Respiratory Viruses in Luxembourg (ReViLux)

Sentinel Network Report -Week 20

Summary of Sentinel Network activities

At the end of week **2025/20**, the sentinel network detected a baseline activity, based on **1.7%** of consultations being associated with influenza-like illness. Among the specimens collected by the sentinel network during the last week (**2025/20**), the percentage of positive tests for **human rhinovirus** was **50.0%**, followed by **metapneumovirus** with **13.3%**, while the positivity rates for **RSV**, **adenovirus** and **parainfluenzavirus** were each **10.0%**. Over the past two weeks (2025/19 and 2025/20), influenza B positivity remained below 5%, while no new influenza A cases were detected.

In total, this season (24/25) 2,912 samples were received with 906 influenza positive samples (404 influenza B and 502 influenza A). So far, 481 of the 502 influenza A samples (95.8%) have been subtyped. Hundred and ninety eight (41.2%) influenza A samples were subtyped as A(H1)pdm09 and 283 (58.8%) 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), 287 RSV cases were detected with a peak during week 2024/52 with 40.0% of subtype A cases and 60.0% of subtype B cases.

Syndromic surveillance over the last 4 weeks (Table 1)

Week	ARI		ILI		Total consultations
	N	%	N	%	
2025/17	16	11.19	6	4.20	143
2025/18	25	11.01	3	1.32	227
2025/19	27	11.39	3	1.27	237
2025/20	31	13.08	4	1.69	237

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 2025/20)**, **1.7%** of the consultations were reported as ILI, representing a baseline activity for Luxembourg, according to ECDC and the Moving Epidemic Method. Since week 2025/14 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.

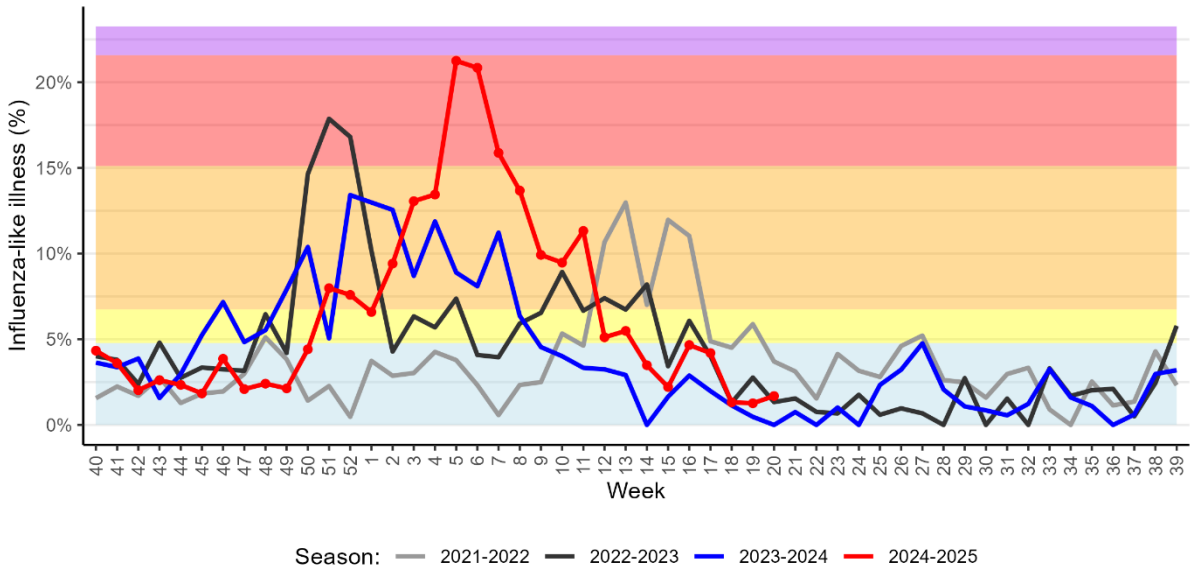

Figure 1. Percentage of patients with Influenza-like illness over the last three seasons and 2024-2025 (red)
Background colours according to intensity of circulation: baseline, low, medium, high, very high.

Laboratory results

Over the last week (2025/20), **human rhinovirus (50.0%)** was the most prevalent virus circulating, followed by **metapneumovirus** with **13.3%**. RSV, adenovirus and

parainfluenzavirus positivity rates were each reported at 10.0%, while influenza B and SARS-COV-2 positivity remained below 5%. An 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), 906 influenza positive samples (404 influenza B and 502 influenza A) were detected, with 481 (95.8%) 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. Since week 2025/18, no new cases of influenza A have been detected within the sentinel network. Figure 5 shows all influenza cases detected by age-group during the 24/25 season. The majority of influenza B cases have been detected in children and adolescents (5 to 17 years), but recent cases have been detected in all age-groups under 65 years.

This season (24/25), two hundred and eighty seven cases of RSV were detected, including 100 RSV-A cases (dominant in the early part of the season) and 150 RSV-B cases. During this season (24/25), approximately 55% of cases were aged 1 and 4 years (figure 3). Over the past four weeks, RSV circulation has remained low within the network.

In total this season, 2912 sentinel samples were analysed with more than 60% of the samples belonging to the age-group under 18 years (figure 4) and with 52% being female.

Over the past 4 weeks, human rhinovirus has been detected in all age-groups, while metapneumovirus, adenovirus and parainfluenzavirus have been detected mainly in children.

Table 2. Distribution of respiratory viruses detected within the Sentinel Network previous 4 weeks compared to previous year. Data for week 2025/20 are not yet completely consolidated

Virus	Season 2024/25					Season 2023/24	
	Positivity Rate in %						
	W17	**W18**	**W19**	**W20**	**Total N (%)**	**W20**	**Total N (%)**
Human rhinovirus	32.4	29.4	41.9	50.0	718 (24.8)	29.4	572 (24.9)
Metapneumovirus	11.8	11.8	9.7	13.3	157 (5.4)	17.6	125 (5.4)
Respiratory syncytial virus	5.9	0.0	6.5	10.0	287 (9.9)	0.0	212 (9.2)
Adenovirus	14.7	11.8	6.5	10.0	203 (7.0)	5.9	125 (5.4)
Parainfluenzavirus	14.7	8.8	12.9	10.0	99 (3.4)	14.7	77 (3.4)
SARS-CoV-2	2.9	5.9	6.5	3.2	80 (2.7)	0.0	227 (9.7)
Influenzavirus B	5.9	2.9	3.2	3.2	404 (13.9)	2.9	12 (0.5)
Influenzavirus A	0.0	5.9	0.0	0.0	502 (17.2)	0.0	388 (16.5)

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

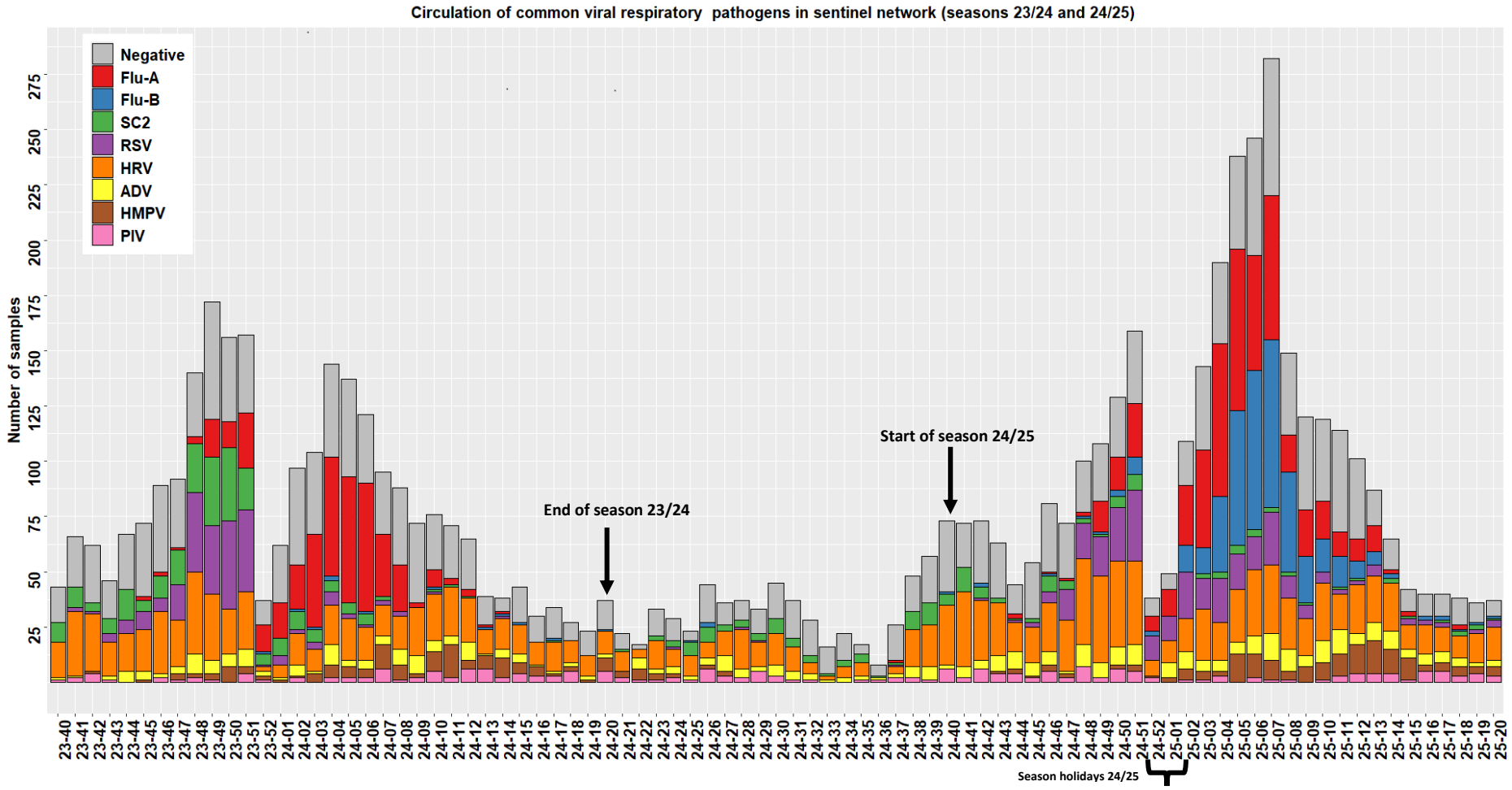

Figure 2. Distribution of respiratory viruses detected within the Sentinel Network by calendar week. Results from last weeks are not all yet consolidated.
FLU-A: influenzavirus A; FLU-B: influenzavirus B; PIV:parainfluenzavirus; RSV: respiratory syncytial virus; ADV: adenovirus; MPV: metapneumovirus; 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 2025/20 are not yet completely consolidated

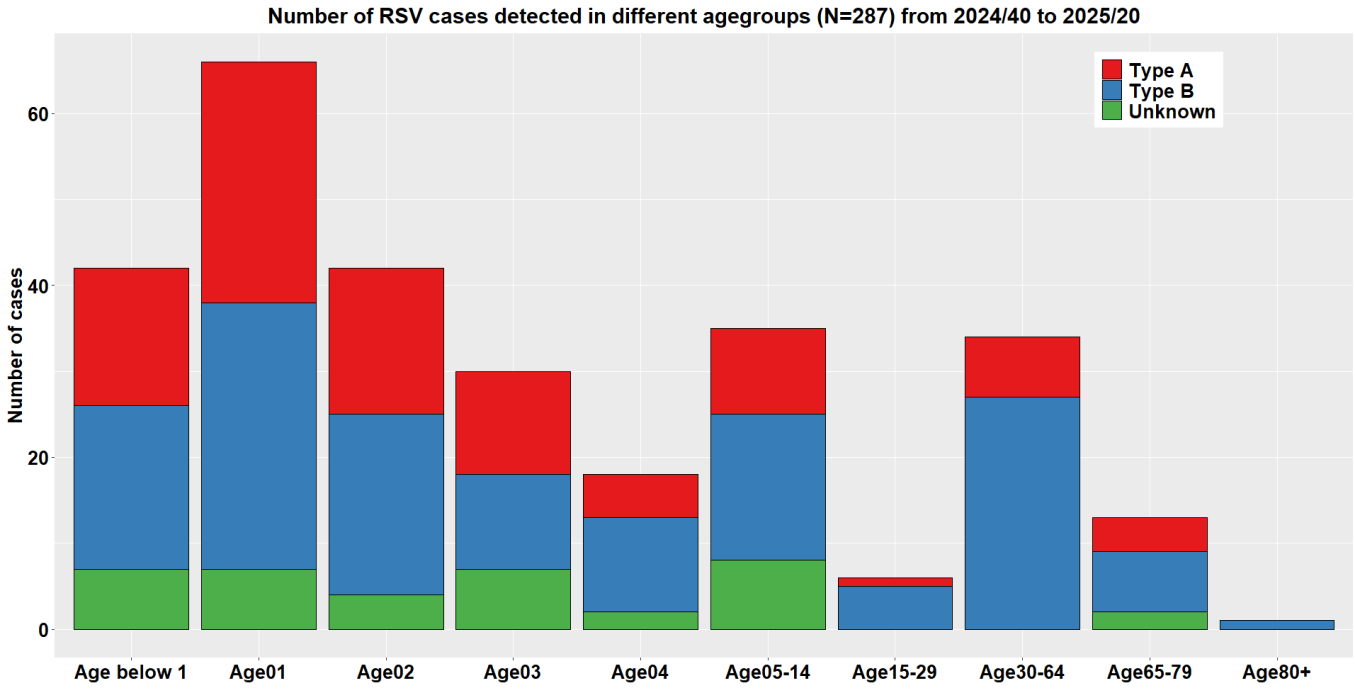


*Figure 4. Displays number of sentinel samples received per week by age-group including overall sample positivity-including human rhinovirus (HRV, dotted line), excluding HRV (black line), influenza **combined** (red) and RSV (green). Secondary axis corresponds to positivity; Data for week 2025/20 are not yet completely consolidated*

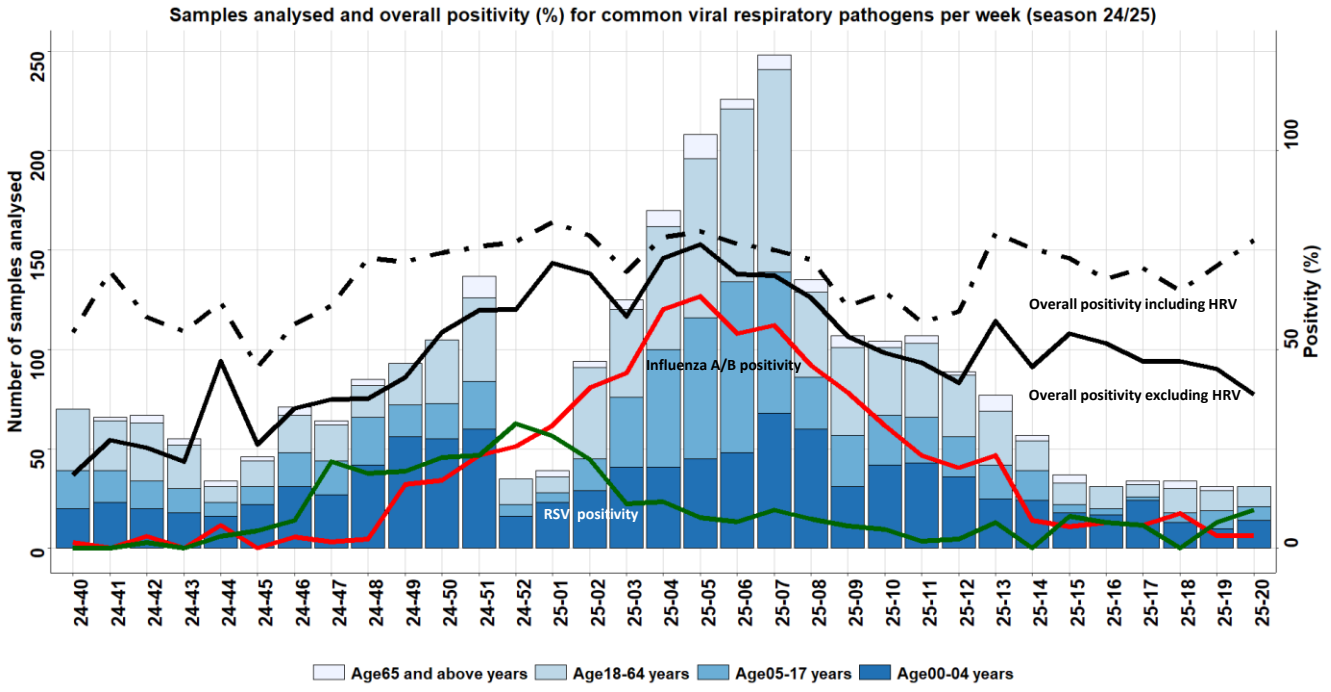
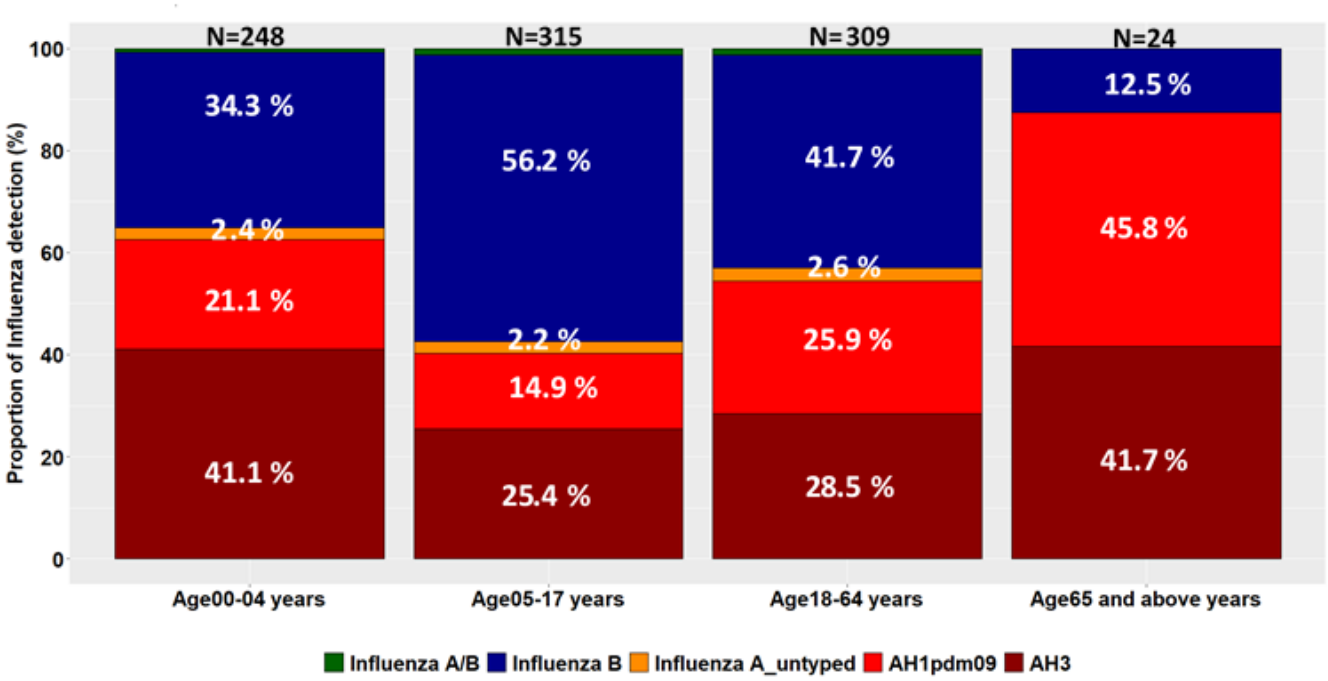


Figure 5. Displays detection of Influenza subtypes by age-group during season 24/25.



References

European Centre for Disease Prevention and Control. European Respiratory Virus Surveillance Summary (ERVISS), 2025, week 19 https://erviss.org/

European Centre for Disease Prevention and Control. Communicable Disease Threats Report Week https://www.ecdc.europa.eu/en/publications-data/communicable-disease-threats-report-10-16-may-2025-week-20

European Centre for Disease Prevention and Control. SARS-CoV-2 variants of concern. Retrieved 20 May 2025. from https://www.ecdc.europa.eu/en/covid-19/variants-concern

Jörg J. Goronzy, Claire E. Gustafson, Cornelia M. Weyand, 38 - Immune Deficiencies at the Extremes of Age, Editor(s): Robert R. Rich, Thomas A. Fleisher, William T. Shearer, Harry W. Schroeder, Anthony J. Frew, Cornelia M. Weyand, Clinical Immunology (Fifth Edition), Elsevier, 2019, Pages 535-543.e1,ISBN 9780702068966, https://doi.org/10.1016/B978-0-7020-6896-6.00038-7.

World Health Organization. Tracking sars-COV-2 variants Retrieved 20 May 2025. from https://www.who.int/activities/tracking-SARS-CoV-2-variants