

## NSW Respiratory Surveillance Report - fortnight ending 04 November 2023

**COVID-19 activity is at moderate levels and increasing. Influenza is at moderate levels and has not returned to inter-seasonal levels. Respiratory syncytial virus activity is at low levels and declining.**

### Summary

COVID-19 activity increased across all indicators in the past fortnight and polymerase chain reaction (PCR) test positivity at sentinel laboratories was 11.3%. Emergency department presentations for COVID-19 increased across most age groups, particularly young children and those aged 65-years and older. Influenza is persisting in the community, with test positivity remaining above inter-seasonal levels at 5.5%. RSV activity continues to gradually decline, with a 7.6% decrease in notifications in the past fortnight and PCR test positivity is at 1.3%.

### 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.

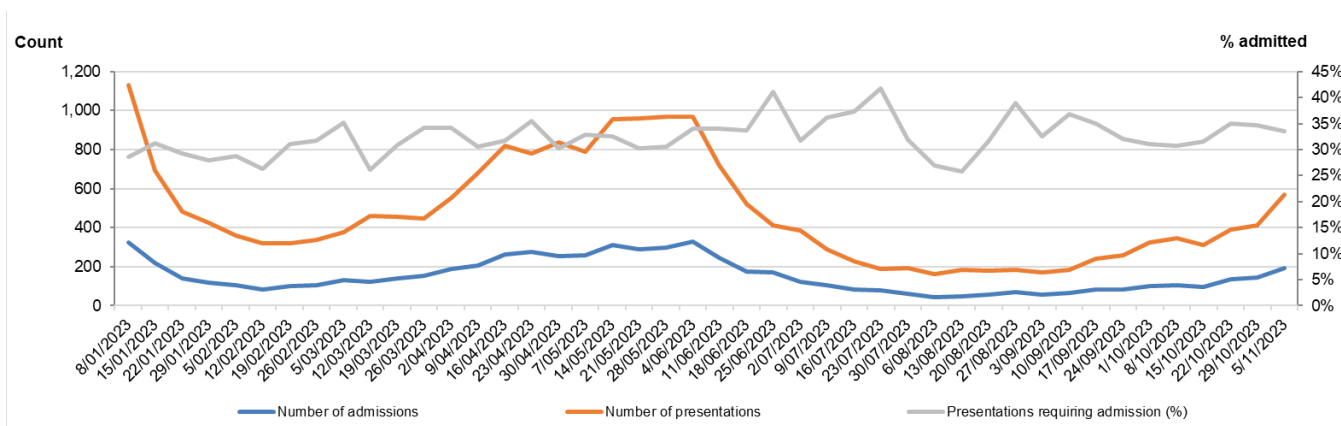
The data source for this report updates as new information becomes available. Therefore, this report cannot be directly compared to previous versions of the NSW Respiratory Surveillance Report or to previous reporting periods. For additional information on the data sources and methods presented within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

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

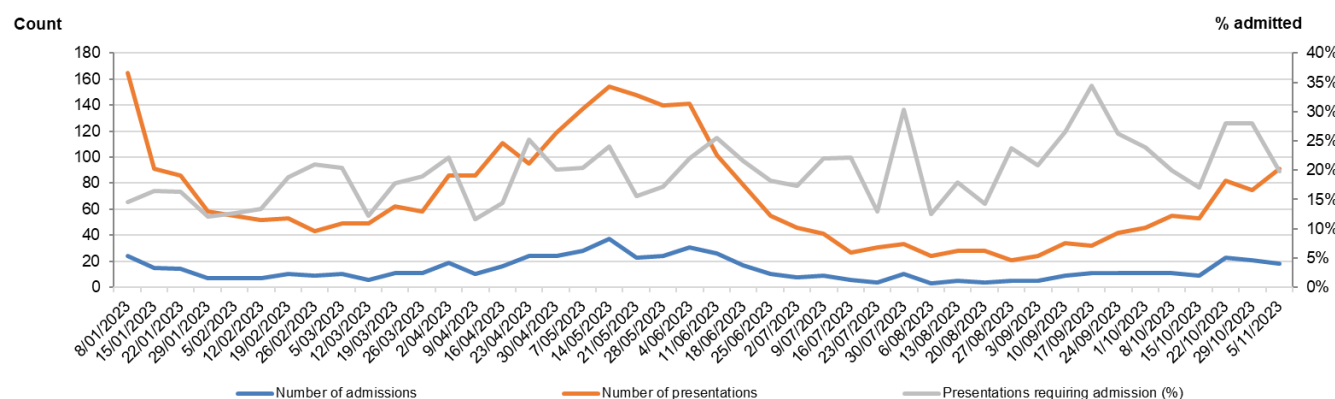
The PHREDSS system provides daily information about presentations to NSW public hospital emergency departments (ED) and subsequent admission to hospital categorised by symptom profile. Here we report on COVID-19, influenza-like illness and bronchiolitis (which is mainly caused by respiratory syncytial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

**Interpretation:** COVID-19 presentations to EDs continue to increase (Figure 1a), particularly in young children aged 0–4 years (Figure 1b) and in those aged 65-years and older (Figure 1c). The recent increase in COVID-19 presentations mirrors the same period in 2022. Influenza-like illness (Figure 2) presentations are stable and have not yet returned to inter-seasonal level. Bronchiolitis (Figure 3) presentations are decreasing.

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



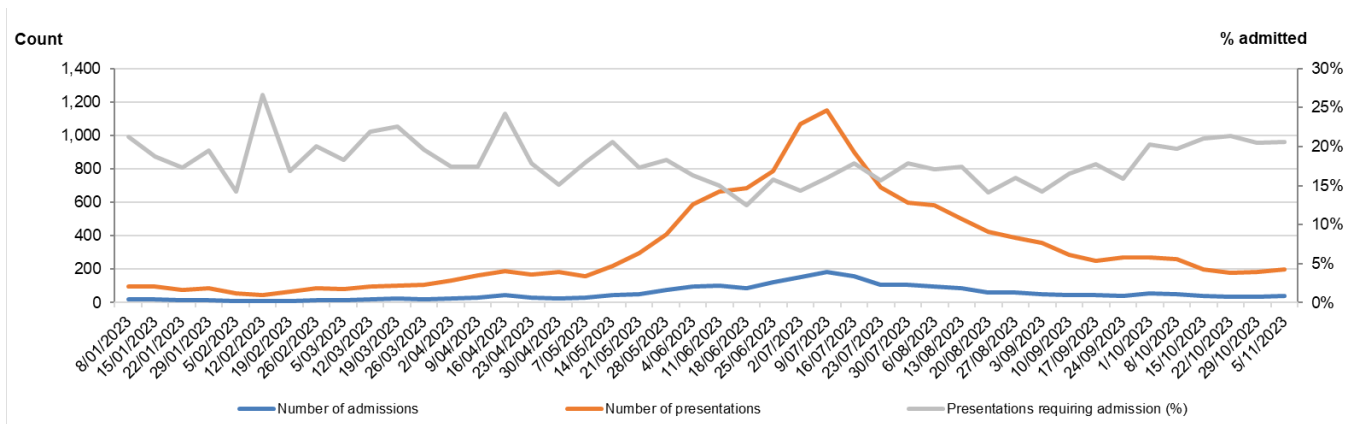
**Figure 1b. ‘COVID-19’ weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, children aged 0-4 years.**



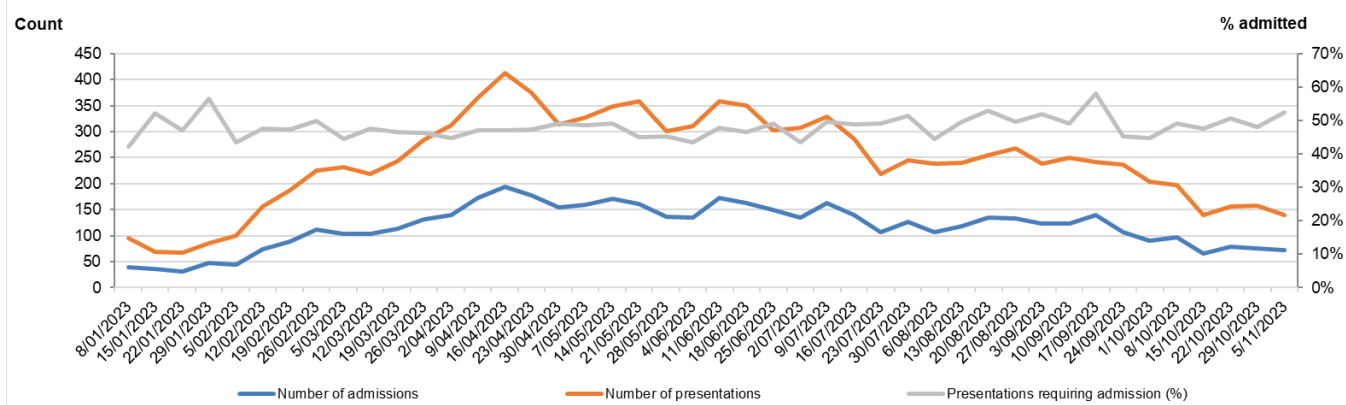
**Figure 1c. ‘COVID-19’ weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023, persons aged 65+ years.**



**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.**



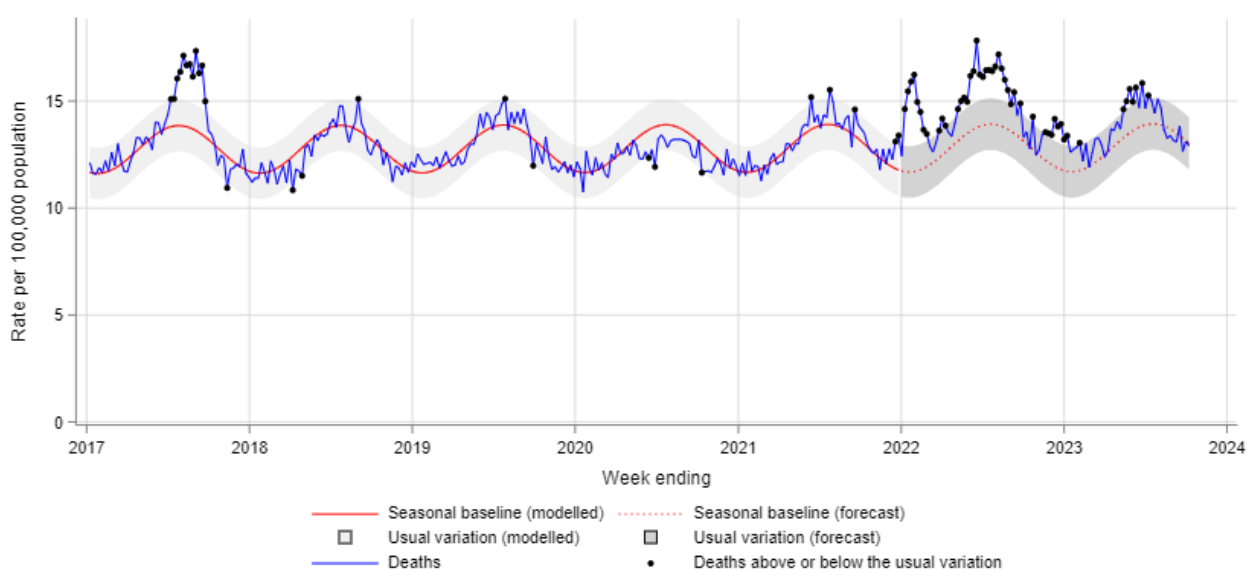
## Death surveillance

### 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 8 October 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 3 September 2023 to 8 October 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 43 &amp; 44, ending 04 November 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.

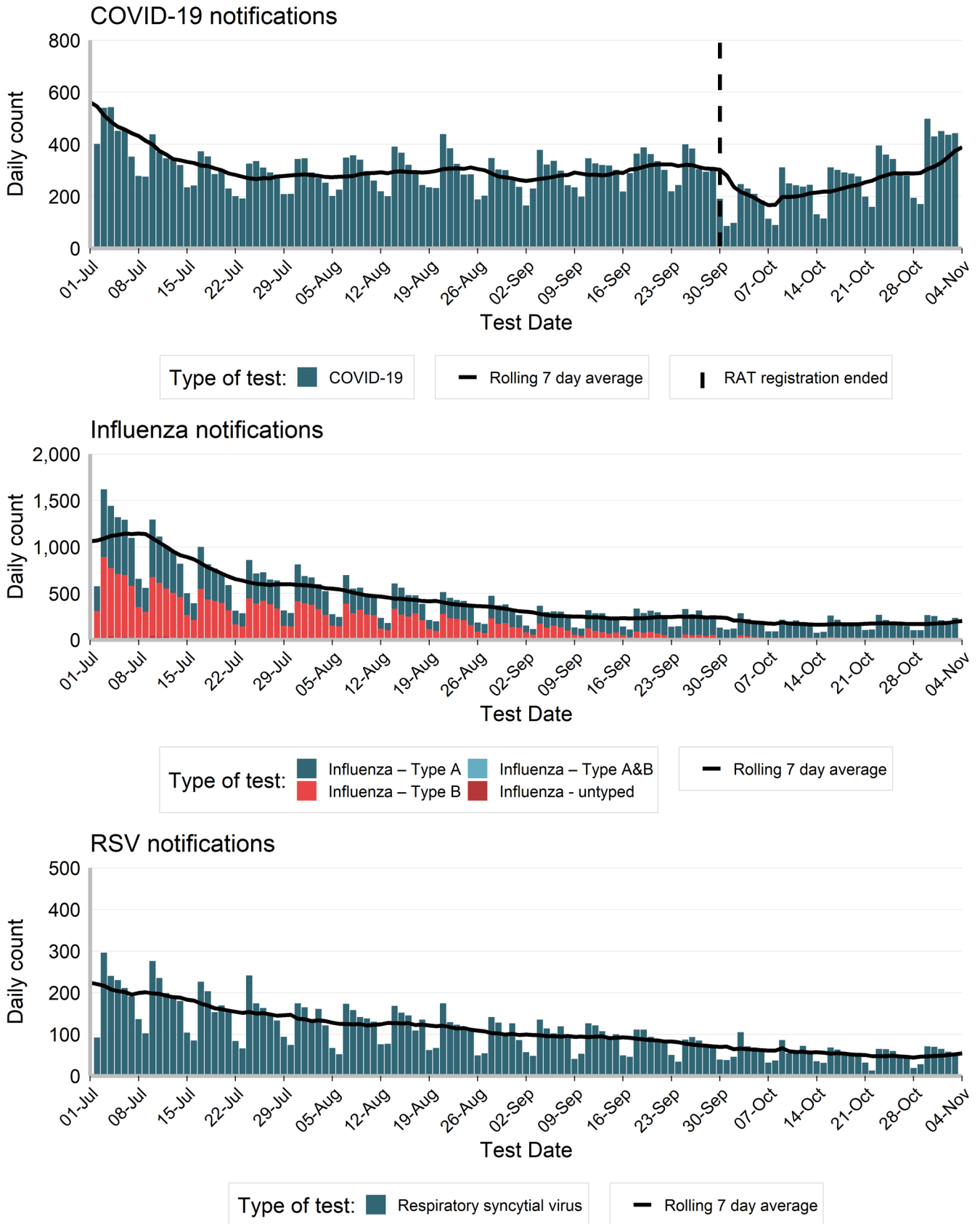
**Interpretation:** Community-based registration of COVID-19 positive RAT results ceased on 30 September 2023 and COVID-19 notifications now predominantly reflect PCR tests. In the past fortnight, there was a 45.8% increase in COVID-19 notifications and an 11.7% increase in influenza notifications since the previous fortnight. RSV notifications declined by 7.7%.

**Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the fortnight ending 04 November 2023.**

	COVID		Influenza		RSV	
	Fortnight ending 04 November 2023	Year to Date	Fortnight ending 04 November 2023	Year to Date	Fortnight ending 04 November 2023	Year to Date
Gender						
Female	2,750	163,786(58%)	1,354	47,918(51%)	354	22,396(52%)
Male	1,983	119,187(42%)	1,252	46,634(49%)	334	20,674(48%)
Age group (years)						
0-4	427	10,391(4%)	338	12,928(14%)	333	22,904(53%)
5-9	113	8,638(3%)	352	19,273(20%)	37	2,367(5%)
10-19	301	22,747(8%)	408	18,241(19%)	37	2,023(5%)
20-29	357	31,414(11%)	313	8,024(8%)	20	1,575(4%)
30-39	526	41,943(15%)	331	12,239(13%)	39	2,033(5%)
40-49	443	40,899(14%)	264	9,738(10%)	29	1,591(4%)
50-59	464	38,600(14%)	184	5,281(6%)	41	2,161(5%)
60-69	428	35,342(12%)	169	3,934(4%)	41	2,591(6%)
70-79	622	27,432(10%)	111	2,795(3%)	56	2,636(6%)
80-89	703	18,101(6%)	95	1,633(2%)	40	2,227(5%)
90+	363	7,767(3%)	42	480(1%)	15	966(2%)
Local Health District of residence						
Central Coast	165	13,287(5%)	65	2,960(3%)	24	2,019(5%)
Far West	15	822(0%)	9	202(0%)	1	212(0%)
Hunter New England	333	35,746(13%)	79	6,893(7%)	59	3,810(9%)
Illawarra Shoalhaven	263	17,735(6%)	64	4,568(5%)	38	2,181(5%)
Mid North Coast	92	6,363(2%)	17	2,051(2%)	20	782(2%)
Murrumbidgee	170	8,880(3%)	69	3,090(3%)	24	2,019(5%)
Nepean Blue Mountains	288	14,105(5%)	137	5,696(6%)	34	2,484(6%)
Northern NSW	128	8,119(3%)	48	3,295(3%)	18	963(2%)
Northern Sydney	562	34,615(12%)	355	11,885(13%)	98	5,712(13%)
South Eastern Sydney	526	30,300(11%)	231	8,266(9%)	98	4,199(10%)
South Western Sydney	698	30,261(11%)	520	15,110(16%)	83	6,045(14%)
Southern NSW	81	7,433(3%)	77	1,693(2%)	13	870(2%)
Sydney	329	23,587(8%)	200	6,070(6%)	52	2,792(6%)
Western NSW	122	11,118(4%)	47	2,368(3%)	7	1,749(4%)
Western Sydney	950	37,951(13%)	674	20,087(21%)	118	7,119(17%)
Aboriginal status						
Aboriginal and/or Torres Strait Islander	98	9,025(3%)	52	3,218(3%)	18	1,497(3%)
Not Aboriginal or Torres Strait Islander	2,584	207,045(73%)	1,473	50,097(53%)	338	20,880(48%)
Not Stated / Unknown	2,057	67,247(24%)	1,082	41,301(44%)	332	20,725(48%)
<b>Total</b>	<b>4,739</b>	<b>283,317(100%)</b>	<b>2,607</b>	<b>94,616(100%)</b>	<b>688</b>	<b>43,102(100%)</b>

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

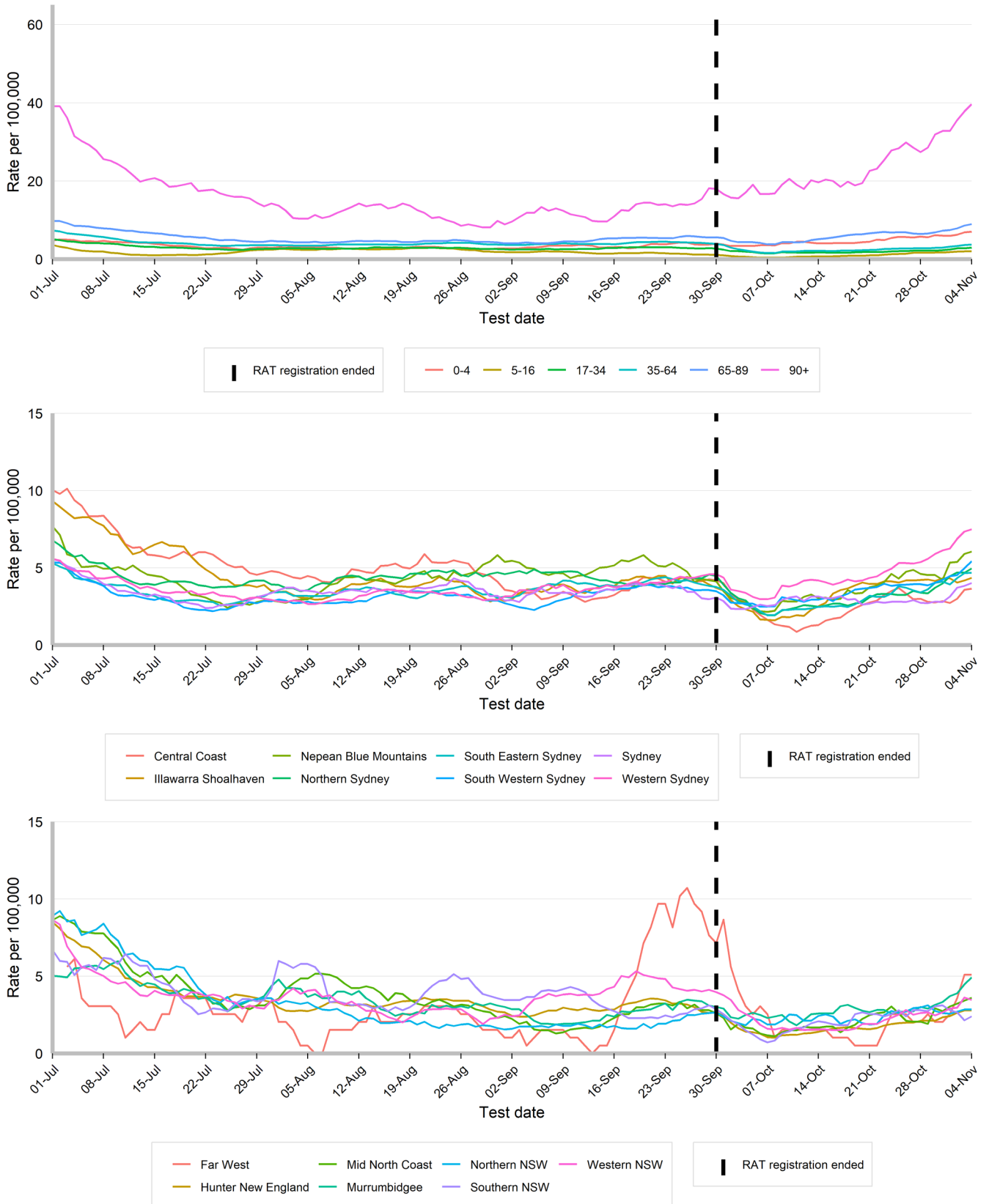
Figure 5. People notified with COVID-19, Influenza and RSV, by date of test and type of test performed, NSW, 01 July 2023 to 04 November 2023.



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

**Interpretation:** COVID-19 notification rates increased in most age groups, particularly persons aged 90-years and older, and Local Health Districts.

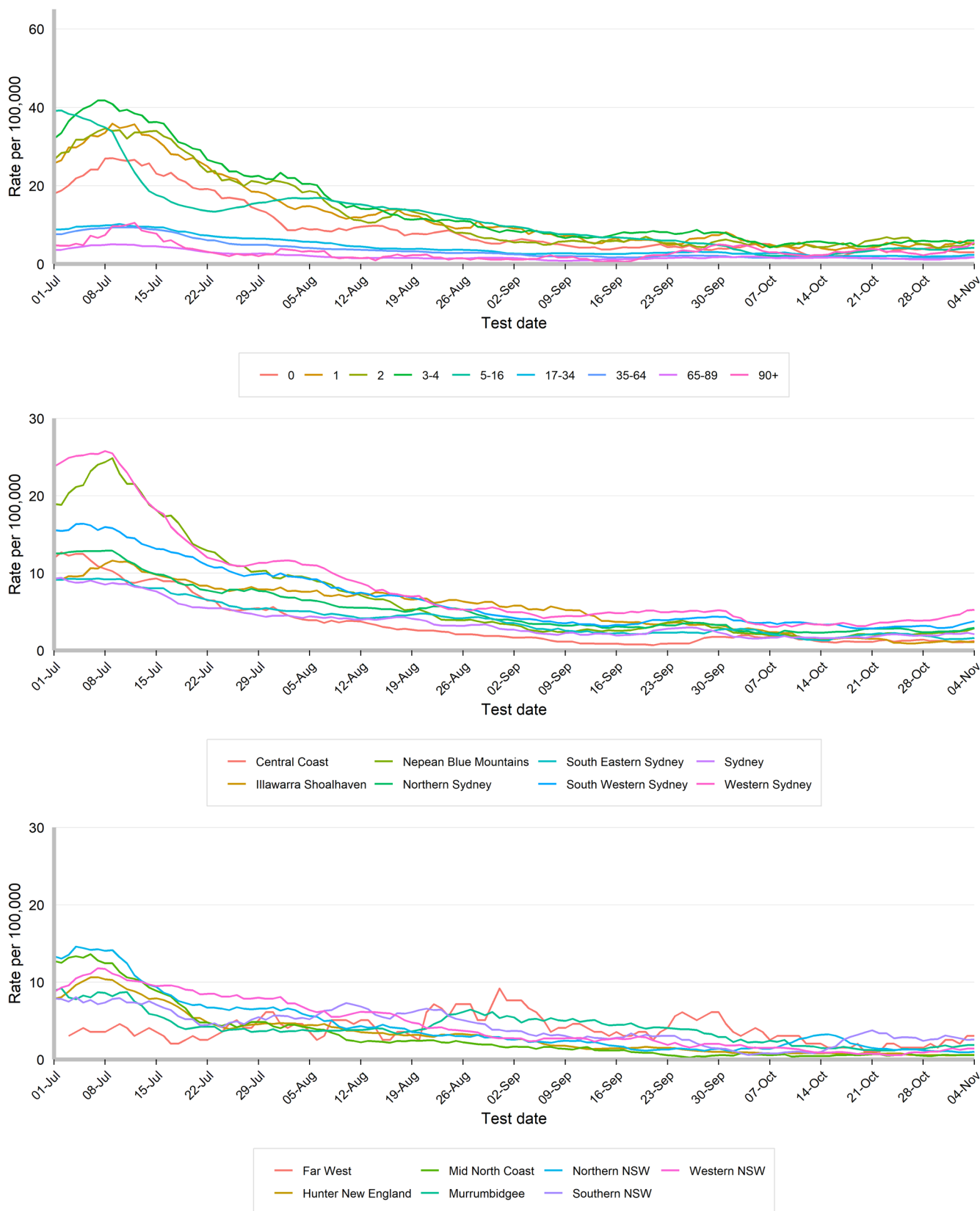
**Figure 6. Daily seven-day rolling average rate of COVID-19 notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 July 2023 to 04 November 2023.**



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

**Interpretation:** Influenza notification rates are stable across most age-groups and Local Health Districts. Increases have occurred in those aged 90-years and older and in some metropolitan LHDs. This may reflect increases in testing patterns given the rise in COVID-19 activity.

**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 04 November 2023.**

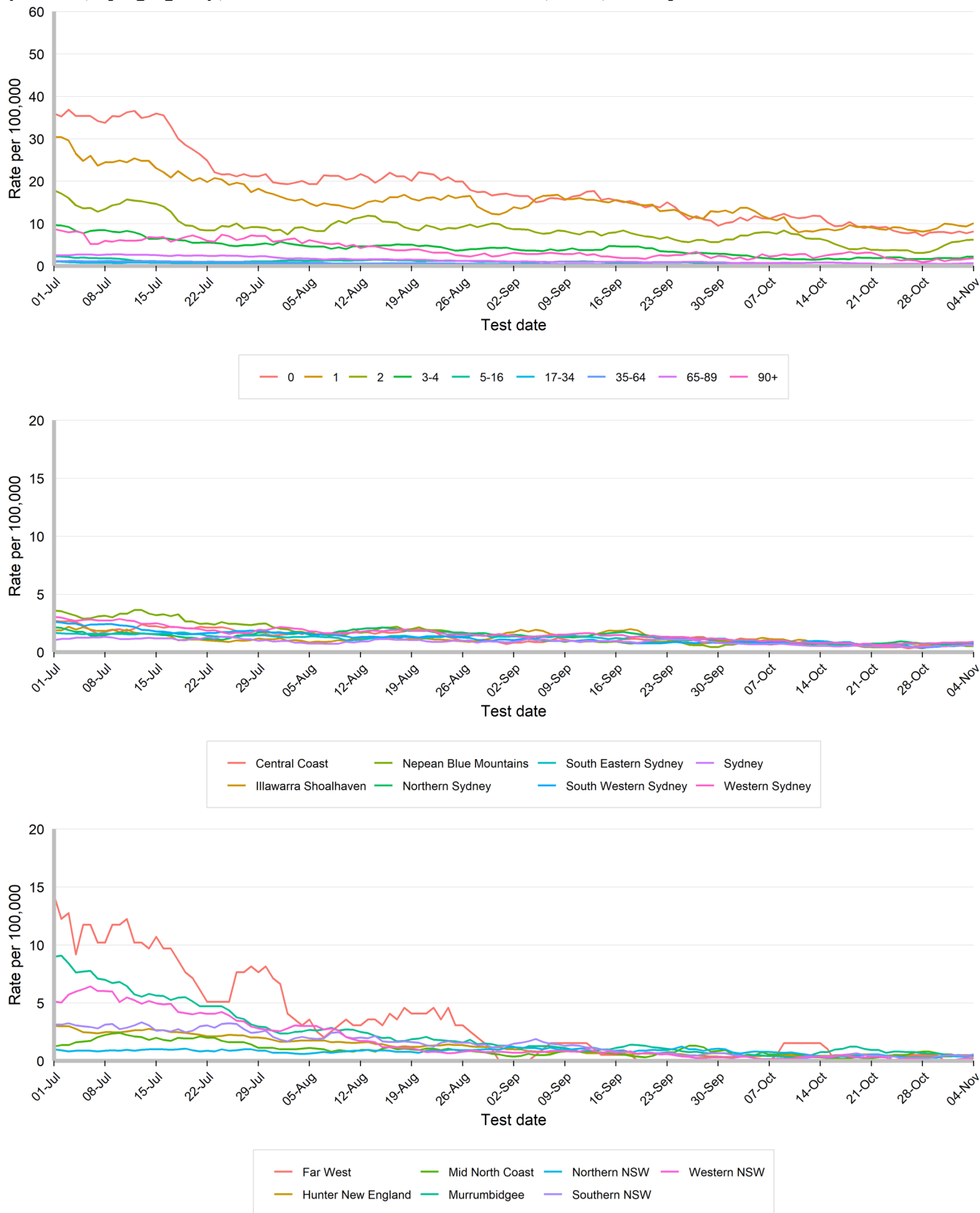




### Rates of respiratory syncytial virus notifications per 100,000 population

**Interpretation:** RSV notification rates have been stable across most age groups and LHDs. An increase was observed in notification rates for 2-year-old children in the past fortnight.

**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 04 November 2023.**

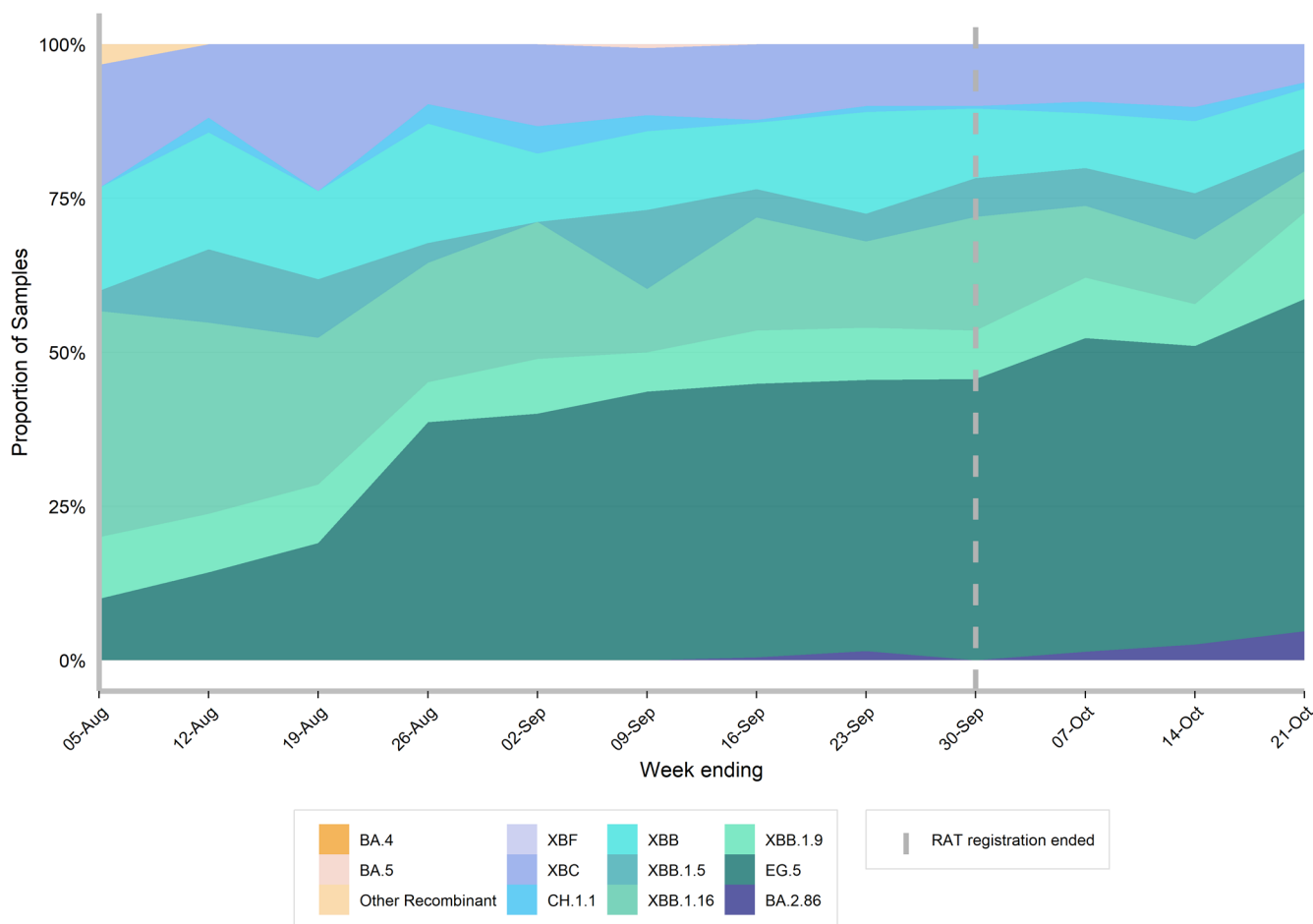


### COVID-19 Whole Genome Sequencing

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:** WGS data are now reported on a weekly basis beginning week ending 5 August 2023 due to the smaller number of samples received over that time compared to the COVID-19 peaks in 2023. EG.5 now accounts for over half of all isolates. The proportion of samples in which BA.2.86 has been detected is increasing.

**Figure 9. Estimated distribution of COVID-19 sub-lineages in the community, 05 August 2023 to 21 October 2023.**



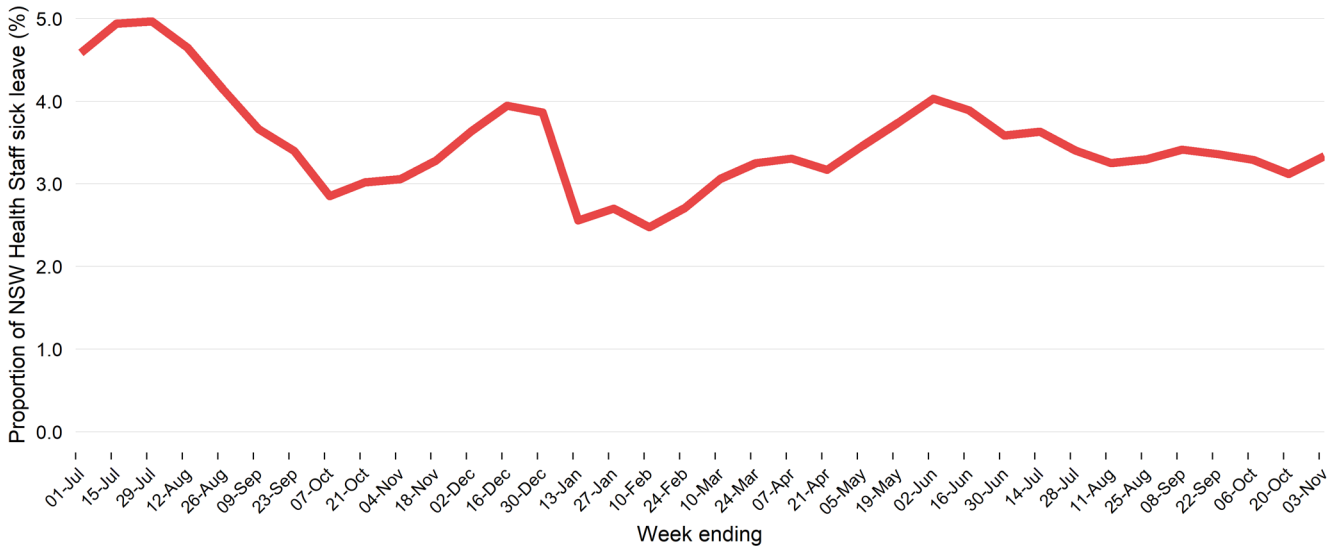
## Other surveillance indicators

### 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:** The proportion of staff on sick leave is comparable to the same fortnight in 2022.

**Figure 10. Proportion of NSW Health full-time equivalent nursing staff on sick leave, 1 July 2022 to 04 November 2023.**

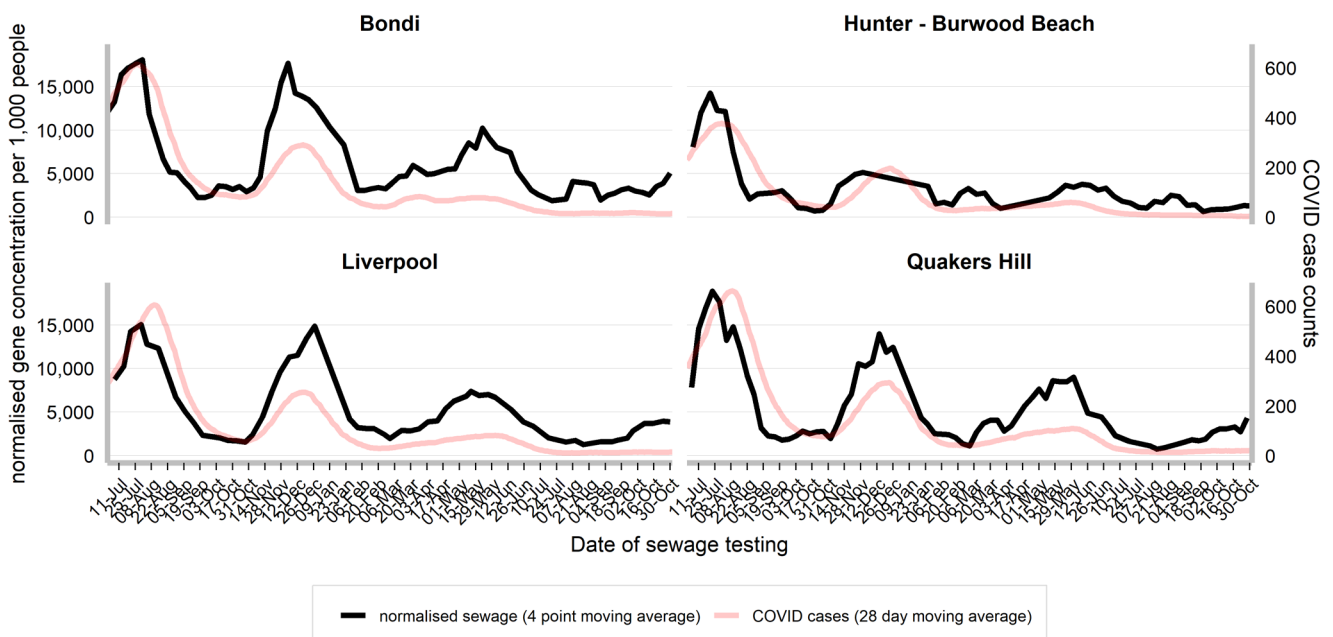


## COVID-19 Sewage surveillance program

Trends are presented for Sydney Bondi, Quakers Hill, Liverpool and Burwood Beach sewage catchments from 5 February 2022 to the week ending 01 November 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 in the catchment areas. This is consistent with increasing COVID-19 activity that has been observed in other indicators.

**Figure 11. Gene concentration, per 1,000 people in each sewage catchment, 1 July 2022 to 01 November 2023.**

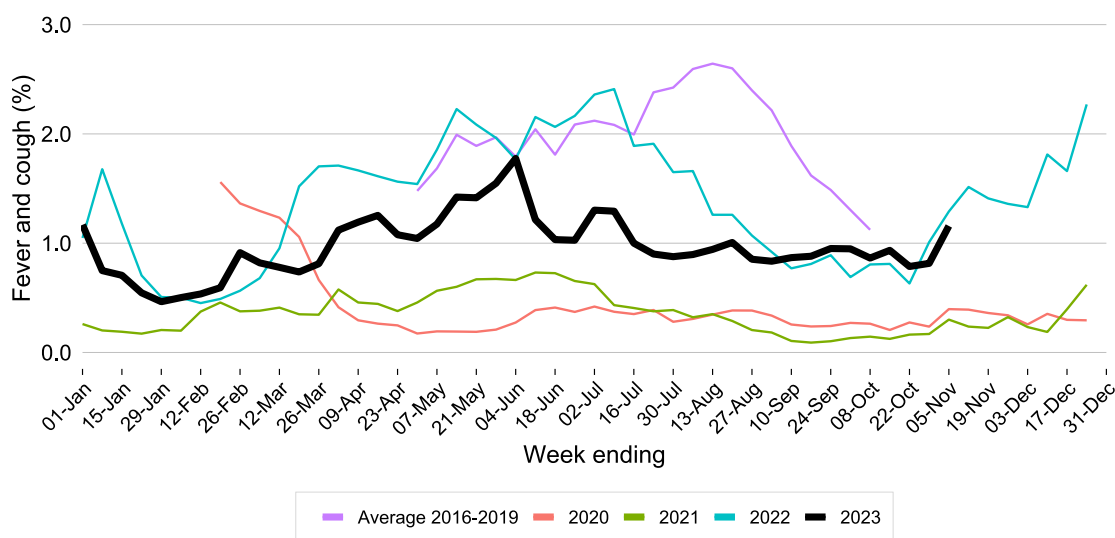


## FluTracking and NSW sentinel laboratory network

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 (ILI) 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 ILI has increased in the past fortnight and is consistent with the trajectory for the same period in 2022. This may be due to increasing COVID-19 in the community.

**Figure 12. Proportion of FluTracking participants reporting influenza-like illness, NSW, 1 January to 05 November 2023.**

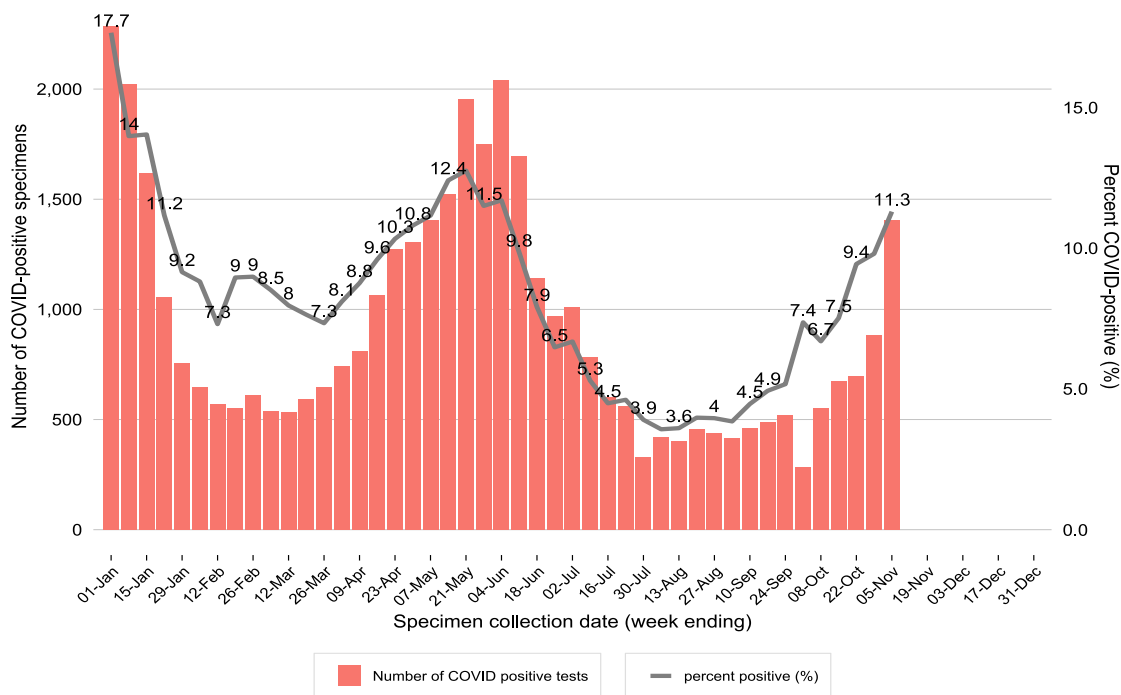


Epidemiological weeks 43 & 44, ending 04 November 2023

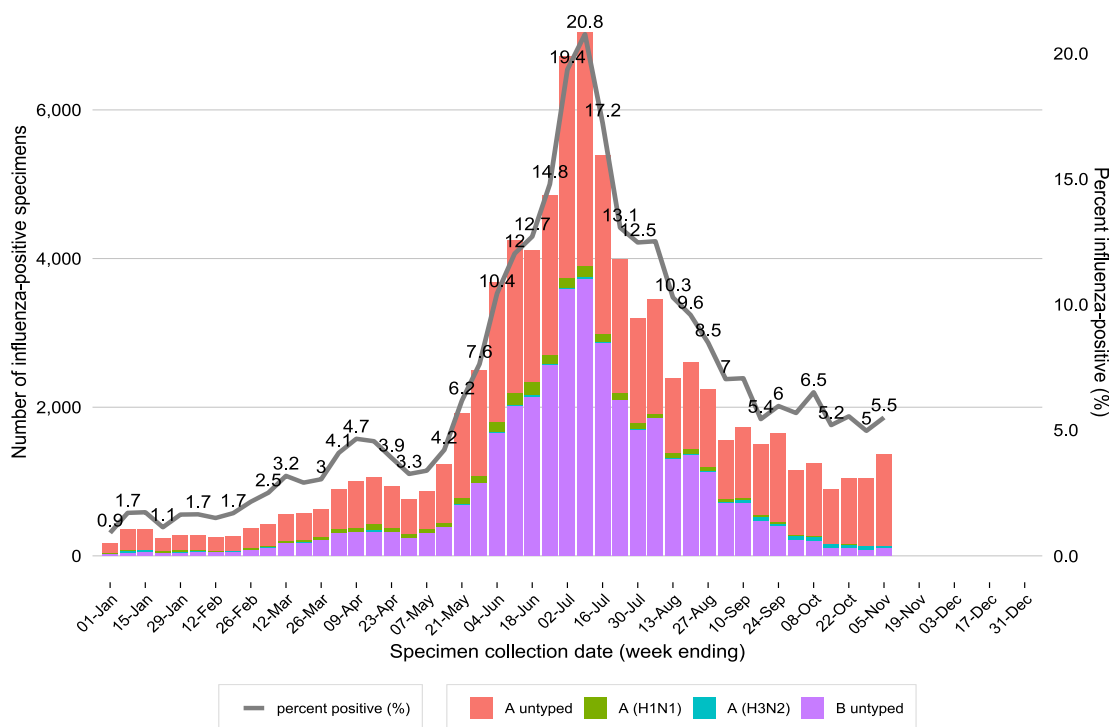
The NSW sentinel laboratory network comprises of 13 public and private laboratories throughout NSW who provide additional data on positive and negative test results. This helps us to understand which respiratory viruses are circulating as well as how much.

**Interpretation:** COVID-19 test positivity is increasing rapidly in recent weeks and influenza test positivity is persisting above inter-seasonal levels. With the exception of rhinovirus, test positivity for other respiratory viruses is decreasing.

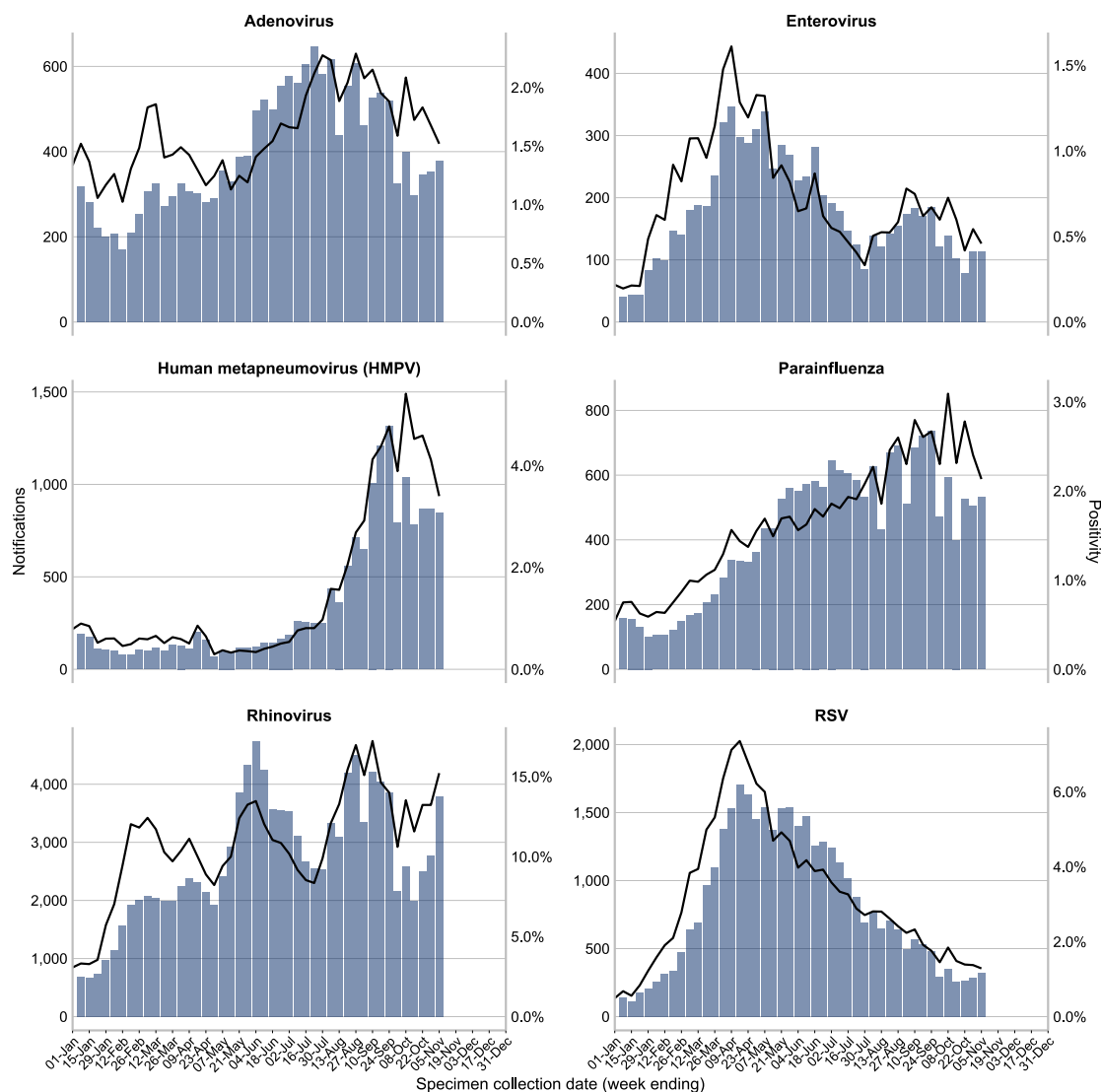
**Figure 13. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 January 2023 to 05 November 2023.**



**Figure 14. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 January 2023 to 05 November 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 05 November 2023.**



**Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 05 November 2023.**

	Week ending				Year to date
	15 October	22 October	29 October	05 November	
	n(% pos)	n(% pos)	n(% pos)	n(% pos)	n
Influenza	897 (5.2%)	1,050 (5.6%)	1,045 (5.0%)	1,369 (5.5%)	83,031
Adenovirus	297 (1.7%)	346 (1.8%)	352 (1.7%)	378 (1.5%)	17,672
Parainfluenza	399 (2.3%)	526 (2.8%)	505 (2.4%)	531 (2.1%)	18,843
Respiratory syncytial virus (RSV)	256 (1.5%)	263 (1.4%)	289 (1.4%)	320 (1.3%)	36,227
Rhinovirus	1,995 (11.6%)	2,502 (13.2%)	2,779 (13.2%)	3,785 (15.2%)	119,942
Human metapneumovirus (HMPV)	780 (4.5%)	868 (4.6%)	865 (4.1%)	846 (3.4%)	15,817
Enterovirus	103 (0.6%)	79 (0.4%)	114 (0.5%)	114 (0.5%)	7,844
<b>Number of PCR tests conducted</b>	<b>17,235</b>	<b>18,907</b>	<b>21,000</b>	<b>24,865</b>	<b>1,090,789</b>
SARS-CoV-2	674 (7.5%)	696 (9.4%)	881 (9.8%)	1,404 (11.3%)	41,471
<b>Number of COVID PCR tests</b>	<b>8,966</b>	<b>7,374</b>	<b>8,988</b>	<b>12,426</b>	<b>487,804</b>
Number of laboratories reporting	8	10	9	11	-
Number of laboratories reporting COVID	4	3	2	4	-

Recent data is subject to change.