



FluCov-Bulletin – mid-November 2022

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

Commentary

Contents

It has been over two 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 Epi-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 4).

Results

Globally, **influenza** circulation is increasing as we enter the 2022/23 winter, after a short period of relatively low circulation (see Figure 1). The following patterns have been observed for **influenza** up until mid-November (until week 45):

- A distinct increase in **influenza** detections was observed in **Canada**, the **United States**, **Mexico**, the **United Kingdom**, **Germany** and **Spain**. In particular, the number of weekly detections has reached similar levels to what was observed during the last epidemic (March-April 2022) in the **United States** and **Canada**.
- **Influenza** A is currently the dominant circulating virus: when subtyped, most countries reported **influenza** A(H3) was dominant, except for the **United Kingdom** and **India**, which had a mix of A(H3) and A(H1N1)pdm09.
- On the basis of heterogeneous surveillance data, **Vietnam** and **Thailand** may be showing increased **influenza** activity.
- **Influenza** circulation in **China** continued to decrease in the first weeks of November.
- There was generally low **influenza** activity in the Southern Hemisphere countries covered by the Bulletin (**Australia**, **Brazil**, **South Africa**).
- No (or relatively small) increase in **influenza** activity was observed in **France**, **India**, **Israel**, **Japan**, **Netherlands**, **Philippines**, **Poland** and **South Korea**.

In most countries covered by the Bulletin, the decline in **SARS-CoV-2** detections that has been seen since August 2022 is leveling off. The following patterns were observed for **SARS-CoV-2** until mid-November (week 45):

- Weekly detections are declining in **France**, **Germany** and **Italy**, after a noticeable increase observed in the second half of October.
- The increase in weekly detections observed at the end of October in a number of Asian countries (**China**, **Japan**, and **South Korea**) continued in the first two weeks of November.
- Relatively low **SARS-CoV-2** activity has been reported in most of the other countries covered by the Bulletin (**United States**, **Canada**, **Brazil**, **Netherlands**, **Spain**, **South Africa**, **Thailand**, **Israel**, **Vietnam**), where the circulation has been steady since the end of the summer.

Implications

The **influenza** season has started in some Northern Hemisphere countries, and particularly in the **United States** and **Canada**. At the moment (week 45), when subtyping is performed, influenza

detections are dominated by **influenza A(H3)**, but some significant A(H1N1)pdm09 activity has also been observed in the **United Kingdom** and **India**. No **influenza B(Yamagata)** activity has been observed in the last weeks and **influenza B(Yamagata)** has been nearly absent since the start of the **SARS-CoV-2** pandemic [1].

SARS-CoV-2 circulation continues to be present in the countries covered by the Bulletin, and it is increasing in some Eastern Asian countries (**China, Japan, South Korea**). The co-circulation of **influenza** and **SARS-CoV-2** is likely this winter and will be closely monitored in the coming weeks.

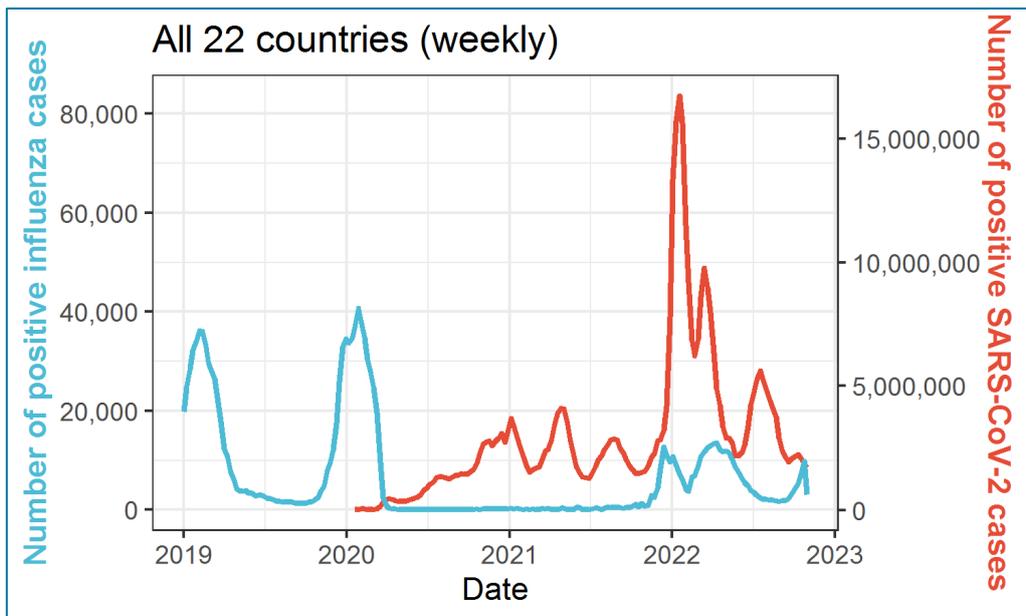


Figure 1: SARS-CoV-2 and influenza detections in the 22 countries covered by the Bulletin since 2019

Note: The apparent and sharp decrease in influenza detections in week 45 of 2022 is likely due to incomplete reporting

Monthly plots by country

The plots per country show weekly data for **influenza** and of **SARS-CoV-2** infections from January 1, 2019 up to November 13, 2022. 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 top plot displays the number of positive **influenza** (in blue) and of **SARS-CoV-2** (in red) cases. An overview of the absolute number of **influenza** and of **SARS-CoV-2** cases per country can be found on **pages 16-17** of this FluCov-Bulletin. The bar in the middle displays the Stringency Index (SI; a country-specific composite metric of the mitigation measures that are in place) over time, where light red indicates loose measures and dark red indicates strict measures. The bottom plot displays the percentage of **influenza** (in blue) and of **SARS-CoV-2** (in red) specimen testing positive

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

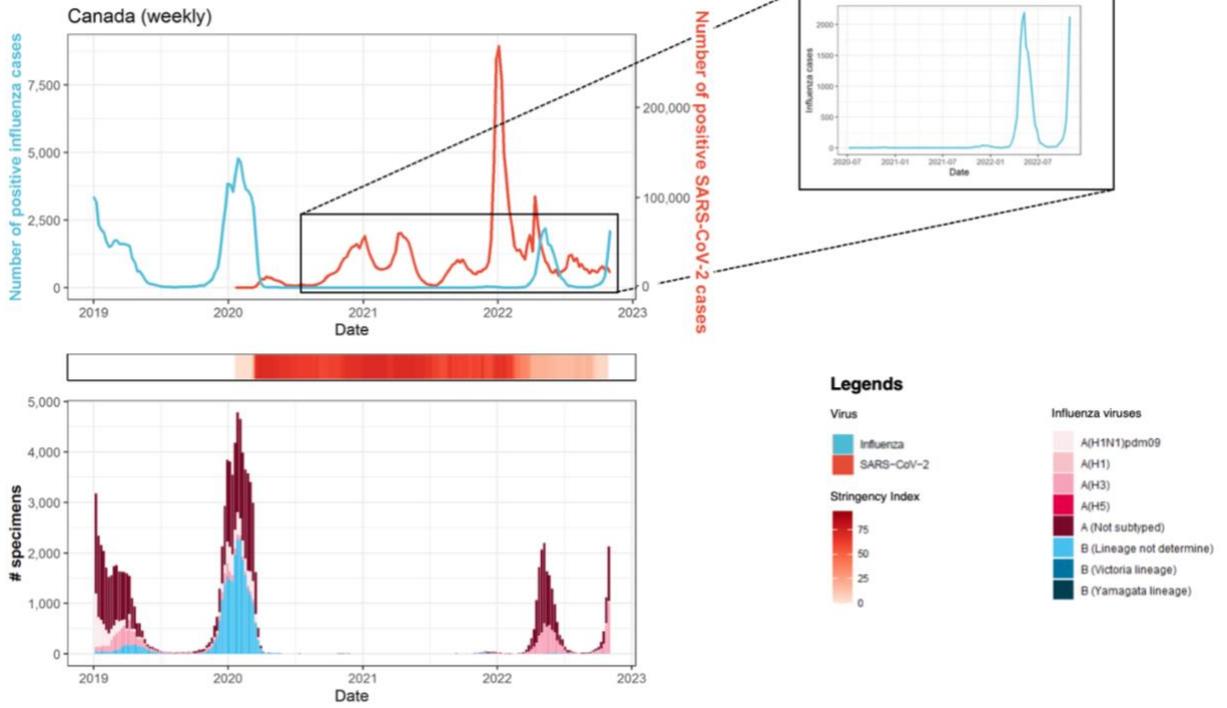
Israel

Oceania

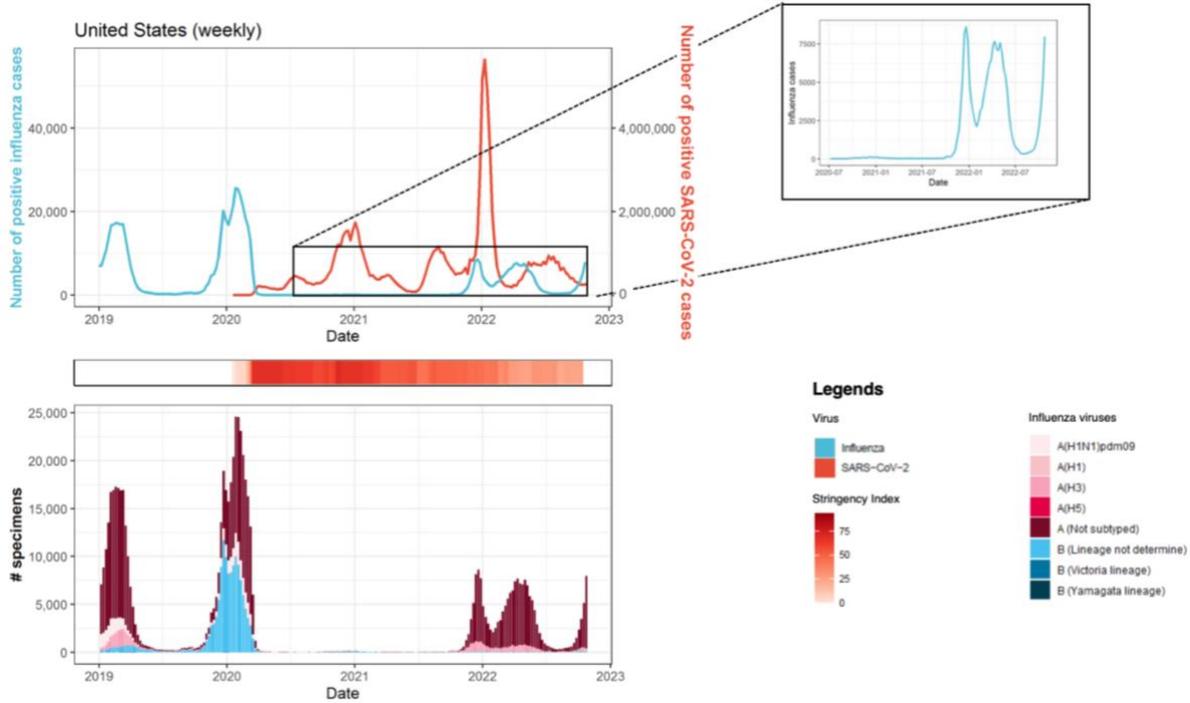
Australia

North America

Canada

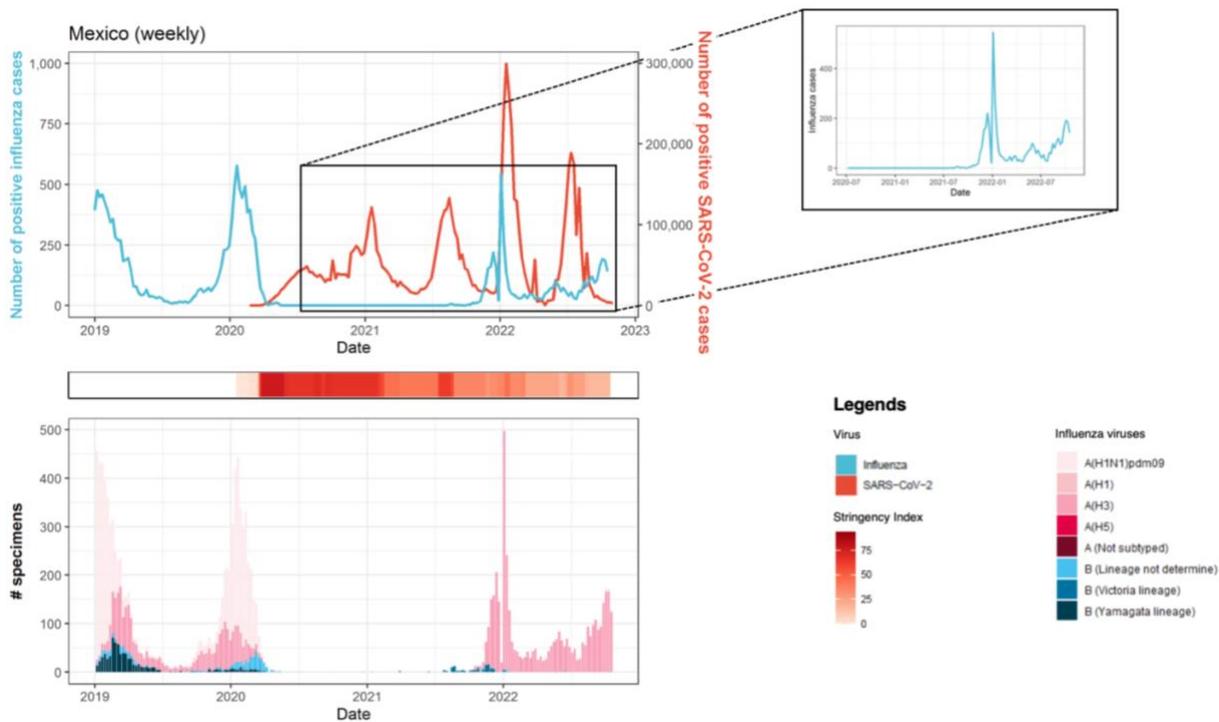


United States



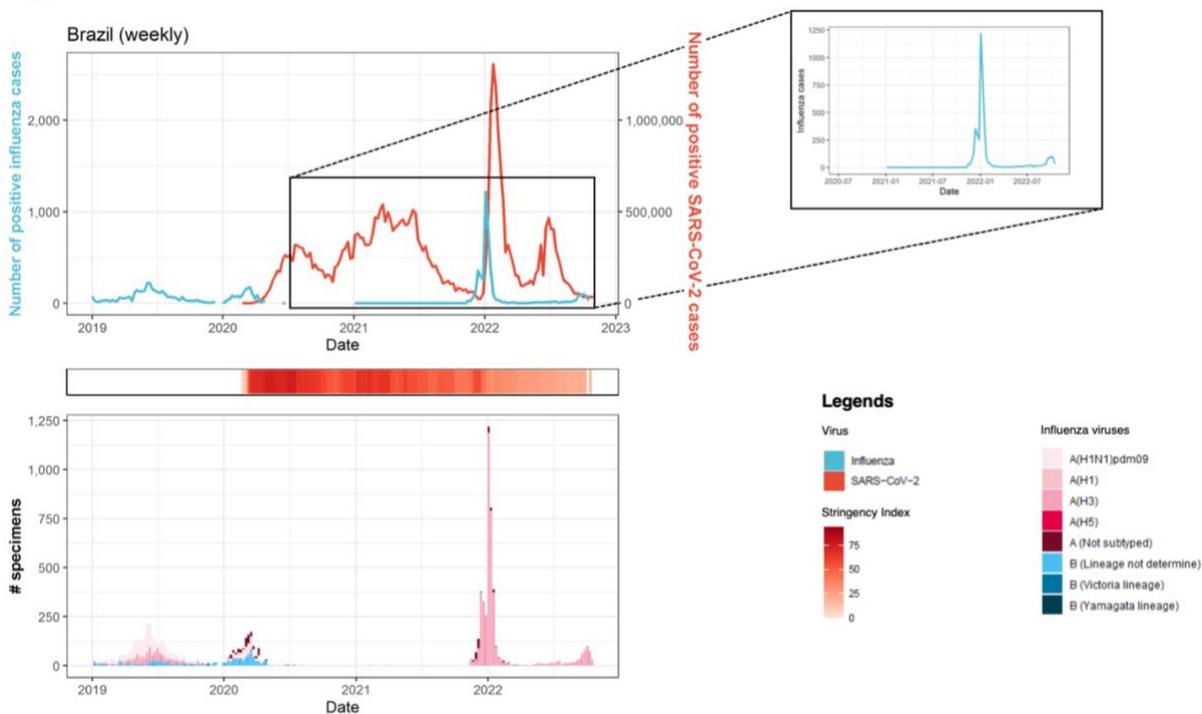
Central America Caribbean

Mexico



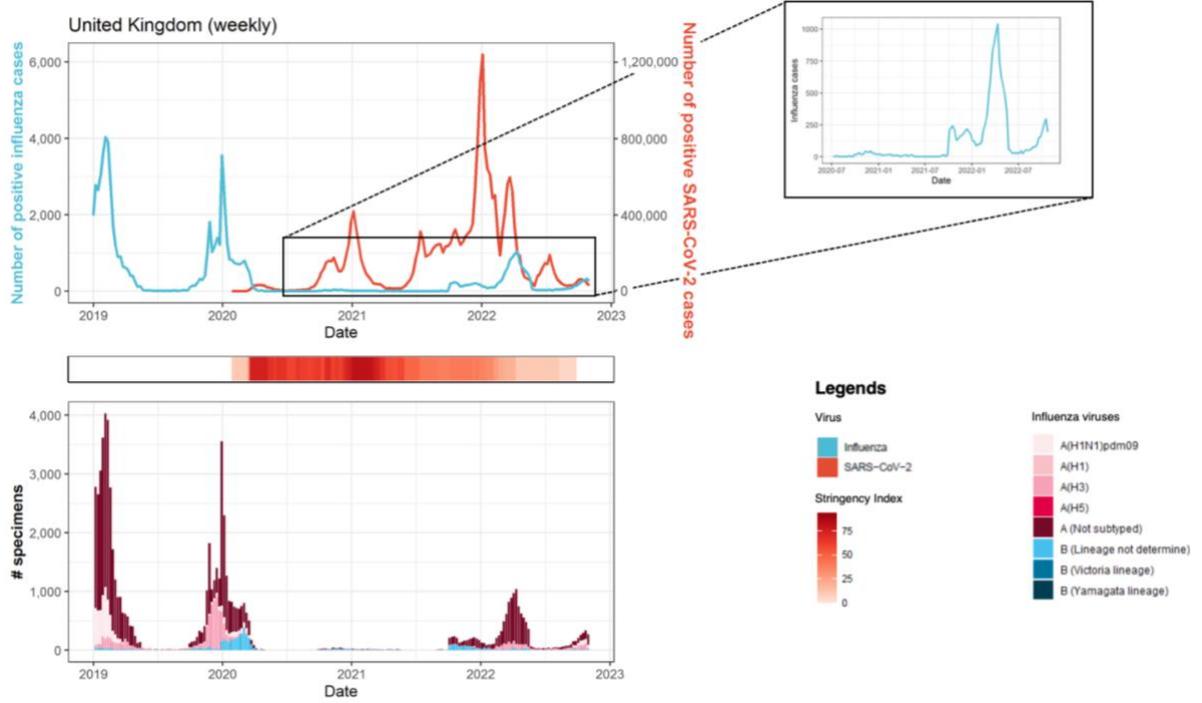
Tropical South America

Brazil



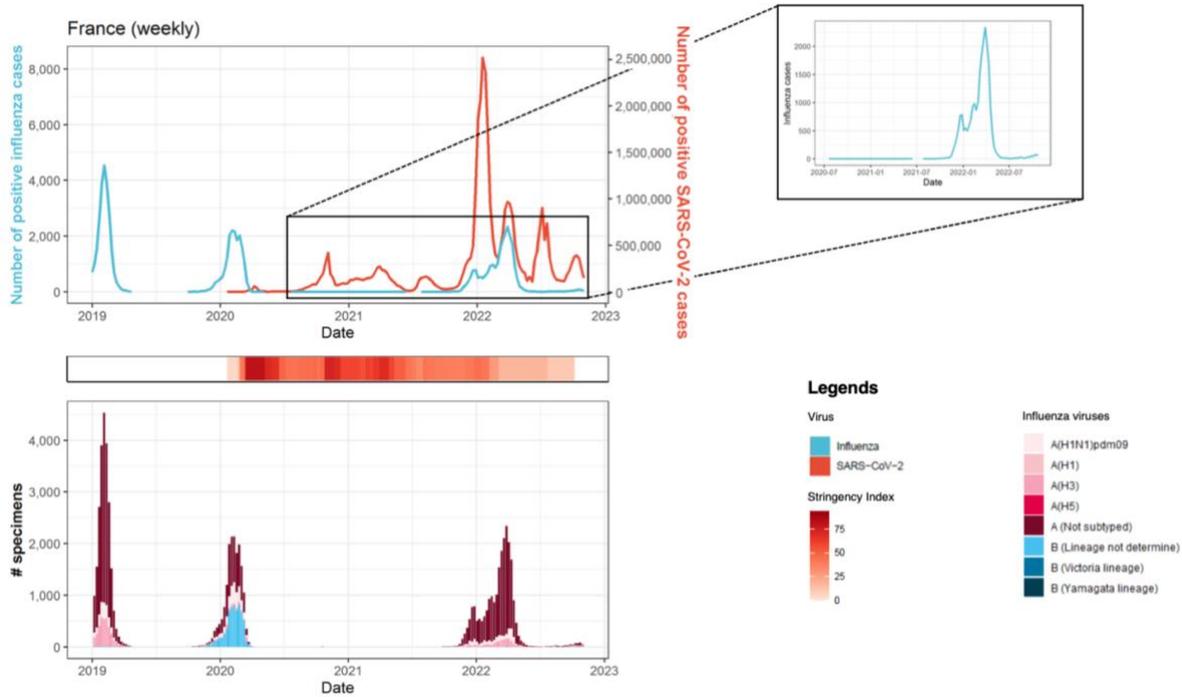
Northern Europe

United Kingdom

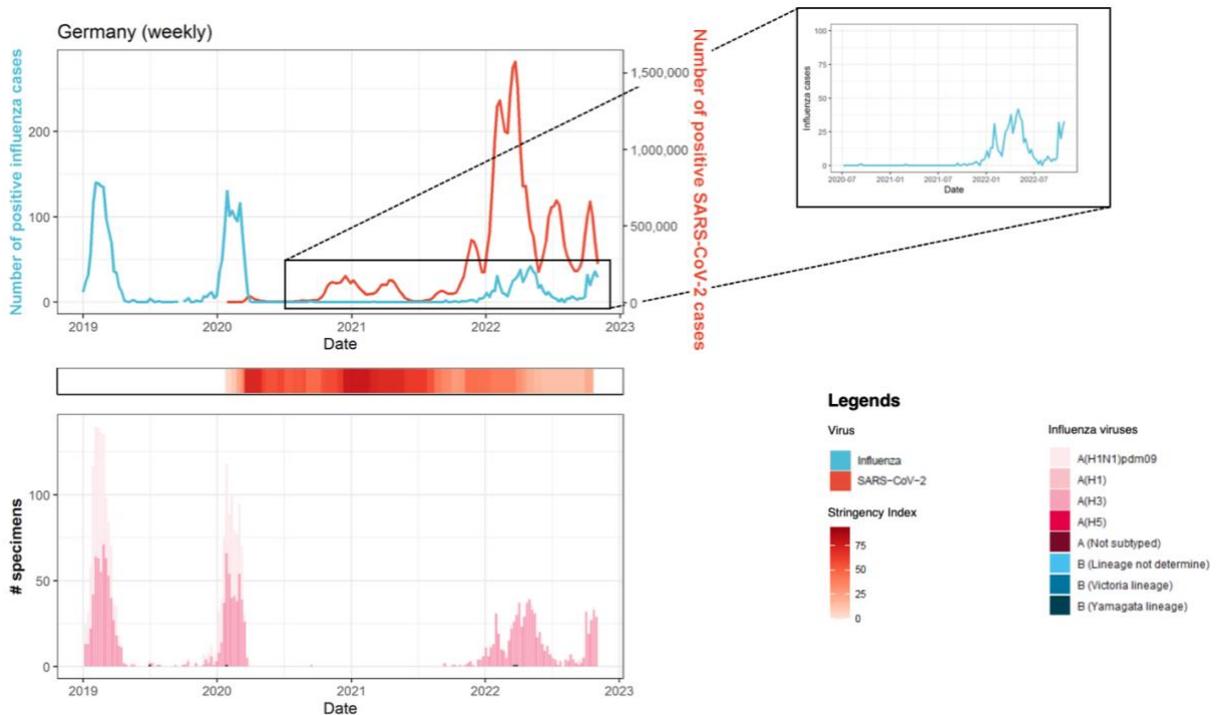


South West Europe

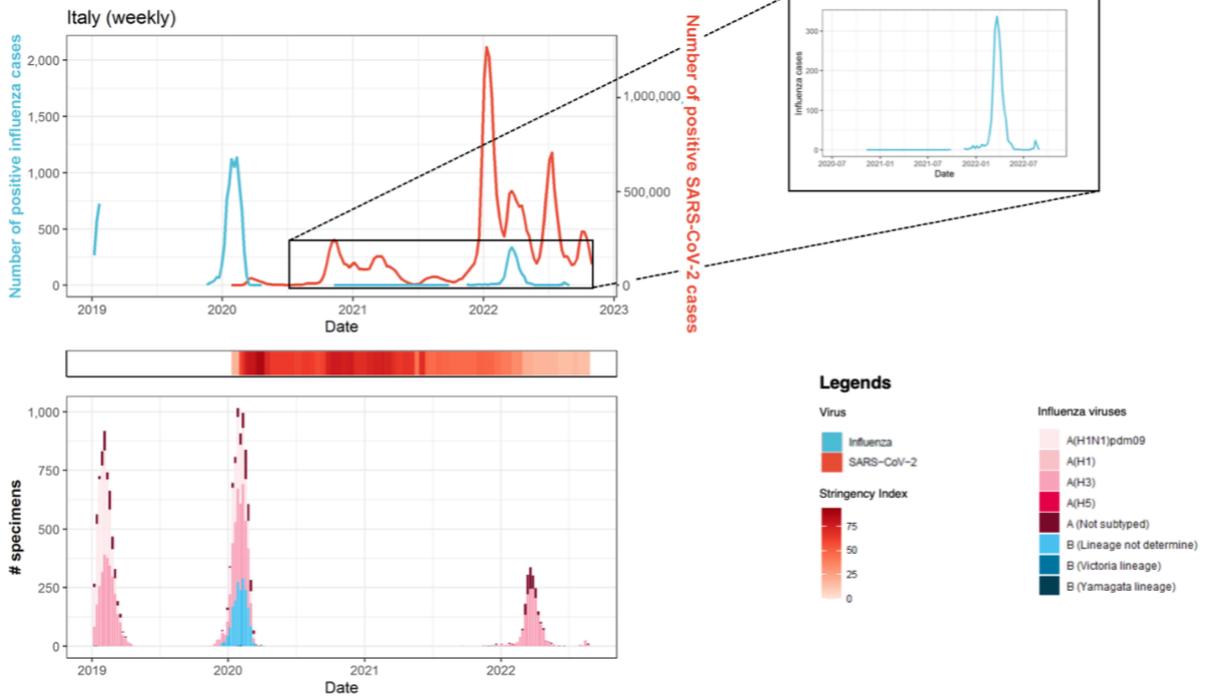
France



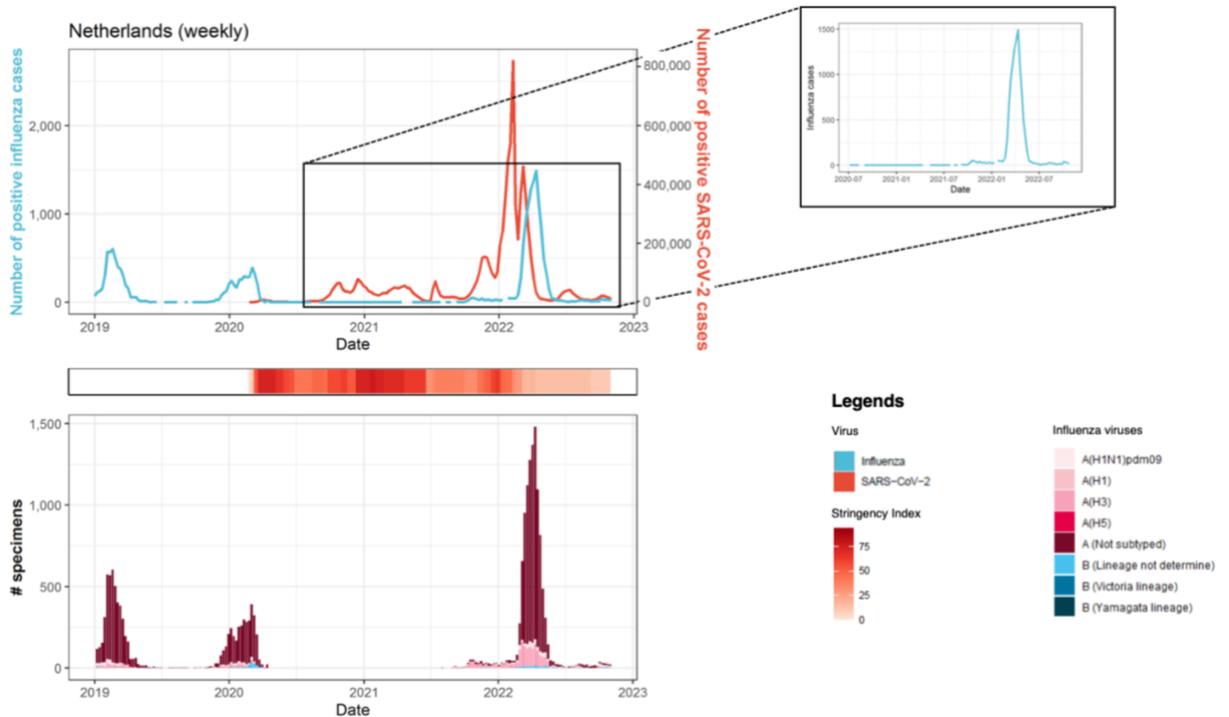
Germany



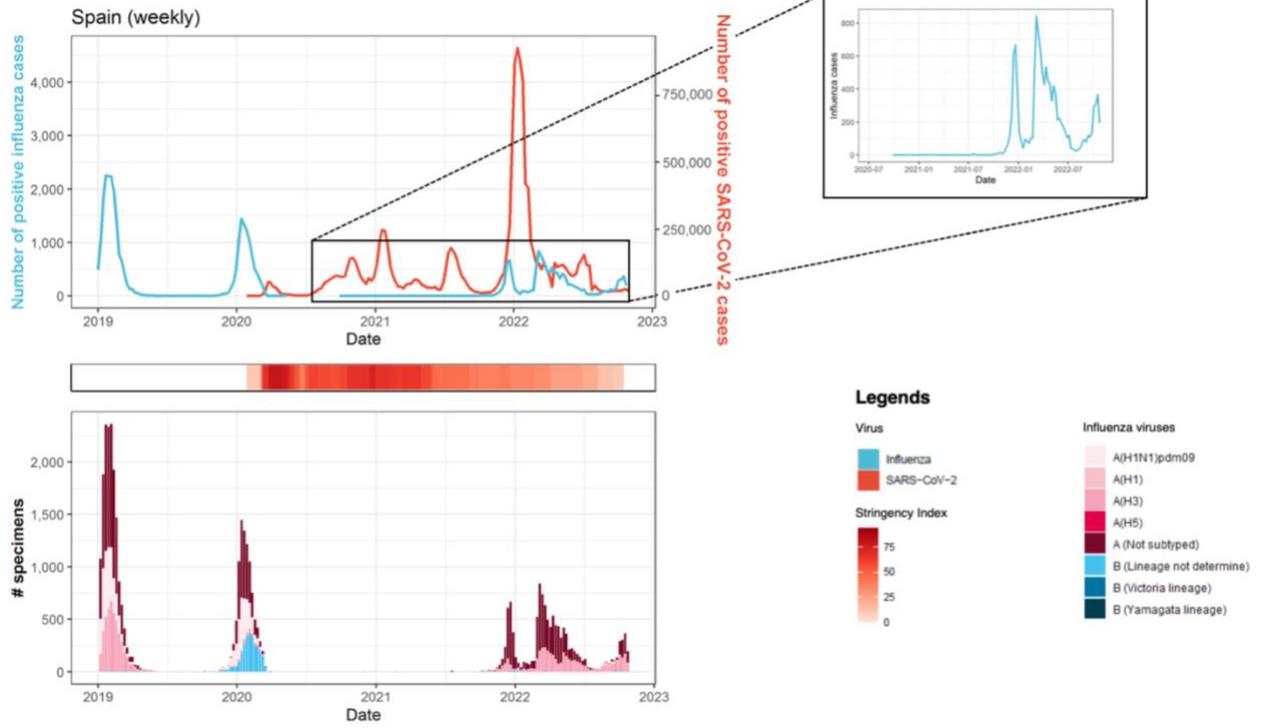
Italy



Netherlands

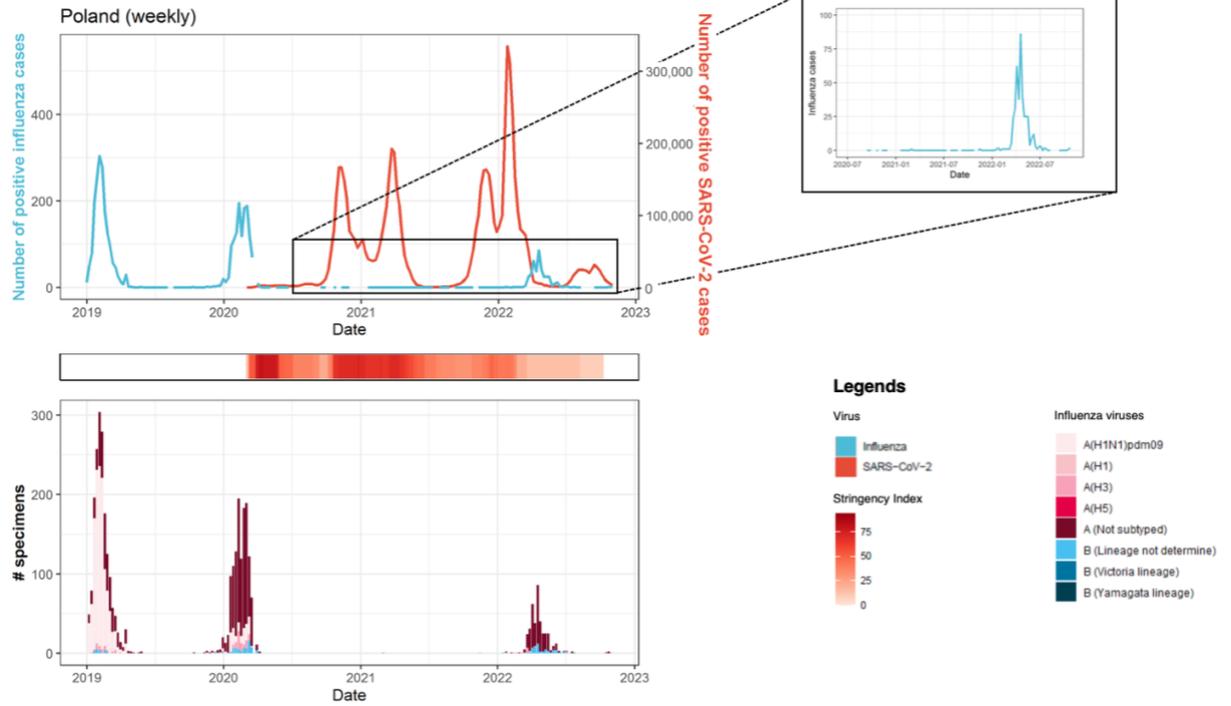


Spain



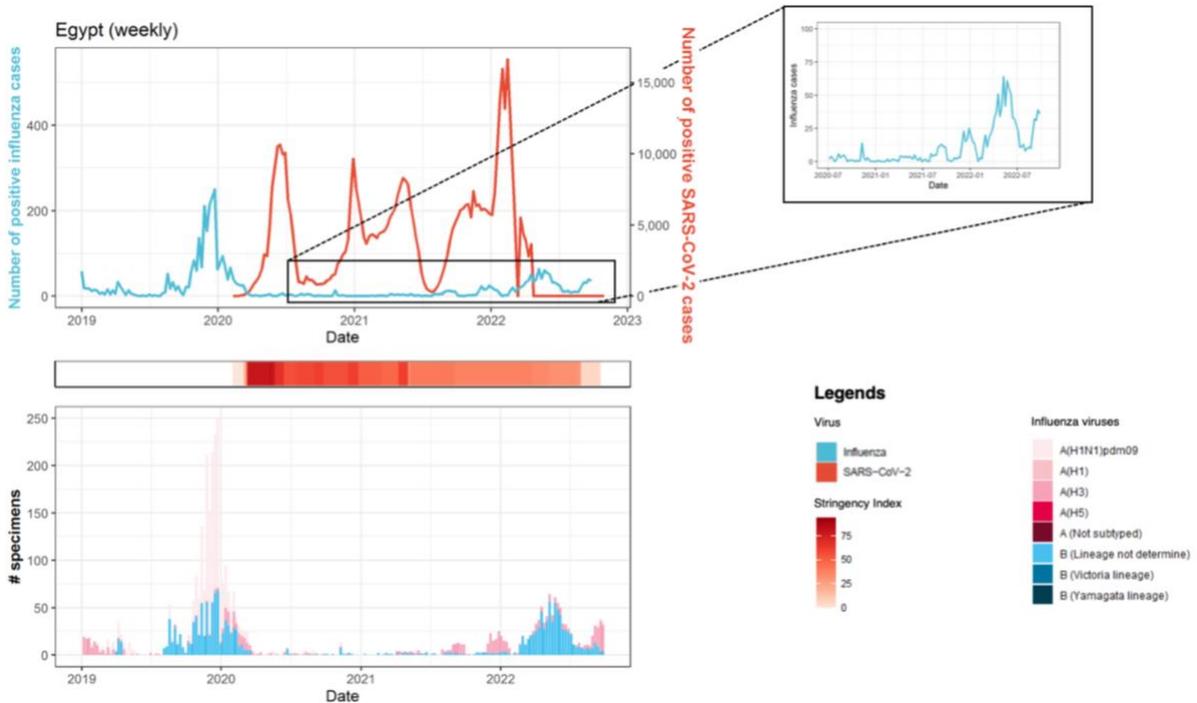
Eastern Europe

Poland



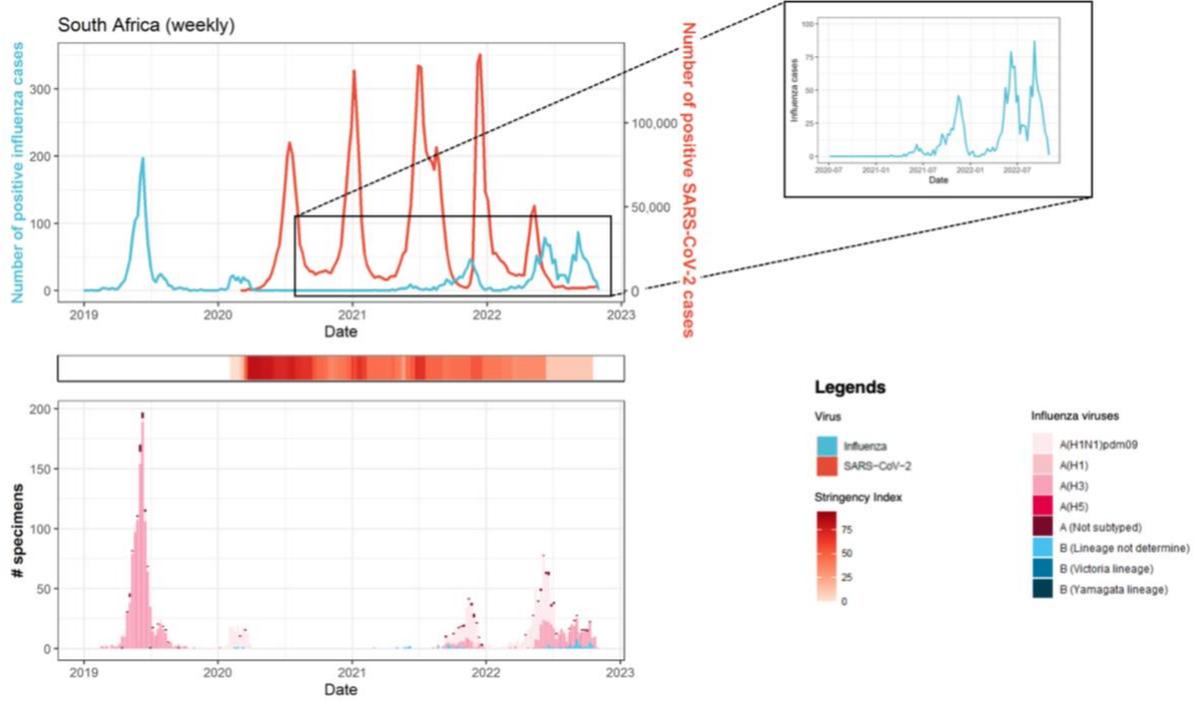
Northern Africa

Egypt



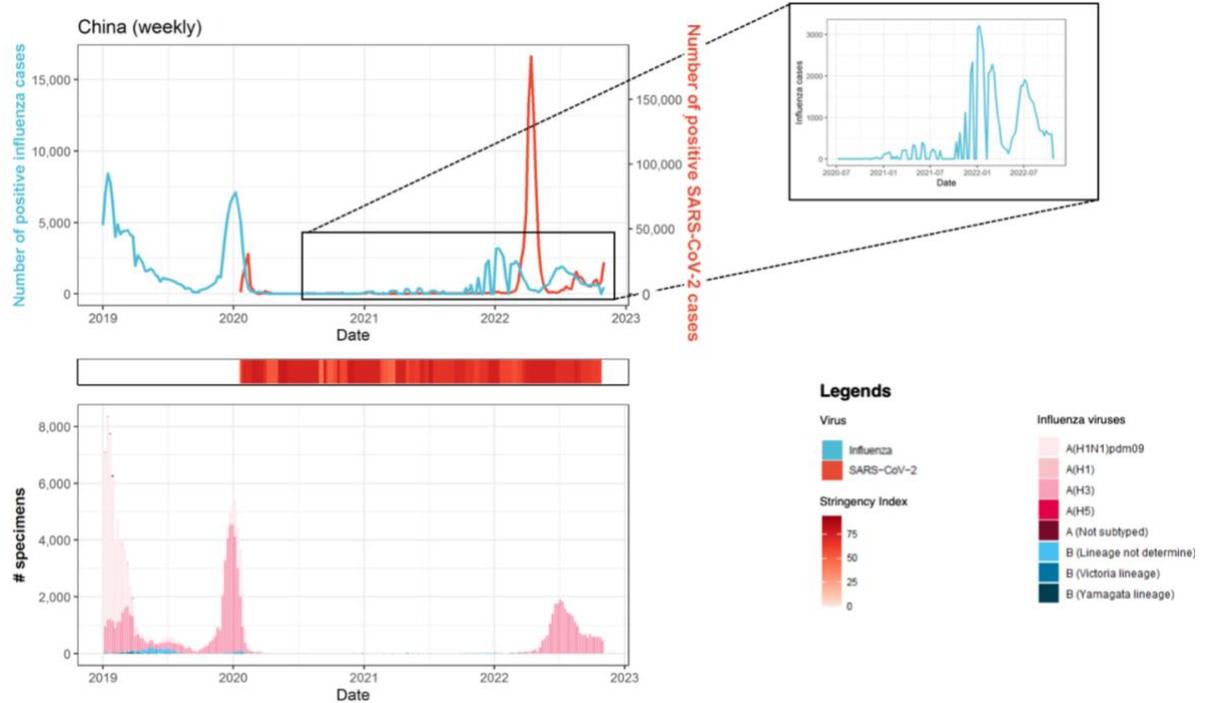
Southern Africa

South Africa

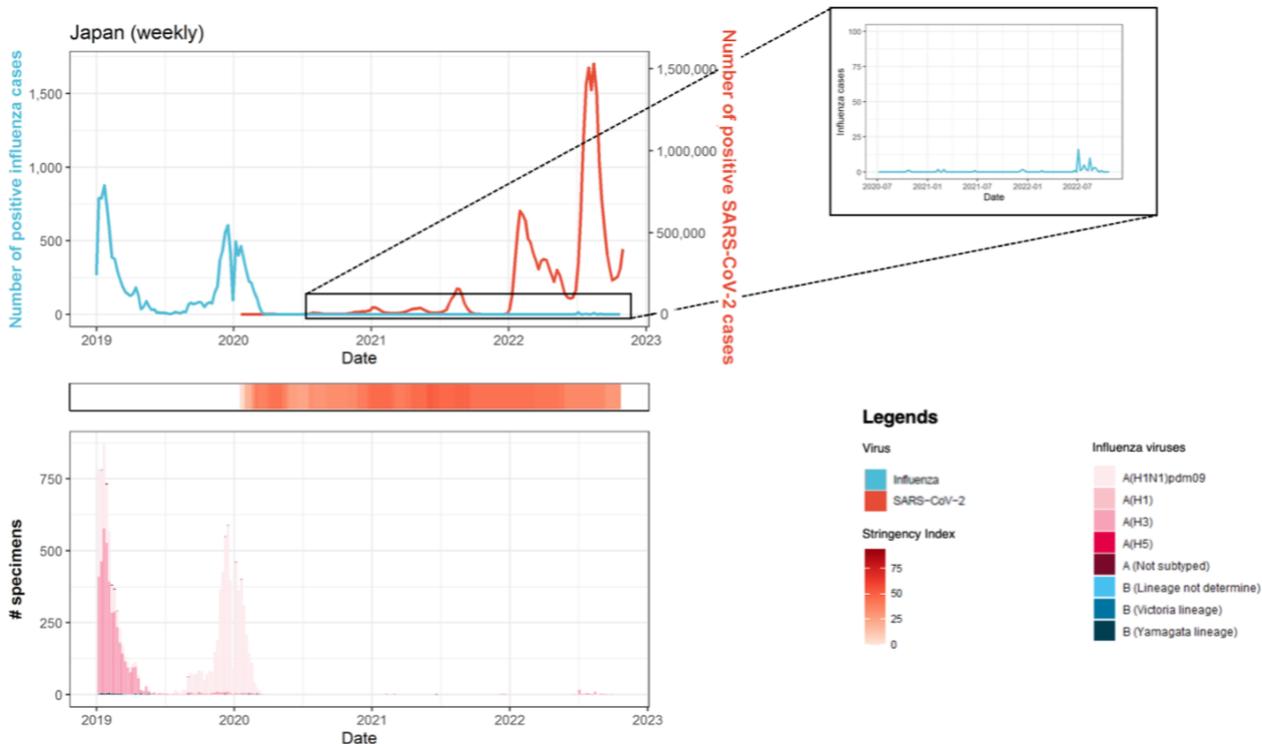


Eastern Asia

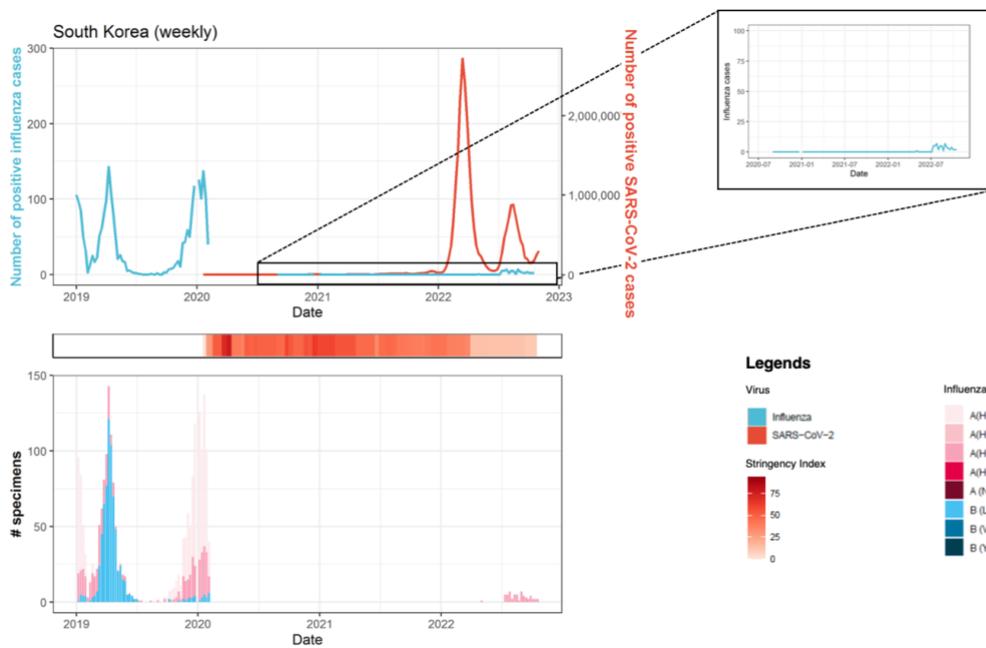
China



Japan

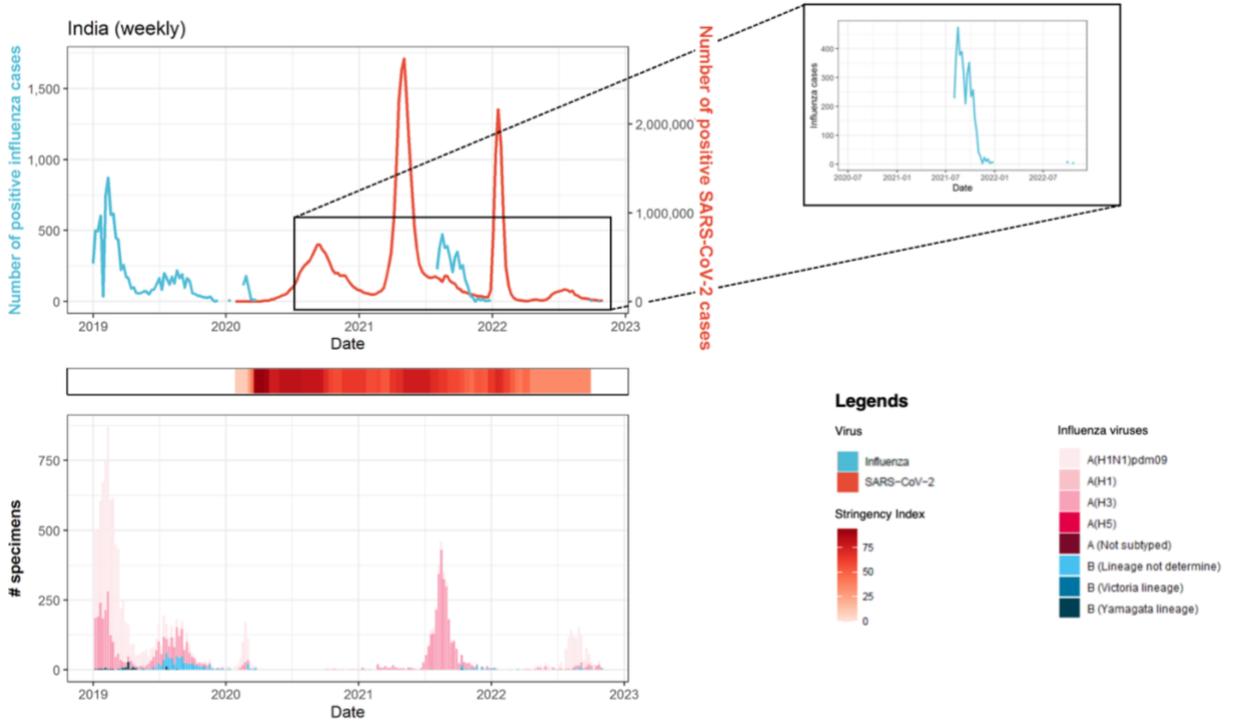


South Korea



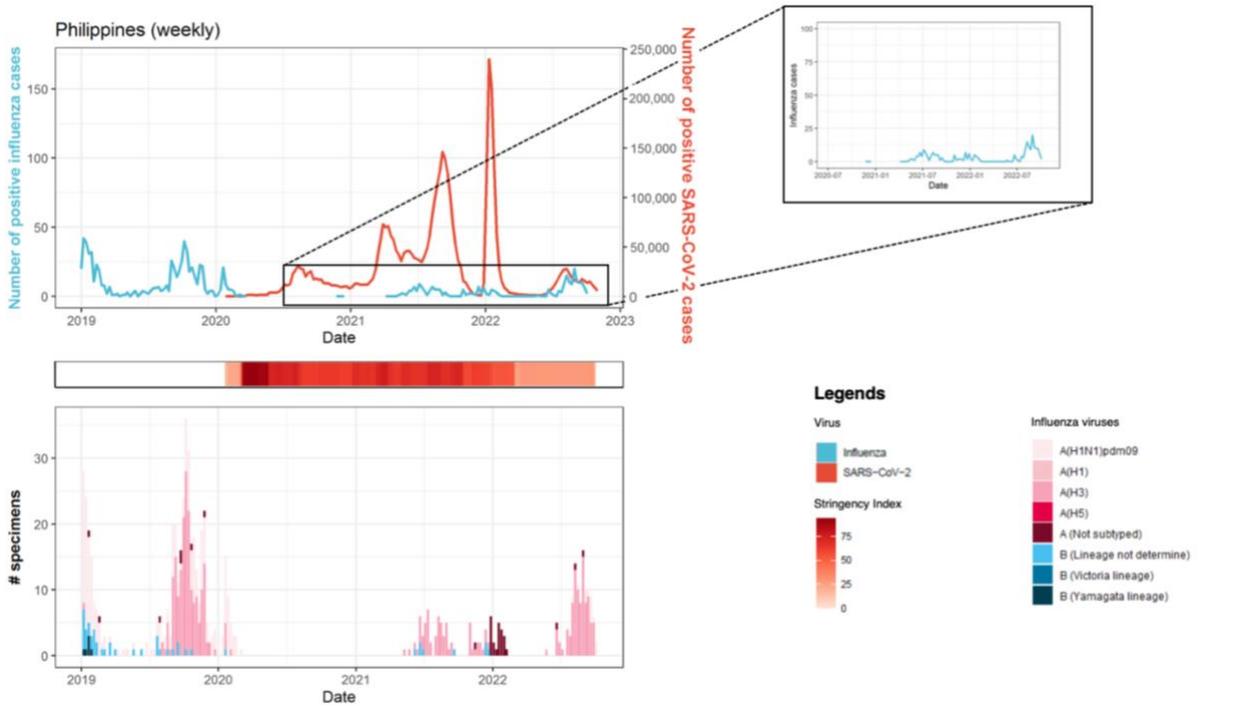
Southern Asia

India

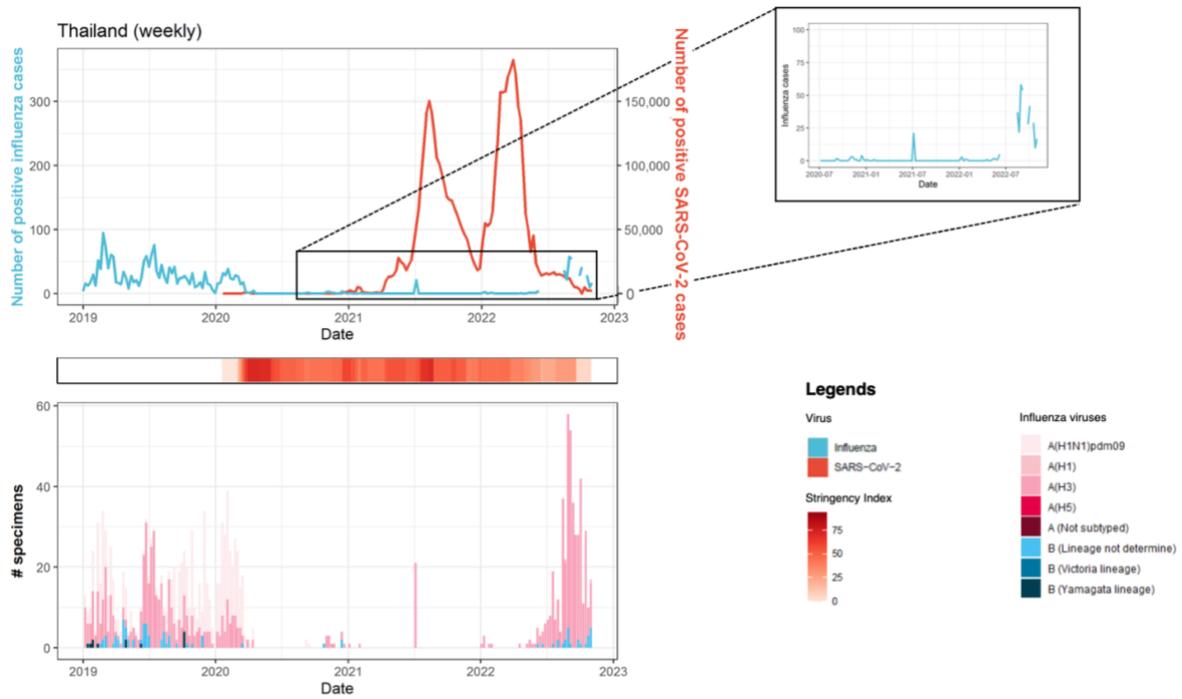


South East Asia

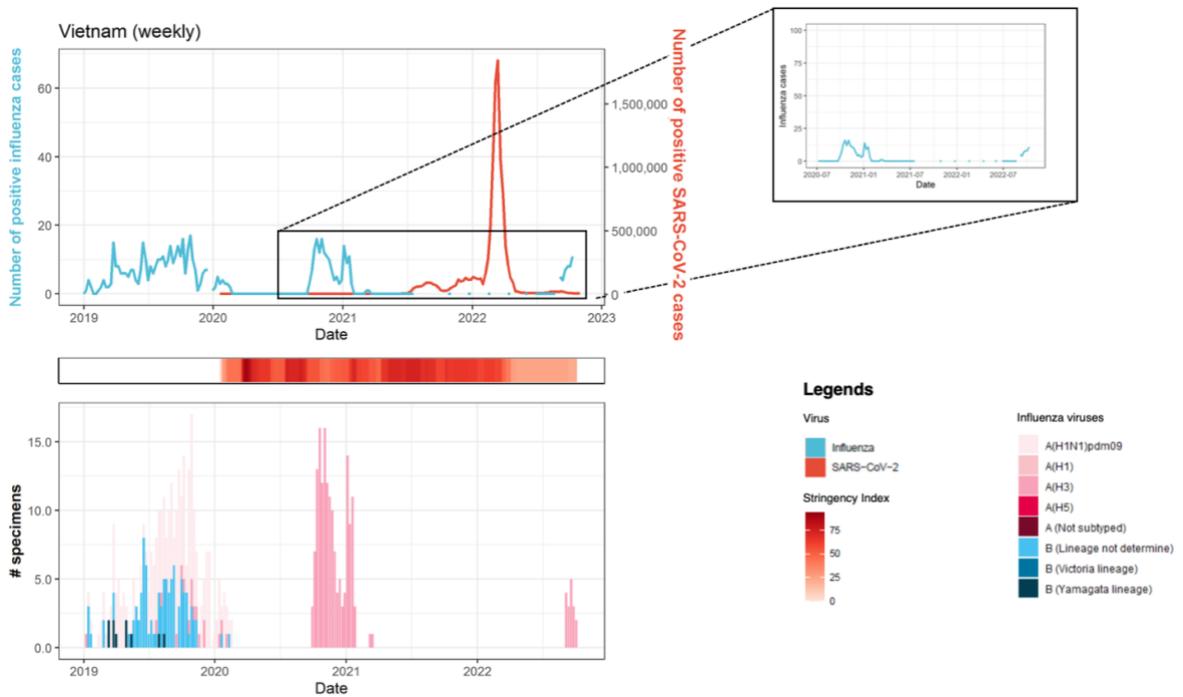
Philippines



Thailand

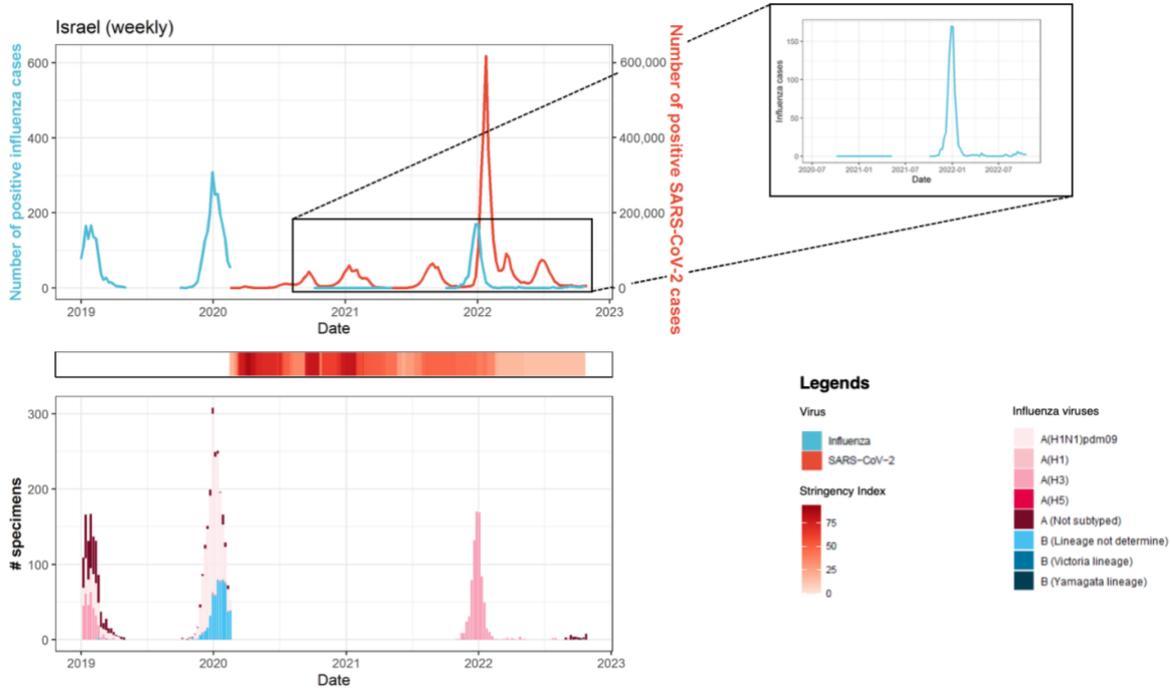


Vietnam



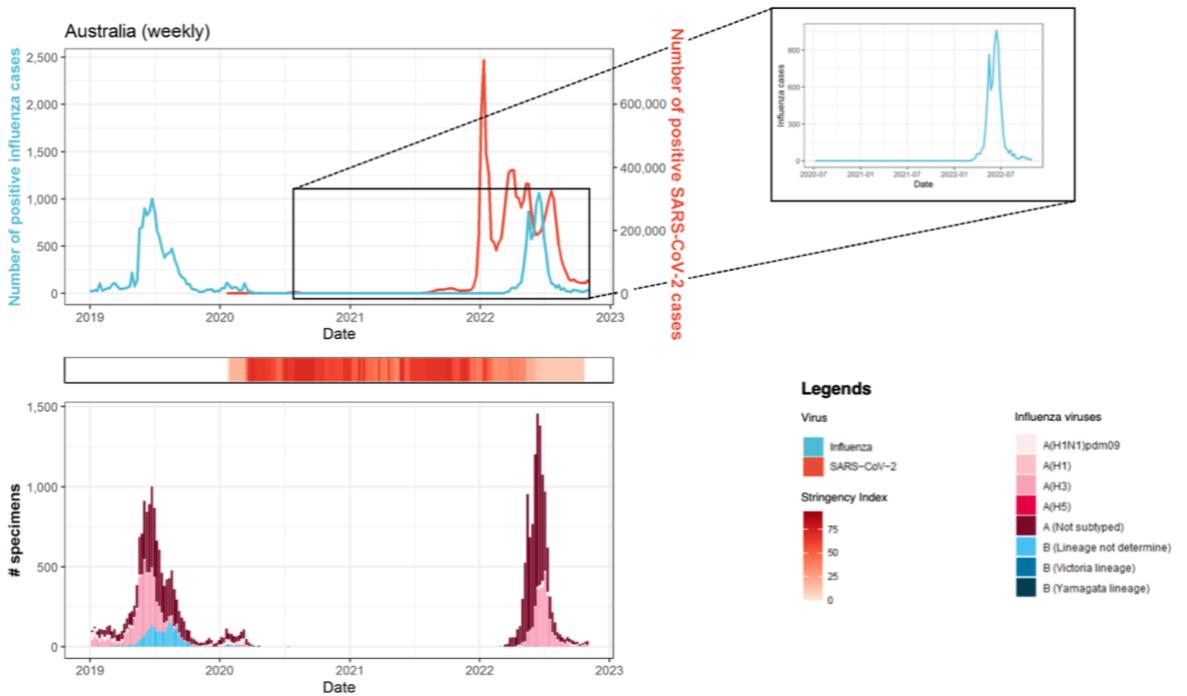
Western Asia

Israel



Oceania

Australia



Absolute numbers per country

Country	Year	Cases ^a of SARS-CoV-2	+/- since last month ^b	Cases ^a of influenza	+/- since last month ^b	Week of last influenza update
Australia	2019			12,404		
Australia	2020	28,425		784		
Australia	2021	397,071		7		
Australia	2022	9,983,376	139,789	8,119	96	2022-44
Brazil	2019			3,320		
Brazil	2020	7,700,828		1,314		
Brazil	2021	14,485,929		1,183		
Brazil	2022	12,537,046	156,225	3,373	220	2022-42
Canada	2019			43,196		
Canada	2020	590,249		44,956		
Canada	2021	1,633,486		337		
Canada	2022	2,161,071	89,529	17,561	1,938	2022-44
China	2019			122,757		
China	2020	93,153		31,164		
China	2021	21,489		10,145		
China	2022	917,622	41,545	50,996	1,807	2022-44
Egypt	2019			1,998		
Egypt	2020	138,062		659		
Egypt	2021	247,513		233		
Egypt	2022	130,070	0	986	0	2022-39
France	2019			25,405		
France	2020	2,735,590		16,589		
France	2021	7,706,191		3,071		
France	2022	26,887,435	1,422,260	20,633	270	2022-44
Germany	2019			1,215		
Germany	2020	1,719,737		958		
Germany	2021	5,430,685		29		
Germany	2022	28,469,324	2,233,458	708	117	2022-44
India	2019			9,698		
India	2020	10,286,709		457		
India	2021	24,574,870		4,085		
India	2022	9,793,218	63,526	34	11	2022-44
Israel	2019			1,796		
Israel	2020	423,290		1,424		
Israel	2021	961,872		456		
Israel	2022	3,300,519	21,881	387	16	2022-43
Italy	2019			2,787		
Italy	2020	2,107,314		7,484		
Italy	2021	4,018,517		31		
Italy	2022	17,405,340	1,063,745	1,997	0	2022-35
Japan	2019			10,343		
Japan	2020	235,747		2,915		
Japan	2021	1,497,558		9		
Japan	2022	20,591,285	1,030,671	48	0	2022-43

Country	Year	Cases ^a of SARS-CoV-2	+/- since last month ^b	Cases ^a of influenza	+/- since last month ^b	Week of last influenza update
Mexico	2019			6,963		
Mexico	2020	1,426,094		4,799		
Mexico	2021	2,553,629		960		
Mexico	2022	3,131,922	21,784	3,683	520	2022-42
Netherlands	2019			5,166		
Netherlands	2020	806,620		3,235		
Netherlands	2021	2,346,892		454		
Netherlands	2022	5,369,111	81,021	10,867	127	2022-44
Philippines	2019			612		
Philippines	2020	474,064		52		
Philippines	2021	2,369,926		105		
Philippines	2022	1,161,120	56,425	135	2	2022-40
Poland	2019			1,786		
Poland	2020	1,294,878		1,282		
Poland	2021	2,813,337		2		
Poland	2022	2,232,220	46,877	410	3	2022-44
South Africa	2019			1,164		
South Africa	2020	1,057,161		157		
South Africa	2021	2,382,539		413		
South Africa	2022	570,022	9,231	1,131	99	2022-44
South Korea	2019			1,702		
South Korea	2020	61,768		505		
South Korea	2021	573,484		0		
South Korea	2022	24,980,414	819,653	57	6	2022-42
Spain	2019			16,580		
Spain	2020	1,938,671		8,829		
Spain	2021	4,440,910		2,210		
Spain	2022	7,218,658	88,784	10,073	1,162	2022-43
Thailand	2019			1,568		
Thailand	2020	6,882		297		
Thailand	2021	2,216,551		23		
Thailand	2022	2,478,355	10,316	332	81	2022-44
United Kingdom	2019			42,447		
United Kingdom	2020	2,488,780		14,377		
United Kingdom	2021	10,456,330		2,755		
United Kingdom	2022	10,117,167	225,633	11,275	1,099	2022-44
United States	2019			268,524		
United States	2020	20,217,255		229,766		
United States	2021	34,687,342		39,506		
United States	2022	42,600,658	1,125,608	145,913	18,970	2022-43
Vietnam	2019			355		
Vietnam	2020	1,465		146		
Vietnam	2021	1,729,792		39		
Vietnam	2022	9,212,688	23,529	43	19	2022-41

^a Laboratory-confirmed cases.

^b 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.

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 [2]. The emergence of this new virus has had a major impact on the global circulation of respiratory viruses, including influenza and RSV [3]. 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) [4].

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 [6]. We used this platform to extract data on the number of cases, as well as tests performed per country. This data is extracted both from the John Hopkins repository on daily confirmed COVID-19 [7] cases as well as various national public health institutions.
- **Government response tracker:** The Oxford COVID-19 Government Response Tracker (OxCGRT) [4] 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 13 November 2022 and cover the period 1 January 2019 to 12 November 2022. 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.

References

- [1] Paget John, Caini Saverio, Del Riccio Marco, van Waarden Willemijn, Meijer Adam. Has influenza B/Yamagata become extinct and what implications might this have for quadrivalent influenza vaccines?. *Euro Surveill.* 2022;27(39):pii=2200753. <https://doi.org/10.2807/1560-7917.ES.2022.27.39.2200753>
- [2] WHO. Listing of WHO's response to COVID-19. <https://www.who.int/news/item/29-06-2020-covidtimeline> [accessed 1 July 2022]
- [3] WHO. Influenza Update N° 416. <https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates/current-influenza-update> [accessed 7 April 2022]
- [4] Oxford COVID-19 Government Response Tracker, Blavatnik School of Government, University of Oxford. <https://www.bsg.ox.ac.uk/research/research-projects/covid-19-government-response-tracker> [accessed 16 June 2021]
- [5] WHO. FluNet. <https://www.who.int/tools/flunet> [accessed 15 June 2021]
- [6] 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]
- [7] COVID-19 Dashboard, Center for Systems Science and Engineering, Johns Hopkins University. <https://coronavirus.jhu.edu/map.html> [accessed 15 June 2021]

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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>

Funding

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