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NATO MilMed COE
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Update 131
FHP-Update
09 February 2023

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GLOBAL

↘
673 573 372
confirmed cases
663 500 000
recovered
6 853 119 deaths

TWN

7-days incidence
686
↘

JPN

7-days incidence
204
↘

KOR

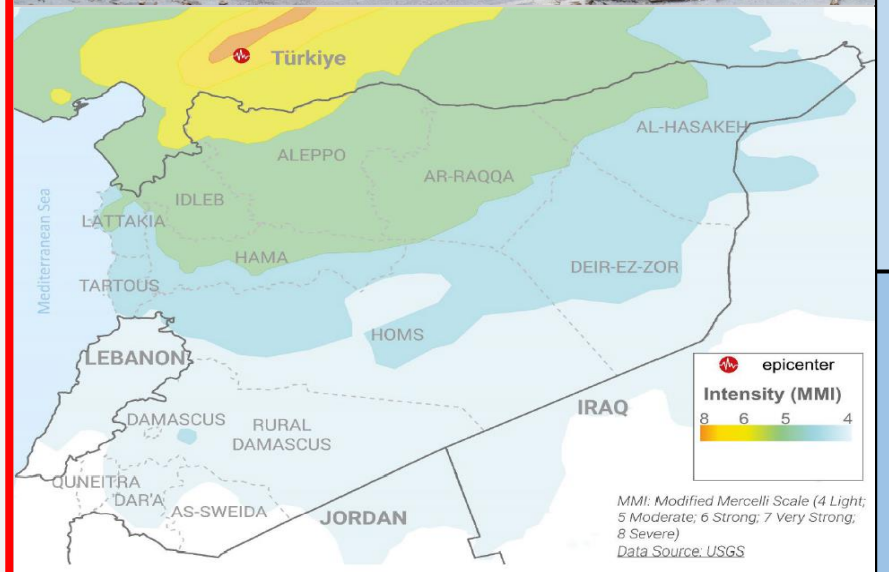
7-days incidence
191
↘

News:

- **WHO:** WHO publishes two landmark documents on leishmaniasis - Determining discriminating concentrations of insecticides for monitoring resistance in sand flies" and "Operational manual on leishmaniasis vector control, surveillance, monitoring and evaluation
- **WHO:** Director-General's briefing on earthquake in Türkiye and the Syrian Arab Republic at the 152nd session of the Executive Board
- **ECDC:** The ECDC Communicable Disease Threats Report (CDTR) is a weekly bulletin for epidemiologists and health professionals on active public health threats. This issue covers the period 30 January - 5 February 2023 and includes updates on COVID-19, diphtheriae, mpox, influenza, influenza A (H9N2), influenza (H5N6), MERS-CoV, avian influenza, BSE, and Niaph virus. You will find more Infection disease outbreaks on slide 7 and 8.
- **ECDC:** published this document aims to support the development of guidance for healthcare facilities and healthcare providers in the European Union/European Economic Area (EU/EEA) on infection prevention and control (IPC) measures for the management of patients with respiratory tract viral infection in healthcare settings.
- **ECDC:** published a protocol for a COVID-19 vaccine effectiveness study using health data registries.
- **Syria/Turkey:** Multiple earthquakes hit southern Türkiye and Syria early morning on 6 February. The one with the most severe impact had 7.7 magnitude, and its tectonic epicenter was located in Gaziantep; Adana at a depth of 24.075 kilometers, with tremors felt in varying intensities across the Syrian Arab Republic. Following the earthquake, multiple aftershocks were reported. Several governorates in north, central, and coastal parts of Syria were affected with Aleppo being the most impacted; although Lattakia, Tartous, Hama, and Idleb, were also considerably affected. Preliminary reports indicate both human and material damages, mainly in Aleppo, Lattakia, Hama, Idleb and Tartous. Preliminary reports from the Syrian Ministry of Health indicate that 430 people have so far been confirmed dead and that 1,315 people sustained injuries in the HCT-Coordinated response areas, mostly in Aleppo, Hama, Latakia and Tartous. The death toll is expected to continue to rise, as is the structural damage as many of the buildings in the affected areas are structurally unsound and could collapse following the additional damage. Reliefweb 6 FEB, Reliefweb 8 FEB
- **FDA:** FDA Pulls Authorization for AstraZeneca's COVID-19 Treatment Evusheld

Topics:

- Global situation: COVID-19 (slide 2)
- COVID-19 (slide 3-6)
- Other infectious diseases (slide 7 + 8)
- OCHA – Flash Update – Earthquake (slide 9)
- Ukraine Situation Report (slide 10)



EUROPE

↗
264 195 368
confirmed cases
261 400 000
recovered
2 127 038 deaths

AUT

7-days incidence
301
↗

CYP

7-days incidence
124
↘

DEU

7-days incidence
93
→

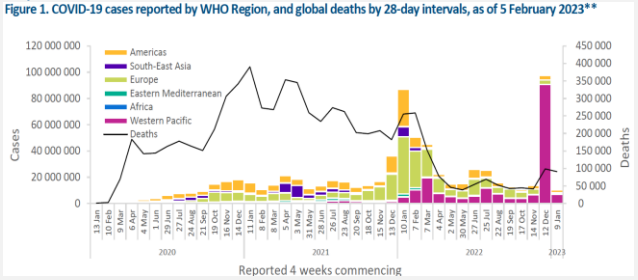
COVID-19 Situation by WHO Region, as of 08 February

Global epidemiological situation overview; WHO as of 08 February 2023

Globally, nearly 10.5 million new cases and over 90 000 deaths were reported in the last 28 days (9 January to 5 February 2023), a decrease of 89% and 8%, respectively, compared to the previous 28 days (Figure 1). Epidemiologic trends in the previous 28 days have been dominated by a large wave of cases and deaths in the Western Pacific Region, notably in China. As of 5 February 2023, over 754 million confirmed cases and over 6.8 million deaths have been reported globally. Current trends in reported COVID-19 cases are underestimates of the true number of global infections and reinfections as shown by prevalence surveys. This is partly due to the reduction in testing and delays in reporting in many countries. Data presented in this report may be incomplete and should, therefore, be interpreted with caution. Additionally, data from previous weeks are continuously updated to incorporate retrospective changes in reported COVID-19 cases and deaths made by countries.

At the country level, the highest numbers of new 28-day cases were reported from China (3 485 265 new cases; -96%), Japan (2 429 215 new cases; -42%), the United States of America (1 328 654 new cases; -27%), the Republic of Korea (736 811 new cases; -59%), and Brazil (389 444 new cases; -59%). The highest numbers of new 28-day deaths were reported from China (40 812 new deaths; -11%), the United States of America (15 294 new deaths; +40%), Japan (9874 new deaths; +28%), the United Kingdom (2671 new deaths; -32%), and Brazil (2566 new deaths; -37%).

Figure 1. COVID-19 cases reported by WHO Region, and global deaths by 28-day intervals, as of 5 February 2023**



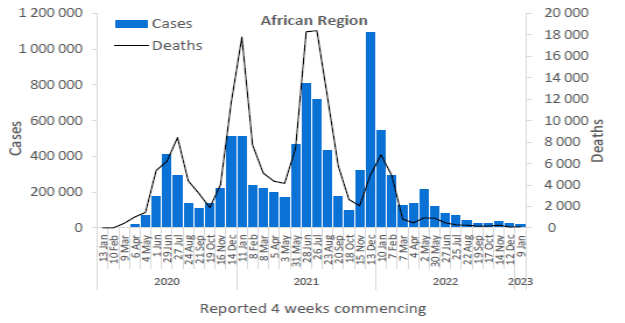
WHO regional overviews

Data for 9 January to 5 February 2023

African Region

The African Region reported over 23 000 new cases, a 27% decrease as compared to the previous 28-day period. Ten (20%) of the 50 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Equatorial Guinea (24 vs one new cases; +2300%), Zambia (4514 vs 832 new cases; +443%), and Mozambique (1600 vs 403 new cases; +297%). The highest numbers of new cases were reported from South Africa (5368 new cases; 9.1 new cases per 100 000; -27%), Zambia (4514 new cases; 24.6 new cases per 100 000; +443%), and Réunion (3290 new cases; 367.5 new cases per 100 000; -57%).

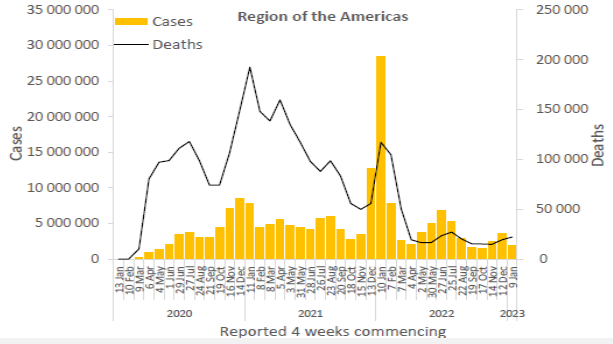
The number of new 28-day deaths in the region increased by 21% as compared to the previous 28-day period, with 99 new deaths reported. The highest numbers of new deaths were reported from South Africa (27 new deaths; <1 new death per 100 000; +50%), Zimbabwe (19 new deaths; <1 new death per 100 000; +12%), and Zambia (16 new deaths; <1 new death per 100 000; +220%).



Region of the Americas

The Region of the Americas reported over 2.1 million new cases, a 43% decrease as compared to the previous 28-day period. Six (11%) of the 56 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Jamaica (802 vs 158 new cases; +408%), Saint Lucia (121 vs 25 new cases; +384%), and the United States Virgin Islands (753 vs 198 new cases; +280%). The highest numbers of new cases were reported from the United States of America (1 328 654 new cases; 401.4 new cases per 100 000; -27%), Brazil (389 444 new cases; 183.2 new cases per 100 000; -59%), and Mexico (91 617 new cases; 71.1 new cases per 100 000; -25%).

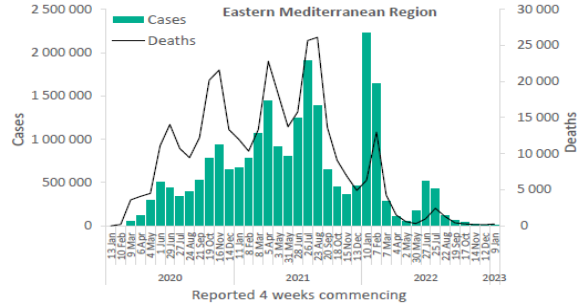
The number of new 28-day deaths in the region increased by 14% as compared to the previous 28-day period, with 22 043 new deaths reported. The highest numbers of new deaths were reported from the United States of America (15 294 new deaths; 4.6 new deaths per 100 000; +40%), Brazil (2566 new deaths; 1.2 new deaths per 100 000; -37%), and Canada (977 new deaths; 2.6 new deaths per 100 000; -16%).



Eastern Mediterranean Region

The Eastern Mediterranean Region reported over 18 000 new cases, a 2% decrease as compared to the previous 28-day period. Five (23%) of the 22 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Tunisia (2711 vs 500 new cases; +442%), Lebanon (5675 vs 2571 new cases; +121%), and the Islamic Republic of Iran (2855 vs 1703 new cases; +68%). The highest numbers of new cases were reported from Lebanon (5675 new cases; 83.1 new cases per 100 000; +121%), the Islamic Republic of Iran (2855 new cases; 3.4 new cases per 100 000; +68%), and Tunisia (2711 new cases; 22.9 new cases per 100 000; +442%).

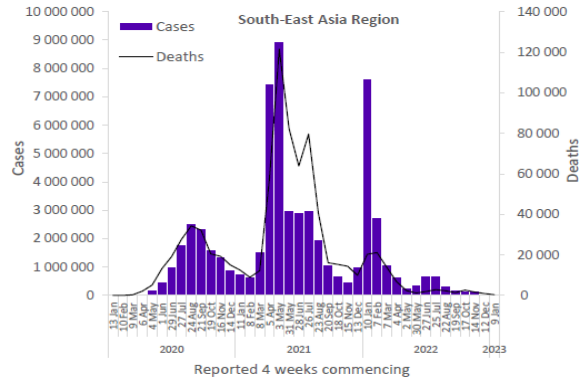
The number of new 28-day deaths in the region increased by 45% as compared to the previous 28-day period, with 231 new deaths reported. The highest numbers of new deaths were reported from Saudi Arabia (50 new deaths; <1 new death per 100 000; +6%), the Islamic Republic of Iran (50 new deaths; <1 new death per 100 000; +4%), and Afghanistan (45 new deaths; <1 new death per 100 000; +275%).



South-East Asia Region

The South-East Asia Region reported over 14 000 new cases, a 65% decrease as compared to the previous 28-day period. One (10%) of the 10 countries for which data are available reported increases in new cases of 20% or greater: Bhutan (54 vs 30 new cases; +80%). The highest numbers of new cases were reported from Indonesia (7589 new cases; 2.8 new cases per 100 000; -69%), India (3439 new cases; <1 new case per 100 000; -33%), and Thailand (2320 new cases; 3.3 new cases per 100 000; -75%).

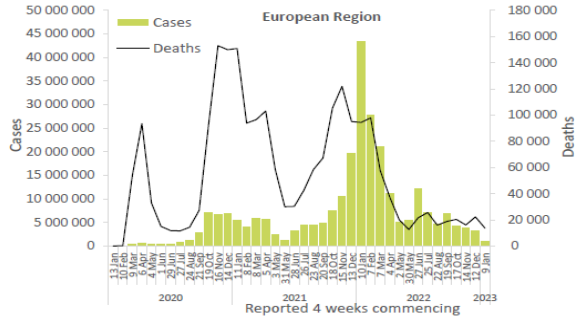
The number of new 28-day deaths in the region decreased by 61% as compared to the previous 28-day period, with 342 new deaths reported. The highest numbers of new deaths were reported from Thailand (155 new deaths; <1 new death per 100 000; -54%), Indonesia (149 new deaths; <1 new death per 100 000; -68%), and India (25 new deaths; <1 new death per 100 000; -60%).



European Region

The European Region reported over 1.2 million new cases, a 62% decrease as compared to the previous 28-day period. Three (5%) of the 61 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Kosovo[1] (273 vs 118 new cases; +131%), Georgia (4957 vs 3012 new cases; +65%), and Montenegro (1404 vs 1021 new cases; +38%). The highest numbers of new cases were reported from Germany (300 876 new cases; 361.8 new cases per 100 000; -59%), Italy (187 023 new cases; 313.6 new cases per 100 000; -66%), and the Russian Federation (169 762 new cases; 116.3 new cases per 100 000; +5%).

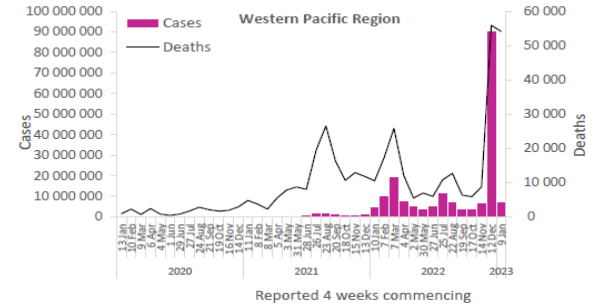
The number of new 28-day deaths in the region decreased by 38% as compared to the previous 28-day period, with 13 652 new deaths reported. The highest numbers of new deaths were reported from the United Kingdom (2671 new deaths; 3.9 new deaths per 100 000; -32%), Italy (1740 new deaths; 2.9 new deaths per 100 000; -40%), and France (1522 new deaths; 2.3 new deaths per 100 000; -51%).



Western Pacific Region

The Western Pacific Region reported over seven million new cases, a 92% decrease as compared to the previous 28-day period. Four (11%) of the 35 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Samoa (118 vs 16 new cases; +638%), Australia (262 214 vs 109 078 new cases; +140%), and Guam (723 vs 302 new cases; +139%). The highest numbers of new cases were reported from China (3 485 265 new cases; 236.9 new cases per 100 000; -96%), Japan (2 429 215 new cases; 1920.7 new cases per 100 000; -42%), and the Republic of Korea (736 811 new cases; 1437.1 new cases per 100 000; -59%).

The number of new 28-day deaths in the region decreased by 3% as compared to the previous 28-day period, with 54 153 new deaths reported. The highest numbers of new deaths were reported from China (40 812 new deaths; 2.8 new deaths per 100 000; -11%), Japan (9874 new deaths; 7.8 new deaths per 100 000; +28%), and Australia (1866 new deaths; 7.3 new deaths per 100 000; +752%).



Source: https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---8-february-2023

COVID-19 in China
Update

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The BlueDot Intelligence Team continues to consider the ongoing COVID-19 situation in mainland China to be of high concern.

- Given the recent reopening of mainland China's borders for tourism as well as the anticipated increase in Lunar New Year-related travel in January and February 2023, there will likely be an increase in importation of SARS-CoV-2 variants into mainland China.
- The top **five countries/regions** that mainland China is **forecasted to receive the highest volume of travellers** from in January 2023 are: **Hong Kong, Taiwan, Macao, Japan, and South Korea**.
- Based on limited sequencing data, mainland China's current wave is reported to be driven by the **BF.7 and BA.5.2 variants**. Several other variants, such as **BQ.1 or BQ.1.1, XBF, XBB.1.5, and CH.1.1**, are modelled or observed to be **higher in transmissibility and/or immune evasion** and are known to be circulating in **other regions globally** that have high connectivity to mainland China. Future waves in China may be driven by one or more of these new variants, or the current wave may be extended in duration due to importation of these variants.
- Although mainland China's current wave of COVID-19 is reported to be subsiding, the country is likely to experience multiple epidemic waves over the next year, driven by the emergence and/or introduction of new variants with increased infectivity, and changes in population susceptibility due to waning immunity.
- The rapid transmission occurring among a large population in mainland China provides more chances for the virus to accumulate mutations. Given the limited availability of sequencing data, the emergence of a new divergent variant in China may not be identified in a timely manner. Countries highly connected to mainland China are at higher risk of importation.
- The top five countries/regions that are forecasted to receive the highest volume of travellers from mainland China in January 2023 are: Hong Kong, Taiwan, South Korea, Macao, and the United States.

SITUATION OVERVIEW

As detailed in BlueDot's Notable Event alert sent out on December 29, 2022, SARS-CoV-2 transmission in China has increased substantially since December 7, 2022, when the country's zero-COVID-19 policy was ended. While the first epidemic wave may have reached an initial peak, several models have predicted that the rural regions will be severely affected next. Additionally, based on the COVID-19 situation observed in Hong Kong in 2022, it is predicted that the death toll in mainland China could exceed 500,000 by April 1 and could reach beyond 1 million deaths in 2023 if no social distancing mandates are implemented.[1]

Due to the recent change in policy, surge in cases, and low number of new deaths officially reported in China, the WHO has called for greater transparency in case, death, and genomic surveillance data from the country.[2] Subsequently, Chinese government officials have reported that data on the COVID-19 situation will be released daily by the China Centers for Disease Control and Prevention.[3] Of approximately 2,000 genomes collected in China since December 1, 2022, Omicron lineages BA.5.2 and BF.7 comprised 97.5% of the samples, as of January 3, 2023.[4] All reported subvariants have been previously observed circulating globally. This suggests there is currently no known risk for dispersion of a new variant from China with potential global consequences, although available sequencing data likely represents a very low proportion of cases, and the WHO has requested for continued sharing of sequencing data.[5] According to news media, a low number of XXB (including XBB.1.5) cases have been reported within the country.[6] The Chinese Bureau of Medical Administration reported that between December 8, 2022, to January 12, 2023, almost 60,000 COVID-19 related deaths have occurred in Chinese hospitals. This includes 5,503 which were due to respiratory failure attributed to COVID-19. The other 54,435 deaths were due to COVID-19 and preexisting conditions.[3] The number of individuals hospitalized due to COVID-19 peaked at 1.625 million on January 5, 2023, and is trending downwards, according to NHC officials. The number of critically ill patients remains high; however, it also peaked on January 5, 2023 at 128,00 and has been decreasing since then. COVID-19 activity trends in rural regions are also reported to be declining although there may be a further surge in relation to the Lunar New Year holiday period.[3] Health authorities have stated that the elderly population continues to carry the highest burden of disease and death.[7] The average reported age for those who died between December 8, 2022 and January 12, 2023 was 80.3, and the average reported age of patients with severe COVID-19 is 75.5.8 Additionally, individuals aged 60 or above make up approximately 89.6% of all individuals with severe COVID-19.[3] In response to the high volume of severe COVID-19, China has provided treatment in the form of oxygen therapy, nebulized inhalations, infusion and injection treatments, and antiviral drugs (Paxlovid and Azvudine). The quantity and accessibility of treatments available is unclear but likely insufficient.[3]

As of January 8, 2023, China removed mandatory quarantine restrictions for international travellers.[9] A large increase in travel into and out of China is expected over the coming weeks due to Lunar New Year (LNY), which officially started on January 22, 2023. Although the proportion of the population who normally travel from urban to rural areas for LNY celebrations may be lower than pre-pandemic,[10] LNY is the world's largest and longest annual period of travel, and increased travel is expected to occur for approximately 40 days from mid-January until late February.[11]

REASONS FOR CONCERN

Lack of reliable data: COVID-19 cases, variants, and COVID-19-associated deaths

- Despite daily updates on the COVID-19 activity in China, the true extent of COVID-19 activity and burden is likely underrepresented due to recent changes to case and death definitions, and there is likely a significant strain on the Chinese healthcare system.
- Due to reduced testing and genomic sequencing, identification of any potential new variants with concerning properties may be delayed.

Insufficient population-level immunity due to strict lockdowns, vaccine hesitancy, and administration of less effective vaccines

- Due to the strict public health measures since the beginning of the pandemic, it is estimated that a most of the Chinese population remained unexposed to SARS-CoV-2 until the restrictions were relaxed in December 2022.
- Vaccine hesitancy has also remained high in China, especially among the elderly population. According to official sources, 60% of those 80 and above have not received a COVID-19 booster dose as of November 11, 2022.[12]
- China has primarily administered its homegrown COVID-19 vaccines (Sinopharm and CoronaVac) throughout the pandemic, which are inactivated whole virus vaccines. Recent research in Singapore indicates that those who received three doses of CoronaVac or Sinopharm were at higher risk of symptomatic SARS-CoV-2 infection, COVID-19-related hospitalization, and severe COVID-19 than those who received three doses of mRNA vaccines (manufactured by Pfizer-BioNTech or Moderna). Four doses of inactivated whole-virus vaccine were comparable to three mRNA vaccine doses for risk reduction against hospitalization and infection, however, due to vaccine hesitancy and only a recent rollout of the fourth dose to high-risk groups and people over the age of 60 (on December 13, 2022), the uptake of this dose is likely insufficient nor timely enough to impact transmission and reduce severe disease at a population level.[13]

Increased international travel leading to increase in importation and exportation of variants

- Increase in LNY-associated travel (international and domestic within China) as well as lifting of the mandatory quarantine period for international arrivals on January 8, 2023 will likely result in increased importation and exportation of SARS-CoV-2 variants.
- While the COVID-19 wave in urban and rural areas has reportedly begun to decline, it is predicted that there may be an increase in infections in rural areas, driven by millions of individuals expected to travel to rural areas during the LNY celebrations, increasing population mixing and risk of exposure to the virus. Additionally, a high proportion of China's older population, who have some of the country's lowest rates of vaccination and booster uptake, live in rural areas, where healthcare capacity is low, making this vulnerable population more at-risk for severe disease outcomes.[14]

OUTLOOK

Although the current epidemic wave in China may be declining, the country is likely to experience multiple waves of COVID-19 driven by population immunity, behaviour, and variants with increased infectiousness, as observed in a similar trend in Hong Kong in 2022. The available data on variants circulating within China suggest that the current wave has been driven by BF.7 and BA.5.2 variants. However, globally, there are variants circulating with higher fitness due to immune evasive and/or transmissibility characteristics, and the reopening of global travel into China will likely introduce variants with the potential to drive further waves of infections. Conversely, the high transmission occurring in China could lead to the emergence of new variants with greater fitness, and the relatively low availability of sequencing data from China can make it more difficult to identify new variants in a timely manner. In light of the anticipated increase in international air travel due to LNY, BlueDot analyzed air travel data to examine travel trends between mainland China and the rest of the world in January and February 2023, presented in Tables 1-2 below. Air travel data was extracted from BlueDot's Developer Portal. Please see Appendix 2 and 3 for details on the end-points used and methodology.

COVID-19 in China
Update

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A large proportion of the top countries/regions most connected to mainland China have reported circulation of variants that have increased infectivity, a higher growth rate, or the extent of immune evasion compared to the currently circulating variants in mainland China (BF.7 and BA.5.2), including BQ.1 or BQ.1.1, XBB.1.5, XBF, and CH.1.1.[15,16,17] This may result in future waves being driven by one or more of these new variants, or the current wave being extended in duration.

Although some countries/regions in Table 1 are observing a subsiding COVID-19 wave (such as Singapore), some countries are in the middle of their current wave (such as Australia) and may observe an increasing prevalence in one or more of the notable variants.

The number of COVID-19 infections in Australia is estimated to have been increasing throughout December 2022 and the first half of January 2023.[18] Some regions of the country have observed an increase in new variants including XBF and BR.2. While real-world data on these variants' ability to evade the immune system is yet to be assessed, both variants are understood to be driving the current COVID-19 wave in many regions of Australia.[19]

The United Kingdom (UK) is also among the top 25 locations that mainland China is forecasted to receive the highest volume of travellers from in January 2023 and has recently reported an increase in prevalence of a new Omicron subvariant, CH.1.1, that comprised approximately 20% of all cases in the UK, as of January 11, 2023.[16]

Table 1: Top 25 countries/regions that mainland China is forecasted to receive the highest volume of travellers from in January 2023, along with the direct flight seating capacity between mainland China and these countries/regions in February 2023, and new or notable Omicron lineages/sublineages in the origin location. *Flight data source:* BlueDot Developer Portal. *Variant data source:* covSPECTRUM

Origin country/region	Forecasted volume of passengers in January 2023 (% of total)	Direct flight seating capacity between mainland China and origin country/region, for February 2023 (% of total)	New or notable lineages/sublineages*
Hong Kong	59,215 (11.0)	187,415 (18.1)	BA.5, BQ.1 or BQ.1.1
Taiwan	51,133 (9.5)	103,983 (10.1)	N/A
Macao	50,240 (9.3)	131,120 (12.7)	N/A
Japan	42,746 (7.9)	60,856 (5.9)	BF.5, BA.5.2, BQ.1 or BQ.1.1
South Korea	36,976 (6.9)	77,314 (7.5)	BA.5.2, BQ.1 or BQ.1.1, BN.1
Singapore	27,151 (5.0)	41,432 (4.0)	BQ.1 or BQ.1.1, XBB, BN.1
Thailand	22,711 (4.2)	43,718 (4.2)	BN.1
United States	21,738 (4.0)	10,187 (1.0)	XBB.1.5, BQ.1 or BQ.1.1
United Arab Emirates	15,800 (2.9)	26,986 (2.6)	N/A
Australia	15,360 (2.9)	36,474 (3.5)	BR.2, BQ.1 or BQ.1.1, BN.1, XBF
Cambodia	15,359 (2.9)	26,234 (2.5)	XBB, CH.1.1, BN.1
Indonesia	15,023 (2.8)	21,450 (2.1)	BQ.1or BQ.1.1, XBB
Malaysia	13,315 (2.5)	20,960 (2.0)	XBB, BA.2.75, BN.1
Italy	10,700 (2.0)	14,923 (1.4)	BQ.1 or BQ.1.1, BA.5
Iran	10,574 (2.0)	22,068 (2.1)	N/A
Philippines	9,773 (1.8)	14,392 (1.4)	XBB
Canada	9,380 (1.7)	8,426 (0.8)	BQ.1 or BQ.1.1
United Kingdom	9,002 (1.7)	7,372 (0.7)	BA.2.75, BQ.1 or BQ.1.1, CH.1.1
Vietnam	8,547 (1.6)	15,557 (1.5)	BN.1
Germany	7,663 (1.4)	19,940 (1.9)	BQ.1 or BQ.1.1, BA.2.75
New Zealand	6,877 (1.3)	11,350 (1.1)	BA.2.75, BQ.1 or BQ.1.1, CH.1.1
Russia	6,792 (1.3)	4,680 (0.5)	N/A
Türkiye	6,245 (1.2)	8,574 (0.8)	BQ.1 or BQ.1.1
Egypt	4,911 (0.9)	7,440 (0.7)	N/A
Pakistan	4,530 (0.8)	10,196 (1.0)	N/A

* New or notable variants are defined as those that are currently dominant in the origin country/region, or are increasing in prevalence and are forecasted to be more immune evasive and/or more transmissible than the currently dominant variant.

The Omicron subvariant XBB.1.5 is increasing in prevalence in several regions of the United States (US), which is considered to be the epicentre for this variant. As of January 21, 2023, the XBB.1.5 variant accounted for 49.1% of all cases in the US.[20] Hence, we also examined flights from the US to China in January 2023 (Appendix 1) to assess the risk of importation of XBB.1.5.

- Among all states in the US, New York has the second highest share of travel to China and the highest prevalence (86.8%) of the newly emerging XBB.1.5 Omicron subvariant.
- BQ.1 or BQ.1.1 are still the dominant variants in several regions of the US, including California, which accounts for over 50% of all forecasted travel between the US and China in January 2023.

IMPORTATION RISK FROM CHINA

To gauge the top locations where individuals from China are travelling to during January and February (i.e., before, during, or after LNY), BlueDot summarized air travel data from China to other countries/regions in Table 2. Although no new variants have been detected in China so far, with the high transmission rates occurring in China, there remains a risk of emergence of new variants arising within China, and their exportation to other countries. Enhancing genomic sequencing surveillance in receiving countries could improve the time-to-detection of potential novel variants with public health implications.

Table 2: Top 25 countries/regions that are forecasted to receive the highest volume of travellers from mainland China in January 2023, along with the direct flight seating capacity between mainland China and these locations in February 2023. *Flight data source:* BlueDot Developer Portal.

Destination country/region	Forecasted volume of passengers in January 2023 (% of total)	Direct flight seating capacity between mainland China and destination country/region, for February 2023 (% of total)
Hong Kong	71,941 (10.8)	183,998 (17.9)
Taiwan	65,062 (9.7)	104,039 (10.1)
South Korea	58,350 (8.7)	77,852 (7.6)
Macao	55,992 (8.4)	131,120 (12.7)
United States	42,844 (6.4)	10,187 (1.0)
Japan	42,474 (6.4)	58,316 (5.7)
Thailand	33,929 (5.1)	52,958 (5.1)
Singapore	29,592 (4.4)	43,046 (4.2)
Australia	17,605 (2.6)	36,474 (3.5)
Canada	17,550 (2.6)	8,426 (0.8)
Indonesia	16,252 (2.4)	21,286 (2.1)
Iran	15,925 (2.4)	22,468 (2.2)
Cambodia	14,868 (2.2)	26,234 (2.5)
Malaysia	14,698 (2.2)	20,960 (2.0)
Italy	12,065 (1.8)	14,923 (1.4)
Vietnam	11,782 (1.8)	16,301 (1.6)
United Arab Emirates	10,546 (1.6)	18,730 (1.8)
Philippines	9,777 (1.5)	17,080 (1.7)
United Kingdom	8,918 (1.3)	7,384 (0.7)
Germany	8,488 (1.3)	19,681 (1.9)
New Zealand	7,471 (1.1)	11,297 (1.1)
Pakistan	6,096 (0.9)	10,196 (1.0)
Russia	5,574 (0.8)	6,248 (0.6)
France	5,213 (0.8)	3,768 (0.4)
Saudi Arabia	5,064 (0.8)	N/A

COVID-19 Global and Notable Updates

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Omicron subvariant CH.1.1 and preliminary findings on neutralizing antibody evasion

CH.1.1 first emerged in Southeast Asia in November 2022 and has since seen a notable increase in places such as Cambodia, New Zealand, and the United Kingdom (UK). [1] **CH.1.1 is a descendant sublineage of BA.2.75; however, it contains a mutation previously seen with the Delta variant and BA.4/5 subvariants**, the L452R mutation of the spike protein. This mutation is of concern as it was previously associated with **increased transmissibility and infectivity**. Although Europe has not seen a high proportion of CH.1.1, as of January 12, 2023, the European Centre for Disease Prevention and Control has moved this subvariant to their "variant under monitoring" classification. [2]

New Zealand [3]

- On January 19, 2023, the New Zealand COVID-19 Genomics Insight Dashboard showed that CH.1.1 is the **most common variant in the country**, making up **34% of the 1,783 COVID-19 samples sequenced** between December 10, 2022, and January 13, 2023.
- Hospital surveillance during the same time period showed that samples from **32% of hospitalized PCR-positive patients were CH.1.1**. Please note that severity information has not been provided with this data.
- Furthermore, **CH.1.1 was one of the major subvariants found in wastewater,** making up **~55% of the subvariants detected**.
- Importantly, this data is based on a limited dataset as genomic sequencing was scaled down due to a summer hiatus; sequencing has since resumed to normal levels.

England, United Kingdom [4]

- According to the United Kingdom Health Security Agency (UKHSA) *Technical Briefing 49* which was posted on January 11, 2023, **CH.1.1 is at moderate prevalence** (**15.78%** (95% credible interval (CrI):10.41 - 24.56)) and is showing a **weekly growth rate advantage of 21.56%** (95% CrI: 19.25 - 23.97) when compared to BQ.1 in England.
- UKHSA predicts that unless a novel variant emerges, **CH.1.1 together with XBB.1.5 are likely to become the most predominate circulating subvariants**, once the current BQ.1 wave ends. To monitor CH.1.1 for changes in the coming weeks, UKHSA has given it a variant designation, V-22DEC-01.
- Indicators such as hospitalizations and vaccine effectiveness have not been established due to limited data over a short time period with which to assess these characteristics.
- UKHSA announced that as of January 17, 2023, the Rosalind Franklin Laboratory, which is one of three laboratories responsible for processing PCR COVID-19 tests, will cease to operate due to reduced demand. **It is unclear what impact this may have on genomic surveillance**. [5,6]

Increased escape of neutralizing antibody response by CH.1.1 [7]

In a recent pre-print article, researchers aimed to understand the spike protein biology and the degree of neutralizing antibody escape by Omicron subvariants XBB.1.5, CH.1.1, and CA.3.1. They assessed neutralizing antibody escape by using sera from healthcare workers who had either received three doses of a monovalent mRNA vaccine, a bivalent booster, or had a recent infection during the BA.4/5 wave in Ohio, United States. Findings included:

- Three-dose vaccinated sera: For 15 healthcare workers who had received three-doses of monovalent mRNA vaccine, CH.1.1 showed **complete escape** from neutralizing antibodies (nAb) with a **mean nAb titer 24.6 times lower than BA.4/5**. While XBB.1.5 showed a mean nAb titer 3.3 times lower than BA.4/5.
- Bivalent vaccinated sera: For 14 healthcare workers who had received 2-4 doses of a monovalent mRNA vaccine and then a single dose of a bivalent mRNA booster, CH.1.1 showed **strong neutralization resistance** with a **mean nAb titer 16.7 times lower than BA.4/5**. XBB.1.5 showed a mean nAb titer of 4.6 times lower than BA.4/5.
- BA.4/5 infected sera: The study group included first responders and household contacts who had recently tested positive for COVID-19 with either BA.4 (n=4), BA.5 (n=7), or were infected during the BA.4/5 wave (n=9). Of this cohort, 17 were unvaccinated and three individuals had received three doses of a monovalent mRNA vaccine. CH.1.1, similar to XBB.1.5, showed **almost complete neutralization resistance**, with **nAb titers 3.0** and 2.6 times **lower than BA.4/5**, respectively.
- Similar to the parental BA.2.75.2 subvariant, CH.1.1 was also shown to have enhanced fusogenicity when compared to BA.4/5, indicating that it has an **increased ability to fuse with human ACE2 receptors and cause infection**.

Overall, this indicates that CH.1.1 has the ability to completely or nearly completely escape neutralization provided by three monovalent dose sera and BA.4/5 wave infection sera, respectively. However, when compared to individuals who receive a bivalent mRNA vaccine, these **bivalent boosted individuals have an approximate 8-fold-higher nAb titer**. [8] The reappearance of the L452R mutation highlights the importance of considering convergent viral evolution (reappearance of previous clinically relevant mutations) and provides another avenue for future research on vaccine targets.

Limitations of this study include a very small sample size, and caution is advised when making inferences. It is important to remember that laboratory studies such as this do not include data on disease severity and symptomology, and as such, clinical implications cannot be inferred. However, **this study points to the importance of receiving updated booster vaccinations and the ongoing need for genomic surveillance and vaccine research**.

After several weeks of reporting increases in COVID-19 cases, several locations have been observing a decreasing trend over the past two-three weeks, including Hong Kong, South Korea, New Zealand, and Australia

Taiwan is continuing to report an increasing trend in their rate of cases

The rates of cases in the United Kingdom and Argentina are continuing to plateau

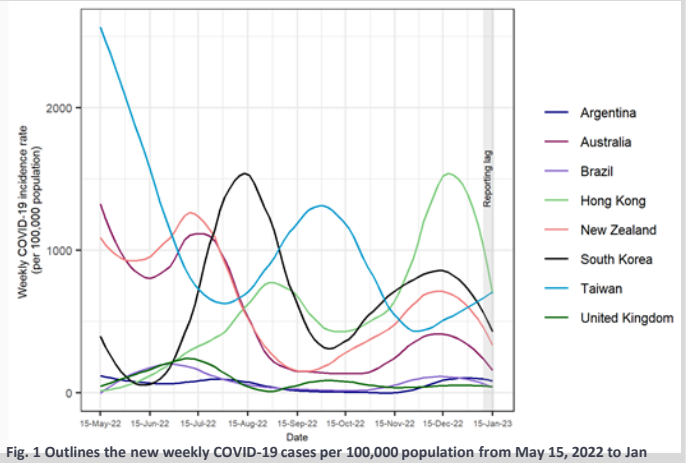

Fig. 1 Outlines the new weekly COVID-19 cases per 100,000 population from May 15, 2022 to Jan 21, 2023 for a select number of countries/regions that have either reported the highest number of cases in the past 30 days or have reported increasing COVID-19 activity in recent weeks. A locally weighted smoothing (LOESS) curve has been applied to the data. The most recent epidemiological week may not represent accurate trends due to reporting lags.

COVID-19 Global and Notable Updates

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Protective effectiveness of previous SARS-CoV-2 infection and hybrid immunity against the Omicron variant

A study published by The Lancet on 18-Jan-2023 discusses the magnitude and duration of the **protective effectiveness of previous SARS-CoV-2 infection and hybrid immunity** (inferred by vaccination and previous infection) **against infection and severe disease caused by the Omicron variant.** [2]

- A systematic review was conducted across multiple databases from 1-Jan-2020 to 1-Jun-2022 and 16 unique articles reporting data for 26 studies were analyzed.

Results from the Study:

- **Against hospital admission or severe disease (hybrid immunity>infection alone):** The effectiveness of hybrid immunity was higher than the protection conferred by previous infection alone.
  - **Hybrid immunity: 96% effective against hospital admission or severe disease at 3 months** (remaining stable at 97% in projections at 12 months)
  - Previous infection: 82% effective against hospital admission or severe disease at 3 months (decreasing to 75% at 12 months)
- **Against reinfection (hybrid immunity>infection alone)**: The effectiveness of hybrid immunity was also higher than from infection alone.
  - **Hybrid immunity: 69% effective against reinfection at 3 months** (dropping to 42% at 12 months)
  - Previous infection: 65% effective against reinfection at 3 months (dropping to 25% at 12 months)
- Individuals with hybrid immunity had the highest magnitude and durability of protection against all outcomes, emphasizing the importance of providing vaccination to previously infected individuals.
- **Infection-induced protection wanes rapidly against reinfection, and vaccination of those previously infected increases durability of protection.**
- Vaccination after natural infection was not associated with an increased risk of reactogenicity (i.e. adverse reactions) or other safety concerns.

Key Takeaways:

- The evolving COVID-19 pandemic continues to present a **substantial challenge to the global vaccination effort** to mitigate the spread of the disease. This is particularly complicated by the rapidly mutating SARS-CoV-2 viral strains which have become increasingly transmissible and immune-evading.
- **The results from this study have the potential to help provide information to tailor guidance on timing and prioritization of future vaccination programs, especially in populations with high rates of past infection.**
- As important public health findings, these results can be combined with data on local infection prevalence, vaccination rates, and their timing to develop forecasts and predictive models of expected disease activity and expected healthcare impacts.
- **In areas with scarce resources and competing health priorities, it is reasonable to focus on achieving high primary series vaccine coverage rates among high-risk individuals**, as this will provide a high level of protection against severe disease for at least one year among those with previous infection.
- Furthermore, given the waning protection for both infection-induced and vaccine-induced immunity against SARS-CoV-2 infection or reinfection, **mass vaccinations could be timed for rollout before periods of expected increased incidence** (eg. winter season) to maximize benefits derived by reducing transmission and severe disease outcomes.
- For future research, follow-up is needed to assess the protective effectiveness of hybrid immunity against hospital admission or severe disease for all available vaccines, to clarify how much waning of protection might occur over a longer study duration.
- There are serious risks associated with acute SARS-CoV-2 infection which include the possibility of hospital admission, ICU admission and mechanical ventilation, and death. However, mild infections can also lead to post-COVID-19 complications such as Long COVID-19, cardiovascular disease, neurological disease, dementia, diabetes, and chronic respiratory problems in a substantial proportion of those infected.
- **Restricting the spread of the virus and preventing severe COVID-19 remains a priority at the global scale.**

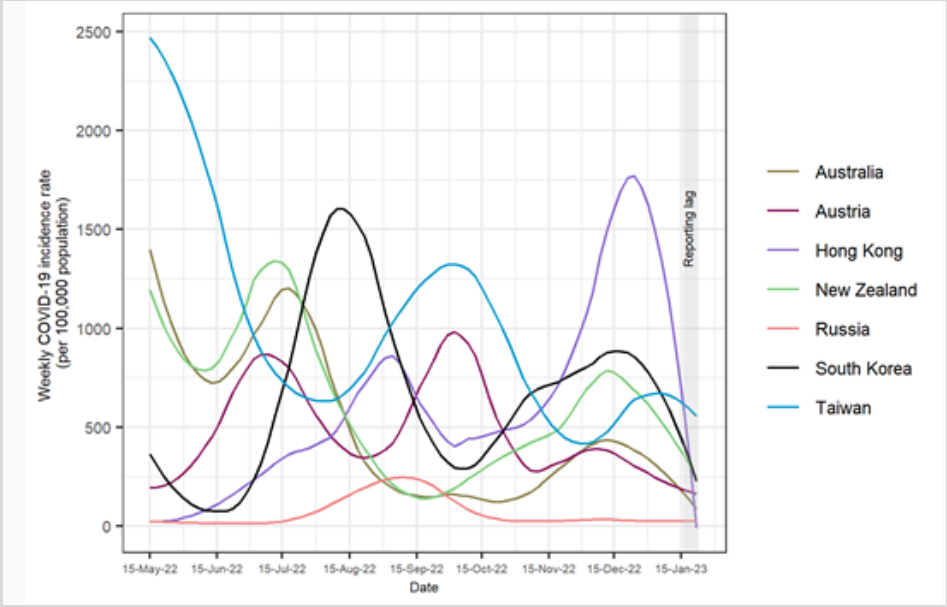

Fig. 1 Outlines the new weekly COVID-19 cases per 100,000 population from 15-May-2022 to 28-Jan-2023, for a select number of countries/regions that have reported the highest number of cases in the past 30 days or have reported a recent increase in COVID-19 activity. A locally weighted smoothing (LOESS) curve has been applied to the data. The most recent epidemiological week (epiweek) may not represent accurate trends due to reporting lags.

- Russia's COVID-19 case counts increased in the most recent epiweek after several weeks of observing a decreasing trend, surpassing levels observed during the week of 25-Dec-2022
- Austria began to observe an increase in COVID-19 activity in the most recent epiweek
- Taiwan began to observe a decreasing trend in the national rate of COVID-19 cases after several weeks of reporting an increasing trend
- Hong Kong, South Korea, Australia, and New Zealand are all continuing to observe a decrease in COVID-19 cases

Other Infectious Disease Outbreaks/ Conflicts

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Chikungunya - Paraguay

As of January 27, 2023, there has been an unprecedented number of chikungunya cases (close to 6,000 cases) reported in Paraguay in the first month of 2023. According to official sources, a large number of chikungunya cases (close to 6,000 cases) have been reported nationwide in the first month of 2023. Cases continue to expand outside the country's epicentre, which are Central and Asunción, to other neighbouring departments such as Cordillera, Paraguarí, Presidente Hayes, Concepción and Alto Paraguay. The authorities are concerned that the epidemic will worsen in February and March as educational institutions will restart in the country. In addition, officials suspect the number of cases may be higher as individuals with mild symptoms may not go to clinics for treatment or may be undiagnosed given the overlap of symptoms with other vector-borne diseases including dengue.

Concern Level: MEDIUM

Chikungunya can spread to unaffected areas by infected travellers and wherever the vector is present with the potential of epidemics among naive populations.

Infection with chikungunya is mostly mild (most common symptoms are fever and joint pain), which challenges the diagnosis and assessment of the true extent of outbreaks.

There is currently no vaccine to prevent infection or specific treatment.

Whenever new waves of significant magnitude are ongoing, further investigations and genome sequencing are required to understand if there is a more virulent strain that is more easily transmitted by mosquito vectors.

SOURCE: NEWS MEDIA[1] [2] [3]

Unknown Respiratory Illness – North Korea

On January 25, 2023, health authorities in the North Korean capital, Pyongyang, ordered a five-day lockdown due to rising cases of unspecified respiratory illness

According to local media, there has been an increase in the number of influenza-like illnesses (ILI) in the capital but there has not been an official statement on the COVID-19 status across the country for at least seven months

Under the official statement, residents have stay-at-home orders and are to submit to temperature checks citywide for at least five days (January 25-January 30)

Some websites reported that Pyongyang residents appeared to be stocking up on goods in anticipation of stricter measures

It is unclear if other areas of North Korea had imposed or will also impose new lockdowns

Concern Level: MEDIUM

North Korea's relatively low global connectivity; this event poses a greater humanitarian concern within the country

The lack of clarity and testing of the underlying cause of ILI is being raised by media reports. Beyond COVID-19, it is possible that the rise in ILI may also be attributed to seasonal viruses like influenza.

Although health authorities in North Korea claimed that they had eradicated COVID-19, they have continued to emphasize anti pandemic strategies.

North Korea's population has likely not been broadly immunized against COVID-19, although some information suggests there have been vaccinations provided for the border areas and certain sectors. Information data on vaccination against other diseases (i.e. influenza) is also unknown.

There are numerous indications that there are significant strains on North Korea's fragile healthcare system.

Reduced testing and sharing of viral genomic sequence data could delay the identification of new SARS-CoV-2 variants of concern should they arise due to an acceleration of cases.

SOURCE: the Guardian

Unknown Respiratory Illness – Argentina

On 18-Jan-2023, the Tucuman Epidemiological Surveillance System flagged several pneumonia cases of unknown etiology among healthcare workers. Currently, there is limited information on the case timeline, source, and symptom onset. Health authorities are investigating to identify any potential connections between the affected individuals as laboratory tests are processed. Media has reported that provisional urine tests have tested negative for *Legionella* and so far all patients have tested negative for COVID-19

Patient samples have been sent for further laboratory testing and analysis to identify a causative agent and definitively rule out *Legionella*

Epidemiological investigations have begun; however, no containment or precautionary measures are advised as there is no known causative agent or transmission route identified at this time

Concern Level: MEDIUM

SOURCE: News Media [1] [2] [3]

Highly Pathogenic Avian Influenza H5N1 – Spain

In October 2022, an increase in the mortality rate in a mink farm in Galicia, northwestern Spain led to the discovery of a Highly Pathogenic Avian Influenza (HPAI) AH5N1 outbreak among the 52,000-mink population

This was the first HPAI H5N1 outbreak in mink in Europe. No other outbreak of HPAI A(H5N1) was identified in poultry farms in the region during this period. During this outbreak, the weekly mortality rate in the mink population peaked in the week of 17–23 October (4.3%) with clinical signs including loss of appetite, hypersalivation, depression, bloody snout and neurological manifestations such as ataxia and tremors. No human cases were reported

As of 12 January 2023, a total of 865 cases of human infection with avian influenza A(H5N1) virus have been reported globally since January 2003. Of these cases, 457 were fatal, resulting in a case fatality rate of 53%. Human acquisition of the virus is predominantly through contact with infected birds. So far, there is no evidence of human-to-human transmission. The spectrum of disease in humans ranges from mildly symptomatic illness to life-threatening disease. The nature of the exposure and the virus clade are known determinants of the clinical presentation. The virus identified presented the highest similarity with strains of the genotype found in wild gulls in France, which has already been described in multiple wild bird species and sporadically in poultry across northern Europe.

The likely source of the outbreak was from wild birds to mink on the farm, either directly or indirectly. Reports indicate that the farm was semi-open and the mink were fed poultry and fish by-products sourced from the same region

The viruses detected at the mink farm differ from all the A(H5N1) viruses identified thus far in the avian population in Europe as they bear an uncommon mutation in the PB2 gene. This distinct mutation may have public health implications, as the same mutation is present in the avian-like PB2 gene of the 2009 pandemic swine-origin influenza A(H1N1) virus and has characteristics that may enable receptor binding to human airway cells. Further studies are underway to better understand the potential virulence and transmissibility of this strain.

Concern Level: LOW

SOURCE: News Media [1] [2] [3] [4] [5]

Other Infectious Disease Outbreaks/ Conflicts

Measles - Paraguay

On 23 January 2023, the Paraguay IHR National Focal Point notified WHO of a confirmed case of measles in Itapúa Department, Paraguay. Itapúa is close to the southern border of the country with Argentina. The case is a 14-month-old boy who had onset of rash and fever on 15 September 2022. He had no travel history and had received one dose of MMR vaccine (MMR1) on 12 September 2022. According to the information received, 30 days prior to onset of symptoms, the case was in contact with a 16-month-old child, a symptomatic family contact, diagnosed as having an allergic reaction including fever, rhinorrhea and skin lesions. This symptomatic family contact was a contact of a family member with a history of periodic travel to Buenos Aires, Argentina.

On 26 September 2022, a serum sample was collected and sent to LCSP which was reactive for measles by Immunoglobulin M (IgM). On 11 October, a second serum sample was collected and sent to the LCSP and tested reactive for measles by IgM and IgG. Further, on 16 November, serum and urine samples were sent to the US CDC for confirmation, and additional molecular analysis was performed which tested positive for measles by reverse transcriptase – quantitative polymerase chain reaction (RT-qPCR) on 10 January 2023, and negative for measles vaccine strain.

In Paraguay, the official measles vaccination coverage for the first and second dose of measles, mumps and rubella vaccine (MMR) in 2021 was reported to be 56% and 55%, respectively, lower than the WHO recommended sustained homogeneous coverage of at least 95%. The last National MMR Vaccination Campaign was conducted from November 2021 to 16 December 2022 including the department of Itapúa.

This is the first case of measles reported in Paraguay since 1998.

SOURCE: WHO

Middle East Respiratory Syndrome - Oman

On 5 January 2023, the National IHR Focal point of Oman notified WHO of one case of MERS-CoV from North Batinah Governorate in Oman.

The case, a 60-year-old male, non-healthcare worker, with comorbidities, who is a resident of North Batinah Governorate, developed symptoms including chest discomfort, shortness of breath, and fever on 28 December which lasted for six days. On 2 January, he was taken to the emergency department of a secondary hospital where he was admitted to the Cardiology Unit for non-invasive ventilation. Prior to admission at the hospital, the case sought medical attention in two healthcare facilities for his symptoms. The case subsequently showed clinical and radiological improvement and was discharged on 16 January 2023.

Screening for Severe Acute Respiratory Infection (SARI) was initiated on 3 January 2023 and MERS-CoV was confirmed by real-time polymerase chain reaction (RT-PCR) testing. Investigation of the history of exposure to the known risk factors in the 14 days prior to the onset of the symptoms identified camel racing exercises conducted in the same area as the patient's residence in North Batinah Governorate. The case, a driving instructor by occupation, had no history of physical contact with dromedaries, goats, sheep or contact with camel products, milk, or urine.

The last MERS-CoV infection was reported from Oman in May 2022. The first ever laboratory-confirmed case of MERS-CoV in Oman was reported in June 2013. Since then, including this current case, Oman has reported 26 cases of MERS-CoV including seven deaths (CFR 27%).

SOURCE: WHO

Meningitis - Niger

Being located in the African meningitis belt, Niger has been affected by several meningitis epidemics resulting in 20 789 cases and 1369 deaths (CFR 6.6%) reported since 2015. From 1 November 2022 to 27 January 2023, a total of 559 cases of meningitis (of which 111 are laboratory confirmed), including 18 deaths (overall CFR 3.2%) have been reported from Zinder region, southeast of Niger, compared to the 231 cases reported during 1 November 2021 to 31 January 2022.

The last meningitis outbreak in the Zinder region, occurred in the 2021/2022 season, with a total of 372 cases, including 12 deaths (CFR 3%). Of the 228 samples collected from suspected cases, 154 (67.5%) have been analyzed by Niamey's Center for Medical and Health Research (CERMES). *Neisseria meningitidis* serogroup C was identified in the majority of confirmed cases (n=104; 93.7%), followed by *Streptococcus pneumoniae* (n=5; 4.5%) and *Haemophilus influenzae* (n=2; 1.8%). The remaining 43 samples tested negative. Males represent 53% of all cases. Among the total of 559 cases of meningitis, people under 20 years of age are the most affected by the outbreak (n=538; 96.3%), with 202 cases (36.2%) reported in the 10-14 years age group, followed by the 5-9 years age group with 153 cases (27.4%), the 15-19 years age group with 107 cases (19.1%), and the 0-4 years age group with 76 cases (13.6%). The most affected health district of Zinder region is Dungass (342 cases, 6 deaths), followed by Matamèye (98 cases, 3 deaths), Mirriah (72 cases, 3 deaths), Magaria (38 cases, 5 deaths), Zinder ville (7 cases, 1 death) and Gouré (2 cases, 0 deaths).

Figure 1. Epicurve of cases of meningitis reported in Niger by month, 1 October 2021 - 27 January 2023.

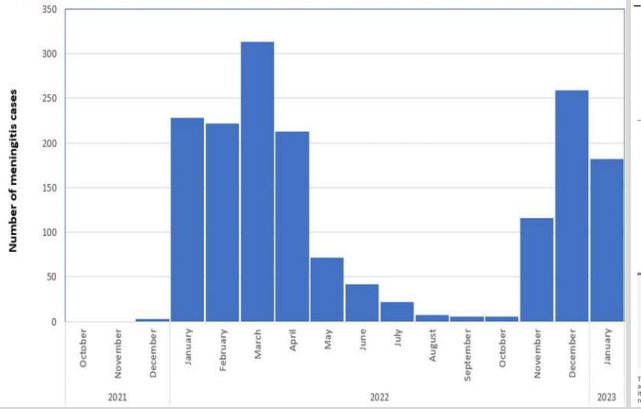
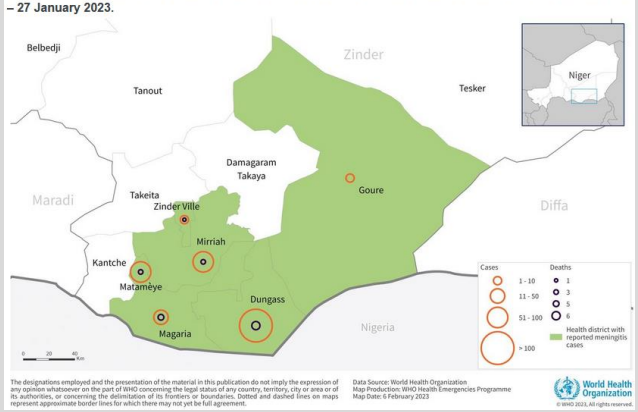


Figure 1. Distribution of reported meningitis cases by health district, Zinder region, Niger, 1 November 2022 – 27 January 2023.

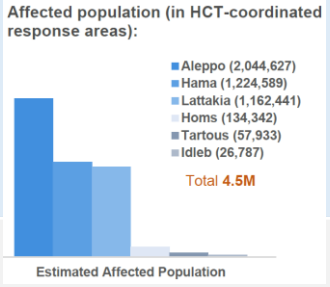


SOURCE: WHO

Influenza Europe; Weeks 04/2023 (23 January – 29 January 2023)

- The percentage of sentinel primary care specimens from patients presenting with ILI or ARI symptoms that tested positive for an influenza virus remained above the epidemic threshold (10%) and decreased to 21% from 23% in the previous week.
- 29 of 38 countries or areas reported high or medium intensity and/or widespread activity indicating substantial seasonal influenza virus circulation across the Region.
- Armenia, Bulgaria, France, Slovenia, Switzerland and Republic of Moldova reported seasonal influenza activity above 40% positivity in sentinel primary care.
- Both influenza type A and type B viruses were detected with A(H1)pdm09 viruses dominating in both sentinel and non-sentinel surveillance systems.
- Hospitalized patients with confirmed influenza virus infection were reported from ICU, other wards (with mainly influenza type A viruses reported) and SARI surveillance (with mainly influenza A(H1)pdm09 subtype viruses reported). Eight countries or areas reported influenza positivity rates above 10% in SARI surveillance.

Source: Flu News Europe



UN Office for the Coordination of Humanitarian Affairs (OCHA)

Flash Update - Earthquake

Source: Reliefweb

Highlights:

- 1,262 Deaths
- 2,285 Injuries
- On 8 February, the Syrian Ministry of Health (MoH) reported 1,262 deaths and 2,285 injuries, mainly in Aleppo, Lattakia, Hama, Idleb countryside, and Tartous. The number of casualties is expected to rise though as search and rescue operations are ongoing.
- Affected population (in HCT-coordinated response areas): Aleppo (2,044,627), Hama (1,224,589), Lattakia (1,162,441), Homs (134,342), Tartous (57,933), Idleb (26,787) - Total 4.5M
- Many of the buildings already damaged by the crisis are at high risk of collapse. The earthquake came as the Middle East is experiencing a snowstorm that is expected to continue until Thursday (9 February). Additional earthquakes and tremors were felt through the afternoon of Monday and evening of Tuesday (7 February).
- UN Disaster Assessment and Coordination (UNDAC) team has deployed and will arrive in Aleppo on 9 February.
- Immediate needs identified include machines and equipment for debris removal, food assistance, shelter and non-food items and WASH support.
- The Central Emergency Response Fund (CERF) has released US$25 million to kickstart the response. The UN with humanitarian actors in the country to coordinate the response and mobile additional funds also through other channels, since aid and supplies are limited and more support is needed to address the gaps.
- A number of partners of the Syria Humanitarian Fund responding to the earthquake are considering reprogramming of activities to redirect assistance to the affected population, primarily in terms of winter supplies. The Fund is providing the necessary flexibility to partners in line with its guidelines. Additionally, the Fund is considering utilization of contingency budget lines with the partners, which is already existing prepositioned funding, as well as top up ongoing projects funding to expedite delivery of aid. Currently, the Fund has a balance of $6 million.
- Massive impact and consequences of this earthquake on local population and infrastructure. Priority response will include actions to support all those newly displaced who will need assistance for a long time period among all other needs.
- The Minister of Education announced that 208 schools were damaged in 8 governorates 71 in Aleppo, 40 in Hama, 34 in Homs, 16 in Lattakia, 14 in rural Damascus, 2 Qunitera, and 1 Idleb, the schools are still under accurate assessment.

Multiple earthquakes hit southern Türkiye and Syria early morning on 6 February. The one with the most severe impact had 7.7 magnitude, and its tectonic epicenter was located in Gaziantep; Adana at a depth of 24.075 kilometers, with tremors felt in varying intensities across the Syrian Arab Republic. Following the earthquake, multiple aftershocks were reported. Several governorates in north, central, and coastal parts of Syria were affected with Aleppo being the most impacted; although Lattakia, Tartous, Hama, and Idleb, were also considerably affected. Preliminary reports indicate both human and material damages, mainly in Aleppo, Lattakia, Hama, Idleb and Tartous. Preliminary reports from the Syrian Ministry of Health indicate that 430 people have so far been confirmed dead and that 1,315 people sustained injuries in the HCT-Coordinated response areas, mostly in Aleppo, Hama, Latakia and Tartous. The death toll is expected to continue to rise, as is the structural damage as many of the buildings in the affected areas are structurally unsound and could collapse following the additional damage.
In Aleppo, in addition to reported deaths and injuries, preliminary reports indicate that a total of 40 buildings collapsed, and unspecified numbers sustained damages. Dozens of people have also reportedly been registered as missing by their relatives. All government technical teams and service departments have been deployed to support search and rescue efforts. SARC also immediately deployed its first aid and disaster management teams.
Search and rescue efforts are however being hampered by the lack of equipment. Government authorities have called for support from the private sector. Damage to Infrastructure has been widely reported across the governorate but the most affected areas are Shaar, Kalaseh, SalahEddin, Myassar, Akabeh, Azizieh, Baroun, Ein Al Tal, Nubol, Zahra, Bustan AzZahra, Azamieh, Fardous, Salheen. Access to all locations is reportedly feasible. The Aleppo sub-relief committee has designated temporary shelter for affected families including a total of 150 apartments in Masaken Hanano, 25 apartments in the rehabilitation and training centre in Sheikh Taha, and 17 formal education schools.
In Lattakia according to the local authorities, affected areas include, Al Oweiniyeh, Al Kazzazin and Al-Raml Janoubi neighborhood in Lattakia City, as well as Demsarkho, Jablah, Al-Qabu and Astamo villages. In addition to confirmed deaths and injuries, preliminary reports also indicate that 53 buildings collapsed while unspecified numbers sustained damages across the Governorate. Additionally, dozens of people have also been reported missing by their relatives. Four temporary shelters have been designated in Lattakia City. Also, in Lattakia, structural damage to water reservoirs and tanks has been reported. The High Ghaniri Reservoir, with a volume of 200 m3, is reportedly falling apart, and the condition of its structure has been assessed as very poor. The reservoir is surrounded by residential buildings which makes it high risk. Al Fawar ground tank (Jableh city), Dahr Al-Syriani high reservoir and Cemet high reservoir of Wadi Qandil station have reportedly been cracked; while, the Dam station reservoir (Central) has cracked and the water is leaking. Al-Zoubar and Karkit stations reportedly sustained some structural damages; and Al Bahloulieh Al Rastan station has sustained huge structural damages and cracks in the workers' room. Due to the power outage since the earthquake occurred, there is no information regarding the extent of the damage in the water networks. In Hama in addition to confirmed deaths and injuries, local authorities also reported that three high rise buildings reportedly collapsed, and dozens of people are also reportedly still missing. Civilians who have been evacuated from their homes have been asked to move to Ibraheem Mahmoud School in Al Arba'een neighbourhood and the Disability Center within Hama city that have been designated by the authorities as temporary collective shelters. Reportedly in rural areas, families that are residing in mud houses have been asked by the local authorities to temporarily seek alternative shelter as a protective measure. According to the local authorities, seven collective high-water tanks reportedly collapsed while five others were damaged as a result of the earthquake. One child died as a result. The water department confirmed that they will continue pumping water to the city and its neighborhood while the service will be suspended for rural areas to allow them to manage the turbidity of water. In Tartous, while no confirmed deaths and injuries have been reported, local authorities informed that Qadmous, Qallue, and Banyas towns were affected by the earthquake. Preliminary reports indicate that 40 buildings in Bayas reportedly sustained structural damages and three buildings collapsed in Tartous. Reports also indicate that hundreds of families have moved from Banyas to the neighboring villages. Local authorities have deployed debris removal equipment and ambulances. Additionally, SARC also reportedly deployed some ambulances. Governorate supported Lattakia with mechanisms for debris removal and ambulances. SARC Tartous supported Lattakia with two ambulances. Reports on hundreds of families displaced from Banyas towards the neighboring villages. Two schools in Tartous reportedly sustained some structural damages. In HCT response areas in Idleb, reports indicate that several uninhabited buildings collapsed but no casualties have so far been confirmed.

Humanitarian response and capacities:

Humanitarian organizations are supporting immediate response efforts including the search and rescue operations, provision of ready-to-eat food or hot meals to displaced families/those that have lost their homes; provision of non-food items, portable water, medicines, first aid and trauma care, dignity kits, protection interventions including psychosocial support. Preparations for inter-agency needs assessments are underway to inform comprehensive response efforts. Notably as this new emergency occurred at a time when the humanitarian community is already grappling to respond to large numbers of people in need with very limited funding; unless additional resources are immediately mobilised and deployed the humanitarian community is weary that these new needs will exacerbate the prevailing humanitarian situation and further constrain the already very limited response capacities.

WHO Response to the Ukraine crisis

December 2022 Bulletin

Source: WHO

Highlights:

- WHO supported the Ministry of Health (MoH) of Ukraine and the Interdepartmental Coordination Council led by the Prime Minister of Ukraine Denys Shmyhal, on the national roadmap for the mental health programme initiated by the First Lady of Ukraine Olena Zelenska in May 2022. Launched on 9 December 2022 by the First Lady and Prime Minister, the operational roadmap will facilitate a humanitarian response built on existing structures, resources and innovations.
- WHO produced a rapid risk assessment for Ukraine, focusing on winter as a hazard. In the context of escalating war, high population movement and displacement, damaged infrastructure and disrupted health systems, with winter comes the risk of excess cold-related morbidity and mortality. The risk assessment considered the potential impacts of winter and actions that could be taken to reduce the risk to affected populations, and also to health service delivery.
- WHO published a study describing the different ways in which access to medicines and medical devices was disrupted in the early stages of the war. It indicates how problems due to damage to infrastructure, logistics difficulties and lack of health-care staff were mitigated through streamlined legislation and volunteer involvement.
- WHO worked with the European Union (EU) Delegation to Ukraine, the United States Agency for International Development (USAID) Mission in Ukraine, and the World Bank to develop a discussion paper on health system recovery in Ukraine. It will support the development of plans for early recovery efforts by suggesting key priorities for the sector over the next 18–24 months.

Humanitarian situation:

Ukraine has seen intense hostilities since 24 February 2022. This has led to a grave humanitarian crisis with millions of people in dire need. This includes refugees who have arrived in other countries, those who have been displaced within Ukraine, and those in areas either not under Government control or recently retaken.

As of 2 January 2023, the Office of the United Nations High Commissioner for Human Rights (OHCHR) has reported a total of 17 994 civilian casualties in Ukraine since the war began, of which 6919 were killed and 11 075 were injured. For the month of December, OHCHR recorded 801 civilian casualties in Ukraine, of which 188 were killed and 613 were injured.

In line with the standard operating procedures of the global Surveillance System for Attacks on Health Care, WHO has verified 747 reported attacks on health-care between 24 February and 30 December. These have resulted in 131 reported injuries and 101 reported deaths of health-care personnel and patients.

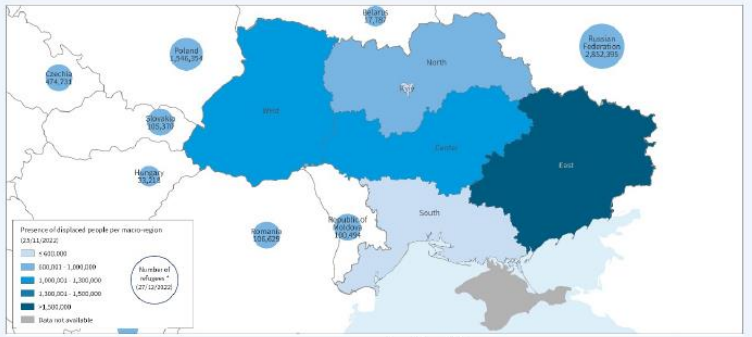
As of 27 December, the United Nations High Commissioner for Refugees has recorded 7.9 million refugees from Ukraine in Europe. A total of 4.9 million were registered for temporary protection or similar national protection schemes in Europe. For cross-border movements, 16.9 million border crossings out of Ukraine and 8.9 million border crossings into Ukraine were recorded. These latter figures reflect cross-border movements and not individuals.

The International Organization for Migration (IOM) estimates that, as of 5 December, 5.9 million people are internally displaced across Ukraine, a slight decrease from 6.5 million at the end of October. Of these 5.9 million, 680 000 were newly displaced within the 30 days prior to the 5 December. Most of these new displacement movements took place from locations in the east (43%) and south (25%) of Ukraine.

Between 1 and 31 December, 50 signals were detected through event-based surveillance, of which 24 were infectious disease signals, 16 pertained to health-care capacity, three – to mass casualties, two related to technological hazards, and two – to water supply.

As of 29 December, the average number of new COVID-19 cases was 487 per day, a decrease from 458 per day in the previous week. The seven-day average polymerase chain reaction (PCR) tests performed increased to 2701 per day from 2677 per day in the previous week (compared to 42 460 per day in the last week before the war). A similar trend was observed with rapid diagnostic tests performed in laboratories and at primary health-care and hospital level.

Fig. 1: Distribution of displaced people and refugees in Ukraine and neighbouring countries as of 27 December 2022



The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not be full agreement.

Data source: World Health Organization, United Nations High Commissioner for Refugees, International Organization for Migration
Map Production: WHO Health Emergencies Programme
Map Date: 4 January 2023

*Individual refugees from Ukraine recorded across Europe

Special Focus: WHO HEALTH NEEDS ASSESSMENT

The full-scale invasion of Ukraine has caused a deterioration in the level of access to health-care services and medicines in the country, particularly for people living in regions close to the front line and areas that are not partially or fully controlled by the Government of Ukraine, and for people who have been internally displaced. Cost and time constraints involved in getting to and from health facilities, as well as limited transportation options were the main barriers to accessing essential health-care services. At the same time, the findings show that the country's health system remains resilient and that overall access to health services is fairly high. To better understand the ongoing need of the population, WHO conducted a quantitative, serial and cross-sectional study to assess self-reported health needs and access to health services among the adult population in Ukraine. The total sample of Round 1 (September 2022) consists of 4000 respondents. Using a questionnaire, data were collected by the Sociological group "Rating" through computer-assisted telephone interviews on 9–14 September 2022. The survey results show that half of those who sought various types of health care faced at least one barrier. Due to the war, the major barriers to accessing health care are cost, time constraints to get to and from health facilities, as well as limited transportation options. The findings show that the health system remains resilient and that some level of health services is often still available. Of those who sought care, 95% reported having received primary care services and up to 90% had access to health services for chronic conditions. Moreover, 93% had access to a family doctor – mostly in person (83%) or by phone (81%). One in five people in recently retaken areas (20%) and areas not under Government control/experiencing active hostilities (18%) stated that they were unable to get to a pharmacy – the top three barriers being increase in price (reported by 84% of respondents), unavailability in a nearby pharmacy (46%), and long queues in local pharmacies (45%). Residents of areas not under the control of the Government of Ukraine and areas experiencing active hostilities have a lower level of access to health care. Fewer of them have access to a family doctor (85% in recently retaken areas compared to 86% in the rest of the country), tried to obtain primary health-care services and assistance for a chronic disease, managed to receive medical care for a child or for an injury, and were able to obtain the necessary medicines (one third have problems with obtaining medicines). People who have been internally displaced experienced more problems as well in comparison to those who are not displaced. Only 80% of them have access to a family doctor. A higher share of displaced people sought emergency and primary health care and medical care for injuries than people who have remained in their home communities. People who have experienced displacement also reported having lower levels of access to medicines (one in three have problems with obtaining medicines) and the COVID-19 vaccine (23% were unable to obtain the vaccine). For more information, please find the complete report available here.