Multi-country outbreak of mpox

External Situation Report 15, published 2 February 2023
Data as received by WHO national authorities by 17:00 CEST, 30 January 2023

Risk assessment	Laboratory confirmed cases	Deaths	Countries/ areas/ territories
Global risk – Moderate WHO Regional risk • Region of the Americas – High • African Region, Eastern Mediterranean Region, European Region, Southeast Asia Region – Moderate • Western Pacific Region – Low	85 449	89	110

Highlights

- Since the last situation report published on 19 January 2023, 716 new cases (0.8% increase in total cases) and nine new deaths have been reported.
- A WHO analysis of case-based data received over the last three months (21 October 2022 through 30 January 2023) shows that the age and sex distribution, severity and clinical presentation of mpox cases remain unchanged during that period, as the number of reported cases has steadily declined globally. Thirty-nine (39) countries continue to report mpox cases.
- The IHR Emergency Committee on the multi-country mpox outbreak will reconvene for the fourth time on 9 February 2023.

From 1 January 2022 through 30 January 2023, a cumulative total of 85 449 laboratory-confirmed cases of mpox and 89 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 19 January 2023, 716 new cases (0.8% increase in total cases) and nine new deaths have been reported.

In the past seven days, 22 countries have continued to report cases and of these, 13 countries reported an increase in the weekly number of cases, with the highest increase reported in Mexico (n=72). As of 30 January 2023, 39 of the 110 affected countries have reported new cases within the last 21 days, the maximum disease incubation period.

The number of weekly new cases reported globally has increased by 37.1% in week 4 (23 January through 29 January 2023) (n = 403 cases) compared to week 3 (16 January through 22 January 2023) (n = 294 cases), with the largest proportional increase observed in the Region of the Americas (5%) and the European Region (85%). It is important to note that the WHO African region has reported the highest number of cases (n =88) in the past week, in the Democratic Republic of the Congo (69 cases), Mozambique (12 cases), and the Central African Republic (seven cases).

From 16 January through 30 January 2023, a total of nine deaths were reported from the Region of the Americas, in the United States of America (five deaths), Peru (three deaths), and in Brazil (one death).

As of 30 January 2023, the 10 countries that have reported the highest cumulative number of cases globally are the United States of America (n = 29 891), Brazil (n = 10 739), Spain (n = 7518), France (n = 4128), Colombia (n = 4066), Mexico (n = 3768), the United Kingdom (n = 3735), Peru (n = 3723), Germany (n = 3692), and Canada (n = 1460). Together, these countries account for 85% of the cases reported globally.

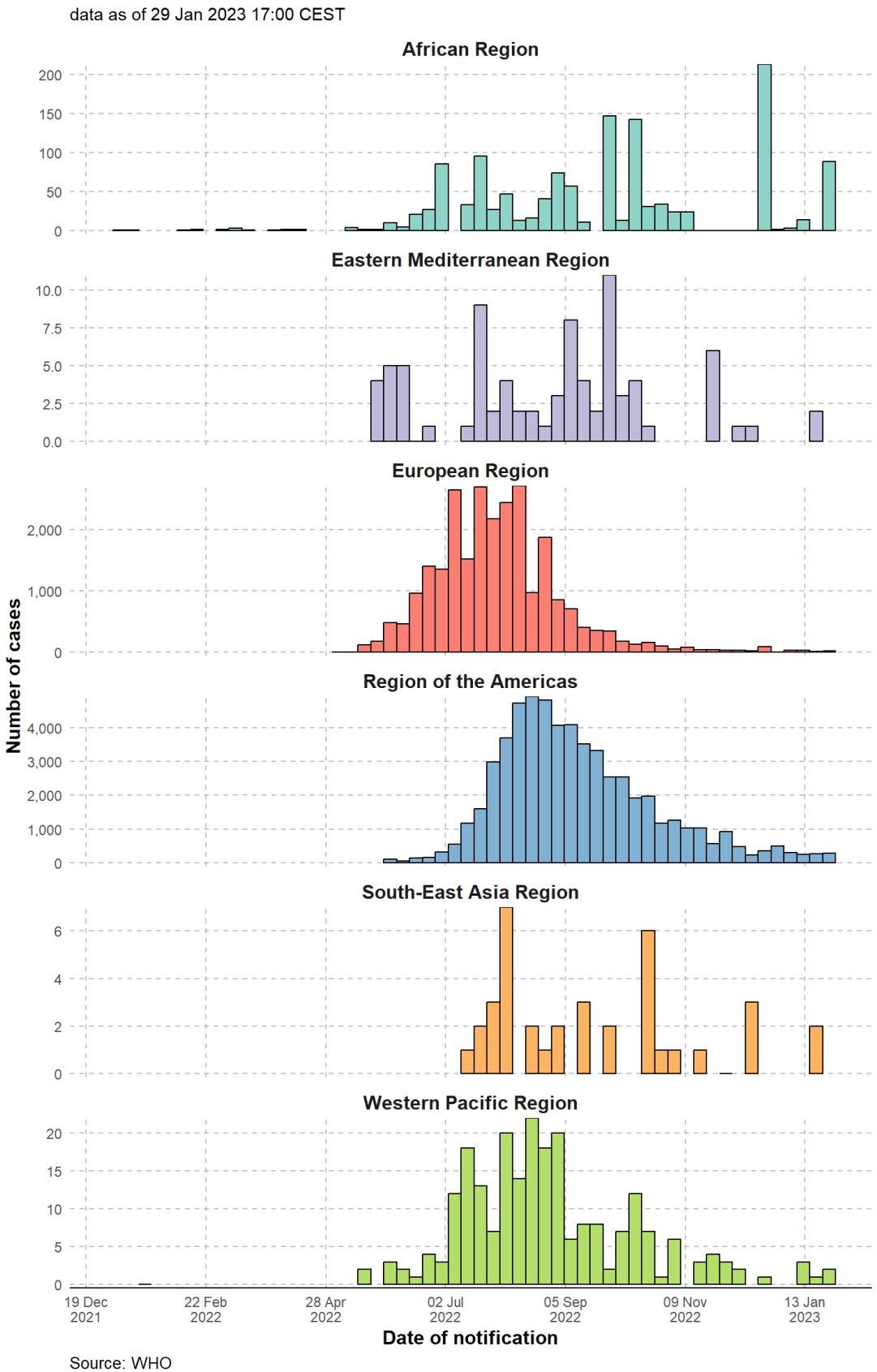
Table 1. Number of cumulative confirmed mpox cases and deaths reported to WHO, by WHO Region, from 1 January 2022 to 30 January 2023 17:00 CEST

WHO Region	Total Confirmed Cases	Total Deaths	Cases in past week[1]	7-day change in cases (%)
Region of the Americas	57 989	67	289	5%
European Region	25 804	5	24	85%
African Region	1302	15	88	-
Western Pacific Region	235	0	2	100%
Eastern Mediterranean Region	82	1	0	-
South-East Asia Region	37	1	0	-
Total	85 449	89	403	37%

(-) 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 30 January 2023, 17:00 CEST*



**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.*

Other key epidemiological findings:

- As of 30 January 2023, 96.6% (73 000/75 600) of cases with available data are men, with a median age of 34 years (interquartile range: 29-41 years); 1% (n=802) of cases with age data available are aged 0-17 years, and 221 (0.3%) are aged 0-4 years. This proportion differs between regions, with the largest proportion of cases aged 0-17 years being reported from the Region of the Americas (648/802; 81%).
- Among cases with sexual orientation reported, 84% (26 532/31 545) have identified as gay, bisexual and other men who have sex with men. Of all reported modes of transmission, transmission through skin and mucosal contact during sex was most reported, in 14 934 of 21 714 (69%) of all reported transmission events.
- 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 both person-to-person transmission as well as infection from presumed contact with infected animals.
- Where this information is included, the most reported exposure setting is a party setting with sexual contact, comprising 3434 of 5191 (66%) reported exposure settings.
- Among the cases (n=38 399) who reported at least one symptom, the most common symptom is any rash and is reported in 79% of cases followed by fever (57%) and systemic and genital rash (50% and 44% respectively)

Summary of last three-month analysis of case-based data (21 October 2022 through January 2023):

An analysis of case-based data received over the last three months (21 October 2022 through 30 January 2023) has been conducted to confirm any epidemiological trends and profiles of reported cases. **The results of the analysis showed:**

- The number of reported cases has been **steadily declining** globally.
- **The main demographic features** of the outbreak such as age and sex remain **unchanged.** Most affected people are young men between 29 and 41 years.
- Although sexual contact is the most reported route of transmission, fewer persons affected sexually identify as gay, bisexual, or other men who have sex with men. Fear of stigma might have biased reporting of sexual orientation.
- The most reported exposure setting is the **household,** rather than events with sexual activities involved, as observed in the overall case data.
- While se**xual encounter** remains the most reported route of transmission in the last three months, other modes such as person-to-person transmission have increased. It is unclear if transmission dynamics are changing or if it is a reporting bias, due to a much lower number of cases being reported globally and outside of the communities previously affected by the multi-country outbreak in 2022
- The **clinical presentation** of cases remains **similar**.
- **Severity** in terms of hospitalization and ICU admission is **unchanged** and remains **low**.
- **Reported** deaths continue to be **low**, but these are most likely underestimated.

Figure 2: Comparison of case profiles of mpox cases from WHO mpox global surveillance, (1 January-20 October 2022) vs (21 October 2022-30 January 2023)

Case profiles
01 Jan 2022 - 20 Oct 2022

	Reported values[1]		Unknown or Missing Value
	Yes	No	
Men who have sex with men	23593 (85.6%)	3973 (14.4%)	47005
HIV-Positive	14879 (47.5%)	16421 (52.5%)	43271
Health worker	1034 (4.1%)	24348 (95.9%)	49189
Travel History	2049 (14.7%)	11861 (85.3%)	60661
Sexual Transmission	13667 (71.7%)	5403 (28.3%)	55501
Hospitalised[2]	3437 (7.0%)	45624 (93.0%)	25510
ICU	35 (0.2%)	14412 (99.8%)	60124
Died	24 (0.0%)	48484 (100.0%)	26063

[1] Note given true proportions of variables, yes reporting may be common than no reporting
[2] May be hospitalised for isolation or medical treatment

Case profiles
21 Oct 2022 - 30 Jan 2023

	Reported values[1]		Unknown or Missing Value
	Yes	No	
Men who have sex with men	2939 (73.9%)	1040 (26.1%)	2752
HIV-Positive	2053 (52.1%)	1890 (47.9%)	2788
Health worker	185 (6.7%)	2575 (93.3%)	3971
Travel History	315 (11.8%)	2350 (88.2%)	4066
Sexual Transmission	1263 (47.4%)	1404 (52.6%)	4064
Hospitalised[2]	474 (10.0%)	4269 (90.0%)	1988
ICU	9 (0.5%)	1788 (99.5%)	4934
Died	6 (0.1%)	4854 (99.9%)	1871

[1] Note given true proportions of variables, yes reporting may be common than no reporting
[2] May be hospitalised for isolation or medical treatment

Figure 3: Comparison of exposure setting of mpox cases from WHO mpox global surveillance, (1 January-20 October 2022) vs (21 October 2022-30 January 2023)

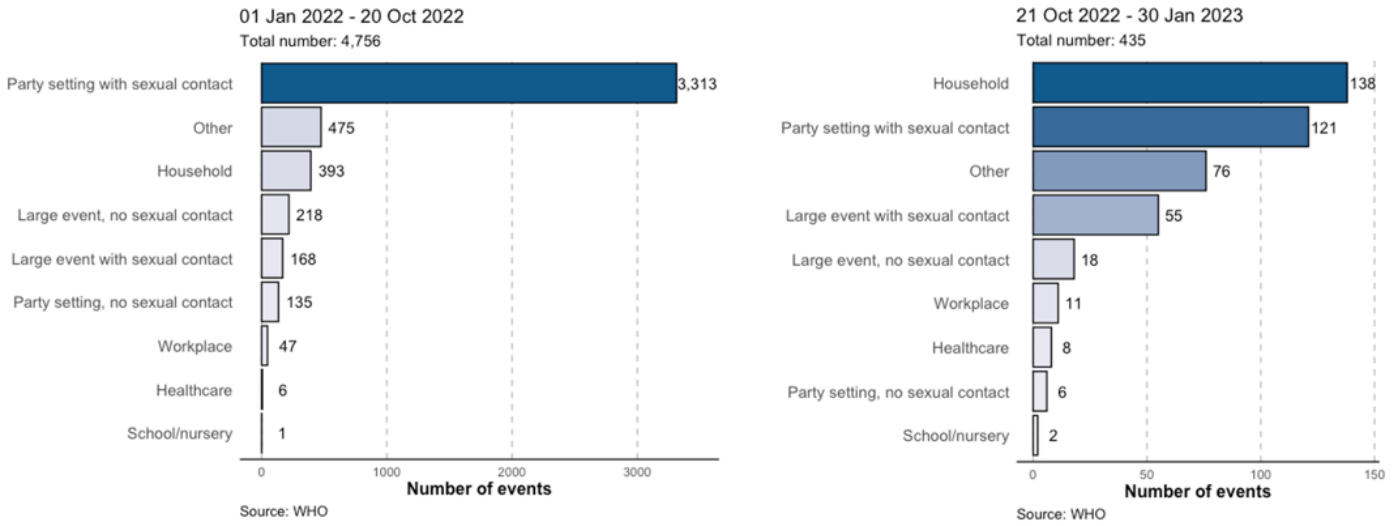


Figure 4: Comparison of transmission routes of mpox cases from WHO mpox global surveillance, (1 January-20 October 2022) vs (21 October 2022-30 January 2023)

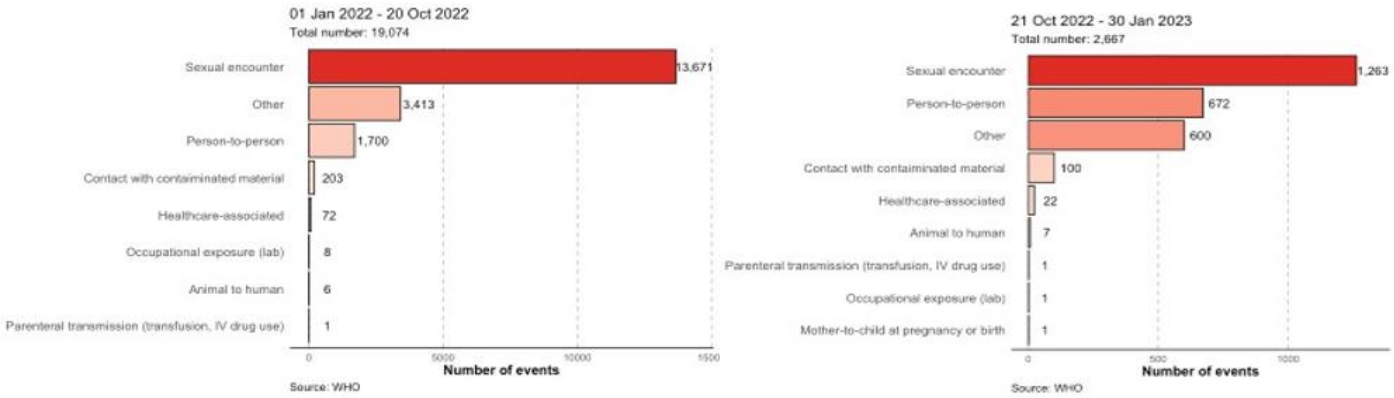
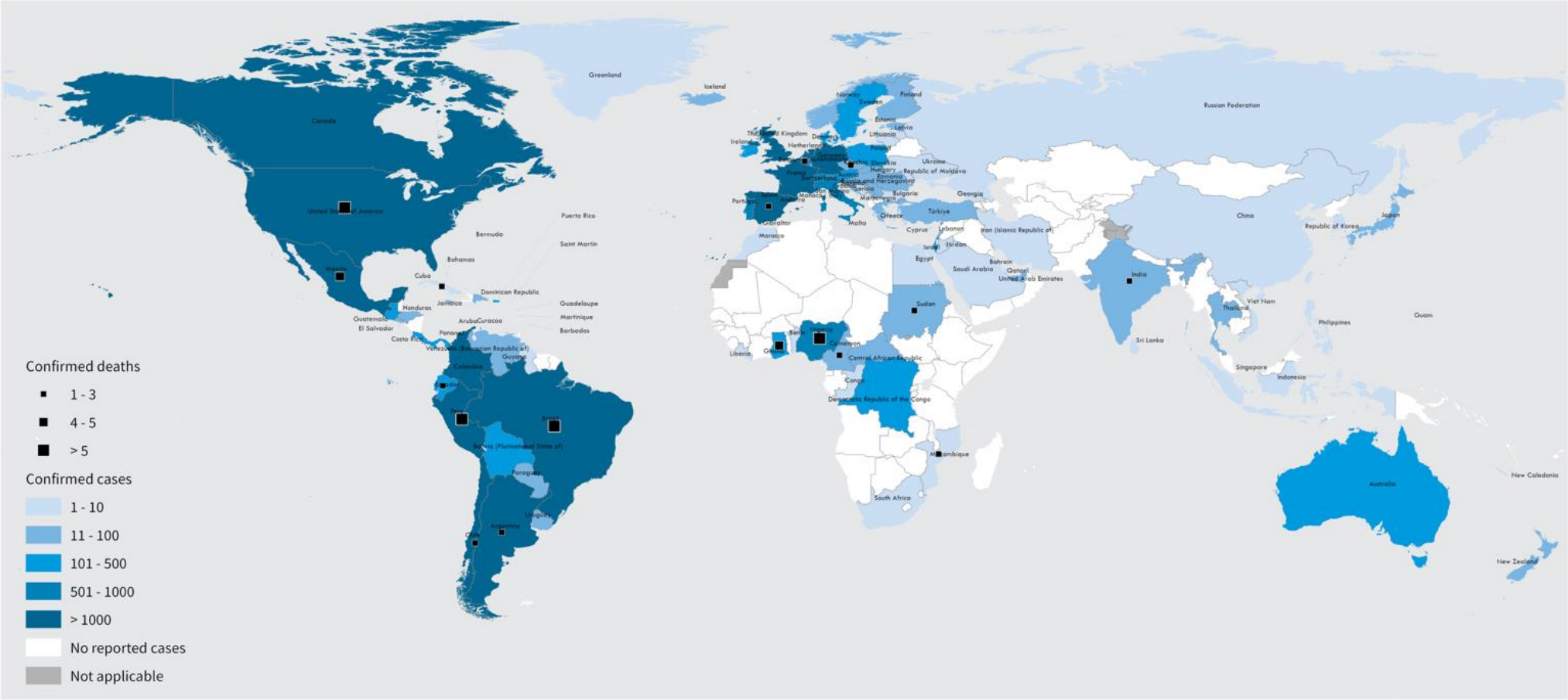


Figure 5. Geographic distribution of confirmed cases of mpox reported to or identified by WHO from official public sources from 1 January 2022 to 30 January 2023 17:00 CEST



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 its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
Map Production: WHO Health Emergencies Programme
Map Date: 31 January 2023

World Health Organization

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HIV and mpox

Intersections between mpox and sexually transmitted infections (STIs): Clinical and public health implications

The majority of cases in the global mpox outbreak in newly affected countries have occurred in sexual networks of gay, bisexual and other men who have sex with men, accounting for 84% (26 284/31 193) of cases with detailed data reported to WHO. Other populations that have emerged as being affected include, in selected population groups, transgender women (accounting for 46% of cases in a case series of mpox in women and non-binary individuals), and sex workers (26% of women affected in a study were sex workers). Communities affected by mpox also experience a greater burden of HIV, hepatitis, and other sexually transmitted infections (STIs) than other population groups because these infections share common modes of transmission and determinants, as previously described by WHO. The intersection between HIV and mpox, and implications for addressing mpox morbidity and mortality was recently outlined by WHO in situation report 14.

This epidemiological association between mpox and STIs has clinical and public health implications. Clinically, mpox should be considered when a patient presents with genitourinary syndromes such as anogenital ulceration, inguinal lymphadenopathy, a rash resembling secondary syphilis, or proctitis in sexually active adults:

- A case series in Nigeria identified that 62% of mpox cases in 2017-18 presented with genital ulceration and 30% presented with inguinal lymphadenopathy (which is also a common feature of mpox in all age groups).
- In a global case series of mpox in women and non-binary individuals, 74% of cases were reported to experience anogenital lesions.
- A global case series of mpox in men identified that 73% had anogenital symptoms, and 14% had proctitis.

These clinical features suggest that, particularly in times of heightened mpox transmission, health workers may need to include mpox as a potential etiology for any of these syndromes and offer mpox testing for persons from groups at risk. Moreover, the inclusion of mpox in routine STI screening for key populations in some settings poses an opportunity for sentinel surveillance to monitor for resurgence of mpox, an approach which needs to be piloted and assessed.

Even when a diagnosis of mpox is confirmed, people with suspected or confirmed mpox may also benefit from STI testing. Up to 29% of mpox cases in a global case series had concomitant STIs, frequently bacterial infections such as gonorrhoeae (8%), syphilis (9%), and chlamydia (5%). Given the high rates of comorbidity between mpox and other STIs, providing concurrent mpox and STI testing will support effective diagnosis and treatment of STIs, and help achieve global health sector objectives such as decreasing the number of new cases of syphilis and gonorrhoea by 2030.

Addressing the overlapping epidemics of STIs and mpox in a people-centred, comprehensive and integrated approach is critical to achieve the strategic aim of stopping mpox transmission. Targeted activities that are already in place for the control of STIs in the same populations, including primary prevention, integrated testing, surveillance and partner notification may need to be strengthened. Integrated delivery of these activities in sexual health services and HIV programmes may have the potential to reduce costs, improve efficiency, and increase equitable access to and uptake of services, leading to improved clinical outcomes. Prevention and case management for STIs can be linked closely with mpox prevention and treatment services, including community-based and outreach services for key populations.

In summary, a series of actions can be taken to strengthen both STI and mpox surveillance, early detection, prevention, clinical care and research.

For public health authorities:

- Establish sentinel surveillance for mpox
- Pilot and assess the inclusion of mpox testing in routine STI screening for key populations
- Link or integrate surveillance for mpox with sexual health services
- Integrate mpox vaccination within other targeted STI vaccination programmes and services
- Maintain specific mpox antiviral treatment access for persons in groups at risk of progression to severe disease

For clinicians:

- Continue to refer for or offer mpox vaccination to groups at risk
- Consider mpox in the differential diagnosis of relevant clinical syndromes, particularly for key population groups, and refer for testing as appropriate
- Offer STI testing to people with suspected or confirmed mpox
- Offer or refer persons with mpox at risk for severe disease, such as those with newly diagnosed or uncontrolled HIV infection, for specific antiviral treatment (e.g. tecovirimat)

National, regional and local health authorities should develop appropriate models for linking or integration of relevant public health programmes and clinical services based on their context and health system characteristics, to be able to deliver high-quality, more widely available and accessible people-centred services.

HIV and mpox: analysis of global surveillance data

During the current mpox outbreak, a high proportion of cases (up to 50% in some countries) with information about HIV status have been reported to be living with HIV.[1,2] The high prevalence of HIV in the outbreak suggests people living with HIV may be at higher risk of mpox - there are several explanations for this observation. Gay, bisexual and other men who have sex with men have been primarily affected during this outbreak and are also disproportionally affected by HIV globally.[3–6] More so, the mpox outbreak has been driven mainly by transmission in sexual networks, and acquisition of mpox and HIV has been linked with sexual contact with new partners.

Observing the demographics of the mpox cases with HIV information from the WHO mpox global surveillance (Table 2), there are no major differences in sex, age, sexual orientation, hospitalization, ICU admission, and mortality by HIV status. The main difference is observed in the higher proportion of persons with immunosuppression among cases living with HIV, most likely due to the consequences of untreated HIV.[7–10] Major differences were also not observed in the main route of transmission and the exposure settings, where the information was unknown for a large proportion of cases. WHO internal analysis (data not shown) found that hospitalized mpox cases were more likely to be HIV positive, but when adjusted for the immunosuppressed status, it was only the immunosuppressed HIV positive cases who showed a higher risk of hospitalization, while non immunosuppressed HIV positive cases had the same likelihood to be hospitalized as HIV negative cases. No major differences in clinical presentation by HIV status (Table 2).

Table 2. Demographic characteristic of mpox cases, transmission route, exposure setting and main symptoms among mpox cases with HIV information, from WHO mpox global surveillance, Jan-Dec 2022.

	HIV-	**HIV+**
	N (%)	**N (%)**
Total	12 755 (48)	13 591 (52)
Sex		
Male	12 003 (94)	13 558 (99)
Female	752 (6)	33 (0.2)
Age group		
0-17	251 (2)	8 (0.1)
18-49	11 488 (90)	12 535 (92)
50+	1004 (8)	1045 (8)
Sexual orientation		
GBMSM	8506 (67)	10 502 (77)
Non-GBMSM	1980 (16)	918 (7)
Unknown	2269 (18)	2171 (16)
Immunosuppressed		
Yes	74 (1)	3899 (29)
No	2127 (17)	342 (3)
Unknown	10 554 (83)	9 350 (69)
Hospitalized		
Yes	413 (3)	529 (4)
No	11 247 (88)	9796 (72)
Unknown	1095 (9)	3266 (24)
ICU		
Yes	11 (0.1)	14 (0.1)
No	6740 (53)	6617 (49)

Unknown	6004 (47)	6960 (51)
Death		
Yes	2 (0.0)	12 (0.1)
No	12 753 (100)	13 579 (99.9)
Transmission - route		
Sex	5707 (45)	4983 (37)
Person-to-person	661 (5)	1014 (8)
Other	967 (8)	1499 (11)
Unknown	5420 (43)	6095 (45)
Exposure setting		
Event with sex	2598 (20)	1786 (13)
Event with no sex	327 (3)	242 (2)
Household	437 (3)	367 (3)
Other	376 (3)	219 (2)
Unknown	9017 (71)	10 977 (81)
Any symptoms		
Yes	3464 (99.9)	4922 (99.9)
No	3 (0.1)	6 (0.1)
Any rash		
Yes	11 437 (90)	9888 (87)
No	1231 (10)	1458 (13)
Genital rash		
Yes	7005 (55)	6159 (54)
No	5663 (45)	5187 (46)
Lymphadenopathy		
Yes	4546 (36)	3982 (35)
No	8122 (64)	7364 (65)
Fever		
Yes	7615 (60)	7326 (65)
No	5053 (40)	4020 (35)
Headache		
Yes	4518 (36)	3981 (35)
No	8150 (64)	7365 (65)

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Summary of Global mpox outbreak situation

Following the unusual spread of mpox across the world, since May 2022, the multi-country outbreak was declared a Public Health Emergency of International Concern (PHEIC) by the WHO Director-General on 23 July 2022. A third meeting of the Emergency Committee on 20 October 2022 held the consensus view that the event was still an emergency. The Director-General issued temporary recommendations to countries based on ongoing concerns including:

- Continuing preparedness and response inequity within and between WHO Member States to the continuing outbreak
- an emerging potential for greater health impact in vulnerable populations
- continuing risk of stigma and discrimination
- weak health systems in some developing countries leading to under-reporting.
- ongoing lack of equitable access to diagnostics, antiviral and vaccines
- research gaps needing to be addressed.

Following global, regional, and national public health responses to this event, in October 2022 WHO assessed the risk as moderate globally and in four regions, high in the Region of the Americas, and low in the Western Pacific Region. While since then there has been a significant decline in the number of mpox cases reported globally, 39 of the 110 affected countries have continued to report cases in the last 21 days. and some countries have reported an increase in the number of cases over the last week. Community transmission continues to occur especially among vulnerable populations of gay and bi-sexual men and other men who have sex with men. Persons living with HIV infection continue to constitute up to 48% of mpox cases globally and persons with uncontrolled HIV infection are known to be at risk for more severe disease. An increase in the proportion of cases in women and children has also been seen. Importation of cases across and within regions also continues to occur.

The Region of the Americas continues to report the highest number of cases which are mostly in vulnerable populations with limited access to vaccines and health care services. The region launched a Response Strategy and Donor Alert to support the most affected Latin American and Caribbean countries. The European Region continues to experience risk reduction in the number of cases and has outlined a path to elimination of mpox. The United Kingdom has published a national mpox elimination strategy. Importation of new cases that may seed further outbreaks remains an ongoing concern.

Slowing efforts for mpox surveillance and laboratory diagnostic capacity, reduction in the number of services offering vaccines in many countries and continuing challenges accessing antiviral therapeutics remain major issues amidst other competing public health priorities, including in some countries outbreaks of cholera, Lassa fever, measles, malaria. The true burden of mpox remains unknown in most African countries. WHO continues to provide support to ensure sustainable control measures and develop plans to enhance access to countermeasures.

The response to the multi-country outbreak, though achieving a reduction in cases reported requires a sustained control strategy and efforts in both newly- and previously-affected countries. Sustaining surveillance is vital to ending the mpox outbreak and, as part of global health security, also serves as surveillance for accidental or deliberate re-emergence of smallpox. Additional efforts would be needed to ensure vulnerable populations in all regions have access to vaccines and antivirals. In implementing the recommendations of the EC and ensuring global mpox control, WHO is committed to the following mpox strategic agenda:

1. Strengthening mpox surveillance through integration of mpox into national surveillance systems and to support mpox elimination for regions and countries, as appropriate based on their epidemiological situation.
2. Integration of mpox into HIV and STIs programmes and services.

3. Providing technical and operational support to countries in Africa through a One –Health approach
4. Continuing to support improved access to diagnostics, treatment and vaccines.
5. Support a broad research agenda to build on what was learned during the emergency phase.

Mpox situation update: European Region (As of 31 January 2023)

As of 31 January 2023, a total of 25 824 confirmed cases of mpox, including five deaths have been reported from 45 countries and territories in the WHO European Region.

Case-based data were reported for 25 726 cases from 41 countries and areas to European Centre for Disease Prevention and Control (ECDC) and the WHO Regional Office for Europe through The European Surveillance System (TESSy), up to 31 January 2023, 10:00. Of the 25 726 cases reported in TESSy, 25 542 were laboratory confirmed. Furthermore, where sequencing was available, 489 samples from reported cases were confirmed to belong to Clade II, formerly known as the West African clade. The number of weekly cases reported in Europe is now <95% the peak levels of the summer, however, low-level indigenous transmission continues in a number of European countries.

The earliest known case has a reported specimen date of 07 March 2022 and was identified through retrospective testing of a residual sample. The earliest date of symptom onset was reported as 17 April 2022. The majority of cases were between 31 and 40 years-old (10 138/25 696 - 39%) and male (25 230/25 664 - 98%). Of the 11 089 male cases with known sexual orientation, 96% self-identified as men who have sex with men. Among cases with known HIV status, 38% (3963/10 458) were HIV-positive. The majority of cases presented with a rash (15 251/15 965 - 96%) and systemic symptoms such as fever, fatigue, muscle pain, chills, or headache (10 806/15 965 - 68%). There were 777 cases hospitalized (6%), of which 271 cases required clinical care. Seven cases were admitted to ICU, and five cases of mpox were reported to have died.

Where information on the most likely mode of transmission is available, 94% of cases in the EURO region report sexual contact. To date, WHO and ECDC have been informed of five cases of occupational exposure in the WHO European Region. In four cases of occupational exposure, health workers were wearing recommended personal protective equipment but were exposed to body fluid while collecting samples. The fifth case was not wearing personal protective equipment.

WHO is also monitoring the management of mpox cases and contacts in Member States. As of 24 January 2023, all countries with confirmed mpox cases require cases to isolate; at home (41 Member States), restrict movement (3 Member States) or isolate in a dedicated facility/hospital (1 Member State). In line with WHO recommendations, 15 member states are not recommending mpox contacts to quarantine, while 23 Member States recommend contacts to limit movement or close contact with others (e.g. sexual contact or contact with certain vulnerable groups). 6 Member States require high-risk contacts to quarantine for 21 days following exposure and one Member State requires all contacts to quarantine.

WHO response to mpox in the WHO European Region

Given the central role of sexual transmission in this outbreak, a sexual rights approach, which includes reduction of stigma and discrimination, has permeated all WHO's response activities, as has the meaningful participation of affected populations.

In responding to mpox during 2022, WHO provided 60 technical support activities across 18 Member States in the areas of surveillance, communications, public health, clinical management, and vaccination; produced eight technical guidance documents, factsheets, or toolkits for European countries; and shared 22 news stories on the personal experiences of patients, healthcare workers, and other response stakeholders.

On 9-10 November 2022, WHO hosted a Sub-Regional training workshop on mpox outbreak management, control and elimination with the aim to build local public health capacity for managing monkeypox outbreaks by improving preparedness, readiness, and response actions through better coordination and planning. Participants included 34 multidisciplinary national experts from IHR (2005) focal points, epidemiologists from public health institutes, clinical management/IPC, laboratory experts from reference laboratories, and risk communication and

community engagement. Further similar workshops are planned to define longer term control and elimination plans at national level.

WHO/Europe's response across the objectives of the mpox SPRP are as follows:

Risk Communication and Community Engagement

Formulate, implement, and monitor appropriate evidence-based control and prevention policies involving affected community groups and targeted risk communication

- With the overall aim of controlling and ultimately sustaining elimination of mpox from the region, WHO supported activities across eight priority objectives and developed a series of policy briefs to support country preparedness and response strategies.
- WHO and ECDC issued joint Interim advice on Risk Communication and Community Engagement during the monkeypox outbreak in Europe providing advice on approaches to the communication of risks and engagement of population groups based on the outbreak's epidemiology and context, recommended preventive measures and people's perceptions and behaviour.
- WHO delivered targeted messages on risk management using innovative communication channels, and involving key stakeholders and partnered with community-based organizations to provide outreach services and information. This included a series of informal webinars with communities, and in November 2022, an expert review meeting on RCCE involved over 100 academics, researchers and frontline RCCE practitioners from the WHO European Region.
- A Joint WHO Regional Office for Europe/ECDC Monkeypox Resource toolkit to support national authorities and event organizers in their planning and coordination of mass and large gathering events has been developed and published.
- Developed public health advice and Q&As for priority groups, including gay, bisexual, and other men who have sex with men.

Surveillance and Coordination

Establish strong case-based national surveillance and report all cases to national and regional surveillance systems to monitor transmission levels

- WHO and ECDC have jointly hosted regular webinars for Member States to provide a platform for information sharing on recent trends, clinical presentation and management, high-risk or vulnerable populations, contact tracing and vaccination.
- WHO and ECDC implemented weekly national case-based reporting through The European Surveillance System (TESSy) to facilitate surveillance of mpox from all the countries and areas of the WHO European Region.
- A biweekly surveillance bulletin was also jointly developed and produced by WHO and ECDC to facilitate reporting of the evolving situation in the Region. WHO, in collaboration with stakeholders, designed a standard protocol which can be adapted to local context to guide a comprehensive public health investigation of monkeypox cases and their contacts.
- In September, WHO and ECDC published a peer-reviewed article in Eurosurveillance describing the epidemiological situation: A large multi-country outbreak of mpox across 41 countries in the WHO European Region, 7 March to 23 August 2022.

Laboratory

Establish safe and high-quality diagnostics, including virus characterization

- WHO has provided focused country support to 18 Member States that either lacked diagnostic capacity, or the supplies needed to provide an adequate response to the outbreak.
- WHO is supporting the procurement and distribution of laboratory supplies and reagents for molecular diagnostics. Based on the results of a needs assessment conducted soon after the outbreak had started, WHO identified 18 countries and territories in Europe for priority support as they either lacked diagnostic capacity, or were in need of supplies to provide an adequate response to the outbreak.
- The correct use of these assays is being supported through a new training program being delivered both on-site and remotely.

- Genomic sequencing supplies are being procured to priority countries that have sequencing capabilities. The laboratory information systems are being adapted to include diagnostics of the monkeypox virus with support from WHO in countries who have requested it.
- A global external quality assessment (EQA) programme for monkeypox virus testing is being arranged and 57 laboratories from 39 countries of the WHO European Region have expressed interest to participate. The distribution of EQA panels is expected in March-April 2023.

Vaccination

Ensure high vaccination uptake in the highest-risk population groups and ensure the availability of safe and effective vaccines and antivirals for priority groups

- The availability of the mpox vaccine in the WHO European Region is still limited to high-income countries and WHO is working closely with various interested Member States and partner organizations to facilitate donation/sharing of mpox vaccine doses with other Member States in the Region.
- According to the data shared by the Member States in the WHO European Region, 37 of 55 Member States and territories[1] have a national mpox vaccination policy; 25 of these recommend pre-exposure prophylaxis for individuals and groups at high risk of exposure.
- As of 30 January 2023, a total of 680 365 doses have been received across 31 countries and 383 981 doses have been administered to date across 30 countries in the Region from which data are available.
- WHO published a policy brief on vaccination against mpox in the WHO European Region, which was developed based on the lessons learned from the experiences of the early adopters of mpox vaccination in the Region. In addition to outlining the considerations for the policy guidance, the policy brief also highlights the knowledge gaps on mpox vaccines and vaccination.
- Considering the need of the Member States to strategize on mpox vaccine demand and acceptance by high-risk population groups, WHO published a considerations document that outlines mechanisms to address challenges linked to behaviour-related aspects of mpox vaccination in the Region.

Infection Prevention and Control

Optimally manage cases, including those with severe disease and Implement IPC systems to minimize the risk of onward transmission in healthcare settings

- WHO has provided training on clinical management across the region through online and in-person webinars and workshops. 13 webinars, trainings, and workshops carried out among over 400 healthcare workers from six countries.
- In response to severe cases, WHO rapidly brought clinical teams and public health authorities together to share detailed clinical information and analysis in a confidential setting to increase understanding on severe mpox complications.
- With marketing authorization issued through EMA, WHO is providing support to Member States on how to get access to Tecovirimat treatment courses through a WHO stockpile (limited number and for compassionate use only).
- In addition, all EU member states and seven additional participating countries (Bosnia and Herzegovina, Iceland, Montenegro, North Macedonia, Norway, Serbia, and Türkiye) can request Tecovirimat provided by The Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO)- Health Emergency preparedness and Response Authority via rescEU.
- Attention to IPC components have been incorporated into all programmatic work to increase national and facility-based IPC programs.
- The risk of exposures to healthcare workers was monitored closely, with specific communications made on the safe and appropriate collection of samples from patients following a small number of sporadic occupational exposures.

One Health

Prevent the establishment of a new animal reservoir in the WHO European Region

- WHO/Europe and the World Organization for Animal Health (WOAH) in Europe are monitoring notified cases of SARS-CoV-2 and mpox in the animal populations and are publishing monthly reports on the status in the Region. To date, one mpox case has been reported in a pet dog in the WHO European Region.

Technical guidance and other resources

Strategic Planning and Global Support

- 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 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
- WHO Monkeypox outbreak: update and advice for health workers, 26 May 2022. https://www.who.int/docs/default-source/coronaviruse/risk-comms-updates/update_monkeypox-.pdf?sfvrsn=99baeb03_1
- Risk communication and community engagement. Public health advice on the recent outbreak of monkeypox in the WHO European Region, 24 May 2022. https://www.euro.who.int/__data/assets/pdf_file/0004/538537/public-health-advice-monkeypox-eng.pdf

EPI - WIN Webinars and Updates

The recordings of the previous EPI-WIN Webinars related to current monkeypox outbreak:

- 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
- WOAH Website and FAQs on Monkeypox in animals

Disease Outbreak News and situation reports

- Monkeypox outbreak 2022: https://www.who.int/emergencies/situations/monkeypox-oubreak-2022
- Multi-country outbreak of mpox, External situation report #14- 19 January 2023: https://www.who.int/publications/m/item/multi-country-outbreak-of-mpox--external-situation-report-14--19-january-2023
- Multi-country outbreak of mpox, External situation report #13- 5 January 2023: https://www.who.int/publications/m/item/multi-country-outbreak-of-mpox--external-situation-report--13---5-january-2023
- Multi-country outbreak of mpox, External situation report #12- 14 December 2022: https://www.who.int/publications/m/item/multi-country-outbreak-of-mpox--external-situation-report-12--14-december-2022
- Multi-country outbreak of mpox, External situation report #11- 1 December 2022: https://www.who.int/publications/m/item/multi-country-outbreak-of-mpox--external-situation-report--11---1-december-2022
- 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
- Multi-country outbreak of monkeypox, External situation report #7- 5 October 2022: https://www.who.int/publications/m/item/multi-country-outbreak-of-monkeypox--external-situation-report--7---5-october-2022
- Multi-country outbreak of monkeypox, External situation report #6- 21 September 2022: https://www.who.int/publications/m/item/multi-country-outbreak-of-monkeypox--external-situation-report--6---21-september-2022
- Multi-country outbreak of monkeypox, External situation report #5- 7 September 2022: https://www.who.int/publications/m/item/multi-country-outbreak-of-monkeypox--external-situation-report--5---7-september-2022
- Multi-country outbreak of monkeypox, External situation report #4- 24 August https://www.who.int/publications/m/item/multi-country-outbreak-of-monkeypox--external-situation-report--4---24-august-2022
- 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

- WHO Multi-country outbreak of monkeypox, External situation report #1 - 6 July 2022: https://www.who.int/publications/m/item/multi-country-outbreak-of-monkeypox--external-situation-report--1---6-july-2022
- 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

Training and Education

- WHO monkeypox outbreak toolbox, June 2022. https://www.who.int/emergencies/outbreak-toolkit/disease-outbreak-toolboxes/monkeypox-outbreak-toolbox
- WHO factsheet on monkeypox, 19 May 2022. http://www.who.int/news-room/fact-sheets/detail/monkeypox
- Health topics – Monkeypox: https://www.who.int/health-topics/monkeypox
- Open WHO. Online training module. Monkeypox: Introduction. 2020
  English: https://openwho.org/courses/monkeypox-introduction
  Français: https://openwho.org/courses/variole-du-singe-introduction
- Open WHO. Extended training. Monkeypox epidemiology, preparedness and response. 2021.
  English: https://openwho.org/courses/monkeypox-intermediate;
  Français: https://openwho.org/courses/variole-du-singe-intermediaire

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
- World Organisation for Animal Health, founded as OIE: Monkeypox. https://www.woah.org/en/disease/monkeypox/
- Joint WHO Regional Office for Europe - European Centre for Disease Prevention and Control, Monkeypox surveillance bulletin Situation reports (who.int)
- Joint WHO Regional Office for Europe - European Centre for Disease Prevention and Control, Monkeypox Resource toolkit to support national authorities and event organizers in their planning and coordination of mass and large gathering events. https://www.who.int/europe/tools-and-toolkits/monkeypox-resource-toolkit-for-planning-and-coordination-of-mass-and-large-gathering-events/
- WHO. Monkeypox & mass gatherings. Recommendations for mass gatherings during a monkeypox outbreak. https://cdn.who.int/media/docs/default-source/epi-win/update78_monkeypox-mass-gatherings.pdf?sfvrsn=dfc9ee5a_1&download=true
- WHO European Region Interim advice for public health authorities on summer events during the monkeypox outbreak in Europe, 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
- Weekly epidemiological record (WER) no.11, 16 March 2018, Emergence of monkeypox in West Africa and Central Africa 1970-2017. http://apps.who.int/iris/bitstream/handle/10665/260497/WER9311.pdf;jsessionid=7AB72F28D04CFE6CE24996192FC478FF?sequence=1 Jezek Z., Fenner F.: Human Monkeypox. Monogr Virol. Basel, Karger, 1988, vol 17, pp 1-5. doi: 10.1159/isbn.978-3-318-04039-5
- 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
- Monkeypox in the Region of the Americas - Risk assessment. https://www.paho.org/en/documents/monkeypox-region-americas-risk-assessment

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 30 January 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	20	0
	Congo *	5	0
	Democratic Republic of the Congo	348	0
	Ghana	121	4
	Liberia *	6	0
	Mozambique *	1	1
	Nigeria	775	7
	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 *	790	1
	Bosnia and Herzegovina *	9	0
	Bulgaria *	6	0
	Croatia	33	0
	Cyprus *	5	0
	Czechia *	71	1
	Denmark	194	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	954	0
	Latvia *	6	0
	Lithuania *	5	0
	Luxembourg *	57	0

	Malta *	33	0
	Monaco *	3	0
	Montenegro *	2	0
	Netherlands	1260	0
	Norway *	94	0
	Poland	215	0
	Portugal *	950	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	7518	3
	Sweden	257	0
	Switzerland *	551	0
	The United Kingdom	3735	0
	Türkiye *	12	0
	Ukraine *	5	0
Region of the Americas	Argentina	1064	2
	Aruba *	3	0
	Bahamas *	2	0
	Barbados *	1	0
	Bermuda *	1	0
	Bolivia (Plurinational State of)	263	0
	Brazil	10 739	15
	Canada *	1460	0
	Chile	1411	2
	Colombia	4066	0
	Costa Rica	140	0
	Cuba *	8	1
	Curaçao *	3	0
	Dominican Republic *	52	0
	Ecuador	483	2
	El Salvador	88	0
	Guadeloupe *	1	0
	Guatemala	348	0
	Guyana *	2	0
	Honduras	13	0
	Jamaica *	18	0
	Martinique	7	0
	Mexico	3768	4
	Panama	110	0
	Paraguay	82	0
	Peru	3723	15
	Puerto Rico	210	0
	Saint Martin *	1	0
	United States of America	29 891	26
	Uruguay *	19	0

	Venezuela (Bolivarian Republic of) *	12	0
South-East Asia Region	India	22	1
	Indonesia *	1	0
	Sri Lanka *	2	0
	Thailand *	12	0
Western Pacific Region	Australia *	144	0
	China *	6	0
	Guam *	1	0
	Japan	11	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**	**85 449**	**89**

[#]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.