

FluCov-Bulletin – End-July 2023

FluCov project: combining data from around the world to better understand the impact of COVID-19 on influenza activity

Commentary

Contents

It is now more than three 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 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 across most regions of the world (see page 3).

Results

On a global level, influenza activity has decreased (see Figure 1). The following country patterns were observed for influenza in July 2023:

- In the Southern Hemisphere, the countries covered in the Bulletin seem to have experienced the peak of their influenza activity and these are now on the decline. Detections decreased in Brazil, where a mix of influenza A(H1N1)pdm09 and B (lineage not determined) was reported, South Africa (influenza A(H3N2)), and Australia (mix of influenza A and B, subtype and lineage not determined).
- It is of note that activity is still high in **Australia**, with 35% of influenza detections of 2023 being reported in July (38% in June).
- In the Northern Hemisphere, influenza activity is low in Europe (United Kingdom, Poland, France, Germany, Netherlands, Spain), Canada and the United States.
- Influenza detections were low in China, India, Japan, the Philippines, and Vietnam.
- An increase in **influenza** detections is currently being observed in **South Korea**, with a mix of **influenza** A(H1N1)pdm09 and A(H3N2). A tentative increase is also being observed in **Thailand** (with a mix of A and B).
- No update on influenza activity in July was available for Egypt, Italy, and Israel.

Globally, SARS-CoV-2 detections have been relatively low after the late 2022 peak in China (see Figure 1). The following country patterns were observed for SARS-CoV-2 in July 2023:

- In **South Korea**, the number of **SARS-CoV-2** detections continued to increase in the last weeks of July.
- SARS-CoV-2 detections were low in most other countries in the Bulletin: Australia, Brazil, Canada, China, France, Germany, India, Israel, Italy, Mexico, Netherlands, the Philippines, Poland, Spain, Thailand, United Kingdom and Vietnam.
- No SARS-CoV-2 detections were reported in Egypt, France, Japan, South Africa and the United States.

Implications

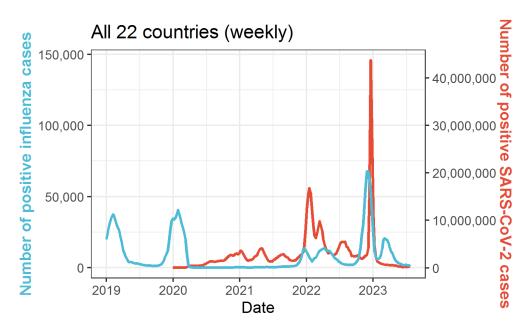
In the Southern Hemisphere, there was a decrease in the number of recorded **influenza** detections across all countries covered by the Bulletin. The specific dominant virus type varied from country to country. In **South Africa**, it was mainly **influenza** A(H3N2), while **Brazil** (with a mix of A(H1N1)pdm09 and B) and **Australia** (subtype and lineage not determined) reported a combination of **influenza** A and B. The decrease is also evident when looking at other countries in the Southern Hemisphere, considering that also **Argentina**, **Chile**, **New Zealand** and **Peru** also appeared to have reached the peak of **influenza** activity and report now moderate to low **influenza** activity [1].

Shifting to the Northern Hemisphere, **influenza** activity remained generally low during the whole month of July, which is typically the case for the summer months.

Up to this point, the prevailing **influenza** B lineage within the countries reported in the Bulletin has been exclusively **influenza** B/Victoria. This has taken on added significance given that **influenza** B/Yamagata has remained very uncommon in the context of the COVID-19 pandemic [2]. For **influenza** A, the Southern Hemisphere **influenza** season has been characterized so far by a mix of **influenza** A(H1N1)pdm09 and **influenza** A(H3N2), with a higher frequency of the former.

Globally, **SARS-CoV-2** detections have been decreasing since the peak in **China** in December 2022 and were relatively low in the first two weeks of July. In **South Korea SARS-CoV-2** detections peaked in May 2023 and started to decrease in June, but a new increase is now observed. It is possible that this is occurring in other countries in the Northern Hemisphere (e.g. **France, UK**, and **USA** [3]) but data are not available in the Bulletin as surveillance systems have been reduced (e.g. routine testing is only done on high-risk persons e.g. the elderly in **France** [3]) or the data are not being reported to WHO (e.g. USA) and are therefore not appearing in the Bulletin.

The World Health Organization (WHO) has declared that **SARS-CoV-2** "is now an established and ongoing health issue which no longer constitutes a public health emergency of international concern (PHEIC)" [4]. Nonetheless, even with this announcement, vigilance in monitoring **SARS-CoV-2** will be necessary in the coming months and the rest of the year.





Disclaimer: Comparisons <u>between countries and seasons</u> of influenza and SARS-CoV-2 detections should be made with care, as national surveillance systems may differ (e.g. surveillance structures and testing intensity) and change over time.

Monthly plots by country

The plots per country show weekly data for influenza and of SARS-CoV-2 infections from 1 January, 2019 up to 16 July, 2023. This FluCov-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.

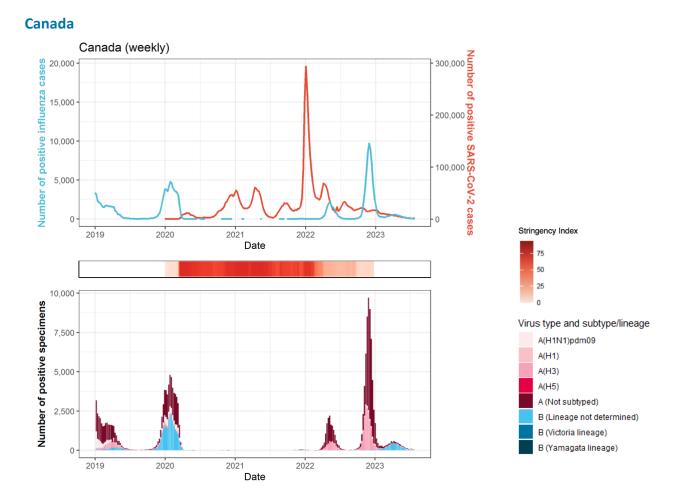
Per country, the first plot displays the number of positive influenza (in blue) and SARS-CoV-2 (in red) detections. An overview of the absolute number of influenza and of SARS-CoV-2 detections per country can be found on pages 26-28 of this FluCov-Bulletin (click here). The bar displays the Stringency Index (SI; a country-specific composite metric of the mitigation measures that are in place) over time. The second plot shows the influenza detections by subtypes/lineages reported to FluNet. The third plot displays the percentage of specimens testing positive for influenza during the current season (in red), the last season, and the average of the two pre COVID-19 seasons (2017-18 and 2018-19).

The FluCov Dashboard is live!

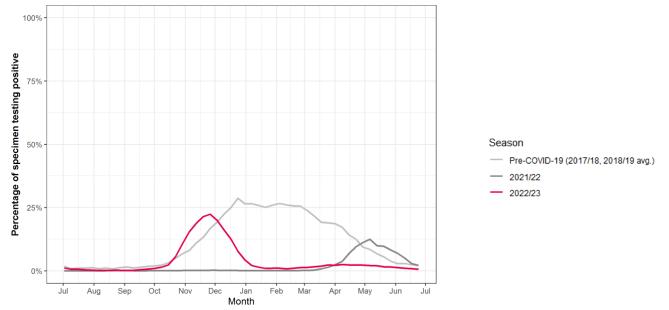
All Figures and Tables in the FluCov-Bulletin can now be accessed (real-time) at: <u>https://www.nivel.nl/en/dossier-epidemiology-respiratory-viruses/flucov-dashboard</u>

Countries (click to view plot)

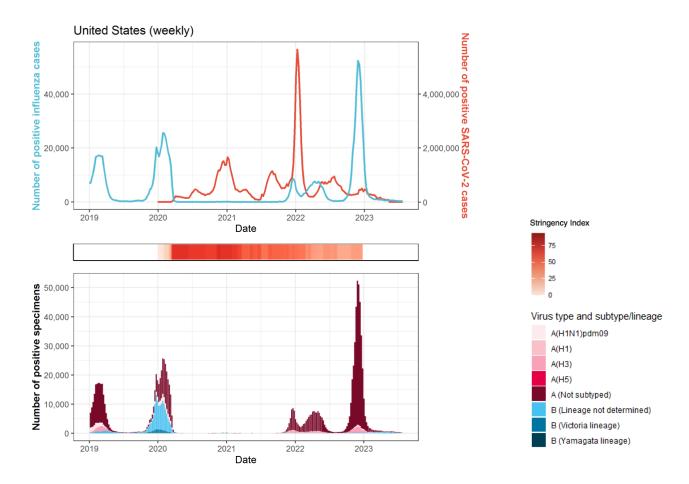
North America Canada United States	Northern Africa Egypt
	Southern Africa
Central America Caribbean Mexico	South Africa
	Eastern Asia
Tropical South America	China
Brazil	Japan
	South Korea
Northern Europe	
United Kingdom	Southern Asia India
Eastern Europe	
Poland	South East Asia Philippines
South West Europe	Thailand
France	Vietnam
Germany	
Italy	Western Asia
Netherlands	Israel
Spain	
	Oceania

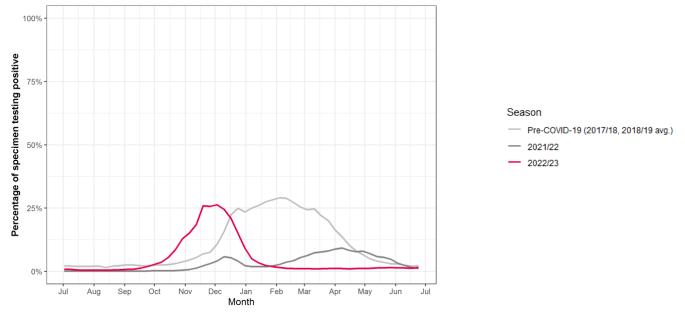


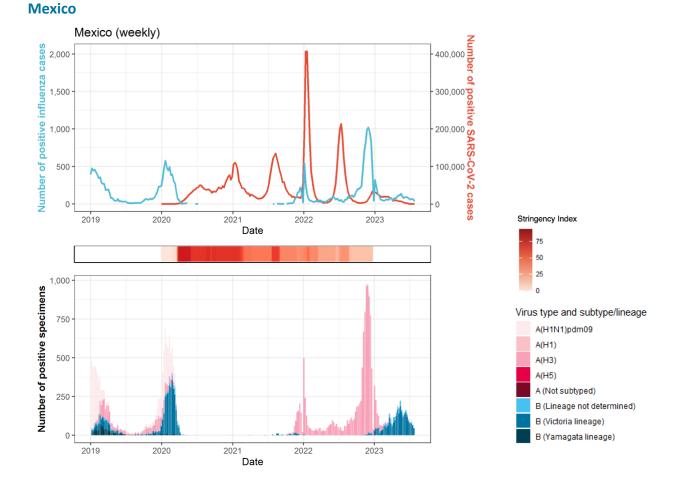
North America



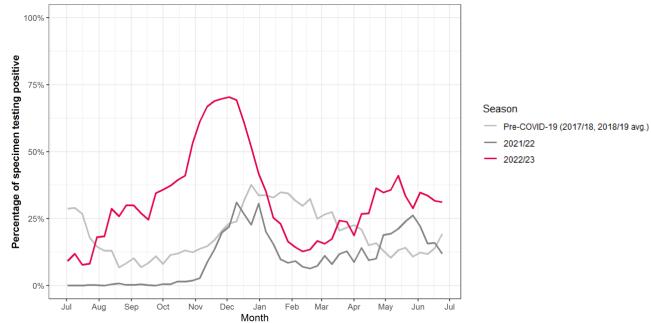
United States

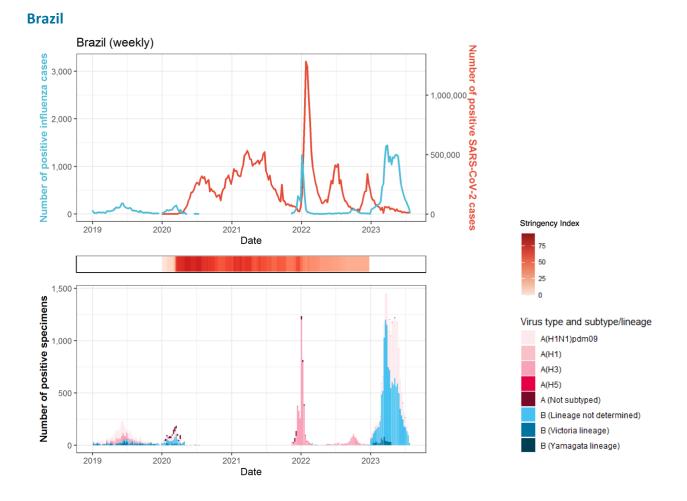






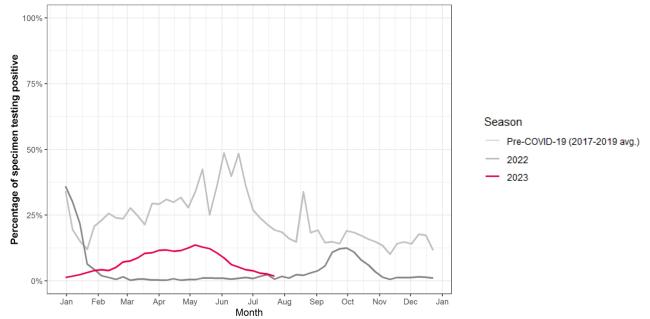
Central America Caribbean

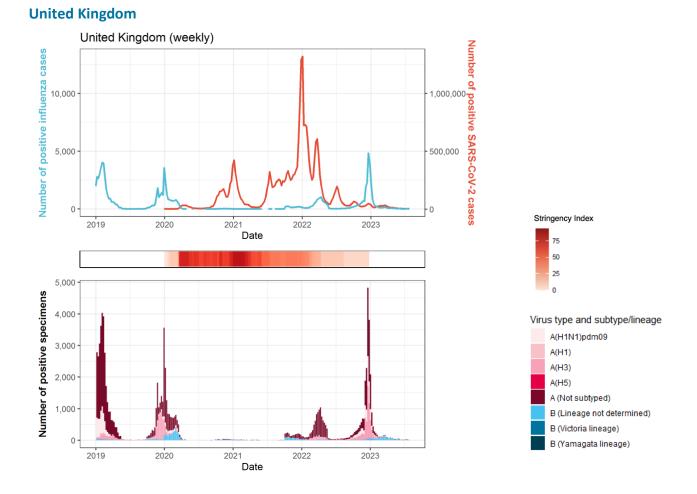




Tropical South America

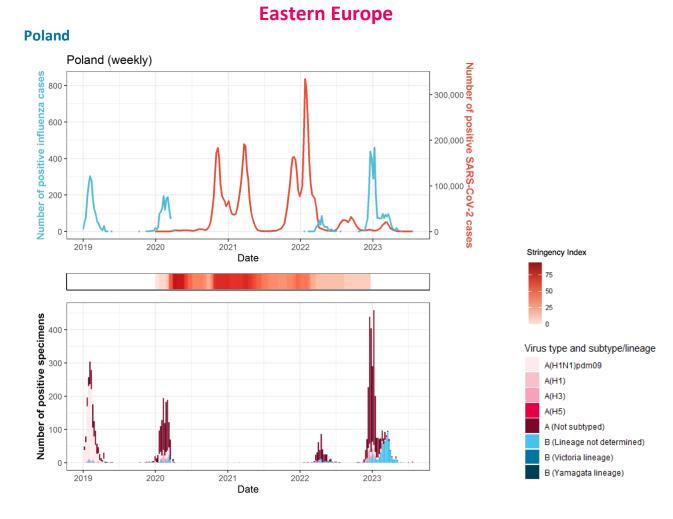
Percentage of specimens testing positive for influenza in different seasons



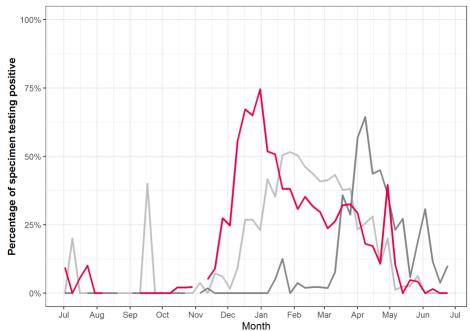


Northern Europe

Percentage of specimens testing positive for influenza in different seasons: data not available

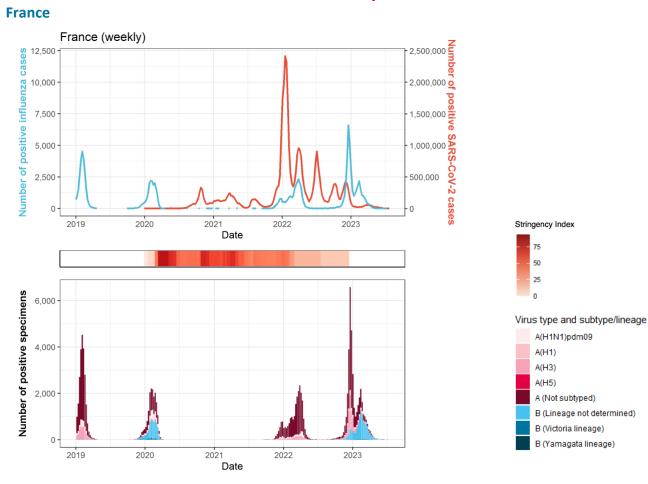


Percentage of specimens testing positive for influenza in different seasons



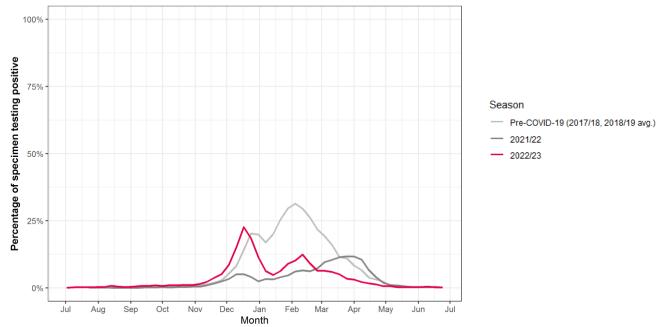
Season

- Pre-COVID-19 (2017/18, 2018/19 avg.)
- 2021/22
- 2022/23

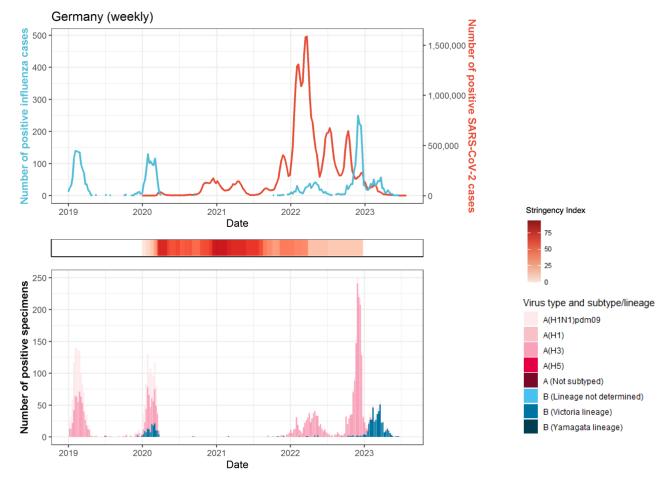


South West Europe

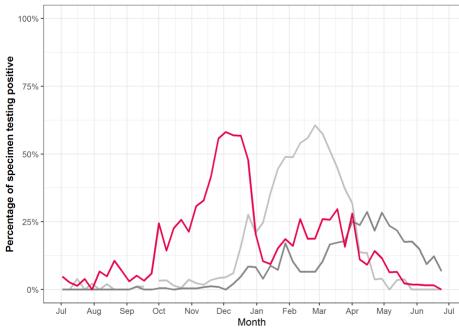




Germany

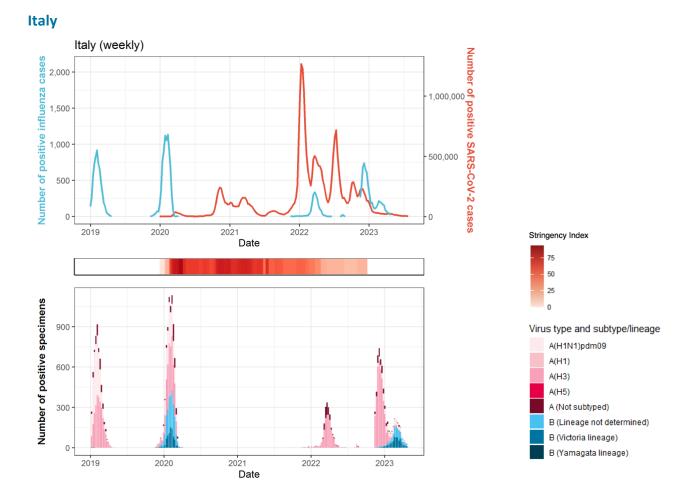


Percentage of specimens testing positive for influenza in different seasons

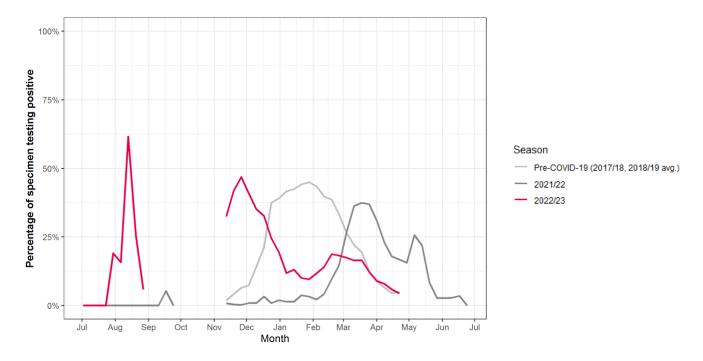


Season

- Pre-COVID-19 (2017/18, 2018/19 avg.)
- 2021/22
- 2022/23

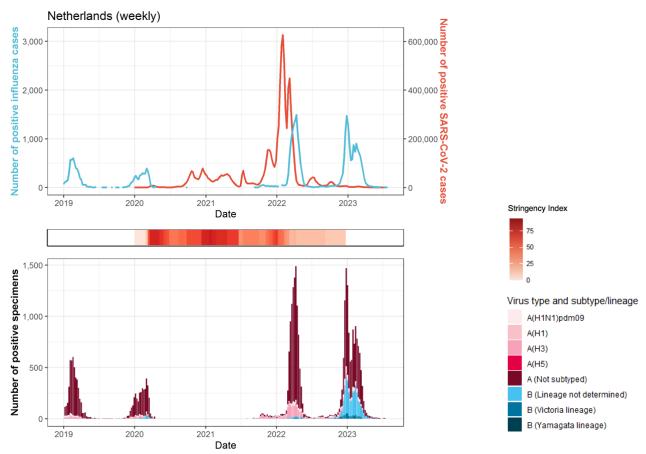


Percentage of specimens testing positive for influenza in different seasons



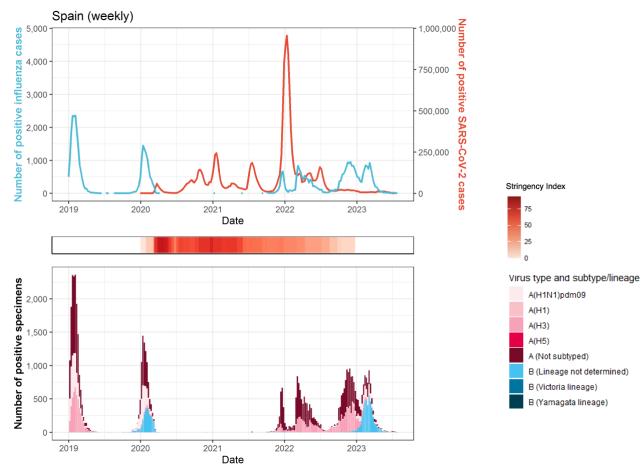
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Netherlands

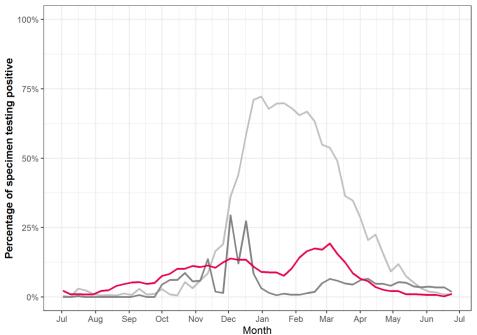


Percentage of specimens testing positive for influenza in different seasons: data not available



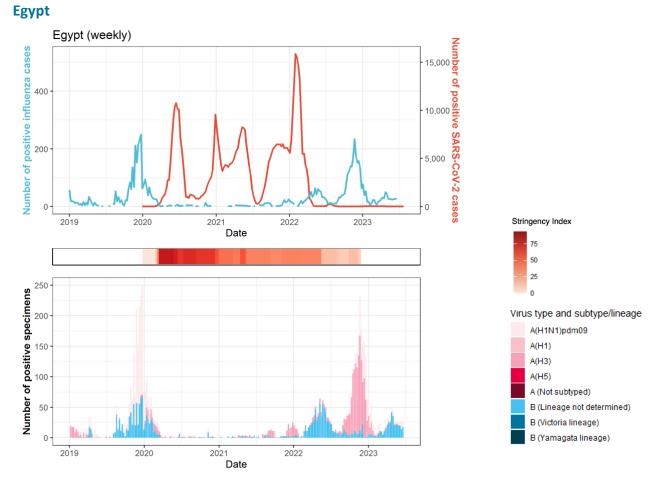


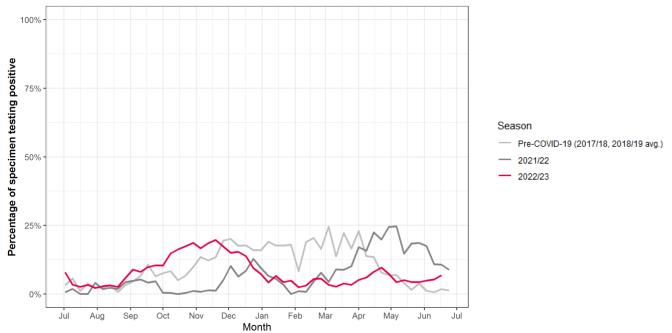
Percentage of specimens testing positive for influenza in different seasons



- Season
- Pre-COVID-19 (2017/18, 2018/19 avg.)
- 2021/22
- 2022/23

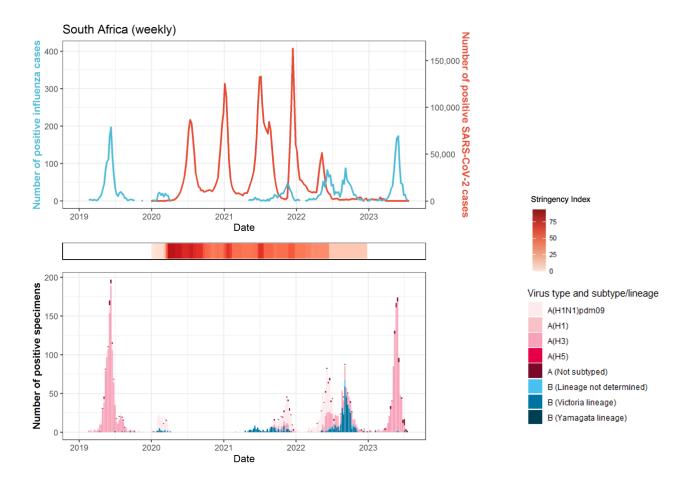
Northern Africa

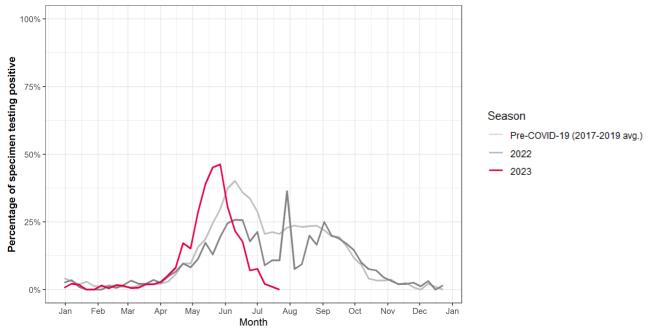




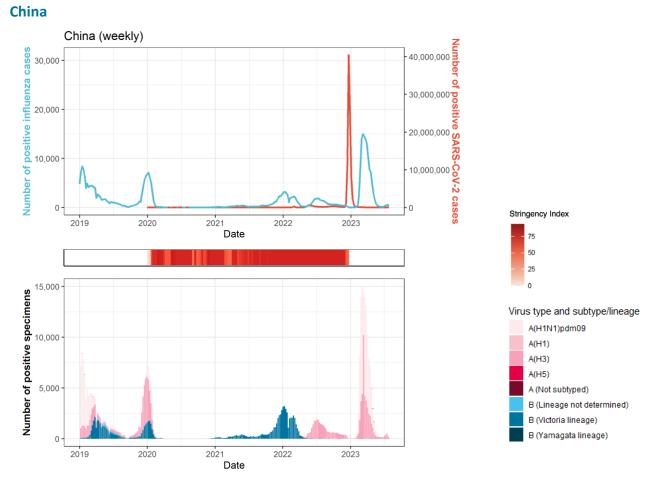
Southern Africa

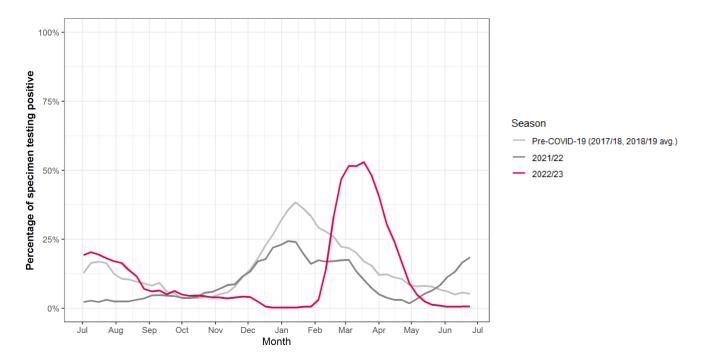
South Africa



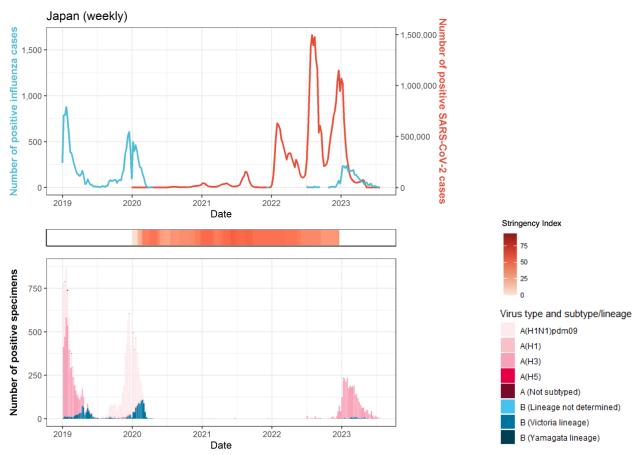


Eastern Asia



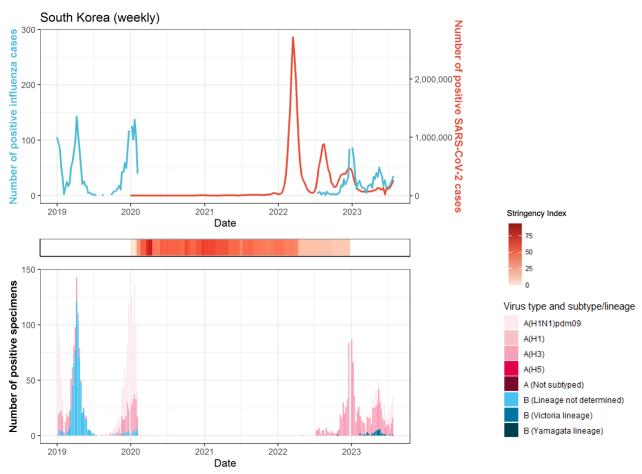




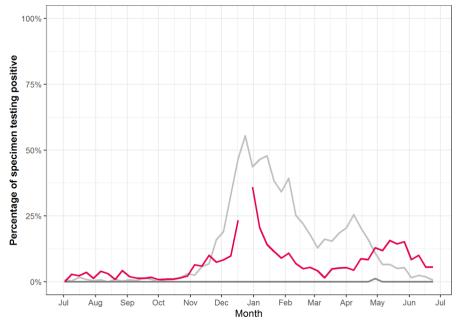


Percentage of specimens testing positive for influenza in different seasons: data not available

South Korea



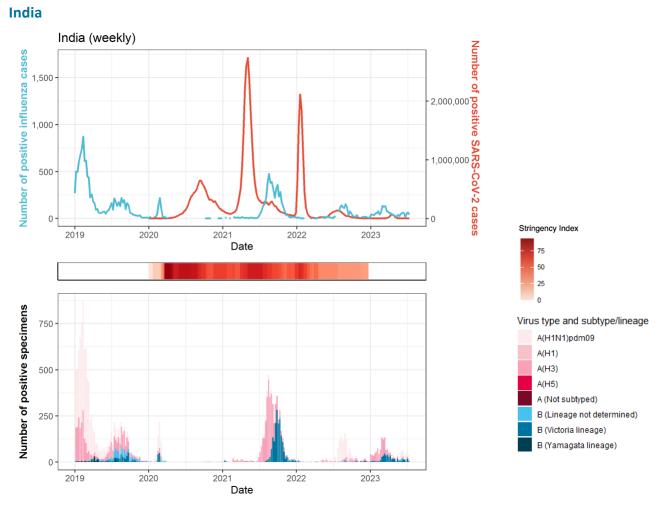
Percentage of specimens testing positive for influenza in different seasons



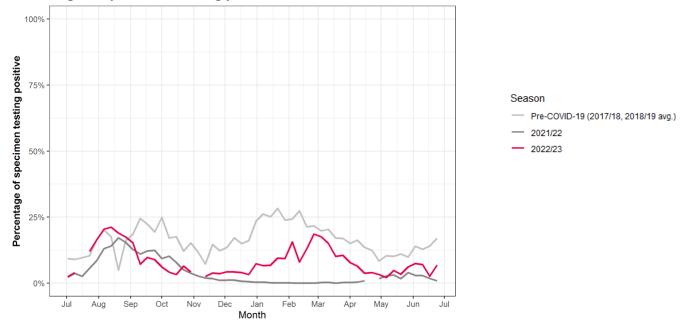
Season

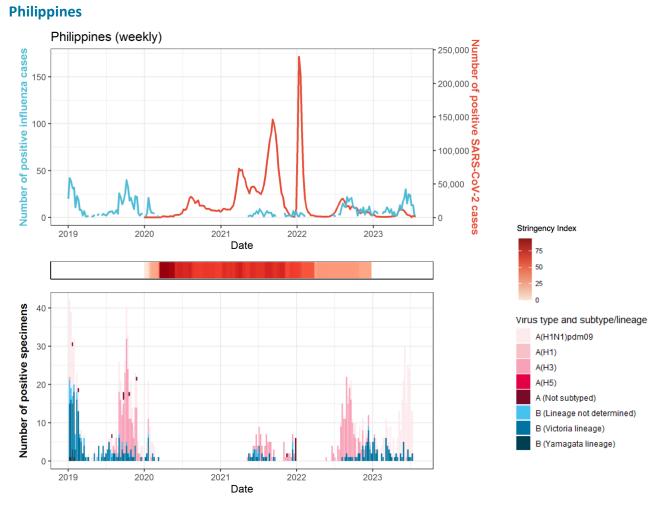
- Pre-COVID-19 (2017/18, 2018/19 avg.)
- 2021/22
- _____ 2022/23

Southern Asia



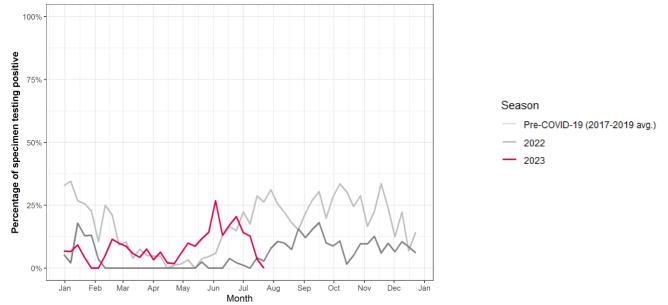
Percentage of specimens testing positive for influenza in different seasons



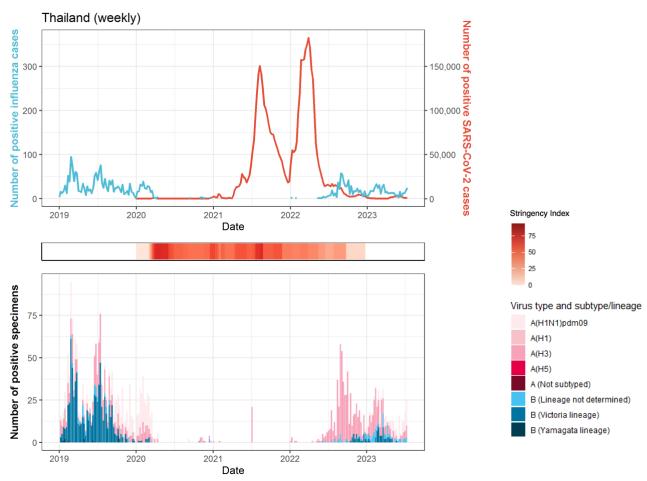


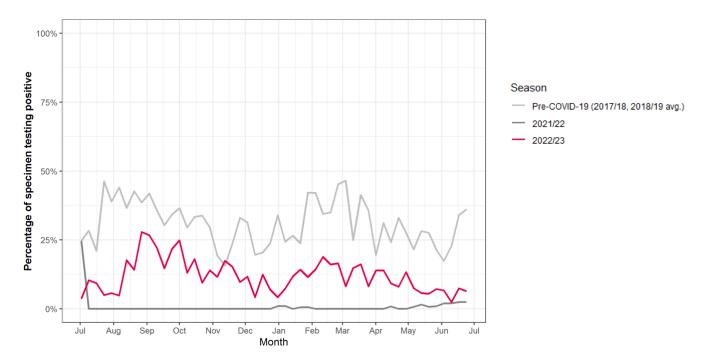
South-East Asia

Percentage of specimens testing positive for influenza in different seasons

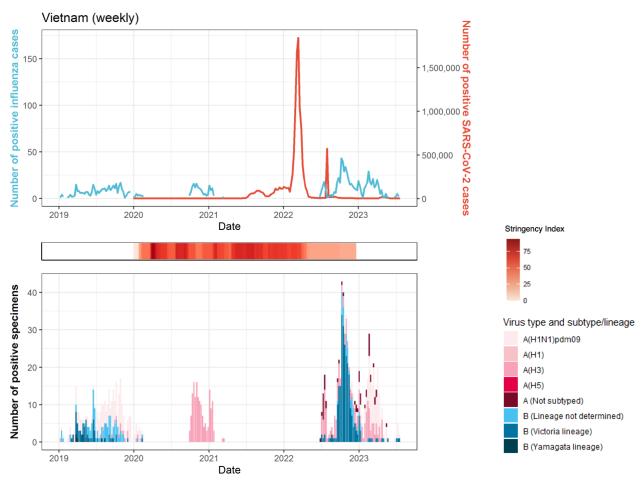


Thailand





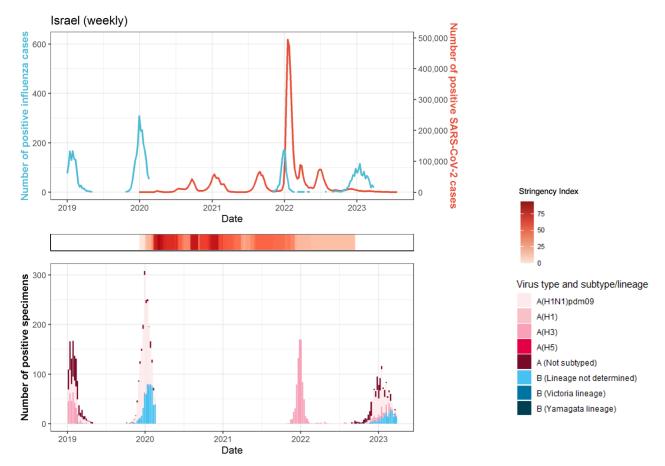
Vietnam

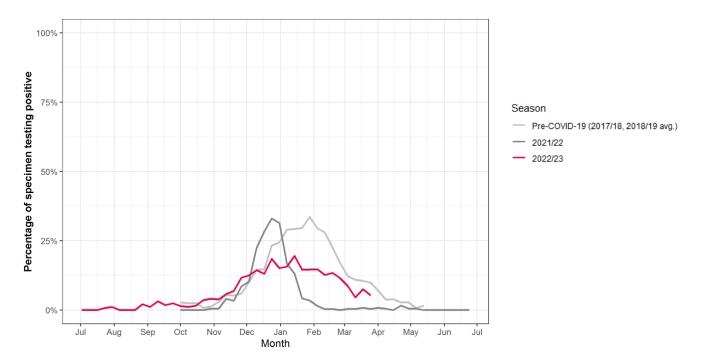


Percentage of specimens testing positive for influenza in different seasons: data not available

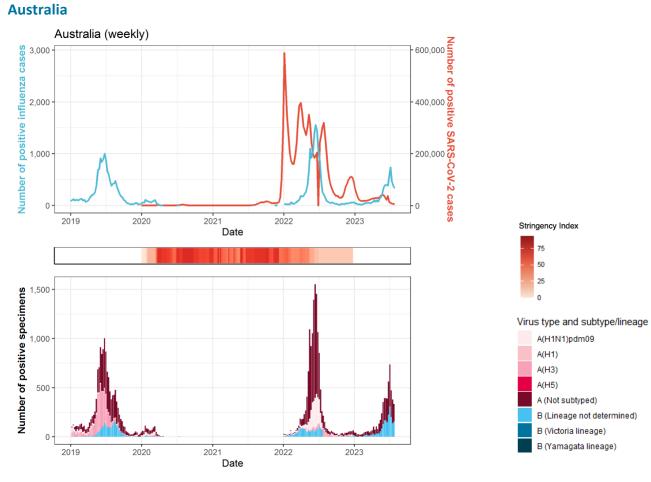
Western Asia



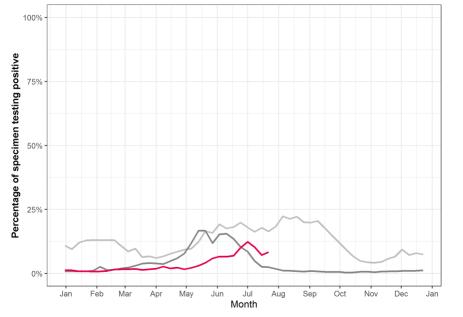




Oceania



Percentage of specimens testing positive for influenza in different seasons





- Pre-COVID-19 (2017-2019 avg.)
- 2022
- 2023

Absolute numbers per country

Country	Year	Cases ^{a,b} of	+/- since	Cases ^a of	+/- since	Week of last
		SARS-CoV-2	last month ^c	influenza	last month ^c	influenza update
Australia	2019			14,002		
Australia	2020	28,381		949		
Australia	2021	338,226		8		
Australia	2022	10,418,952		14,151		
Australia	2023	774,711	30,144	5,474	1,921	2023-30
Brazil	2019			3,459		
Brazil	2020	7,563,551		1,391		
Brazil	2021	14,700,856		1,240		
Brazil	2022	14,038,581		3,648		
Brazil	2023	1,414,647	61,012	19,470	626	2023-30
Canada	2019			43,196		
Canada	2020	565,508		44,956		
Canada	2021	1,536,966		337		
Canada	2022	2,390,310		71,314		
Canada	2023	204,724	7,859	11,019	264	2023-30
China	2019			122,757		
China	2020	96,673		31,295		
China	2021	35,398		26,183		
China	2022	84,792,971		56,455		
China	2023	14,374,998	10,884	120,586	1,633	2023-30
Egypt	2019			1,999		
Egypt	2020	136,644		659		
Egypt	2021	248,084		233		
Egypt	2022	130,805		2,709		
Egypt	2023	490	0	685	0	2023-25
France	2019			25,405		
France	2020	2,338,258		16,589		
France	2021	6,371,668		3,071		
France	2022	29,279,621		40,148		
France	2023	1,007,943	0	18,774	13	2023-28
Germany	2019			1,215		
Germany	2020	1,660,178		958		
Germany	2021	5,353,865		29		
Germany	2022	30,227,893		1,923		
Germany	2023	1,195,820	1,099	539	0	2023-30
India	2019			10,428		
India	2020	10,266,679		655		
India	2021	24,572,130		4,789		
India	2022	9,840,329		1,421		
India	2023	317,245	1,441	1,652	161	2023-29
Israel	2019			1,796		
Israel	2020	419,661		1,424		
Israel	2021	962,275		456		
Israel	2022	3,381,652		774		
Israel	2023	67,714	2,173	801	0	2023-13

SARS-CoV-2 last month* influenza last month* influenza update Italy 2019 .083,689 7,485	Country	Year	Cases ^{a,b} of	+/- since	Cases ^a of	+/- since	Week of last
Italy 2020 2,083,689 7,485 Italy 2021 3,897,739 31 Italy 2023 744,043 14,680 2,415 0 2023-17 Iapan 2019 10,343 13,687 13,687 13,687 Japan 2020 230,304 2,915 14,680 2,915 Japan 2022 27,7371,282 272 13,937 14,680 2019 10,343 Japan 2023 4,698,502 0 2,992 19 2023-29 Mexico 2019 - 6,963 - - Mexico 2021 2,538,755 960 - - Mexico 2023 361,728 15 2,738 230 2023-30 Netherlands 2019 - 5,166 - - - Netherlands 2019 2,313,304 471 - - - - - - - - - - - - - - - - - -			SARS-CoV-2	last month ^c	influenza	last month ^c	influenza update
Italy20213,87,73931Italy202219,187,0105,817Japan201910,343Japan201910,343Japan20211,503,4849Japan202227,371,282272Japan202227,371,282272Japan20222,7371,282272Mexico20211,465,0674,799Mexico20223,235,80510,314Mexico20233,61,72815Q2042,245,80510,314Mexico20233,61,72815Q2052,312,304471Netherlands20207,73,1983,235Netherlands20202,324,60514,863Netherlands20212,312,304471Netherlands20225,480,56514,863Philippines20212,312,304471Netherlands20222,472,52352Philippines20212,31,346105Philippines20211,271,346105Philippines20211,281,8012Poland20212,271,314,64Poland20212,281,8012Poland20212,281,8012Poland20222,251,871,604Poland20231,39,511,57South Africa20201,297,4001,282Poland20232,39530930South Africa2	Italy	2019			6,361		
Italy202219.187,0105.817Italy2023744,04314,6802,41502023-17Japan2020203,0142,915	Italy	2020	2,083,689		7,485		
Italy2023744,04314,6802,41502023-17Japan201910,343Japan2021230,3042,915Japan202227,371,282272Japan202227,371,282272Japan20224,698,50202,992Mexico20196,963Mexico20211,496,0674,799Mexico20223,236,80510,314Mexico2023361,728152,738Netherlands20195,166Netherlands20225,480,56514,863Netherlands20225,480,56514,863Netherlands20225,480,56514,863Netherlands20212,371,346105Philippines2020477,52352Philippines20212,371,346105Philippines20211,218,700260Philippines20211,218,700260Philippines20211,218,700260Philippines20211,218,700260Philippines20221,224,7031,604Poland202310,9161,57South Africa202923,9350South Africa20202,34,930South Africa20202,39,930South Africa20212,40,73,71413South Africa20222,39,530South Africa20222,34,530 <td>Italy</td> <td>2021</td> <td>3,897,739</td> <td></td> <td>31</td> <td></td> <td></td>	Italy	2021	3,897,739		31		
Japan201910,343Japan2020230,3042,915Japan20211,503,4849Japan202227,371,282272Japan20234,698,50202,992Mexico20196,963Mexico20212,538,755960Mexico2022361,728152,7382023361,728152,738230Netherlands2020773,1983,235Netherlands20212,312,304471Netherlands20225,480,56514,863Netherlands20225,05514,863Netherlands20225,05514,863Netherlands20225,13252Philippines2020472,52352Philippines20212,313,346105Philippines20212,317,346105Philippines20221,281,870260Philippines20221,281,8102Poland20212,259,1871,604Poland20212,247,9015South Africa20211,297,4001,282Poland20222,259,1871,604Poland20212,407,371413South Africa20212,407,371413South Africa20212,407,371413South Africa202260,6481,171South Africa20222,8424,023295South Korea<	Italy	2022	19,187,010		5,817		
Japan 2020 230,304 2,915 Japan 2021 1,503,484 9 Japan 2022 27,371,282 272 Japan 2023 4,689,502 0 2,992 19 2023-29 Mexico 2010 1,496,067 4,799 Mexico 2021 2,538,755 960 Mexico 2023 3,236,805 10,314 Mexico 2023 3,21,2304 471 Netherfands 2012 2,312,304 471 Netherfands 2022 5,480,565 14,863 Netherfands 2022 5,480,565 14,863 Philippines 2012 2,312,304 471 Netherfands 2023 50,532 359 9,210 15 2023-30 Philippines 2012 2,313,46 105 Philippines 2021 1,218,790 260 Philippines 2022 1,218,790 260 Poland 2021 2,914,900 286 1,604 Poland 2021 2,974,00 1,282 <	Italy	2023	744,043	14,680	2,415	0	2023-17
japan2020230,3042,915Japan20211,503,4849Japan20234,698,50202,992192023-29Mexico20196,963Mexico20211,496,0674,799Mexico20223,238,755960Mexico2023361,728152,7382302023-30Netherlands20195,166Netherlands2020773,1983,235Netherlands20212,312,304471Netherlands20225,480,56514,863Netherlands202350,5323599,210152023-30Philippines20142,371,346105Philippines20212,312,700260Philippines20221,2618,560270282023-30Poland20191,786Poland20201,297,4001,282Poland20212,811,8012South Africa20212,9491,604Poland20221,039,161157South Africa20212,9530930232023-30South Africa202223,9530930232023-30South Africa20212,74,	Japan	2019			10,343		
Japan202227,371,282272Japan20234,698,50202,992192023-29Mexico20201,496,0674,799		2020	230,304		2,915		
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	Thailand	2023	31,256	3,612	505	95	2023-30

Country	Year	Cases ^{a,b} of SARS-CoV-2	+/- since last month ^c	Cases ^a of influenza	+/- since last month ^c	Week of last influenza update
United Kingdom	2019			42,447		
United Kingdom	2020	2,563,561		14,377		
United Kingdom	2021	10,878,143		2,755		
United Kingdom	2022	10,752,821		26,896		
United Kingdom	2023	456,850	11,522	5,706	82	2023-30
United States	2019			268,524		
United States	2020	19,577,585		229,766		
United States	2021	33,956,701		39,507		
United States	2022	45,877,410		469,968		
United States	2023	4,025,133	0	44,011	1,221	2023-30
Vietnam	2019			355		
Vietnam	2020	1,456		146		
Vietnam	2021	1,729,801		39		
Vietnam	2022	9,793,887		399		
Vietnam	2023	96,668	1,330	255	9	2023-29

^a Laboratory-confirmed cases.

^b As of the 24th bulletin, the data source, used by Our World In Data, for SARS-CoV-2 cases has been changed retrospectively. As a result, yearly totals displayed in this table may differ from those in previous bulletins.

^c 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. +/- since last month includes all cases over the last full calendar month.

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 FluCov-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) [7].

Data sources

- Influenza: FluNet [8] 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 [9]. We used this platform to extract data on the number of cases, as well as tests performed per country. As of 8 March 2023, Our World in Data changed their primary data source from the John Hopkins repository on daily confirmed COVID-19 cases to the WHO [10].
- Government response tracker: The Oxford COVID-19 Government Response Tracker (OxCGRT) [7] 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 24 July 2023 and cover the period 1 January 2019 to 30 July 2023 (Influenza) and 7 Aug (SARS-CoV-2). 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 <u>flucov@nivel.nl</u>.

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Websites

Project Website: <u>https://www.nivel.nl/en/flucov</u> FluCoV Dashboard: <u>https://www.nivel.nl/en/dossier-epidemiology-respiratory-viruses/flucov-dashboard</u>

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