

Respiratory Viruses in Luxembourg (ReViLux)

Sentinel Network Report -Week 02

Summary of Sentinel Network activities

At the end of week **2025/02**, the sentinel network detected a medium epidemic activity with increasing trend, based on **9.4%** of consultations being associated with influenza-like illness. Among the specimens collected by the sentinel network over the last week, the percentage of positive tests for **Influenza A** was **28.7%**, **22.6%** for **RSV** and **16.1%** for **Human rhinovirus**.

During the week **2025/02**, positivity rates for **Influenza B** increased sharply to 12.8%, while no new SARS-CoV-2 cases were detected in the sentinel network.

In total, this season (24/25) 1,061 samples were received with 136 Influenza positive samples (31 Influenza B and 105 Influenza A). So far, 88 of the 105 Influenza A samples have been subtyped. Thirty eight (43.2%) Influenza A samples have been subtyped as A(H1)pdm9 and 50 (56.8%) samples as A(H3) virus. RSV continues to circulate at increased level with 55.4 % of subtype A and 44.5% subtype B cases.

Syndromic surveillance over the last 4 weeks (Table 1)

Week	ARI		ILI		Total consultations
	N	%	N	%	
2024/51	101	23.71	34	7.98	426
2024/52	74	20.05	28	7.59	369
2025/01	45	24.73	12	6.59	182
2025/02	33	10.71	29	9.42	308

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

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 north hemisphere is generally monitored by seasons that go from week 40 to week 20. The period between weeks 20 and 40 is usually called inter-season.

Clinical results

Last week (**2025/02**), **9.4%** of the consultations were reported as ILI, representing a medium epidemic activity for Luxembourg, according to ECDC and the Moving Epidemic Method. Over the past 4 weeks, the network has reported rates above 6.5%, indicating increased activity.

The history of ILI consultations is displayed in Figure 1, and a detailed summary of the number of ARI and ILI cases during the last four weeks is included in Table 1.

Laboratory results

Over the last week, the most frequently detected viruses (according to positivity rates) were **Influenza A (28.7%)**, followed by **RSV (22.6%)** and **Human rhinovirus (16.1%)**. During week 2025/02, Influenza B increased sharply to 12.8%, while no new SARS-CoV-2 cases were identified. Fifty percent of the Influenza B cases identified this week were in children and adolescent, while the remaining 50% were in adults aged 19 to 44 (figure 5).

RSV activity remained above 20% in week 2025/02, but decreased from 28.9% to 22.6%. So far this season (24/25), hundred fifty six RSV cases have been detected, including seventy one RSV-A and fifty seven RSV-B. Nearly 65% of cases were aged 1 and 4 years (figure 3).

In total, 1061 sentinel samples have been analysed with more than 53% of samples belonging to age-group below 18 years and with 51% of female cases. Over the last three weeks more samples from adults have been tested (figure 4).

Over the past 2 weeks, Human rhinovirus was detected in all age-groups below 65 years, while Adenovirus and Metapneumovirus were detected predominantly in children. Over the last 2 weeks, about 70% of all co-infections (N=21) were detected primarily in children below 5 years. The most commonly identified combination was RSV with adenovirus. So far this season, two patients were co-infected with Influenza A and B.

An overview of the circulating viral pathogens during the current and previous inter- season is displayed in Figure 2 and Table 2.

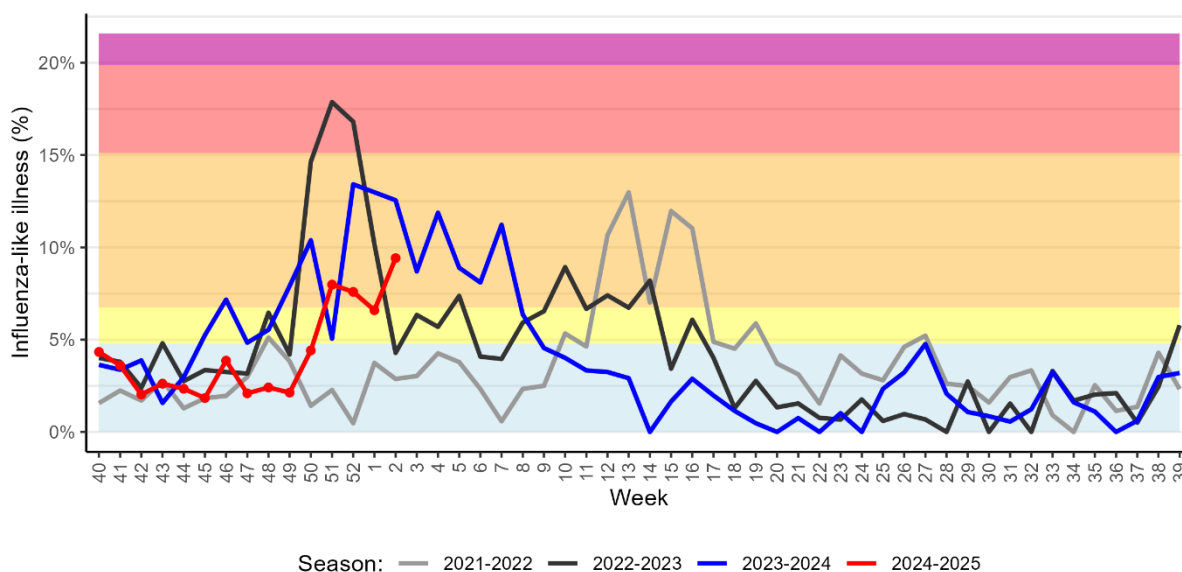


Figure 1. Percentage of patients with influenza-like illness over the last three seasons
Background colours according to intensity of circulation: baseline, low, medium, high, very high.

Table 2. Distribution of respiratory viruses detected within the Sentinel Network previous 4 weeks compared to previous year. Data for week 2025/01 not yet completely consolidated

Virus	Season 2024/25					Season 2023/24	
	Positivity Rate in %					Total N	
	W51	W52	W01	W02	Total N (%)	W02	(%)
Influenzavirus A	17.5	20.0	30.8	28.7	105 (9.9)	22.5	388 (16.5)
Respiratory syncytial virus	23.4	31.4	28.9	22.6	156 (14.8)	2.3	212 (9.2)
Human rhinovirus	27.9	20.0	26.3	16.1	373 (35.5)	16.3	572 (24.9)
Influenzavirus B	5.8	5.7	0.0	12.8	31 (2.9)	0.7	12 (0.5)
Adenovirus	6.6	0.0	18.4	8.6	88 (8.4)	5.8	125 (5.4)
Metapneumovirus	2.2	2.9	5.3	5.4	22 (2.1)	1.2	125 (5.4)
Parainfluenzavirus	3.7	5.7	0.0	1.1	54 (5.1)	2.3	77 (3.4)
SARS-CoV-2	5.1	0.0	0.0	0.0	52 (4.9)	9.0	227 (9.7)

Co-detection counted once for each virus detected & N- total number of detection during season

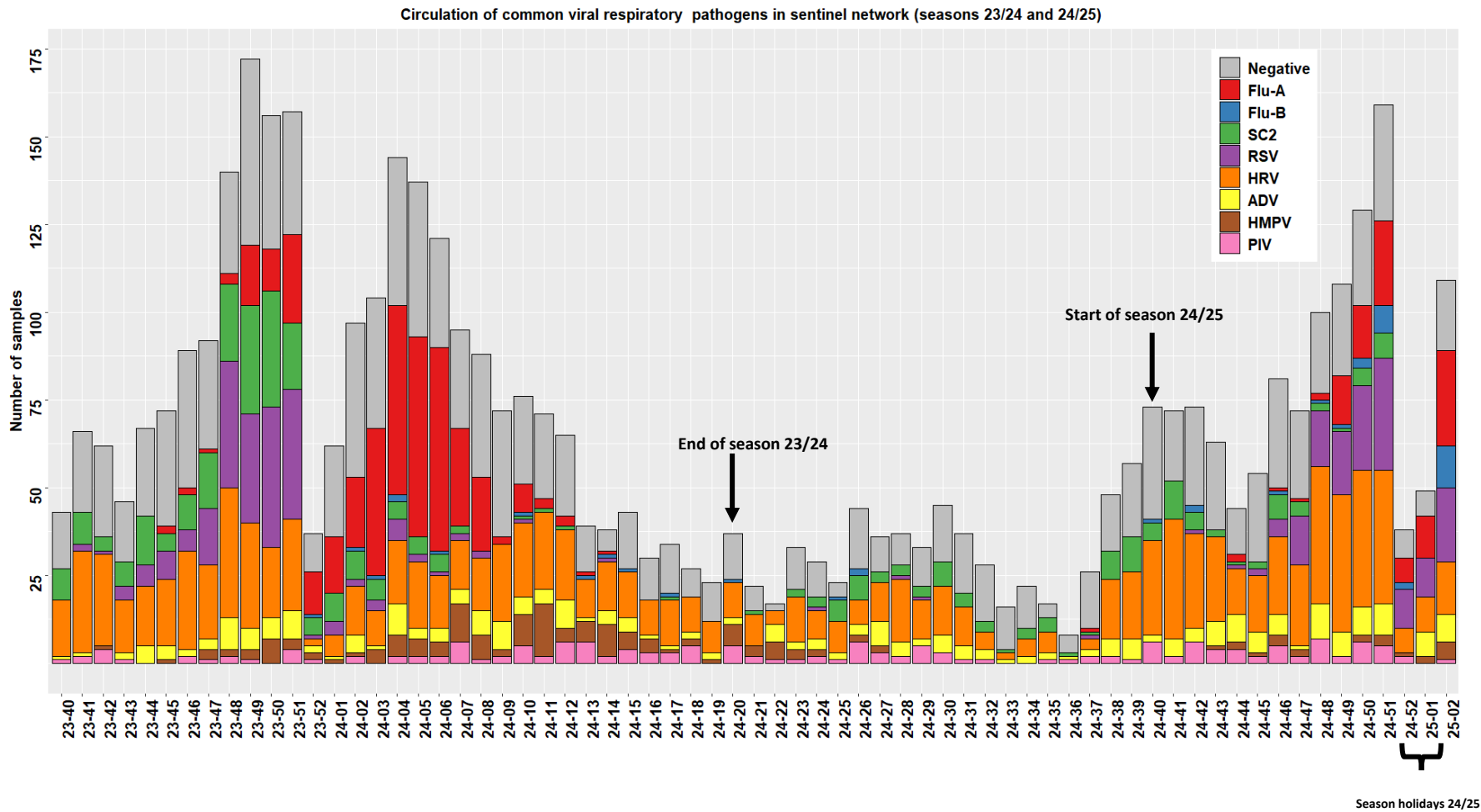


Figure 2. Distribution of respiratory viruses detected within the Sentinel Network, by calendar week. Results from last weeks are not all yet consolidated.
 FLU-A: Influenzavirus A; FLU-B: Influenzavirus B; PIV: Parainfluenzavirus; RSV: Respiratory syncytial virus; ADV: Adenovirus; MPV: Metapneumovirus; HRV: Human rhinovirus; SC2: SARS-CoV-2.

Figure 3. Displays RSV cases according to different age groups with highest impact among the 1-4 years old. Data for week 2025/02 not yet completely consolidated

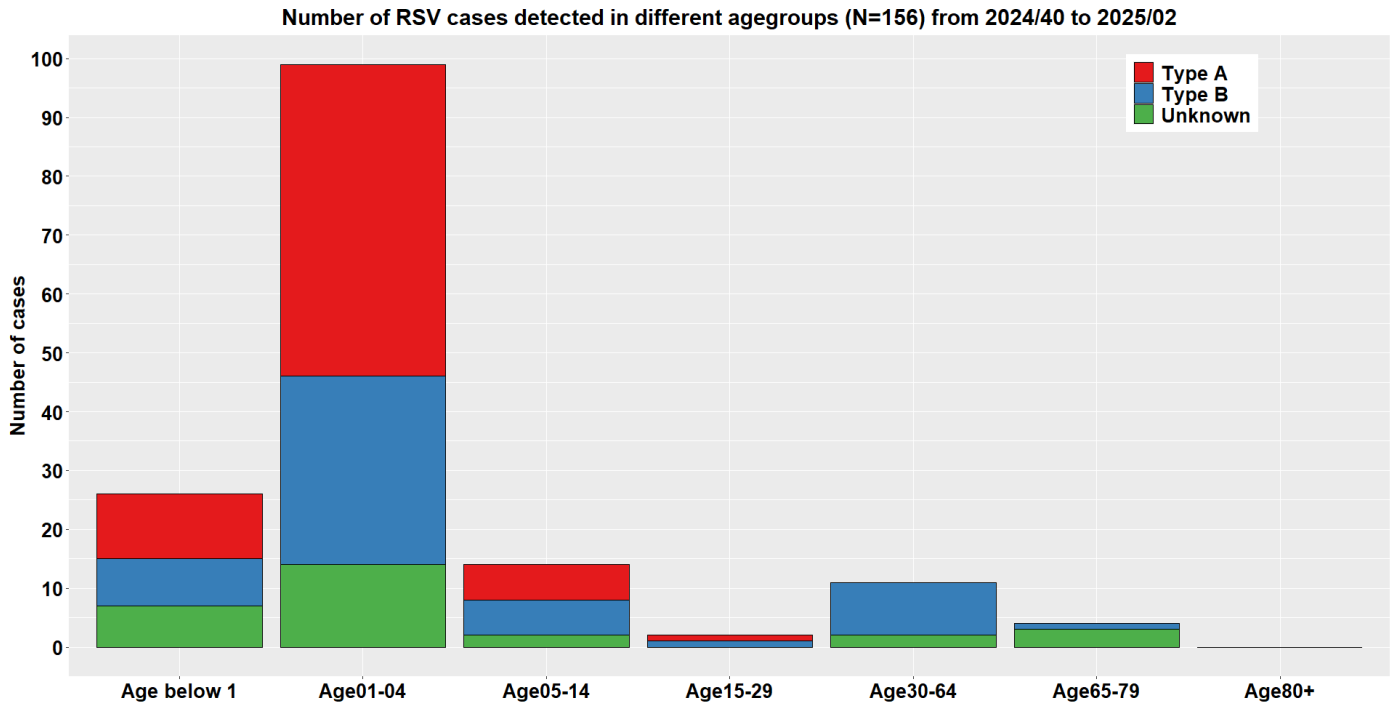


Figure 4. Displays number of sentinel samples received per week by age-group including overall sample positivity including Human rhinovirus (HRV, dotted line) and excluding HRV (black line). Secondary axis corresponds to positivity

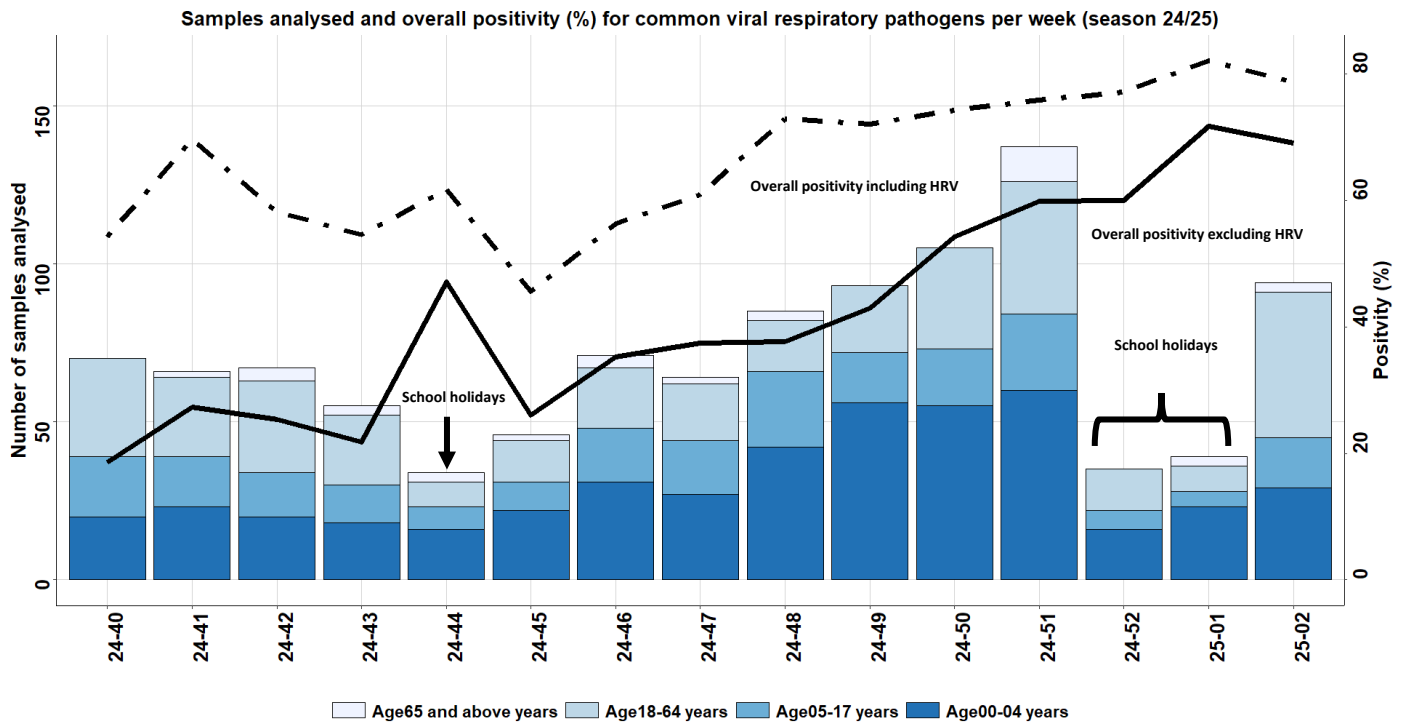
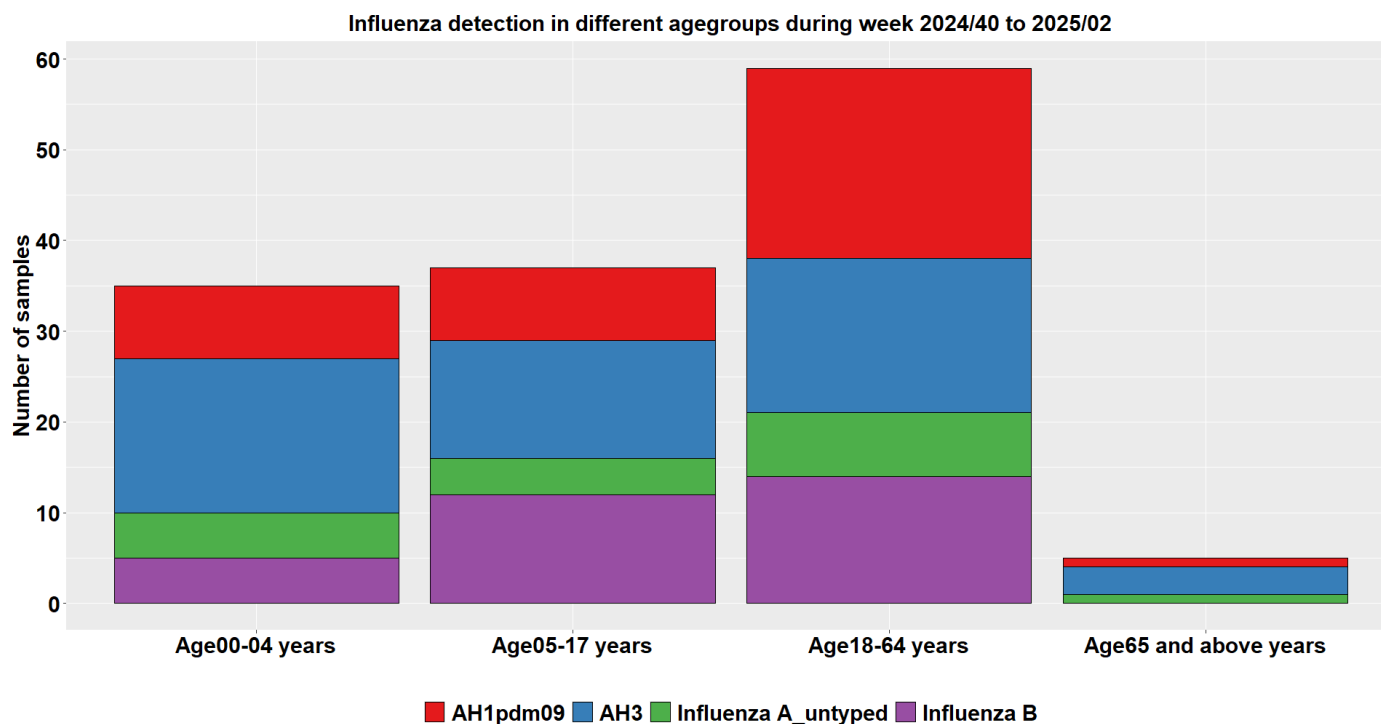


Figure 5. Displays detection of Influenza subtypes by age-group. Data for week 2025/02 not yet completely consolidated



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