FluCov Epi-Bulletin - May 2022

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





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]. During 2022, the following general patterns have been observed for **influenza**:

- The decline observed after the February-March 2022 epidemic continued in May for most countries included in the bulletin.
- Canada, Spain, the Netherlands and the United States reported intense influenza activity in April and/or May, but a decline in cases has now been observed in all of these countries.
- The FluNet data suggest that **influenza** activity is also going down in Australia, but these numbers do not seem to be consistent with those reported by the National Surveillance data, that suggest that the increase in **influenza** cases is continuing [1].
- Most countries had a single (or no) epidemic peak, but some had two clear epidemic peaks:
 United States, Spain, South Africa and (arguably) Germany.
- Currently, only China is reporting increasing influenza cases (May 2022) based on the FluNet data. Contrary to what happened from week 1 to week 16, the majority of cases reported from week 17 to week 21 of this year have been Influenza A.
- South Korea reported the first case of influenza since the start of 2022 in May.
- No new influenza cases were reported in May for most Asian countries included in this bulletin: Vietnam, Thailand, Philippines and Japan.
- Italy and Egypt were the only countries included in this bulletin that did not report **influenza** updates in May (week of last **influenza** update: 17 and 16 respectively).

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 and relaxation of non-pharmaceutical interventions (NPIs) [2].

- As anticipated in April, almost all countries included in this bulletin are reporting declining numbers of SARS-CoV-2 cases.
- Though this decline is continuing overall, some countries are still experiencing intense SARS-CoV-2 activity: the United States, Japan, Australia, Germany, and Italy.
- In Mexico, Brazil, Germany and the United States (possibly France), there are indications
 that the number of SARS-CoV-2 cases is increasing again after a sharp decline during the
 beginning of May.
- The fifth wave reported in South Africa in April seems to have ended.

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. Globally, **influenza** activity has continued much longer than usual, and reached its peak in a second wave in March-April (after a first wave in December-January). After two years of little or no **influenza** activity, some countries reported numbers of **influenza** cases per week that are comparable to pre-pandemic levels (e.g. **Mexico, Brazil, Israel, Australia**); surprisingly, **the Netherlands** reported more than twice the number of cases that were reported during both the 2018/19 and 2019/20 winters.

During the month of May, the majority of countries continued to report declines in both SARS-CoV-2 and influenza cases, and only a minority of countries reported rises in SARS-CoV-2 (small rises in Mexico, Brazil, France, Germany) and influenza activity (China).

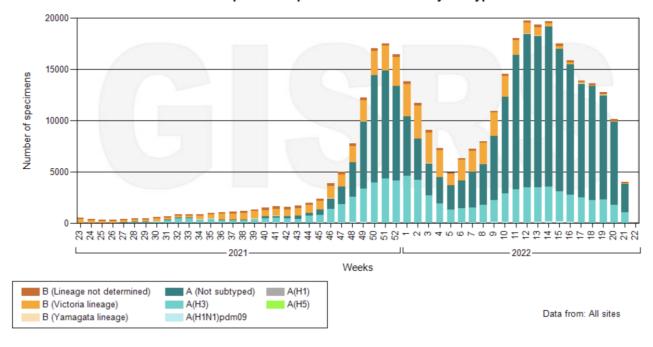
Three important factors should be considered when interpreting the data presented in this bulletin: the first is that the winter is approaching fast in the Southern Hemisphere. This means that rises in of SARS-CoV-2 cases (even small rises, as reported in Brazil) and influenza cases (as reported in Australia and South Africa) should be carefully monitored as the circulation of respiratory viruses will probably increase during the coming months. The second factor to consider is that the activity in Australia and South Africa (for both viruses) started during the autumn months and not in the winter. Lastly, many countries have reduced SARS-CoV-2 testing [3] (home testing is increasing, on the other hand) and WHO is therefore receiving less information (case reports and sequencing) [4]. This means we are moving from massive to moderate testing and this will have an impact on our ability to track SARS-CoV-2, predict epidemic waves and detect new variants.

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

generated on 06/06/2022 19:23:16 UTC

Global circulation of influenza viruses

Number of specimens positive for influenza by subtype



Data source: FluNet (www.who.int/flunet), GISRS

© World Health Organization 2022

Monthly plots by country

The plots per country show weekly data for influenza and of SARS-CoV-2 infections from January 1, 2019 up to June 5, 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 of SARS-CoV-2 (in blue) cases. An overview of the absolute number of influenza and of 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 of 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

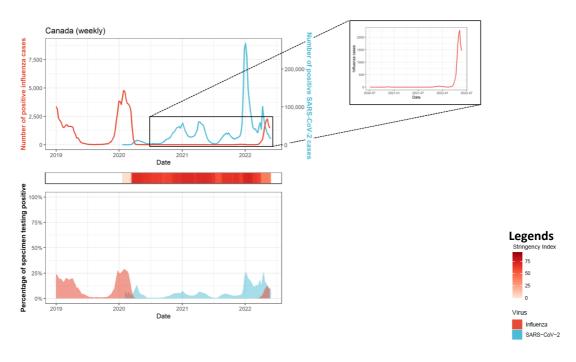
Israel

Oceania

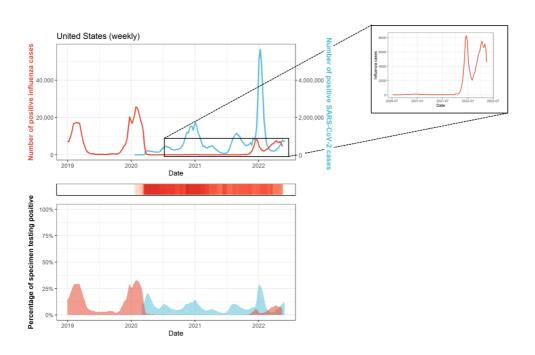
Australia

North America

Canada

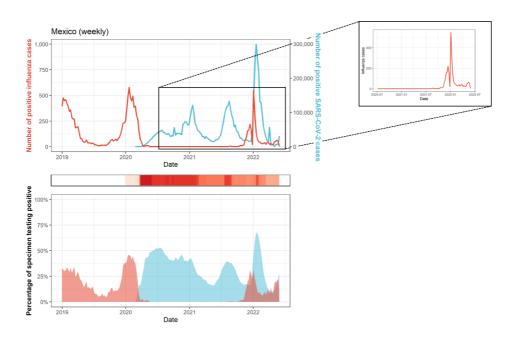


United States



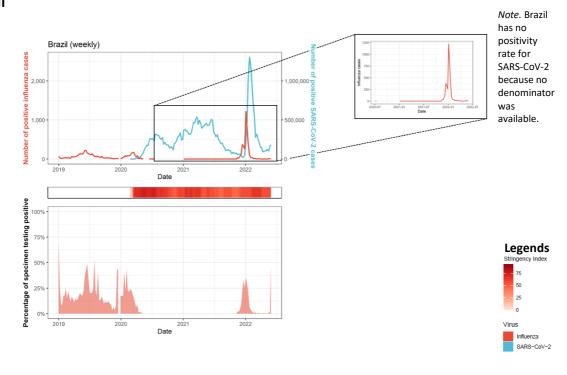
Central America Caribbean

Mexico



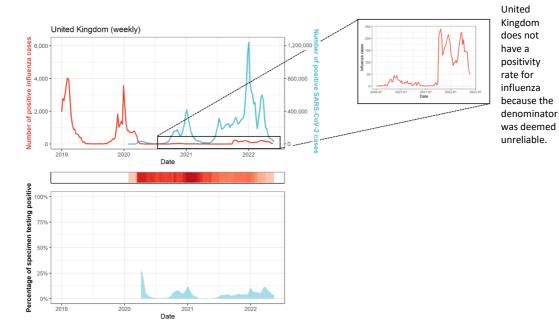
Tropical South America

Brazil



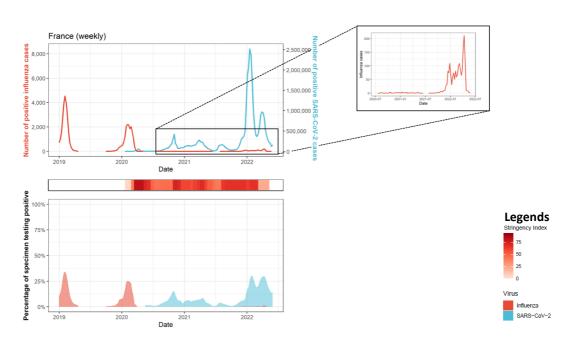
Northern Europe

United Kingdom



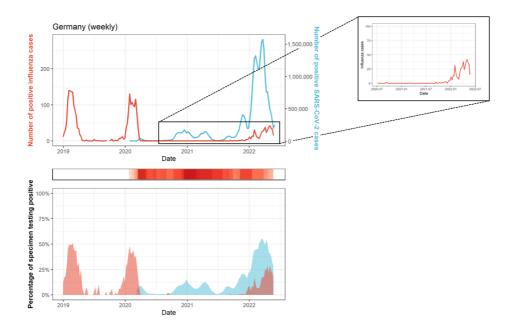
South West Europe

France

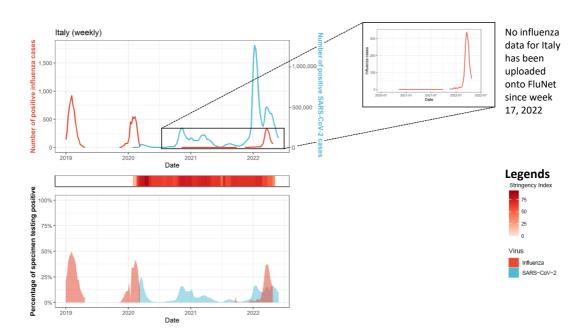


Note. The

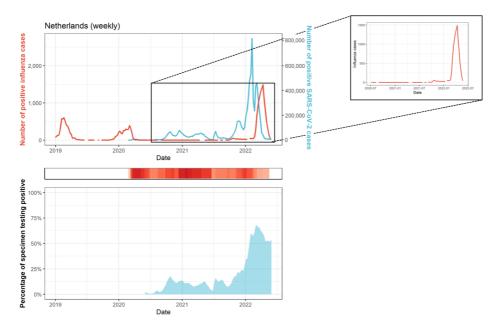
Germany



Italy



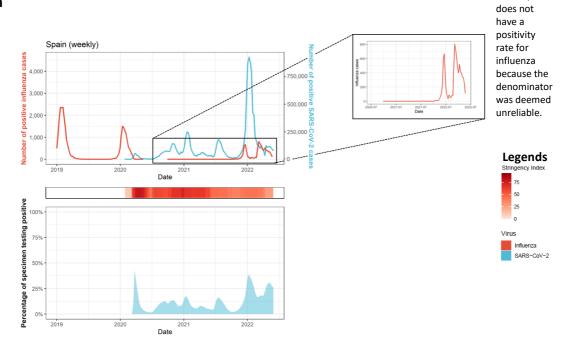
Netherlands



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

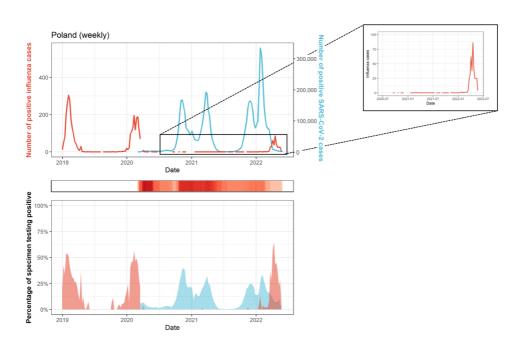
Note. Spain

Spain



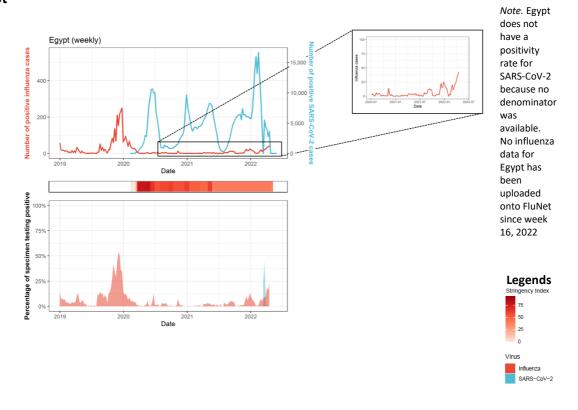
Eastern Europe

Poland



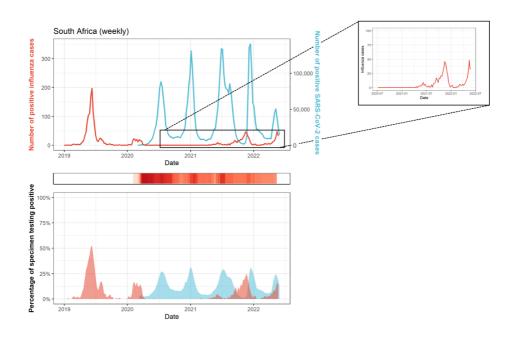
Northern Africa

Egypt



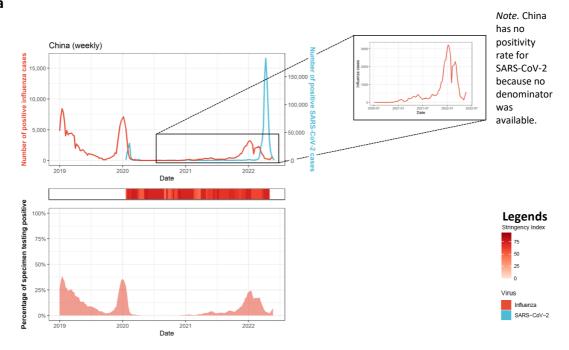
Southern Africa

South Africa

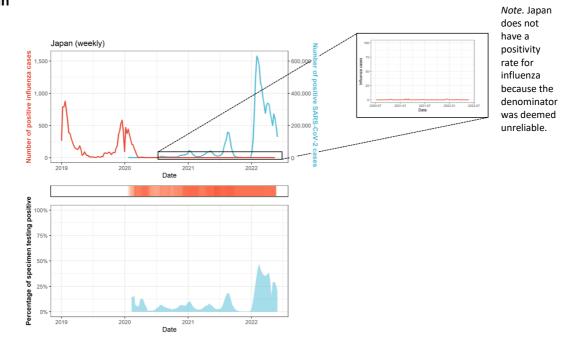


Eastern Asia

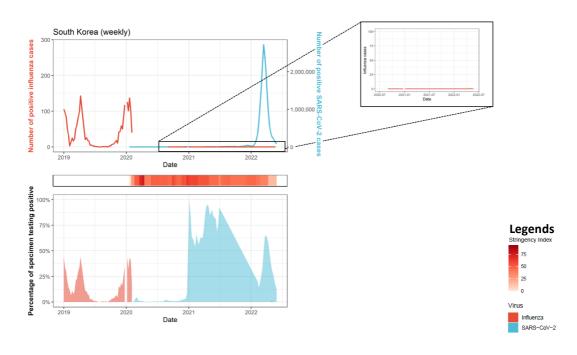
China



Japan

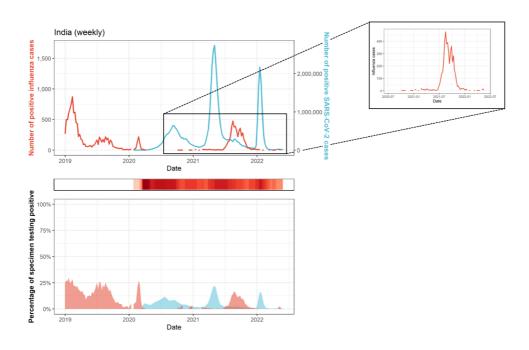


South Korea



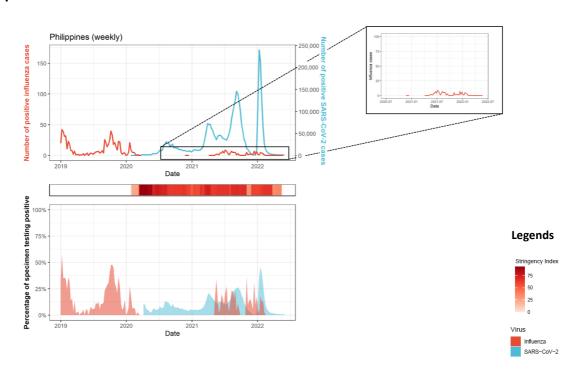
Southern Asia

India

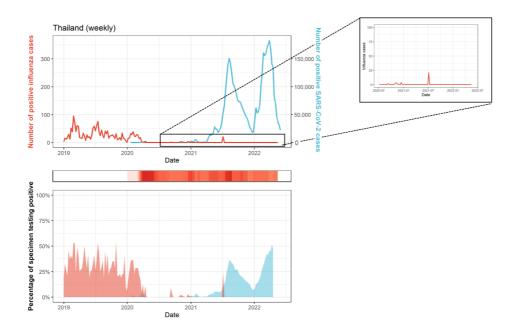


South East Asia

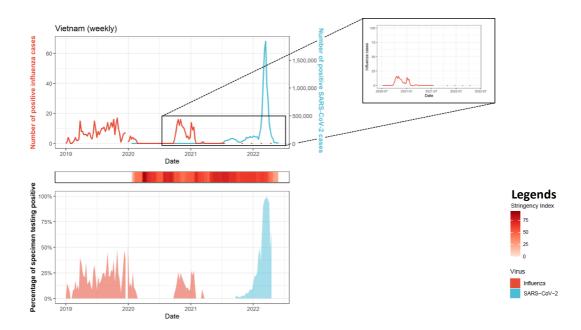
Philippines



Thailand

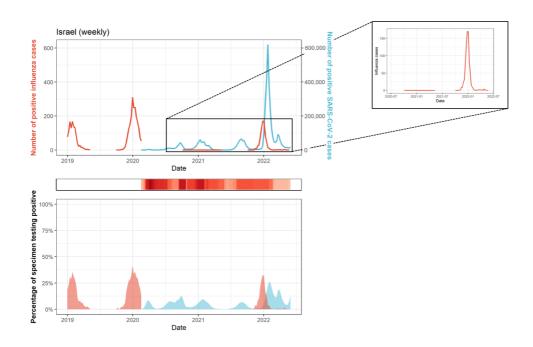


Vietnam



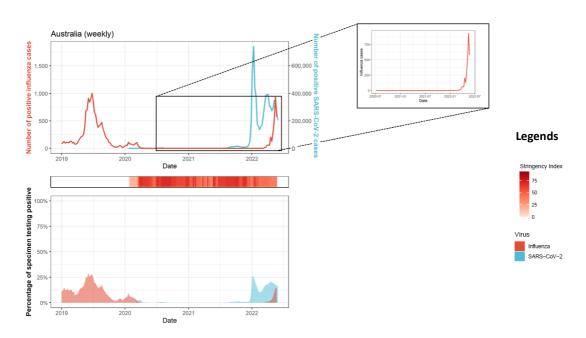
Western Asia

Israel



Oceania

Australia



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	3AN3-C0V-2	lasemonen	14,002	last month	minuciiza apaate
Australia	2020	28,425		949		
Australia	2021	397,071		8		
Australia	2022	6,916,342	1,359,266	2,880	2,326	21 - 2022
Brazil	2019	5,5 = 5,5 :=	_,	3,459	_,	
Brazil	2020	7,700,828		1,391		
Brazil	2021	14,485,929		1,240		
Brazil	2022	8,727,199	570,802	2,708	28	22 - 2022
Canada	2019		•	43,196		
Canada	2020	590,249		44,956		
Canada	2021	1,633,486		337		
Canada	2022	1,669,103	119082	11,557	7,592	21 - 2022
China	2019			122,757	•	
China	2020	93,172		31,295		
China	2021	21,498		26,184		
China	2022	768,734	72,570	29,474	1,496	21 - 2022
Egypt	2019	•	•	1,999	•	
Egypt	2020	138,062		659		
Egypt	2021	247,513		412		
Egypt	2022	130,070	0	280	0	16 - 2022
France	2019			25,405		
France	2020	2,727,705		16,589		
France	2021	7,706,191		395		
France	2022	19,585,156	874,157	1,459*	21	21 - 2022
Germany	2019	-,,	- , -	1,215		
Germany	2020	1,719,737		958		
Germany	2021	5,430,685		31		
Germany	2022	19,210,587	1,551,168	476	126	21 - 2022
India	2019	, ,	, ,	10,428		
India	2020	10,286,709		655		
India	2021	24,574,870		4,789		
India	2022	8,299,253	81,644	67	31	22 - 2022
Israel	2019		•	1,796		
Israel	2020	423,262		1,424		
Israel	2021	961,872		446		
Israel	2022	2,754,583	62,411	348	2	21 - 2022
Italy	2019		,	6,361		
Italy	2020	2,107,314		3,599		
Italy	2021	4,018,517		31		
Italy	2022	11,295,727	958,210	1,868	0	17 - 2022
Japan	2019	•	•	10,200		
Japan	2020	235,747		2,744		
Japan	2021	1,496,547		9		
Japan	2022	7,106,451	967,494	1	0	20 - 2022
		,,	/	<u>=</u>		

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	371113 COV E	idst month	6,963	iase monen	mmachiza apaace
Mexico	2020	1,426,094		4,799		
Mexico	2021	2,553,629		960		
Mexico	2022	1,796,654	36,297	1,713	218	22 - 2022
Netherlands	2019	1,750,054	30,237	5,166	210	22 2022
Netherlands	2019	806,620		3,235		
Netherlands	2020	2,346,892		3,233 454		
Netherlands	2021	5,026,769	39,032	10,413	979	21 - 2022
Philippines	2019	3,020,703	33,032	612	373	21 2022
Philippines	2019	474,064		52		
Philippines	2020	2,369,926		105		
• •	2021		4,938	165	0	21 - 2022
Philippines		847,236	4,330		U	21 - 2022
Poland	2019	4 204 070		1,786		
Poland	2020	1,294,878		1,282		
Poland	2021	2,813,337	4.020	2	70	24 2022
Poland	2022	847,236	4,938	373	79	21 - 2022
South Africa	2019			1,164		
South Africa	2020	1,057,161		157		
South Africa	2021	2,382,539		413		
South Africa	2022	499,491	166,652	191	125	21 - 2022
South Korea	2019			1,702		
South Korea	2020	61,768		505		
South Korea	2021	573,484		0		
South Korea	2022	17,484,162	843,766	1	1	21 - 2022
Spain	2019			17,228		
Spain	2020	1,938,671		9,373		
Spain	2021	4,440,910		2,169		
Spain	2022	6,031,519	430,112	6,457	1,037	21 - 2022
Thailand	2019			1,568		
Thailand	2020	6,898		297		
Thailand	2021	2,216,551		23		
Thailand	2022	2,231,585	192,536	0	0	20 - 2022
United Kingdom	2019			42,447		
United Kingdom	2020	2,491,790		14,369		
United Kingdom	2021	10,472,900		2,755		
United Kingdom	2022	8,568,339	264,086	2,776	325	21 - 2022
United States	2019			268,524		
United States	2020	20,191,905		229,766		
United States	2021	34,643,385		38,453		
United States	2022	29,392,543	2,864,670	96,882	18,087	20 - 2022
Vietnam	2019			355		
Vietnam	2020	1,465		146		
Vietnam	2021	1,729,792		39		
Vietnam	2022	8,988,122	69,570	0	0	20 - 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.

^{*} Influenza cases differ from the April Epi-Bulletin as they were retrospectively corrected in FluMart. Data in the Table were downloaded on the 7th of June.

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) [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.

Extraction details

Data were extracted on 7 June 2022 and cover the period 1 January 2019 to 05 June 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] Australian Government. Department of Health. Australian Influenza Surveillance Report and Activity Updates.

 https://www1.health.gov.au/internet/main/publishing.nsf/Content/cda-surveil-ozflu-flucurr.htm [accessed 13 Jun 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 [accessed 30 November 2021]
- [3] Usher AD. FIND documents dramatic reduction in COVID-19 testing. Lancet Infect Dis. 2022 Jun 2:S1473-3099(22)00376-0. doi: 10.1016/S1473-3099(22)00376-0. Epub ahead of print.
- [4] Reuters. WHO chief says we are 'increasingly blind' on COVID transmission. [Accessed 07/06/2022] https://www.reuters.com/business/healthcare-pharmaceuticals/who-chief-says-we-are-increasingly-blind-covid-transmission-2022-04-27/
- [5] WHO. Influenza Update N° 416. https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates/current-influenza-update [accessed 7 April 2022]
- [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]

Team

Nivel

Marco Del Riccio, Lisa Staadegaard, Willemijn van Waarden, Saverio Caini, Jean-Sebastien Casalegno, John Paget

Global Influenza Initiative

Behazine Combadiere: Sorbonne University, UPMC University Paris, France Ben Cowling: School of Public Health, University of Hong Kong, Hong Kong, China

Ann Falsey: Rochester General Hospital, University of Rochester School of Medicine, Rochester, NY,

USA

Angele Gentile: Ricardo Gutiérrez Children's Hospital, Buenos Aires, Argentina

Jan Kyncl: Department of Infectious Diseases Epidemiology, National Institute of Public Health,

Prague, Czech Republic

Bruno Lina: Virpath Laboratory, University of Lyon, Lyon, France

Raina McIntyre: The Kirby Institute, University of New South Wales, Sydney, Australia

Sanofi Pasteur

Erica Dueger, Clotilde El Guerche-Séblain, Meral Akçay, Cecile Eymin

Project website

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

Funding

The FluCov project is funded by Sanofi Pasteur.