COVID-19 and influenza are at a low level of activity. RSV is at a moderate level of activity

Summary

COVID-19 and influenza activity remain at low levels. RSV activity has been increasing and is at a moderate level. Pertussis, or whooping cough, notifications have dropped over the last 3 months.

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 Wastewater Surveillance Program, Whole Genome Sequencing (WGS) data and the NSW Sentinel Laboratory Network results are currently of most value for monitoring COVID-19 and other respiratory viruses of importance in the community. Public registration of positive COVID-19 rapid antigen tests (RAT) in NSW ceased on 30 September 2023. NSW Health also monitors COVID-19 outbreaks in residential aged-care facilities that 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 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 the impact on the health system.

Interpretation: Emergency Department (ED) presentations and admissions for COVID-19 have slightly decreased over the last week and are at low levels. ED presentations and admissions for an influenza-like illness remain stable at low levels. ED presentations and admissions for bronchiolitis in young children have been increasing over the last month. For children under 5 years of age with bronchiolitis, 82% of presentations and 81% of admissions, were for infants less than one year old.

Figure 1. 'COVID-19' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 1 September 2023 - 9 March 2025, persons of all ages

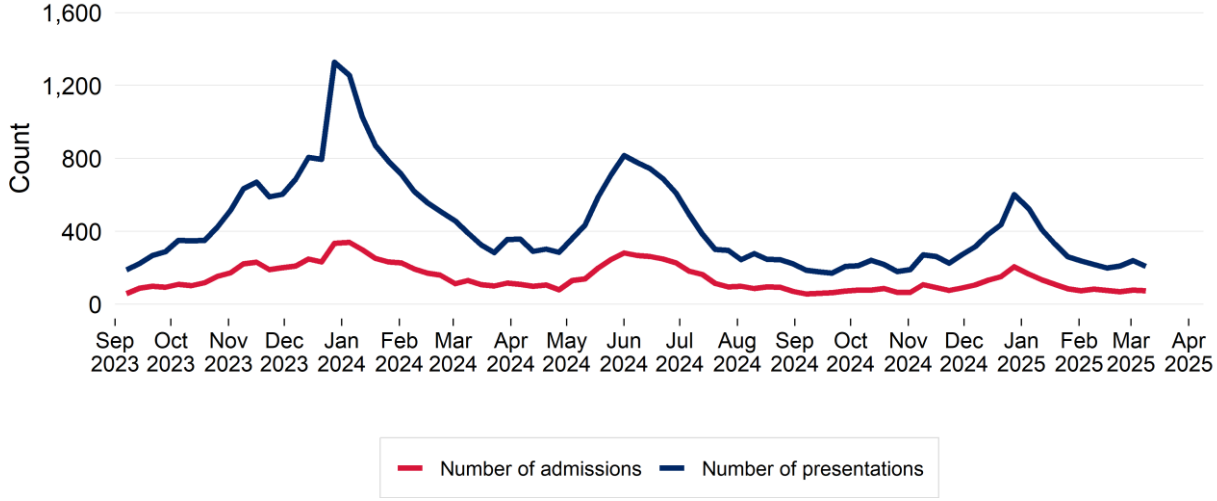


Figure 2. 'Influenza-like illness' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 1 September 2023 - 9 March 2025, persons of all ages

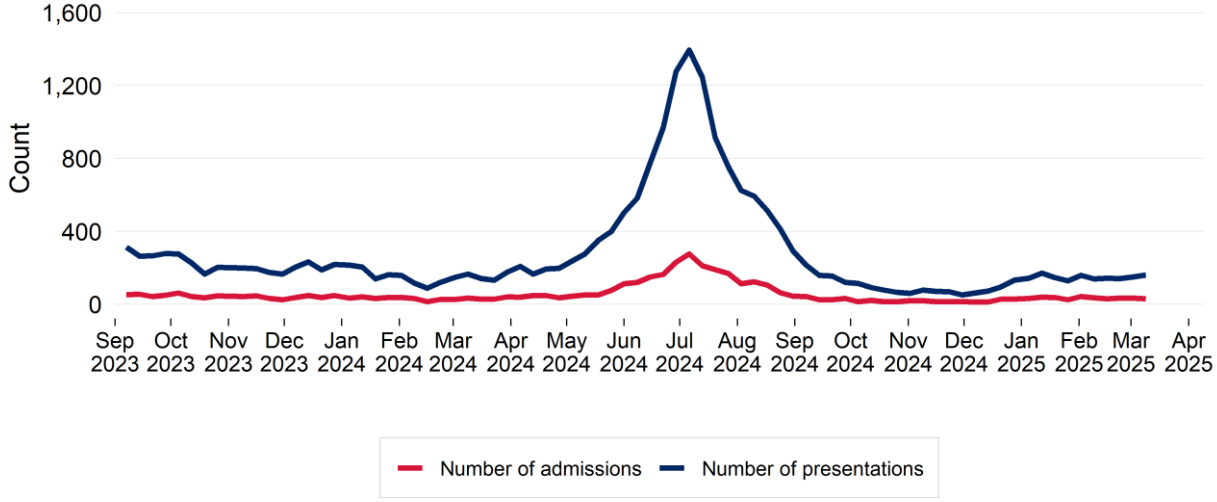
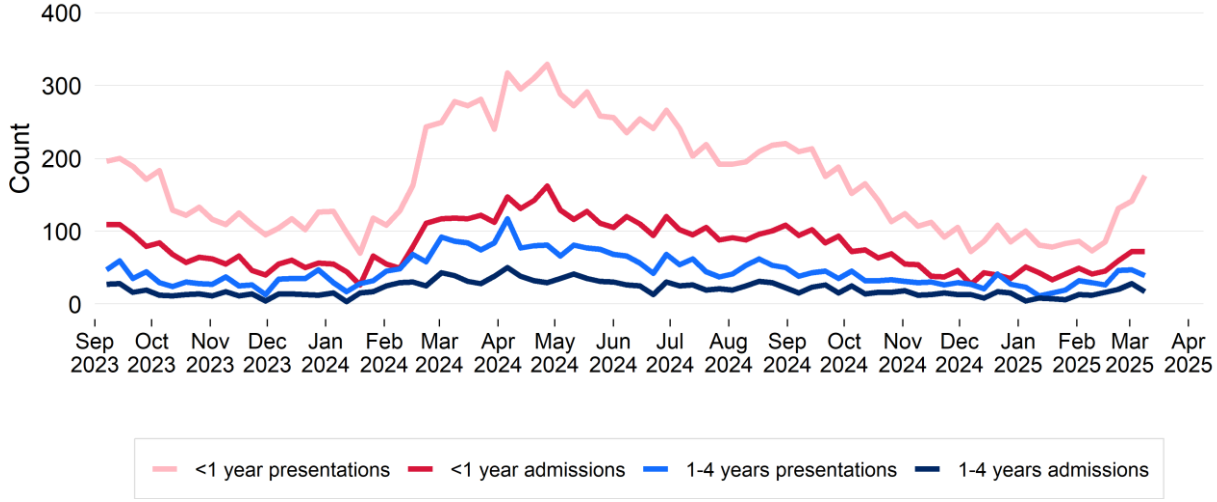


Figure 3. Bronchiolitis weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 1 September 2023 - 9 March 2025, children aged 0-4 years



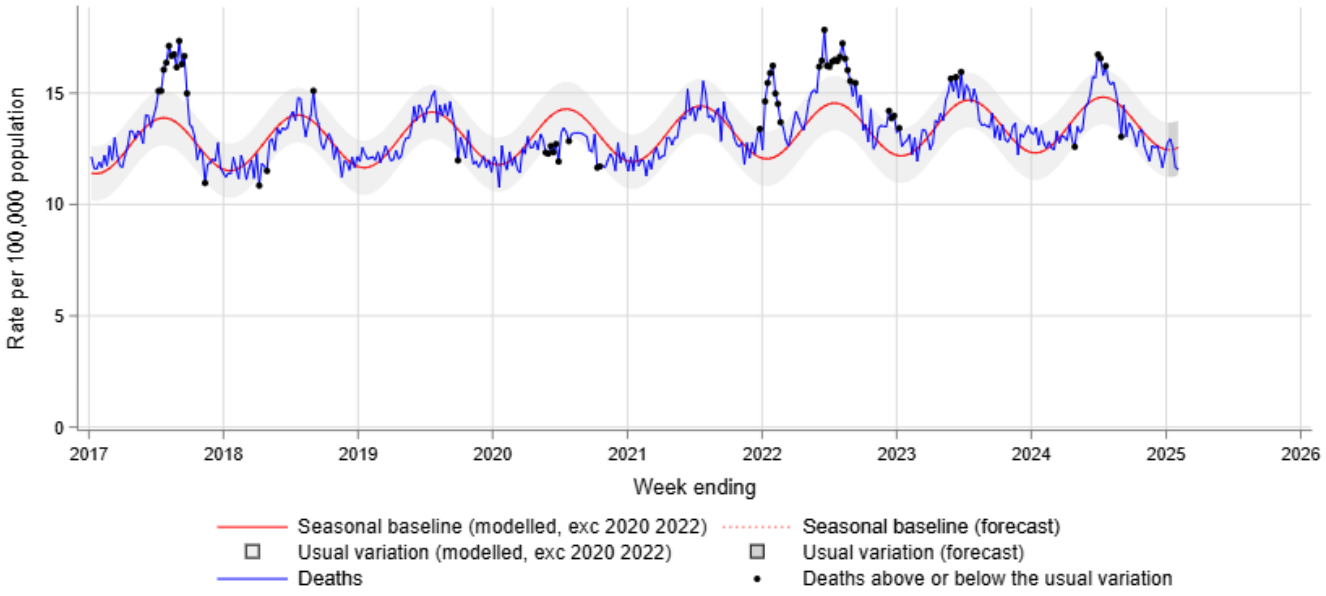
Death surveillance

All-cause mortality

The model for rapid surveillance of excess all-cause mortality in NSW is updated annually, and has a focus on surveillance for increased mortality in recent months. The model outputs for the current year should not be directly compared to previous years' outputs, due to a change in the baseline of the model. The NSW model supports surveillance of the impact of circulating viruses such as COVID-19 and influenza on all-cause mortality. This is not the same approach as that used by the ABS or by the Actuaries Institute to examine excess mortality associated with COVID-19 during the pandemic period. These approaches modelled excess mortality in the absence of COVID-19.

Interpretation: Weekly lag adjusted all-cause mortality is below the seasonal baseline (red line) and within lower threshold of the usual variation band (grey shading).

Figure 4. All-cause death rate per 100,000 population, all ages, 1 January 2017 to 2 February 2025



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 29 December 2024 to 2 February 2025. For additional information see COVID-19 surveillance report data sources and methodology for details.

Notifications of COVID-19, influenza and RSV

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

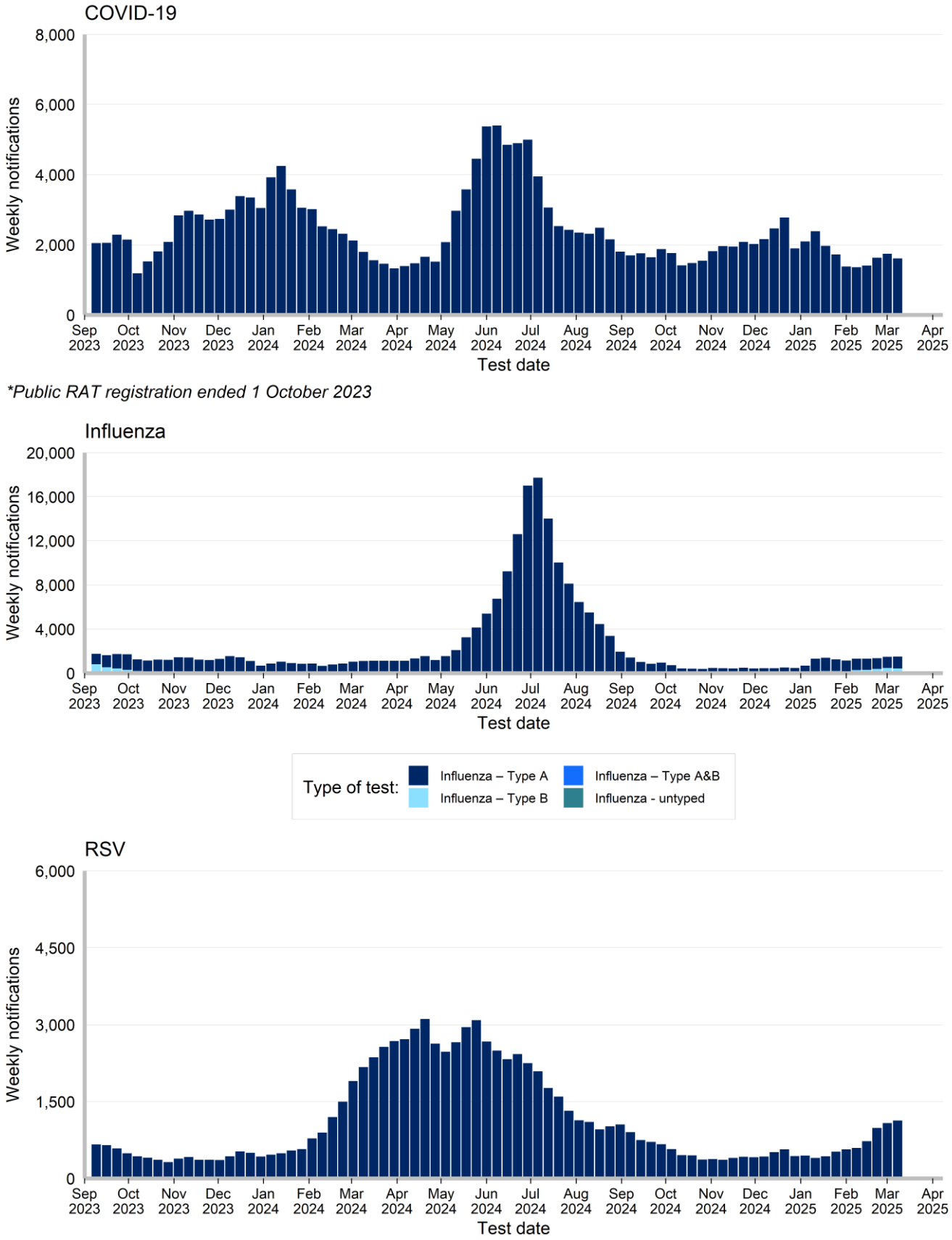
Interpretation: In the past week there was a decrease of 7.11% in COVID-19 notifications, an increase of 2.39% in influenza notifications, and an increase of 5.73% RSV notifications.

Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the week ending 8 March 2025

	COVID		Influenza		RSV	
	Week ending 8 March 2025	Year to Date	Week ending 8 March 2025	Year to Date	Week ending 8 March 2025	Year to Date
Gender						
Female	912	9,859 (57%)	755	6,585 (52%)	608	3,620 (53%)
Male	695	7,406 (43%)	742	6,118 (48%)	517	3,233 (47%)
Age group (years)						
0-4	140	1,889 (11%)	143	1,462 (12%)	615	3,521 (51%)
5-9	58	484 (3%)	229	1,370 (11%)	83	353 (5%)
10-19	198	1,118 (6%)	232	1,586 (12%)	62	326 (5%)
20-29	127	1,351 (8%)	125	1,058 (8%)	36	266 (4%)
30-39	177	1,905 (11%)	180	1,525 (12%)	59	332 (5%)
40-49	178	1,876 (11%)	168	1,644 (13%)	43	296 (4%)
50-59	167	1,643 (10%)	137	1,396 (11%)	71	400 (6%)
60-69	163	1,777 (10%)	142	1,178 (9%)	54	433 (6%)
70-79	166	2,273 (13%)	83	888 (7%)	57	455 (7%)
80-89	171	2,041 (12%)	49	494 (4%)	37	334 (5%)
90+	71	920 (5%)	9	106 (1%)	9	139 (2%)
Local Health District of residence						
Central Coast	46	633 (4%)	50	288 (2%)	33	210 (3%)
Far West	2	27 (0%)	3	16 (0%)	2	9 (0%)
Hunter New England	116	1,195 (7%)	79	665 (5%)	131	653 (10%)
Illawarra Shoalhaven	66	750 (4%)	70	492 (4%)	62	454 (7%)
Mid North Coast	37	369 (2%)	11	141 (1%)	11	100 (1%)
Murrumbidgee	49	557 (3%)	28	202 (2%)	3	45 (1%)
Nepean Blue Mountains	111	1,050 (6%)	86	629 (5%)	110	481 (7%)
Northern NSW	48	648 (4%)	34	332 (3%)	33	280 (4%)
Northern Sydney	198	2,198 (13%)	269	2,392 (19%)	226	1,255 (18%)
South Eastern Sydney	152	1,619 (9%)	165	1,627 (13%)	113	821 (12%)
South Western Sydney	228	2,712 (16%)	184	1,640 (13%)	95	667 (10%)
Southern NSW	19	186 (1%)	21	131 (1%)	11	86 (1%)
Sydney	135	1,289 (7%)	114	1,106 (9%)	94	501 (7%)
Western NSW	35	344 (2%)	24	225 (2%)	8	78 (1%)
Western Sydney	366	3,560 (21%)	352	2,751 (22%)	190	1,199 (17%)
Aboriginal status						
Aboriginal and/or Torres Strait Islander	27	356 (2%)	28	212 (2%)	23	162 (2%)
Not Aboriginal or Torres Strait Islander	853	8,706 (50%)	822	6,917 (54%)	480	3,099 (45%)
Not Stated / Unknown	728	8,212 (48%)	647	5,578 (44%)	623	3,594 (52%)
Total	1,608	17,274 (100%)	1,497	12,707 (100%)	1,126	6,855 (100%)

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

Figure 5. Weekly notifications of COVID-19*, Influenza and RSV, by date of test and type of test performed, NSW, 1 September 2023 to 8 March 2025



Rates of COVID-19 notifications per 100,000 population

Interpretation: Rates of COVID-19 notifications are low across all ages.

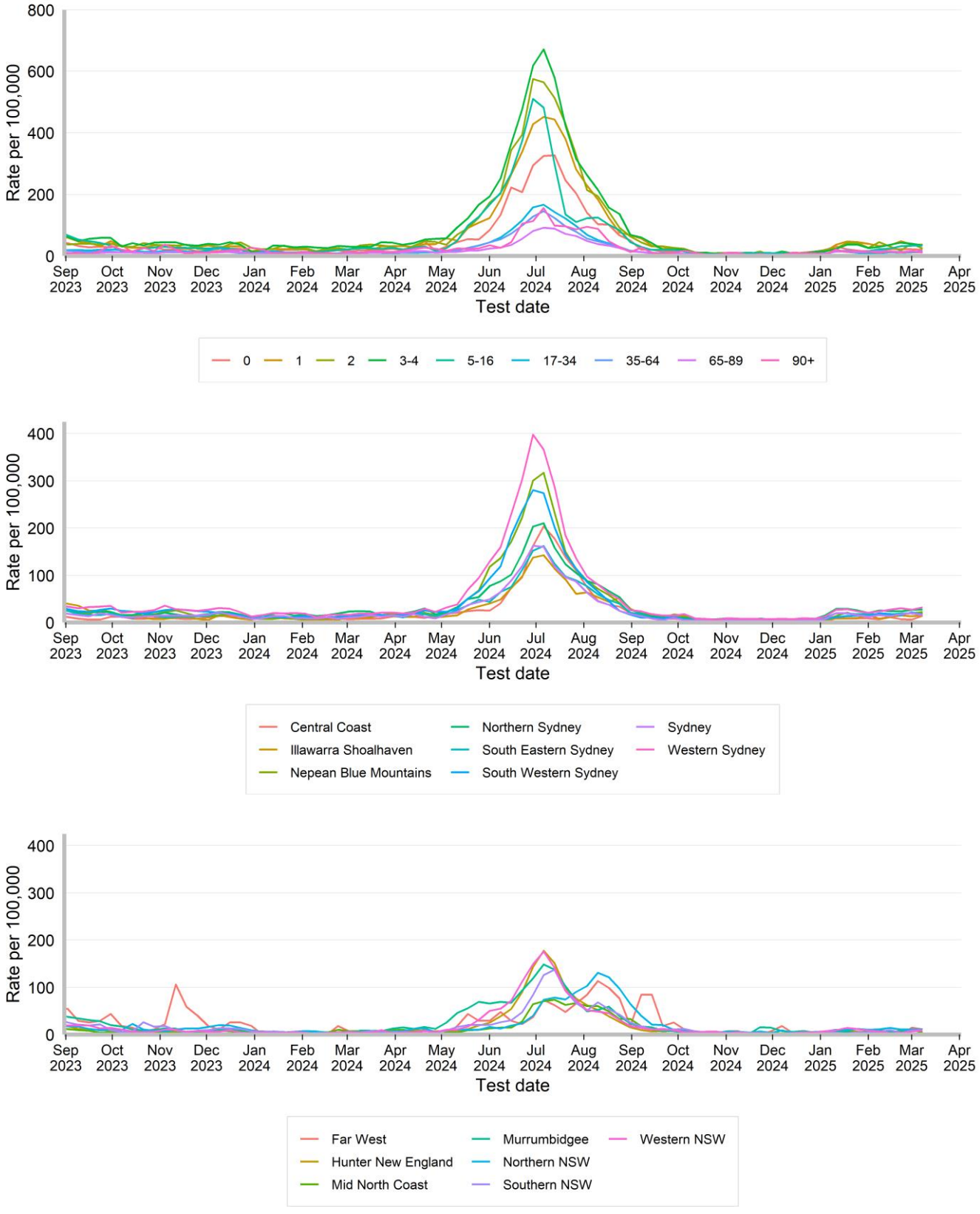
Figure 6. Weekly rate of COVID-19* notifications per 100,000 population, by age group, Local Health District and test date, NSW, 1 September 2023 to 8 March 2025

*Public RAT registration ended 1 October 2023

Rates of influenza notifications per 100,000 population

Interpretation: Influenza notification rates are low in all age groups and across all districts.

Figure 7. Weekly rate of influenza notifications per 100,000 population, by age group, Local Health District and test date, NSW, 1 September 2023 to 8 March 2025



Rates of RSV notifications per 100,000 population

Interpretation: Rates of RSV notifications have been increasing over the last 2 months with the highest rates in children aged 1 year.

Figure 8. Weekly rate of respiratory syncytial virus notifications per 100,000 population, by age group and test date, NSW, 1 September 2023 to 8 March 2025

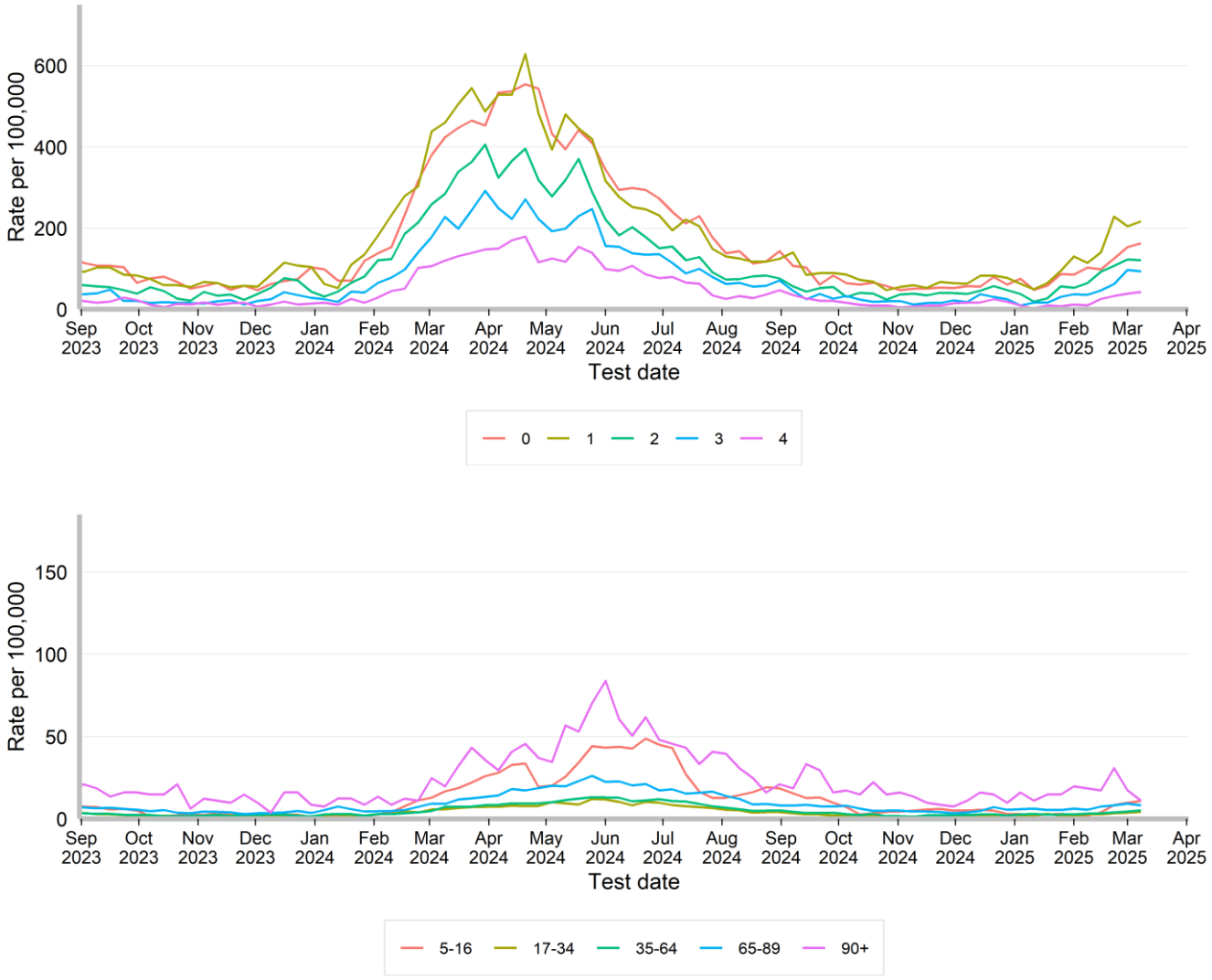
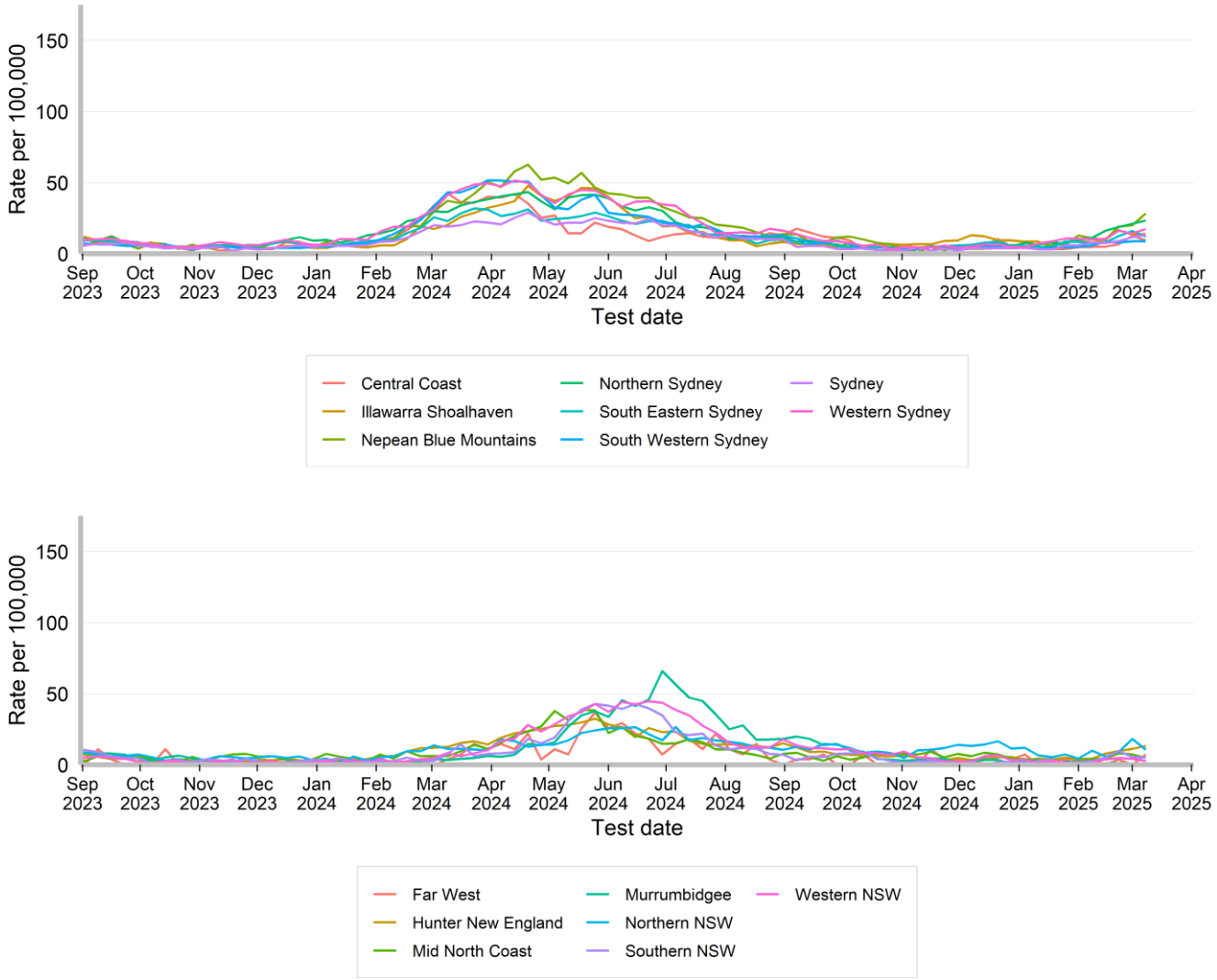


Figure 9. Weekly rate of respiratory syncytial virus notifications per 100,000 population, by Local Health District and test date, NSW, 1 September 2023 to 8 March 2025



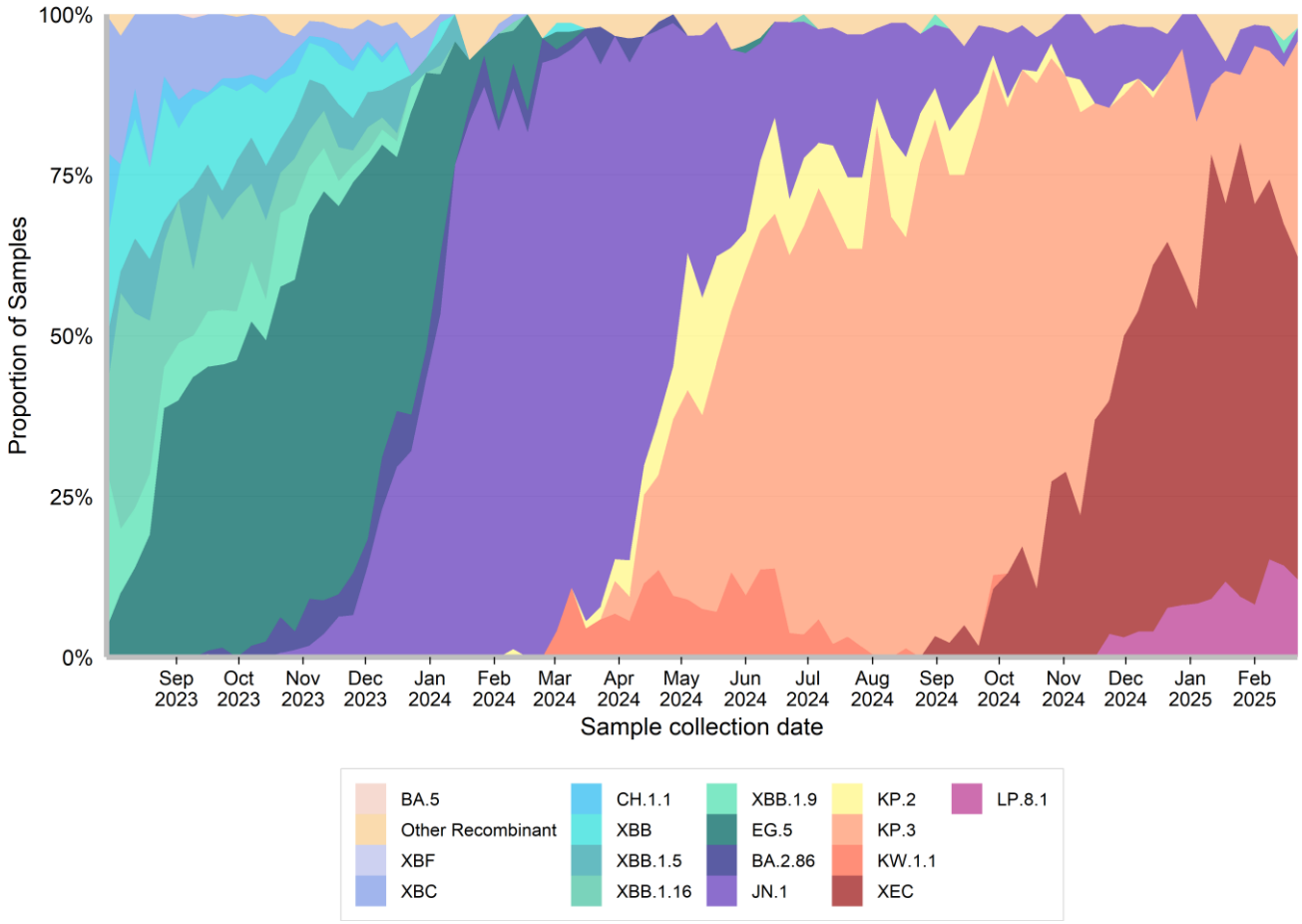
Other surveillance indicators

COVID-19 Whole Genome Sequencing

A subset of specimens from people who test positive with COVID-19 via PCR at NSW Health Pathology services undergo whole genome sequencing each week to identify and understand the behaviour of circulating variants. This sample may not necessarily reflect the distribution of all cases across NSW. NSW continues to monitor the sub-lineages in samples from ICU to monitor for increased disease severity.

Interpretation: NSW continues to monitor sub-lineages emerging globally and locally and consider their impact in the context of the local immunity profile. We continue to report a COVID-19 sub-lineage LP.8.1 whose prevalence has been increasing globally. At the global level the World Health Organization evaluates its risk for this variant as low, however there can be regional differences in variant associated risk.

Figure 10. Estimated weekly distribution of COVID-19 sub-lineages in the community, 1 September 2023 to 22 February 2025

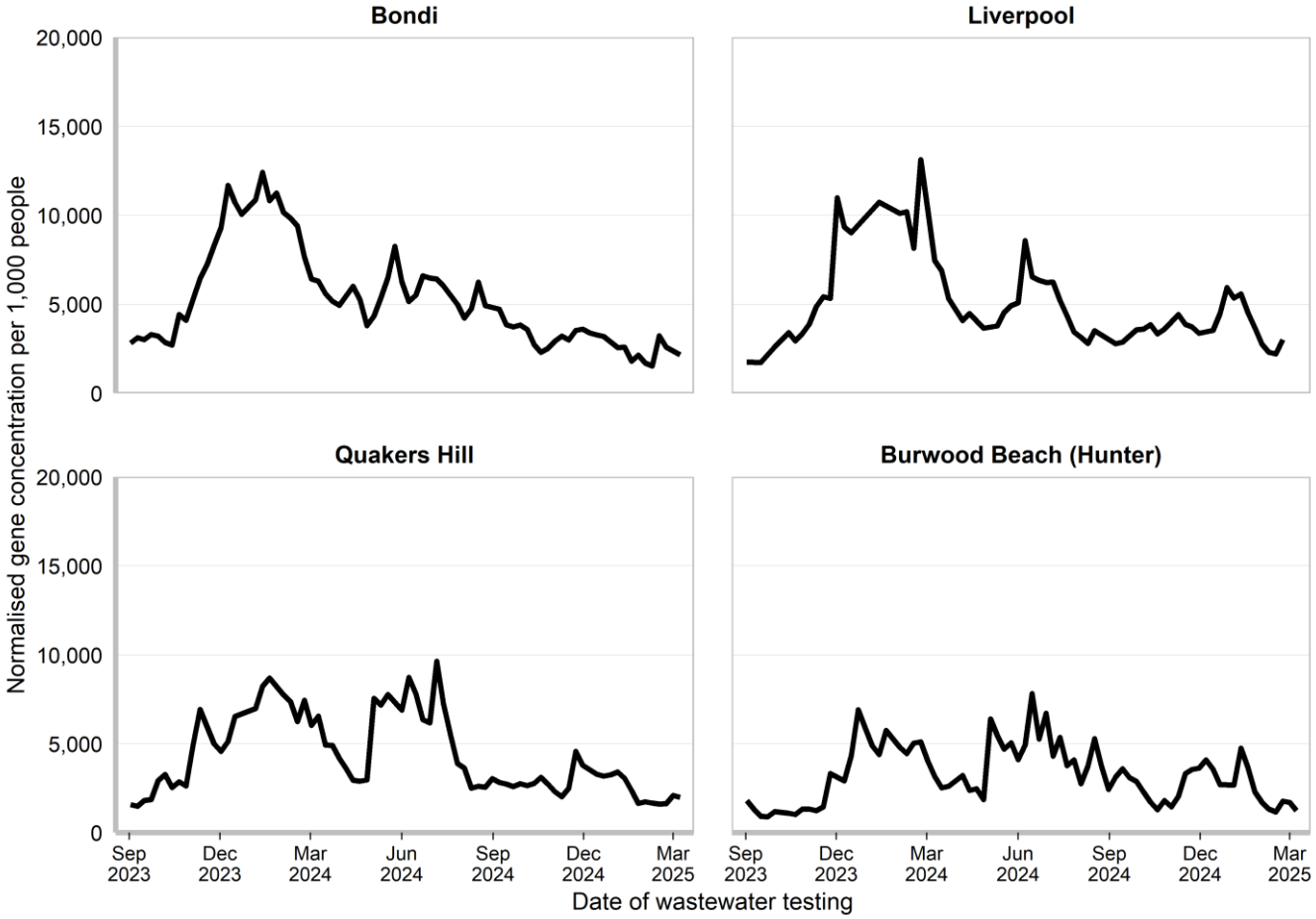


COVID-19 Wastewater Surveillance Program

Trends are presented for Bondi, Liverpool, Quakers Hill, and Burwood Beach (Hunter) wastewater catchments from 08 September 2023 to the week ending 8 March 2025. For more information, please see the COVID-19 Wastewater Surveillance Program website: https://www.health.nsw.gov.au/Infectious/covid-19/Pages/sewage-surveillance.aspx.

Interpretation: Gene concentrations per 1,000 people are low across all catchment areas.

Figure 11. Gene concentration, per 1,000 people in each wastewater catchment, 1 September 2023 to 8 March 2025



NSW Sentinel Laboratory Network

The NSW Sentinel Laboratory Network comprises of 12 public and private laboratories throughout NSW who provide additional data on positive and negative test results. This data helps us understand which respiratory viruses are circulating and their level of activity. Note that the number of laboratories providing data differs between viruses and changes between weeks (Tables 2 and 3).

Interpretation: Test positivity for COVID-19 has remained stable at 5.9%, influenza has increased to 5.8%, and RSV positivity increased to at 3.7%.

Figure 12. Number and proportion of tests positive for COVID-19 at NSW sentinel laboratories by week, 1 September 2023 to 9 March 2025

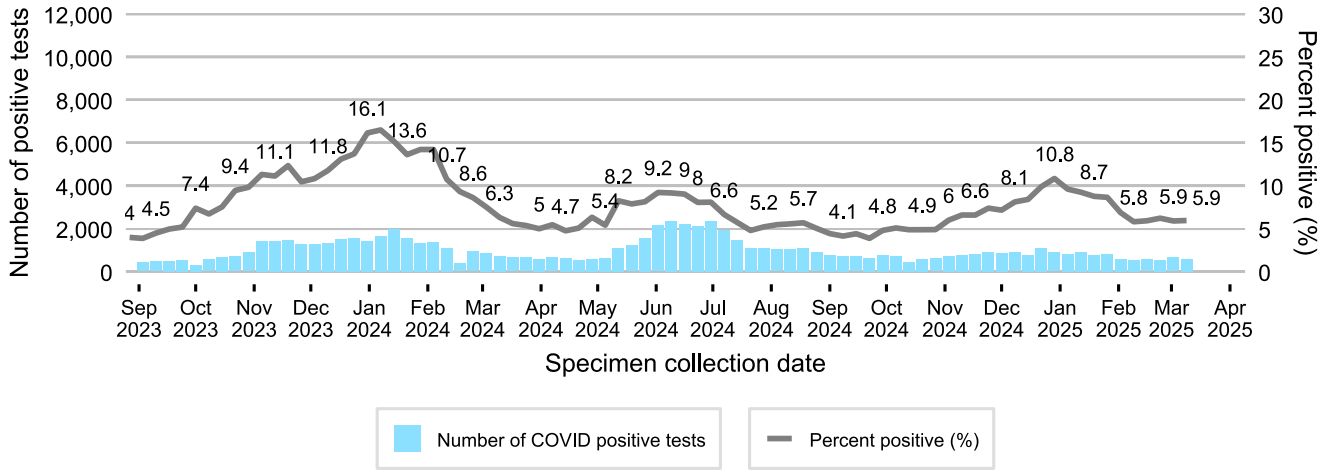


Figure 13. Number and proportion of tests positive for influenza at NSW sentinel laboratories by week, 1 September 2023 to 9 March 2025

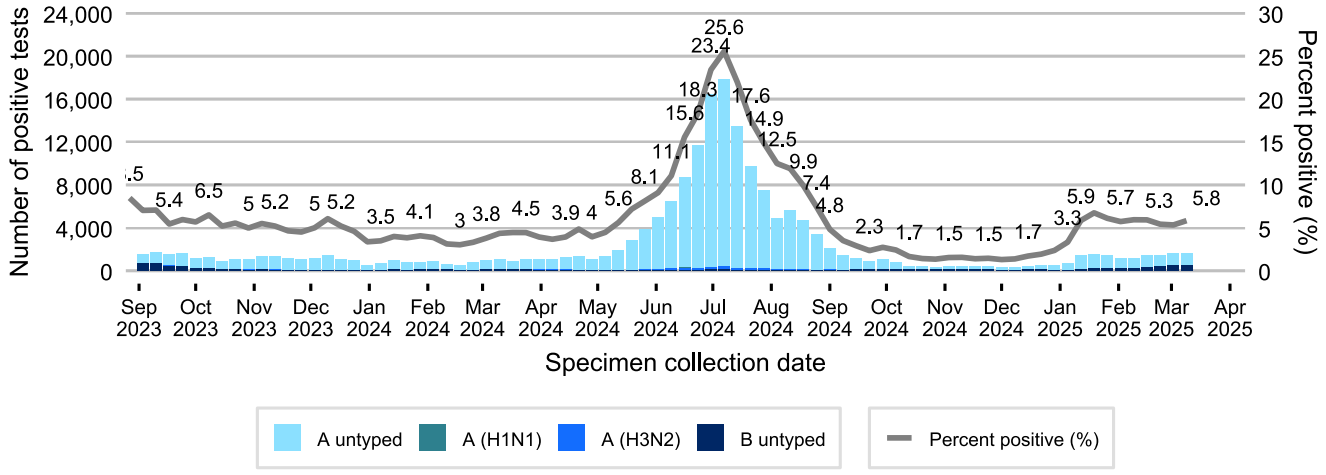


Figure 14. Number and proportion of tests positive for RSV at NSW sentinel laboratories by week, 1 September 2023 to 9 March 2025

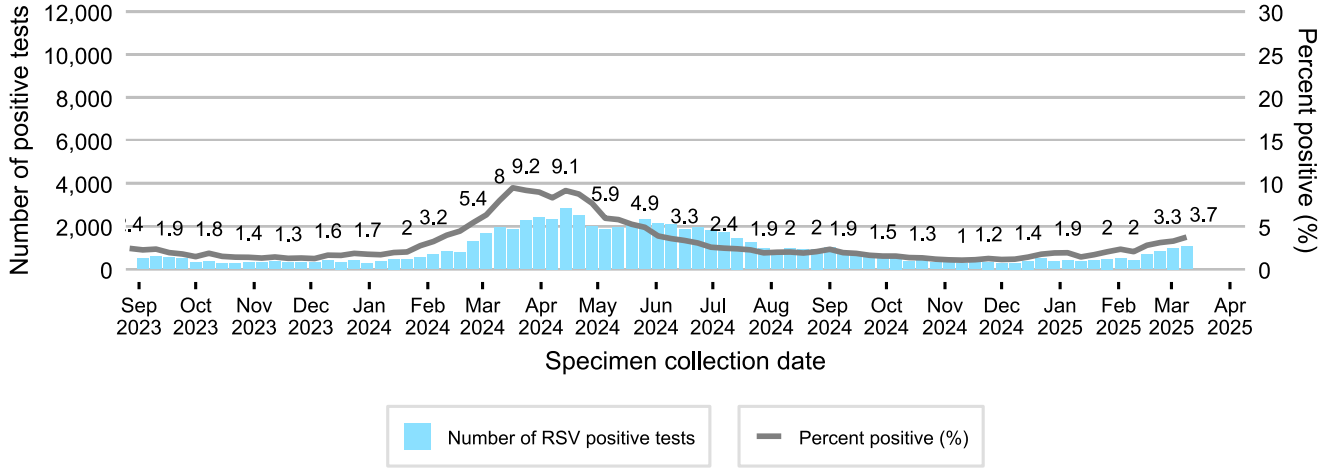


Figure 15. Number of positive PCR test results and proportion of tests positive for other respiratory viruses at NSW sentinel laboratories by week, 1 September 2023 to 9 March 2025

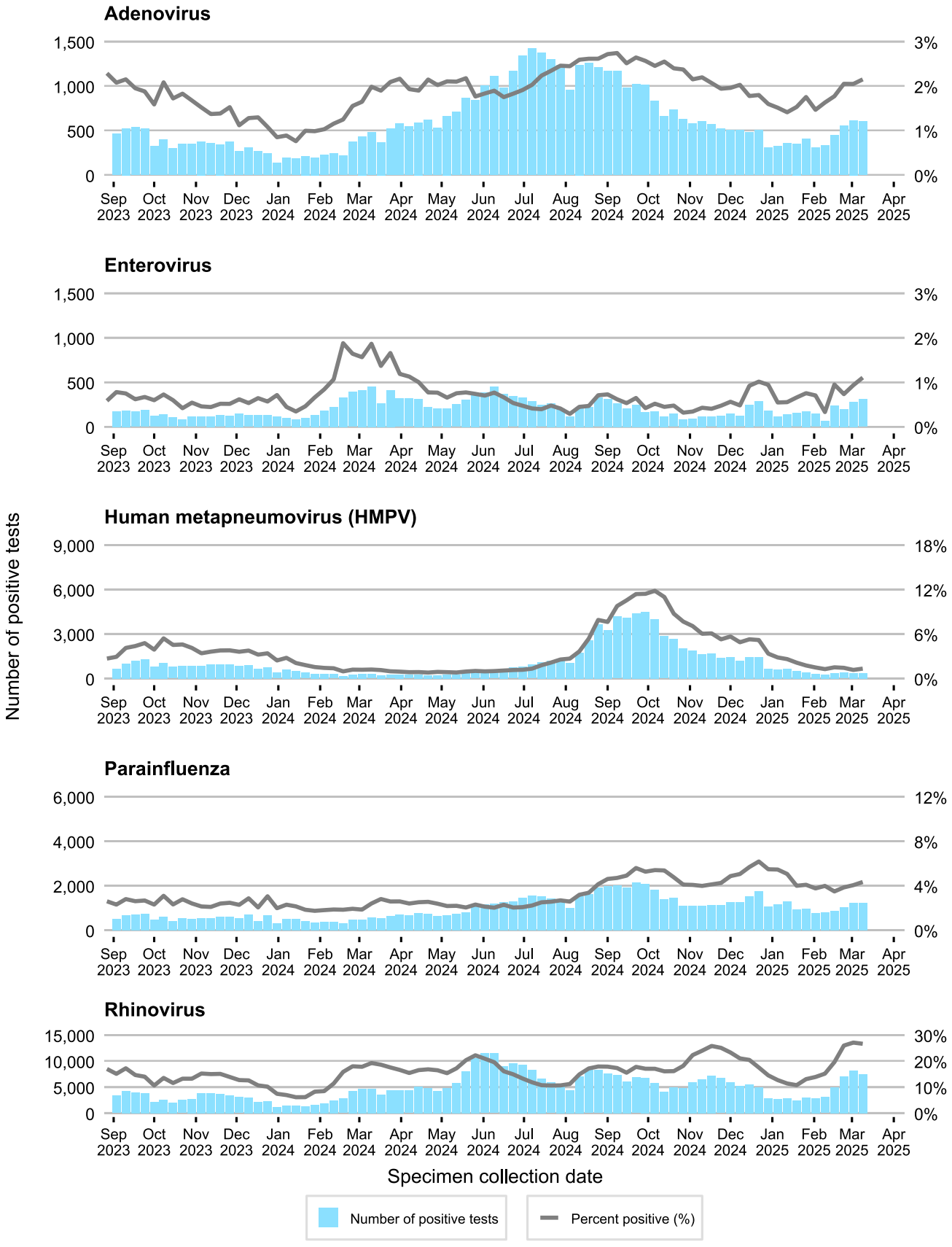


Table 2. Total number of COVID-19 notifications from NSW sentinel laboratories, in the four weeks to 9 March 2025

	Week ending							
	16 February		23 February		02 March		09 March	
	n	% pos	n	% pos	n	% pos	n	% pos
SARS-CoV-2	556	5.9%	543	6.2%	646	5.9%	578	5.9%
Number of COVID PCR tests conducted	9,424		8,758		10,990		9,747	
Number of laboratories reporting COVID	4		3		4		2	

Recent data is subject to change.

Table 3. Total number of other respiratory disease notifications from NSW sentinel laboratories, in the four weeks to 9 March 2025

	Week ending							
	16 February		23 February		02 March		09 March	
	n	% pos	n	% pos	n	% pos	n	% pos
Influenza	1,492	5.9%	1,470	5.4%	1,605	5.3%	1,642	5.8%
Respiratory syncytial virus (RSV)	698	2.8%	837	3.1%	982	3.3%	1,048	3.7%
Adenovirus	446	1.8%	556	2.1%	616	2.0%	605	2.2%
Human metapneumovirus (HMPV)	379	1.5%	390	1.4%	348	1.2%	374	1.3%
Rhinovirus	4,930	19.6%	7,035	26.0%	8,151	27.1%	7,492	26.6%
Enterovirus	239	1.0%	199	0.7%	281	0.9%	311	1.1%
Parainfluenza	877	3.5%	1,043	3.8%	1,218	4.1%	1,219	4.3%
Number of PCR tests conducted	25,156		27,098		30,070		28,120	
Number of laboratories reporting	11		10		11		8	

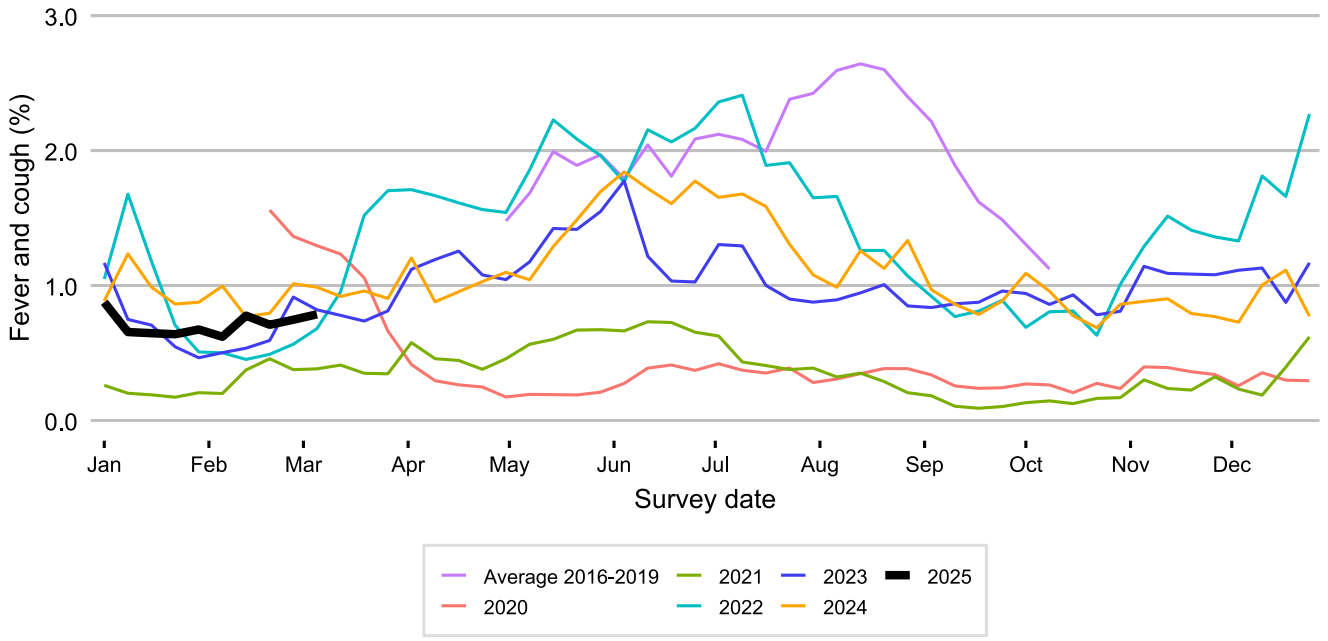
Recent data is subject to change.

FluTracking

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: Since January 2025, the proportion of people reporting fever has remained below 1%.

Figure 16. Proportion of FluTracking participants reporting influenza-like illness, NSW, 1 January to 9 March 2025



In Focus

Pertussis

Pertussis (commonly known as whooping cough) is caused by the bacteria *Bordetella pertussis*. Pertussis can cause serious illness in all ages but can be particularly dangerous in babies. Pertussis can cause pneumonia and can be life threatening. Anyone with pertussis can spread it to others. The bacteria spread from one person to another mainly when someone with the infection coughs and fine droplets that contain the bacteria spread into the surrounding air. Vaccination reduces the risk of infection and severe disease. There is seasonal variation in pertussis activity, with greater activity typically in the spring and summer months. Outbreaks of pertussis usually occur every few years as population immunity wanes. Public health interventions in place during 2020 and 2021 to reduce the transmission of COVID-19, also reduced other respiratory infections, including pertussis. In 2020 there was dramatic reduction in the rate of notifications to almost half of the low in 2013, with further reductions in 2021 and 2022 (Figure 16). Notifications of people with pertussis in NSW started to increase in 2023, with 2024 having the highest notification rate recorded since 2009 (Figure 17). The number of notifications in the 5-14 year age group increased rapidly from February 2024, reaching a maximum in September. Since mid-November the number of notifications in this age group has been declining and is now comparable to other age groups (Figure 18). Additional notification data can be found on the on the NSW Health pertussis data page.

Figure 17. Pertussis notifications and rates per 100,000 by year, 2009 to 2024

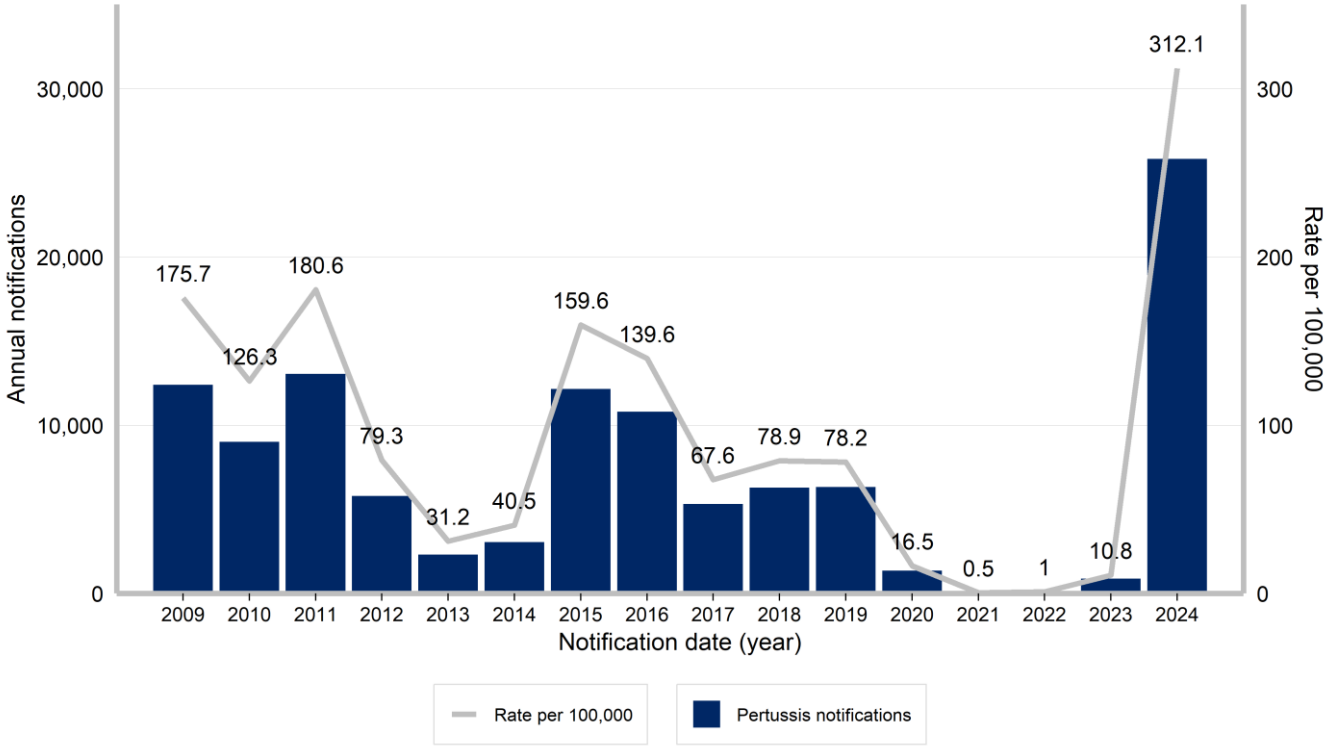


Figure 18. Monthly pertussis notification rates per 100,000 by age group, 1 September 2023 to 28 February 2025

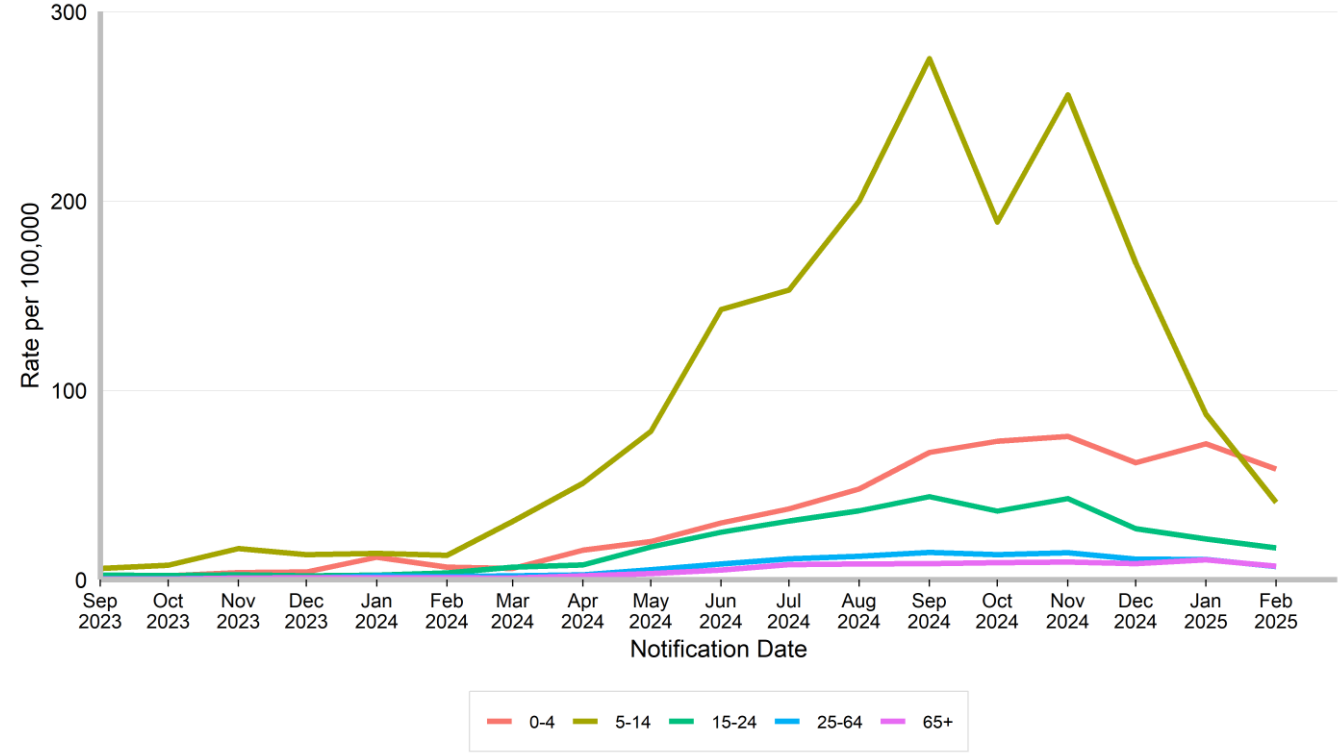


Figure 19. Weekly pertussis notifications by age group, 1 January 2024 to 8 March 2025