FluCov Epi-Bulletin – September 2021

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

Commentary

Background

WHO requested information on a reported cluster of atypical pneumonia cases in Wuhan from the Chinese authorities on 1 January 2020 and on 1 March 2020 it made the assessment that SARS-CoV-2 could be characterized as 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 second 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 for twenty countries distributed over the Americas (North, Central and Tropical South), Europe (Northern, South West and Eastern), 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

Overall, between July and September 2021, no influenza activity was detected in the vast majority of countries including Australia where no activity was detected during the typical Influenza epidemic season. Clear influenza activity was only detected in India and China, with the dominant virus in India being a mix of influenza A (H3) and influenza B-Victoria and the dominant virus in China being influenza B-Victoria [4].

The majority of countries have experienced an increase in SARS-CoV-2 cases in the second half of 2021 (July onwards). In some of the countries, the number of SARS-CoV-2 cases are now declining: Mexico, the UK, France, Italy, the Netherlands, Spain, Japan, Thailand, Vietnam and Israel. In some the number of cases is still increasing: Canada, Brazil (recent weeks), and South Korea; and in some they seem to have reached a peak: US, Germany, the Philippines and Australia. The number of infections has been stable and low in Poland and China. India has shown no new peak in SARS-CoV-2 infections in the second half of 2021.

Implications

There are several factors driving the global decline in influenza activity during the COVID-19 pandemic. One of these is the worldwide implementation of non-pharmaceutical interventions (NPIs) to reduce the spread of SARS-CoV-2 [5]. The plotted stringency indexes in this second Epi-Bulletin show that many countries are currently loosening prevention and control measures and this may explain the overall increase in SARS-CoV-2 infections in the second half of 2021. It will be important to see the effect of the loosening measures on influenza activity in the coming Northern Hemisphere winter period. This will be tracked in the upcoming monthly FluCov Epi-Bulletins.

Monthly plots by country

The plots per country show weekly data for influenza and SARS-Cov-2 infections from 1 January 2019 up to 19 September 2021. This Epi-Bulletin includes the countries Canada, United States, Mexico, Brazil, United Kingdom, France, Germany, Italy, Netherlands, Spain, Poland, 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 13-14 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 (new)

Tropical South America
Brazil (new)

Northern Europe
United Kingdom

South West Europe
France
Germany
Italy
Netherlands (new)
Spain

Eastern Europe
Poland (new)

Eastern Asia
China
Japan
South Korea (new)

Southern Asia
India

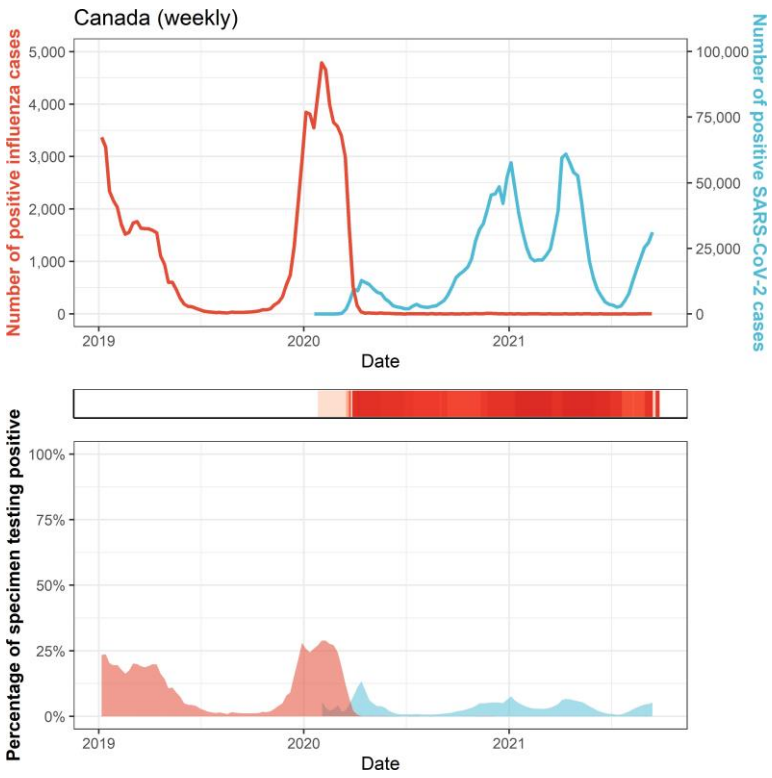
South East Asia
Philippines (new)
Thailand (new)
Vietnam (new)

Western Asia
Israel (new)

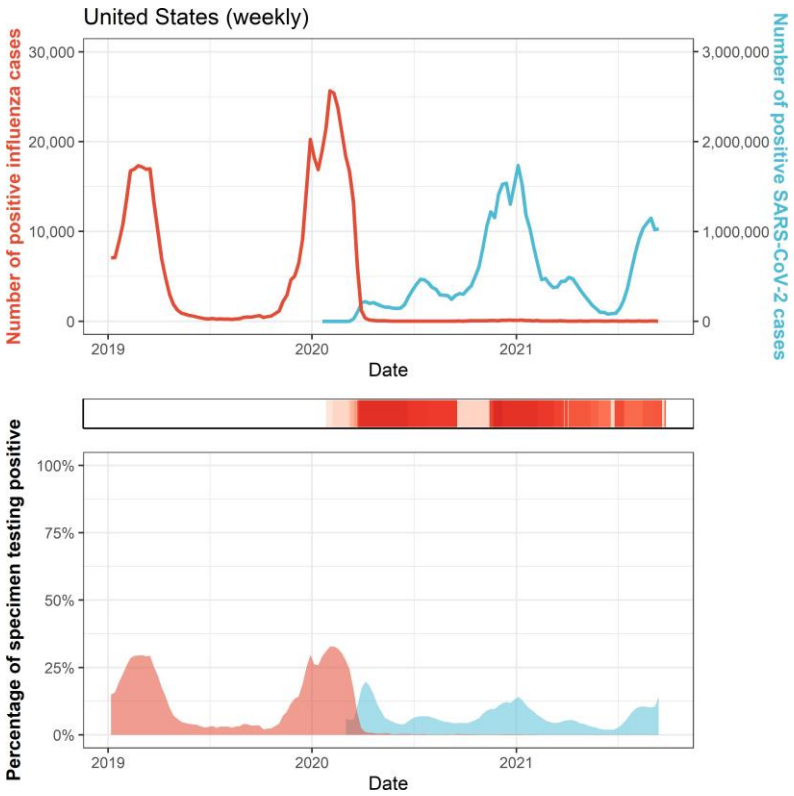
Oceania
Australia

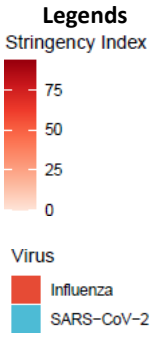
North America

Canada



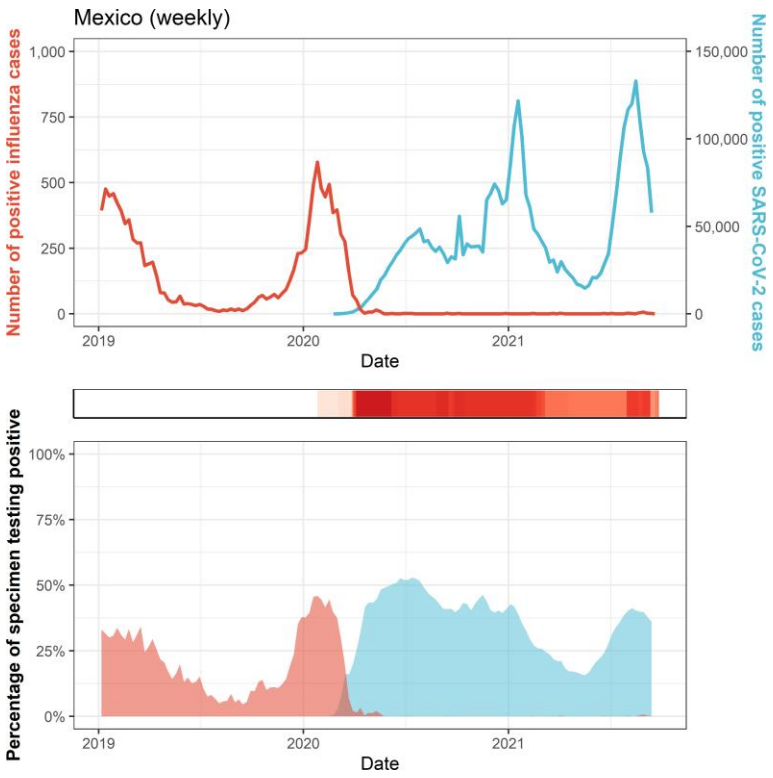
United States





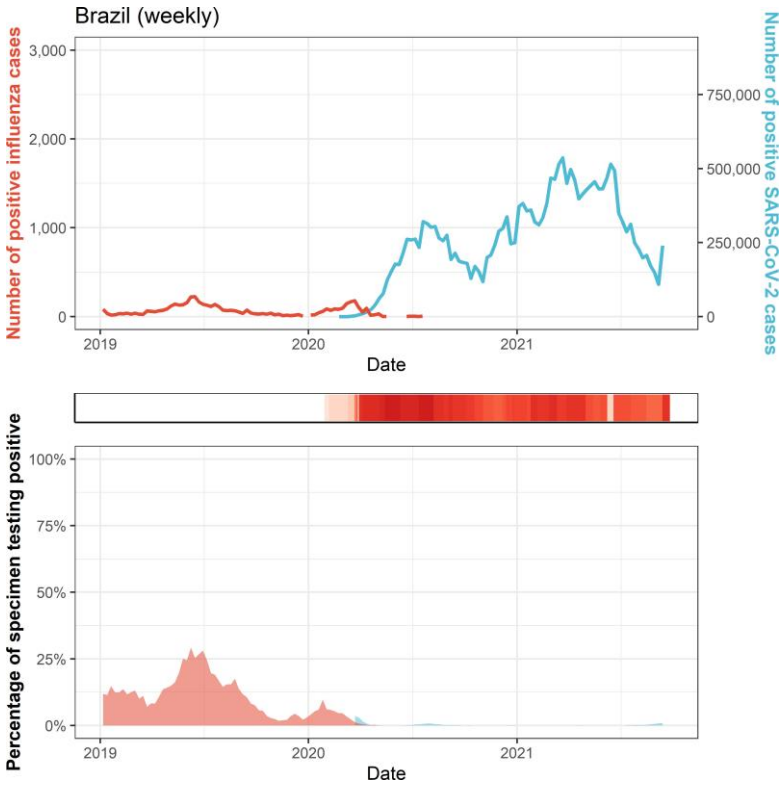
Central America Caribbean

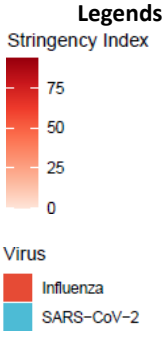
Mexico



Tropical South America

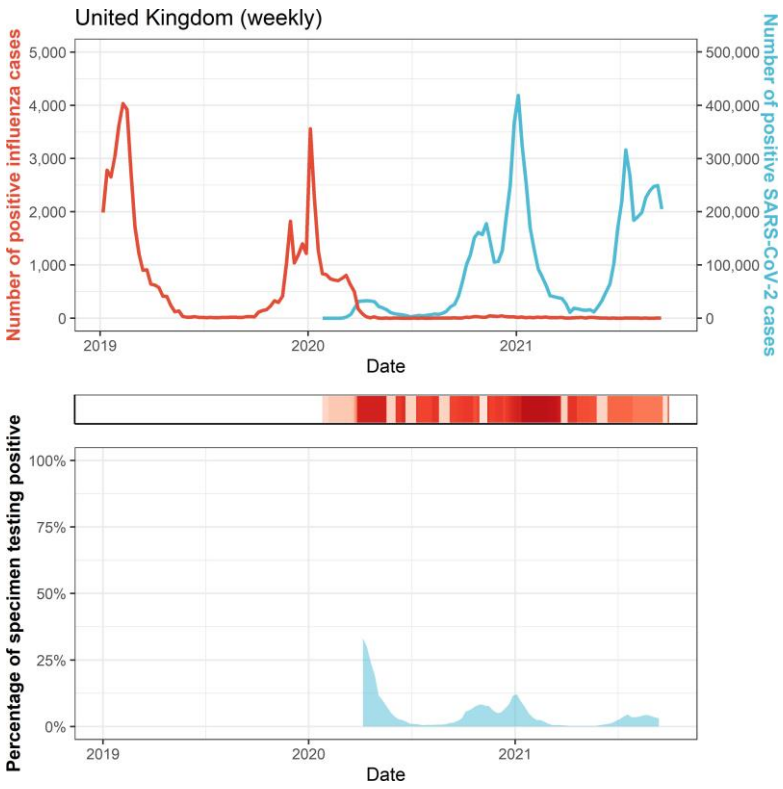
Brazil





Northern Europe

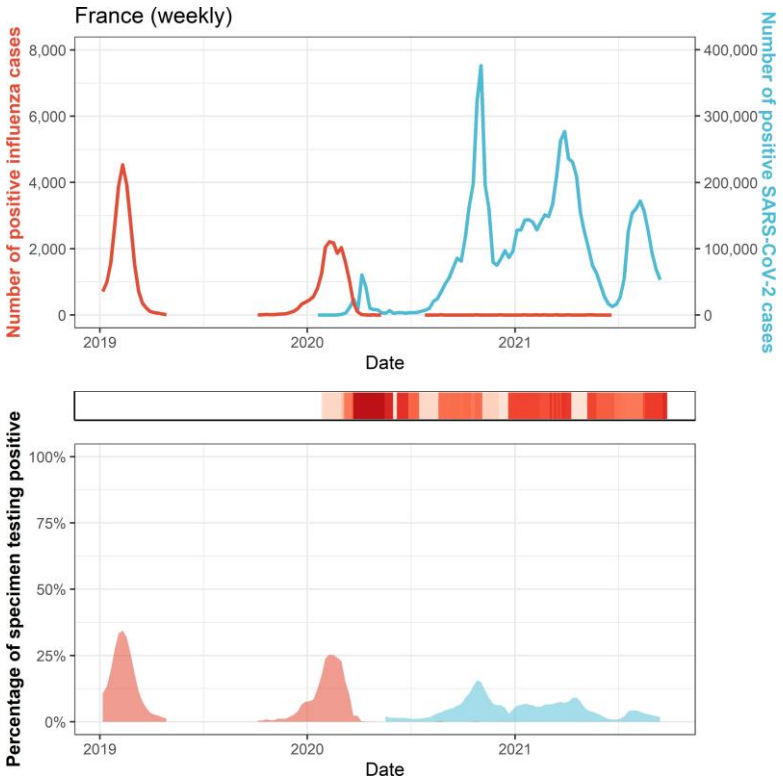
United Kingdom



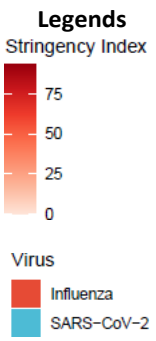
Note. The United Kingdom does not have a positivity rate for influenza because the denominator was deemed unreliable.

South West Europe

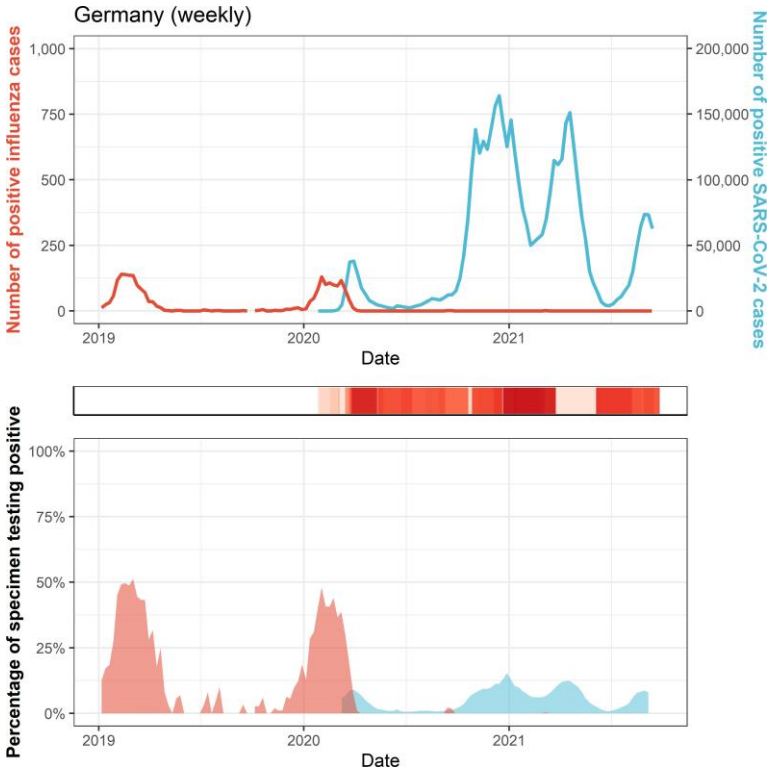
France



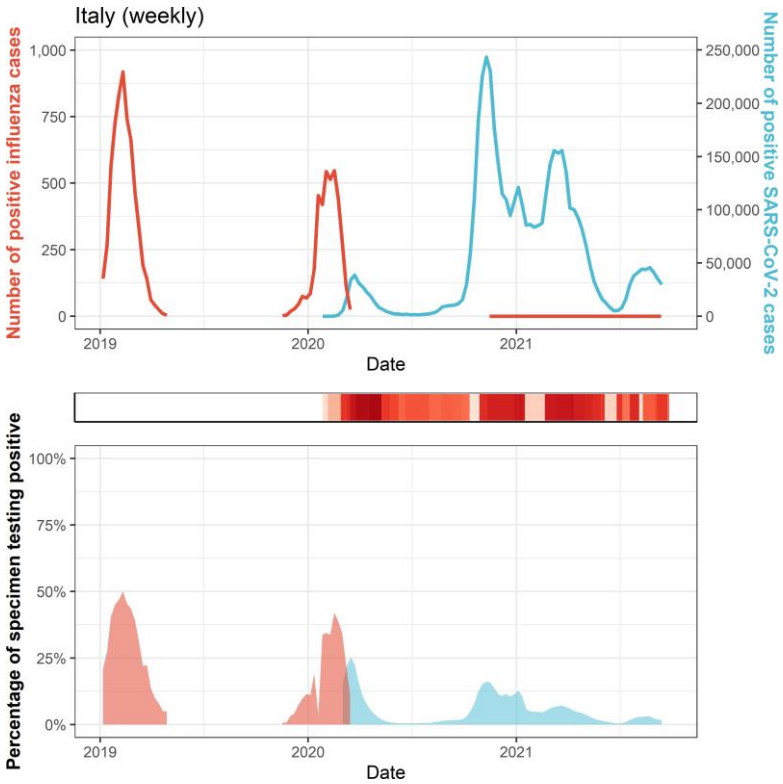
Note. The last FluNet update for France was week 24.

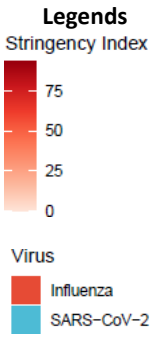


Germany

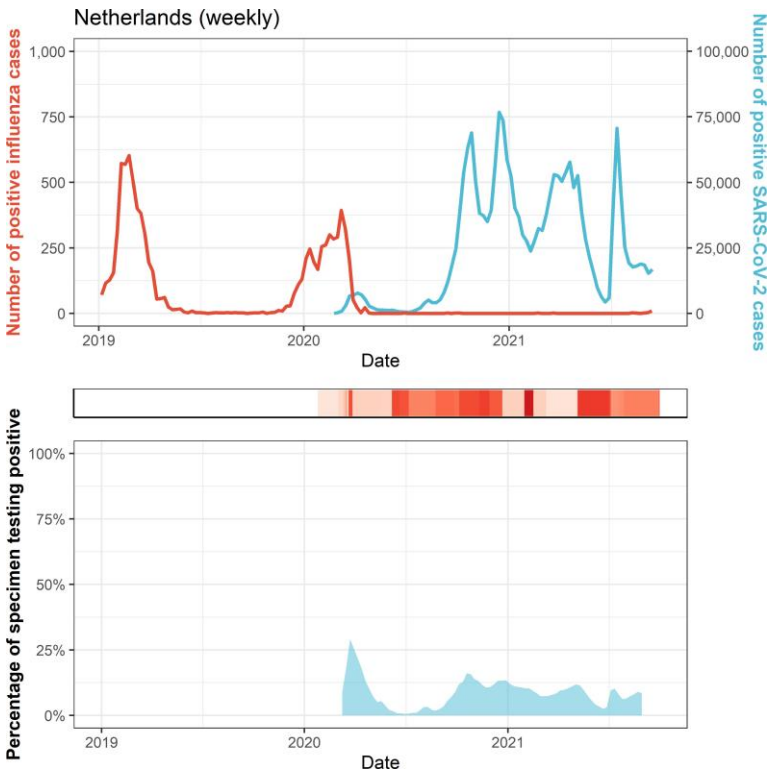


Italy



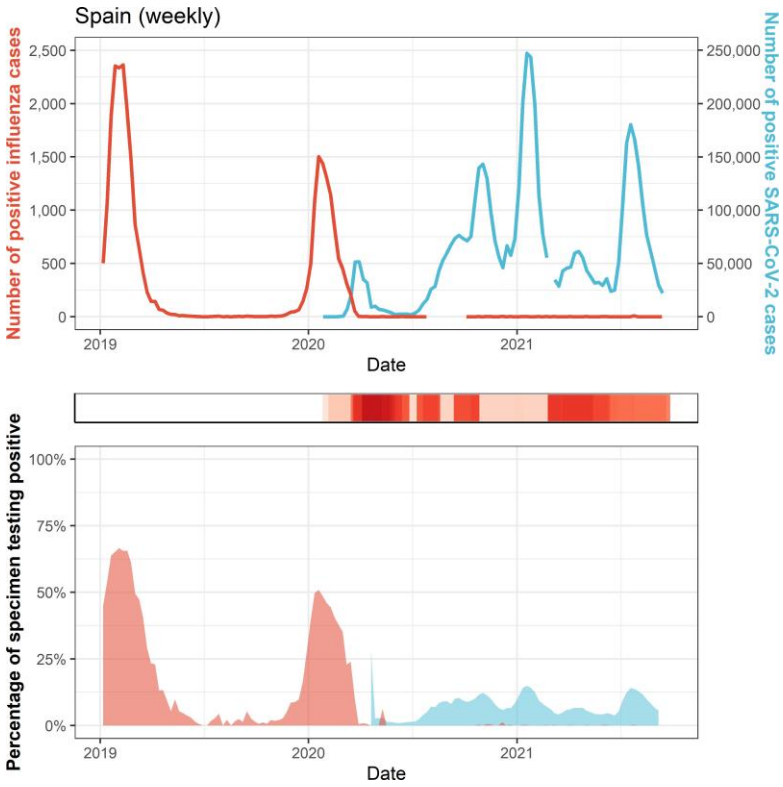


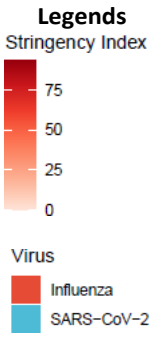
Netherlands



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

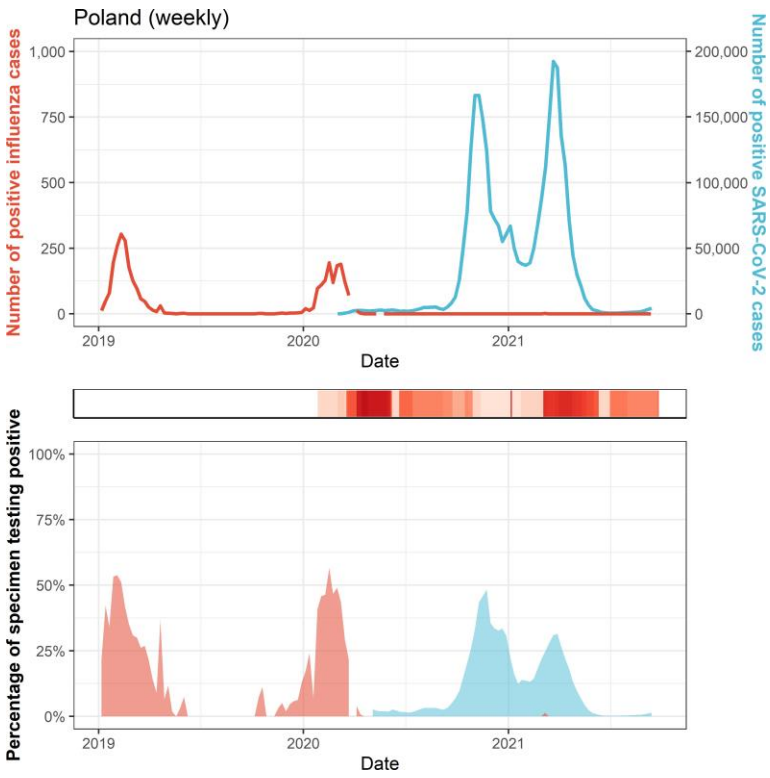
Spain





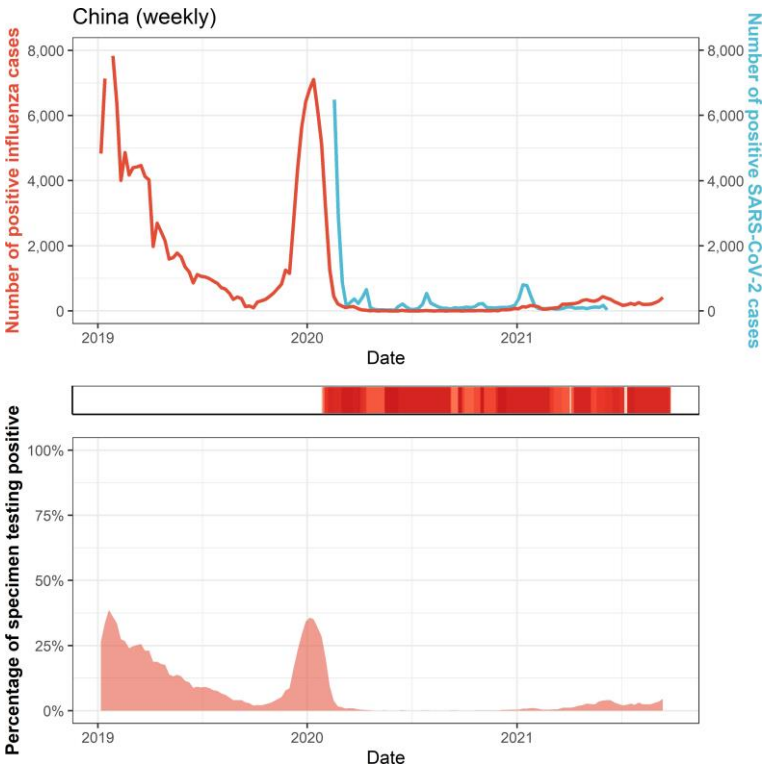
Eastern Europe

Poland

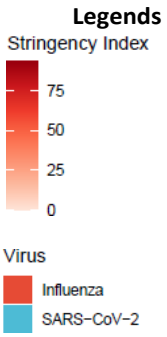


Eastern Asia

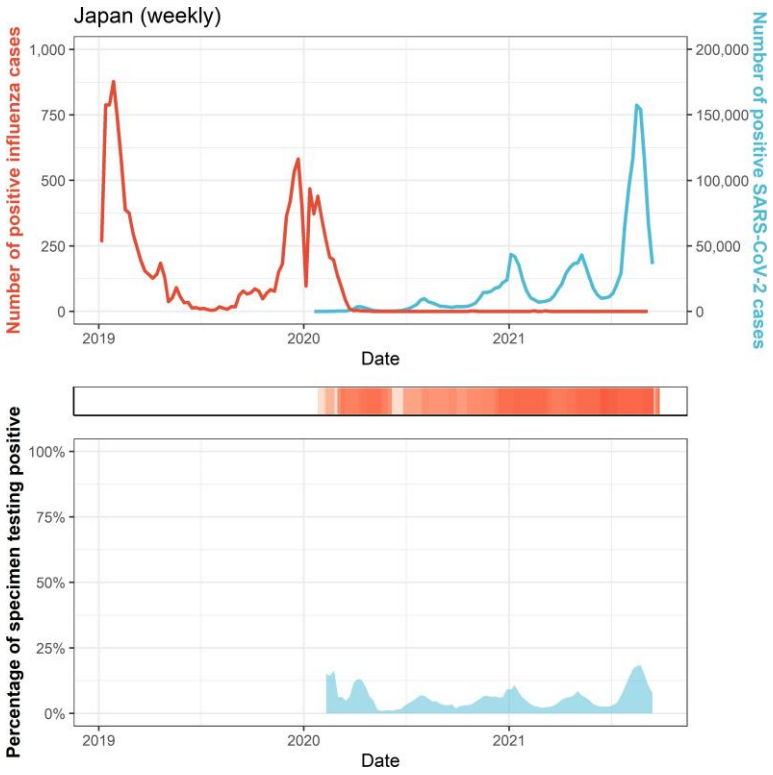
China



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

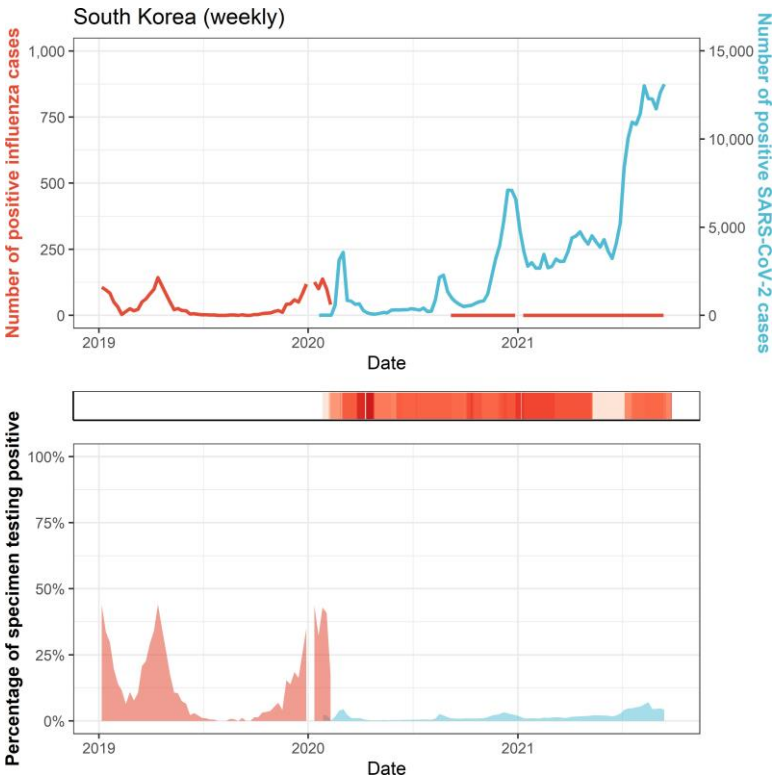


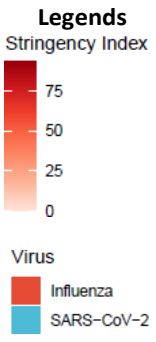
Japan



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

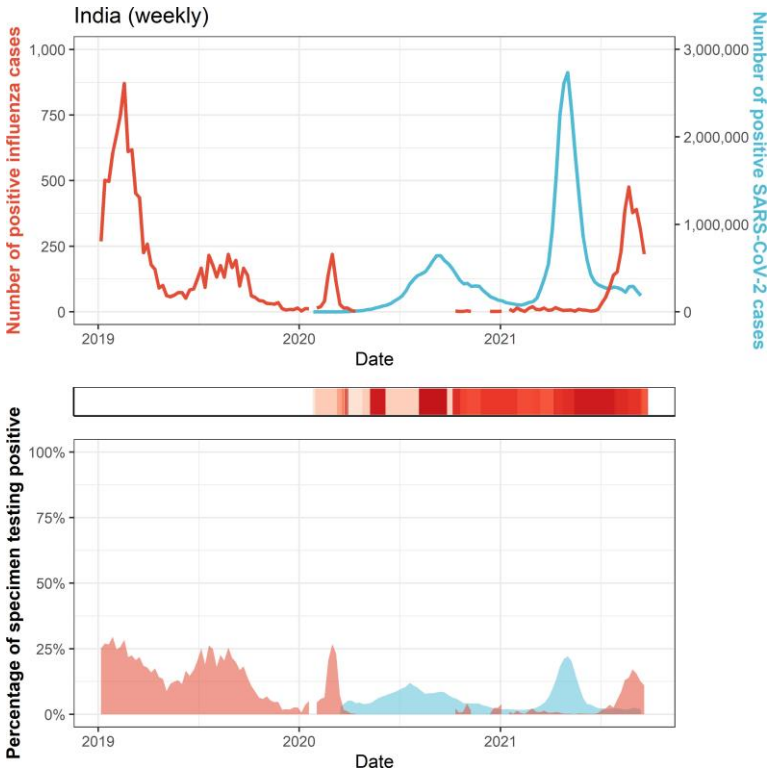
South Korea





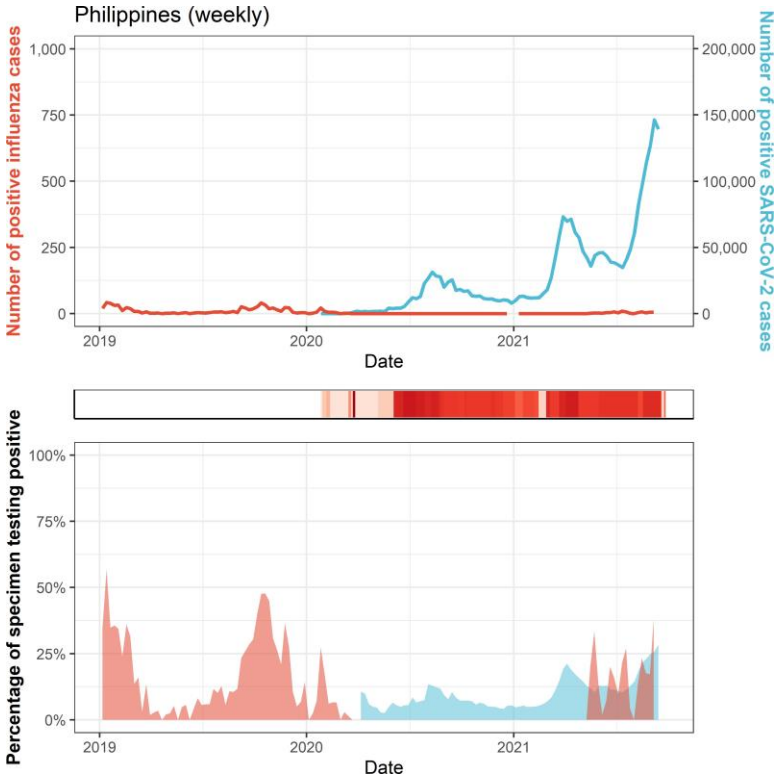
Southern Asia

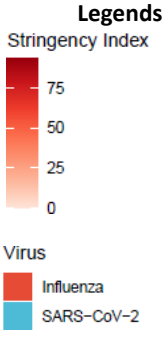
India



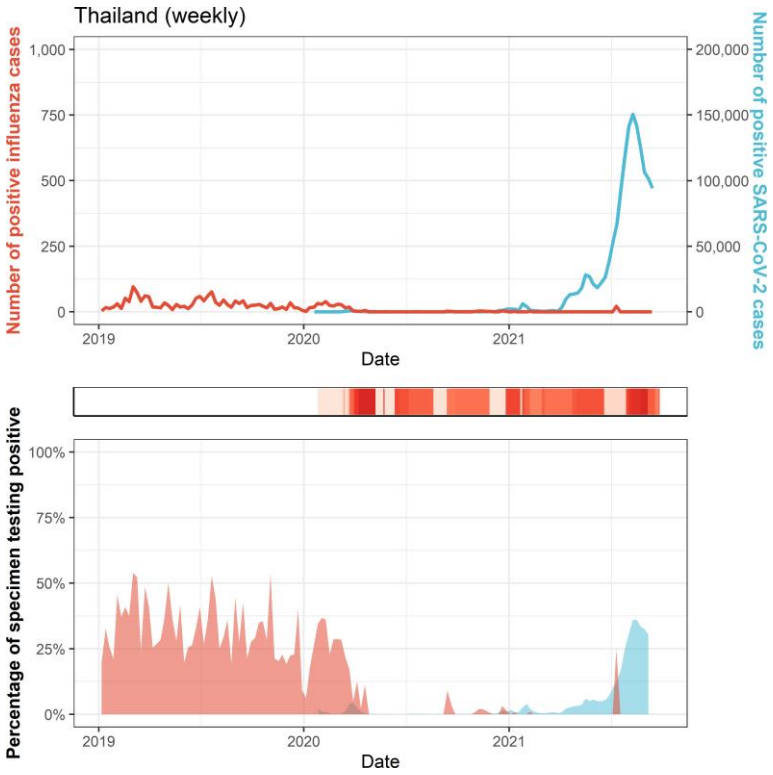
South East Asia

Philippines

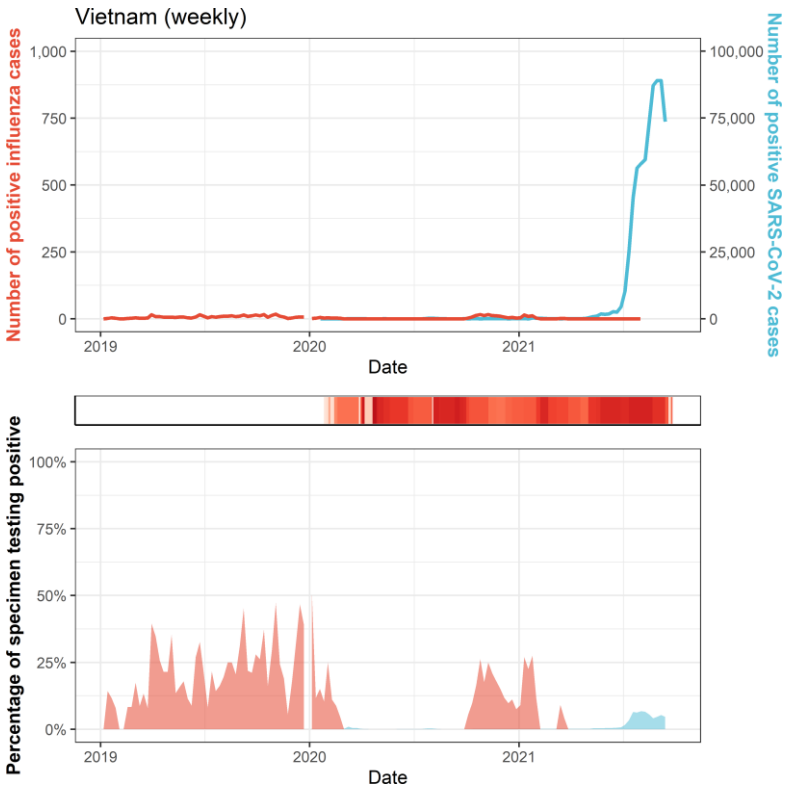




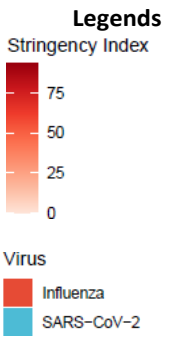
Thailand



Vietnam

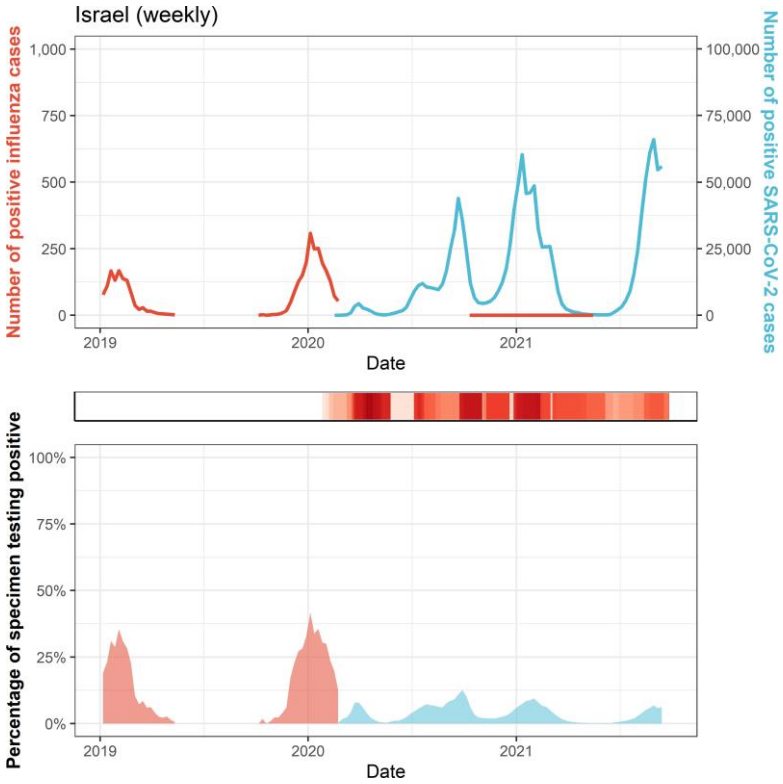


Note. The last FluNet update for Vietnam was week 30.



Western Asia

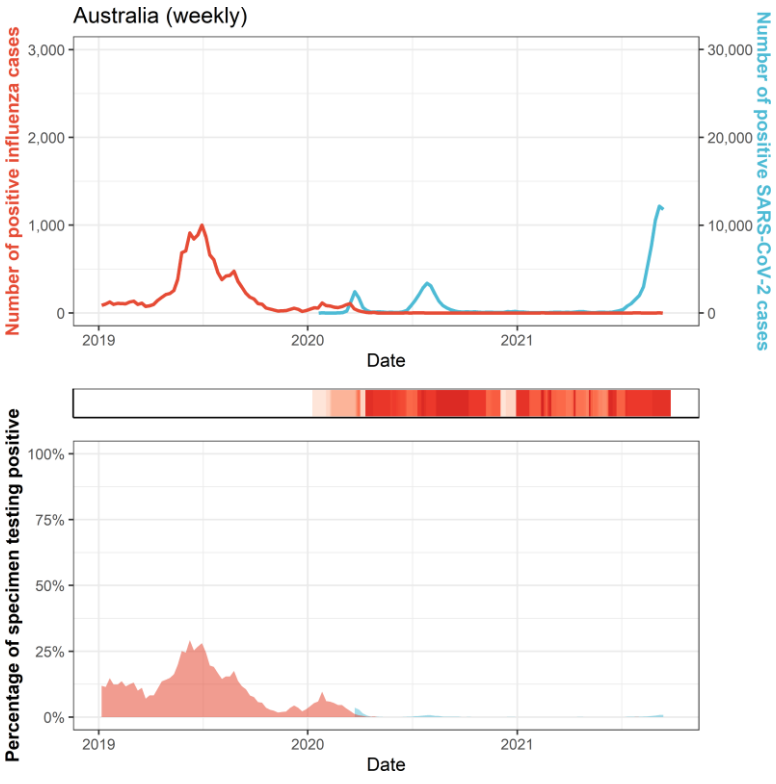
Israel

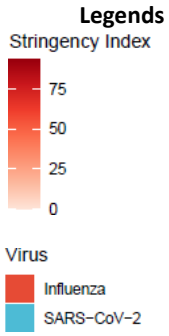


Note. The last FluNet update for Israel was week 19.

Oceania

Australia





Absolute numbers per country

Country	Year	Cases of SARS-CoV-2	Cases of influenza
Australia	2019	-	14.002
Australia	2020	28.425	949
Australia	2021	58.703	4
Brazil	2019	-	3.459
Brazil	2020	7.675.973	1.391
Brazil	2021	13.563.810	-
Canada	2019	-	43.196
Canada	2020	587.429	44.956
Canada	2021	993.574	25
China	2019	-	122.757
China	2020	86.569	31.295
China	2021	8.684	8.107
France	2019	-	25.405
France	2020	2.677.660	16.589
France	2021	4.715.055	20
Germany	2019	-	1.215
Germany	2020	1.760.520	958
Germany	2021	2.389.312	1
India	2019	-	10.428
India	2020	10.286.709	655
India	2021	23.161.454	3.066
Israel	2019	-	1.796
Israel	2020	423.262	1.424
Israel	2021	804.867	-
Italy	2019	-	6.361
Italy	2020	2.107.166	3.599
Italy	2021	2.528.945	-
Japan	2019	-	10.199
Japan	2020	235.809	2.715
Japan	2021	1.442.281	4
Mexico	2019	-	6.963
Mexico	2020	1.426.094	4.799
Mexico	2021	2.143.583	23
Netherlands	2019	-	5.166
Netherlands	2020	808.382	3.235
Netherlands	2021	1.213.901	18
Philippines	2019	-	612
Philippines	2020	474.064	52
Philippines	2021	1.892.685	65
Poland	2019	-	1.786
Poland	2020	1.294.878	1.282

Country	Year	Cases of SARS-CoV-2	Cases of influenza
Poland	2021	1.603.057	1
South Korea	2019	-	1.702
South Korea	2020	61.768	505
South Korea	2021	225.767	-
Spain	2019	-	17.228
Spain	2020	1.928.265	9.373
Spain	2021	3.001.281	18
Thailand	2019	-	1.568
Thailand	2020	7.159	297
Thailand	2021	1.469.314	23
United Kingdom	2019	-	42.447
United Kingdom	2020	2.496.235	14.369
United Kingdom	2021	4.968.556	254
United States	2019	-	268.524
United States	2020	20.153.435	229.766
United States	2021	21.933.996	1.414
Vietnam	2019	-	355
Vietnam	2020	1.465	146
Vietnam	2021	685.598	39

Data sources

Influenza

FluNet [4] 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] WHO. FluNet. https://www.who.int/tools/flunet [accessed 15 June 2021]

[5] Mondiale de la Santé, O., & World Health Organization. (2021). Weekly Epidemiological Record, 2021, vol. 96, 25 [full issue]. *Weekly Epidemiological Record= Relevé épidémiologique hebdomadaire*, *96*(25), 241-264.

[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

https://www.nivel.nl/en/flucov

Funding

The FluCov project is funded by Sanofi Pasteur.