# NSW Respiratory Surveillance Report - week ending 16 March 2024

**COVID-19 activity is moderate. Influenza activity is low. Respiratory syncytial virus activity is high.**

## Summary

COVID-19 activity continues to decrease across all indicators. Influenza activity is low though there is still evidence of continued community circulation. Presentations to emergency departments for children with bronchiolitis remain high though admissions have stabilized. Respiratory syncytial virus (RSV) notifications have increased by 8% since last week.

## 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 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:** Presentations to EDs for COVID-19 have declined and admissions are stable. Influenza-like illness presentations and admissions are relatively stable at a low level. Presentations and admissions for bronchiolitis in young children remain at a high level.

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

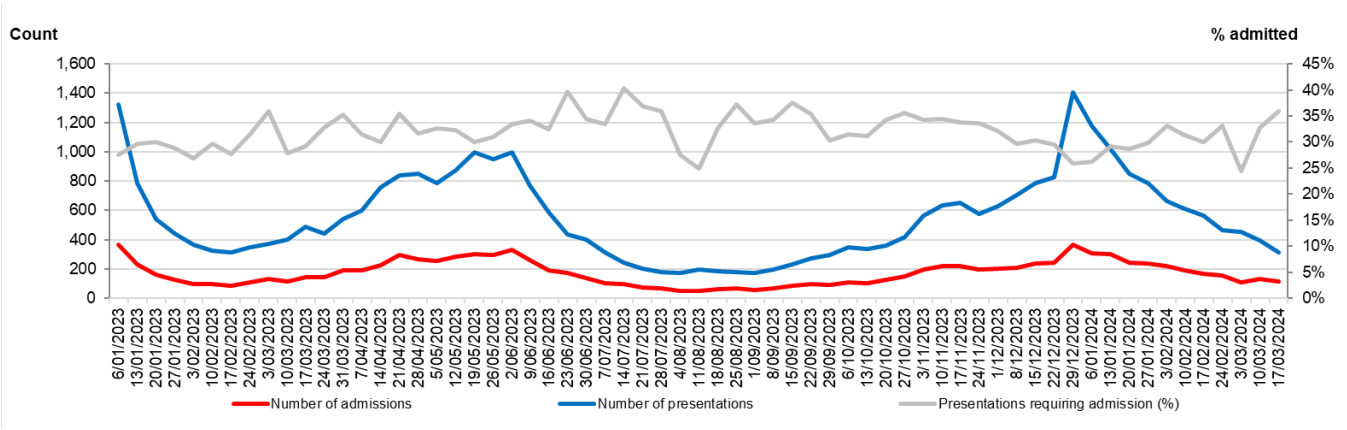



**Figure 2. 'Influenza-like illness' weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023-2024, persons of all ages.**

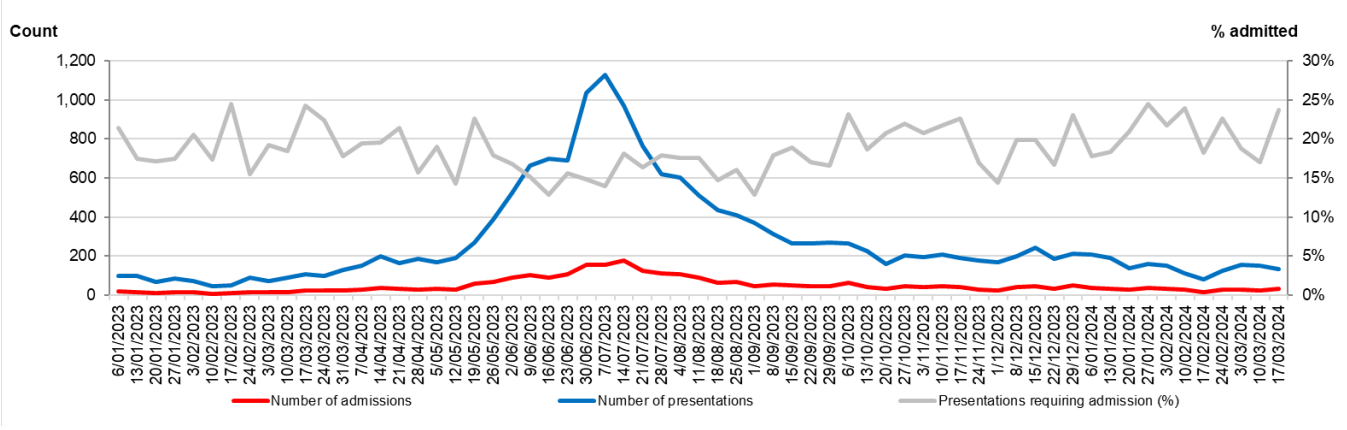
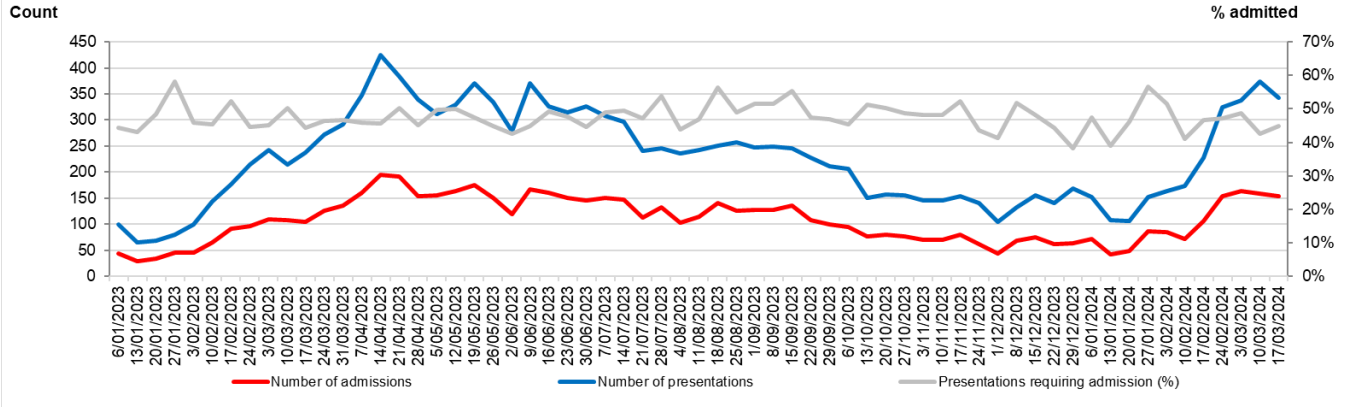



**Figure 3. Bronchiolitis weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023-2024, children aged 0-4 years.**



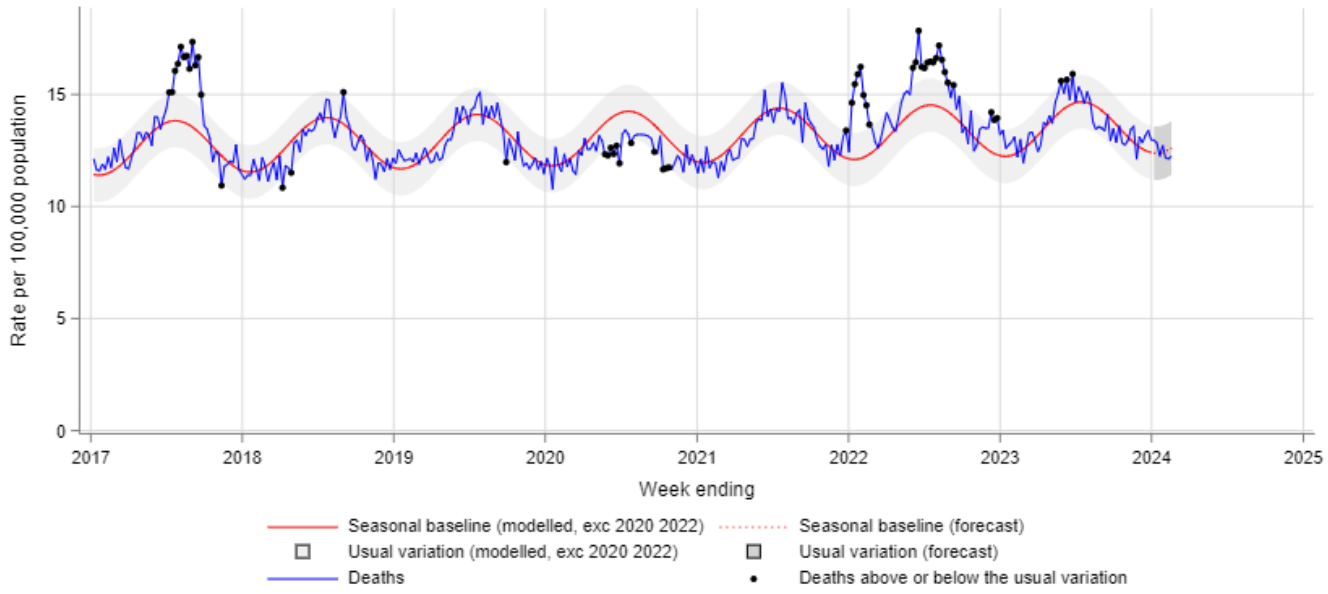
# Death surveillance

## 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 within the usual variation.

**Figure 4. All-cause death rate per 100,000 population, all ages, 2017 to 18 February 2024**




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 14 January 2024 to 18 February 2024. 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.

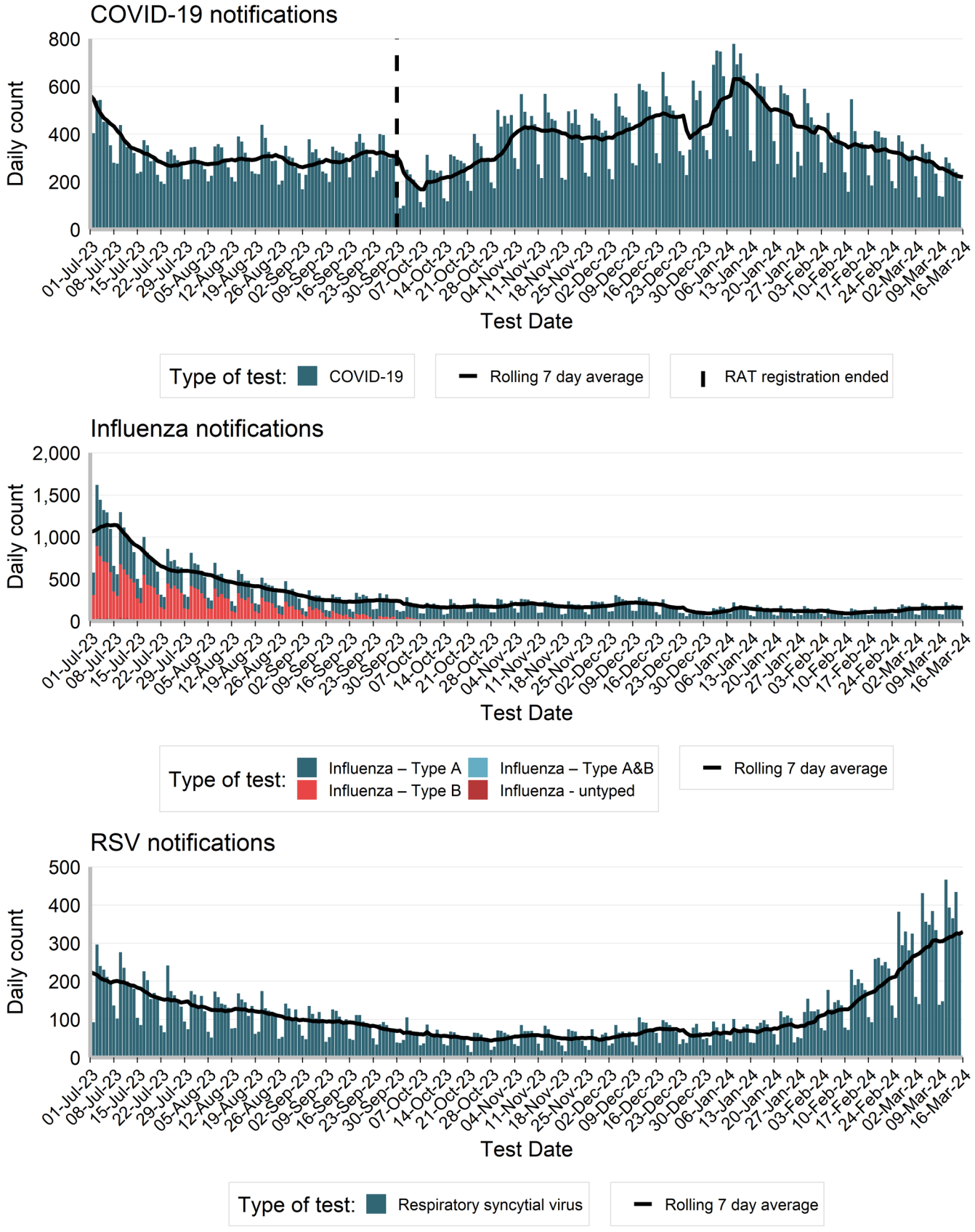
**Interpretation:** In the past week there was decrease of 12.7% in COVID notifications, an increase of 3.1% in influenza notifications, and an increase of 8.4% in RSV notifications. Most RSV notifications are for children under 5 years of age.

**Table 1: Notifications of COVID-19, influenza and RSV, NSW, tested in the week ending 16 March 2024.**

| | COVID | | Influenza | | RSV | |
|---|---|---|---|---|---|---|
| | Week ending 16 March 2024 | Year to Date | Week ending 16 March 2024 | Year to Date | Week ending 16 March 2024 | Year to Date |
| Gender | | | | | | |
| Female | 845 | 16,360(55%) | 537 | 5,089(51%) | 1,191 | 6,448(51%) |
| Male | 684 | 13,485(45%) | 576 | 4,852(49%) | 1,109 | 6,136(49%) |
| Age group (years) | | | | | | |
| 0-4 | 146 | 3,100(10%) | 123 | 1,253(13%) | 1,531 | 8,280(66%) |
| 5-9 | 27 | 566(2%) | 136 | 1,045(10%) | 159 | 690(5%) |
| 10-19 | 81 | 1,350(5%) | 188 | 1,376(14%) | 86 | 408(3%) |
| 20-29 | 114 | 2,416(8%) | 99 | 1,217(12%) | 56 | 362(3%) |
| 30-39 | 141 | 3,312(11%) | 133 | 1,307(13%) | 99 | 575(5%) |
| 40-49 | 178 | 3,008(10%) | 125 | 1,153(12%) | 57 | 375(3%) |
| 50-59 | 160 | 2,949(10%) | 107 | 931(9%) | 79 | 434(3%) |
| 60-69 | 189 | 3,316(11%) | 82 | 699(7%) | 91 | 489(4%) |
| 70-79 | 227 | 3,988(13%) | 71 | 590(6%) | 62 | 487(4%) |
| 80-89 | 182 | 3,902(13%) | 38 | 280(3%) | 57 | 365(3%) |
| 90+ | 94 | 1,942(7%) | 13 | 99(1%) | 24 | 130(1%) |
| Local Health District of residence | | | | | | |
| Central Coast | 58 | 1,093(4%) | 31 | 318(3%) | 130 | 712(6%) |
| Far West | 10 | 100(0%) | 0 | 13(0%) | 2 | 5(0%) |
| Hunter New England | 123 | 2,207(7%) | 55 | 433(4%) | 148 | 834(7%) |
| Illawarra Shoalhaven | 84 | 1,288(4%) | 50 | 456(5%) | 116 | 555(4%) |
| Mid North Coast | 33 | 799(3%) | 19 | 138(1%) | 22 | 156(1%) |
| Murrumbidgee | 49 | 635(2%) | 24 | 154(2%) | 10 | 76(1%) |
| Nepean Blue Mountains | 59 | 1,301(4%) | 41 | 375(4%) | 127 | 632(5%) |
| Northern NSW | 63 | 1,076(4%) | 19 | 180(2%) | 35 | 252(2%) |
| Northern Sydney | 191 | 3,479(12%) | 227 | 1,977(20%) | 328 | 2,051(16%) |
| South Eastern Sydney | 152 | 3,274(11%) | 136 | 1,269(13%) | 263 | 1,456(12%) |
| South Western Sydney | 201 | 4,477(15%) | 183 | 1,461(15%) | 447 | 2,234(18%) |
| Southern NSW | 28 | 505(2%) | 17 | 112(1%) | 31 | 107(1%) |
| Sydney | 125 | 2,595(9%) | 101 | 829(8%) | 135 | 863(7%) |
| Western NSW | 54 | 593(2%) | 10 | 125(1%) | 17 | 114(1%) |
| Western Sydney | 297 | 6,131(21%) | 198 | 2,060(21%) | 485 | 2,520(20%) |
| Aboriginal status | | | | | | |
| Aboriginal and/or Torres Strait Islander | 31 | 613(2%) | 13 | 177(2%) | 63 | 305(2%) |
| Not Aboriginal or Torres Strait Islander | 848 | 16,579(56%) | 600 | 5,491(55%) | 958 | 5,398(43%) |
| Not Stated / Unknown | 652 | 12,673(42%) | 502 | 4,286(43%) | 1,280 | 6,893(55%) |
| Total | 1,531 | 29,865(100%) | 1,115 | 9,954(100%) | 2,301 | 12,596(100%) |

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

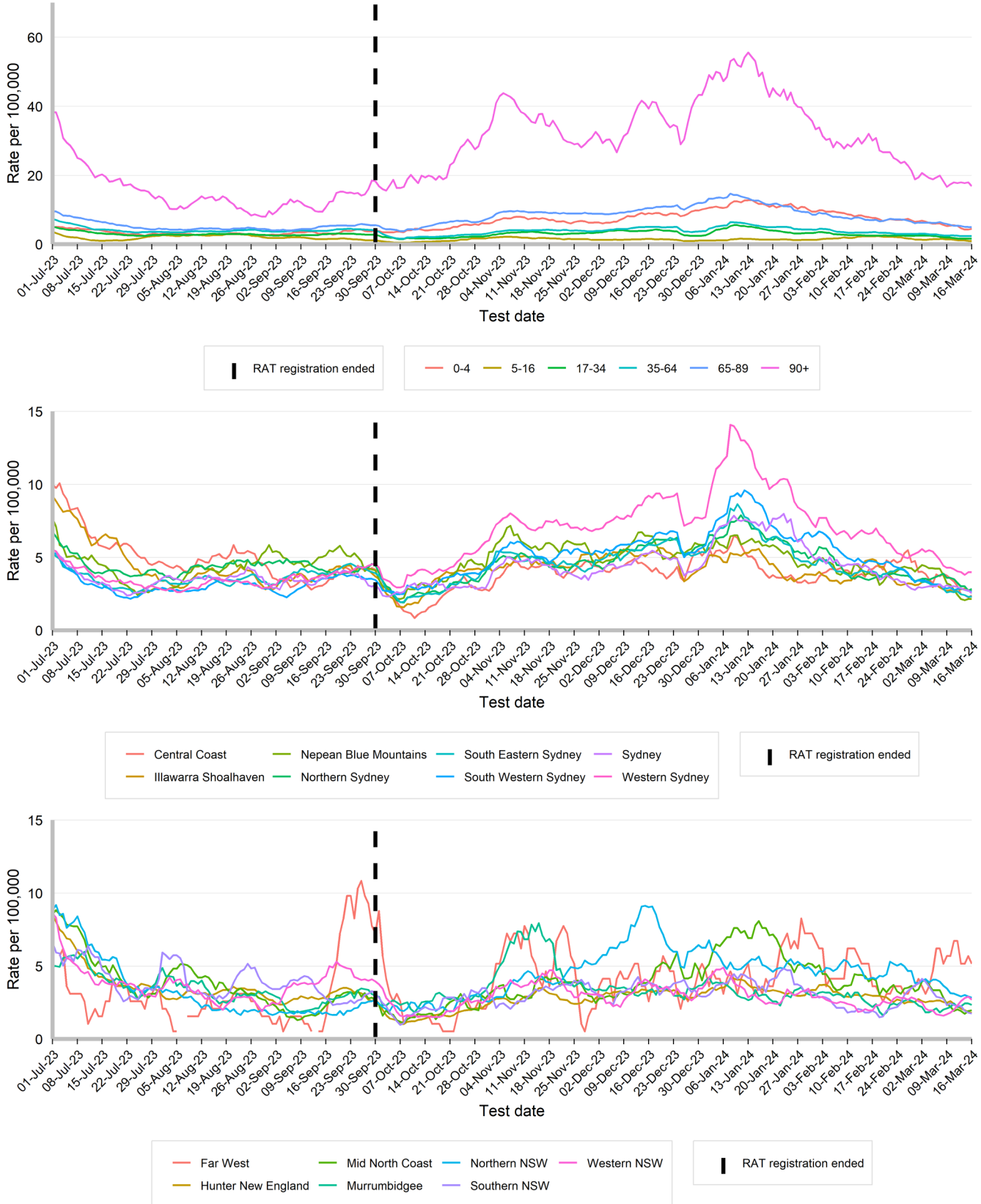
**Figure 5. People notified with COVID-19, Influenza and RSV, by date of test and type of test performed, NSW, 01 July 2023 to 16 March 2024.**



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

**Interpretation:** Rates of COVID-19 notifications declining across all ages.

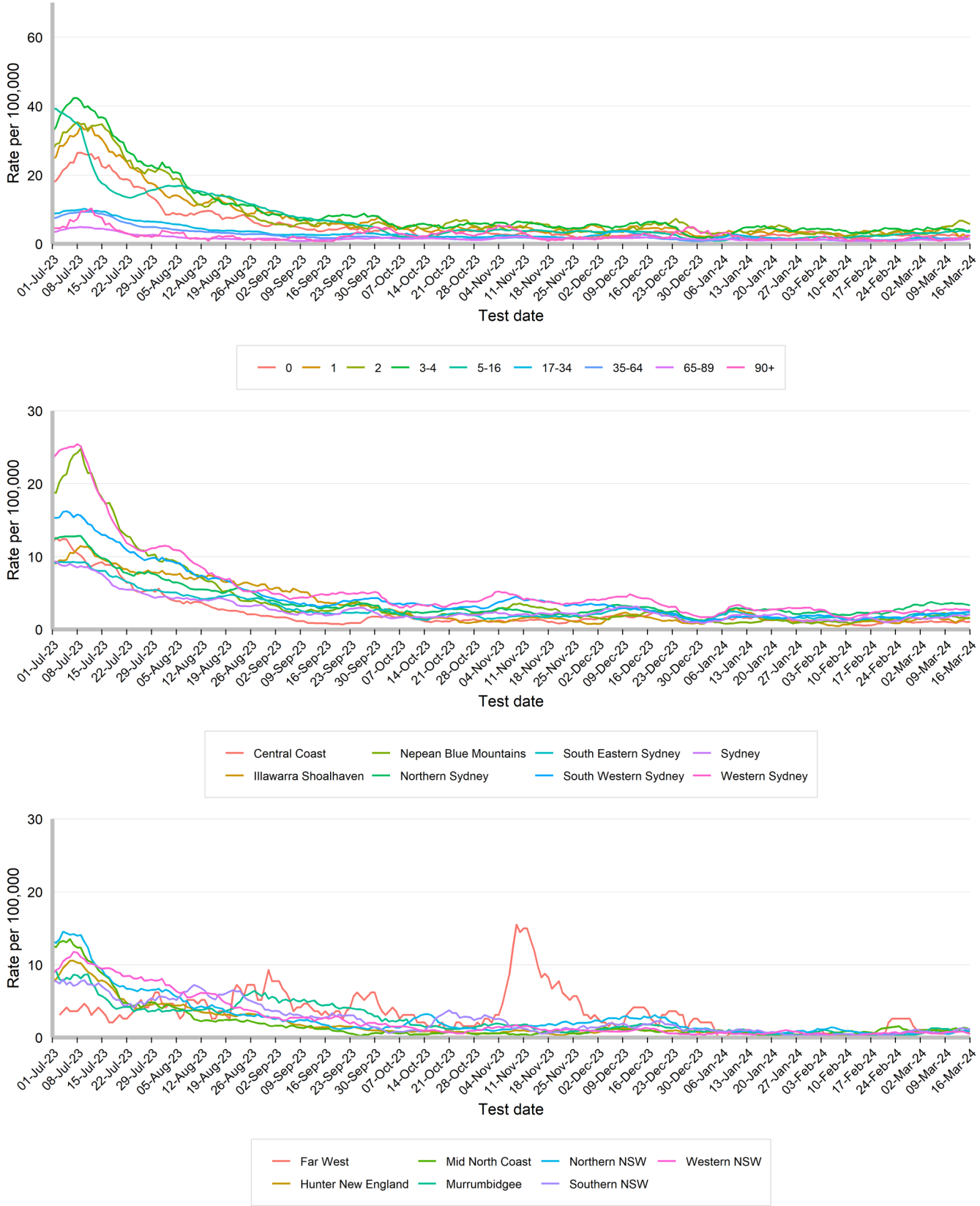
**Figure 6. Daily seven-day rolling average rate of COVID-19 notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 July 2023 to 16 March 2024.**



# Rates of influenza notifications per 100,000 population

**Interpretation:** Rates of influenza notifications are low and stable

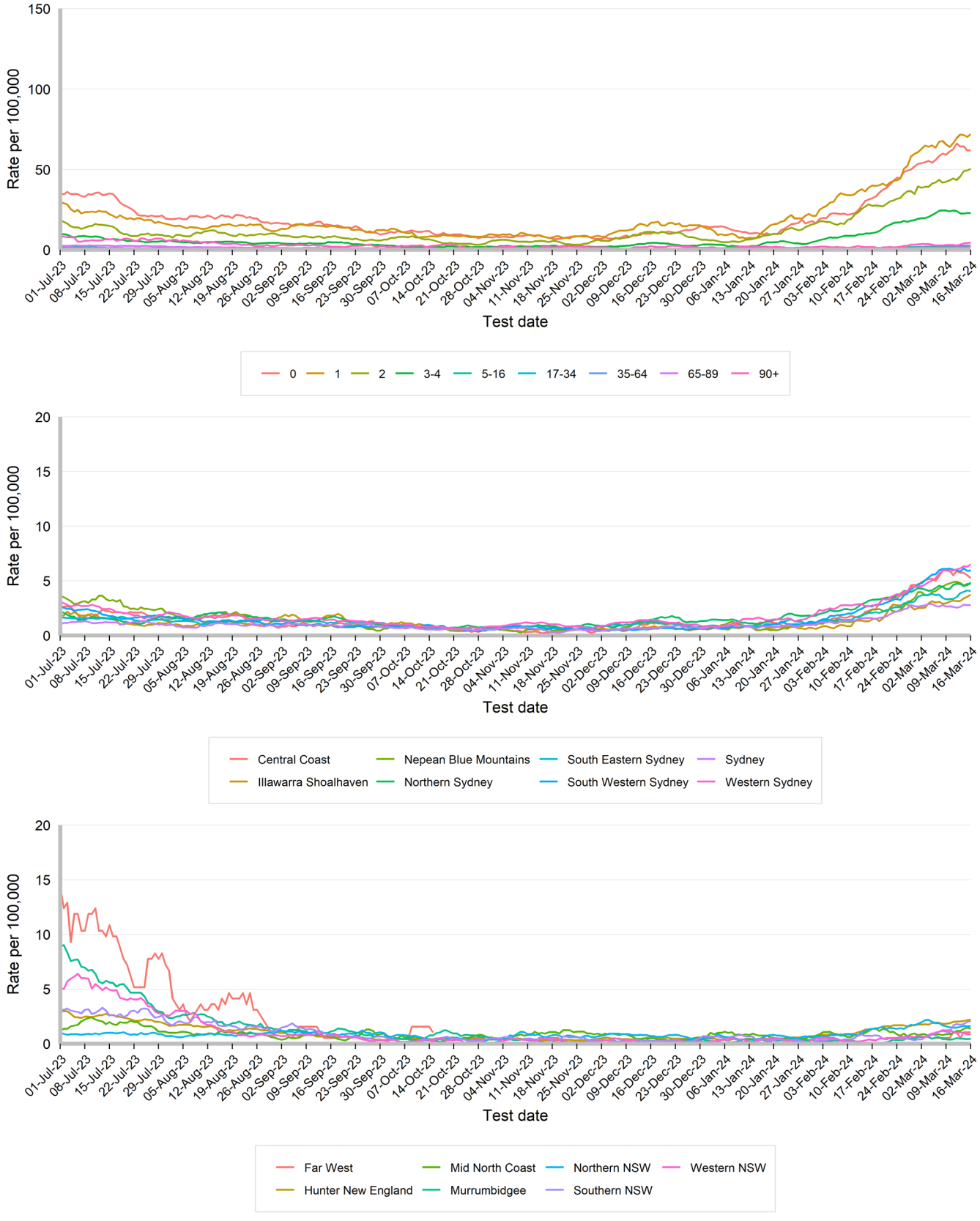
**Figure 7. Daily seven-day rolling average rate of influenza notifications per 100,000 population, by age group, Local Health District and test date, NSW, 01 July 2023 to 16 March 2024.**



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

**Interpretation:** Rates of RSV notifications continue to increase in children under 5 years of age with the highest rates in the youngest children.

**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 March 2024.**

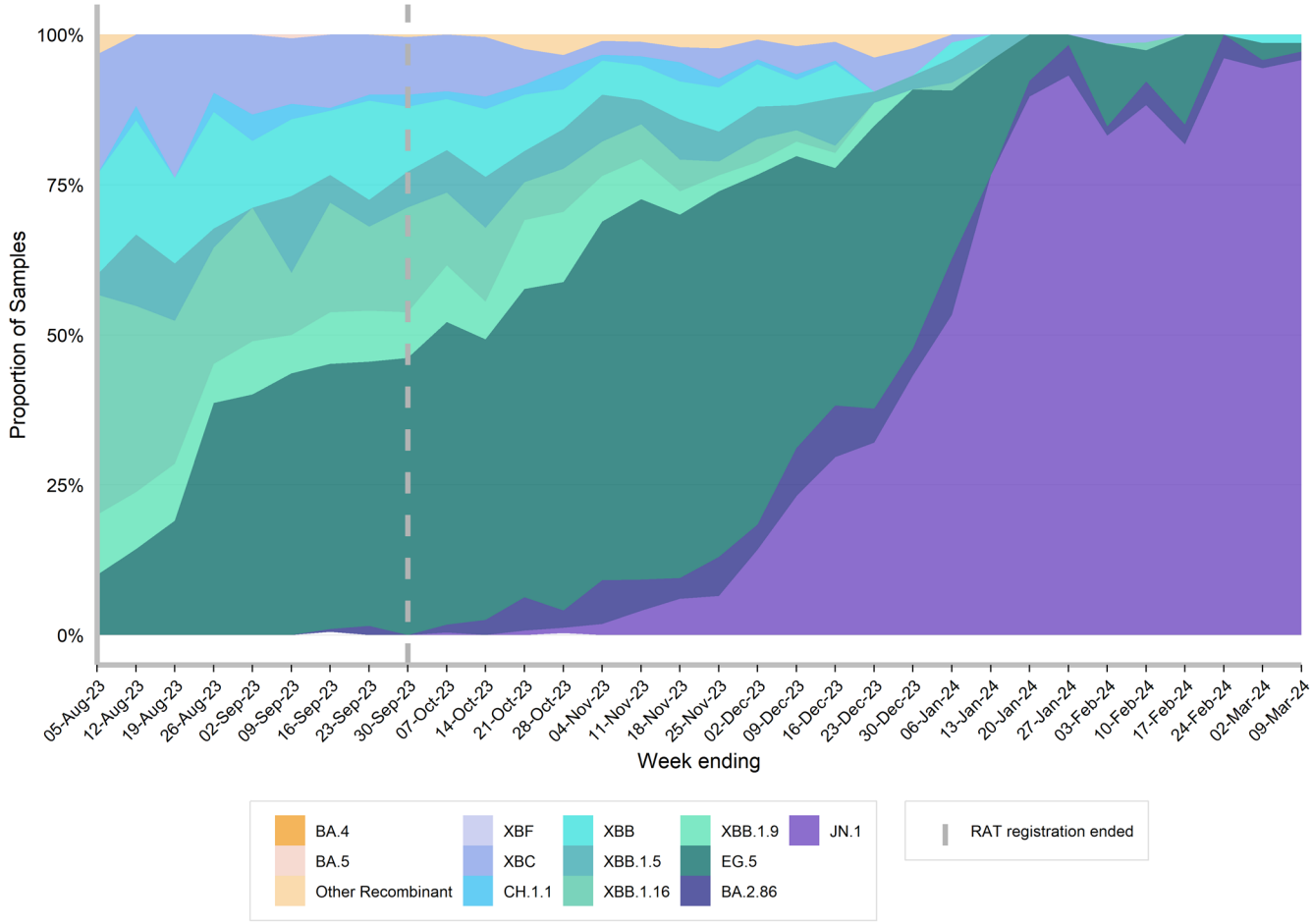


# COVID-19 Whole Genome Sequencing

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:** JN.1 now dominates sub-lineages circulating in the community

**Figure 9. Estimated distribution of COVID-19 sub-lineages in the community, 05 August 2023 to 09 March 2024.**



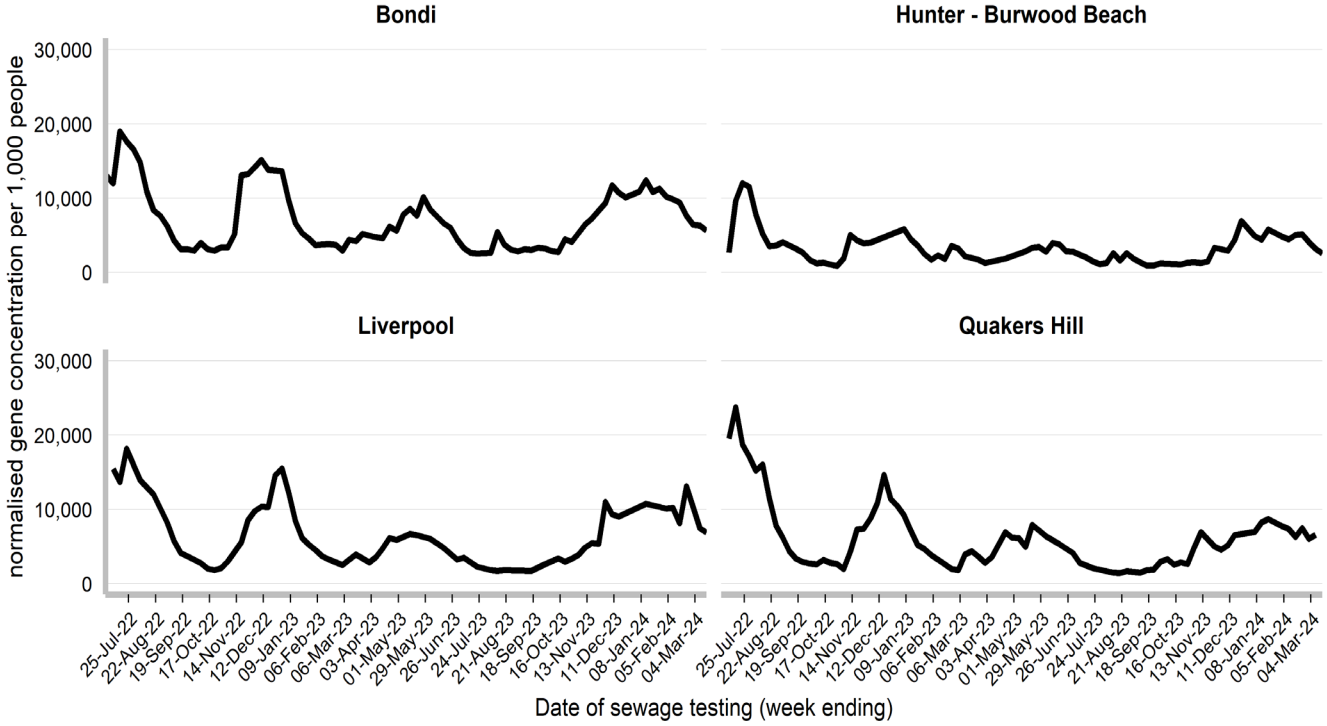
# Other surveillance indicators

## 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 16 March 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 have declined in all catchments.

**Figure 10. Gene concentration, per 1,000 people in each sewage catchment, 1 July 2022 to 16 March 2024.**

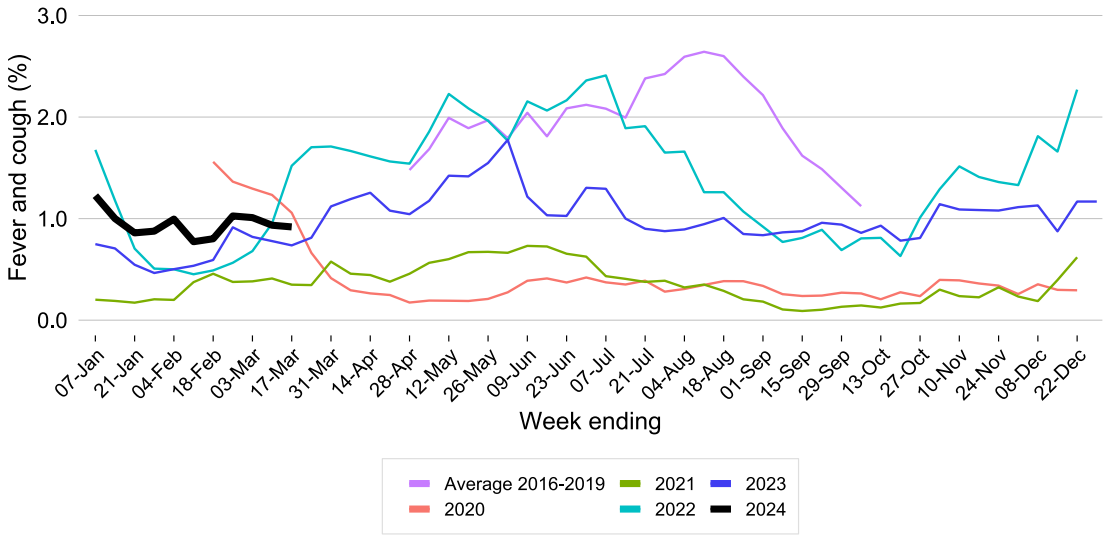



*Note: we have changed the method for tracking gene concentration to using a model that weights more recent weeks of data collection. For additional information see COVID-19 surveillance report data sources and methodology.

# 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/

**Figure 11. Proportion of FluTracking participants reporting influenza-like illness, NSW, 1 January to 17 March 2024.**



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 PCR positivity continues to decrease and influenza positivity is stable.

**Figure 12. Number and proportion of tests positive for COVID-19 at sentinel NSW laboratories, 1 July 2023 to 17 March 2024.**

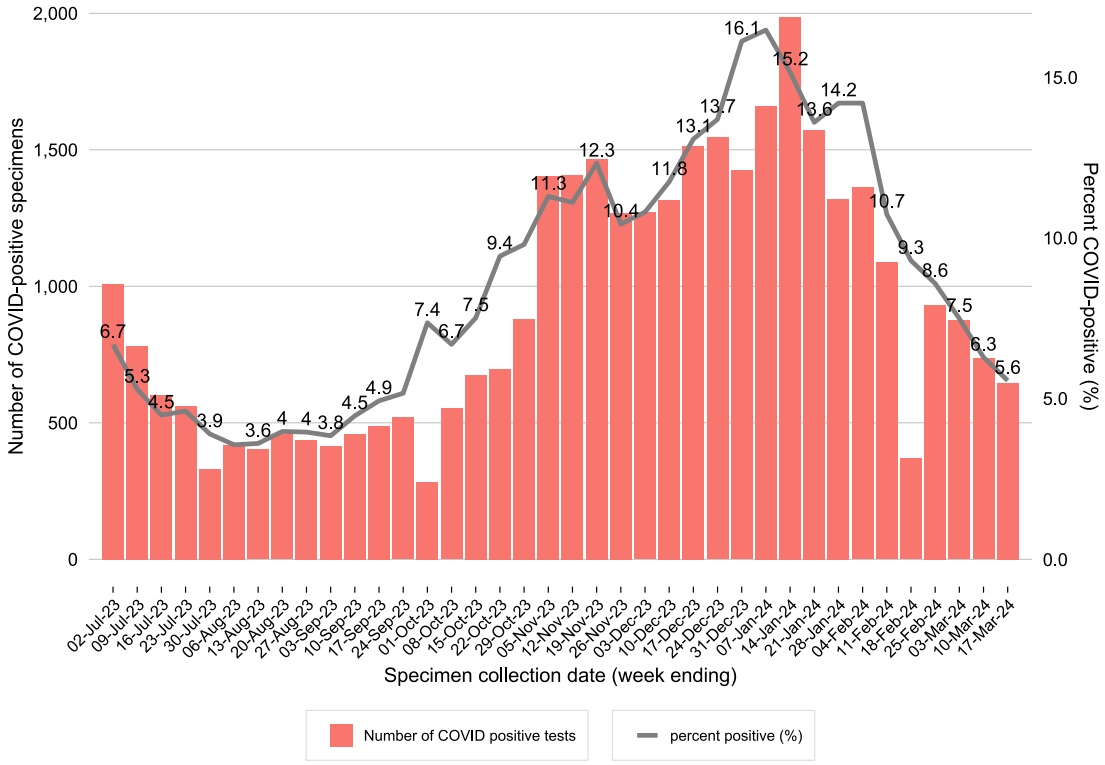



**Figure 13. Number and proportion of tests positive for influenza at sentinel NSW laboratories, 1 July 2023 to 17 March 2024.**

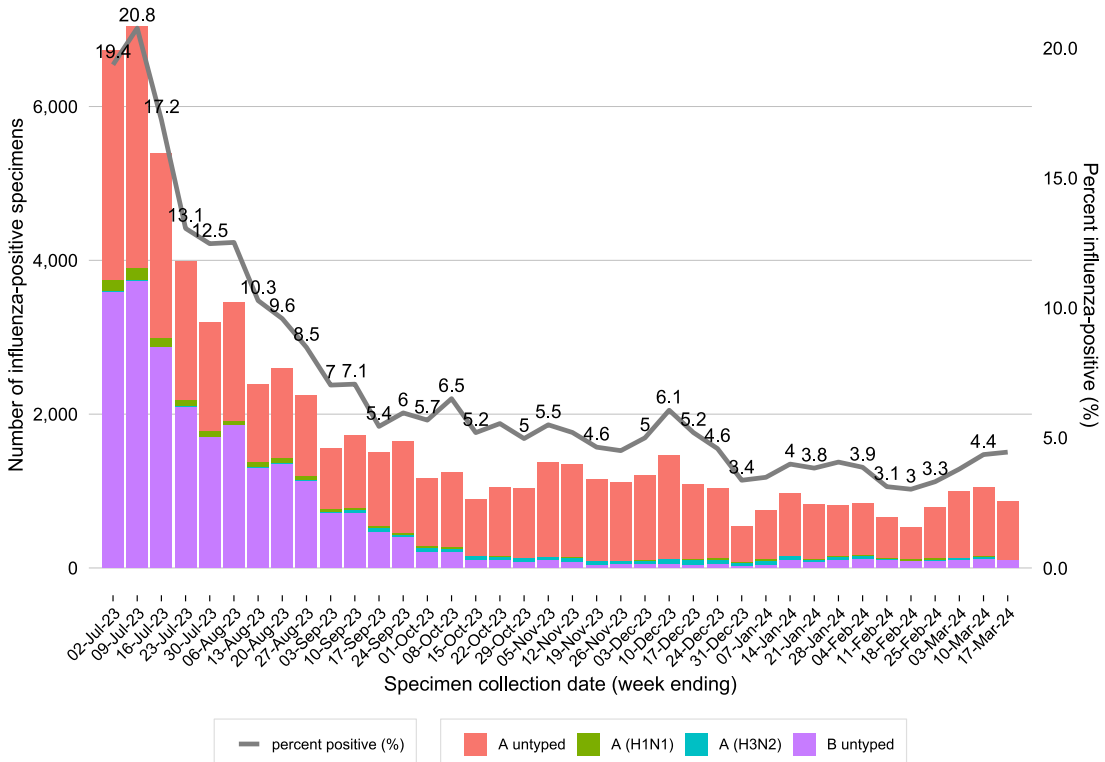


**Figure 14. Number of positive PCR test results and proportion of tests positive for other respiratory viruses at sentinel NSW laboratories, 1 July 2023 to 17 March 2024.**

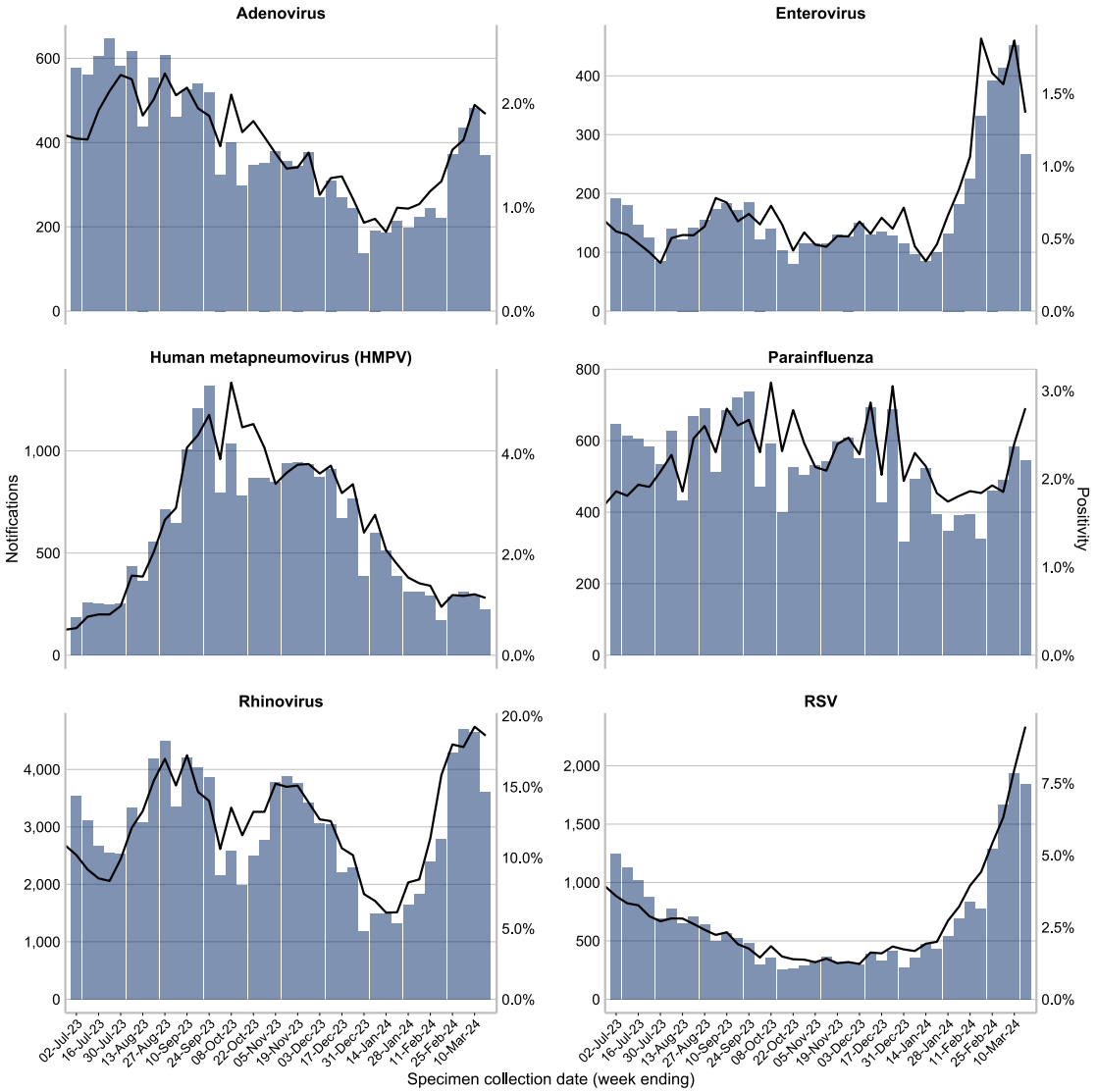



**Table 2. Total number of respiratory disease notifications from sentinel laboratories, NSW in the four weeks to 17 March 2024.**

| | Week ending | | | | Year to date |
|---|---|---|---|---|---|
| | 25 February | 03 March | 10 March | 17 March | |
| | n(% pos) | n(% pos) | n(% pos) | n(% pos) | n |
| Influenza | 792 (3.3%) | 1,004 (3.8%) | 1,056 (4.4%) | 866 (4.5%) | 9,111 |
| Adenovirus | 371 (1.6%) | 435 (1.6%) | 481 (2.0%) | 369 (1.9%) | 3,131 |
| Parainfluenza | 460 (1.9%) | 489 (1.9%) | 582 (2.4%) | 545 (2.8%) | 4,943 |
| Respiratory syncytial virus (RSV) | 1,292 (5.4%) | 1,668 (6.3%) | 1,933 (8.0%) | 1,841 (9.5%) | 10,848 |
| Rhinovirus | 4,295 (18.0%) | 4,700 (17.8%) | 4,661 (19.2%) | 3,619 (18.6%) | 30,245 |
| Human metapneumovirus (HMPV) | 285 (1.2%) | 311 (1.2%) | 293 (1.2%) | 221 (1.1%) | 3,684 |
| Enterovirus | 392 (1.6%) | 413 (1.6%) | 452 (1.9%) | 266 (1.4%) | 2,672 |
| Number of PCR tests conducted | 23,872 | 26,393 | 24,218 | 19,438 | 241,619 |
| SARS-CoV-2 | 931 (8.6%) | 875 (7.5%) | 736 (6.3%) | 646 (5.6%) | 12,546 |
| Number of COVID PCR tests | 10,842 | 11,673 | 11,701 | 11,607 | 113,526 |
| Number of laboratories reporting | 11 | 12 | 12 | 8 | - |
| Number of laboratories reporting COVID | 4 | 4 | 4 | 4 | - |

Recent data is subject to change.

# In Focus

This section of the report will be provided when NSW Health is investigating a particular aspect of respiratory illness activity.

## Pneumonia in children and young adults in NSW

There have been unseasonably high presentations to ED with subsequent hospital admissions in NSW for children and young adults with pneumonia. In recent weeks, presentations and admissions for children 0-4 years have continued to increase with no change in the proportion admitted. For children aged 5–16 years there was a continued increase in presentations to ED and an uptick in the number admitted to hospital. For those 17-34 years presentations have been fluctuating in an overall upward direction but their admissions have been relatively low and stable. Most ED presentations for pneumonia have unspecified pneumonia diagnoses, that is, a specific cause of the pneumonia has not yet been identified.

**Figure 15. Pneumonia weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023-2024, persons aged 0 – 4 years.**

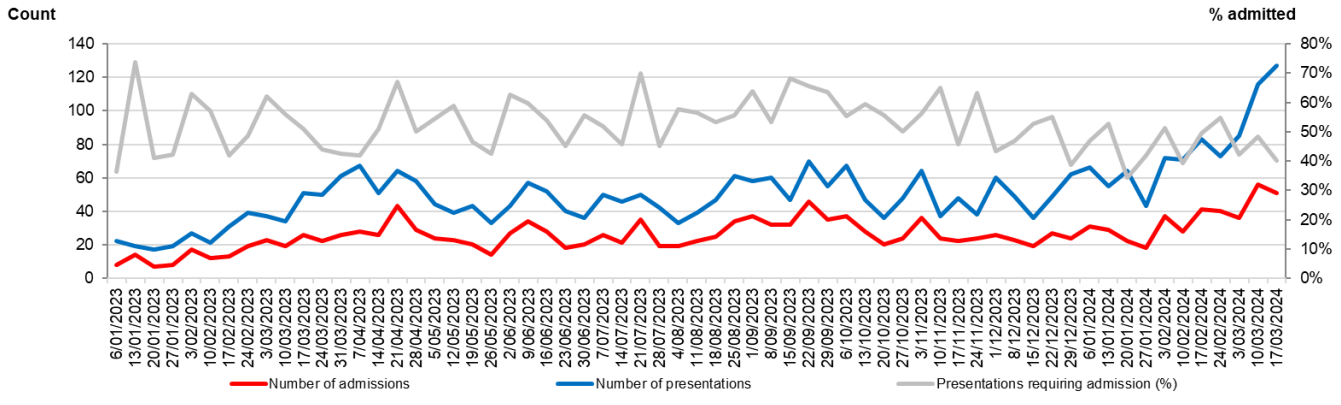



**Figure 16. Pneumonia weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023-2024, persons aged 5 – 16 years.**

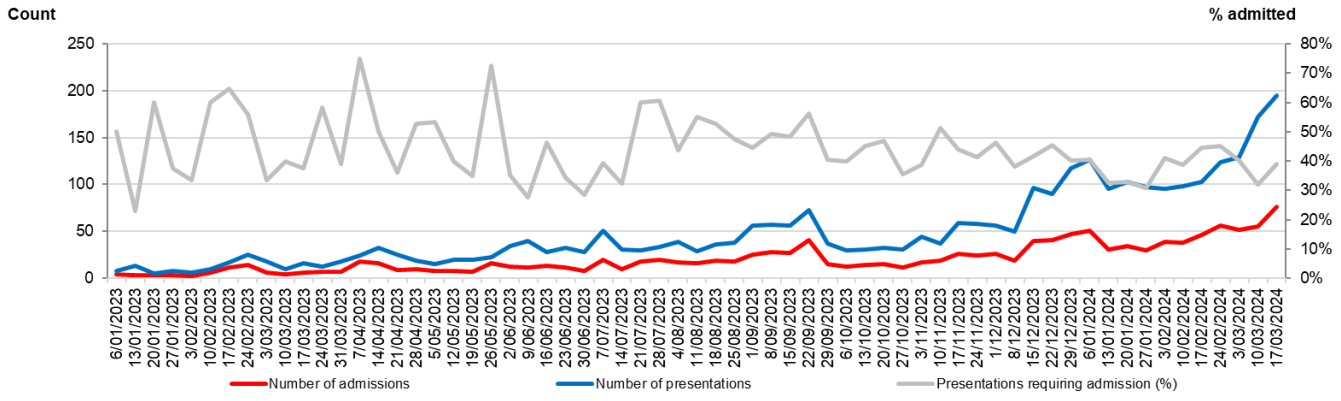



**Figure 17. Pneumonia weekly counts of unplanned emergency department (ED) presentations and admission following presentation, 2023-2024, persons aged 17 – 34 years.**