

This report is a summary of the results obtained from various molecular respiratory panels performed across PathCare laboratories during 2025. As with the monthly respiratory pathogen reports, the data is dependent on submission of samples by clinicians and therefore may not be representative of the general population but is intended to identify trends in the circulation of these viruses which may be of clinical relevance.

INFLUENZA, RESPIRATORY SYNCYTIAL VIRUS (RSV) AND SARS-COV-2

- Respiratory syncytial virus (RSV) activity increased in late March, peaking in week 18 (week starting 28 April) and dropping below 5% in week 33 (week starting 11 August). This is a later than average start to the season and resulted in concurrent increases in RSV and influenza activity. NICD surveillance data also indicated a late start to RSV season, beginning in week 11 (week starting 10 March) and ending in week 31 (week starting 28 July) (NICD Weekly Respiratory Pathogens Surveillance Report, Week 50, https://www.nicd.ac.za/wp-content/uploads/2025/12/Resp_Path_Report_2024_50.pdf).
- The 2025 influenza season showed a single peak which was predominantly due to influenza A(H3N2). Influenza A detection levels began to increase in late March, reaching 10% in week 15 (week starting 7 April), peaking at 33% in week 23 (week starting 2 June) and then dropping below 10% in week 29 (week starting 14 July). This closely reflects the NICD surveillance data, according to which the influenza season started in week 13 (week starting 24 March), peaked in week 20 (week starting 12 May) and ended in week 30 (week starting 21 July). After dropping to 1% in week 34, the detection rates again showed a slight increase from approximately week 39 and remained in the range of 4-8% for the rest of the year. Outside of the influenza season, both influenza A(H3N2) and A(H1N1)pdm09 detections were noted (Figure 2). Influenza B positivity rates remained <1% throughout 2025.
- Following an increase in SARS-CoV-2 detection rates in December 2024, these high levels were maintained during January 2025 before declining during February and falling below 5% in week 10 (week starting 3 March). The percentage of positive samples remained below 5% until week 34 (week starting 18 August) when the positivity rate increased, peaking in week 44 (week starting 27 October) at 13% and ranging from 7-9% during December.

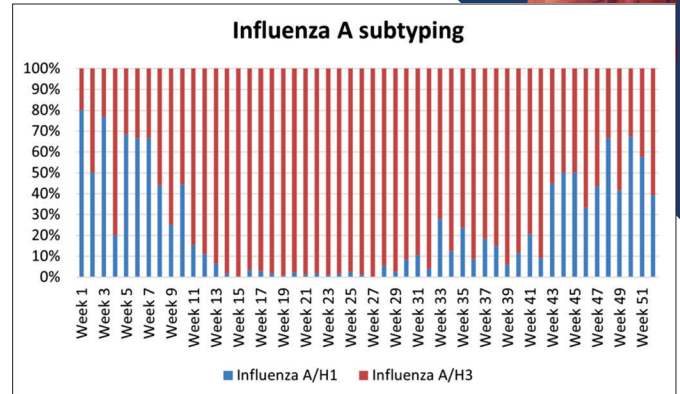


Figure 2: Distribution of influenza A subtyping during 2025 for influenza positive samples where molecular subtyping was available.

- Regarding the age distribution of positive samples (Figure 3), RSV was detected predominantly in children under 5 years of age (72%) while SARS-CoV-2 and influenza A positive samples were mostly from adults (72% and 57% respectively). This is similar to the distribution seen in 2024. The variable age distribution of influenza B positive samples resulted from the small number of detections throughout the year.

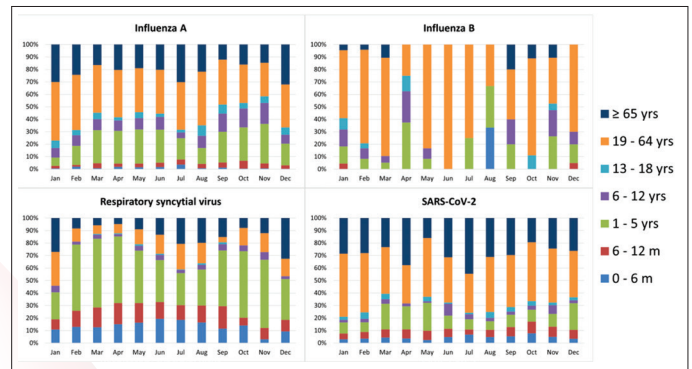


Figure 3: Age distribution of positive samples by month for influenza A, influenza B, respiratory syncytial virus and SARS-CoV-2 in 2025.

CORONAVIRUSES (EXCLUDING SARS-COV-2)

- The overall detection rate for the endemic coronaviruses (229E, HKU1, NL63 and OC43) ranged from 1-9% during 2025 with an initial increase in coronavirus NL63, followed by an increase in coronavirus OC43. Coronavirus 229E and coronavirus HKU1 positivity rates were ≤2% throughout the year.

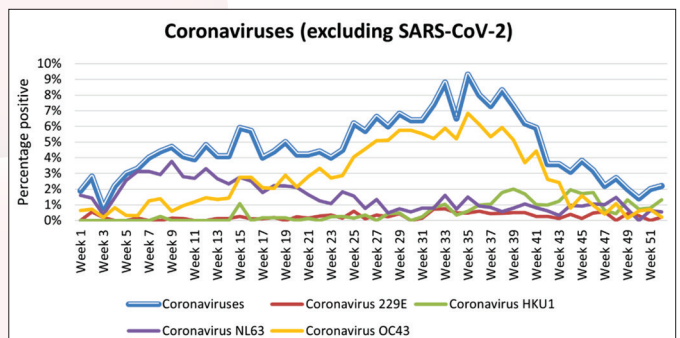


Figure 4: Percentage of samples testing positive for endemic coronaviruses by epi-week for 2025.

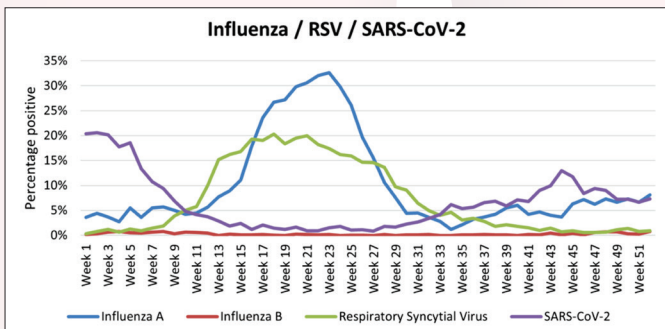
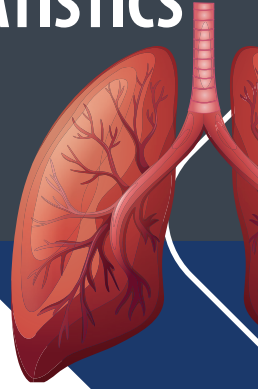


Figure 1: Percentage of samples testing positive for influenza A, influenza B, respiratory syncytial virus and SARS-CoV-2 by epi-week for 2025.



PARAINFLUENZA VIRUSES

- The overall detection rate of parainfluenza viruses increased from February to April due to increased positivity rates of parainfluenza virus type 1 and, to a lesser degree, parainfluenza virus type 4. A higher second peak was noted from September due to an increase in the positivity rate of parainfluenza virus type 3.

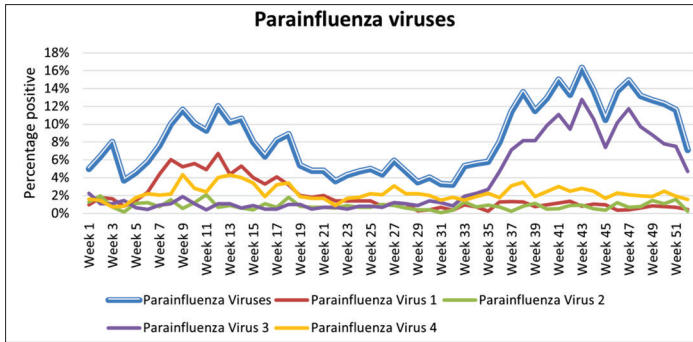


Figure 5: Percentage of samples testing positive for parainfluenza viruses by epi-week for 2025.

ADENOVIRUS, BOCAVIRUS, HUMAN METAPNEUMOVIRUS AND HUMAN RHINO/ENTEROVIRUS

- As in previous years, human rhino/enterovirus showed year-round circulation, with the percentage of samples testing positive ranging from 19-53%.
- Human metapneumovirus circulation increased in the second half of August and remained high until the end of October. A similar pattern was noted in 2024.
- Less variation was seen in the positivity rates of adenovirus and bocavirus.

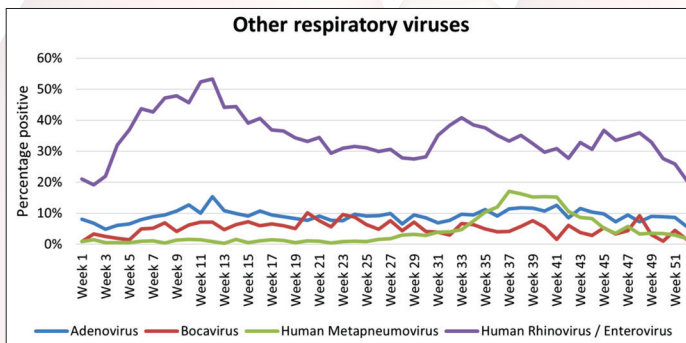


Figure 6: Percentage of samples testing positive for adenovirus, bocavirus, human metapneumovirus and human rhinovirus/enterovirus by epi-week for 2025.

ATYPICAL BACTERIA

- Mycoplasma pneumoniae* detection rates reached 1% during January and then remained at <1% for the rest of the year.
- Similarly, *Chlamydia pneumoniae* detection rates showed an increasing trend during February and early March and then remained $\leq 1\%$ throughout 2025.
- An increase in *Bordetella pertussis* cases was reported by the NICD in early November. This increase was also noted in the PathCare respiratory data and continued through December. The positive samples were predominantly from children, particularly those aged ≤ 5 years. Vaccination plays a critical role in preventing *Bordetella pertussis* infections including routine EPI doses in infancy, boosters at 6 and 12 years, and maternal vaccination during pregnancy. In addition, post-exposure prophylaxis is recommended for high-risk contacts, including pregnant women, infants, and non-immune healthcare workers in contact with high-risk patients. It is also important to note that *Bordetella pertussis* is a notifiable medical condition.
- As in 2024, only sporadic cases of *Legionella pneumophila* were detected. Please note that the fluctuations in detection rates are related to the relatively small number of samples tested as these statistics represent only molecular testing for *Legionella pneumophila* as legionella urinary antigen results are not included in this report. *Legionella pneumophila* is also a notifiable medical condition.

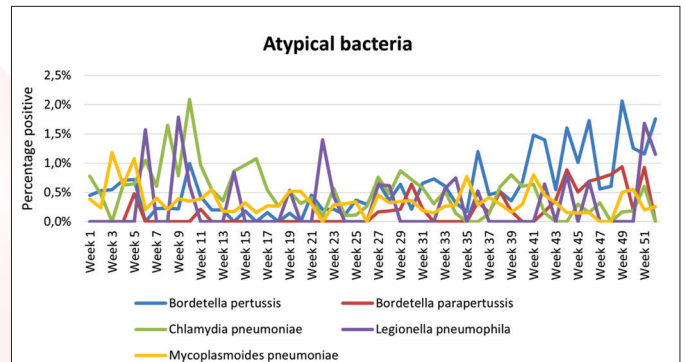


Figure 7: Percentage of samples testing positive for atypical bacteria by epi-week for 2025.