

FluCov-Bulletin – December 2024

FluCov project: combining data from around the world to better understand the co-circulation of influenza and COVID-19

Commentary

Contents

The FluCov Bulletin offers a summary starting from January 2019, detailing the count of confirmed influenza and SARS-CoV-2 detections, along with positivity rates of tested specimens, across 25 countries globally (see page 3).

Results

On a global level, influenza activity increased in December, primarily due to rising activity in the Northern Hemisphere (see Figure 1). The following country patterns were observed for influenza:

- In the <u>Northern Hemisphere</u>, an increase in <u>influenza</u> activity was reported in North America with <u>influenza</u> A (not subtyped) as the predominant virus type in the **United States** and **Canada**, and <u>influenza</u> A(H3N2) in **Mexico**.
- Increased influenza activity was also reported in the European countries covered by the bulletin:
 United Kingdom, the Netherlands, Poland, France (driven by influenza A (not subtyped), followed by influenza B in France), Germany, Italy (driven by influenza A(H1N1)pdm09 and B/Victoria), and Spain (influenza B).
- In **China** and **Japan**, **influenza** activity increased, driven by **influenza** A(H1N1)pdm09, whereas B/Victoria drove increased activity in **India**.
- Influenza activity remained stable at low level in **Thailand** and **Vietnam**.
- Influenza activity increased in Israel (mainly influenza B, lineage not determined) and Egypt (mainly influenza A(H3N2).
- In the <u>Southern Hemisphere</u>, <u>influenza</u> activity decreased or remained stable at low levels in **Argentina**, **Brazil**, **Chile**, **South Africa**, the **Philippines**, and **Australia**.
- No update on influenza activity was available for New Zealand and South Korea in December.

Globally, SARS-CoV-2 detections were low during December. The following country patterns were observed for SARS-CoV-2:

- SARS-CoV-2 activity decreased in Argentina, and the Netherlands.
- SARS-CoV-2 activity remained stable in Canada (week 50) [1].
- A slight increase in SARS-CoV-2 activity was observed in Chile, as well as Brazil and the United States [2,3].
- Over the past month, SARS-CoV-2 activity continued to increase in Australia [4].
- SARS-CoV-2 activity remained stable at low levels in China, India, Mexico, New Zealand, Poland,
 South Africa, Thailand, and the United Kingdom. SARS-CoV-2 activity also remained at low levels in France, Germany and Spain [5].
- No update on SARS-CoV-2 was available for Egypt, Israel, Italy, Japan, the Philippines, South Korea, and Vietnam.

Implications

Global influenza activity increased in nearly all Northern Hemisphere countries covered by the Bulletin, signaling the start of the 2024-25 influenza season. Influenza A(H1N1)pdm09 is the predominant virus type in most countries with elevated activity, cocirculating with A(H3N2) in **North America** and A(H3N2) and influenza B (Victoria if lineage determined) in **Europe**. In most countries, the timing of the season start is similar to the pre-COVID-19 years. This is in line with ECDC reporting that 'trends from the last two years suggest a return to a more regular timing of seasonal influenza' [6].

The WHO 2024-2025 Northern Hemisphere Vaccine Composition Report recommends a trivalent vaccine to protect against influenza A(H1N1)pdm09, A(H3N2), and B/Victoria lineage viruses [7]. This recommendation excludes B/Yamagata, aligning with the current understanding that this lineage has not been detected in recent global circulation. However, the single detection of influenza B/Yamagata RNA in week 42 in the **Netherlands** [5] underlines the importance to continue monitoring and determining the lineages of influenza B specimens to assess whether influenza B/Yamagata has truly ceased circulating [8].

In December 2024, SARS-CoV-2 activity was low in most countries covered by the Bulletin, although according to WHO, activity remained elevated in parts of South America, Europe, Middle and Eastern Africa, and South East Asia [9]. The WHO declared the end of the pandemic in May 2023 [10], countries have adopted diverse monitoring strategies for SARS-CoV-2, leading to reduced surveillance and instances of unshared data with the WHO. This variation in approaches impact the completeness of data reported in the FluCov Bulletin.

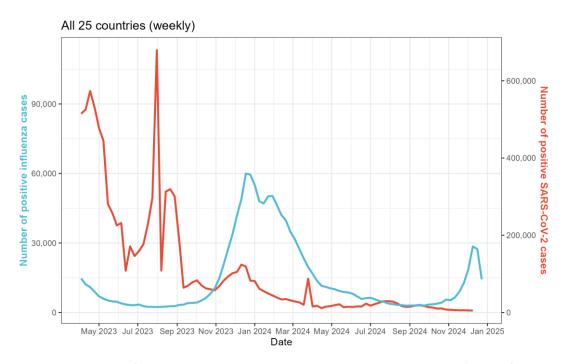


Figure 1: SARS-CoV-2 and influenza detections in the 25 countries covered by the Bulletin (period: from week 14/2023 to week 52/2024).

Note: the displayed decrease in influenza cases in week 51-52 may be due to reduced or delayed testing and reporting during the holiday period.

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, 2023 up to 29 December, 2024. For real time figures starting from 1 January 2019, please visit the FluCov Dashboard. This FluCov-Bulletin includes the countries Canada, United States, Mexico, Brazil, Argentina, Chile, United Kingdom, France, Germany, Italy, Netherlands, Spain, Poland, South Africa, Egypt, China, Japan, South Korea, India, Philippines, Thailand, Vietnam, Israel, Australia and New Zealand.

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 SARS-CoV-2 detections per country can be found on pages 29-32 of this FluCov-Bulletin (click here). 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 two seasons, 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 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

Temperate South America

Argentina Chile

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

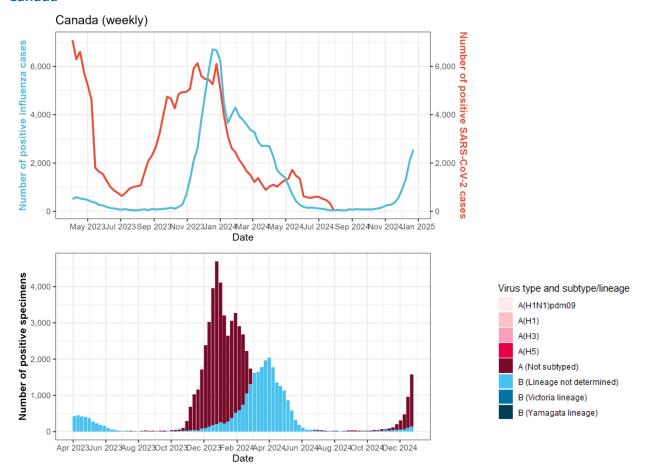
Israel

Oceania Australia New Zealand

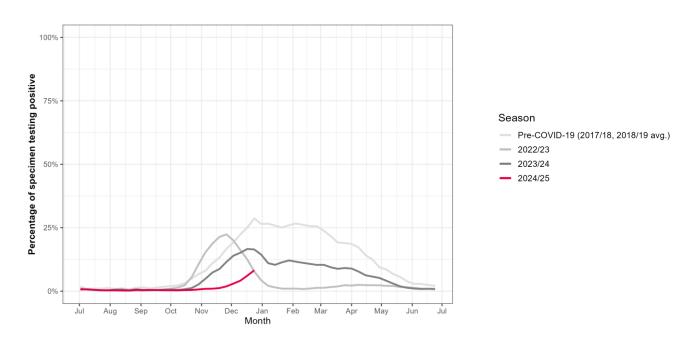
3

North America

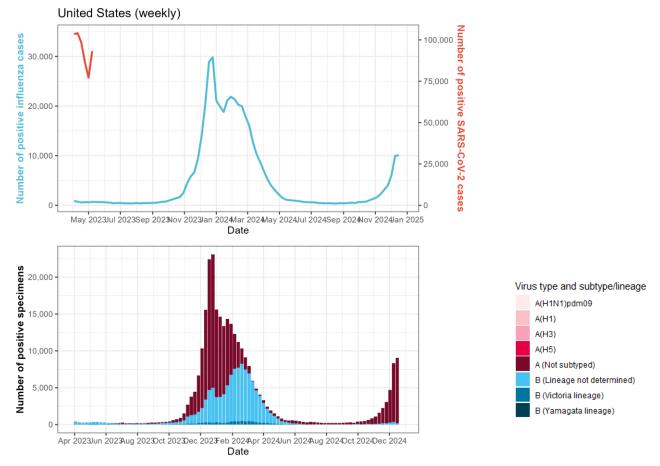
Canada



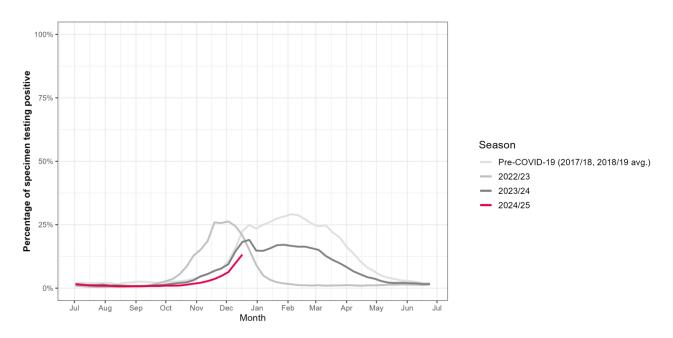
Note: Canada stopped reporting **SARS-CoV-2** activity to the WHO since W31/2024



United States

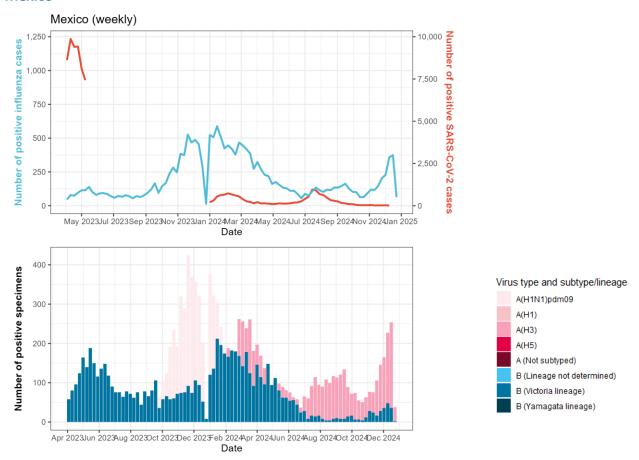


Note: The United States stopped reporting **SARS-CoV-2** activity to the WHO since W20/2023

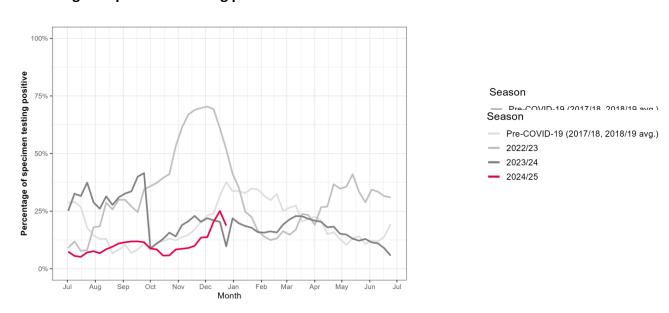


Central America Caribbean

Mexico

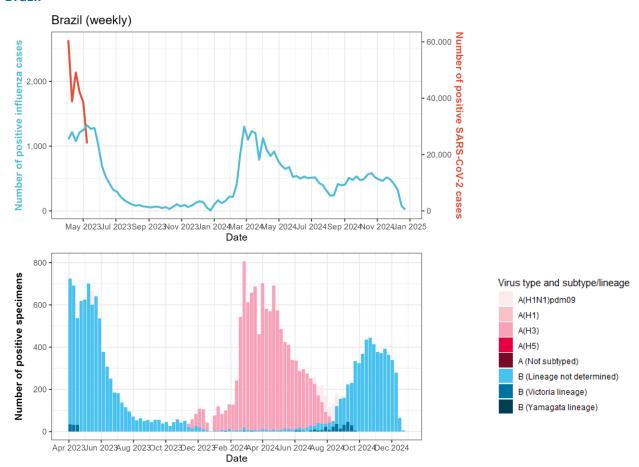


Note: the displayed decrease in influenza cases in week 52 may be due to reduced or delayed testing and reporting during the holiday period.

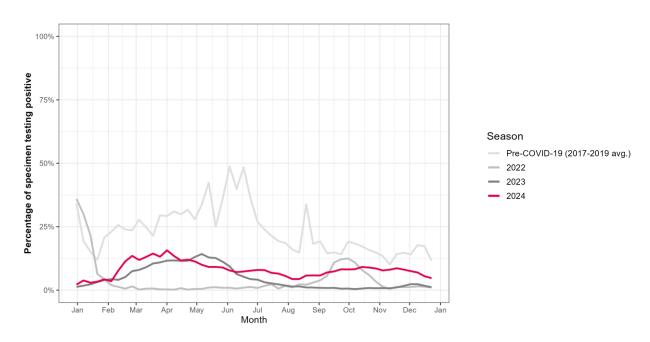


Tropical South America

Brazil

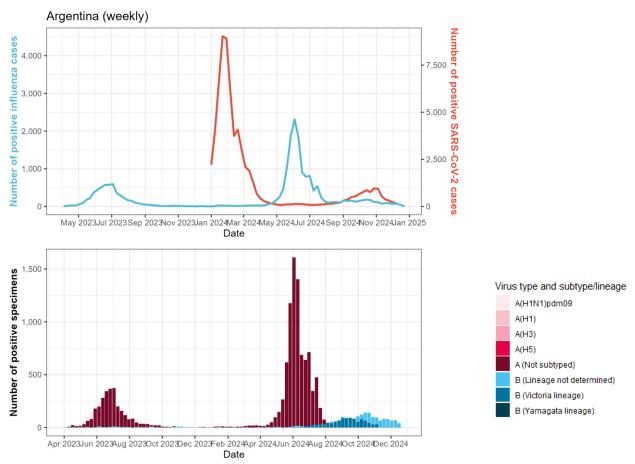


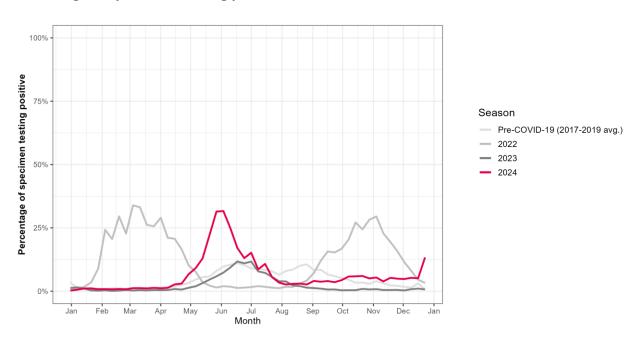
Note: Brazil stopped reporting **SARS-CoV-2** activity to the WHO since W19/2023



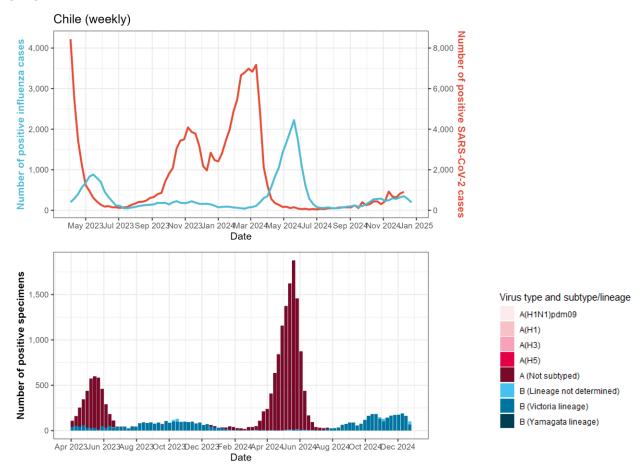
Temperate South America

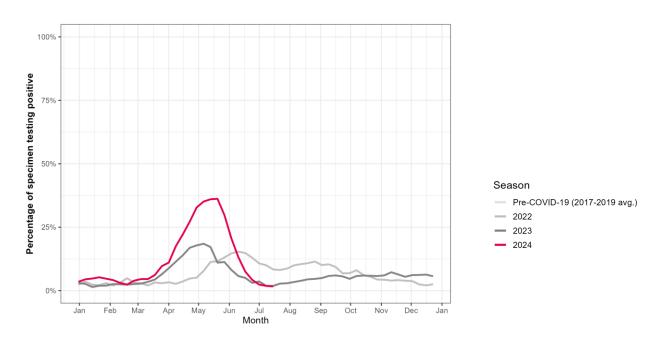
Argentina





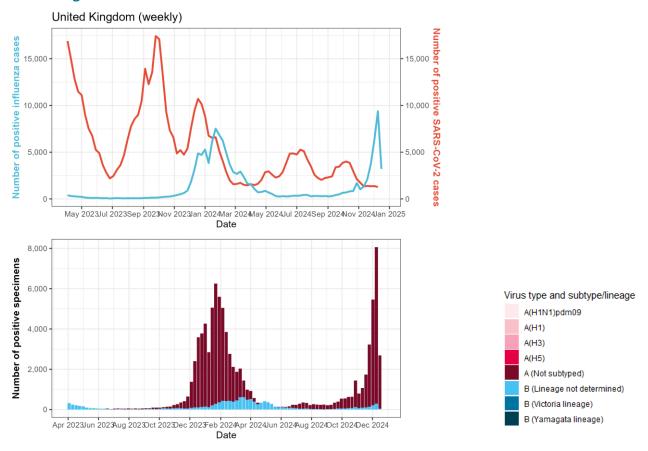
Chile



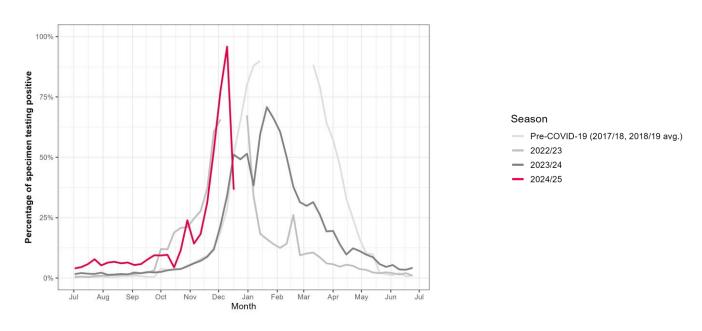


Northern Europe

United Kingdom

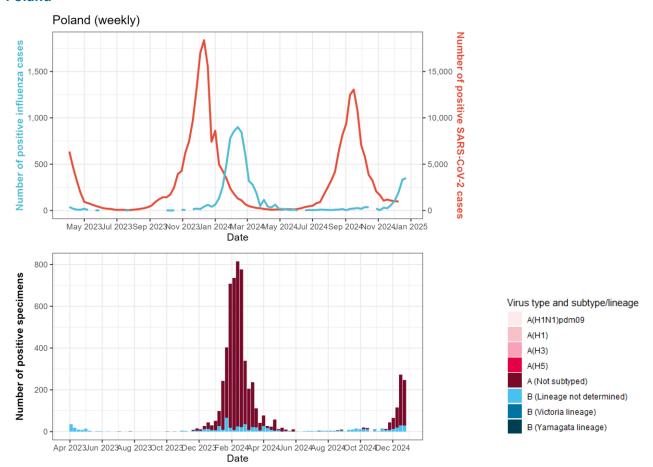


Note: the displayed decrease in influenza cases in week 51 may be due to reduced or delayed testing and reporting during the holiday period.

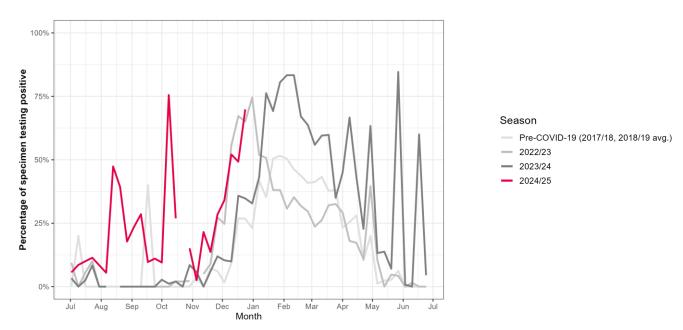


Eastern Europe

Poland



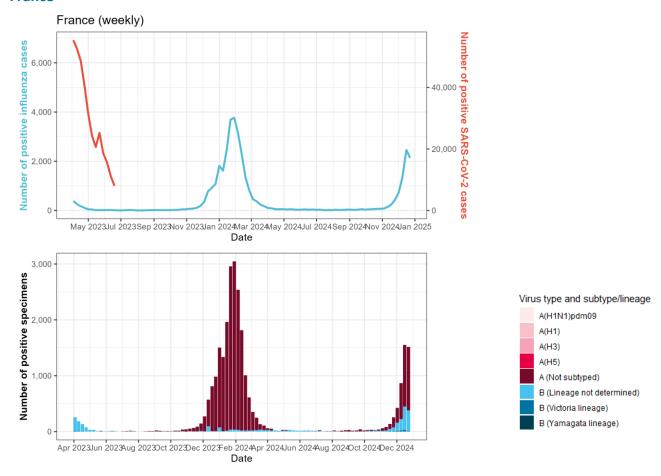
Percentage of specimens testing positive for influenza in different seasons



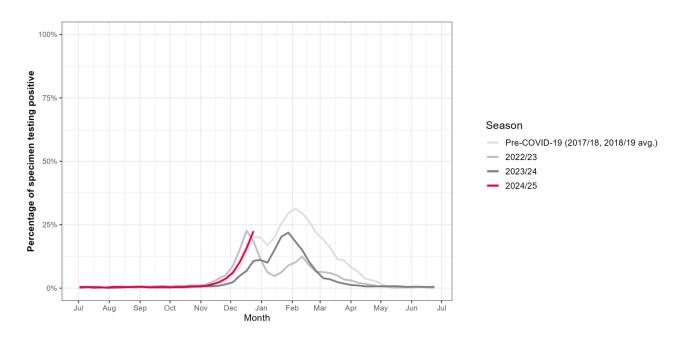
Note: the high variety in percentage positive since April 2024 is likely caused by a low number of tested specimens

South West Europe

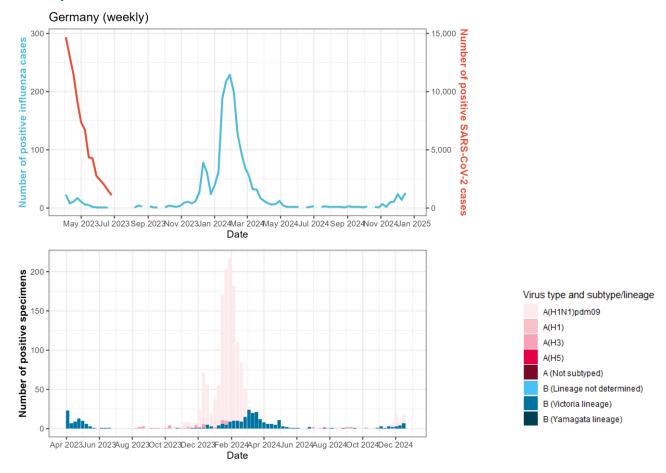
France



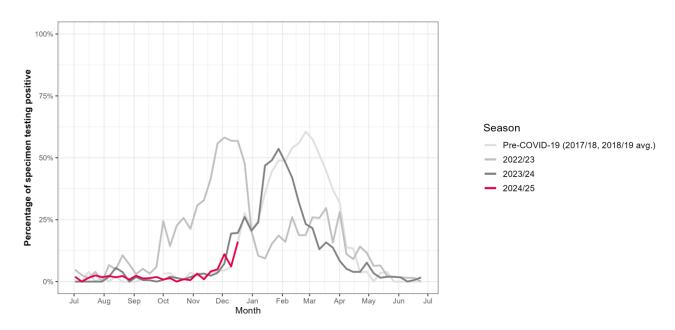
Note: France stopped reporting **SARS-CoV-2** activity to the WHO since W26/2023



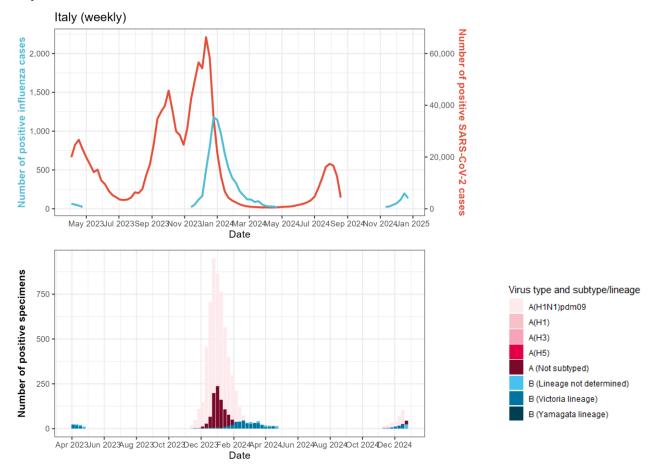
Germany



Note: Germany stopped reporting SARS-CoV-2 activity to the WHO since W27/2023



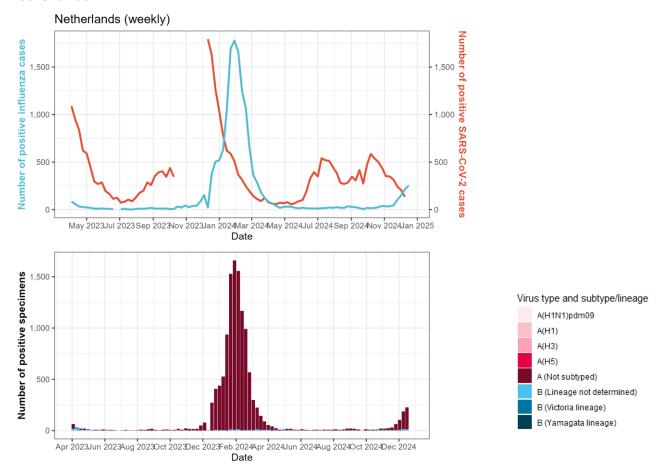
Italy



Note: Italy stopped reporting **SARS-CoV-2** activity to the WHO since W34/2024

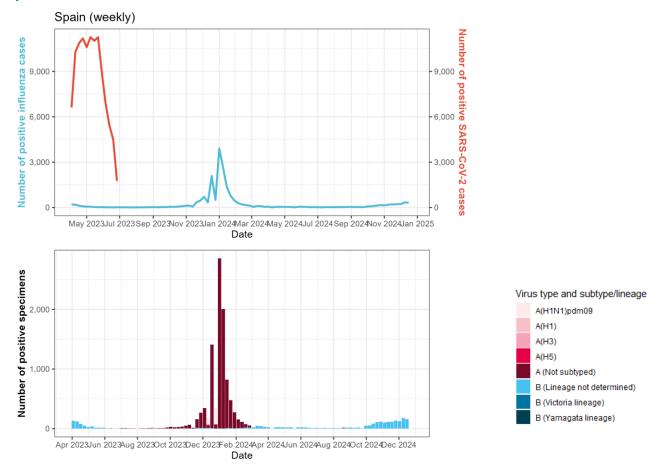
Percentage of specimens testing positive for influenza in different seasons: data not available

Netherlands

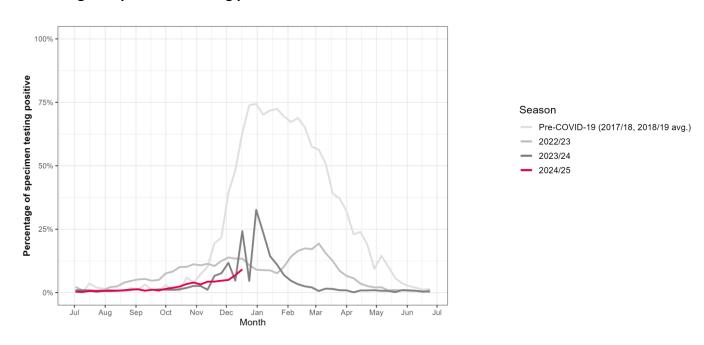


Percentage of specimens testing positive for influenza in different seasons: data not available

Spain

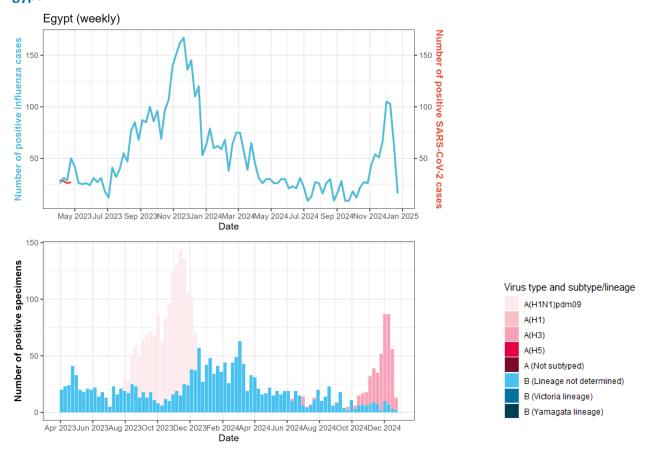


Note: Spain stopped reporting **SARS-CoV-2** activity to the WHO since W27/2023



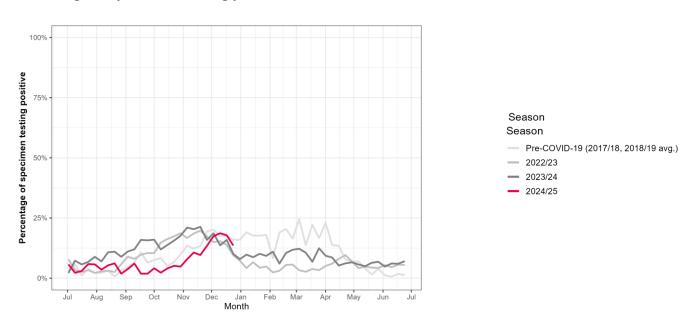
Northern Africa

Egypt



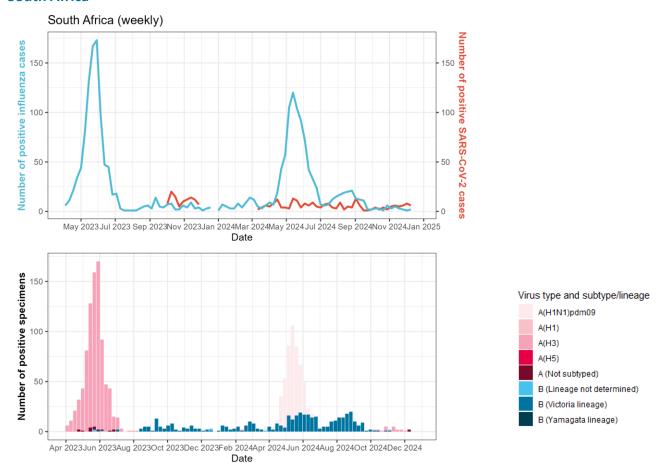
Note: Egypt stopped reporting SARS-CoV-2 activity to the WHO since W18/2023

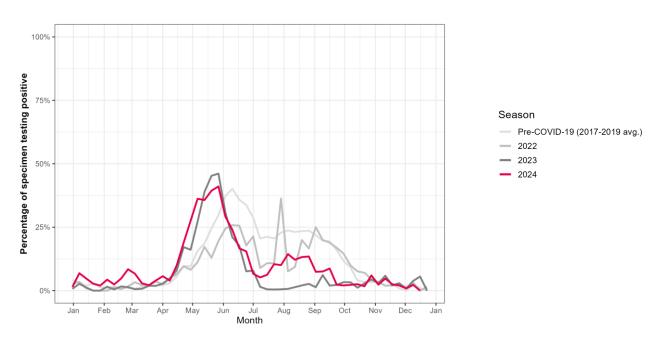
Note: the displayed decrease in influenza cases in week 51-52 may be due to reduced or delayed testing and reporting during the holiday period.



Southern Africa

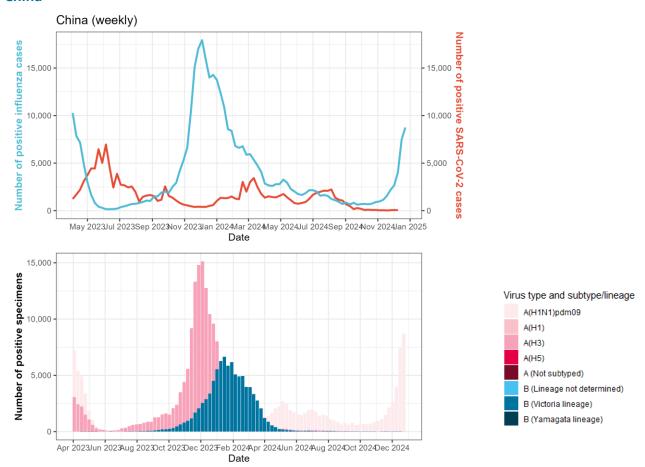
South Africa

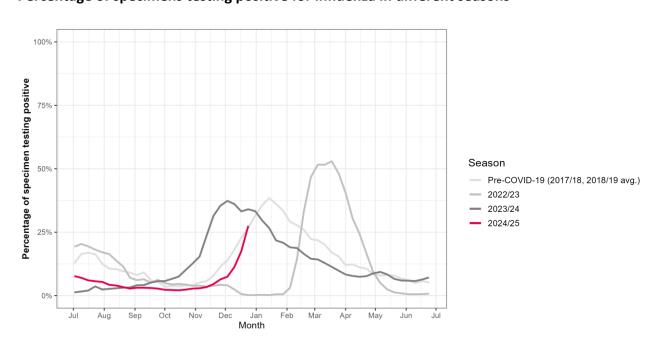




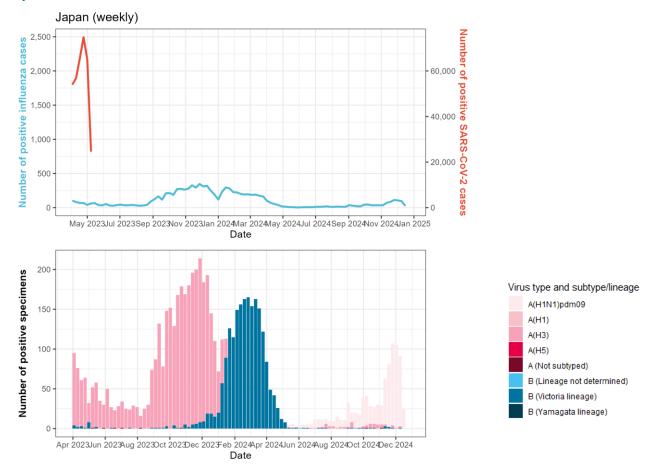
Eastern Asia

China





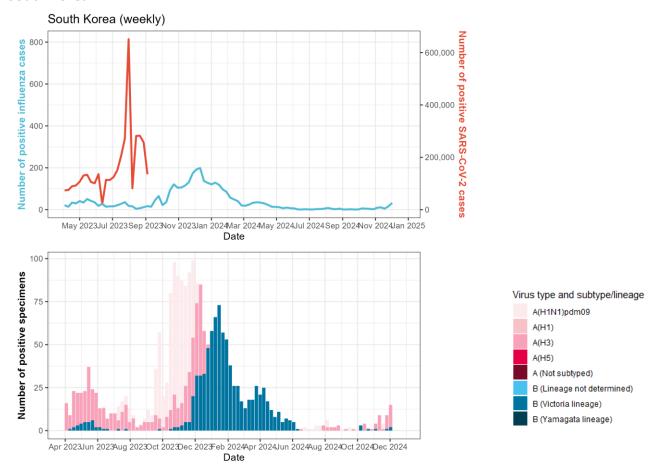
Japan



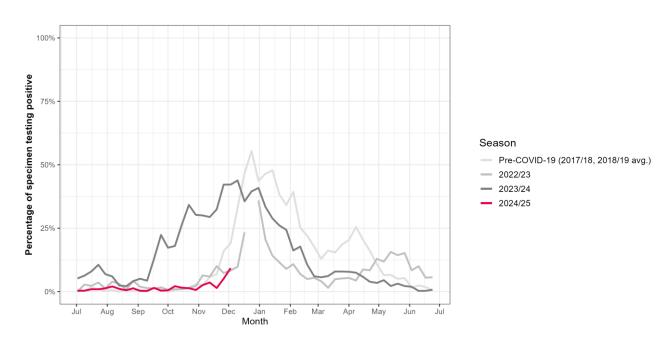
Note: Japan stopped reporting **SARS-CoV-2** activity to the WHO since W21/2023

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

South Korea

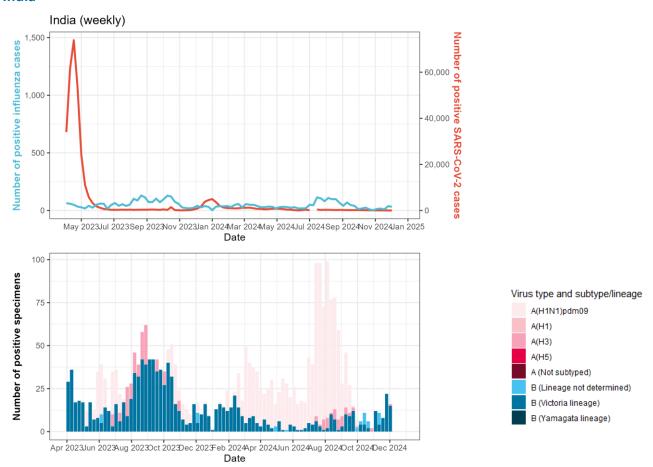


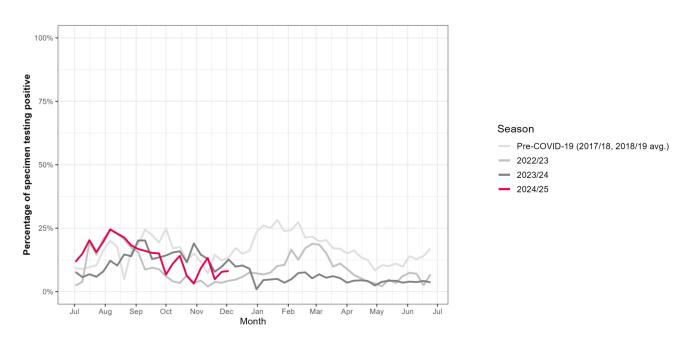
Note: South Korea stopped reporting SARS-CoV-2 activity to the WHO since W37/2023



Southern Asia

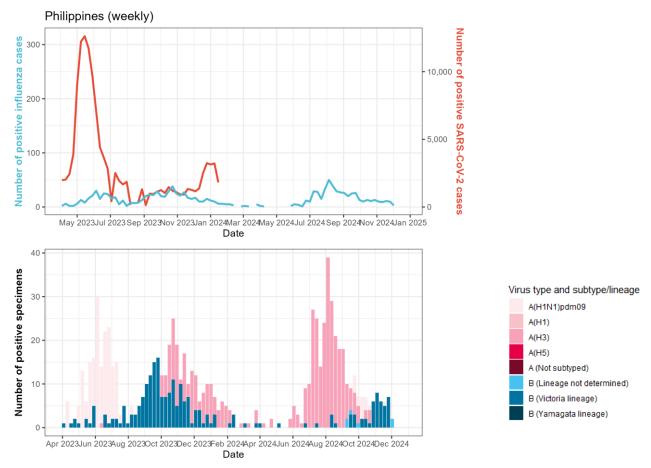
India



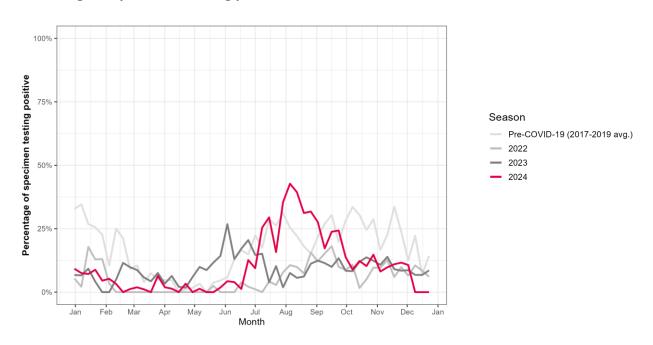


South-East Asia

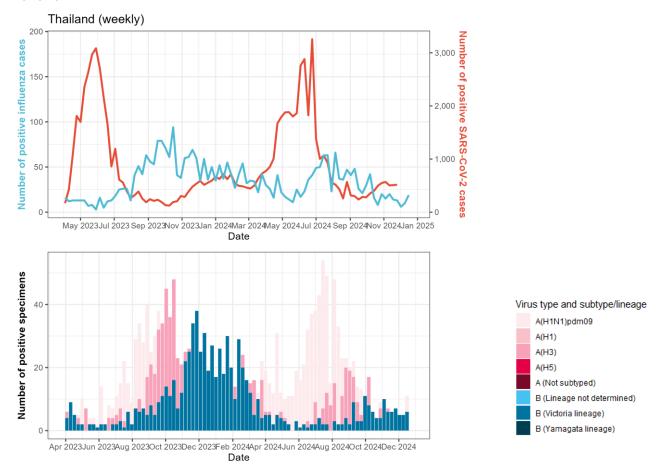
Philippines

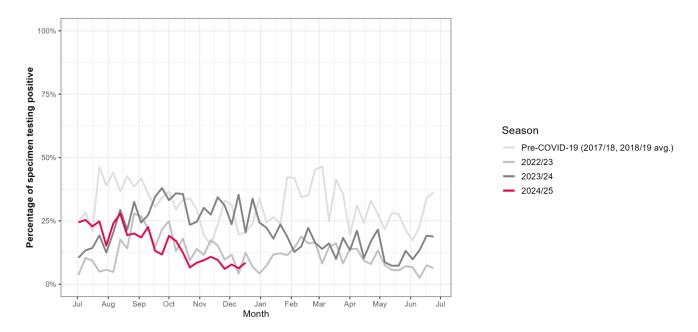


Note: the Philippines stopped reporting **SARS-CoV-2** activity to the WHO since W04/2024

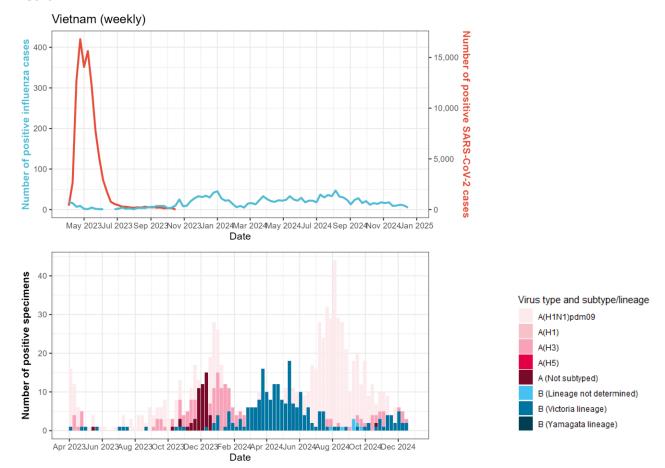


Thailand





Vietnam

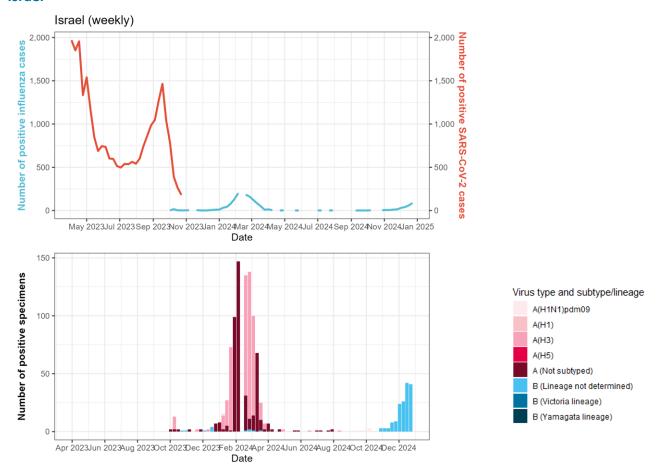


Note: Vietnam stopped reporting SARS-CoV-2 activity to the WHO since W44/2023

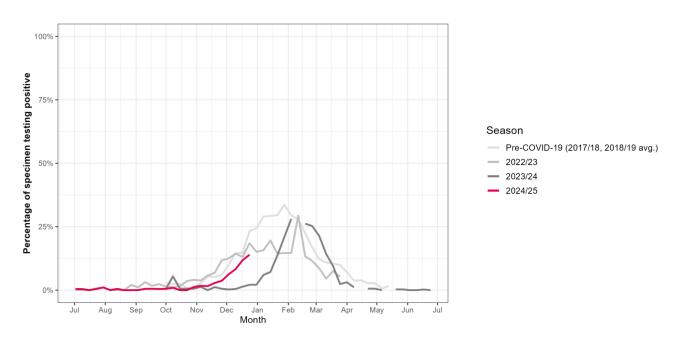
Percentage of specimens testing positive for influenza in different seasons: data not available

Western Asia

Israel

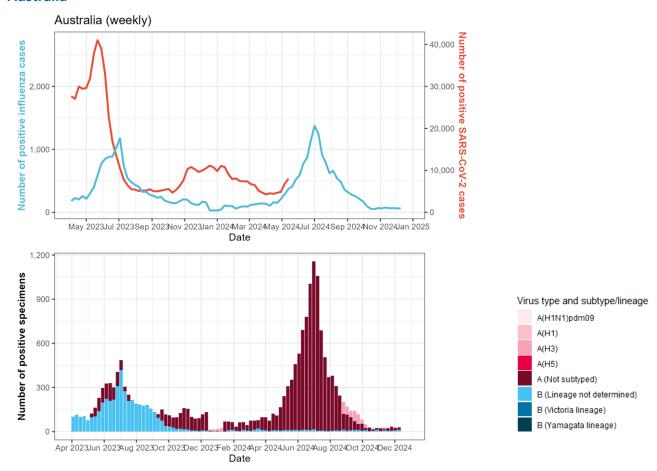


Note: Israel stopped reporting **SARS-CoV-2** activity to the WHO since W44/2023

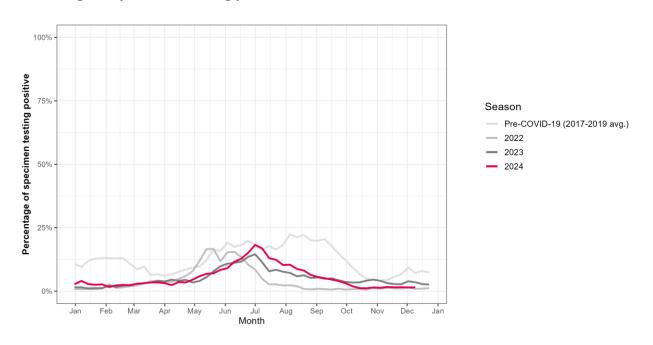


Oceania

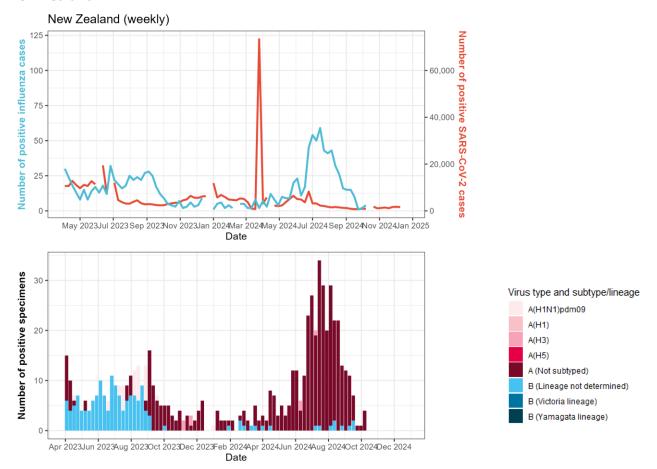
Australia

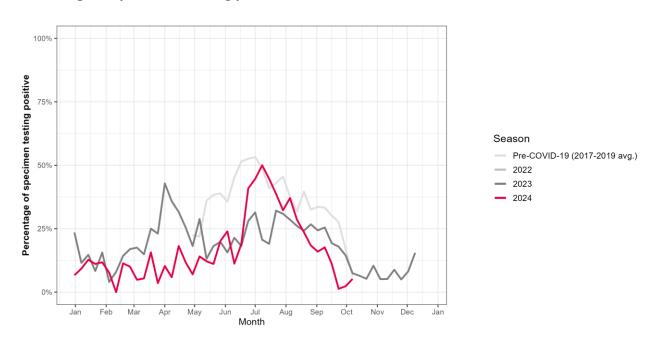


Note: Australia stopped reporting SARS-CoV-2 activity to the WHO since W20/2024



New Zealand





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
Argentina	2019	57 III 5 CO V L	idot illoritii	6,477	rast month	iiiiaciiza apaate
Argentina	2020	1,674,319		465		
Argentina	2021	4,106,203		29		
Argentina	2022	4,110,617		26,585		
Argentina	2023	153,818		5,618		
Argentina	2024	65,401	373	14,663	283	2024-52
Australia	2019	,		14,002		
Australia	2020	28,381		949		
Australia	2021	338,226		8		
Australia	2022	10,418,952		14,654		
Australia	2023	935,976		15,427		
Australia	2024	139,626	0	15,853	194	2024-50
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	1,209,506		21,939		
Brazil	2024	0	0	27,954	1,340	2024-52
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	281,456		47,166		
Canada	2024	44,819	0	71,454	7,453	2024-52
Chile	2019	,		6,539	,	
Chile	2020	605,950		272		
Chile	2021	1,198,732		77		
Chile	2022	3,227,670		13,139		
Chile	2023	300,625		10,926		
Chile	2024	75,728	1,731	19,703	1,424	2024-52
China	2019	,	•	122,757	•	
China	2020	96,673		31,237		
China	2021	35,398		26,151		
China	2022	84,792,971		56,455		
China	2023	14,397,685		260,766		
China	2024	58,701	126	180,208	25,146	2024-52
Egypt	2019	,		1,999	, -	
Egypt	2020	136,644		659		
Egypt	2021	248,084		233		
Egypt	2022	130,805		2,709		
Egypt	2023	490		3,074		
Egypt	2024	0	0	2,023	354	2024-52
-8)7'	2027	J	<u> </u>	2,023	55 4	2027 32

Country	Year	Cases ^{a,b} of	+/- since	Cases ^a of influenza	+/- since	Week of last
France	2019	SARS-CoV-2*	last month ^c	25,405	last month ^c	influenza update
France	2019	2,338,258		16,589		
France	2020	6,371,668		3,071		
France	2021	29,279,621		40,148		
France	2022	1,007,943		22,690		
France	2023	1,007,945	443	31,228	7,190	2024-52
		U	443	<u> </u>	7,190	2024-32
Germany	2019	1 660 170		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		796		
Germany	2024	0	0	1,551	75	2024-51
India	2019			10,428		
India	2020	10,266,679		655		
India	2021	24,572,130		5,128		
India	2022	9,840,329		1,948		
India	2023	334,788		3,359		
India	2024	31,349	0	2,002	71	2024-49
Israel	2019			1,796		
Israel	2020	419,661		1,424		
Israel	2021	962,275		456		
Israel	2022	3,381,658		774		
Israel	2023	77,964		1,013		
Israel	2024	0	0	1,399	230	2024-52
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	1,493,181		5,256		
Italy	2024	164,867	0	5,694	576	2024-52
Japan	2019	,		10,343		
Japan	2020	230,304		2,915		
Japan	2021	1,503,484		9		
Japan	2022	27,371,282		273		
Japan	2023	4,698,502		7,752		
Japan	2023	0	0	3,975	338	2024-51
Mexico	2019	<u> </u>	<u> </u>	6,963	550	202 1 01
Mexico	2019	1,496,067		4,799		
Mexico	2020			4,799 960		
Mexico		2,538,755				
	2022	3,236,805		10,314		
Mexico	2023	336,789	22	7,666	1 220	2024 52
Mexico	2024	14,071	32	11,530	1,228	2024-52

Country	Year	Cases ^{a,b} of SARS-CoV-2*	+/- since	Cases ^a of influenza	+/- since	Week of last influenza update
Netherlands	2019	3AN3-C0V-2	iast month	5,166	iast month	iiiiideiiza apaate
Netherlands	2020	773,198		3,235		
Netherlands	2021	2,312,304		471		
Netherlands	2022	5,480,565		14,864		
Netherlands	2023	58,671		10,675		
Netherlands	2024	15,844	341	12,852	719	2024-51
New Zealand	2019			1,011		
New Zealand	2020	1,807		0		
New Zealand	2021	11,939		0		
New Zealand	2022	2,043,704		0		
New Zealand	2023	382,925		631		
New Zealand	2024	221,609	3,348	633	0	2024-41
Philippines	2019	,	•	612		
Philippines	2020	472,523		52		
Philippines	2021	2,371,346		105		
Philippines	2022	1,218,790		260		
Philippines	2023	134,620		688		
Philippines	2024	8,183	0	548	13	2024-52
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	263,677		2,085		
Poland	2024	135,404	1,987	7,490	1,052	2024-52
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	24,056		1,024		
South Africa	2024	221	14	1,000	5	2024-51
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	5,512,600		2,586		
South Korea	2024	0	0	1,117	48	2024-49
Spain	2019			16,358		
Spain	2020	1,919,549		8,827		
Spain	2021	4,180,589		2,206		
Spain	2022	7,654,824		18,089		
Spain	2023	225,378		13,948		
Spain	2024	0	0	13,186	1,115	2024-51

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
Thailand	2019			1,568		
Thailand	2020	6,919		297		
Thailand	2021	2,216,551		23		
Thailand	2022	2,500,484		575		
Thailand	2023	38,456		1,717		
Thailand	2024	43,905	-516	1,611	48	2024-51
United Kingdom	2019			42,447		
United Kingdom	2020	2,563,561		14,373		
United Kingdom	2021	10,878,146		2,755		
United Kingdom	2022	10,752,848		79,679		
United Kingdom	2023	670,728		44,148		
United Kingdom	2024	155,752	2,649	101,186	22,671	2024-51
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		176,909		
United States	2024	0	0	307,438	30,210	2024-51
Vietnam	2019			355		
Vietnam	2020	1,456		146		
Vietnam	2021	1,729,801		39		
Vietnam	2022	9,793,887		399		
Vietnam	2023	98,880		596		
Vietnam	2024	0	0	1,087	37	2024-51

^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 [11]. The emergence of this new virus has had a major impact on the global circulation of respiratory viruses, including influenza and RSV [12]. 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 were compared to the prevention and control measures applied in each country using the Stringency Index from the Oxford COVID-19 Government Response Tracker (OxCGRT), when this indicator was available (until 31 December 2022) [13].

Data sources

- Influenza: FluNet [14] 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 [15]. 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 [16].
- Government response tracker: The Oxford COVID-19 Government Response Tracker (OxCGRT) [13] 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 6 January 2025 and cover the period 1 January 2019 to 29 December 2024 (influenza) and 15 December 2024 (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 referring to the exact same period. In case of any unclear details or perceived irregularities, feel free to contact us at flucov@nivel.nl.

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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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