



FluCov-Bulletin – October 2023

FluCov project: combining data from around the world to better understand the impact of COVID-19 on influenza activity

Commentary

Contents

It is now almost four years since a cluster of atypical pneumonia cases in Wuhan, China, was reported to the World Health Organization (WHO) (January 1, 2020) that was later linked to the new **SARS-CoV-2** virus. The FluCov Bulletin provides an overview of the number of positive cases of **influenza** and **SARS-CoV-2** and the percentage of specimens that tested positive from January 2019 onwards in 22 countries across most regions of the world (see page 3).

Results

On a global level, **influenza** activity has increased very slightly in October 2023 (see Figure 1). The following country patterns were observed for **influenza**:

- In the Southern Hemisphere, **influenza** detections have been low or are decreasing in the countries covered by the Bulletin (**Brazil, South Africa and Australia**).
- In the Northern Hemisphere, **influenza** activity remained low in Europe, with most countries reporting a stable number of new detections, compared to September (**United Kingdom, Poland, France, Germany, Netherlands, Spain**).
- **Influenza** activity was low in the Americas (**United States, Canada**). A slight increase in influenza detections was reported in **Mexico**.
- **Influenza** detections were low in **India, Japan, the Philippines, and Vietnam**.
- **Influenza** in China (Southern China in particular) has risen from very low (<10% positivity) to low (10-20% positivity) since week 42, and the trend is continuing over week 43.
- In **South Korea**, **influenza** detections increased further, with a mix of **influenza** A(H1N1)pdm09 and A(H3N2), as did the percentage of specimens that tested positive.
- After a rise in cases during the past two months, **influenza** activity (with a mix of A and B) seems to have peaked in **Thailand**.
- No update on **influenza** activity was available for **Italy** and **Egypt** in October.

Globally, **SARS-CoV-2** detections have been relatively low after the late 2022 peak in China (see Figure 1). The following country patterns were observed for **SARS-CoV-2** in October 2023:

- Despite a small increase in detections in most countries, **SARS-CoV-2** activity was low in most countries in the Bulletin: **Australia, Brazil, Canada, China, Egypt, France, Germany, India, Israel, Japan, Mexico, Netherlands, the Philippines, Poland, South Africa, South Korea, Spain, Thailand, United Kingdom, and the United States**.
- Italy reported a relatively high number of detections; however, **SARS-CoV-2** activity now appears to be declining.

Implications

Global **influenza** activity has shown a slight uptick in October 2023, following low activity. **SARS-CoV-2** activity has also been low worldwide.

Influenza detections in the Southern and Northern Hemispheres:

All Southern Hemisphere countries covered by the Bulletin reported a mix of **influenza** A and B. **Influenza** activity has been decreasing in **Australia** and remained stable at a low level in **South Africa and Brazil**. Other countries in the Southern Hemisphere also reported low **influenza** activity [1], with only **New Zealand (influenza A)** and **Chile (predominantly influenza B)** reporting detections above the seasonal threshold. In the Northern Hemisphere, **influenza** activity remained generally low throughout the month of September, **China** being (mix of **influenza A/H3** and **B/Victoria**) the only exception.

Influenza A subtypes and Influenza B lineages:

Up until now, the dominant **influenza** B lineage in the countries reported in the Bulletin has exclusively been **influenza B/Victoria** (when the lineage was determined). This is noteworthy, especially considering the rarity of **influenza B/Yamagata** during the COVID-19 pandemic [2].

Regarding **influenza A**, the Southern Hemisphere's **influenza** season has primarily featured a mix of **influenza A(H1N1)pdm09** and **influenza A(H3N2)**.

SARS-CoV-2:

SARS-CoV-2 detections have been on the decline worldwide since December 2022 when **China** experienced its peak. As of October, detections remained relatively low. The increase in SARS-CoV-2 hospital admissions that was reported in September in the United States, England, and Italy seems to have stopped [3]. It's critical to acknowledge that the Bulletin's data completeness is impacted by scaled-back monitoring efforts, such as France's strategy of testing predominantly high-risk individuals, and instances of non-communication with WHO. This results in some data not being included in the FluCov Bulletin [4].

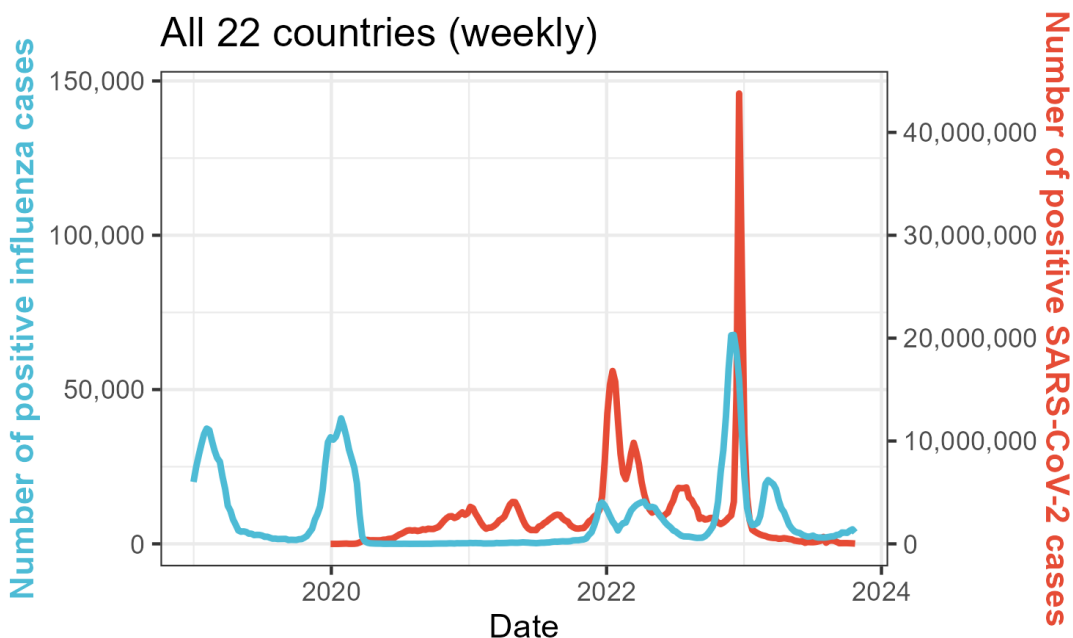


Figure 1: SARS-CoV-2 and influenza detections in the 22 countries covered by the Bulletin (period: from week 1/2019 to week 43/2023)

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, 2019 up to 1 November, 2023. 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 bar displays the Stringency Index (SI; a country-specific composite metric of the mitigation measures that are in place) over time. 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 now 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

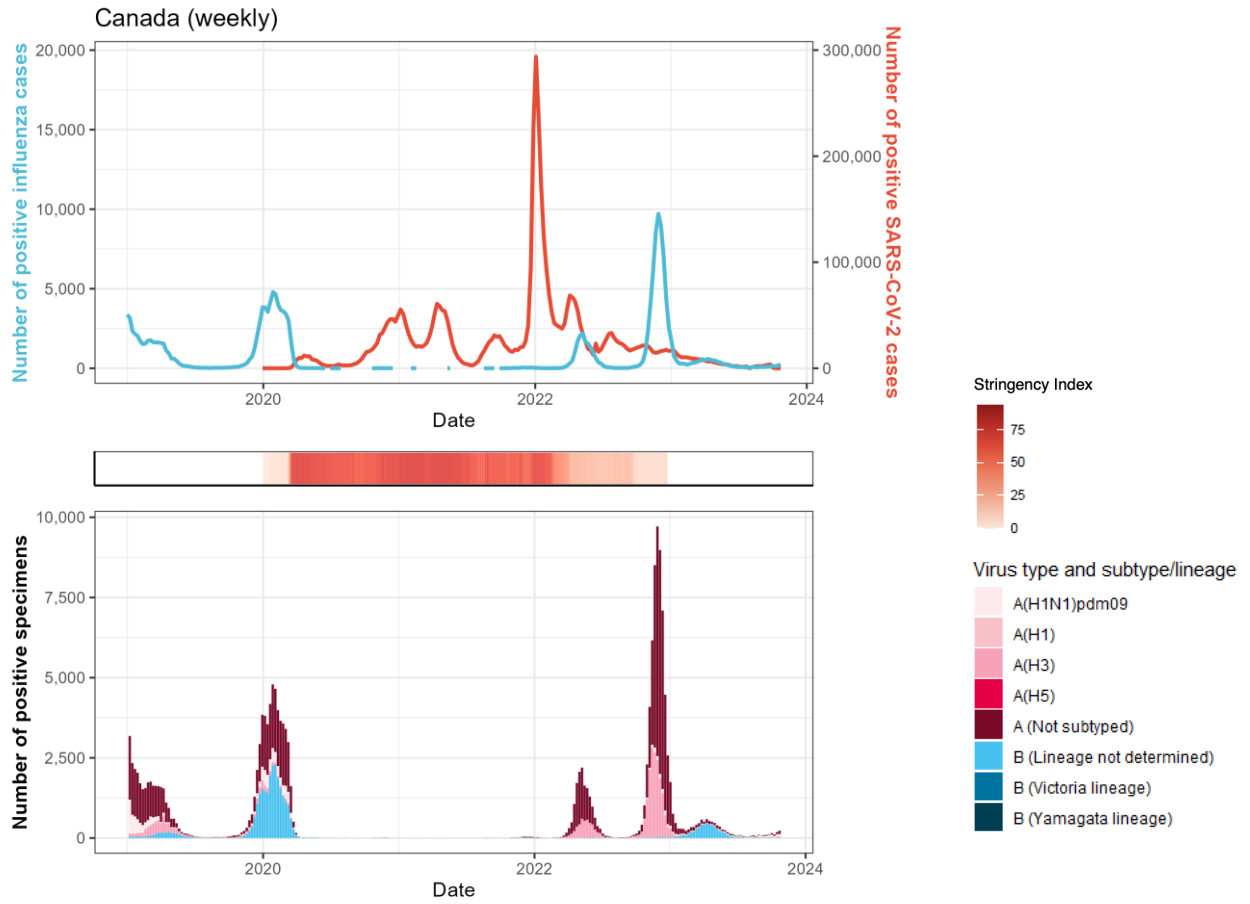
Israel

Oceania

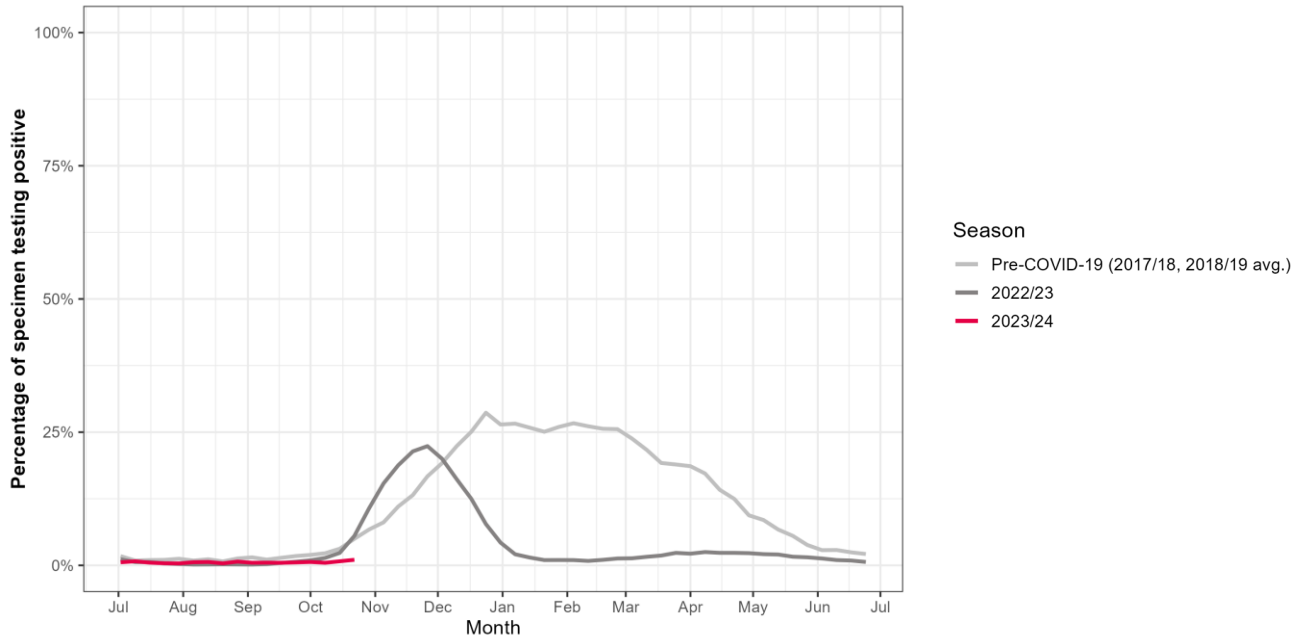
Australia

North America

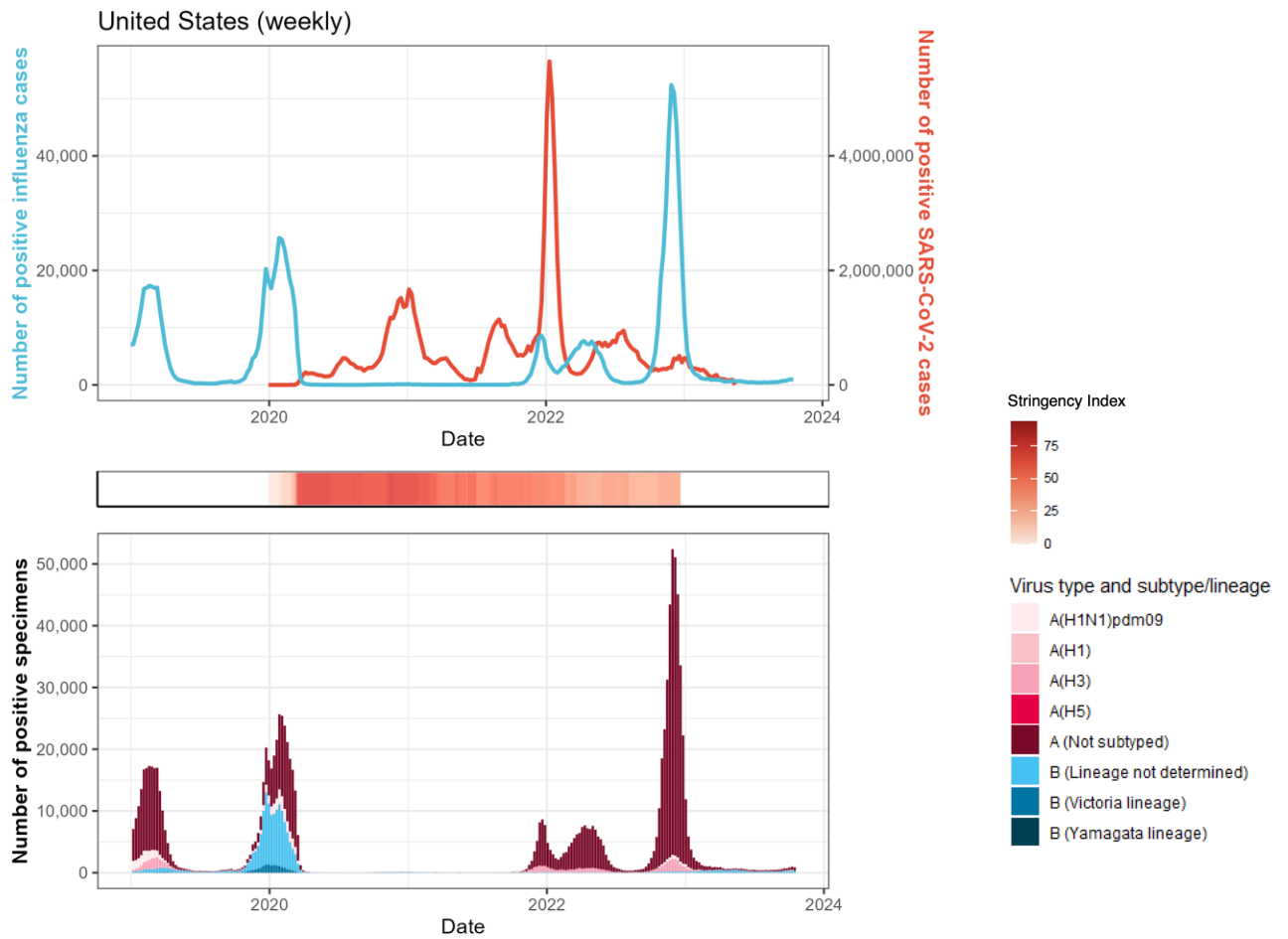
Canada



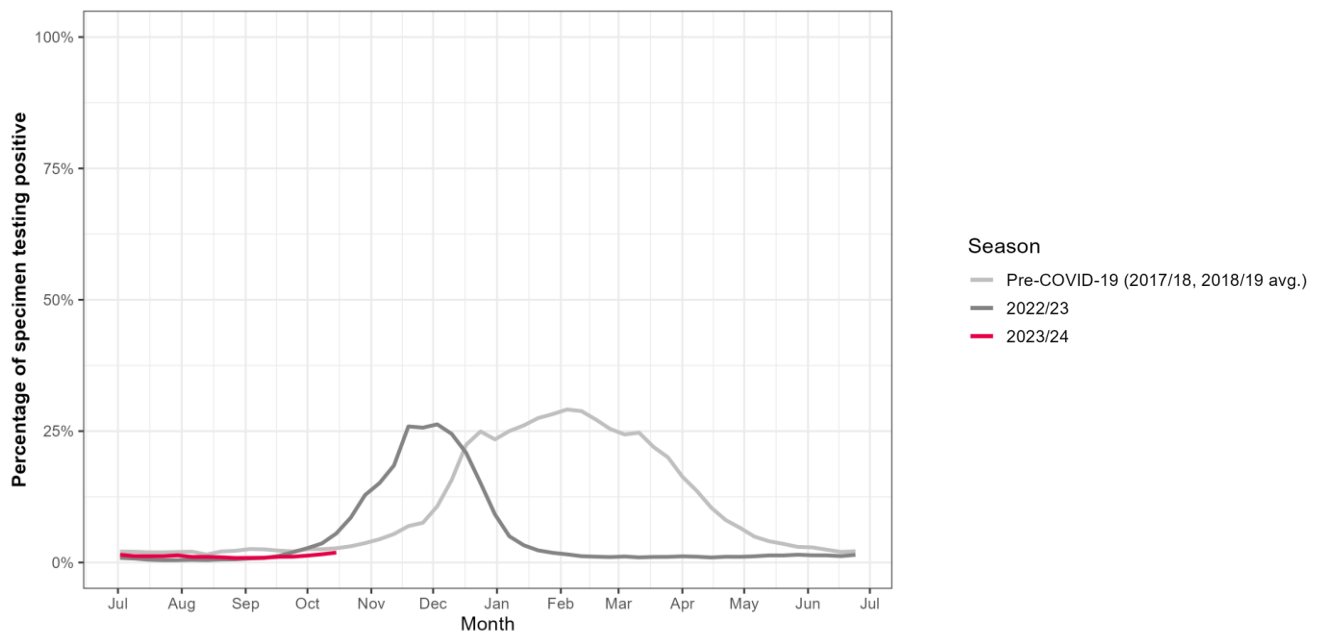
Percentage of specimens testing positive for influenza in different seasons



United States

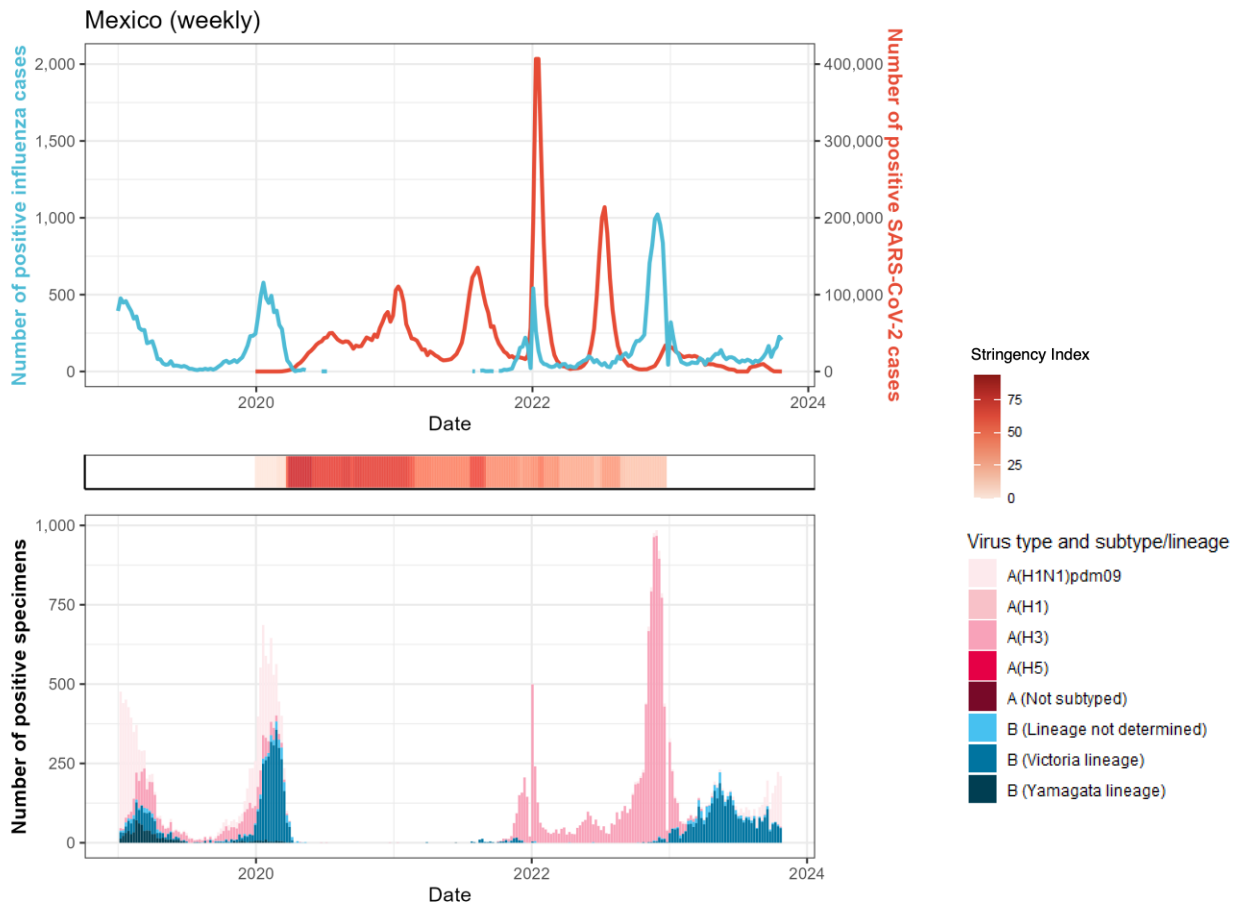


Percentage of specimens testing positive for influenza in different seasons

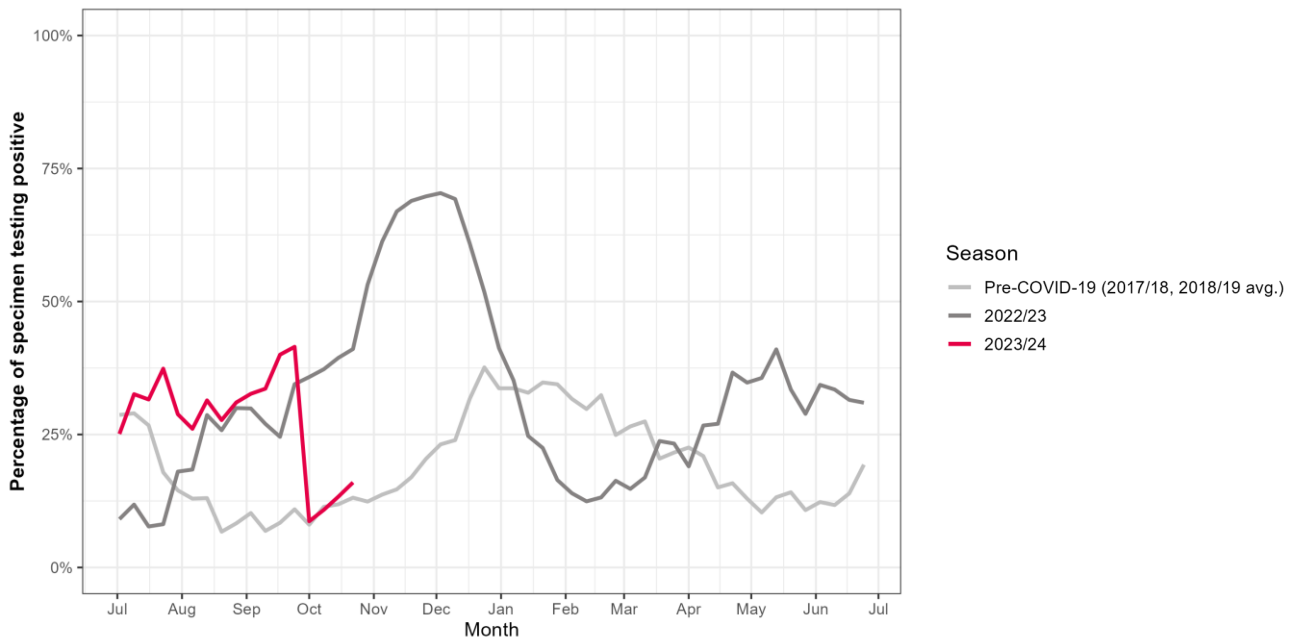


Central America Caribbean

Mexico

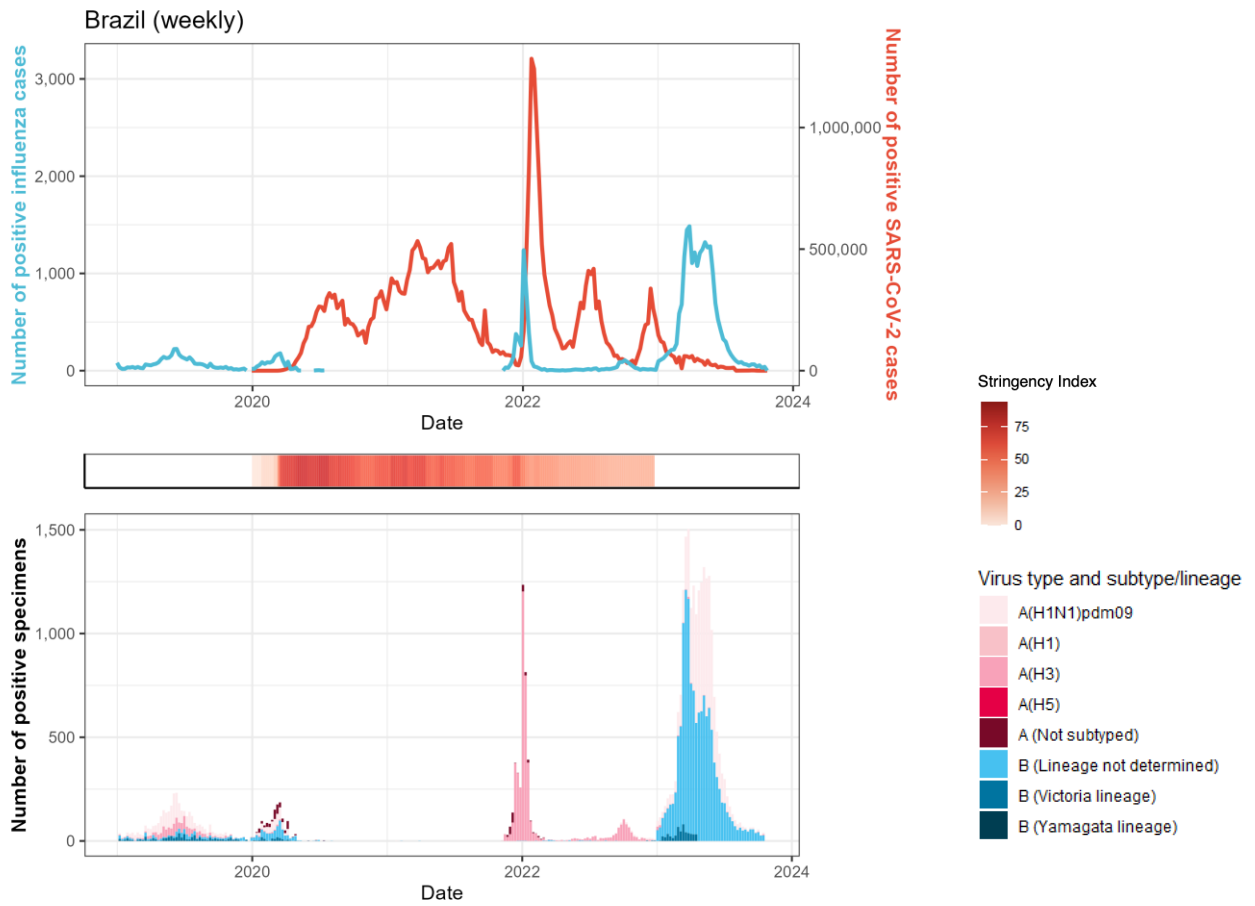


Percentage of specimens testing positive for influenza in different seasons

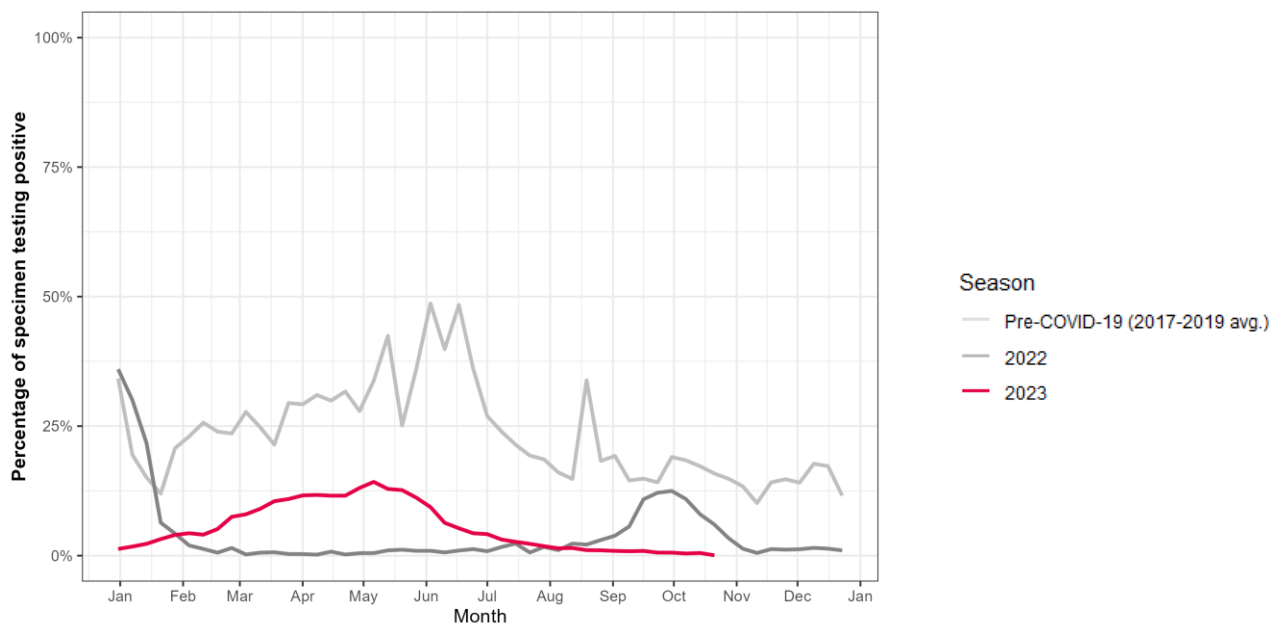


Tropical South America

Brazil

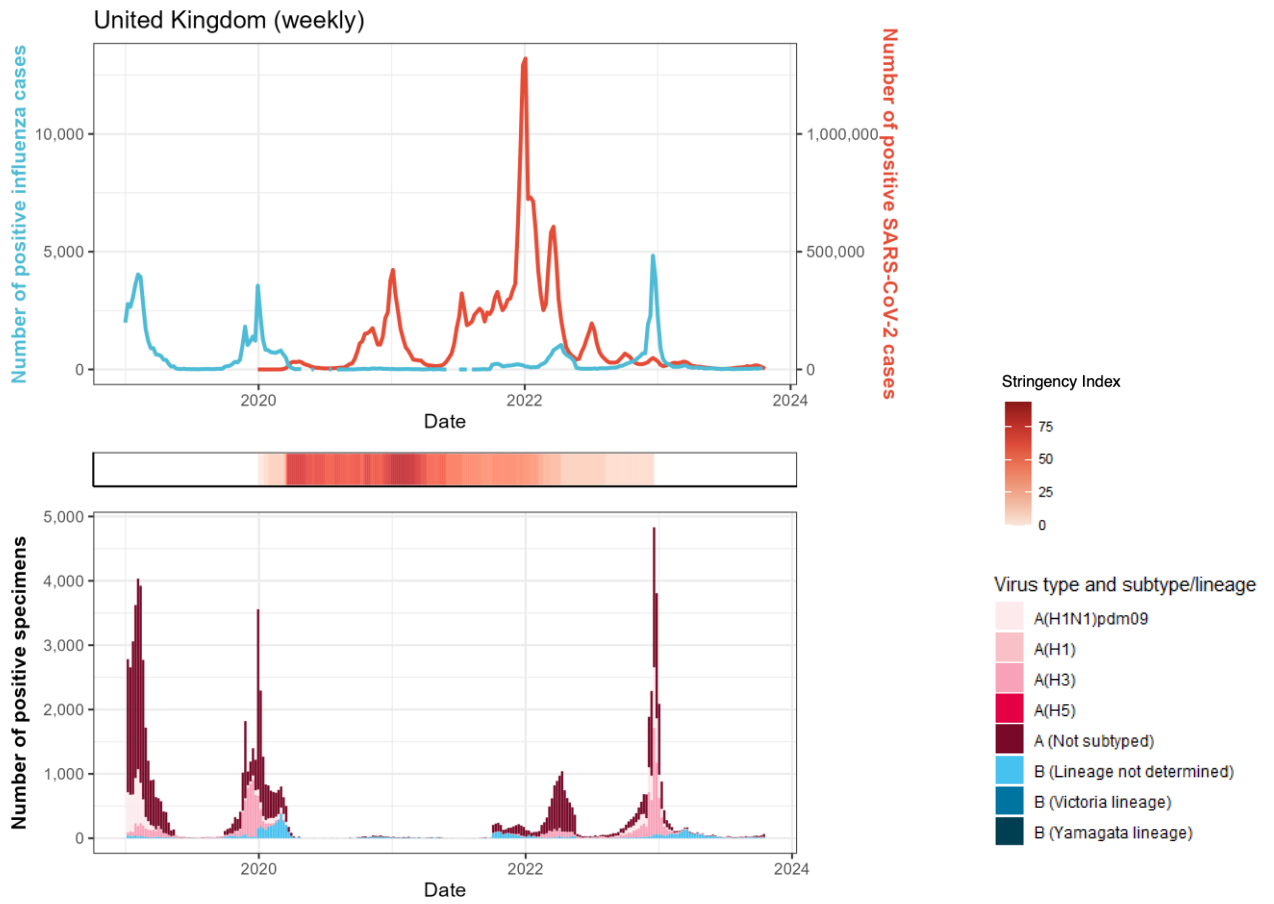


Percentage of specimens testing positive for influenza in different seasons



Northern Europe

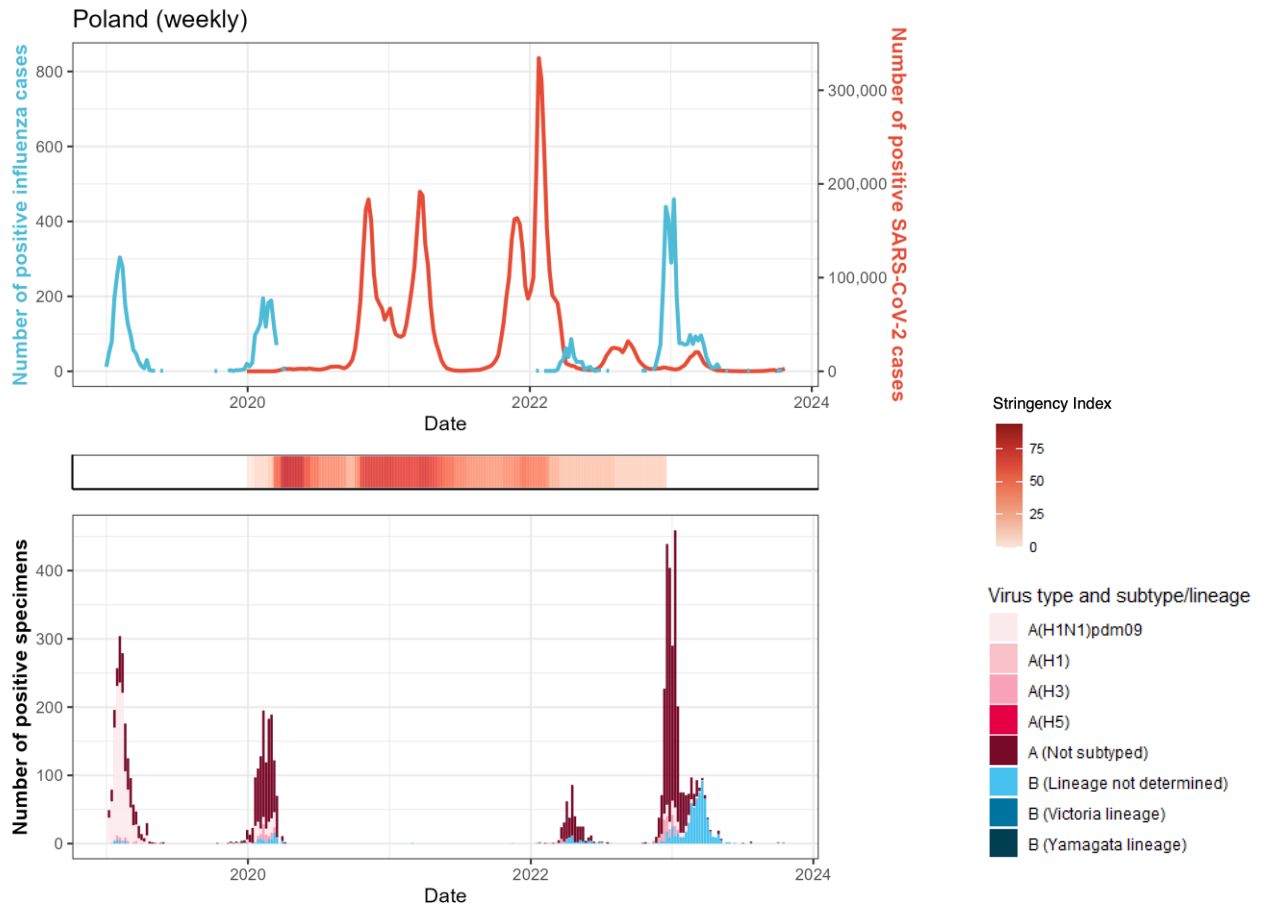
United Kingdom



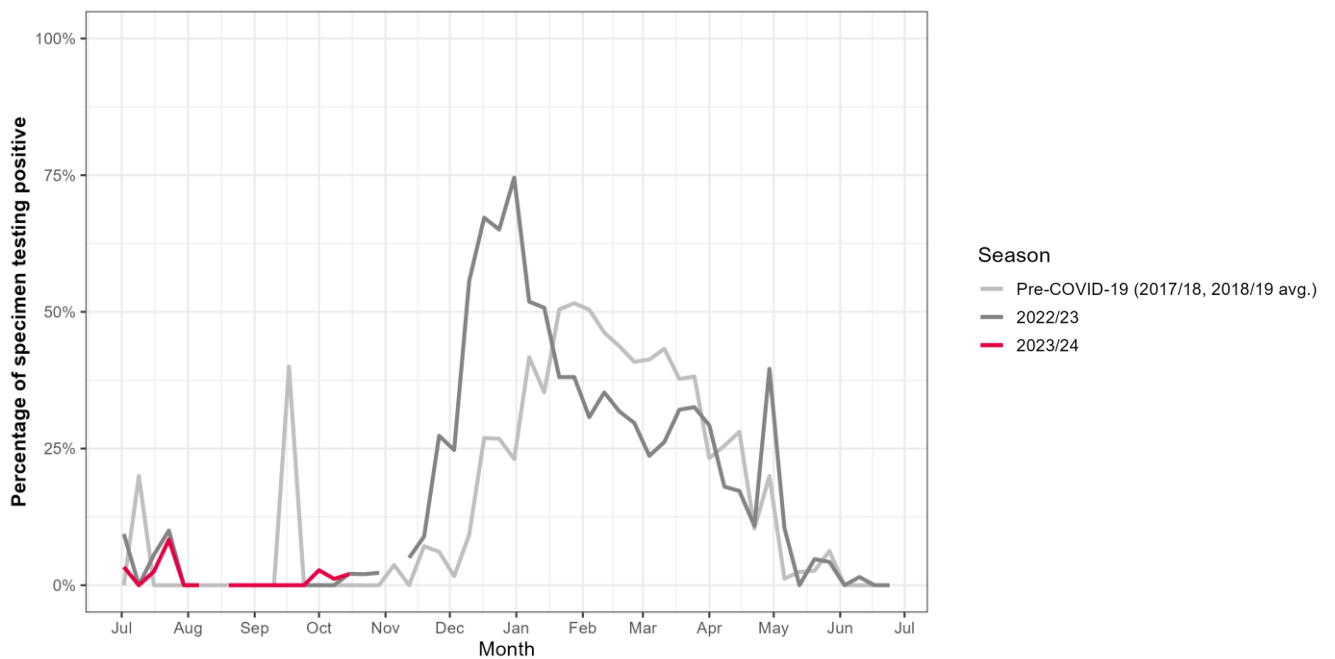
Percentage of specimens testing positive for influenza in different seasons: data not available

Eastern Europe

Poland

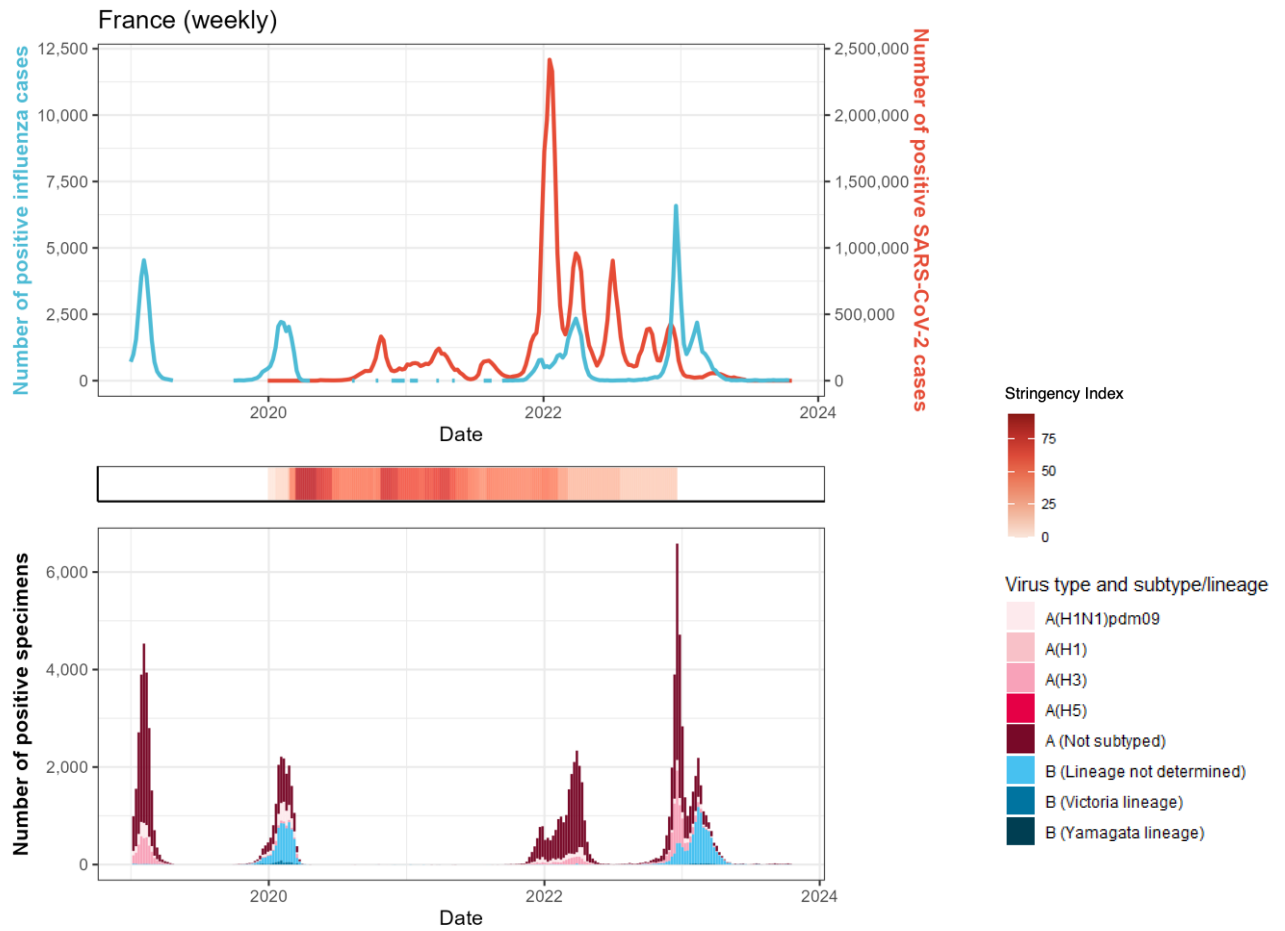


Percentage of specimens testing positive for influenza in different seasons

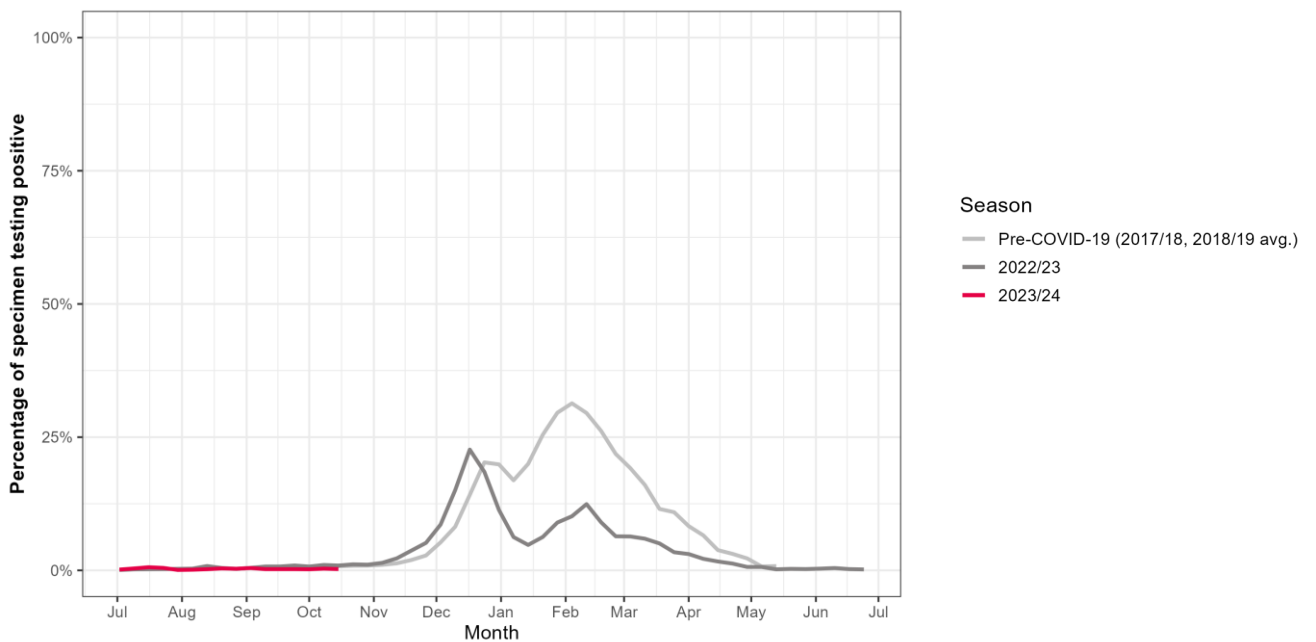


South West Europe

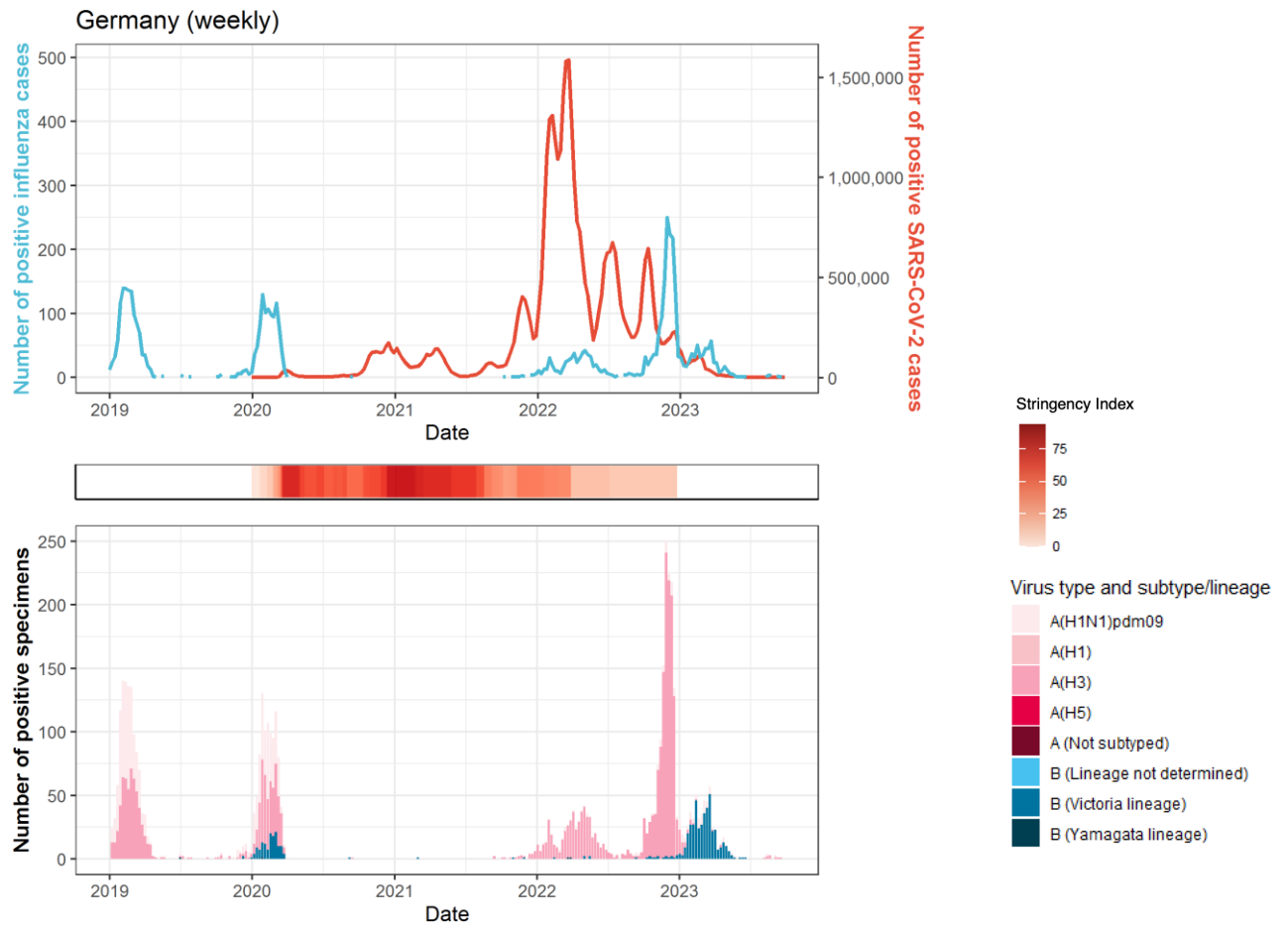
France



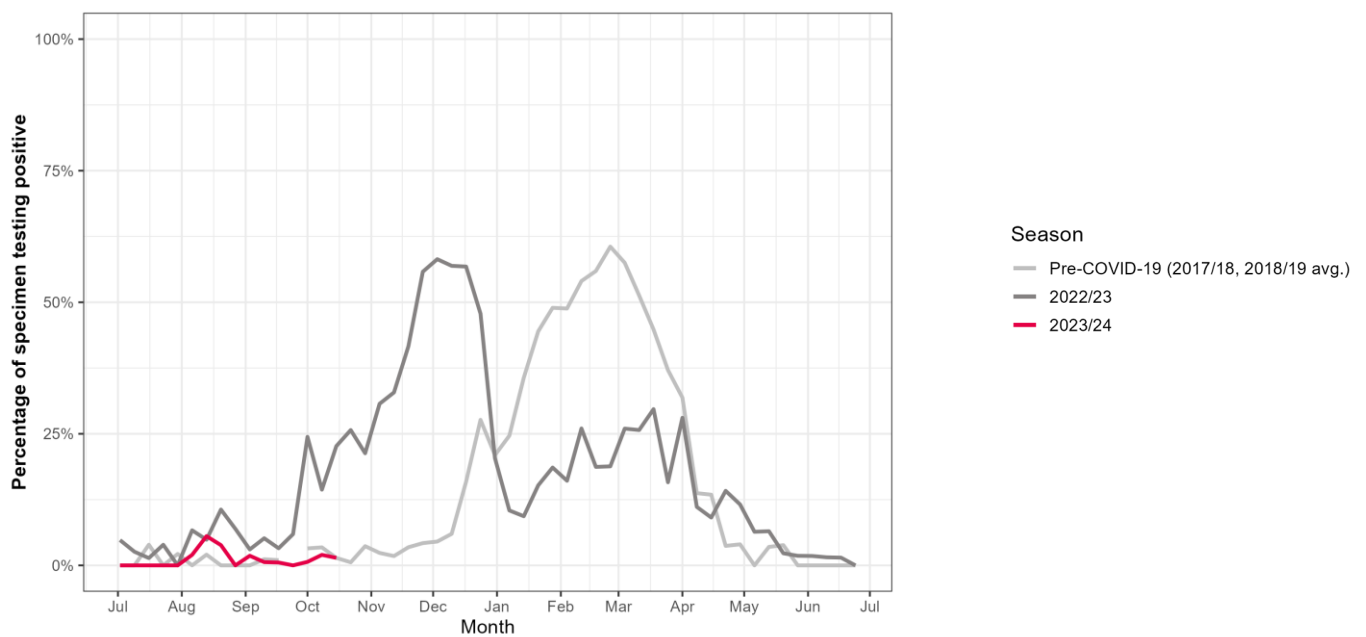
Percentage of specimens testing positive for influenza in different seasons



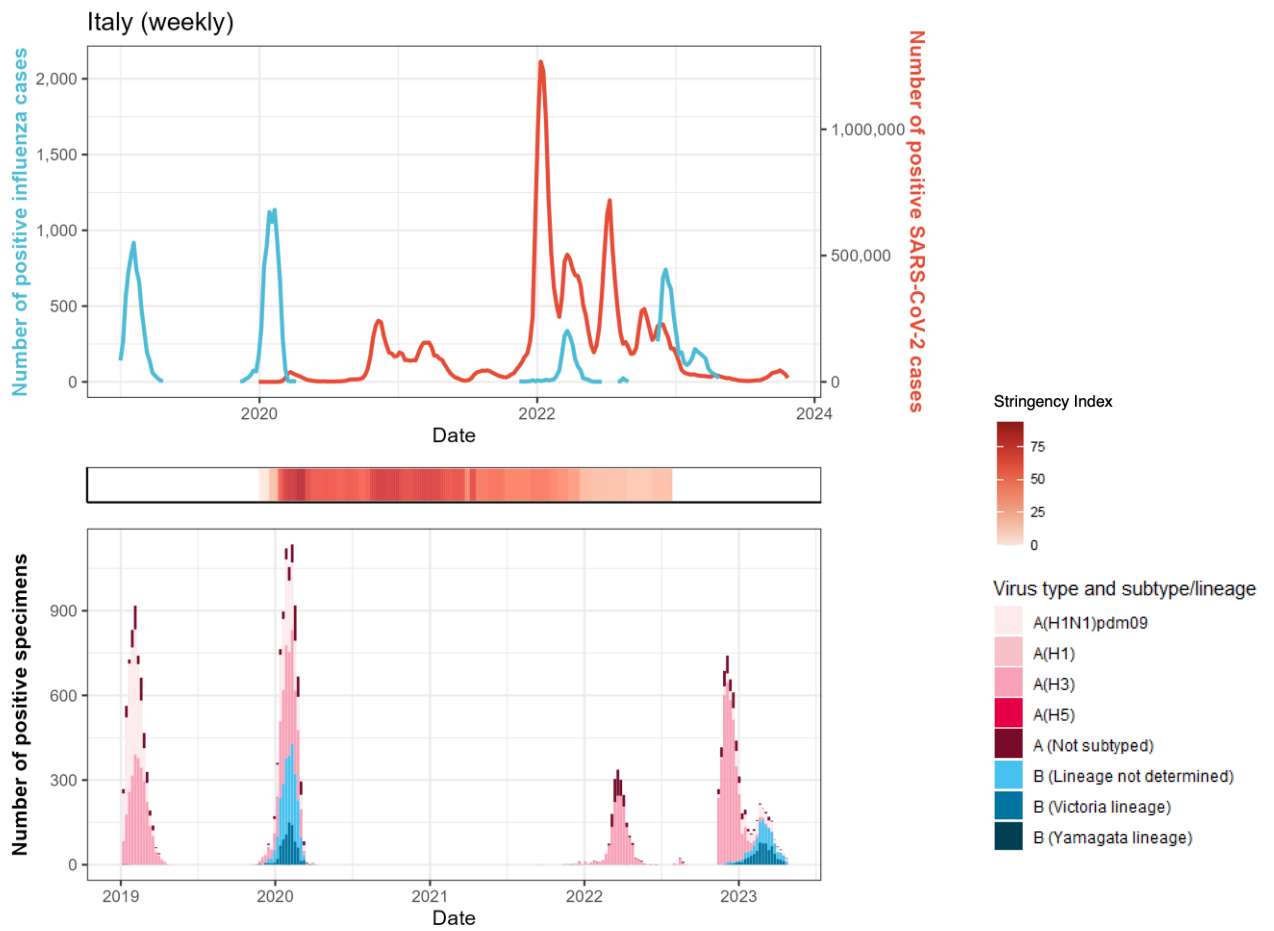
Germany



Percentage of specimens testing positive for influenza in different seasons

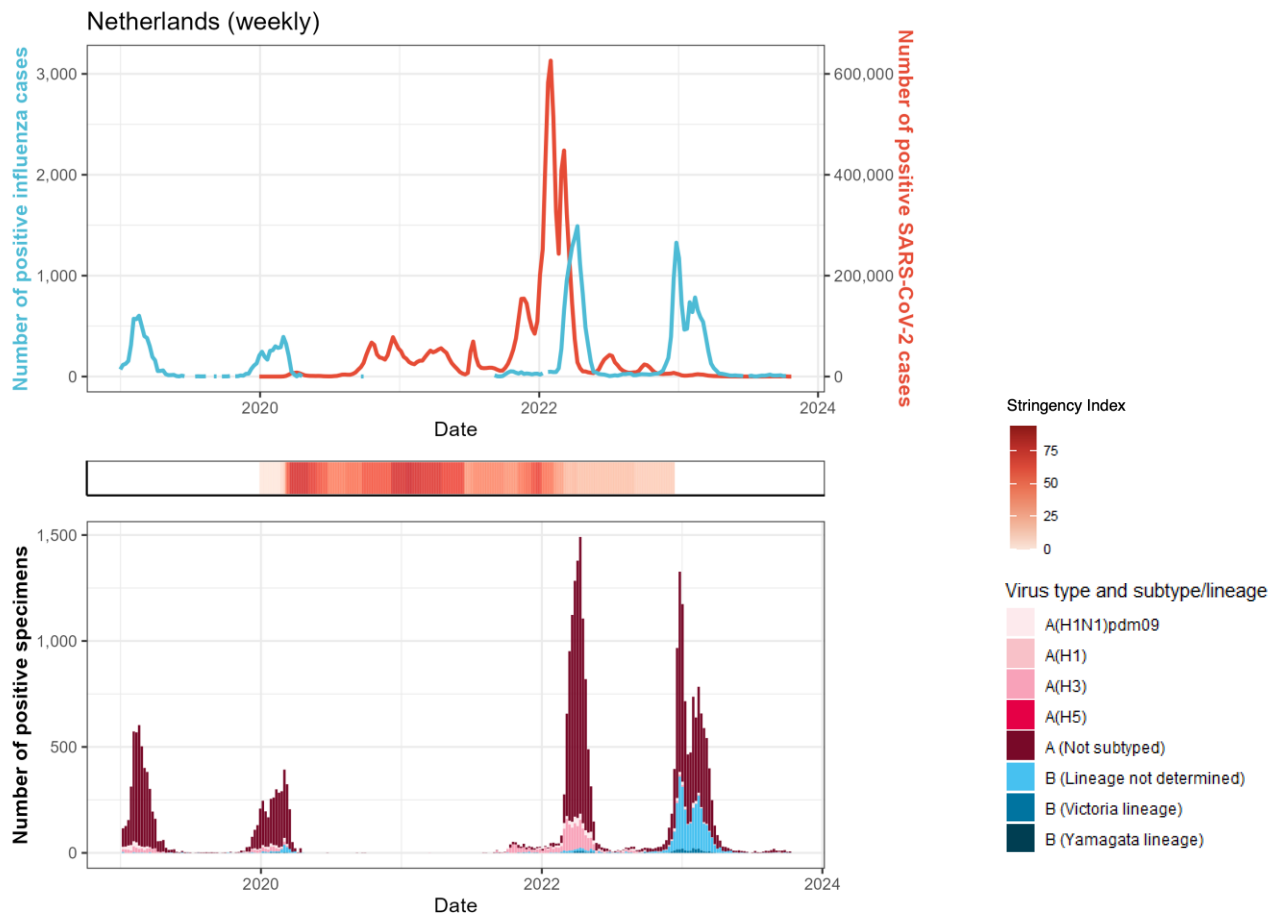


Italy



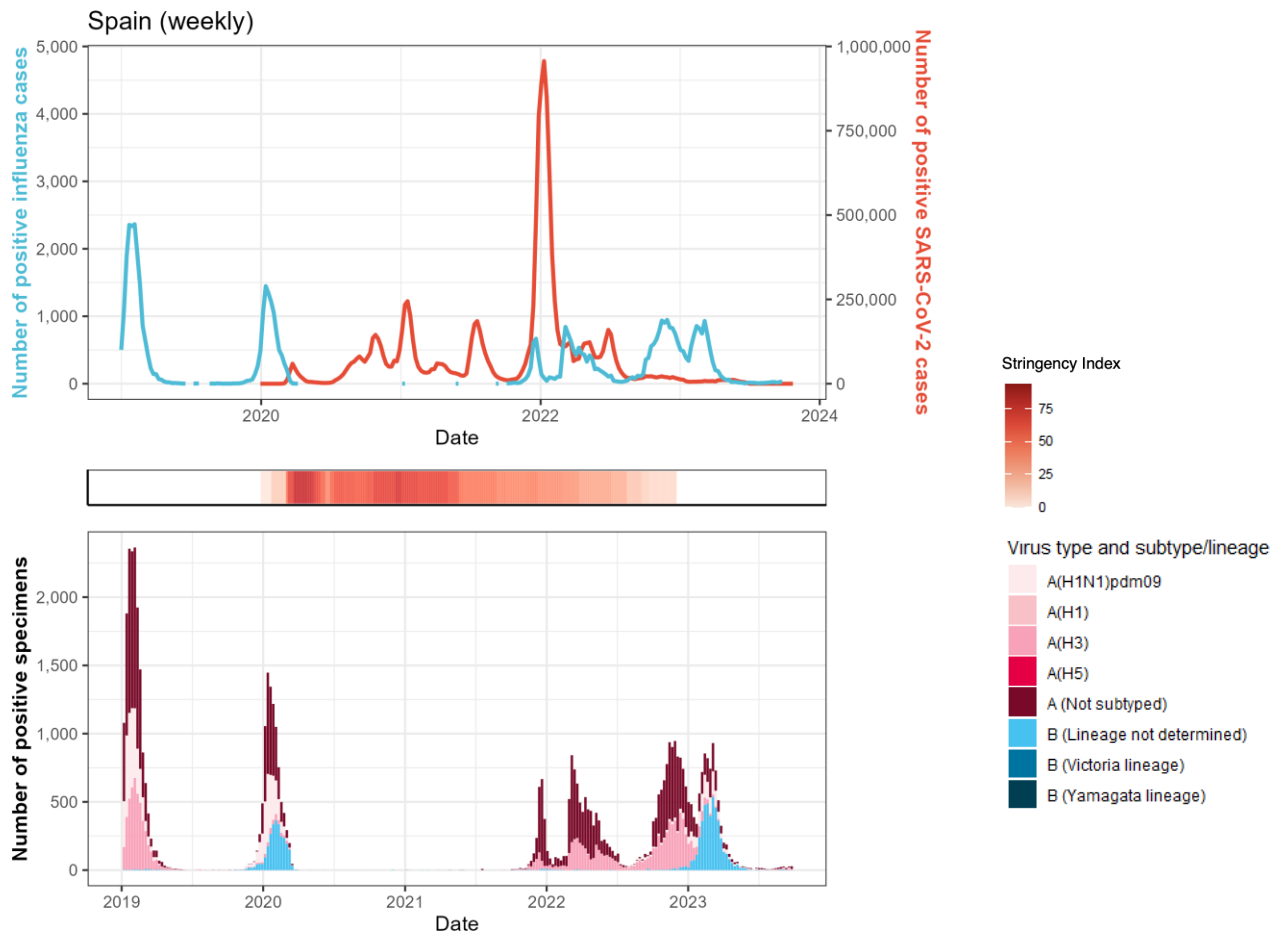
Percentage of specimens testing positive for influenza in different seasons: data not available

Netherlands

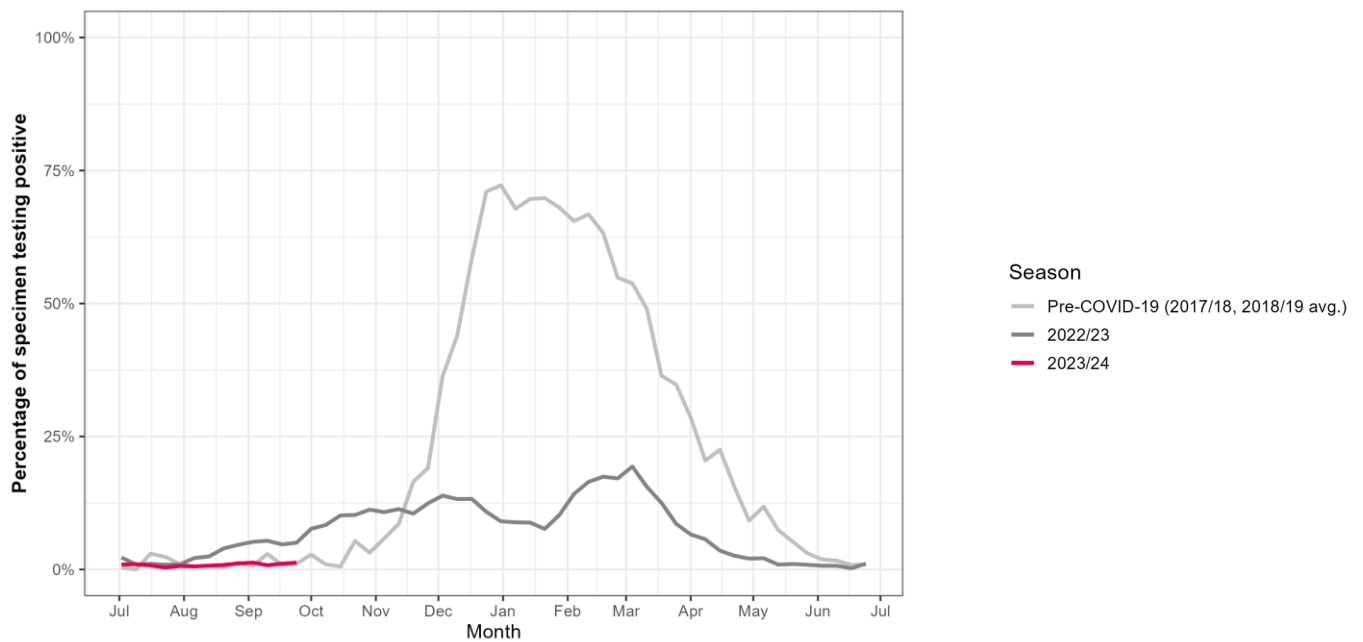


Percentage of specimens testing positive for influenza in different seasons: data not available

Spain

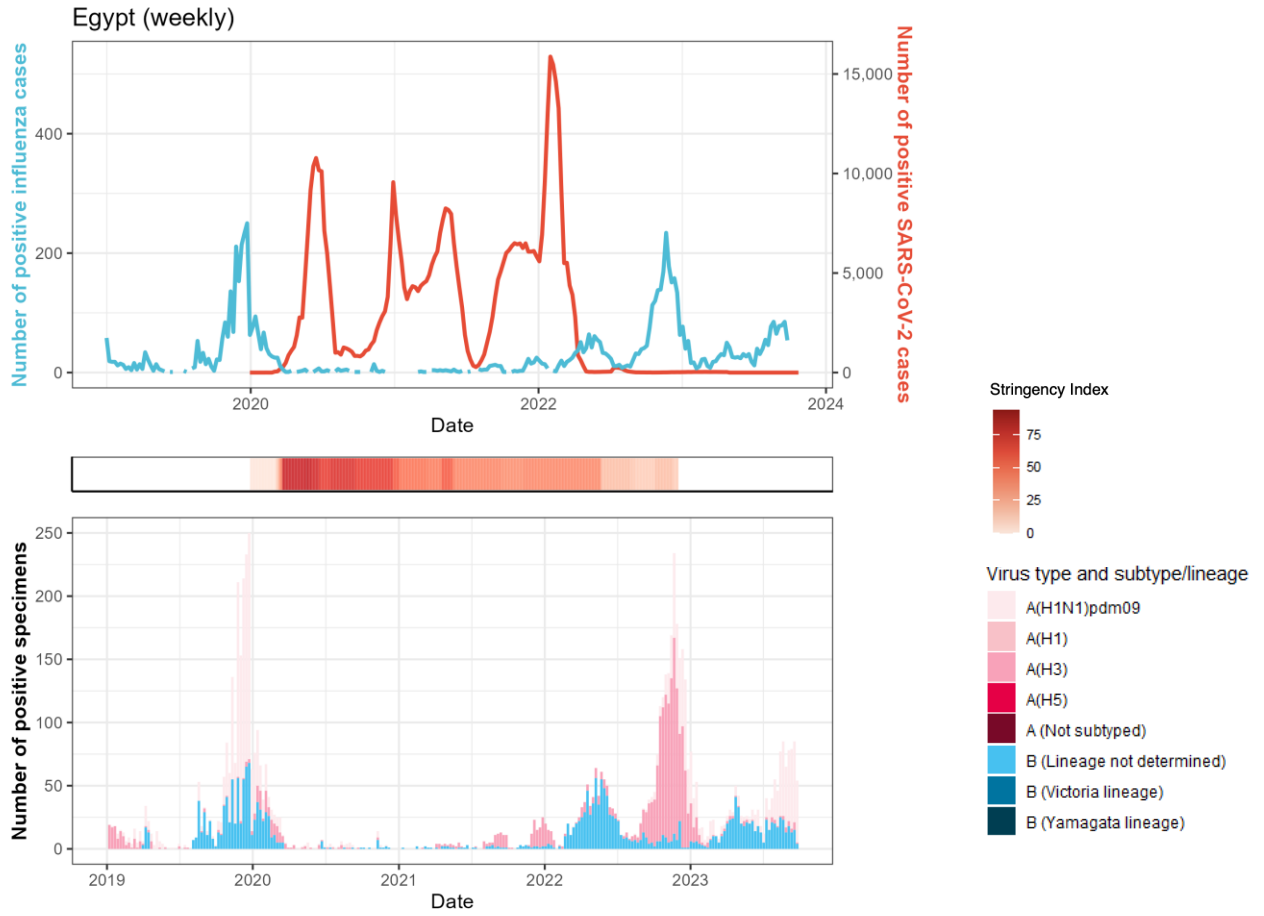


Percentage of specimens testing positive for influenza in different seasons

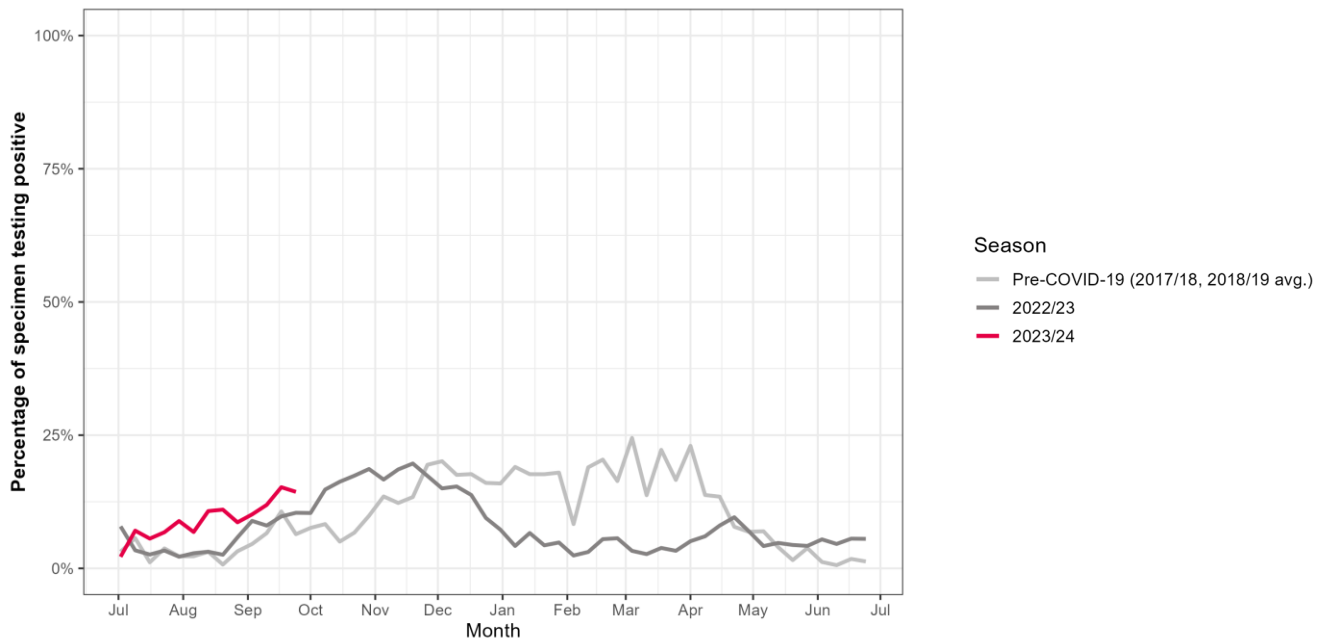


Northern Africa

Egypt

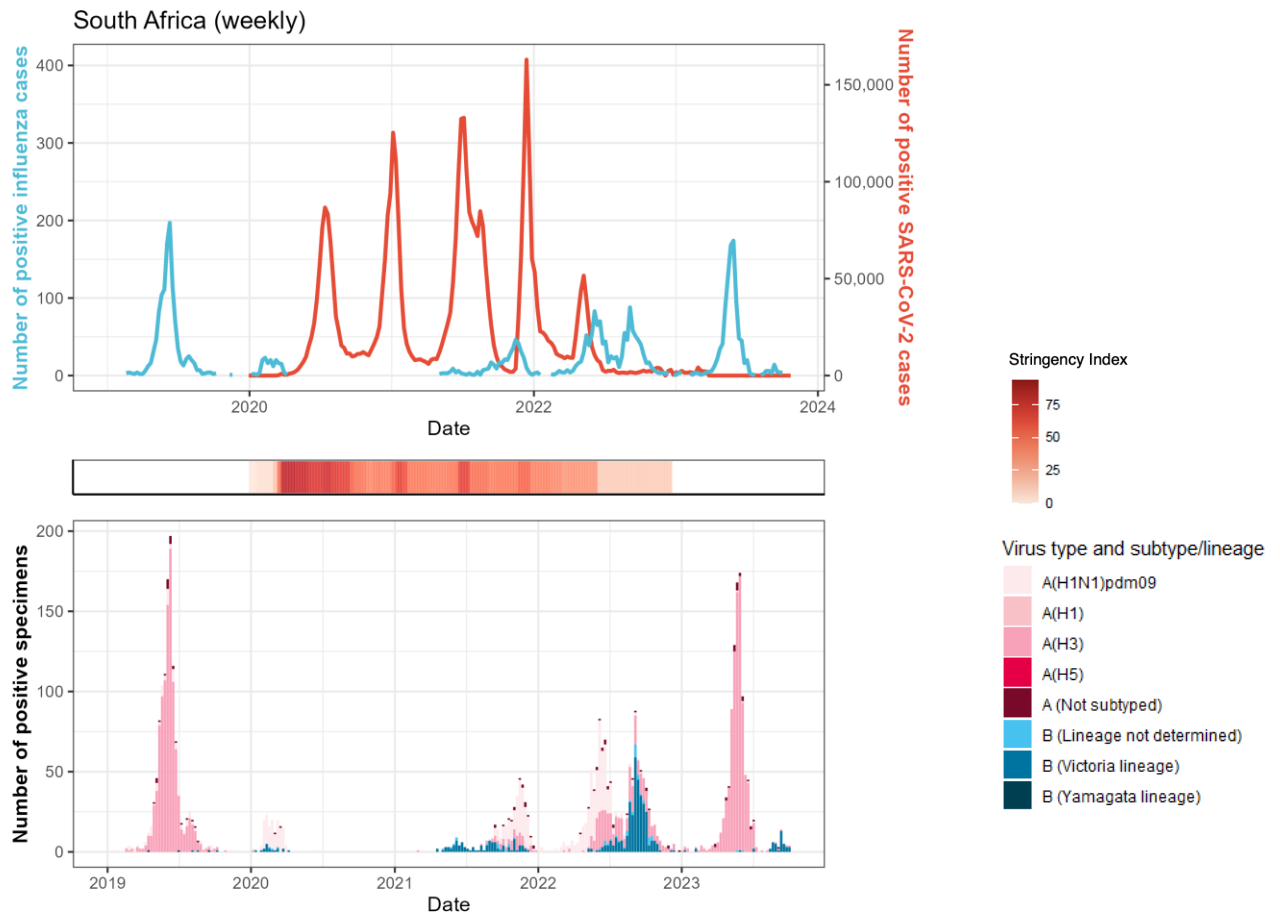


Percentage of specimens testing positive for influenza in different seasons

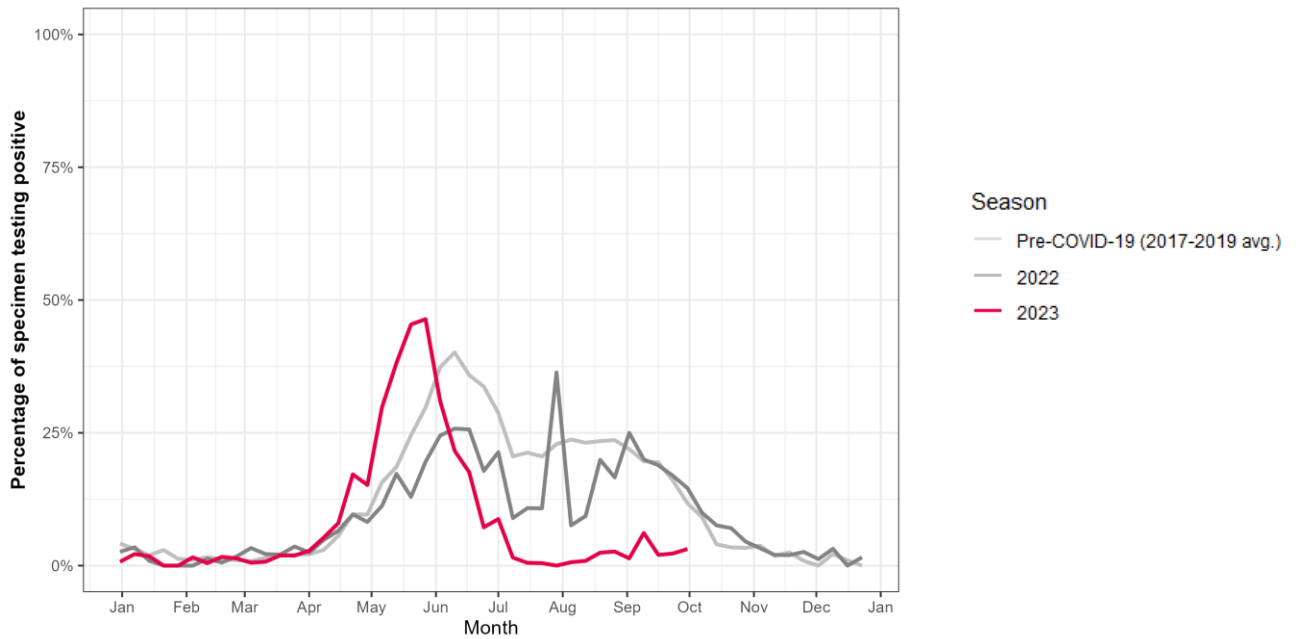


Southern Africa

South Africa

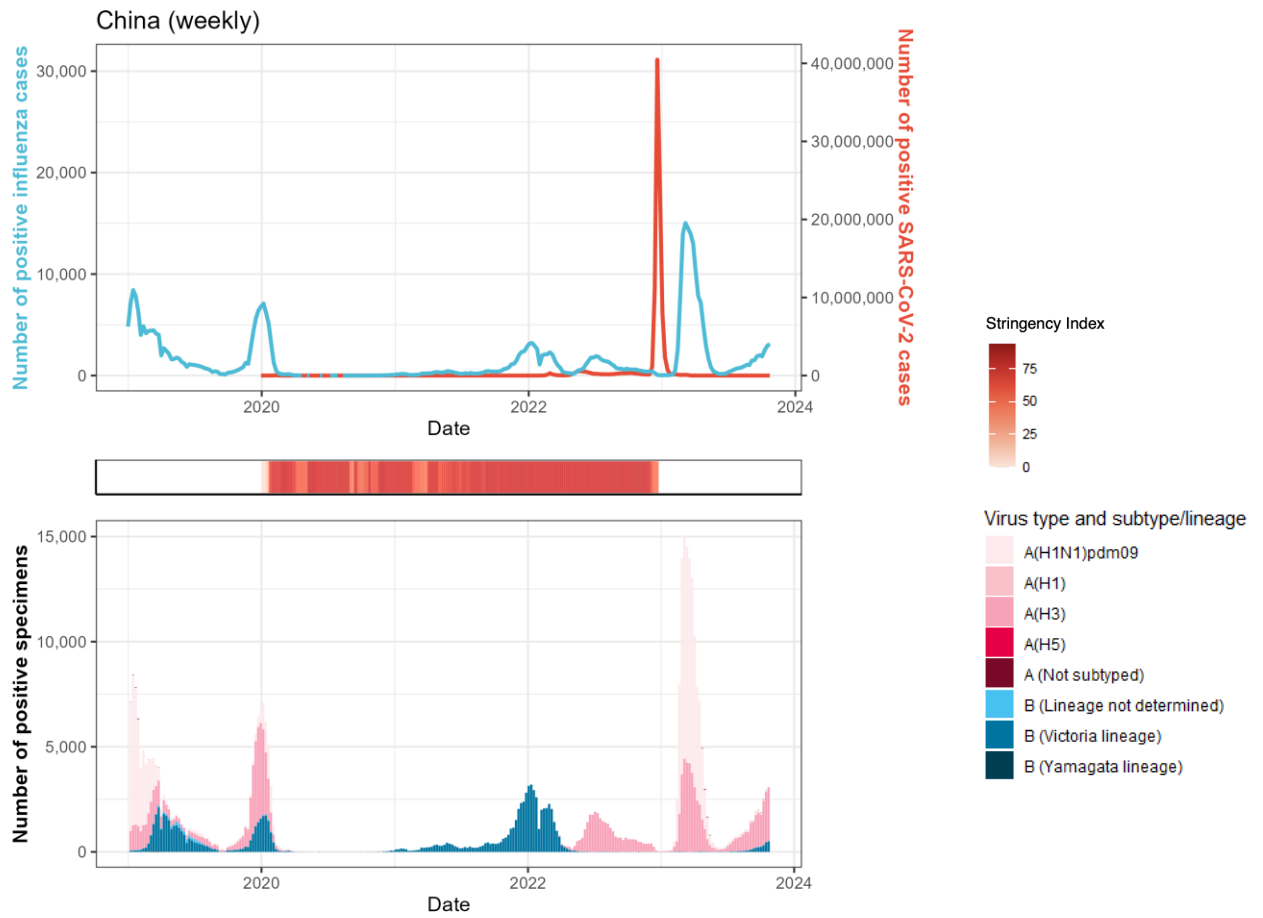


Percentage of specimens testing positive for influenza in different seasons

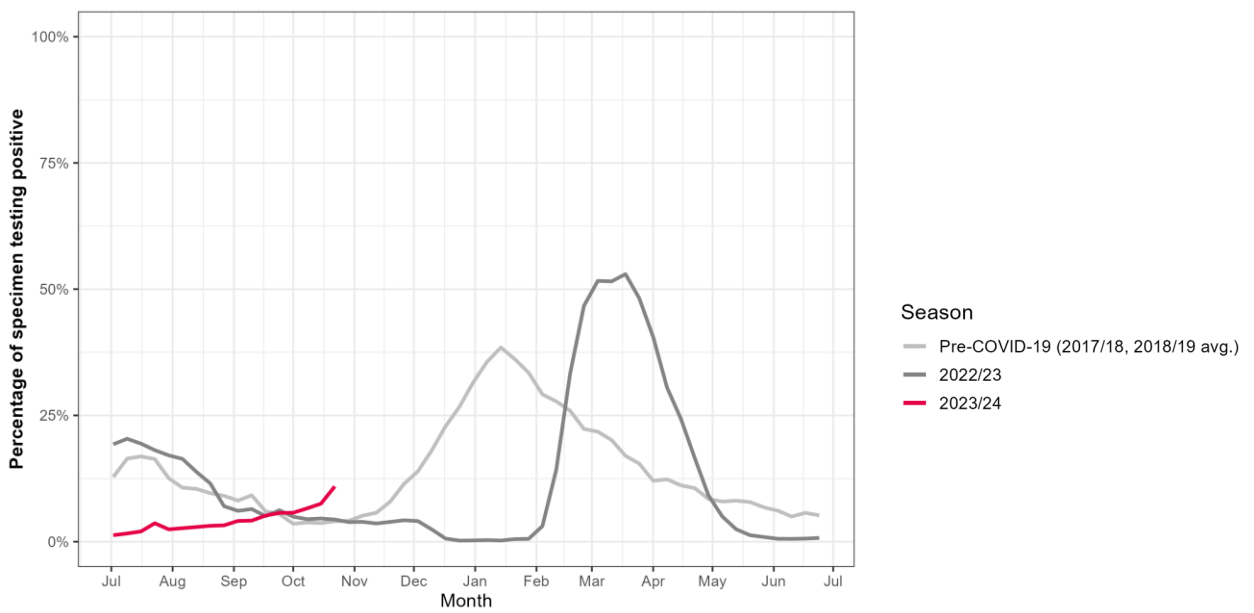


Eastern Asia

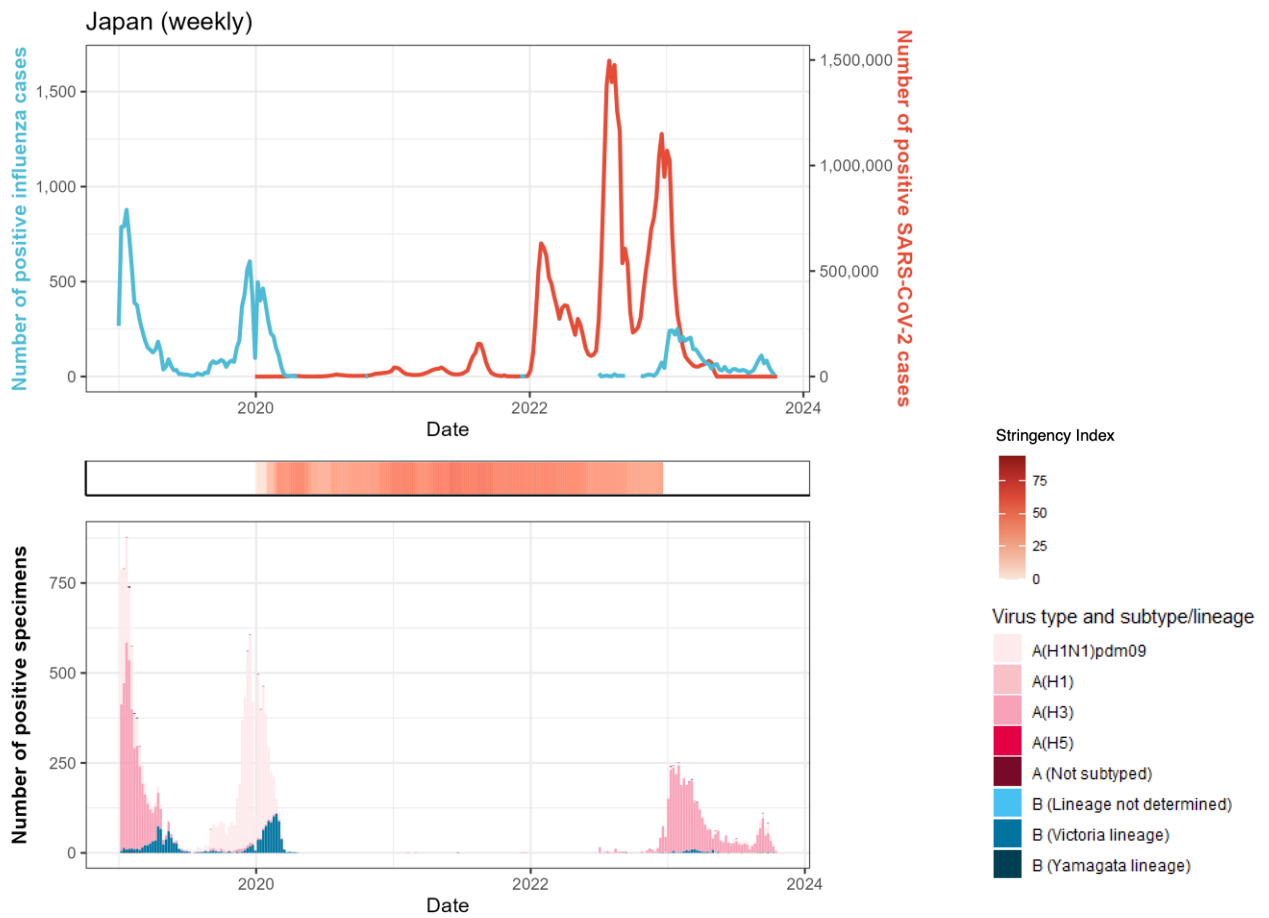
China



Percentage of specimens testing positive for influenza in different seasons

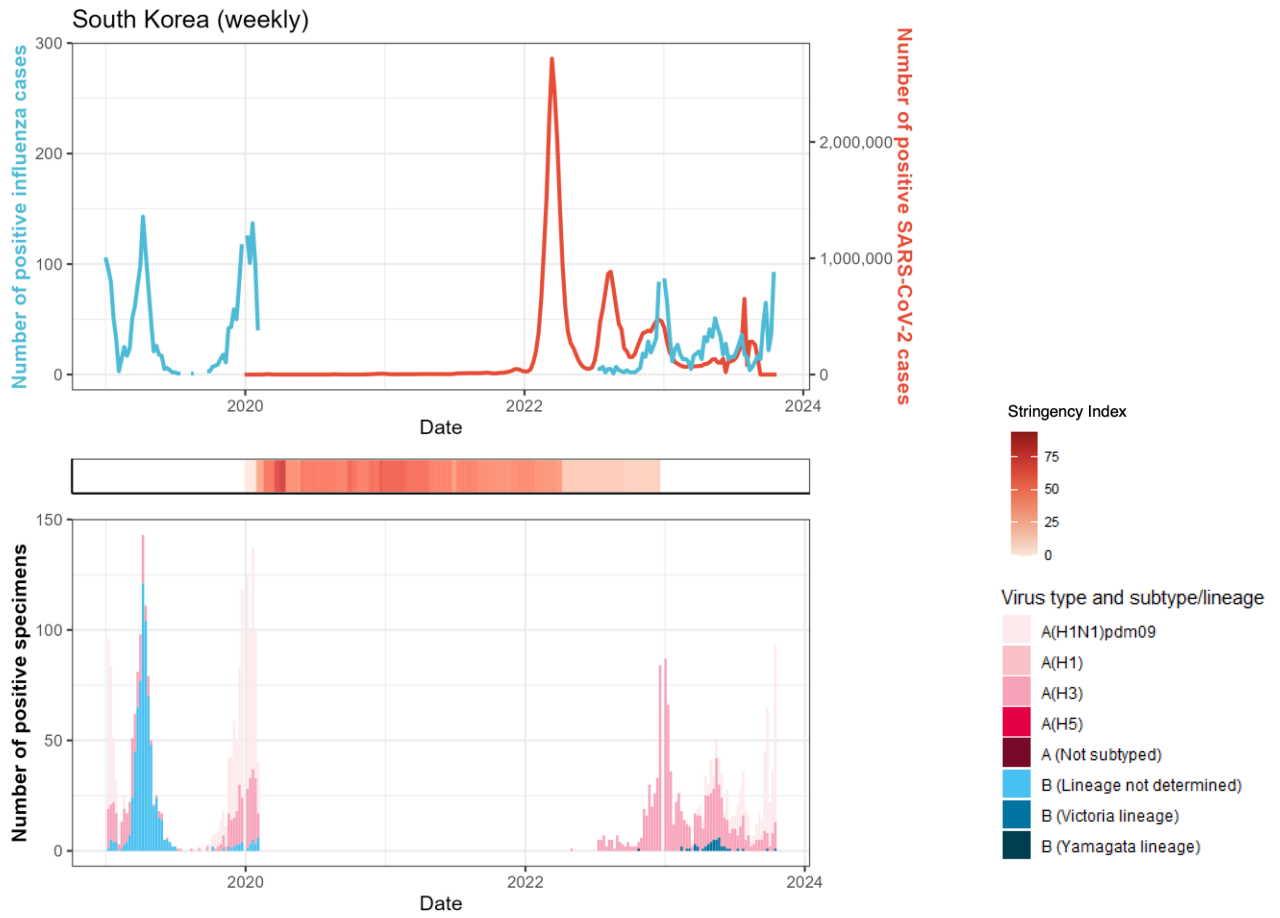


Japan

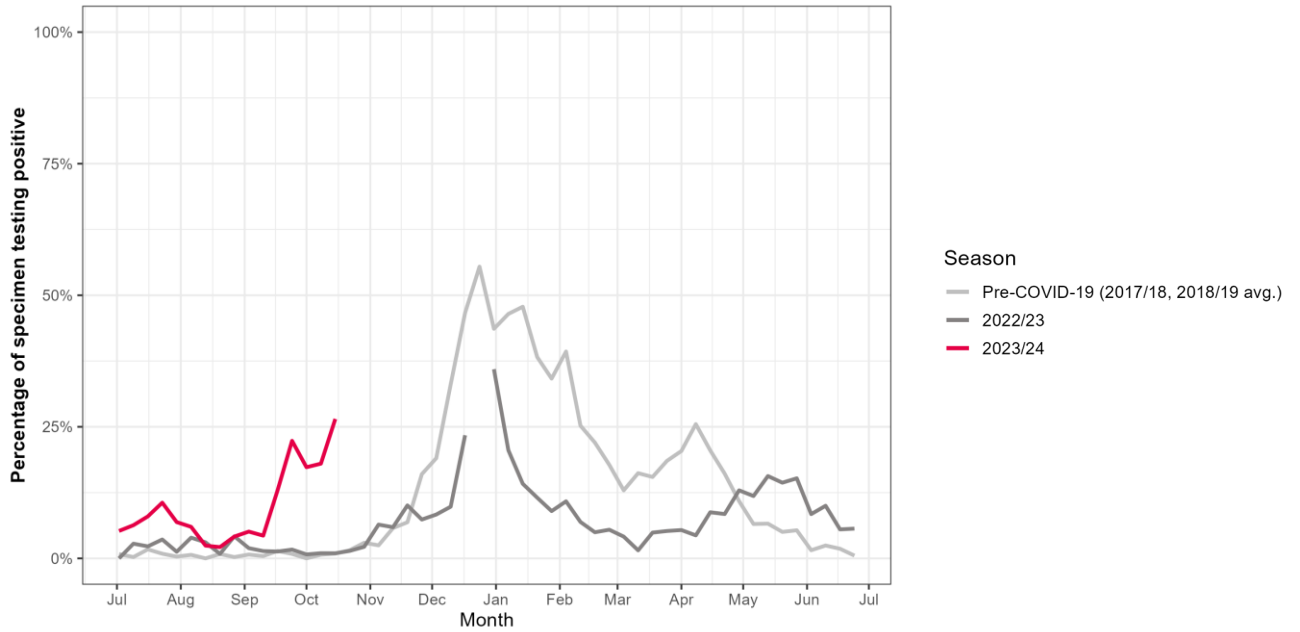


Percentage of specimens testing positive for influenza in different seasons: data not available

South Korea

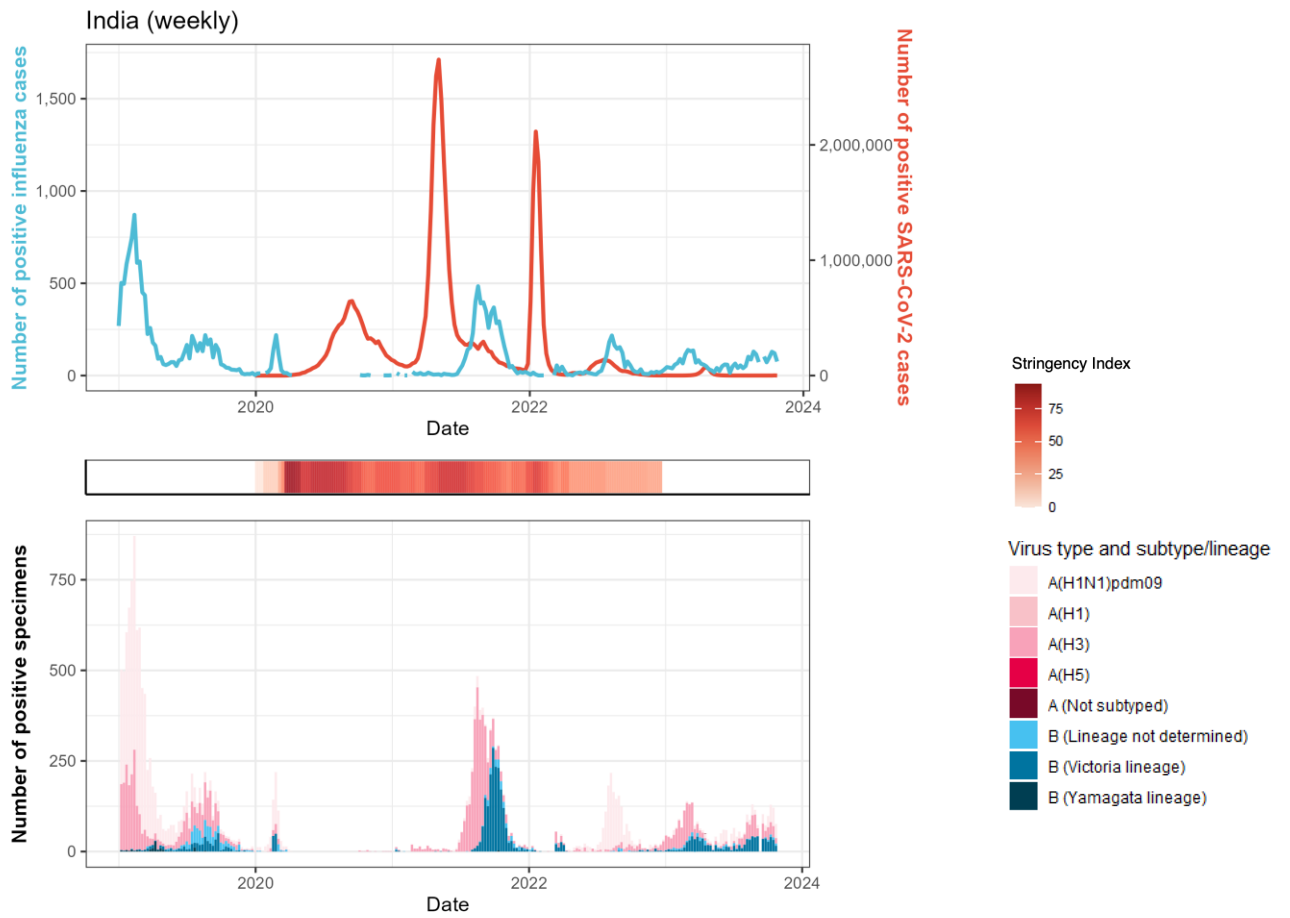


Percentage of specimens testing positive for influenza in different seasons

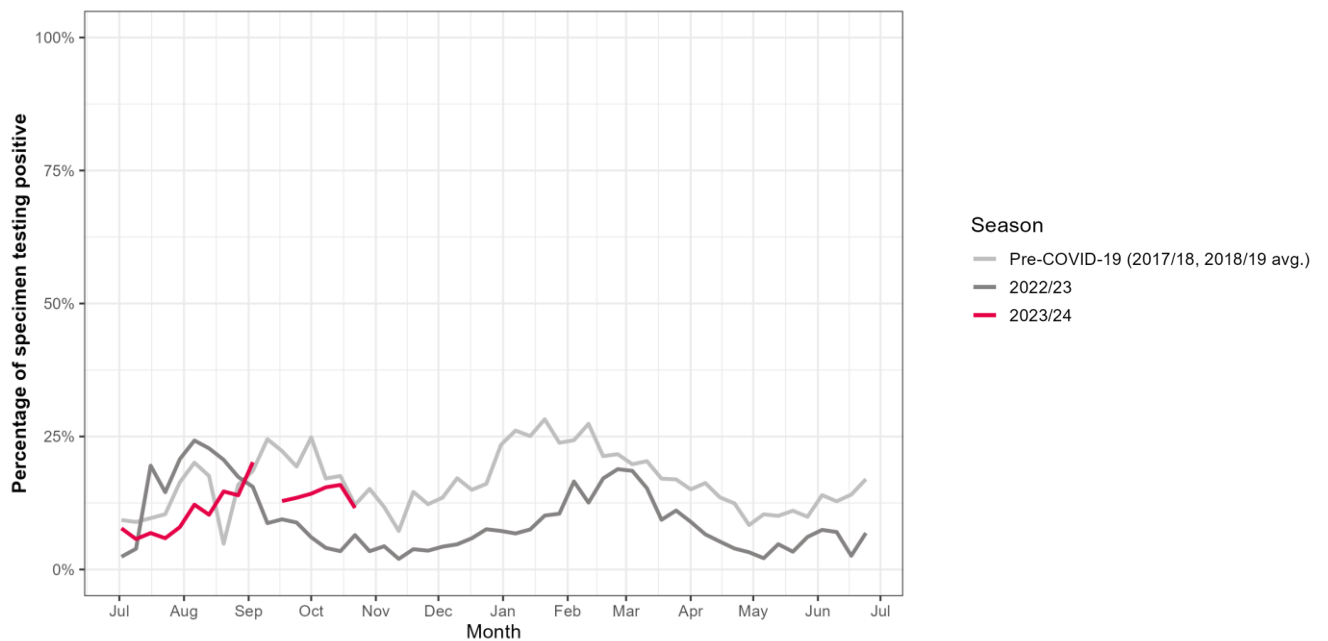


Southern Asia

India

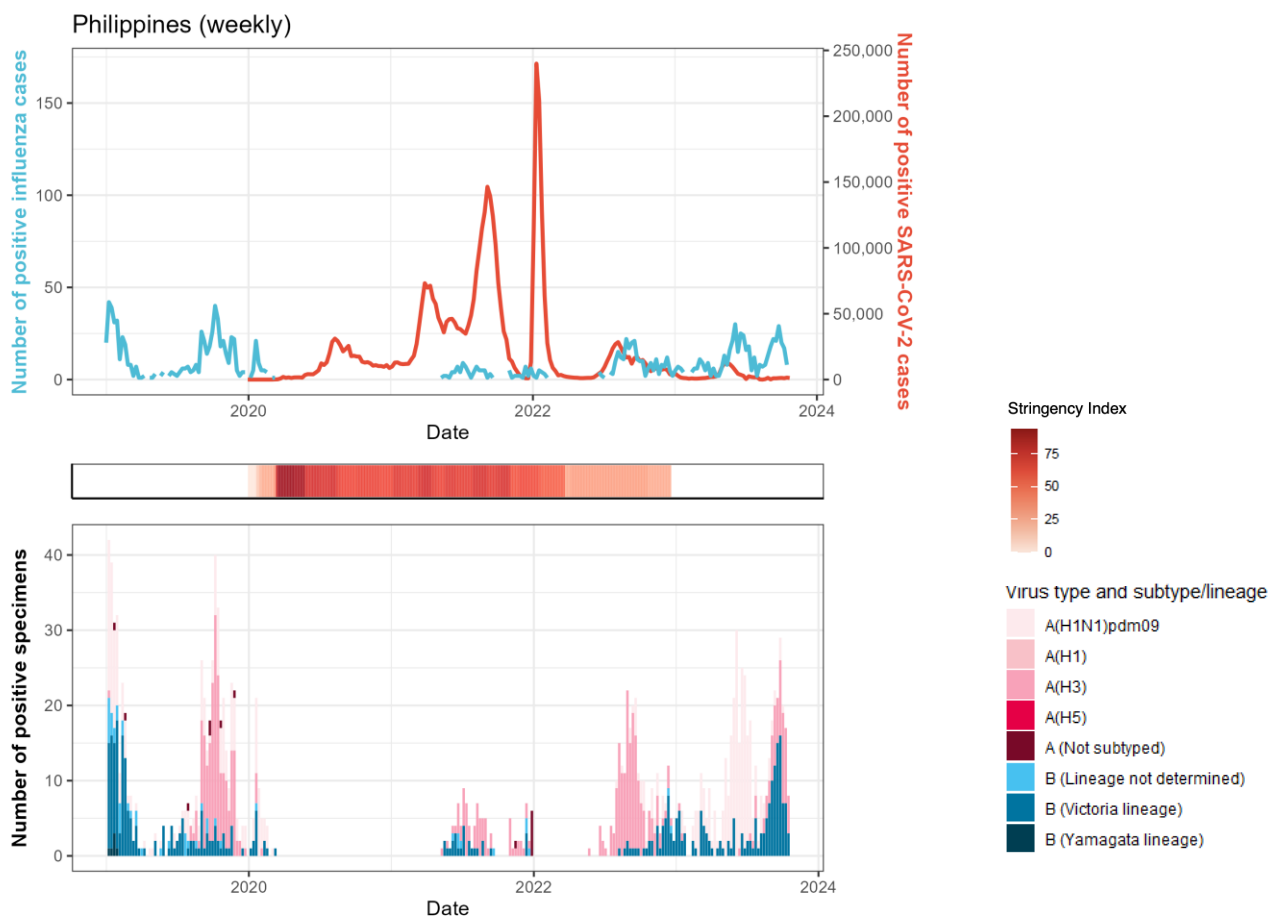


Percentage of specimens testing positive for influenza in different seasons

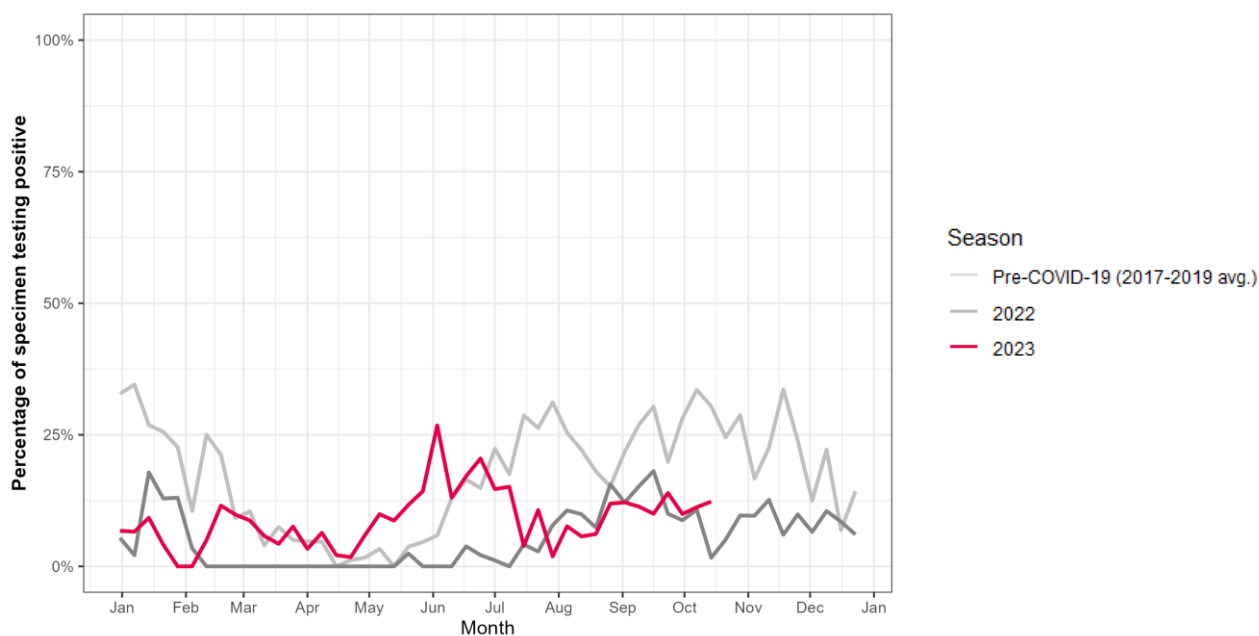


South-East Asia

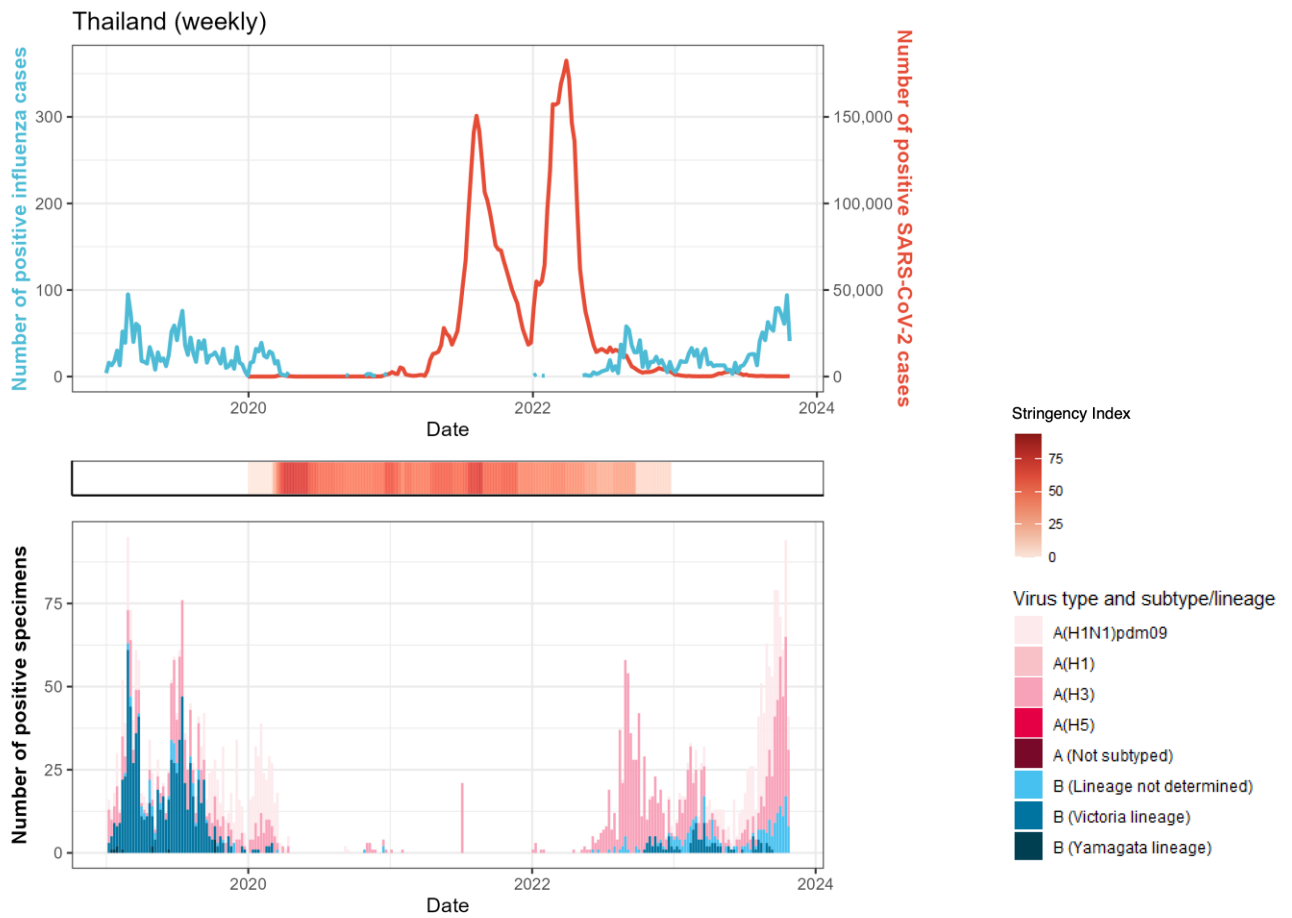
Philippines



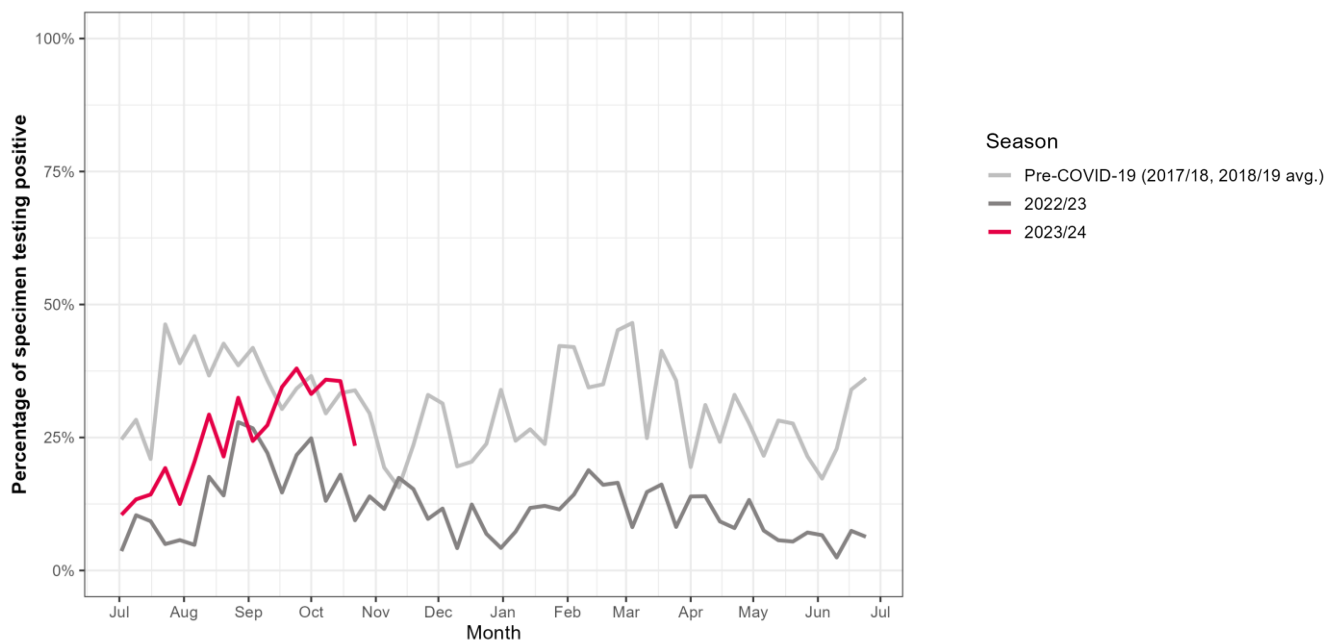
Percentage of specimens testing positive for influenza in different seasons



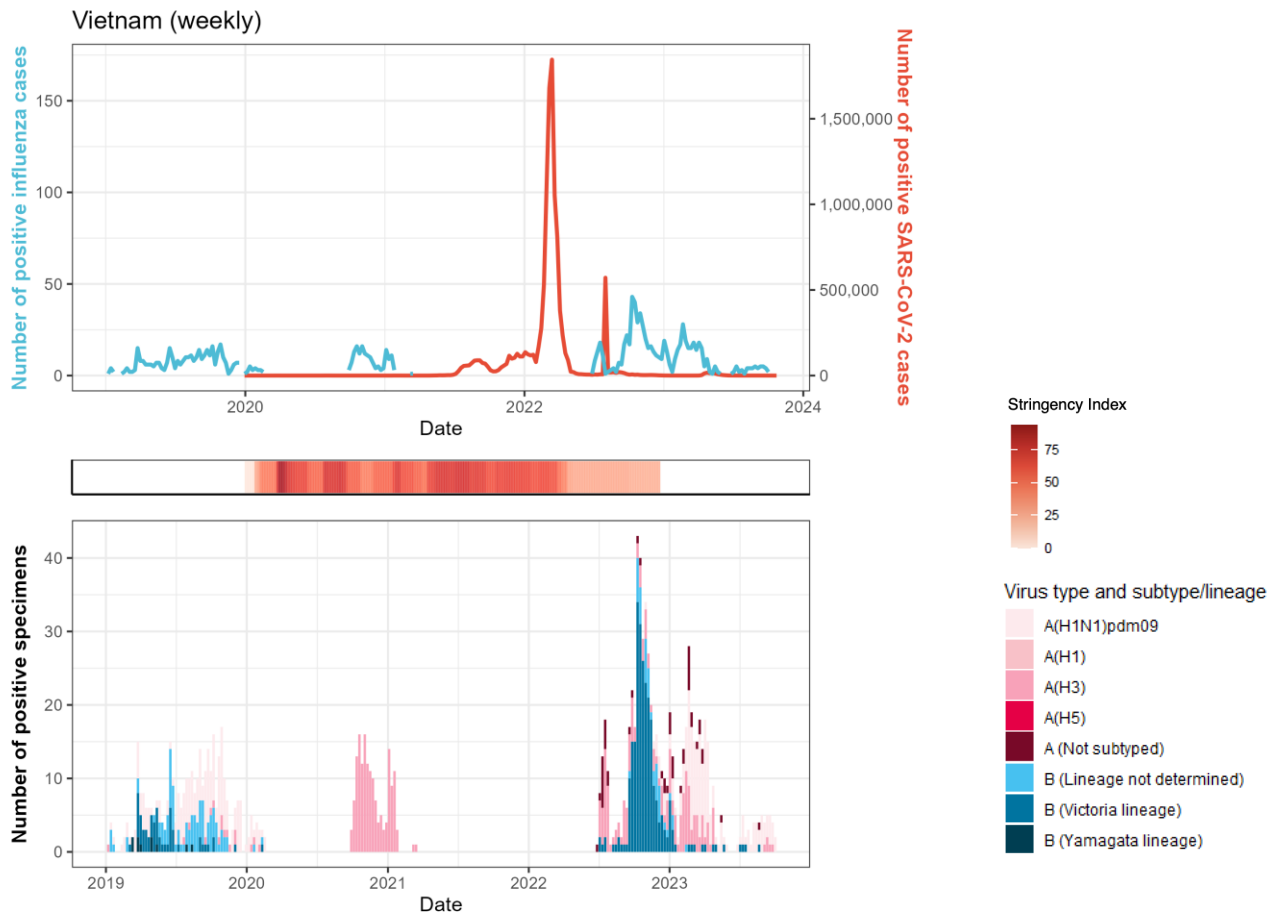
Thailand



Percentage of specimens testing positive for influenza in different seasons



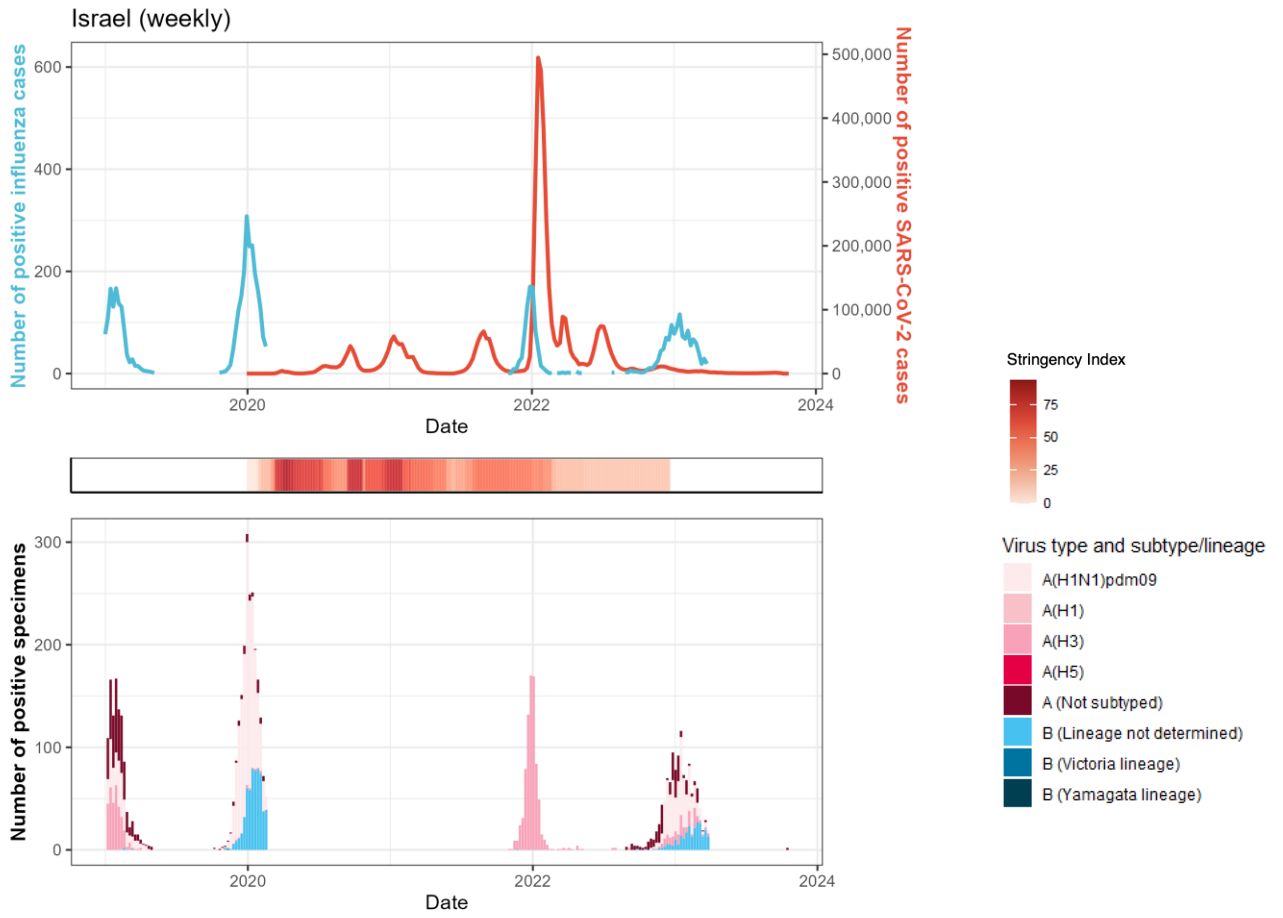
Vietnam



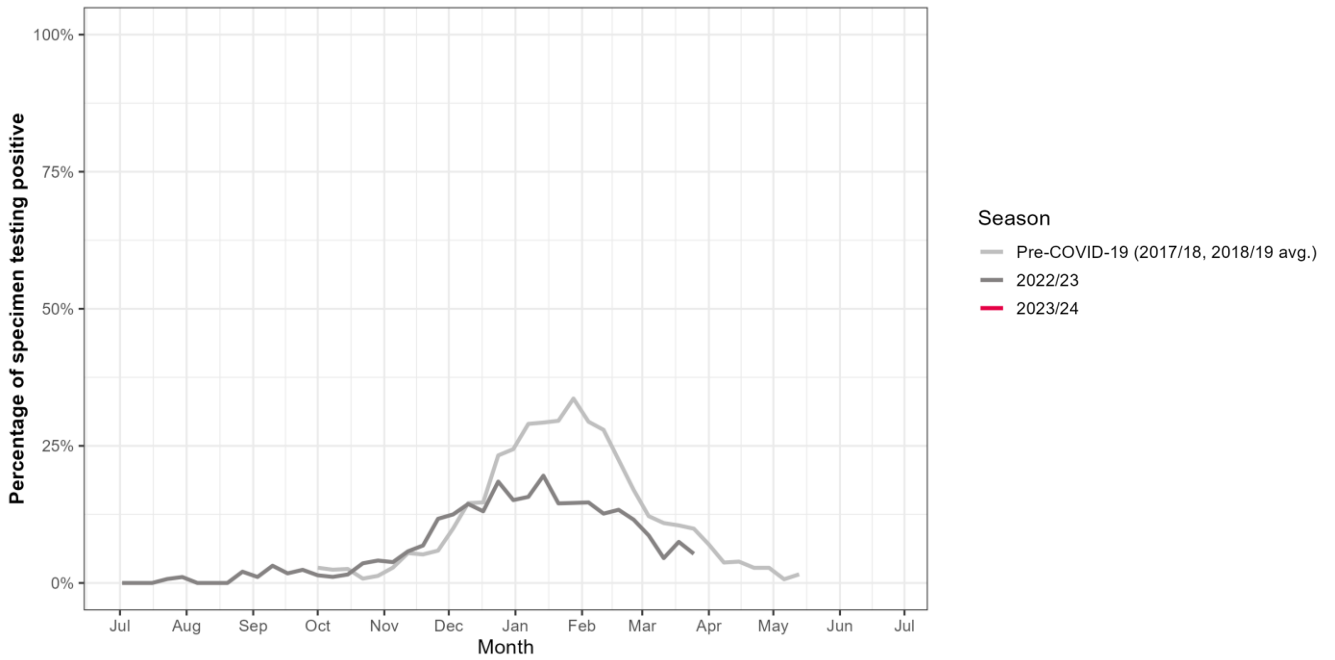
Percentage of specimens testing positive for influenza in different seasons: data not available

Western Asia

Israel

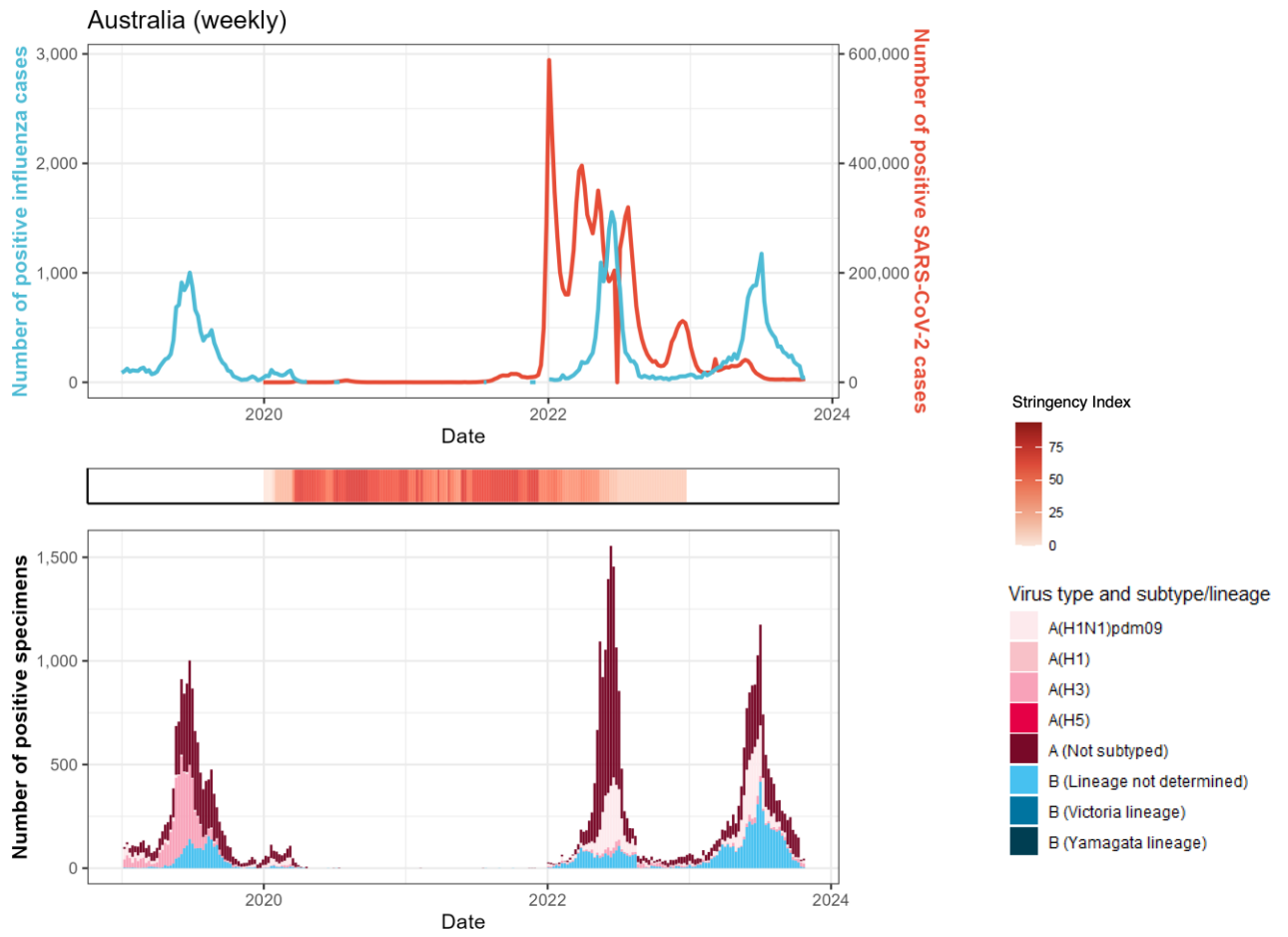


Percentage of specimens testing positive for influenza in different seasons

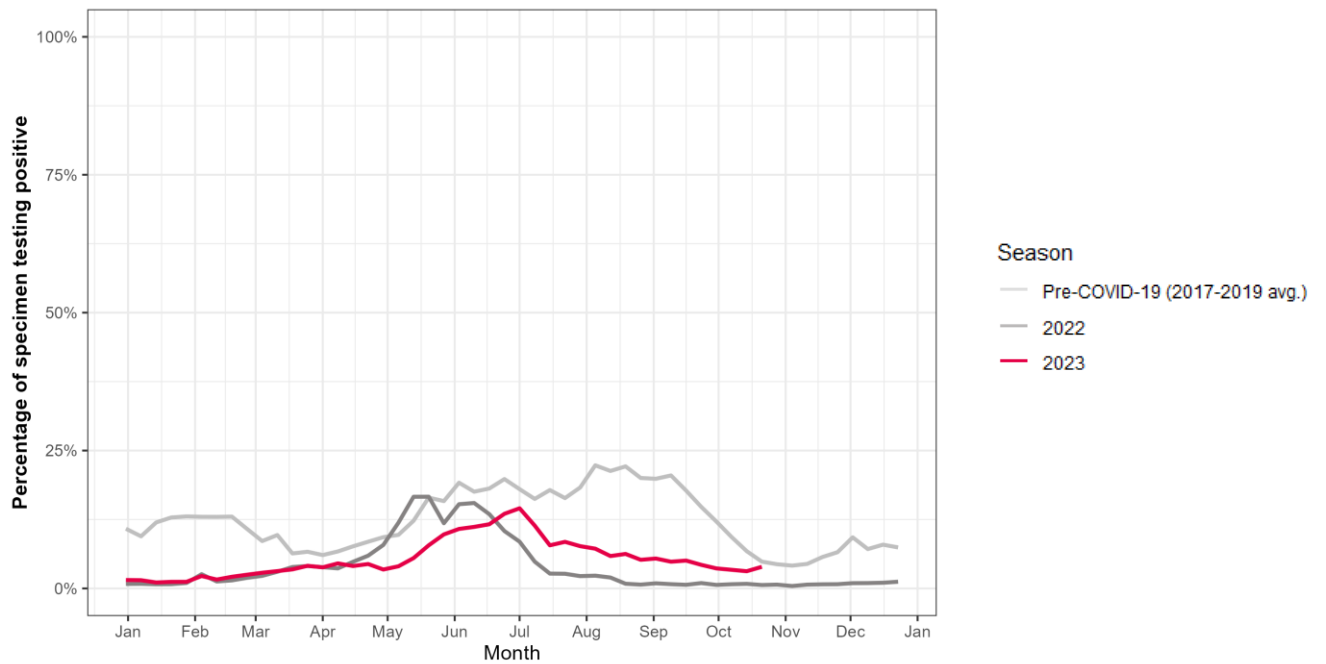


Oceania

Australia



Percentage of specimens testing positive for influenza in different seasons



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 | 28,381 | | 949 | | |
| Australia | 2021 | 338,226 | | 8 | | |
| Australia | 2022 | 10,418,952 | | 14,509 | | |
| Australia | 2023 | 844,418 | 21,438 | 14,005 | 399 | 2023-43 |
| Brazil | 2019 | | | 3,459 | | |
| Brazil | 2020 | 7,563,551 | | 1,391 | | |
| Brazil | 2021 | 14,700,856 | | 1,240 | | |
| Brazil | 2022 | 14,038,581 | | 3,648 | | |
| Brazil | 2023 | 1,419,334 | 0 | 21,036 | 125 | 2023-43 |
| Canada | 2019 | | | 43,196 | | |
| Canada | 2020 | 565,508 | | 44,956 | | |
| Canada | 2021 | 1,536,966 | | 337 | | |
| Canada | 2022 | 2,390,310 | | 71,314 | | |
| Canada | 2023 | 223,425 | 482 | 12,560 | 680 | 2023-43 |
| China | 2019 | | | 122,757 | | |
| China | 2020 | 96,673 | | 31,237 | | |
| China | 2021 | 35,398 | | 26,151 | | |
| China | 2022 | 84,792,971 | | 56,455 | | |
| China | 2023 | 14,392,925 | 5,067 | 142,940 | 10,430 | 2023-43 |
| Egypt | 2019 | | | 1,999 | | |
| Egypt | 2020 | 136,644 | | 659 | | |
| Egypt | 2021 | 248,084 | | 233 | | |
| Egypt | 2022 | 130,805 | | 2,709 | | |
| Egypt | 2023 | 490 | 0 | 1,454 | 0 | 2023-39 |
| 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 | 0 | 18,988 | 51 | 2023-42 |
| 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 | 0 | 559 | 7 | 2023-42 |
| India | 2019 | | | 10,428 | | |
| India | 2020 | 10,266,679 | | 655 | | |
| India | 2021 | 24,572,130 | | 5,128 | | |
| India | 2022 | 9,840,329 | | 1,948 | | |
| India | 2023 | 322,861 | 2,463 | 2,995 | 424 | 2023-43 |
| Israel | 2019 | | | 1,796 | | |
| Israel | 2020 | 419,661 | | 1,424 | | |
| Israel | 2021 | 962,276 | | 456 | | |
| Israel | 2022 | 3,381,658 | | 774 | | |
| Israel | 2023 | 77,119 | 847 | 803 | 2 | 2023-42 |

| 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 |
|--------------|------|------------------------------------|-----------------------------------|---------------------------------|-----------------------------------|-------------------------------|
| Italy | 2019 | | | 6,361 | | |
| Italy | 2020 | 2,083,689 | | 7,485 | | |
| Italy | 2021 | 3,897,739 | | 31 | | |
| Italy | 2022 | 19,187,010 | | 5,817 | | |
| Italy | 2023 | 1,061,739 | 134,282 | 2,415 | 0 | 2023-17 |
| Japan | 2019 | | | 10,343 | | |
| Japan | 2020 | 230,304 | | 2,915 | | |
| Japan | 2021 | 1,503,484 | | 9 | | |
| Japan | 2022 | 27,371,282 | | 273 | | |
| Japan | 2023 | 4,698,502 | 0 | 3,954 | 81 | 2023-42 |
| Mexico | 2019 | | | 6,963 | | |
| Mexico | 2020 | 1,496,067 | | 4,799 | | |
| Mexico | 2021 | 2,538,755 | | 960 | | |
| Mexico | 2022 | 3,236,805 | | 10,314 | | |
| Mexico | 2023 | 421,182 | 576 | 4,325 | 732 | 2023-43 |
| 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 | 53,984 | 1,129 | 7,980 | 12 | 2023-41 |
| Philippines | 2019 | | | 612 | | |
| Philippines | 2020 | 472,523 | | 52 | | |
| Philippines | 2021 | 2,371,346 | | 105 | | |
| Philippines | 2022 | 1,218,790 | | 260 | | |
| Philippines | 2023 | 120,801 | 4,947 | 466 | 45 | 2023-42 |
| Poland | 2019 | | | 1,786 | | |
| Poland | 2020 | 1,297,400 | | 1,282 | | |
| Poland | 2021 | 2,811,801 | | 2 | | |
| Poland | 2022 | 2,259,187 | | 1,604 | | |
| Poland | 2023 | 161,508 | 6,575 | 1,874 | 5 | 2023-42 |
| South Africa | 2019 | | | 1,164 | | |
| South Africa | 2020 | 1,039,161 | | 157 | | |
| South Africa | 2021 | 2,407,371 | | 413 | | |
| South Africa | 2022 | 602,048 | | 1,171 | | |
| South Africa | 2023 | 23,953 | 0 | 981 | 4 | 2023-40 |
| South Korea | 2019 | | | 1,702 | | |
| South Korea | 2020 | 60,722 | | 505 | | |
| South Korea | 2021 | 574,528 | | 0 | | |
| South Korea | 2022 | 28,424,023 | | 295 | | |
| South Korea | 2023 | 5,512,600 | 0 | 1,179 | 151 | 2023-42 |
| Spain | 2019 | | | 17,228 | | |
| Spain | 2020 | 1,919,549 | | 8,827 | | |
| Spain | 2021 | 4,180,589 | | 2,206 | | |
| Spain | 2022 | 7,654,824 | | 18,027 | | |
| Spain | 2023 | 225,378 | 0 | 8,962 | 0 | 2023-39 |
| Thailand | 2019 | | | 1,568 | | |
| Thailand | 2020 | 6,919 | | 297 | | |
| Thailand | 2021 | 2,216,551 | | 23 | | |
| Thailand | 2022 | 2,500,484 | | 575 | | |
| Thailand | 2023 | 34,206 | 652 | 1,249 | 267 | 22023-43 |

| 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 |
|----------------|------|------------------------------------|-----------------------------------|---------------------------------|-----------------------------------|-------------------------------|
| United Kingdom | 2019 | | | 42,447 | | |
| United Kingdom | 2020 | 2,563,561 | | 14,377 | | |
| United Kingdom | 2021 | 10,878,146 | | 2,755 | | |
| United Kingdom | 2022 | 10,752,847 | | 26,896 | | |
| United Kingdom | 2023 | 601,854 | 45,101 | 6,142 | 143 | 2023-42 |
| United States | 2019 | | | 268,524 | | |
| United States | 2020 | 19,577,585 | | 229,766 | | |
| United States | 2021 | 33,956,701 | | 39,507 | | |
| United States | 2022 | 45,877,410 | | 469,968 | | |
| United States | 2023 | 4,025,133 | 0 | 51,915 | 2,719 | 2023-42 |
| Vietnam | 2019 | | | 355 | | |
| Vietnam | 2020 | 1,456 | | 146 | | |
| Vietnam | 2021 | 1,729,801 | | 39 | | |
| Vietnam | 2022 | 9,793,887 | | 399 | | |
| Vietnam | 2023 | 98,856 | 312 | 298 | 2 | 2023-40 |

^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 [5]. The emergence of this new virus has had a major impact on the global circulation of respiratory viruses, including influenza and RSV [6]. 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 are compared to the prevention and control measures applied in each country using the Stringency Index from the Oxford COVID-19 Government Response Tracker (OxCGRT) [7].

Data sources

- **Influenza:** FluNet [8] 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 [9]. 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 [10].
- **Government response tracker:** The Oxford COVID-19 Government Response Tracker (OxCGRT) [7] 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 24 July 2023 and cover the period 1 January 2019 to 29 October 2023 (influenza) and 2 November 2023 (SARS-CoV-2). 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 using data for the exact same period. In case of any unclarities or perceived irregularities, feel free to contact us at flucov@nivel.nl.

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Websites

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

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

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