NIVEL
Research for better care

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.

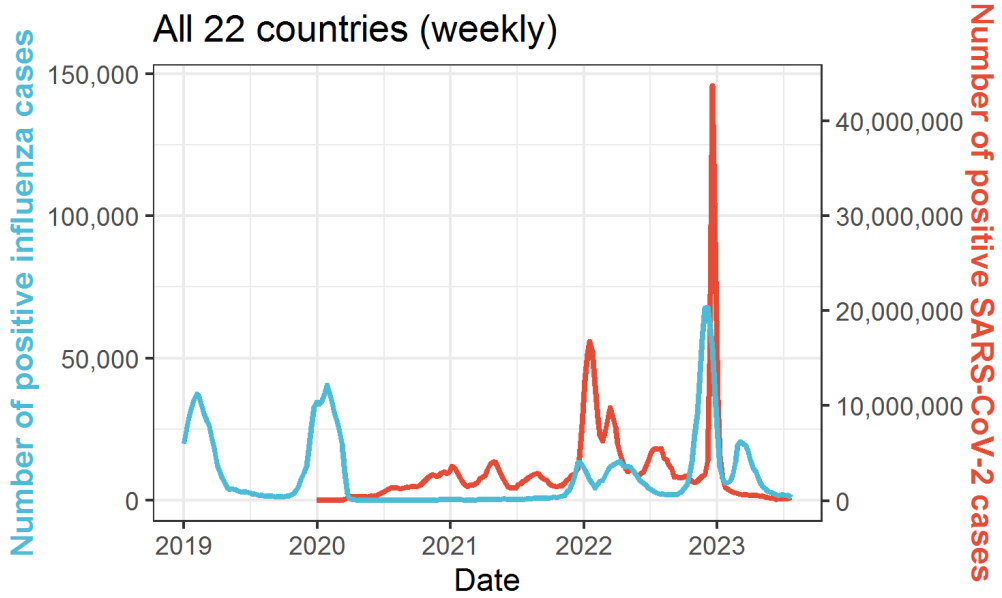


Figure 1: SARS-CoV-2 and influenza detections in the 22 countries covered by the Bulletin (period: from week 1/2019 to week 30/2023)

Disclaimer: Comparisons between countries and seasons 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:
https://www.nivel.nl/en/dossier-epidemiology-respiratory-viruses/flucov-dashboard

Countries (click to view plot)

North America
Canada
United States

Central America Caribbean
Mexico

Tropical South America
Brazil

Northern Europe
United Kingdom

Eastern Europe
Poland

South West Europe
France
Germany
Italy
Netherlands
Spain

Northern Africa
Egypt

Southern Africa
South Africa

Eastern Asia
China
Japan
South Korea

Southern Asia
India

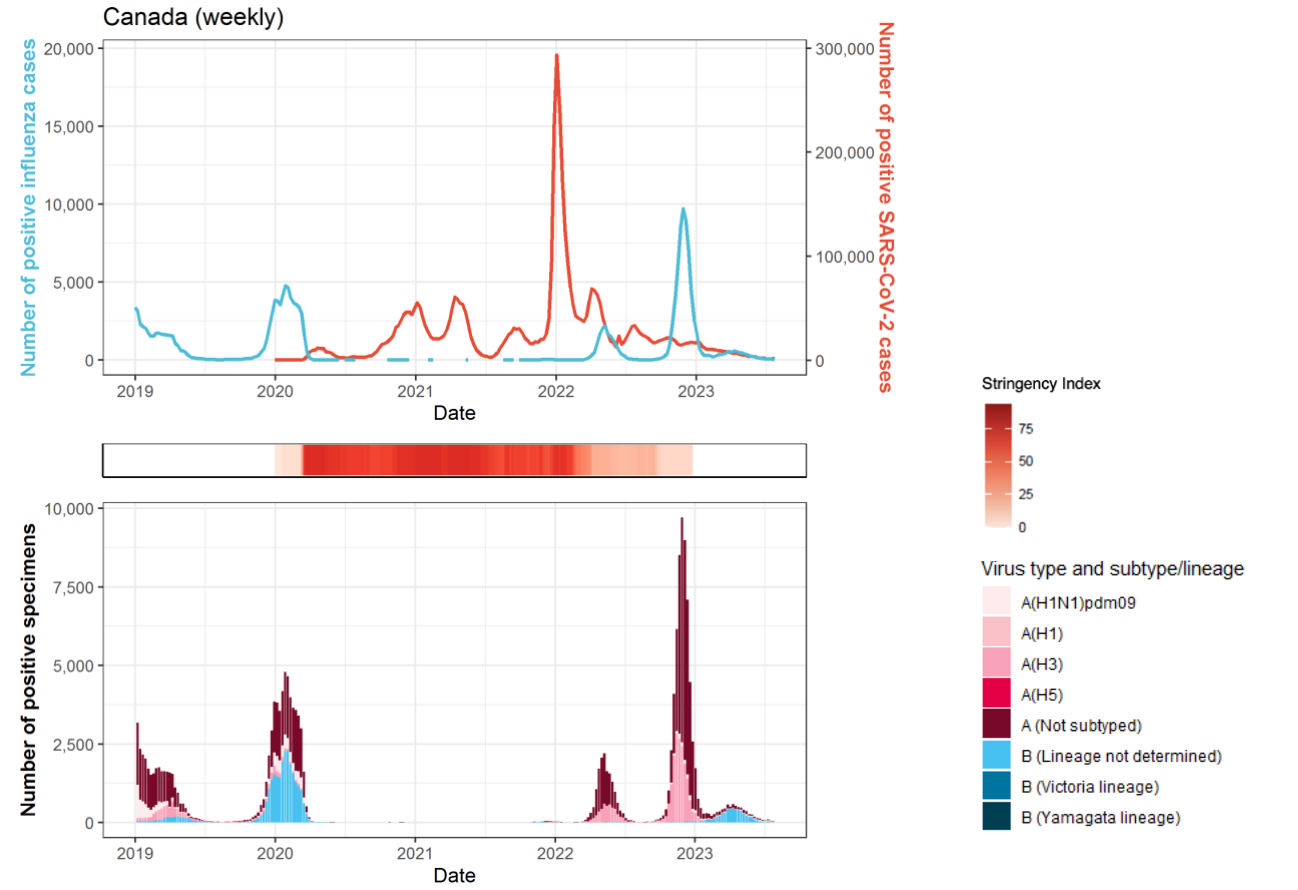
South East Asia
Philippines
Thailand
Vietnam

Western Asia
Israel

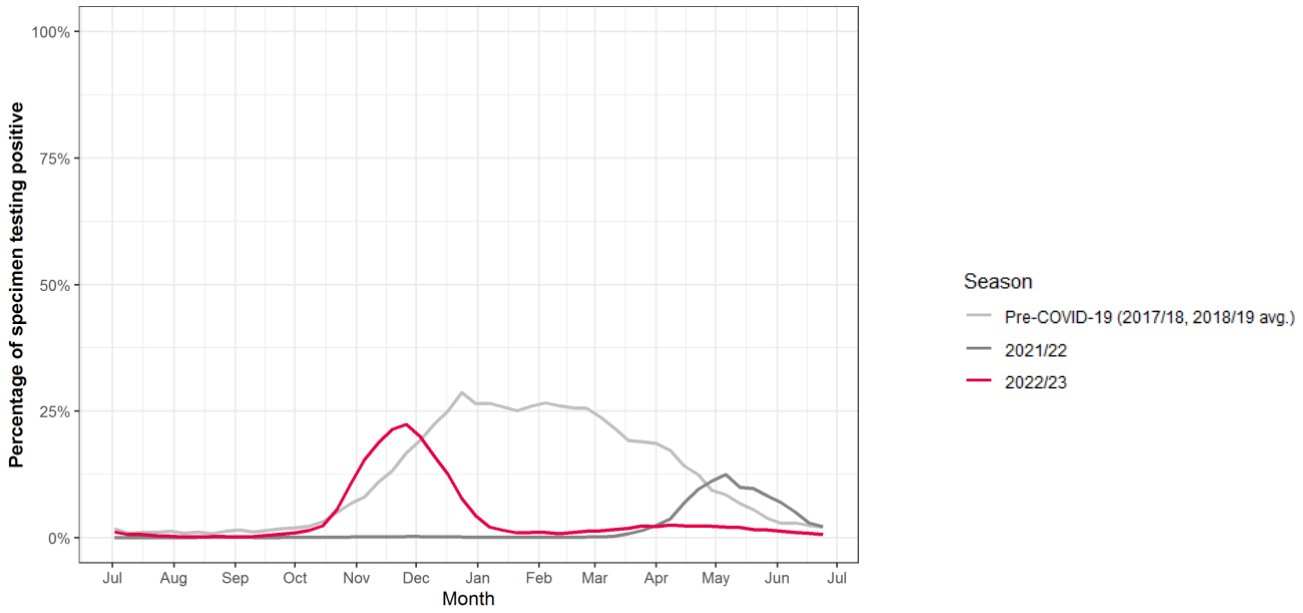
Oceania
Australia

North America

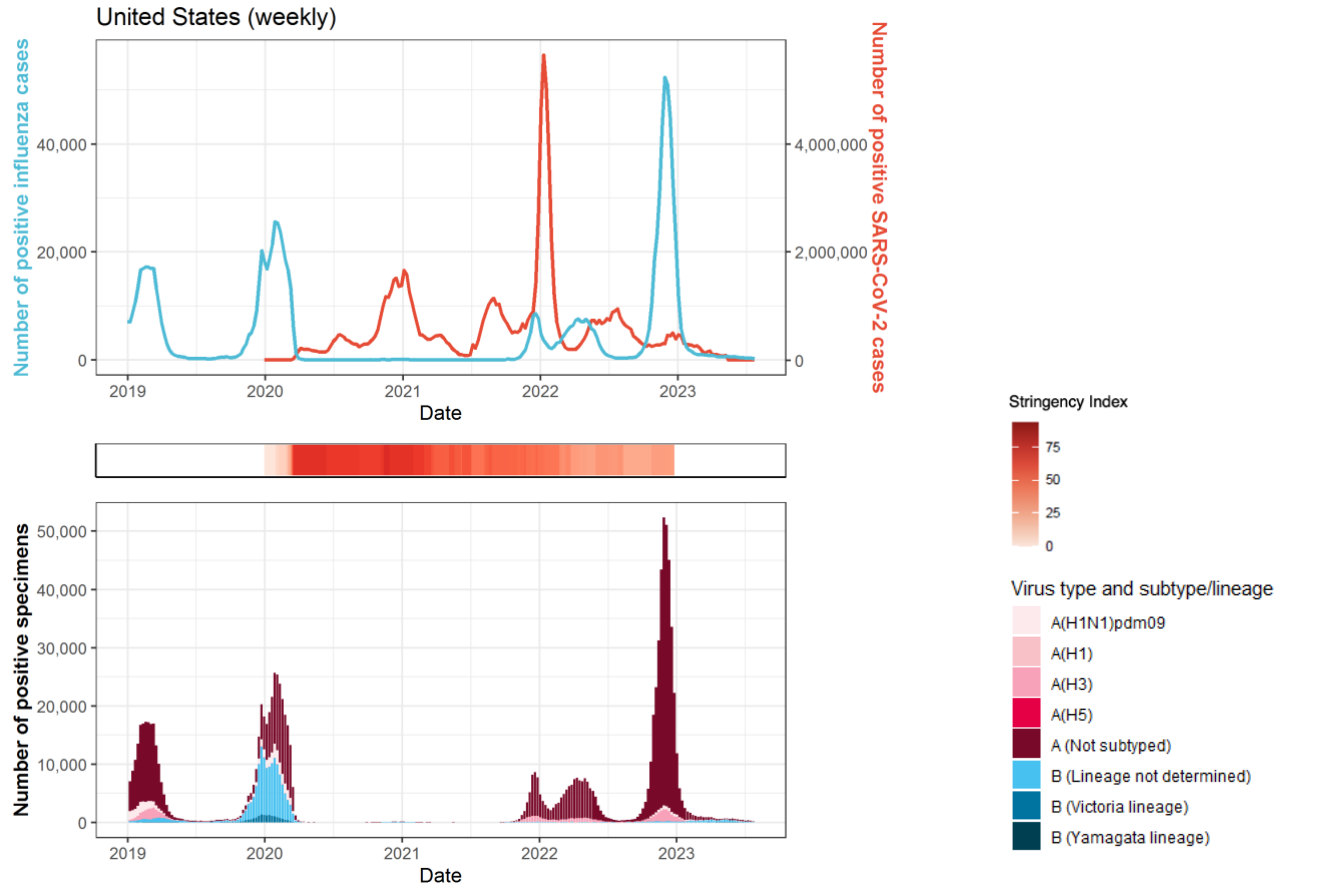
Canada



Percentage of specimens testing positive for influenza in different seasons



United States



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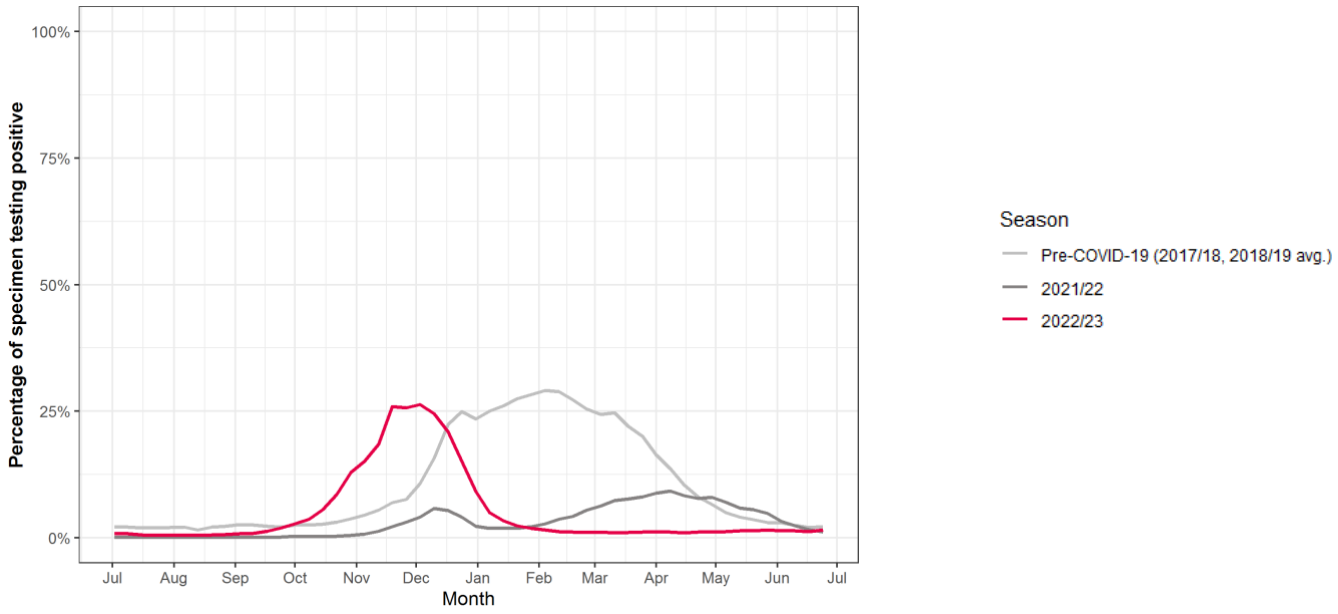
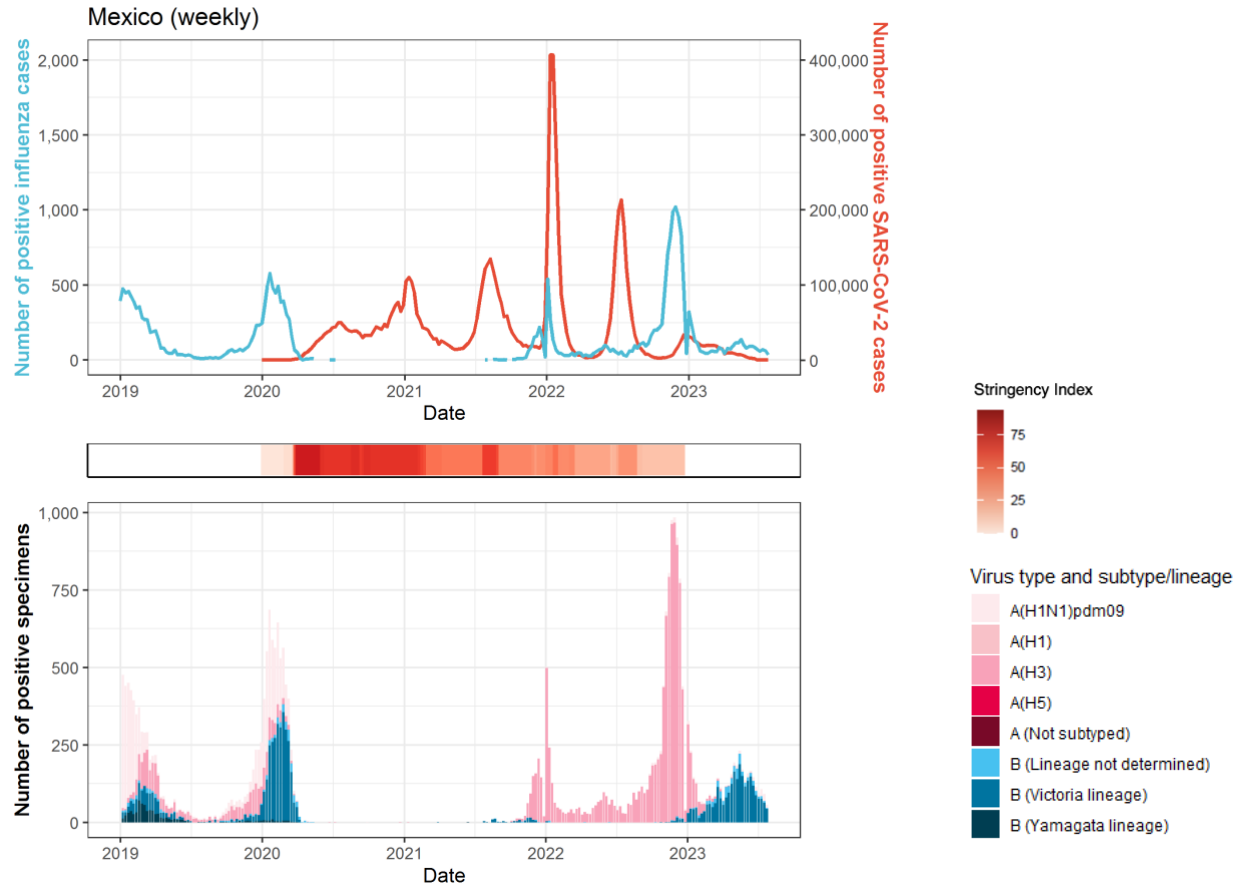


Central America Caribbean

Mexico



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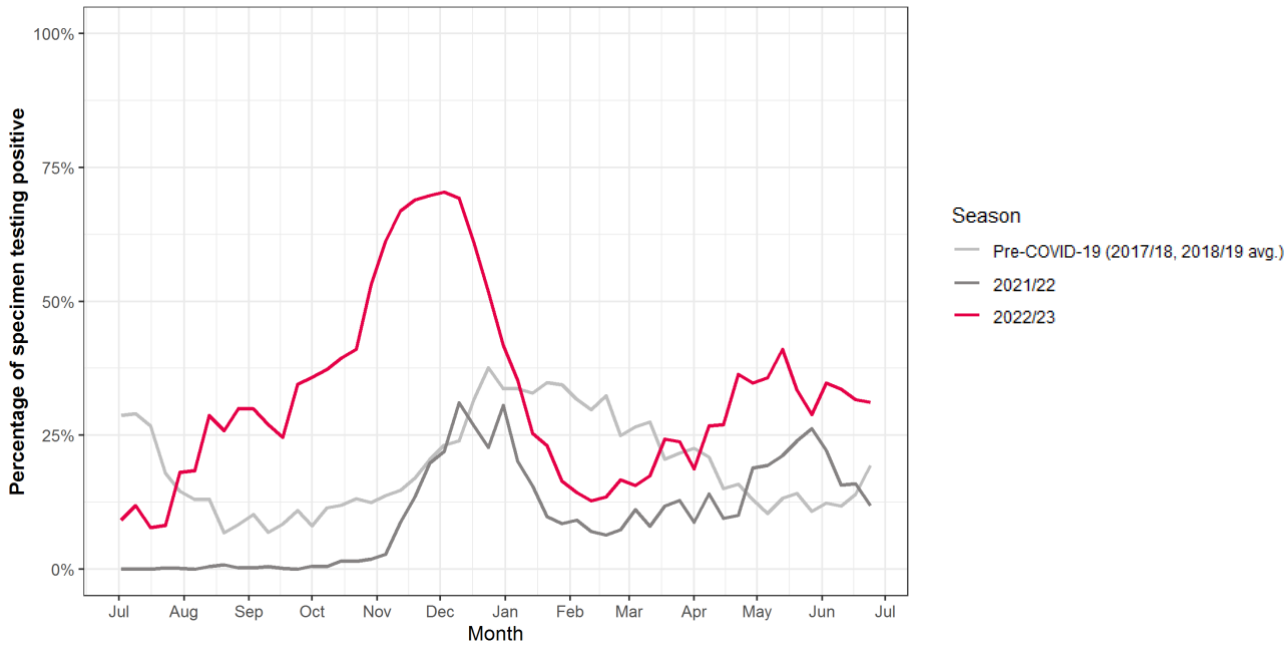
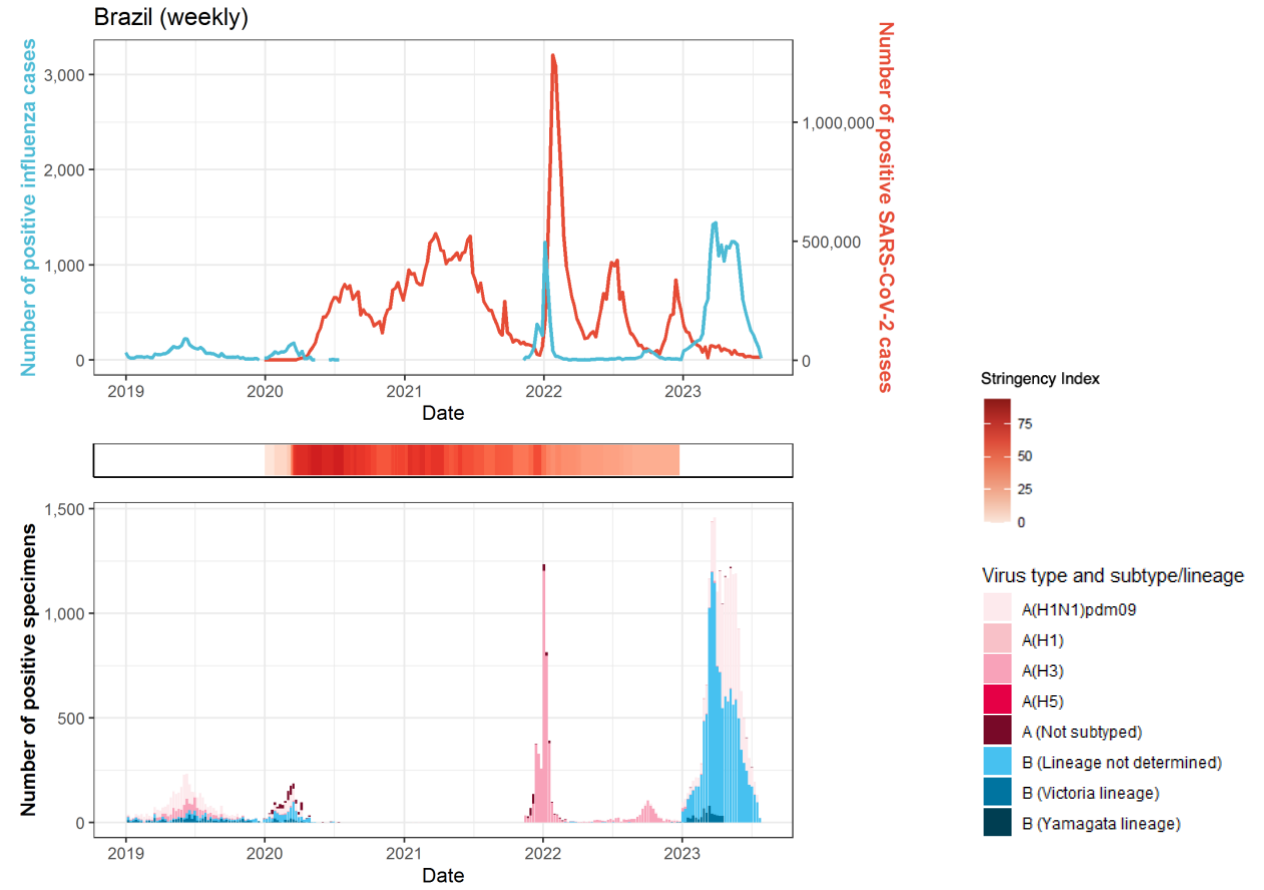


Tropical South America

Brazil



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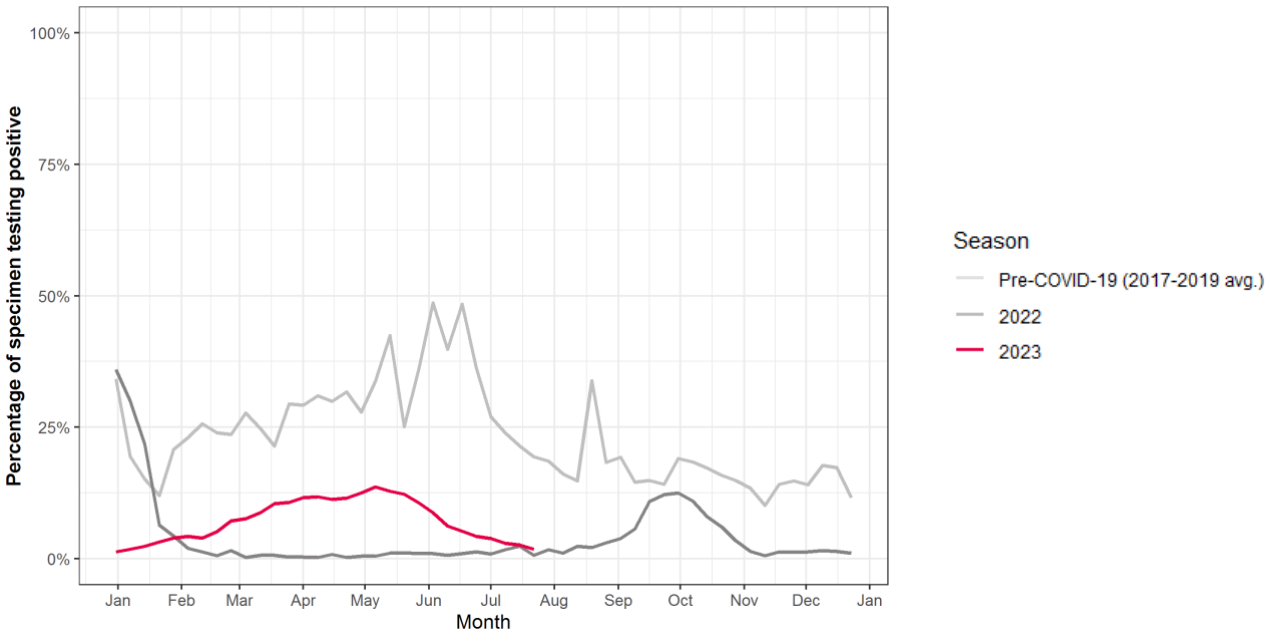
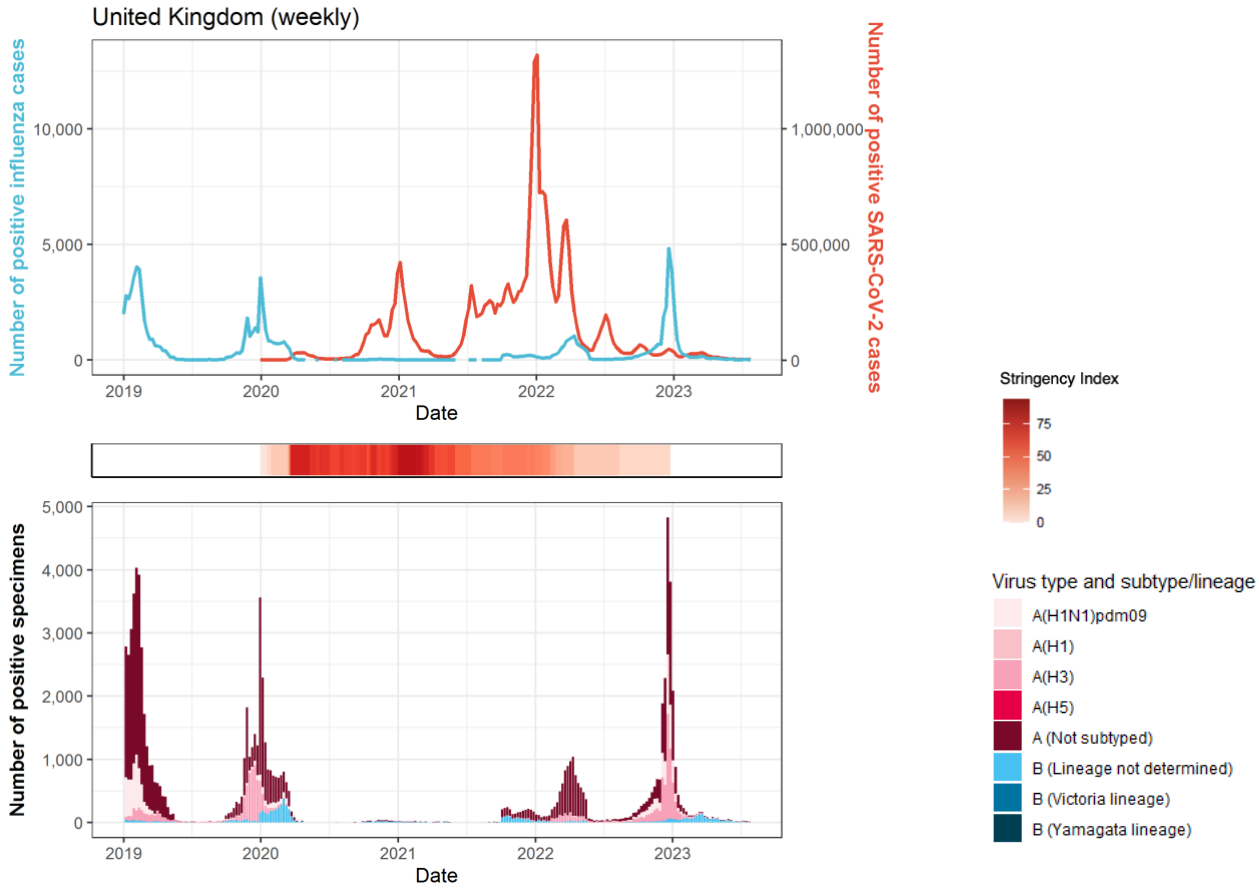


Northern Europe

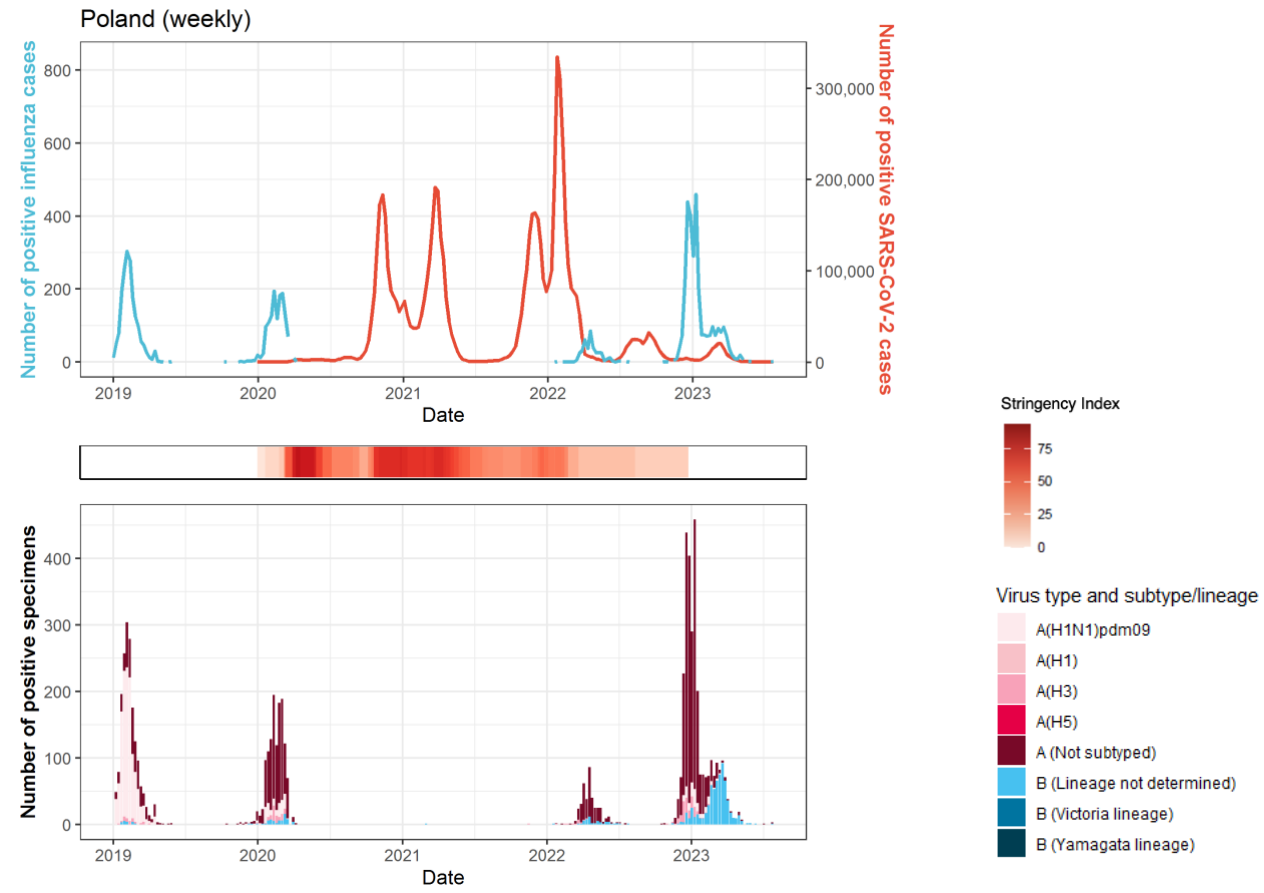
United Kingdom



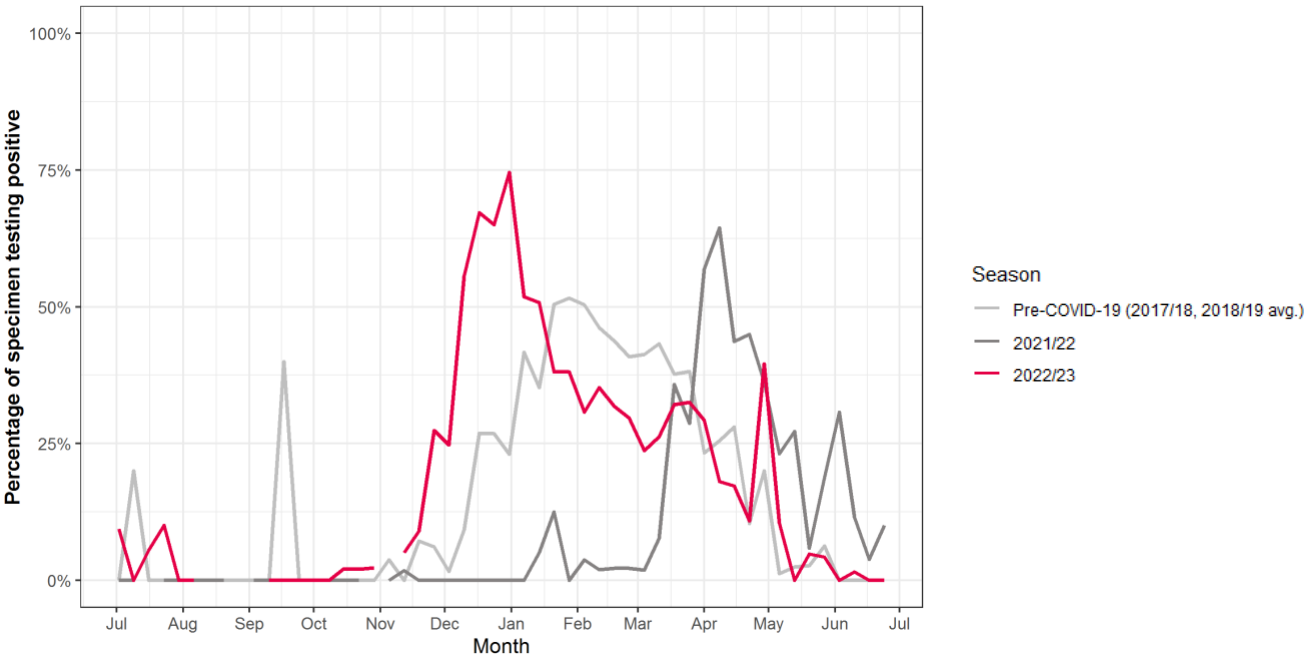
Percentage of specimens testing positive for influenza in different seasons: data not available

Eastern Europe

Poland

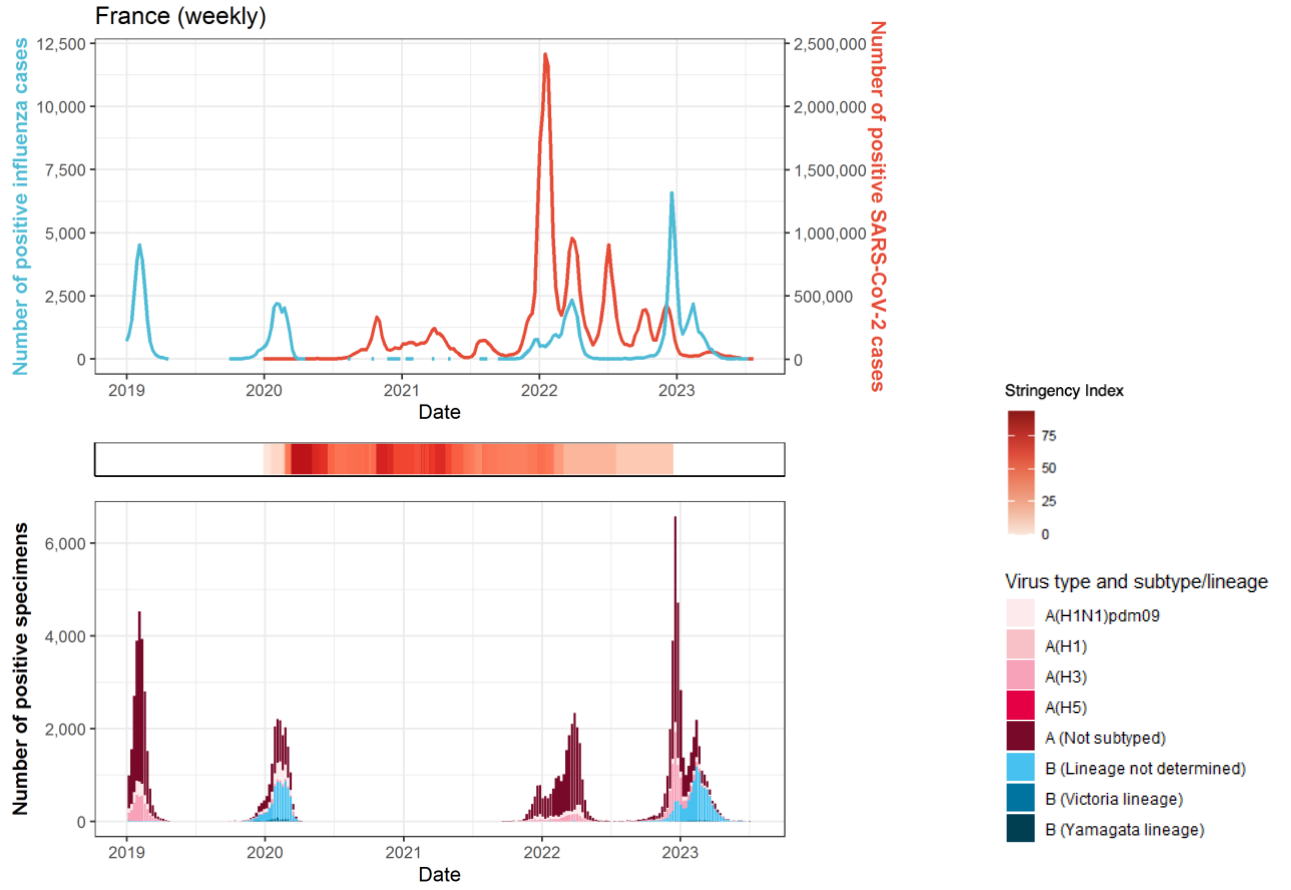


Percentage of specimens testing positive for influenza in different seasons



South West Europe

France



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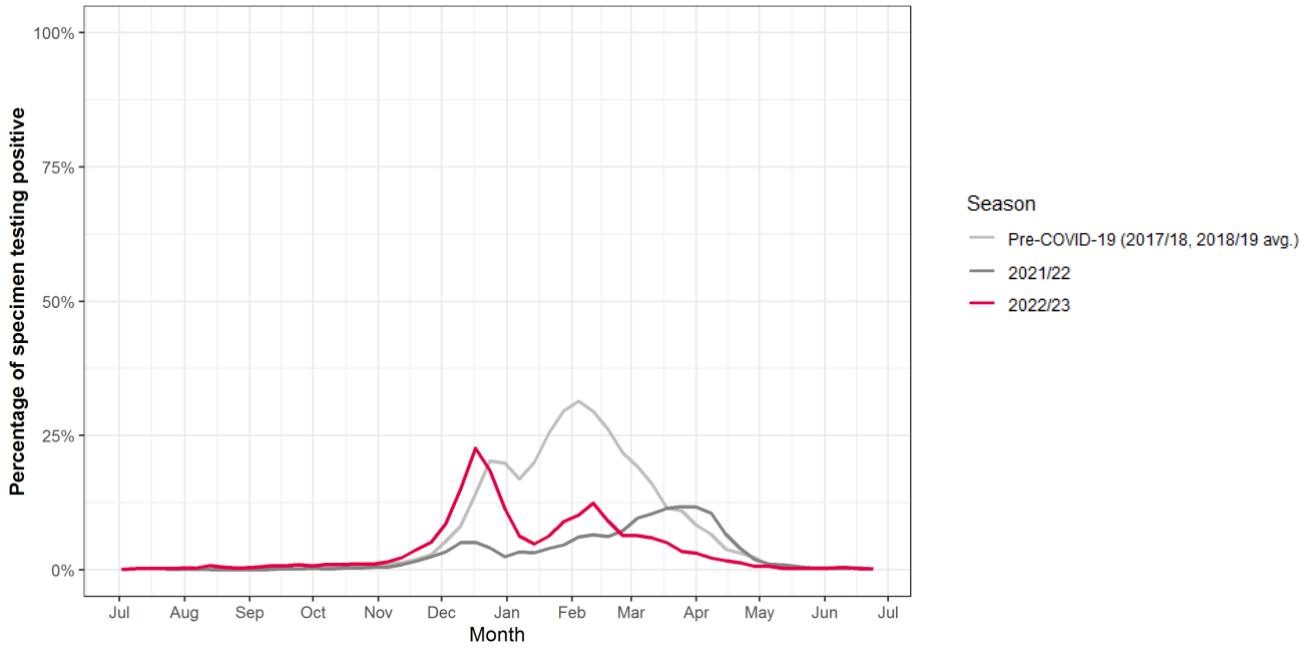
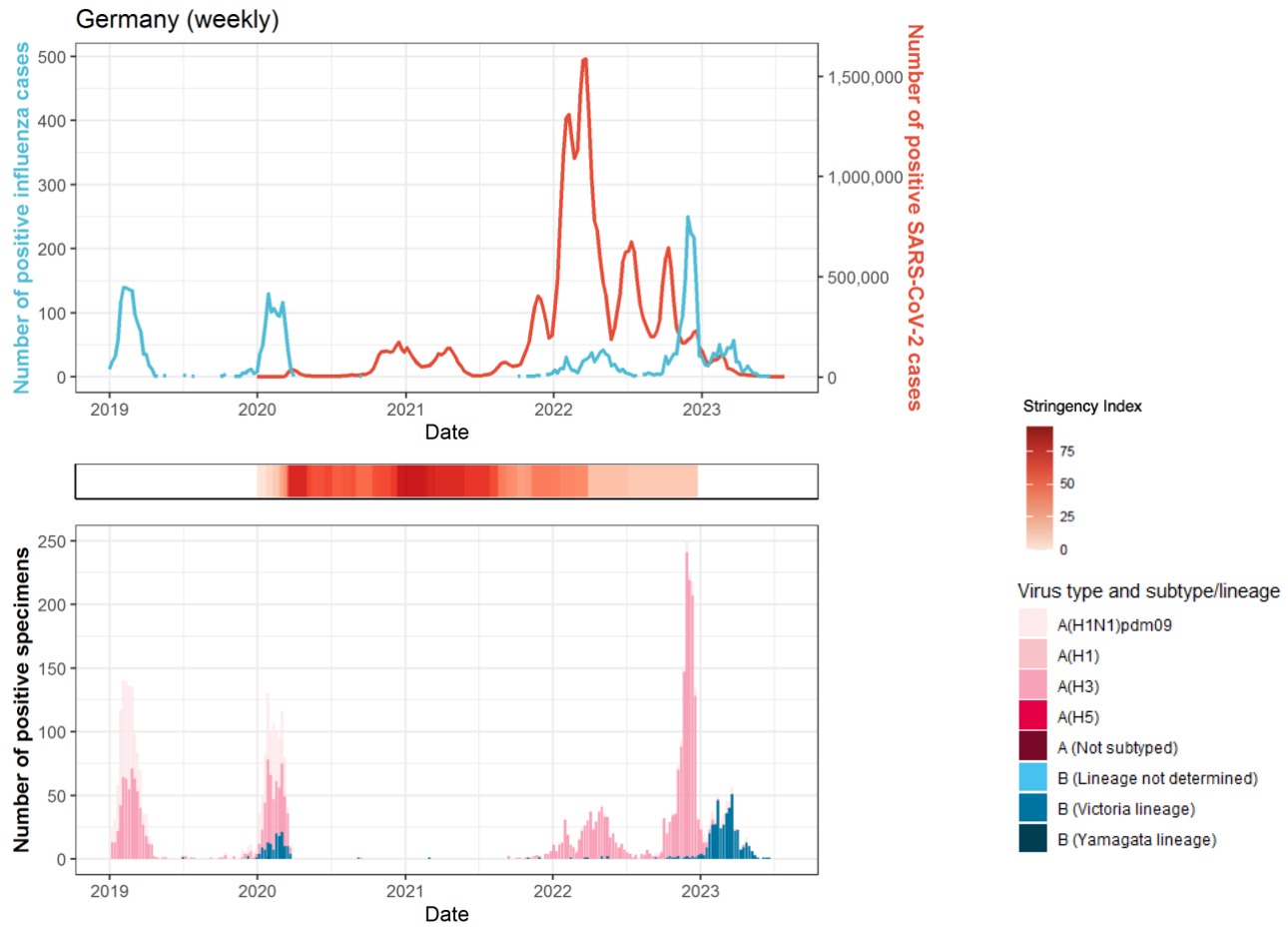


Germany



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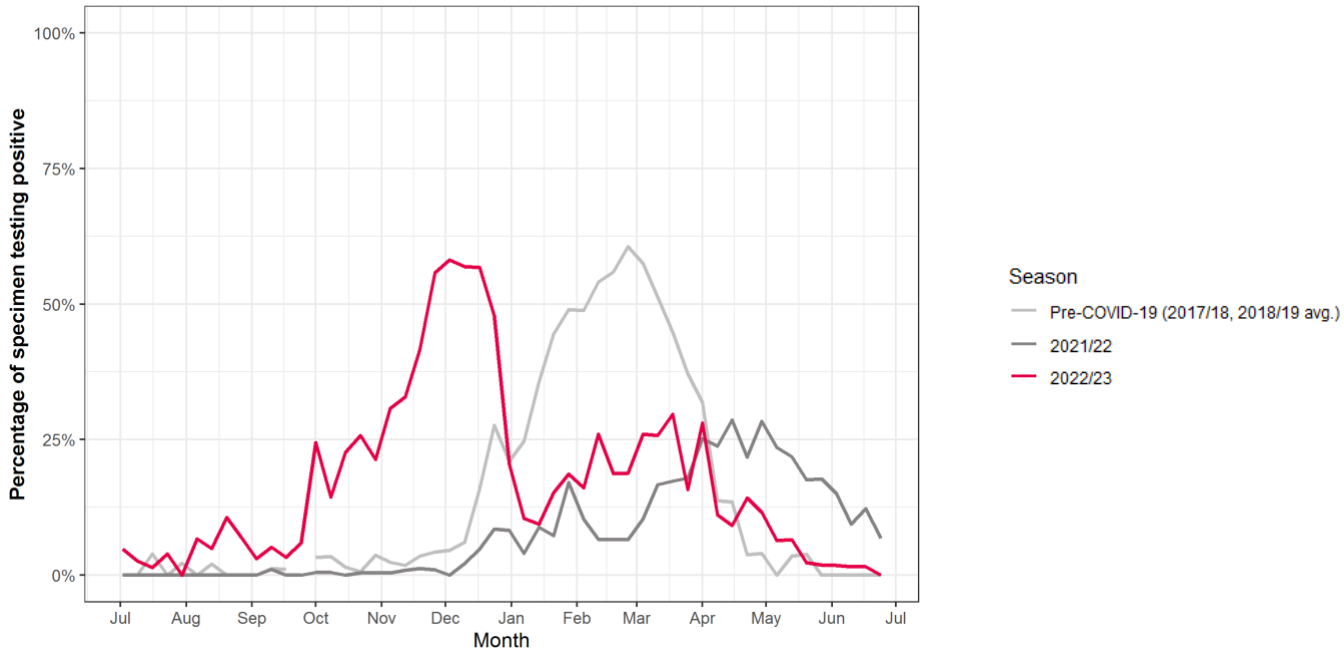

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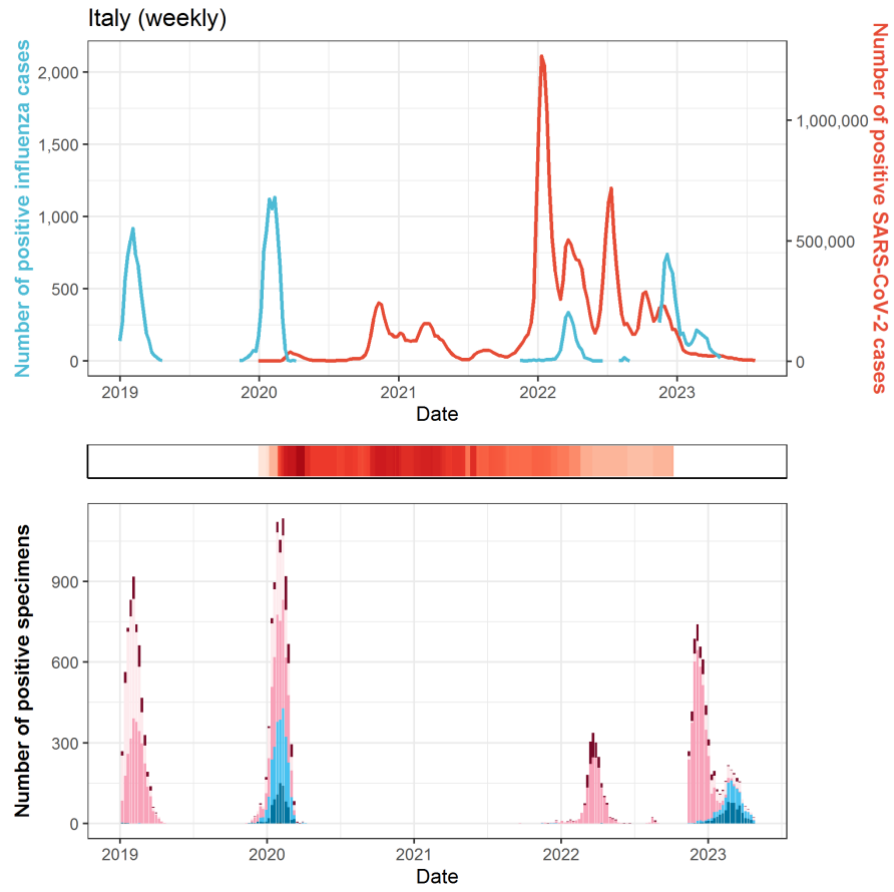

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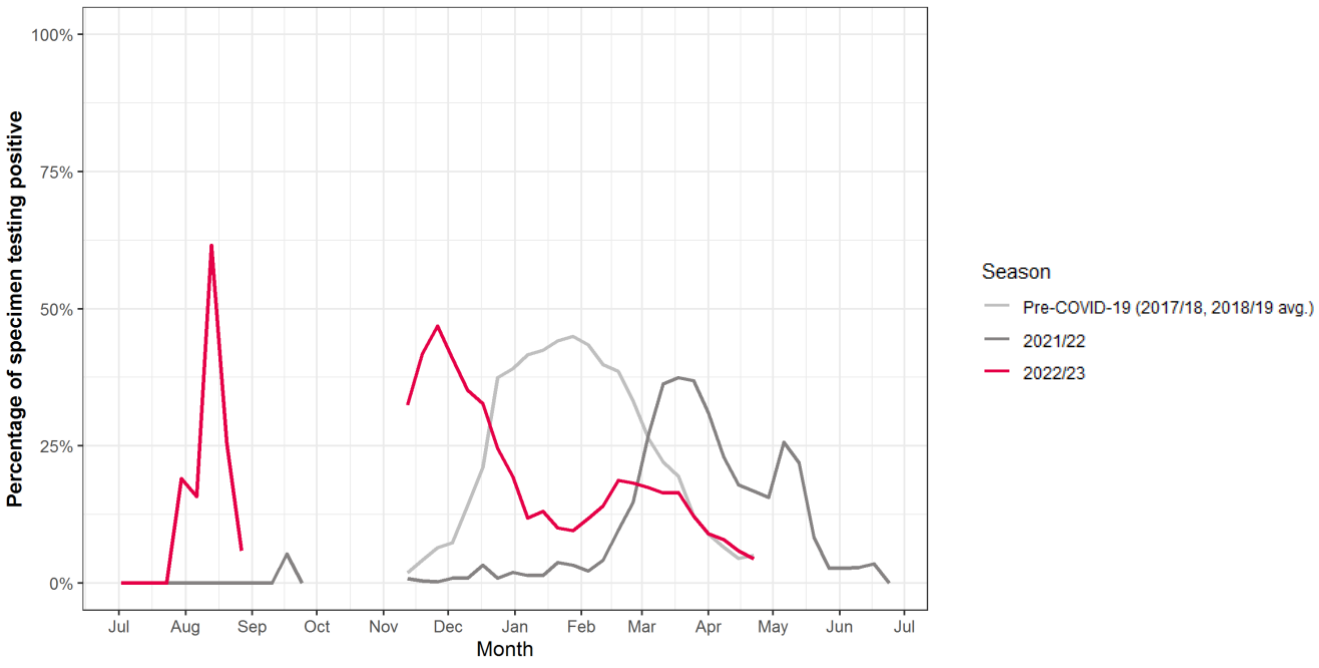

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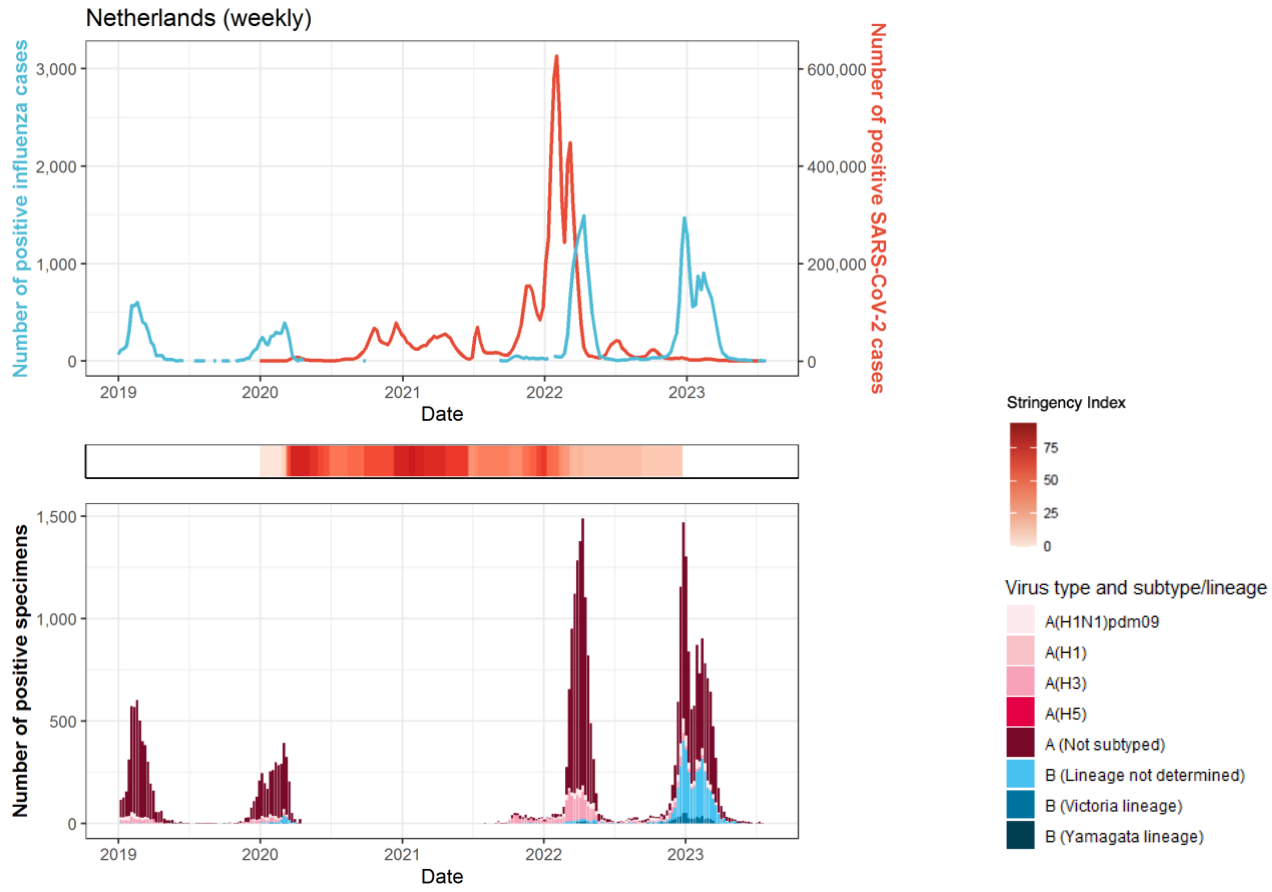
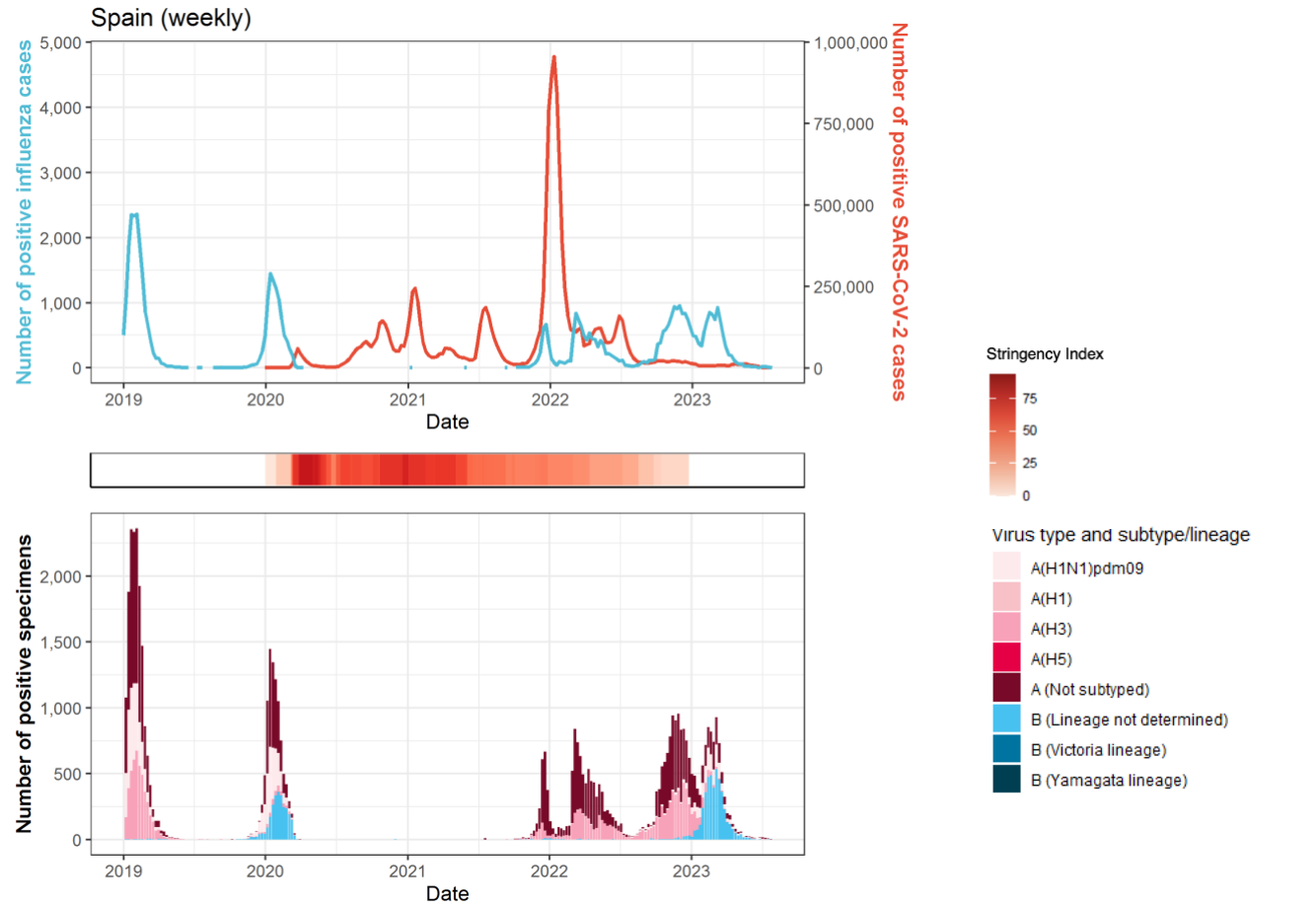


Percentage of specimens testing positive for influenza in different seasons: data not available

Spain



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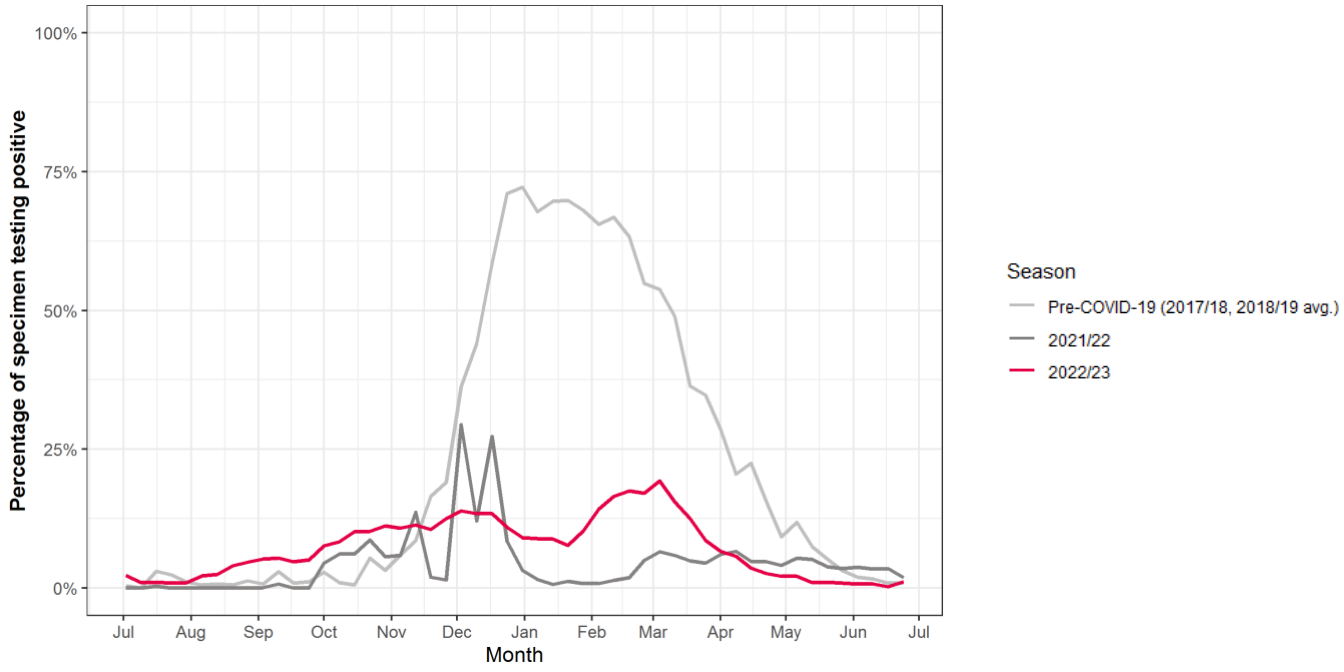
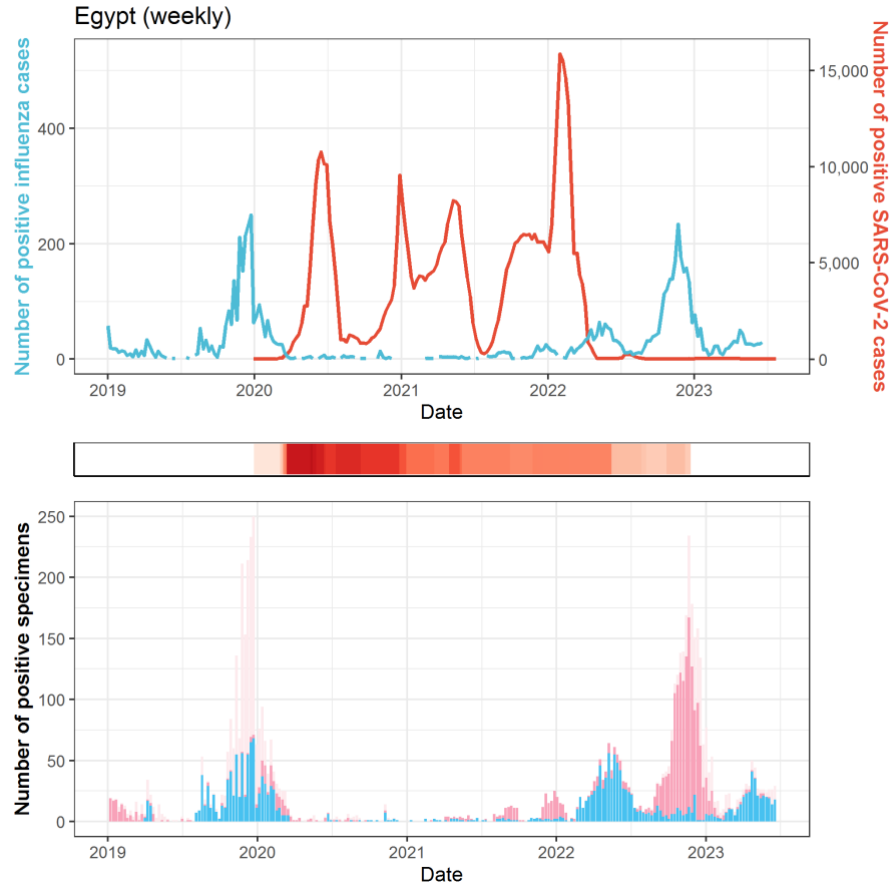
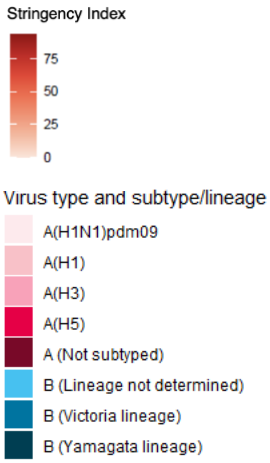


Northern Africa

Egypt





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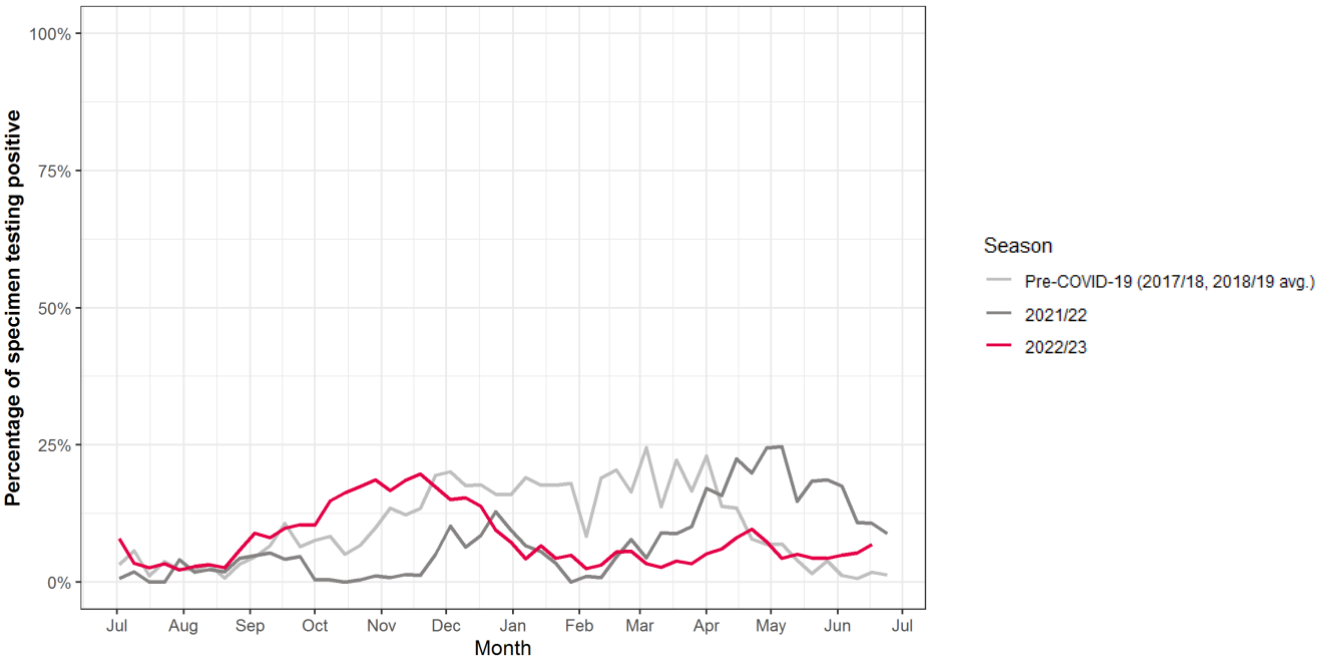
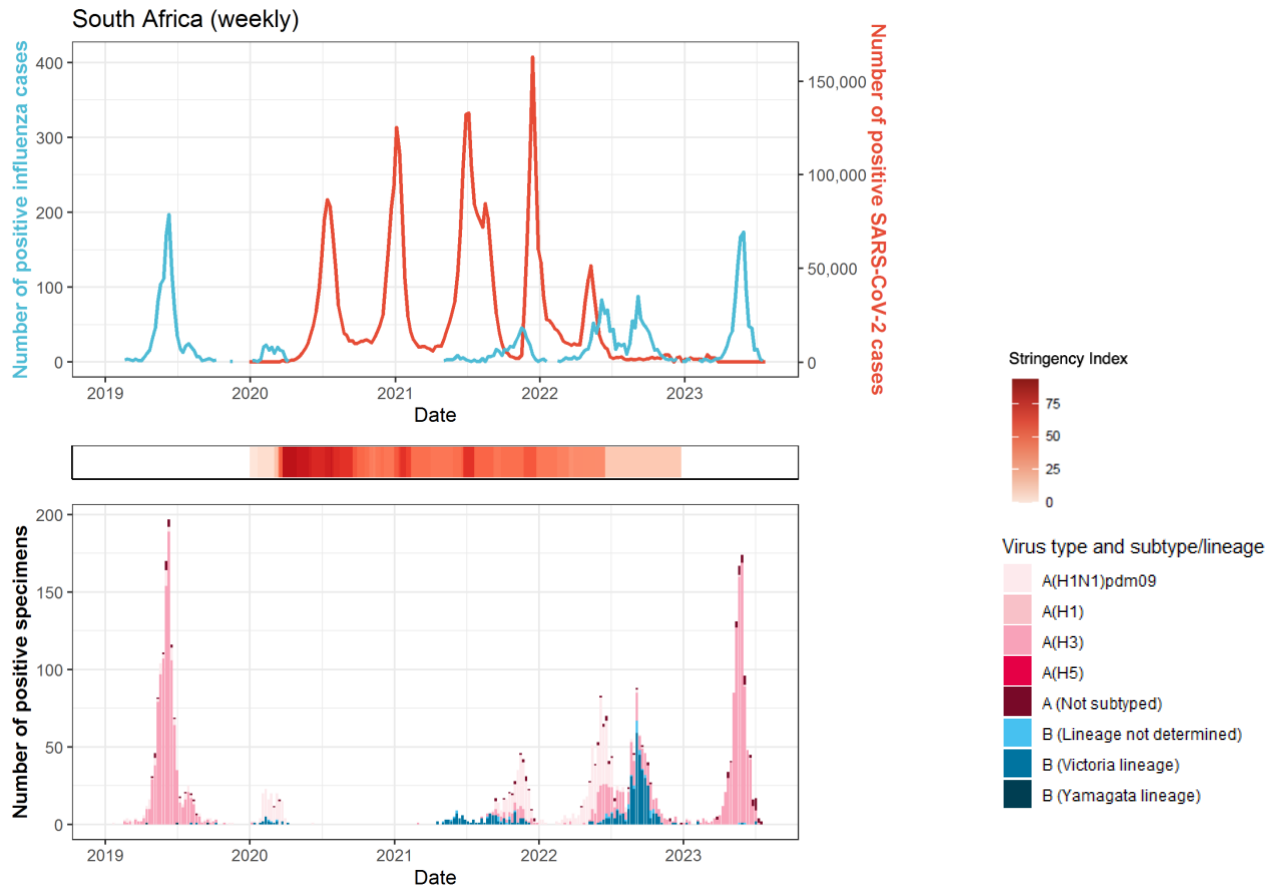


Southern Africa

South Africa



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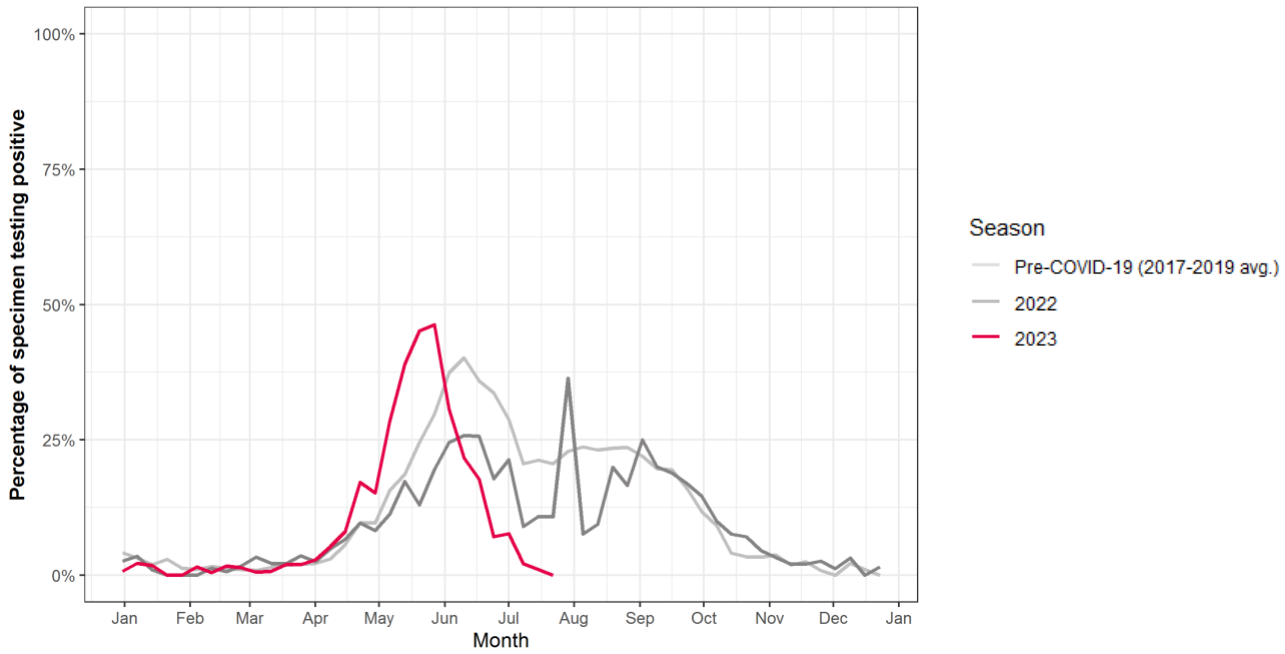
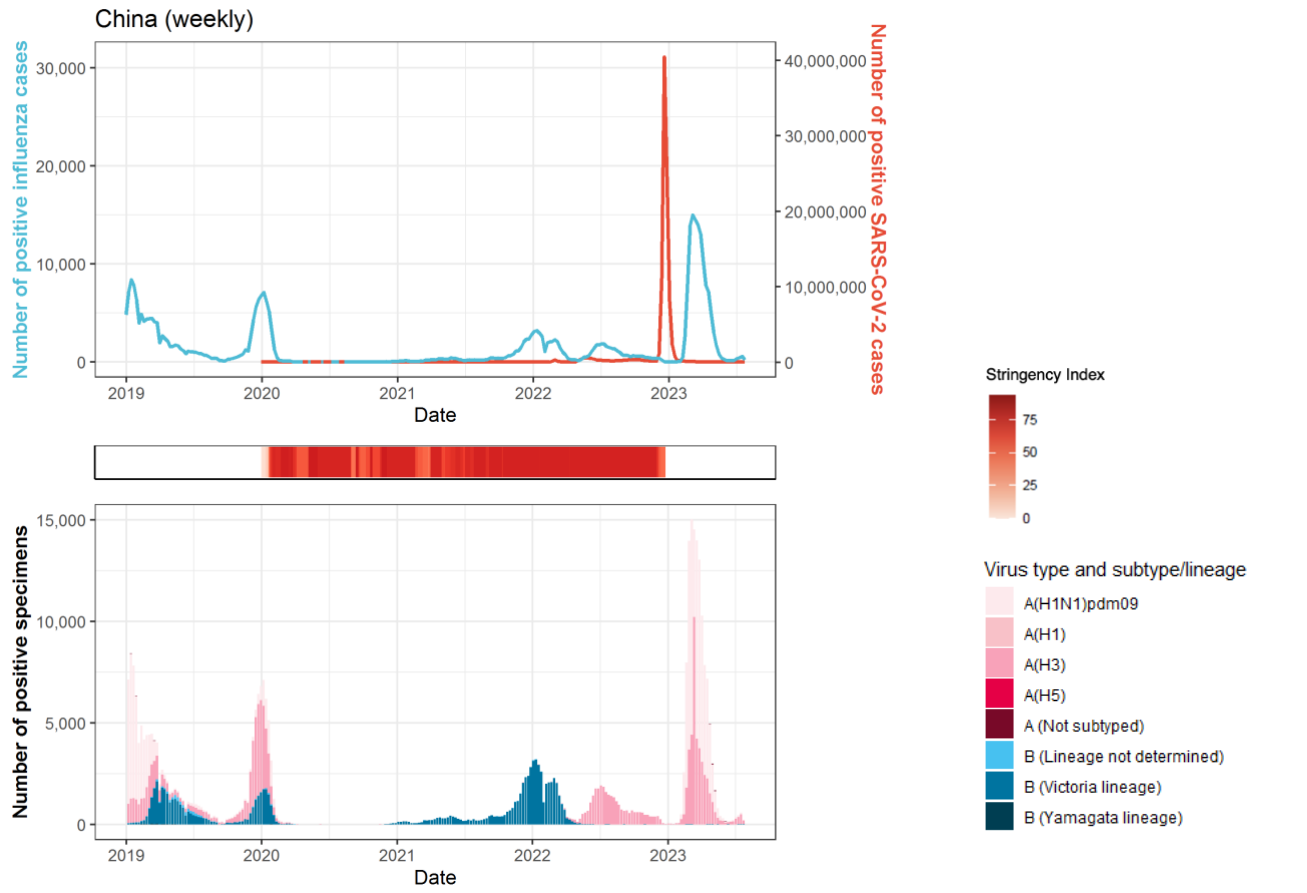


Eastern Asia

China



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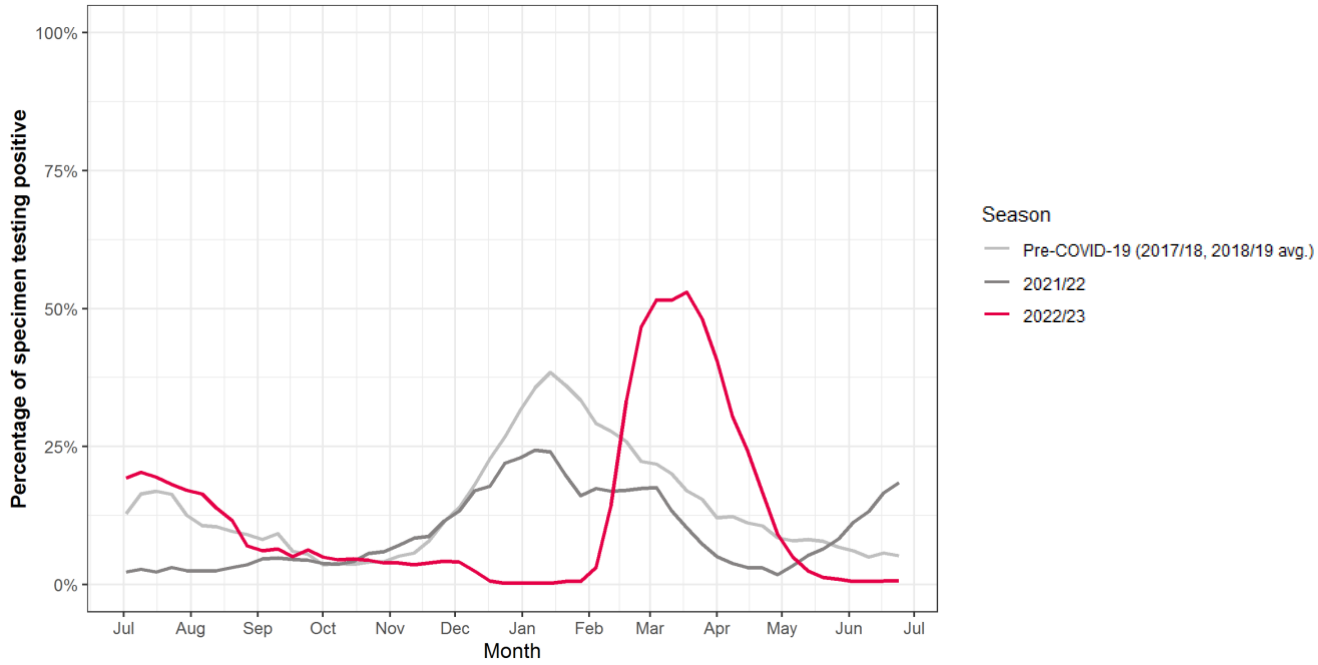
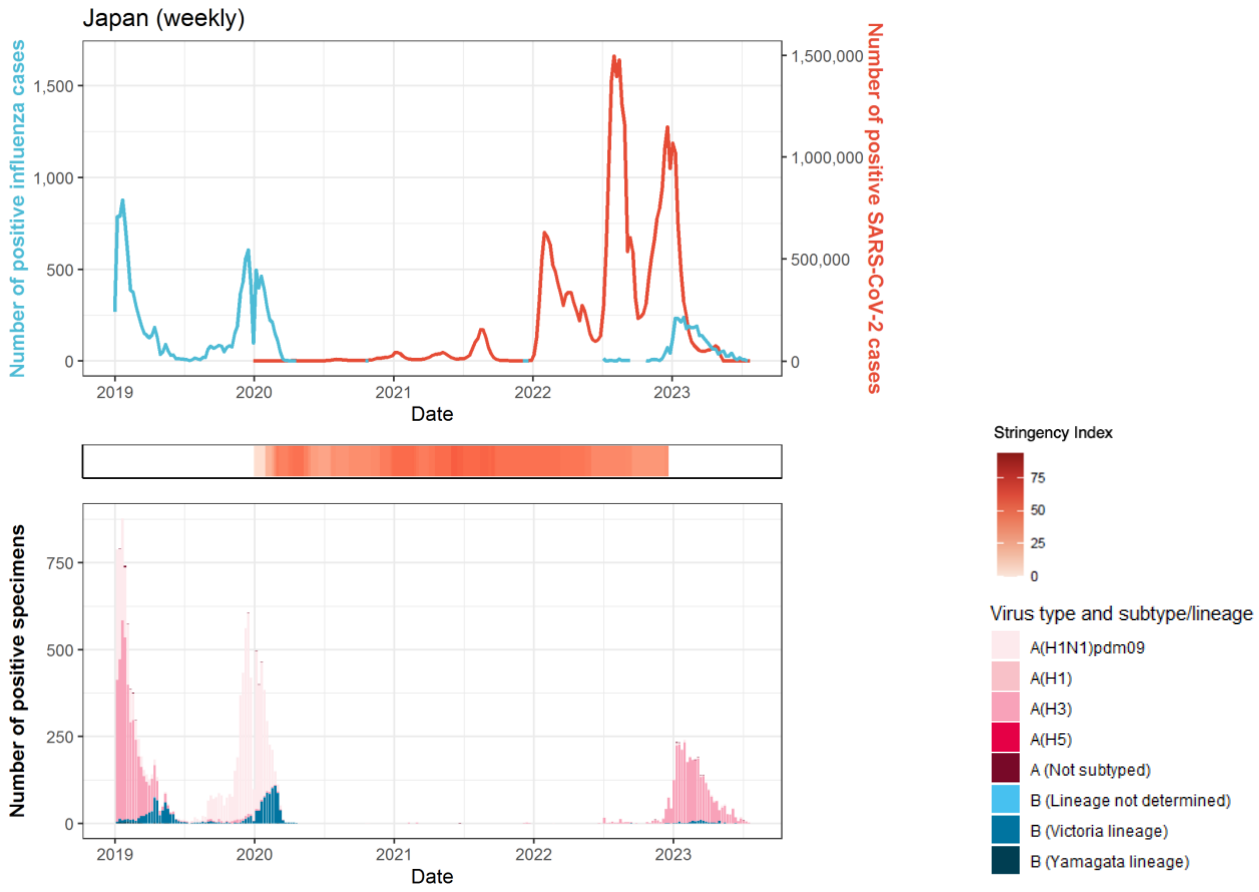
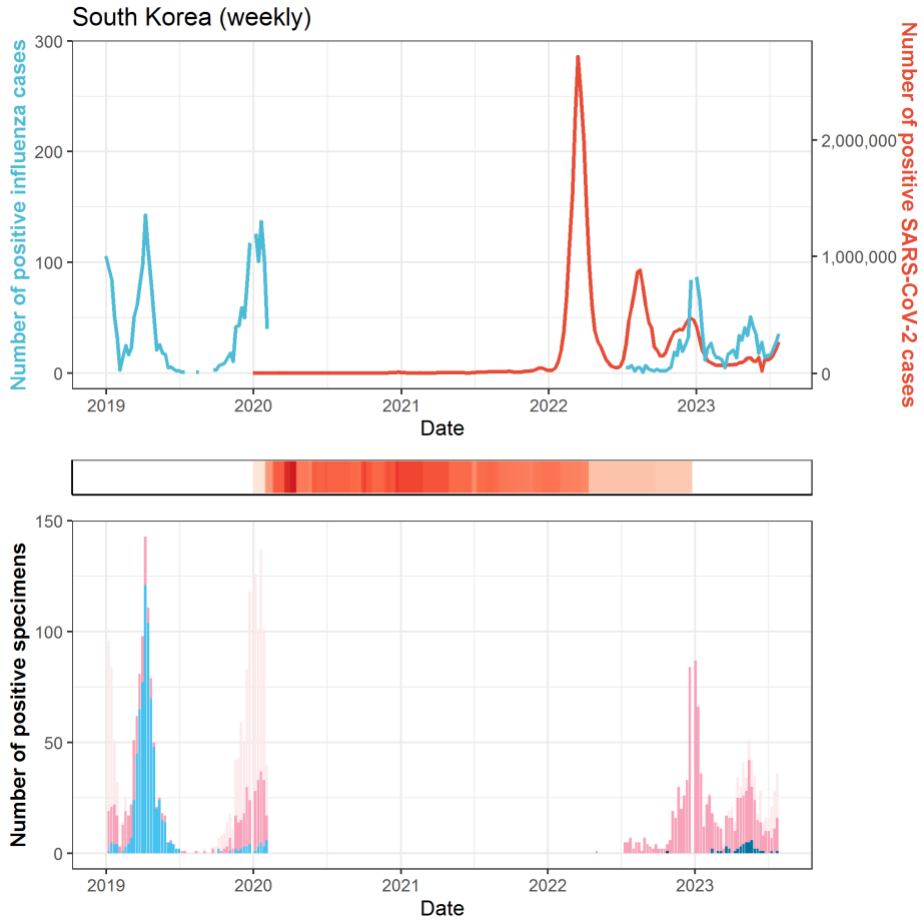


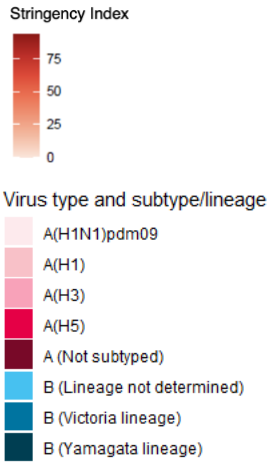
Japan



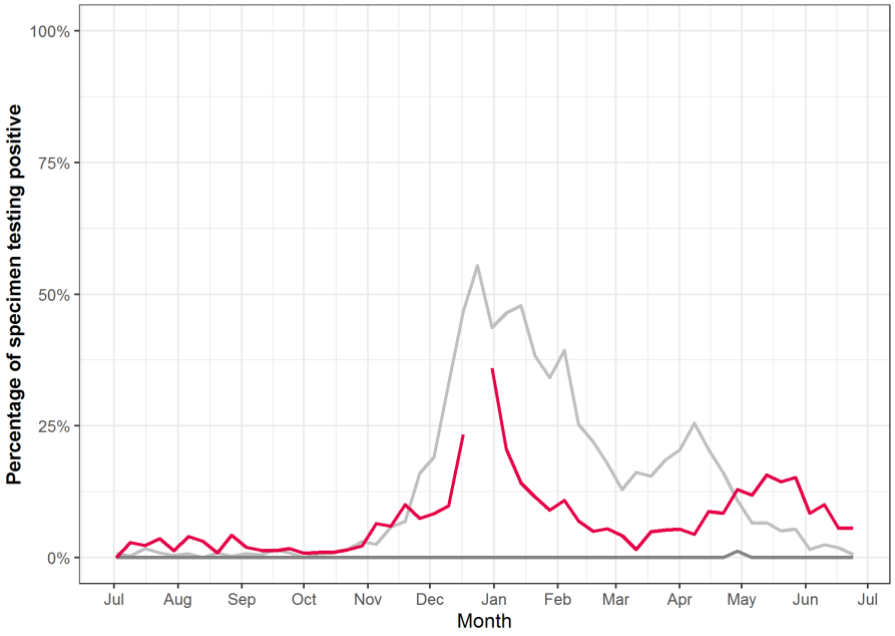
Percentage of specimens testing positive for influenza in different seasons: data not available

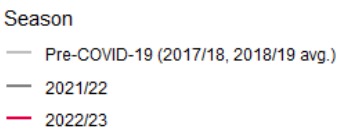
South Korea





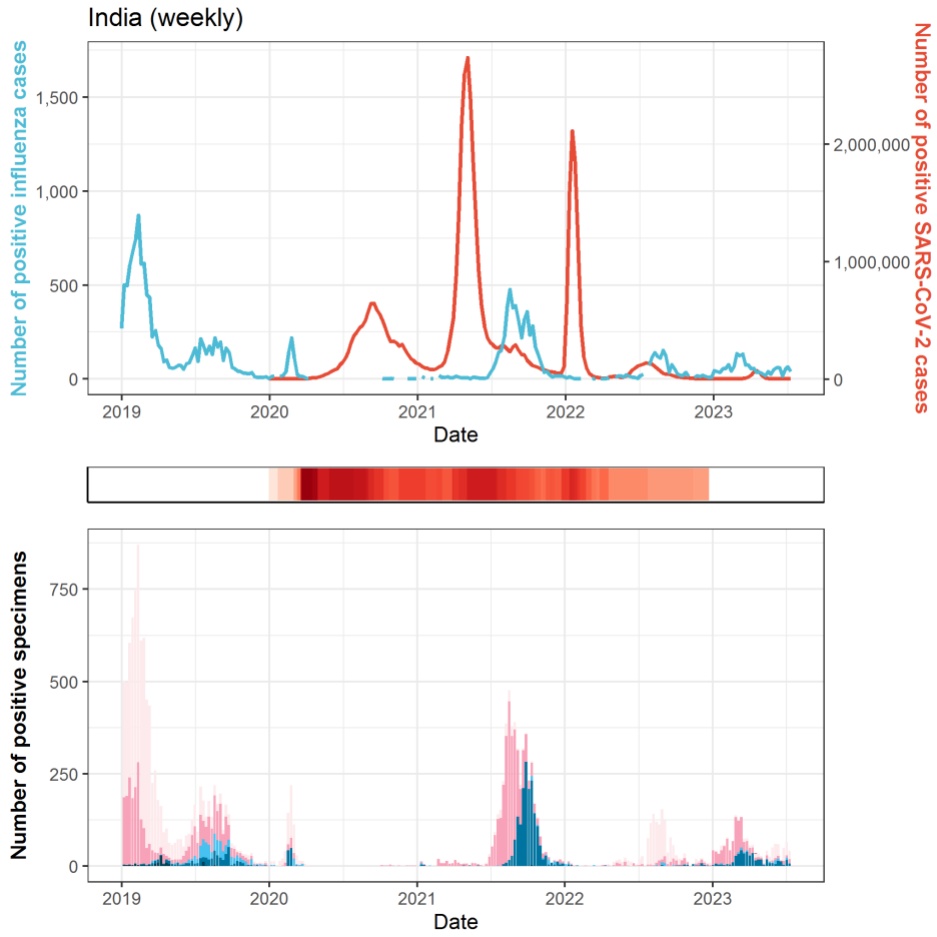
Percentage of specimens testing positive for influenza in different seasons



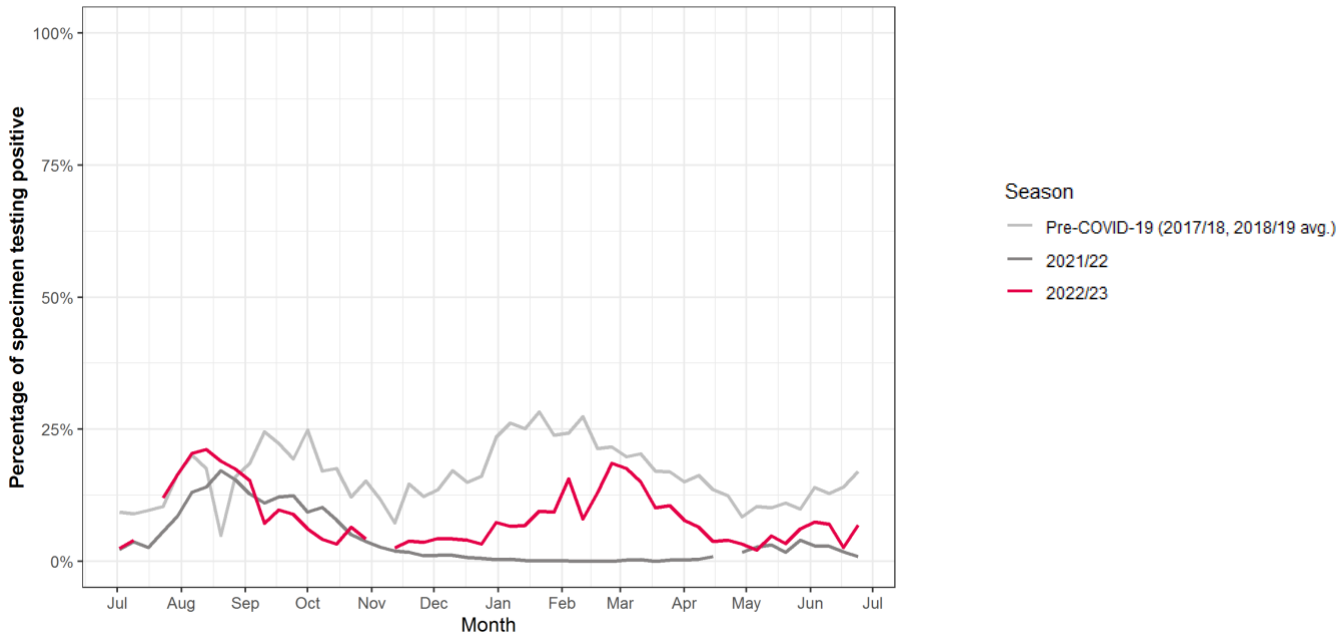


Southern Asia

India

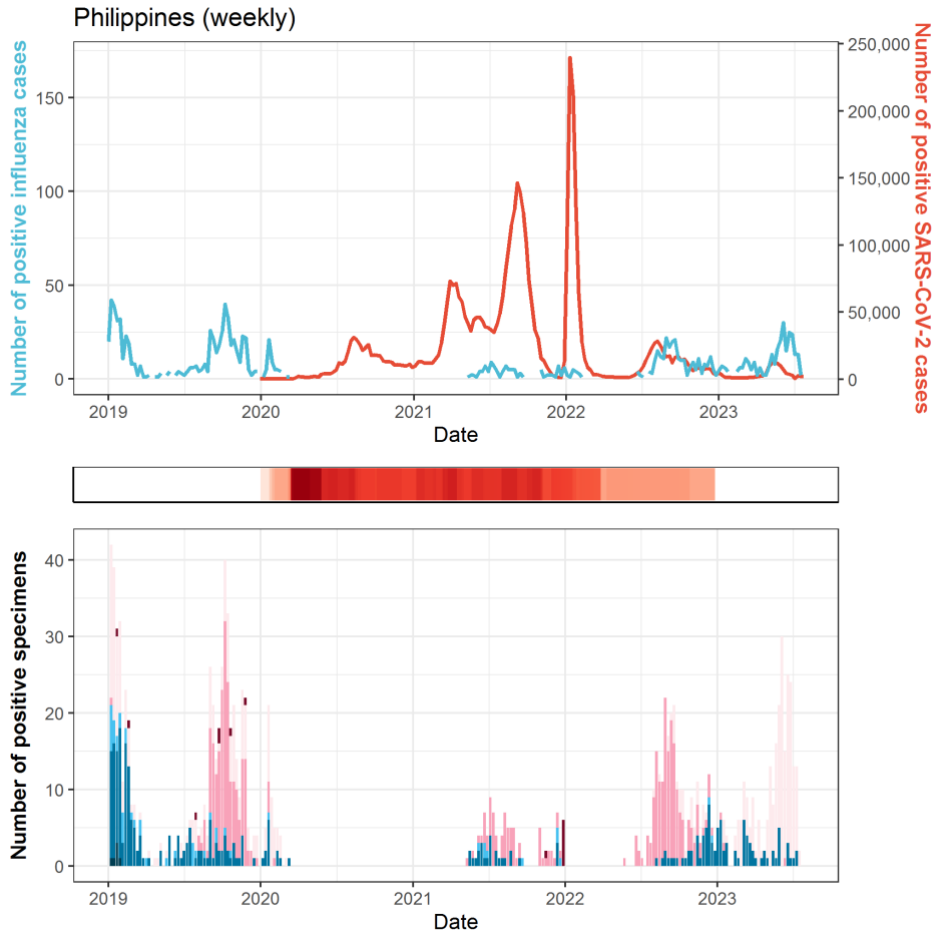


Percentage of specimens testing positive for influenza in different seasons



South-East Asia

Philippines



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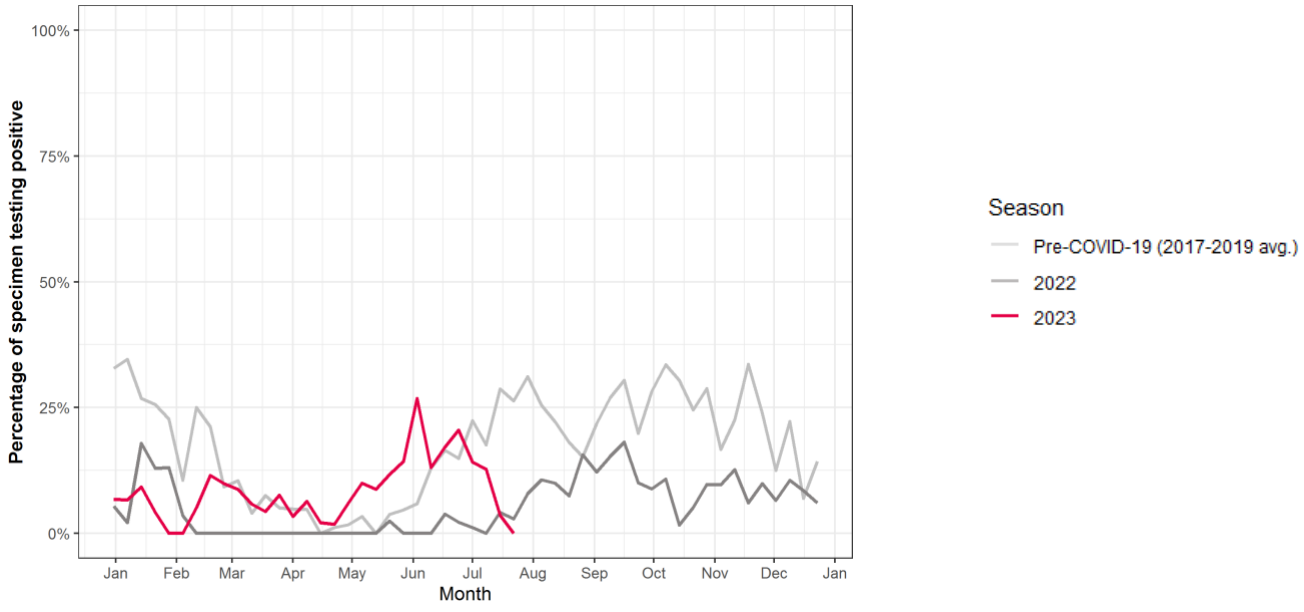
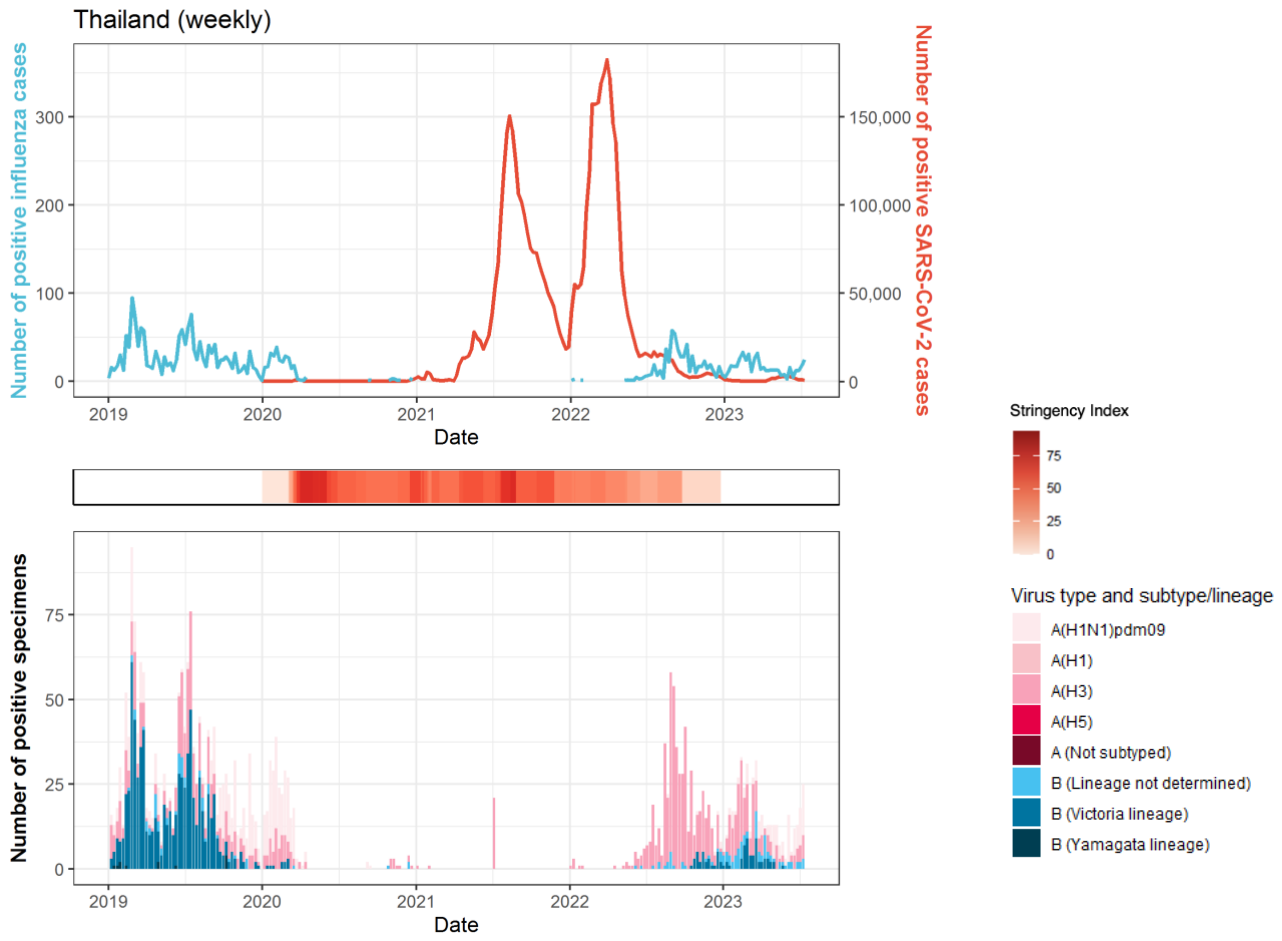


Thailand



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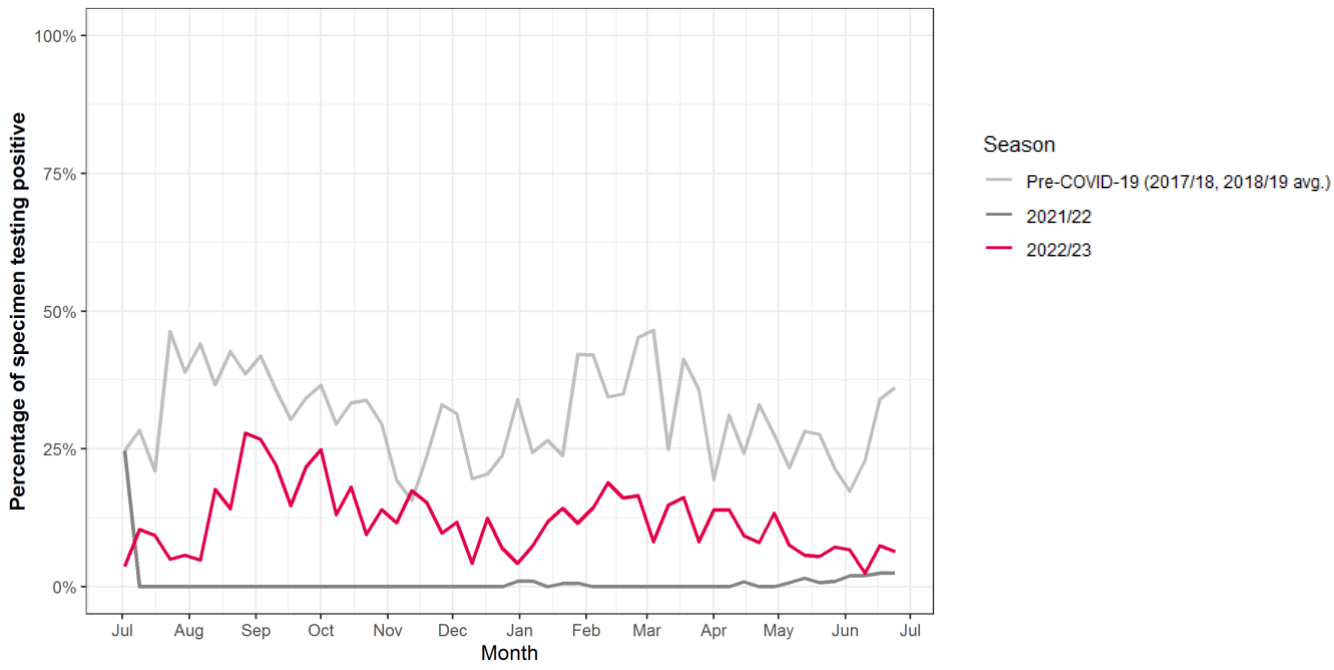
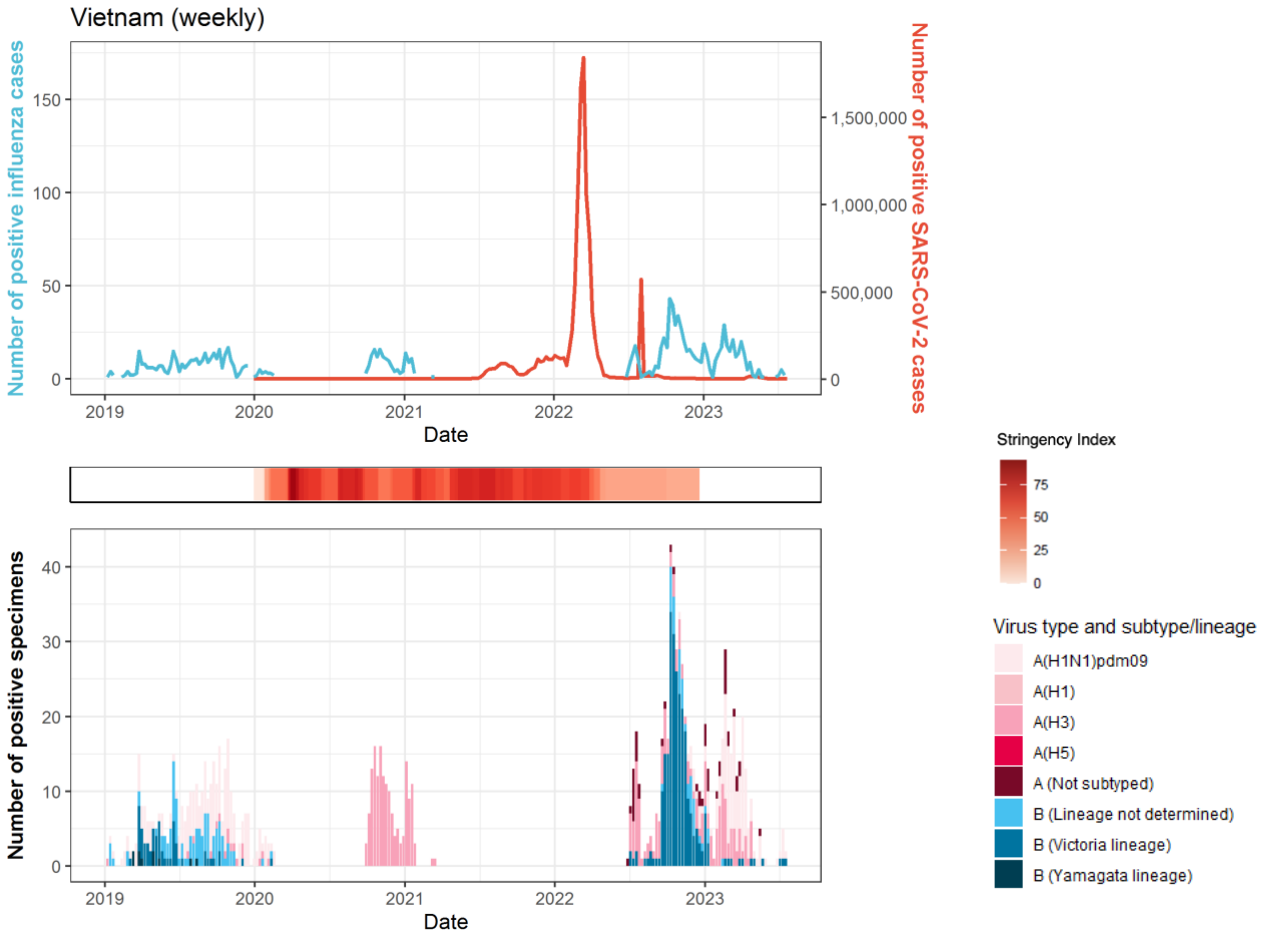


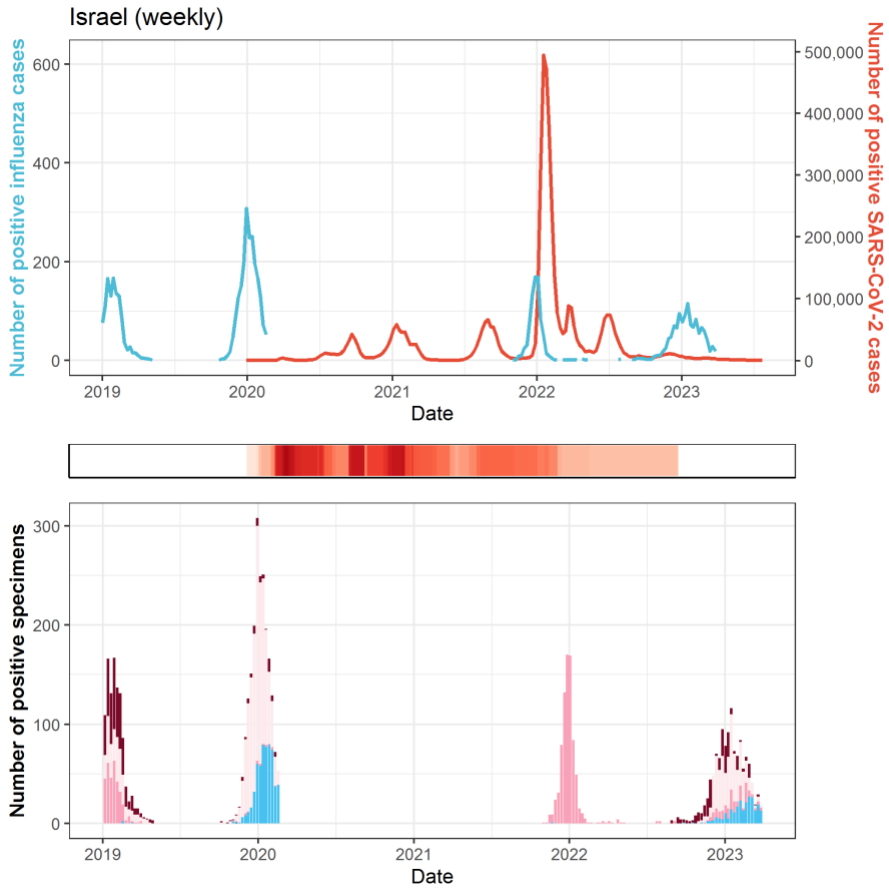
Vietnam

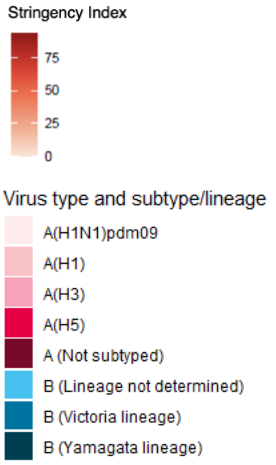


Percentage of specimens testing positive for influenza in different seasons: data not available

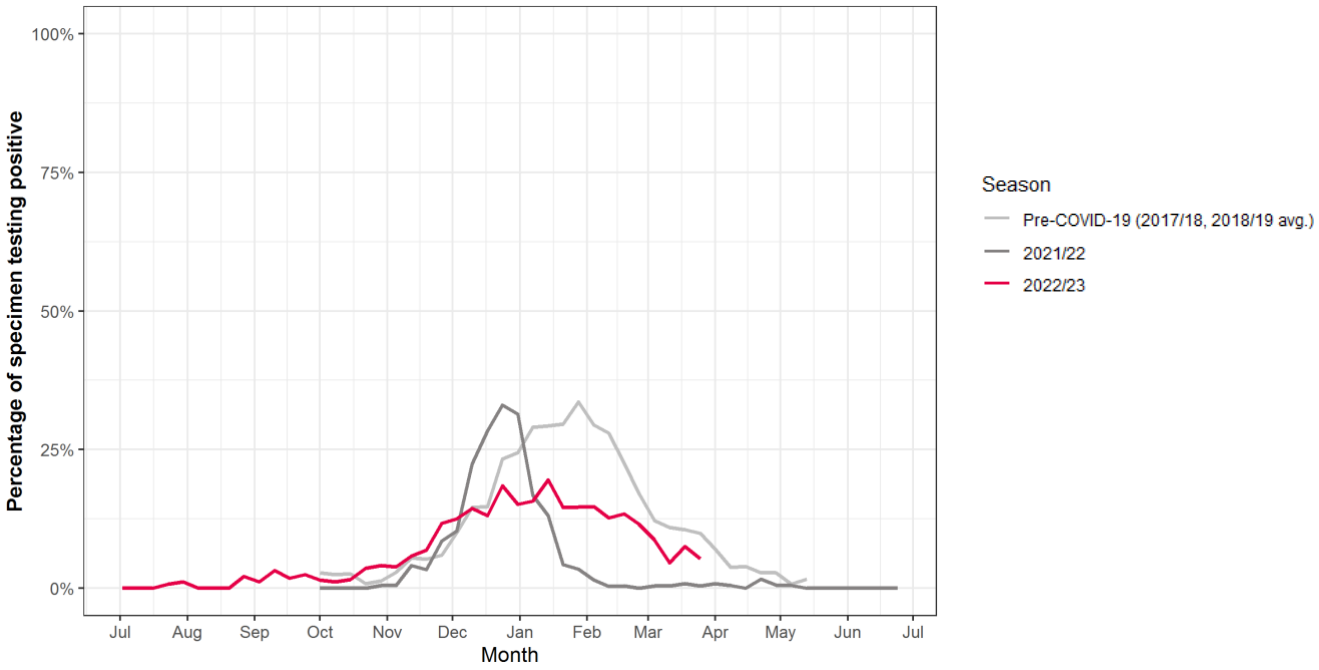
Western Asia

Israel



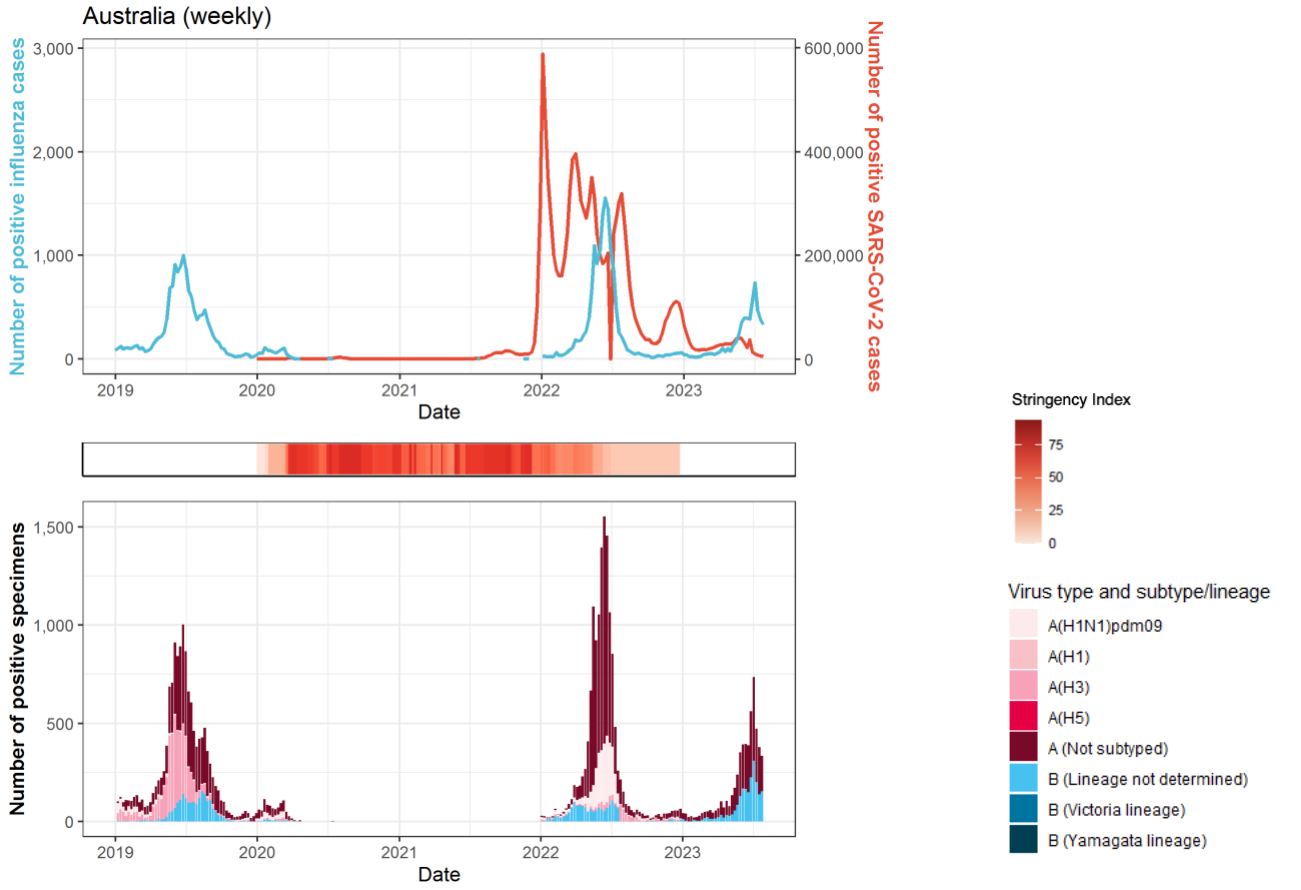


Percentage of specimens testing positive for influenza in different seasons



Oceania

Australia



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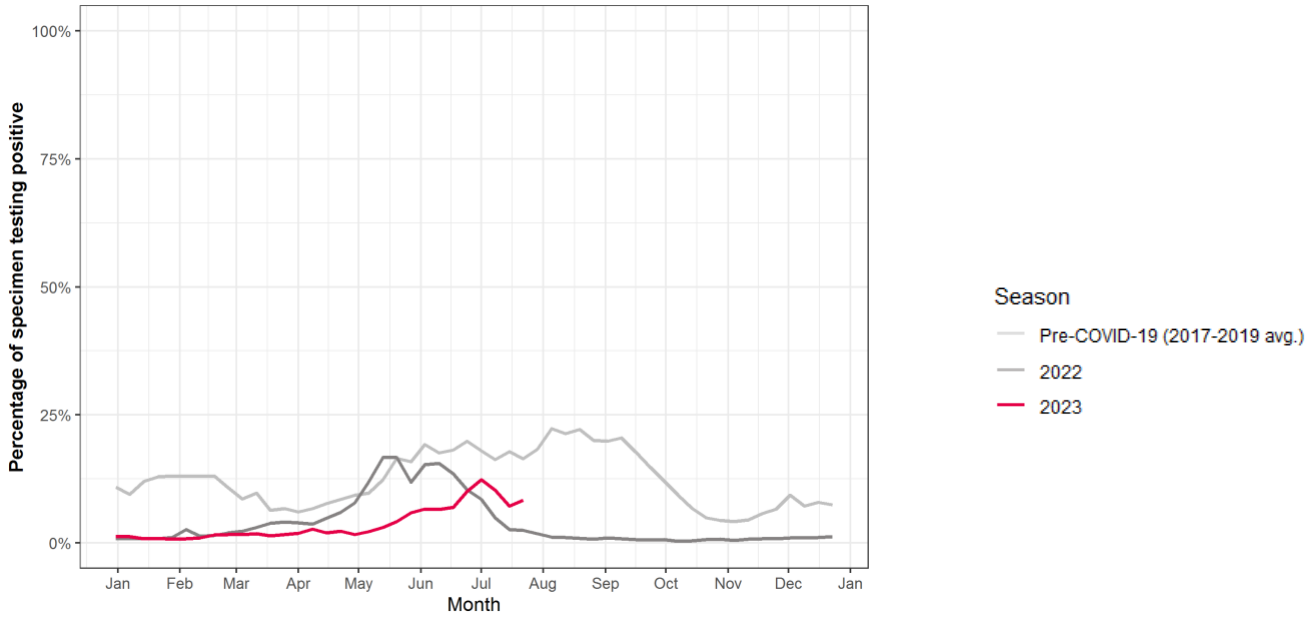

Absolute numbers per country

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
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

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
Italy	2019			6,361		
Italy	2020	2,083,689		7,485		
Italy	2021	3,897,739		31		
Italy	2022	19,187,010		5,817		
Italy	2023	744,043	14,680	2,415	0	2023-17
Japan	2019			10,343		
Japan	2020	230,304		2,915		
Japan	2021	1,503,484		9		
Japan	2022	27,371,282		272		
Japan	2023	4,698,502	0	2,992	19	2023-29
Mexico	2019			6,963		
Mexico	2020	1,496,067		4,799		
Mexico	2021	2,538,755		960		
Mexico	2022	3,236,805		10,314		
Mexico	2023	361,728	15	2,738	230	2023-30
Netherlands	2019			5,166		
Netherlands	2020	773,198		3,235		
Netherlands	2021	2,312,304		471		
Netherlands	2022	5,480,565		14,863		
Netherlands	2023	50,532	359	9,210	15	2023-30
Philippines	2019			612		
Philippines	2020	472,523		52		
Philippines	2021	2,371,346		105		
Philippines	2022	1,218,790		260		
Philippines	2023	110,261	8,560	270	28	2023-30
Poland	2019			1,786		
Poland	2020	1,297,400		1,282		
Poland	2021	2,811,801		2		
Poland	2022	2,259,187		1,604		
Poland	2023	149,790	286	1,869	5	2023-30
South Africa	2019			1,164		
South Africa	2020	1,039,161		157		
South Africa	2021	2,407,371		413		
South Africa	2022	602,048		1,171		
South Africa	2023	23,953	0	930	23	2023-30
South Korea	2019			1,702		
South Korea	2020	60,722		505		
South Korea	2021	574,528		0		
South Korea	2022	28,424,023		295		
South Korea	2023	4,142,523	1,070,190	830	101	2023-30
Spain	2019			17,228		
Spain	2020	1,919,549		8,827		
Spain	2021	4,180,589		2,206		
Spain	2022	7,654,824		18,099		
Spain	2023	225,378	1,764	8,782	44	2023-30
Thailand	2019			1,568		
Thailand	2020	6,919		297		
Thailand	2021	2,216,551		23		
Thailand	2022	2,500,484		575		
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 flucov@nivel.nl.

References

[1] WHO. FluNet. https://www.who.int/tools/flunet [accessed 24 July 2023]

[2] Paget J, Caini S, Del Riccio M, van Waarden W, Meijer A. Has influenza B/Yamagata become extinct and what implications might this have for quadrivalent influenza vaccines? Euro Surveill. 2022 Sep;27(39):2200753. doi: 10.2807/1560-7917.ES.2022.27.39.2200753.

[3] Hospice Civils de Lyon (HCL). Bulletin Épidémiologique Hebdomadaire. Saison 22-23, Numéro 50, date: 8 Aug 2023. Available online: https://twitter.com/BEHcl.

[4] WHO. Statement on the fifteenth meeting of the IHR (2005) Emergency Committee on the COVID-19 pandemic. 5 May 2023. Statement on the fifteenth meeting of the IHR (2005) Emergency Committee on the COVID-19 pandemic (who.int) [accessed 9 May 2023]

[5] WHO. Listing of WHO's response to COVID-19. https://bit.ly/3mIMtRi [accessed 1 July 2022]

[6] WHO. Influenza Update N° 416. http://bit.ly/3T5SvHV [accessed 7 April 2022]

[7] Oxford COVID-19 Government Response Tracker, Blavatnik School of Government, University of Oxford. http://bit.ly/41WqmqX [accessed 16 June 2021]

[8] WHO. FluNet. https://www.who.int/tools/flunet [accessed 8 March 2023]

[9] 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]

[10] Mathieu E, Rodés-Guirao L. Our World in Data will rely on data from the WHO to track confirmed COVID-19 cases and deaths. https://ourworldindata.org/covid-jhu-who [accessed 5 April 2023]

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Websites

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

FluCoV Dashboard: https://www.nivel.nl/en/dossier-epidemiology-respiratory-viruses/flucov-dashboard

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