

Respiratory Viruses in Luxembourg (ReViLux)

Sentinel Network Report – Week 42

Sentinel Surveillance Network

The Sentinel Surveillance aims at monitoring the 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 over Luxembourg. 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, 3.9% of the consultations were reported as ILI, which represents a baseline epidemic activity for Luxembourg, according to ECDC and the Moving Epidemic Method. The observed rates of ILI were at expected level for this time of the year and similar to previous years. 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 four weeks, the most frequently detected viruses (according to positivity rates) were Human rhinovirus (44.4%), followed closely by SARS-CoV-2 (14.7%). Detected Influenza remains low within the sentinel network. The first cases of RSV were detected, indicating low RSV activity. However, the activity observed within the sentinel network is less compared to last season. An overview of the viral circulation during the current and previous inter-season is displayed in Figure 2 and Table 2.

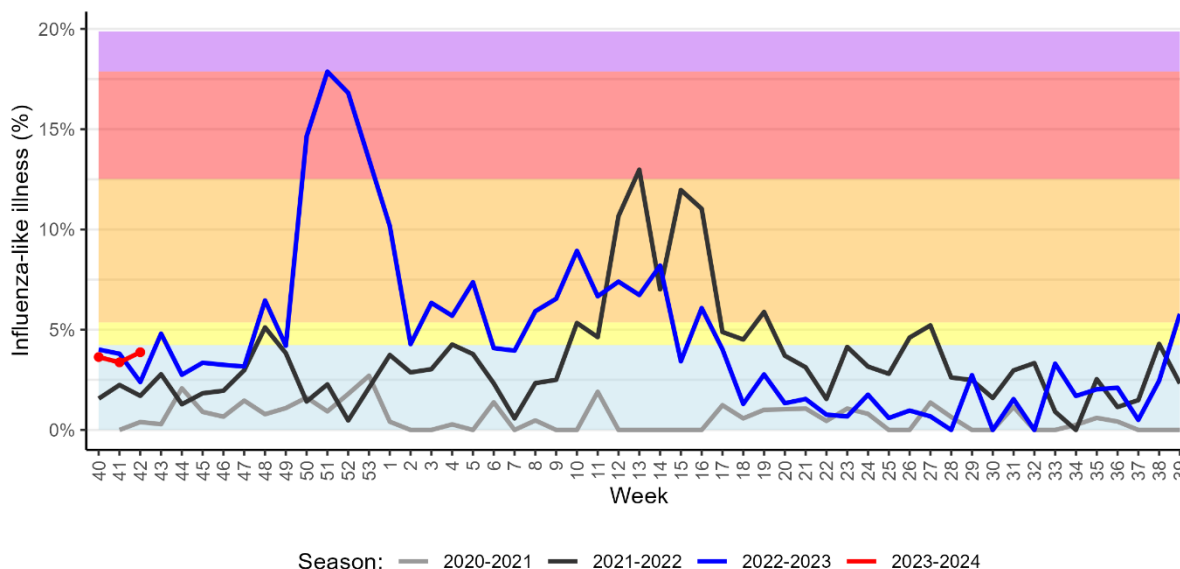


Figure 1. Percentage of patients with influenza-like illness over the last three seasons
Background colours according to intensity of circulation: baseline, low, medium, high, very high.

Table 1. Syndromic surveillance over the last 4 weeks

Week	ARI		ILI		Total consultations
	N	%	N	%	
2023/39	44	18.18	14	5.79	242
2023/40	52	15.76	12	3.64	330
2023/41	83	18.65	15	3.37	445
2023/42	46	17.83	10	3.88	258

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

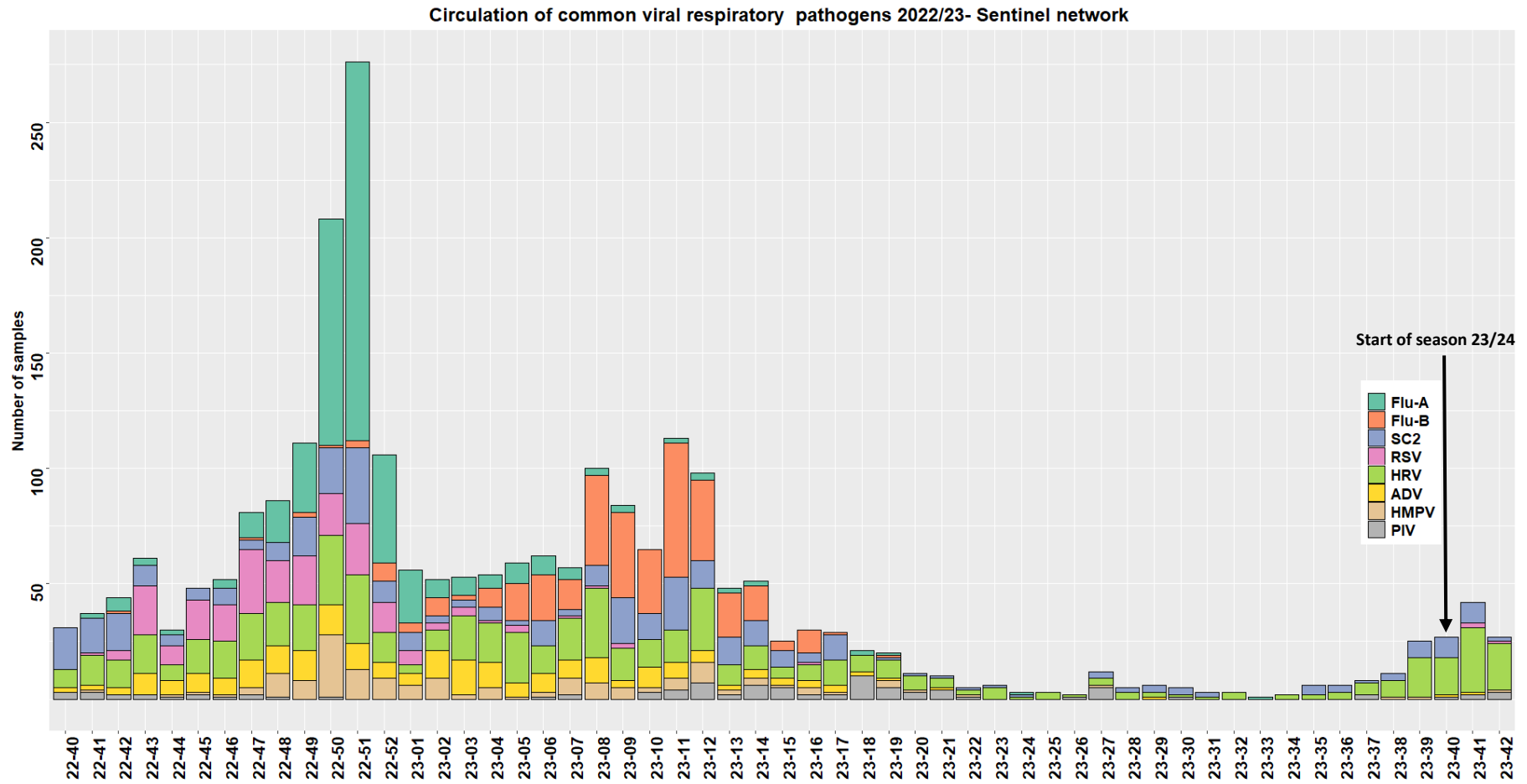


Figure 2. Distribution of respiratory viruses detected within the Sentinel Network, by calendar week. Results from last weeks are not yet consolidated. FLU-A: influenza A; FLU-B: influenza B; PIV: parainfluenza virus; RSV: respiratory syncytial virus; ADV: adenovirus; MPV: metapneumovirus; HRV: human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

Table 2. Distribution of respiratory viruses detected within the Sentinel Network previous 4 weeks compared to previous year.

Virus	Season 23/24 weeks (39-42)		Season 22/23 weeks (39-42)	
	N*	Positivity rate (%)	N*	Positivity rate (%)
Human rhinovirus	81	44.0	41	29.1
SARS-CoV-2	27	14.7	57	26.9
Parainfluenza	6	3.3	9	6.4
Respiratory syncytial virus	3	1.6	6	4.3
Adenovirus	2	1.1	8	5.7
Metapneumovirus	2	1.1	1	0.7
Influenzavirus A	0	0.0	10	4.7
Influenzavirus B	0	0.0	1	0.5
Total	121		133	

*Co-infection cases counted once for each virus detection