318 (1.3%)	296 (1.2%)	393 (1.6%)	332 (1.6%)	38,245
Rhinovirus	3,421 (13.9%)	3,063 (12.7%)	3,044 (12.6%)	2,219 (10.7%)	139,339
Human metapneumovirus (HMPV)	935 (3.8%)	870 (3.6%)	911 (3.8%)	670 (3.2%)	21,085
Enterovirus	127 (0.5%)	149 (0.6%)	129 (0.5%)	134 (0.6%)	8,627
<b>Number of PCR tests conducted</b>	<b>24,626</b>	<b>24,116</b>	<b>24,198</b>	<b>20,811</b>	<b>1,235,398</b>
SARS-CoV-2	1,268 (10.4%)	1,271 (10.8%)	1,317 (11.8%)	1,515 (13.1%)	49,717
<b>Number of COVID PCR tests</b>	<b>12,147</b>	<b>11,757</b>	<b>11,205</b>	<b>11,579</b>	<b>559,062</b>
Number of laboratories reporting	11	11	11	10	-
Number of laboratories reporting COVID	4	4	4	4	-

Recent data is subject to change.