

Multi-country outbreak of monkeypox

External Situation Report 3, published 10 August 2022

Data as received by WHO national authorities by 17:00 CEST, 7 August 2022

Risk assessment	Laboratory confirmed cases	Deaths	Countries/areas/territories
Global risk – Moderate			
WHO Regional risk	27 814	11	89
<ul style="list-style-type: none"> European Region – High African Region, Region of the Americas, Eastern Mediterranean Region, Southeast Asia Region – Moderate Western Pacific Region – Low-Moderate 			

Highlights

- For the first time, monkeypox deaths have been reported in countries outside of the African Region in Spain (two deaths), Brazil (one death), and India (one death). In two cases, deaths have been linked to viral encephalitis and some patients had underlying immune compromising conditions.
- On 8 August, WHO convened a meeting of two WHO Collaborating Centres for orthopoxviruses and other experts in poxvirology and viral evolution to consider the naming of monkeypox virus (MPXV) variants.
- Alternate names for monkeypox are being collected on the [ICD proposal platform](#) and suggestions are welcome. There are other processes on-going for the renaming of the virus itself and its clades.
- On 20 July 2022, WHO launched a global epidemiological report titled [“Multi-Country Monkeypox Outbreak - Global Trends”](#) to provide detailed epidemiological information from case report forms provided by the Member States to WHO. A new section highlighting the situation in West and Central Africa was added on 28 July.
- Vaccination programmes for monkeypox should be accompanied by strong information campaigns conveying that it takes approximately two weeks from completion of a vaccination series (one or two doses depending on product) for immunity to fully develop. The level of protection conferred by vaccination under different circumstances has not yet been determined for this outbreak. For these reasons, people from the most affected communities where monkeypox is present should continue to take protective measures during this outbreak. This may include temporarily reducing the number of sexual partners to reduce potential exposure.
- WHO urges countries to scale up their response, and to implement the [recommendations](#) included in the declaration of the Public Health Emergency of International Concern, to bring the outbreak under control

Epidemiological Update

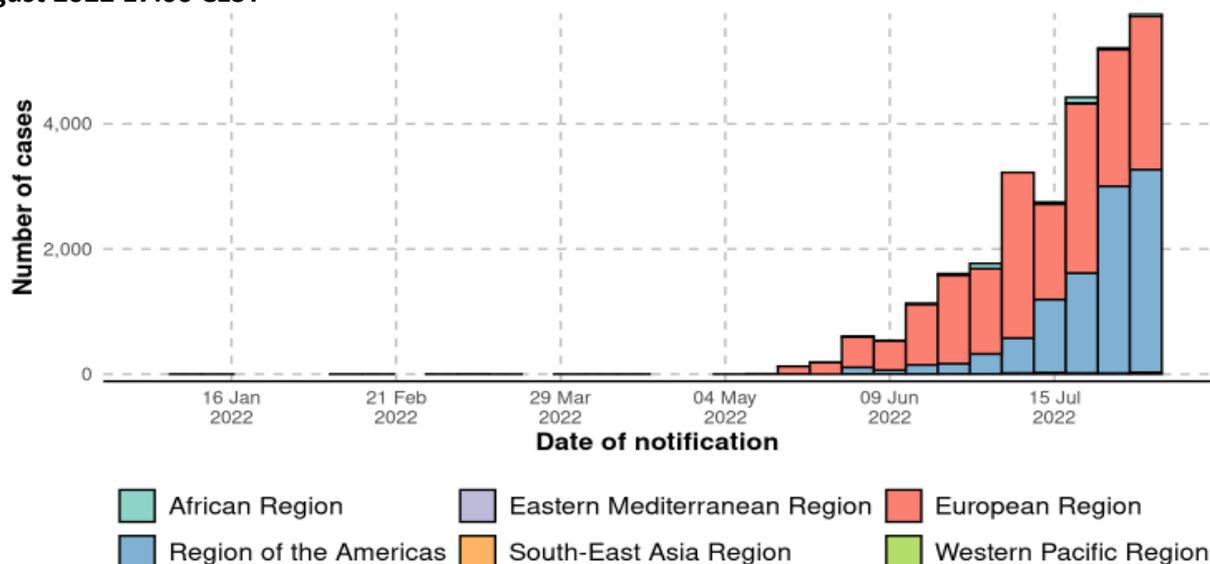
From 1 January through 7 August 2022, 27 814 laboratory confirmed cases of monkeypox and 11 deaths have been reported to WHO from 89 countries/territories/areas^[1] in all six WHO Regions (Table 1). Since the last edition of this [report](#) published on 25 July 2022, 11 798 new cases (74% increase), and six new deaths have been reported; 14 new countries have reported cases. In the past seven days, 42 countries reported an increase in the weekly number of cases, with the highest increase reported in Brazil. There are 14 countries that have not reported new cases for over 21 days, the maximum incubation period of the disease.

The number of weekly reported new cases globally has increased by 19% in epidemiological week 31 (from 1 to 7 August) (n = 6217 cases) compared to week 30 (from 25 to 31 July) (n = 5213 cases). The majority of cases reported in the past four weeks were notified from the WHO European region (53%) followed by the Region of the Americas (46%).

As of 7 August, the ten countries that have reported the highest cumulative number of cases globally are: the United States of America (n = 7510), Spain (n = 4577), Germany (n = 2887), the United Kingdom (n = 2759), France (n = 2239), Brazil (n = 1721), Netherlands (n = 959), Canada (n = 957), Portugal (n = 710), and Italy (n = 505). Together, these countries account for 89% of the cases reported globally to date. The numbers should be interpreted carefully due to underreporting of cases in countries.

In past seven days, a total of 10 countries reported their first case. These include Montenegro, Uruguay, Liberia, Sudan, Bolivia (Plurinational State of), Cyprus, Guadeloupe, Guatemala, Lithuania and Saint Martin.

Figure 1. Epidemiological curve of weekly aggregated confirmed cases of monkeypox by region, from 1 January to 7 August 2022 17:00 CEST*



Source: WHO

*This figure shows aggregated weekly data, for epidemiological weeks ending on Sundays. Data on the current week, with incomplete data, 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 7 August 17:00 CEST

WHO Region	Confirmed cases	Deaths
African Region	375	7
Region of the Americas	10 815	1
Eastern Mediterranean Region	31	0
European Region	16 495	2
South-East Asia Region	13	1
Western Pacific Region	85	0
Cumulative	27 814	11

Other key epidemiological findings:

- Data on sex are available for 73% (17 052/23 290) of cases. Of these, 99% (16 839/17 052) are males, and the median age of reported cases is 36 years (Interquartile range: 31-43). Males between 18-44 years of age continue to be disproportionately affected by this outbreak as they account for 77% of cases. Less than 1% (98/17 426) of cases with age data available are aged 0-17 years.
- Among cases with known HIV status, 39% (3204/8234) are HIV positive.
- To date, 344 cases have been reported to be health care workers. While most reported being infected in the community, at least one occupational exposure has been reported in the current outbreak.

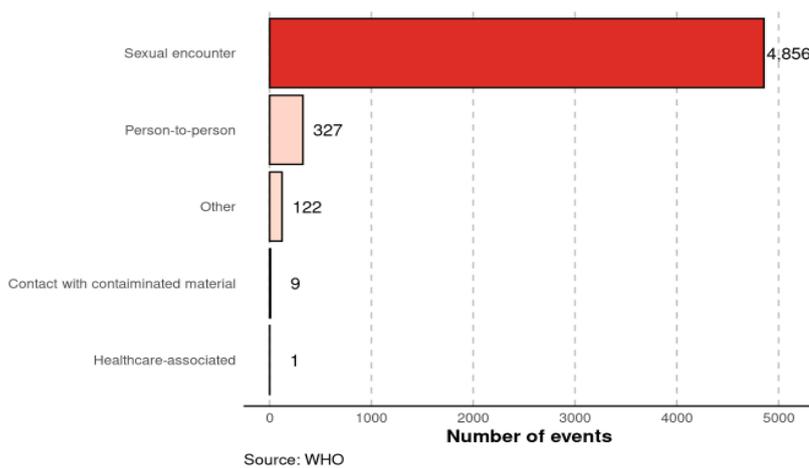
With the exception of countries in the African Region, the ongoing outbreak of monkeypox continues to primarily affect men who identify as gay, bisexual and other men who have sex with men, and who have reported recent sex with one or multiple partners. While cases are being reported among other men as well as among women and children, there is no signal suggesting that transmission in these new groups is sustained.

Mode of transmission¹

Of the cases reported, 33% (7741/23290) reported information on sexual orientation. Of these, 97% (7541/7741) identified as gay, bisexual, and other men who have sex with men.

Data on mode of transmission were available for 23% (5315/23 290) of cases, of which 91% (4856/5315) reported transmission through sexual encounters (Figure 1). Among individuals where sexual orientation [heterosexual, lesbian (women who have sex with women) or others] was reported but is not men who have sex with men, 74% (70/95) reported sexual encounter² as the reported mode of transmission.³

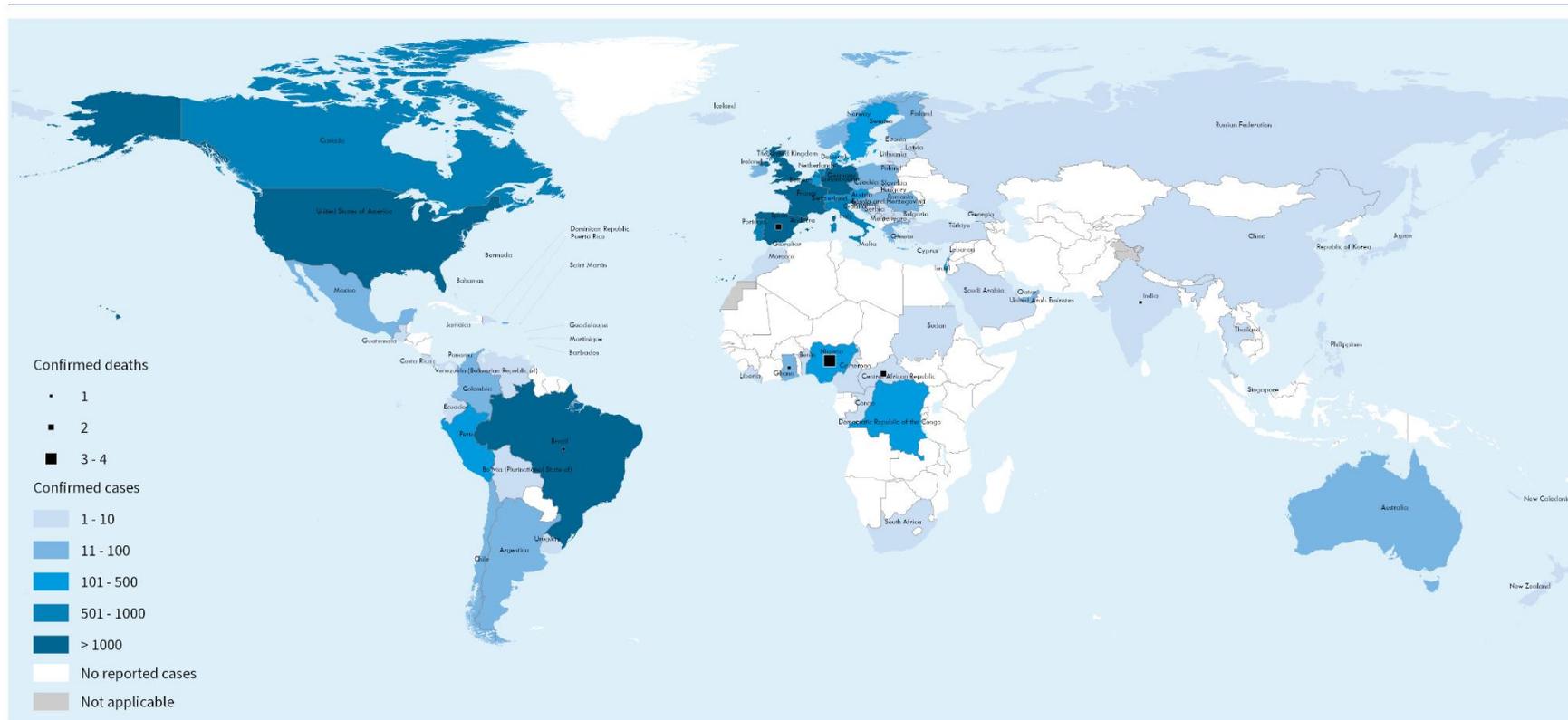
Figure 2. Monkeypox cases by mode of transmission, as of 7 August 2022 (n=5315)



For further information, please see the [WHO Multi-country Monkeypox Outbreak – Global Trends](#).

¹ Note: When considering transmission, note that dissociation between transmission via skin-to-skin contact during sex and transmission via bodily fluids cannot be disentangled. While skin-to-skin contact with lesions remains an important transmission route, monkeypox virus has been isolated from semen samples and rectal swabs from confirmed cases.
² Sexual orientation does not necessarily reflect who the case has had recent sexual history with nor does it imply sexual activity.
³ Up until this point in time, the 2022 multi-country Monkeypox outbreak has been overwhelmingly concentrated in networks of men who have sex with men. For this reason, understanding events in which other individuals have acquired monkeypox is important to monitor potential of sustained spillover into the wider population.

Figure 3. Geographic distribution of confirmed cases of monkeypox reported to or identified by WHO from official public sources from 1 January 2022 to 7 August 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: 10 August 2022

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, isolation, clinical management, implementation of infection prevention and control measures, and vaccination activities, as well as support ongoing epidemiological and countermeasures research.

Surveillance and Laboratory

Interim WHO guidance on [Surveillance, case investigation and contact tracing for monkeypox](#) outlines the criteria for testing, reporting, case investigation, and contact tracing. Currently, WHO is working on updating this guidance to add more information on the clinical presentation of cases and adapt the case definition to better identify suspected cases.

Together with the surveillance guidance, the [Monkeypox Case investigation form \(CIF\), as well as a minimum dataset Case reporting form \(CRF\)](#), will be updated to better reflect the recommendations of the Director-General following the most recent meeting of the IHR Emergency Committee for monkeypox. Currently, WHO has received the CRF for around 90% of the total confirmed cases reported at the global level. The consistency and completeness of these data vary widely between countries.

WHO is piloting a systematic collection of information about the outbreak response implemented by countries for monkeypox through a Policy and Response Tracker, which includes information about surveillance, testing, isolation, quarantine and vaccination.

Clinical management, vaccines and therapeutics

Vaccines

WHO is currently updating its [interim guidance on vaccines and immunization for monkeypox](#). WHO has strongly encouraged Member States to convene their national immunization technical advisory groups (NITAGs) to review the emerging evidence and develop policy recommendations for the use of vaccines as relevant to the national context, both to ensure readiness in countries where there are few or no cases reported, as well as to support a timely response when required. It is recommended to implement vaccine efficacy studies during vaccine roll-out to document vaccine effectiveness and evaluate immunization strategies.

Post-exposure prophylaxis (PEP) is recommended for close contacts of cases, ideally within four days of first exposure (and up to 14 days in the absence of symptoms), to prevent onset of the disease.

Primary preventive vaccination before exposure (PPV) is recommended for high-risk groups including individuals at high risk of exposure (importantly but not exclusively gay, bisexual and other men who have sex with men and/or have multiple sexual partners); and health workers at high risk of exposure, laboratory personnel working with orthopoxviruses, clinical laboratory personnel performing diagnostic testing for monkeypox, and outbreak response team members (as designated by national public health authorities). All decisions around immunization

of individuals with smallpox or monkeypox vaccines (before or following potential exposure) should be by shared clinical decision-making between the health care provider and prospective vaccinee, based on a joint assessment of risks and benefits, on a case-by-case basis.

Vaccination programmes should be accompanied by information campaigns conveying that it takes approximately two weeks from completion of a vaccination series (one or two doses depending on the product) for immunity to fully develop and that the level of protection conferred by these vaccines under different circumstances has not yet been determined for this outbreak.

Member States using vaccines against monkeypox are strongly encouraged to do so within a framework of collaborative clinical studies using standardized design methods and data collection tools for clinical and outcome data, in order to rapidly increase evidence generation, especially on vaccine efficacy/effectiveness and safety. Where participation in placebo-controlled clinical efficacy trials for monkeypox vaccines and schedules is not considered feasible, the use of a range of other robust [study designs to assess vaccine effectiveness](#) should be rapidly put in place employing standard data collection methods, where resources allow.

WHO, in collaboration with the Uppsala Monitoring Centre (WHO Collaborating Centre), has developed a mobile application, called VigiMobile App, to report adverse events following immunization with smallpox and monkeypox vaccines.

Therapeutics

Currently, there is no specific treatment approved for monkeypox virus infection. However, there are antiviral medications that can be used to treat smallpox and other conditions that may help patients with monkeypox infection. Therefore, the development of therapeutics for treatment of monkeypox at primary health care level is a priority for preventing severe disease, clinical complications and on-going transmission.

WHO is seeking feedback on the [Target Product Profile \(TPP\) therapeutics for monkeypox cases](#) from experts in the industry, product developers, the scientific community, national infection control programme personnel and clinicians currently involved in the management and control of monkeypox. The TPP is intended to guide and prioritize the evaluation of repurposed therapeutic agents for monkeypox or the development of new therapeutic agents.

Technical guidance and other resources

WHO Guidance and Public Health Recommendations

- 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](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 Global clinical data platform for monkeypox case report form (CRF), 15 July 2022. https://www.who.int/publications/i/item/WHO-MPX-Clinical_CRF-2022.2
- 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>
- WHO Surveillance, case investigation and contact tracing for Monkeypox: Interim guidance, 24 June 2022. <https://www.who.int/publications/i/item/WHO-MONKEYPOX-surveillance-2022.2>
- WHO Vaccines and immunization for monkeypox: Interim guidance, 14 June 2022. <https://apps.who.int/iris/bitstream/handle/10665/356120/WHO-MPX-Immunization-2022.1-eng.pdf>
- 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>
- 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-\(crf\)](https://www.who.int/publications/m/item/monkeypox-minimum-dataset-case-reporting-form-(crf))
- WHO Monkeypox minimum dataset case reporting form (CRF), 14 June 2022. [https://www.who.int/publications/m/item/monkeypox-minimum-dataset-case-reporting-form-\(crf\)](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>
- Global clinical data platform for monkeypox case report form (CRF), 14 June 2022. <https://www.who.int/publications/i/item/WHO-MPX-Clinical-CRF-2022.1>
- WHO Go.Data: Managing complex data in outbreaks. <https://www.who.int/tools/godata>

Risk communication and community engagement

- Monkeypox Q&A, 12 July 2022. <https://www.who.int/news-room/questions-and-answers/item/monkeypox>
- 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
- Monkeypox: public health advice for gay, bisexual and other men who have sex with men, 25 May 2022, <https://www.who.int/news/item/25-05-2022-monkeypox--public-health-advice-for-gay--bisexual-and-other-men-who-have-sex-with-men>

- 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 genomic studies

- 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>
- 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, publishing date, 19 May 2022. <http://www.who.int/news-room/factsheets/detail/monkeypox>
- Health topics – Monkeypox: https://www.who.int/health-topics/monkeypox#tab=tab_1
- 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 \(who.int\)](https://www.who.int/europe/publications/m/item/monkeypox-surveillance-bulletin)
- 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 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

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 monkeypox by WHO region and country from 1 January 2022 to 7 August 2022, 17:00 CEST*

WHO Region	Country/territory/area	Confirmed cases	Deaths
African Region	Benin	3	0
	Cameroon	7	0
	Central African Republic	3	2
	Congo	2	0
	Democratic Republic of the Congo	163	0
	Ghana	35	1
	Liberia	2	0
	Nigeria	157	4
	South Africa	3	0
Region of the Americas	Argentina	31	0
	Bahamas	1	0
	Barbados	1	0
	Bermuda	1	0
	Bolivia (Plurinational State of)	3	0

	Brazil	1721	1
	Canada	957	0
	Chile	68	0
	Colombia	43	0
	Costa Rica	3	0
	Dominican Republic	4	0
	Ecuador	7	0
	Guadeloupe	1	0
	Guatemala	2	0
	Jamaica	3	0
	Martinique	1	0
	Mexico	91	0
	Panama	2	0
	Peru	340	0
	Puerto Rico	21	0
	Saint Martin	1	0
	United States of America	7510	0
	Uruguay	2	0
	Venezuela (Bolivarian Republic of)	1	0
	Eastern Mediterranean Region	Lebanon	6
Morocco		1	0
Qatar		2	0
Saudi Arabia		5	0
Sudan		1	0
United Arab Emirates		16	0
European Region	Andorra	4	0
	Austria	154	0
	Belgium	482	0
	Bosnia and Herzegovina	1	0
	Bulgaria	4	0
	Croatia	12	0
	Cyprus	1	0
	Czechia	26	0
	Denmark	108	0
	Estonia	9	0
	Finland	22	0
	France	2239	0
	Georgia	1	0
	Germany	2887	0
	Gibraltar	5	0
	Greece	39	0
	Hungary	42	0
	Iceland	10	0
Ireland	97	0	

	Israel	160	0
	Italy	505	0
	Latvia	3	0
	Lithuania	3	0
	Luxembourg	31	0
	Malta	17	0
	Montenegro	1	0
	Netherlands	959	0
	Norway	64	0
	Poland	63	0
	Portugal	710	0
	Romania	22	0
	Russian Federation	1	0
	Serbia	10	0
	Slovakia	6	0
	Slovenia	37	0
	Spain	4577	2
	Sweden	111	0
	Switzerland	312	0
	The United Kingdom	2759	0
Türkiye	1	0	
South-East Asia Region	India	9	1
	Thailand	4	0
Western Pacific Region	Australia	58	0
	China	3	0
	Japan	3	0
	New Caledonia	1	0
	New Zealand	3	0
	Philippines	1	0
	Republic of Korea	1	0
	Singapore	15	0
Cumulative	89 countries/territories/areas	27 814	11