FluCov-Bulletin – April 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 in April (see Figure 1). The following country patterns were observed for **influenza**:

- In the <u>Northern Hemisphere</u>, **influenza** activity continued to decrease and returned to baseline activity in all European countries covered by the bulletin (**France**, **Germany**, **Italy**, the **Netherlands**, **Poland**, **Spain,** and the **United Kingdom**).
- **Influenza** activity also decreased in **Canada** and **Mexico**, with **influenza** B (lineage not determined) predominant in **Canada** and a mix of **influenza** A(H3N2) and B/Victoria in **Mexico**.
- **Influenza** activity continued to decrease in **China** with an overall positivity rate under 10% towards the end of April. The predominant viruses were **influenza** B/Victoria, and A(H1N1)pdm09.
- **Influenza** B/Victoria was dominant in **South Korea** and **Japan**, where detections were low.
- Continued low **influenza** activity was reported in **India**, the **Philippines**, **Thailand** and **Vietnam.**
- In **Egypt**, **influenza** continued to be reported at low levels with a mix of **influenza** A and B (lineage not determined).
- In the <u>Southern Hemisphere</u>, **influenza** detections decreased in **Brazil** and have been low in **Australia** and **South Africa**. In **South Africa** an increase in detections and the percentage of specimens that tested positive for **influenza** was observed at the end of April.
- No update on **influenza** activity was available for **Israel** and the **United States** in April.

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 April 2024:

- **SARS-CoV-2** activity was low with a decreasing trend in **Australia**, **Canada**, **China**, **India**, **Italy**, **Netherlands**, **Poland** and the **United Kingdom**.
- **SARS-CoV-2** activity was also low in **South Africa**.
- An increase in **SARS-CoV-2** activity was reported in **Thailand**.
- No update on **SARS-CoV-2** detections was available for **Brazil, Egypt, France, Germany, Israel, Japan, Mexico, Philippines, South Korea, Spain, United States,** and **Vietnam** in April.

Implications

the Northern Hemisphere, **influenza** activity continued to decline and is now below baseline in Europe, the **United States** and **Canada** [1-3]. In the 2023/24 Northern Hemisphere season, the prevalent **influenza** strains have been A(H1N1)pdm09 and A(H3N2), with the latter driving the November peak in **China**. However, **influenza** B/Victoria – the dominant and only **influenza** B lineage currently circulating – was detected more frequently later in the season and replaced **influenza** A as the dominant strain in **Canada**, **China**, **Japan** and **South Korea** in February/March 2024. This bimodal curve of **influenza** A and B is not uncommon and was already regularly seen before the COVID-19 pandemic [4]. In the Southern Hemisphere, **influenza** activity decreased in **Brazil** and remained low in **Australia** and **South Africa**, with a slight increase at the end of April in **South Africa**. Detections also remained low in **New Zealand** and **Argentina**, but have been increasing in **Chile** since March [5]. It is of importance that the lineage of **influenza** B specimens continues to be determined, to understand whether **influenza** B/Yamagata has ceased circulating globally [6]. The **United States** (CDC) reports that vaccine components of the current **influenza** vaccine are well-matched to circulating A(H1N1)pdm09, B/Victoria and A(H3) clades [2]. 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 April 2024, **SARS-CoV-2** activity is low in almost all countries, after a peak in late 2023. An increase in **SARS-CoV-2** detections in April was only reported in **Thailand**. One year following the WHO's declaration of the pandemic's end [7], 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.
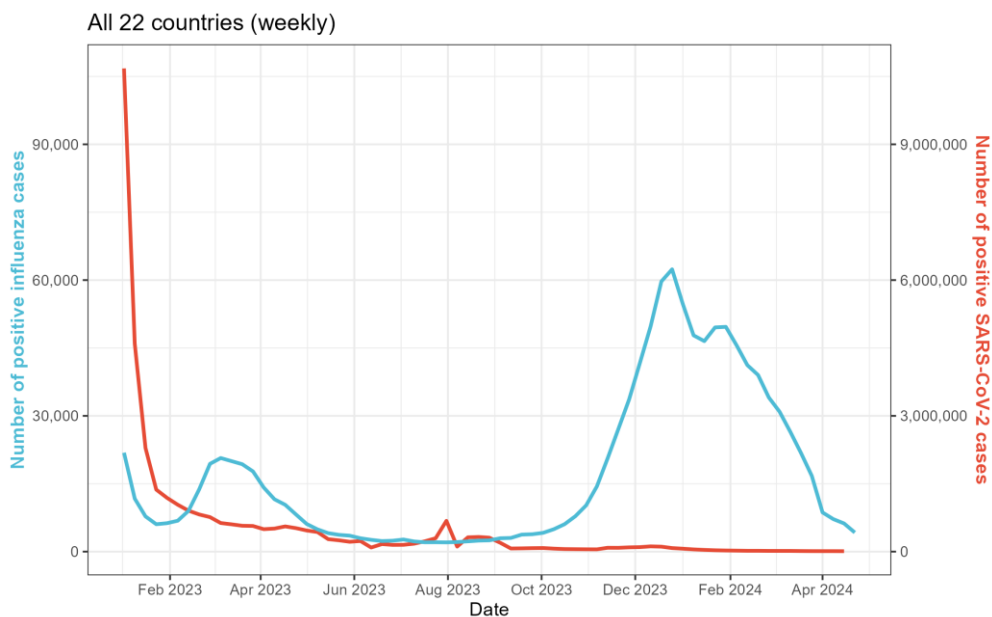

Figure 1: SARS-CoV-2 and influenza detections in the 22 countries covered by the Bulletin (period: from week 1/2023 to week 17/2024).

Disclaimer: Comparisons <u>between countries and seasons</u> 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 5 May, 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/flucov-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)
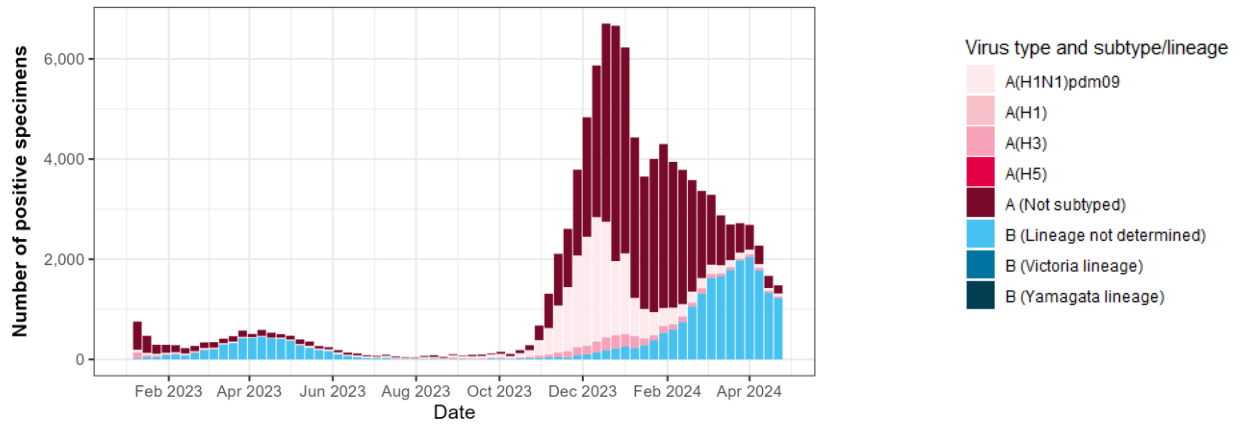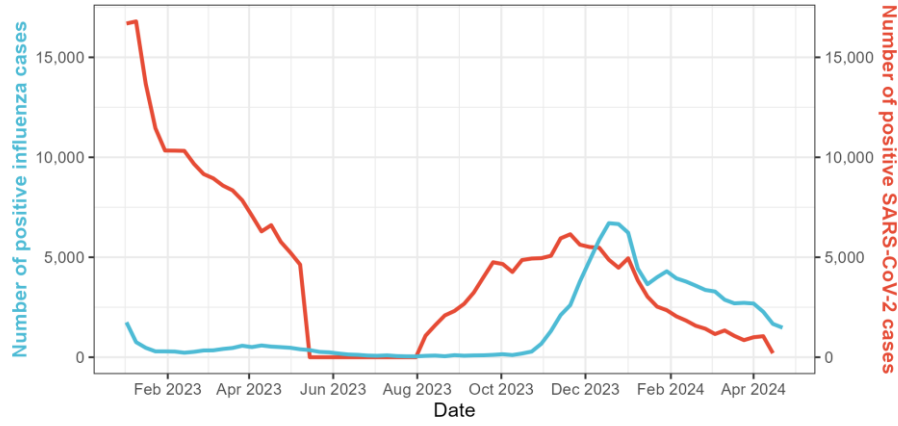
Virus type and subtype/lineage
- A(H1N1)pdm09
- A(H1)
- A(H3)
- A(H5)
- A (Not subtyped)
- B (Lineage not determined)
- B (Victoria lineage)
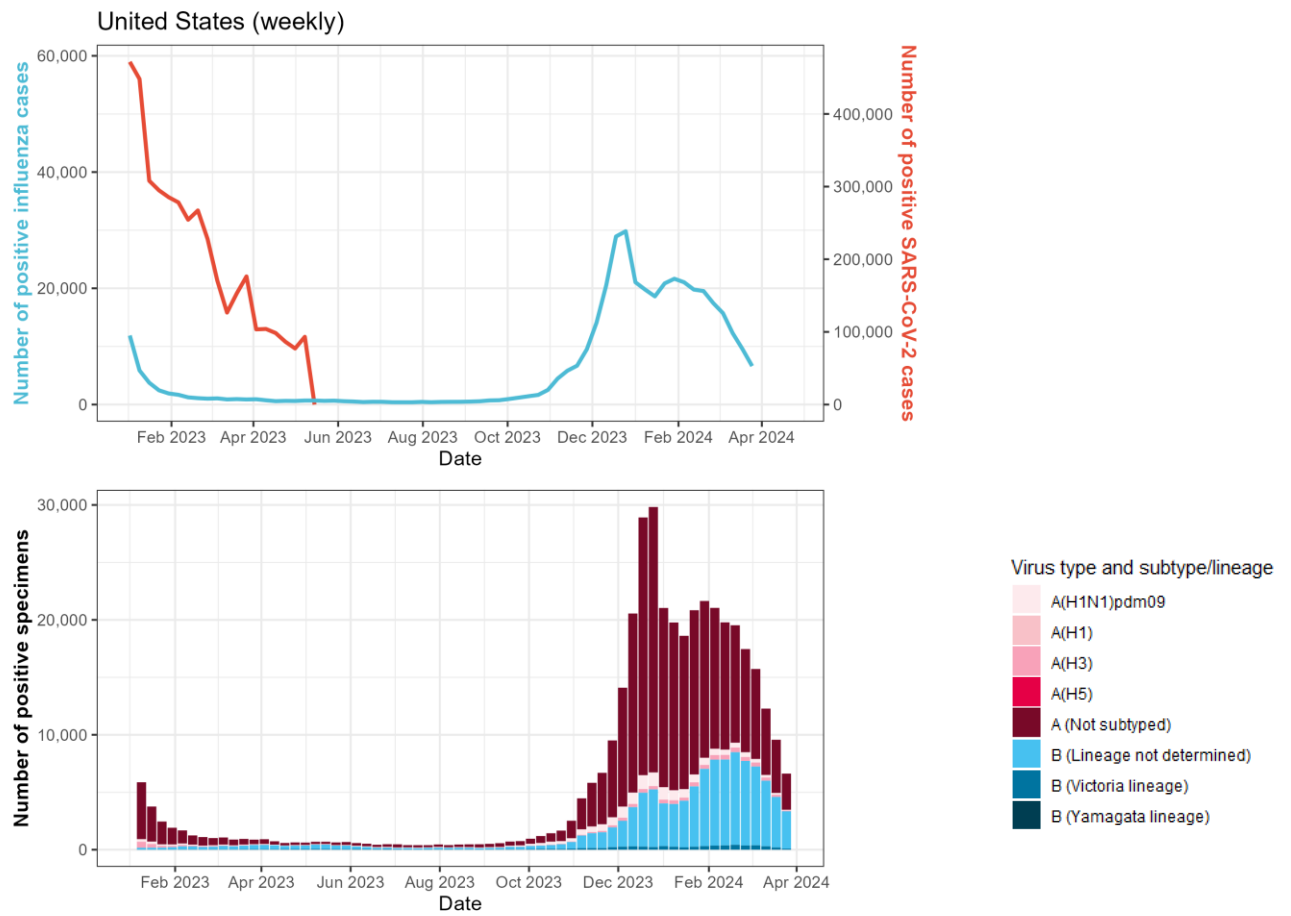- B (Yamagata lineage)

Percentage of specimens testing positive for influenza in different seasons

Season
- Pre-COVID-19 (2017/18, 2018/19 avg.)
- 2022/23
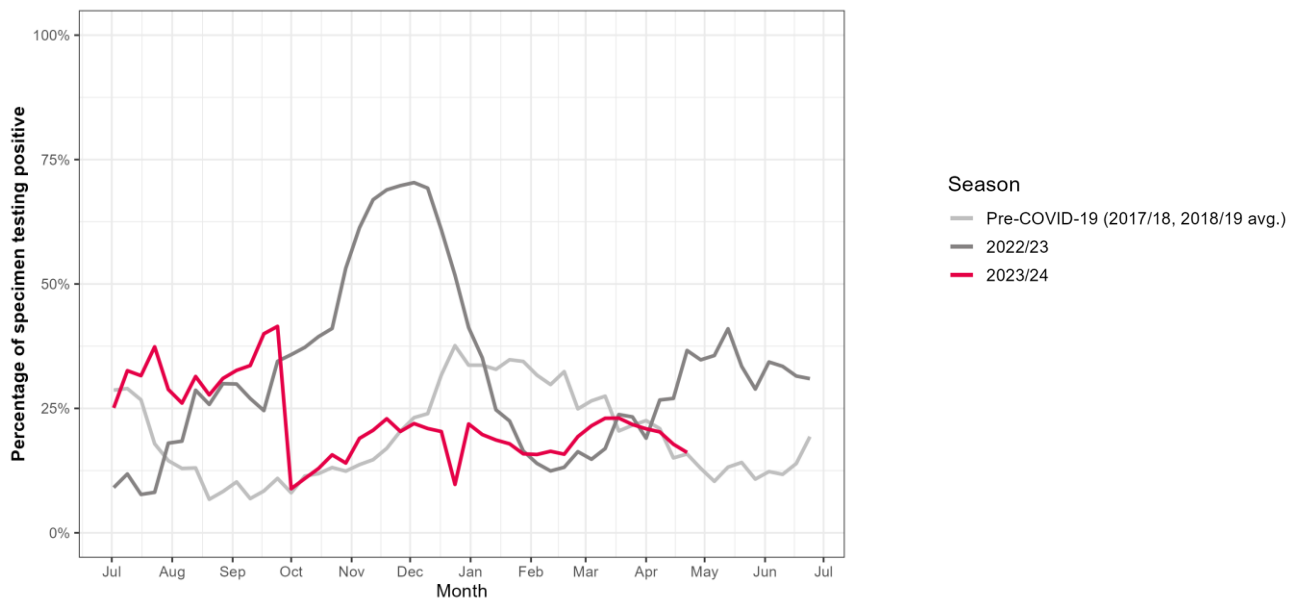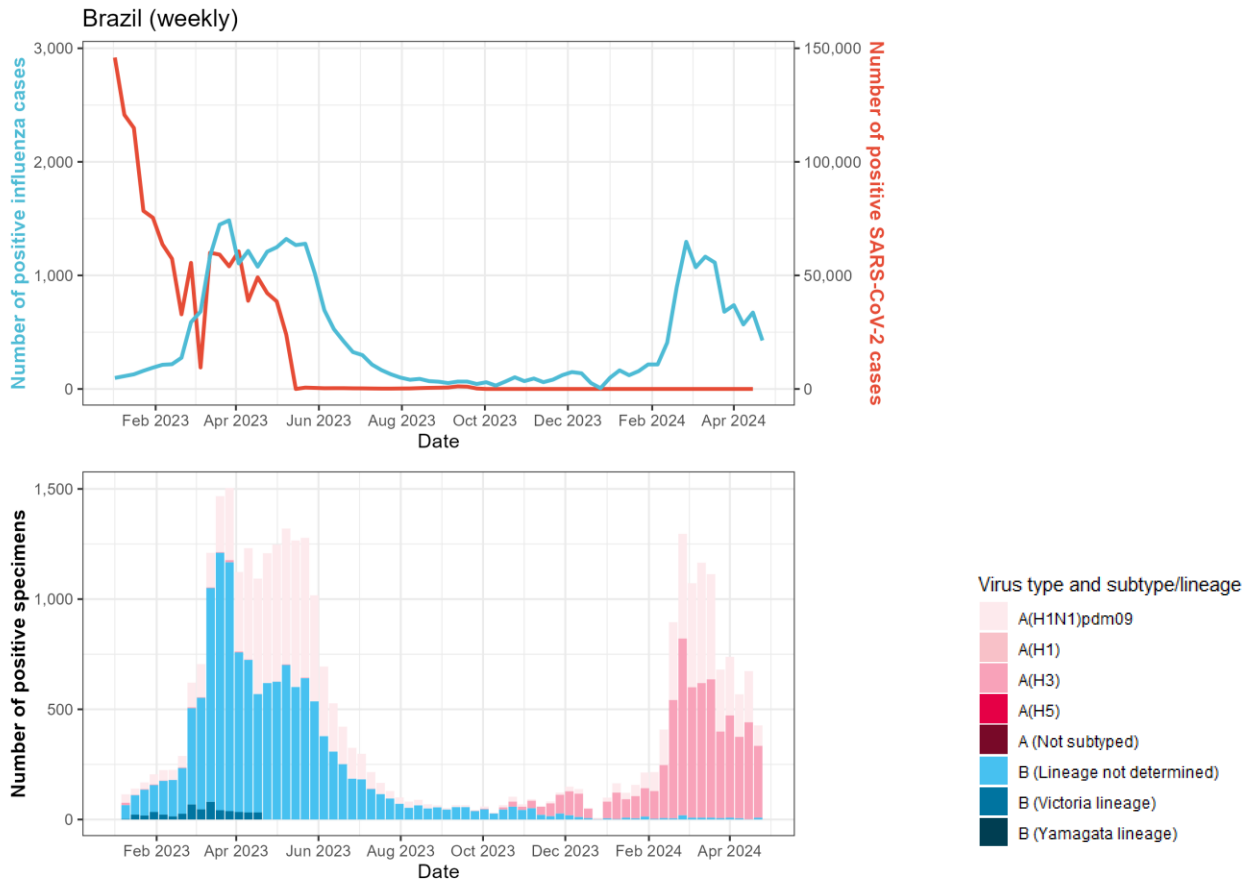- 2023/24

United States
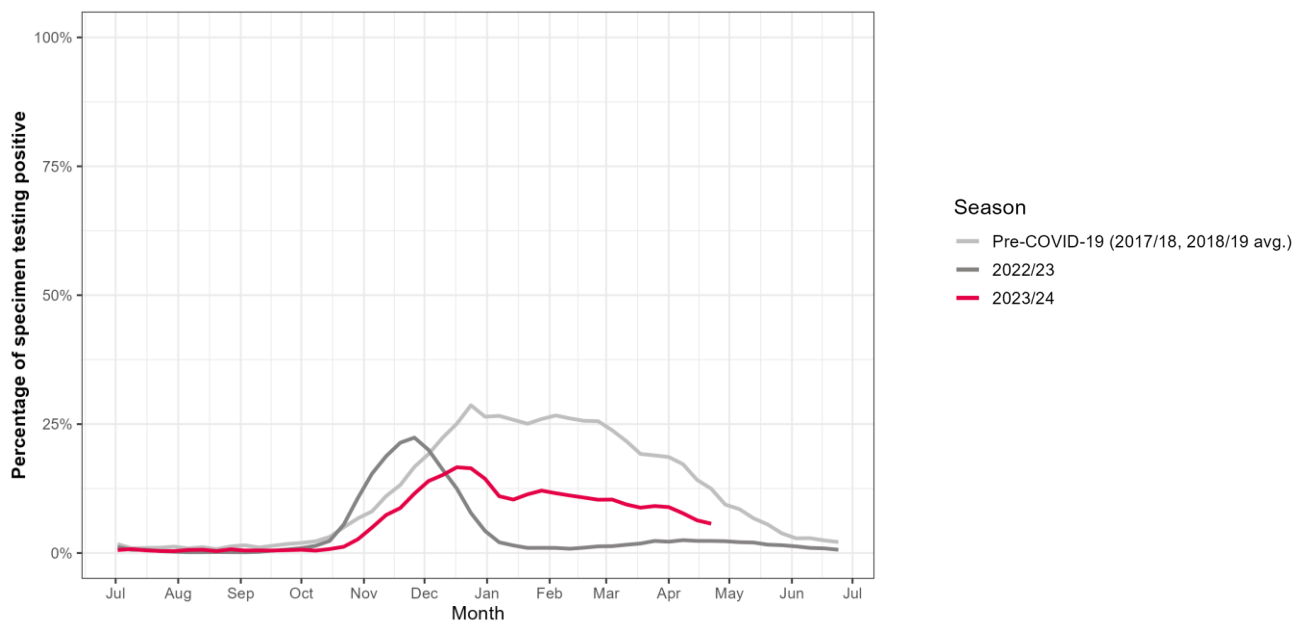
United States (weekly)

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
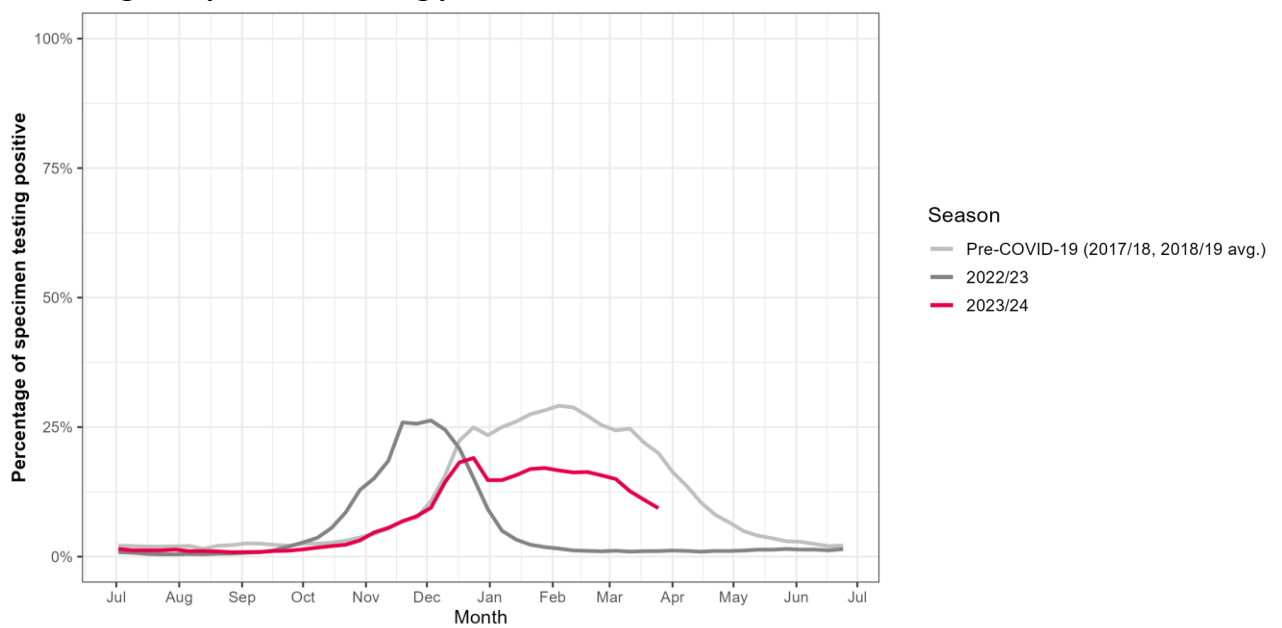
Central America Caribbean
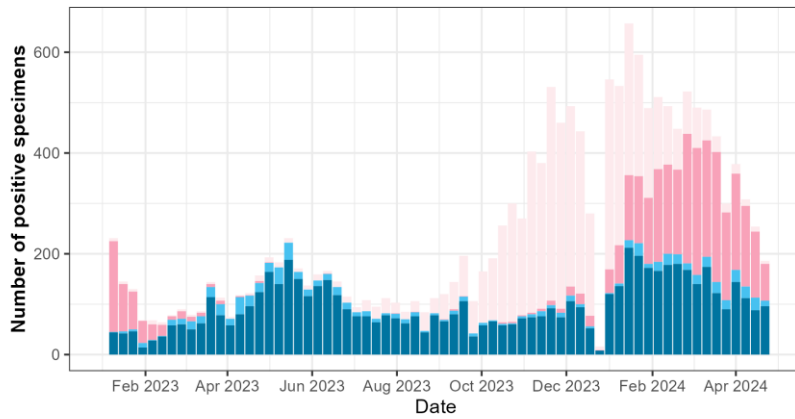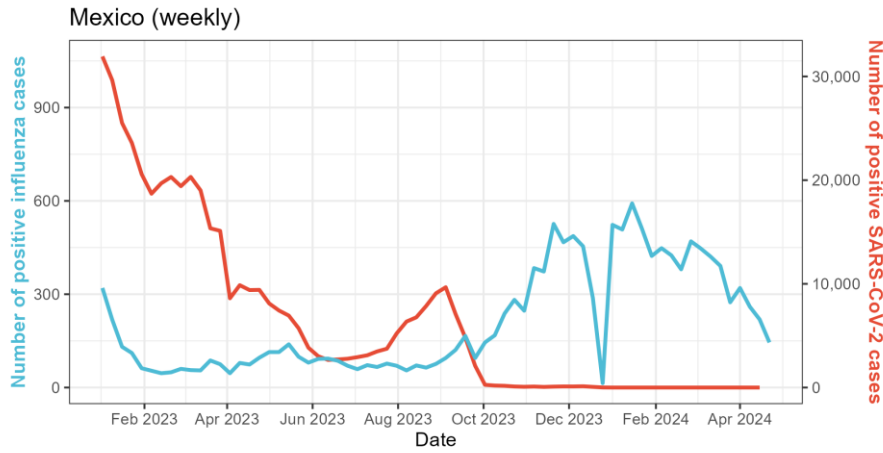
Mexico

Mexico (weekly)

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

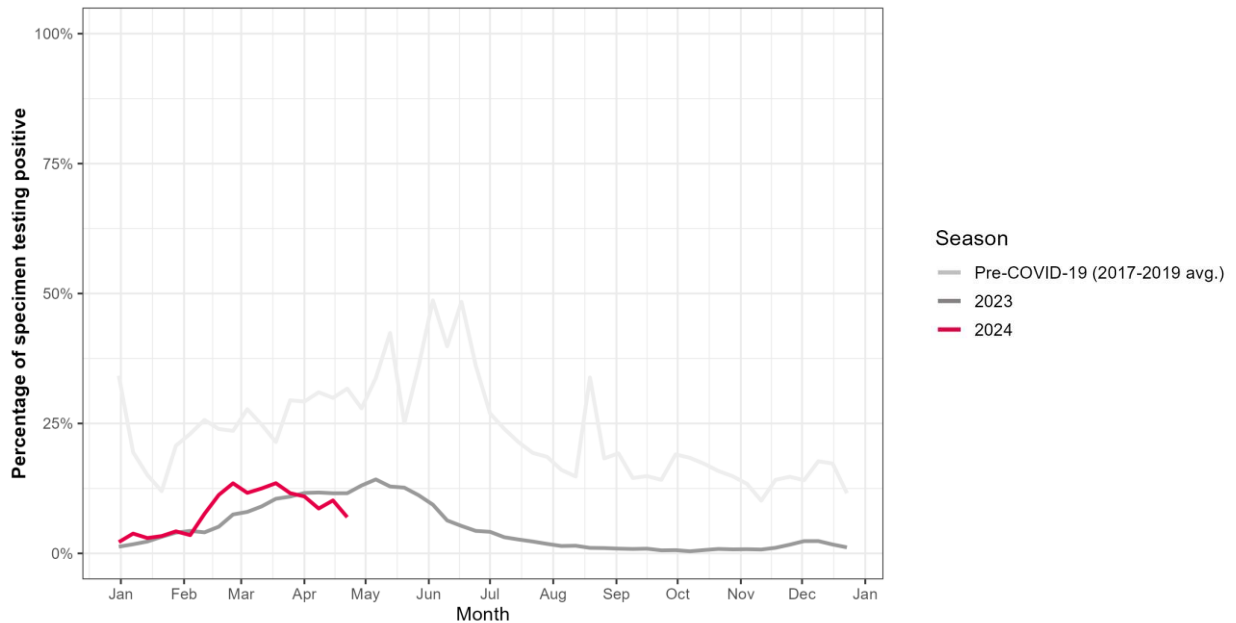## Percentage of specimens testing positive for influenza in different seasons
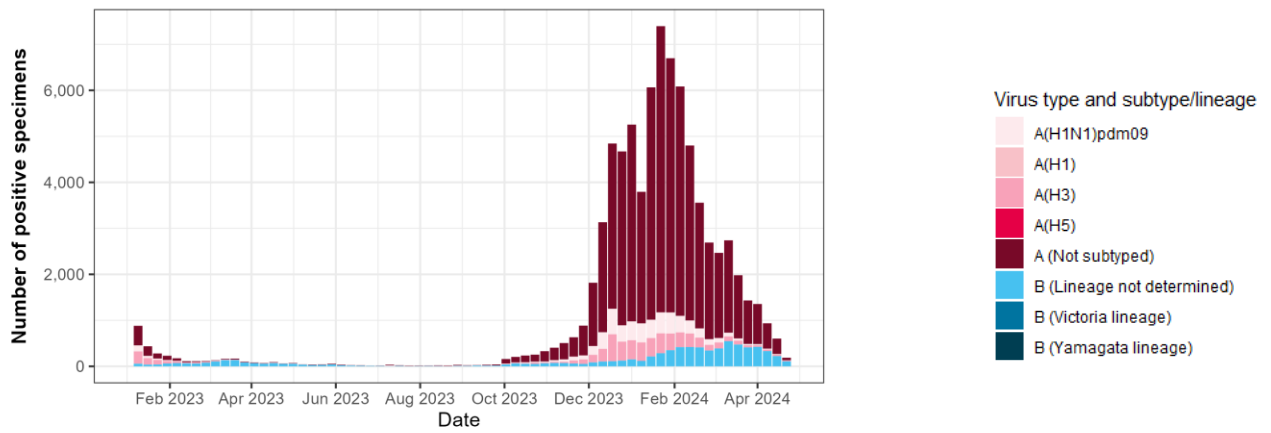
Tropical South America
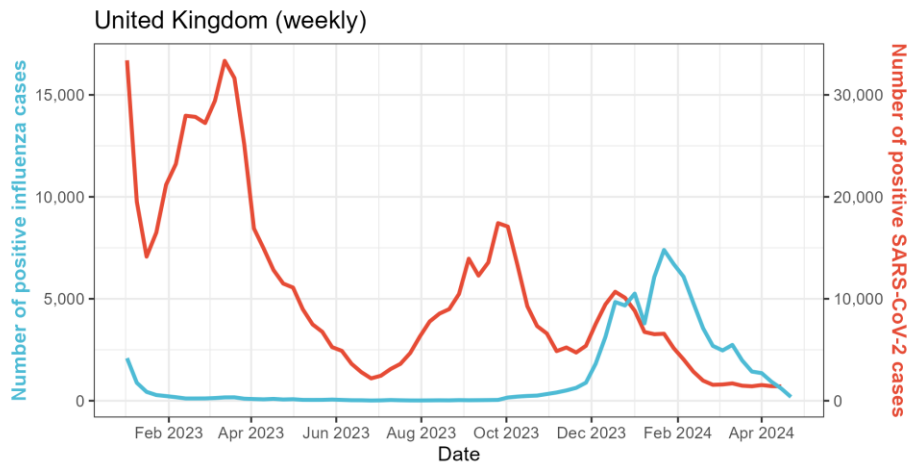
Brazil

Brazil (weekly)

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
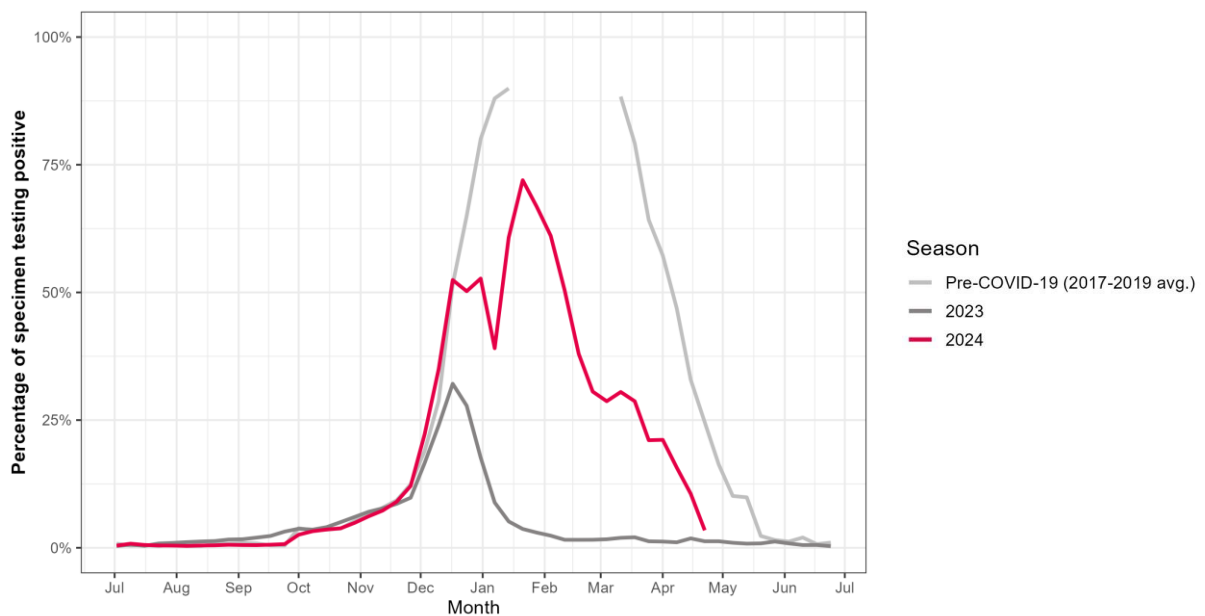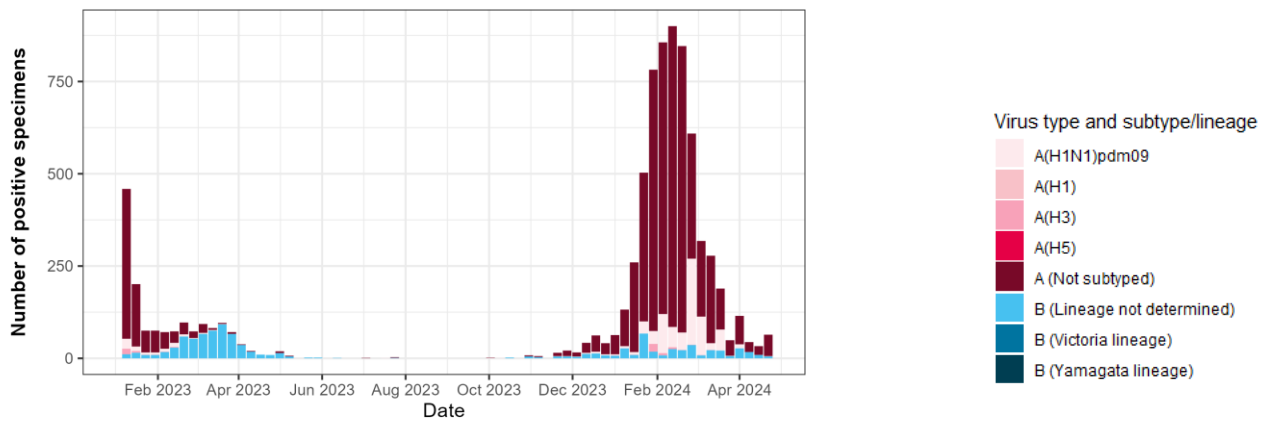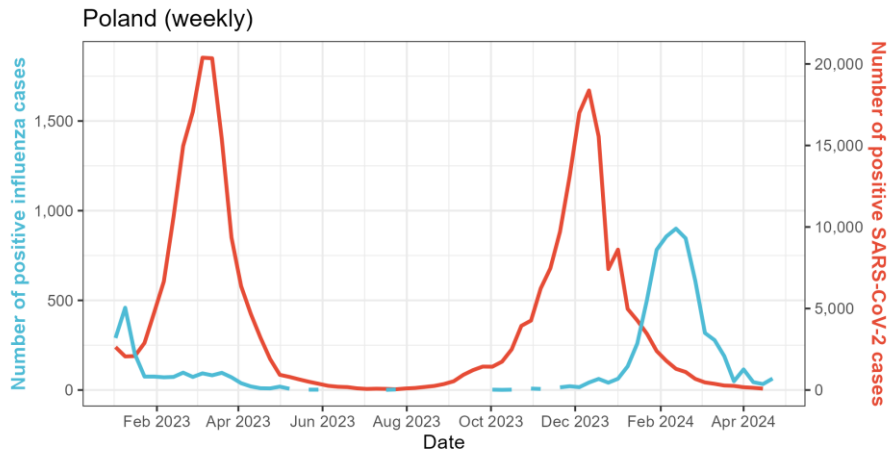
Northern Europe

United Kingdom

United Kingdom (weekly)

Percentage of specimens testing positive for influenza in different seasons

Eastern Europe

Poland

Poland (weekly)

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

Season
- Pre-COVID-19 (2017/18, 2018/19 avg.)
- 2022/23
- 2023/24

South West Europe

France

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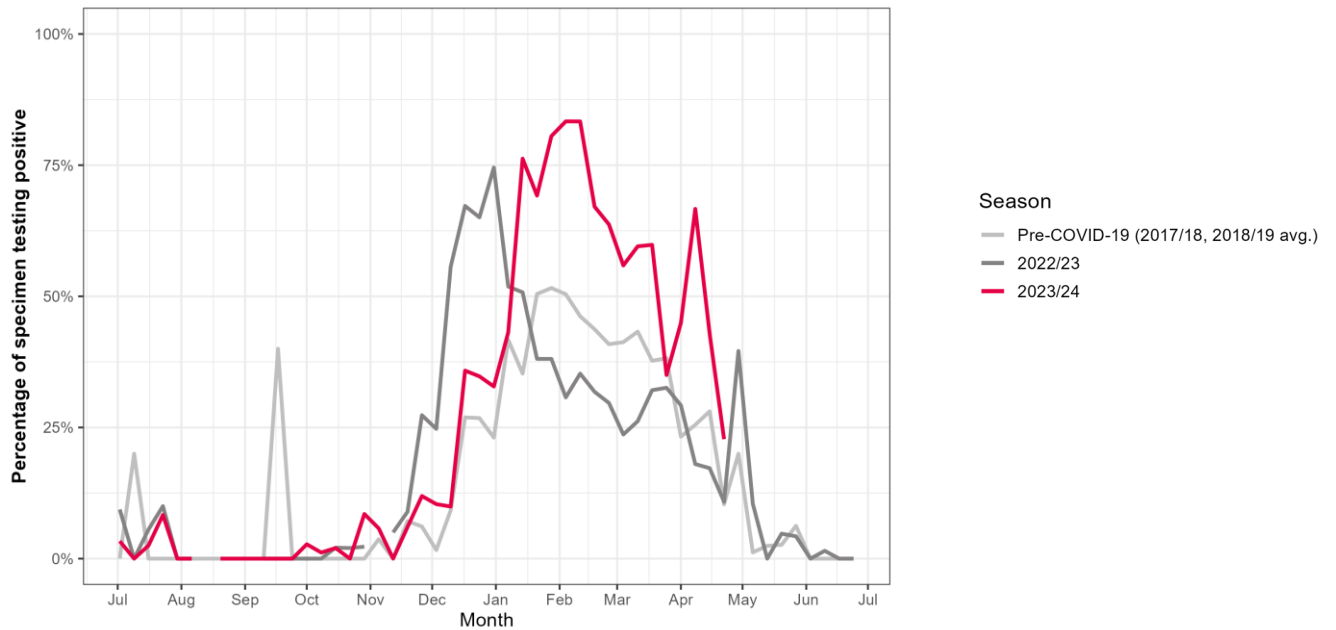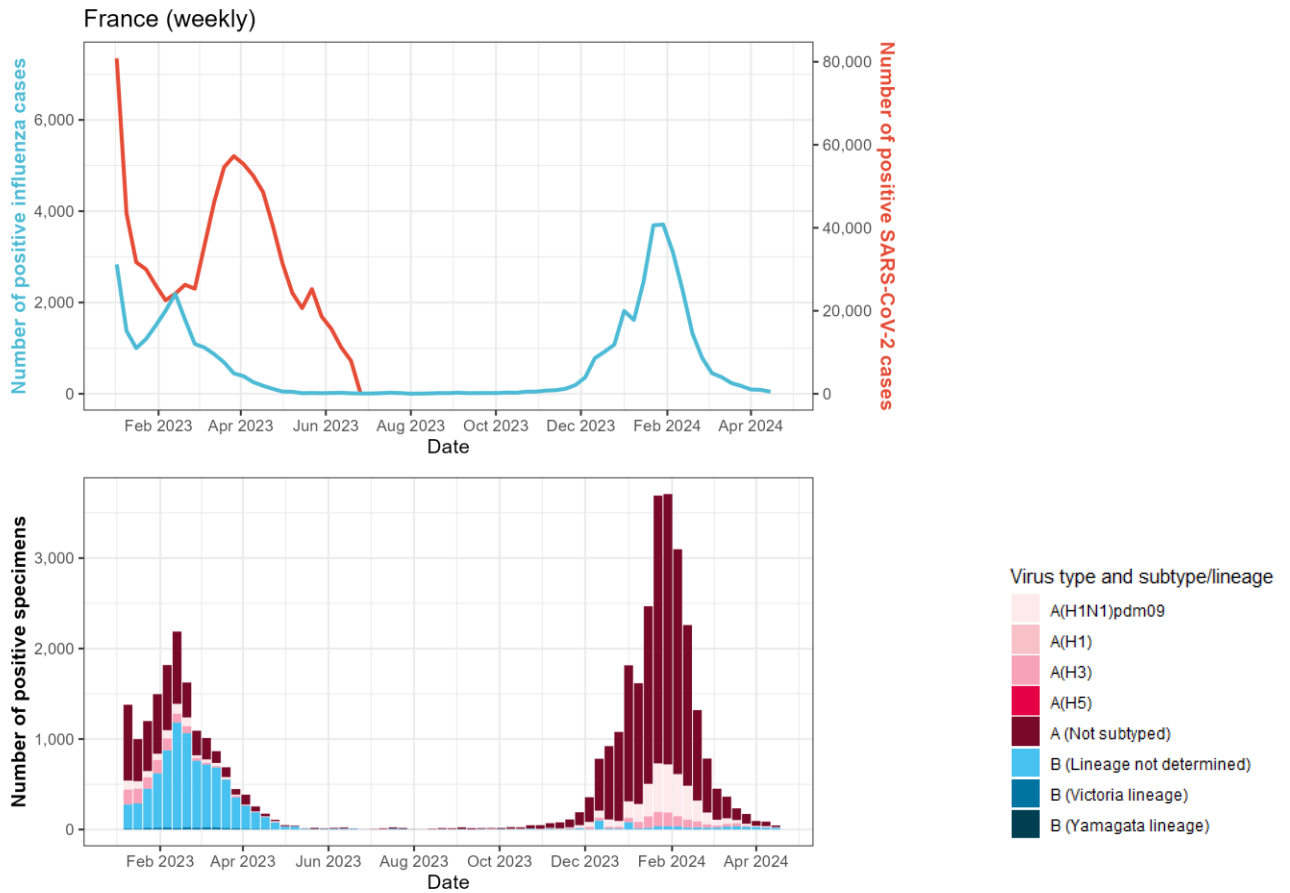
Note: France stopped reporting **SARS-CoV-2** activity to the WHO since W26/2023

Percentage of specimens testing positive for influenza in different seasons

Germany

Germany (weekly)
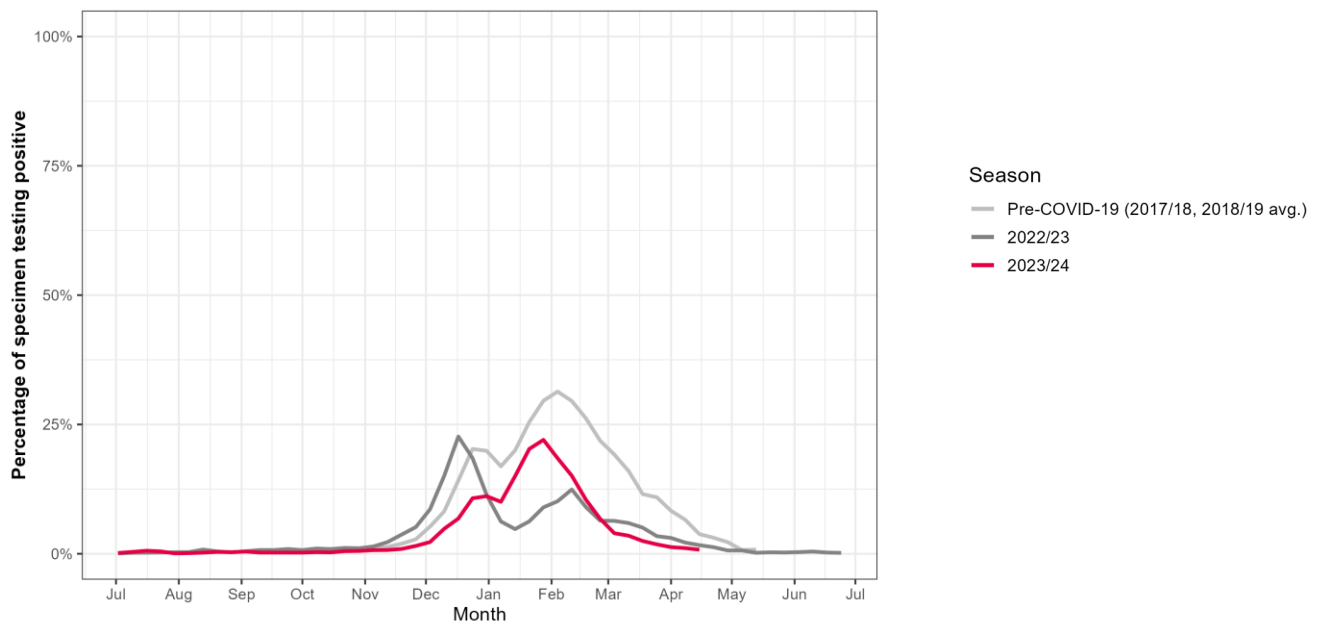

Note: Germany stopped reporting **SARS-CoV-2** activity to the WHO since W27/2023

Percentage of specimens testing positive for influenza in different seasons

Italy

Italy (weekly)

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

Netherlands

Netherlands (weekly)

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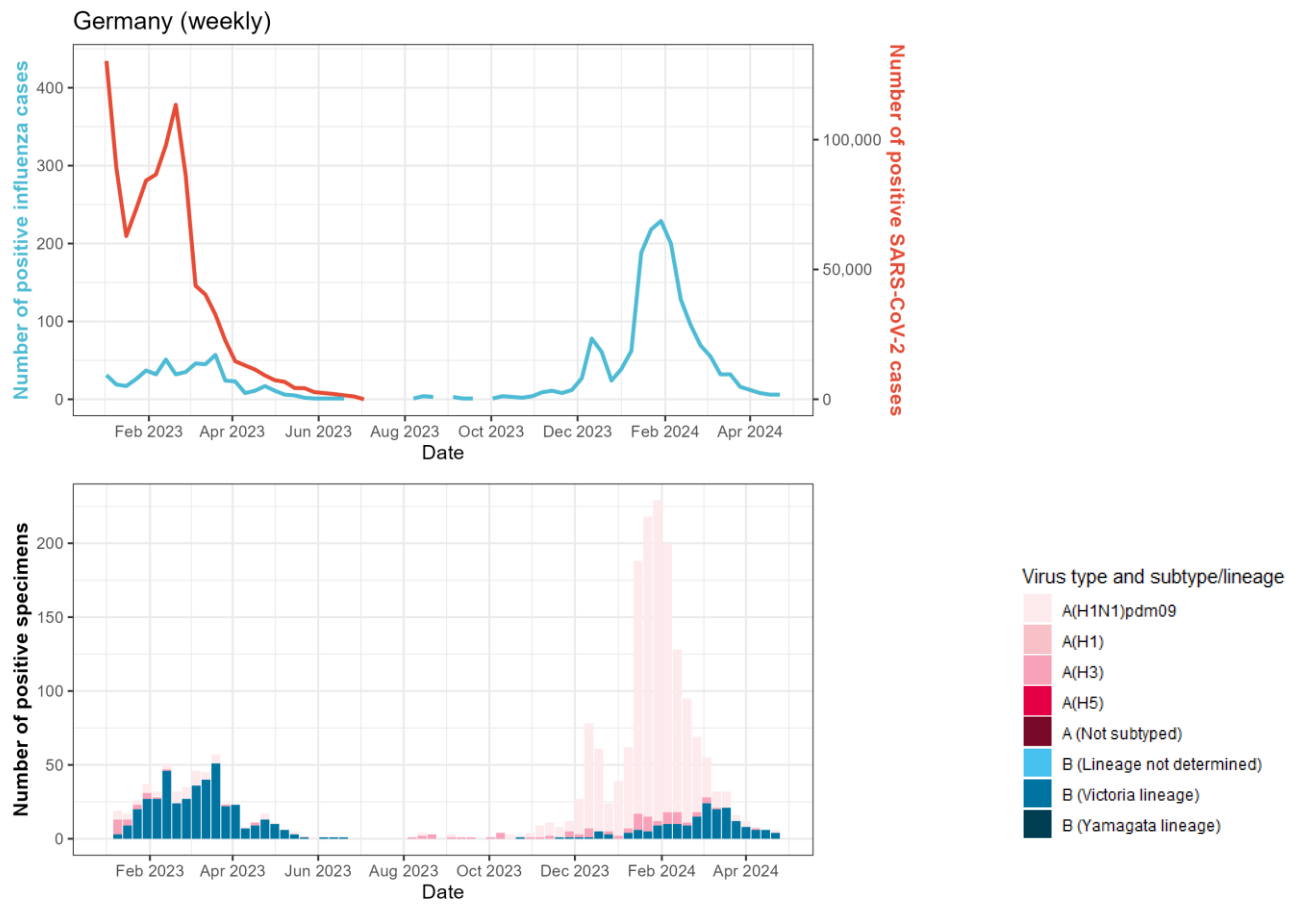
Spain

Spain (weekly)

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

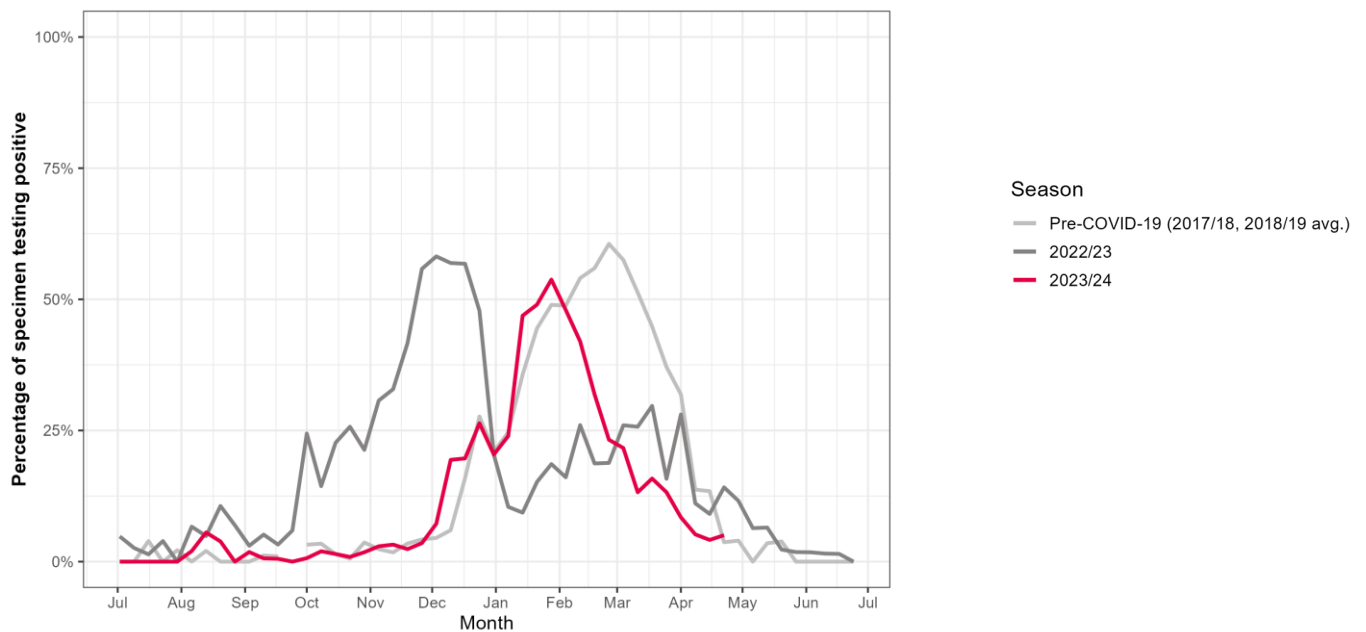### Percentage of specimens testing positive for influenza in different seasons
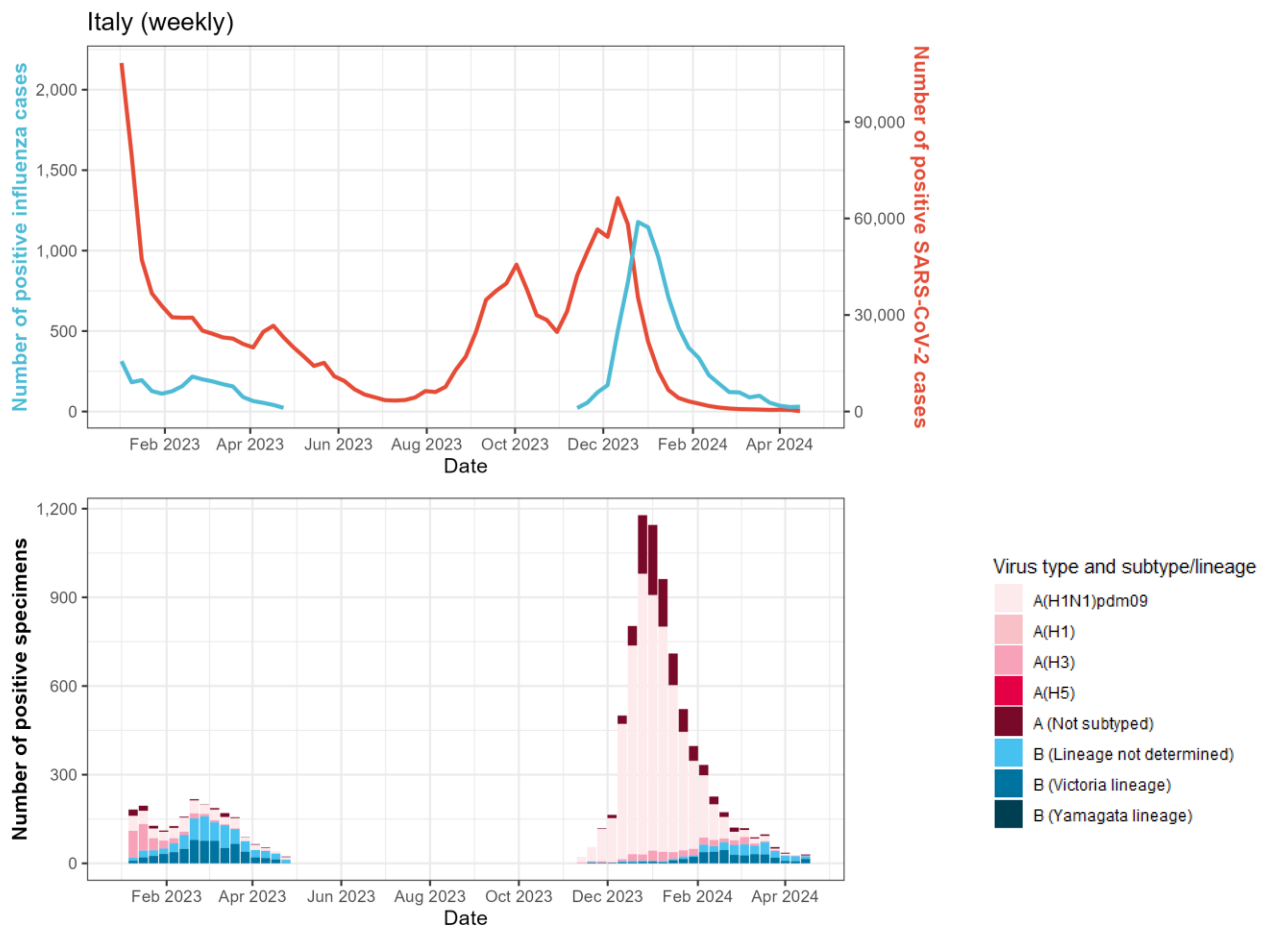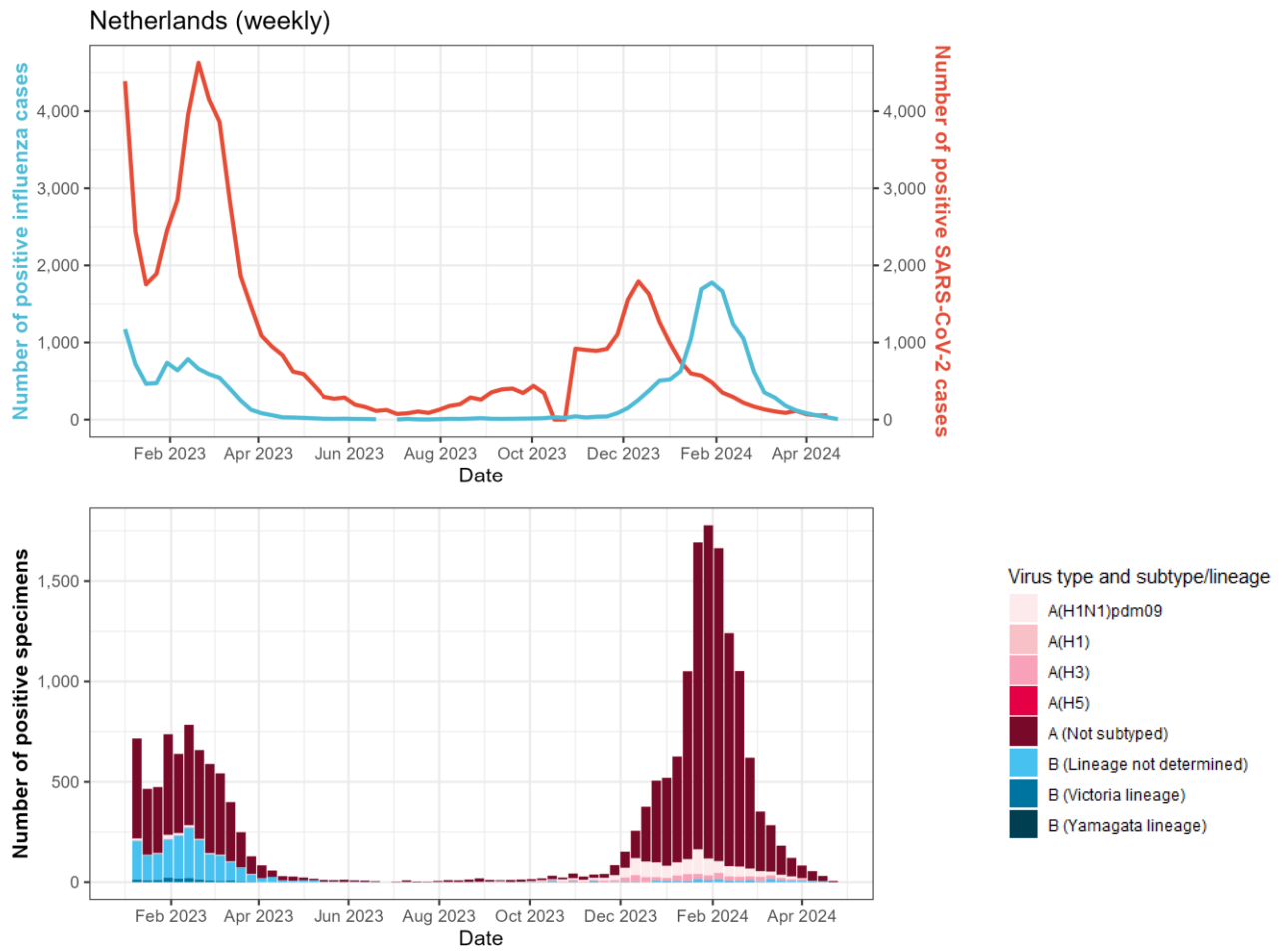
Northern Africa

Egypt

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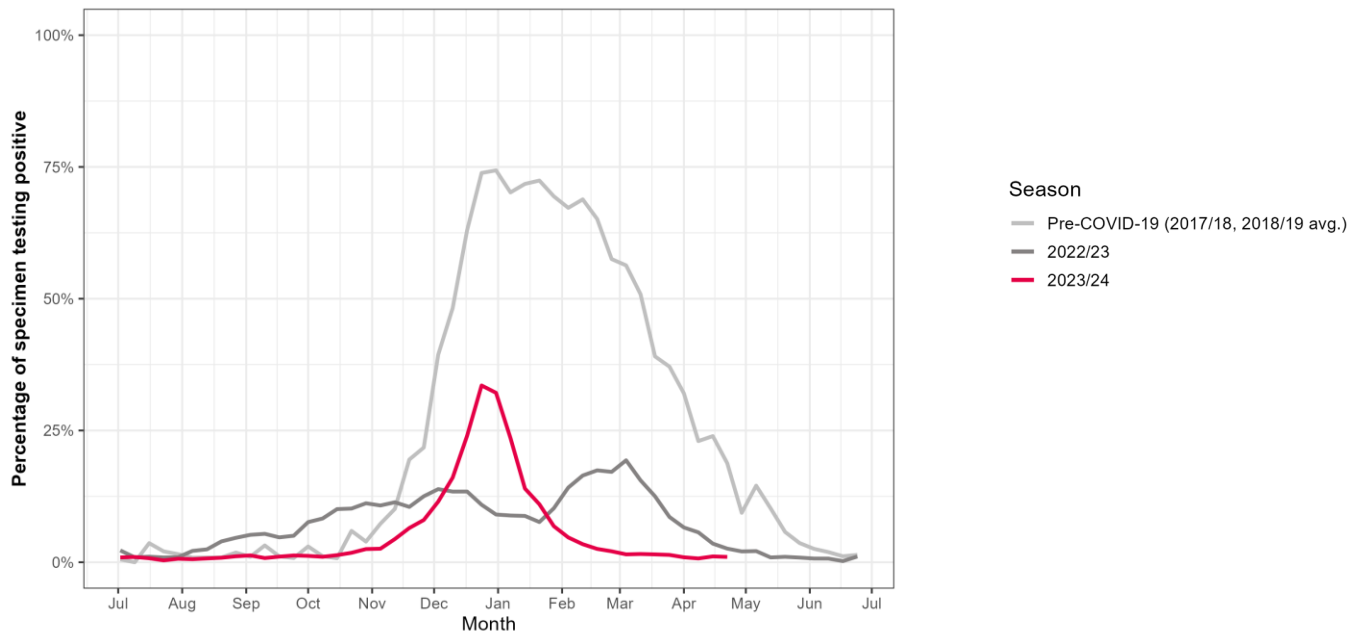
Note: Egypt has reported zero **SARS-CoV-2** activity to the WHO since W18/2023

Percentage of specimens testing positive for influenza in different seasons

Southern Africa

South Africa

South Africa (weekly)

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

China (weekly)

Percentage of specimens testing positive for influenza in different seasons

Japan

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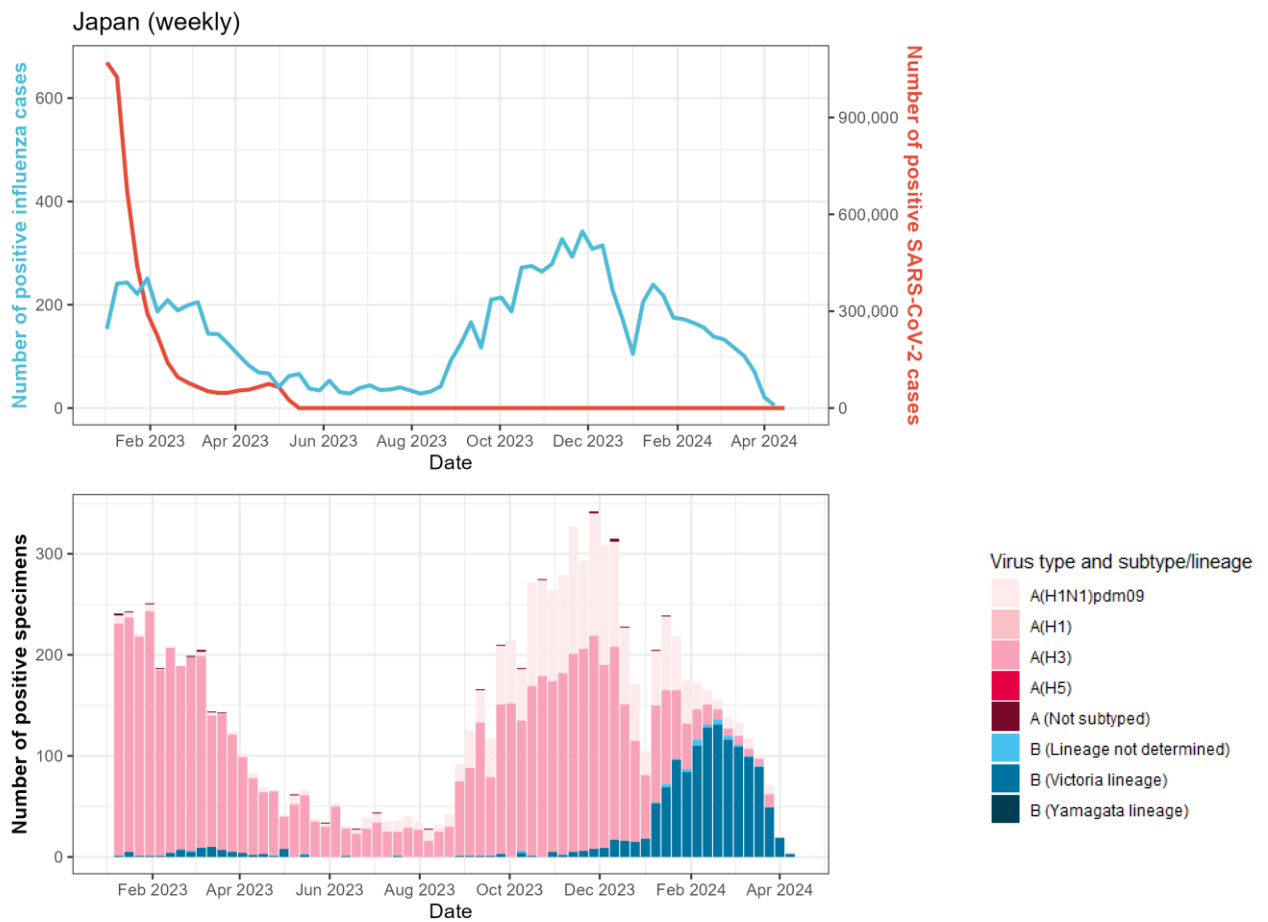
Note: Japan has reported zero **SARS-CoV-2** activity to the WHO since W21/2023

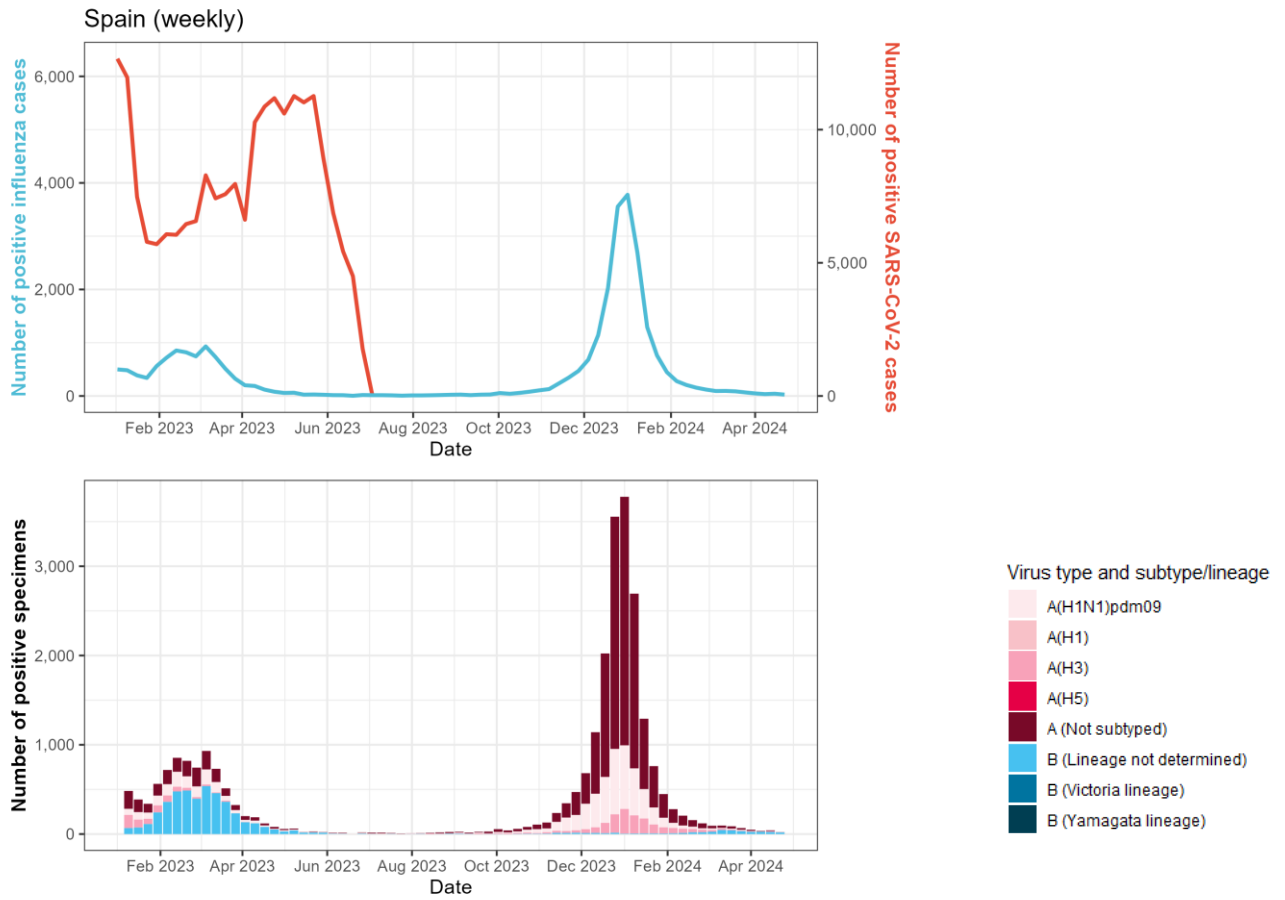*Percentage of specimens testing positive for influenza in different seasons: data not available*

South Korea

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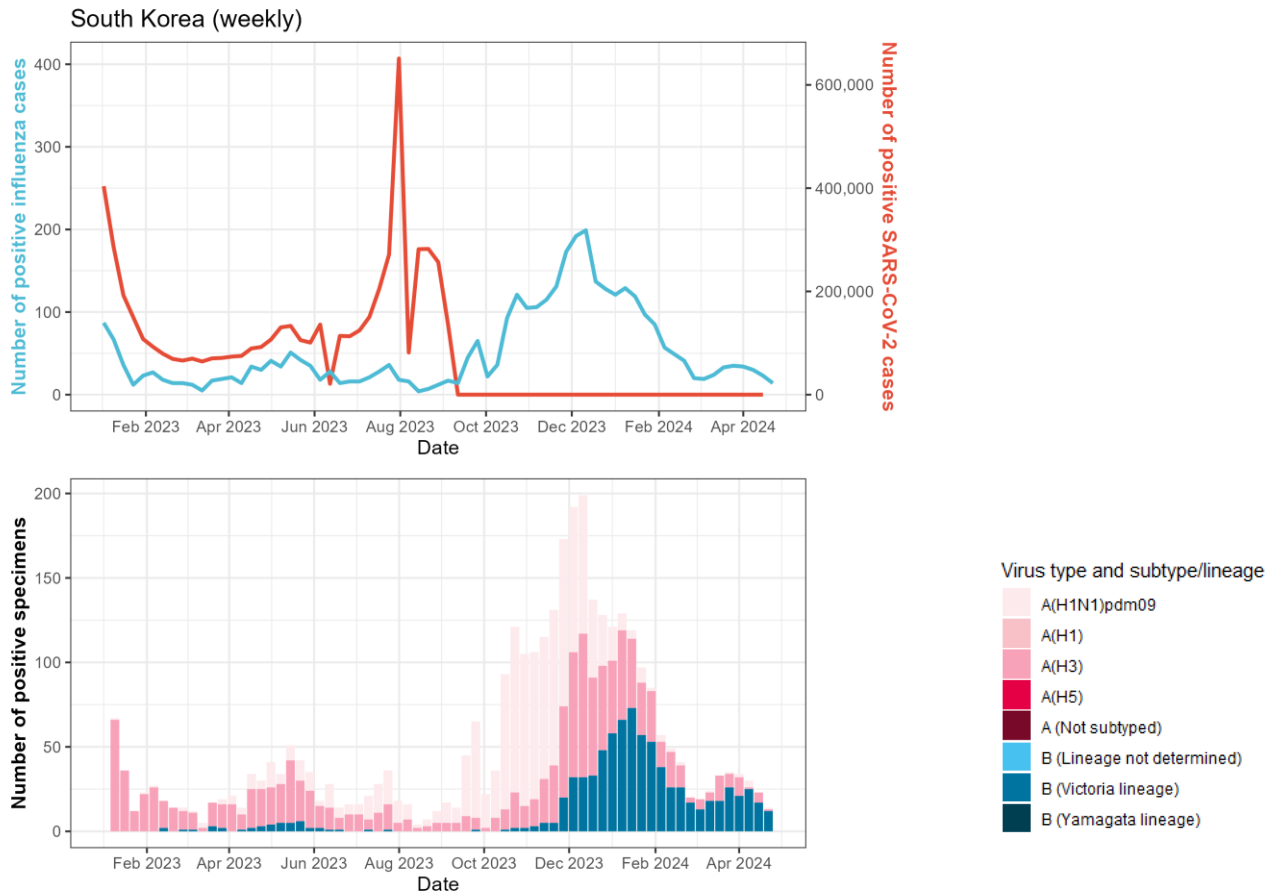
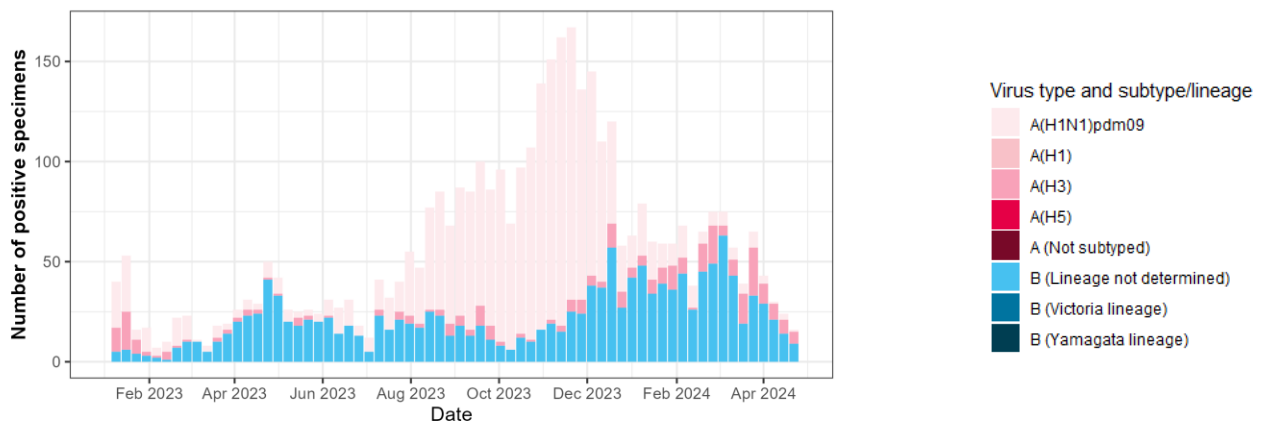Note: South Korea has reported zero **SARS-CoV-2** activity to the WHO since W37/2023

Percentage of specimens testing positive for influenza in different seasons
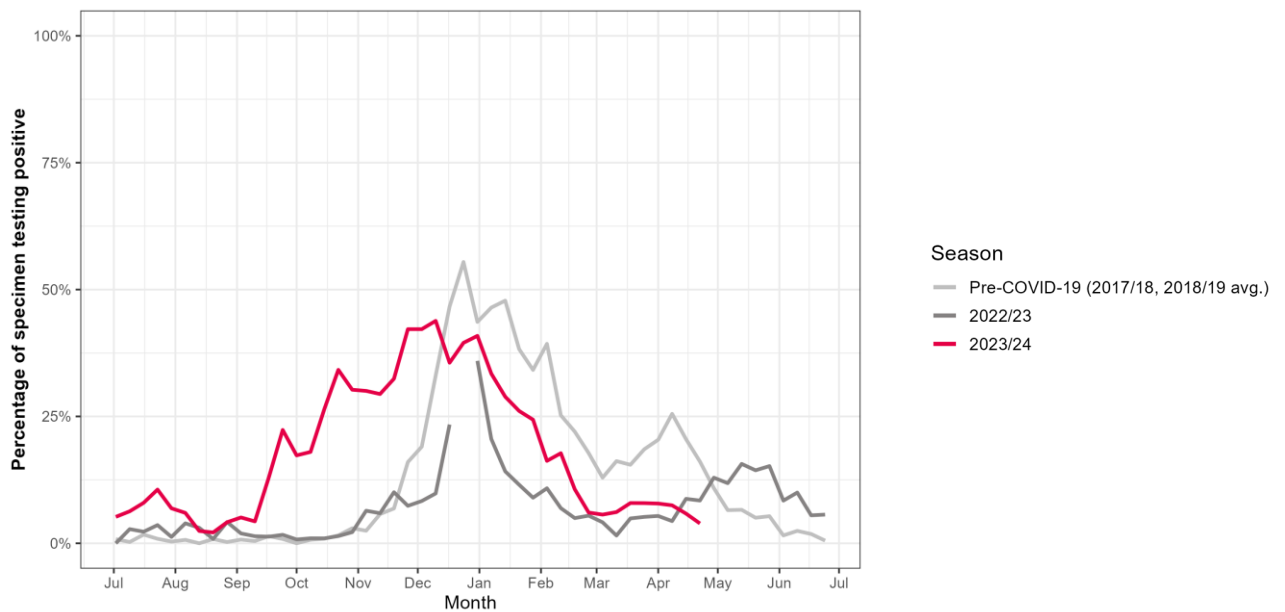
Southern Asia

India
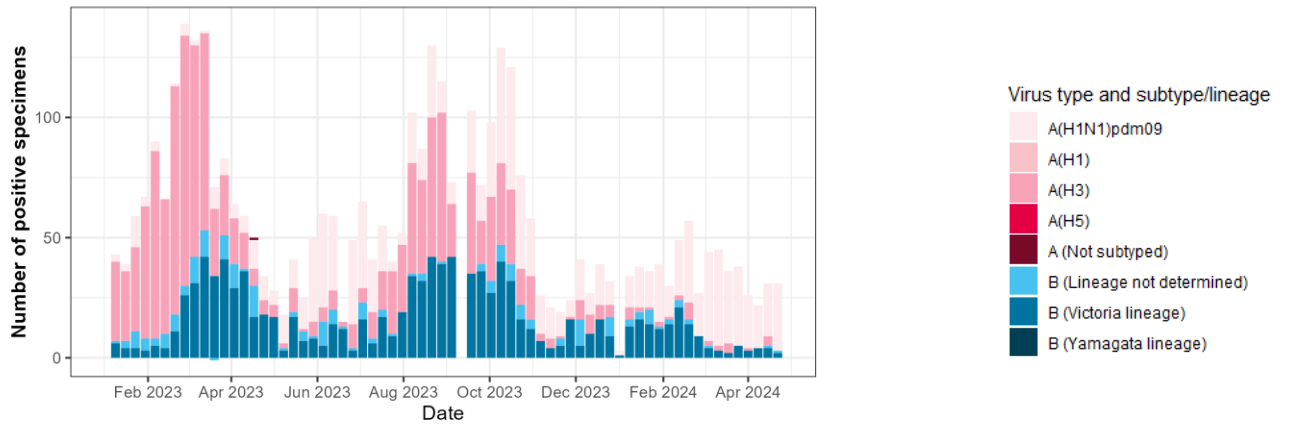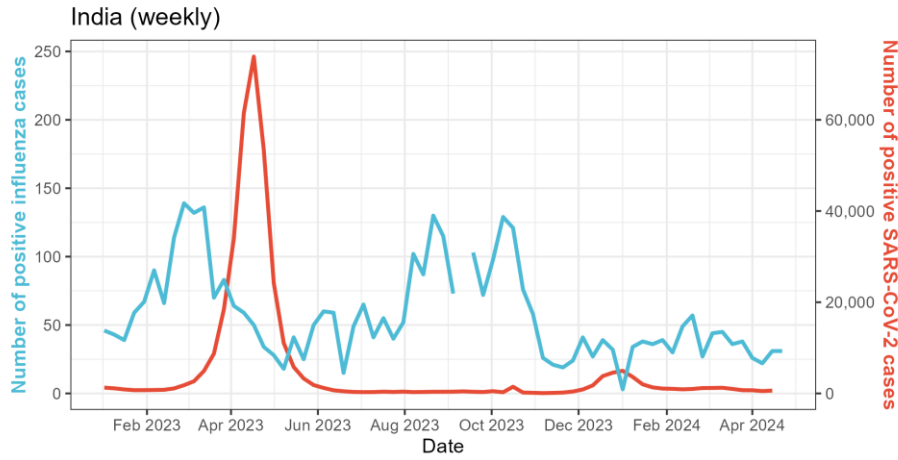
India (weekly)

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

Season
- Pre-COVID-19 (2017/18, 2018/19 avg.)
- 2022/23
- 2023/24

South-East Asia

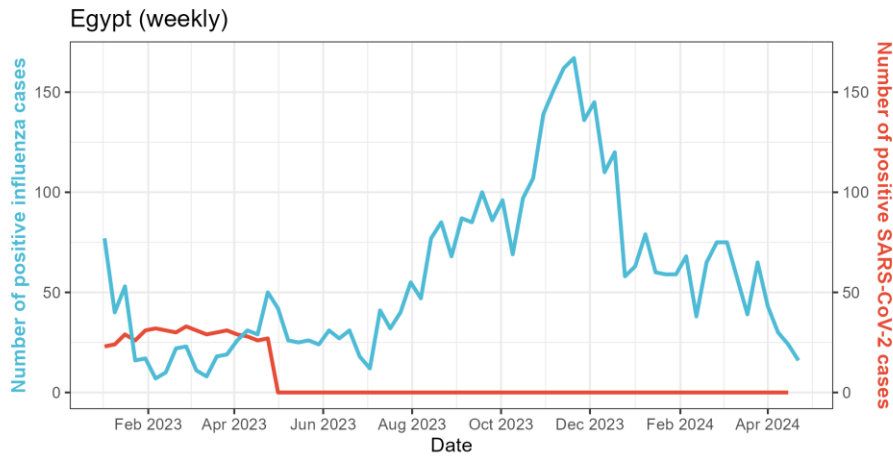## Philippines

Philippines (weekly)
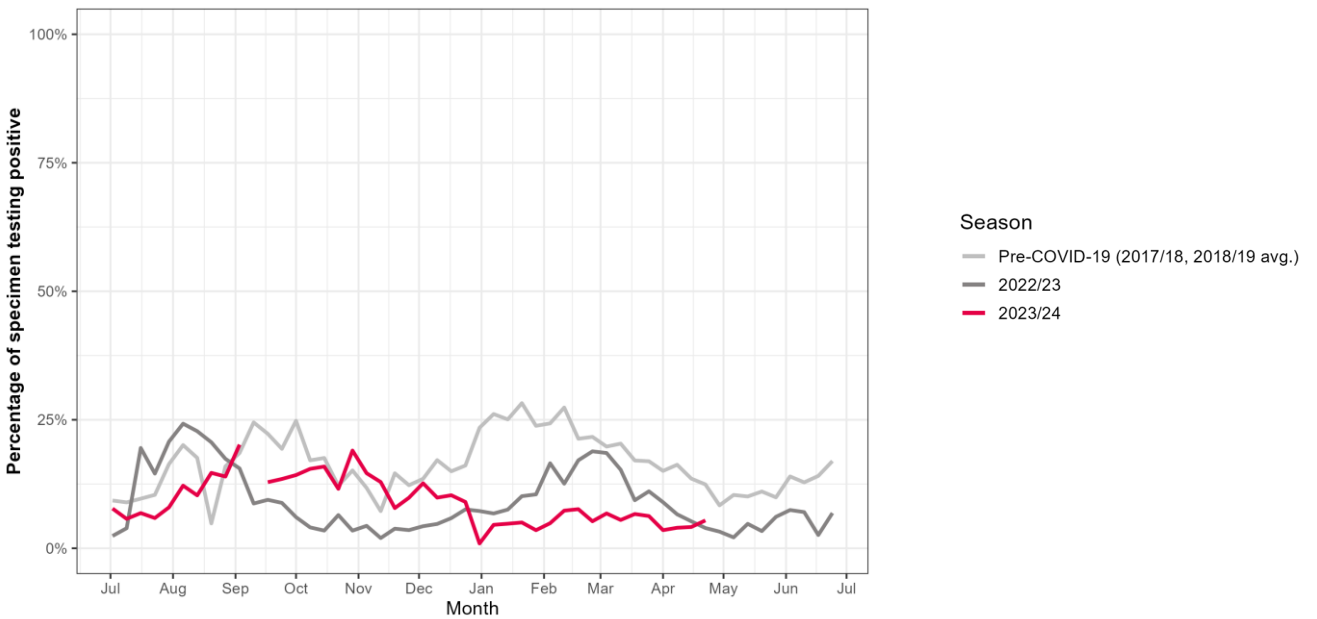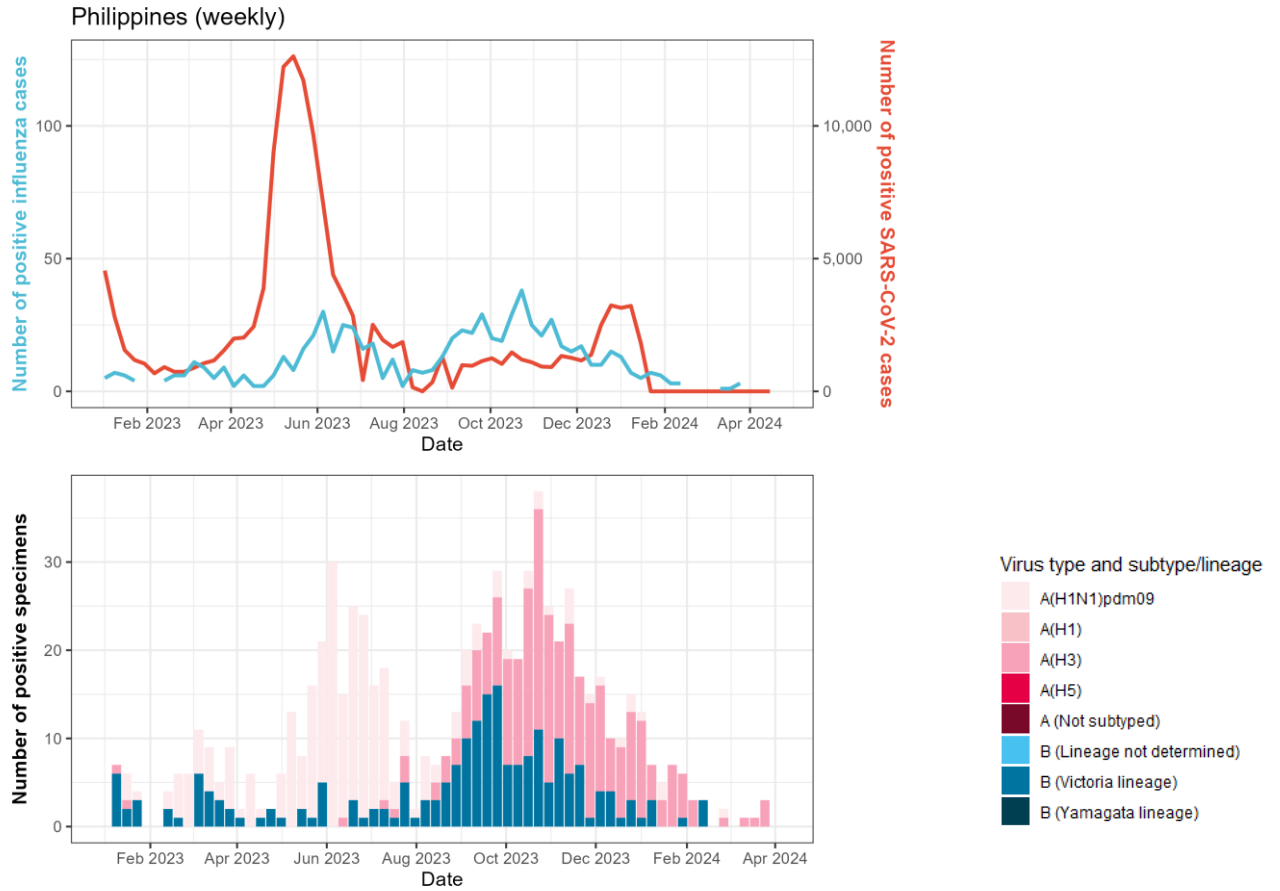
Note: the Philippines has reported zero **SARS-CoV-2** activity to the WHO since W04/2024

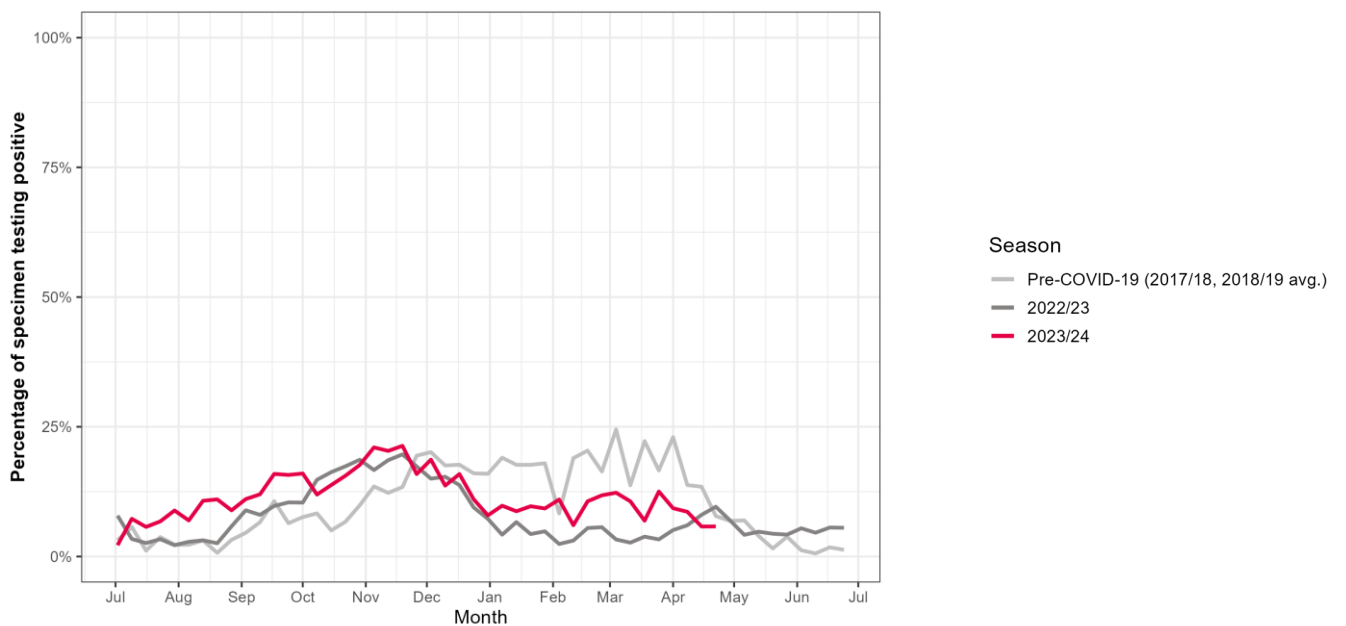## Percentage of specimens testing positive for influenza in different seasons

Thailand

Thailand (weekly)
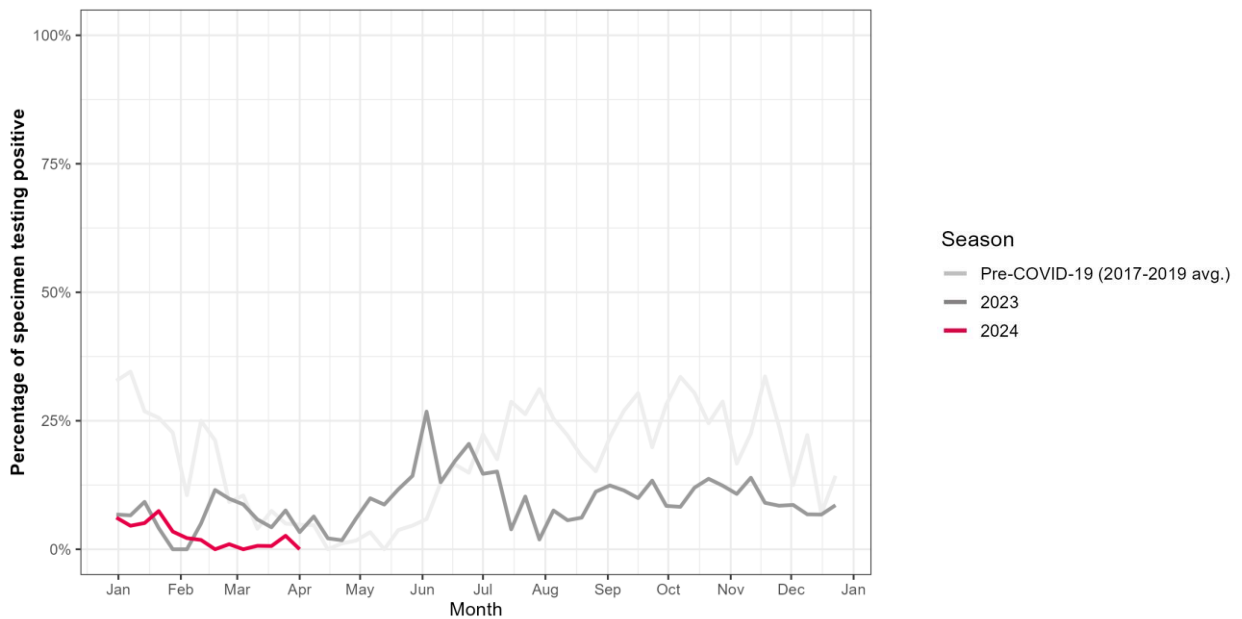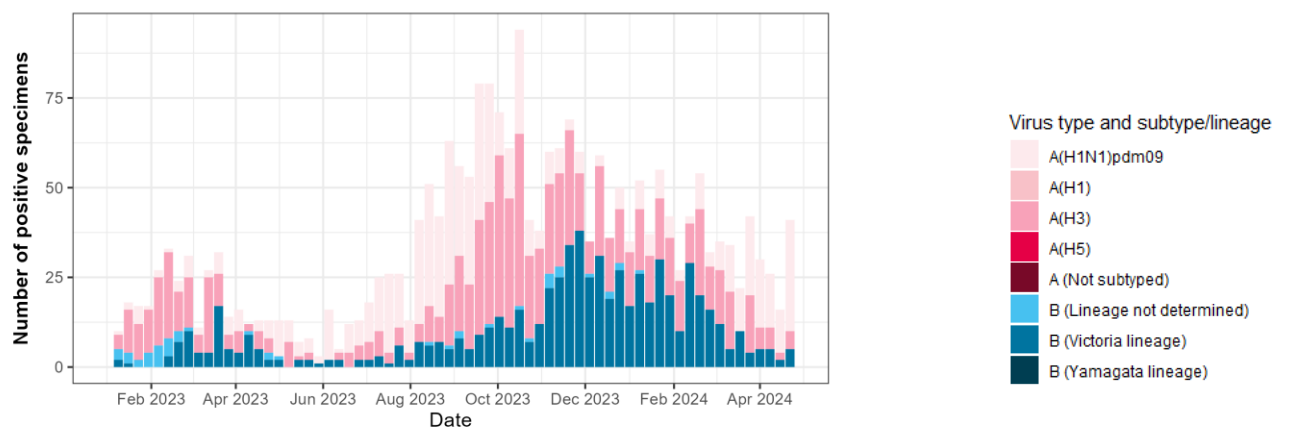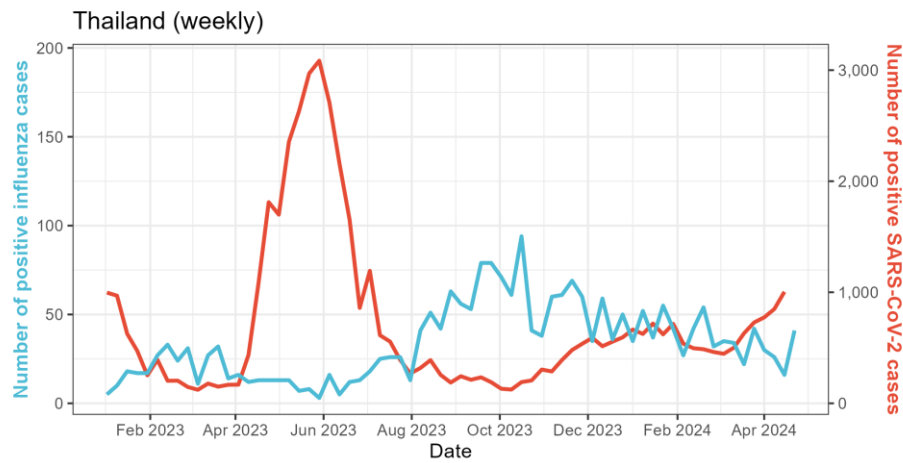
Percentage of specimens testing positive for influenza in different seasons

Vietnam

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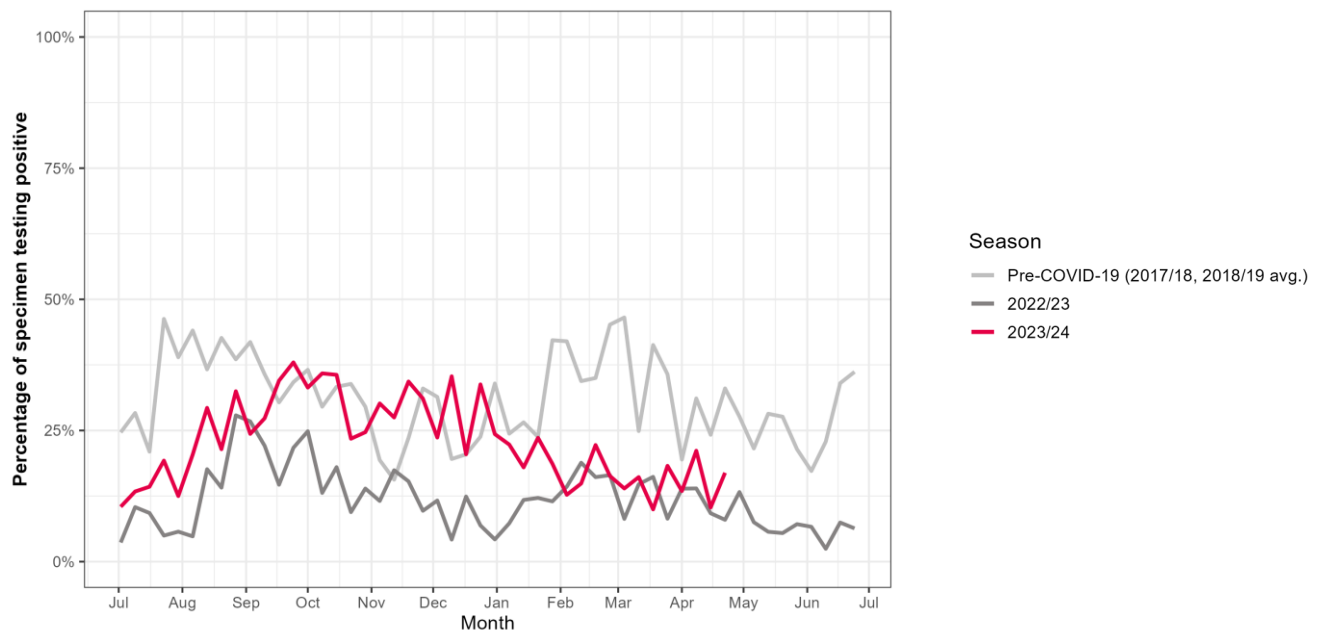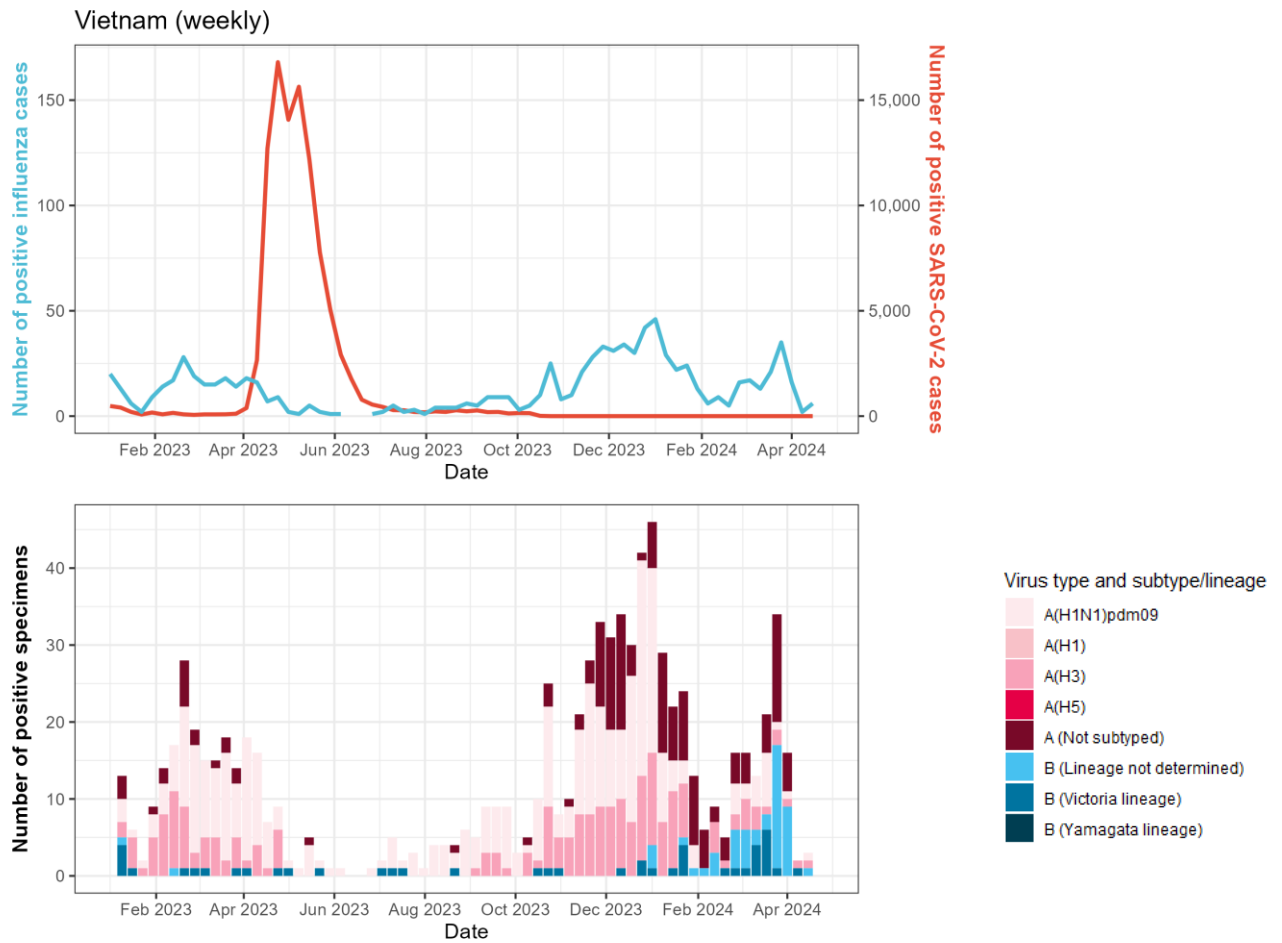
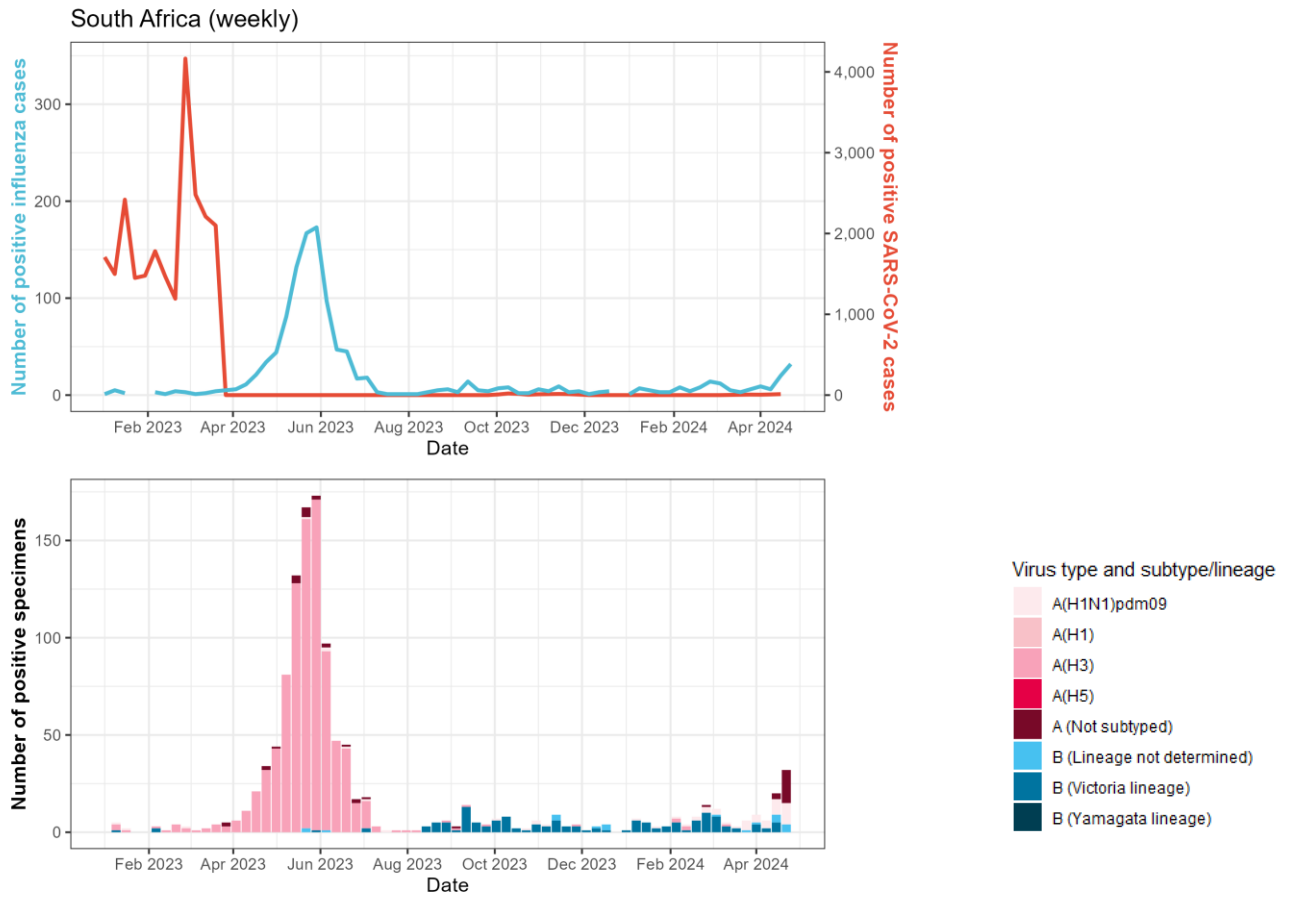Note: Vietnam has reported zero **SARS-CoV-2** activity to the WHO since W44/2023

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

Western Asia

Israel

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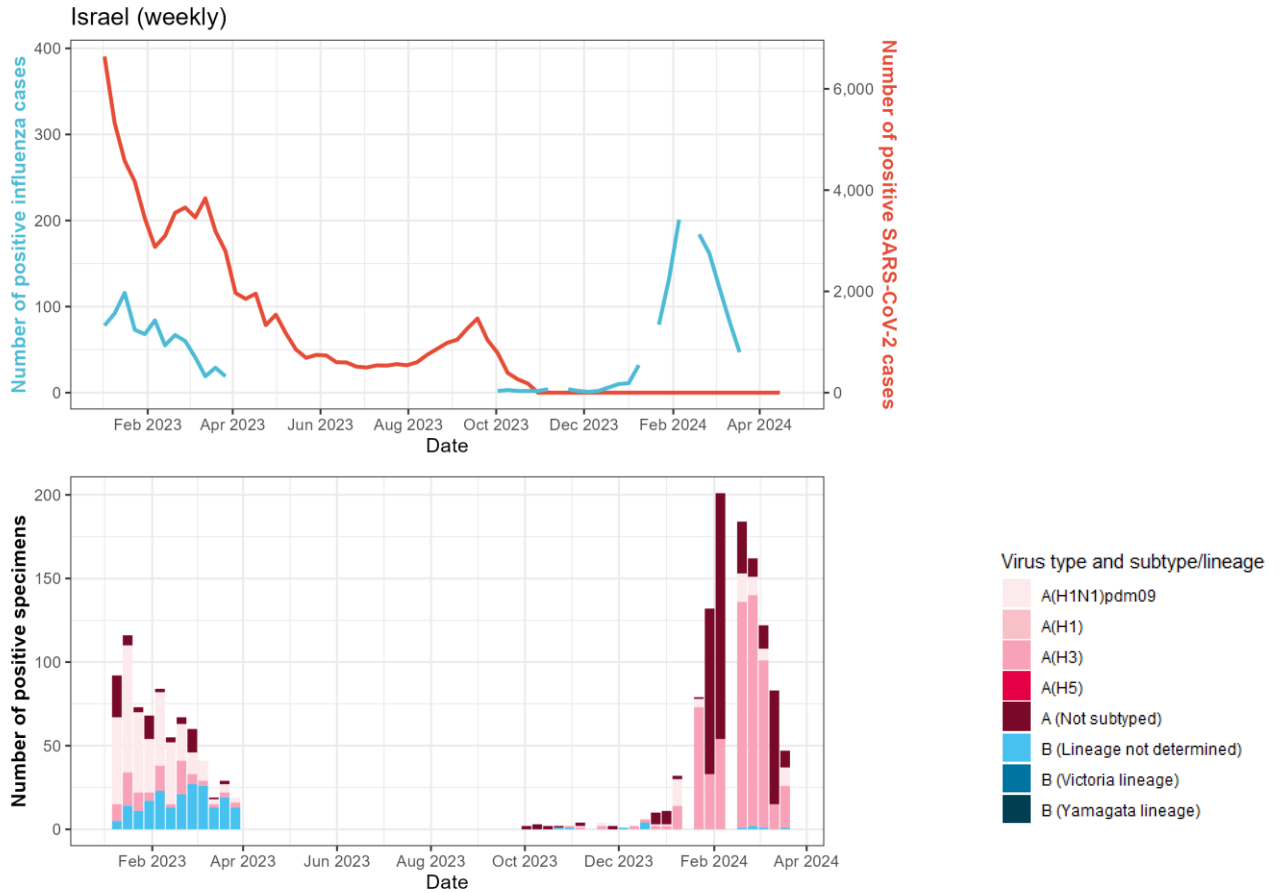
Note: Israel has reported zero **SARS-CoV-2** activity to the WHO since W44/2023

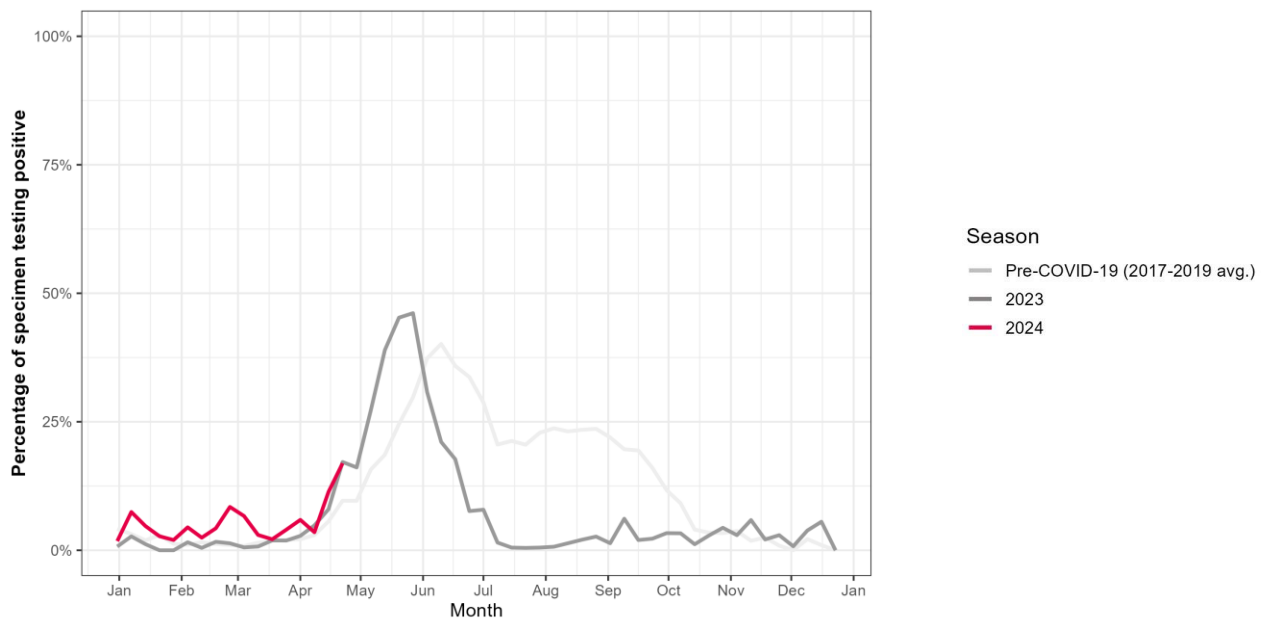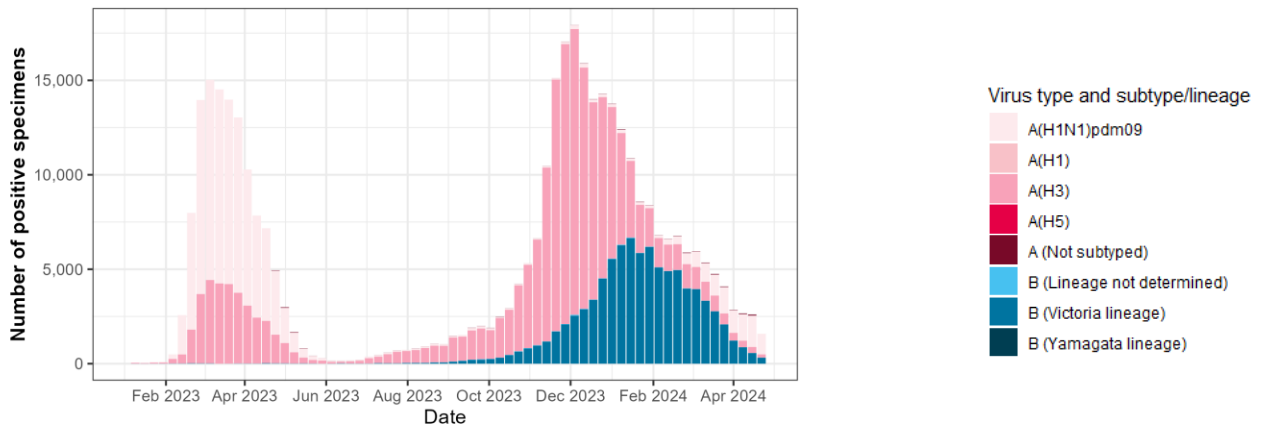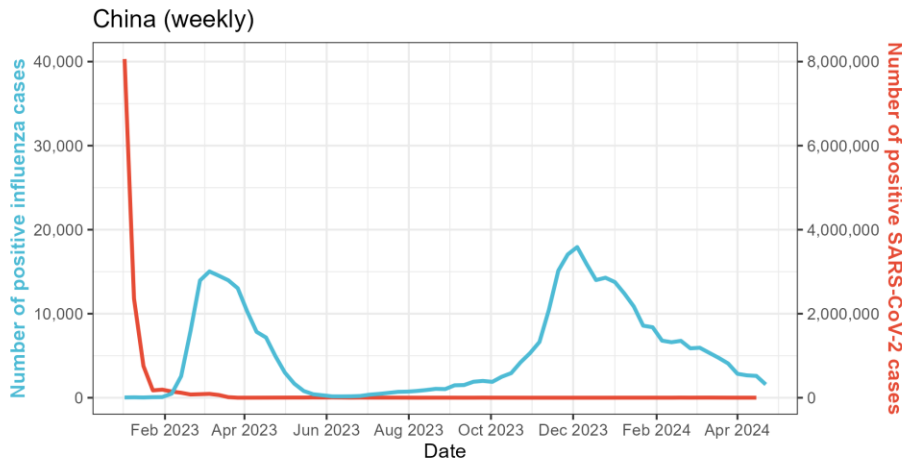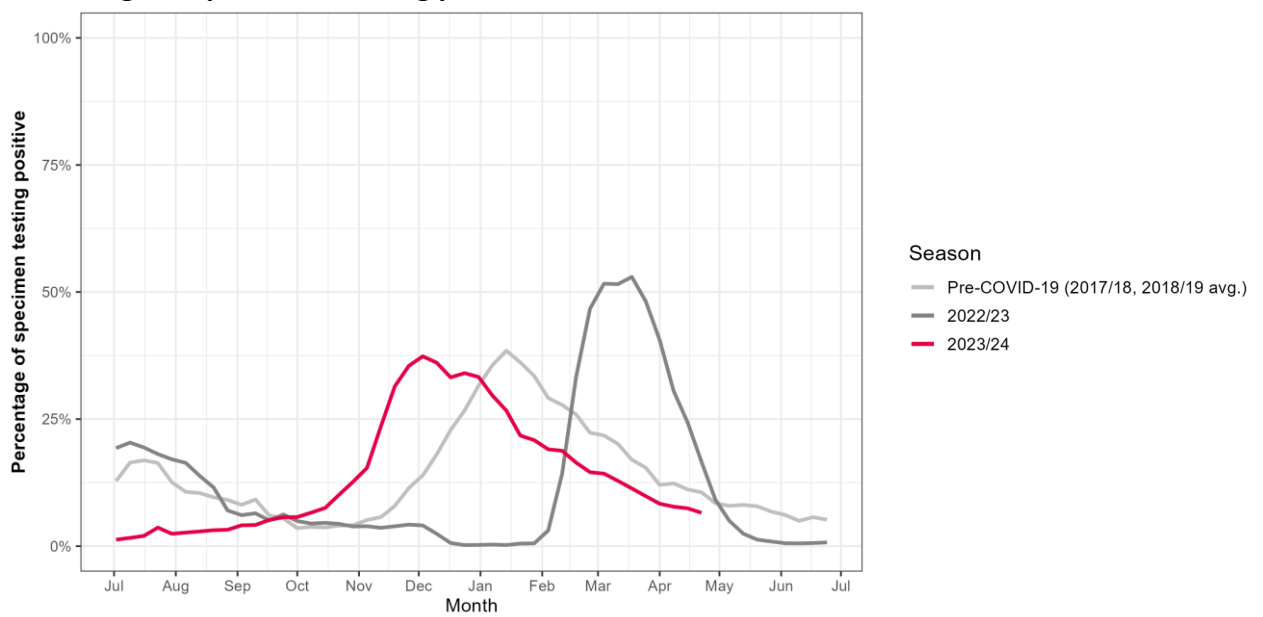## Percentage of specimens testing positive for influenza in different seasons

Oceania

Australia
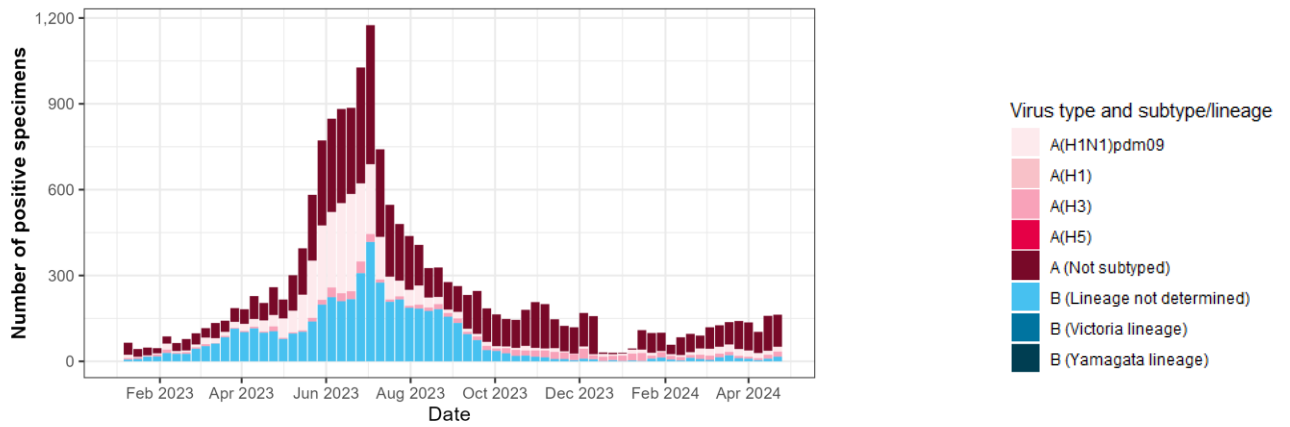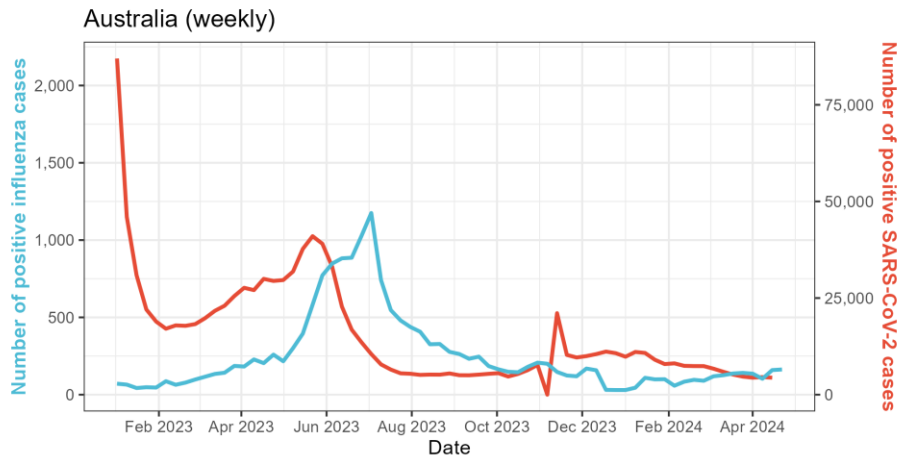
Australia (weekly)

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

Season
- Pre-COVID-19 (2017-2019 avg.)
- 2023
- 2024
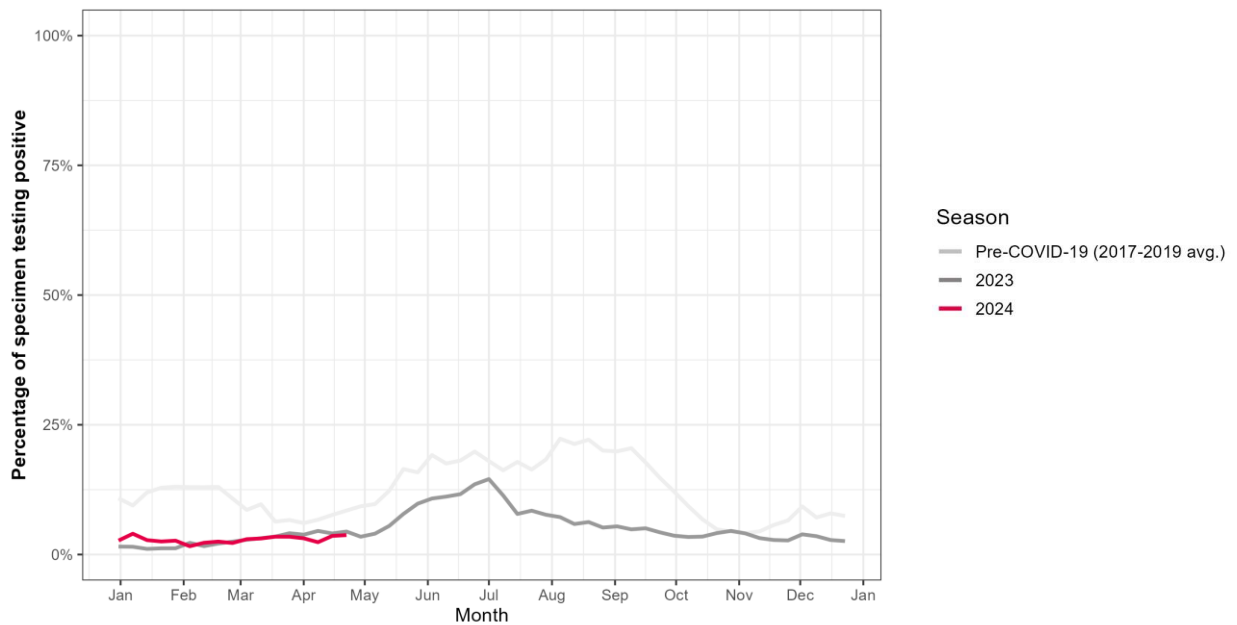
Absolute numbers per country

Country	Year	Cases[a,b] of SARS-CoV-2	+/- since last month[c]	Cases[a] of influenza	+/- since last month[c]	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		15,427		
Australia	2024	114,837	13,349	1,795	561	2024-17
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	10,008	2,406	2024-17
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	282,745		47,166		
Canada	2024	30,257	2,254	56,966	8,104	2024-17
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	29,031	4,310	109,893	9,695	2024-17
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	915	113	2024-17
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	22,207	226	2024-16
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	1,395	32	2024-17

Country	Year	Cases[a,b] of SARS-CoV-2	+/- since last month[c]	Cases[a] of influenza	+/- since last month[c]	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	23,025	1,837	586	110	2024-17
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	1,053	0	2024-12
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	1,601,181		5,256		
Italy	2024	58,474	1,156	5,043	94	2024-16
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		7,699		
Japan	2024	0	0	2,021	26	2024-15
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	464,157		7,666		
Mexico	2024	0	0	6,757	944	2024-17
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	5,052	181	11,359	175	2024-17
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	51	0	2024-14
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	30,346	392	6,041	256	2024-17

Country	Year	Cases[a,b] of SARS-CoV-2	+/- since last month[c]	Cases[a] of influenza	+/- since last month[c]	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	37	25	146	67	2024-17
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	930	101	2024-17
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		17,882		
Spain	2024	0	0	10,226	151	2024-17
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	10,257	2,627	622	113	2024-17
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	706,144		24,075		
United Kingdom	2024	54,856	4,381	58,039	3,081	2024-17
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		176,883		
United States	2024	0	0	223,913	0	2024-13
Vietnam	2019			355		
Vietnam	2020	1,440		146		
Vietnam	2021	1,650,233		39		
Vietnam	2022	9,872,529		399		
Vietnam	2023	99,798		596		
Vietnam	2024	0	0	280	24	2024-17

[a] Laboratory-confirmed cases.

[b] As of the 24th 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.

[c] 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 [8]. The emergence of this new virus has had a major impact on the global circulation of respiratory viruses, including influenza and RSV [9]. 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) [10].

Data sources

- **Influenza**: FluNet [5] 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 6 May 2024 and cover the period 1 January 2019 to 5 May 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 flucov@nivel.nl.

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Project Website: https://www.nivel.nl/en/flucov

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

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