European RSV Surveillance Bulletin
Reporting Week 12 (18 - 24 March) 2024

Overall summary of RSV activity in Europe – Key-points

- In Week 12, seven countries (Austria, Belgium, Denmark, France, the Netherlands, Portugal and Slovenia) reported information on the qualitative indicators 'week activity' and 'week trend'.
    - Slovenia reported RSV activity. Austria, France and Portugal reported sporadic RSV activity. Belgium, Denmark and the Netherlands reported baseline RSV activity.
    - The RSV activity is decreasing in Austria, France and Slovenia, whilst remaining stable in Portugal.
    - Austria, Belgium, France, the Netherlands and Slovenia reported that RSV type A was dominant on a seasonal basis.
- Six countries (Austria, Belgium, Denmark, France the Netherlands and Slovenia) have uploaded weekly surveillance data (see Bulletin Part 2).
    - In all reporting countries the number of RSV detections was lower compared to previous weeks. Due to reporting delays the surveillance data may be incomplete in the most recent weeks.
    - In all reporting countries the trend in percentage of RSV positive cases is decreasing or remaining stable at a low level.
    - The percentage of RSV positivity within the age group is highest in the age group 0-4 year in all reporting countries. Looking at this youngest age group in higher granularity (first six months, 6 months – 11 months, 1 year, 2-4 years), the age group with the highest percentage positivity differs between the countries.

Part 1 Overview of RSV activity in Europe

1.1 RSV Activity and Trend in the Reporting week (qualitative indicators)

For a more detailed explanation of the methodology see part 3.2 Methodology qualitative indicators
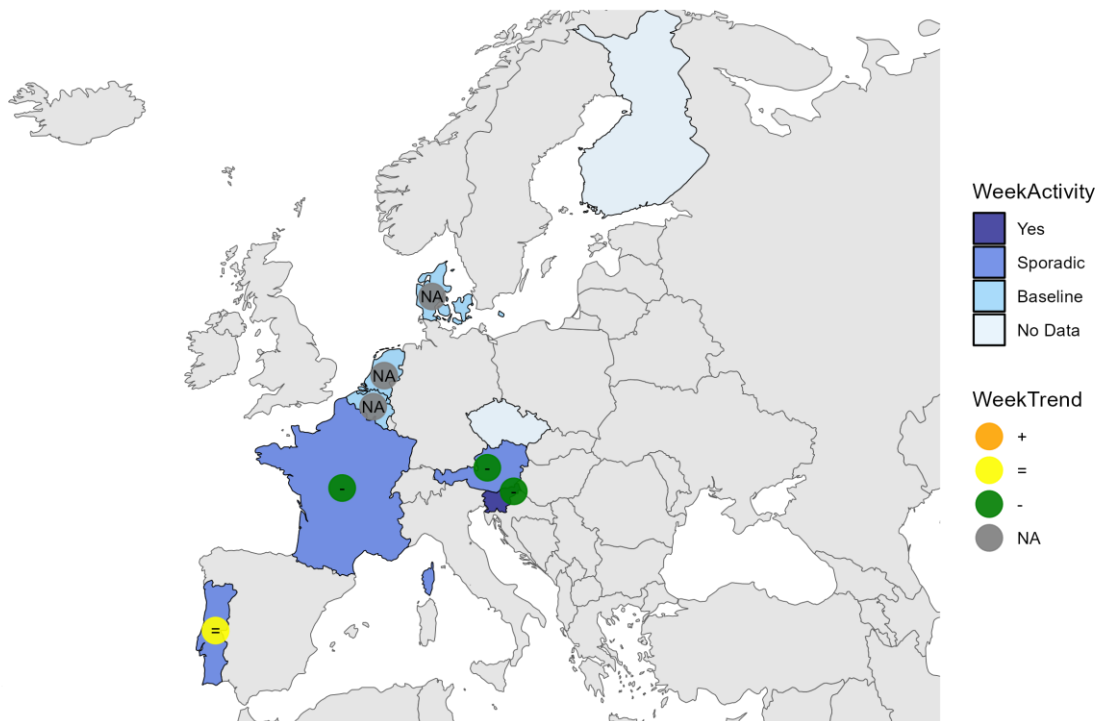
2024-W12

Figure 1.1: Overview of RSV activity in Europe in the Reporting Week
The status of RSV activity in the reporting week is presented by the colour of the country and the trend of the RSV activity in comparison with the previous week(s) is reported in the circle(s).
Abbreviations and clarification legends: Week activity: 'Yes', 'Sporadic', 'No' and 'No Data'. Week trend: '+' increasing, '=' stable, '-' decreasing, 'NA' not applicable. 'NA' will be reported in case of 'no' week activity in the reporting week.

1.2 RSV week trend over the season 2023/24 (qualitative indicators)

For a more detailed explanation of the methodology see part 3.2 Methodology qualitative indicators.
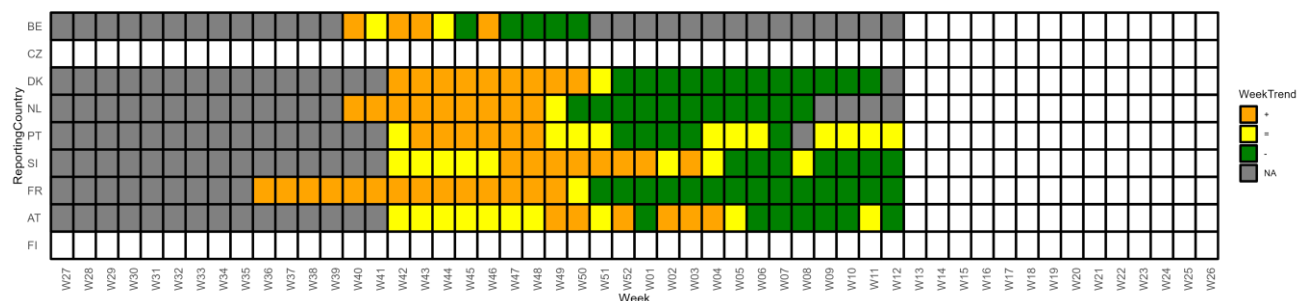

Figure 1.2: Trend of the weekly RSV activity in comparison with the previous week(s)
The WeekTrend for the reporting week is also shown in Figure 1.
Abbreviations/explanation legends: Week trend: '+' increasing, '=' stable, '-' decreasing, 'NA' not applicable. 'NA' will be reported in case of 'no' week activity in the reporting week
Country codes: 'AT' = Austria; BE' = Belgium; 'CZ' = Czechia; 'DK' = Denmark; 'FI' = Finland; 'FR' = France; 'NL' Netherlands; 'PT' = Portugal; 'SI' = Slovenia.

1.3   Dominant RSV type (A/B) in the season and Reporting week (qualitative indicators)

For a more detailed explanation of the methodology see part 3.2 Methodology qualitative indicators

2024-W12

Figure 1.3: Dominant RSV type per country season 2023/24 (country colours) and Reporting week (circle)
Threshold for a dominant virus: >= 60% of the typed RSV viruses in the season; threshold for co-dominant viruses is between 40% and 60%.
Dominant RSV type: will only be reported if 10 or more typed RSV viruses are available for the season (dominant for the season) or the reporting week (dominant for the week), otherwise this will be reported as 'NA'. All countries reported less than 10 typed RSV viruses for week 10.

Part 2 More detailed information on RSV activity in Europe

For an overview of surveillance sources per country, see 3.1 'Institutes providing the qualitative indicators and/or surveillance data' and 3.3 'Overview of RSV surveillance source data available per country'

The following parameters and outputs are presented:
2.1 RSV positive cases: weekly number
Weekly number of RSV positive cases – laboratory surveillance
Weekly number of RSV positive cases – sentinel surveillance
2.2 RSV positive cases: weekly percentage
Weekly percentage RSV positive cases – laboratory & sentinel surveillance
2.3 RSV type (A/B)
Weekly number of RSV positive cases by RSV type – laboratory & sentinel surveillance
2.4 Age specific RSV data
Cumulative number of RSV positive cases by age group

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2.1 RSV positive cases: weekly number

Weekly number of RSV positive cases – laboratory surveillance
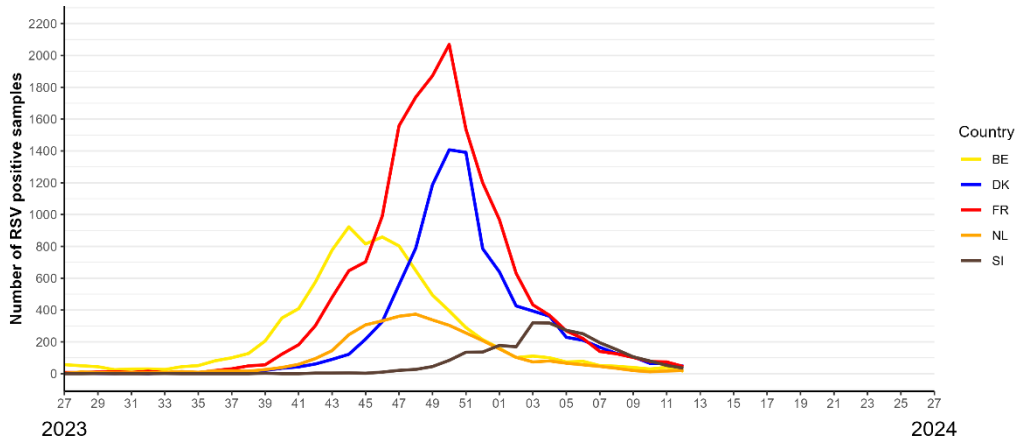
European overview

Figure 2.1a: European overview of RSV positive cases based on laboratory surveillance in season 2023-2024.
Weekly number of RSV positive samples reported in the laboratory surveillance system of each participating country.

By country including previous seasons

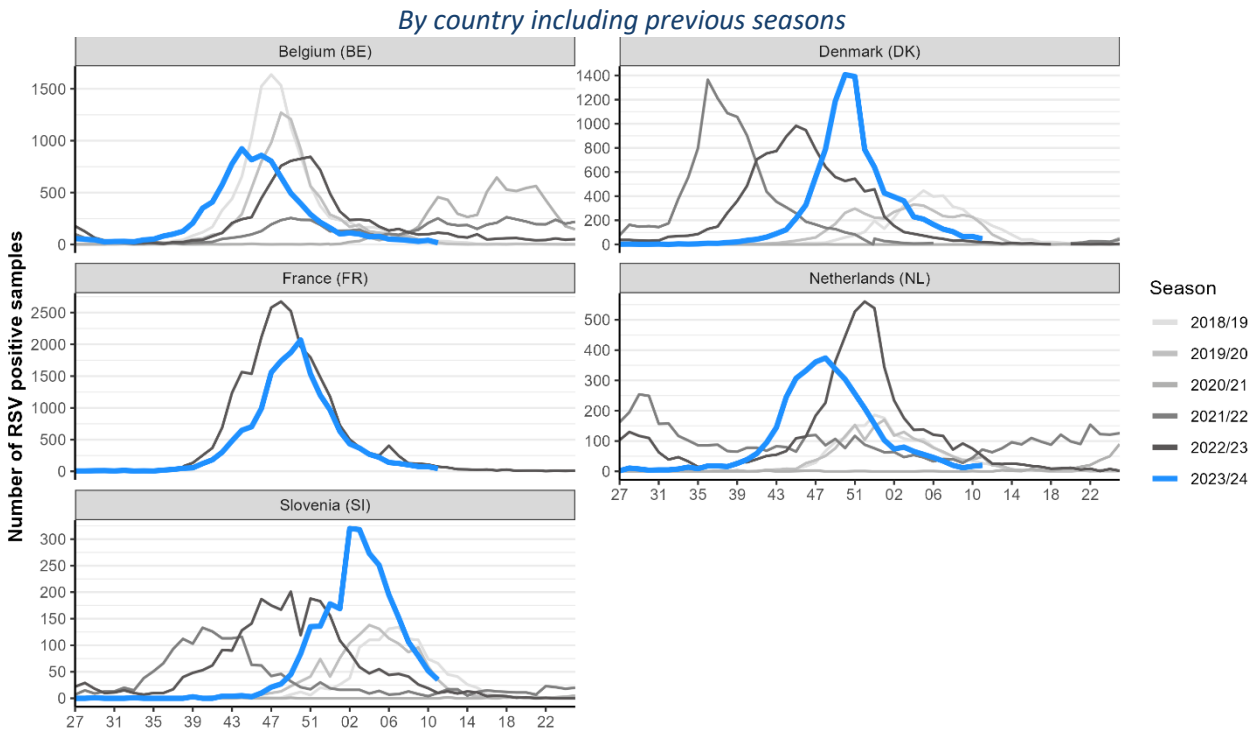***Figure 2.1b: Country-specific overview of RSV positive cases based on laboratory surveillance in season 2023-2024, including retrospective data.***
Weekly number of RSV positive samples reported in the laboratory surveillance system of each participating country. The thick blue line represents the current season (2023-2024); the grey lines represent previous seasons. Note: y-axis varies between countries.

Weekly number of RSV positive cases – sentinel surveillance
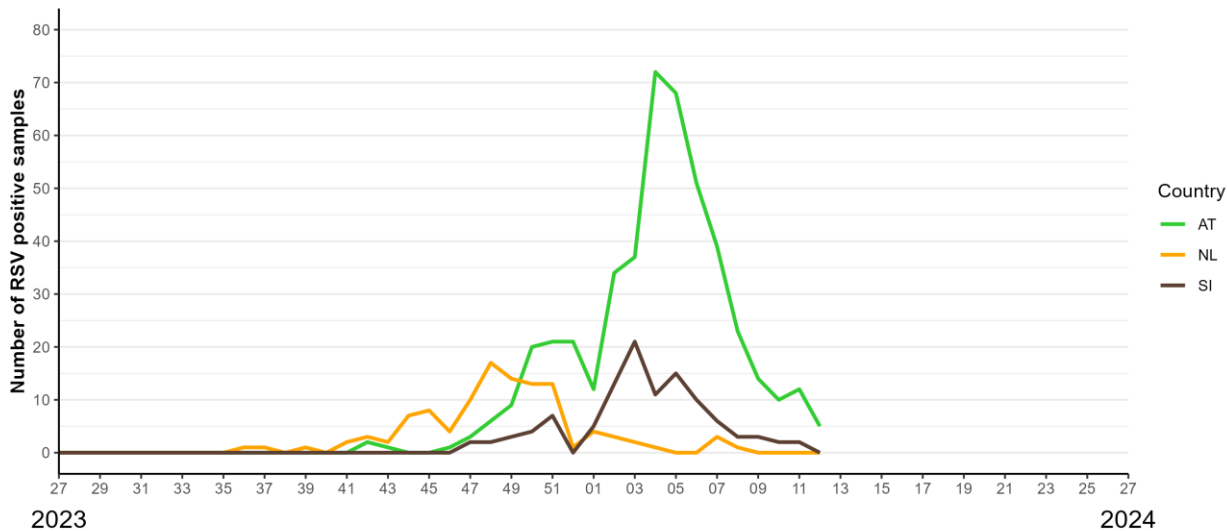
European overview

Figure 2.2a: European overview of RSV positive cases based on sentinel surveillance in season 2023-2024.
Weekly number of RSV positive samples reported in the sentinel surveillance system of each participating country.

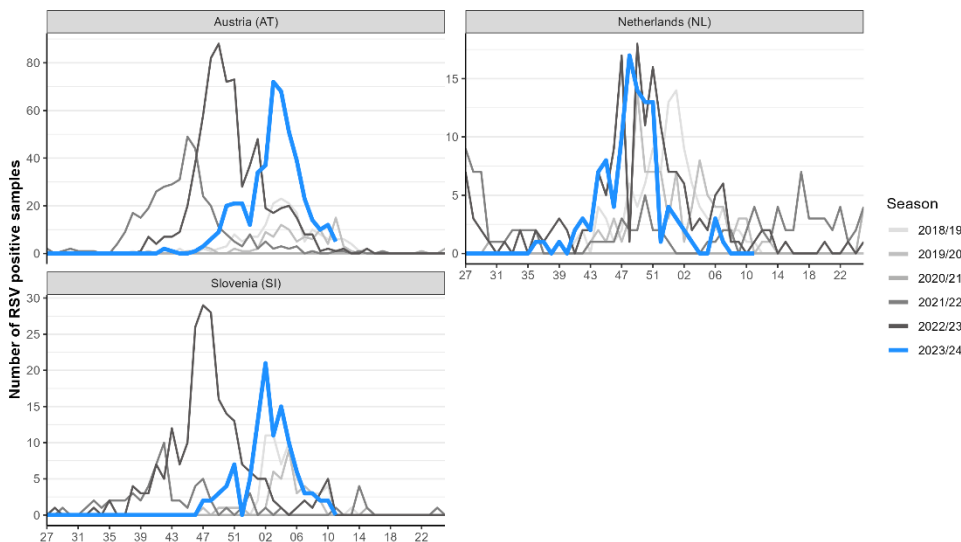### By country including previous seasons

Figure 2.2b: Country-specific overview of RSV positive cases based on sentinel surveillance in season 2023-2024, including retrospective data.
Weekly number of RSV positive samples reported in the sentinel surveillance system of each participating country. The thick blue line represents the current season (2023-2024); the grey lines represent previous seasons.

2.2 RSV positive cases: weekly percentage

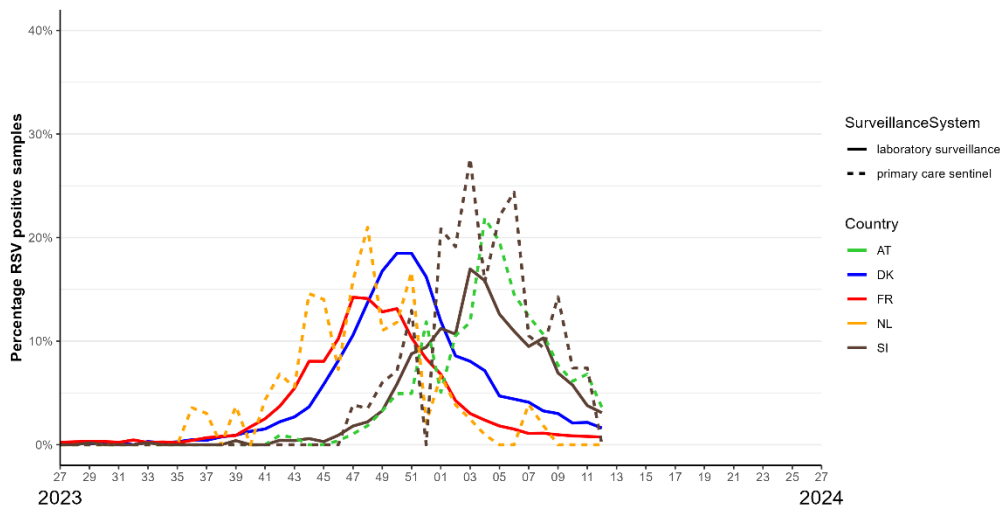### Weekly percentage RSV positive cases – laboratory & sentinel surveillance

European overview

Figure 2.3a: European overview of** the **percentage of RSV positive cases in season 2023-2024.
Weekly percentage of RSV positive samples reported in the laboratory and sentinel surveillance systems of each participating country. Laboratory and sentinel surveillance data are represented by a dashed and solid line, respectively. RSV positive percentages are calculated as the ratio of RSV positives to tested specimens.

By country including previous seasons
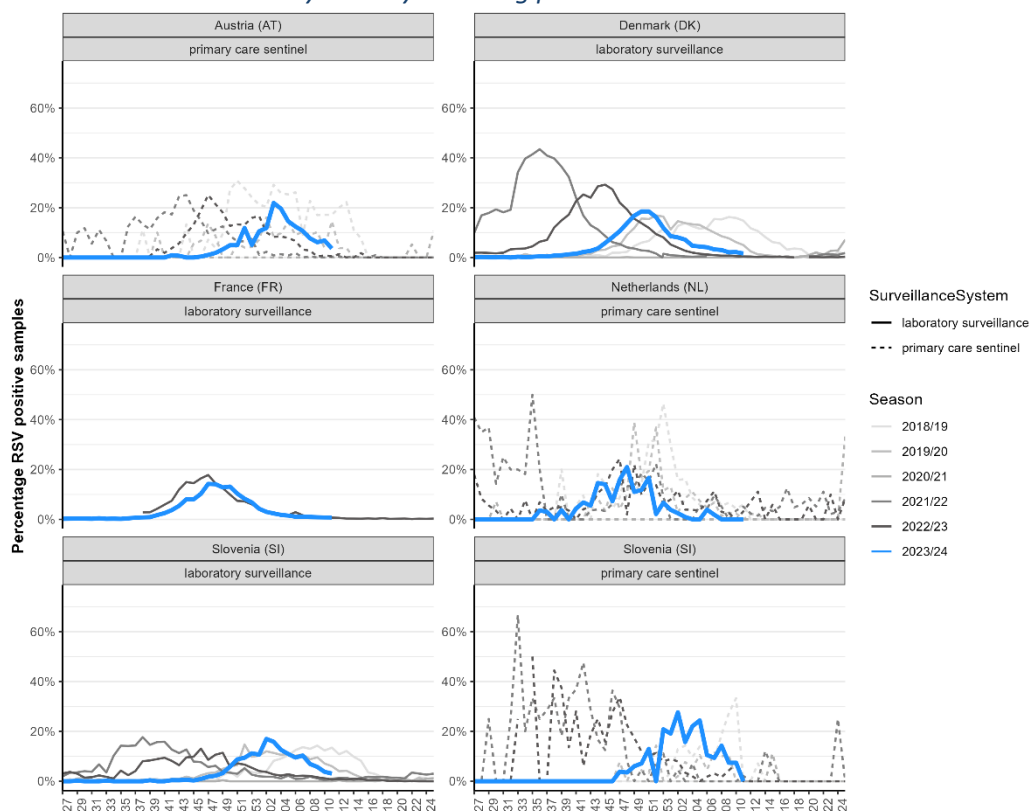
Figure 2.3b: Country-specific overview of the percentage of RSV positive cases in season 2023-2024.
Weekly percentage of RSV positive samples reported in the laboratory and sentinel surveillance systems of each participating country. Laboratory and sentinel surveillance data are reprented by a dashed and solid line, respectively. The thick blue line represents the current season (2023-2024); the grey lines represent previous seasons. RSV positive percentages are calculated as the ratio of RSV positives to tested specimens.

2.3 RSV type (A/B)

Weekly number of RSV positive cases by RSV type – laboratory & sentinel surveillance
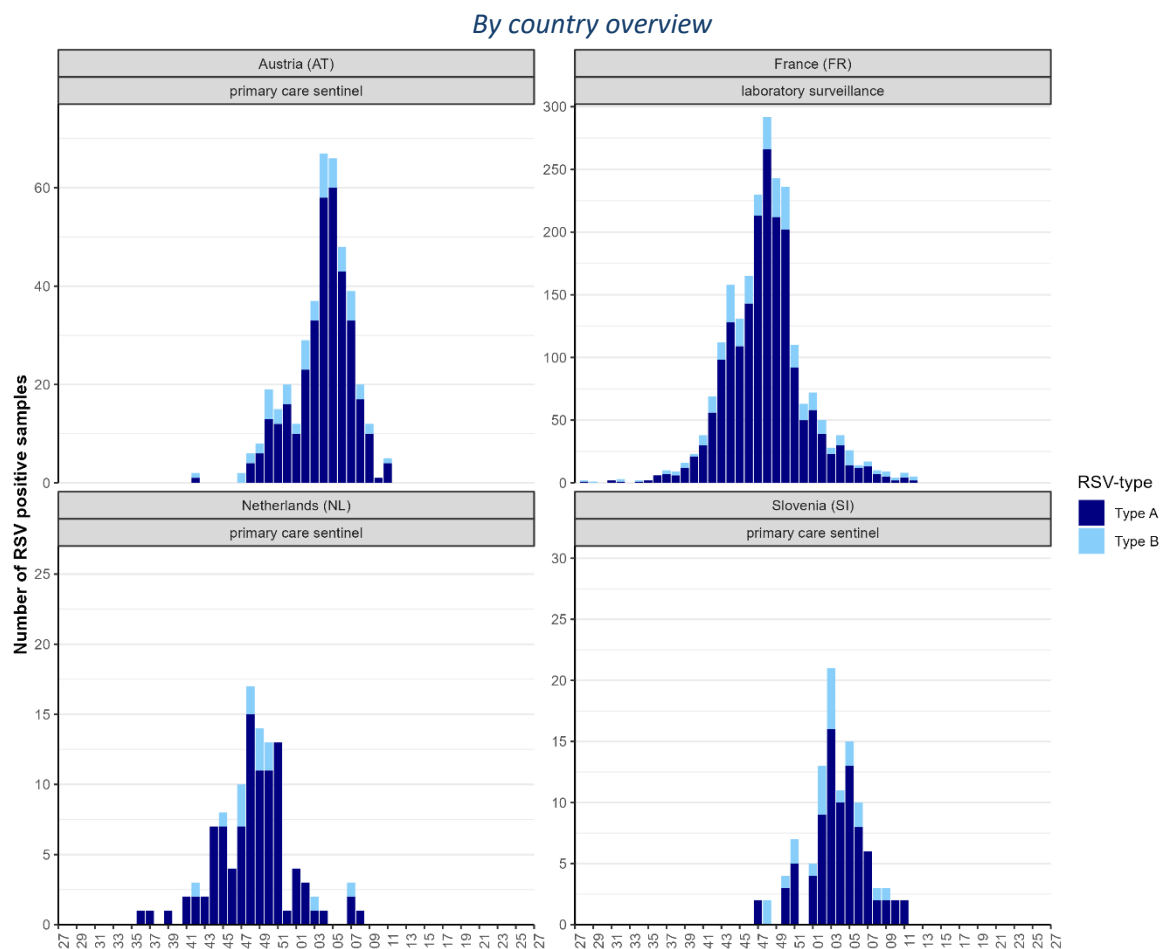
By country overview

Figure 2.4: Country-specific overview of the number of RSV-A and RSV-B cases in season 2023-2024.
Weekly number of RSV-A and RSV-B positive samples reported in each participating country. RSV-A and RSV-B are represented as dark and light blue bars, respectively.

2.4 Age specific RSV data

Cumulative percentage of RSV positive cases within age groups
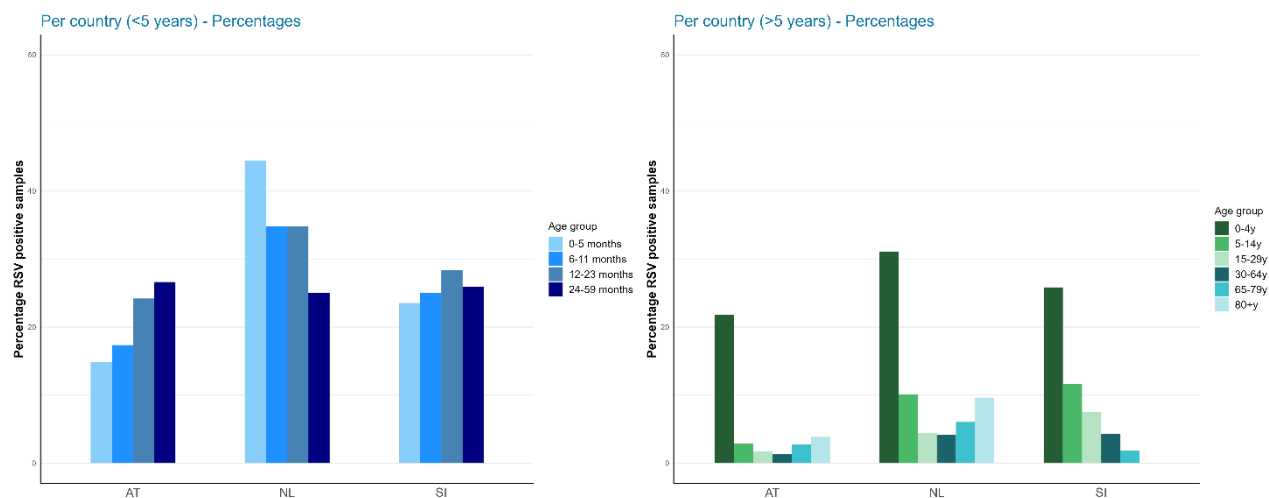
Figure 2.4a: Country-specific overview of the cumulative percentage of RSV positive samples per age group in season 2023-2024.

Percentage of RSV positivity within each age group, in each participating country since week 27 of 2023. The figure on the left shows age groups under 5 years old, displayed in months. The figure on the right shows all age groups, displayed in years.

Country codes: 'AT' = Austria; 'NL' = Netherlands; 'SI' = Slovenia.

Part 3 Surveillance sources & methodologies

Respiratory syncytial virus (RSV) is an important cause of acute lower respiratory tract infections and hospitalizations, especially among young children and older adults. Monitoring RSV on a European level is currently limited. Since the respiratory season 2023/24, WHO Euro and ECDC provide a weekly integrated surveillance summary for influenza, RSV and SARS-CoV-2 for the European Union/European Economic Area (EU/EEA) and the WHO European region (ERVISS). Notably, this season marks the inclusion of more RSV data in the reporting.

To enhance RSV surveillance, National Public Health Institutes (NPHI) in the EU/EEA were invited to participate in the PROMISE European RSV Surveillance Bulletin and to provide weekly RSV surveillance data and input. The PROMISE European RSV Surveillance Bulletin will enable (national) public health institutes and other stakeholders to monitor RSV in a real-time manner and access more comprehensive and detailed information on the circulation of RSV in Europe. During the winter of 2023/24 this Bulletin will be published bi-weekly. The aim of the PROMISE RSV surveillance Bulletin is to evaluate which specific parameters and outputs are best practice for adequate monitoring and comprehensive reporting for RSV. These experiences and expertise will be transferred to WHO Euro and the ECDC for consideration in the integrated epidemiological surveillance summary for influenza, RSV and SARS-CoV-2. Importantly, all of the PROMISE work related to the European RSV surveillance Bulletin has been planned and coordinated with input from ECDC and WHO Europe to enable a smooth handover at the end of the project.

3.1 NPHIs: qualitative indicators and/or surveillance data reported in the Bulletin

Country	Source/Institute(s)	More information - National RSV surveillance data
Austria	1. Center for Virology, Medical University of Vienna (MUW)	▪ Sentinel surveillance report for RSV (weekly updated)
Belgium	1. Sciensano	▪ National reporting (weekly updated)
Denmark	2. Statens Serum Institut (SSI) providing national data uploaded to the National Microbiology database by all clinical microbiology laboratories	
France	1. RENAL (French hospital network) 2. National reference laboratories on respiratory viruses (including influenza and Sars-CoV-2) in Hospices Civils de Lyon and Institut Pasteur Paris	▪ National reporting (weekly updated) ▪ Methodology of respiratory surveillance, including RSV surveillance: Annual activity report of national reference center for respiratory viruses
Netherlands	3. National Institute of Public Health & Environment (RIVM) 4. Netherlands Institute for Health Services Research (Nivel) 5. Virological laboratory surveillance, Dutch Working Group for Clinical Virology of the Dutch Society for Medical Microbiology (NVMM).	▪ National reporting (weekly updated) ▪ Methodology of respiratory surveillance, including RSV surveillance: Annual report Surveillance of COVID-19, influenza and other respiratory infections in the Netherlands: winter 2021/2022
Portugal	1. National Institute of Health Doutor Ricardo Jorge (INSA)	▪ National reporting (weekly updated)
Slovenia	1. National Laboratory of Health, Environment and Food (NLZOH) 2. National Institute of Public Health (NIJZ)	▪ National reporting (weekly updated)

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3.2   Methodology qualitative indicators (Part 1 of the Bulletin)

Qualitative indicator	Description
Definition of week	Preferably based on the day of sampling, otherwise another date (e.g. day of testing). Using ISOweeks from Monday-Sunday.
Definition of season	The season is defined as week 67 through week 66 of the next year.
Definition for WeekActivity	The definition for RSV week activity (no/sporadic/yes) is primarily based on the judgement of the national public health institute (NPHI). Guidance is provided by recommending the use of the Moving Epidemic Method (MEM) for the most relevant source to establish a threshold for the weekly activity, and (if applicable) additionally verify the weekly judgement with other available sources. Sporadic activity is advised if there is some RSV activity but circulation is still below the activity threshold or if there are temporal fluctuations around the threshold.

Definition for WeekTrend	The definition for RSV trends (increasing/stable/decreasing) is primarily based on the judgement of the NPHI.
	
	Guidance is provided by recommending a comparison to previous week ánd more long term trends.
	
	e.g '+' or '-' trend is reported in case of:
	  - > 5% change in number of positive RSV cases compared to previous week
	And
	  - >10% change compared to two weeks back
	The interpretation of the trend is more complicated if there are fluctuations in the data over the weeks, this is especially the case in the beginning and end of the season. During the project we will evaluate this recommendation.
	
	Trend will be only displayed when activity is 'sporadic' or 'yes' to avoid overinterpretation of trends with very low numbers..

Qualitative indicator	Description
Dominant virus - season	Threshold for a dominant virus is >= 60% of the typed RSV viruses in the season; threshold for co-dominant viruses is between 40% and 60%. Dominance will only be reported if 10 or more typed RSV viruses are available for the season. To calculate the dominant virus for a season, all RSV typed viruses are included in the calculation with the same weight, regardless of the sampling week and distribution of samples over the season.
Dominant virus - week	Threshold for a dominant virus is >= 60% of the typed RSV viruses in the week; threshold for co-dominant viruses is between 40% and 60%. Dominant virus will only be reported if 10 or more typed RSV viruses are available for the week.

3.3 Overview of RSV surveillance source data available per country (Part 2 of the Bulletin)

Country	Data type	Origin of cases/samples	Case definition	Denominator available	RSV type tested	Age specific information
Austria	Sentinel surveillance			Yes	Yes	Yes
Belgium	Laboratory surveillance	Hospital & GP practices	Unknown (most testing is done fore clinical purposes)	No	No	Yes
	Sentinel surveillance	Hospitals	SARI	Yes	Yes	Yes
Denmark	Laboratory surveillance (registry data)	Hospital & GP practices		Yes	No	Yes
France	Laboratory surveillance	Hospital & GP practices		Yes	Yes	No
Netherlands	Laboratory surveillance	Hospital & GP practices	Unknown (most testing is done for clinical purposes)	No	No	No
	Sentinel surveillance	GP practices	ILI & ARI	Yes	Yes	Yes
Slovenia	Laboratory surveillance	Hospital & GP practices		Yes	No	No
	Sentinel surveillance	GP practices		Yes	Yes	Yes

NB Only for systems that are reported in Part 2 of the Bulletin.
NB The number of detections in the most recent weeks might increase due to delayed reporting.

3.4 Project information, disclaimers and contact information

PROMISE Project - Preparing for immunisation and surveillance in Europe

This work is being undertaken under Workpackage 2.1 of the PROMISE project: Establishment of a European RSV surveillance platform and publication of a Fortnightly Electronic Bulletin on RSV activity in Europe.

Disclaimer

The PROMISE project receives funding from the Innovative Medicines Initiative 2 Joint Undertaking under Grant Agreement 101034339. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme and EFPIA. To define the collaborative framework of this project and to clarify the roles of the public and private partners involved in the different tasks, including this bulletin, we have established specific Rules of Collaboration.

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This bulletin was drafted by Bronke Boudewijnse (Nivel), David Gideonse (RIVM), Daan van Kooten (Nivel), John Paget† (Nivel), Jojanneke van Summeren (Nivel), Anne Teirlinck (RIVM).

Please visit the PROMISE website for more information about the project: https://imi-promise.eu/ and the PROMISE surveillance activities: https://imi-promise.eu/surveillance/promise-european-rsv-surveillance-bulletin/