



# FluCov-Bulletin – mid-March 2024

*FluCov project: combining data from around the world to better understand the co-circulation of influenza and COVID-19*

## Commentary

### Contents

Four years have passed since the initial report of atypical pneumonia in Wuhan, China, in January 2020, which was eventually associated with the novel **SARS-CoV-2** virus. The FluCov Bulletin offers a summary starting from January 2019, detailing the count of confirmed **influenza** and **SARS-CoV-2** detections, along with positivity rates of tested specimens, across 22 countries globally (see page 3).

### Results

On a global level, **influenza** activity has further decreased since the end of February (see Figure 1). The following country patterns were observed for **influenza**:

- In the Northern Hemisphere, **influenza** activity continued to decrease in most European countries (**France, Germany, Italy, Netherlands, Spain** and **United Kingdom**). **Italy, Spain** and the **United Kingdom** reported very low **influenza** activity (<10% positivity) [1]. Detections also started to decrease in **Poland**.
- In the **United States** and **Canada**, **influenza** activity remained at epidemic level and the percentage of positive tests remained stable. In **Canada**, detections of influenza B increased, while the total number of detections decreased. In the **United States**, **influenza** A and B (**influenza** B/Victoria, if lineage was determined), circulated in equal measure.
- In **Mexico**, **influenza** activity and the percentage of positive tests remained stable compared to the end of February.
- **Influenza** activity continued to decrease in **China** but remained elevated with an overall positivity rate around 20% in the first two weeks of March. The predominant virus was **influenza** B/Victoria.
- **Influenza** B/Victoria was also dominant in **South Korea** and **Japan**, where detections were low.
- Continued low **influenza** activity was reported in **Thailand, India**, and the **Philippines**.
- In **Egypt**, **influenza** (B, no lineage determined) continued to be reported at low levels.
- **Israel** reported increased **influenza** activity and percentage positive, although a peak may have been reached.
- In the Southern Hemisphere, **influenza** detections have been low in **South Africa** and **Australia**, but increased in **Brazil**, compared to the end of February.
- No update on **influenza** activity was available for **Vietnam** in the first half of March.

Globally, **SARS-CoV-2** detections never reached the levels observed during the late 2022 peak, mainly driven by China (see Figure 1). The following patterns were observed for **SARS-CoV-2** in the first half of March 2024:

- **SARS-CoV-2** activity was low, after decreasing in **Canada, Italy, Netherlands, Poland**, and the **United Kingdom** following a peak in December 2023. Activity was also low in **India**, after a relatively small peak in January 2024.
- Slightly elevated **SARS-CoV-2** activity was reported in **Australia** and **Thailand**.
- In **China**, **SARS-CoV-2** detections remained relatively low.

- No update on **SARS-CoV-2** detections was available for **Brazil, Egypt, France, Germany, Israel, Japan, Mexico, Philippines, South Africa, South Korea, Spain, United States, and Vietnam** in the first half of March.

### Implications

Global **influenza** activity has been decreasing since December 2023. In the Northern Hemisphere, however, **influenza** activity remains elevated in North America and a number of European countries covered by the bulletin. In the 2023/24 Northern Hemisphere season, the prevalent **influenza** strains have been A(H1N1)pdm09 and A(H3N2), with the latter being particularly predominant in **China**. However, **influenza** B/Victoria – the dominant and only **influenza** B lineage currently circulating– has started to be detected more frequently as of January and is currently the dominant strain in **China, Japan** and **South Korea**. This bimodal curve of **influenza** A and B is not uncommon and was already regularly seen before the COVID-19 pandemic [2]. It is of importance that the lineage of **influenza** B specimens is determined, to contribute to a coordinated global effort to understand whether **influenza** B/Yamagata has ceased circulating [3]. The US (CDC) reports that vaccine components of the current **influenza** vaccine are well-matched to circulating A(H1N1)pdm09, B/Victoria and A(H3) clades [4]. The same is true for Europe (ECDC) with the exception that some A(H3) viruses (2a.3a.1 clade) are less well-matched [1].

As of March 2024, **SARS-CoV-2** activity is low in almost all countries, after an increase in late 2023. The number of patients hospitalized with **SARS-CoV-2** continued to decrease in **Canada, Italy, the Netherlands** and the **United States**, after a peak in December 2023 [5]. In **Japan**, **SARS-CoV-2** patients in hospital decreased following a peak in early February 2024. One year following the WHO's declaration of the pandemic's end [6], countries have implemented varied approaches to monitoring SARS-CoV-2. These strategies presently encompass the reduction of surveillance activities and instances where surveillance data is not shared with the WHO. This variation in approaches impacts the completeness of data reported in the FluCov Bulletin.

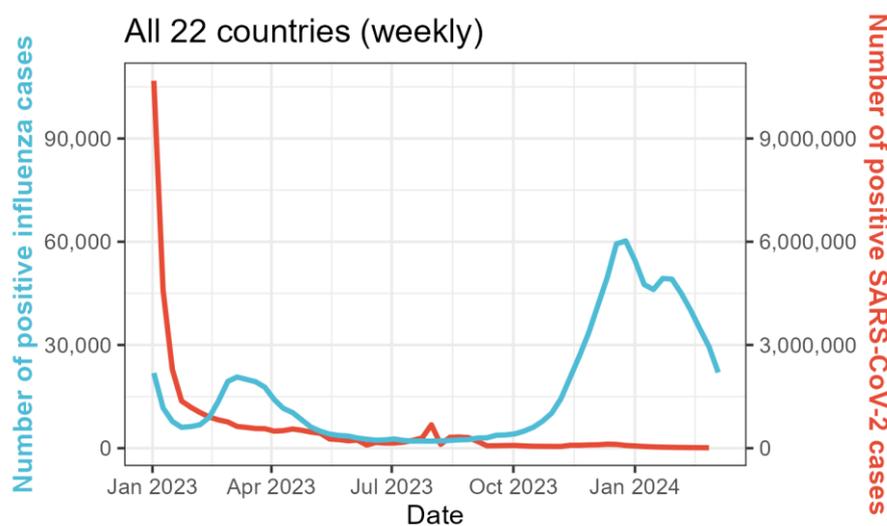


Figure 1: SARS-CoV-2 and influenza detections in the 22 countries covered by the Bulletin (period: from week 1/2023 to week 10/2024).

**Disclaimer: Comparisons between countries and seasons of influenza and SARS-CoV-2 detections should be made with care, as national surveillance systems may differ (e.g. surveillance structures and testing intensity) and change over time.**

## Monthly plots by country

The plots per country show weekly data for **influenza** and of **SARS-CoV-2** infections from 1 January, 2023 up to 10 March, 2024. For real time figures starting from 1 January 2019, please visit the **FluCov Dashboard**. This FluCov-Bulletin includes the countries Canada, United States, Mexico, Brazil, United Kingdom, France, Germany, Italy, Netherlands, Spain, Poland, South Africa, Egypt, China, Japan, South Korea, India, Philippines, Thailand, Vietnam, Israel and Australia.

Per country, the first plot displays the number of positive **influenza** (in blue) and **SARS-CoV-2** (in red) detections. An overview of the absolute number of **influenza** and of **SARS-CoV-2** detections per country can be found on [pages 26-28 of this FluCov-Bulletin \(click here\)](#). The second plot shows the **influenza** detections by subtypes/lineages reported to FluNet. The third plot displays the percentage of specimens testing positive for **influenza** during the current season (in red), the last season, and the average of the two pre COVID-19 seasons (2017-18 and 2018-19).

### The FluCov Dashboard is live!

All Figures and Tables in the FluCov-Bulletin can be accessed (real-time) at:

<https://www.nivel.nl/en/dossier-epidemiology-respiratory-viruses/flu-cov-dashboard>

### Countries (click to view plot)

North America

Canada

United States

Central America Caribbean

Mexico

Tropical South America

Brazil

Northern Europe

United Kingdom

Eastern Europe

Poland

South West Europe

France

Germany

Italy

Netherlands

Spain

Northern Africa

Egypt

Southern Africa

South Africa

Eastern Asia

China

Japan

South Korea

Southern Asia

India

South East Asia

Philippines

Thailand

Vietnam

Western Asia

Israel

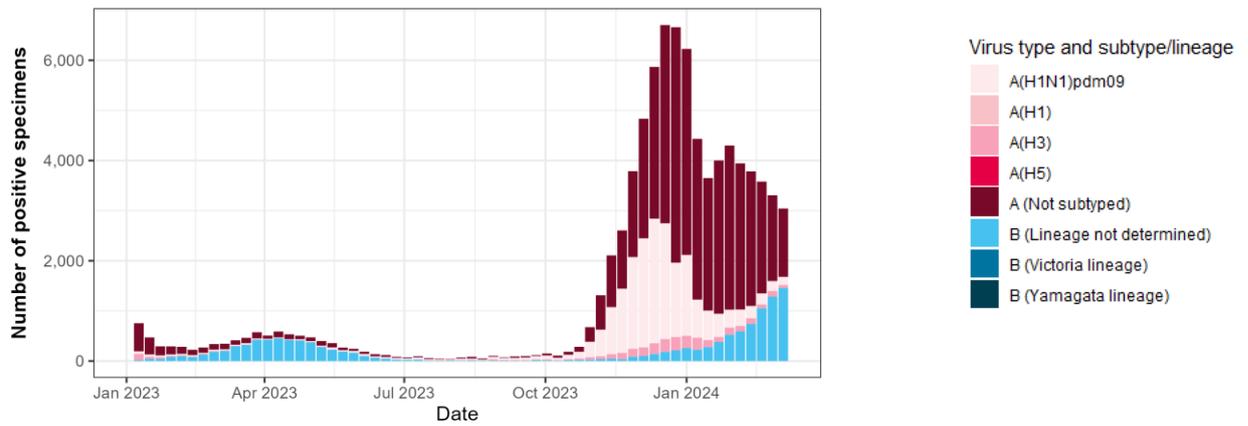
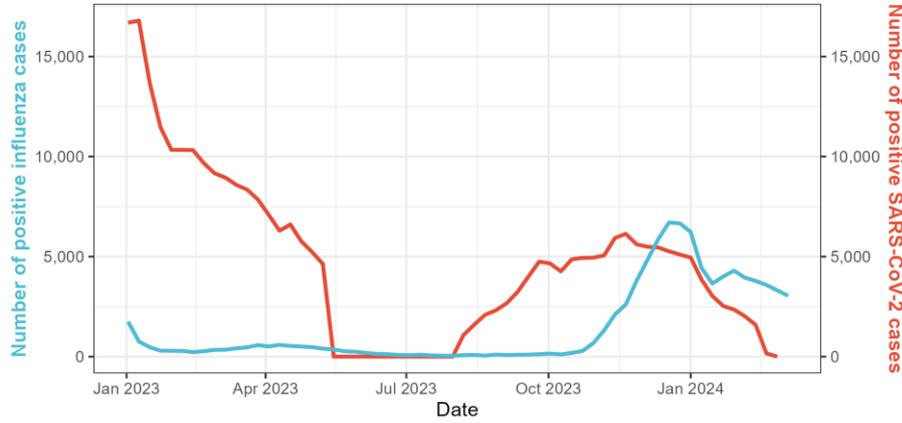
Oceania

Australia

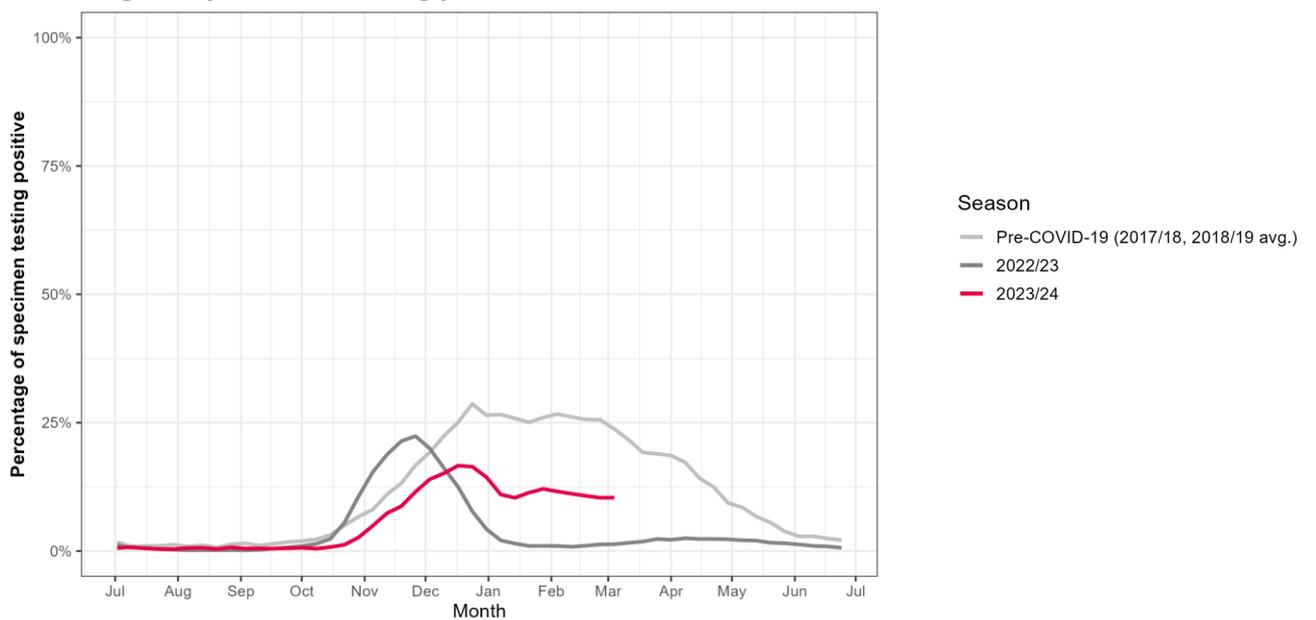
# North America

## Canada

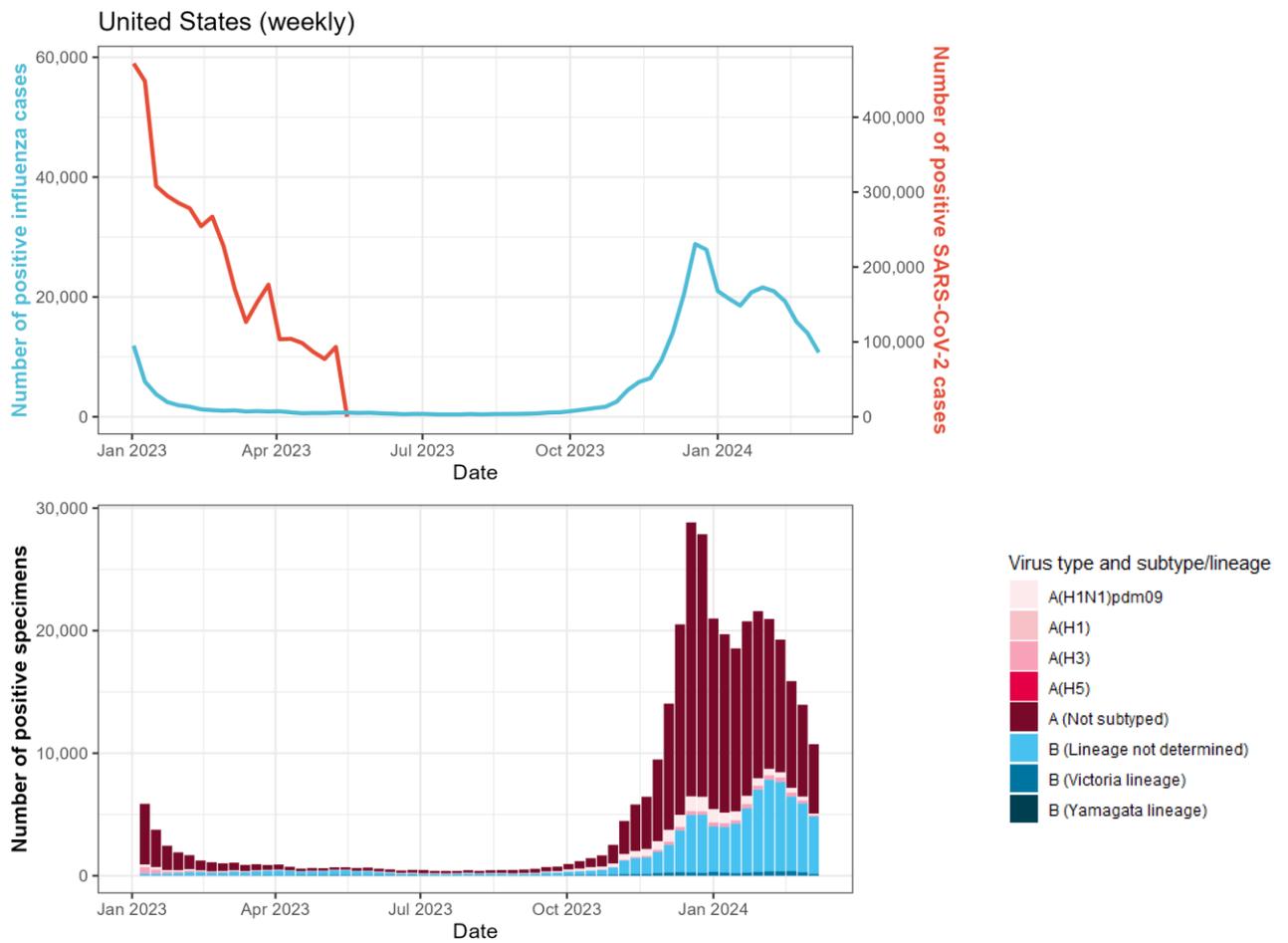
Canada (weekly)



Percentage of specimens testing positive for influenza in different seasons

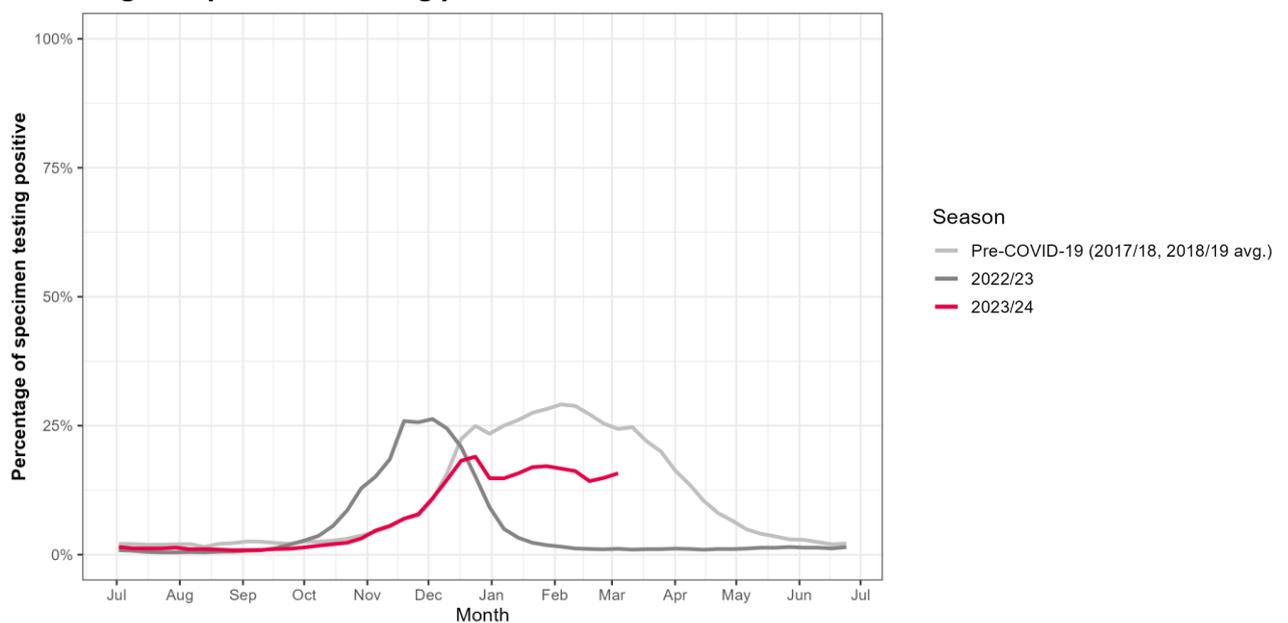


## United States



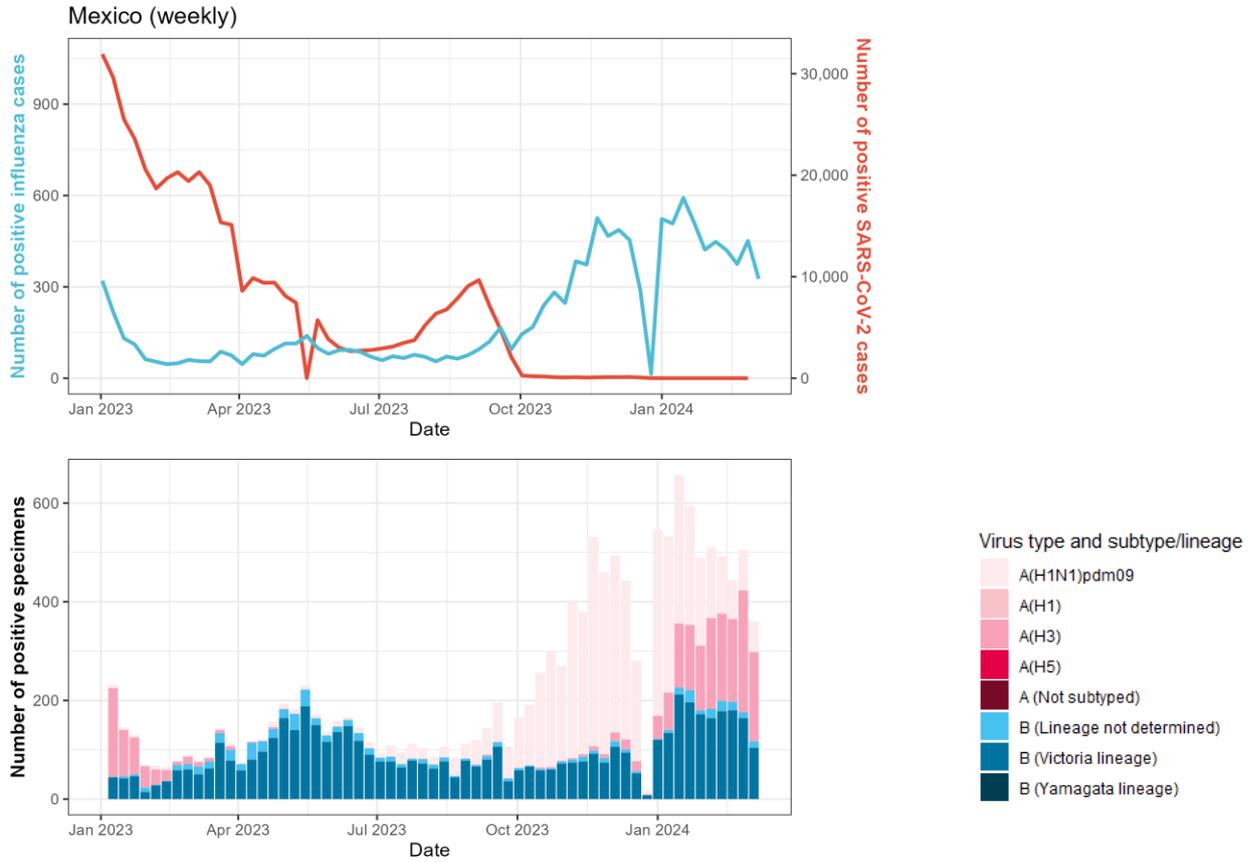
Note: The United States stopped reporting SARS-CoV-2 activity to the WHO since W20/2023

## Percentage of specimens testing positive for influenza in different seasons



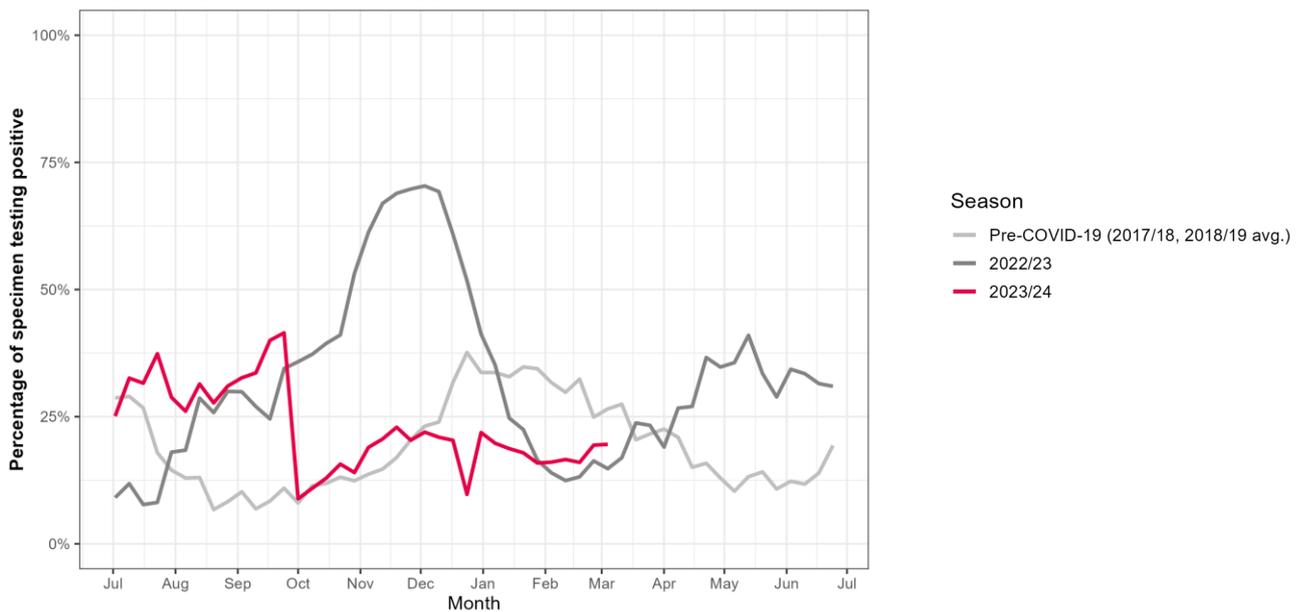
# Central America Caribbean

## Mexico



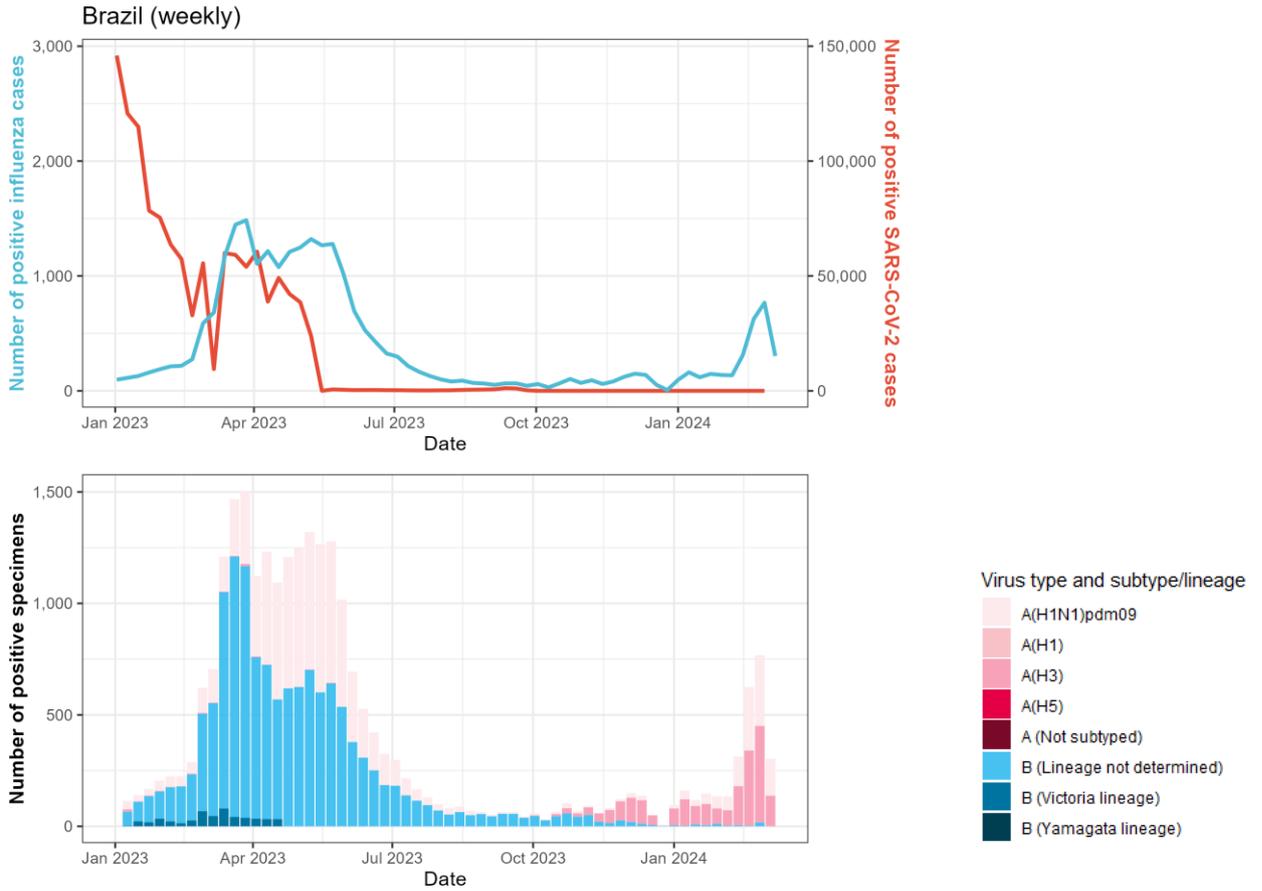
Note: Mexico has reported zero SARS-CoV-2 activity to the WHO since W2/2024

## Percentage of specimens testing positive for influenza in different seasons



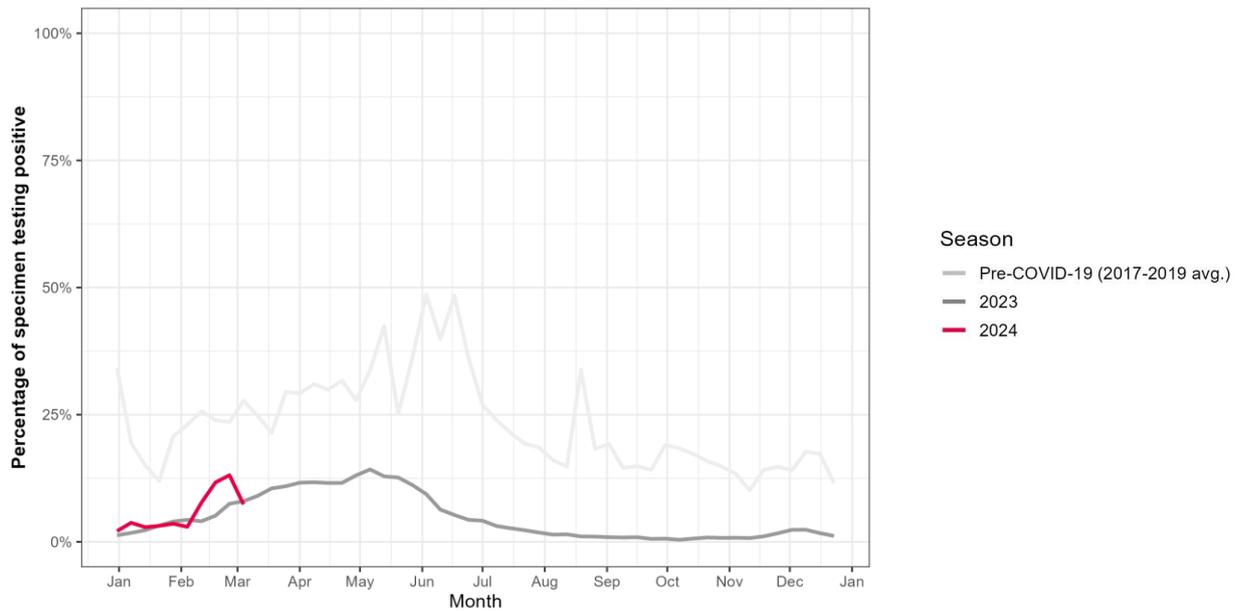
# Tropical South America

## Brazil



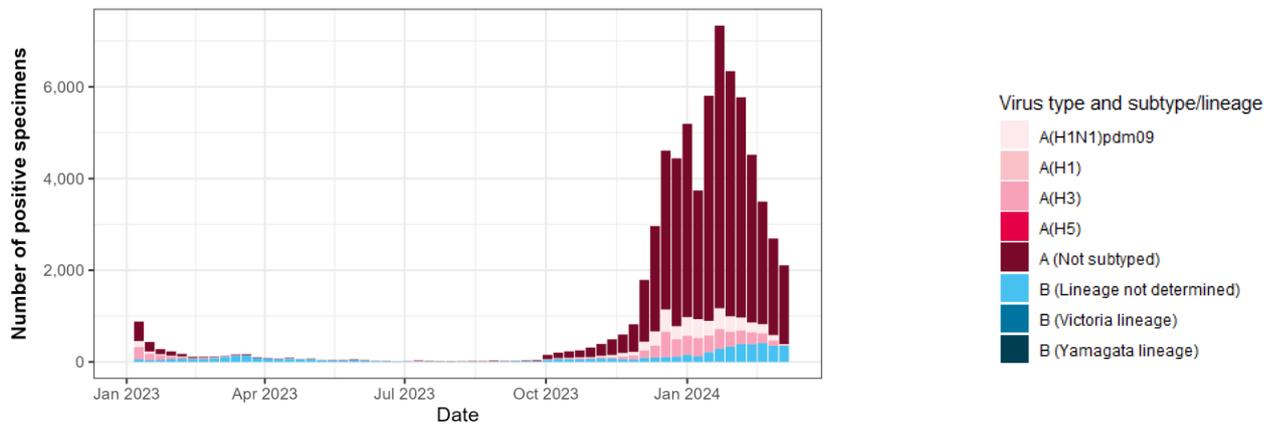
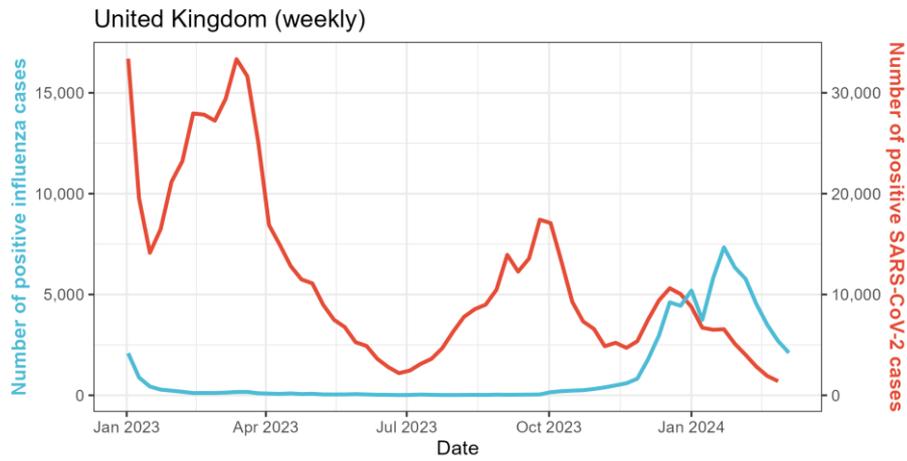
Note: Brazil has reported zero SARS-CoV-2 activity to the WHO since W2/2024

## Percentage of specimens testing positive for influenza in different seasons

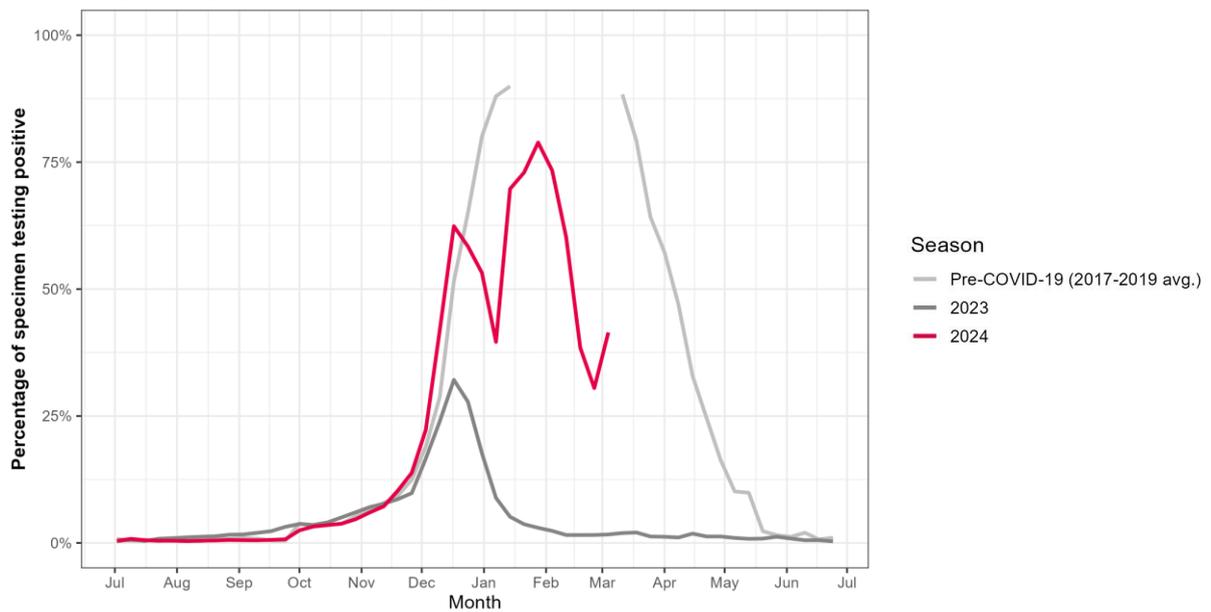


# Northern Europe

## United Kingdom

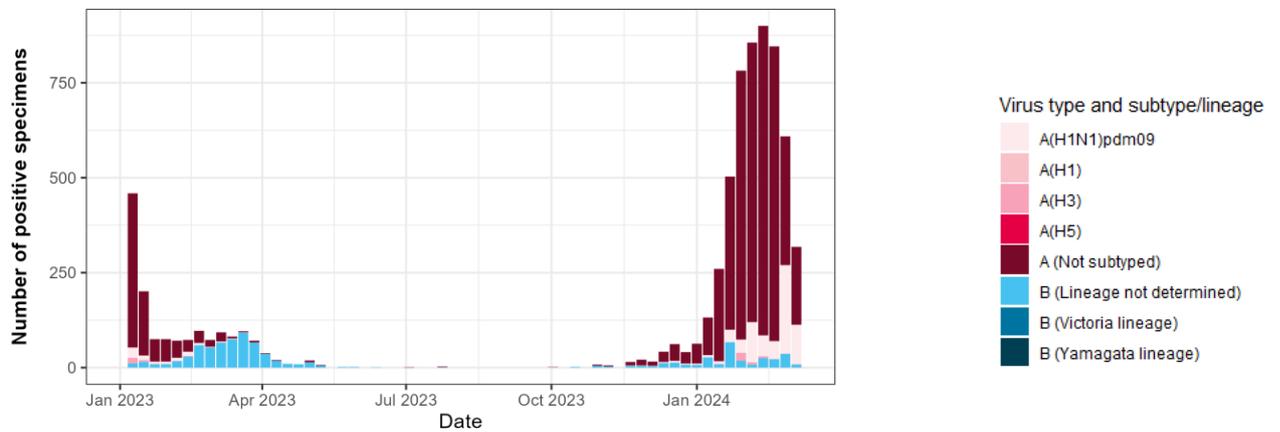
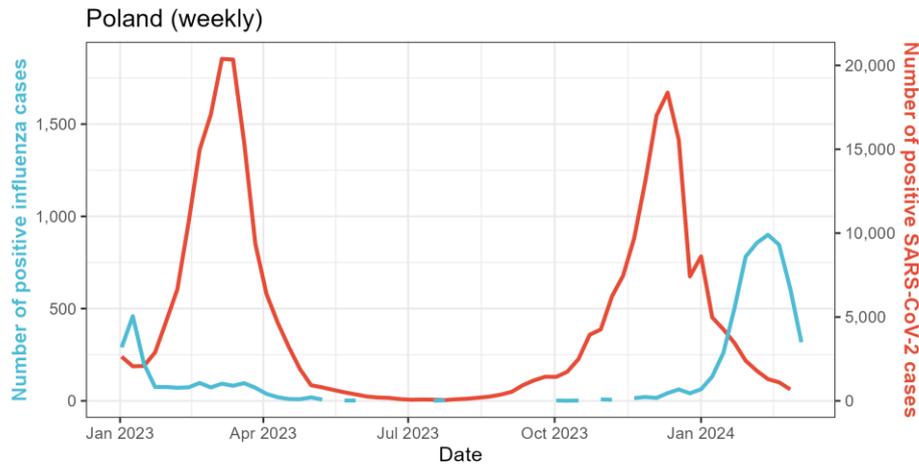


## Percentage of specimens testing positive for influenza in different seasons

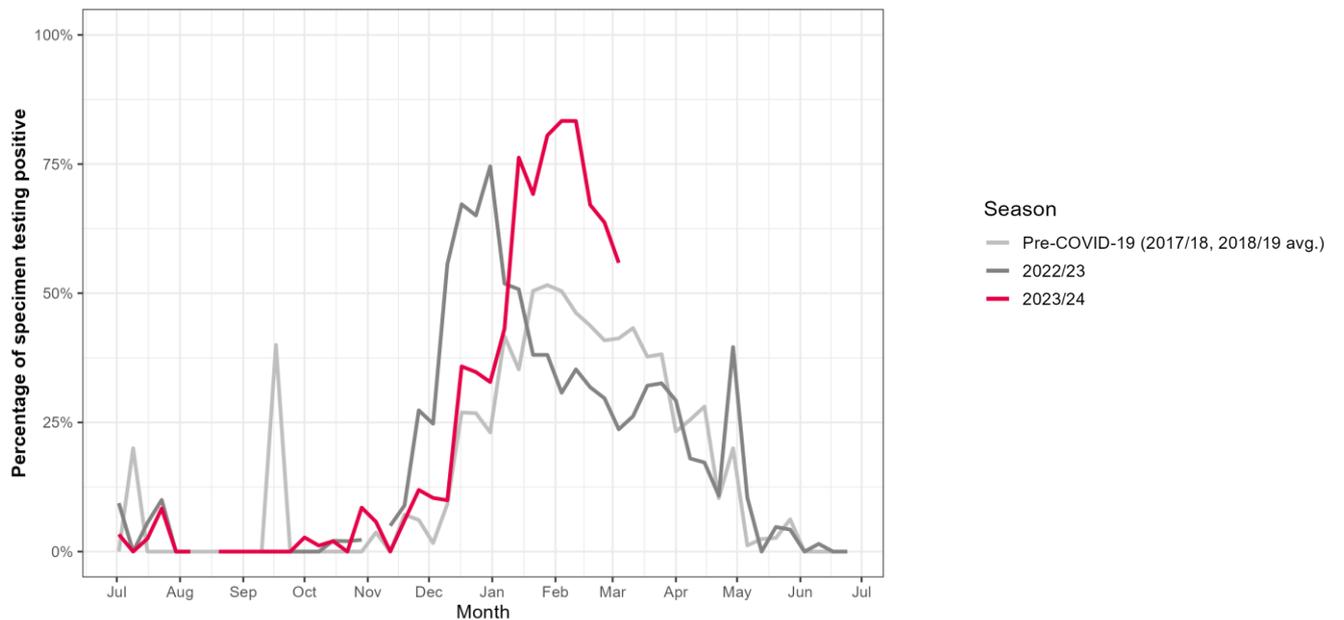


# Eastern Europe

## Poland

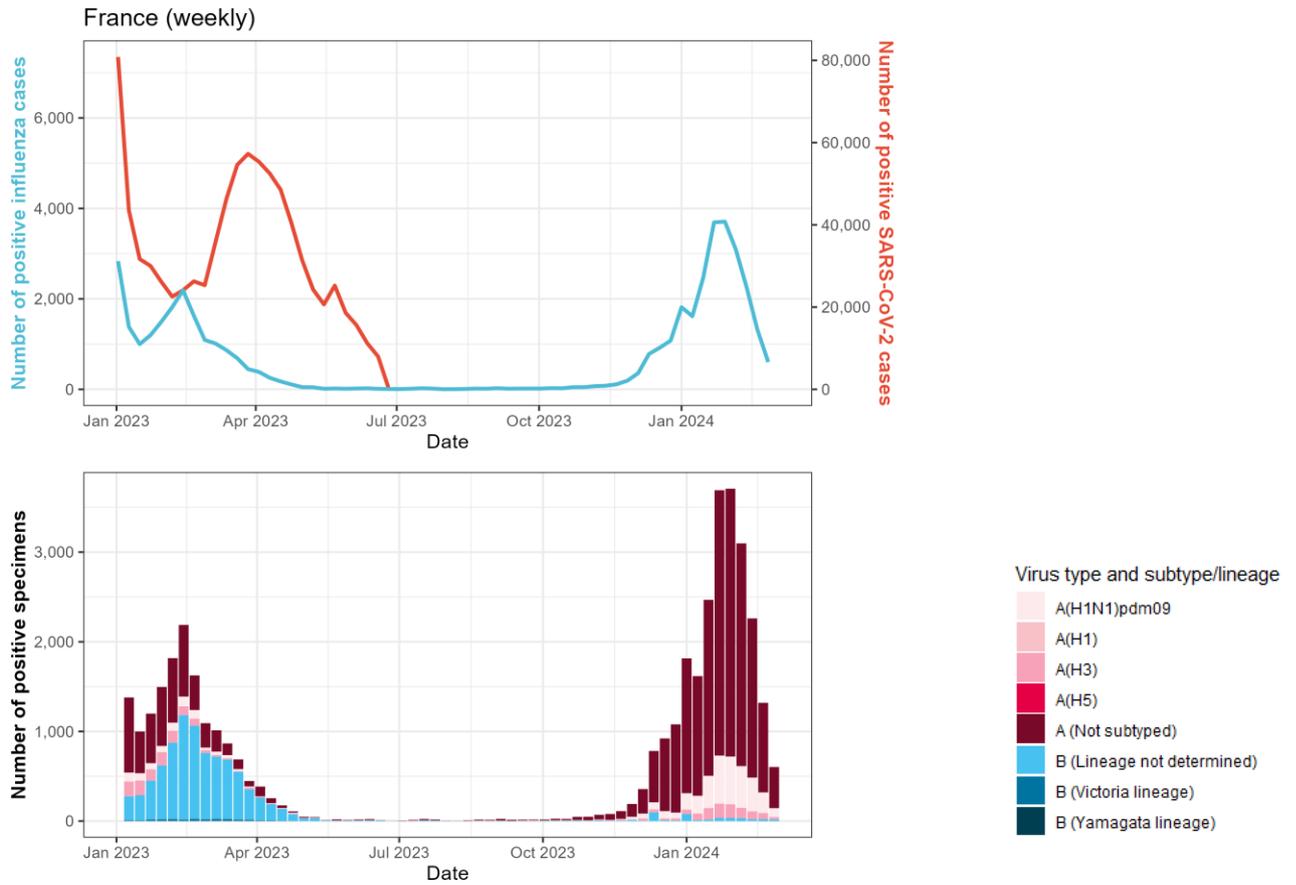


## Percentage of specimens testing positive for influenza in different seasons



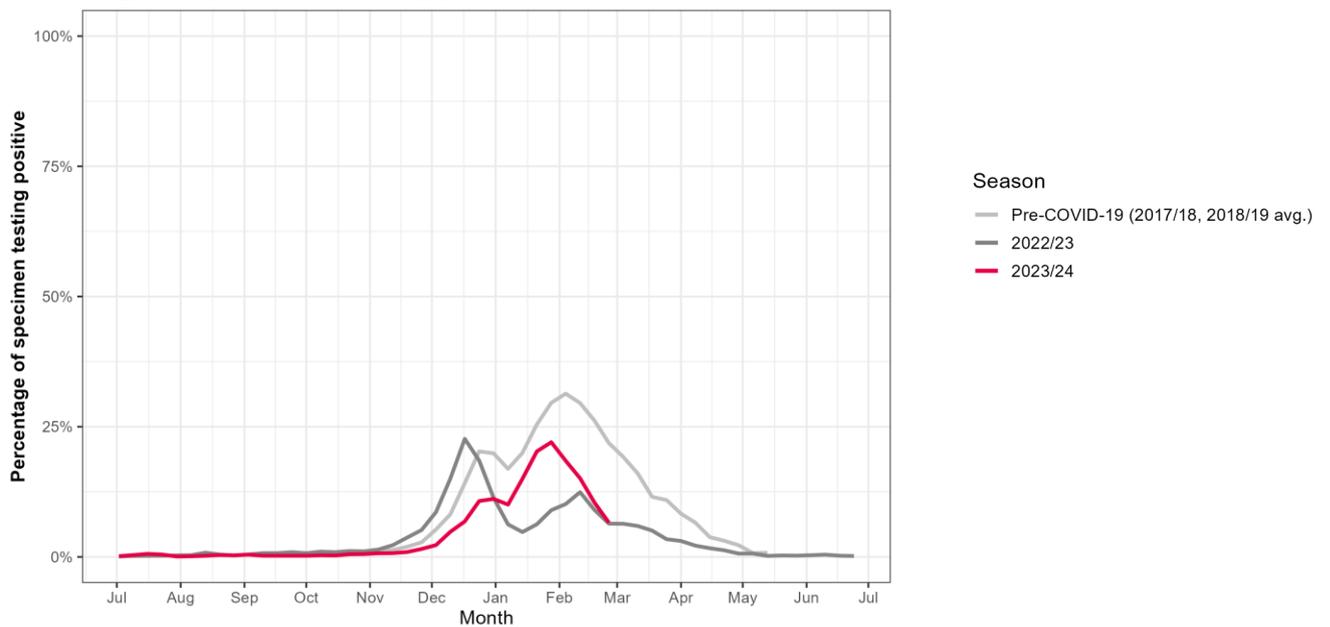
# South West Europe

## France

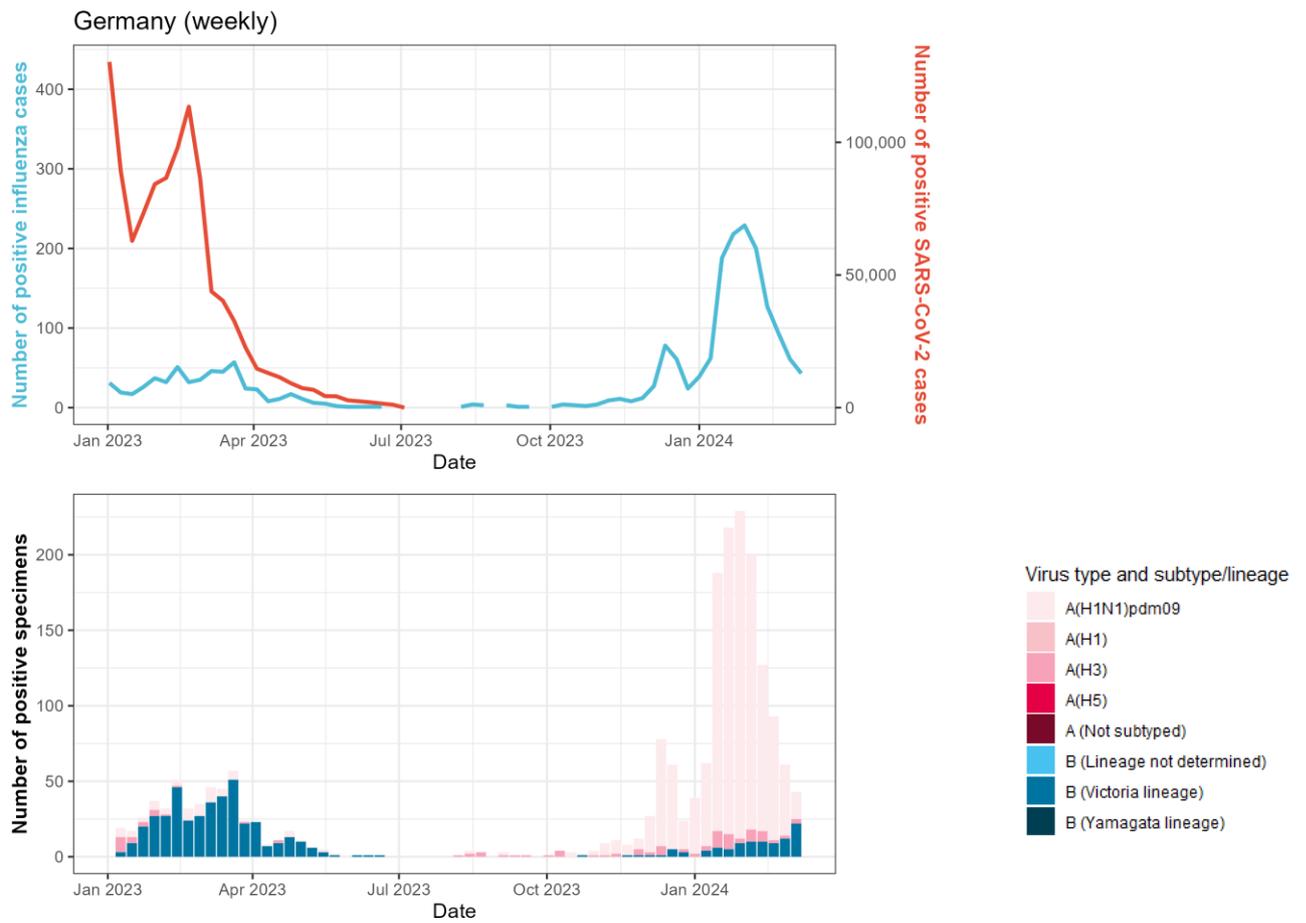


Note: France stopped reporting SARS-CoV-2 activity to the WHO since W26/2023

## Percentage of specimens testing positive for influenza in different seasons

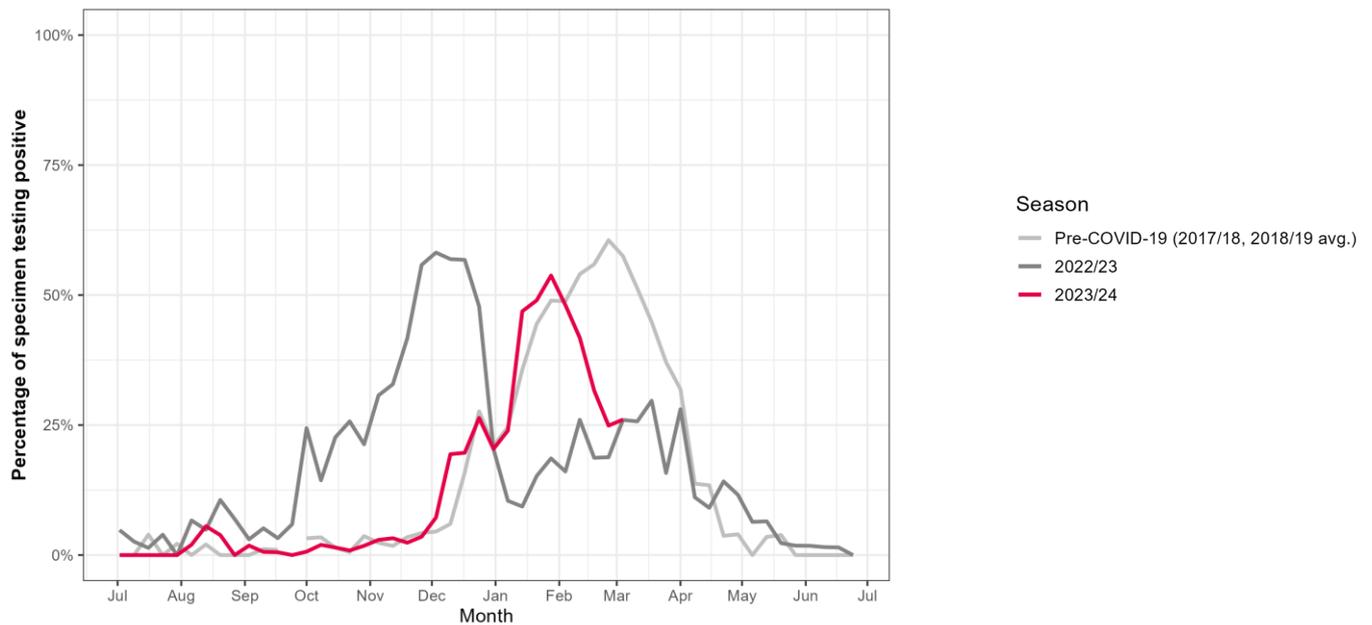


## Germany

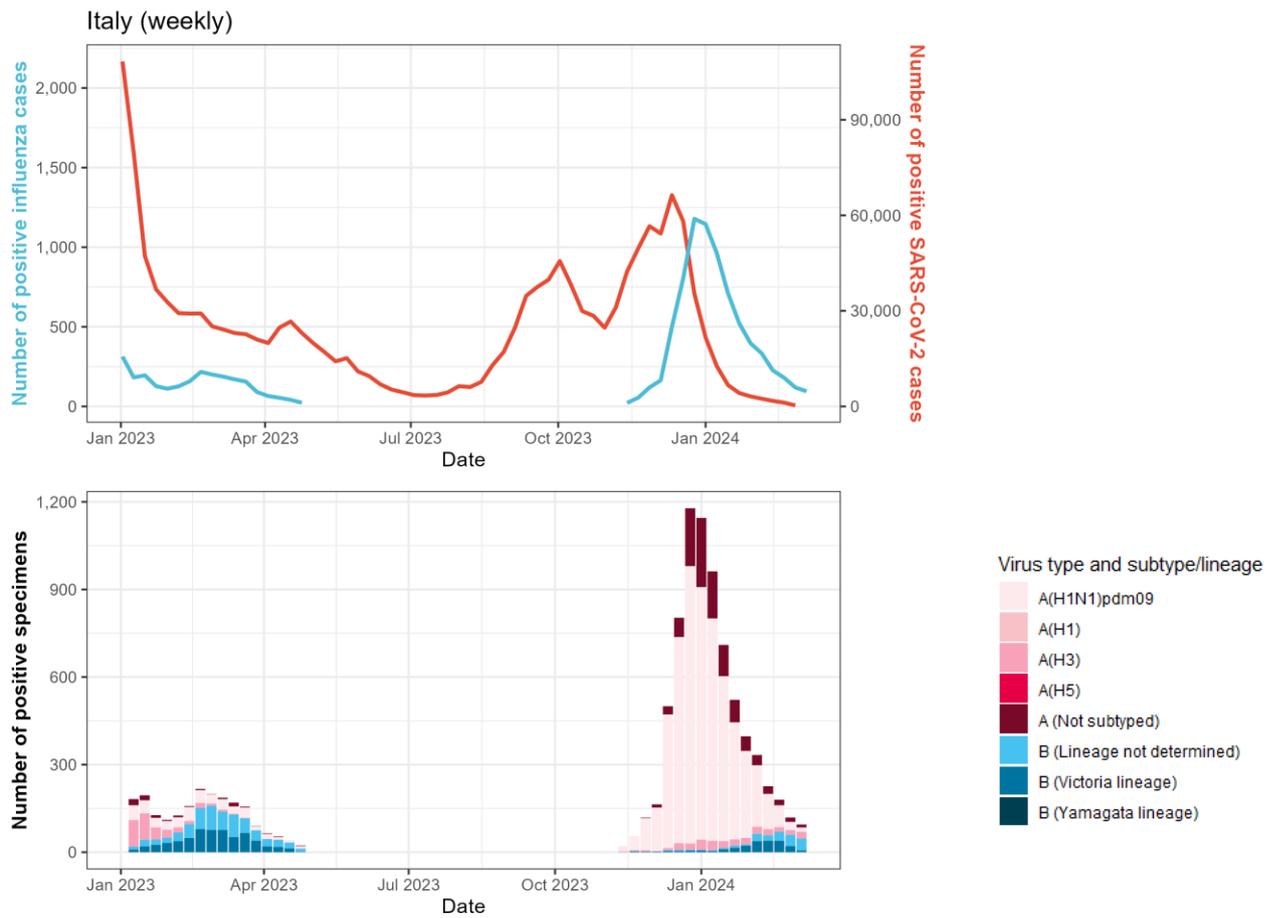


Note: Germany stopped reporting SARS-CoV-2 activity to the WHO since W27/2023

## Percentage of specimens testing positive for influenza in different seasons

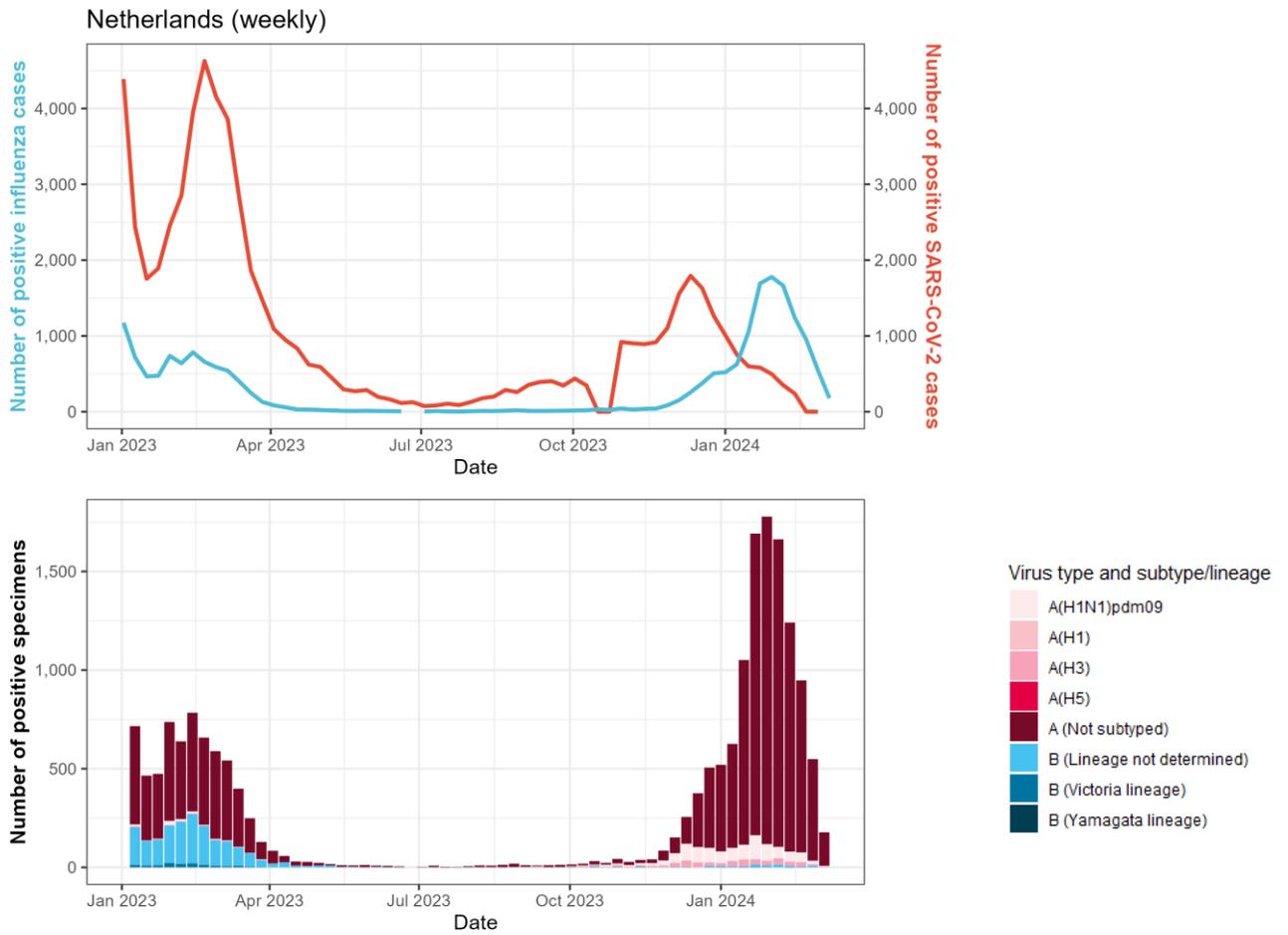


## Italy



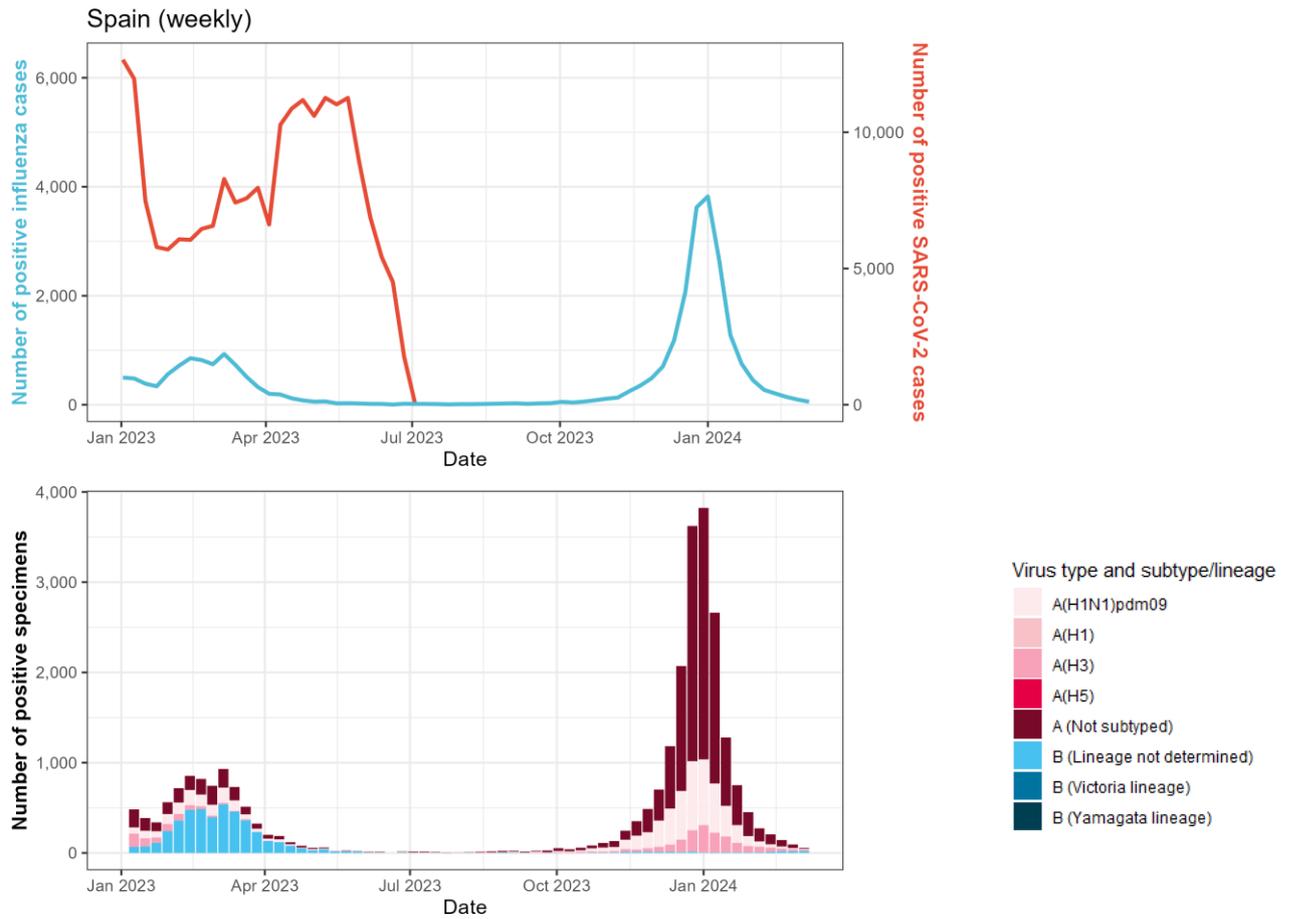
**Percentage of specimens testing positive for influenza in different seasons: data not available**

## Netherlands



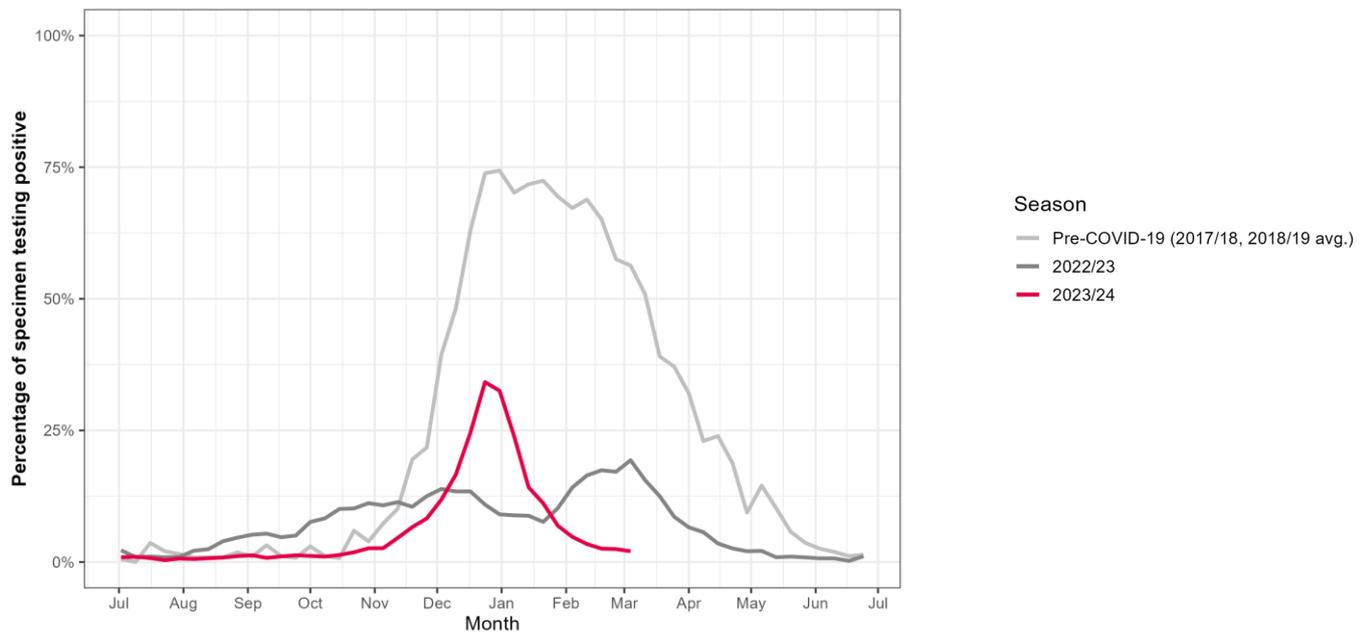
**Percentage of specimens testing positive for influenza in different seasons: data not available**

## Spain



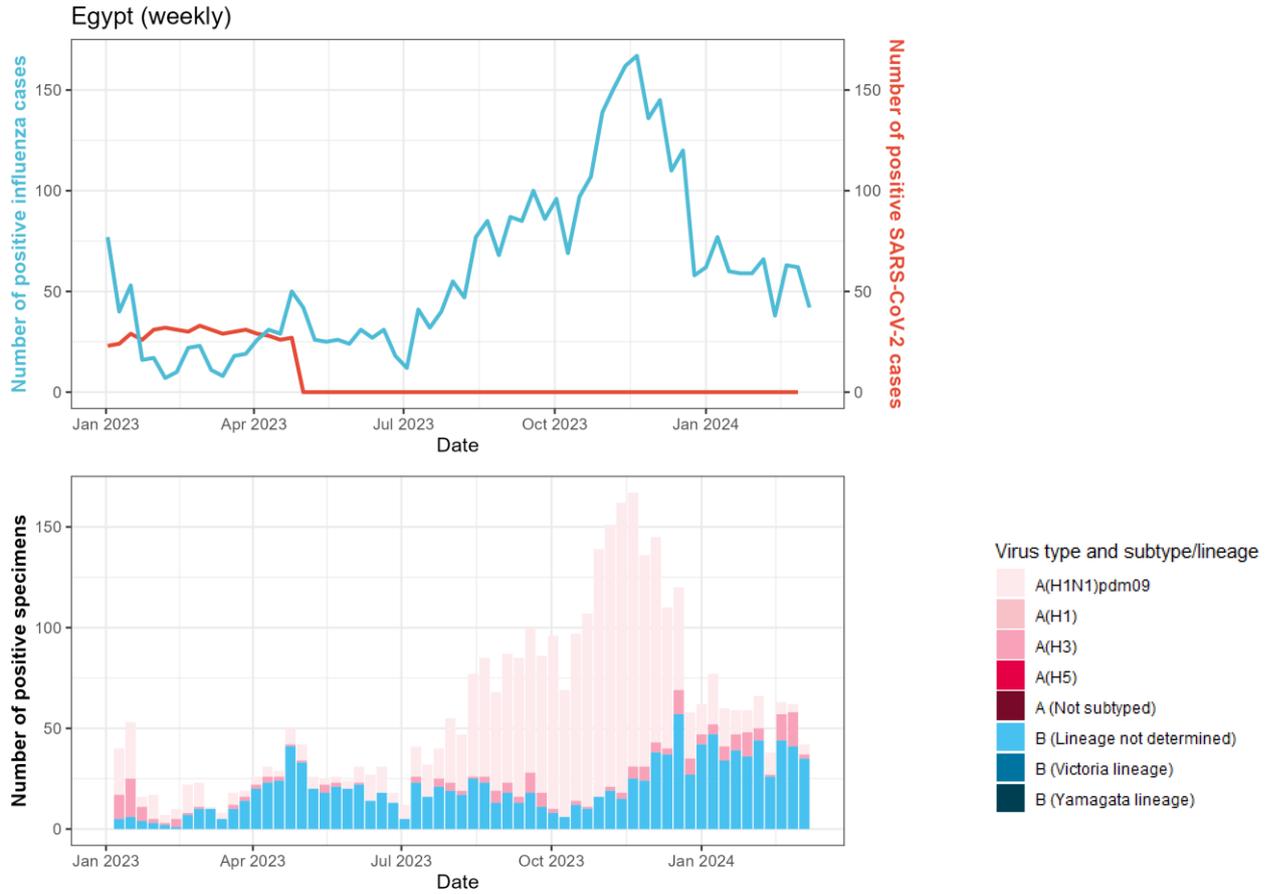
Note: Spain stopped reporting SARS-CoV-2 activity to the WHO since W27/2023

## Percentage of specimens testing positive for influenza in different seasons



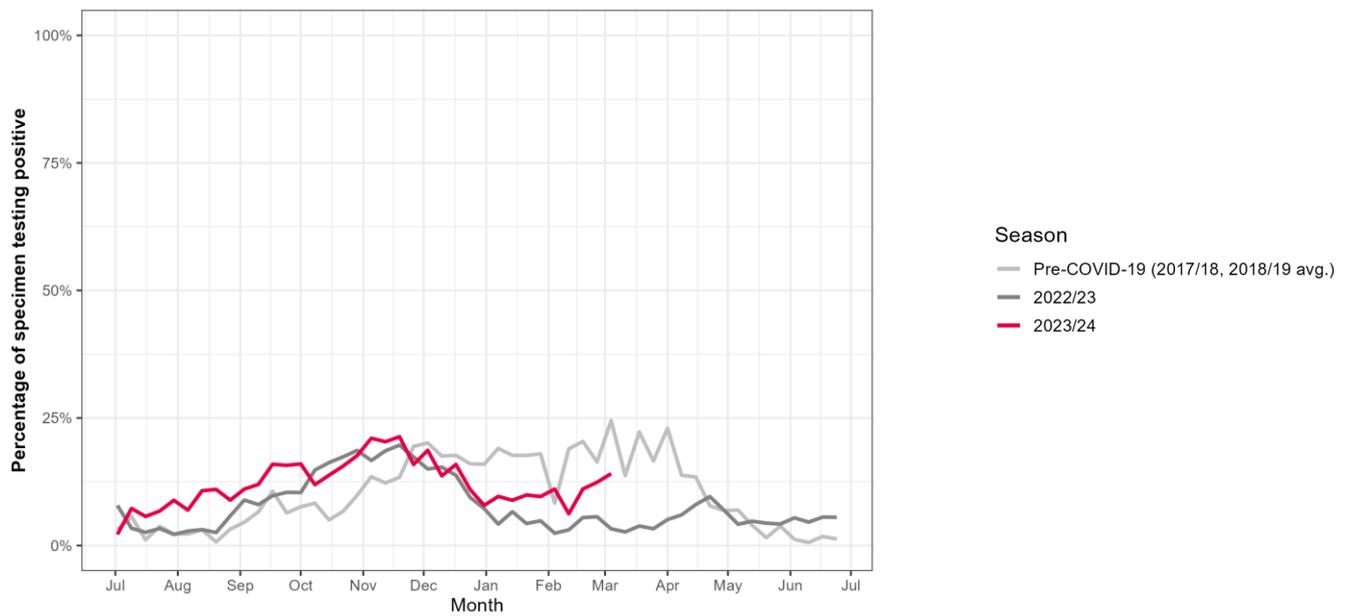
# Northern Africa

## Egypt



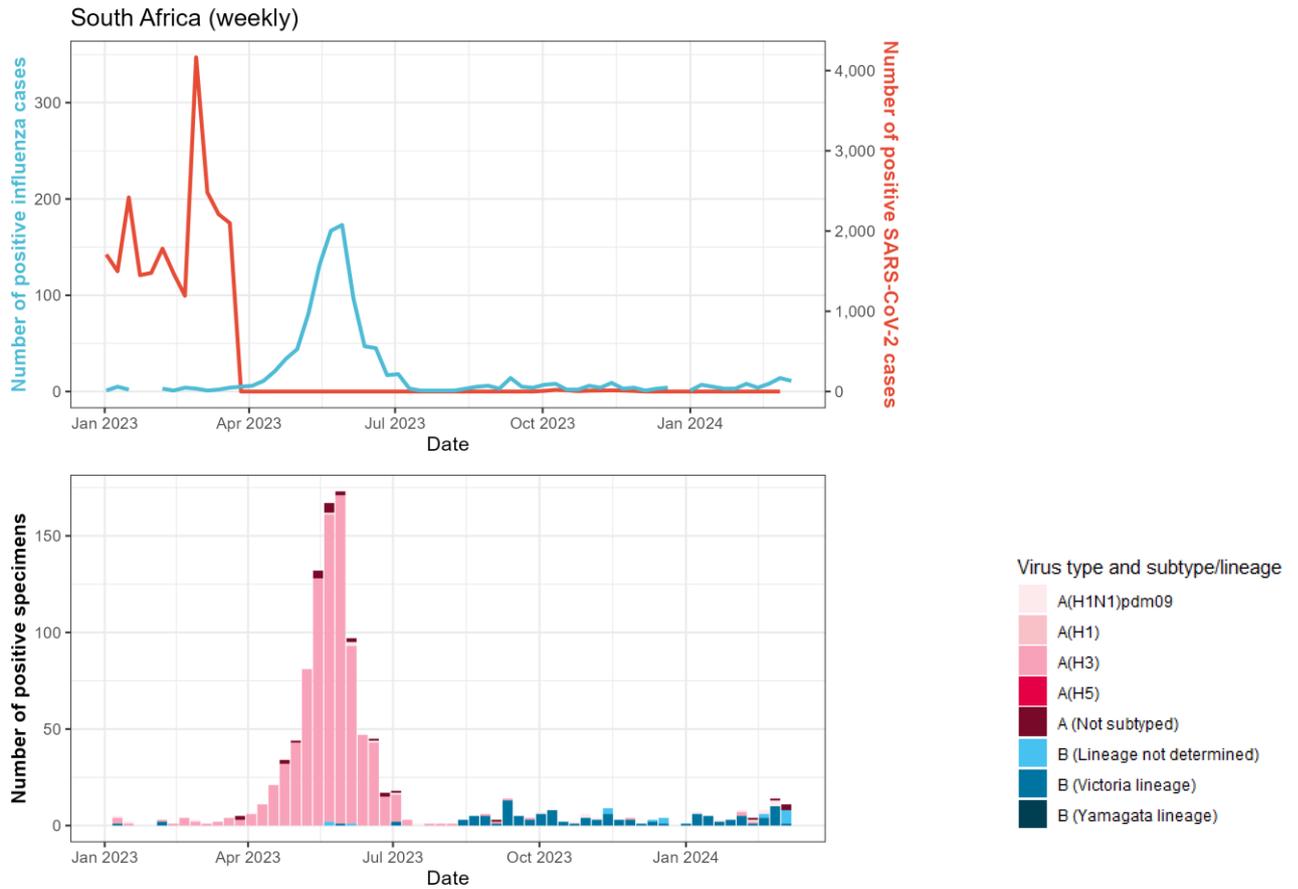
Note: Egypt has reported zero SARS-CoV-2 activity to the WHO since W18/2023

## Percentage of specimens testing positive for influenza in different seasons



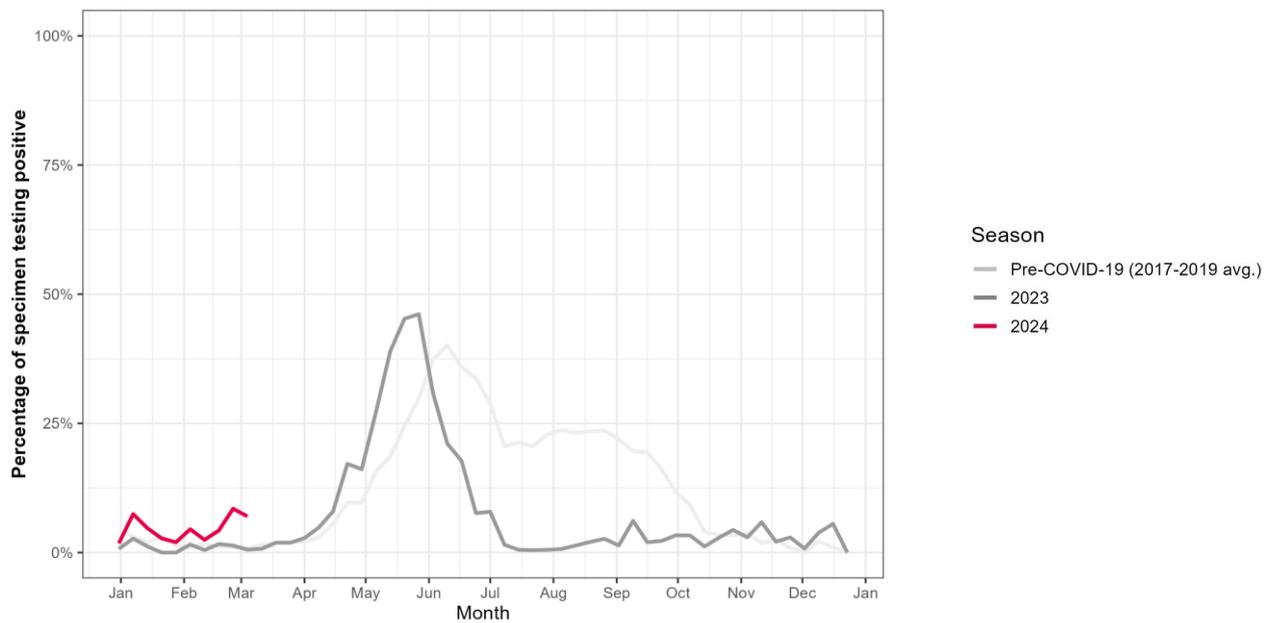
# Southern Africa

## South Africa



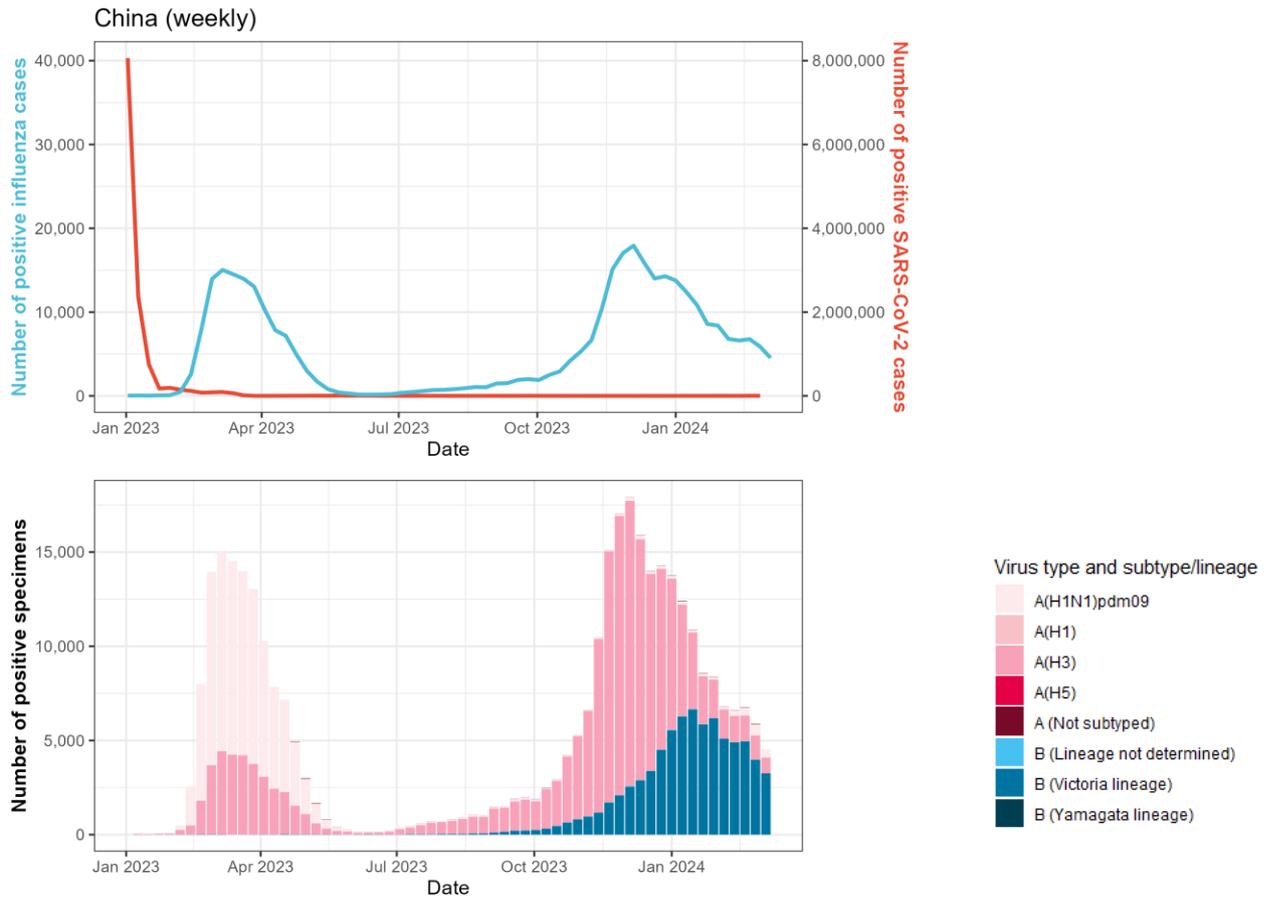
Note: South Africa has reported zero SARS-CoV-2 activity to the WHO since W50/2023

## Percentage of specimens testing positive for influenza in different seasons

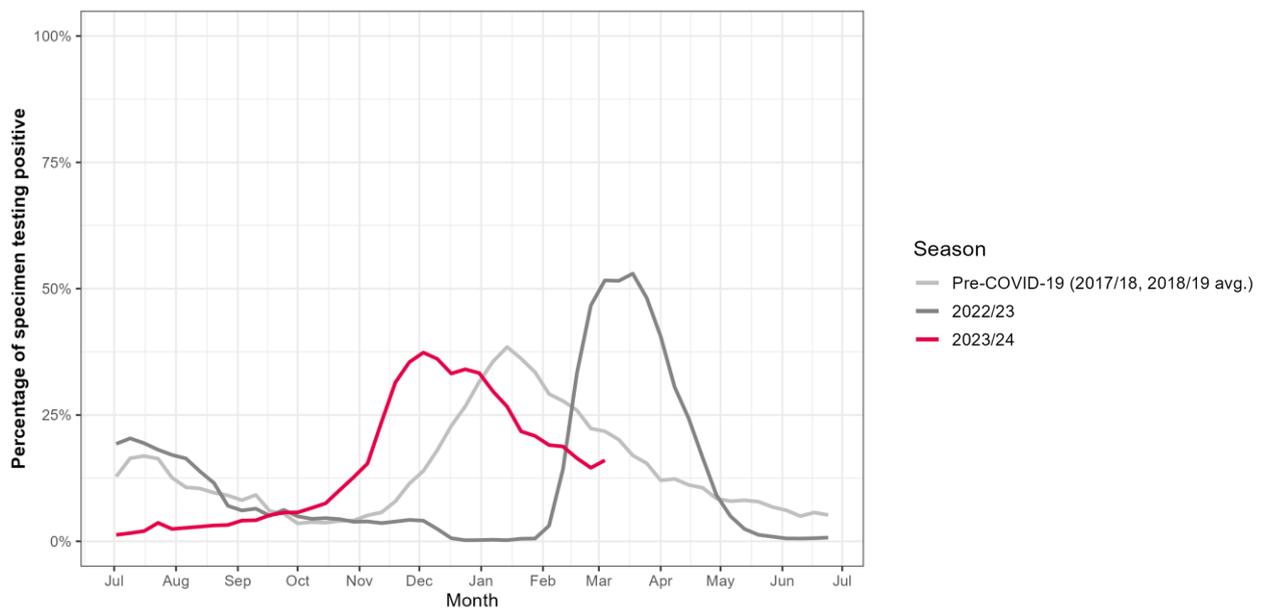


# Eastern Asia

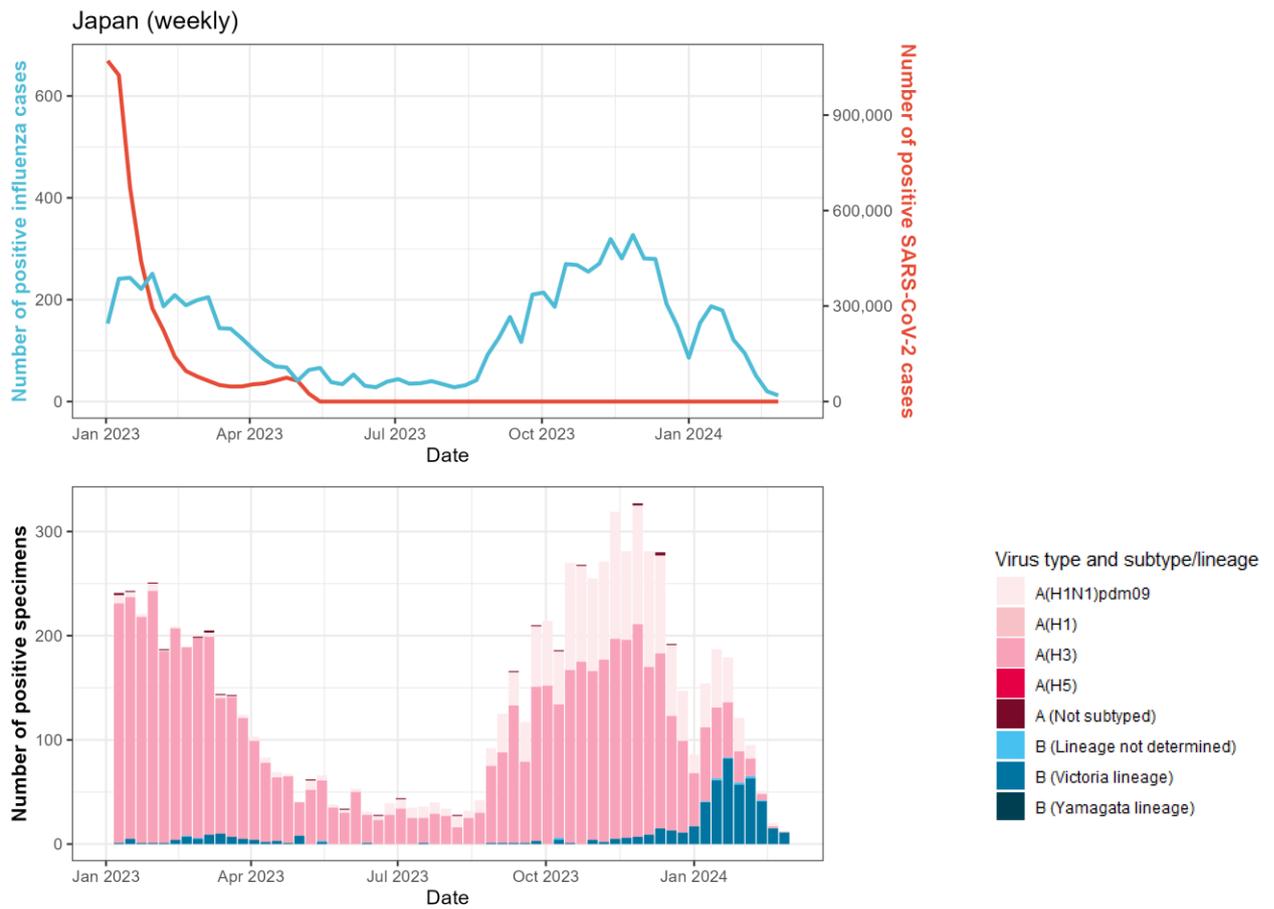
## China



## Percentage of specimens testing positive for influenza in different seasons



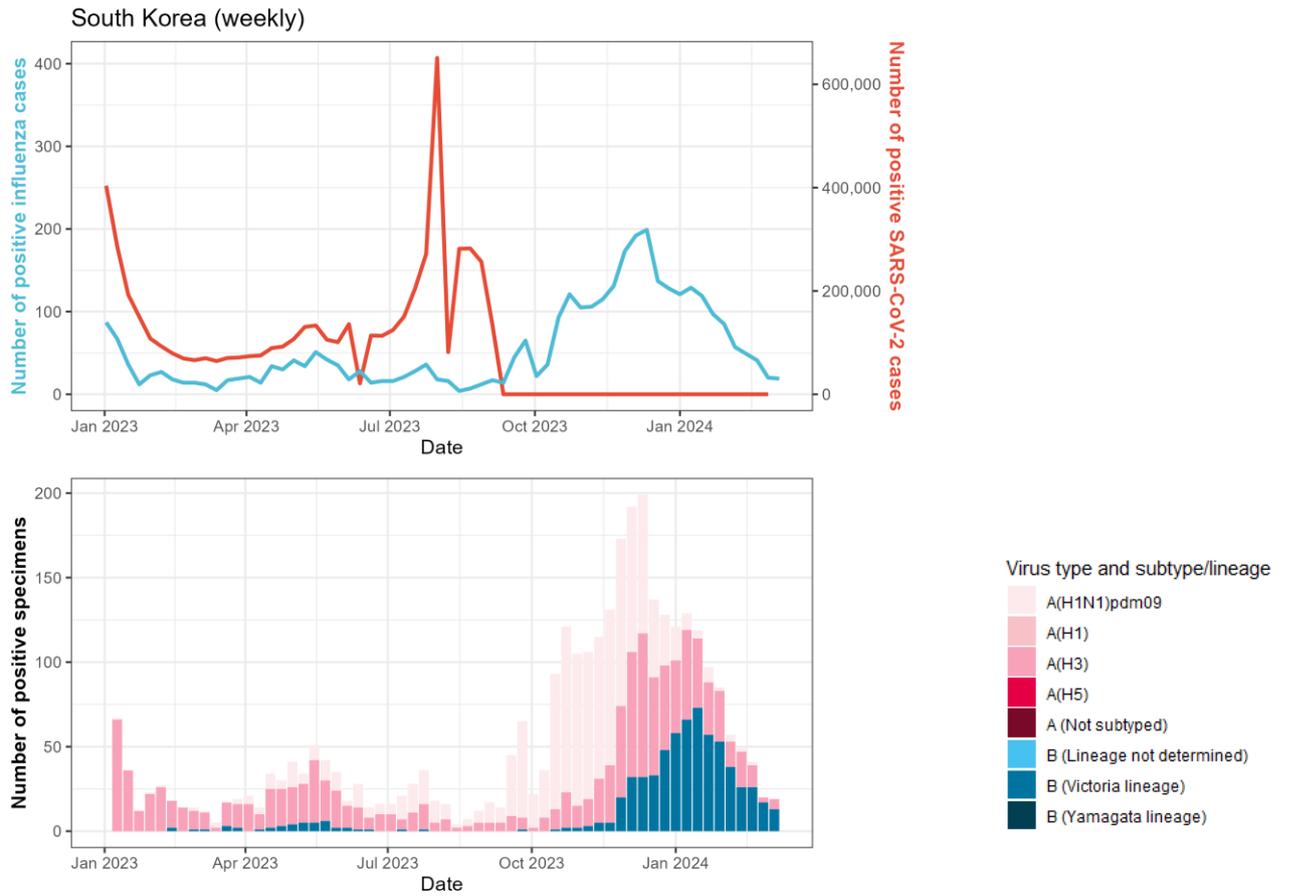
## Japan



Note: Japan has reported zero SARS-CoV-2 activity to the WHO since W21/2023

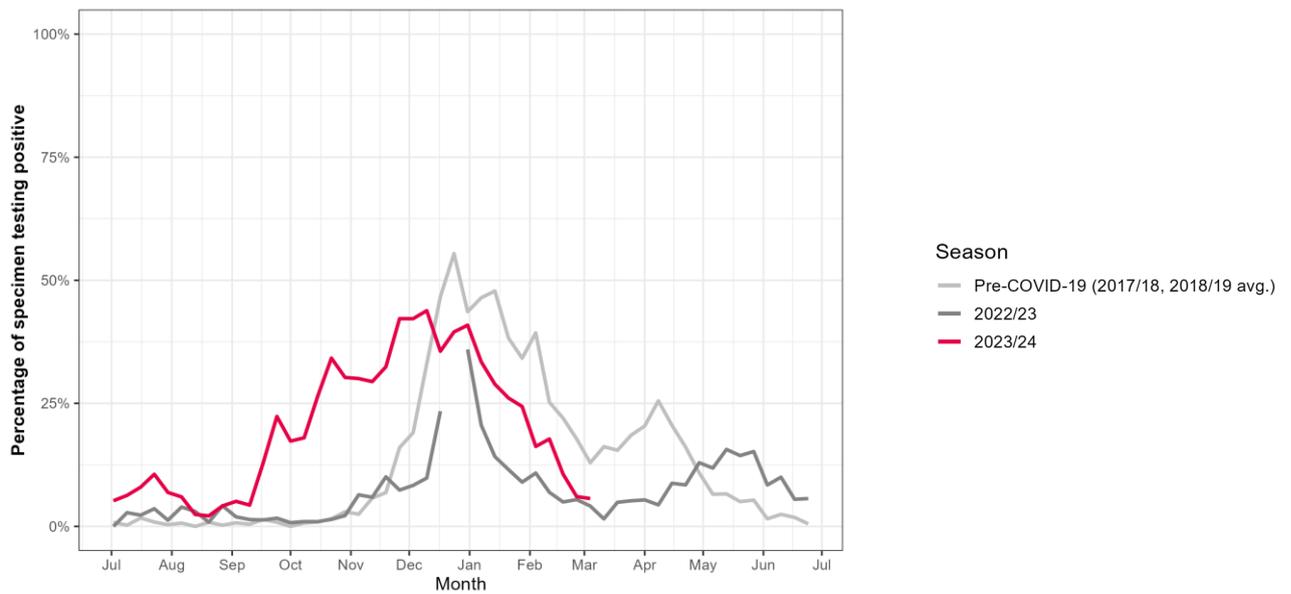
**Percentage of specimens testing positive for influenza in different seasons: data not available**

## South Korea



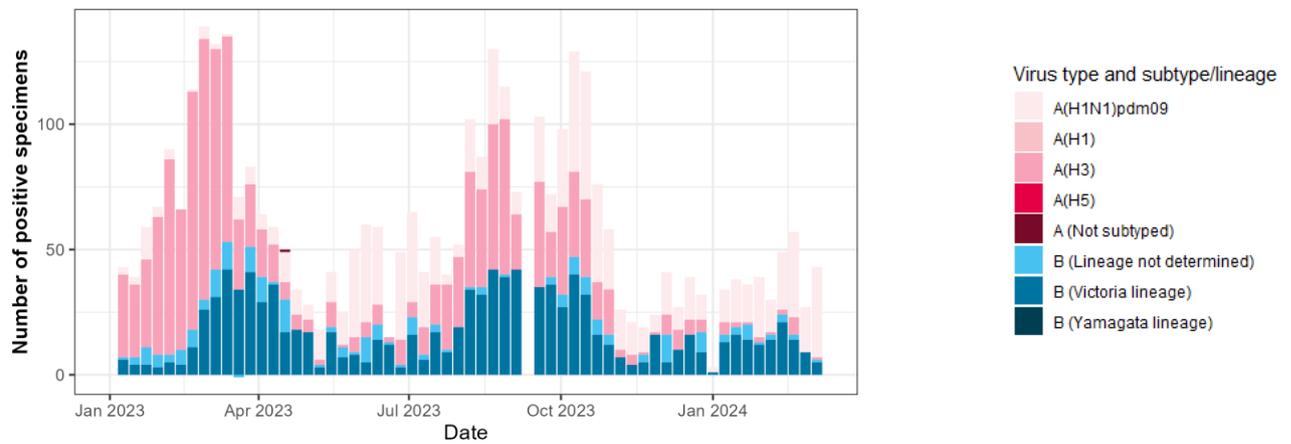
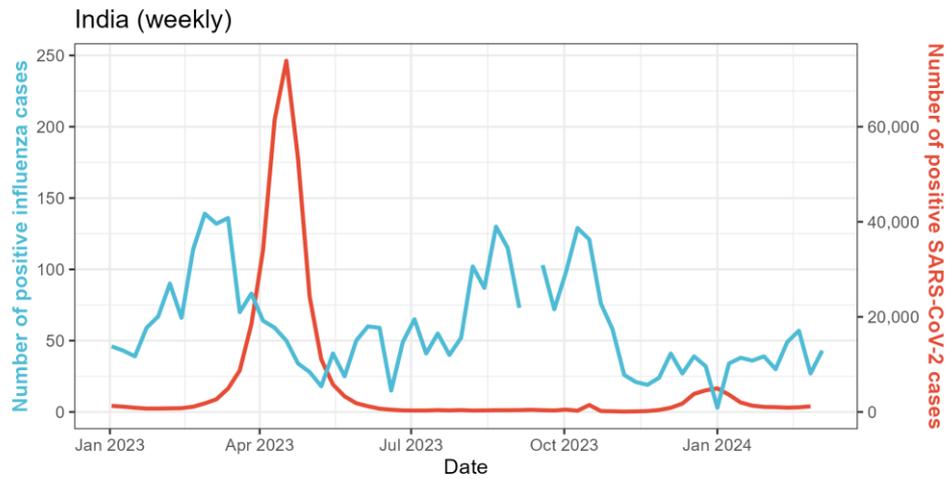
Note: South Korea has reported zero SARS-CoV-2 activity to the WHO since W37/2023

## Percentage of specimens testing positive for influenza in different seasons

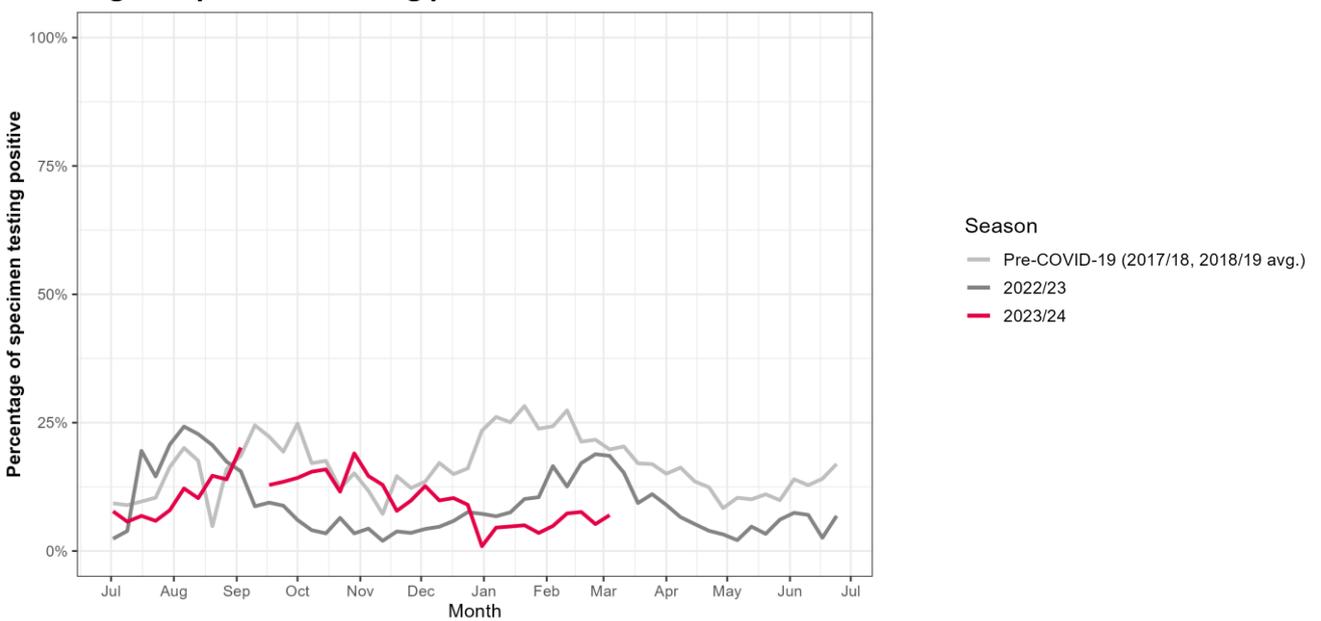


# Southern Asia

## India

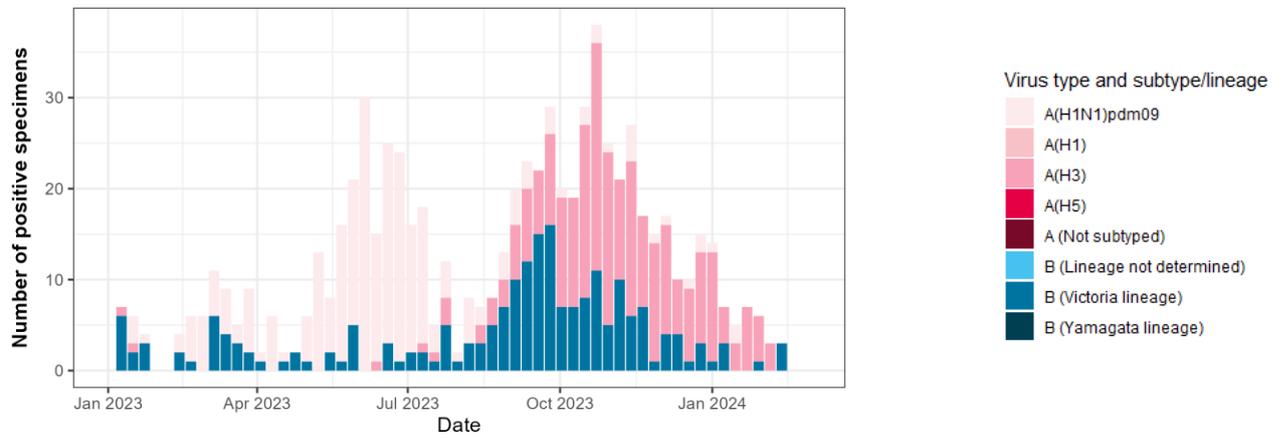
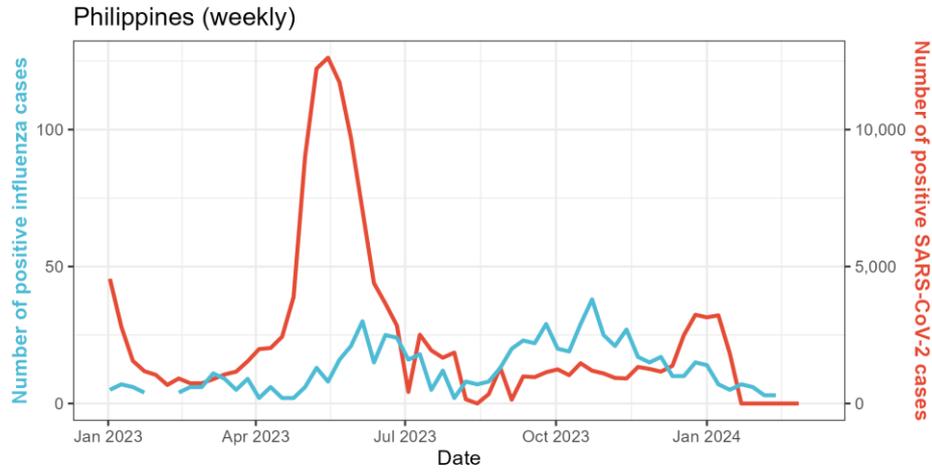


## Percentage of specimens testing positive for influenza in different seasons

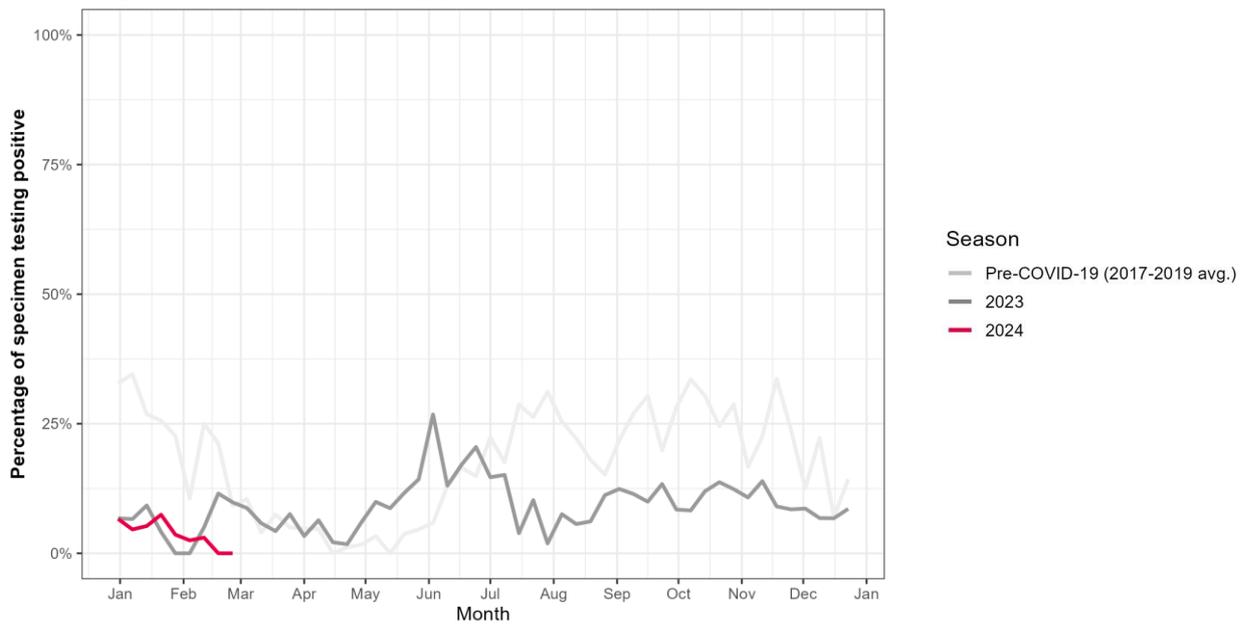


# South-East Asia

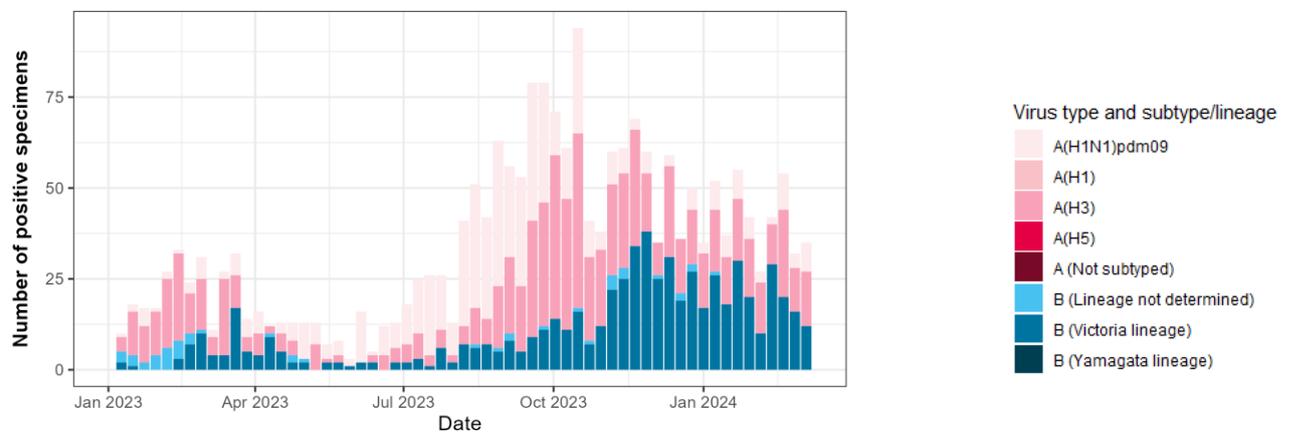
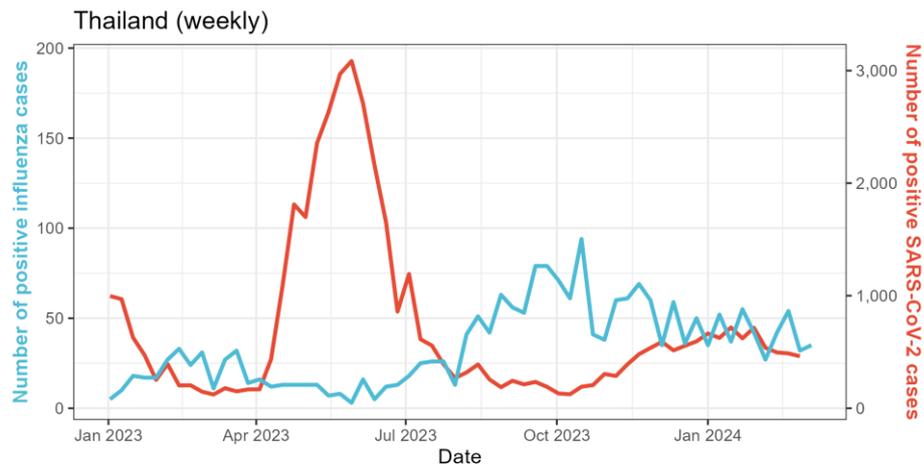
## Philippines



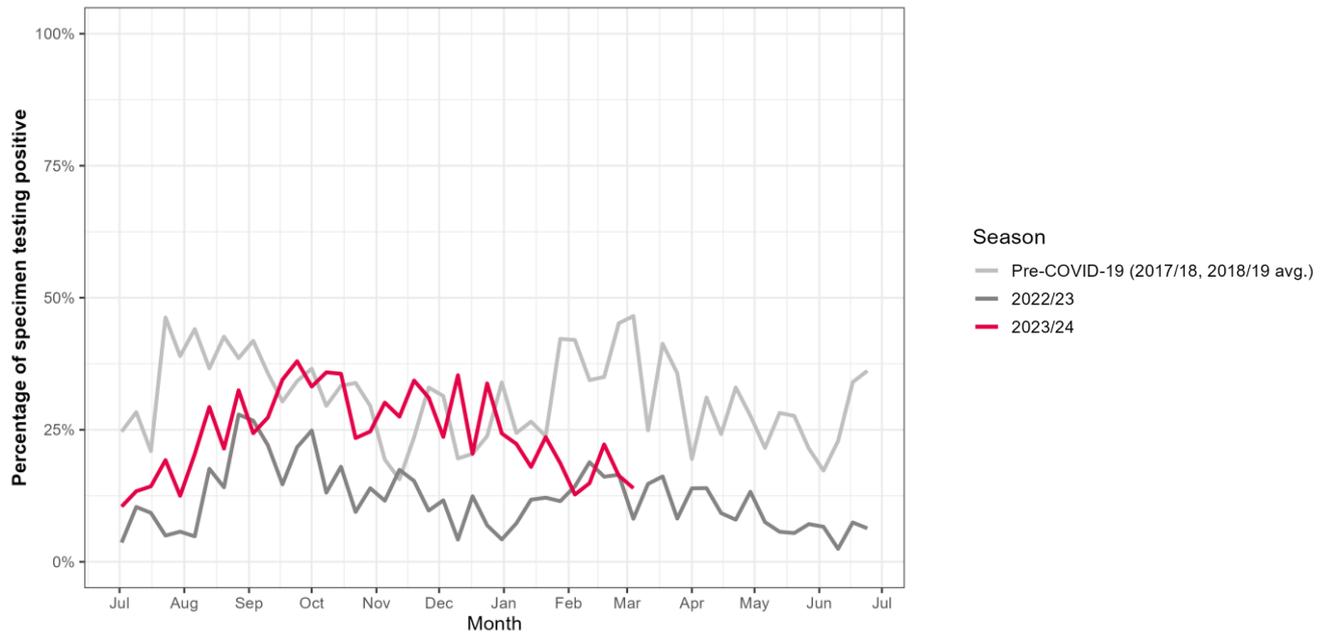
## Percentage of specimens testing positive for influenza in different seasons



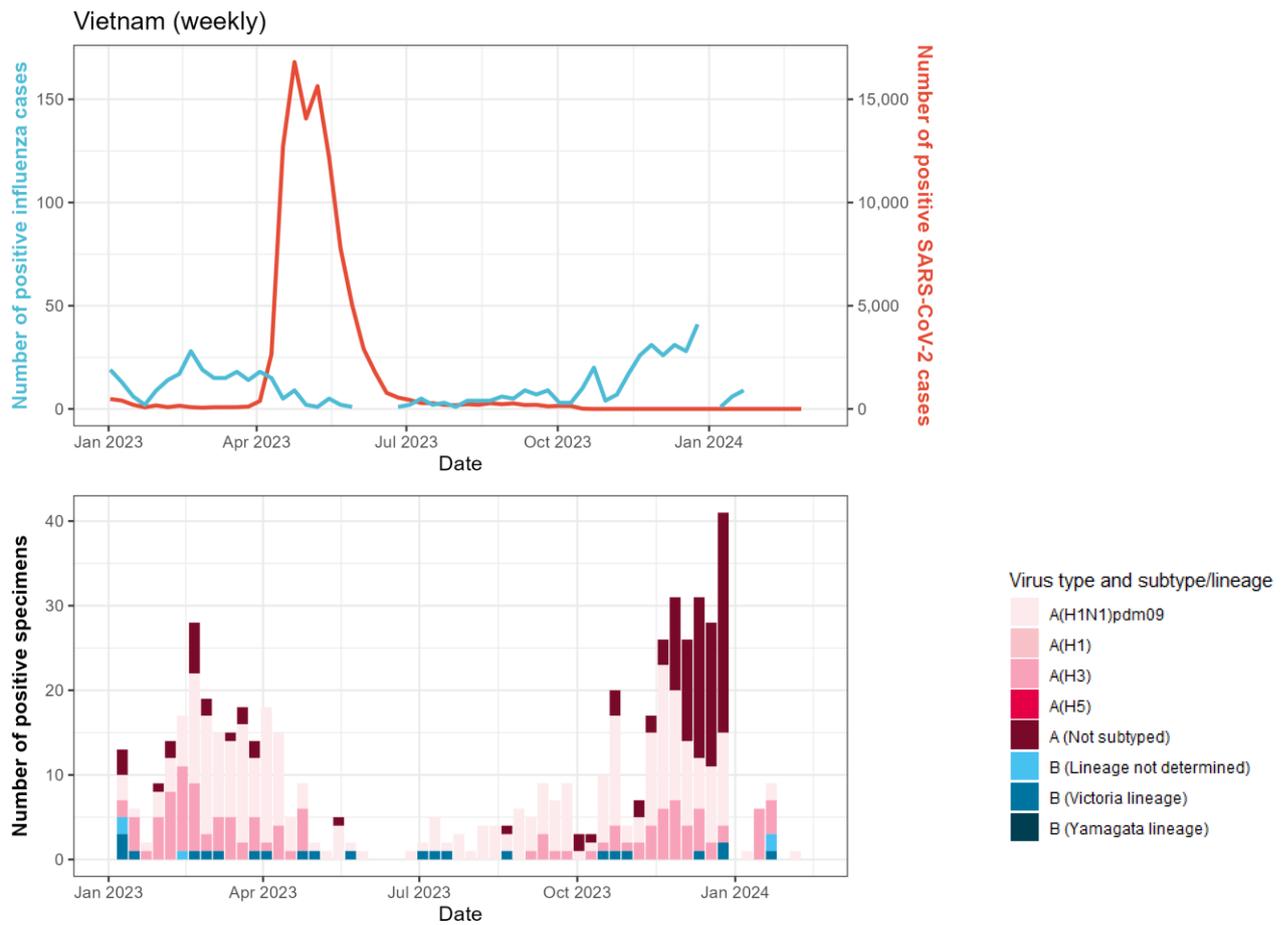
## Thailand



## Percentage of specimens testing positive for influenza in different seasons



## Vietnam

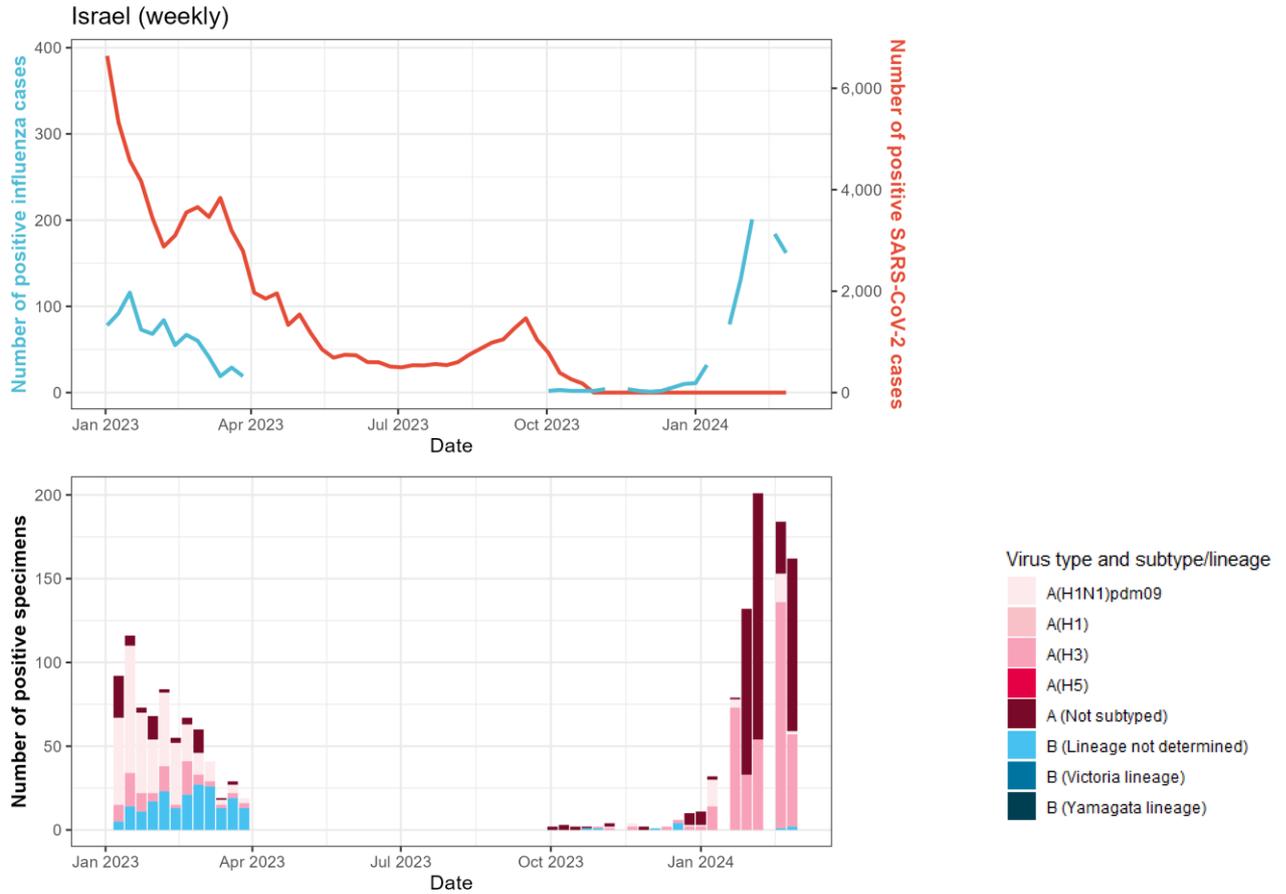


Note: Vietnam has reported zero SARS-CoV-2 activity to the WHO since W44/2023

**Percentage of specimens testing positive for influenza in different seasons: data not available**

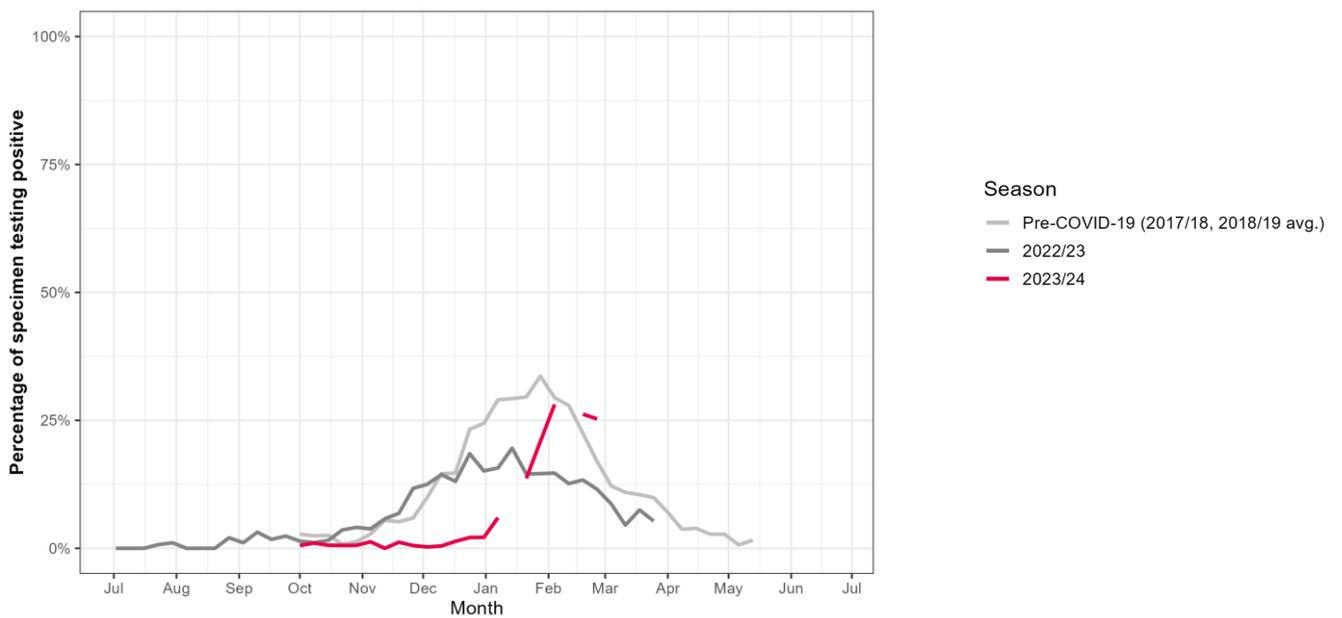
# Western Asia

## Israel



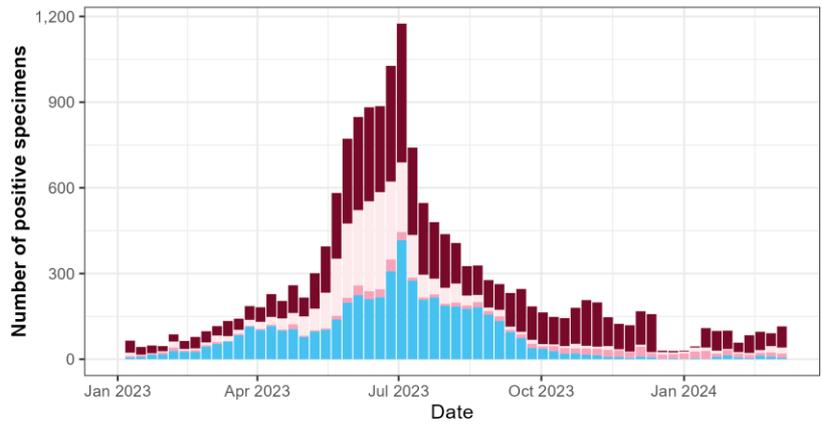
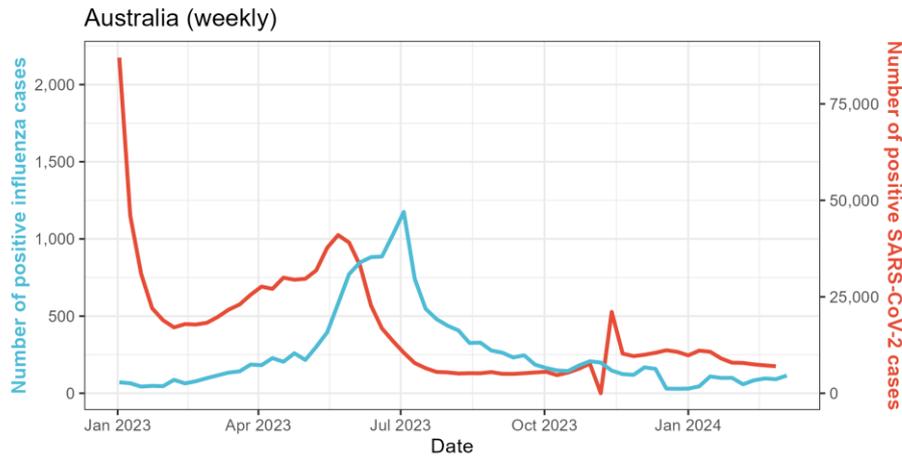
Note: Israel has reported zero SARS-CoV-2 activity to the WHO since W44/2023

## Percentage of specimens testing positive for influenza in different seasons



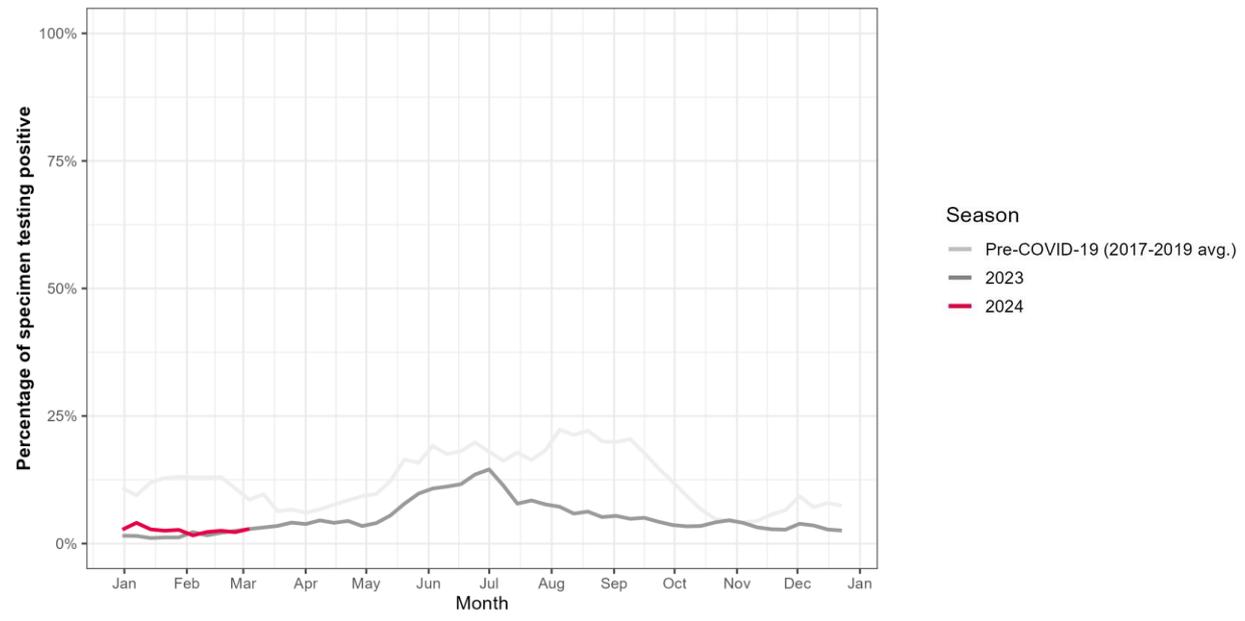
# Oceania

## Australia



- Virus type and subtype/lineage
- A(H1N1)pdm09
  - A(H1)
  - A(H3)
  - A(H5)
  - A (Not subtyped)
  - B (Lineage not determined)
  - B (Victoria lineage)
  - B (Yamagata lineage)

## Percentage of specimens testing positive for influenza in different seasons



## Absolute numbers per country

Country	Year	Cases <sup>a,b</sup> of SARS-CoV-2	+/- since last month <sup>c</sup>	Cases <sup>a</sup> of influenza	+/- since last month <sup>c</sup>	Week of last influenza update
Australia	2019			14,002		
Australia	2020	28,296		949		
Australia	2021	338,311		8		
Australia	2022	10,327,434		14,654		
Australia	2023	1,027,494		15,422		
Australia	2024	71,140	30,485	712	429	2024-10
Brazil	2019			3,459		
Brazil	2020	7,448,560		1,391		
Brazil	2021	14,782,177		1,240		
Brazil	2022	13,893,600		3,648		
Brazil	2023	1,395,623		21,939		
Brazil	2024	0	0	2,500	1,978	2024-10
Canada	2019			43,196		
Canada	2020	539,241		44,956		
Canada	2021	1,422,482		337		
Canada	2022	2,514,662		71,314		
Canada	2023	283,629		47,166		
Canada	2024	20,480	6,116	37,227	18,914	2024-10
China	2019			122,757		
China	2020	96,324		31,237		
China	2021	34,534		26,151		
China	2022	62,314,792		56,455		
China	2023	36,877,077		260,766		
China	2024	12,025	6,998	80,064	34,448	2024-10
Egypt	2019			1,999		
Egypt	2020	131,315		659		
Egypt	2021	249,205		233		
Egypt	2022	134,994		2,709		
Egypt	2023	509		3,079		
Egypt	2024	0	0	546	288	2024-10
France	2019			25,405		
France	2020	2,338,258		16,589		
France	2021	6,371,668		3,071		
France	2022	29,279,621		40,148		
France	2023	1,007,943		22,690		
France	2024	0	0	20,580	10,989	2024-09
Germany	2019			1,215		
Germany	2020	1,660,178		958		
Germany	2021	5,353,865		29		
Germany	2022	30,227,893		1,923		
Germany	2023	1,195,820		796		
Germany	2024	0	0	1,217	710	2024-10

Country	Year	Cases <sup>a,b</sup> of SARS-CoV-2	+/- since last month <sup>c</sup>	Cases <sup>a</sup> of influenza	+/- since last month <sup>c</sup>	Week of last influenza update
India	2019			10,428		
India	2020	10,187,850		655		
India	2021	24,598,952		5,128		
India	2022	9,890,304		1,948		
India	2023	336,066		3,282		
India	2024	15,863	3,959	313	202	2024-10
Israel	2019			1,796		
Israel	2020	399,105		1,424		
Israel	2021	965,663		456		
Israel	2022	3,391,936		774		
Israel	2023	84,854		841		
Israel	2024	0	0	801	679	2024-09
Italy	2019			6,361		
Italy	2020	2,039,182		7,485		
Italy	2021	3,583,249		31		
Italy	2022	19,438,072		5,817		
Italy	2023	1,601,141		5,256		
Italy	2024	53,631	8,474	4,594	1,255	2024-10
Japan	2019			10,343		
Japan	2020	217,312		2,915		
Japan	2021	1,514,477		9		
Japan	2022	26,534,616		273		
Japan	2023	5,537,167		7,515		
Japan	2024	0	0	905	299	2024-09
Mexico	2019			6,963		
Mexico	2020	1,453,414		4,799		
Mexico	2021	2,548,565		960		
Mexico	2022	3,243,611		10,314		
Mexico	2023	457,219		7,666		
Mexico	2024	0	0	4,251	2,117	2024-10
Netherlands	2019			5,166		
Netherlands	2020	773,198		3,235		
Netherlands	2021	2,312,304		471		
Netherlands	2022	5,480,565		14,019		
Netherlands	2023	64,963		9,582		
Netherlands	2024	4,031	1,087	10,068	6,179	2024-10
Philippines	2019			612		
Philippines	2020	469,003		52		
Philippines	2021	2,369,471		105		
Philippines	2022	1,220,895		260		
Philippines	2023	137,910		688		
Philippines	2024	8,183	0	45	12	2024-09
Poland	2019			1,786		
Poland	2020	1,259,923		1,282		
Poland	2021	2,790,909		2		
Poland	2022	2,314,550		1,604		
Poland	2023	266,683		2,085		
Poland	2024	27,894	6,594	4,951	3,993	2024-10

Country	Year	Cases <sup>a,b</sup> of SARS-CoV-2	+/- since last month <sup>c</sup>	Cases <sup>a</sup> of influenza	+/- since last month <sup>c</sup>	Week of last influenza update
South Africa	2019			1,164		
South Africa	2020	994,911		157		
South Africa	2021	2,413,026		413		
South Africa	2022	640,295		1,171		
South Africa	2023	24,404		1,024		
South Africa	2024	0	0	53	37	2024-10
South Korea	2019			1,702		
South Korea	2020	56,855		505		
South Korea	2021	554,812		0		
South Korea	2022	28,047,388		295		
South Korea	2023	5,912,818		2,586		
South Korea	2024	0	0	718	252	2024-10
Spain	2019			16,358		
Spain	2020	1,919,549		8,827		
Spain	2021	4,180,589		2,206		
Spain	2022	7,654,824		18,089		
Spain	2023	225,378		18,102		
Spain	2024	0	0	9,683	1,168	2024-10
Thailand	2019			1,568		
Thailand	2020	6,142		297		
Thailand	2021	2,203,829		23		
Thailand	2022	2,511,838		575		
Thailand	2023	40,567		1,717		
Thailand	2024	4,863	2,235	376	197	2024-10
United Kingdom	2019			42,447		
United Kingdom	2020	2,344,433		14,377		
United Kingdom	2021	10,230,346		2,755		
United Kingdom	2022	11,584,258		26,896		
United Kingdom	2023	705,864		23,264		
United Kingdom	2024	42,423	13,889	44,903	22,826	2024-10
United States	2019			268,524		
United States	2020	18,890,446		229,766		
United States	2021	32,988,414		39,507		
United States	2022	47,140,633		469,968		
United States	2023	4,417,336		174,497		
United States	2024	0	0	171,681	91,657	2024-10
Vietnam	2019			355		
Vietnam	2020	1,440		146		
Vietnam	2021	1,650,233		39		
Vietnam	2022	9,872,529		399		
Vietnam	2023	99,798		556		
Vietnam	2024	0	0	17	1	2024-07

<sup>a</sup> Laboratory-confirmed cases.

<sup>b</sup> As of the 24<sup>th</sup> bulletin, the data source, used by Our World In Data, for SARS-CoV-2 cases has been changed retrospectively. As a result, yearly totals displayed in this table may differ from those in previous bulletins.

<sup>c</sup> Influenza cases are reported by FluNet on a weekly basis. To convert these data to months, weekly data are assigned to the month most days in that week belong to. SARS-CoV-2 cases are reported per day and assigned to each month by date. +/- since last month includes all cases over the last full calendar month.

# Methodology

## Background

After assessment of alarming levels of spread and severity of SARS-CoV-2 virus, on March 11, 2020, WHO declared COVID-19 a pandemic [7]. The emergence of this new virus has had a major impact on the global circulation of respiratory viruses, including influenza and RSV [8]. The FluCov project aims to understand and communicate the impact of COVID-19 on: i) influenza activity and ii) prevention and control measures (e.g. vaccination) in the coming years.

## Scope

The countries included in this FluCov-Bulletin are distributed over the Americas (North, Central and Tropical South), Europe (Northern, South West and Eastern), Africa (Northern and Southern), Asia (Eastern, Southern, South East and Western) and Oceania. These data were compared to the prevention and control measures applied in each country using the Stringency Index from the Oxford COVID-19 Government Response Tracker (OxCGRT), when this indicator was available (until 31 December 2022) [9].

## Data sources

- **Influenza:** FluNet [10] is a global web-based tool for influenza virological surveillance first launched in 1997. The virological data entered into FluNet, e.g. number of influenza viruses detected by subtype, are critical for tracking the movement of viruses globally and interpreting the epidemiological data. The data are provided remotely by National Influenza Centres (NICs) of the Global Influenza Surveillance and Response System (GISRS) and other national influenza reference laboratories collaborating actively with GISRS or are uploaded from WHO regional databases.
- **SARS-CoV-2:** Our World in Data systematically collects COVID-19 data which is presented in their online tool [11]. We used this platform to extract data on the number of cases, as well as tests performed per country. As of 8 March 2023, Our World in Data changed their primary data source from the John Hopkins repository on daily confirmed COVID-19 cases to the WHO [12].
- **Government response tracker:** The Oxford COVID-19 Government Response Tracker (OxCGRT) [9] systematically collects information on several different common policy responses that governments have taken to respond to the pandemic on 20 indicators such as school closures and travel restrictions. It now has data from more than 180 countries. OxCGRT data is downloaded directly from the Our World in Data platform.

## Extraction details

Data were extracted on 18 March 2024 and cover the period 1 January 2019 to 10 March 2024. Data from both platforms are regularly updated and **sometimes retrospectively corrected**. This might explain any discrepancies between our reported figures and the data published online, even when referring to the exact same period. In case of any unclear details or perceived irregularities, feel free to contact us at [fluov@nivel.nl](mailto:fluov@nivel.nl).

## References

- [1] ECDC & WHO-EURO. European Respiratory Virus Surveillance Summary. [erviss.org](https://www.erviss.org) [accessed 19 March 2024]
- [2] Caini S, et al. Global Influenza B Study. Temporal Patterns of Influenza A and B in Tropical and Temperate Countries: What Are the Lessons for Influenza Vaccination? *PLoS One*. 2016 Mar 31;11(3):e0152310. doi: 10.1371/journal.pone.0152310.
- [3] Paget J, Caini S, Del Riccio M, van Waarden W, Meijer A. Has influenza B/Yamagata become extinct and what implications might this have for quadrivalent influenza vaccines? *Euro Surveill*. 2022 Sep;27(39):2200753. doi: 10.2807/1560-7917.ES.2022.27.39.2200753
- [4] CDC. Weekly U.S. Influenza Surveillance Report. [Weekly U.S. Influenza Surveillance Report | CDC](https://www.cdc.gov/fluview/weekly-surveillance-reports/) [accessed 18 March 2024]
- [5] Our World In Data. Weekly new hospital admission for COVID-19 per million. [Weekly new hospital admissions for COVID-19 per million \(ourworldindata.org\)](https://ourworldindata.org/weekly-new-hospital-admissions-for-covid-19-per-million) [accessed 5 March 2024]
- [6] WHO. Statement on the fifteenth meeting of the IHR (2005) Emergency Committee on the COVID-19 pandemic. [Statement on the fifteenth meeting of the IHR \(2005\) Emergency Committee on the COVID-19 pandemic \(who.int\)](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-report/fifteenth-meeting-of-the-ihr-2005-emergency-committee-on-the-covid-19-pandemic) [accessed 20 March 2024]
- [7] WHO. Listing of WHO's response to COVID-19. <https://bit.ly/3mIMtRi> [accessed 1 July 2022]
- [8] WHO. Influenza Update N° 416. <http://bit.ly/3T5SvHV> [accessed 7 April 2022]
- [9] Oxford COVID-19 Government Response Tracker, Blavatnik School of Government, University of Oxford. <http://bit.ly/41WqmQX> [accessed 16 June 2021]
- [10] WHO. FluNet. <https://www.who.int/tools/flunet> [accessed 8 March 2023]
- [11] Ritchie, H., Ortiz-Ospina, E., Beltekian, D., Mathieu, E., Hasell J., Macdonald B. et al. Coronavirus Pandemic (COVID-19). <https://ourworldindata.org/coronavirus> [accessed 15 June 2021]
- [12] Mathieu E, Rodés-Guirao L. Our World in Data will rely on data from the WHO to track confirmed COVID-19 cases and deaths. <https://ourworldindata.org/covid-jhu-who> [accessed 5 April 2023]

---

## Project Team

**Nivel, Netherlands:** Bronke Boudewijns, Susanne Heemskerk, Marco Del Riccio, Daan van Kooten, Saverio Caini, Caroline Schneeberger, John Paget

### Global Influenza Initiative:

Ben Cowling, School of Public Health, University of Hong Kong, Hong Kong

Ann Falsey, Rochester General Hospital, University of Rochester School of Medicine, Rochester, NY

Angela Gentile, Ricardo Gutiérrez Children's Hospital, Buenos Aires

Jan Kyncl, Department of Infectious Diseases Epidemiology, National Institute of Public Health, Prague

Bruno Lina: Virpath Laboratory, University of Lyon, Lyon

Raina McIntyre: The Kirby Institute, University of New South Wales, Sydney



Global **Influenza** Initiative

**Sanofi, France:** Erica Dueger, Clotilde El Guerche-Séblain, Meral Akçay, Cecile Eymin

## Websites

Project Website: <https://www.nivel.nl/en/fluov>

FluCoV Dashboard: <https://www.nivel.nl/en/dossier-epidemiology-respiratory-viruses/fluov-dashboard>

## Funding

The FluCoV Project is funded by Sanofi, France.