Multi-country outbreak of mpox

External Situation Report 17, published 2 March 2023
Data as received by WHO national authorities by 17:00 CEST, 27 February 2023

Risk assessment	Laboratory confirmed cases	Deaths	Countries/areas/territories
Global risk – Moderate	86 173	100	110

WHO Regional risk

- African Region, Eastern Mediterranean Region, European Region, Region of the Americas– Moderate
- South East Asia Region, Western Pacific Region – Low

Highlights

- Since the last situation report published on 16 February 2023, 313 new mpox cases (0.4% increase in total cases) and eight new related deaths have been reported to WHO.
- The latest epidemiological data suggests the outbreak is heading towards an end in the European Region, and slowing down in the Region of the Americas where human-to-human transmission occurs.
- In the African region where the infection also occurs through contact with infected animals, the epidemic curve shows more sustained transmission, reflecting mixed patterns of human-to-human transmission through direct or sexual contact as well as outbreaks due to zoonotic spillover events.
- In November 2022, a vaccine called OrthopoxVac was licensed in the Russian Federation for immunization against smallpox, mpox and other orthopoxviruses according to the rules for registration of medicines of the Eurasian Economic Union.

From 1 January 2022 through 27 February 2023, a cumulative total of 86 173 laboratory-confirmed cases of mpox and 100 deaths have been reported to WHO from 110 countries/territories/areas (hereafter 'countries'[i]) in all six WHO Regions (Table 1). Since the last situation report published on 16 February 2023, 313 new cases (0.4% increase in total cases) and eight new deaths have been reported. The outbreak shows a long-tail epidemic curve with a trend of slowly declining numbers of new cases in the last weeks.

The number of weekly new cases reported globally has increased by 32.5% in week 8 (20 February through 26 February 2023) (n = 151 cases) compared to week 7 (13 February through 19 February 2023) (n = 114 cases), with the Region of the Americas reporting the majority (87.8%) of cases in the past four weeks. The Western Pacific Region and the Region of the Americas are reporting an increase in cases, while the rest of the regions have reported a decline in cases or observed no proportional increase. As the number of cases decreases, the relative weekly changes need to be interpreted with caution and considering the total absolute numbers.

From 14 February through 27 February 2023, three countries reported an increase in the weekly number of cases, with the highest increase reported in Peru (50%; n = 15 vs. n = 10). As of 27 February 2023, 22 of the 110 affected countries have reported new cases within the last 21 days, the maximum disease incubation period. Fourteen of them are in the Americas, three in Europe, three in Africa, and two in the Western Pacific Region. Some of these countries continue to have sustained community transmission of mpox, while others only report sporadic cases.

From 14 February through 27 February 2023, a total of eight deaths were reported. Seven deaths were reported in the Region of the Americas, with six deaths from the United States of America and one from Ecuador. In the African Region, one death was reported by the Central African Republic. One previously reported death in Peru was reclassified as not due to mpox and was retracted, resulting in a global total of 100 deaths since 1 January 2022.

As of 27 February 2023, the 10 countries that have reported the highest cumulative number of cases globally are the United States of America (n = 30 012), Brazil (n = 10 825), Spain (n = 7543), France (n = 4128), Colombia (n = 4081), Mexico (n = 3877), Peru (n = 3752), the United Kingdom (n = 3735), Germany (n = 3692), and Canada (n = 1460). Together, these countries account for 85% of the cases reported globally.

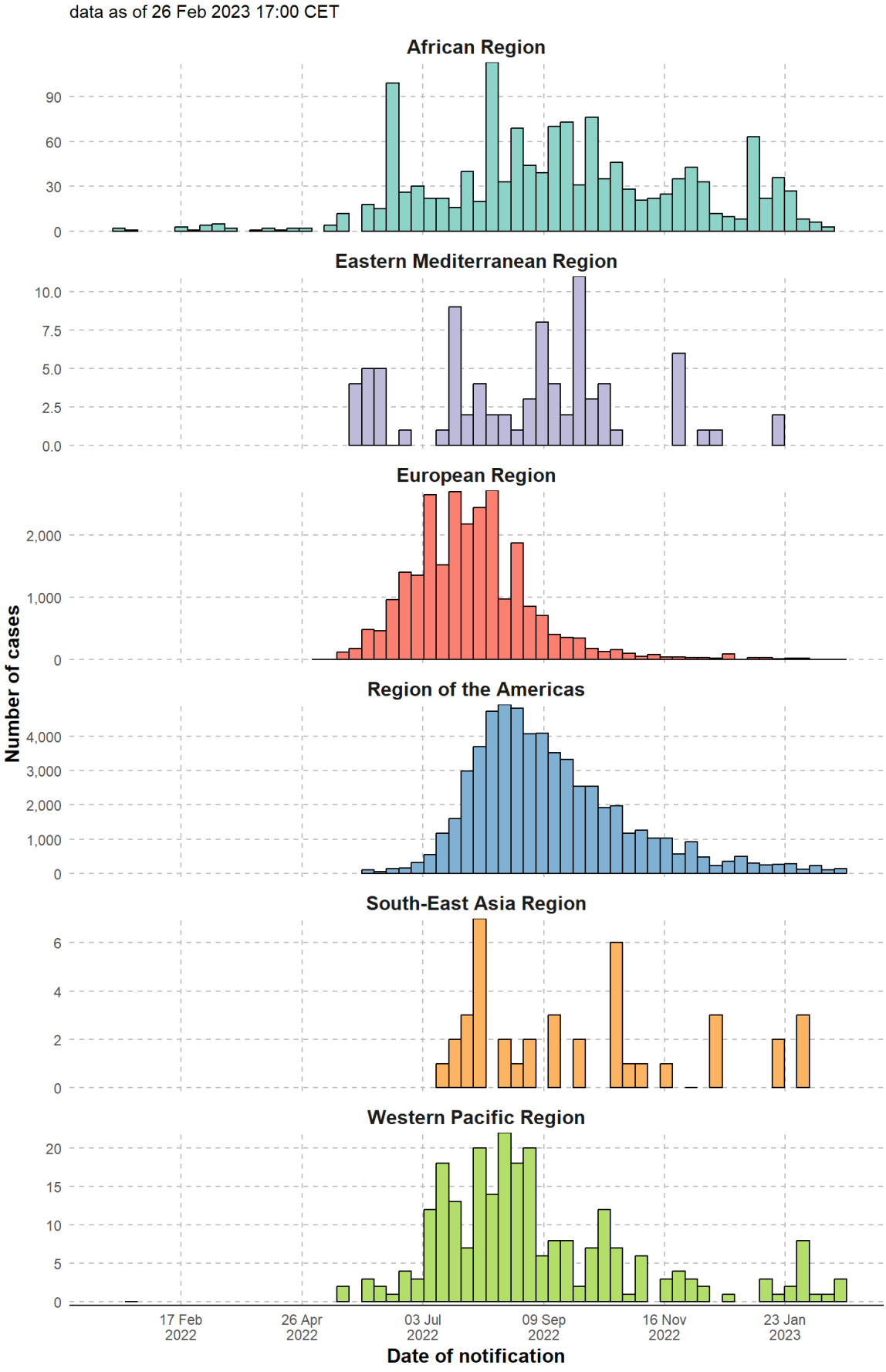
Table 1. Number of cumulative confirmed mpox cases and deaths reported to WHO, by WHO Region, from 1 January 2022 to 27 February 2023 17:00 CEST

WHO Region	Total Confirmed Cases	Total Deaths	Cases in past week[1]	7-day change in cases (%)
Region of the Americas	58 578	76	143	38%
European Region	25 843	5	5	-17%
African Region	1382	17	0	-
Western Pacific Region	248	0	3	200%
Eastern Mediterranean Region	82	1	0	-
South-East Asia Region	40	1	0	-
Total	86 173	100	151	32%

(-) Zero cases were reported in at least one week in the past two weeks

[1] Using the most recently completed international standard week (Monday - Sunday)

Figure 1. Epidemiological curves of weekly aggregated confirmed cases of mpox by WHO Region, from 1 January 2022 to 27 February 2023, 17:00 CEST*



Source: WHO

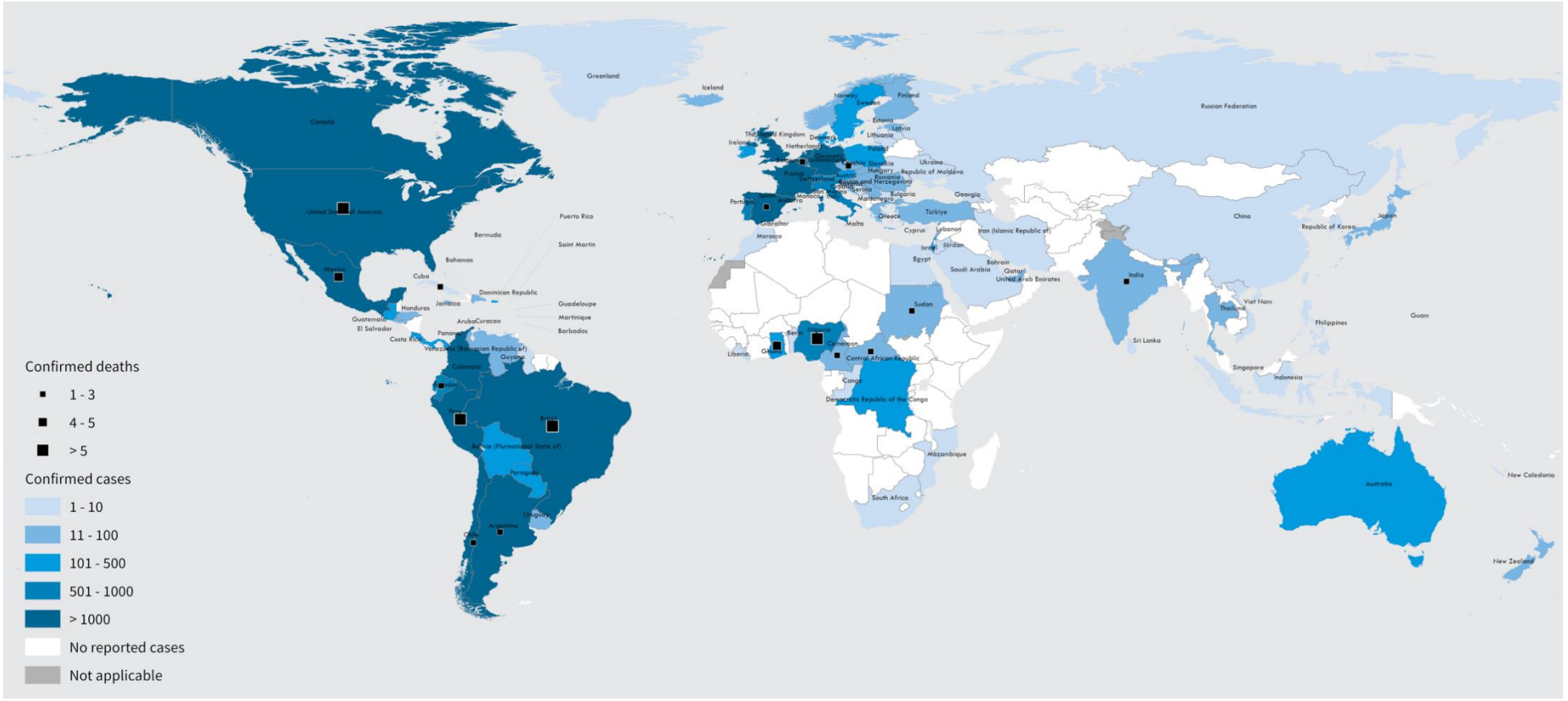
**This figure shows aggregated weekly data, for completed epidemiological weeks ending on Sundays. Data on the current week will be presented in the next situation report.*

The epidemic curves showed in Figure 1, although subject to reporting bias, suggests that the outbreak is heading towards an end in the European Region, and slowing down in the Americas. In the African Region where the infection also occurs through contact with infected animals, the epidemic curve shows a more sustained transmission. This reflects mixed patterns of human-to-human transmission through direct or sexual contact as well as outbreaks due to zoonotic spillover events. The remaining three regions report sporadic cases and clusters rather than sustained transmission and highlight the potential risk of reintroduction of cases even after a few weeks with no reported cases.

Other key epidemiological findings:

- As of 24 February 2023, 96.4% (73 829 / 76 555) of cases with available data are men, with a median age of 34 years (interquartile range: 29-41 years). This pattern has been quite stable over time.
- Of cases with age data available, 1.1% (921 / 82 191) are children aged 0-17 years, and 267 (0.3%) are aged 0-4 years. The majority of pediatric cases were reported from the Region of the Americas (672 / 9 21; 73%) with the overall proportion of child cases in the Americas 1.2% (672 / 56 007) being similar to the proportion which has been observed globally.
- Among cases with sexual orientation reported, 85.5% (27 198 / 31 814) have identified as gay, bisexual and other men who have sex with men. This proportion, although it has slightly fluctuated over time, has consistently been above 75%, highlighting that most of the transmission continues to occur in this community.
- Of all reported modes of transmission, skin and mucosal contact during sex was the most reported, in 15 196 of 22 092 (68.8%) of all reported transmission events.
- Where this information is available, the most reported exposure setting is a party setting with sexual contact, comprising 3720 of 5476 (67.9%) reported exposure settings. In recent months, transmission in a household setting as a proportion of all settings reported has increased.
- Among the cases (n = 37 152) who reported at least one symptom, the most common symptom is any rash and is reported in 82.7% of cases, followed by fever (59.8%), and generalized or genital rash (52.4% and 46.4% respectively). The symptomatology of cases has been very consistent over time in this outbreak.
- Detailed information on the route of transmission is not available for most cases from the WHO African Region and available information on transmission might not fully describe the epidemiological spread of the virus in the region. Countries from this region have reported person-to-person transmission, including transmission through sexual contact; as well as, in some contexts (primarily in Central Africa), infection from presumed contact with infected animals.

Figure 2. Geographic distribution of confirmed cases of mpox reported to or identified by WHO from official public sources from 1 January 2022 to 27 February 2023 17:00 CEST



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Data Source: World Health Organization
Map Production: WHO Health Emergencies Programme
Map Date: 28 February 2023

World Health Organization

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Vaccines for mpox

There are currently three vaccines approved by different regulatory agencies for the prevention of mpox, including modified vaccinia Ankara from Bavarian Nordic (MVA-BN, Denmark) and LC16 from KMB Biologics (Japan). Recently, in November 2022, a third vaccine called OrthopoxVac was licensed in the Russian Federation for immunization against smallpox, mpox and other orthopoxviruses according to the rules for registration of medicines of the Eurasian Economic Union. In addition, a smallpox vaccine ACAM2000 has been recommended for use in specific populations in the case where other vaccines may not be available. At this time the vaccines for mpox are not prequalified by WHO but interim guidance for their use has been developed and issued with the advice and support of the WHO Strategic Advisory Group of Experts (SAGE).

Vaccines for mpox should be based on a full assessment of risks and benefits on a case-by-case basis. Primary preventative (pre-exposure) vaccination is recommended for individuals at highest risk for exposure. Persons at highest risk of exposure in the current multi-country outbreak are gay, bisexual or other men who have sex with men (MSM) with multiple sexual partners. Others at risk may include individuals with multiple casual sexual partners; sex workers; health workers at risk of repeated exposure, laboratory personnel working with orthopoxviruses; clinical laboratory and health care personnel performing diagnostic testing for monkeypox; and outbreak response team members. It is important to note the level of risk of exposure may vary between groups and could be used in countries for prioritization in scenarios of limited vaccine supply. Vaccines may also be used for post-exposure preventive vaccination (PEPV) and is recommended for contacts of cases ideally within four days of first exposure (and up to 14 days in the absence of symptoms). In cases where vaccination is used, programmes must be backed by thorough surveillance and contact-tracing, and accompanied by a strong information campaign, robust pharmacovigilance, ideally in the context of collaborative vaccine effectiveness studies with standardized protocols and data collection tools.

During the current global mpox outbreak the most commonly administered vaccine has been the MVA-BN non-replicating live-attenuated third generation vaccine. To date 83 countries have procured vaccines through existing contractual frameworks such as agreements with the European Health Emergency preparedness and Response Authority (HERA) and the Pan-American Health Organization (PAHO; which is also the WHO Regional Office for the Americas, AMRO) revolving fund.

Studies to assess vaccine effectiveness of MVA-BN have been conducted within the context of the multi-country mpox outbreak with several starting to report promising initial results. Vaccine effectiveness estimates of MVA-BN against mpox suggest a range of 66% to 83% for persons having received full vaccination (2 doses), and of36% to 86% for a single dose of vaccine (WHO, unpublished data). Vaccine effectiveness studies continue with further data expected in the coming months.

In the WHO European region, almost all countries that have vaccine have purchased MVA-BN since the beginning of the outbreak. In the WHO Americas region, the PAHO Revolving Fund secured 130,000 doses for distribution in the region, and 12 of the 52 eligible countries have placed orders to date. As of 27 February 2022, PAHO/AMRO has delivered 99 400 mpox vaccine doses through the PAHO Revolving Fund to the Bahamas, Belize, Brazil, Chile, Ecuador, El Salvador, Guyana, Honduras, Jamaica, Panama, Peru, and Trinidad and Tobago. In addition, the government of Japan has confirmed a donation of 25 000 doses of LC16 vaccine to Colombia to carry out a clinical trial to obtain further information on vaccine effectiveness. The study protocol is in its final stages of review.

In the WHO African Region, one country is in the process of procuring vaccines for the response from the manufacturer. Additionally, there have been on-going discussions with the European Commission/HERA, Japan, South Korea, and United States to donate vaccines to the response and for further research in a range of settings. The WHO Regional Office for Africa is establishing a mechanism to support establishment of focussed immunization programmes and will:

- Support national authorities to develop mpox vaccination guidance, policies, and strategies.

- Assess available country data to identify high risk and priority groups for mpox vaccination.
- Provide technical advice and support during the implementation of mpox vaccination programmes.
- Liaise with agencies donating mpox vaccines to Member States.
- Liaise with countries that request procurement of mpox vaccines.

Mpox situation update: South-East Asia Region

As of 23 February 2023, a total of 40 laboratory-confirmed mpox cases including one death have been verified from four countries in the WHO South-East Asia Region (Figure 3). The highest number of cases have been reported from India (n = 22), followed by Thailand (n = 15), Sri Lanka (n = 2), and Indonesia (n = 1).

Figure 3. Number of mpox cases reported in WHO South-East Asia Region by date of notification [1] (14 July 2022 – 23 February 2023)

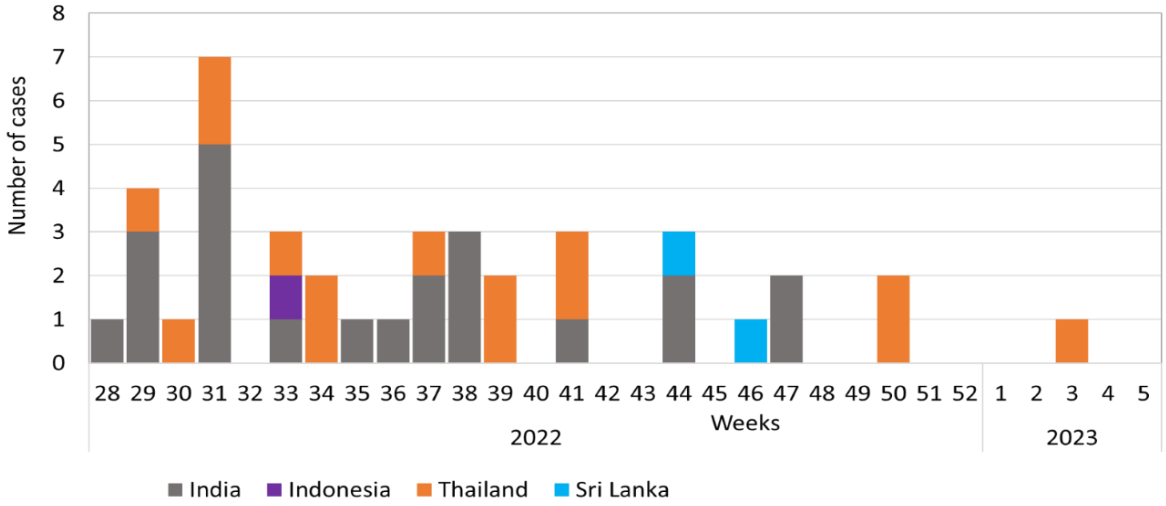
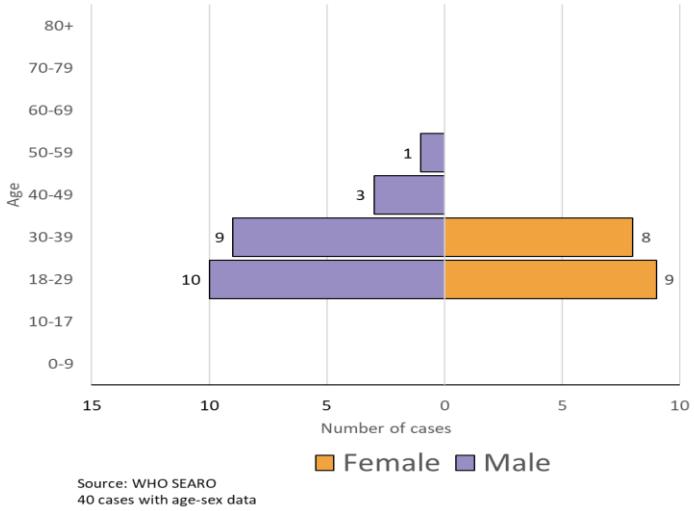
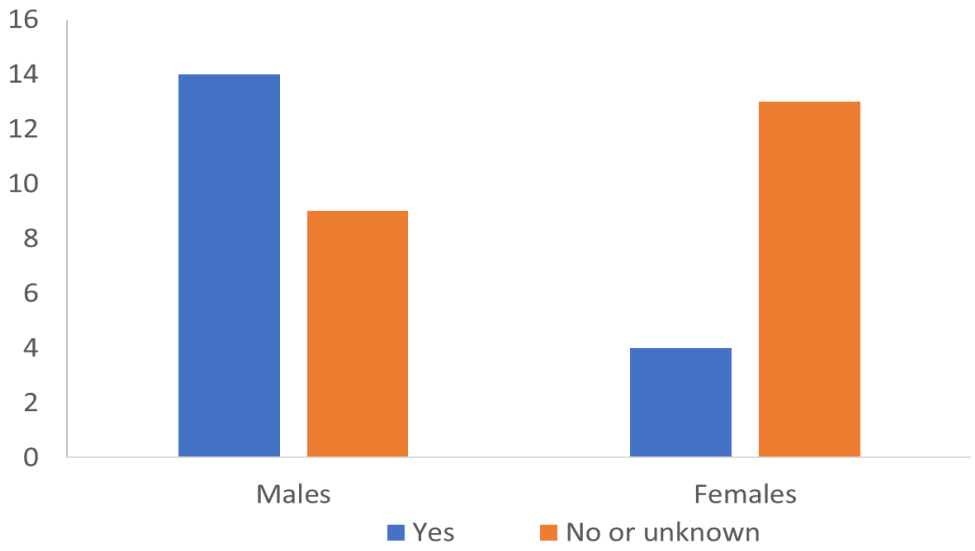


Figure 4. Age and gender distribution of mpox cases in WHO South-East Asia Region (as of 23 February 2023)



Men account for 58% of cases (n = 23) and women 43% (n = 17), suggesting the proportion of males is much lower in the Region, compared to the global situation, where 96.4% (73 632 /76 348) of cases with available data are male. Conversely, this data may reflect insufficient access to testing or reluctance on the part of persons affected to be tested due to fear of stigma or other consequences. About 90% of cases are between 18-39 years old (n = 34) (median age 29) (Figure 4).

Figure 5. Number of male and female cases reporting a recent travel history in the South-East Asia Region



Travel history was reported by 18 cases (45%), while 20 cases (50%) reported no recent travel history, suggesting they are likely locally acquired. The travel history for two cases is unknown. Out of 18 cases reporting recent travel history, the large majority (89%) report recent travel from countries in the WHO Eastern Mediterranean Region.

- A higher proportion of males reported (61%; 14/23) a recent international travel history compared to 23.5% of females (4/17), suggesting males were more likely exposed abroad while females were more likely to have acquired the infection locally (Figure 5).
- Four cases self-reported their sexual orientation as men who have sex with men (MSM); 21 reported the orientation as heterosexual; two as other; and the orientation is unknown for the remaining 13 cases. The proportion of MSM is much lower (10%) in this region compared to the global situation, in which 84.2% (27 063/32 156) of cases with known data identified themselves as MSM globally.
- The HIV status was positive in two cases, negative in 14 cases and unknown in the remaining 24 cases.
- Sexual encounter was reported as the source of transmission in 12 cases in SEAR (30%) compared to 68.7% (15 104 of 21 974) globally.

Table 2. Characteristics of verified mpox cases reported in SEA Region 23 July 2022 – 23 February 2023.

		Frequency (n = 40)		
		Total	Males (n = 23)	Females (n = 17)
Country	India	22	12	10
	Indonesia	1	1	0
	Sri Lanka	2	2	0
	Thailand	15	8	7
Age group	0-17 years	0	0	0
	18-29 years	20	10	10
	30-39 years	16	9	7
	40-49 years	3	3	0
	50 years and over	1	1	0
Sexual orientation	Heterosexual	**21**	10	11
	Men who have sex with men	**4**	4	0
	Other	**2**	1	1
	Unknown	13	8	5
HIV status	Positive	2	2	0
	Negative	14	7	7

	Unknown	24	14	10
Recent international travel	Yes	18	**14**	**4**
	No	20	**9**	**11**
	Unknown	2	0	2
Exposure type	Sexual encounter	15	9	6
	Unknown	25	14	11
Clade	Clade I	0	0	0
	Clade II	15	8	7
	Unknown	25	15	10

Mpox situation update: Central America

As of **22 February 2023**, a total of 772 confirmed cases of mpox have been reported from the seven countries of Central America; 25% of cases were reported in the last six weeks (197/772) from five countries as per the tables below. Belize and Nicaragua have never reported cases.

Table 3: Number of cases reported per 1 million population as of 22 February 2023, Central America

Country	Total Cases	Incidence (Cases per one million population)
Costa Rica	175	53.9
El Salvador	69	42.2
Guatemala	372	15.4
Honduras	16	27.5
Panamá	139	63.7

* Belize and Nicaragua have not reported cases of mpox

Table 4: Proportion of cases reported in last six weeks, Central America

Country	Total Cases	Cases reported last six weeks (n)	Proportion of cases reported, in the last six weeks (% of all cases)
Costa Rica	175	74	42.3
El Salvador	69	0	0.0
Guatemala	372	71	19.1
Honduras	16	2	12.5
Panama	139	50	36.0
Total	771	197	25.6

* Belize and Nicaragua have not reported cases of mpox

Case profile

- **As of 22 February 2023, 98.6% (761 / 772)** of cases with available data are male.
- The median age is 31 years. Costa Rica (n = 1) and Guatemala (n = 1) reported confirmed mpox among children below the age of 14 years.
- The most commonly reported form of transmission, amongst those with responses, is sexual encounter at 93% (236/253).
- Among cases with known data on sexual orientation, 93.3% (657 / 704) identified as men who have sex with men.
- Among those with known HIV status, 72.3% (321 / 438) were HIV-positive. Note that information on HIV status is not available for 45% of cases.
- Nine cases were reported to be health care workers, but exposure setting is not known for all cases.
- All countries in the region reporting viral genomic sequences report Clade II MPXV.

Table 5: Case profile of the reported mpox cases, Central America

	Yes	No	Unknown or Missing Value
Men who have sex with men	657 (93.3%)	47 (6.7%)	57
HIV-Positive	321 (72.3%)	117 (27.7%)	345
Health worker	9 (1.5%)	583 (98.5%)	191
Travel history	58 (7.5%)	714 (92.5%)	11
Sexual transmission	236 (97.9%)	5(2.1%)	542
Hospitalized	36 (4.6%)	737 (95.4%)	10
Concurrent STI	60 (17.2%)	289 (82,8%)	434
ICU	0	774	9
Died	0	0	0

Mpox situation update: Caribbean and Atlantic Ocean islands

As of **22 February 2023**, a total of 309 confirmed cases have been reported from islands in the Caribbean Sea and Atlantic Ocean, but only seven cases have been reported in the last 6 weeks. Cases were reported from 13 countries, however only three countries have reported more than 10 cases: Puerto Rico (210), Dominican Republic (52) and Jamaica (18)

Case profile

- As of 22 February 2023, 72.1% (62 / 86) of cases with available data are male.
- The median age is 31 years.
- The most commonly reported mode of transmission, amongst those with responses, is sexual encounter at 64. 7% (11 / 17).
- Among cases with known data on sexual orientation, 71.9% (23 / 32) identified as men who have sex with men.
- Among those with known HIV status, 41.9% (13/31) were HIV-positive. Information on HIV status was not available for 63% of cases.
- One death has been reported (1.2%), from Cuba.
- Two (2.3%) cases were reported to be health care workers.

WHO response to mpox in Central America and the Caribbean

Laboratory and Surveillance:

In **Honduras**, WHO has been working in close coordination with local health authorities to help strengthen epidemiological surveillance for mpox in the country since a technical mission carried out in November 2022. During the visit, WHO met with the Ministry of Health to review mpox in the country and supported the organization of a workshop. The two-day event aimed to strengthen the national response in the management and surveillance of mpox, review the main infection prevention and control measures for the disease, identify the route of notification, referral and contact tracing, and recognize the most relevant aspects regarding the collection and handling of samples for diagnosis. The workshop was attended by staff from the regional laboratories and epidemiologists. The workshop also reinforced the need to collaborate with the centers providing care to key targeted populations and risk communication focused on them. During the mission, WHO also participated in a workshop on strengthening community response to mpox, organized by the Ministry of

Health and partners. The objective of this event was to review prevention measures, identify opportunities for civil society participation in the response, and strengthen communication with key populations. Representatives of gay men and other MSM communities, transgender persons, and sex workers participated in the workshop.

WHO has also been coordinating actions with **Guatemala** and **Panama** after a mission to these countries in November 2022. The visit aimed to provide technical cooperation visit on surveillance and response to the mpox outbreak in Guatemala, and participation in a congress in Panama. In Guatemala, WHO visited key health facilities, and met with NGOs working with the most at-risk populations and with the Ministry of Health. During the mission, WHO reviewed information about the response to mpox in the country and discussed possibilities for strengthening it. While in Panama, WHO participated in the Congress of the Central American and Caribbean Association of Infectious Diseases in a panel dedicated to sharing experiences in the clinical management of patients with mpox.

Risk Communication and Community Engagement:

During the month of February 2023, in the **Bahamas**, WHO shared flyers with key mpox facts, information, measures for recovering at home, and key information for sex workers. The material was distributed to health care facilities and organizations serving high-risk groups (men who have sex with men, sex workers, and health care workers).

In **Costa Rica**, in February 2023, WHO in collaboration with the Ministry of Health disseminated short videos and informational materials, calling on the population to seek medical care in the case of detection of lesions or related mpox symptoms. The initiative is part of a communication campaign, which also includes information about the prevention and control of mpox through publications on the social networks of the country's Ministry of Health.

Strategic Health Supplies including vaccines:

On 27 February 2023, the office of WHO Region of the Americas published an update of the systematic review on Therapeutic options for mpox: synthesis of evidence in Spanish. The publication includes the results of a systematic rapid review of available evidence on potential mpox therapeutics from available randomized and non-randomized controlled trials and observational studies. As new evidence emerges, WHO periodically updates the publication and corresponding recommendations. As of 27 February 2022, WHO has delivered 99 400 mpox vaccine doses through PAHO's Revolving Fund to 12 countries: the Bahamas, Belize, Brazil, Chile, Ecuador, El Salvador, Guyana, Honduras, Jamaica, Panama, Peru, and Trinidad and Tobago.

Technical guidance and other resources

Strategic Planning and Global Support

- WHO commentary on the naming of mpox disease and monkeypox virus clades has been published in the Lancet Infectious Diseases. 6 February 2023. New nomenclature for mpox (monkeypox) and monkeypox virus clades
- WHO recommends new name for monkeypox disease-28 November 2022 https://www.who.int/news/item/28-11-2022-who-recommends-new-name-for-monkeypox-disease
- Monkeypox Strategic Preparedness, Readiness and Response Plan (SPRP) Operational planning guidelines – 2 November 2022 https://www.who.int/publications/m/item/monkeypox-strategic-preparedness--readiness--and-response--operational-planning-guidelines
- WHO Emergency Appeal: Monkeypox - July 2022 – June 2023, 13 October 2022 https://www.who.int/publications/m/item/who-emergency-appeal--monkeypox---july-2022---june-2023
- Monkeypox Strategic Preparedness, Readiness, and Response Plan (SPRP)- 5 October 2022, https://www.who.int/publications/m/item/monkeypox-strategic-preparedness--readiness--and-response-plan-(sprp)

International Health Regulations Emergency committee and Temporary Recommendations of the Director-General

- WHO fourth meeting of the International Health Regulations (2005) (IHR) Emergency Committee regarding the multi-country outbreak of monkeypox, 15 February 2023. https://www.who.int/news/item/15-02-2023-fourth-meeting-of-the-international-health-regulations-(2005)-(ihr)-emergency-committee-on-the-multi-country-outbreak-of-monkeypox-(mpox))
- WHO Third meeting of the International Health Regulations (2005) (IHR) Emergency Committee regarding the multi-country outbreak of monkeypox, 1 November 2022. https://www.who.int/news/item/01-11-2022-third-meeting-of-the-international-health-regulations-(2005)-(ihr)-emergency-committee-regarding-the-multi-country-outbreak-of-monkeypox
- WHO Second meeting of the International Health Regulations (2005) (IHR) Emergency Committee regarding the multi-country outbreak of monkeypox, 23 July 2022. https://www.who.int/news/item/23-07-2022-second-meeting-of-the-international-health-regulations-(2005)-(ihr)-emergency-committee-regarding-the-multi-country-outbreak-of-monkeypox
- WHO Director-General's statement at the press conference following IHR Emergency Committee regarding the multi-country outbreak of monkeypox, 23 July 2022. https://www.who.int/director-general/speeches/detail/who-director-general-s-statement-on-the-press-conference-following-IHR-emergency-committee-regarding-the-multi--country-outbreak-of-monkeypox--23-july-2022

WHO Interim Guidance and Public Health Advice

- Surveillance, case investigation and contact tracing for mpox (monkeypox): interim guidance, 22 December 2022. https://www.who.int/publications/i/item/WHO-MPX-Surveillance-2022.4
- WHO Vaccines and immunization for monkeypox: Interim guidance, 16 November 2022. https://apps.who.int/iris/bitstream/handle/10665/364527/WHO-MPX-Immunization-2022.3-eng.pdf
- WHO Surveillance, case investigation and contact tracing for Monkeypox: Interim guidance, 25 August 2022. https://www.who.int/publications/i/item/WHO-MPX-Surveillance-2022.3
- WHO Global clinical data platform for monkeypox case report form (CRF), 21 July 2022, https://www.who.int/publications/i/item/WHO-MPX-Clinical_CRF-2022.3
- Public health advice for gatherings during the current monkeypox outbreak, 28 June 2022: https://www.who.int/publications/i/item/WHO-MPX-Gatherings-2022.1
- Clinical management and infection prevention and control for monkeypox: Interim rapid response guidance, 10 June 2022. https://www.who.int/publications/i/item/WHO-MPX-Clinical-and-IPC-2022.1
- Emergency use of unproven clinical interventions outside clinical trials: ethical considerations: https://www.who.int/publications-detail-redirect/9789240041745
- WHO Technical brief (interim) and priority actions: enhancing readiness for monkeypox in WHO South-East Asia Region, 7 July 2022. https://cdn.who.int/media/docs/default-source/searo/whe/monkeypox/searo-mpx-tbrief22.pdf

Data management

- Monkeypox Case and contact investigation form (CIF) and minimum dataset Case reporting form (CRF). 19 August 2022. https://www.who.int/publications/m/item/monkeypox-minimum-dataset-case-reporting-form-(crf)
- The WHO Global Clinical Platform for monkeypox, 14 June 2022. https://www.who.int/tools/global-clinical-platform/monkeypox
- WHO Go.Data: Managing complex data in outbreaks. https://www.who.int/tools/godata

Risk communication and community engagement

- Public health advice for sex workers on monkeypox 30 September 2022. https://www.who.int/publications/m/item/public-health-advice-for-sex-workers-on-monkeypox
- Risk communication and community engagement public health advice on understanding, preventing and addressing stigma and discrimination related to monkey pox 1 September 2022. https://www.who.int/publications/m/item/communications-and-community-engagement-interim-guidance-on-using-inclusive-language-in-understanding--preventing-and-addressing-stigma-and-discrimination-related-to-monkeypox
- Monkeypox Q&A, 31 August 2022. https://www.who.int/news-room/questions-and-answers/item/monkeypox
- Monkeypox: public health advice for gay, bisexual and other men who have sex with men, 18 July 2022. https://www.who.int/publications/m/item/monkeypox-public-health-advice-for-men-who-have-sex-with-men
- Risk communication and community engagement (RCCE) for monkeypox outbreaks: Interim guidance, 24 June 2022. https://www.who.int/publications/i/item/WHO-MPX-RCCE-2022.1

- Interim advice for public health authorities on summer events during the monkeypox outbreak in Europe, 2022. 14 June 2022. https://www.who.int/europe/publications/m/item/interim-advice-for-public-health-authorities--on-summer-events-during-the-monkeypox--outbreak-in-europe--2022
- Interim advice on Risk Communication and Community Engagement during the monkeypox outbreak in Europe, 2022. Joint report by WHO Regional office for Europe/ECDC, 2 June 2022. https://www.euro.who.int/__data/assets/pdf_file/0009/539046/ECDC-WHO-interim-advice-RCCE-Monkeypox-2-06-2022-eng.pdf
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EPI - WIN Webinars and Updates

- The recordings of the previous EPI-WIN Webinars related to current monkeypox outbreak:
- WHO EPI-WIN webinar: Changing perspectives of the mpox outbreak (22 February 2023)
- WHO monkeypox technical briefing for the transport and tourism sector, 5 October 2022, https://www.who.int/news-room/events/detail/2022/10/05/default-calendar/technical-briefing-on-monkeypox-for-transport-and-tourism-sector
- Managing stigma and discrimination in health-care settings in public health emergencies such as monkeypox (Sept. 22, 2022)
- How is monkeypox spreading? What do we know so far (July 27, 2022)
- Monkeypox outbreak and mass gatherings (June 24, 2022)

EPI-WIN updates

- Update 79: Monkeypox outbreak update: Situation - transmission - countermeasures
- Update 78: Monkeypox and mass gatherings
- Update 77: Monkeypox outbreak, update and advice for health workers

Laboratory and diagnostics

- Monkeypox: experts give virus variants new names, 12 August 2022. https://www.who.int/news/item/12-08-2022-monkeypox--experts-give-virus-variants-new-names
- WHO Laboratory testing for the monkeypox virus: Interim guidance, 23 May 2022. https://apps.who.int/iris/handle/10665/354488
- WHO Guidance on regulations for the transport of infectious substances 2021-2023, 25 February 2021. https://www.who.int/publications/i/item/9789240019720
- Genomic epidemiology of monkeypox virus. https://nextstrain.org/monkeypox?c=country

One Health and animal health

- WOAH Risk Guidance on Reducing Spillback of Mpox (Monkeypox) virus from Humans to Wildlife, Pet Animals and other Animals
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Disease Outbreak News and situation reports

- Monkeypox outbreak 2022: https://www.who.int/emergencies/situations/monkeypox-oubreak-2022
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- Multi-country outbreak of monkeypox, External situation report #10- 16 November 2022: https://www.who.int/publications/m/item/multi-country-outbreak-of-monkeypox--external-situation-report--10---16-november-2022
- Multi-country outbreak of monkeypox, External situation report #9- 2 November 2022: https://www.who.int/publications/m/item/multi-country-outbreak-of-monkeypox--external-situation-report--9---2-november-2022
- Multi-country outbreak of monkeypox, External situation report #8- 19 October 2022: https://www.who.int/publications/m/item/multi-country-outbreak-of-monkeypox--external-situation-report--8---19-october-2022
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- Multi-country outbreak of monkeypox, External situation report #3 - 10 August 2022: https://www.who.int/publications/m/item/multi-country-outbreak-of-monkeypox--external-situation-report--3---10-august-2022
- WHO Multi-country outbreak of monkeypox, External situation report #2 – 25 July 2022: https://www.who.int/publications/m/item/multi-country-outbreak-of-monkeypox--external-situation-report--2---25-july-2022

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- WHO disease outbreak news: Monkeypox, all items related to multi-country outbreak: https://www.who.int/emergencies/emergency-events/item/2022-e000121
- WHO disease outbreak news: Monkeypox, all previous items including endemic countries and traveler-associated outbreaks: https://www.who.int/emergencies/emergency-events/item/monkeypox

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- WHO monkeypox outbreak toolbox, June 2022. https://www.who.int/docs/default-source/documents/emergencies/outbreak-toolkit/monkeypox-toolbox-20112019.pdf
- WHO factsheet on monkeypox, 19 May 2022. http://www.who.int/news-room/fact-sheets/detail/monkeypox
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- Open WHO. Extended training. Monkeypox epidemiology, preparedness and response. 2021.
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Other Resources

- WHO AFRO Weekly Bulletin on Outbreaks and Other Emergencies, all previous items: https://www.afro.who.int/health-topics/disease-outbreaks/outbreaks-and-other-emergencies-updates
- WHO 5 moments for hand hygiene. https://www.who.int/campaigns/world-hand-hygiene-day
- WHO One Health. https://www.who.int/health-topics/one-health
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- Joint WHO Regional Office for Europe - European Centre for Disease Prevention and Control, Monkeypox surveillance bulletin Situation reports (who.int)
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Annex 1: Data, table and figure notes

Caution must be taken when interpreting all data presented. Differences are to be expected between information products published by WHO, national public health authorities, and other sources using different inclusion criteria and different data cut-off times. While steps are taken to ensure accuracy and reliability, all data are subject to continuous verification and change. Case detection, definitions, testing strategies, reporting practice, and lag times differ between countries/territories/areas. These factors, amongst others, influence the counts presented, with variable underestimation of true case and death counts, and variable delays to reflecting these data at the global level.

[i]'Countries' may refer to countries, territories, areas or other jurisdictions of similar status. The designations employed, and the presentation of these materials do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Annex 2: Confirmed cases of mpox by WHO region and country from 1 January 2022 to 27 February 2023, 17:00 CEST.

*Countries with no reported cases for more than 21 days

WHO Region	Country	Total Confirmed Cases	Total Deaths[#]
African Region	Benin*	3	0
	Cameroon*	18	3
	Central African Republic	27	1
	Congo*	5	0
	Democratic Republic of the Congo	395	0
	Ghana*	121	4
	Liberia*	7	0
	Mozambique*	1	1
	Nigeria	800	8
	South Africa*	5	0
Eastern Mediterranean Region	Bahrain*	1	0
	Egypt*	3	0
	Iran (Islamic Republic of) *	1	0
	Jordan*	1	0
	Lebanon*	26	0
	Morocco*	3	0
	Qatar*	5	0
	Saudi Arabia*	8	0
	Sudan*	18	1
	United Arab Emirates*	16	0
European Region	Andorra*	4	0
	Austria*	327	0
	Belgium*	793	1
	Bosnia and Herzegovina*	9	0
	Bulgaria*	6	0
	Croatia*	33	0
	Cyprus*	5	0
	Czechia*	71	1
	Denmark*	196	0
	Estonia*	11	0
	Finland*	42	0
	France*	4128	0
	Georgia*	2	0
	Germany*	3692	0
	Gibraltar*	6	0
	Greece*	86	0
	Greenland*	2	0
	Hungary*	80	0
	Iceland*	16	0
	Ireland*	228	0
	Israel*	262	0
	Italy	957	0
	Latvia*	6	0
	Lithuania*	5	0
	Luxembourg*	57	0

	Malta*	33	0
	Monaco*	3	0
	Montenegro*	2	0
	Netherlands	1261	0
	Norway*	95	0
	Poland*	215	0
	Portugal*	951	0
	Republic of Moldova*	2	0
	Romania*	47	0
	Russian Federation*	2	0
	San Marino*	1	0
	Serbia*	40	0
	Slovakia*	14	0
	Slovenia*	47	0
	Spain	7543	3
	Sweden*	260	0
	Switzerland*	551	0
	Türkiye *	12	0
	The United Kingdom*	3735	0
	Ukraine*	5	0
Region of the Americas	Argentina	1098	2
	Aruba*	3	0
	Bahamas*	2	0
	Barbados*	1	0
	Bermuda*	1	0
	Bolivia (Plurinational State of)	264	0
	Brazil	10 825	15
	Canada*	1460	0
	Chile	1431	2
	Colombia	4081	0
	Costa Rica	188	0
	Cuba*	8	1
	Curaçao *	3	0
	Dominican Republic*	52	0
	Ecuador	510	3
	El Salvador	96	0
	Guadeloupe*	1	0
	Guatemala	383	0
	Guyana*	2	0
	Honduras	18	0
	Jamaica*	18	0
	Martinique*	7	0
	Mexico	3877	4
	Panama	139	0
	Paraguay	104	0
	Peru	3752	15
	Puerto Rico*	210	0
	Saint Martin*	1	0
	United States of America	30 012	34
	Uruguay*	19	0
	Venezuela (Bolivarian Republic of) *	12	0

	India*	22	1
	Indonesia*	1	0
	Sri Lanka*	2	0
	Thailand*	15	0
Western Pacific Region	Australia*	144	0
	China	8	0
	Guam*	1	0
	Japan	22	0
	New Caledonia*	1	0
	New Zealand*	41	0
	Philippines*	4	0
	Republic of Korea*	4	0
	Singapore*	21	0
	Viet Nam*	2	0
Cumulative	**110 Countries/territories/areas**	**86 173**	**100**

[#]Only deaths among confirmed cases are reported here; the reported number of deaths due to mpox among suspected cases are available at regional or national level.