Multi-country outbreak of monkeypox

External Situation Report 6, published 21 September 2022
Data as received by WHO national authorities by 17:00 CEST, 19 September 2022

Risk assessment	Laboratory confirmed cases	Deaths	Countries/ areas/ territories
Global risk – Moderate WHO Regional risk • European Region, Region of the Americas – High • African Region, Eastern Mediterranean Region, Southeast Asia Region – Moderate • Western Pacific Region – Low-Moderate	61 753	23	105

Highlights

- During the week of 12 to 18 September 2022, the number of monkeypox cases reported in the Regions of Europe and the Americas declined, driving the global downward trend observed since August 2022.
- Since the last edition published on 7 September 2022, 8757 new cases (16.5% increase in total cases) and five new deaths have been reported.
- On 13 September 2022, the Region of the Americas published a Risk Statement (Date of assessment: 9 September 2022), classifying the overall risk in the Region as High.
- On 16 September 2022, WHO launched a Public Advice page**.** The purpose of the page is to provide information and public health advice to individuals and families on ways in which they can prevent illness and stay healthy. WHO launches this page with information on how to stay safe during an outbreak of monkeypox.

World Health Organization

Epidemiological Update

Data source: WHO Multi-country Monkeypox Outbreak – Global Trends

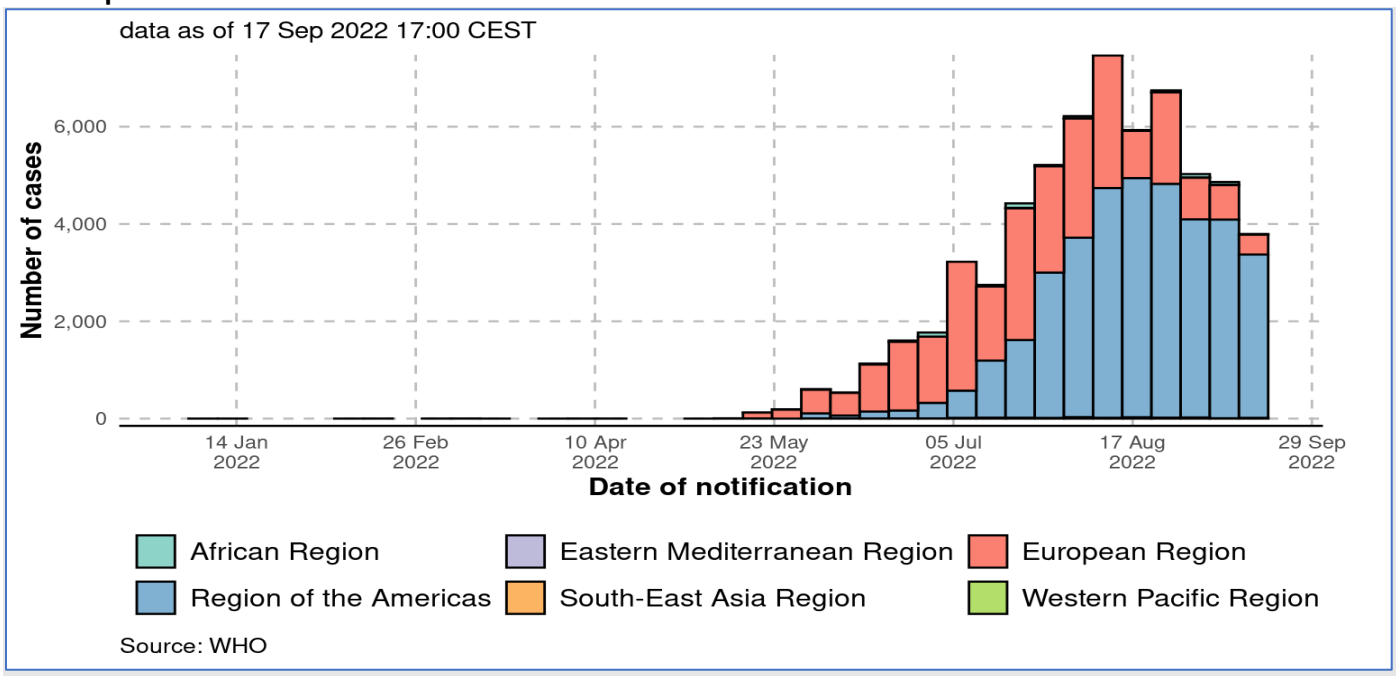
From 1 January through 18 September 2022, 61 753 laboratory-confirmed cases of monkeypox and 23 deaths have been reported to WHO from 105 countries/territories/areas (hereafter 'countries'[i]) in all six WHO Regions (Table 1). Since the last edition published on 7 September 2022, 8757 new cases (16.5% increase in total cases) and five new deaths have been reported.

In the past seven days, 23 countries reported an increase in the weekly number of cases, with the highest increase reported in Chile. Three new countries also reported their first case in the past seven days: Guam (12 September), Ukraine (15 September), and Bahrain (16 September). Overall, 33 countries have not reported new cases for over 21 days, the maximum incubation period of the disease.

The number of weekly new cases reported globally decreased by 22% in week 37 (12 - 18 September) (n=3,794 cases) compared to week 36 (05 - 11 September) (n=4,863 cases), with the largest decrease observed in the European Region (-81%) and in the Region of the Americas (-42%). Despite these decreases, the majority of cases reported in the past four weeks were from the Region of the Americas (80.3%) and the European Region (18.6%). From 5 September to 18 September, a total of five deaths have been reported, in Cameroon (n=2), Nigeria (n=2) and Sudan (n=1). Overall, the African Region has reported the highest number of deaths among confirmed cases (14/23; 60.9%).

As of 18 September, the ten countries that have reported the highest cumulative number of cases globally are the United States of America (n = 22 957), Spain (n = 7 037), Brazil (n = 6 649), France (n = 3 898), Germany (n = 3 563), the United Kingdom (n = 3 552), Peru (n = 2 054), Canada (n = 1 363), Colombia (n = 1 260), and the Netherlands (n = 1 209). Together, these countries account for 86.7% of the cases reported globally.

Figure 1. Epidemiological curve of weekly aggregated confirmed cases of monkeypox by region, from 1 January to 17 September 2022 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.

Table 1. Number of cumulative confirmed monkeypox cases and deaths reported to WHO, by WHO Region, from 1 January 2022 to 18 September 17:00 CEST

WHO Region	Confirmed cases	Deaths
African Region	587	14
Region of the Americas	36 783	4
Eastern Mediterranean Region	51	1
European Region	24 138	3
South-East Asia Region	21	1
Western Pacific Region	173	0
Cumulative	61 753	23

Other key epidemiological findings:

- The outbreak continues to affect primarily young men, with 97.4% (31 295 of 32 125) of cases with available data being men, with a median age of 35 years (Interquartile Range: 30 - 42). Less than 1% of cases with age data available are aged 0-17 years, out of which 86 (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 (164/293; 56%).
- Among cases with sexual orientation reported, 90.9% (13 940/15 339) identified as gay, bisexual and other men who have sex with men. Of all reported types of transmission, transmission through skin and mucosal contact during sexual activities was most commonly reported, with 10 215 of 11 242 (90.9%) of all reported transmission events.
- Of all settings in which cases were likely exposed, the most commonly reported was in a party setting with sexual contacts, with 3,099 of 5,280 (58.7%) of all likely exposure categories.
- Among cases with known HIV status, 44.2% (7 709 of 17 444) are HIV-positive.
- Among the cases who reported at least one symptom, the most common symptom is any rash, and is reported in 85% of cases, followed by fever at 57%, and systemic and genital rash (41.6% and 30.1%, respectively).

Regional differences in the distribution of monkeypox cases by age group and gender

Figure 2 shows the age-sex pyramid of monkeypox cases in the WHO Regions reporting the highest number of cases. The European and the Americas Regions show a similar pattern in the age-sex distribution, with the majority of cases occurring among males aged 30-39 years, as well as similar distributions of sexual orientation; indicating that the ongoing outbreak of monkeypox in these Regions continues to primarily affect men who identify as gay, bisexual and other men who have sex with men and who have reported recent sexual contact with one or multiple partners.

On the other hand, in the African Region, while demographic features of the outbreak will reflect ongoing zoonotic transmission, the role of zoonotic spillover events is not well understood at this time. The age-sex pyramid also likely reflects other modes of transmission including transmission in the household. Children aged 0-9 years old represent one of the most affected groups, and the one in which there is no marked difference in the number of boys and girls affected, followed by the age group 18-29 years where men again predominate while women also continue to be affected. Thus, as recent studies are beginning to suggest, sexual transmission

routes likely include transmission between men and transmission between men and women. Further epidemiological investigation, research and one-health studies are needed to elucidate and better understand the sources and modes of spread of monkeypox in different rural and urban contexts throughout the region.

Figure 2. Age-sex pyramid of monkeypox cases in the three WHO regions reporting the highest number of cases (n=31 012 cases with age-sex data).

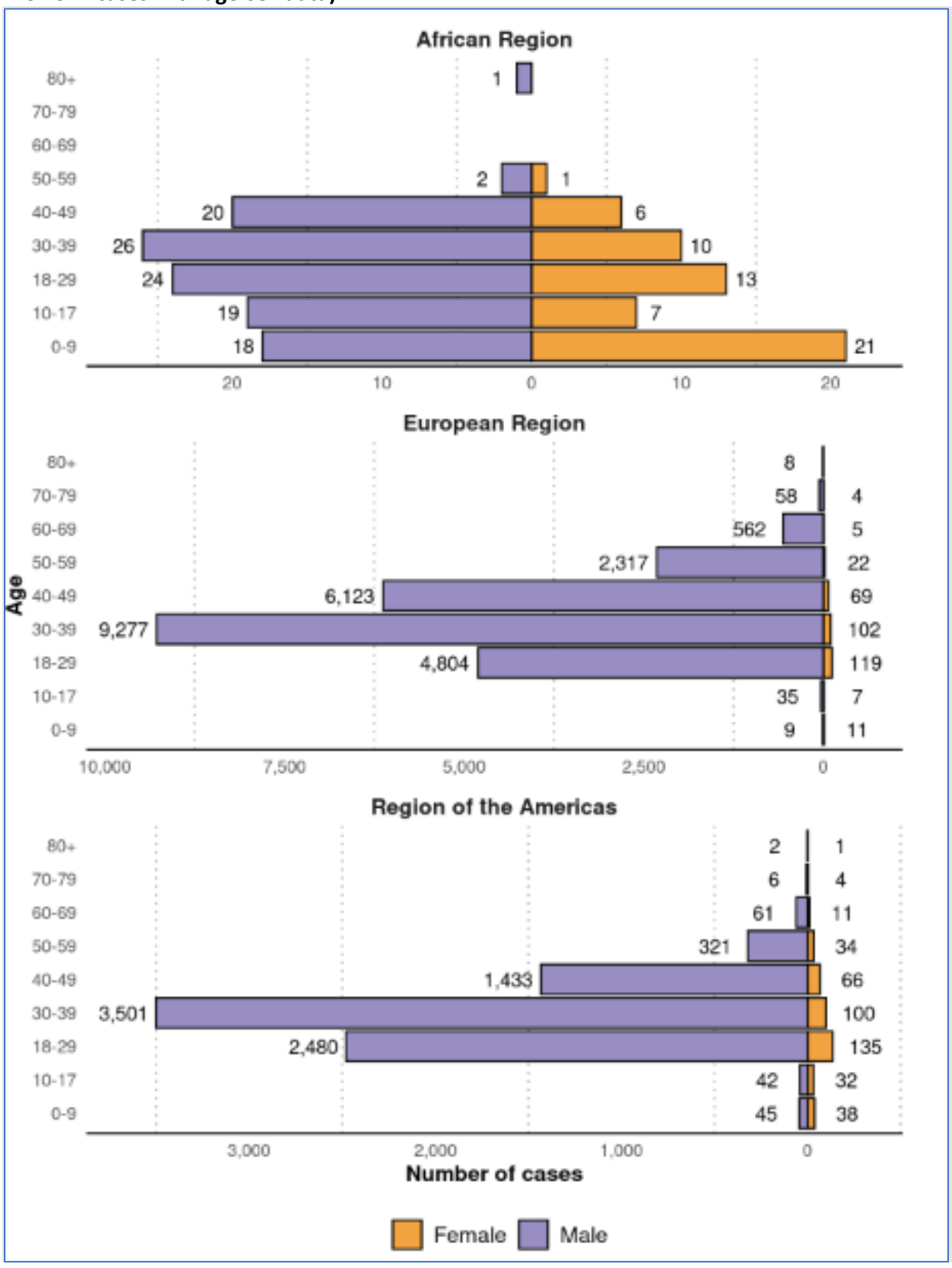
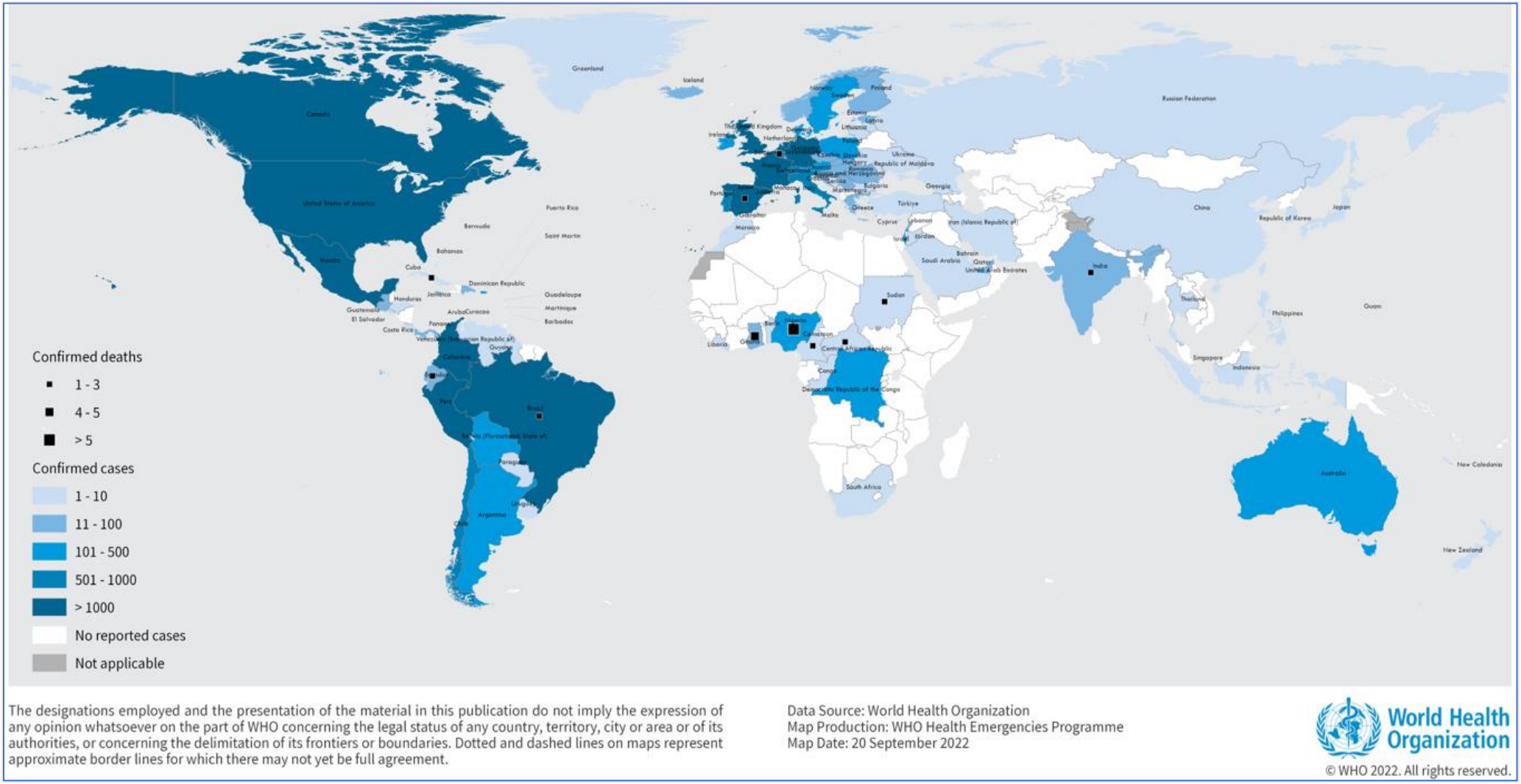


Figure 3. Geographic distribution of confirmed cases of monkeypox reported to or identified by WHO from official public sources from 1 January 2022 to 18 September 17:00 CEST



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: 20 September 2022

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Updates and WHO Advice

WHO continues to closely monitor and respond to the outbreak and support international coordination and information sharing with the Member States and partners. Clinical and public health incident response have been activated by Member States to coordinate comprehensive case finding, contact tracing, laboratory investigation, supported isolation, clinical management, implementation of infection prevention and control measures, risk communication and community engagement, and vaccination activities, as well as support ongoing epidemiological and countermeasures research.

Surveillance and Laboratory

WHO continues to collect regular information on the daily number of monkeypox cases and deaths through IHR communication, as well as detailed information through the case reporting form (CRF). Currently, WHO has received the CRF for around 91% of the total confirmed cases reported at the global level, and the latest epidemiological information is included in the online 2022 Monkeypox outbreak: Global trends. New sections of the online report include a Literature Summary & Epidemic Parameters, in which WHO summarizes epidemiologic parameters from newly published literature on the 2022 outbreak.

WHO is currently working with partners to investigate the use of wastewater surveillance for monkeypox, its benefits for monitoring the presence or transmission of the virus in the community, and to outline technical and other challenges related to this work.

Infection Prevention and Control

WHO advises health care settings to continue to follow standard and transmission-based precautions for health workers, including the use of a respirator, gloves, gown, eye protection when caring for patients with suspected or confirmed monkeypox. Gloves and other personal protective clothing and equipment should be worn while taking care of the sick, whether in a health facility or in the home. Health care facilities should ensure health workers are properly trained in injection safety, including promoting the use of safety-engineered devices. For skin and other specimen collection, WHO guidance should be followed to avoid health worker infection through percutaneous exposure such as via needle-stick injury, of which there have been several case reports. Sharp needles should not be used for de-roofing skin lesions, where a lancet or other appropriate device is preferred.

Particular attention should be paid to environmental cleaning and disinfection protocols and safe handling of linen and laundry according to standard and transmission-based precautions. All contact with possibly contaminated materials should be avoided. Guidance for infection prevention and control measures in health care and household settings is available in Clinical management and infection prevention and control for monkeypox: interim rapid response guidance.

In community settings such as congregate settings, and settings where sex on premises is available, managers or organizers should ensure staff are aware of risks of monkeypox, modes of transmission, and signs and symptoms, and put in place infection control measures such as hand hygiene, environmental cleaning and disinfection, and safe handling and cleaning and disinfection of shared items including linens.

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Technical guidance and other resources

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

- 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

- 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 Vaccines and immunization for monkeypox: Interim guidance, 24 August 2022. https://apps.who.int/iris/bitstream/handle/10665/361894/WHO-MPX-Immunization-2022.2-eng.pdf
- WHO Global clinical data platform for monkey 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

- Case and contact investigation form (CIF), 16 June 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
- Monkeypox Case 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)

Risk communication and community engagement

- 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

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

Disease Outbreak News and situation reports

- Monkeypox outbreak 2022: https://www.who.int/emergencies/situations/monkeypox-oubreak-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.

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Annex 2: Confirmed cases of monkeypox by WHO region and country from 1 January 2022 to 18 September 2022, 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*	7	2
	Central African Republic	8	2
	Congo	5	0
	Democratic Republic of the Congo*	195	0
	Ghana	84	4
	Liberia	3	0
	Nigeria	277	6
	South Africa*	5	0
Eastern Mediterran-ean Region	Bahrain	1	0
	Iran (Islamic Republic of) *	1	0
	Jordan	1	0
	Lebanon	11	0
	Morocco*	3	0
	Qatar	4	0
	Saudi Arabia	8	0
	Sudan	6	1
	United Arab Emirates*	16	0
European Region	Andorra*	4	0
	Austria	301	0
	Belgium	744	1
	Bosnia and Herzegovina*	3	0
	Bulgaria	6	0
	Croatia	27	0
	Cyprus*	5	0
	Czechia	65	0
	Denmark	183	0
	Estonia	11	0
	Finland	33	0
	France	3898	0
	Georgia*	2	0
	Germany	3563	0
	Gibraltar*	6	0
	Greece	69	0
	Greenland*	2	0
	Hungary	75	0
	Iceland*	12	0
	Ireland	173	0
	Israel	247	0

	Italy	828	0
	Latvia	5	0
	Lithuania*	5	0
	Luxembourg	55	0
	Malta	33	0
	Monaco*	3	0
	Montenegro*	2	0
	Netherlands	1209	0
	Norway	89	0
	Poland	167	0
	Portugal	908	0
	Republic of Moldova*	2	0
	Romania	38	0
	Russian Federation	2	0
	Serbia*	31	0
	Slovakia	14	0
	Slovenia	46	0
	Spain	7037	2
	Sweden	179	0
	Switzerland	502	0
	The United Kingdom	3552	0
	Republic of Türkiye*	1	0
	Ukraine	1	0
Region of the Americas	Argentina	265	0
	Aruba	3	0
	Bahamas*	2	0
	Barbados*	1	0
	Bermuda*	1	0
	Bolivia (Plurinational State of)	129	0
	Brazil	6649	2
	Canada	1363	0
	Chile	728	0
	Colombia	1260	0
	Costa Rica	4	0
	Cuba	2	1
	Curacao*	1	0
	Dominican Republic	31	0
	Ecuador	68	1
	El Salvador	2	0
	Guadeloupe*	1	0
	Guatemala	12	0
	Guyana	2	0
	Honduras	4	0
	Jamaica	12	0
	Martinique*	1	0

	Mexico	1049	0
	Panama	12	0
	Paraguay*	1	0
	Peru	2054	0
	Puerto Rico	160	0
	Saint Martin*	1	0
	United States of America	22 957	0
	Uruguay	5	0
	Venezuela (Bolivarian Republic of)*	3	0
South-East Asia Region	India	12	1
	Indonesia*	1	0
	Thailand	8	0
Western Pacific Region	Australia	132	0
	China	5	0
	Guam	1	0
	Japan*	4	0
	New Caledonia*	1	0
	New Zealand	5	0
	Philippines*	4	0
	Republic of Korea	2	0
	Singapore	19	0
Cumulative	105 countries/territories/areas	61 753	23