

NSW Respiratory Surveillance Report - fortnight ending 20 January 2024

COVID-19 activity persists at high levels. Influenza and RSV activity is low and stable. Trends in the past fortnight are likely to be influenced by the holiday period.

Summary

COVID-19 activity has decreased in the week ending 20 January 2024, but remains high. There were declines in emergency department presentations in all age-groups, which may be influenced by primary healthcare availability over the holiday period. Sewage data indicates that transmission may be plateauing in the community in the Sydney catchment. COVID-19 polymerase chain reaction (PCR) test positivity at sentinel laboratories was 13.9%. Influenza and RSV activity is low with PCR test positivity at 4.0% and 2.1% respectively.

Data sources and methods

NSW Health continually reviews the methods used to monitor respiratory virus activity in New South Wales. This is due to 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 sources for this report are updated 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 the number of people admitted to hospital, are useful for monitoring the severity of illness and impact on the health system.

Interpretation: Emergency department presentations for COVID-19, influenza-like illness and bronchiolitis decreased over the past fortnight.

Figure 1. 'COVID-19' weekly counts of unplanned emergency department (ED) presentations and admission following presentation 2023-2024, persons of all ages.

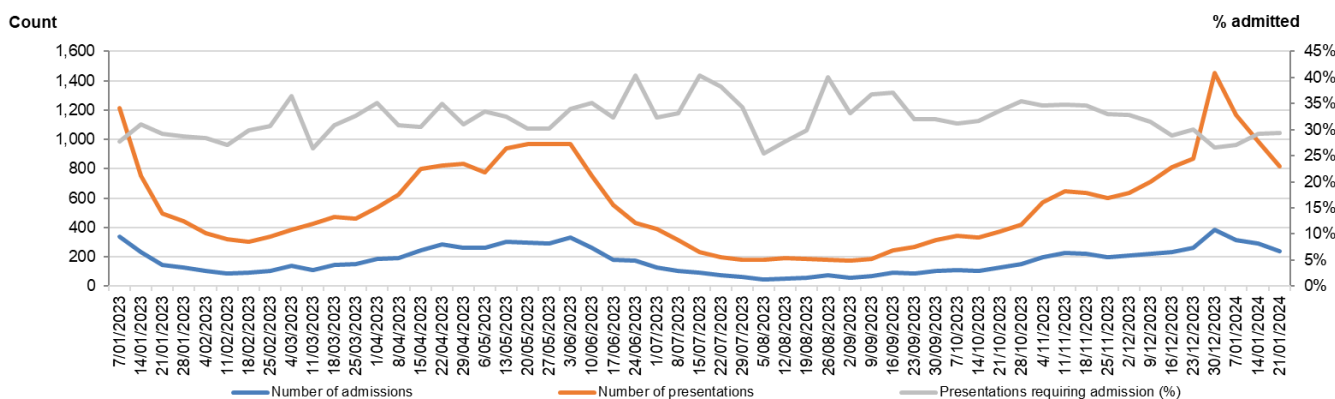


Figure 2. 'Influenza-like illness' weekly counts of unplanned emergency department (ED) and admissions following presentation, 2023-2024, persons of all ages.

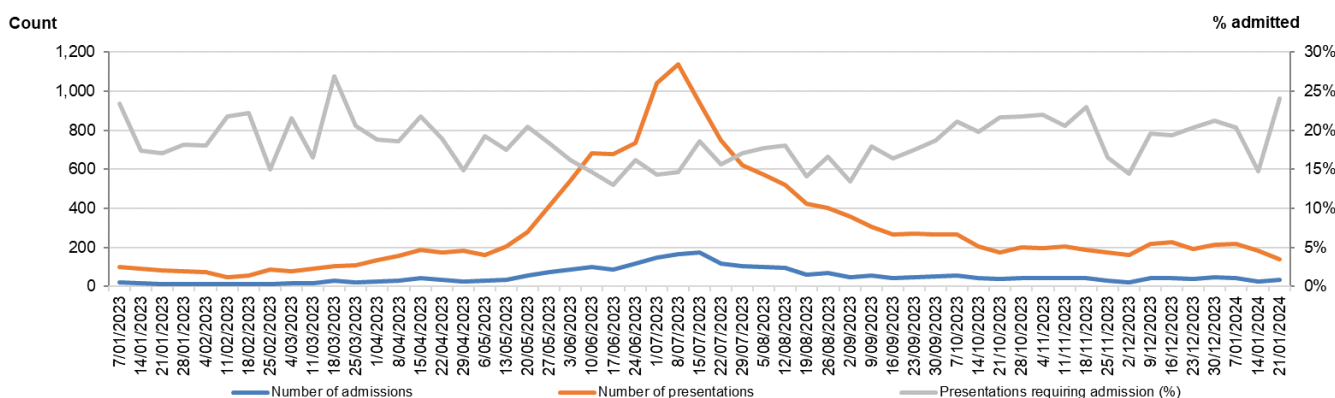
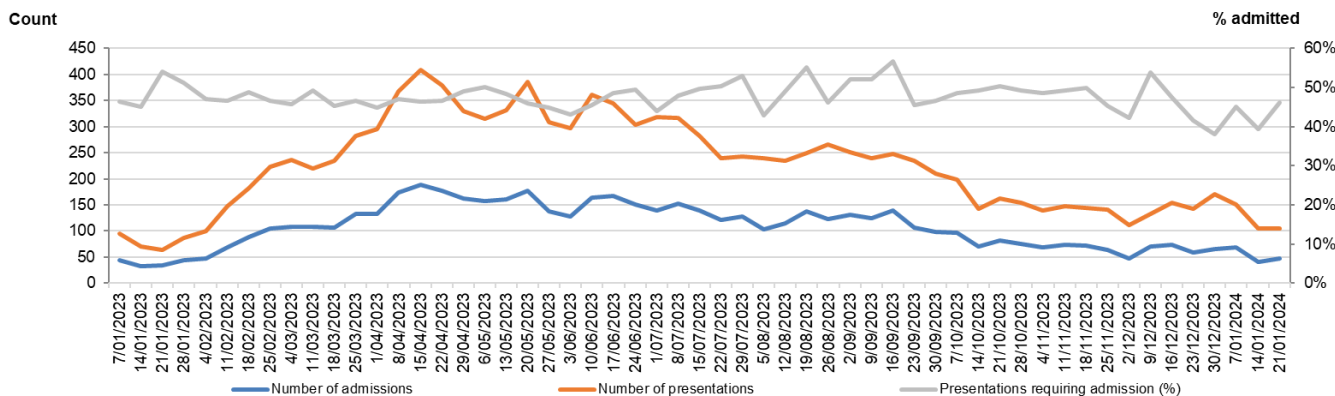


Figure 3. Bronchiolitis weekly counts of unplanned emergency department (ED) and admission following presentation, 2023-2024, children aged 0-4 years.



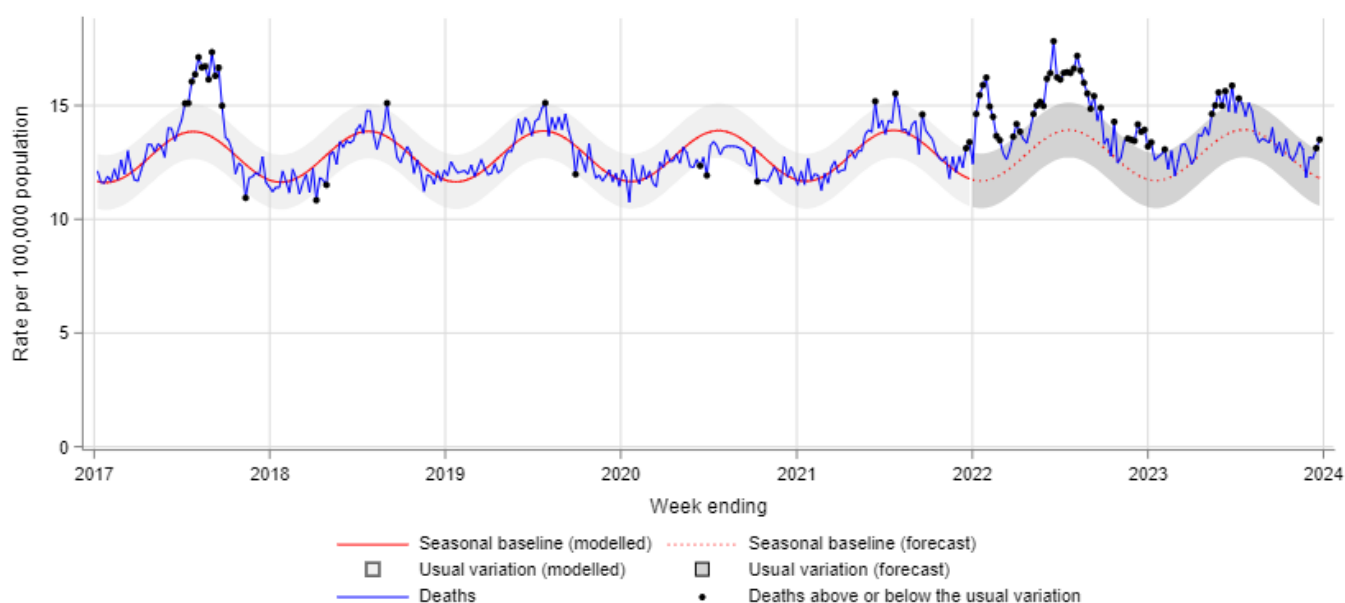
Death surveillance

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 registered by 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 mortality impact from any significant and prolonged cause on the NSW population.

Interpretation: Weekly lag adjusted all-cause mortality was above the usual variation for late December.

Figure 4. All-cause death rate per 100,000 population, all ages, 2017 to 24 December 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 19 November 2023 to 24 December 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 2 & 3, ending 20 January 2024

Notifications of COVID-19, influenza and RSV

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

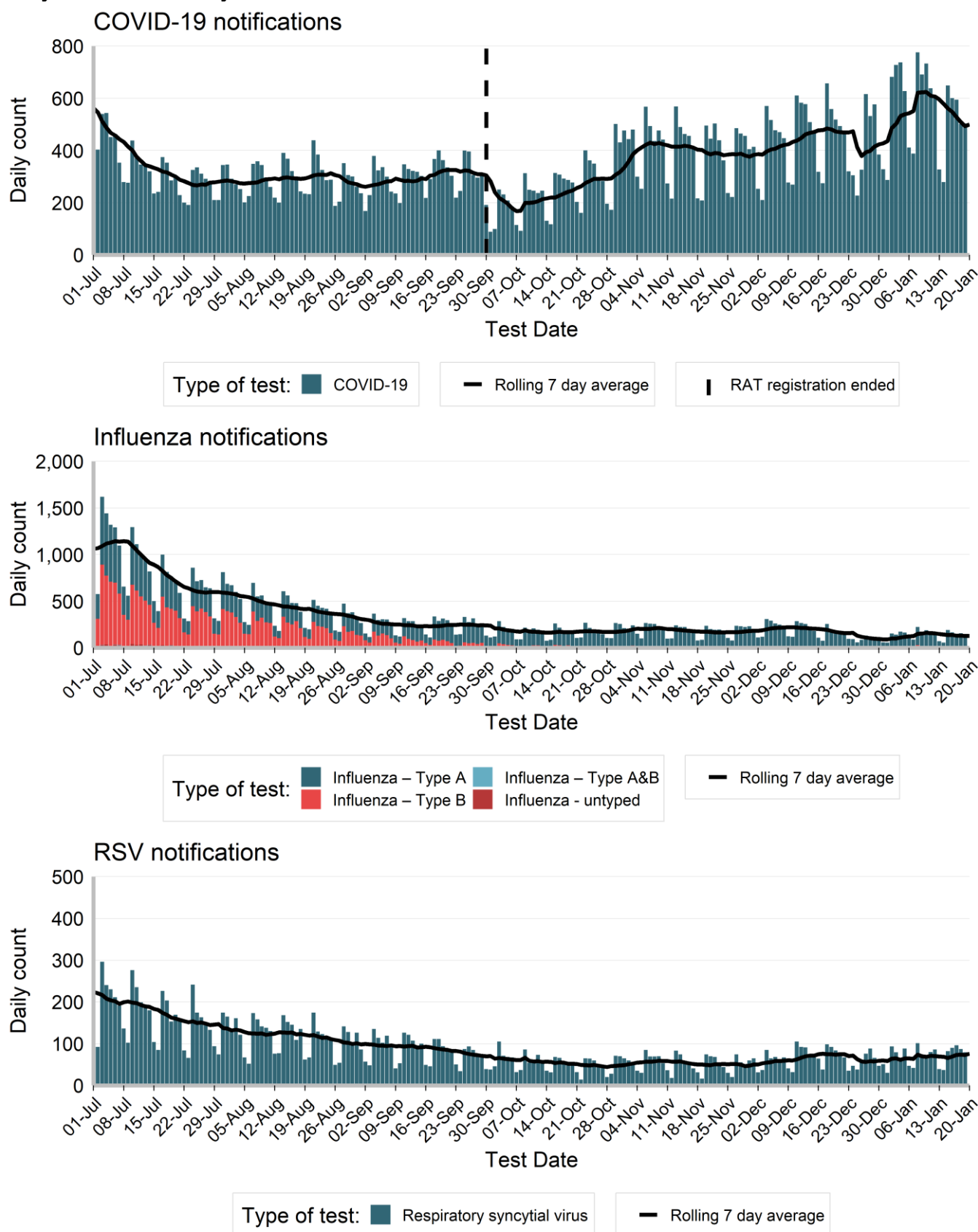
Interpretation: COVID-19 notifications increased by 13.4% over the previous fortnight. However this was associated with the week ending 13 January, with notifications declining in the week ending 20 January (Figure 5). Influenza and RSV notifications increased by 26.8% and 17.6%.

Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the fortnight ending 20 January 2024.

	COVID		Influenza		RSV	
	Fortnight ending 20 January 2024	Year to Date	Fortnight ending 20 January 2024	Year to Date	Fortnight ending 20 January 2024	Year to Date
Gender						
Female	4,170	6,130(55%)	994	1,415(52%)	528	735(52%)
Male	3,484	4,992(45%)	931	1,306(48%)	485	680(48%)
Age group (years)						
0-4	787	1,090(10%)	252	325(12%)	487	676(48%)
5-9	103	143(1%)	154	192(7%)	38	57(4%)
10-19	259	359(3%)	194	275(10%)	31	39(3%)
20-29	644	959(9%)	301	460(17%)	33	54(4%)
30-39	890	1,305(12%)	307	407(15%)	59	80(6%)
40-49	736	1,055(9%)	238	330(12%)	60	77(5%)
50-59	732	1,088(10%)	189	274(10%)	58	86(6%)
60-69	880	1,302(12%)	126	191(7%)	68	99(7%)
70-79	1,045	1,529(14%)	108	166(6%)	88	116(8%)
80-89	1,032	1,526(14%)	44	73(3%)	73	106(7%)
90+	558	779(7%)	14	30(1%)	20	26(2%)
Local Health District of residence						
Central Coast	219	342(3%)	72	106(4%)	50	69(5%)
Far West	16	20(0%)	3	3(0%)	0	0(0%)
Hunter New England	478	693(6%)	73	114(4%)	61	79(6%)
Illawarra Shoalhaven	305	437(4%)	110	176(6%)	50	66(5%)
Mid North Coast	226	328(3%)	17	27(1%)	22	37(3%)
Murrumbidgee	101	155(1%)	27	42(2%)	15	17(1%)
Nepean Blue Mountains	322	461(4%)	63	82(3%)	36	63(4%)
Northern NSW	216	312(3%)	33	48(2%)	22	34(2%)
Northern Sydney	920	1,302(12%)	376	507(19%)	169	255(18%)
South Eastern Sydney	913	1,329(12%)	234	355(13%)	126	174(12%)
South Western Sydney	1,241	1,778(16%)	253	351(13%)	138	183(13%)
Southern NSW	120	165(1%)	27	39(1%)	15	19(1%)
Sydney	734	1,041(9%)	181	237(9%)	74	111(8%)
Western NSW	107	189(2%)	21	33(1%)	14	22(2%)
Western Sydney	1,685	2,490(22%)	423	585(21%)	221	284(20%)
Aboriginal status						
Aboriginal and/or Torres Strait Islander	152	216(2%)	41	59(2%)	15	21(1%)
Not Aboriginal or Torres Strait Islander	4,205	6,200(56%)	1,071	1,536(56%)	515	720(51%)
Not Stated / Unknown	3,303	4,715(42%)	815	1,128(41%)	485	676(48%)
Total	7,660	11,131(100%)	1,927	2,723(100%)	1,015	1,417(100%)

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

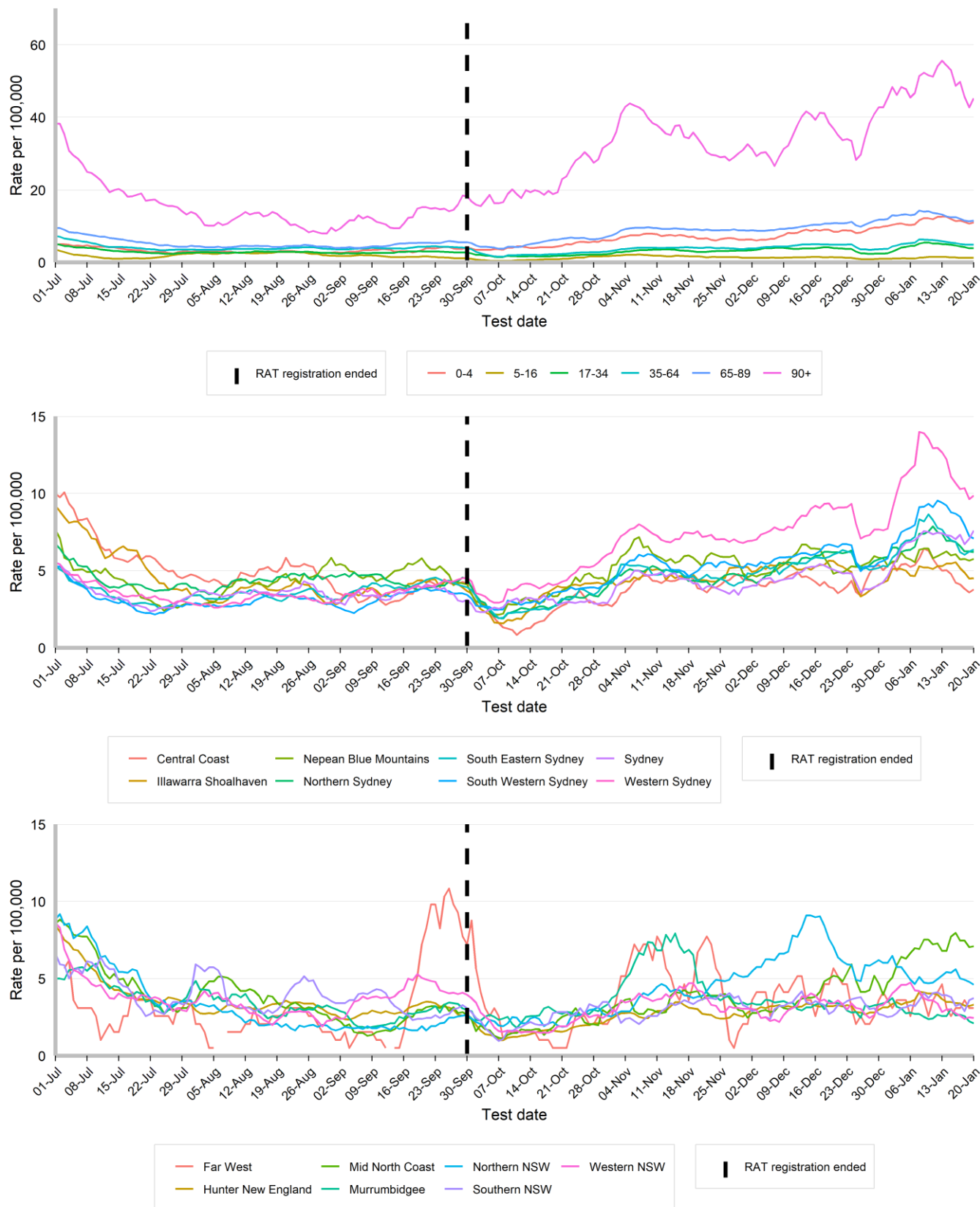
Figure 5. People notified with COVID-19, Influenza and RSV, by date of test and type of test performed, NSW, 01 July 2023 to 20 January 2024.



Rates of COVID-19 notifications per 100,000 population

Interpretation: In the week ending 20 January 2024, COVID-19 notification rates declined or were stable across most age-groups and Local Health Districts.

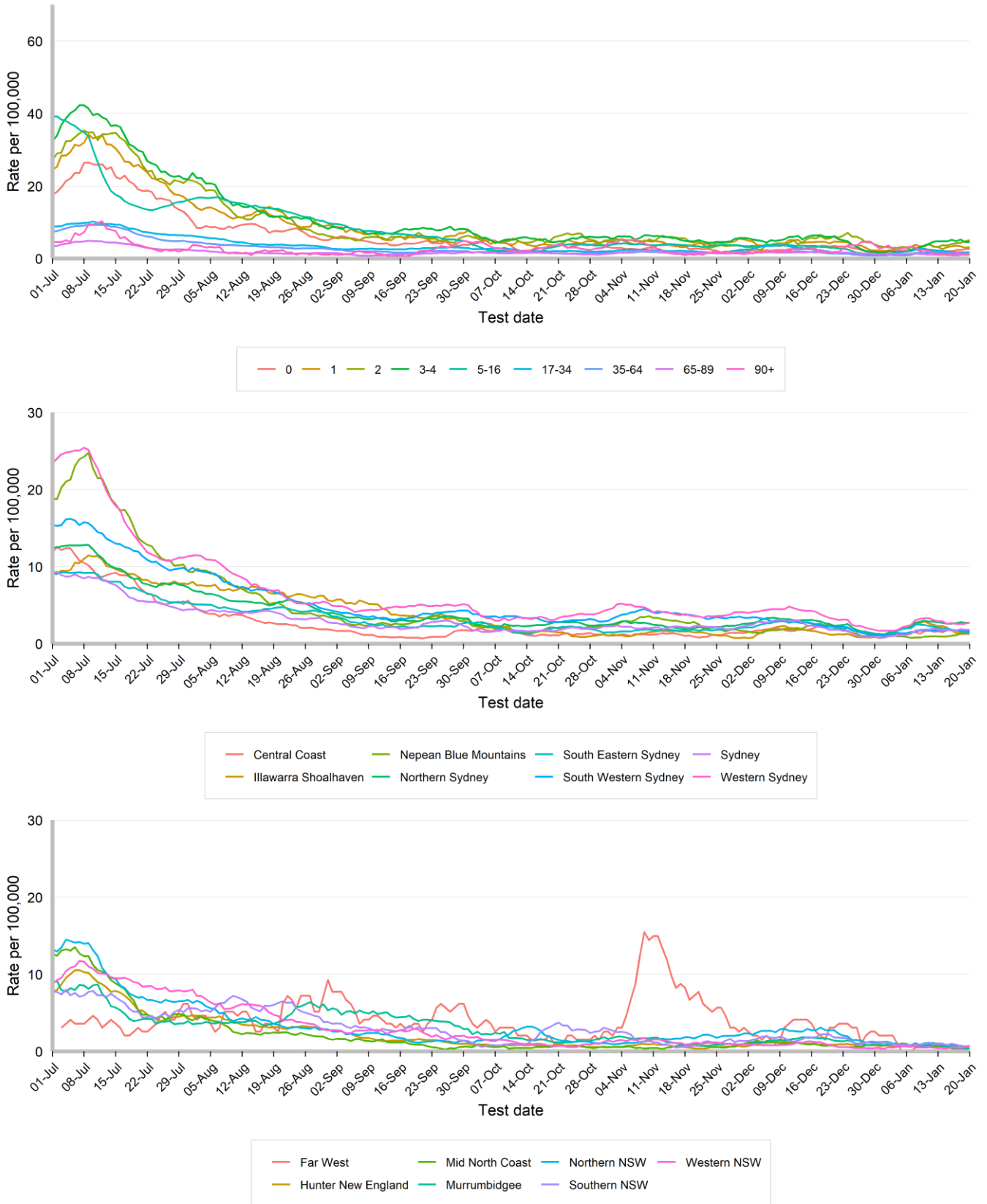
Figure 6. Daily seven-day rolling average rate of COVID-19 notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 July 2023 to 20 January 2024.



Rates of influenza notifications per 100,000 population

Interpretation: Influenza notification rates were stable across most age-groups and Local Health Districts.

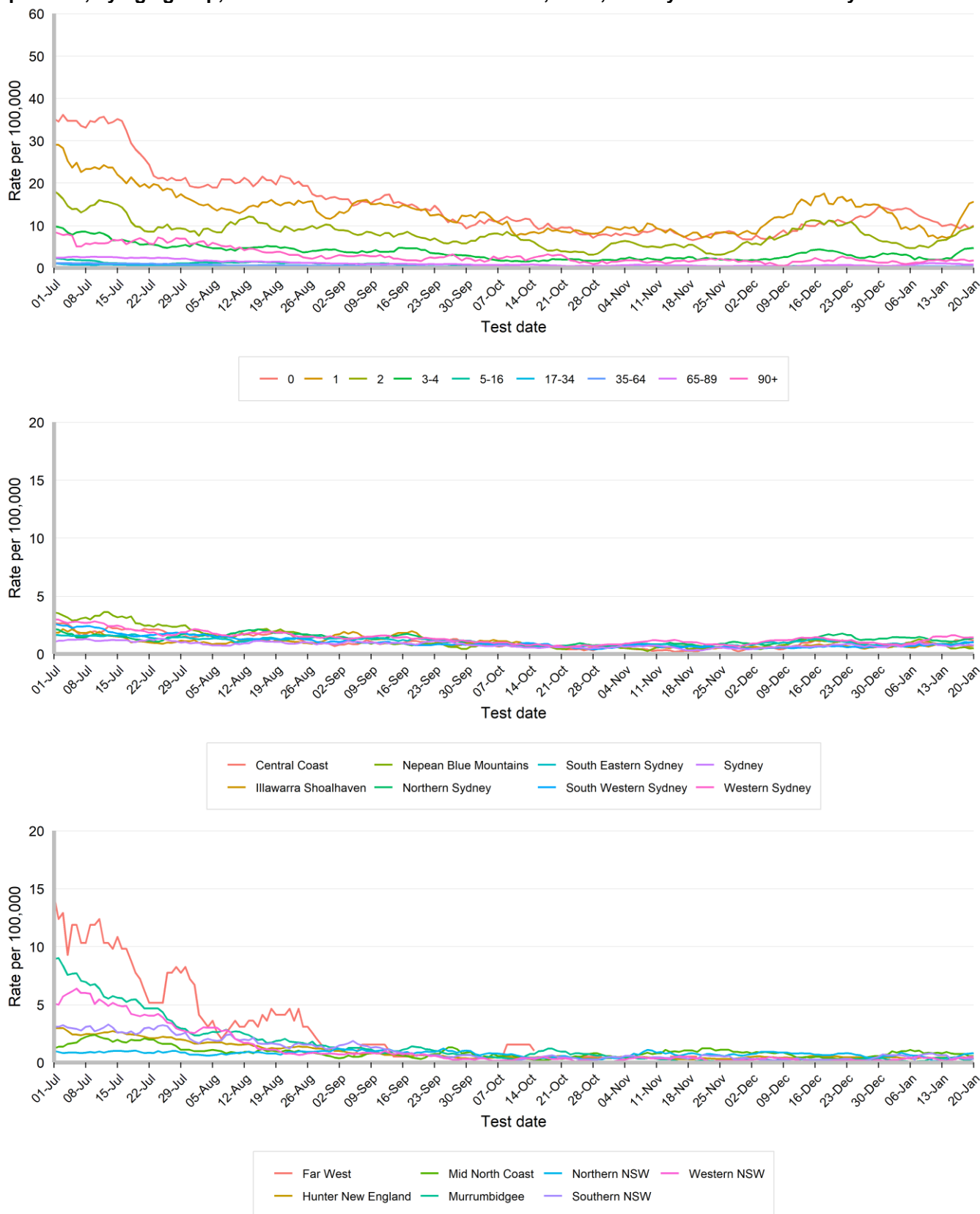
Figure 7. Daily seven-day rolling average rate of influenza notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 July 2023 to 20 January 2024.



Rates of respiratory syncytial virus notifications per 100,000 population

Interpretation: RSV notification rates declined in infants aged less than 12-months in the past fortnight however increased in children aged 1 – 4-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 20 January 2024.

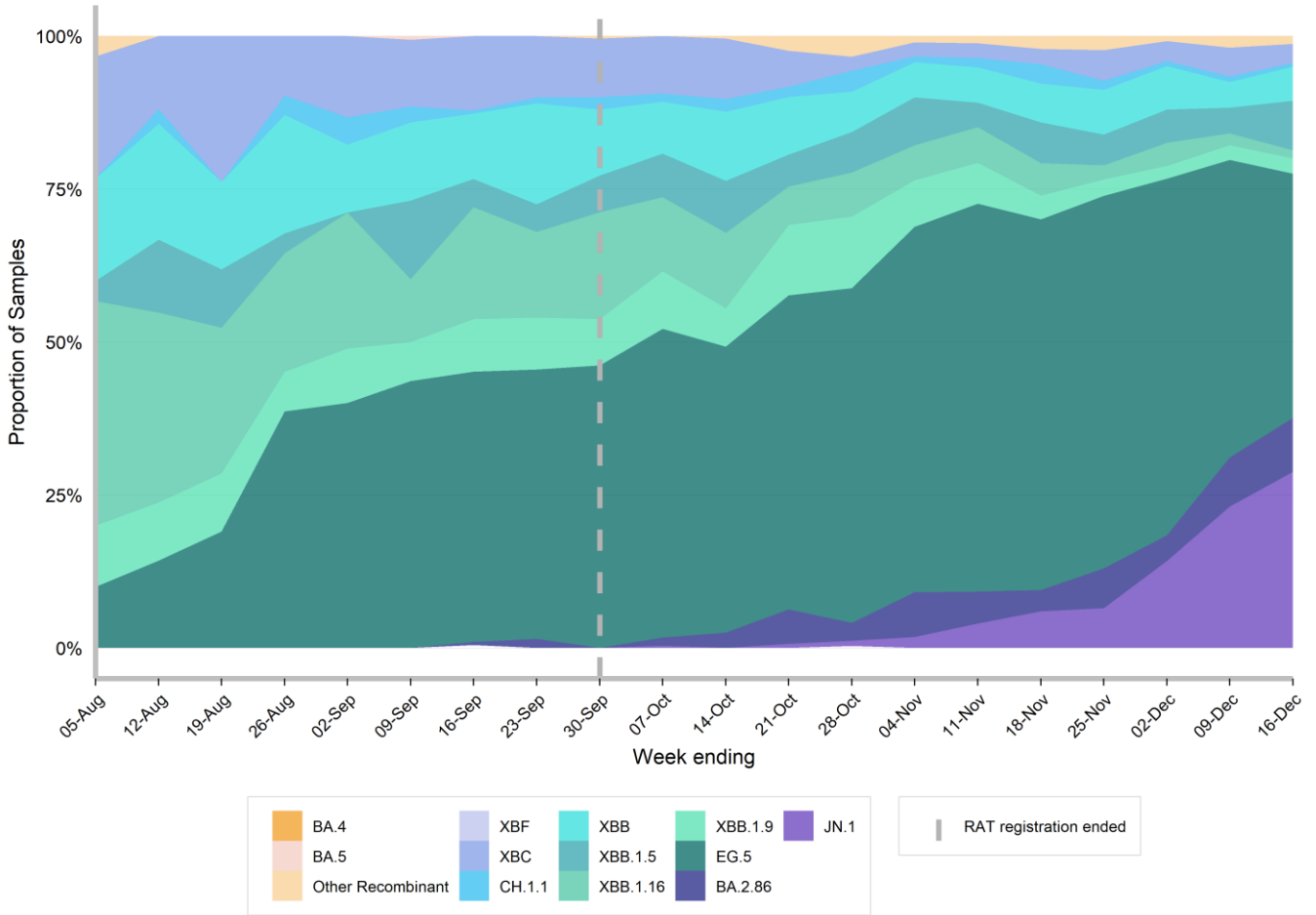


COVID-19 Whole Genome Sequencing

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: There were insufficient samples received to update the WGS distribution from 16 December.

Figure 9. Estimated distribution of COVID-19 sub-lineages in the community, 05 August 2023 to 16 December 2023.



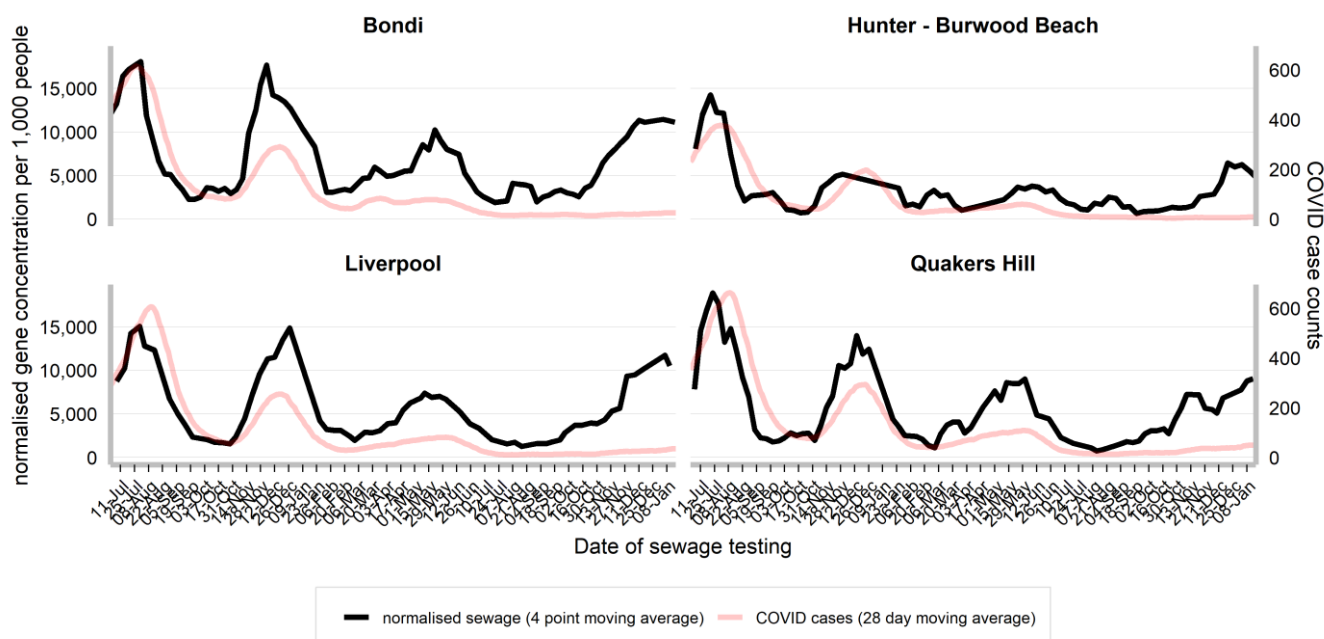
Other surveillance indicators

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 17 January 2024. 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 remain high in the Sydney catchment areas.

Figure 10. Gene concentration, per 1,000 people in each sewage catchment, 1 July 2022 to 17 January 2024.



FluTracking – NSW data

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/>

Over the summer period there is a small sample size for FluTracking, as participants have been given the option to opt-out until April 2024. Reporting of FluTracker data for NSW participants has been suspended until an adequate number of participants are reporting each fortnight.

Sentinel laboratory surveillance

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 should be interpreted cautiously given data from fewer laboratories were available for the past week. COVID-19 PCR positivity declined to 13.9%, influenza and RSV test positivities are remaining around 4% and 2% respectively.

Figure 11. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 January 2023 to 21 January 2024.

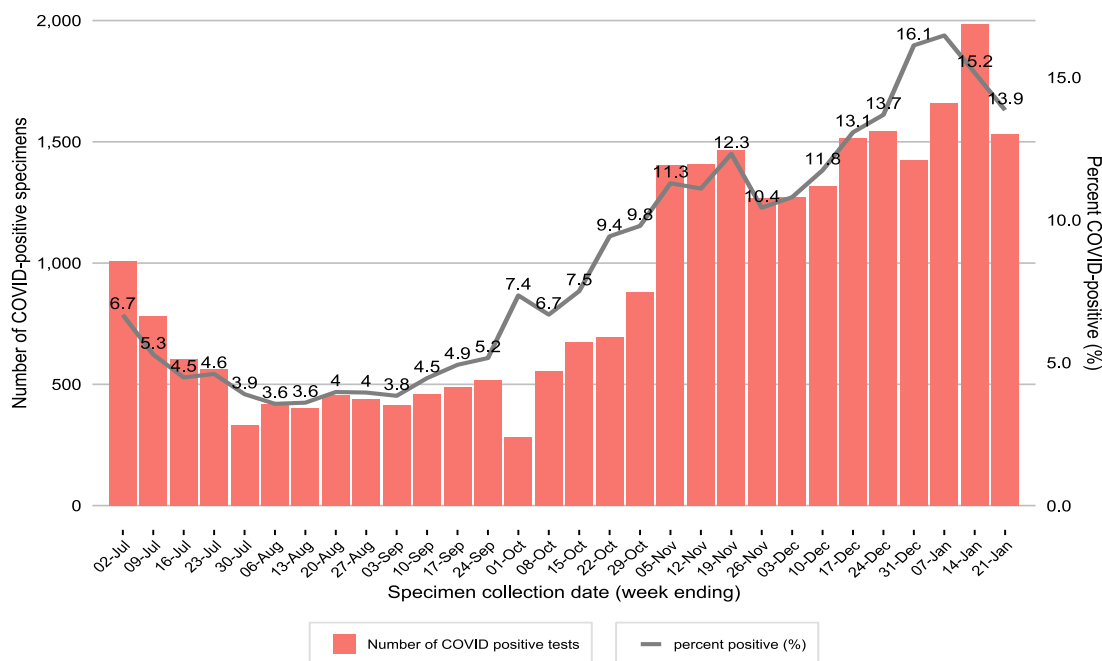


Figure 12. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 January 2023 to 21 January 2024.

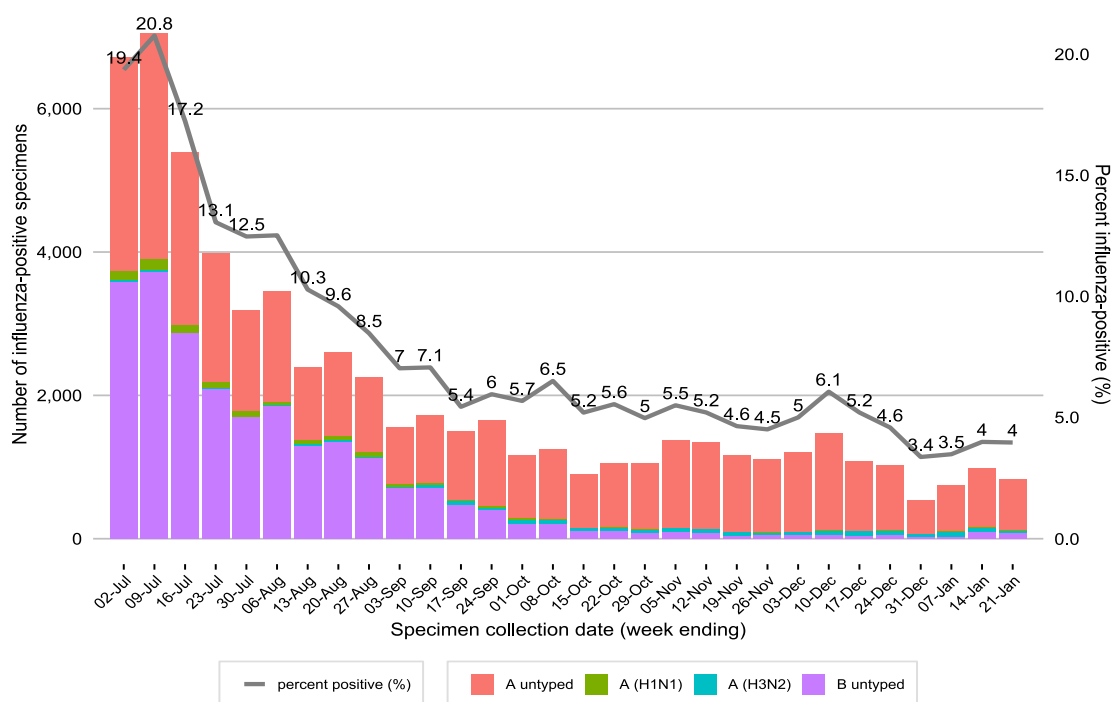


Figure 13. Number of positive PCR test results and proportion of tests positive for other respiratory viruses at sentinel NSW laboratories, 1 January 2023 to 21 January 2024.

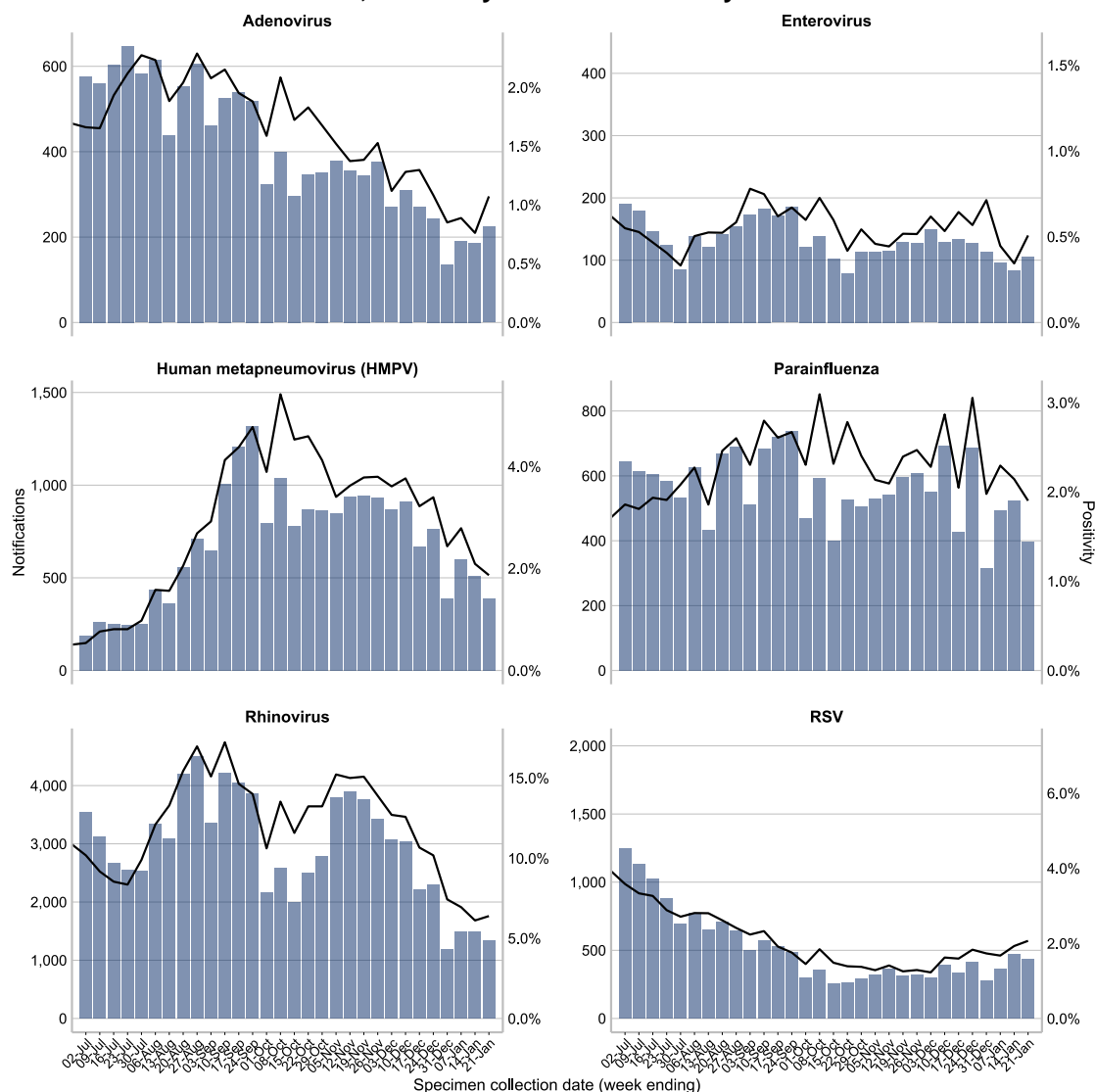


Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 21 January 2024.

	Week ending				Year to date
	31 December	07 January	14 January	21 January	
	n (% pos)	n (% pos)	n (% pos)	n (% pos)	n
Influenza	539 (3.4%)	749 (3.5%)	975 (4.0%)	829 (4.0%)	2,553
Adenovirus	136 (0.9%)	191 (0.9%)	186 (0.8%)	224 (1.1%)	601
Parainfluenza	316 (2.0%)	493 (2.3%)	523 (2.1%)	397 (1.9%)	1,413
Respiratory syncytial virus (RSV)	277 (1.7%)	360 (1.7%)	471 (1.9%)	432 (2.1%)	1,263
Rhinovirus	1,187 (7.4%)	1,492 (6.9%)	1,492 (6.1%)	1,334 (6.4%)	4,318
Human metapneumovirus (HMPV)	389 (2.4%)	599 (2.8%)	510 (2.1%)	390 (1.9%)	1,499
Enterovirus	114 (0.7%)	96 (0.4%)	84 (0.3%)	106 (0.5%)	286
Number of PCR tests conducted	15,980	21,483	24,405	20,881	66,769
SARS-CoV-2	1,424 (16.1%)	1,660 (16.5%)	1,987 (15.2%)	1,532 (13.9%)	5,179
Number of COVID PCR tests	8,828	10,074	13,099	11,052	34,225
Number of laboratories reporting	10	12	12	9	-
Number of laboratories reporting COVID	4	4	4	3	-

Recent data is subject to change.