Respiratory Viruses in Luxembourg (ReViLux)

Sentinel Network Report -Week 18

Summary of Sentinel Network activities

At the end of week **2025/18**, the sentinel network detected a baseline activity, based on **1.3%** 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 **human rhinovirus** was **29.4%**, **11.8%** each for **metapneumovirus** and **adenovirus**, while the **influenza positivity rate** remained **below 10%**. **SARS-CoV-2** activity increased slightly to **5.9%.**

In total, this season (24/25) 2,850 samples were received with 904 influenza positive samples (402 influenza B and 502 influenza A). So far, 480 of the 502 influenza A samples (95.6%) have been subtyped. Hundred and ninety seven (41.0%) influenza A samples have been subtyped as A(H1)pdm09 and 283 (59.0%) samples as A(H3) virus. This season influenza activity peaked in week 2025/05 with early influenza A dominance followed by A (mainly A(H3)) and B co-circulation.

In total this season (24/25), 282 RSV cases have been detected with peak in week 2025/05 with 40.8% of subtyped A and 59.2% of subtype B cases.

Syndromic surveillance over the last 4 weeks (Table 1)

Week	ARI		ILI		Total consultations
	N	%	N	%	
2025/15	36	15.93	5	2.21	226
2025/16	34	17.62	9	4.66	193
2025/17	16	11.19	6	4.20	143
2025/18	25	11.01	3	1.32	227

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 **(end of week 2025/18)**, **1.3%** of the consultations were reported as ILI, representing a baseline activity for Luxembourg, according to ECDC and the Moving Epidemic Method. Since week 2025/13 ILI rates have returned to baseline 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.

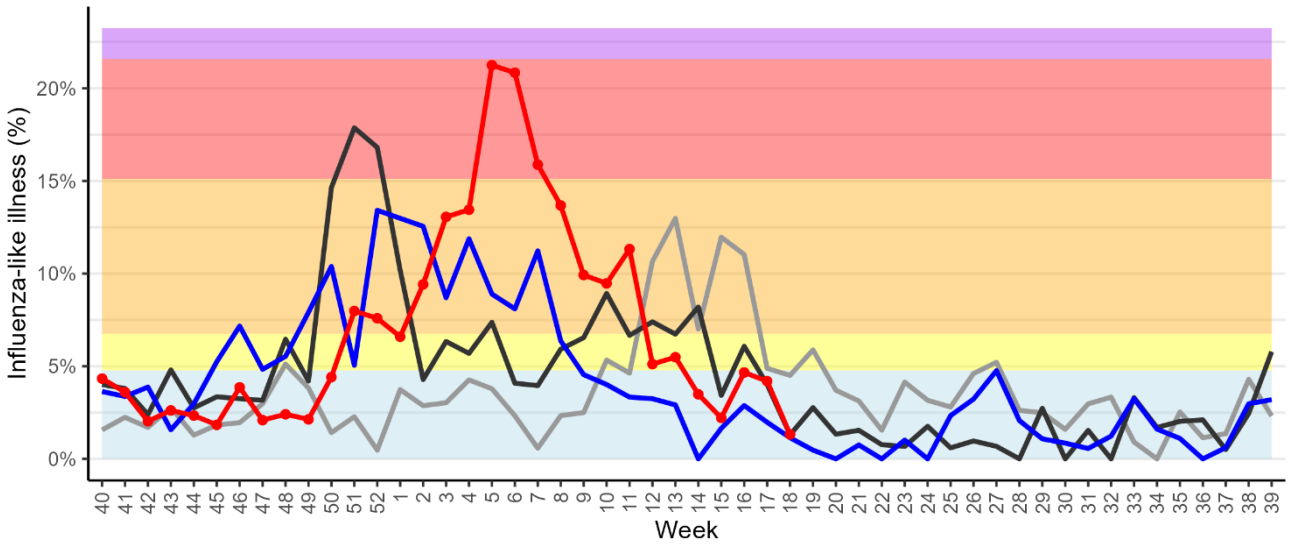

Figure 1. Percentage of patients with Influenza-like illness over the last three seasons and 2024-2025 (red)
Background colours according to intensity of circulation: baseline, low, medium, high, very high.

Laboratory results

In week 2025/18, **human rhinovirus (29.4%)** was the most prevalent virus circulating, followed by **metapneumovirus** and **adenovirus with each 11.8%.** Overall, the combined positivity rates for influenza A and B remained below 10%, while **SARS-CoV-2** activity increased slightly **(5.9%)** but also remained below 10% within the sentinel network. An

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overview of the circulating viral pathogens during the current and previous inter- season is displayed in figure 2 and table 2.

In total, this season (24/25), 904 influenza positive samples (402 influenza B and 502 influenza A) have been detected, with 480 (95.6%) influenza A samples subtyped. This season influenza activity peaked in week 2025/05. At the beginning of the season, A(H1)pdm09 subtype was dominant, then co-circulation of A(H3), A(H1)pdm09 and B was observed until week 2025/10. As of week 2025/10, only a few cases of A(H1)pdm09 have been detected. Over the past 4 weeks influenza B cases have been identified in patients under 18 years of age, while influenza A has been detected in different age-groups. The overall distribution of subtypes during this season is shown in figure 5.

So far this season (24/25), two hundred and eighty two RSV cases have been detected, including 100 RSV-A cases (dominant in the early part of the season) and 145 RSV-B cases. Overall during this season (24/25), 55% of cases were aged 1 and 4 years (figure 3). Although in week 2025/18 no new RSV case was detected, low RSV activity has been observed over the past month, particularly in patients over 45 years of age (50% of cases).

In total, 2850 sentinel samples have been analysed with more than 60% of samples belonging to age-group below 18 years (figure 4) and with 52% of female.

Over the past 4 weeks, human rhinovirus and metapneumovirus were detected in all age-groups, while adenovirus and parainfluenzavirus were detected predominantly in children.

Over the last 4 weeks, about 90% of all co-infections (N=23) were detected primarily in children below 5 years. The most commonly identified combination was human rhinovirus with adenovirus. So far this season, ten patients were co-infected with influenza A and B.

Table 2. Distribution of respiratory viruses detected within the Sentinel Network previous 4 weeks compared to previous year. Data for week 2025/18 not yet completely consolidated

Virus	Season 2024/25					Season 2023/24	
	Positivity Rate in %						
	W15	**W16**	**W17**	**W18**	**Total N (%)**	**W18**	**Total N (%)**
Human rhinovirus	29.7	41.9	32.4	29.4	690 (24.3)	47.6	572 (24.9)
Metapneumovirus	27.0	9.7	11.8	11.8	150 (5.3)	9.5	125 (5.4)
Adenovirus	10.8	16.1	14.7	11.8	198 (7.0)	9.5	125 (5.4)
Parainfluenzavirus	2.7	16.1	14.7	8.8	92 (3.2)	23.8	77 (3.4)
SARS-CoV-2	2.7	0.0	2.9	5.9	77 (2.7)	1.8	227 (9.7)
Influenzavirus A	5.4	0.0	0.0	5.9	502 (17.6)	0.0	388 (16.5)
Influenzavirus B	0.0	6.5	5.9	2.9	402 (14.1)	1.8	12 (0.5)
Respiratory syncytial virus	8.1	6.5	5.9	0.0	282 (9.9)	0.0	212 (9.2)

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

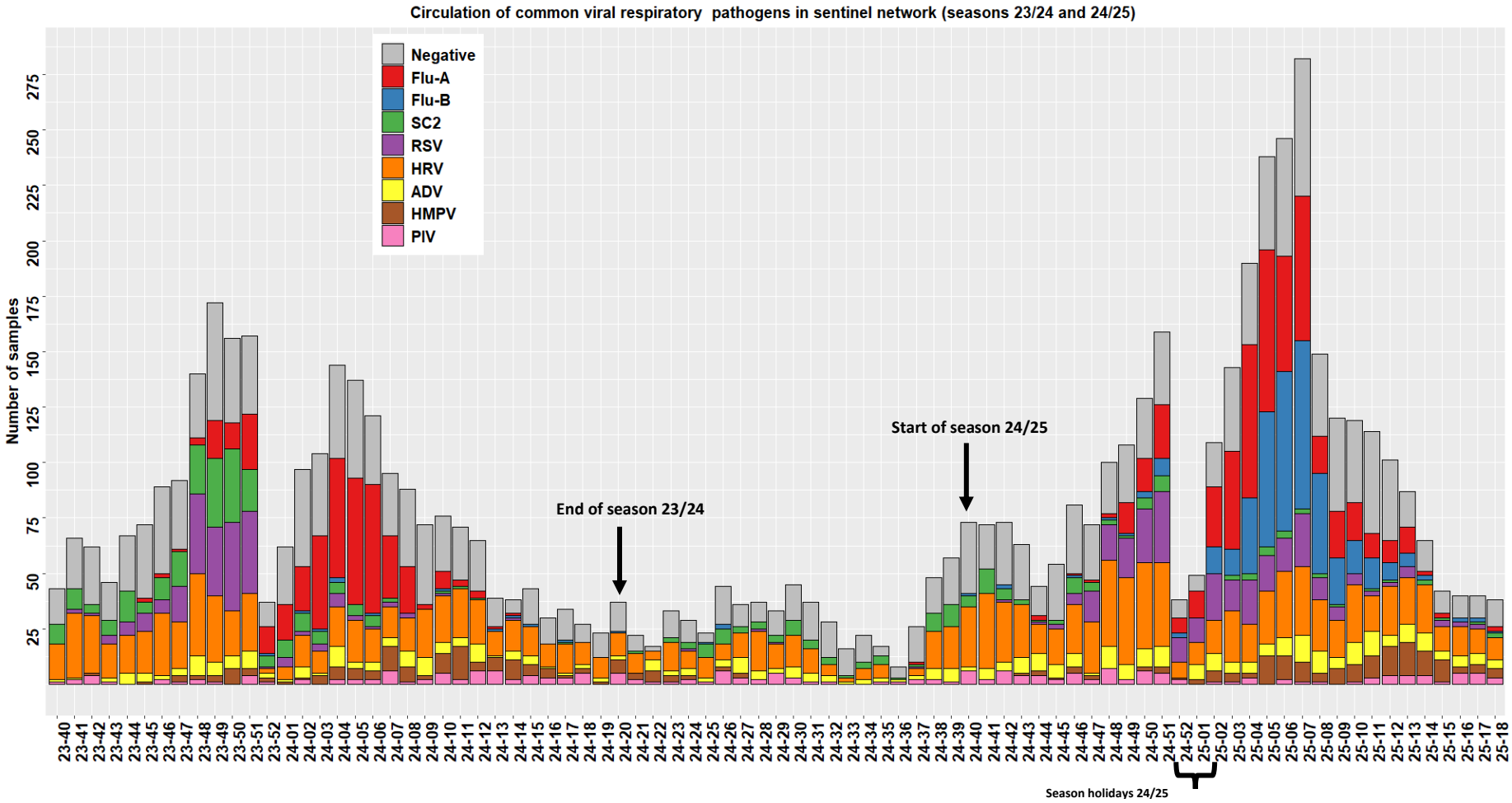

Figure 2. Distribution of respiratory viruses detected within the Sentinel Network by calendar week. Results from last weeks are not all yet consolidated.
FLU-A: influenzavirus A; FLU-B: influenzavirus B; PIV:parainfluenzavirus; RSV: respiratory syncytial virus; ADV: adenovirus; MPV: metapneumovirus; HRV: human rhinovirus; SC2: SARS-CoV-2.

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Figure 3. Displays RSV cases according to different age groups with highest impact among the 1 years old. Data for week 2025/18 not yet completely consolidated

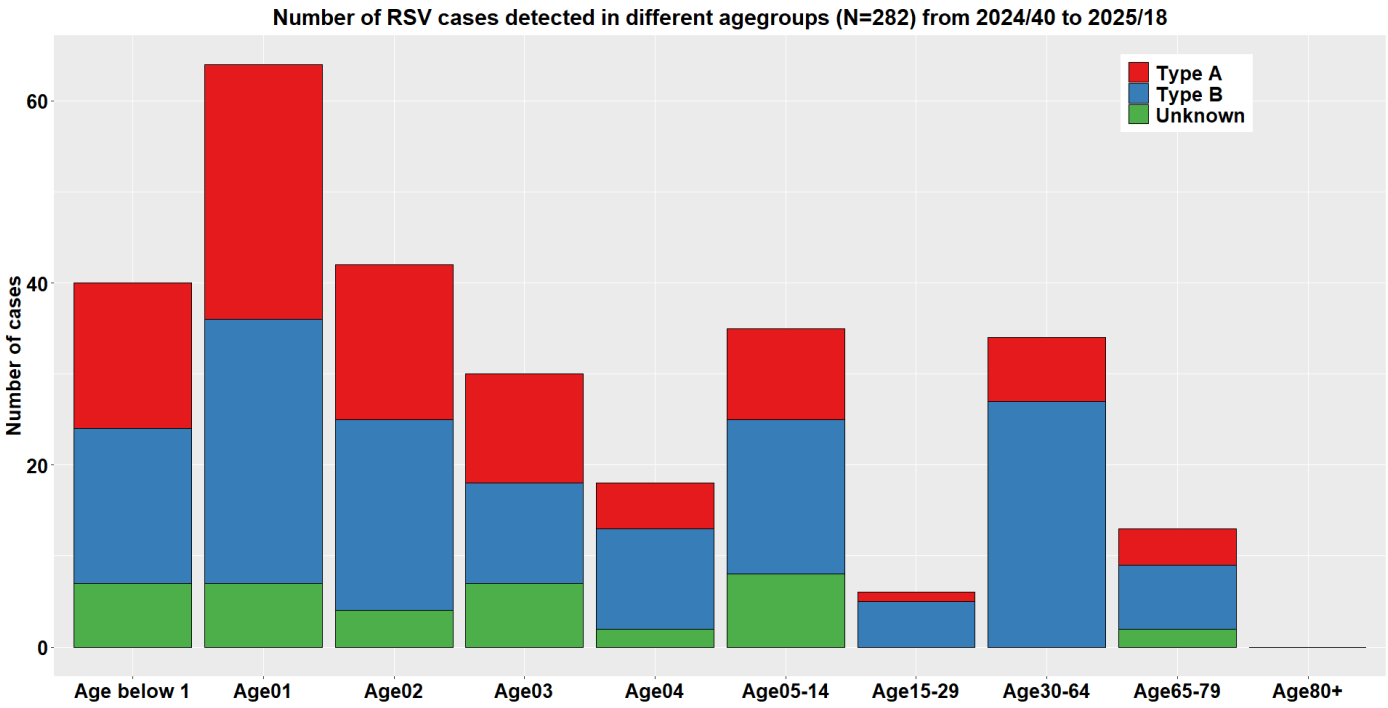


*Figure 4. Displays number of sentinel samples received per week by age-group including overall sample positivity including human rhinovirus (HRV, dotted line), excluding HRV (black line), influenza **combined** (red) and RSV (green). Secondary axis corresponds to positivity*

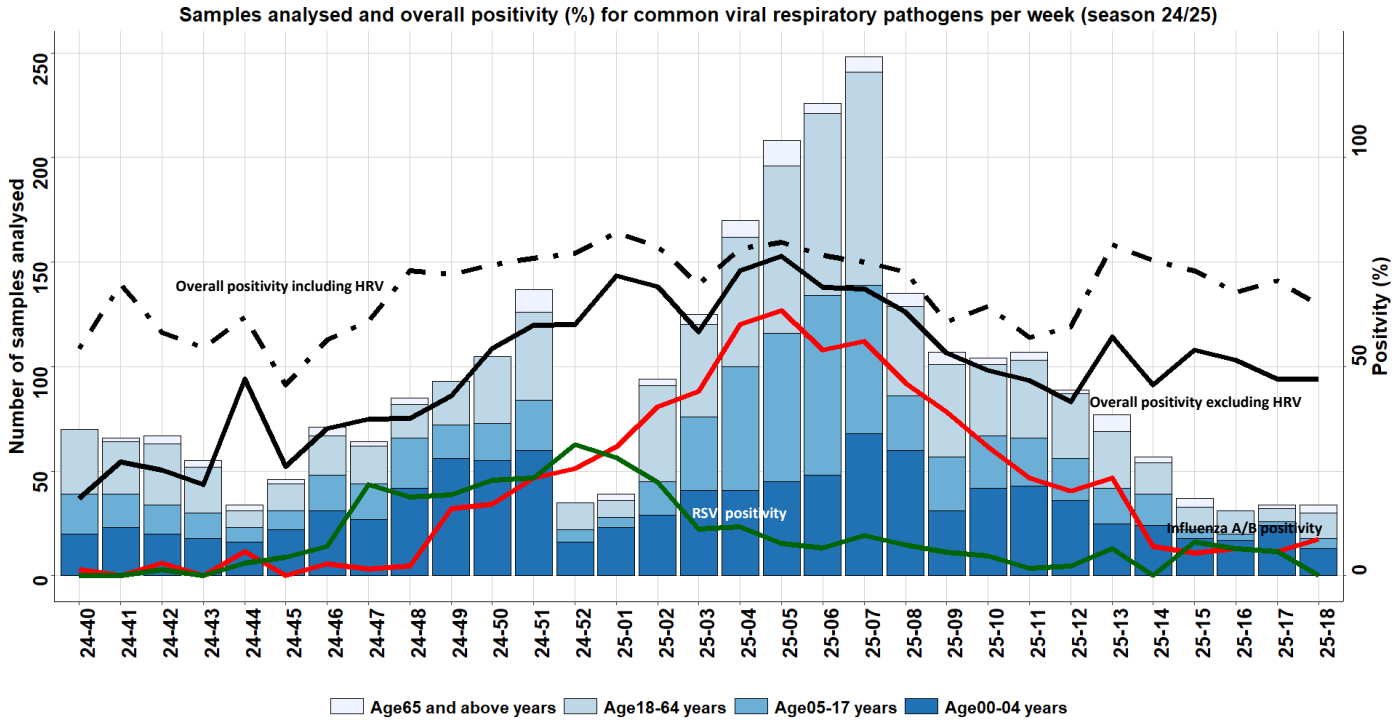
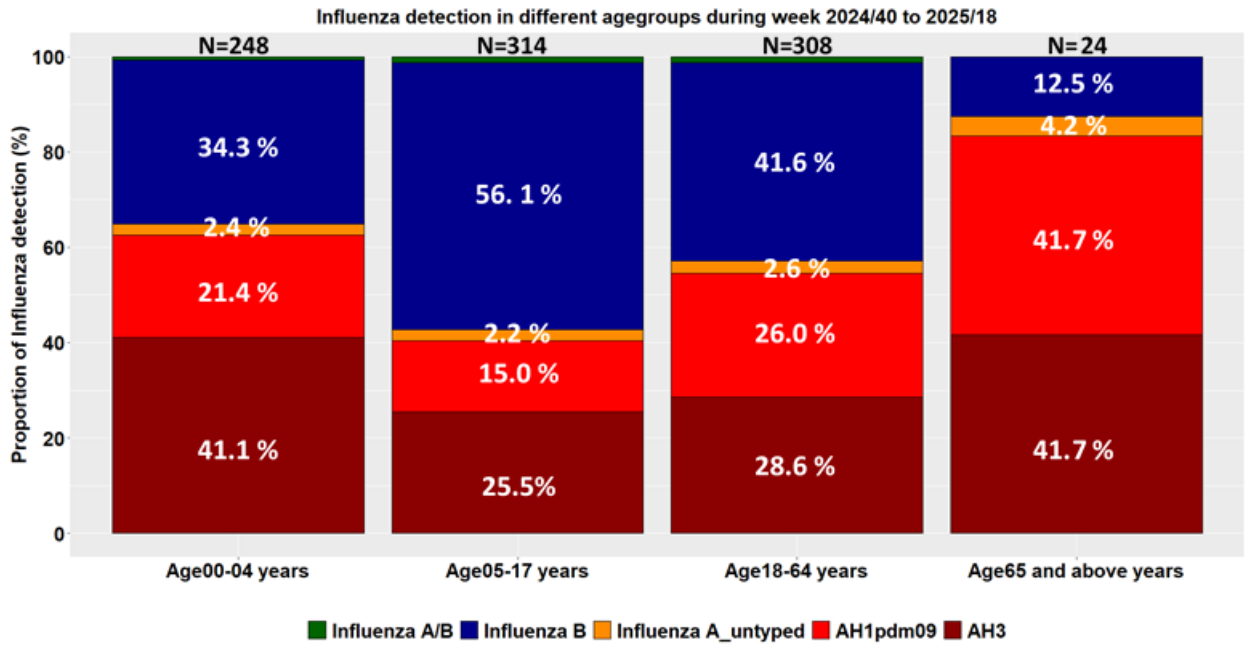


Figure 5. Displays detection of Influenza subtypes by age-group. Data for week 2025/18 not yet completely consolidated



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