# Force Health Protection Branch NATO MilMed COE Munich



# FHP-Update 11 January 2023



### info.dhsc@coemed.org

Branch Chief
Phone: +49 89 1249 4003
Branch Admin
Phone: +49 89 1249 4001

### GLOBAL

→
666 383 286
confirmed cases
651 900 000
recovered
6 716 919 deaths

### **HKG**

7-days incidence

1.408

7

**JPN** 

7-days incidence

933

7

### News:

- WHO: meets with <u>Chinese officials on current COVID-19 situation</u>.
- WHO: published a regional action plan for prevention and control of snakebite envenoming in South East Asia 2022-2030
- Regarding this topic Snakes live in countries where military operations are conducted. The German Bundeswehr offers a training in with specialist personnel are trained to catch snakes and bring them safely out of the camps in order to prevent snakebites in soldiers. This course can also be done in english language for international military personnel. For more information, please watch the video.
- ECDC: published the ECDC assessment of the XBB.1.5 sub-lineage SARS-CoV-2
- ECDC: monitored the SARS-CoV-2 variants of concern. Find the full report and all tables here.
- ECDC: provide guidelines for aviation as part of European response to COVID-19 developments in China
- ECDC: published a summary about the Influenza virus characterization in Europe.
- **UNICEF:** Across the globe, UNICEF will continue to support children and families facing humanitarian crises 11 emergencies that need more attention and support in 2023

### Topics:

- Global situation: COVID-19 (slide 2-3)
- COVID-19 (slide 3-5)
- Other infectious diseases (slide 6)
- Ebola Situation Update in Uganda (slide 7)
- Ukraine Situation Report (slide 8)





### **EUROPE**

262 948 070 confirmed cases 259 300 000 recovered 2 110 521 deaths

### <u>SMR</u>

7-days incidence 336

V

### <u>SVN</u>

7-days incidence 319

V

### CYP

7-days incidence

298

7

### NZL

7-days incidence

### 932

7

#### Disclaime

This update provided by the NATO Centre of Excellence (NATO MILMED COE) on its website is for general information purposes only and cannot be considered as official recommendation. All national and international laws, regulations, and guidelines as well as military orders supersede this information.

All information is provided in good fath, however, the NATO MILMED COE makes no representation or provided in good fath, however, the NATO MILMED COE makes no representation or provided in good fath, however, the NATO MILMED COE makes no representation or warranty of any kind, express or implied, regarding the accuracy, adequacy, validity,

All minimation is provided in good ratif, however, the NATO Minimation of representation of warranty or any kind, express or implied, regarding the accuracy, adequacy, valid reliability or completeness of any information.

The information published on this website is not intended to substitute professional medical advice, diagnosis or treatment.

The NATO MILMED COE disclaim any liability in connection with the use of this information.

### COVID-19 Situation by WHO Region, as of 04 January

### Global epidemiological situation overview; WHO as of 04 January 2023

Globally, more than 3 million new cases and 10 000 deaths have been reported in the week of 26 December 2022 to 1 January 2023 (Figure 1, Table 1). This represents a reduction in weekly cases and deaths of 22% and 12%, respectively. However, those trends need to be interpreted considering the reduction in testing and delays in reporting in many countries during the year-end holiday season. Therefore, data presented in this report, especially for the most recent week, are incomplete and the decreasing trends should be interpreted in that context as they may change with updated information provided following the holiday period. In the last 28 days (5 December 2022 to 1 January 2023), over 14.5 million cases and over 46 000 new fatalities were reported globally – an increase of 25% and 21%, respectively, compared to the previous 28 days. As of 1 January 2023, over 656 million confirmed cases and over 6.6 million deaths have been reported globally.

At the country level, the highest numbers of new weekly cases were reported from Japan (946 130 new cases; -18%), the Republic of Korea (457 745 new cases; -3%), the United States of America (393 587 new cases; -21%), China (218 019 new cases; +45%), and Brazil (206 944 new cases; -19%). The highest numbers of new weekly deaths were reported from the United States of America (2501 new deaths; -14%), Japan (1941 new deaths; -3%), Brazil (1110 new deaths; +19%), France (803 new deaths; similar to the previous week), and China (648 new deaths; +48%).

# 25 000 000 Americas South-East Asia Europe Eastern Mediterranean Africa Mestern Pacific Deaths Deaths 10 000 000 South-East Asia Europe Eastern Mediterranean Africa 40 000 20 000 0 South-East Asia Europe Eastern Mediterranean Africa 40 000 20 000 0 South-East Asia Europe Eastern Mediterranean Africa 40 000 20 000 0 South-East Asia Europe Eastern Mediterranean Africa Africa Africa Mestern Pacific Deaths 60 000 20 000 0 South-East Asia Europe Eastern Mediterranean Africa Africa Mestern Pacific Double Fig. 10 000 000 South-East Asia Europe Eastern Mediterranean Africa Africa Mestern Pacific Double Fig. 10 000 000 South-East Asia Europe Eastern Mediterranean Africa Africa Mestern Pacific Double Fig. 10 000 000 South-East Asia Europe Eastern Mediterranean Africa Africa Africa Mestern Pacific Double Fig. 10 000 000 South-East Asia Europe Eastern Mediterranean Africa Af

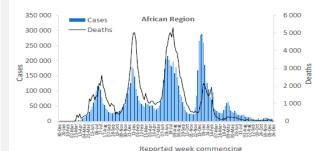
Figure 1. COVID-19 cases reported weekly by WHO Region, and global deaths, as of 1 January 2023\*\*

### WHO regional overviews:

Epidemiological week 26 December 2022 to 1 January 2023 African Region

The African Region reported over 2570 new cases, a 73% decrease as compared to the previous week. Five (10%) 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 Nigeria (35 vs 17 new cases; +106%), Mali (two vs one new cases; +100%), and Zambia (512 vs 320 new cases; +60%). The highest numbers of new cases were reported from Ethiopia (905 new cases; <1 new case per 100 000; +10%), Zambia (512 new cases; 2.8 new cases per 100 000; +60%), and South Africa (348 new cases; <1 new case per 100 000; -88%).

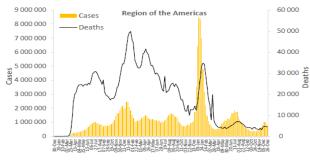
The number of new weekly deaths in the region decreased by 32% as compared to the previous week, with 13 new deaths reported. The highest numbers of new deaths were reported from Zimbabwe (four new deaths; <1 new death per 100 000; -33%), Madagascar (two new deaths; <1 new death per 100 000; +100%), and Zambia (two new deaths; <1 new death per 100 000; -33%).



Region of the Americas

# The Region of the Americas reported over 803 000 new cases, a 20% decrease as compared to the previous week. Two (4%) 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 Honduras (2230 vs 943 new cases; +136%), and Paraguay (3272 vs 1889 new cases; +73%). The highest numbers of new cases were reported from the United States of America (393 587 new cases; 118.9 new cases per 100 000; -21%), Brazil (206 944 new cases; 97.4 new cases per 100 000; -19%), and Argentina (72 558 new cases; 160.5 new cases per 100 000; +17%).

The number of new weekly deaths in the region decreased by 9% as compared to the previous week, with 4385 new deaths reported. The highest numbers of new deaths were reported from the United States of America (2501 new deaths; <1 new death per 100 000; -14%), Brazil (1110 new deaths; <1 new death per 100 000; +19%), and Peru (194 new deaths; <1 new death per 100 000; +4%).



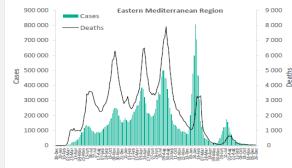
Reported week commencing

Source: https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---4-january-2023

#### Eastern Mediterranean Region

The Eastern Mediterranean Region reported over 4150 new cases, a 16% decrease as compared to the previous week. Two (9%) of the 22 countries for which data are available reported increases in new cases of 20% or greater: Libya (21 vs nine new cases; +133%) and Lebanon (682 vs 486 new cases; +40%). Some of the highest numbers of new cases were reported from Qatar (1441 new cases; 50 new cases per 100 000; -18%) and the United Arab Emirates (459 new cases; 4.6 new cases per 100 000; -1%).

The number of new weekly deaths in the region decreased by 19% as compared to the previous week, with 35 new deaths reported. The highest numbers of new deaths were reported from the Islamic Republic of Iran (12 new deaths; <1 new death per 100 000; -14%), Saudi Arabia (10 new deaths; <1 new death per 100 000; -29%), and Tunisia (five new deaths; <1 new death per 100 000; -29%).

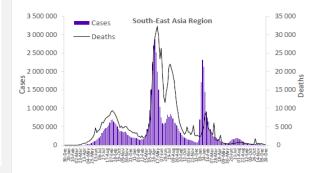


#### Reported week commencing

### South-East Asia Region

The South-East Asia Region reported over 8000 new cases, a 26% decrease as compared to the previous week. Six (60%) of the 10 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Timor-Leste (nine vs three new cases; +200%), Nepal (36 vs 20 new cases; +80%), and Myanmar (73 vs 57 new cases; +28%). The highest numbers of new cases were reported from Indonesia (4057 new cases; 1.5 new cases per 100 000; -38%), Thailand (2111 new cases; 3 new cases per 100 000; -27%), and India (1543 new cases; <1 new case per 100 000; +34%).

The number of new weekly deaths in the region decreased by 32% as compared to the previous week, with 172 new deaths reported. The highest numbers of new deaths were reported from Indonesia (82 new deaths; <1 new death per 100 000; -41%), Thailand (75 new deaths; <1 new death per 100 000; -43%).

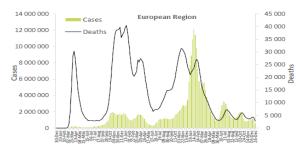


Reported week commencing

### **European Region**

The European Region reported just under 549 000 new cases, a 43% decrease as compared to the previous week. Four (7%) 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 Kyrgyzstan (10 vs four new cases; +150%), Kosvoo<sup>[1]</sup> (35 vs 18 new cases; +94%), and Malta (167 vs 133 new cases; +26%). The highest numbers of new cases were reported from France (156 133 new cases; 240.1 new cases per 100 000; -48%), Germany (149 260 new cases; 179.5 new cases per 100 000; -35%), and Italy (83 202 new cases; 139.5 new cases per 100 000; -37%).

The number of new weekly deaths in the region decreased by 29% as compared to the previous week, with 2866 new deaths reported. The highest numbers of new deaths were reported from France (803 new deaths; 1.2 new deaths per 100 000; similar number of deaths reported the previous week), Italy (474 new deaths; <1 new death per 100 000; -41%), and the Russian Federation (379 new deaths; <1 new death per 100 000; -1%).

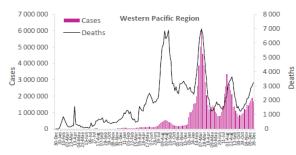


Reported week commencing

### Western Pacific Region

The Western Pacific Region reported over one million new cases, a 12% decrease as compared to the previous week. 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 Micronesia (Federated States of) (165 vs 21 new cases; +686%), Niue (123 vs 72 new cases; +71%), and Singapore (8 324 vs 5 481 new cases; +52%). The highest numbers of new cases were reported from Japan (946 130 new cases; 748.1 new cases per 100 000; -18%), the Republic of Korea (457 745 new cases; 892.8 new cases per 100 000; -3%), and China (218 019 new cases; 14.8 new cases per 100 000; -45%).

The number of new weekly deaths in the region increased by 7% as compared to the previous week, with 3233 new deaths reported. The highest numbers of new deaths were reported from Japan (1941 new deaths; 1.5 new deaths per 100 000; -3%), China (648 new deaths; <1 new death per 100 000; +48%), and the Republic of Korea (429 new deaths; <1 new death per 100 000; +9%).



Reported week commencing

# bluedot

# COVID-19 in China High Concern

### **Current Situation**

- On December 7, 2022, health authorities in China ended its Zero-COVID-19 policy.
- Since then, COVID-19 transmission has rapidly increased resulting in the highest number of cases per day in China since the start of the pandemic.

### **COVID-19 Activity**

- According to media sources, an internal meeting of China's National Health Commission (NHC) has estimated that 248
  million people have contracted the virus in the first 20 days of December this year. This represents nearly 18% of the
  country's 1.4 billion people.
- In contrast, official counts report 62,592 symptomatic COVID-19 cases in the same time frame.
- A modelling study published as a preprint from the WHO Collaborating Centre in Hong Kong has estimated that almost 1 million deaths (684 per million population estimated population size of 1.4 billion) could occur during the initial simultaneous country-wide reopening.

### **Media Reporting**

- Media reports indicate that some hospitals have exceeded their inpatient bed and ICU bed capacity, and oxygen supplies
  are limited.
- There are also reports of lengthy lines and wait times at crematoriums, which are said to be running at full capacity.
- Lastly, significant nationwide shortages of over-the-counter medications for cold symptoms along with shortages of home testing kits for COVID-19 are being reported.

### **Testing and reporting changes**

- Health authorities have shut down their nationwide network of PCR testing and have ceased gathering data on asymptomatic cases.
- Many are now using rapid antigen tests to detect infections and are not required to report positive results.
- Last week China narrowed its definition of what constitutes a COVID-19-associated death, counting only those stemming from COVID-caused pneumonia or respiratory failure.
- Furthermore, on December 26, the NHC indicated in a statement that it will stop publishing daily COVID-19 data without specifying reasons for the change or how frequently future updates will be made.

### **Current Variants Circulating in China**

- Although there is limited information on COVID-19 variants currently circulating in China, recent reports on travellers returning from China to Italy have identified Omicron subvariants including BA.5.2, BF.7, XBB, and BQ.1.
- In addition, local reports indicate that the current surge is being led by the dominant BF.7 strain, a sub-variant of Omicron that is reported to be highly transmissible. Earlier in the year, several BF.7 infections were reported in the United States, the United Kingdom, and India.

### **Travel Policy Changes**

- On December 28, 2022, the U.S. CDC indicated in a press release that as of January 5, 2023, a negative PCR COVID-19 test or documentation of recovery will be mandatory for all air passengers boarding flights to the United States originating from mainland China and the Special Administrative Regions of Hong Kong and Macau. COVID-19 testing must be taken no more than 2 days prior to flight departures.
- CDC re-imposed this measure in an attempt to mitigate the introduction and spread of COVID-19 in the United States given the lack of adequate epidemiological and viral genomic sequencing data reported from China at this time.
- Similarly, Italy, India, Taiwan and Japan are requiring a negative COVID-19 test from travellers arriving from mainland China.

# SARS-CoV-2 variants of concern and Omicron subvariants under monitoring

### **Geographic spread and prevalence**

Globally, from 2 December 2022 to 2 January 2023, 105 428 SARS-CoV-2 sequences were shared through GISAID. Among these, 103 723 sequences were the Omicron variant of concern (VOC), accounting for 98.4% of sequences reported globally in the past 30 days.

BA.5 and its descendent lineages are still dominant globally, accounting for 63.7% of sequences submitted to GISAID as of week 50 (12 to 18 December 2022), even though their prevalence is decreasing. The prevalence of BA.2 and its descendent lineages is rising, mainly due to BA.2.75\* (\* indicates inclusion of descendent lineages); together they account for 15.2% of sequences submitted. BA.4 and its descendent lineages are declining with a prevalence of 0.7% as of week 50. Unassigned sequences (presumably Omicron) account for 13.6% of sequences submitted to GISAID in week 50, while the other lineages account for 6.1%.

At the global level, six variants currently under monitoring account for 74.4% of prevalence as of week 50 and have replaced the former BA.5 descendent lineages. These six variants under monitoring (and the respective prevalence) are BQ.1\* (44.9%), a sublineage of BA.5, BA.5 with one or several of five mutations (S:R346X, S:K444X, S:V445X, S:N450D, S:N460X) (10.3%), BA.2.75\* (11.8%), BA.4.6\* (0.6%), and BA.2.3.20\* (<0.1%). In week 50, the prevalence of XBB\* was 6.8%, which includes XBB.1.5 which had an increase in sequences in week 50 (667 sequences) compared to week 49 (5 to 11 December 2022) where 525 sequences were reported. Based on current evidence, there is no indication of increased severity associated with these variants under monitoring compared to the former Omicron lineages.

The TAG-VE (Technical Advisory Group on SARS-CoV-2 Virus Evolution) convened on 3 January 2022 to discuss the COVID-19 situation in mainland China.

Please find further information here.



COVID-19
cases per 100
000
population
reported by
countries,
territories and
areas, 26
December
2022 to 1
January 2023

Source: WHO

### **COVID-19 Bivalent Booster Effectiveness**



Currently, there are four available bivalent vaccines. Pfizer-BioNTech and Moderna have both developed a bivalent COVID-19 vaccine that includes the BA.1 strain and one that includes the BA.4/BA.5 strain. Globally, 38 countries have approved at least one of these four bivalent vaccines. [1] Uptake of the bivalent vaccine or recent booster has been varied between regions but is relatively low across all regions with available data in comparison with previous vaccine doses. Despite signs that a number of countries are heading into new epidemic waves while uptake of booster vaccinations has declined, new studies support that the bivalent booster vaccines provide substantial additional protection against severe disease.

| Country/region              | Population         | Time period<br>(varying by<br>region) | % of population<br>that received a<br>recent booster<br>dose<br>(bivalent or<br>monovalent) |
|-----------------------------|--------------------|---------------------------------------|---|
| United States <sup>2</sup>  | Adults 18 and over | Sept 1 - Dec 14                       | 16%   |
| United States <sup>2</sup>  | Adults 65 and over | Sept 1 - Dec 14                       | 36%   |
| Canada <sup>3</sup>         | Adults 18 and over | Aug 1 – Dec 4                         | 20%   |
| England <sup>4</sup>        | Adults 50 and over | Sept 5 - Dec 12                       | 58%   |
| European Union <sup>5</sup> | Adults 18 and over | Aug 7 - Dec 17                        | 11%   |
| European Union <sup>5</sup> | Adults 65 and over | Aug 7 – Dec 17                        | 20%   |

Table 1. Uptake of a recent booster (bivalent or monovalent) in regions that have approved at least one bivalent vaccine. [2,3,4,5]

### **Key Takeaways from Two Recent Bivalent Booster Studies**

- Bivalent COVID-19 boosters have been developed to target new and emerging COVID-19 subvariants, however, there is limited effectiveness data in humans available.
- Two recent studies in the US were recently published in Morbidity and Mortality Weekly (MMWR). The first study, herein referred to as the IVY Network study, [6] showed that immunocompetent individuals ≥65 years of age who had received a bivalent booster were 84% less likely to experience COVID-19 illness hospitalization when compared to those who are not vaccinated and 73% less likely when compared to those who received a last monovalent vaccine ≥12 months before illness onset.
- The second study, herein referred to as the VISION Network study, [7] showed that immunocompetent individuals ≥18 years of age who received a bivalent booster were 57% less likely to experience COVID-19-related hospitalization, when compared to those who are not vaccinated and 45% less likely than those who received a last monovalent vaccine ≥11 months before illness onset.
- Although neither study is subvariant specific, and do not allow for a direct comparison between the bivalent boosters and monovalent vaccines, they both provide evidence to reiterate that vaccination against SARS-CoV-2 provides strong protection against severe COVID-19 illness.

It is likely that a combination of improved bivalent booster effectiveness against Omicron subvariants and the **recency of the last vaccination** plays an important role in protective immunity against symptomatic and severe illness.

IVY Network study: Estimates of bivalent vaccine effectiveness in preventing COVID-19 associated hospitalization among those 65 years of age and older. [6]

The Investigating Respiratory Viruses in the Acutely III (IVY) Network (a hospital network of 22 hospitals across 18 states in the US) estimated the vaccine effectiveness (VE) of the bivalent (BA.4/BA.5) COVID-19 mRNA boosters against COVID-19 related hospitalization of immunocompetent individuals ≥65 years of age. Their preliminary results show that a recent bivalent booster vaccination provides added protection against COVID-19 hospitalization for those ≥65 years of age.

The IVY Network conducted their study between September 8, 2022, to November 30, 2022, when the Omicron BA.5 or BQ.1/BQ.1.1 subvariants (which are derived from BA.5) were of increasing prevalence. Between September 8, 2022 and November 30, 2022, BA.5 and its descendant lineages made up 87% of sequenced samples in the US, while BQ.1 and its descendant lineages made up 19% in the same time period. [8] This is important as the bivalent boosters have been

| r   | Case patients | Control patients |
|---|---------------|------------------|
| Unvaccinated  | 81 (21%)      | 62 (15%)         |
| Received 2 or more monovalent COVID-19 mRNA vaccine doses | 280 (73%)     | 296 (71%)        |
| Received a bivalent COVID-19<br>mRNA booster              | 20 (5%)       | 59 (14%)         |
| Total patients included in analysis                       | 79            | 8                |

developed to protect against the ancestral SARS-CoV-2 strain and more recent Omicron subvariants such as BA.4/BA.5, however, there is limited data available indicating the real-world effectiveness of the newer bivalent boosters. Notably, the study excluded those with immunocompromising conditions, those who experienced illness after hospital admission (i.e., hospital-acquired), and/or those who experienced a co-infection with influenza or respiratory syncytial virus.

Overall, the IVY Network found that the proportionate reduction in risk of illness with a bivalent booster was highest when compared to those who are unvaccinated (VE = 84%), and those who had received their monovalent vaccines ≥12 months before illness onset (relative VE (rVE) = 83%).

- This is expected as having received a COVID-19 vaccine would provide protection when compared to those who have not been vaccinated.
- Additionally, waning immunity would be expected to be greater for those with longer time periods between their most recent vaccine dose and illness.

VE or rVE of a bivalent booster against COVID-19 associated hospitalization when compared to individuals who are unvaccinated or have received ≥2 monovalent COVID-19 vaccine doses

| Unvaccinated  | VE = 84%  |
|---|-----------|
| Received ≥2 monovalent COVID-19 mRNA vaccine doses ≥2 months before illness onset                         | VE = 73%  |
| Received ≥2 monovalent COVID-19 mRNA vaccine doses <b>6-11 months</b> before illness before illness onset | rVE = 78% |
| Received ≥2 monovalent COVID-19 mRNA vaccine doses ≥12 months before illness before illness onset         | rVE = 83% |

• Since previous infections were not accounted for, bias in these results could occur if rates of previous infections and their timing prior to study onset differed between study comparison groups. Given that a majority of the US population has been infected with SARS-CoV-2 since the emergence of Omicron, [9] these results support that the bivalent booster vaccines delivered recently provide substantial additional protection than achieved through infection and/or a monotype vaccination series received six or more months prior.

### **COVID-19 Bivalent Booster Effectiveness**



VISION Network study: Estimates of bivalent vaccine effectiveness in preventing COVID-19 associated urgent care and hospitalization among immunocompetent adults [7]

A similar study was run by the VISION Network, which includes seven health systems in nine US states, between September 13, 2022, to November 18, 2022. In this study, researchers evaluated VE of the bivalent COVID-19 mRNA boosters against COVID-19 related emergency department/urgent care (ED/UC) visits or hospitalization for COVID-19 in immunocompetent individuals ≥18 years of age. They found that bivalent boosters reduced the risk of ED/UC visits when compared to the unvaccinated and provided additional protection against COVID-19 illness for those with previous monovalent (2, 3, or 4 doses) COVID-19 vaccinations.

| Breakdown of case and control patients included in analysis |   |              |
|---|---|--------------|
| ED/UC visits with COVID-19 related illness                  | Total patients included in the analysis | 78,303       |
|   | Unvaccinated                            | 24,142 (31%) |
|   | No bivalent dose                        | 50,256 (64%) |
|   | With bivalent dose                      | 3,905 (5%)   |
| Hospitalizations with COVID-<br>19 related illness          | Total patients included in the analysis | 15,527       |
|   | Unvaccinated                            | 4,092 (26%)  |
|   | No bivalent dose                        | 10,652 (67%) |
|   | With bivalent dose                      | 783 (5%)     |

Within this study, individuals were excluded if they had immunocompromising conditions, had only received one mRNA COVID-19 vaccine, had received a non-mRNA COVID-19 vaccine, and/or had received their vaccine dose before the CDC bivalent booster recommendation on September 1, 2022. Similar to the IVY Network study, the highest proportionate reduction in risk of illness with a bivalent booster was found when compared to unvaccinated individuals; this was true for both the ED/UC (56%), and hospitalization (57%) groups. Additionally, a higher VE was also shown for individuals who received a last monovalent dose ≥11 months earlier (ED/UC VE = 50%, Hospitalization VE = 45%), which is expected as these individuals would have experienced a greater degree of waning immunity.

VE of a bivalent booster against COVID-19 associated ED/UC visits or hospitalization when compared to individuals who are unvaccinated or have received 2, 3, and 4 monovalent COVID-19 vaccine doses

| ED/UC visits    | Unvaccinated   | 56% |
|-----------------|--|-----|
|                 | Last monovalent dose received <b>2-4 months</b> before illness onset | 31% |
|                 | Last monovalent dose received ≥11 months before illness onset        | 50% |
| Hospitalization | Unvaccinated   | 57% |
|                 | Last monovalent dose received ≥11 months before illness onset        | 45% |

### Limitations

Specific to the IVY Network study: [6]

Due to the small sample size, researchers were unable to estimate VE by the number of COVID-19
monovalent vaccines doses received or for those whose most recent monovalent vaccine dose was
received 2-5 months before illness onset.

Specific to the VISION Network study: [7]

• Patients included in this study may not be representative of the general US population as they came from only nine states and would have received the bivalent vaccine soon after its authorization.

Similar limitations that exist for both studies include that: [6,7]

- A subvariant specific VE could not be calculated as multiple subvariants were circulating at the time of study and genotyping was not performed at patient-level.
- Previous SARS-CoV-2 infection was either rarely reported/documented (IVY Network) or was not documented (VISION Network). Thus, it is unclear whether immunity from previous infections may have influenced the VE estimates if rates of infection and their timing prior to bivalent booster vaccination and recurrent infection differed between study groups.
- In the US, monovalent COVID-19 vaccines are no longer used as boosters, therefore, there was no way to compare the effectiveness of a bivalent and a monovalent booster received in the same period.

Either a **bivalent brand specific VE could not be calculated** as the study did not specify what proportions of different bivalent boosters were administered (IVY Network) **or was not calculated** (VISION Network). Overall, no comparisons between vaccine brands can be made. Currently there are two bivalent boosters approved for use in the US: Moderna COVID-19 Vaccine, Bivalent and Pfizer-BioNTech COVID-19 Vaccine, Bivalent, both targeting BA.5 along with the wildtype strain. [10]

# Other Infectious Disease Outbreaks/

# **Conflicts**



### **Unknown Illness in Afghanistan**

In a follow-up on the unknown illness first reported on December 20, 2022 in the sourtheastern province of Zabul, Afghanistan, preliminary data reported by the health department of Zabul provice indicates that the likely cause of the disease is Crimean-Congo hemorrhagic fever (CCHF). Official information indicates that as of December 21, 80 cases and two deaths hae been reported. CCHF is transmitte mainly through tick bites and it is widespread in Afghanistan. Generally,, cases are reported between May and November.

### SOURCE: ProMed

### Measels in India

As health officials rush to control an outbreak of measles in India, scientists say the nation is set to miss its deadline of eliminating the disease by 2023. As of November, India had recorded 12,773 cases of measles this year, according to the World Health Organization, making it the largest outbreak in 2022.

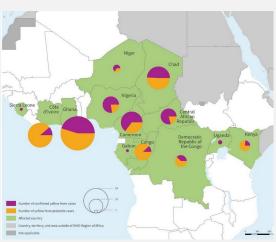
Public-health researchers say that the revival of measles in India — mostly in four large cities — is happening because millions of children didn't get vaccinated in 2020, owing to the disruptions caused by the COVID-19 pandemic. On top of this, researchers say there has been persistently low coverage in routine immunizations of newborns for the past few years, which has contributed to the current outbreak.

Three children of a family died after contracting measles within a span of three weeks in a village in Uttar Pradesh's Unnao, Chief Medical Officer Satya Prakash has confirmed. Meanwhile, 35 other children from the same village have developed rashes and are suffering from fever. Three of the children had to be hospitalised due to their serious condition.

### Source: New Media

# Yellow fever in African Region From 1 January 2021 to 7 December 2022, a total of 203 confirmed

and 252 probable cases with 40 deaths (Case Fatality Ratio 9%) were reported to WHO from 13 countries in the WHO African Region. Risk factors for further yellow fever spread and amplification include low population immunity, population movements, viral transmission dynamics, and climate and environmental factors that have contributed to the spread of Aedes mosquitoes. Recent Reactive Vaccination Campaigns increase population immunity and may have contributed to reducing the risk of yellow fever spread in targeted countries, resulting in a gradual downward trend in reported confirmed cases in 2022. However, the countries remain at high risk. In 2022, 12 countries in the WHO African Region have reported confirmed cases of yellow fever (Cameroon, the Central African Republic, Chad, Côte d'Ivoire, the Democratic Republic of the Congo, Ghana, Kenya, Niger, Nigeria, the Republic of the Congo, Sierra Leone and Uganda). Eight of these countries are experiencing a



continuation of transmission from 2021 (Cameroon, the Central African Republic, Chad, Côte d'Ivoire, the Democratic Republic of the Congo, Ghana, Nigeria, and the Republic of the Congo) and four countries are newly reporting confirmed cases (Kenya, Niger, Sierra Leone and Uganda). One country, Gabon, reported an isolated confirmed case in 2021, but no further cases were registered in 2022.

Source: WHO

### Cholera in Haiti – Summary of the current situation

Since the notification of the first two confirmed cases of *Vibrio cholerae* O1 in the greater Port-au-Prince area on 2 October 2022, to 7 January 2022, the Haitian Ministry of Health (Ministère de la Santé Publique et de la Population, MSPP per its French acronym), reported a total of 23,044 suspected cases in 10 departments of the country, including 1,576 confirmed cases, 18,699 hospitalized suspected cases, and 464 registered deaths. As of 7 January 2023, 9 departments have confirmed cases (Artibonite, Centre, Grand-Anse, Nippes, Nord, Nord-Ouest, Ouest, Sud and Sud-Est). To date, the case fatality rate among suspected cases is 2.0%. Of a total of 4,351 samples analyzed by the National Public Health Laboratory (LNSP for its acronym in French), 1,576 were confirmed (36.2% positivity rate).

Of the total reported suspected cases with available information, 57% are male and 48% are aged 19 years or younger. The most affected age group is 1 to 4-year-olds (20%), followed by 20 to 29-year-olds (14.5%) and 5 to 9-year-olds (14%)

### Source: WHO PAHO

### Vaccine-derivd Poliomyelitis in Canada

As of 23-Dec-2022, type 2 poliovirus has been detected in two wastewater samples from undisclosed locations. No human cases have been reported in Canada yet, but environmental surveillance will continue.

### **Latest Measures**

- Canadian National Microbiology Laboratory (NML) will continue sampling wastewater for the next 2 months in Canadian sites with close ties to New York State and the surrounding area
- Also, United States CDC is examining the above positive samples for genetic linkages to the cVDPV2 samples from its current New York State outbreak

### Additional Context

- Initial findings suggest a high likelihood the positive samples are linked to those identified in New York State
- Continued sampling and genome sequencing will help better understand local circulation v/s importation
- The Canada IHR National Focal Point was the first to report VDPV2 in local wastewater and since then PAHO/WHO is working with the Public Health Agency of Canada (PHAC) to follow up on this event.

### LOW CONCERN

### Source: ProMed

### Influenza Europe; Weeks 52/2022 (26 December – 01 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 slightly decreased to 34% from 37% in the previous week most probably due to the impact of the festive period with lower testing and reporting.
- 16 of 32 countries or areas reported high or very-high intensity and 22 of 31 widespread activity indicating high seasonal influenza circulation across the Region.
- The Republic of Moldova, Sweden, Lithuania, Slovakia, Slovenia, Poland, the Netherlands, and Estonia reported seasonal influenza activity above 50% positivity in sentinel primary care.
- Both influenza type A and type B viruses were detected with A(H3) viruses being dominant in sentinel surveillance systems but with A(H1)pdm09 viruses dominating in non-sentinel surveillance systems.
- Hospitalized patients with confirmed influenza virus infection were reported from ICU, other wards and SARI surveillance, mostly type A virus without subtype. The highest positivity rates for influenza virus detections in SARI surveillance were reported by Romania (64%), Ukraine (59%), Russian Federation (49%), and Serbia (43%).

**Source: Flu News Europe** 

# Other Infectious Disease Outbreaks/ Conflicts

# Ebola outbreak in Uganda, as of 3 January 2023

## Epidemiological update

### **Background:**

On 20 September 2022, the Ministry of Health in Uganda, together with WHO AFRO, confirmed an outbreak of SVD in Mubende District, Uganda, after one fatal case was confirmed.

The index case was a 24-year-old man, a resident of Ngabano village of the Madudu sub-county in Mubende District. The patient experienced high fever, diarrhoea, abdominal pain, and began vomiting blood on 11 September 2022. Samples were collected on 17 September 2022 and SVD was laboratory-confirmed on 19 September. The patient died on the same day, five days after hospitalisation.

### On 15 October 2022, the President of Uganda

imposed a 21-day lockdown on the Mubende and Kassanda districts to contain the outbreak. Measures included an overnight curfew, closing places of worship and entertainment, and restricting movement in and out of the two districts. These measures were extended on 5 November 2022 and again on 26 November, until 17 December 2022.

The Ugandan government is carrying out community-based surveillance and active case finding. An on-site **mobile laboratory** has been established in Mubende and risk communication activities are ongoing in all affected districts. Africa CDC, WHO, GOARN and other partners have teams in Uganda to support the coordination of the response.

#### As of 16 November 2022

, all travellers leaving or arriving at Entebbe International Airport in Uganda are required to complete a health declaration form.

On 8 December 2020

, the **Ministry of Health of Uganda** announced that 1 200 doses of vaccine have arrived in the country which will be used in the Tokomeza Ebola vaccine trial. This is the first batch of one of three vaccine candidates. According to the **Sabin Vaccine Institute**, the doses that have arrived are Sabin's vaccine and they will make another 8 500 doses available to WHO on a rolling basis through January.

SVD outbreaks have previously occurred in Uganda (four outbreaks) and Sudan (three outbreaks). The last SVD outbreak in Uganda was in 2012.

### **ECDC Assessment**

### Risk to EU/EEA citizens living in or travelling to affected areas in Uganda

Despite the increase in number of cases and the transmissions reported in the densely populated capital city of Kampala, the current probability that EU/EEA citizens living in or travelling to EVD-affected areas of Uganda will be exposed to the virus is very low, provided that they adhere to the recommended precautionary measures (see further information below). Transmission requires direct contact with blood, secretions, organs or other bodily fluids of dead or living infected people or animals; all unlikely exposures for the general EU/EEA tourists or expatriates in Uganda.

Considering that infection with Sudan ebolavirus leads to severe disease but that the probability of exposure of EU/EEA citizens is very low, the impact for the EU/EEA citizens living and travelling in affected areas in Uganda is considered low. Overall, the current risk for EU/EEA citizens living or travelling to affected areas in Uganda is considered low.

### Risk of introduction and spread within the EU/EEA

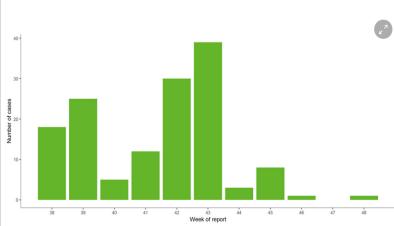
The most likely route by which the Ebola virus could be introduced to the EU/EEA is through infected people from affected areas travelling to the EU/EEA or medical evacuation of cases to the EU/EEA. According to the International Air Travel Association, in 2019, there were about 126,000 travellers arriving in the EU/EEA from Uganda. Based on experience from the largest EVD outbreak in West Africa to date (2013-2016), where thousands of cases were reported, with transmission in large urban centres, and hundreds of EU/EEA humanitarian and military personnel deployed to the affected areas, importation of cases by travellers is considered unlikely.

The likelihood of secondary transmission of Ebola virus within the EU/EEA and the implementation of sustained chains of transmission within the EU/EEA is very low as cases are likely to be promptly identified and isolated and follow up control measures are likely to be implemented. During the large EVD outbreak in West Africa in 2013–2016, there was only one local transmission in the EU/EEA (in Spain) in a healthcare worker who had attended to an evacuated EVD patient. The impact for the EU/EEA citizens living in the EU/EEA is considered low and overall, the current risk for the citizens in the EU/EEA is considered very low.

Healthcare providers in the EU/EEA should be informed of and sensitised to:

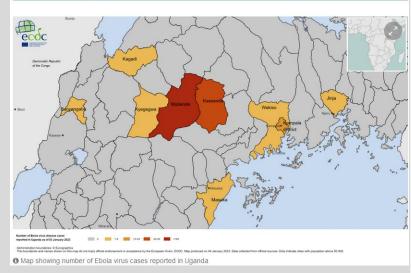
- the possibility of EVD among travellers returning from affected areas;
- the clinical presentation of the disease and need to enquire about travel history and contacts in people returning from EVD-affected countries;
- the availability of protocols for the ascertainment of possible cases and procedures for referral to healthcare facilities;
- the imperative need for strict implementation of barrier management, use of personal protective measures and equipment and disinfection procedures in accordance with specific guidelines and WHO infection control recommendations when providing care to EVD cases.

### Ebola cases in Uganda, 2022-2023



1 Ebola cases in Uganda 2022. Source: WHO; Ministry of Health, Uganda; Government of Uganda

# Geographical distribution of EVD cases in Uganda, 2022-2023



Source: https://www.ecdc.europa.eu/en/news-events/ebola-outbreak-uganda

## **Ukraine – Situation Report**

Situation Report (04 January 2023)

Source: WHO

### **Health Information**

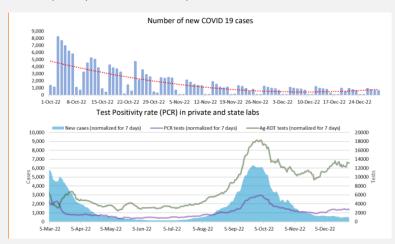
As of 2 January 2023, the Office of the UN High Commissioner for Human Rights (OHCHR) recorded:

- A total of 6919 civilians killed (2737 men, 1842 women, 175 girls, and 216 boys, as well as 38 children and 1 911 adults whose sex is yet unknown): and
- 11 075 civilians injured (2401 men, 1726 women, 233 girls, and 321 boys, as well as 254 children and 6137 adults whose sex is yet unknown).

#### Surveillance

### **COVID-19 and other communicable diseases**

As of 29 December, the average daily number of new COVID-19 cases is at 487 a slight increase from 458 per day in the previous week. The seven-day average daily polymerase chain reaction (PCR) tests performed increase to 2,701 from 2,677 in the previous week (compared to 42 460 in the last week before the war). A similar trend is observed with rapid diagnostic tests performed in laboratories and at primary healthcare and hospital level.



### **Rapid Needs Assessment**

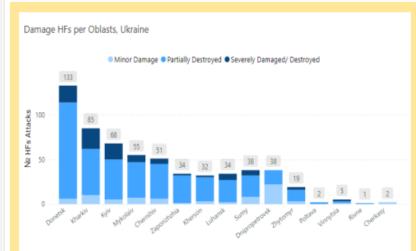
WHO conducted a rapid health needs assessment with crowdsourced data from 351 respondents: 235 from the city of Kharkiv and 116 from outside Kharkiv. The data, collected on 2–11 December, show: an increase in perceived health status outside the city of Kharkiv after liberation; significant improvement in access to health-care services outside the city of Kharkiv; and that access to pharmacies and medicines is better in the city of Kharkiv, with slight improvement in access outside the city



### ATTACKS ON HEALTH

Verified reports of attacks (as of 30 November 2022) For further information, click here.





Based on matched HFs names, as of 26 December 2022 there are 597 attacks on healthcare facilities in 15 oblasts (including Kyiv city). 270 health facilities were attacked, on average around 454 thousand patients were treated per month in these health facilities according to pre-war data from eHealth.

| HFs Attacked    | HFs Attacked in Oblasts, Ukraine |   |  |
|-----------------|----------------------------------|---|--|
| Oblast, Ukraine | Nº<br>Attacks<br>HFs             | Avr № of<br>patients treated<br>in HFs Attacked |  |
| Rivne           | 1                                | 5170  |  |
| Cherkasy        | 2                                | 631   |  |
| Poltava         | 2                                | 4745  |  |
| Vinnytsia       | 5                                | 9914  |  |
| Zhytomyr        | 19                               | 36455   |  |
| Kherson         | 32                               | 27057   |  |
| Luhansk         | 34                               | 30672   |  |
| Zaporizhzhia    | 34                               | 20210   |  |
| Dnipropetrovsk  | 38                               | 27401   |  |
| Sumy            | 38                               | 35857   |  |
| Chernihiv       | 51                               | 47151   |  |
| Mykolaiv        | 55                               | 34469   |  |
| Kyiv            | 68                               | 23849   |  |
| Kharkiv         | 85                               | 89452   |  |
| Donetsk         | 133                              | 61735   |  |
| In Total        | 597                              | 454768  |  |