Respiratory Viruses in Luxembourg (ReViLux)

Sentinel Network Report -Week 49

Summary of Sentinel Network activities

In week **2025/49**, consultations for acute respiratory infections **(ARI)** remained above **15%**, while influenza-like illness activity **(ILI)** rose to **5.1%**, but remained within ECDC-defined baseline levels.

In week 2025/49, the LNS processed 83 sentinel specimen, with respiratory viruses detected in 73.5% of samples - dominated by **human rhinovirus (31.1%)**, followed by **RSV (18.8%)** and **influenza A (16.9%)**. Both **RSV** and **influenza A** activity **exceeded the 10% epidemic threshold** for **two consecutive weeks**, and **SARS- CoV-2** positivity increased to **10.8%**, indicating co-circulation of all three viruses.

RSV –monoclonal antibodies and vaccination

Since September 2023, newborns have been eligible for RSV protection through maternal vaccination during pregnancy or postnatal administration of monoclonal antibodies (nirsevimab), and as of late 2024, the Conseil Supérieur des Maladies Infectieuses (CSMI) additionally recommends RSV vaccination for senior residents.

RSV vaccination: CSMI recommendation	
To protect infants	**To protect senior residents**
Expected to be delivered or born during season (September to February): Vaccination of pregnant mother or once born administration of monoclonal antibodies	≥75 years; (particularly in residential and long term care facilities)
Infants younger than 6 months at the start of season: administration of monoclonal antibodies	≥ 65 years with comorbidities that increases the risk of severe infection
For more info, see references from CSMI	

The sentinel network collects RSV vaccine coverage data for children under 2 years. During the 2025/26 season, 108 samples were received, with vaccination records available for 80% (N=86). Four vaccinated cases tested positive for RSV (three RSV B, one un-typed). Vaccination timing was unavailable, but children were about one year or older indicating they were vaccinated during the previous season.

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

During weeks 2025/47-49, consultations for acute respiratory infections (ARI) remained above 15%. In addition, influenza-like illness (ILI) activity increase to about 5%, but stayed within baseline levels, although detections of influenza A continued to rise.

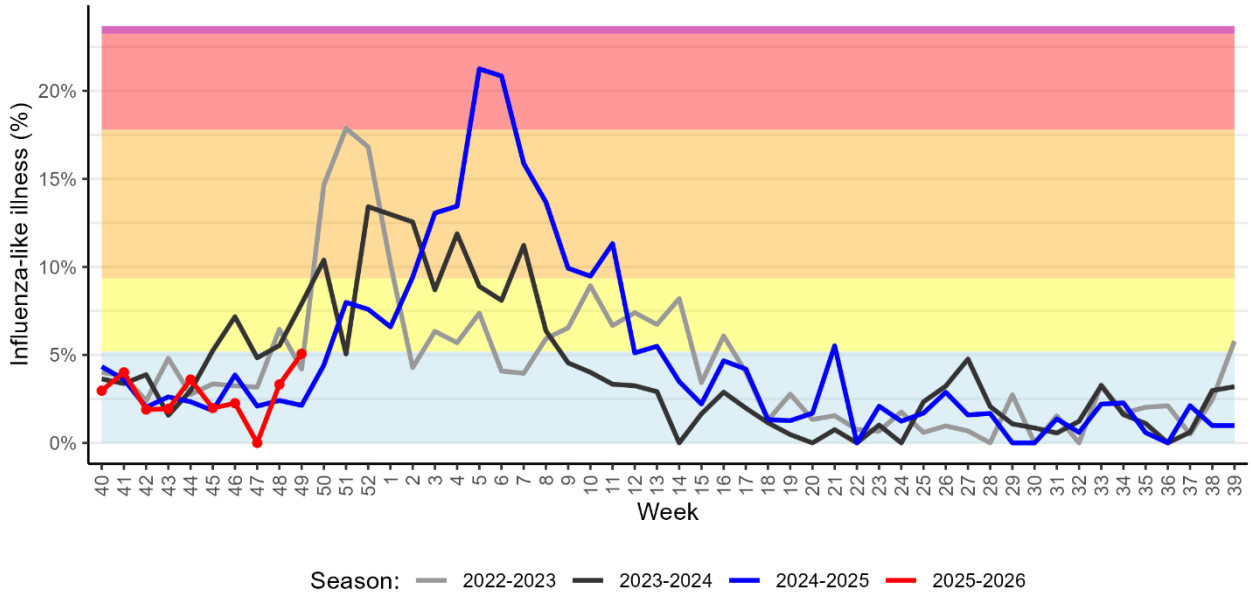
Similar patterns-excluding the most recent week- have been observed in previous seasons. Historical trends in ILI consultations are presented in figure 2, and a detailed summary of the ARI and ILI case counts for the past four weeks is provided in table 1.

Table 1. Syndromic surveillance over the last 4 weeks

Week	ARI		ILI		Total consultations
	N	%	N	%	
2025/46	48	13.52	8	2.25	355
2025/47*	18	16.51	0	0.00	109
2025/48	43	15.87	9	3.32	271
2025/49	41	17.30	12	5.06	237

*ARI: Acute Respiratory Infections; ILI: Influenza-like Illness. *Results from only 5 doctors*

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 2025/49, the LNS received **83 sentinel specimens,** indicating increased activity within the network. Children under 5 years accounted for the largest proportion **(38.6%, N=32)**, followed by adults aged 18 to 64 years **(31.1%, N=26)**. Children aged 5-17 years represented **27.7% (N=23)**, while older adults (≥ 65 years) comprised **2.4% (N=2)** of the sampled population. Overall, **59.0% (N=49)** of samples were from female patients and **41.0% (N=34)** from male patients.

Respiratory viruses were detected in **61 of 83 samples (73.5%)**. The predominant pathogen was **human rhinovirus (31.1%)**, followed by **RSV (18.8%)** and **influenza A (16.9%)**. Over the preceding two weeks, **RSV** and **influenza A** positivity exceeded **15%**, whereas **SARS-CoV-2** detection increased also to **above 10%**.

Since the start of the season (25/26), **42 RSV cases** have been confirmed. Subtyping identified **RSV-A** in **20 cases (58.8%)** and **RSV-B** in **14 cases (41.2%)**. Approximately **33% of RSV infections occurred in children < 2 years**, while **21%** were reported in **adults aged 18 to 64 years** (figure 4).

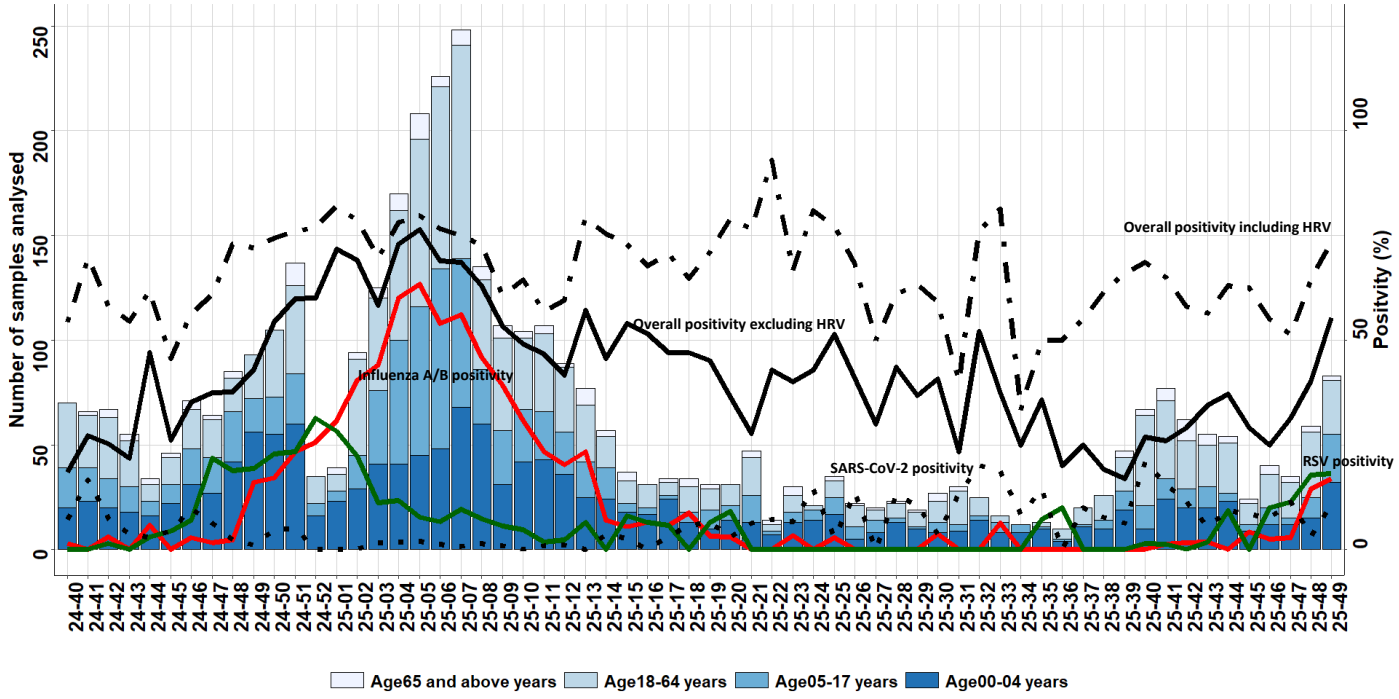
Influenza A activity has remained **above 10%** for two consecutive weeks, driven by A(H3). Among **29 detected cases this season**, **69.6% (N=16)** were subtyped as **A(H3)** and **30.4% (N=7)** as **A(H1)pdm09**. Subtyping is still pending for **6 cases**. Slightly less than **50% of influenza A** cases occurred in **adults aged 18 to 64 years**, followed by **34%** in children **aged 5 to 17 years** (figure 5). 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 %							
	W46	**W47**	**W48**	**W49**	**Total N (%)**	**W48**	**W49**	**Total N (%)**
Human rhinovirus	30.0	20.0	33.9	31.1	198(35.5)	45.9	41.9	720 (24.8)
Respiratory syncytial virus	10.0	11.4	17.7	18.8	42 (7.5)	18.8	19.4	287 (9.9)
Influenzavirus A	2.5	2.9	14.5	16.9	29 (5.2)	2.4	15.1	502 (17.2)
SARS-CoV-2	7.5	11.4	3.2	10.8	61 (10.9)	2.4	1.1	80 (2.7)
Adenovirus	5.0	2.9	3.2	4.8	31 (5.6)	11.8	7.5	203 (7.0)
Metapneumovirus	0.0	2.9	3.2	4.8	11 (2.0)	0.0	0.0	157 (5.4)
Parainfluenzavirus	0.0	0.0	1.6	4.8	34 (6.1)	8.2	2.2	99 (3.4)
Influenzavirus B	0.0	0.0	0.0	0.0	0 (0.0)	1.1	1.2	404 (13.9)

*Figure 2. Presents number of sentinel samples received per week by age-group (weeks 2024/40 to 2025/49) 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.*



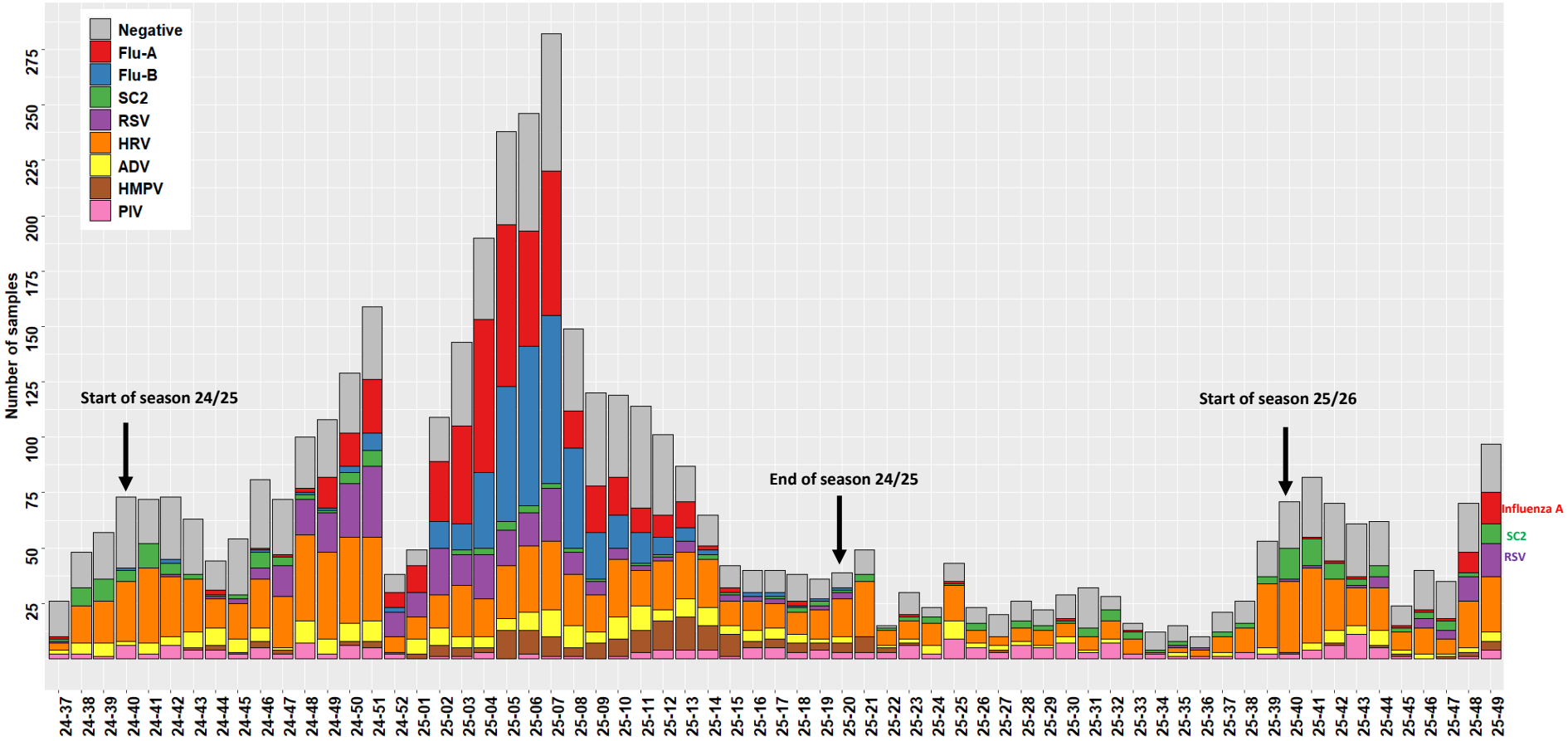


Figure 3. Circulation of respiratory viruses detected within the Sentinel Network by calendar week (seasons 24/25 and 25/26). FLU-A: influenzavirus A; FLU-B: influenzavirus B; PIV:parainfluenzavirus; RSV: respiratory syncytial virus; ADV: adenovirus; HMPV: metapneumovirus; HRV: human rhinovirus; SC2: 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=42) from 2025/40 to 2025/49

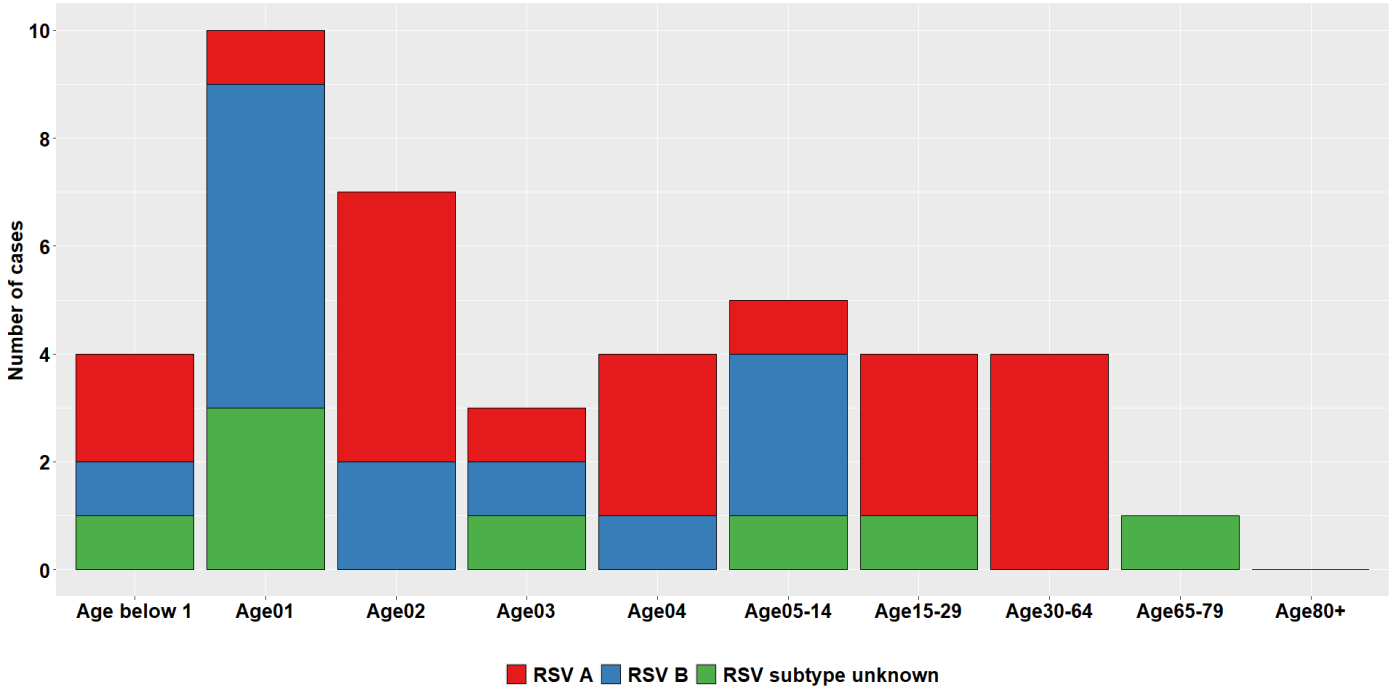
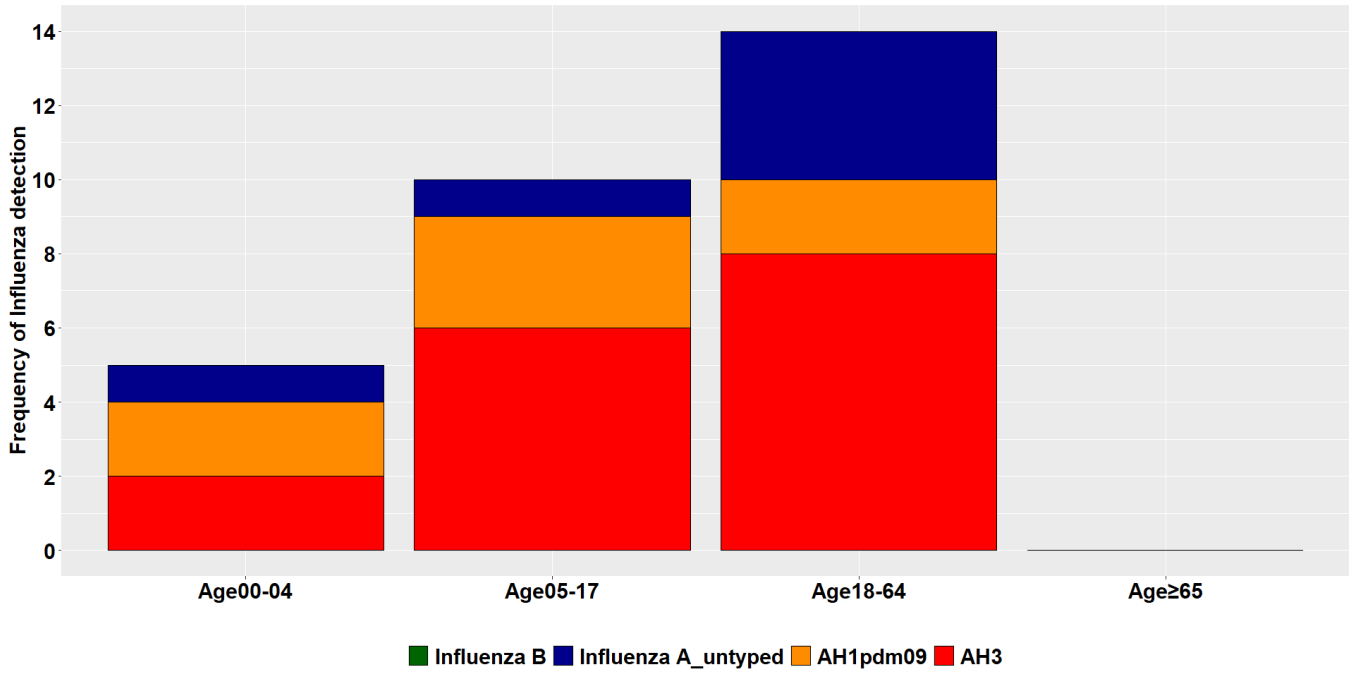


Figure 5. Number of Influenza cases detected in different age-groups (N=29) from 2025/40 to 2025/49; not all samples have yet been subtyped



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