FluCov Epi-Bulletin – October 2021

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

NIVEL Research for better care

Global Influenza Initiative

Commentary

Background

World Health Organization (WHO) requested information on a reported cluster of atypical pneumonia cases in Wuhan from Chinese authorities on January 1, 2020. After assessment of alarming levels of spread and severity of SARS-CoV-2 virus, on March 11, 2020 WHO declared COVID-19 a pandemic [1]. The emergence of this new virus has had a major impact on the global circulation of respiratory viruses, including influenza and RSV [2]. 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

This is the third FluCov Epi-Bulletin and it 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. This Epi-Bulletin includes 22 countries (listed on page 2) 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) [3].

Results

In the majority of countries little to no influenza activity was reported. Brazil, Israel and South Korea have thus far reported "0" influenza cases for 2021, whereas Germany, Japan, Poland, Thailand and Vietnam have reported no **new** influenza cases since the last Epi-Bulletin published in September. Since September 2021, increased influenza activity has been reported in India, China, United States, United Kingdom, the Netherlands and France. Although much higher influenza activity was reported in India and China compared to other countries, influenza circulation remained below the epidemic threshold in all other countries.

In the majority of countries included in this Epi-Bulletin (see page 2 for a full list), SARS-CoV-2 infections appear to be declining, except in the United Kingdom, the Netherlands, Germany, Egypt and Australia where numbers of cases are rising. The majority (66%) of new SARS-CoV-2 infections since the last Epi-Bulletin (September 2021) were reported in the United States (n = 3.356.857), the United Kingdom (n = 1.349.857) and India (n = 727.305).

Implications

The rising number of influenza cases in China, India, the United States, United Kingdom, the Netherlands and France, and the increased circulation of other respiratory viruses in Canada in recent weeks (e.g. Rhino, RSV and HPIV) [4] may indicate that epidemics with winter viruses, including influenza, are returning to the pre-pandemic landscape. With prevention and control measures for SARS-CoV-2 being relaxed and the autumn/winter period coming up, more influenza activity could be expected in the coming months. However, as SARS-CoV-2 cases are also rising in some NH countries (e.g. United Kingdom, the Netherlands, Germany), prevention and control measures may be tightened again, which may slow the rise of SARS-CoV-2 as well as influenza cases in the near future. We will be able to provide more information on this development in the November edition of this Epi-Bulletin.

Monthly plots by country

The plots per country show weekly data for influenza and SARS-Cov-2 infections from January 1, 2019 up to October 24, 2021. 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 (new)

Southern Africa
South Africa (new)

Eastern Asia
China
Japan
South Korea

Southern Asia
India

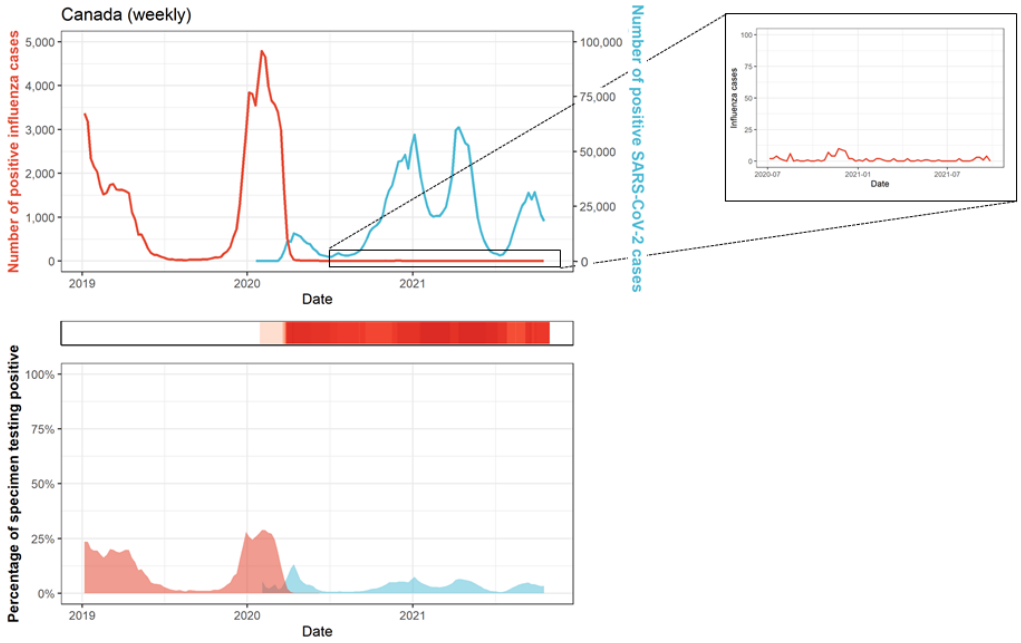
South East Asia
Philippines
Thailand
Vietnam

Western Asia
Israel

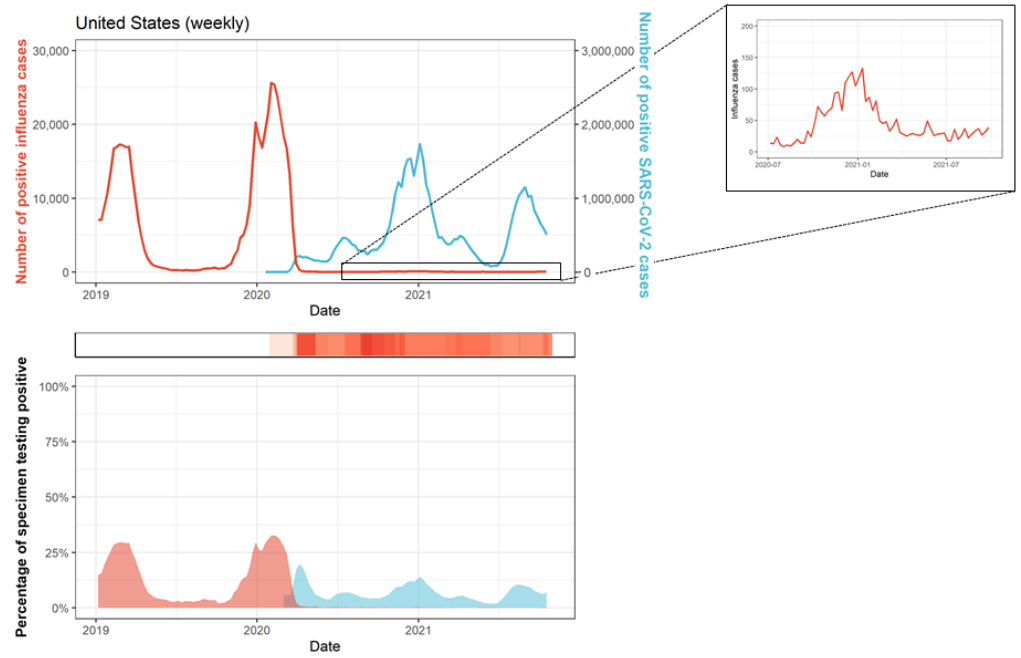
Oceania
Australia

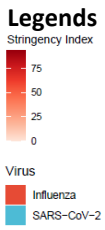
North America

Canada



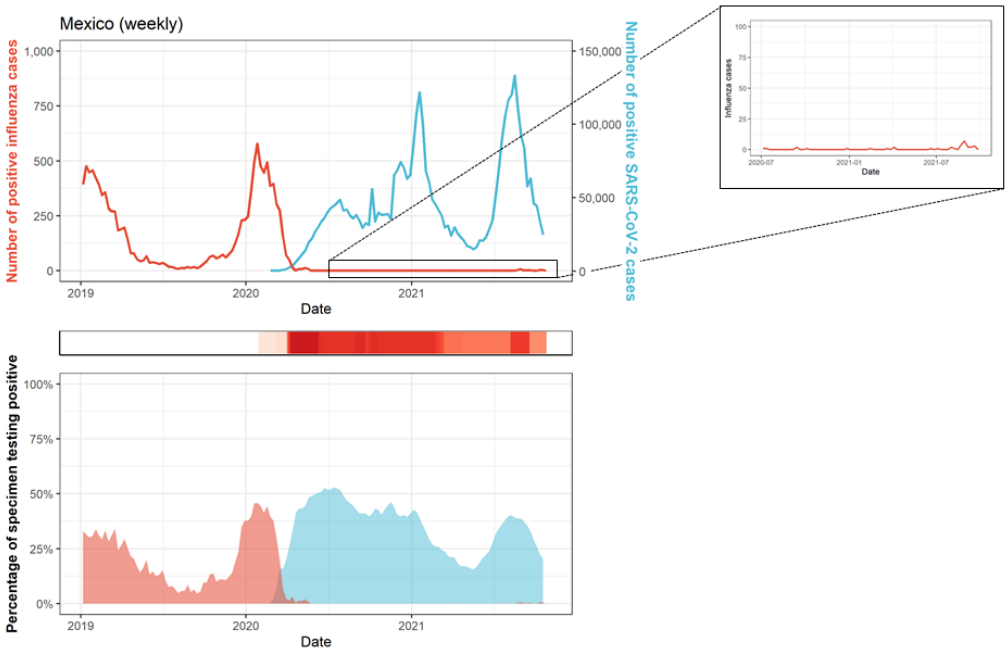
United States





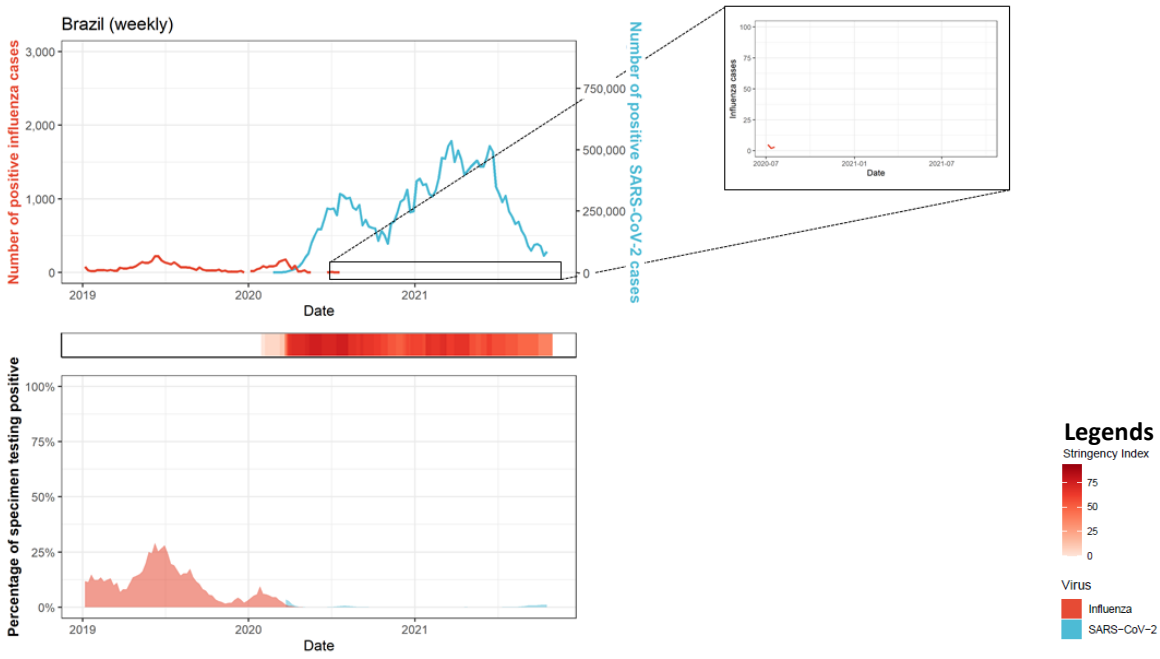
Central America Caribbean

Mexico



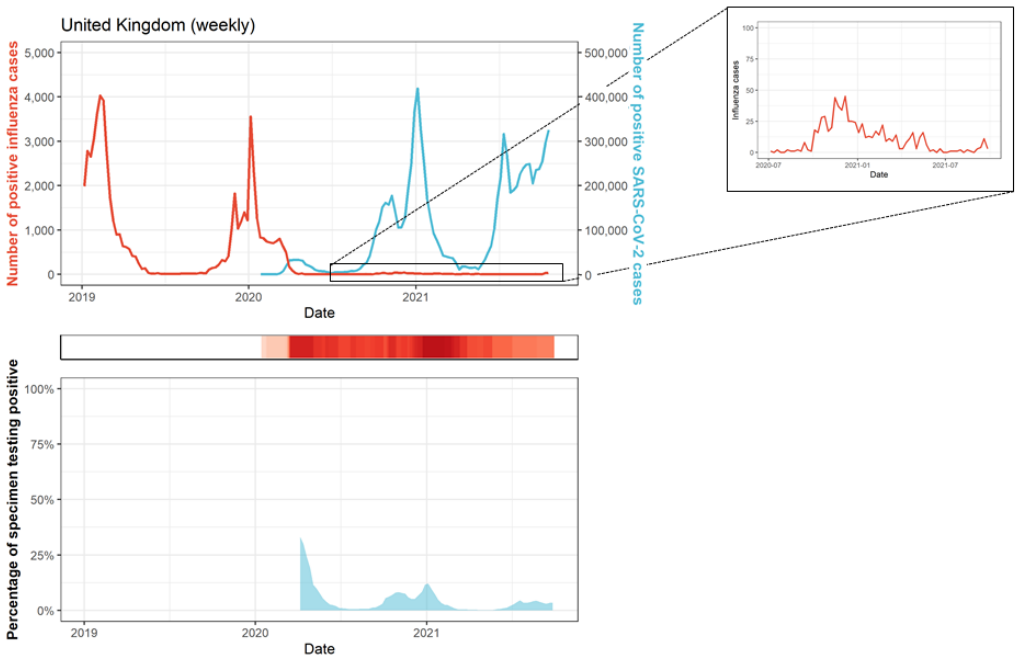
Tropical South America

Brazil



Northern Europe

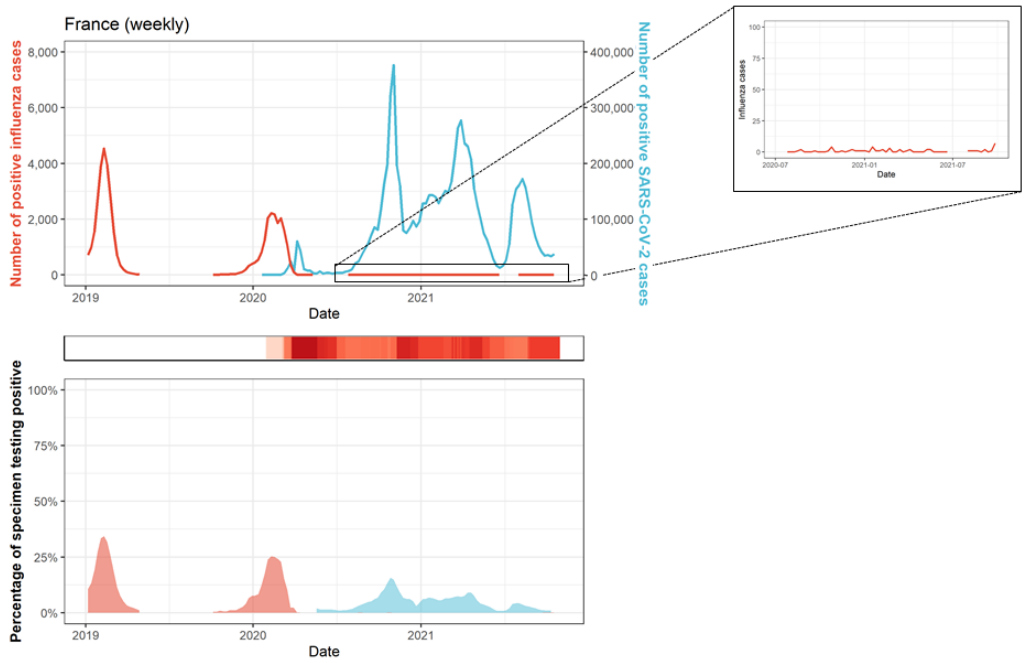
United Kingdom

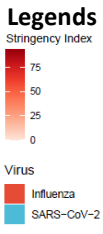


Note. The United Kingdom does not have a positivity rate for influenza because the denominator was deemed unreliable.

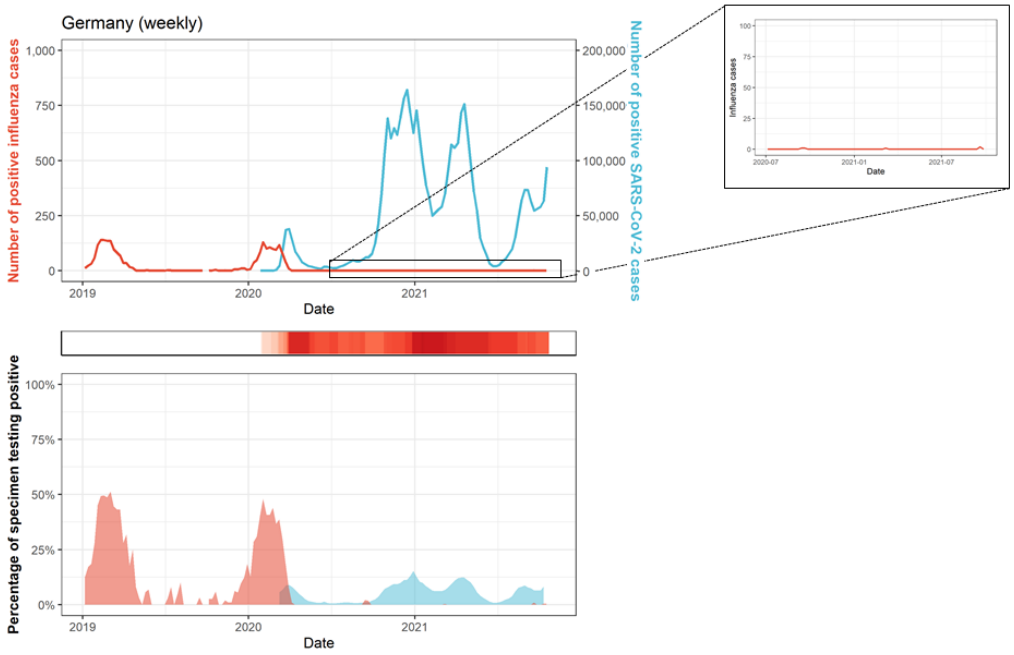
South West Europe

France

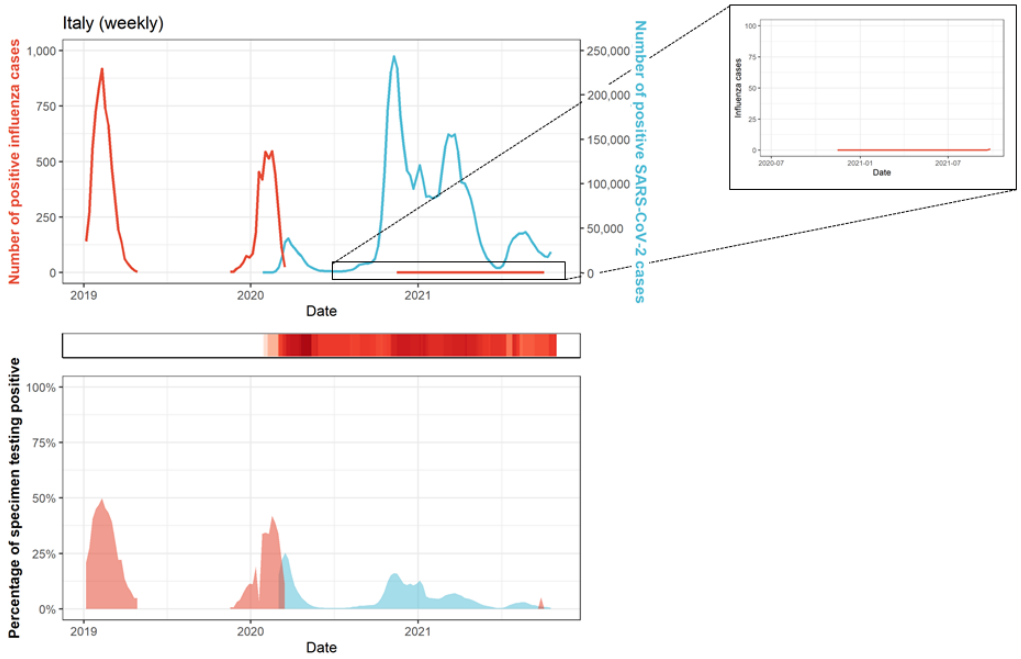


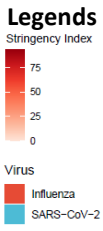


Germany

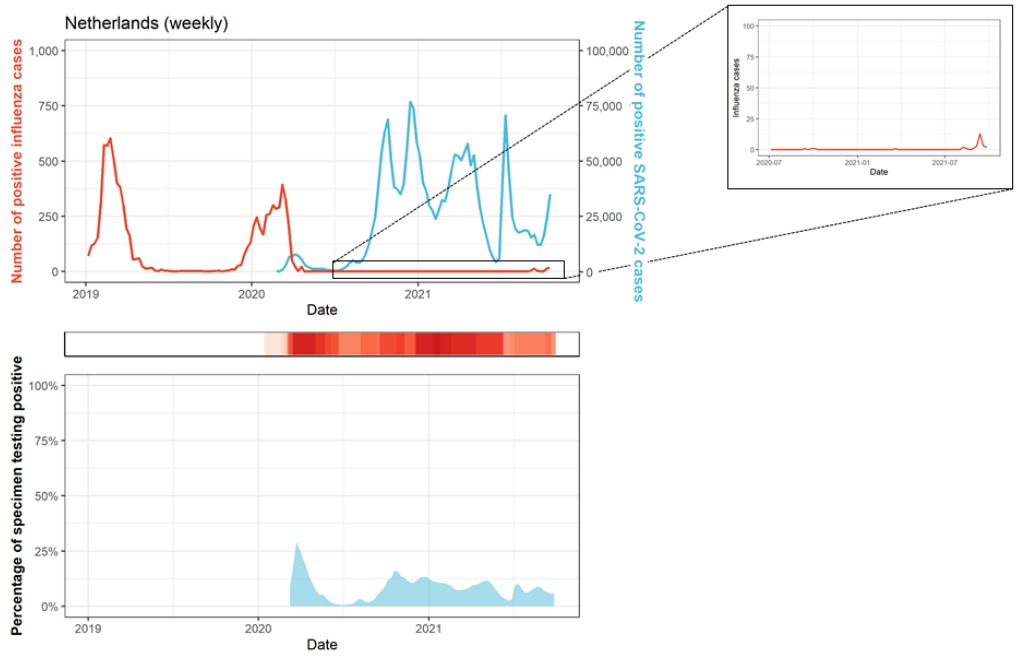


Italy



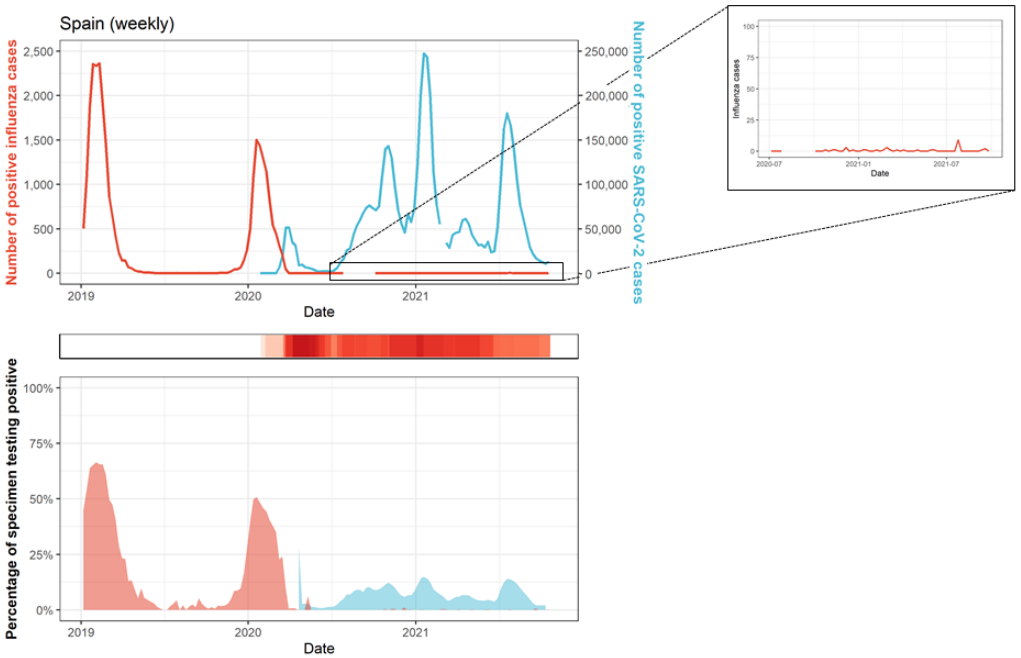


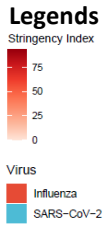
Netherlands



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

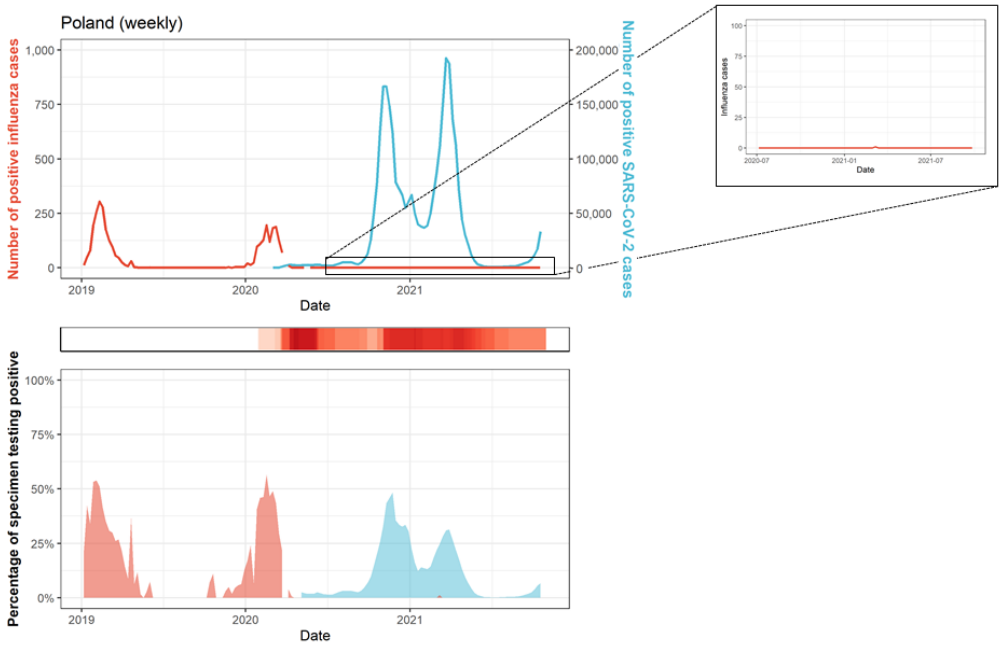
Spain





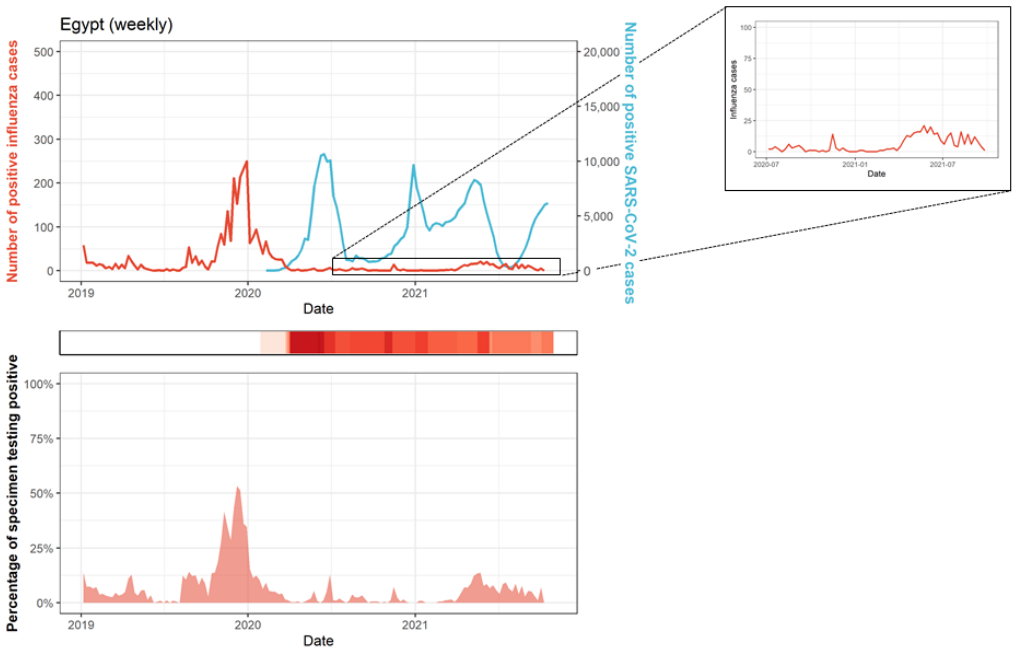
Eastern Europe

Poland



Northern Africa

Egypt



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

Legends

Stringency Index

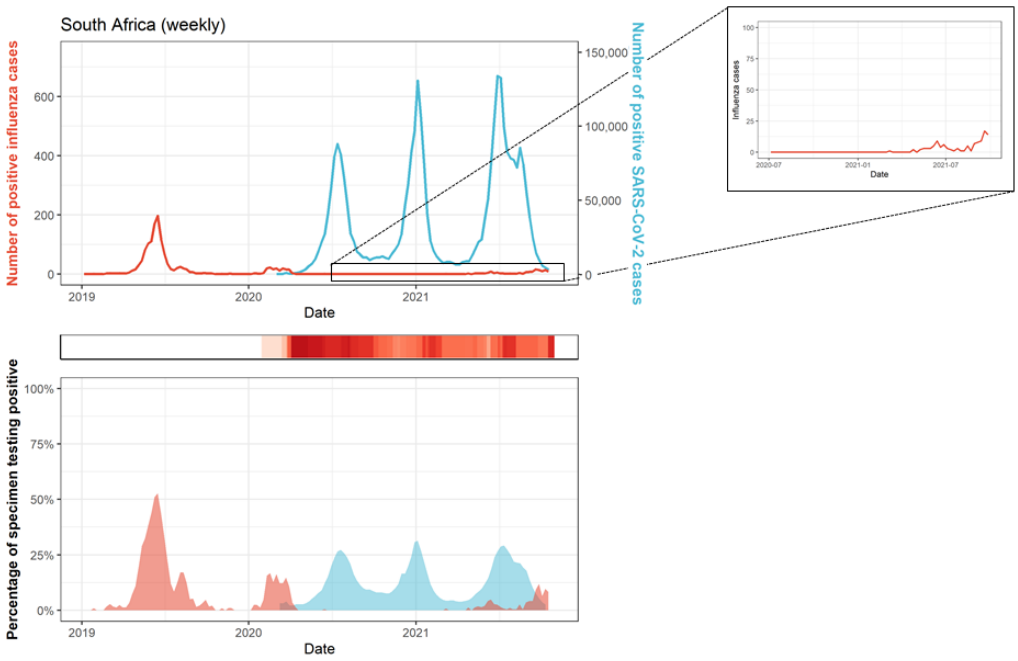
75
50
25
0

Virus

Influenza
SARS−CoV−2

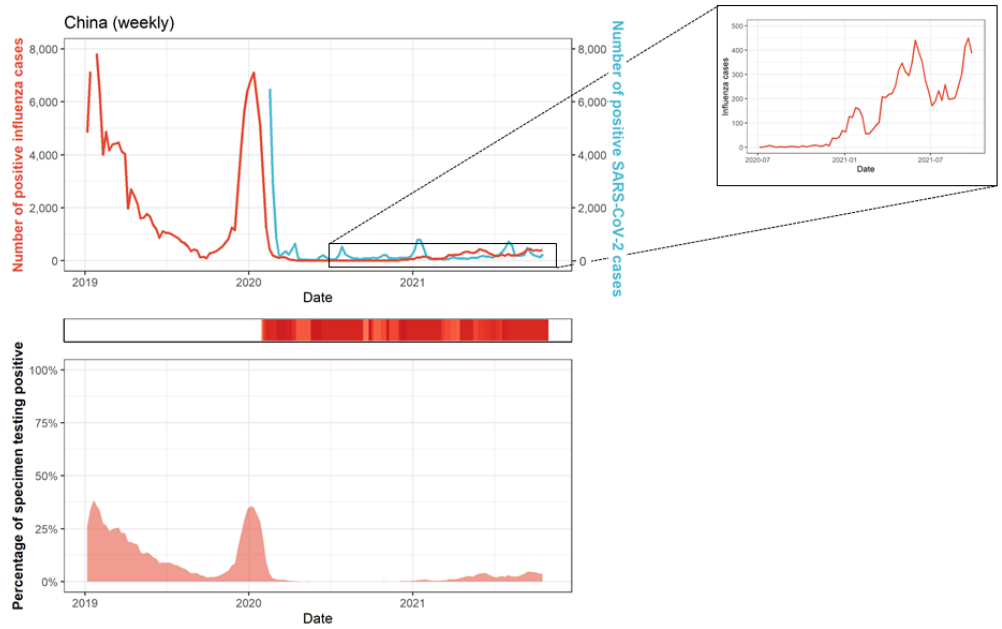
Southern Africa

South Africa

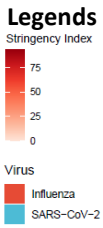


Eastern Asia

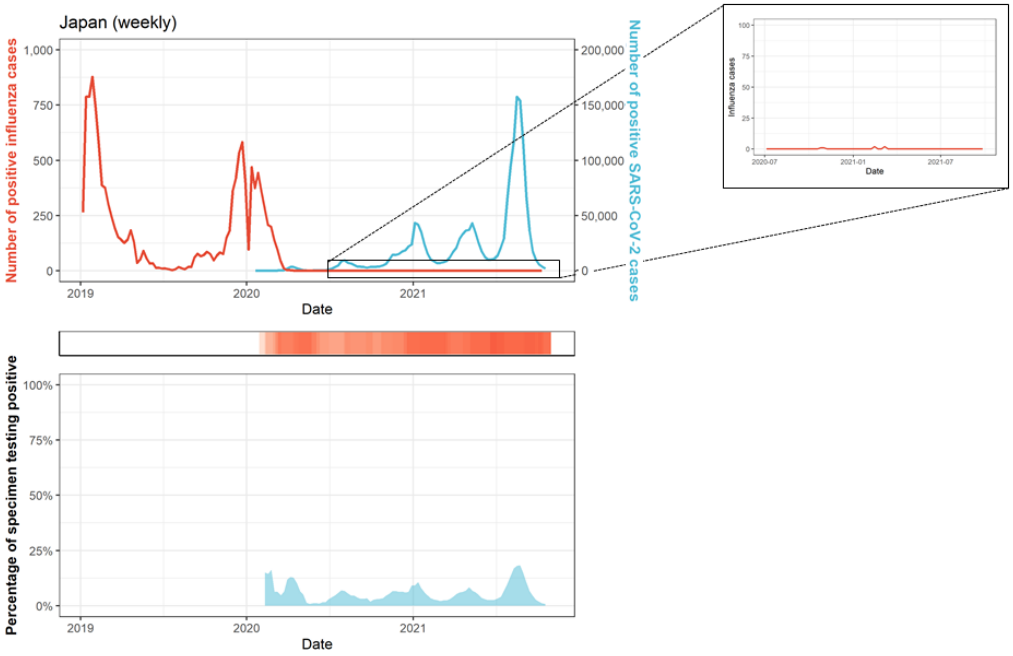
China



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

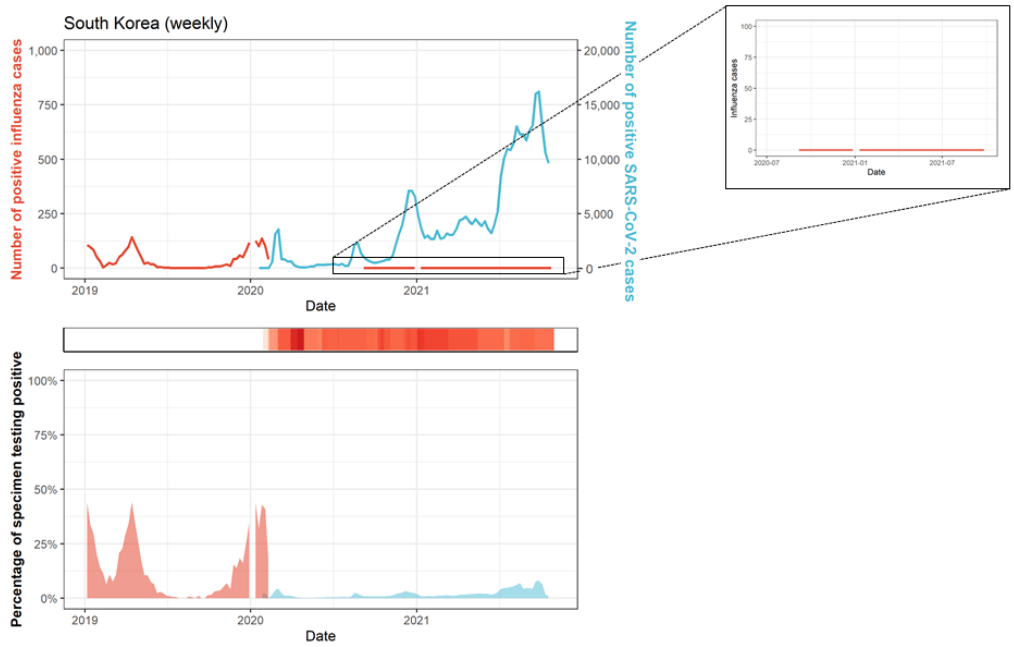


Japan



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

South Korea



Legends

Stringency Index

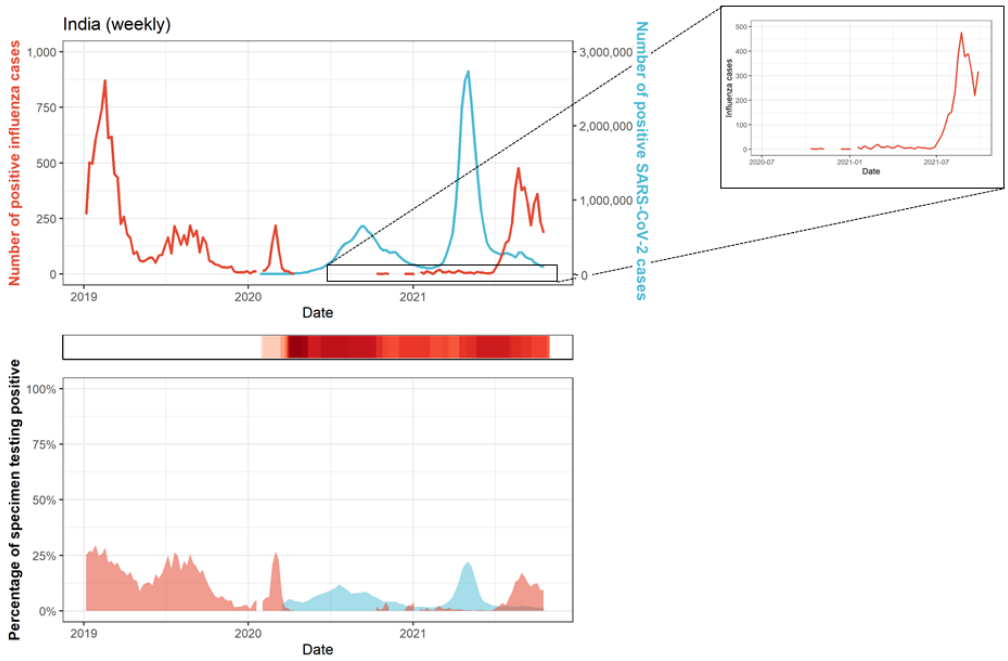
75
50
25
0

Virus

Influenza
SARS−CoV−2

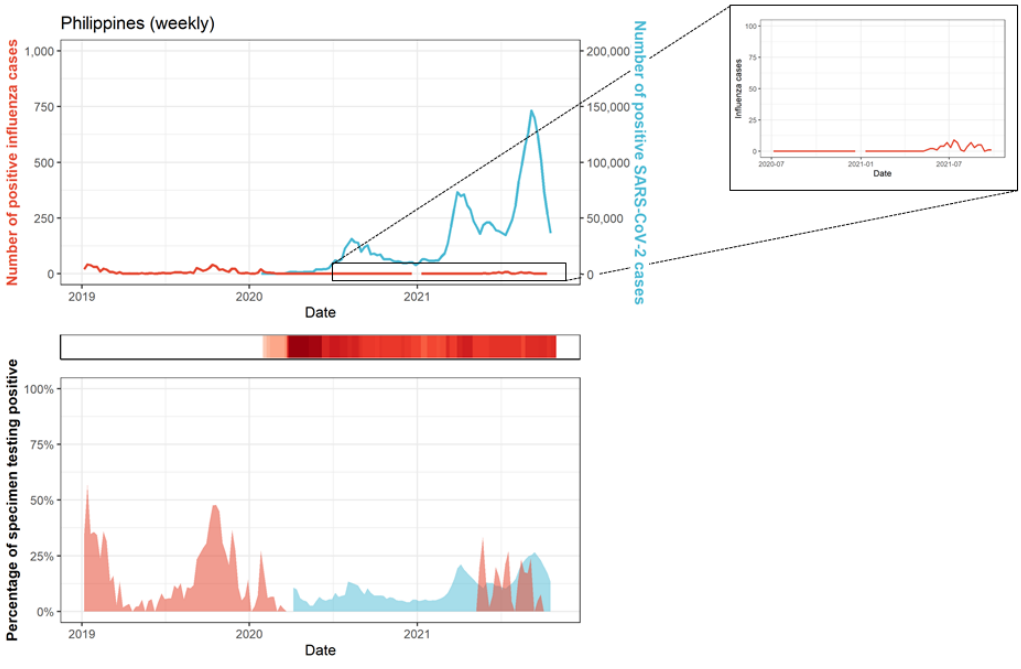
Southern Asia

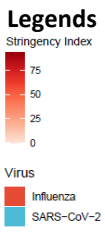
India



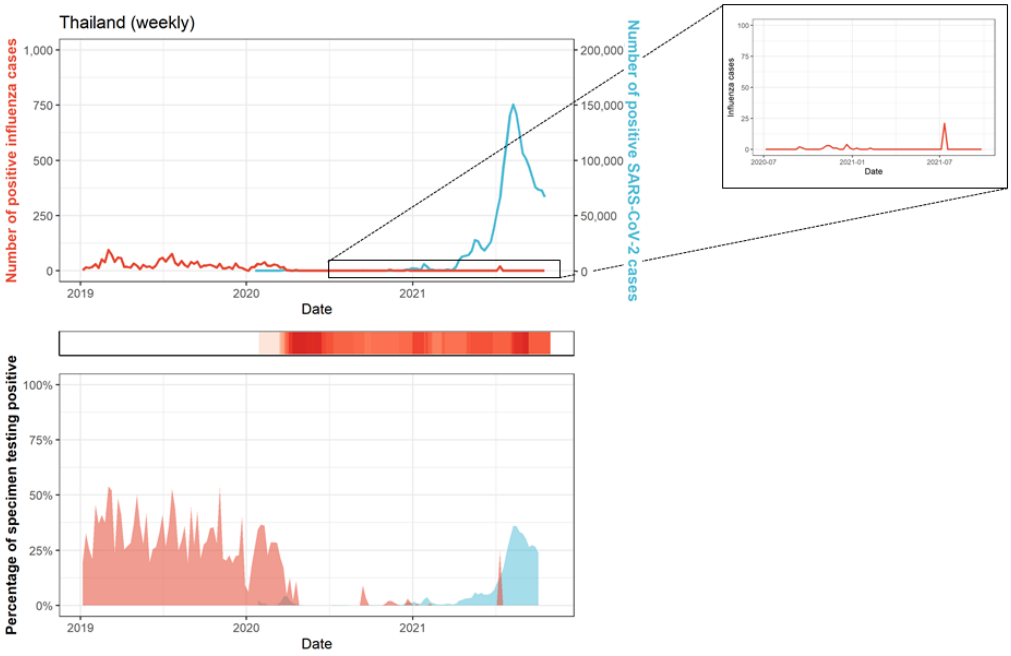
South East Asia

Philippines

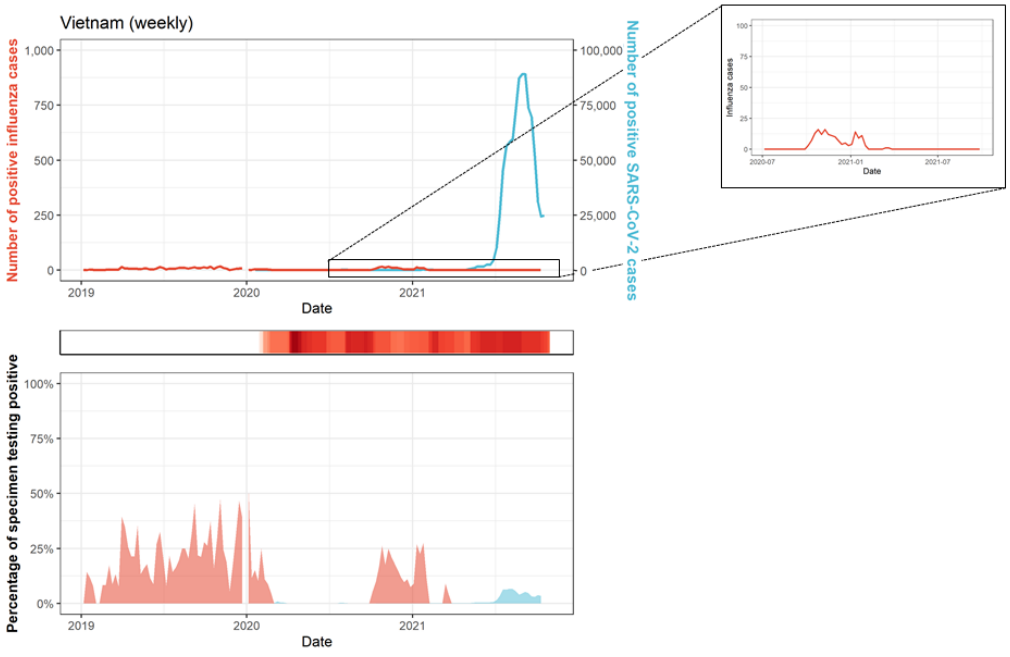




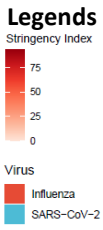
Thailand



Vietnam

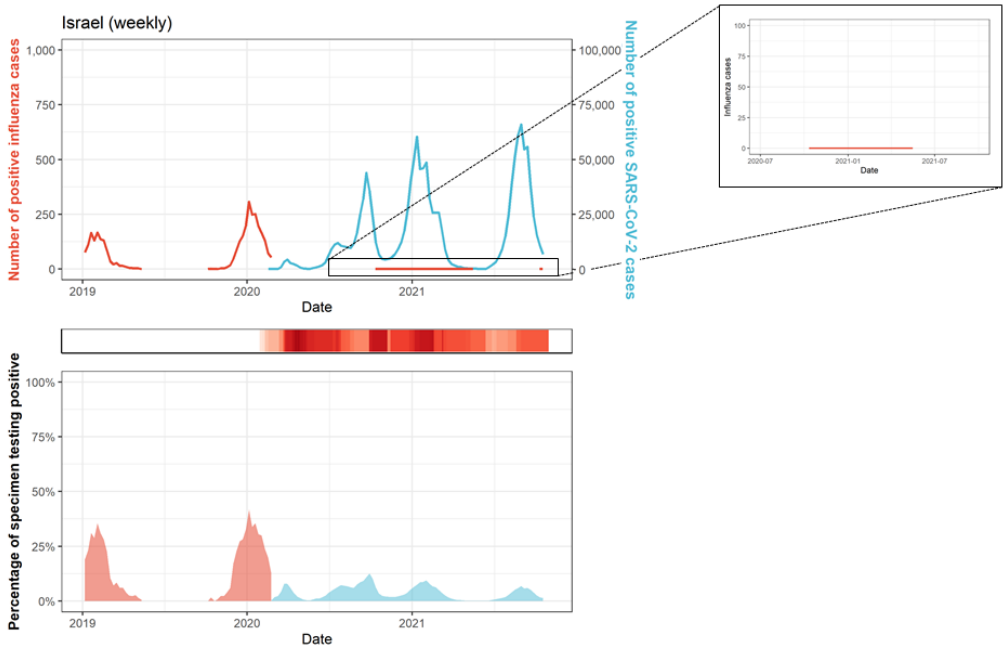


Note. Vietnam reported 0 influenza cases and 0 specimen taken for the last weeks.



Western Asia

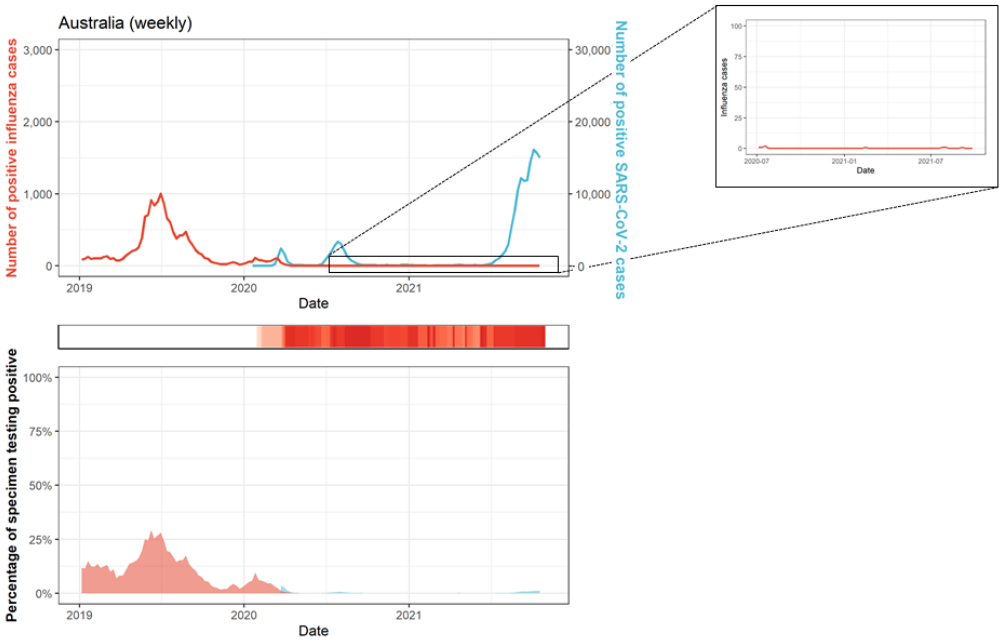
Israel

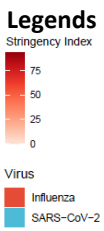


Note. Last FluNet update for Israel was week 41, but no data was uploaded between week 20 and 39.

Oceania

Australia





Absolute numbers per country

Country	Year	Cases* of SARS-CoV-2	+ since Sept. Epi-Bulletin	Cases* of influenza	+ since Sept. Epi-Bulletin
Australia	2019	-		14.002	
Australia	2020	28.425		949	
Australia	2021	131.877	73.174	5	1
Brazil	2019	-		3.459	
Brazil	2020	7.675.973		1.391	
Brazil	2021	13.903.684	339.874	-	0
Canada	2019	-		43.196	
Canada	2020	587.429		44.956	
Canada	2021	1.118.707	125.133	38	13
China	2019	-		122.757	
China	2020	86.569		31.295	
China	2021	9.757	1.073	10.143	2.036
Egypt	2019	-		1.999	
Egypt	2020	138.062		659	
Egypt	2021	186.557	NA	305	NA
France	2019	-		25.405	
France	2020	2.677.660		16.589	
France	2021	4.898.154	183.099	50	30
Germany	2019	-		1.215	
Germany	2020	1.760.520		958	
Germany	2021	2.715.558	326.246	5	0
India	2019	-		10.428	
India	2020	10.286.709		655	
India	2021	23.888.759	727.305	4.164	1.098
Israel	2019	-		1.796	
Israel	2020	423.262		1.424	
Israel	2021	899.817	94.950	-	0
Italy	2019	-		6.361	
Italy	2020	2.107.166		3.599	
Italy	2021	2.634.019	105.074	1	1
Japan	2019	-		10.200	
Japan	2020	235.809		2.743	
Japan	2021	1.481.887	39.606	4	0
Mexico	2019	-		6.963	
Mexico	2020	1.426.094		4.799	
Mexico	2021	2.355.567	211.984	35	12
Netherlands	2019	-		5.166	
Netherlands	2020	808.382		3.235	
Netherlands	2021	1.313.865	99.964	59	41
Philippines	2019	-		612	
Philippines	2020	474.064		52	
Philippines	2021	2.282.859	390.174	67	2

Country	Year	Cases* of SARS-CoV-2	+ since Sept. Epi-Bulletin	Cases* of influenza	+ since Sept. Epi-Bulletin
Poland	2019	-		1.786	
Poland	2020	1.294.878		1.282	
Poland	2021	1.678.049	74.992	1	0
South Africa	2019	-		1.164	
South Africa	2020	1.057.161		157	
South Africa	2021	1.862.471	NA	143	NA
South Korea	2019	-		1.702	
South Korea	2020	61.768		505	
South Korea	2021	291.320	65.553	-	0
Spain	2019	-		17.228	
Spain	2020	1.928.265		9.373	
Spain	2021	3.069.467	68.186	29	11
Thailand	2019	-		1.568	
Thailand	2020	7.159		297	
Thailand	2021	1.843.319	374.005	23	0
United Kingdom	2019	-		42.447	
United Kingdom	2020	2.496.235		14.366	
United Kingdom	2021	6.318.500	1.349.944	346	92
United States	2019	-		268.524	
United States	2020	20.153.406		229.766	
United States	2021	25.290.853	3.356.857	1.684	270
Vietnam	2019	-		355	
Vietnam	2020	1.465		146	
Vietnam	2021	887.475	201.877	39	0

Note. *Laboratory-confirmed cases. NA = not available.

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) [3] 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.

References

[1] WHO. Listings of WHO's response to COVID-19. https://www.who.int/news/item/29-06-2020-covidtimeline [accessed 8 February 2021]

[2] 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]

[3] 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]

[4] Government of Canada. Respiratory Virus Detection Report. October 17 to October 23 2021 (Surveillance Week 2021-41). https://www.canada.ca/en/public-health/services/surveillance/respiratory-virus-detections-canada.html (accessed 2 November 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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Project website

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