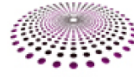


FluCov Epi-Bulletin – December 2021

*'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 the World Health Organization (WHO) requested information on a reported cluster of atypical pneumonia cases in Wuhan from Chinese authorities (January 1, 2020). The FluCov Epi-Bulletin provides an overview of the number of positive cases of **influenza** and **SARS-CoV-2** and the percentage of specimens tested positive from January 2019 onwards in 22 countries (see [page 2](#)). In this edition of the Epi-Bulletin, we have added an update on the influenza **vaccination coverage rates (VCRs)** for the elderly in 12 of the countries covered by FluCov, which were recently published in Eurosurveillance [1], see [page 16](#).

Results

At the end of 2021, **influenza** activity was rising in all included countries in the Americas, South Africa and, in a little over half of the countries, in Europe. Germany, Italy and Poland reported very little to no influenza activity, as did Egypt, Australia and most countries in Asia (except for China, India and Israel). Since November 2021, no new influenza cases were reported in Vietnam, Thailand, South Korea, Poland and Japan. In Australia, Egypt, Germany and the Philippines, the weekly number of new cases was lower than 10. Some of the influenza surveillance systems may have been disrupted by the Christmas/New Year break and it is difficult to fully interpret the end of year surveillance data at this moment.

The numbers of reported **SARS-CoV-2** cases have surged to record levels in almost all countries included in this Epi-Bulletin, probably due to the recent emergence of the Omicron variant [2]. Little activity was reported in Mexico, Brazil, Egypt, China, Thailand, India and the Philippines.

Implications

The increased circulation of SARS-CoV-2 and influenza that started in November 2021 has continued in December, with dramatic increases in **SARS-CoV-2** activity in many countries. Reasons for the increase in **SARS-CoV-2 cases** could be linked to a relaxation of non-pharmaceutical interventions, seasonality (winter months), greater mixing due to the festive holidays and the reduced effectiveness and protection of the COVID-19 vaccines against the new Omicron variant.

Importantly, and in contrast to the 2020/21 winter, there appears to be **co-circulation** of influenza and SARS-CoV-2 in many countries during the 2021/22 winter. Also, whilst there is **influenza** activity, it is currently relatively low or at around baseline levels compared to previous years in many countries. Despite this general pattern, a couple of countries have had (India) or are having (China) widespread influenza activity. Of note is the increased influenza activity in South Africa, as this is occurring at an unusual time of the year in the southern hemisphere. Overall, it looks like influenza will continue to circulate, often co-circulating with SARS-CoV-2, but it is currently difficult to predict its intensity (small, medium or large epidemics) over the coming months.

National Influenza Centre (NIC) Survey

We would like to invite NIC contact persons of countries included in this Epi-Bulletin to participate in our **NIC survey**. Through this survey we aim to better understand the influenza (FluNet) and SARS-CoV-2 surveillance data reported to WHO in 2020 and 2021. Participation is possible until the end of January 2022 using the following link:

<https://s.surveyplanet.com/eHfBYgPI5>

- **Responded:** Australia, Italy, Philippines, Spain, Thailand, UK
- **Pending:** Brazil, Canada, China, Egypt, France, Germany, India, Israel, Japan, Mexico, Netherlands, Poland, South Africa, South Korea, US, Vietnam

Monthly plots by country

The plots per country show weekly data for influenza and SARS-Cov-2 infections from January 1, 2019 up to January 2, 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 14-15](#) 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

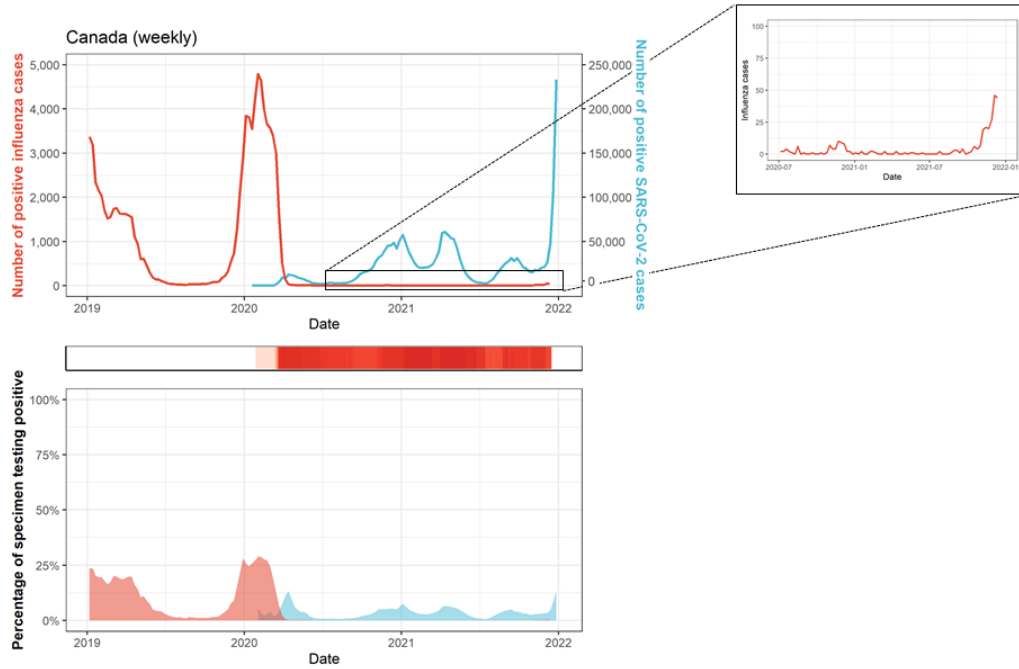
Israel

Oceania

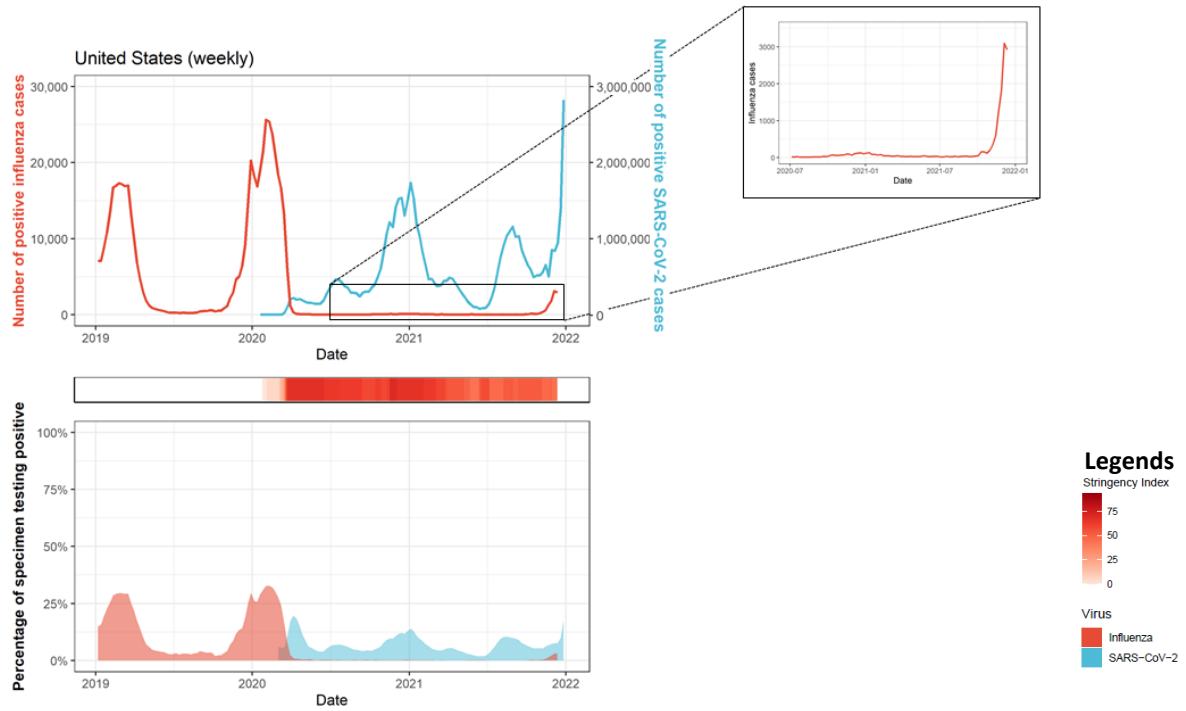
Australia

North America

Canada

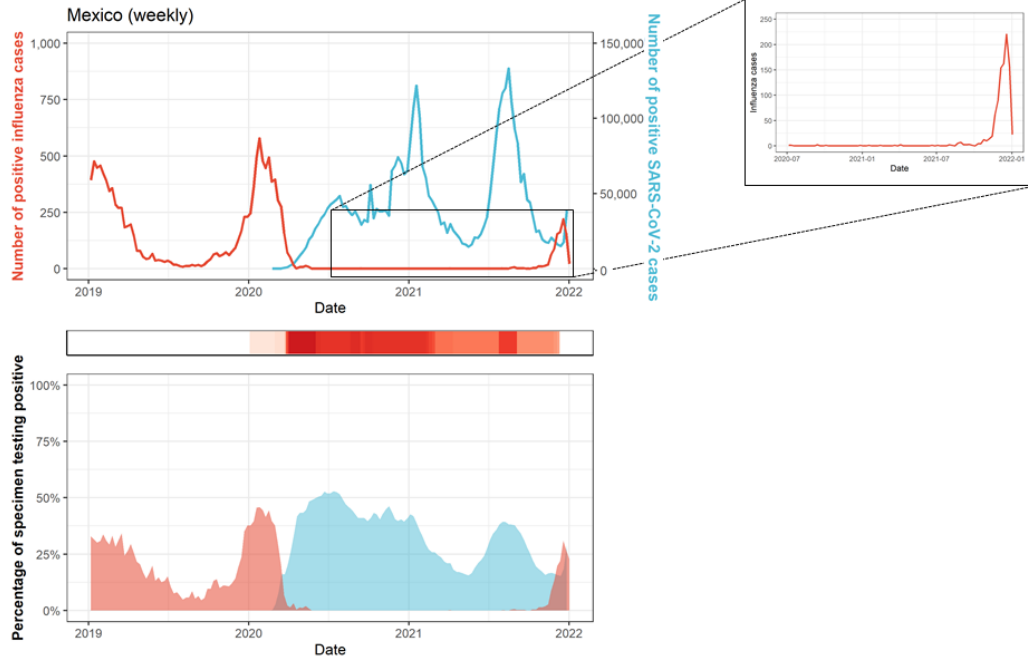


United States



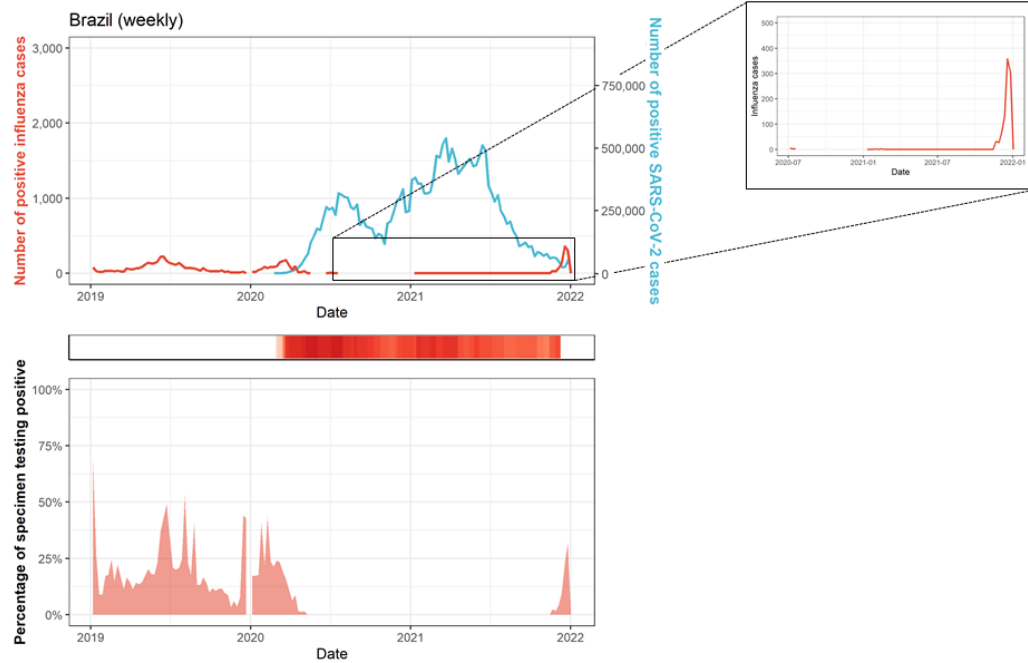
Central America Caribbean

Mexico



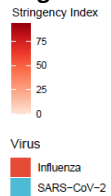
Tropical South America

Brazil



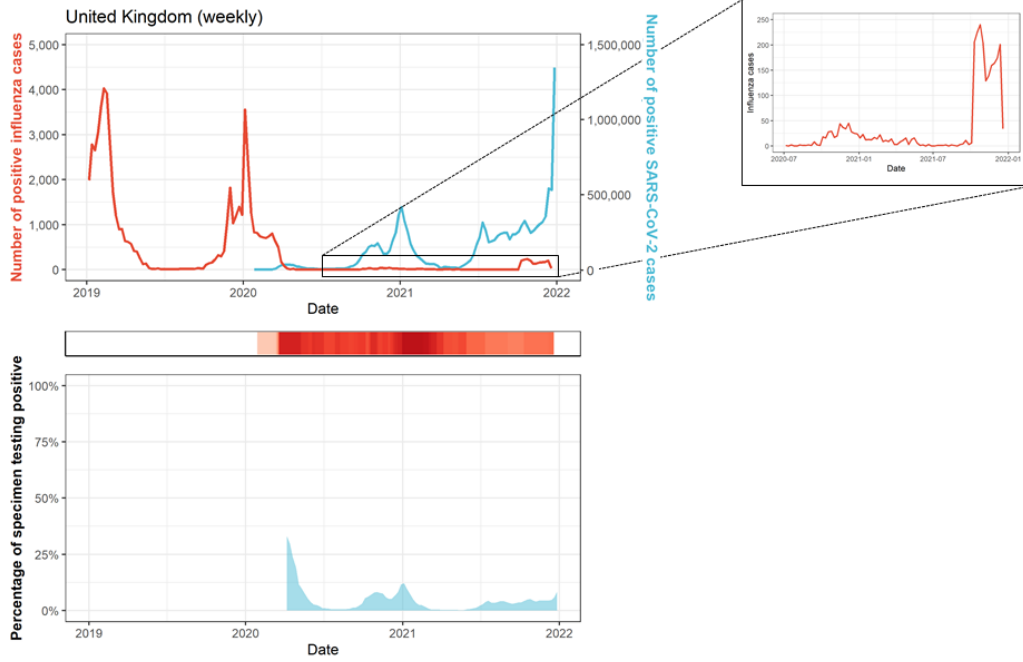
Note. Brazil has no positivity rate for SARS-CoV-2 because no denominator was available.

Legends



Northern Europe

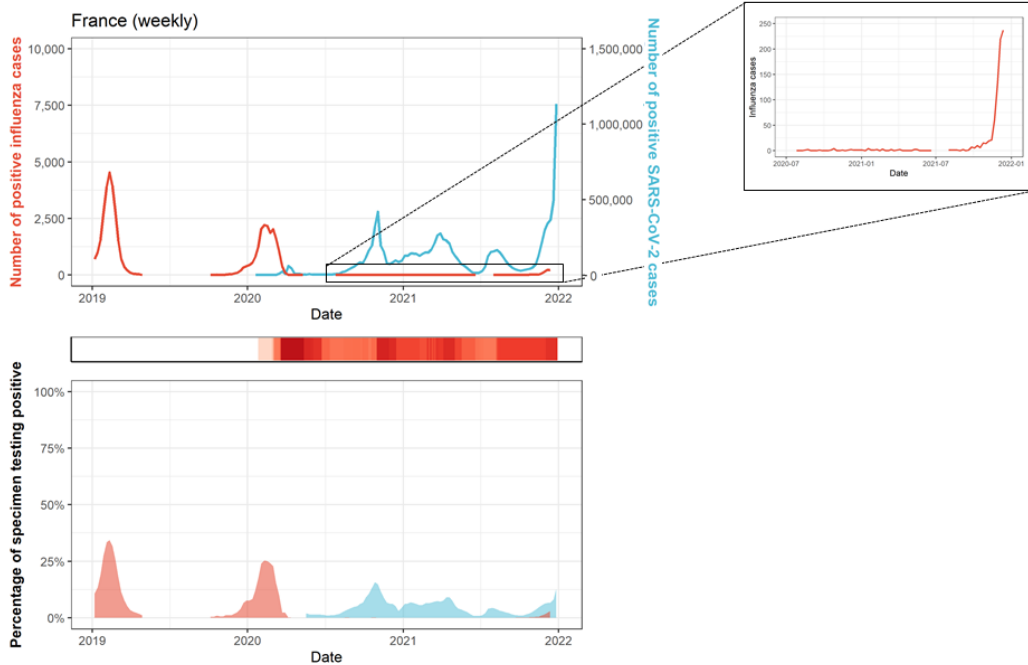
United Kingdom



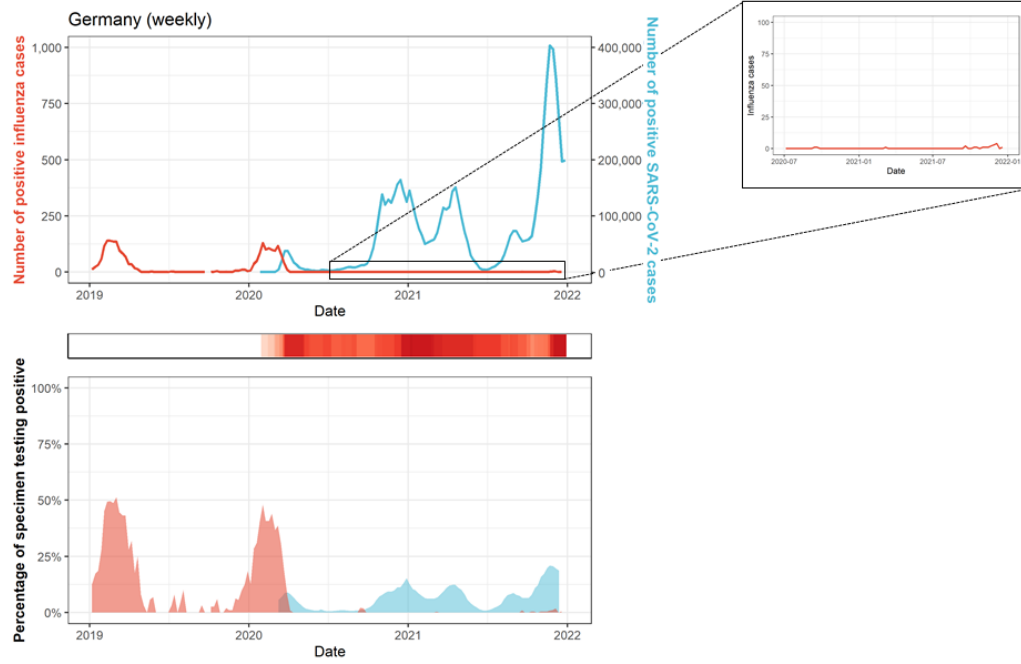
Note. The United Kingdom does not have a positivity rate for influenza because the denominator was deemed unreliable.

South West Europe

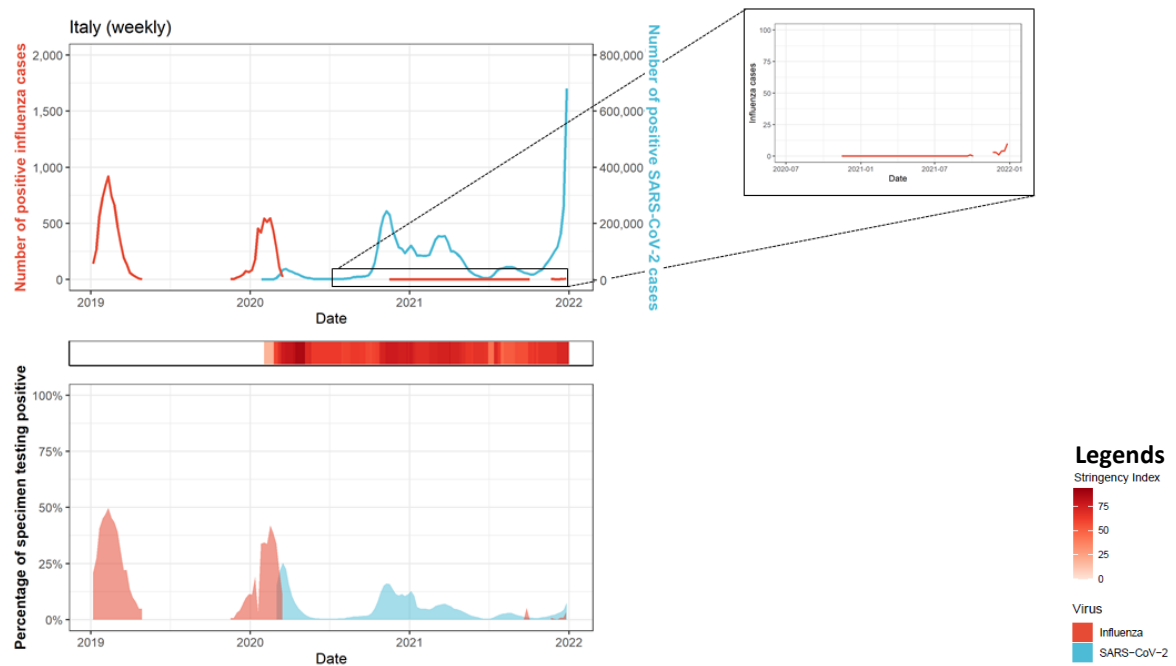
France



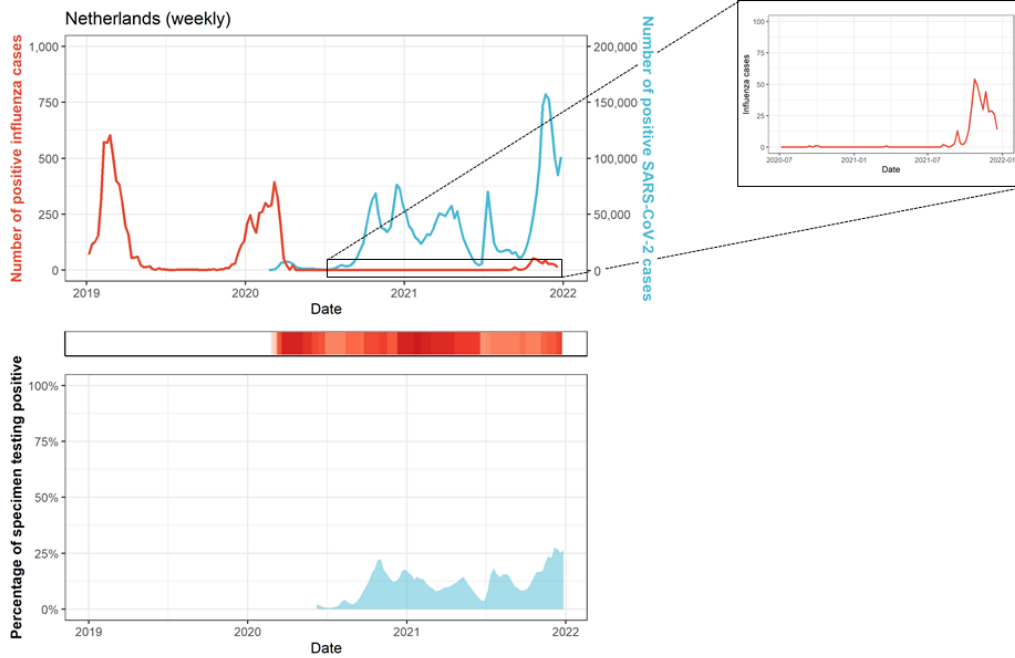
Germany



Italy

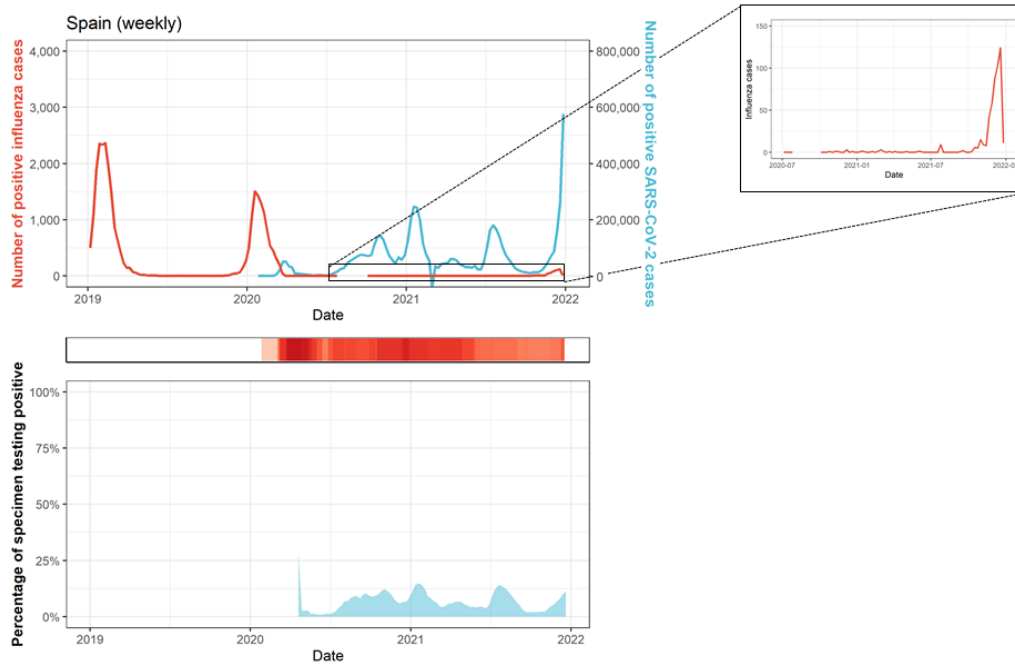


Netherlands



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

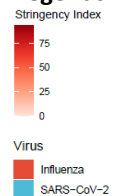
Spain



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

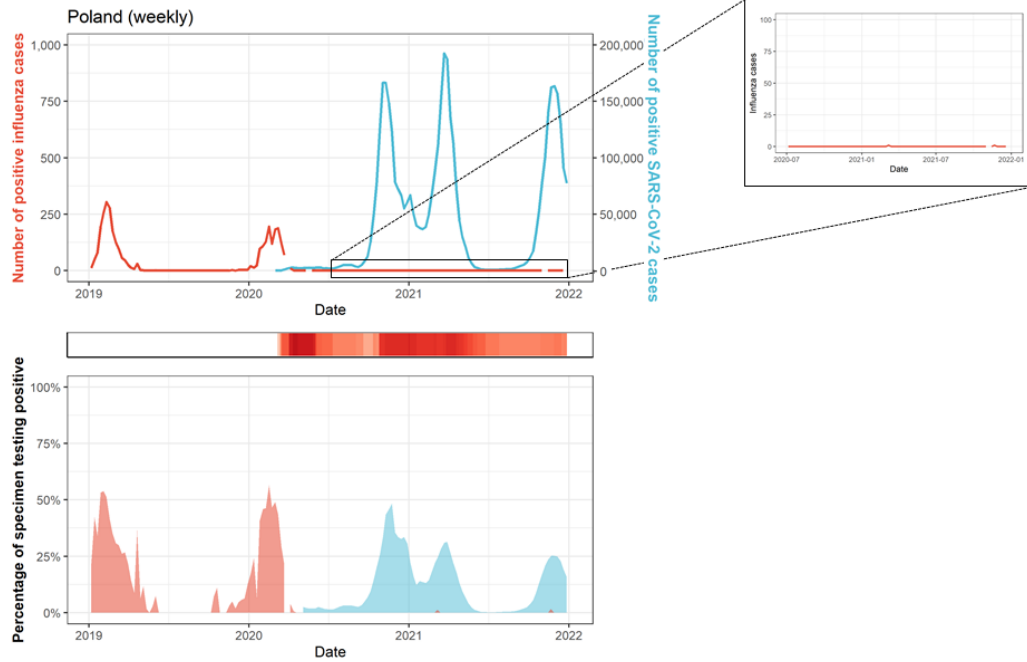
The number of SARS-CoV-2 cases dips below 0 as -74 347 new cases were reported on 2 March 2021.

Legends



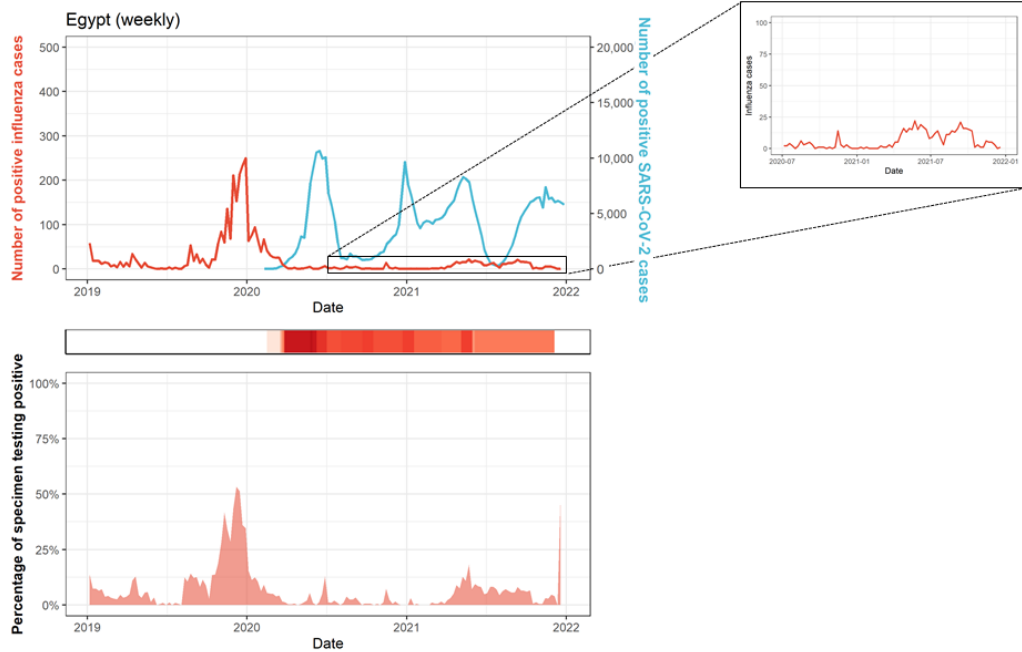
Eastern Europe

Poland

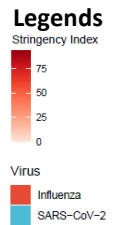


Northern Africa

Egypt

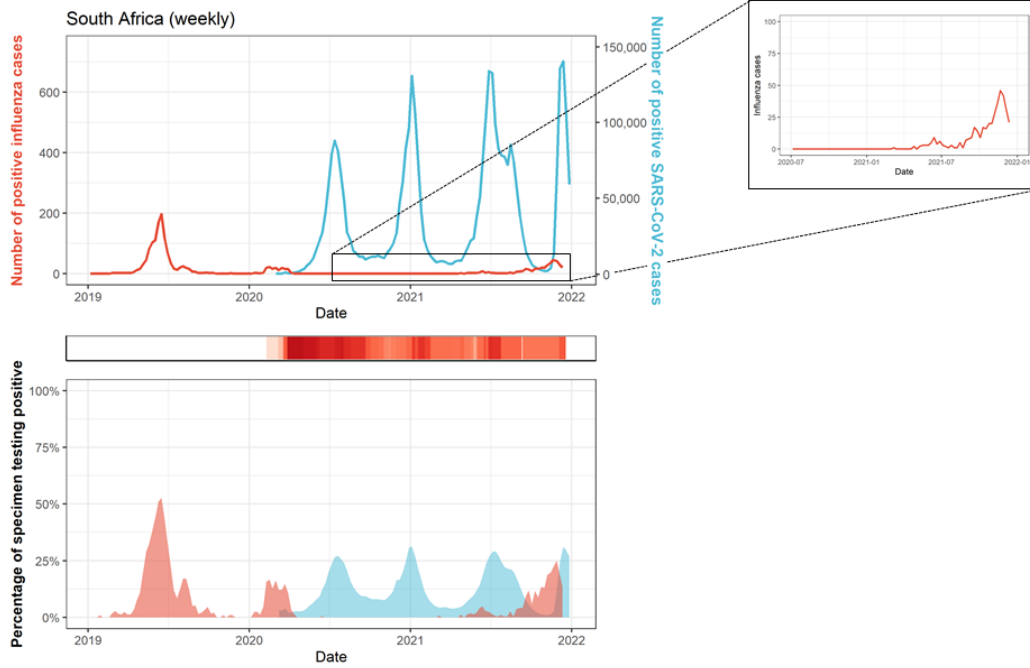


Note. Egypt does not have a positivity rate for SARS-CoV-2 because no denominator was available.



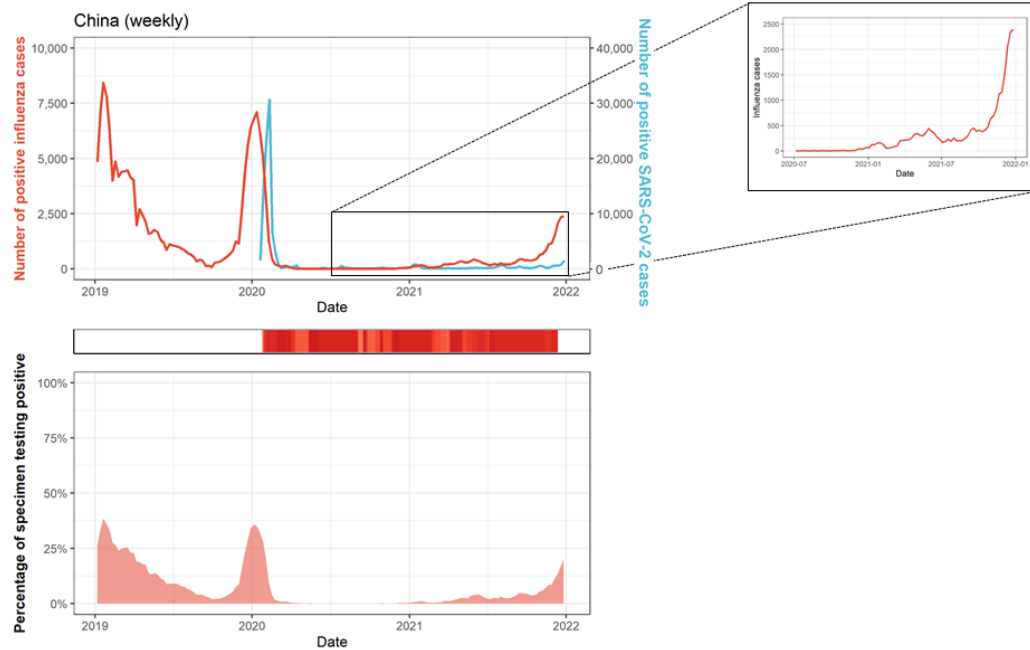
Southern Africa

South Africa

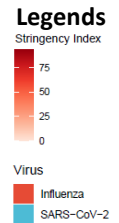


Eastern Asia

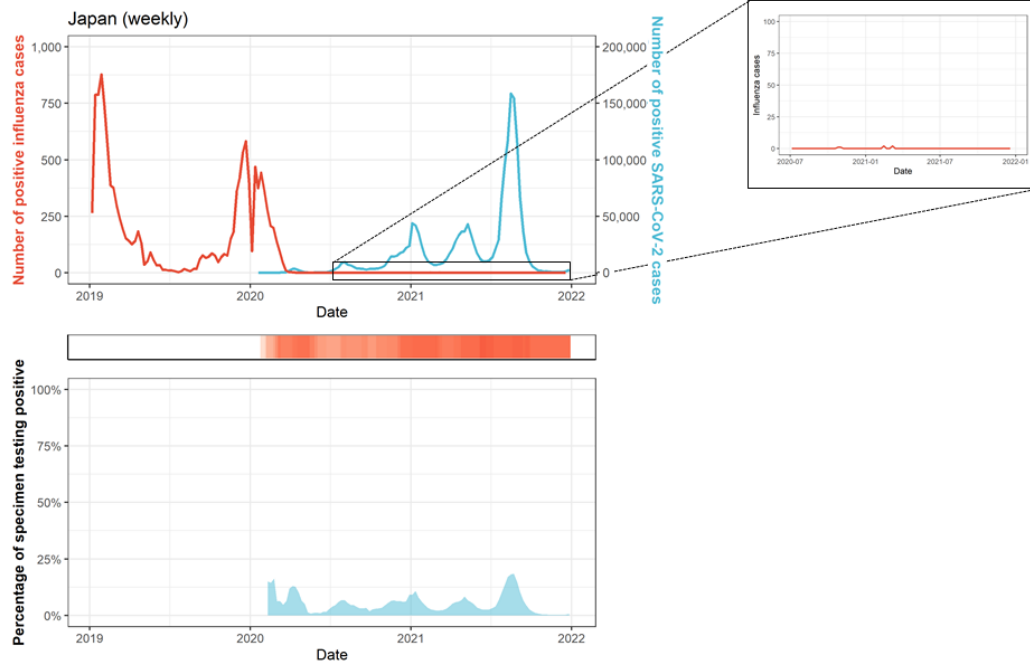
China



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

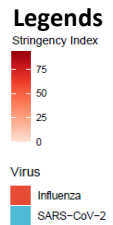
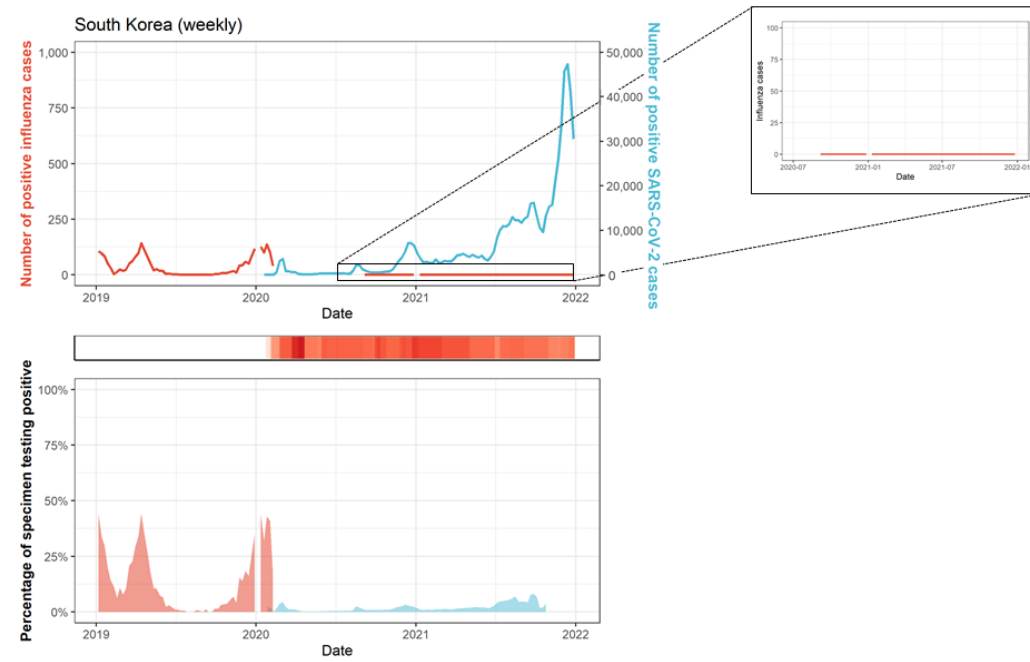


Japan



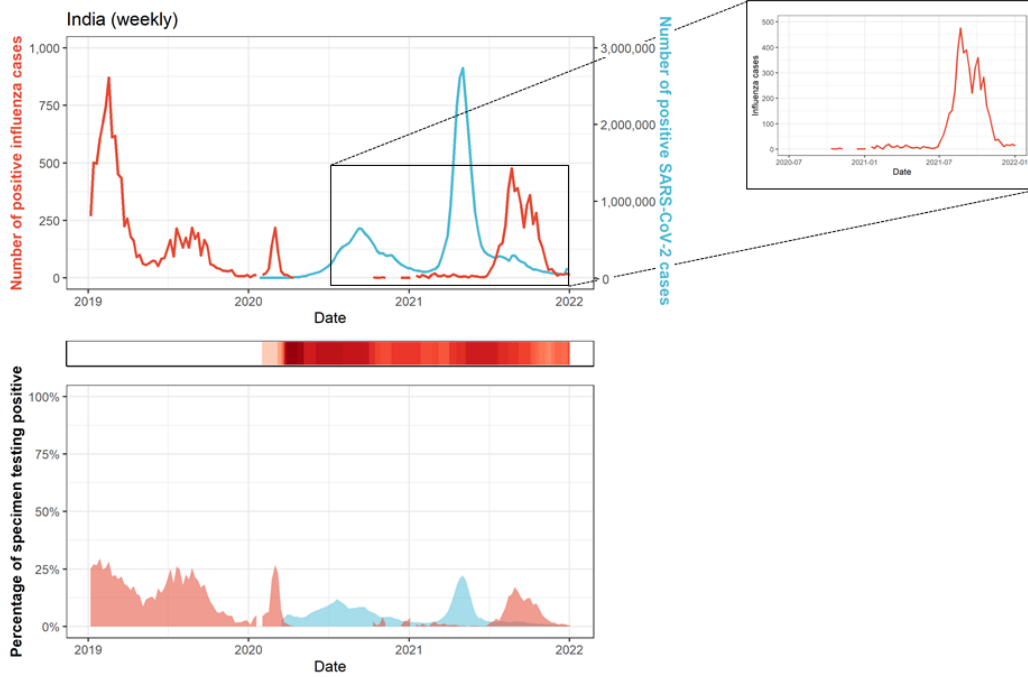
Note. Japan does not have a positivity rate for influenza because the denominator was deemed unreliable.

South Korea



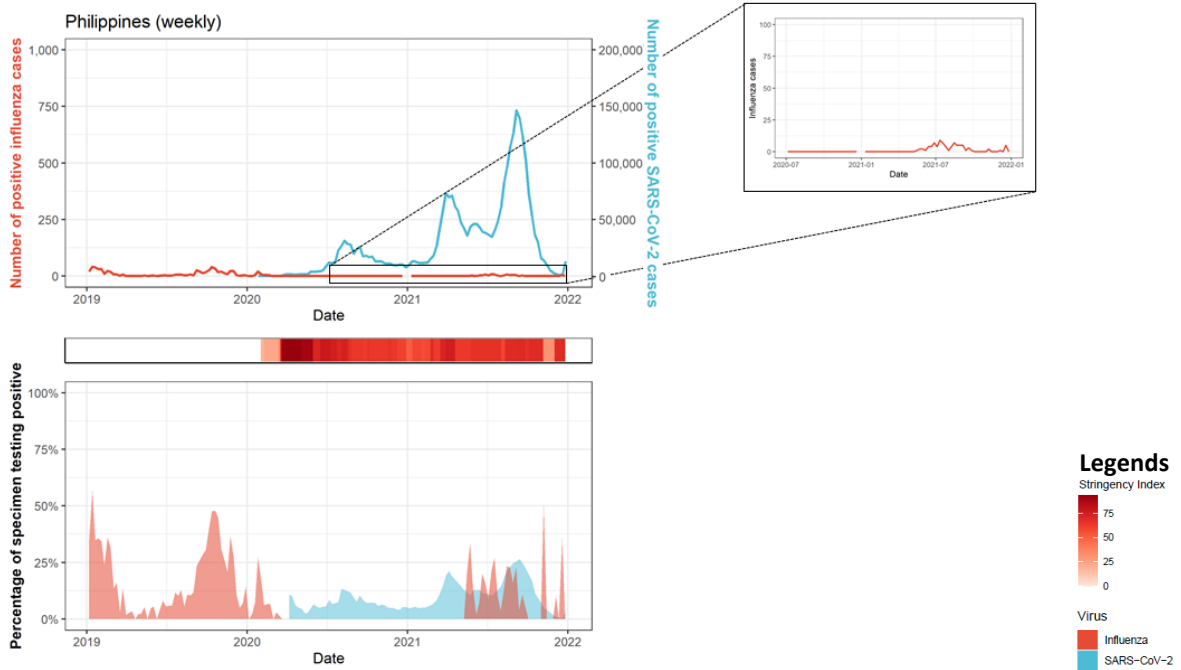
Southern Asia

India

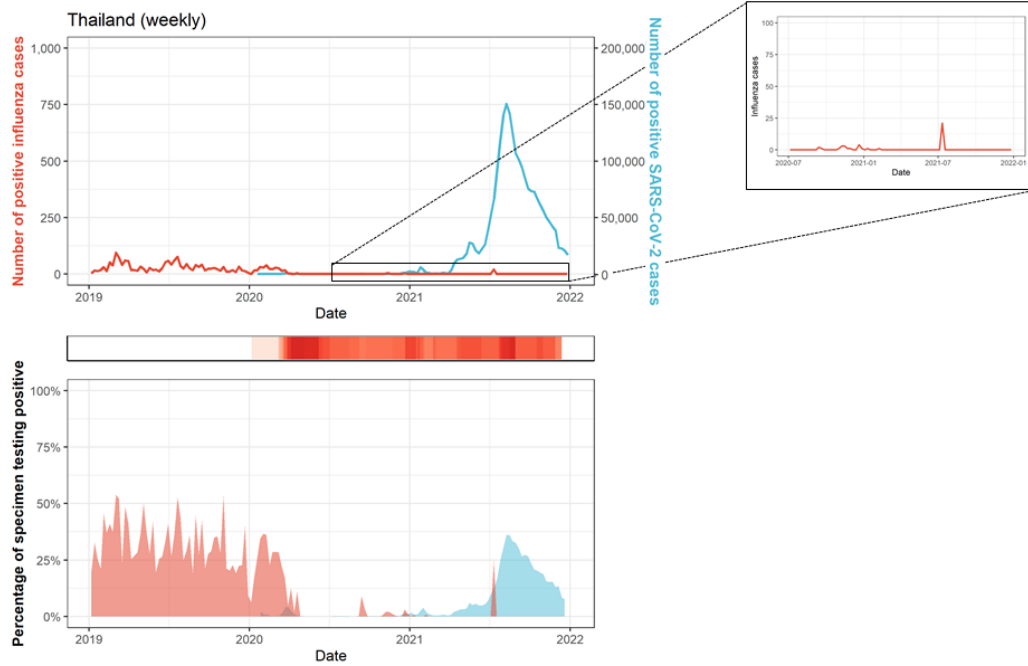


South East Asia

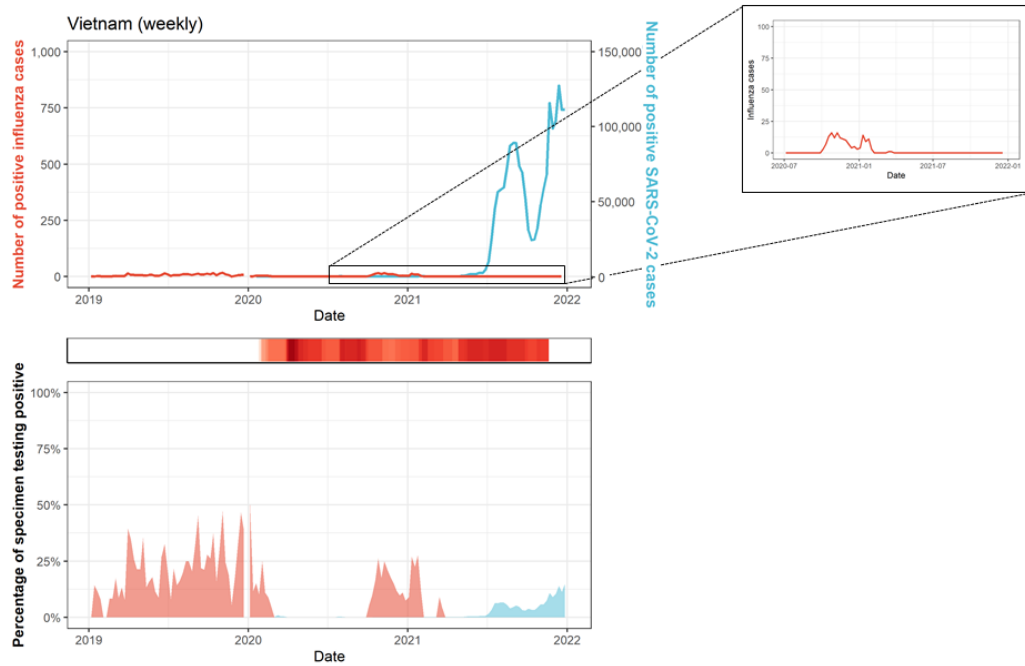
Philippines



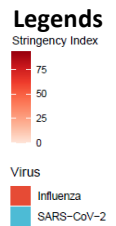
Thailand



Vietnam

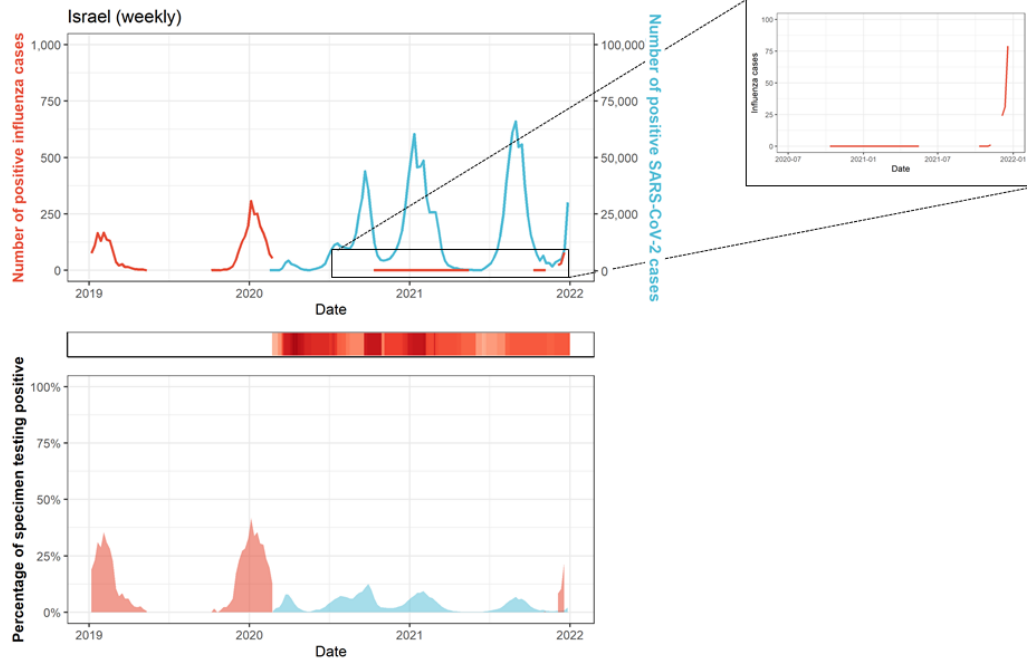


Note. Vietnam reported 0 influenza cases and 0 specimen taken since week 30.



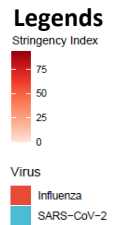
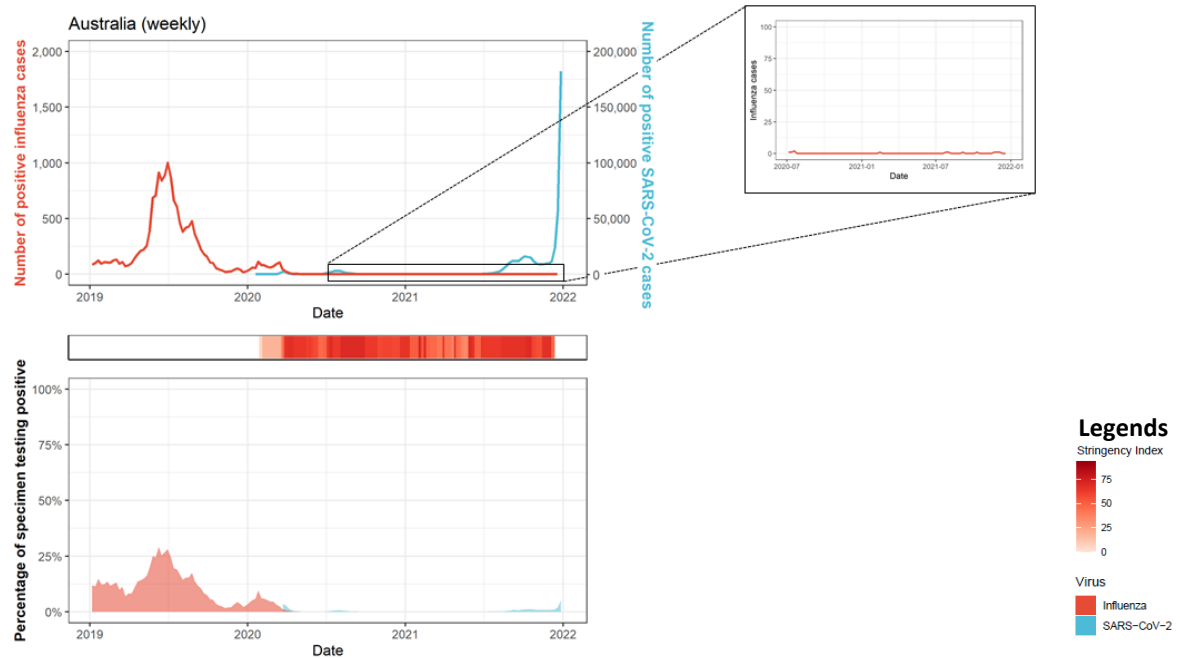
Western Asia

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
Australia	2019			14002	
Australia	2020	28425		949	
Australia	2021	374524	191294	8	1
Brazil	2019			3459	
Brazil	2020	7681032		1391	
Brazil	2021	14485929	191696	930	863
Canada	2019			43196	
Canada	2020	587429		44956	
Canada	2021	1605069	391631	225	90
China	2019			122757	
China	2020	86524		31295	
China	2021	15243	3490	23362	8318
Egypt	2019			1999	
Egypt	2020	138062		659	
Egypt	2021	247513	26997	406	4
France	2019			25405	
France	2020	2706289		16589	
France	2021	7706191	2297738	772	456
Germany	2019			1215	
Germany	2020	1746929		958	
Germany	2021	5446257	1269622	18	5
India	2019			10428	
India	2020	10286709		655	
India	2021	24574870	264803	4817	75
Israel	2019			1796	
Israel	2020	423262		1424	
Israel	2021	960670	40272	144	134
Italy	2019			6361	
Italy	2020	2107166		3599	
Italy	2021	4018517	1097136	26	19
Japan	2019			10200	
Japan	2020	235747		2743	
Japan	2021	1496547	5660	4	0
Mexico	2019			6963	
Mexico	2020	1426094		4799	
Mexico	2021	2553629	95157	960	715
Netherlands	2019			5166	
Netherlands	2020	798437		3235	
Netherlands	2021	2339505	490178	390	69
Philippines	2019			612	
Philippines	2020	474064		52	
Philippines	2021	2369915	11245	85	6

Country	Year	Cases ^a of SARS-CoV-2	+/- since last month ^b	Cases ^a of influenza	+/- since last month ^b
Poland	2019			1786	
Poland	2020	1294878		1282	
Poland	2021	2813337	568154	2	0
South Africa	2019			1164	
South Africa	2020	1057161		157	
South Africa	2021	2382539	490234	396	52
South Korea	2019			1702	
South Korea	2020	61768		505	
South Korea	2021	573484	182903	0	0
Spain	2019			17228	
Spain	2020	1928265		9373	
Spain	2021	4366480	1130561	495	326
Thailand	2019			1568	
Thailand	2020	7159		297	
Thailand	2021	2216272	107563	23	0
United Kingdom	2019			42447	
United Kingdom	2020	2491838		14369	
United Kingdom	2021	10473555	2718439	2151	409
United States	2019			268524	
United States	2020	20163969		229766	
United States	2021	34578412	6181869	12205	6023
Vietnam	2019			355	
Vietnam	2020	1465		146	
Vietnam	2021	1729792	493175	39	0

Note. ^a Laboratory-confirmed cases. ^b Influenza cases are reported by FluMart 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.

Influenza Vaccination Coverage Rates for 12 countries

Northern hemisphere countries

Country	Age (years)	2017/18 VCR (%)	2018/19 VCR (%)	2019/20 VCR (%)	2020/21 VCR (%)	2019/20–2020/21 difference (% points)
Canada ^a	≥65	70.7	69.9	70.3	70.0	- 0.3
England ^b	≥65	73.0	72.0	72.4	80.9	+ 8.5
France ^c	≥65	49.7	51.0	52.0	59.9	+ 7.9
Israel ^d	≥65	59.8	59.2	59.8	68.2	+ 8.4
Italy ^e	≥65	52.7	53.1	54.6	65.3	+ 10.7
Netherlands ^f	≥65	60.4	60.3	61.3	67.9	+ 6.6
Philippines ^{g,*}	≥60	NA	NA	2.6	5.6	+ 3.0
Poland ^h	≥65	13.0	14.2	15.1	18.4	+ 3.3
South Korea ⁱ	≥65	81.3	82.8	83.8	73.6	- 10.2
Spain ^j	≥65	55.7	54.3	54.7	67.7	+ 13.0
United States ^k	≥65	59.6	68.1	69.8	75.2	+ 5.4

Southern hemisphere country

Country	Age (years)	2017 VCR (%)	2018 VCR (%)	2019 VCR (%)	2020 VCR (%)	2019–2020 difference (% points)
Australia ^l	≥65	33.6	50.4	60.6	69.6	+ 9.0

Note. VCR: vaccination coverage rate; NA: not available.

Influenza VCRs in the elderly by influenza season and difference between the first COVID-19 pandemic and the pre-pandemic season in 11 northern hemisphere countries and 1 southern hemisphere country, 2017/18 to 2020/21. More information on the data provided in this table can be found in Del Riccio et al. [1].

*The Philippines is a tropical climate country with influenza activity occurring from June to November, and the vaccine is administered from February on each year. **Sources:** ^a [Government of Canada](#); ^b [Public Health England](#); ^c [Public Health France](#); ^d [Ministry of Health, Israel](#); [Organisation for Economic Co-operation and Development \(OECD\), France](#); ^e [Ministry of Health, Italy](#); ^f [The Netherlands Institute for Health Services Research \(Nivel\)](#); ^g [Ministry of Health, Philippines](#); ^h [National Institute of Public Health, Poland](#); ⁱ [Korea Disease Control and Prevention Agency](#), reported by Kwon et al. [3]; ^j [Ministry of Health, Spain](#); ^k [Centers for Disease Control and Prevention \(CDC\)](#); ^l [Department of Health, Australia](#)

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 [5]. 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) [6].

Data sources

- **Influenza:** FluNet [7] 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 [8]. 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 [9] cases as well as various national public health institutions.
- **Government response tracker:** The Oxford COVID-19 Government Response Tracker (OxCGRT) [6] 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.
- **Influenza Vaccination Coverage Rates:** VCRs were extracted from reports and websites of National Public Health Institutes, Ministries of Health and International Organizations of the 12 countries included in the Influenza VCR table on [page 16](#). Specific sources for each country are listed in the table note.

Extraction details

Data were extracted on 3 January 2022 and cover the period 1 January 2019 to 2 January 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] Del Riccio M., Lina B., Caini S., Staadegaard L., Wiegersma S., Kynčl J., Combadière B., MacIntyre, C.R., Paget, J. Letter to the editor: Increase of influenza vaccination coverage rates during the COVID-19 pandemic and implications for the upcoming influenza season in northern hemisphere countries and Australia. *Euro Surveill.* 2021;26(50):pii=2101143. <https://doi.org/10.2807/1560-7917.ES.2021.26.50.2101143>
- [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]
- [3] Kwon Y, Choe YJ, Yun JW, Kim HK, Kim S, Chun C, et al. Impact of Media Coverage on Influenza Vaccine Coverage in Elderly Individuals from 2020 to 2021 in the Republic of Korea. *Vaccines (Basel)*. 2021;9(4):367. <https://doi.org/10.3390/vaccines9040367> PMID: 33920117
- [4] WHO. Listings of WHO's response to COVID-19. <https://www.who.int/news/item/29-06-2020-covidtimeline> [accessed 8 February 2021]

- [5] Paget J. RESCEU Newsletter #14 (December 2020). Impact of COVID-19 on RSV seasonality and non-pharmaceutical interventions. <https://mailchi.mp/48b04fd9fba3/newsletter11-1591564> [accessed 8 February 2021]
- [6] 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]
- [7] WHO. FluNet. <https://www.who.int/tools/flunet> [accessed 15 June 2021]
- [8] 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]
- [9] 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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Project website

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

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The FluCov project is funded by Sanofi Pasteur.