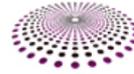


FluCov Epi-Bulletin – March 2022

*'Combining data from around the world to understand
the impact of COVID-19 on influenza activity'*



Global **Influenza** Initiative

Commentary

Contents

It has been 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 (see [page 3](#)).

Results

At the end of 2021, increased **influenza** activity was seen in many countries included in this bulletin [1]. In February and March, the following general patterns have been observed for **influenza**:

- The increase in **influenza** cases that was reported overall for the included countries in the February Epi-Bulletin continued in March (see WHO FluNet figure on page 2).
- Some countries have seen a steep rise in **influenza** cases in March: France, Italy and the Netherlands, with the latter reaching record levels (the peak of cases per week in the Netherlands is now higher than the pre-pandemic period).
- Though a decline in cases (or a plateau) was reported for Canada and the United Kingdom in February, these two countries, as well as Spain and United States, experienced an atypical resurgence in cases in March, after the winter peak.
- A small resurgence of **influenza** cases was visible for Australia and Poland after two years of almost no activity.
- Some countries have passed their peak level of **influenza** activity and are returning to little or no **influenza** activity, as anticipated in the February Epi-Bulletin: Brazil, Germany, India, Israel, Mexico, South Africa, the Philippines. This decline – after experiencing important **influenza** activity also in the first half of the March – is now also apparent in China.
- Since the start of 2022, no new **influenza** cases were reported in Egypt, Japan, South Korea, Thailand, and Vietnam. In addition, for the Philippines, no new cases were reported since the last Epi-Bulletin (February 2022).
- The majority of new cases since the last Epi-Bulletin, in terms of absolute numbers, were reported in the United States (16,276), in China (6,832) and France (6,086), with most cases being **influenza A** in the United States (98.9%) and France (99.9%), and in China being **influenza B** (98.8%).

The number of overall reported **SARS-CoV-2** cases has surged to record levels during the past winter, probably due to the emergence of the Omicron variant and relaxation of non-pharmaceutical interventions (NPIs) [2].

- In the February Epi-Bulletin, it was reported that the winter wave appeared to have ended (or at least declined) in most countries.
- Though this decline is continuing in many countries (Brazil, Israel, India, Mexico, the Netherlands, Poland, the Philippines, South Africa, Spain, United States), others are currently experiencing a resurgence in **SARS-CoV-2** cases (Australia, Egypt, France, Italy, Japan, Israel, United Kingdom).

- China, Germany, South Korea, Thailand and Vietnam experienced a steep rise in the number of **SARS-CoV** cases in March, representing – respectively – 91%, 47%, 79%, 53%, and 78% of their cumulative 2022 cases. In particular, China and Thailand do not appear to have passed the epidemic peak.

Implications

The increased circulation of **SARS-CoV-2** and **influenza** that started in November 2021 continued throughout the months of December and January 2022. In February, most countries were reporting steep declines in both **SARS-CoV-2** and **influenza** cases, probably due to the fact that many countries reintroduced NPIs in January, in response to the Omicron variant. During the month of March, while the majority of countries continued to report declines in both **SARS-CoV-2** and **influenza** cases, a minority of countries reported steep rises in **SARS-CoV-2** activity, reaching new record levels of cases per week (i.e. Germany and China), and **influenza** activity (i.e. France and the Netherlands). A possible explanation for this could include the relaxation of NPIs that has been adopted by some countries in March.

Importantly, and in contrast to the 2020/21 winter, we have witnessed the **co-circulation** of **influenza** and **SARS-CoV-2** in many countries during the 2021/22 winter. Despite the levels of **influenza** activity being low compared to previous years in many countries, others have reported or are now reporting numbers of **influenza** cases per week that are comparable to the pre-pandemic levels (e.g. Brazil, India, Mexico and Israel during the winter and France, Italy and the Netherlands during March) [3]. A recent publication has shown how decreases in influenza circulation has resulted in considerably less genetic diversity in influenza viruses and the B/Yamagata lineage has not been conclusively detected since April 2020 [4], however the recent rise in influenza activity that is currently being reported could alter this course and genetic diversity may now be on the increase. Globally, **influenza** activity has slowly been decreasing, though the last few weeks have seen a new increase (see the WHO FluNet Figure below). It will be important to see if the approach of the summer season for countries in the Northern Hemisphere will be followed by a decline in **SARS-CoV-2** and **influenza** cases, despite the progressive relaxation of the NPIs.

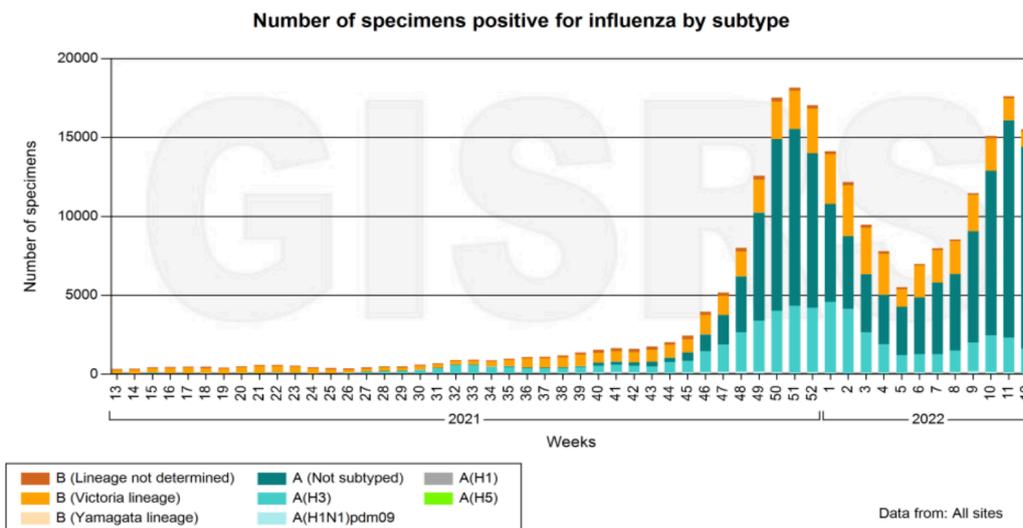


Influenza Laboratory Surveillance Information

generated on 01/04/2022 06:59:55 UTC

by the Global Influenza Surveillance and Response System (GISRS)

Global circulation of influenza viruses



Data source: FluNet (www.who.int/flu-net), GISRS

© World Health Organization 2022

Monthly plots by country

The plots per country show weekly data for influenza and SARS-Cov-2 infections from January 1, 2019 up to April 3, 2022. This Epi-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. These plots will be updated monthly and distributed through future Epi-Bulletins.

Per country, the top plot displays the number of positive influenza (in red) and SARS-CoV-2 (in blue) cases. An overview of the absolute number of influenza and SARS-CoV-2 cases per country can be found on [pages 15-15](#) of this Epi-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 red) and SARS-CoV-2 (in blue) specimen testing positive.

Countries (click to view plot)

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

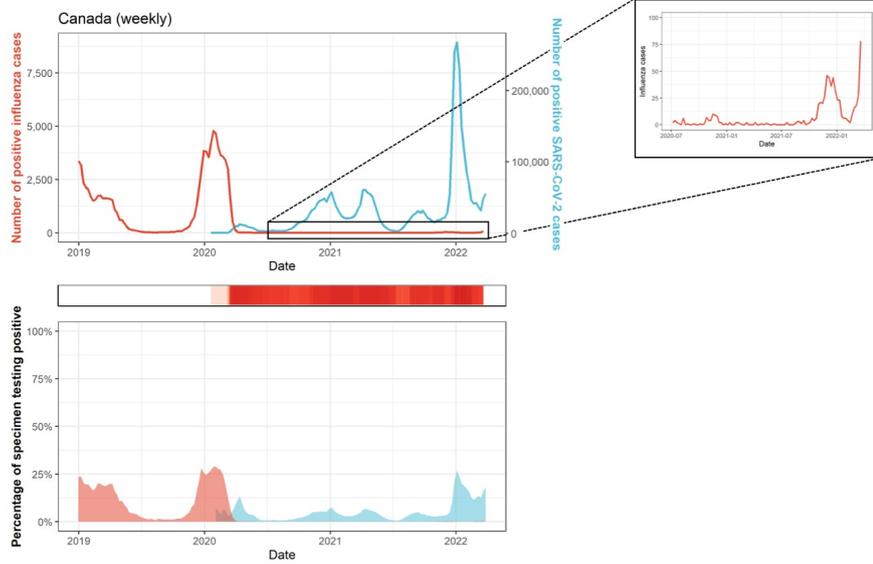
Israel

Oceania

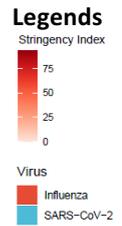
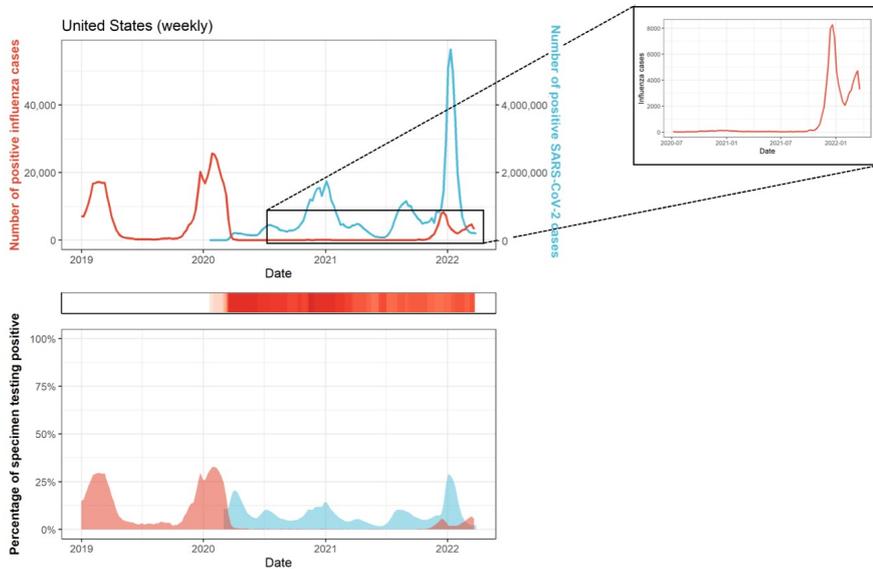
Australia

North America

Canada

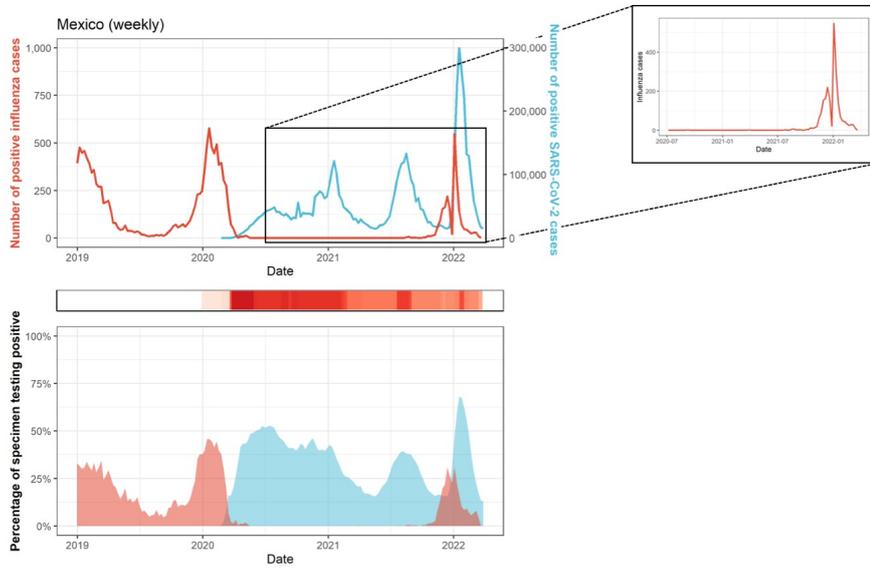


United States



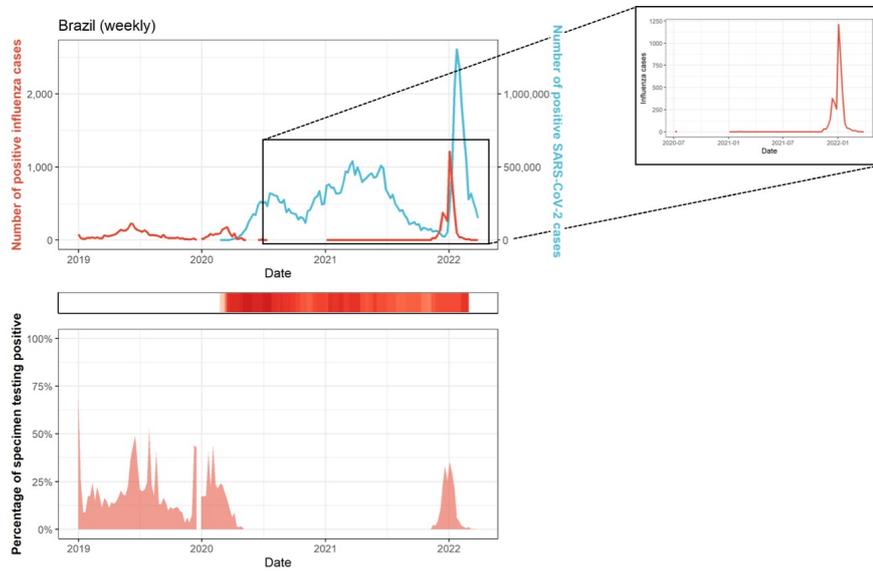
Central America Caribbean

Mexico

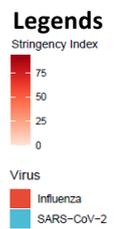


Tropical South America

Brazil

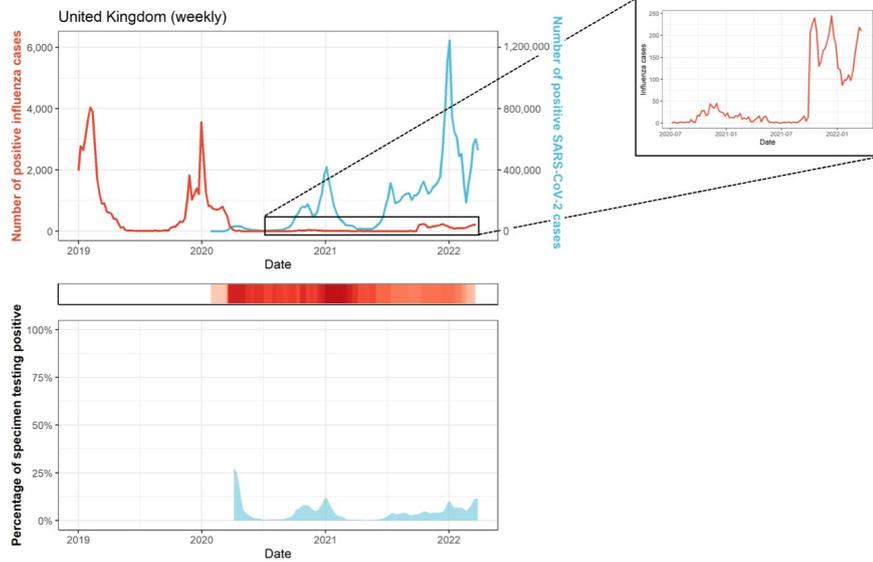


Note. Brazil has no positivity rate for SARS-CoV-2 because no denominator was available.



Northern Europe

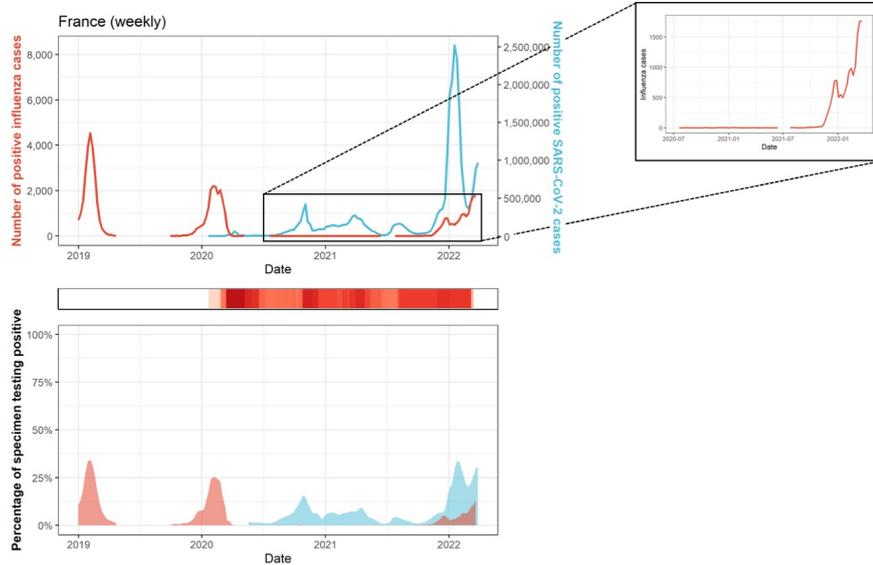
United Kingdom



Note. The United Kingdom does not have a positivity rate for influenza because the denominator was deemed unreliable.

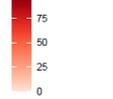
South West Europe

France



Legends

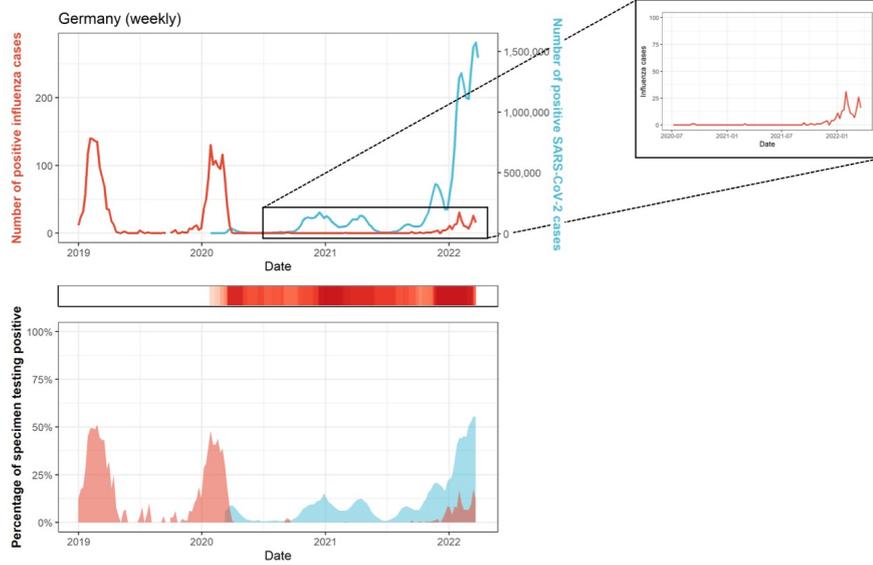
Stringency Index



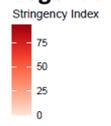
Virus



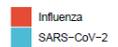
Germany



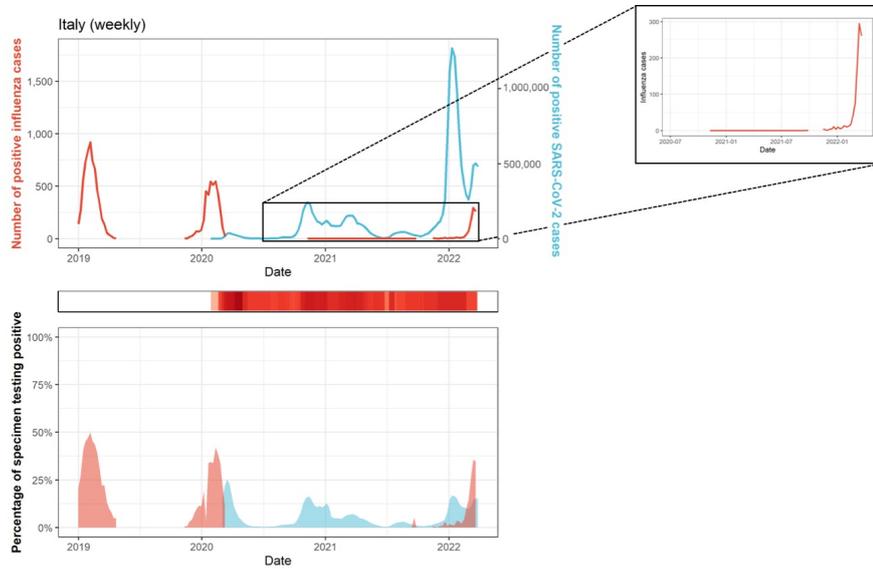
Legends



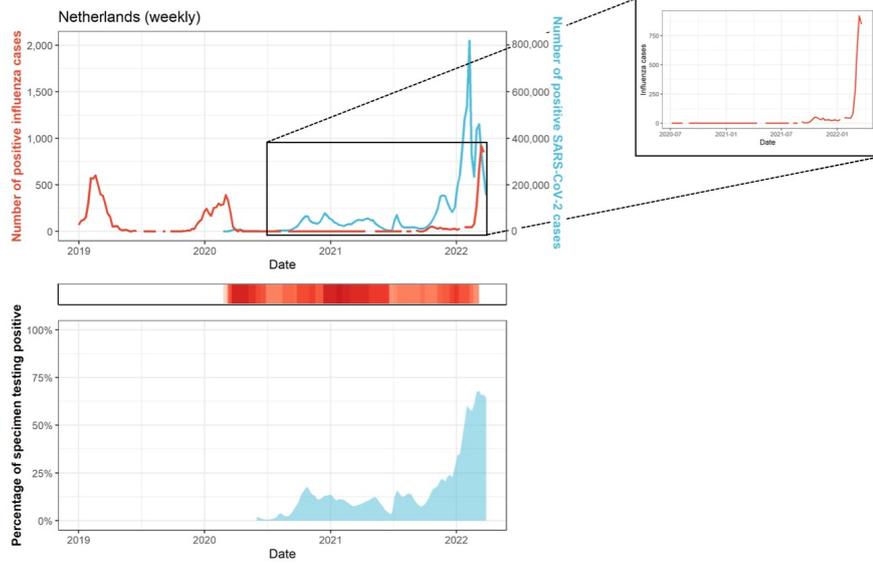
Virus



Italy

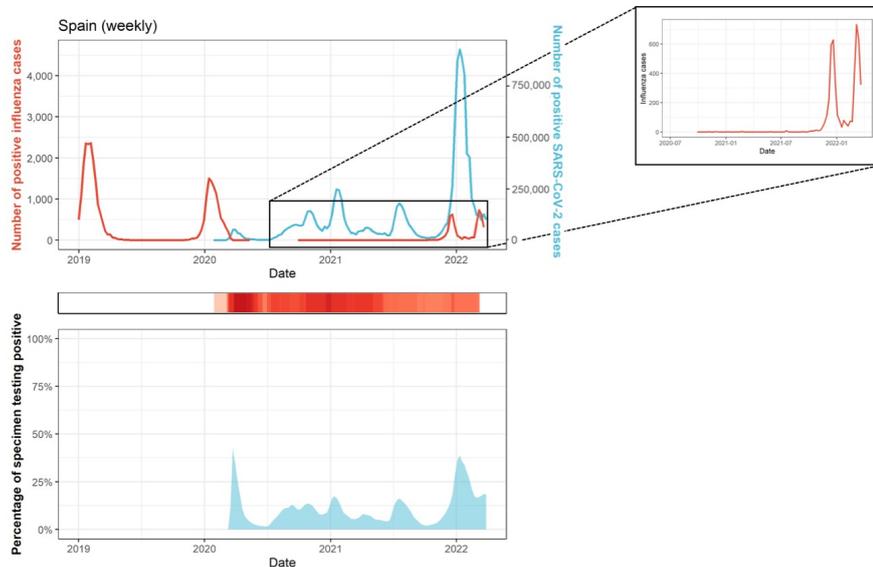


Netherlands



Note. The Netherlands does not have a positivity rate for influenza because the denominator was deemed unreliable.

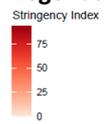
Spain



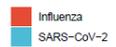
Note. Spain does not have a positivity rate for influenza because the denominator was deemed unreliable.

The number of SARS-CoV-2 cases dips below 0 as -74 347 new cases were reported on 2 March 2021.

Legends

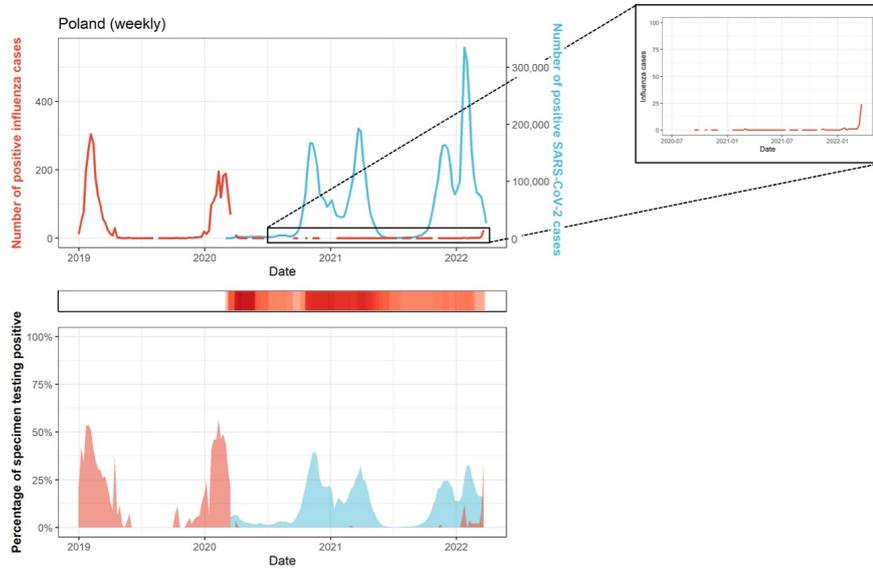


Virus



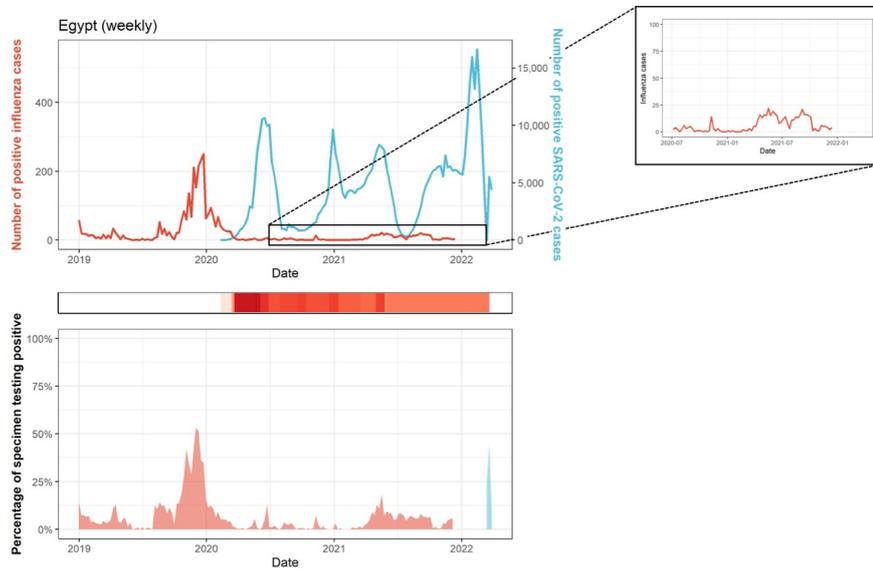
Eastern Europe

Poland



Northern Africa

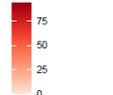
Egypt



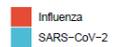
Note. Egypt does not have a positivity rate for SARS-CoV-2 because no denominator was available. No influenza data for Egypt has been uploaded onto FluNet since week 50, 2021

Legends

Stringency Index

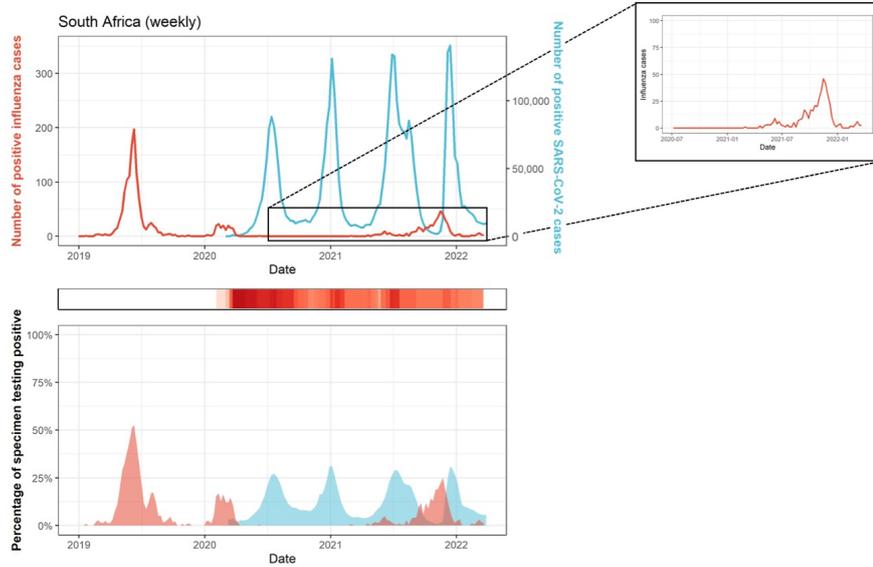


Virus



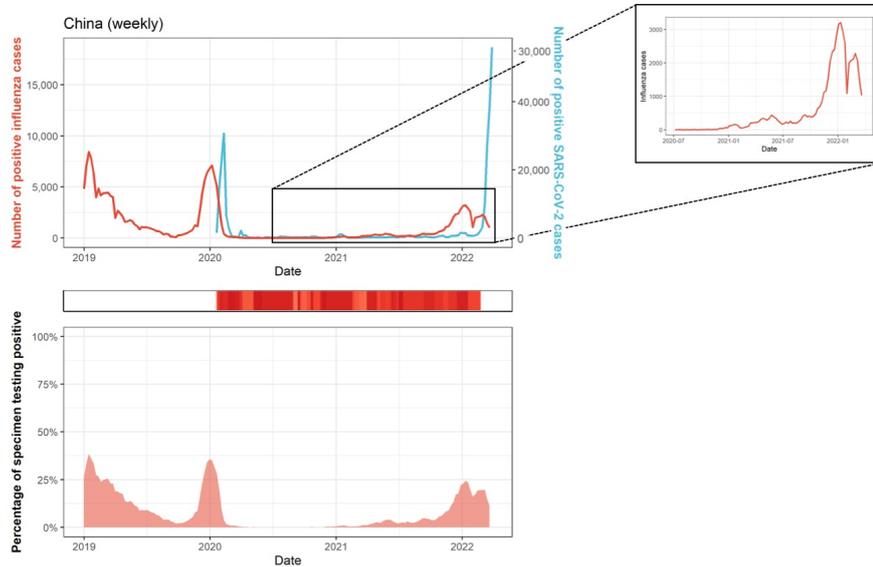
Southern Africa

South Africa

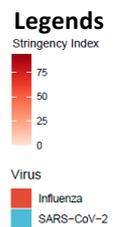


Eastern Asia

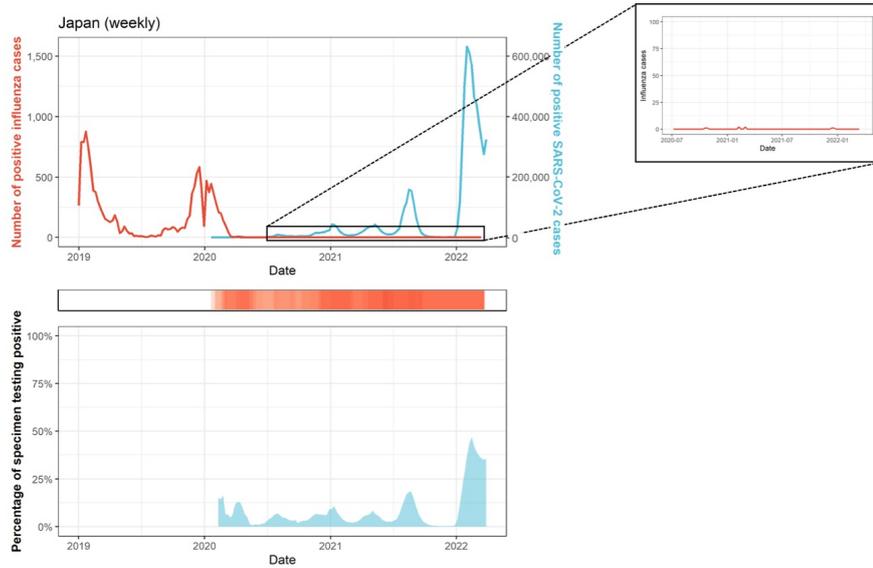
China



Note. China has no positivity rate for SARS-CoV-2 because no denominator was available.

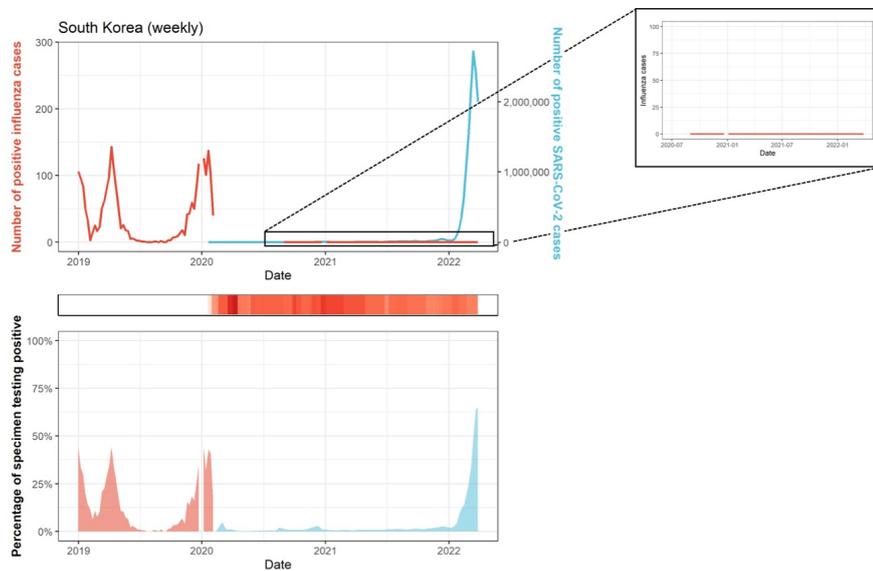


Japan

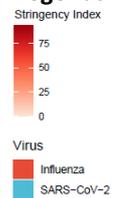


Note. Japan does not have a positivity rate for influenza because the denominator was deemed unreliable.

South Korea

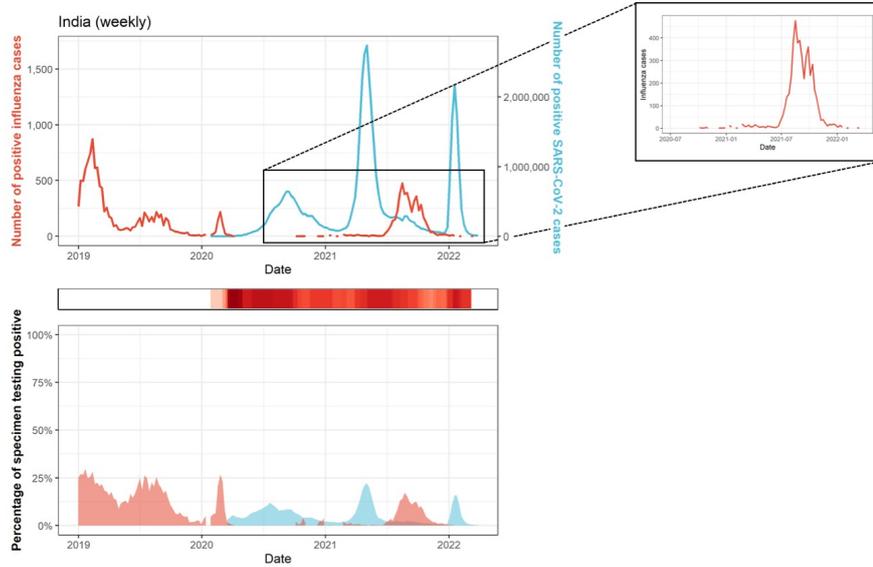


Legends



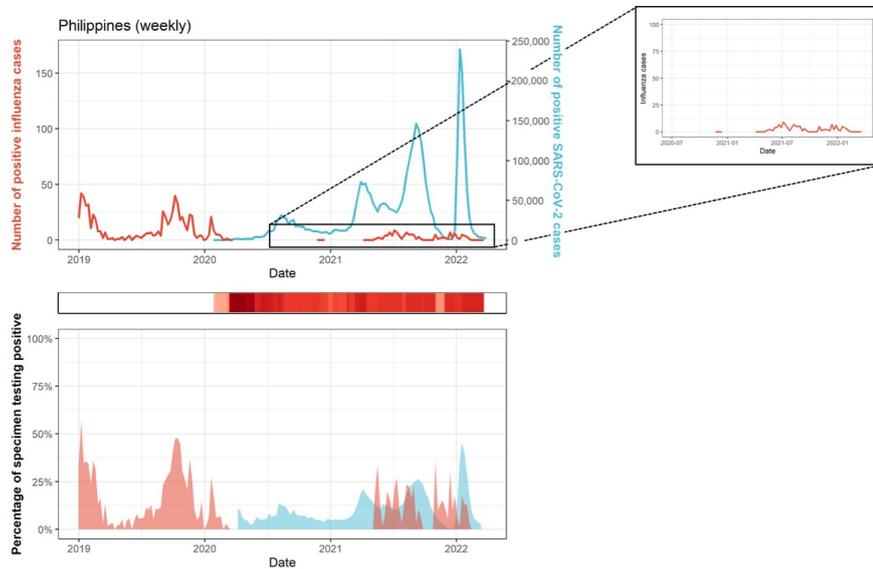
Southern Asia

India

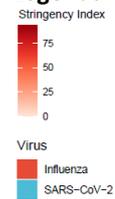


South East Asia

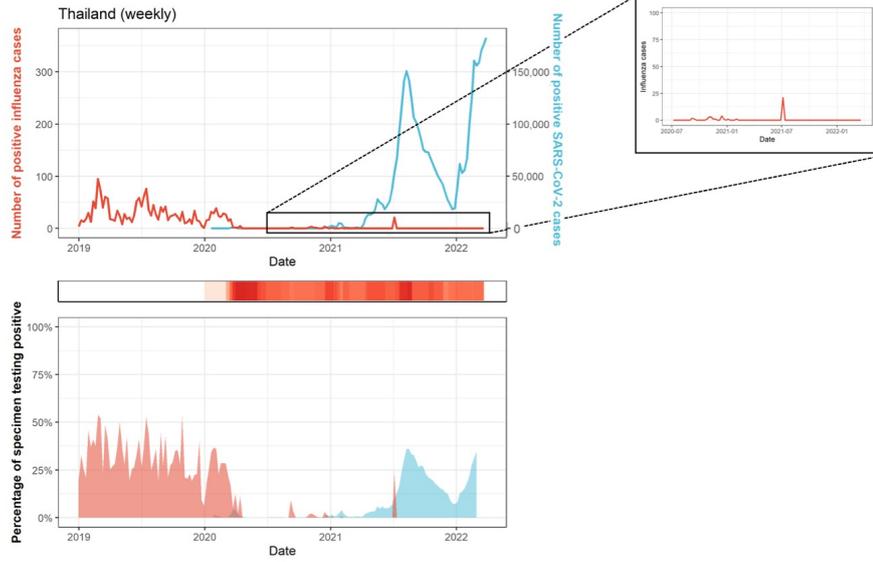
Philippines



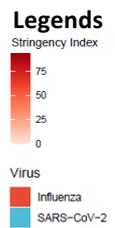
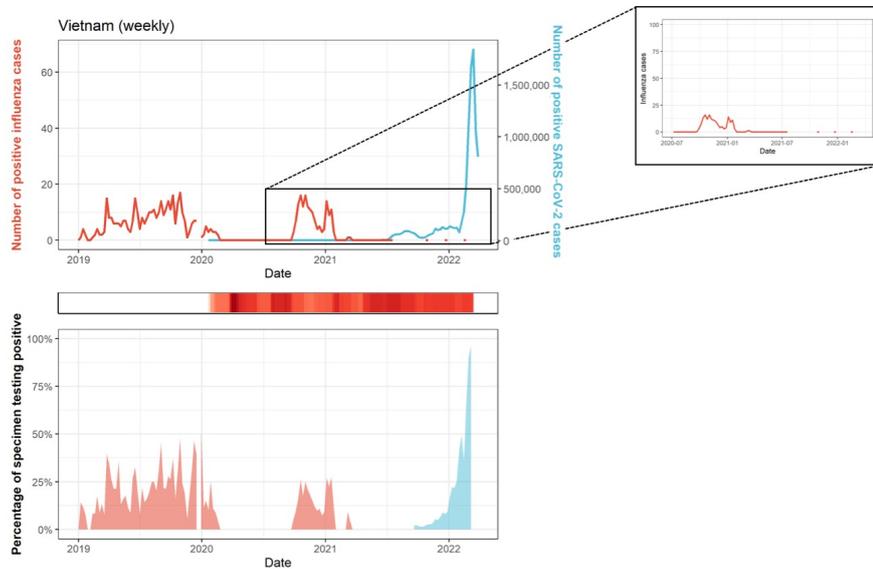
Legends



Thailand

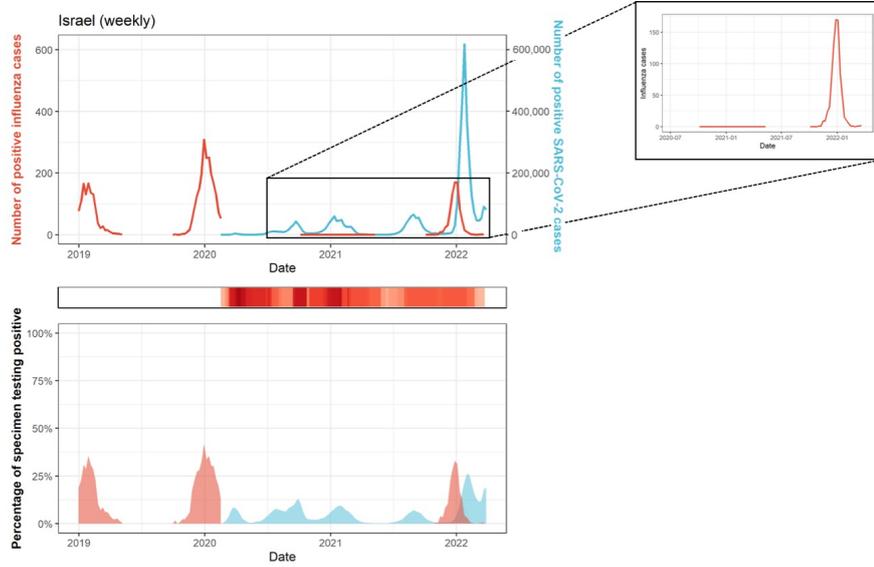


Vietnam



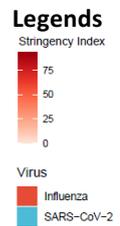
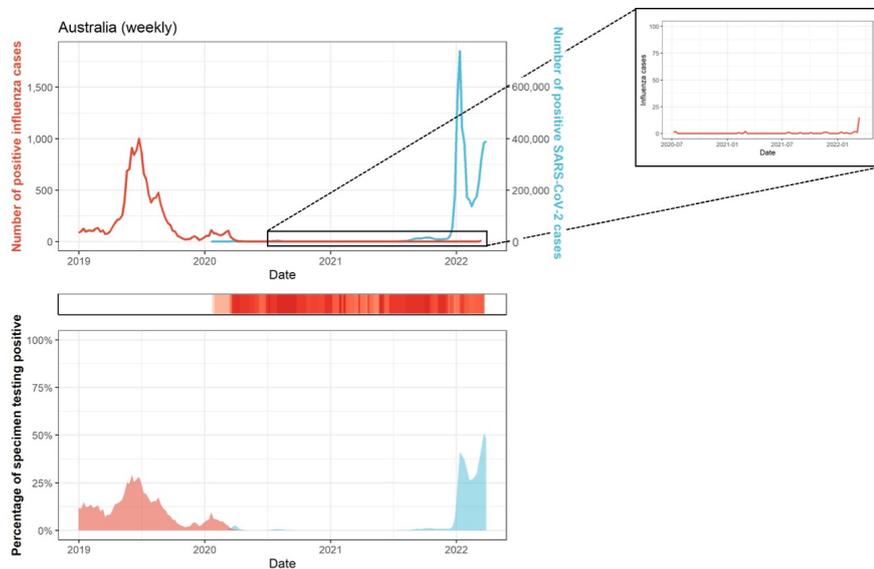
Western Asia

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			14002		
Australia	2020	28425		949		
Australia	2021	397071		10		
Australia	2022	4177000	1338049	22	18	11 - 2022
Brazil	2019			3459		
Brazil	2020	7700828		1391		
Brazil	2021	14485929		1240		
Brazil	2022	7659831	1155099	2632	21	13 - 2022
Canada	2019			43196		
Canada	2020	590249		44956		
Canada	2021	1633486		337		
Canada	2022	1266175	187510	222	140	12 - 2022
China	2019			122757		
China	2020	93172		31295		
China	2021	21498		26184		
China	2022	112803	103123	26033	6832	12 - 2022
Egypt	2019			1999		
Egypt	2020	138062		659		
Egypt	2021	247513		412		
Egypt	2022	119689	21493	0	0	50 - 2021
France	2019			25405		
France	2020	2727705		16589		
France	2021	7706191		3071		
France	2022	15650155	2912650	11726	6086	12 - 2022
Germany	2019			1215		
Germany	2020	1719737		958		
Germany	2021	5430685		31		
Germany	2022	14244325	6649640	179	64	12 - 2022
India	2019			10428		
India	2020	10286709		655		
India	2021	24574870		4789		
India	2022	8164196	94730	31	5	13 - 2022
Israel	2019			1796		
Israel	2020	423262		1424		
Israel	2021	961872		446		
Israel	2022	2534293	283722	338	4	12 - 2022
Italy	2019			6361		
Italy	2020	2107314		3599		
Italy	2021	4018517		31		
Italy	2022	8516671	1859518	927	811	12 - 2022
Japan	2019			10200		
Japan	2020	235747		2744		
Japan	2021	1496547		6		
Japan	2022	4823289	1549704	0	0	11 - 2022

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			6963		
Mexico	2020	1426094		4799		
Mexico	2021	2553629		960		
Mexico	2022	1679812	150906	1276	70	13 - 2022
Netherlands	2019			5166		
Netherlands	2020	806620		3235		
Netherlands	2021	2346892		451		
Netherlands	2022	4799608	1497810	3039	2698	12 - 2022
Philippines	2019			612		
Philippines	2020	474064		52		
Philippines	2021	2369926		105		
Philippines	2022	834609	16248	16	0	12 - 2022
Poland	2019			1786		
Poland	2020	1294878		1282		
Poland	2021	2813337		2		
Poland	2022	1854716	295877	37	31	12 - 2022
South Africa	2019			1164		
South Africa	2020	1057161		157		
South Africa	2021	2382539		413		
South Africa	2022	260667	44911	24	14	12 - 2022
South Korea	2019			1702		
South Korea	2020	61768		505		
South Korea	2021	573484		0		
South Korea	2022	12740565	10102369	0	0	13 - 2022
Spain	2019			17228		
Spain	2020	1938671		9373		
Spain	2021	4440910		2068		
Spain	2022	5213564	530785	2647	2100	12 - 2022
Thailand	2019			1568		
Thailand	2020	6898		297		
Thailand	2021	2216551		23		
Thailand	2022	1433291	764799	0	0	12 - 2022
United Kingdom	2019			42447		
United Kingdom	2020	2491790		14369		
United Kingdom	2021	10472900		2805		
United Kingdom	2022	7403665	2278953	1633	779	12 - 2022
United States	2019			268524		
United States	2020	20191905		229766		
United States	2021	34643385		38341		
United States	2022	25266774	1049435	40442	16276	12 - 2022
Vietnam	2019			355		
Vietnam	2020	1465		146		
Vietnam	2021	1729792		39		
Vietnam	2022	7833352	6121124	0	0	12 - 2022

Note. ^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 [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 Epi-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. This data is extracted both from the John Hopkins repository on daily confirmed COVID-19 [10] cases as well as various national public health institutions.
- **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 4 April 2022 and cover the period 1 January 2019 to 03 April 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.

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