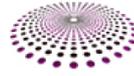


FluCov Epi-Bulletin – April 2022

‘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) and this outbreak 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 the Epi-Bulletin [1]. From January to April 2022, the following general patterns have been observed for **influenza**:

- On a monthly basis, there were more cases of **influenza** reported in the February-March 2022 epidemic wave compared to the December-January wave (see WHO FluNet Figure on page 2).
- In the month of April, most countries in the Bulletin are reporting declining numbers of **influenza** cases.
- Only a few countries are reporting increasing numbers of **influenza** cases: **Poland, Canada and Australia**. The resurgence of cases in these three countries has followed two years of almost no activity.
- A number of countries have maintained no to very low levels of **influenza** cases right up to April 2022: **Japan, South Korea, Thailand and Vietnam**.

The overall number of reported **SARS-CoV-2** cases has surged to record levels during the 2021/22 winter, probably due to the emergence of the Omicron variant [2] and the relaxation of non-pharmaceutical interventions (NPIs).

- Most countries are now seeing declining numbers of **SARS-CoV-2**. This includes countries in Southern Asia (e.g. Thailand and Vietnam) and Eastern Asia (e.g. Japan and Korea)
- In China, there are indications that the number of **SARS-CoV-2** cases is now declining
- In contrast, it looks like cases of **SARS-CoV-2** may be increasing in the US
- Importantly, the data for South Africa indicate an increase in cases of **SARS-CoV-2** and this country may be the starting their Fifth Wave of **SARS-CoV-2**

Implications

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. Interestingly, the **influenza** activity has continued much longer than normal and has also occurred during the months of March and April 2022. Globally, the second wave of influenza activity (February-March 2022) has been larger than the December-January wave.

The data for April 2022 seem to suggest that cases of **influenza** and **SARS-CoV-2** are now declining in most countries. However, there are two important exceptions regarding **SARS-CoV-2** and this is

the US where activity may be increasing and South Africa where there are strong indications that a Fifth Wave has begun [3]. Importantly, the activity in South Africa is occurring during the (Southern Hemisphere) autumn months and not in the winter when respiratory viruses normally circulate. It will be important to follow **SARS-CoV-2** cases in South Africa and see if this provides information on a possible new wave of **SARS-CoV-2** in the Northern Hemisphere (e.g. in terms of the intensity of activity and whether the epidemic might occur in the autumn rather than the winter period).

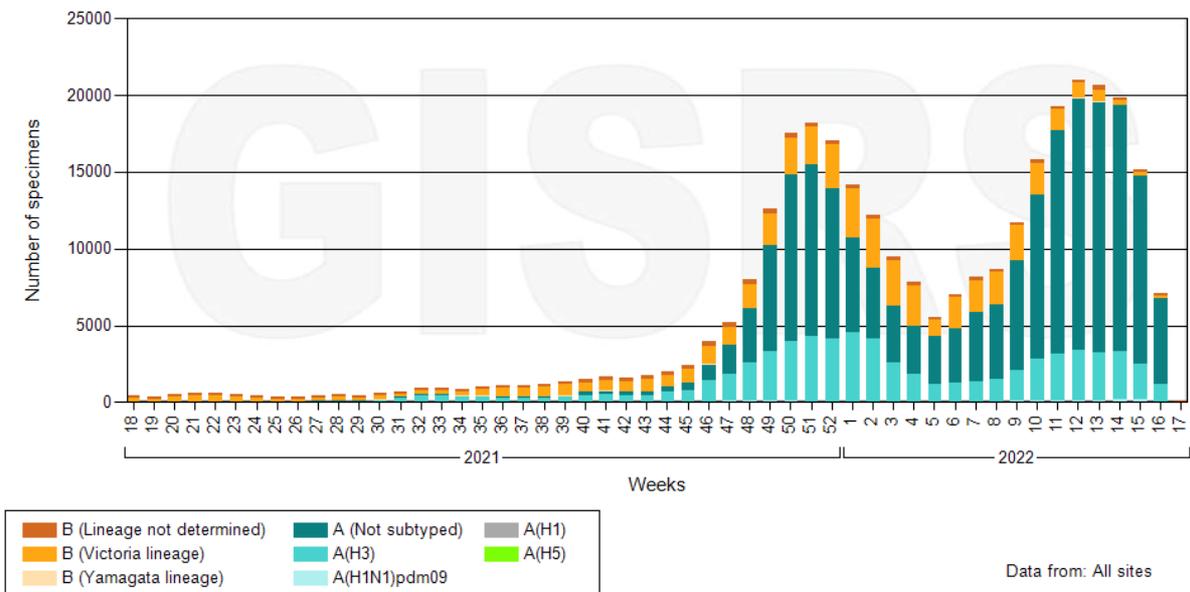


Influenza Laboratory Surveillance Information
by the Global Influenza Surveillance and Response System (GISRS)

generated on 03/05/2022 19:05:12 UTC

Global circulation of influenza viruses

Number of specimens positive for influenza by subtype



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 May 1, 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 15-16 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

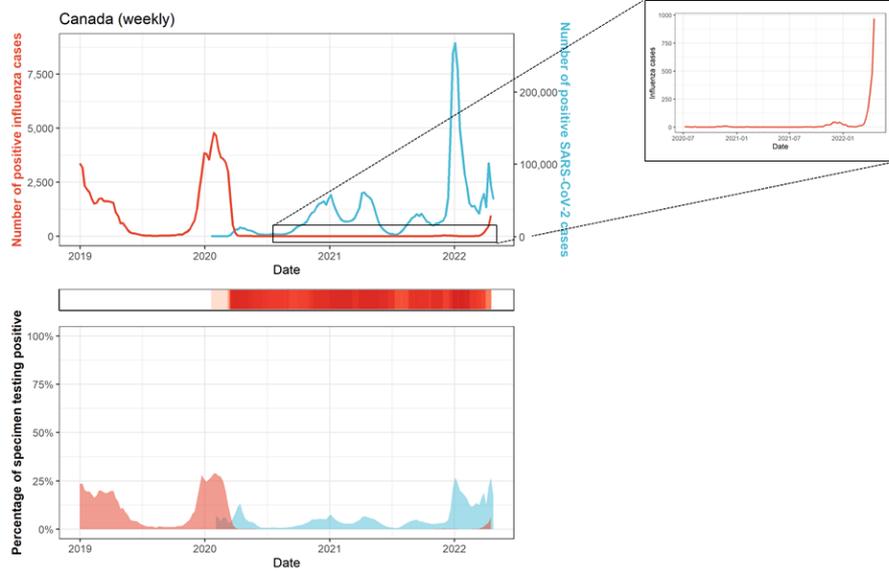
Israel

Oceania

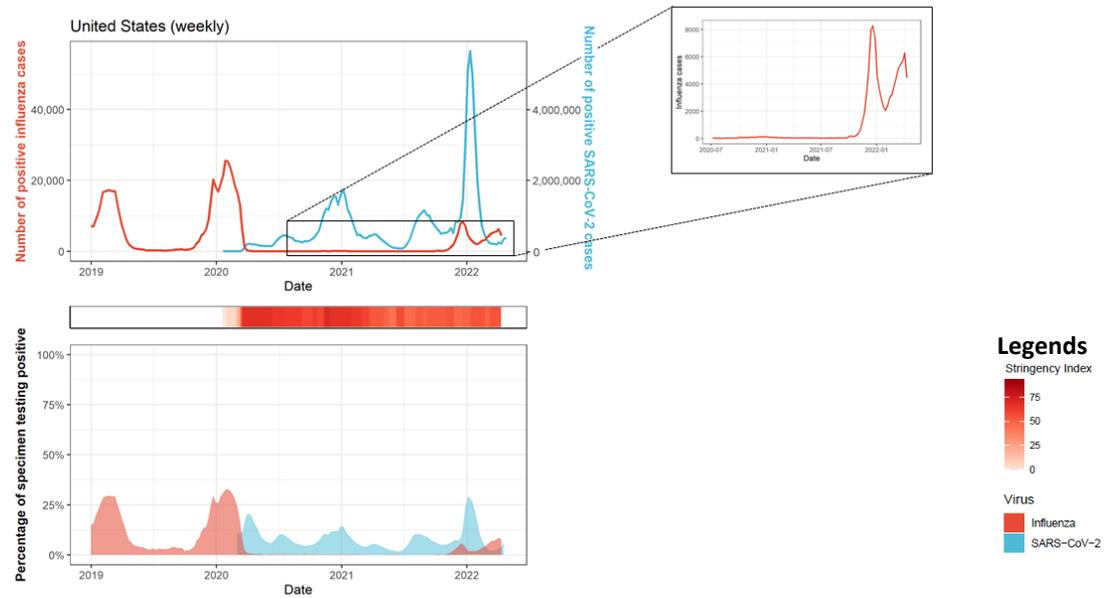
Australia

North America

Canada

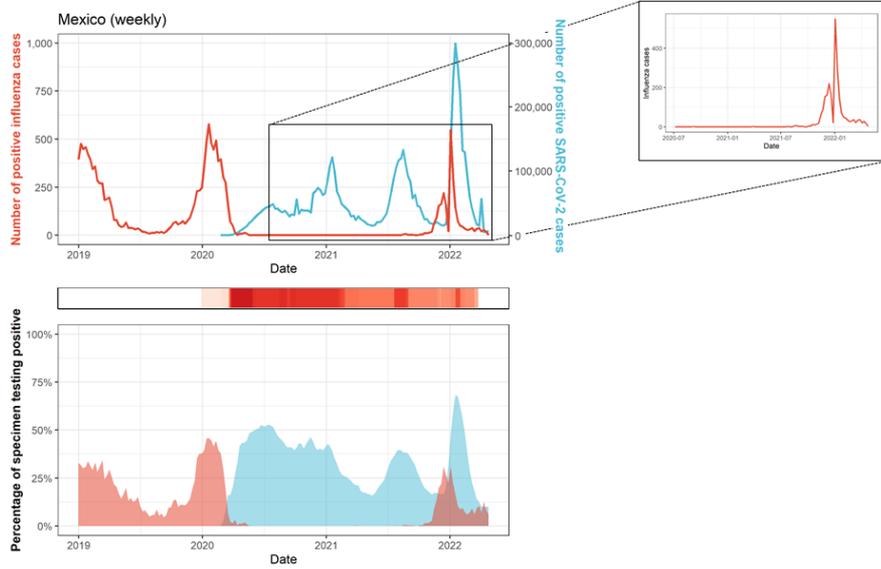


United States



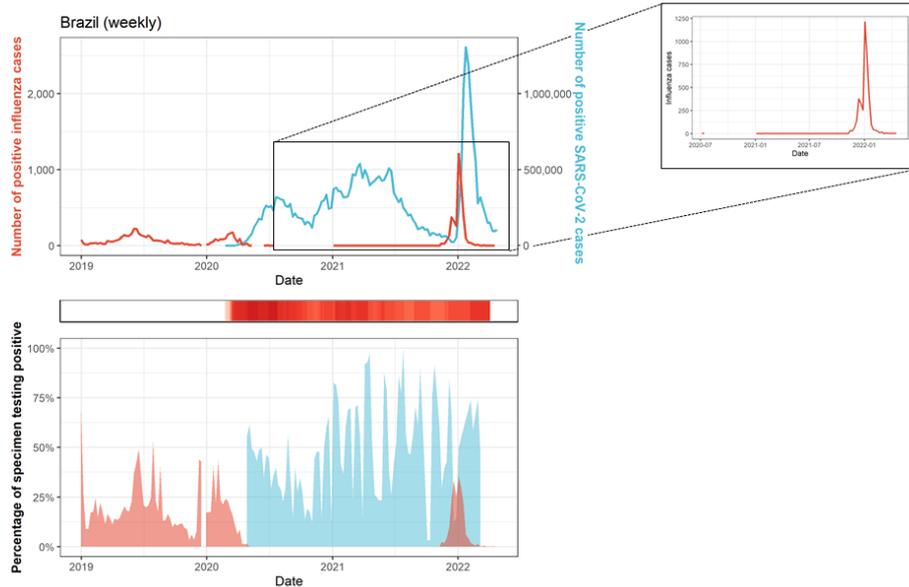
Central America Caribbean

Mexico



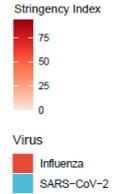
Tropical South America

Brazil



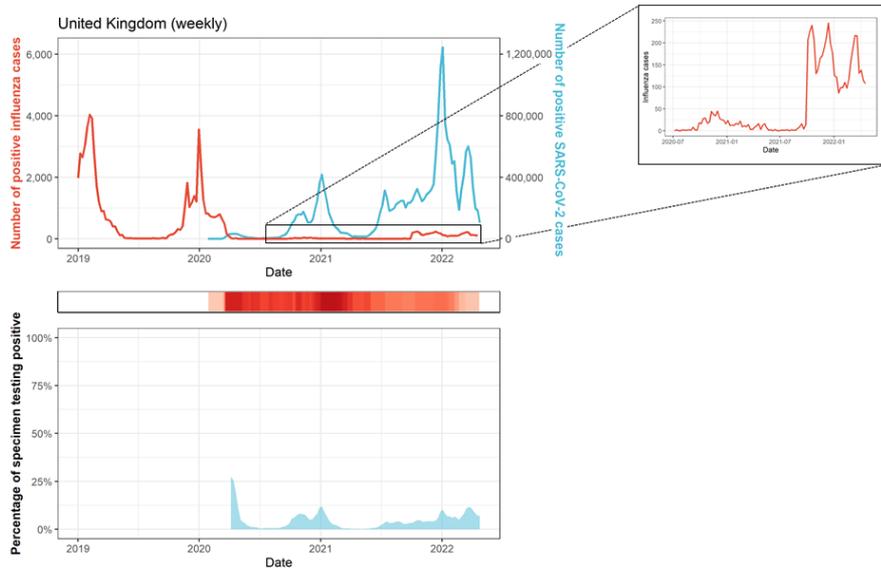
Note. Brazil has no positivity rate for SARS-CoV-2 because no denominator was available.

Legends



Northern Europe

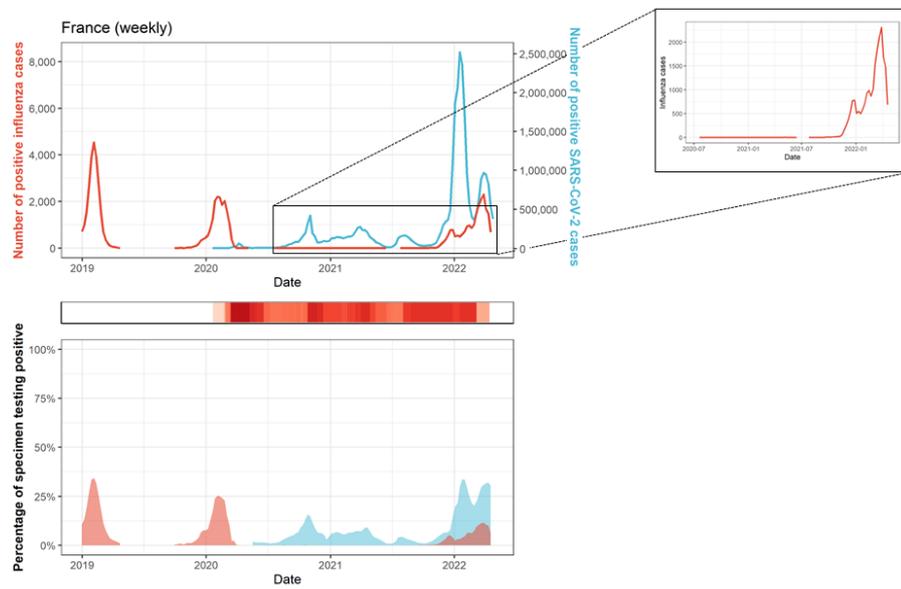
United Kingdom



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

South West Europe

France



Legends

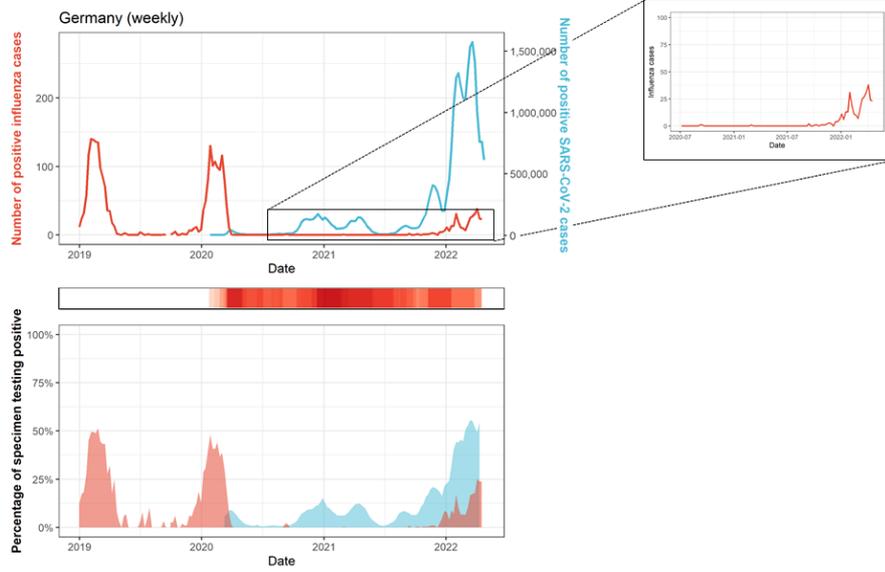
Stringency Index

- 75
- 50
- 25
- 0

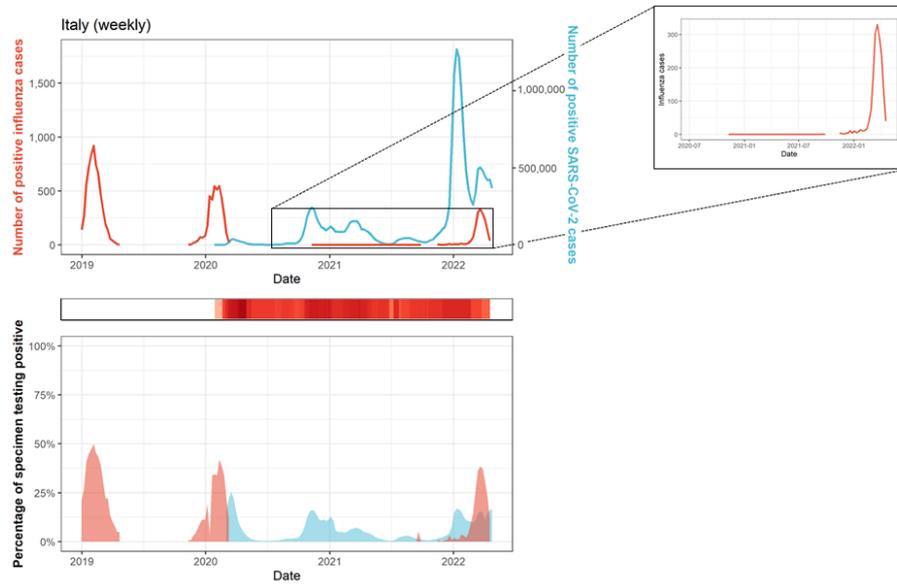
Virus

- Influenza
- SARS-CoV-2

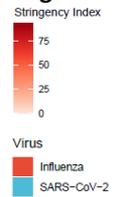
Germany



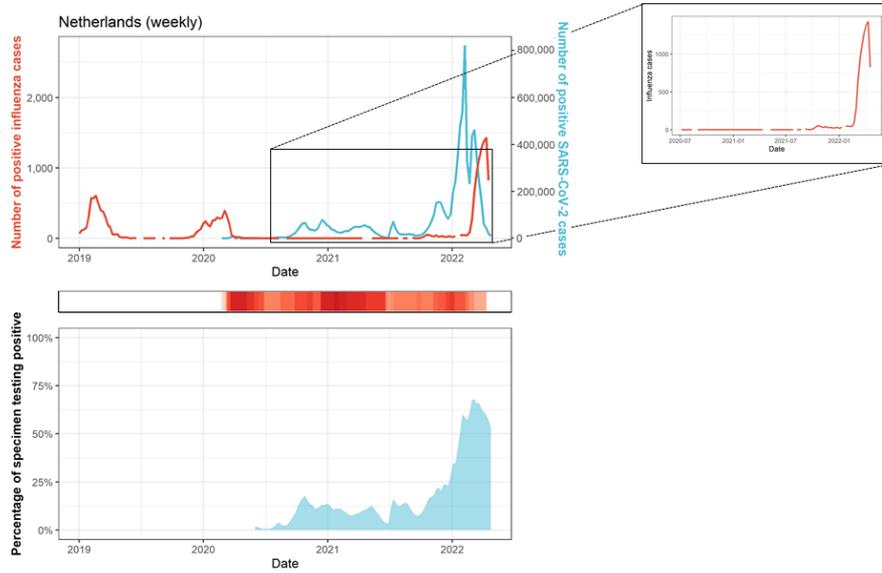
Italy



Legends

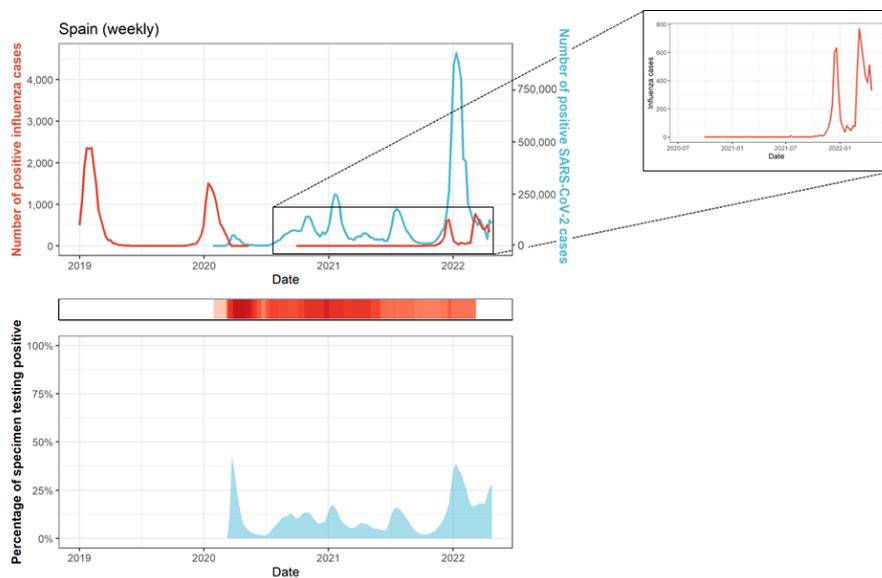


Netherlands



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

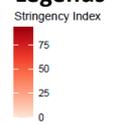
Spain



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

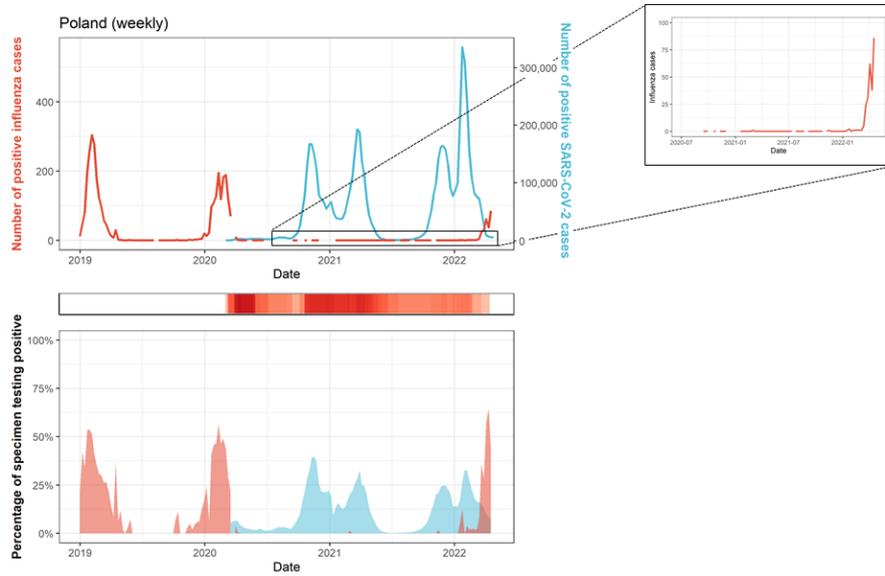


Virus



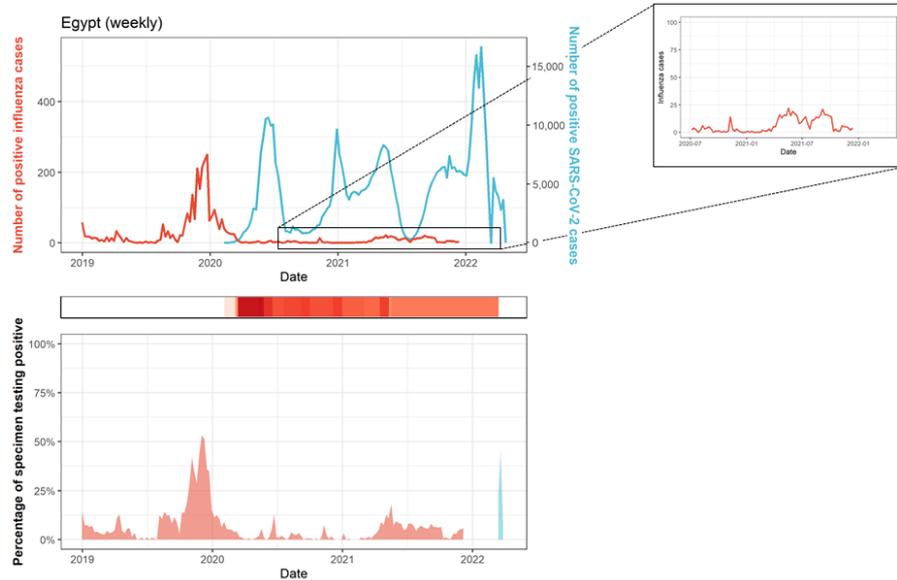
Eastern Europe

Poland



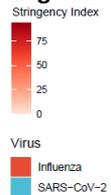
Northern Africa

Egypt



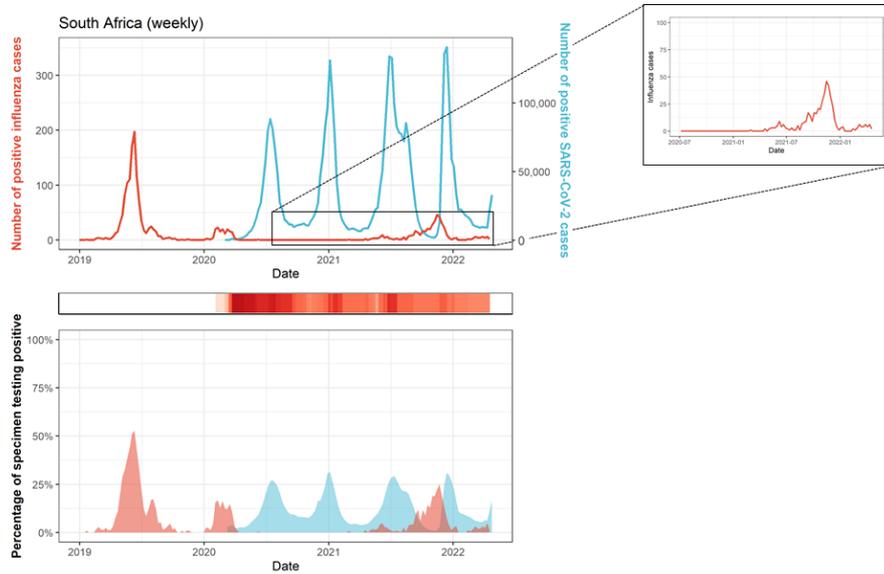
Note. Egypt does not have a positivity rate for SARS-CoV-2 because no denominator was available. No influenza data for Egypt has been uploaded onto FluNet since week 50, 2021

Legends



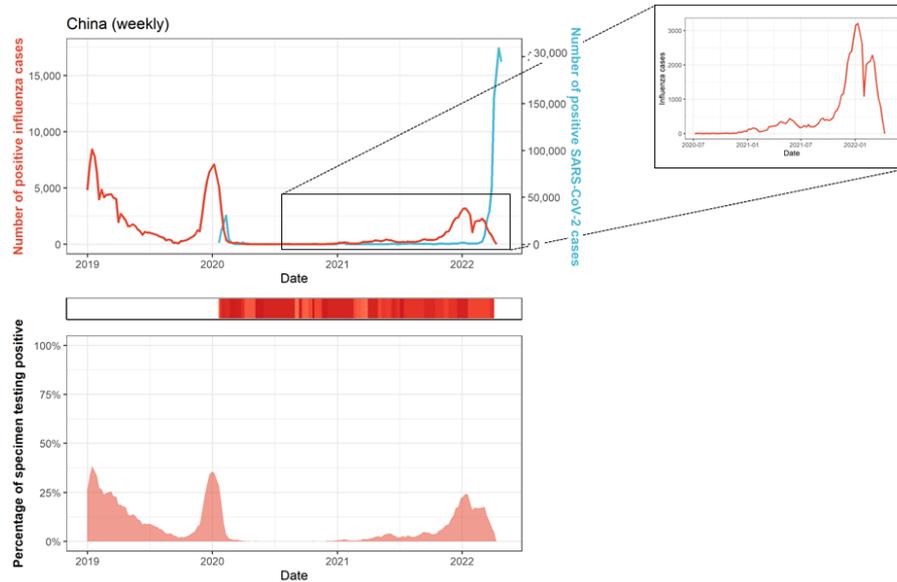
Southern Africa

South Africa



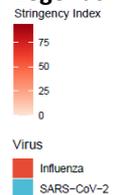
Eastern Asia

China

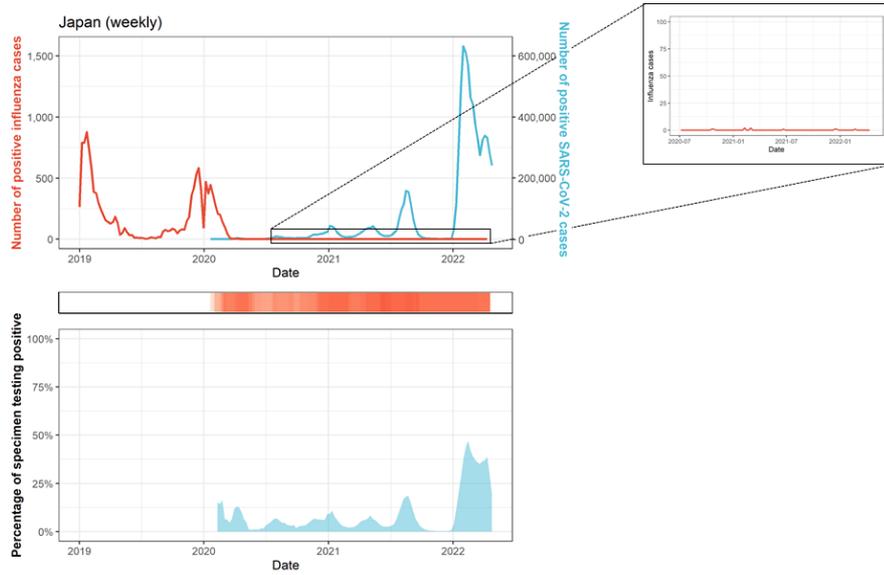


Note. China has no positivity rate for SARS-CoV-2 because no denominator was available.

Legends

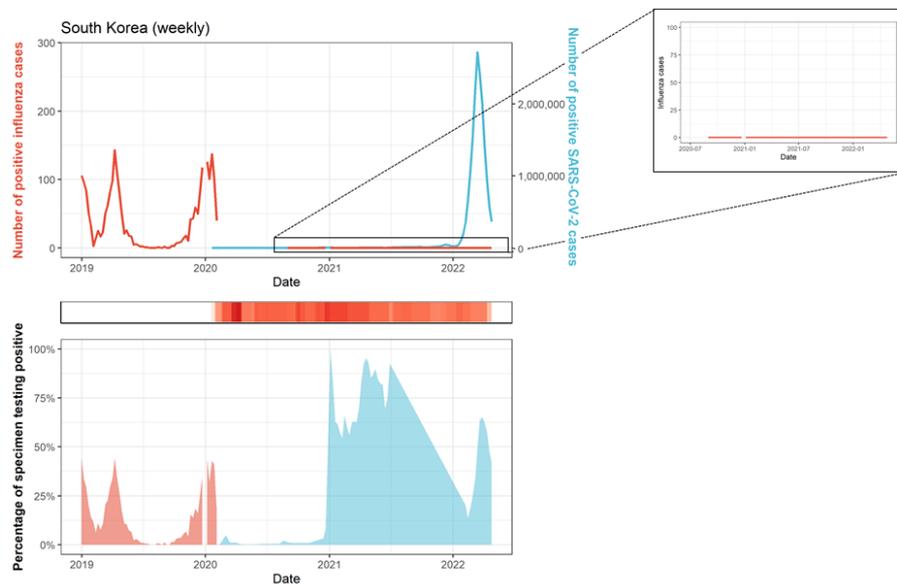


Japan



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

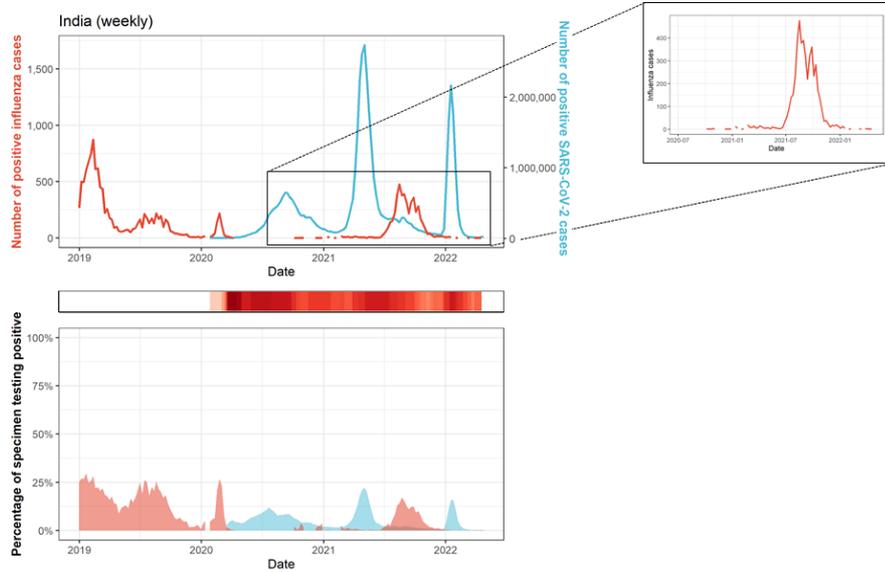
South Korea



Legends
 Stringency Index
 75
 50
 25
 0
 Virus
 Influenza
 SARS-CoV-2

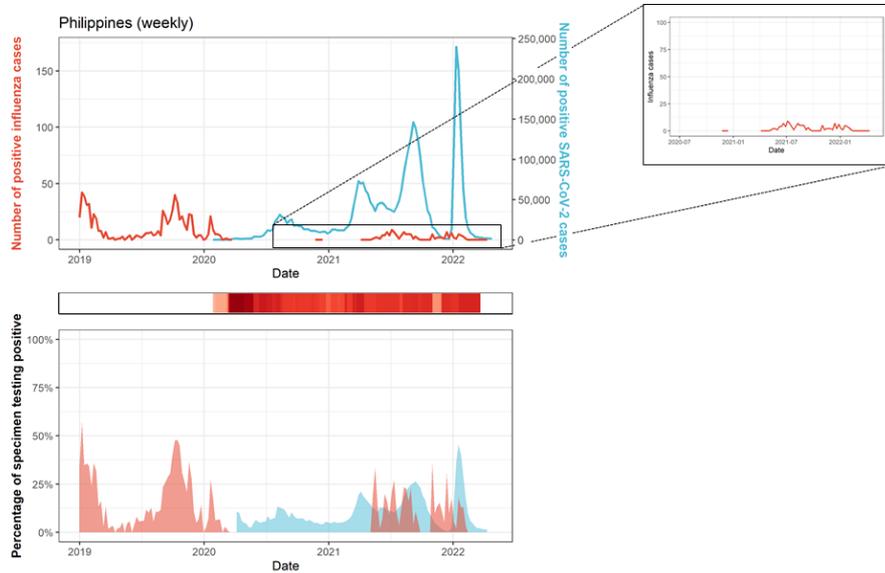
Southern Asia

India

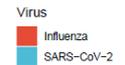
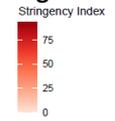


South East Asia

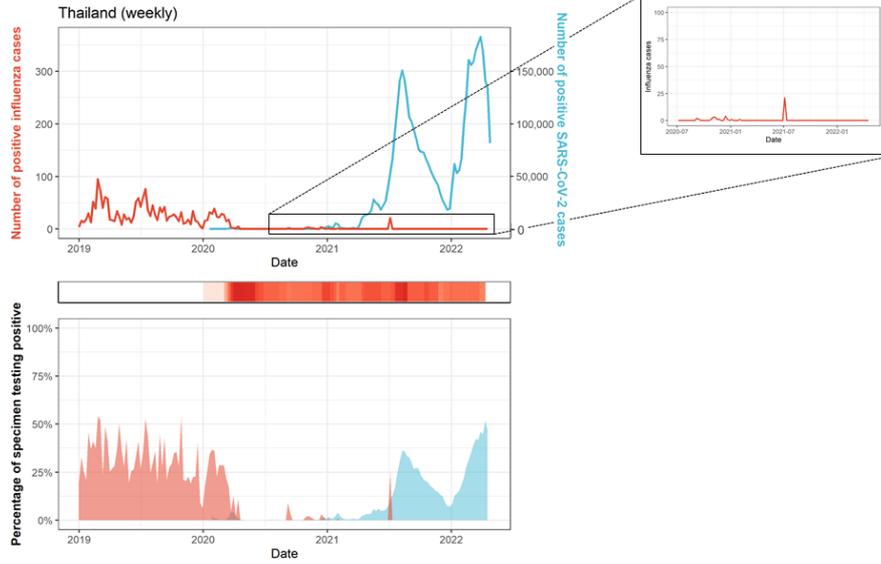
Philippines



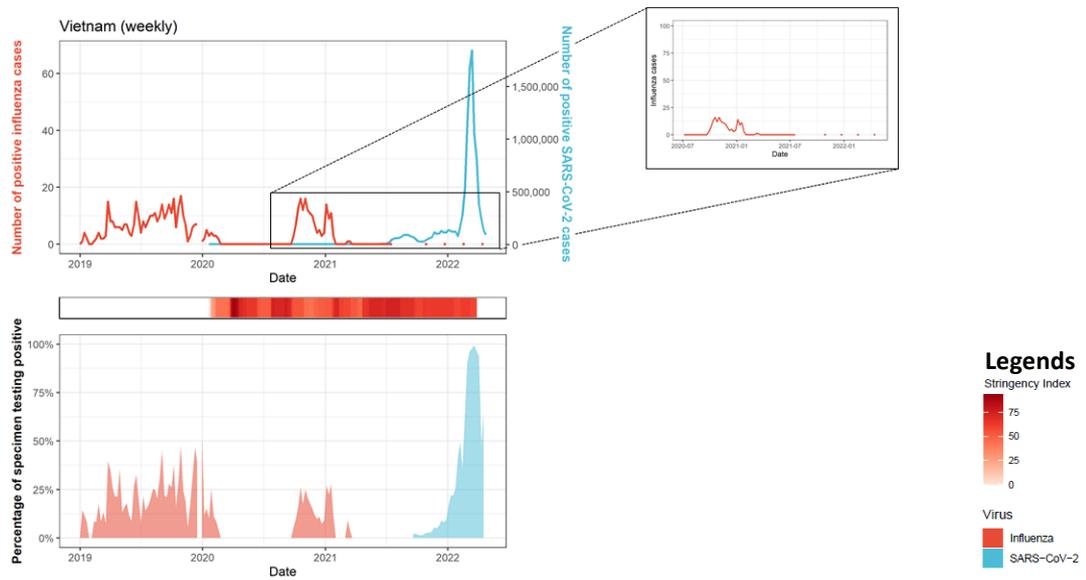
Legends



Thailand

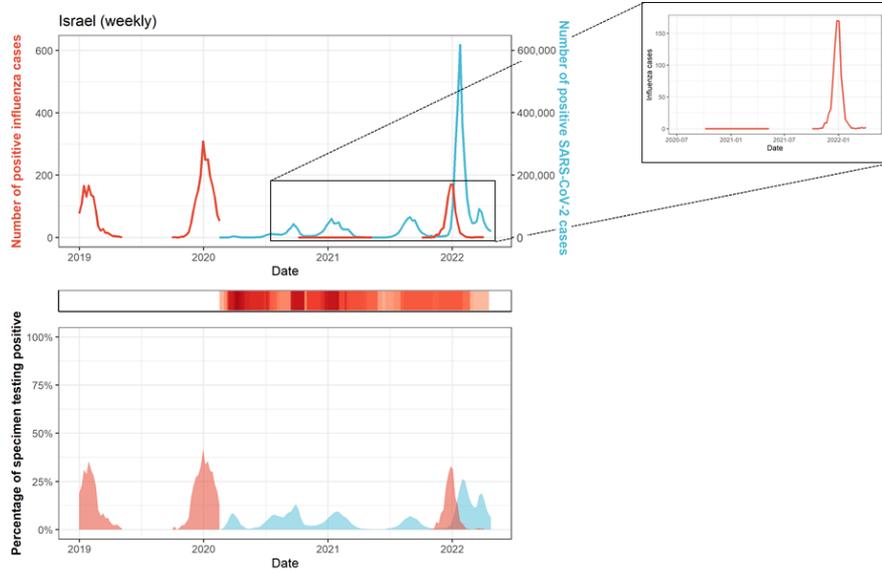


Vietnam



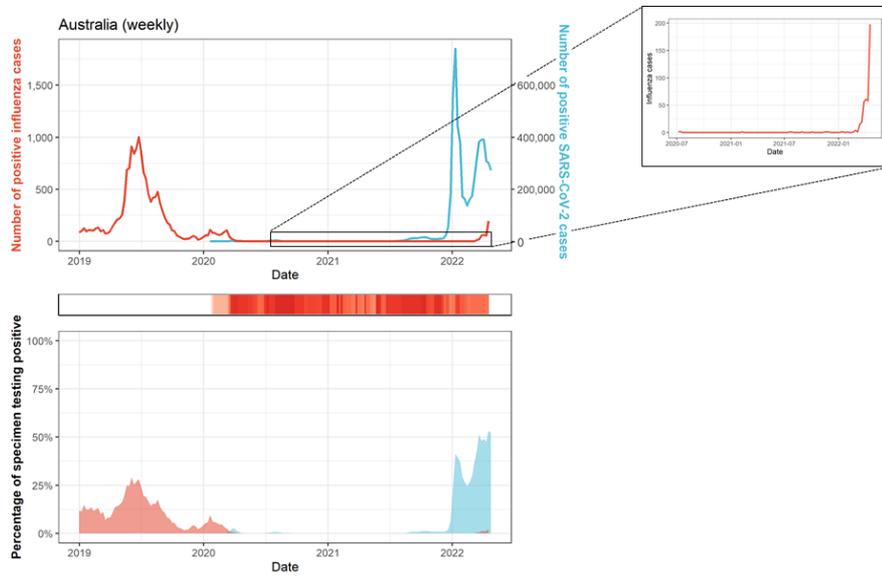
Western Asia

Israel

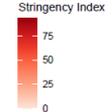


Oceania

Australia



Legends



Virus



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 | 5557076 | 1380076 | 416 | 317 | 16 - 2022 |
| Brazil | 2019 | | | 3459 | | |
| Brazil | 2020 | 7700828 | | 1391 | | |
| Brazil | 2021 | 14485929 | | 1240 | | |
| Brazil | 2022 | 8156397 | 496566 | 2648 | 6 | 17 - 2022 |
| Canada | 2019 | | | 43196 | | |
| Canada | 2020 | 590249 | | 44956 | | |
| Canada | 2021 | 1633486 | | 337 | | |
| Canada | 2022 | 1550021 | 275800 | 2146 | 1760 | 16 - 2022 |
| China | 2019 | | | 122757 | | |
| China | 2020 | 93172 | | 31295 | | |
| China | 2021 | 21498 | | 26184 | | |
| China | 2022 | 837244 | 724414 | 27190 | 370 | 15 - 2022 |
| Egypt | 2019 | | | 1999 | | |
| Egypt | 2020 | 138062 | | 659 | | |
| Egypt | 2021 | 247513 | | 412 | | |
| Egypt | 2022 | 130070 | 10381 | 0 | 0 | 50 - 2021 |
| France | 2019 | | | 25405 | | |
| France | 2020 | 2727705 | | 16589 | | |
| France | 2021 | 7706191 | | 3071 | | |
| France | 2022 | 18681346 | 3031191 | 18318 | 3848 | 16 - 2022 |
| Germany | 2019 | | | 1215 | | |
| Germany | 2020 | 1719737 | | 958 | | |
| Germany | 2021 | 5430685 | | 31 | | |
| Germany | 2022 | 17659419 | 3452690 | 305 | 85 | 16 - 2022 |
| India | 2019 | | | 10428 | | |
| India | 2020 | 10286709 | | 655 | | |
| India | 2021 | 24574870 | | 4789 | | |
| India | 2022 | 8217609 | 53413 | 36 | 5 | 16 - 2022 |
| Israel | 2019 | | | 1796 | | |
| Israel | 2020 | 423262 | | 1424 | | |
| Israel | 2021 | 961872 | | 446 | | |
| Israel | 2022 | 2692172 | 157879 | 341 | 2 | 14 - 2022 |
| Italy | 2019 | | | 6361 | | |
| Italy | 2020 | 2107314 | | 3599 | | |
| Italy | 2021 | 4018517 | | 31 | | |
| Italy | 2022 | 10337517 | 1820846 | 1696 | 403 | 16 - 2022 |
| Japan | 2019 | | | 10200 | | |
| Japan | 2020 | 235747 | | 2744 | | |
| Japan | 2021 | 1496547 | | 6 | | |
| Japan | 2022 | 6138957 | 1315668 | 1 | 0 | 15 - 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 | 1759957 | 80145 | 1443 | 68 | 17 - 2022 |
| Netherlands | 2019 | | | 5166 | | |
| Netherlands | 2020 | 806620 | | 3235 | | |
| Netherlands | 2021 | 2346892 | | 451 | | |
| Netherlands | 2022 | 4987737 | 188129 | 8270 | 3633 | 16 - 2022 |
| Philippines | 2019 | | | 612 | | |
| Philippines | 2020 | 474064 | | 52 | | |
| Philippines | 2021 | 2369926 | | 105 | | |
| Philippines | 2022 | 842007 | 7398 | 16 | 0 | 15 - 2022 |
| Poland | 2019 | | | 1786 | | |
| Poland | 2020 | 1294878 | | 1282 | | |
| Poland | 2021 | 2813337 | | 2 | | |
| Poland | 2022 | 1888299 | 33583 | 254 | 186 | 16 - 2022 |
| South Africa | 2019 | | | 1164 | | |
| South Africa | 2020 | 1057161 | | 157 | | |
| South Africa | 2021 | 2382539 | | 413 | | |
| South Africa | 2022 | 332839 | 72172 | 45 | 12 | 16 - 2022 |
| South Korea | 2019 | | | 1702 | | |
| South Korea | 2020 | 61768 | | 505 | | |
| South Korea | 2021 | 573484 | | 0 | | |
| South Korea | 2022 | 16640396 | 3899831 | 0 | 0 | 17 - 2022 |
| Spain | 2019 | | | 17228 | | |
| Spain | 2020 | 1938671 | | 9373 | | |
| Spain | 2021 | 4440910 | | 2068 | | |
| Spain | 2022 | 5601407 | 387843 | 4678 | 1227 | 16 - 2022 |
| Thailand | 2019 | | | 1568 | | |
| Thailand | 2020 | 6898 | | 297 | | |
| Thailand | 2021 | 2216551 | | 23 | | |
| Thailand | 2022 | 2039049 | 605758 | 0 | 0 | 16 - 2022 |
| United Kingdom | 2019 | | | 42447 | | |
| United Kingdom | 2020 | 2491790 | | 14369 | | |
| United Kingdom | 2021 | 10472900 | | 2805 | | |
| United Kingdom | 2022 | 8300318 | 896653 | 2128 | 360 | 16 - 2022 |
| United States | 2019 | | | 268524 | | |
| United States | 2020 | 20191905 | | 229766 | | |
| United States | 2021 | 34643385 | | 38341 | | |
| United States | 2022 | 26513035 | 1238414 | 59494 | 10738 | 15 - 2022 |
| Vietnam | 2019 | | | 355 | | |
| Vietnam | 2020 | 1465 | | 146 | | |
| Vietnam | 2021 | 1729792 | | 39 | | |
| Vietnam | 2022 | 8918552 | 1085200 | 0 | 0 | 16 - 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 [4]. The emergence of this new virus has had a major impact on the global circulation of respiratory viruses, including influenza and RSV. 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) [5].

Data sources

- **Influenza:** FluNet [6] 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 [7]. 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 [8] cases as well as various national public health institutions.
- **Government response tracker:** The Oxford COVID-19 Government Response Tracker (OxCGRT) [5] 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 2 May 2022 and cover the period 1 January 2019 to 1 May 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 flu cov@nivel.nl.

References

- [1] FluCov Epi-Bulletin – December 2021. https://www.nivel.nl/sites/default/files/algemene-content/FluCov%20EpiBulletin_Dec2021_11012022.pdf [accessed 7 February 2022]
- [2] WHO. Classification of Omicron (B.1.1.529): SARS-CoV-2 variant of concern. [https://www.who.int/news/item/26-11-2021-classification-of-omicron-\(b.1.1.529\)-sars-cov-2-variant-of-concern](https://www.who.int/news/item/26-11-2021-classification-of-omicron-(b.1.1.529)-sars-cov-2-variant-of-concern) [accessed 30 November 2021]
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- [6] WHO. FluNet. <https://www.who.int/tools/flunet> [accessed 15 June 2021]
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- [8] 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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