

Annual Acute Respiratory Infections Report - 2023

Issued April 2024

For internal LHD use only

Data Summary

This report details acute respiratory infections (ARI), with a focus on COVID-19, influenza, and respiratory syncytial virus (RSV), in South Eastern Sydney Local Health District (SESLHD) from 1 January to 31 December 2023.

- COVID-19 activity varied throughout the year with a noticeable peak across all indicators from March-June. Those people aged 65 years or older had the highest rates of notifications across SESLHD.
- Influenza activity followed a usual seasonal pattern with a peak between May - September, however notifications remained above what is usually reported from September to December. Activity increased across all indicators during May-August with rates of notifications highest amongst those less than 5 years of age.
- Respiratory syncytial virus (RSV) remained steady throughout the year with only a single peak in June across all indicators. Rate of notifications was highest in those aged 1 year of age.

Data Sources and Methods

This report adopts new approaches to monitoring respiratory virus activity to align with the NSW respiratory surveillance methods. Changes to respiratory virus testing over time impact notification patterns which may not be a good proxy for levels of respiratory virus in the community and limit the validity of comparing respiratory virus impact on community transmission in different years. The data sources used for this report have been referenced throughout the document. All data used in this report is limited to the jurisdictional boundaries of SESLHD unless otherwise stated.

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Acknowledgements

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Next report to be issued:	Quarter 1, 2025	

Transmission

The following section uses data such as test positivity, rate of disease notifications, FluTracking, and sewage surveillance as indicators for community transmission and infection rates.

Notification and test positivity for COVID-19, influenza, and RSV

Notification data is obtained from all laboratory tests for infections. Prior to 30 September mandatory reporting of positive RAT results was also in place and included in the notification data. Test positivity data is calculated using laboratory testing data from NSW Health Pathology-Randwick.

Figure 1 shows the weekly number of COVID-19 notifications and test positivity for 2023. Test positivity increased with notifications between March and June, with a second test positivity peak in December at 12% despite notifications remaining low. This indicates that notifications were detecting a lower proportion of cases in the last quarter of the year after mandatory RAT notification ceased and access to community PCR testing was restricted.

Figure 1: Weekly COVID-19 cases and test positivity, 2023, SESLHD

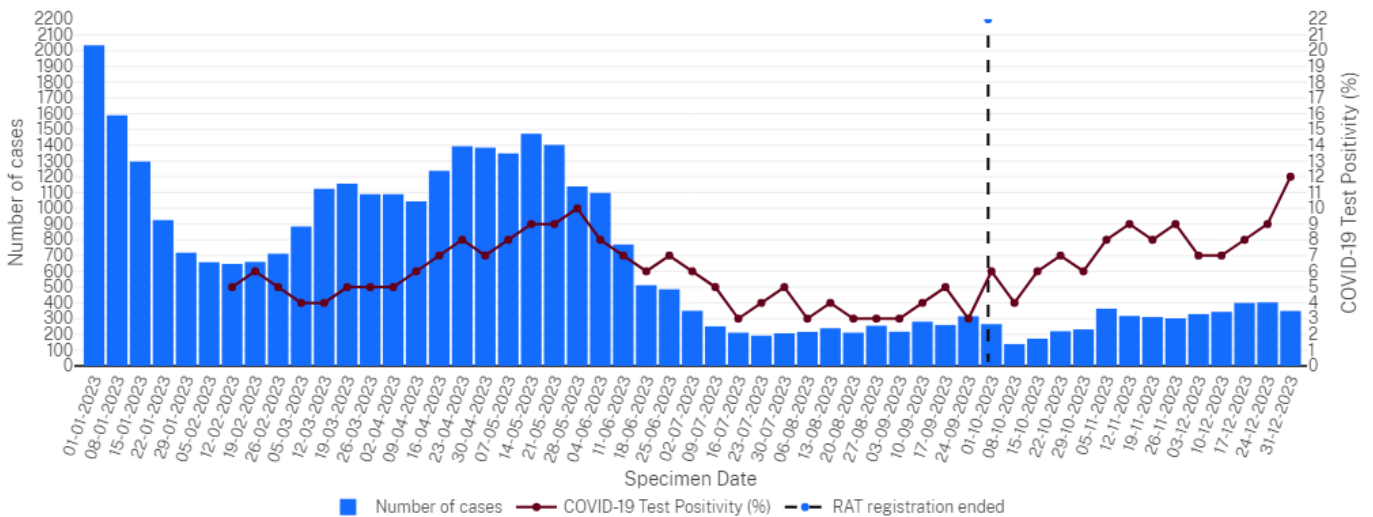
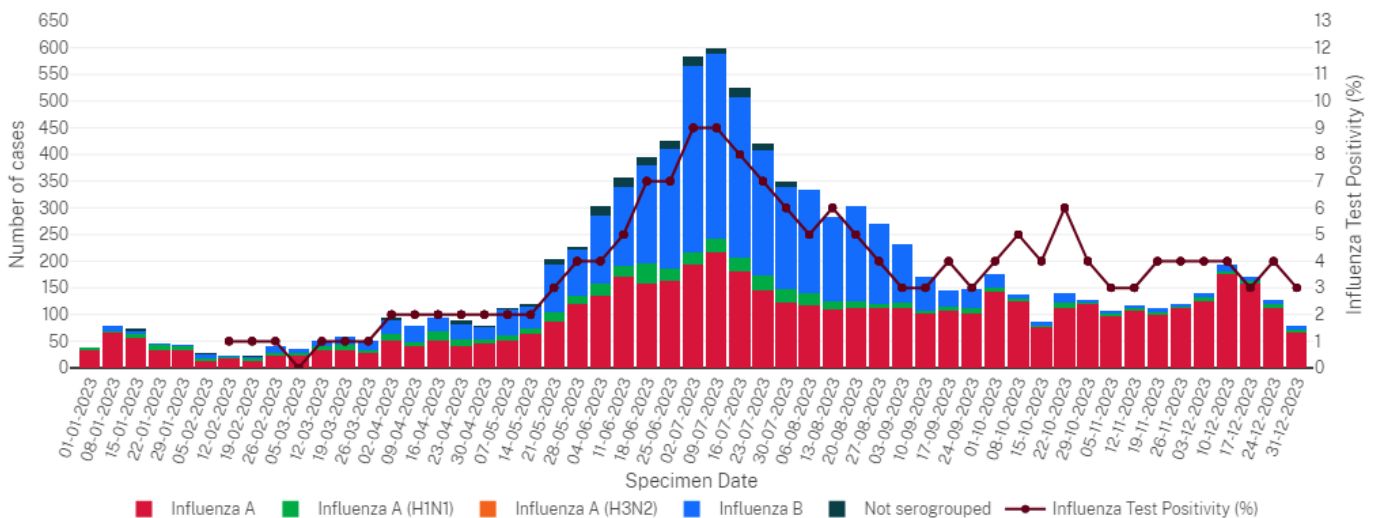


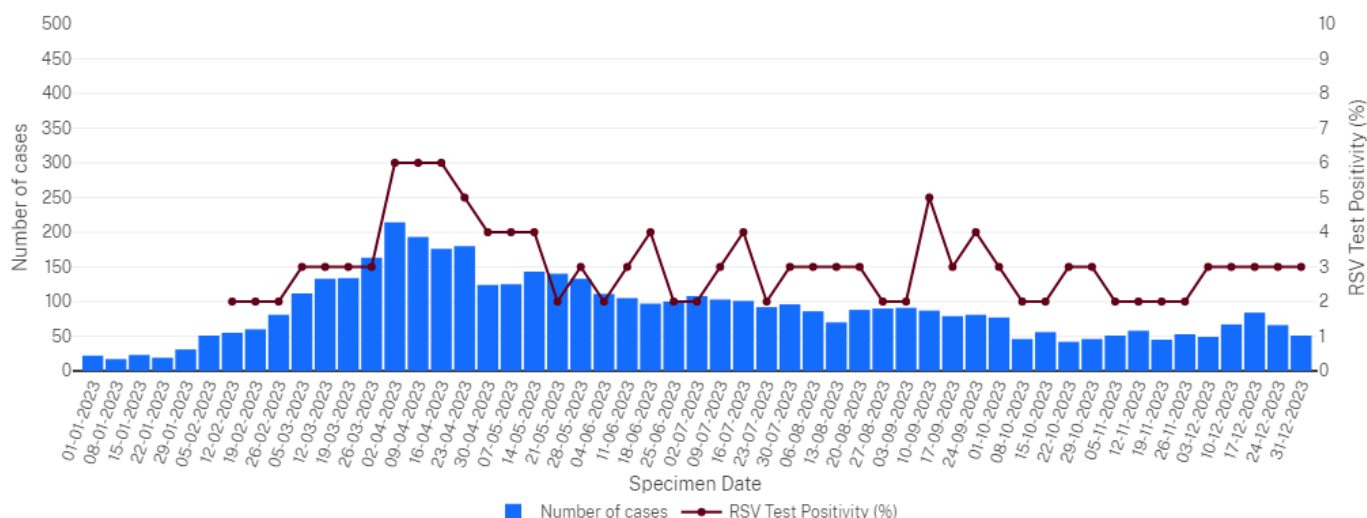
Figure 2 shows weekly influenza notifications by serogroup and test positivity. Influenza followed a usual seasonal trend with a peak over the winter months of May - September. Influenza B was the predominant strain during this time and test positivity peaked at 9%. Influenza A was present for the entire 12 months, and reported at higher levels than is usually seen during spring and summer.

Figure 2: Weekly Influenza cases, by serogroup and Influenza test positivity, 2023, SESLHD



RSV notifications increased four-fold from February to April, then persisted throughout the year with test positivity reaching a peak of 6% in April.

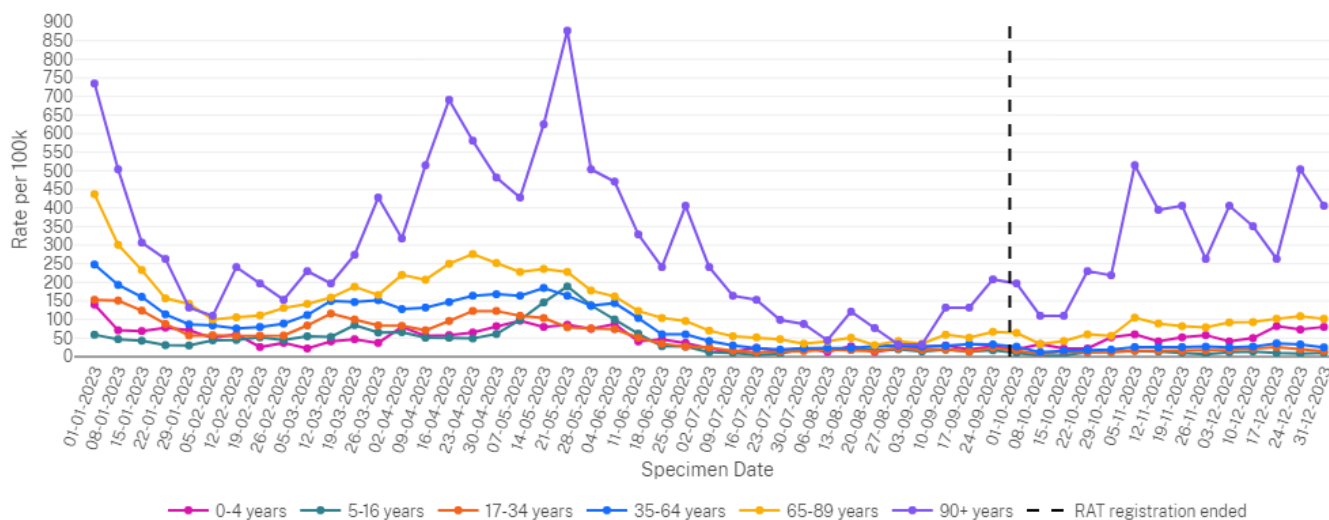
Figure 3: Weekly RSV cases and RSV test positivity, 2023, SESLHD



Rates of COVID-19, influenza, and RSV notifications by age

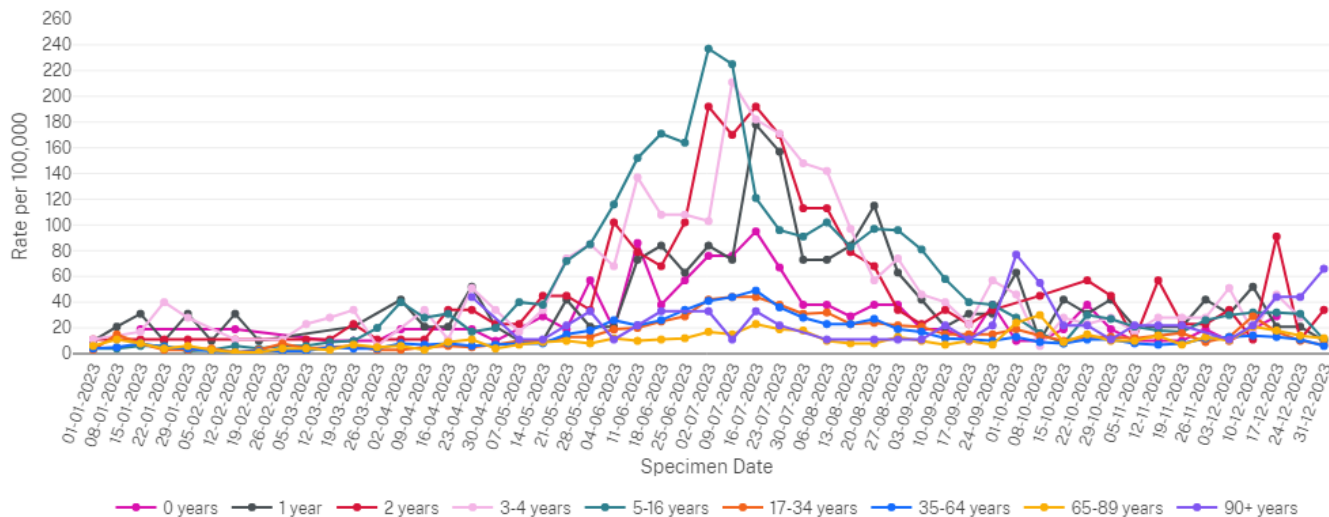
Figures 4, 5 and 6 show the rate of notifications by age group per 100,000 population. Population data were sourced from the Australian Bureau of Statistics (ABS) and are the official estimates from the ABS for 2022. Overall, the highest rates of COVID-19 notifications are seen in those aged 65 years or older. This could be a result of continued testing in residential aged care facilities leading to an over representation of notifications in this population within the district. The 0-4 year age group had the lowest rate of notifications at 3 per 100,000 population.

Figure 4: Rate of COVID-19 notifications by age group per 100,000 population, 2023, SESLHD



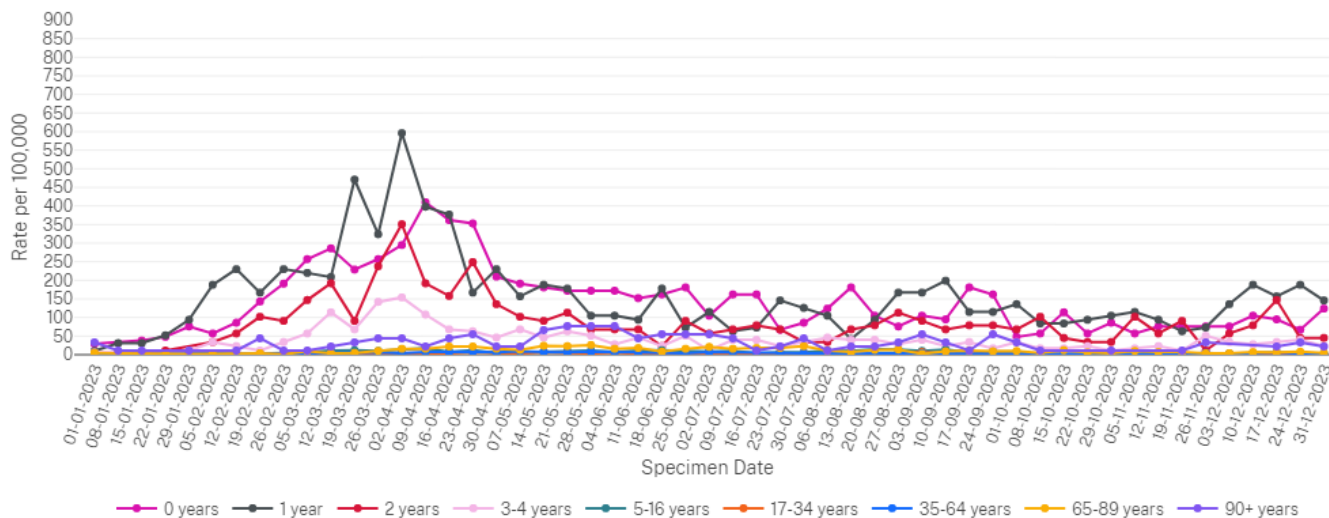
Influenza notifications were highest amongst children and followed an upward trend during May through to July. The rate of influenza notifications among children aged 5-16 years peaked at 232 per 100,000 people in late June. The age group with the next highest rate was in children aged 3-4 years with a rate of 211 per 100,000 people in early July.

Figure 5: Rate of influenza notifications by age group per 100,000 population, 2023, SESLHD



Rates of RSV notifications were highest in children aged less than 5 years. The rate of RSV notifications among children aged 1 year peaked at 596 per 100,000 people April. The age group with the next highest rate was in children aged 0 years with a rate of 410 per 100,000 people in early April.

Figure 6: Rate of RSV notifications by age group per 100,000 population, 2023, SESLHD

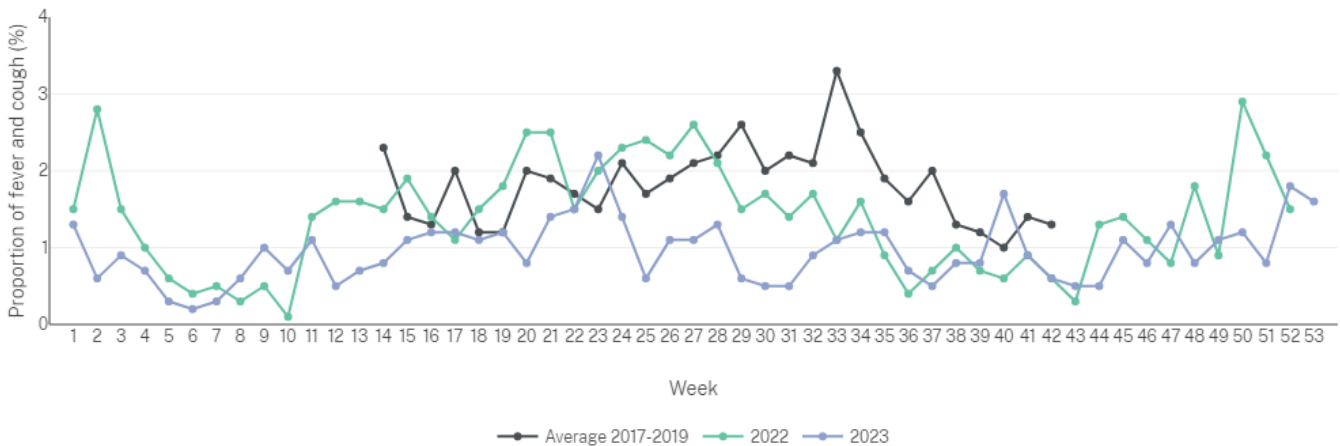


FluTracking

FluTracking is an online health surveillance system used to monitor influenza and COVID-19 activity across Australia and New Zealand. Participants complete an online survey each week to provide community level influenza-like illness surveillance. FluTracking provides a consistent approach to surveillance of influenza activity across all jurisdictions over time, allowing year to year comparisons of the timing, attack rates and seriousness of respiratory illness in the community. Prior to the pandemic FluTracking was only conducted during the expected influenza season, so comparative data prior to 2020 is only available from April to October. More information about FluTracking and ways to be involved are available here: <https://info.flutracking.net/about/>

The proportion of people reporting influenza-like illness was overall less in 2023 compared to 2022. Proportions increased during the winter months before decreasing towards the end of spring and then increasing in December, aligning with COVID-19 trends.

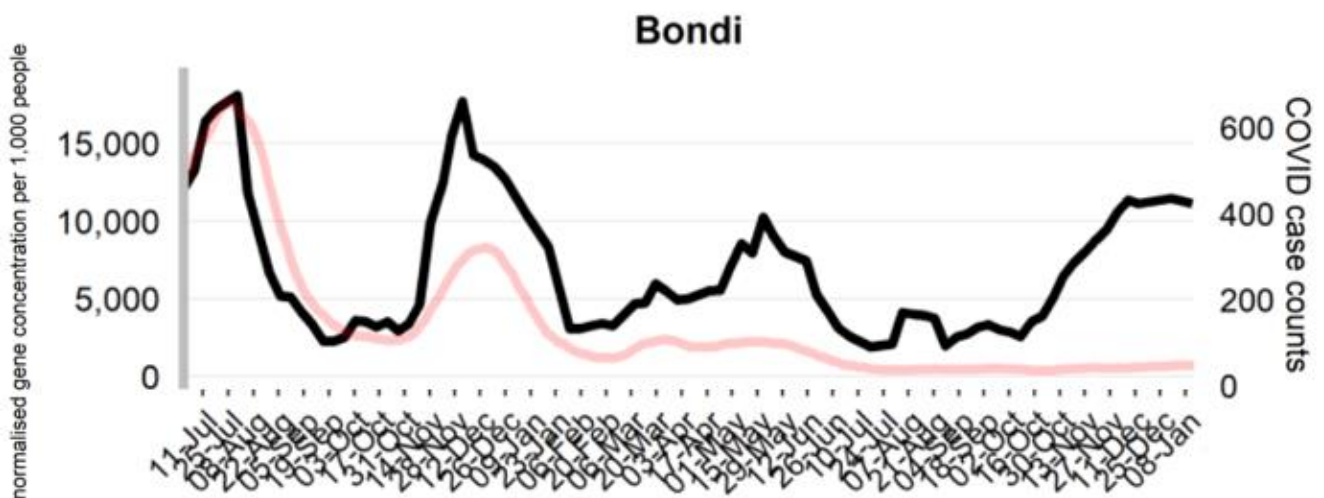
Figure 7: Proportion of SESLHD FluTracking participants who reported fever and cough, by week ending, 1 January - 31 December 2023



COVID-19 sewage surveillance program

Trends are presented for Sydney Bondi sewage catchments from July 2022 to 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>.

Figure 11. Gene concentration, per 1,000 people in Bondi sewage catchment, 11 July 2022 to 08 January 2024



Impact

Outbreaks in residential aged care facilities

COVID-19 was the main cause of ARI outbreaks in residential aged care facilities during 2023. The number of outbreaks of COVID-19 reported in a month reached a peak of 33 in April. Outbreaks of influenza and RSV remained low throughout the year.

Figure 15: Acute respiratory infection outbreaks in SESLHD residential aged care facilities, 2023

