

FluCov-Bulletin – end-March 2024

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

Commentary

Contents

Four years have passed since the initial report of atypical pneumonia in Wuhan, China, in January 2020, which was eventually associated with the novel **SARS-CoV-2** virus. 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 22 countries globally (see page 3).

Results

On a global level, influenza activity has further decreased since the beginning of March (see Figure 1). The following country patterns were observed for influenza:

- In the <u>Northern Hemisphere</u>, influenza activity continued to decrease in all European countries covered by the bulletin (France, Germany, Italy, Poland, the Netherlands, Spain and the United Kingdom). Italy and Spain reported very low influenza activity (<10% positivity) [1].
- In the United States and Canada, influenza activity remained at epidemic level and the percentage
 of positive tests decreased in the United States and remained stable in Canada. In Canada,
 detections of influenza B increased, while the total number of detections decreased. In the United
 States, influenza A and B (influenza B/Victoria, if lineage was determined), circulated in equal
 measure.
- In **Mexico**, influenza activity decreased but the percentage of positive tests remained stable compared to the beginning of March.
- Influenza activity continued to decrease in **China** with an overall positivity rate around 10% in the last two weeks of March. The predominant virus was influenza B/Victoria.
- Influenza B/Victoria was also dominant in South Korea and Japan, where detections were low.
- Continued low influenza activity was reported in India, Thailand and Vietnam.
- In **Egypt**, influenza continued to be reported at low levels with a mix of influenza A and B (lineage not determined).
- Influenza activity and percentage of positive tests decreased in Israel.
- In the <u>Southern Hemisphere</u>, influenza detections have been low in Australia and South Africa. Influenza detections have also been low in Brazil and have decreased, compared to the beginning of March.
- No update on influenza activity was available for the Philippines in the second half of March.

Globally, **SARS-CoV-2** detections never reached the levels observed during the late 2022 peak, mainly driven by China (see Figure 1). The following patterns were observed for **SARS-CoV-2** in the second half of March 2024:

- SARS-CoV-2 activity was low, after decreasing in Canada, Italy, Netherlands, Poland, Thailand and the United Kingdom following a peak in December 2023. Activity was also low in India, after a relatively small peak in January 2024.
- Slightly elevated SARS-CoV-2 activity was reported in Australia.
- In China, SARS-CoV-2 detections remained relatively low.

 No update on SARS-CoV-2 detections was available for Brazil, Egypt, France, Germany, Israel, Japan, Mexico, Philippines, South Africa, South Korea, Spain, United States, and Vietnam in the second half of March.

Implications

Global influenza activity has been decreasing since December 2023. In the Northern Hemisphere, however, influenza activity remains elevated in North America and a number of European countries covered by the bulletin (Germany, Poland and United Kingdom). In the 2023/24 Northern Hemisphere season, the prevalent influenza strains have been A(H1N1)pdm09 and A(H3N2), with the latter being particularly predominant in China. However, influenza B/Victoria – the dominant and only influenza B lineage currently circulating – has started to be detected more frequently as of January and is currently the dominant strain in Canada, China, Japan and South Korea. This bimodal curve of influenza A and B is not uncommon and was already regularly seen before the COVID-19 pandemic [2]. It is of importance that the lineage of influenza B specimens is determined, to contribute to a coordinated global effort to understand whether influenza B/Yamagata has ceased circulating [3]. The US (CDC) reports that vaccine components of the current influenza vaccine are well-matched to circulating A(H1N1)pdm09, B/Victoria and A(H3) clades [4]. The same is true for Europe (ECDC) with the exception that some A(H3) viruses (2a.3a.1 clade) are less well-matched [1].

As of March 2024, **SARS-CoV-2** activity is low in almost all countries, after an increase in late 2023. The number of patients hospitalized with **SARS-CoV-2** continued to decrease in **Canada**, **Italy**, the **Netherlands** and the **United States**, after a peak in December 2023 [5]. In **Japan**, **SARS-CoV-2** patients in hospital decreased following a peak in early February 2024. One year following the WHO's declaration of the pandemic's end [6], countries have implemented varied approaches to monitoring SARS-CoV-2. These strategies presently encompass the reduction of surveillance activities and instances where surveillance data is not shared with the WHO. This variation in approaches impacts the completeness of data reported in the FluCov Bulletin.

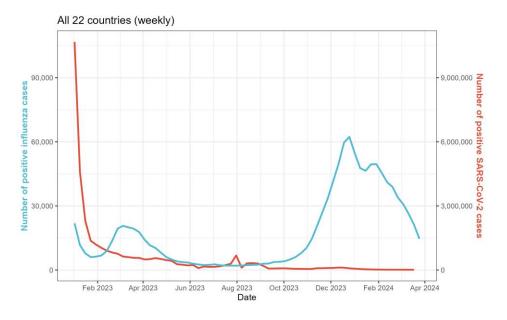


Figure 1: SARS-CoV-2 and influenza detections in the 22 countries covered by the Bulletin (period: from week 1/2023 to week 13/2024).

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, 2023 up to 31 March, 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, 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 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).

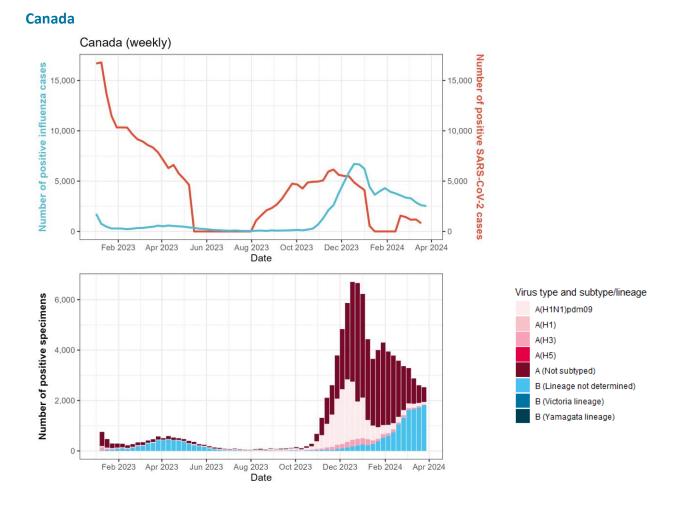
The FluCov Dashboard is live!

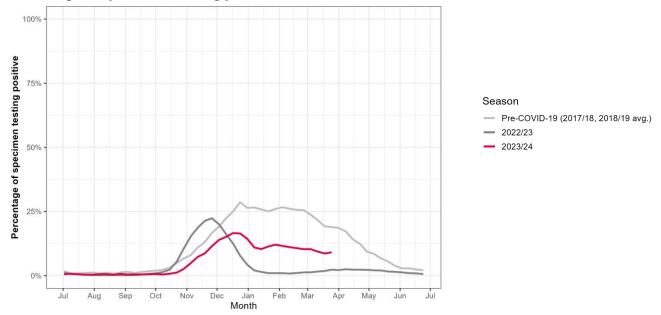
All Figures and Tables in the FluCov-Bulletin can be accessed (real-time) at: https://www.nivel.nl/en/dossier-epidemiology-respiratory-viruses/flucov-dashboard

Countries (click to view plot)

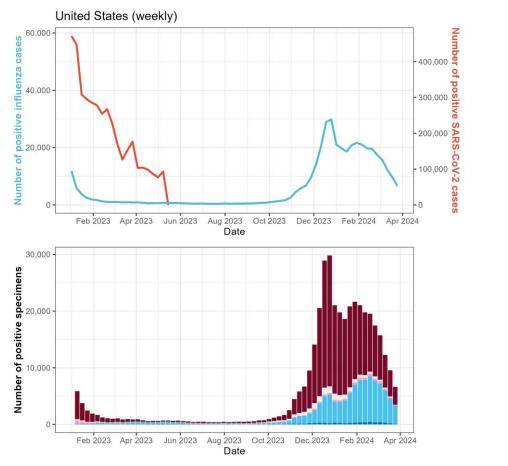
| North America Canada United States | Northern Africa Egypt |
|--|---|
| Central America Caribbean Mexico | Southern Africa South Africa |
| Tropical South America Brazil | Eastern Asia China Japan South Korea |
| Northern Europe | |
| United Kingdom | Southern Asia India |
| Eastern Europe | |
| Poland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

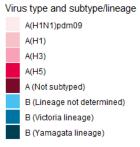




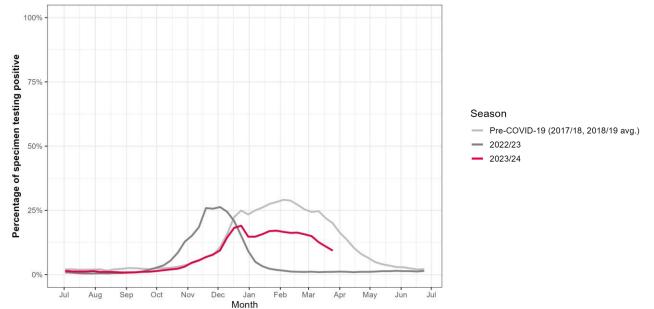


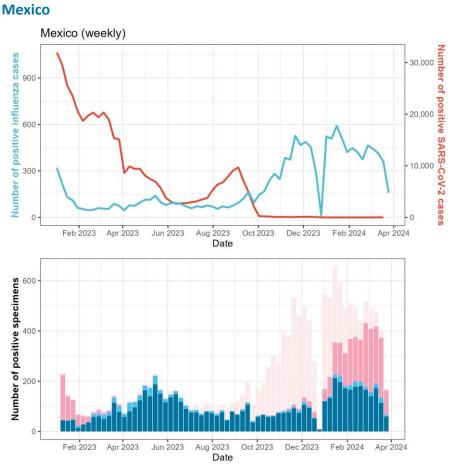
United States



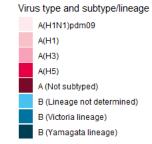


Note: The United States stopped reporting SARS-CoV-2 activity to the WHO since W20/2023

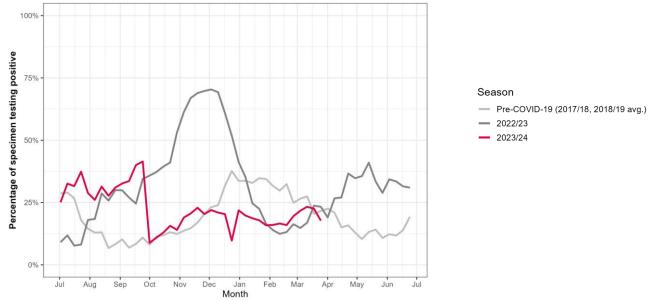




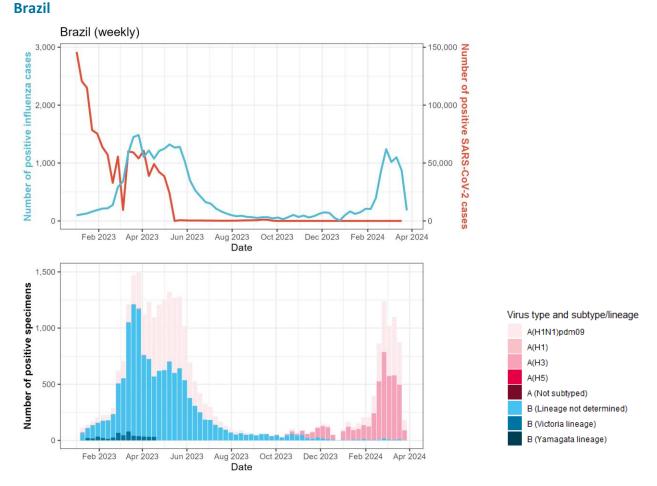
Central America Caribbean



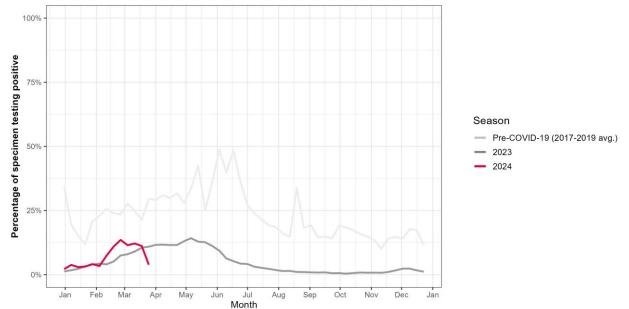
Note: Mexico has reported zero SARS-CoV-2 activity to the WHO since W2/2024

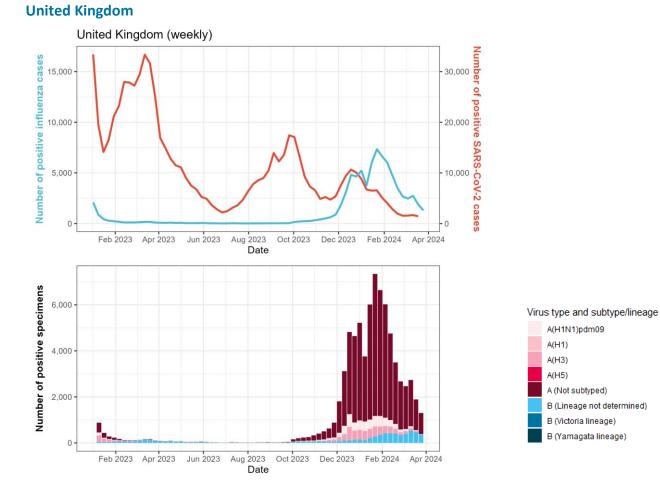


Tropical South America

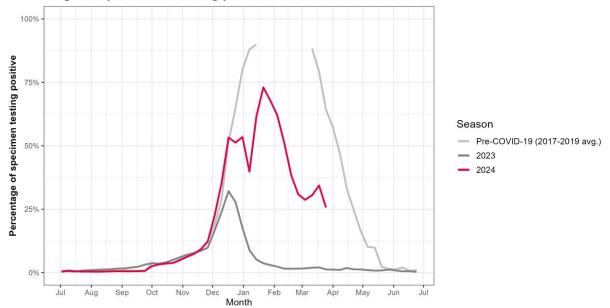


Note: Brazil has reported zero SARS-CoV-2 activity to the WHO since W2/2024

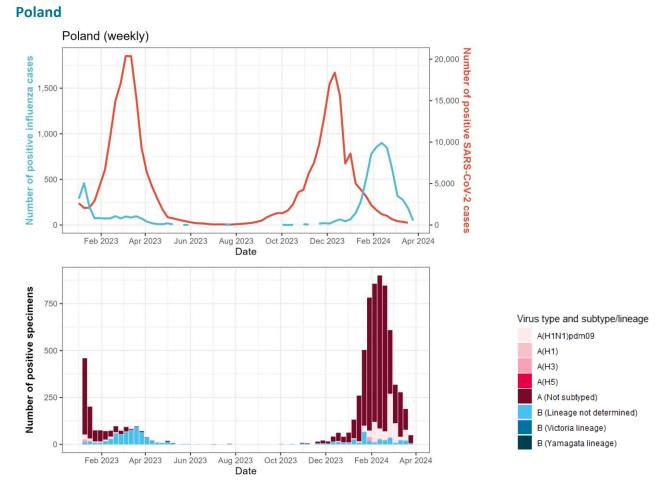


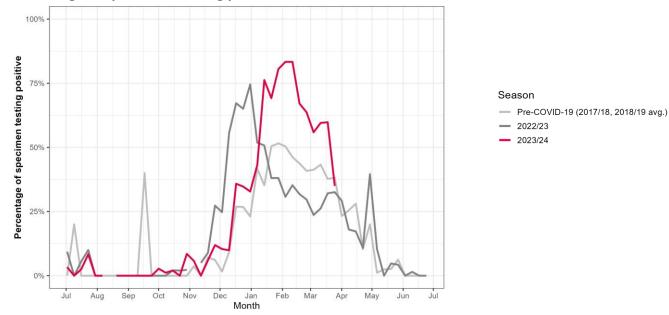


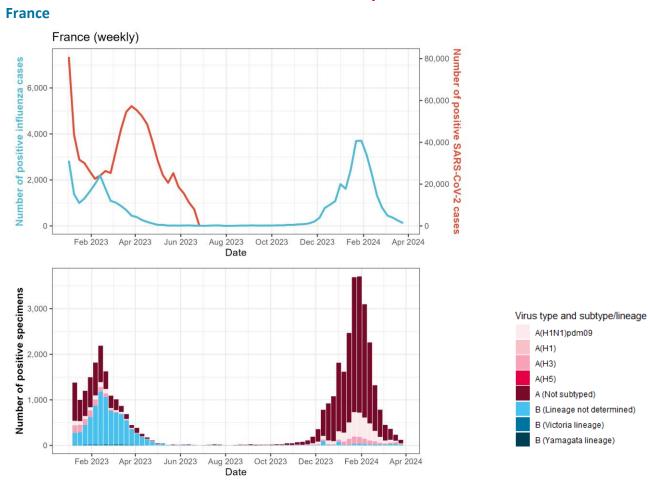
Northern Europe



Eastern Europe

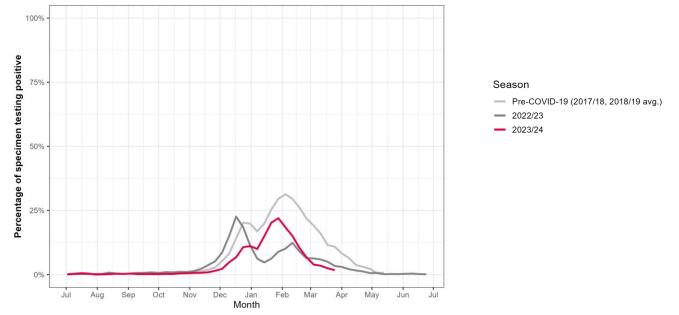




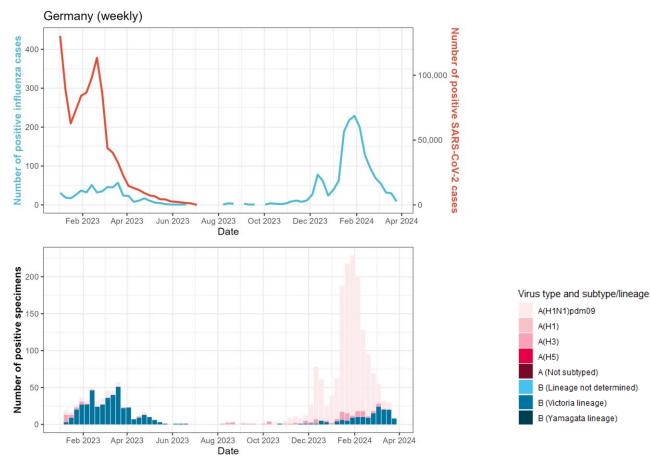


South West Europe

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



Germany

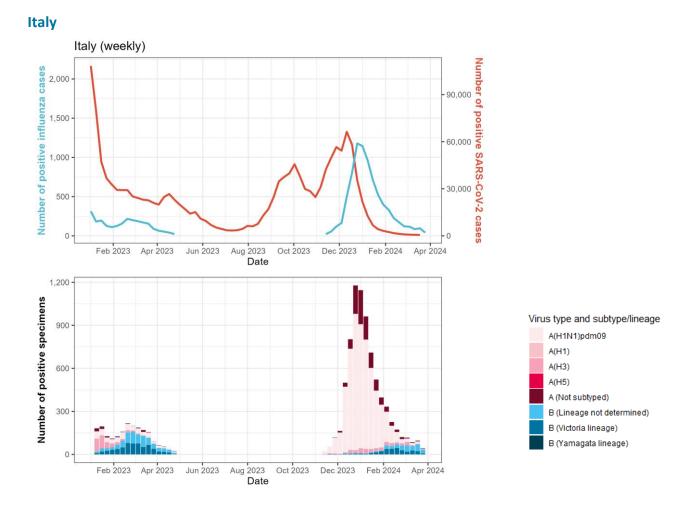


Note: Germany stopped reporting **SARS-CoV-2** activity to the WHO since W27/2023



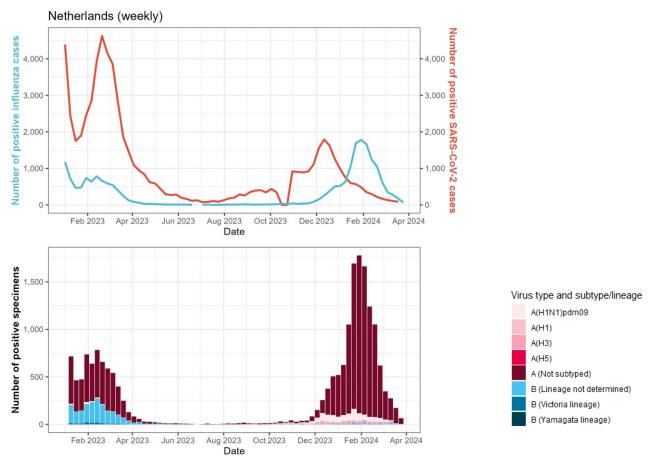


- Pre-COVID-19 (2017/18, 2018/19 avg.)
- 2022/23
- 2023/24



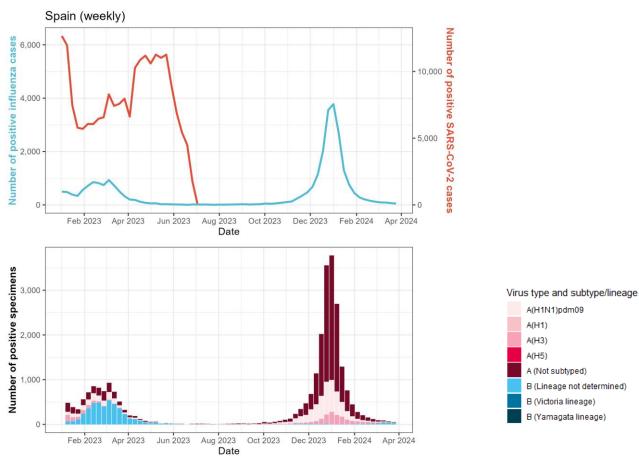
Percentage of specimens testing positive for influenza in different seasons: data not available

Netherlands

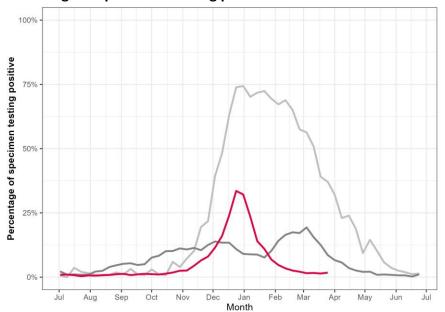


Percentage of specimens testing positive for influenza in different seasons: data not available



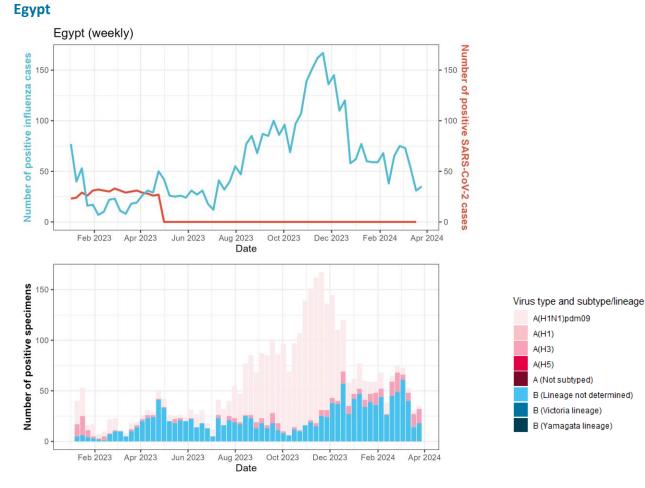


Note: Spain stopped reporting SARS-CoV-2 activity to the WHO since W27/2023

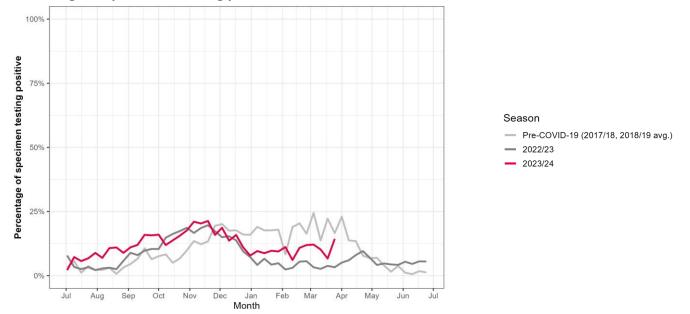


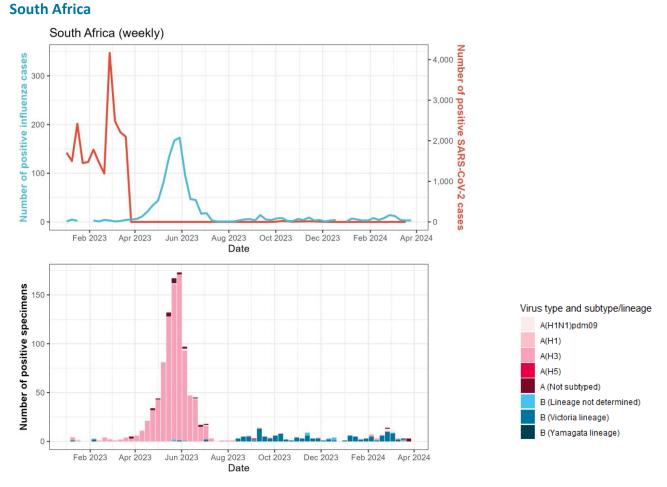
- Season
 - Pre-COVID-19 (2017/18, 2018/19 avg.)
- 2022/23
 2023/24

Northern Africa



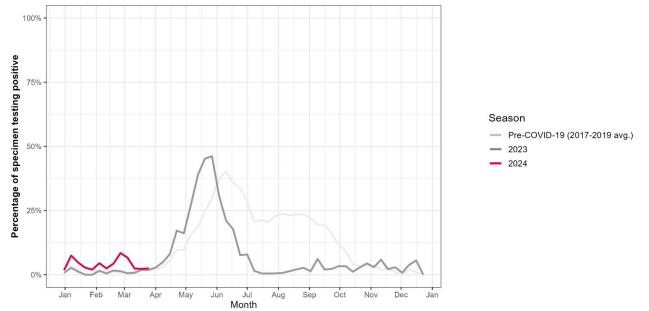
Note: Egypt has reported zero SARS-CoV-2 activity to the WHO since W18/2023



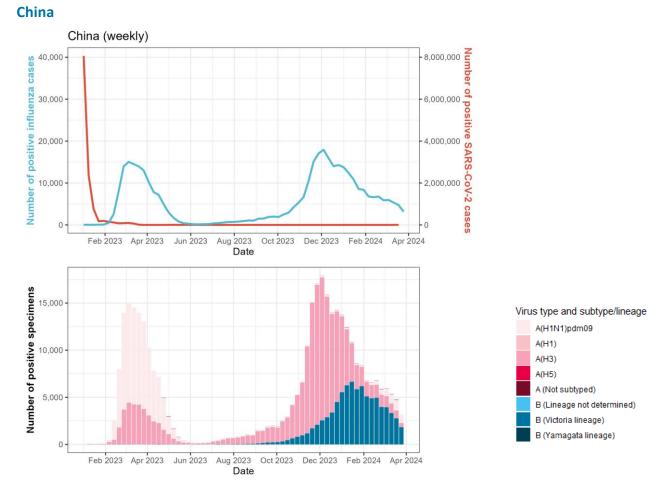


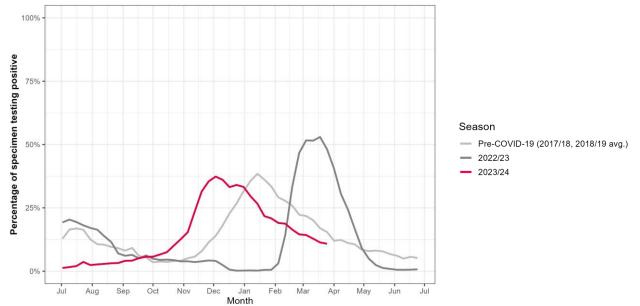
Southern Africa

Note: South Africa has reported zero SARS-CoV-2 activity to the WHO since W50/2023

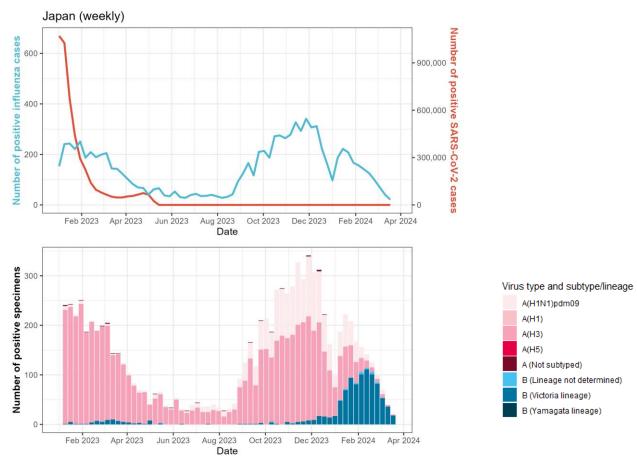


Eastern Asia





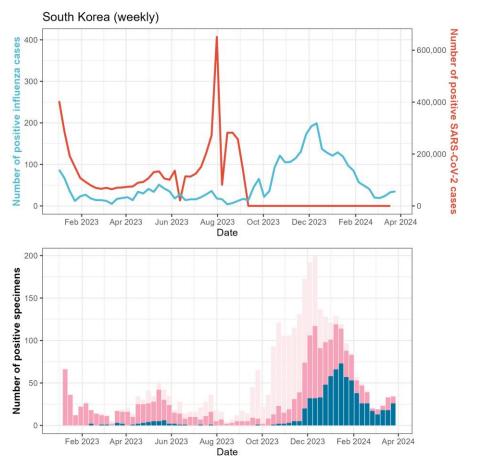


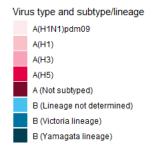


Note: Japan has reported zero SARS-CoV-2 activity to the WHO since W21/2023

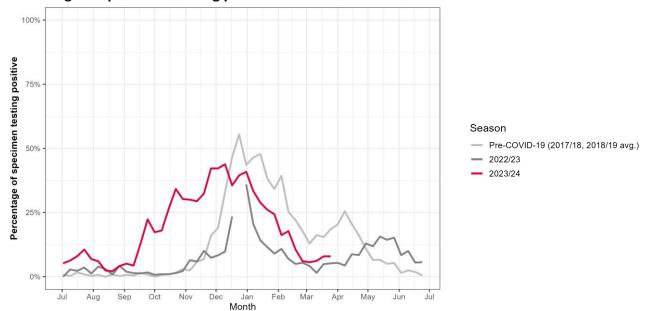
Percentage of specimens testing positive for influenza in different seasons: data not available

South Korea

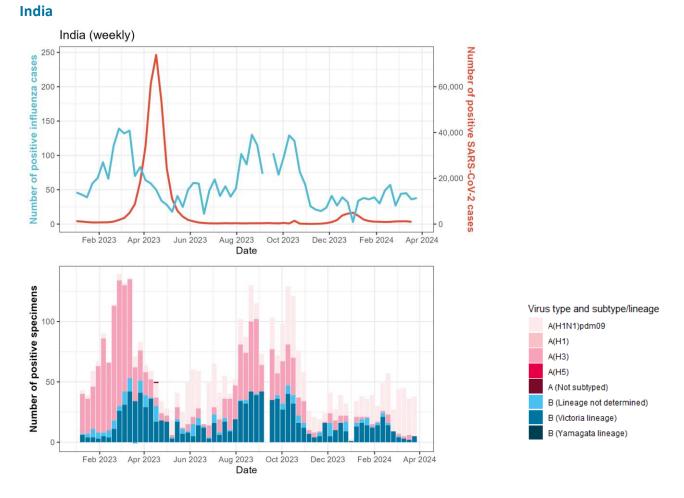


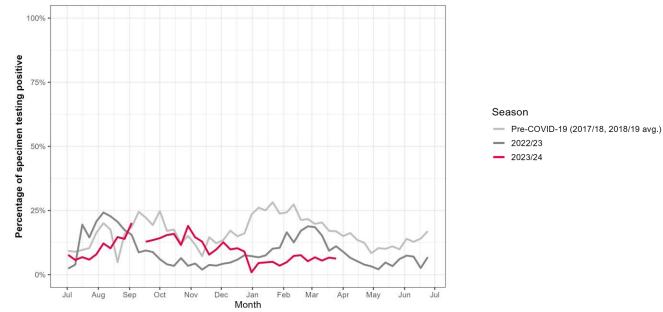


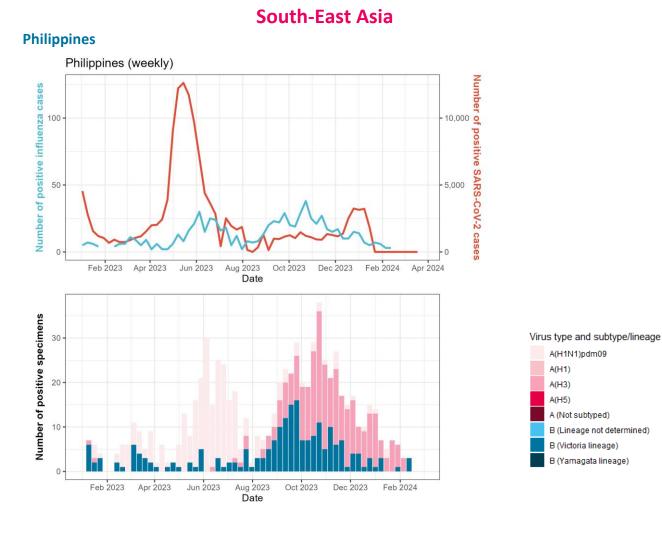
Note: South Korea has reported zero SARS-CoV-2 activity to the WHO since W37/2023

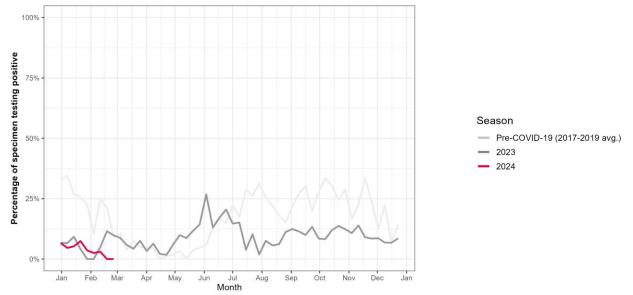


Southern Asia

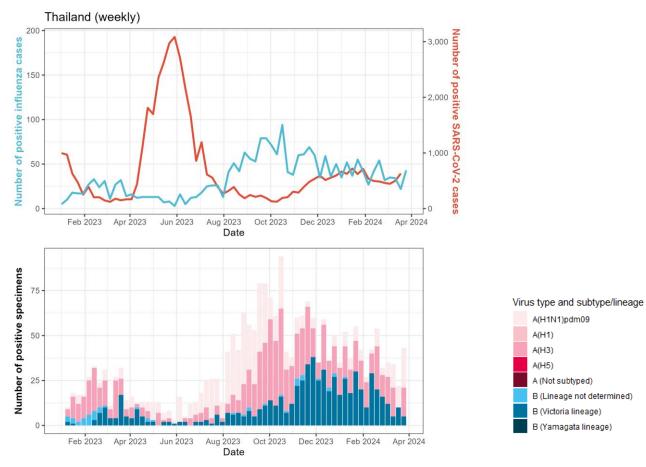




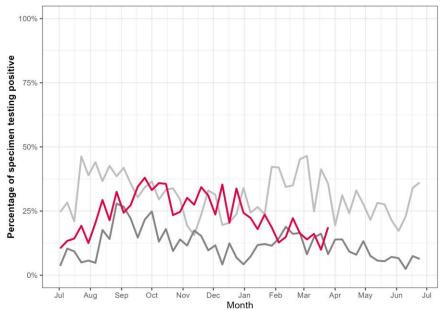




Thailand



Percentage of specimens testing positive for influenza in different seasons

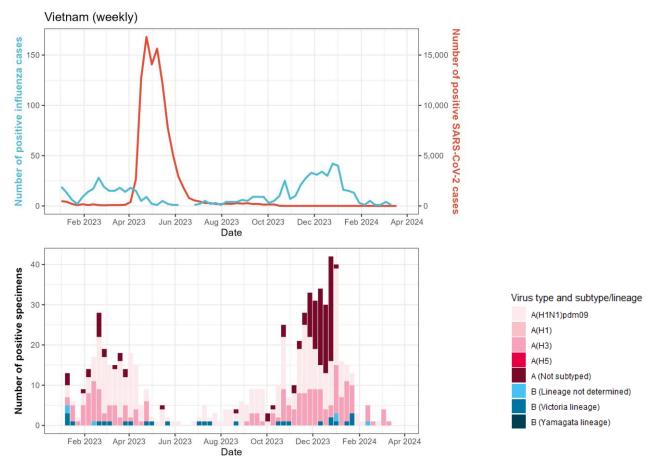


Season

- Pre-COVID-19 (2017/18, 2018/19 avg.)
- 2022/23
 2023/24

Nivel

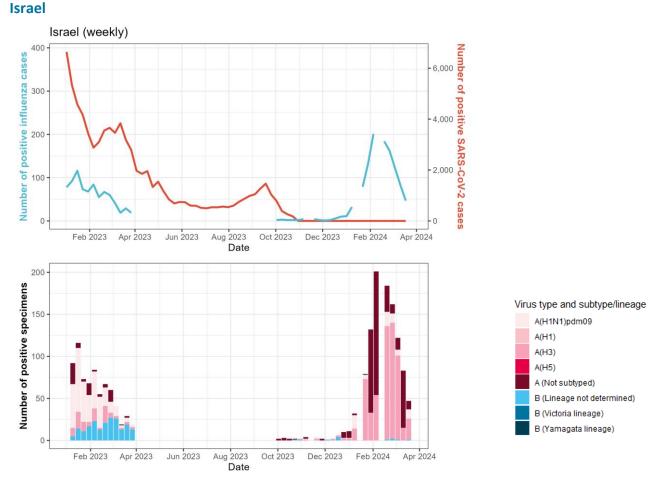
Vietnam



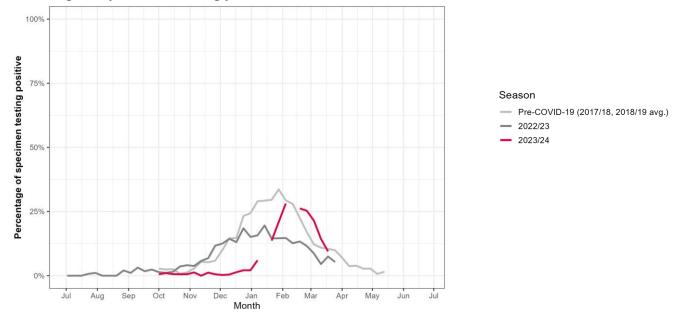
Note: Vietnam has reported zero SARS-CoV-2 activity to the WHO since W44/2023

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

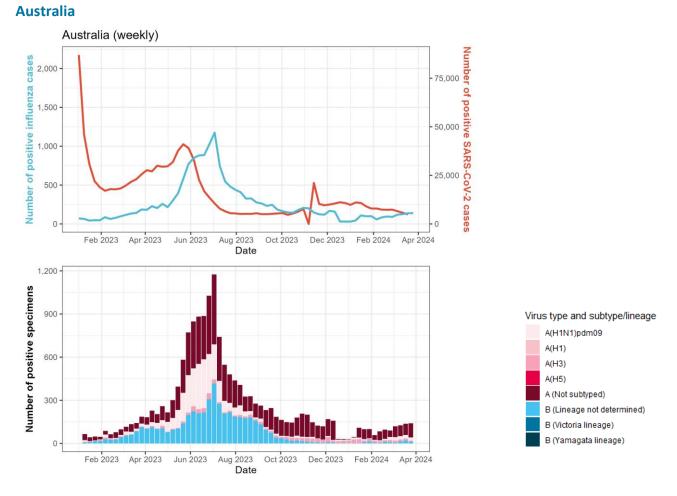
Western Asia

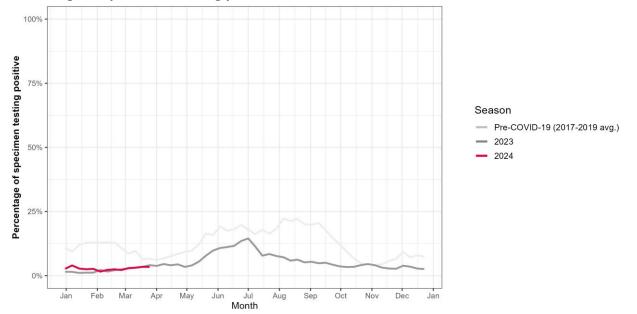


Note: Israel has reported zero SARS-CoV-2 activity to the WHO since W44/2023









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 | 28,296 | | 949 | | |
| Australia | 2021 | 338,311 | | 8 | | |
| Australia | 2022 | 10,327,434 | | 14,654 | | |
| Australia | 2023 | 1,027,494 | | 15,427 | | |
| Australia | 2024 | 95,785 | 24,583 | 1,233 | 522 | 2024-13 |
| Brazil | 2019 | | | 3,459 | | |
| Brazil | 2020 | 7,448,560 | | 1,391 | | |
| Brazil | 2021 | 14,782,177 | | 1,240 | | |
| Brazil | 2022 | 13,893,600 | | 3,648 | | |
| Brazil | 2023 | 1,395,623 | | 21,939 | | |
| Brazil | 2024 | 0 | 0 | 6,617 | 3171 | 2024-13 |
| Canada | 2019 | | | 43,196 | | |
| Canada | 2020 | 539,241 | | 44,956 | | |
| Canada | 2021 | 1,422,482 | | 337 | | |
| Canada | 2022 | 2,514,662 | | 71,314 | | |
| Canada | 2023 | 282,745 | | 47,166 | | |
| Canada | 2024 | 10,818 | 4,588 | 48,578 | 11294 | 2024-13 |
| China | 2019 | | | 122,757 | | |
| China | 2020 | 96,324 | | 31,237 | | |
| China | 2021 | 34,534 | | 26,151 | | |
| China | 2022 | 62,314,792 | | 56,455 | | |
| China | 2023 | 36,877,077 | | 260,766 | | |
| China | 2024 | 22,953 | 10,928 | 99,275 | 19211 | 2024-13 |
| Egypt | 2019 | | | 1,999 | | |
| Egypt | 2020 | 131,315 | | 659 | | |
| Egypt | 2021 | 249,205 | | 233 | | |
| Egypt | 2022 | 134,994 | | 2,709 | | |
| Egypt | 2023 | 509 | | 3,079 | | |
| Egypt | 2024 | 0 | 0 | 755 | 192 | 2024-13 |
| 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 | | 22,690 | | |
| France | 2024 | 0 | 0 | 21,932 | 1171 | 2024-13 |
| 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 | | 796 | | |
| Germany | 2024 | 0 | 0 | 1,354 | 126 | 2024-13 |

| 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 |
| India | 2019 | | | 10,428 | | |
| India | 2020 | 10,187,850 | | 655 | | |
| India | 2021 | 24,598,952 | | 5,128 | | |
| India | 2022 | 9,890,304 | | 1,948 | | |
| India | 2023 | 336,066 | | 3,282 | | |
| India | 2024 | 20,472 | 4,609 | 476 | 163 | 2024-13 |
| Israel | 2019 | | | 1,796 | | |
| Israel | 2020 | 399,105 | | 1,424 | | |
| Israel | 2021 | 965,663 | | 456 | | |
| Israel | 2022 | 3,391,936 | | 774 | | |
| Israel | 2023 | 84,854 | | 841 | | |
| Israel | 2024 | 0 | 0 | 1,053 | 252 | 2024-12 |
| Italy | 2019 | | | 6,361 | | |
| Italy | 2020 | 2,039,182 | | 7,485 | | |
| Italy | 2021 | 3,583,249 | | 31 | | |
| Italy | 2022 | 19,438,072 | | 5,817 | | |
| Italy | 2023 | 1,601,195 | | 5,256 | | |
| Italy | 2024 | 56,807 | 2,965 | 4,929 | 340 | 2024-13 |
| Japan | 2019 | | | 10,343 | | |
| Japan | 2020 | 217,312 | | 2,915 | | |
| Japan | 2021 | 1,514,477 | | 9 | | |
| Japan | 2022 | 26,534,616 | | 273 | | |
| Japan | 2023 | 5,537,167 | | 7,678 | | |
| Japan | 2024 | 0 | 0 | 1,534 | 132 | 2024-12 |
| Mexico | 2019 | | | 6,963 | | |
| Mexico | 2020 | 1,453,414 | | 4,799 | | |
| Mexico | 2021 | 2,548,565 | | 960 | | |
| Mexico | 2022 | 3,243,611 | | 10,314 | | |
| Mexico | 2023 | 464,157 | | 7,666 | | |
| Mexico | 2024 | 0 | 0 | 5,638 | 1375 | 2024-13 |
| Netherlands | 2019 | | | 5,166 | | |
| Netherlands | 2020 | 773,198 | | 3,235 | | |
| Netherlands | 2021 | 2,312,304 | | 471 | | |
| Netherlands | 2022 | 5,480,565 | | 14,019 | | |
| Netherlands | 2023 | 64,963 | | 9,582 | | |
| Netherlands | 2024 | 4,756 | 498 | 11,106 | 862 | 2024-13 |
| Philippines | 2019 | | | 612 | | |
| Philippines | 2020 | 469,003 | | 52 | | |
| Philippines | 2021 | 2,369,471 | | 105 | | |
| Philippines | 2022 | 1,220,895 | | 260 | | |
| Philippines | 2023 | 137,910 | | 688 | | |
| Philippines | 2024 | 8,183 | 0 | 45 | 0 | 2024-09 |
| Poland | 2019 | • | | 1,786 | | |
| Poland | 2020 | 1,259,923 | | 1,282 | | |
| Poland | 2021 | 2,790,909 | | 2 | | |
| Poland | 2022 | 2,314,550 | | _ 1,604 | | |
| Poland | 2023 | 266,683 | | 2,085 | | |
| Poland | 2024 | 29,701 | 1,807 | 5,785 | 834 | 2024-13 |
| | | -, | , | -, | | |

| 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 |
| South Africa | 2019 | | | 1,164 | | |
| South Africa | 2020 | 994,911 | | 157 | | |
| South Africa | 2021 | 2,413,026 | | 413 | | |
| South Africa | 2022 | 640,295 | | 1,171 | | |
| South Africa | 2023 | 24,404 | | 1,024 | | |
| South Africa | 2024 | 0 | 0 | 75 | 22 | 2024-13 |
| South Korea | 2019 | | | 1,702 | | |
| South Korea | 2020 | 56,855 | | 505 | | |
| South Korea | 2021 | 554,812 | | 0 | | |
| South Korea | 2022 | 28,047,388 | | 295 | | |
| South Korea | 2023 | 5,912,818 | | 2,586 | | |
| South Korea | 2024 | 0 | 0 | 829 | 111 | 2024-13 |
| 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 | | 17,879 | | |
| Spain | 2024 | 0 | 0 | 10,036 | 301 | 2024-13 |
| Thailand | 2019 | | | 1,568 | | |
| Thailand | 2020 | 6,142 | | 297 | | |
| Thailand | 2021 | 2,203,829 | | 23 | | |
| Thailand | 2022 | 2,511,838 | | 575 | | |
| Thailand | 2023 | 40,567 | | 1,717 | | |
| Thailand | 2024 | 6,902 | 2,039 | 510 | 134 | 2024-13 |
| United Kingdom | 2019 | | | 42,447 | | |
| United Kingdom | 2020 | 2,344,433 | | 14,377 | | |
| United Kingdom | 2021 | 10,230,346 | | 2,755 | | |
| United Kingdom | 2022 | 11,584,258 | | 26,896 | | |
| United Kingdom | 2023 | 706,042 | | 23,986 | | |
| United Kingdom | 2024 | 48,756 | 6,226 | 54,317 | 8392 | 2024-13 |
| United States | 2019 | | | 268,524 | | |
| United States | 2020 | 18,890,446 | | 229,766 | | |
| United States | 2021 | 32,988,414 | | 39,507 | | |
| United States | 2022 | 47,140,633 | | 469,968 | | |
| United States | 2023 | 4,417,336 | | 176,883 | | |
| United States | 2024 | 0 | 0 | 223,913 | 44194 | 2024-13 |
| Vietnam | 2019 | | | 355 | | |
| Vietnam | 2020 | 1,440 | | 146 | | |
| Vietnam | 2021 | 1,650,233 | | 39 | | |
| Vietnam | 2022 | 9,872,529 | | 399 | | |
| Vietnam | 2023 | 99,798 | | 591 | | |
| Vietnam | 2024 | 0 | 0 | 100 | 5 | 2024-13 |
| ^a Laboratory-confirm | | | | | | |

^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 [7]. The emergence of this new virus has had a major impact on the global circulation of respiratory viruses, including influenza and RSV [8]. 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) [9].

Data sources

- Influenza: FluNet [10] 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 [11]. 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 [12].
- **Government response tracker**: The Oxford COVID-19 Government Response Tracker (OxCGRT) [9] 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 8 March 2024 and cover the period 1 January 2019 to 31 March 2024. 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 <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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