

Respiratory Viruses in Luxembourg (ReViLux)

Report – Sentinel Week 11 and Sequencing Update

Summary

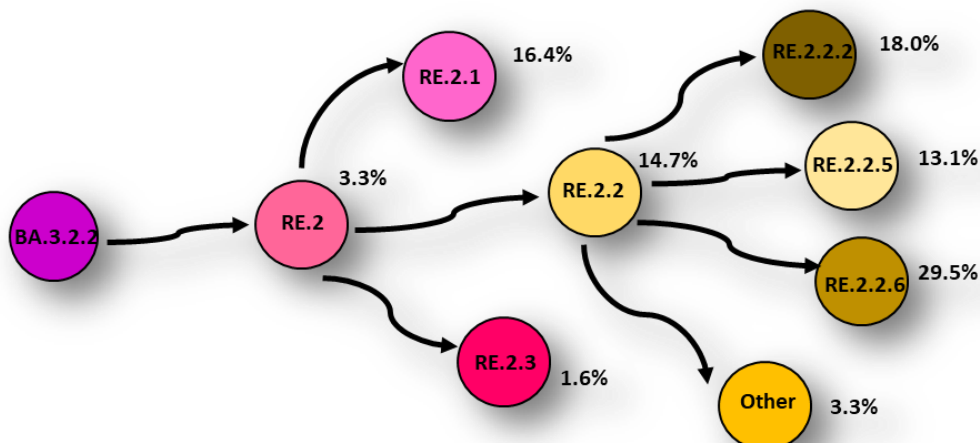
Influenza-like illness (ILI) positivity represented **1.9%** of consultations and remained at the ECDC- defined baseline.

During week 2026/11, 60 sentinel specimens were received, with over 50% originating from children under 5 years of age. Respiratory viruses were detected in 56.7% of samples, predominantly **human rhinovirus (33.3%)**, followed by **human metapneumovirus (10.0%)** and **adenovirus (8.3%)**. **Influenza A** activity (**5.0%**) remained low, with three influenza A(H3) cases identified in young children. **RSV** activity decreased to **3.3%**, with two new RSV-A detections in young children and **SARS-CoV-2 (3.3%)** also remained low. Across the past two weeks, rhinovirus, metapneumovirus and parainfluenza viruses were detected mainly in patients under 65 years, while adenovirus was primarily identified in children under five.

Variants of SARS-CoV-2 detected from weeks 2026/06-2026/09

The most common variant detected during this monitoring period was BA.3.2 (46.6%), followed by XFG (33.6%, including XFG.3) and NB.1.8.1 (19.9%). Other variants were not detected during this period.

The Figure below illustrates the emergence and distribution of BA.3.2.2 sub-lineages circulating in Luxembourg during this period.



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 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 called inter-season and monitoring is done on a voluntary basis.

Clinical results

In week 2026/11, consultations for acute respiratory infections (ARI) remained below 10%, and the proportion of influenza-like illness (ILI) consultations decreased to below 2%, staying within ECDC-defined baseline. Similar patterns are being observed in other European countries, with an overall decrease in respiratory viral circulation.

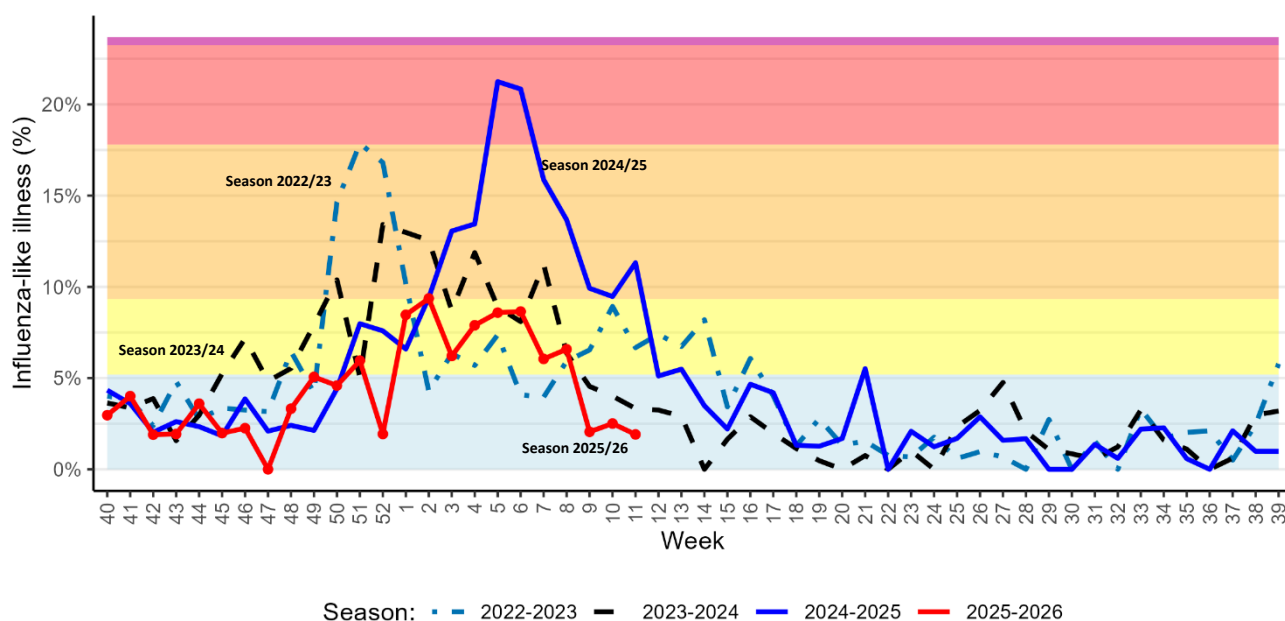
Historical trends in ILI consultations are presented in Figure 2, and a detailed summary of the ARI and ILI case counts for the past four weeks is provided in Table 1.

Table 1. Syndromic surveillance over the last 4 weeks

Week	ARI		ILI		Total consultations
	N	%	N	%	
2026/08	37	16.23	15	6.58	228
2026/09	38	13.01	6	2.05	292
2026/10	27	9.68	7	2.51	279
2026/11	33	9.02	7	1.91	366

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

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 2026/11, the LNS received 60 sentinel specimens. Of these, 55.0% (N=33) were from children under 5 years of age, followed by 28.3% (N=17) from adults aged 18 to 64 years. Children aged 5 to 17 years accounted for 13.3% (N=8), while patients aged ≥ 65 years represented 3.3% (N=2). Overall, 53.3% (N=32) of samples were from female and 46.7% (N=28) were from male patients.

Respiratory viruses were detected in 34 (56.7%) of the 60 sentinel samples. The predominant pathogen was **human rhinovirus (33.3%)**, followed by **human metapneumovirus (10.0%)** and **adenovirus (8.3%)**.

Overall, influenza A circulation remained below 10%, with three new cases detected in week 2026/11; all were subtyped as influenza A(H3) and occurred in children.

RSV- activity decreased from 7.3% to 3.3%, with two new cases detected in week 2026/11 in young children, both subtyped as RSV-A.

SARS-CoV-2 positivity also remained below 5% indicating continued very low circulation within the sentinel network.

Over the past two weeks, human rhinovirus, human metapneumovirus and parainfluenza viruses were detected across all age groups below 65 years, while adenovirus was primarily identified in children under 5 years.

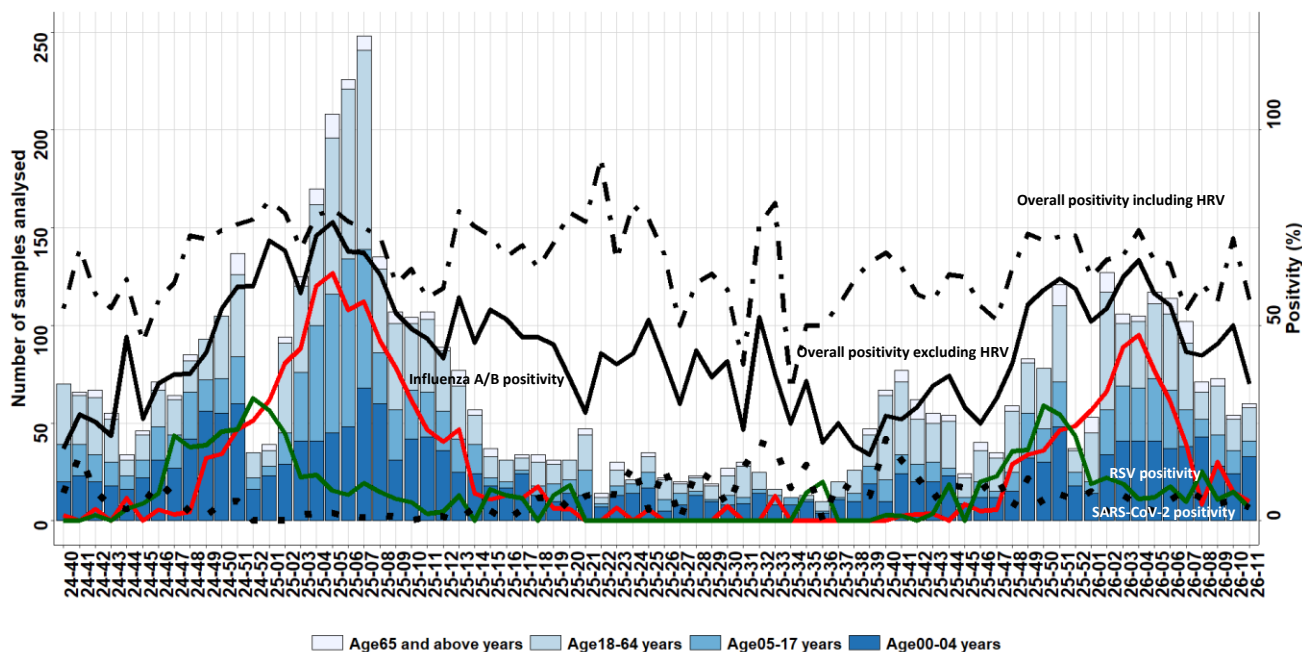
An overview of the circulating viral pathogens in the sentinel network in Luxembourg during the current and previous (inter)- season is presented in figure 2, 3 and table 2.

Table 2. Distribution of respiratory viruses detected within the Sentinel Network over the past 4 weeks compared to previous season; Results from last weeks are not all yet consolidated.

Virus	Season 2025/26					Season 2024/25		
	Positivity Rate in %							
	W08	W09	W10	W11	Total N (%)	W10	W11	Total N (%)
Human rhinovirus	23.9	13.7	29.6	33.3	427 (24.1)	25.0	15.0	720 (24.8)
Metapneumovirus	11.3	11.0	16.7	10.0	101 (5.7)	7.7	9.3	157 (5.4)
Adenovirus	9.9	9.6	13.0	8.3	108 (6.1)	9.6	10.3	203 (7.0)
Influenzavirus A	4.2	15.1	7.4	5.0	355 (20.0)	16.3	10.3	502 (17.2)
Parainfluenzavirus	5.6	1.4	5.6	5.0	61 (3.4)	1.0	2.8	99 (3.4)
Respiratory syncytial virus	12.7	5.5	7.4	3.3	182 (10.3)	4.8	1.9	287 (9.9)
SARS-CoV-2	5.6	4.1	5.6	3.3	121 (6.8)	0.0	0.9	80 (2.7)
Influenzavirus B	0.0	0.0	0.0	0.0	0 (0.0)	14.4	13.1	404 (13.9)

*Co-detection is counted once for each virus detected.

Figure 2. Presents number of sentinel samples received per week by age-group (weeks 2024/40 to 2026/11) 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.



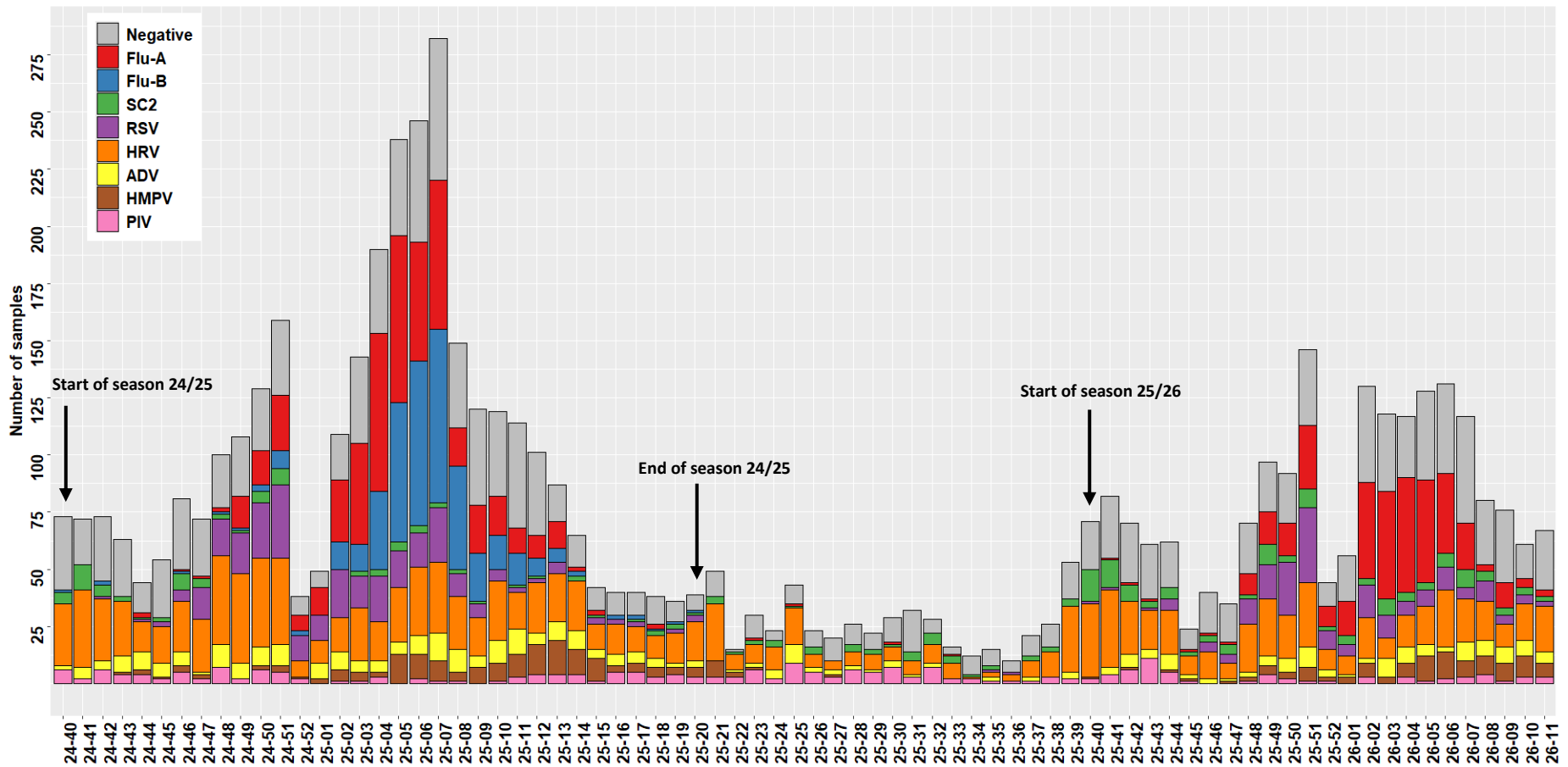


Figure 3. Circulation of respiratory viruses detected within the Sentinel Network by calendar week (seasons 24/25 and 25/26). FLU-A: influenza A; FLU-B: influenza B; PIV: parainfluenza; RSV: respiratory syncytial virus; ADV: adenovirus; HMPV: metapneumovirus; HRV: human rhinovirus; SC2: SARS-CoV-2; Results from last weeks are not all yet consolidated.

SARS-CoV-2 Genomic Surveillance

The LNS receives positive specimens (nasopharyngeal or oropharyngeal swabs analysed by RT-PCR) from the national network of laboratories. A selection of hospital specimens are sequenced, as well as a representative selection of community specimens. Illumina devices are used. Bioinformatic analyses are based on a standardised pipeline and lineage assignment is performed through the Pangolin software (Pangolin: 4.4; 1.37.1 mode USHER).

Sequencing activity

Of the 228 reported cases in Luxembourg, 131 samples (57.5%) were successfully sequenced. Specimen collection dates ranged from calendar weeks 06 to 09 of 2026. Among these, 26.7% (N=35) were obtained from hospital settings, while 73.3% (N=96) originated from the community. Sequencing efforts prioritized the most recent specimens and those from hospitalized patients. Any low coverage will be addressed in subsequent sequencing runs.

Variant circulation

Over the past 18 months, SARS-CoV-2 variant JN.1, along with its various sub-variants and recombinant forms, has been dominant in Luxembourg. Since July 2025, XFG has emerged as the predominant variant, reaching a prevalence of up to 90% in October 2025. Until the end of January 2026, XFG and its sub-variants (Figure 7) remained dominant, but their prevalence has recently declined to approximately 35%.

In contrast, BA.3.2 was first detected in November 2025 and now accounts for 46.6% of new detections in Luxembourg during weeks 2025/06-09. However, overall SARS-CoV-2 circulation remains low, making it unclear whether BA.3.2 has a growth advantage over other circulating variants.

NB.1.8.1, first detected in April 2025 in Luxembourg, continues to circulate but with downward trend.

At this time, there is no indication that NB.1.8.1, XFG, or BA.3.2 are associated with increased disease severity. A summary of all circulating variants identified in the selected sample, including those listed by WHO variants under monitoring, is provided in Table 4 and Figure 6.

Among hospital patients (N=35) approximately 54% of the sequenced samples were from individuals aged > 75 years. In contrast, more than 95% of community cases were from patients aged ≤ 75 years. Overall, in this selected cohort (N=131), females accounted for 60% in both settings. Table 3 compares sampling setting and variant prevalence over the past four weeks. Notably, only a limited number of samples were received from hospitals, indicating that most cases were detected in the community.

Table 3. Comparison of sub-variants by sampling setting

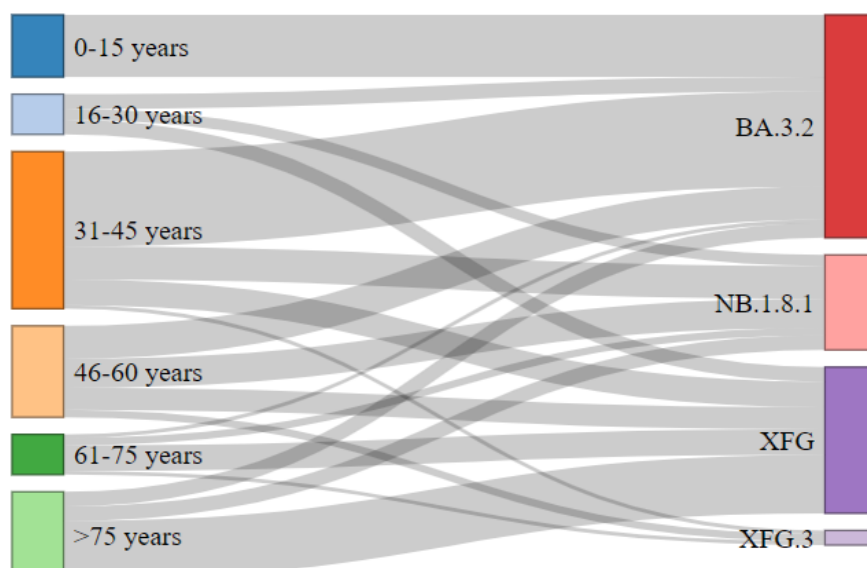
Comparison of variant detection during weeks 2026/06-09		
Lineage	Community (N=96)	Hospital (N=35)
XFG	23 (24.0%)	21 (60.0%)
NB.1.8.1	20 (20.8%)	6 (17.1%)
BA.3.2	53 (55.2%)	8 (22.9%)
Other	0 (0%)	0 (0%)

Table 4. Distribution of SARS-CoV-2 lineages detected during weeks 2026/02 to 2026/09; Previously reported cases might be updated by retrospective analysis;

JN.1 and XFG excludes sub-variants listed in Table.

Lineage	First detection in Luxembourg	Under WHO monitoring	weeks 02-05 (N=159)		weeks 06-09 (N=131)	
			%	CI %	%	CI %
BA.3.2	11.11.2025	yes	25.2	18.6 – 32.6	46.6	37.8 – 55.5
XFG*	13.03.2025	yes	36.5	29.0 – 44.5	30.5	22.8 – 39.2
NB.1.8.1	07.04.2025	yes	24.5	18.1 – 32.0	19.9	13.4 – 27.7
XFG.3	22.04.2025	under XFG	10.1	5.9 – 15.8	3.1	0.8 – 7.6
Other	not applicable	no	2.5	0.7 – 6.3	0.0	
JN.1*	25.08.2023	yes	1.3	0.2 – 4.5	0.0	
KP.3	03.04.2024	yes	0.0		0.0	

Figure 5. Distribution of XFG, XFG.3, NB.1.8.1 and Other detected during weeks 2026/06 to 2026/09 (N=131) by age groups



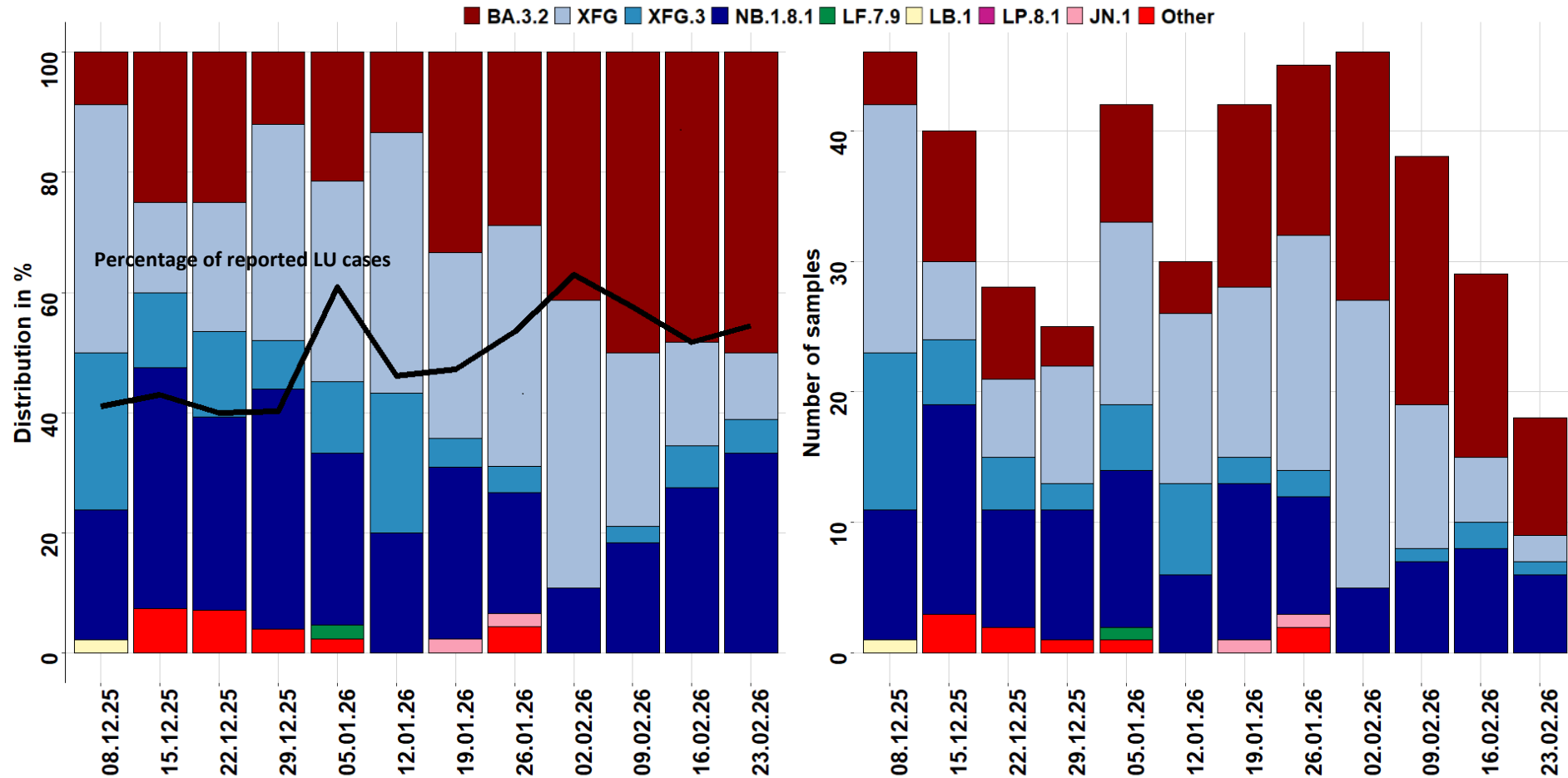
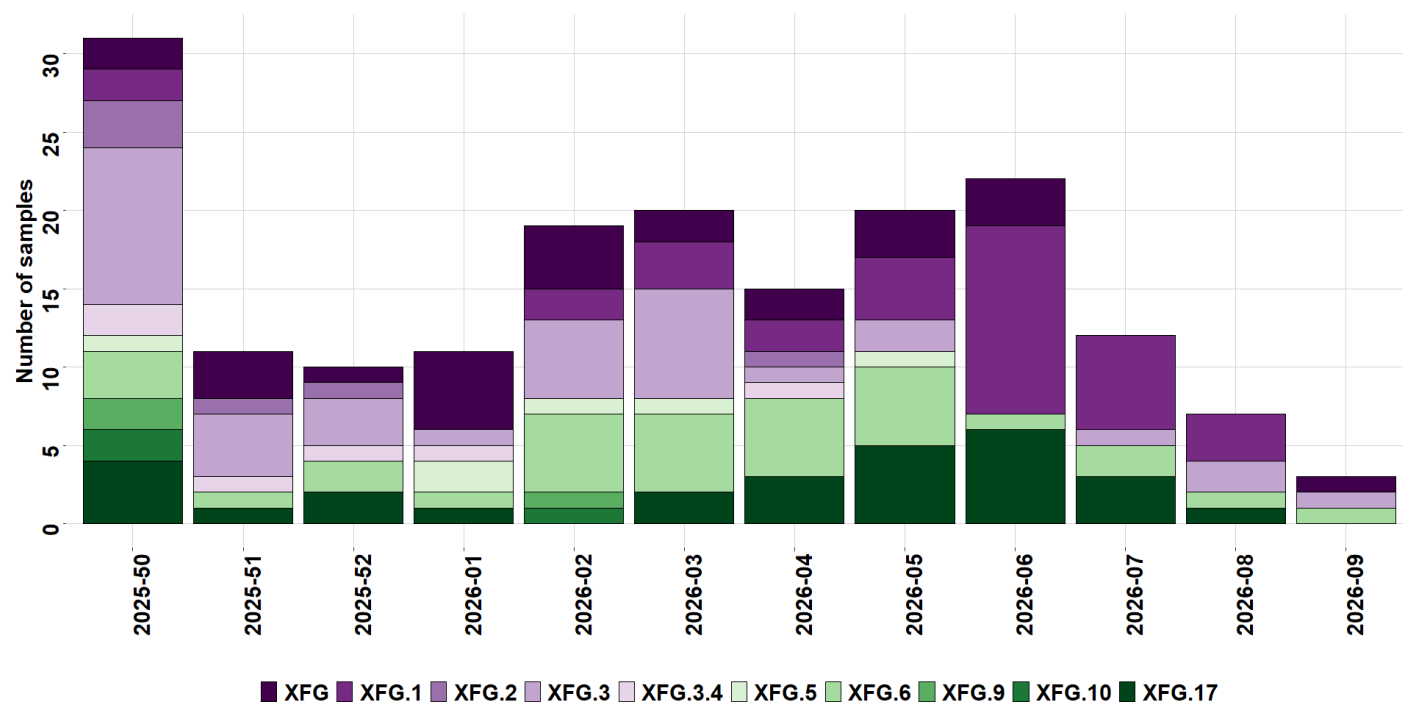


Figure 6. Lineage distribution and sequencing coverage from week 2025/50 (08.12.2025) to week 2026/09 (23.02.2026) in weekly intervals; All displayed variants include descendant lineages- except those specified on the legend. Other: recent cases-recombinant XFC, and XGA; during this period no further KP.3 cases have been detected

Figure 7. Number of selected XFG sub-variants circulating in Luxembourg over the past 12 weeks, illustrating the diversity within XFG.



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