Respiratory Viruses in Luxembourg (ReViLux)

Sentinel Network Report -Week 04

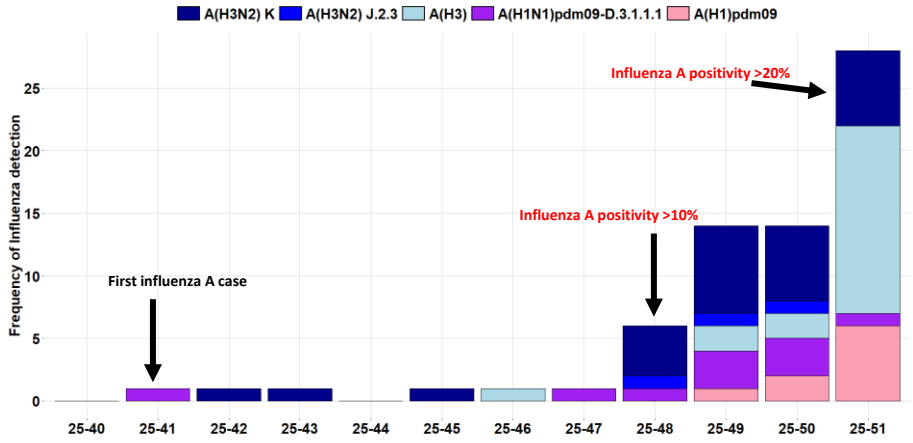
Summary of Sentinel Network activities

Influenza-like illness **(ILI)** accounted **for 7.9%** of consultations, surpassing the baseline, according to ECDC.

In week 2026/04, 105 sentinel samples were analysed, mostly from children under 5 years. Respiratory viruses were detected in 73.3% of the specimens: **influenza A** dominated (**46.7%)**, followed by human rhinovirus **(13.6%)**. **SARS-CoV-2** circulation fell **below 5%** and has stayed low across all ages for four weeks. In the sentinel network, **RSV** peaked around Christmas but has remained **under 10%** for two weeks, while influenza A remained high. Other respiratory viruses - **metapneumovirus (5.8%)**, **adenovirus (5.8%)** and **parainfluenzavirus (2.9%)** - showed age-specific circulation patterns, particularly younger children.

Influenza characterisation (2025/40-51)

Between weeks 2025/40 and 2025/51, we identified 71 influenza A cases, of which 39 samples (55.7%) were successfully sequenced across all age-groups. During this period, 49 cases (72.1%) were classified as A(H3) and 19 cases (27.9%) as A(H1)pdm09. Since August 2025, a notable global increase in A(H3N2) subclade K viruses has been observed. In our cohort, the K subclade was dominant during weeks 2025/42-51, accounting for 89.7% of detections; additionally three cases of the J.2.3 subclade were identified. Among the influenza A(H1) samples, 10 were sequenced, all of which belonged to the D.3.1.1 subclade. Although some genetic differences exist between currently circulating influenza viruses and the vaccine strains, vaccination is still expected to provide protection against severe disease.



Sentinel Surveillance Network

The Sentinel Surveillance aims to monitor circulating respiratory viruses, from traditional ones like influenza to more recent ones like SARS-CoV-2, and hence underpin public health actions. The Sentinel Network is a group of general practitioners and paediatricians spread across the country. They report the weekly number of patients showing symptoms suggestive of acute respiratory infection (ARI) and influenza-like illness (ILI), and those patients are then sampled and tested for a panel of respiratory viruses. The circulation of respiratory viruses in the Northern Hemisphere is generally monitored by seasons that range from week 40 to week 20. The period between weeks 20 and 40 is usually called inter-season.

Clinical results

In weeks 2026/04, consultations for acute respiratory infections (ARI) remained at around 10% and ILI rates increased slightly from 6.2% to 7.9%, indicating low epidemic activity. Similar trends are being observed in other European countries, despite high circulation of influenza A.

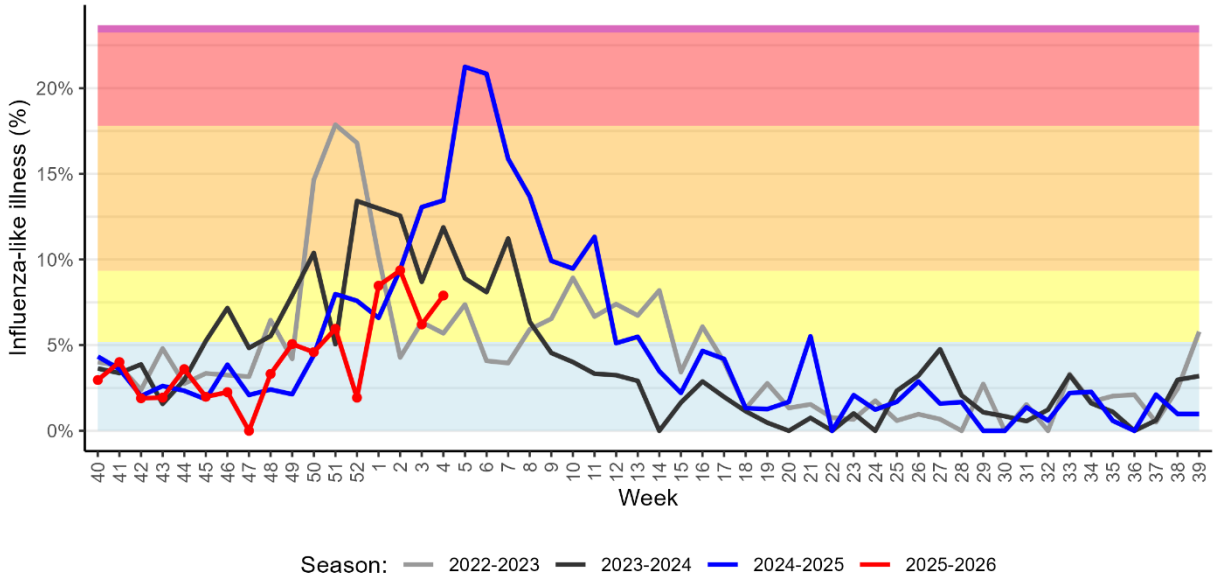
Historical trends in ILI consultations are presented in figure 2, and a detailed summary of the ARI and ILI case counts for the past four weeks is provided in table 1.

Table 1. Syndromic surveillance over the last 4 weeks

Week	ARI		ILI		Total consultations
	N	%	N	%	
2026/01	47	18.95	21	8.47	248
2026/02	57	21.35	25	9.36	267
2026/03	55	11.78	29	6.21	467
2026/04	43	10.29	33	7.89	418

ARI: Acute Respiratory Infections; ILI: Influenza-like Illness.

Figure 1. Percentage of patients with Influenza-like illness over the last three seasons and 2025-2026 (red) Background colours according to intensity of circulation: baseline, low, medium, high, very high.



Laboratory results

During week 2026/04, the LNS received 105 sentinel specimens. Of these, 39.1% (N=41) were from children under 5 years, followed by 32.4% (N=34) from adults aged 18 to 64 years. Children aged 5 to 17 years accounted for 25.7% (N=27), while patients aged ≥ 65 years for 2.9% (N=3). Overall, 51.4% (N=54) of samples were female and 48.6% (N=51) were male patients.

Respiratory viruses were detected in 77 (73.3%) of the 105 sentinel samples. The predominant pathogen was **influenza A (47.6%)**, followed by **human rhinovirus (13.6%)**. **RSV, adenovirus,** and **metapneumovirus** were each detected in **5.8%** of the specimens. SARS-CoV-2 circulation dropped below 5% and has remained under 10% for the past four weeks. In contrast, influenza A activity has exceeded 40% for two consecutive weeks and has shown an upward trend since the beginning of the new year. RSV positivity peaked during the Christmas time at 27.3%, but declined to below 10% over the past two weeks.

Since the beginning of the season, 141 RSV cases have been confirmed. Subtyping identified 78 RSV-A (65.5%) and 41 (34.5%) RSV- B cases. Approximately 32% of RSV infections occurred in children under 2 years of age, 33% in children aged 2 to 4 years, and 22% in adults aged 18 to 64 years.

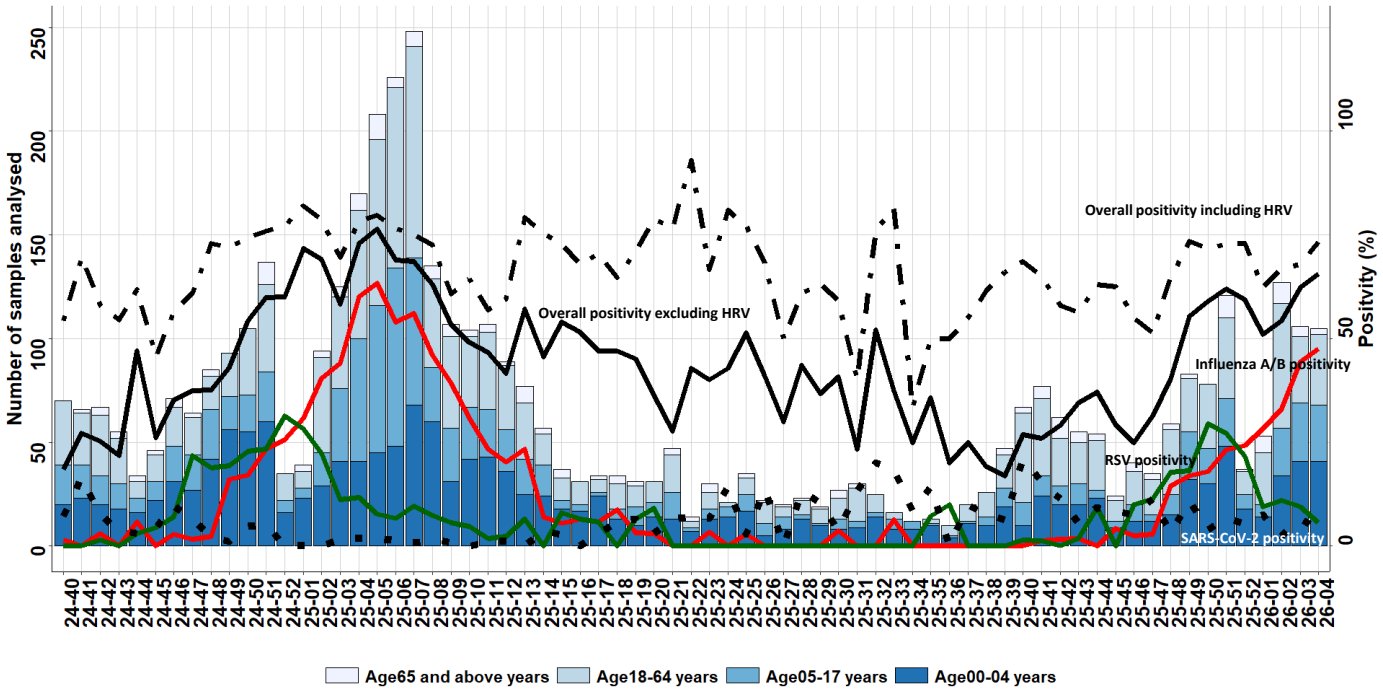
Furthermore, over the past two weeks, human rhinovirus has been detected in all age-groups. Metapneumovirus was identified in patients under 65 years, while parainfluenzavirus and adenovirus were primarily detected in children under 10 years of age.

An overview of the circulating viral pathogens in the sentinel network in Luxembourg during the current and previous (inter)- season is presented in figure 2, 3 and table 2.

Table 2. Distribution of respiratory viruses detected within the Sentinel Network during the past 4 weeks compared to previous season; Total N detected during season 2025/26 and previous season; Results from last weeks are not all yet consolidated.

Virus	Season 2025/26					Season 2024/25		
	Positivity Rate in %							
	W01	**W02**	**W03**	**W04**	**Total N (%)**	**W03**	**W04**	**Total N (%)**
Influenzavirus A	28.3	33.1	44.3	47.6	234 (19.7)	35.2	40.6	502 (17.2)
Human rhinovirus	15.1	14.2	8.5	13.6	303 (25.6)	18.5	10.0	720 (24.8)
Respiratory syncytial virus	9.4	11.0	9.4	5.8	141 (11.9)	11.2	11.8	287 (9.9)
Adenovirus	1.9	1.6	7.5	5.8	66 (5.6)	4.0	2.9	203 (7.0)
Metapneumovirus	9.4	11.0	9.4	5.8	40 (3.4)	3.2	1.2	157 (5.4)
SARS-CoV-2	7.5	2.4	6.6	3.8	92 (7.8)	1.6	1.8	80 (2.7)
Parainfluenzavirus	0.0	2.4	0.0	2.9	44 (3.7)	0.8	1.8	99 (3.4)
Influenzavirus B	0.0	0.0	0.0	0.0	0 (0.0)	9.6	20.0	404 (13.9)

*Figure 2. Presents number of sentinel samples received per week by age-group (weeks 2024/40 to 2026/04) including overall sample positivity- including human rhinovirus (HRV, dot-dash line), excluding HRV (black line), SARS-CoV-2 (dotted line), influenza **combined** (red) and RSV (green); Secondary axis corresponds to positivity; Results from last weeks are not all yet consolidated.*



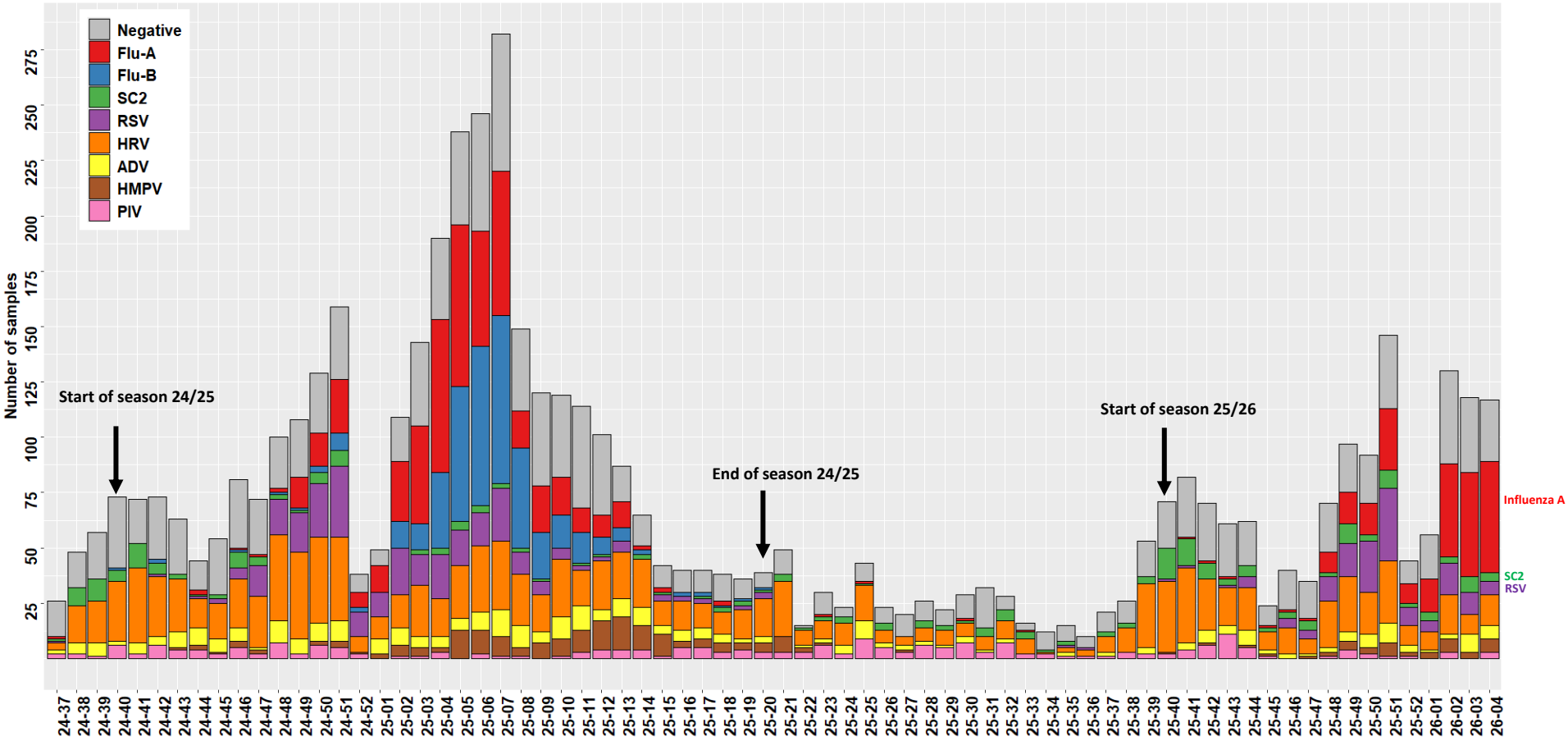


Figure 3. Circulation of respiratory viruses detected within the Sentinel Network by calendar week (seasons 24/25 and 25/26). FLU-A: influenzavirus A; FLU-B: influenzavirus B; PIV:parainfluenzavirus; RSV: respiratory syncytial virus; ADV: adenovirus; HMPV: metapneumovirus; HRV: human rhinovirus; SC2: SARS-CoV-2; Results from last weeks are not all yet consolidated.

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Figure 4. Number of RSV cases detected in different age-groups (N=141) from 2025/40 to 2026/04

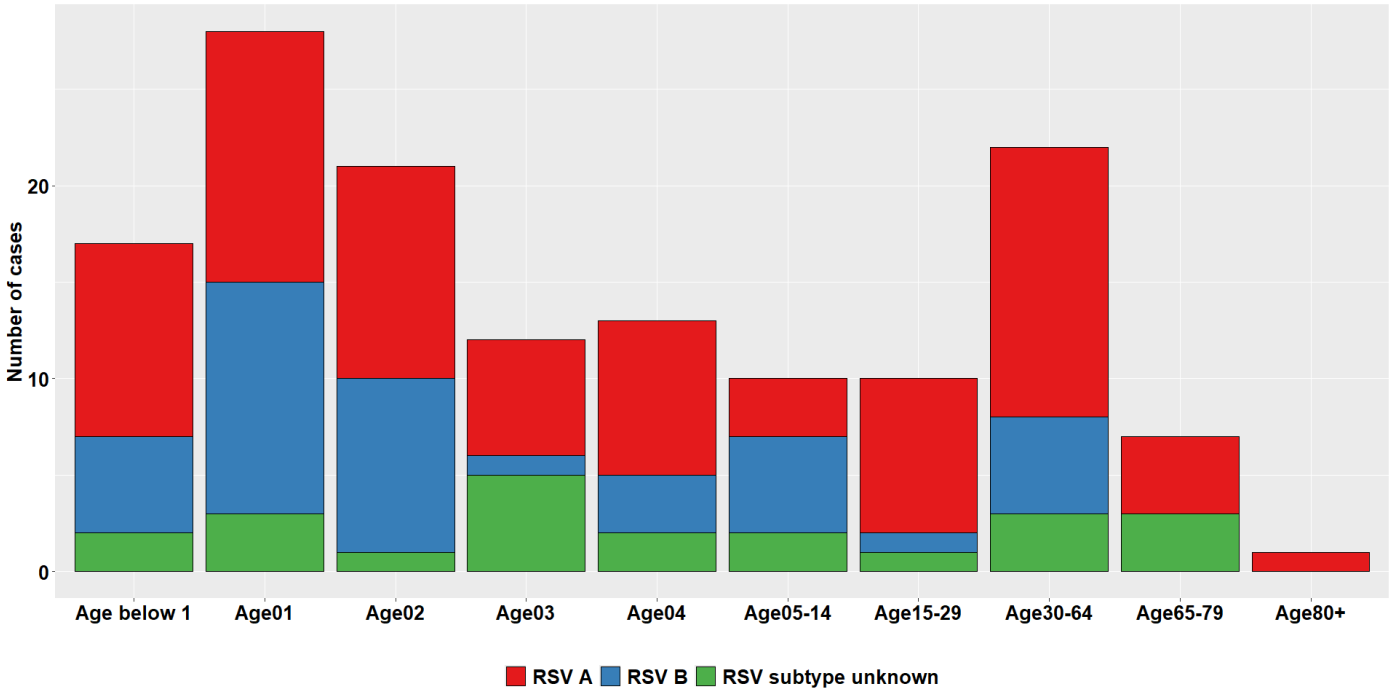
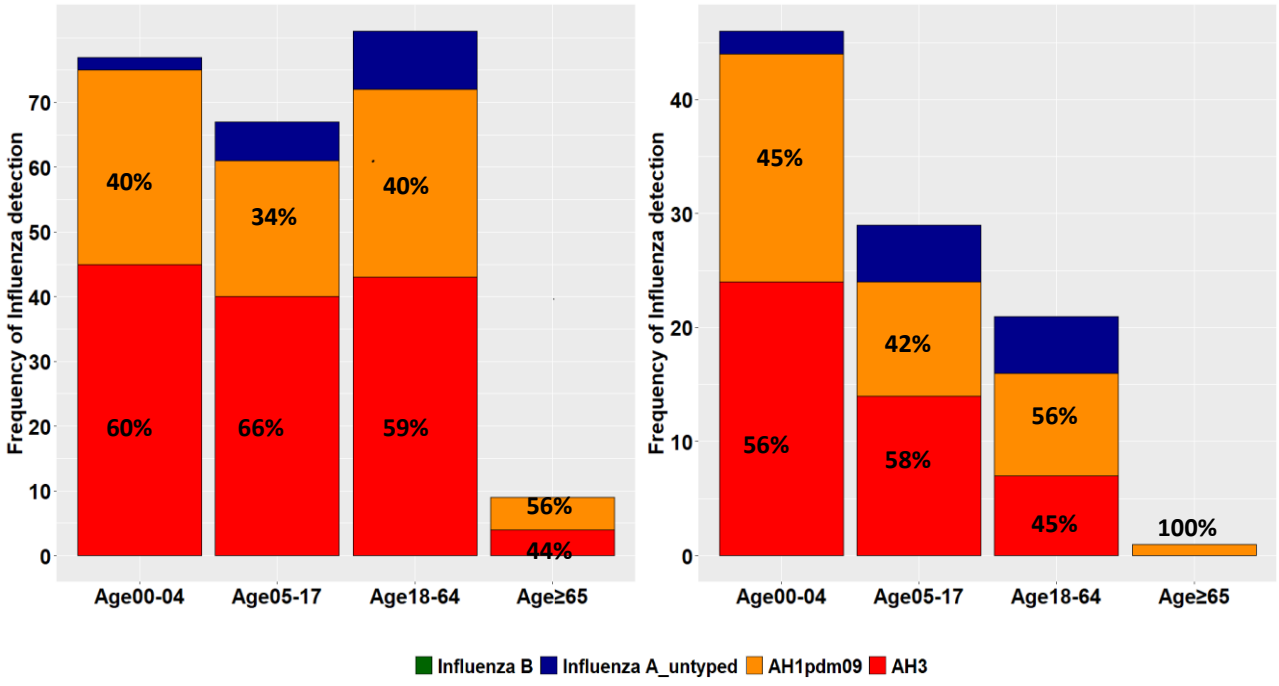


Figure 5. Influenza cases by age group: comparison of 2025/40-2026/04 (N=234) vs. 2026/03-04 (N=97); AH3 and AH1pdm09 percentages in black; blue-subtyping pending



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