

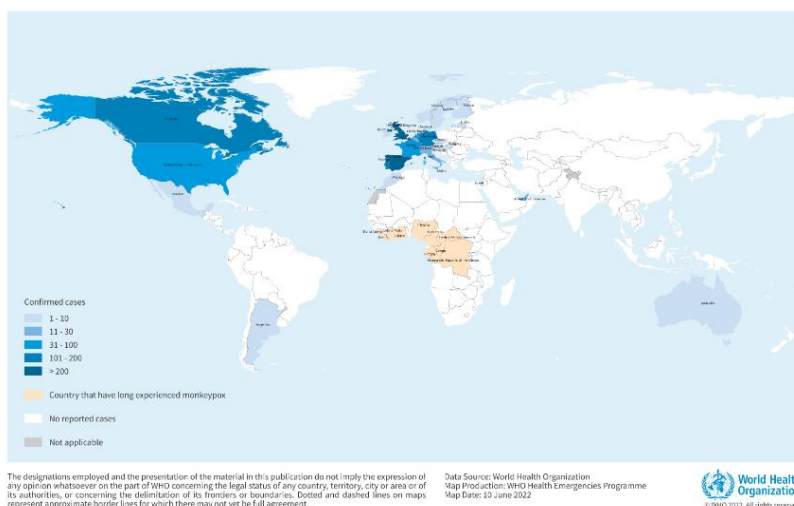
Given the simultaneous occurrence of monkeypox outbreaks in non-endemic countries within and outside the Region of the Americas, the Pan American Health Organization/World Health Organization (PAHO/WHO) shares with its Member States an update on the epidemiological situation and reinforcing guidance on surveillance, laboratory, clinical management, infection prevention and control, vaccination, mass gatherings, international travel, and risk communication.

Situation summary

From 13 May to 10 June 2022, the World Health Organization (WHO) was notified of 1,423 confirmed cases of monkeypox in 31 Member States that are not endemic for monkeypox (**Table 1**). So far, no deaths related to the ongoing outbreak have been reported in non-endemic countries. Most cases have been identified through sexual health clinics and primary care facilities, and have included primarily, but not exclusively men who have sex with men (MSM) community.

As of 10 June 2022, most confirmed cases in non-endemic countries were reported in the European Region with 87% (n=1,243, 23 countries), followed by the Region of the Americas with 11% (n=159, 5 countries), the Eastern Mediterranean Region with 1% (n=14, 2 countries) and the Western Pacific Region with <1% (n=7, 1 country) (**Figure 1, Table 1**).

Figure 1. Geographical distribution of monkeypox cases in non-endemic countries, between 13 May and 8 June 2022.



Source: Multi-country monkeypox outbreak: situation update. Disease Outbreak News (DON). Available at: <https://bit.ly/39hcWiQ>. The map includes cases reported or identified by WHO from official public sources.

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In all samples in which sequencing was performed and the monkeypox virus (MPXV) **was identified, the West African clade¹ was particularly identified. Most confirmed cases with a history of travel reported travel to countries in Europe or North America, rather than West or Central Africa, where monkeypox is endemic. Confirmation of monkeypox in persons who have not traveled to an endemic area is unusual and the occurrence of a case in a non-endemic country is considered an outbreak.**

This is the first recorded occurrence of simultaneous monkeypox outbreaks in non-endemic countries, suggesting that there may have been undetected transmission for an unknown period, followed by recent amplifying events.

To date, the clinical presentation of confirmed cases has been varied. Many cases in this outbreak do not present the classic clinical presentation of monkeypox. These atypical clinical findings, different from the classic presentation of monkeypox, are the presence of skin lesions in the genital or perineal/perianal area, without subsequent dissemination, in a small number, and which may precede the general symptoms (fever, malaise, myalgia, etc.), as well as proctitis. Frequently, adenopathies are found. Lesions around the mouth and on the oral mucosa, similar to the classic presentation of monkeypox, have also been described.

In this outbreak, some documented cases have presented pustules and lesions at different stages of development, which is atypical compared to the known clinical presentation of monkeypox.

Most patients have received home care; very few cases have required hospitalization due to complications or severe clinical manifestations, and some cases were hospitalized for monitoring and isolation purposes. Reasons for hospitalization included symptomatic pain management and treatment of secondary infections.

In addition to cases reported in non-endemic countries, the World Health Organization continues to receive updates on monkeypox outbreaks in endemic countries² in the Region of Africa through established surveillance mechanisms (Integrated Disease Surveillance and Response). From January through 8 June 2022, a total of 1,536 suspected

Table 1. Monkeypox cases in non-endemic countries. 13 May to 10 June 2022.

Región	Country	Confirmed	Probable
AMRO	Argentina	2	
	Brazil	1	
	Canada	110	
	Mexico	1	
	United States of America	45	
EMRO	Morocco	1	
	United Arab Emirates	13	
EURO	Austria	1	
	Belgium	24	1
	Czechia	6	
	Denmark	3	
	Finland	2	
	France	91	
	Germany	165	
	Greece		1
	Hungary	2	
	Iceland		2
	Ireland	9	
	Israel	4	
	Italy	20	
	Latvia	1	
	Malta	1	
	Netherlands	54	
	Norway	2	
	Portugal	209	
	Slovenia	6	
	Spain	259	
Sweden	6		
Switzerland	12		
The United Kingdom	366		
WPRO	Australia	7	1
Total	31	1423	5

Note: AMRO: WHO Regional Office for the Americas; EMRO: WHO Regional Office for the Eastern Mediterranean; EURO: WHO Regional Office for Europe; WPRO: WHO Regional Office for the Western Pacific.

¹ Two clades of monkeypox are recognized, one endemic in West Africa (WA) and one from the Congo Basin region (CB). The WA clade has been associated in the past with a lower overall mortality rate of <3%, whereas the CB clade appears to cause severe disease more frequently with a case fatality rate (CFR) of 1-10%. Both estimates are based on infections among generally younger populations in the setting of endemic countries in Africa.

² The countries endemic for monkeypox are Cameroon, Central African Republic, Democratic Republic of Congo, Gabon, Ghana (identified only in animals), Ivory Coast, Liberia, Nigeria, Republic of Congo, and Sierra Leone. Benin and South Sudan have documented imports in the past. Countries currently reporting cases in the West African clade are Cameroon and Nigeria.

cases, including 72 deaths, were reported in eight endemic countries. During the same period, 59 confirmed cases were reported in six of the above endemic countries.

The outbreak of monkeypox is ongoing and more cases are expected to be identified as surveillance and laboratory capacity is implemented in non-endemic countries.

Guidance for national authorities

Given the simultaneous occurrence of monkeypox outbreaks in non-endemic countries within and outside the Region of the Americas, the Pan American Health Organization/World Health Organization (PAHO/WHO) reinforcing guidance on surveillance, laboratory testing and diagnosis, case investigation and contact tracing, clinical management, infection prevention and control, vaccination and immunization, mass gatherings, international travel, and risk communication³. These guidelines will be updated according to the findings of ongoing research.

Surveillance

PAHO/WHO encourages Member States to collaborate with the ongoing investigation and therefore recommends that they use the **monkeypox case notification form to report cases that meet the definitions of probable or confirmed cases**. This will allow for the collection of the minimum sufficient information for clinical and epidemiological characterization of cases and thus contribute to the ongoing investigation at the global level.

The list of minimum variables for the notification of monkeypox cases is published and available on the WHO website, available at: <https://bit.ly/3ttUp9K>

Additional surveillance guidance was shared in the Epidemiological Alert on monkeypox in non-endemic countries, published on 20 May 2022, are still in effect. Available at: <https://bit.ly/3H5NrNL>

Laboratory testing and diagnosis

On 25 May 2022, PAHO/WHO shared with its Member States **interim guidelines on laboratory testing for monkeypox virus**, based on the World Health Organization guidelines published on 23 May 2022, to interim guidance to National Reference Laboratories on detection of monkeypox virus. Interim guidelines are available at: <https://bit.ly/3mHzs7k>

PAHO/WHO informs Member States that an increasing number of commercial PCR kits are available on the market, some specific for the detection of monkeypox virus, some for the detection of the genus *Orthopoxvirus*. Almost all are considered for research use only and none are independently validated. Several primer and probe sets are mentioned in the scientific literature for setting up in-house PCR protocols.

Clinical management and infection prevention control

WHO has developed interim rapid response guidance for clinical management and prevention and control of monkeypox infections for health facilities and the community, the publication is available at: <https://bit.ly/39i91SX>. Most cases can be managed on an outpatient basis with symptomatic treatment and appropriate infection prevention and control measures. Hospitalization is performed according to clinical criteria or to ensure care during patient isolation.

³ WHO Disease outbreak news (DON). Multi-country monkeypox outbreak: situation update. Available at: <https://bit.ly/3986drq>

Given the limited evidence on the use of antivirals in monkeypox, PAHO/WHO recommends Member States that in the event they decide to use this medication, it should be performed in randomized clinical trials with standardized collection of clinical data and outcomes to rapidly generate evidence on efficacy and safety.

The implementation of appropriate infection prevention and control (IPC) measures is essential to mitigate and control the transmission of monkeypox in community and health care settings; this includes the application of a hierarchy of controls (administrative, environmental, and engineering controls) and the use of personal protective equipment (PPE) to reduce the risk of exposure to monkeypox in health care settings. Healthcare workers should apply standard precautions regularly, including performing a risk assessment for each patient interaction, respiratory hygiene and cough etiquette, patient positioning, PPE, aseptic technique, safe injections and sharps injury prevention, environmental cleaning and disinfection, proper management of linen and bedding, decontamination and reprocessing of reusable patient care items and equipment, and waste management. **WHO recommends that contact and droplet IPC measures be implemented for any suspected, probable or confirmed case of monkeypox.**

Considerations related to vaccination

There is a vaccine that was developed for monkeypox (MVA-BN), also known as Imvamune, Imvanex or Jynneos, that has been approved since 2019 by some national regulatory authorities, which is not yet widely available. WHO is coordinating with the manufacturer to improve access to this vaccine.

PAHO/WHO reminds Member States that mass vaccination against monkeypox in the population is neither required nor recommended; every effort should be made to control the person-to-person spread of monkeypox through early case detection and diagnosis, isolation, and contact tracing.

PAHO's Technical Advisory Group on Vaccines and Immunization (TAG) on Vaccine Preventable Diseases welcomes WHO recommendations that vaccination should only be offered to close contacts of a confirmed case of monkeypox.

Post-exposure vaccination with locally available vaccine (should ideally be administered within four days of exposure) can be considered for high-risk close contacts⁴.

All decisions about immunization with smallpox or monkeypox vaccines should be based on a case-by-case assessment of risks and benefits through shared clinical decision making. Implementation of vaccination should be accompanied by robust pharmacovigilance, and vaccine efficacy studies under clinical trial protocols are strongly recommended.

Mass gatherings and international travel

PAHO/WHO reminds Member States that **mass gatherings (including private satellite events) could represent an environment leading to monkeypox virus transmission if they involve close, prolonged, and frequent interactions between people, which in turn could expose them to contact with injuries, body fluids, respiratory droplets, and/or contaminated materials.** Currently,

⁴ PAHO Technical Advisory Group (TAG) on Vaccine Preventable Diseases (31 May 2022). VIII Ad Hoc Meeting of PAHO's Technical Advisory Group (TAG) On Vaccine-Preventable Diseases: Technical Briefing on the Multi-Country Monkeypox Outbreak. Available at: <https://bit.ly/3m15Si9>

postponing, or canceling meetings in areas where cases of monkeypox have been detected is not a default measure. However, the following preventive measures should be considered:

- 1) Share information on the epidemiological situation, modes of transmission and prevention measures with the organizers and attendees of the event,
- 2) maintain physical distance and regular hand washing are also effective in preventing the transmission of monkeypox virus,
- 3) the mass gatherings should have a primary health care team, which should be briefed on the initial management of persons with signs and symptoms consistent with monkeypox and the reporting of cases.

Based on the information available at this time, **WHO does not recommend that Member States adopt any measures related to international travel for inbound or outbound travelers.**

PAHO/WHO reminds Member States that if a traveler presents with febrile rash illness or is considered a suspected or confirmed case of monkeypox by health authorities, he/she should avoid any travel, domestic or international, until it does not constitute a public health risk. Likewise, any traveler presenting with febrile rash illness, during travel or upon return to the country of origin, should immediately notify a health worker. Persons who have been identified as contacts of suspected, probable and/or confirmed cases of monkeypox should be subject to monitoring by health authorities and should avoid any domestic or international travel until the end of their monitoring period.

PAHO/WHO urges health sector actors (health authorities at all levels, health workers, health and social sector partners, and commercial, academic, and research partners) in all Member States to respond rapidly to monkeypox outbreaks to contain local spread and spread to other countries. **Rapid and appropriate action must be taken before the virus becomes established as a human pathogen with efficient person-to-person transmission in both endemic and non-endemic settings.**

Risk communication

PAHO/WHO recommends that Member States communicate the risks related to monkeypox to the population and involve at-risk and affected populations, community leaders, civil society organizations, and health workers, including those in sexual health clinics. Prevention, detection, and timely care of cases are essential to prevent further secondary cases and effectively control the current outbreak. Providing public health counseling on how the disease is transmitted, its symptoms and preventive measures, as well as developing strategies for engaging population groups that are most at risk, are critical to limiting the spread.

Key messages:

- 1) If a person develops symptoms such as rash with blisters on the face, hands, feet, eyes, mouth and/or perianal and genital areas, fever, swollen lymph nodes, anal and rectal pain, headaches, muscle aches and fatigue; they should contact the nearest health facility.
- 2) If a person is a suspected or confirmed case of monkeypox, they should be isolated, avoid direct contact with others, and abstain from sexual intercourse, including oral sex, until the scabs fall off. During this period, cases may receive supportive treatment to relieve symptoms. Anyone caring for a suspected or confirmed case of monkeypox should use appropriate personal protective measures. Persons who have had sexual contact with a suspected or confirmed case, their family members, and health care workers who have cared for them are at highest risk of exposure because of the high likelihood of direct contact.

- 3) Anyone who has direct contact, including but not limited to sexual contact, with an infected person can contract monkeypox. Steps for self-protection include, avoiding sexual contact with someone who has a localized anogenital rash and limiting the number of sexual partners; avoiding close contact with someone who has symptoms and signs consistent with possible monkeypox infection; keeping hands clean with soap and water or alcohol-based gels; and maintaining cough etiquette.
- 4) Travelers to or residing in countries where monkeypox is endemic should avoid contact with sick mammals such as rodents, marsupials, non-human primates (dead or alive) that may harbor monkeypox virus and should refrain from eating or manipulate wild animals (bushmeat).
- 5) Prevent the spread of rumors and misinformation about monkeypox. It is important that public health authorities systematically listen to and analyze information shared through social media to identify key questions and information gaps and develop communication strategies based on this. The public should be encouraged to obtain information only from official sources.


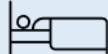





One Health

In endemic areas, several wild mammals have been identified as susceptible to monkeypox virus. This includes various types of squirrels, Gambian rats, dormice, non-human primates, among others. Some species are asymptomatic, especially those suspected of being reservoirs (rodents). Other species, such as monkeys and great apes, show skin rashes typical of those found in humans.

So far, there is no documented evidence that traditional domestic animals or livestock can be affected by monkeypox virus. There is also no documented evidence of human-to-animal transmission of monkeypox. However, there is still a risk of animal-to-human transmission⁵. Appropriate measures include proper waste management to prevent transmission of the disease from infected humans to susceptible animals in the household (including pets), physical distancing between people with monkeypox and domestic pets, in pet stores, in zoos and wildlife reserves, and with peri-domestic animals, especially rodents.

⁵ United States Centres for Disease Control and Prevention. Past U.S. Cases and Outbreaks. Available at: <https://bit.ly/3mJ7M20>

Below is a list of links to guidelines, scientific reports and other resources published by PAHO/WHO and WHO.

<p align="center">Surveillance, rapid response teams, and case investigation</p> <p align="center"></p>	<p align="center">Clinical management</p> <p align="center"></p>
<p>WHO. Monkeypox minimum dataset case reporting form (CRF). 4 June 2022. Available at: https://bit.ly/3xtUT21</p> <p>WHO. Surveillance, case investigation and contact tracing for Monkeypox. 22 May 2022. Available at: https://bit.ly/3toy25B</p> <p>WHO. Monkeypox outbreak toolbox. June 2021. Available at: https://bit.ly/3lz59iA</p>	<p>WHO. Clinical management and infection prevention and control for monkeypox: Interim rapid response guidance, 10 June 2022. Available at: https://bit.ly/39i91SX</p> <p>WHO. Update 77 – Monkeypox outbreak, update and advice for health workers. 30 May 2022. Available at: https://bit.ly/3xtXglr</p>
<p align="center">Laboratory</p> <p align="center"></p>	<p align="center">Infection and prevention control</p> <p align="center"></p>
<p>WHO. Laboratory testing for the monkeypox virus: Interim guidance. 23 May 2022. Available at: https://bit.ly/3zrLB8j</p> <p>PAHO/WHO. Laboratory Guidelines for the Detection and Diagnosis of Monkeypox Virus Infection. 25 May 2022. Available at: https://bit.ly/3NBtDUX</p>	<p>WHO. Clinical management and infection prevention and control for monkeypox: Interim rapid response guidance, 10 June 2022. Available at: https://bit.ly/39i91SX</p> <p>WHO. Update 77 – Monkeypox outbreak, update and advice for health workers. 30 May 2022. Available at: https://bit.ly/3xtXglr</p>
<p align="center">Critical preparedness and response</p> <p align="center"></p>	<p align="center">Risk communication</p> <p align="center"></p>
<p>WHO. Technical Brief (interim) and Priority Actions: Enhancing Readiness for monkeypox in WHO South-East Asia Region. Available at: https://bit.ly/3Hd1Yax</p>	<p>WHO. Monkeypox: public health advice for gay, bisexual and other men who have sex with men. 25 May 2022. Available at: https://bit.ly/3mxhDry</p>
<p align="center">Investigation, training, and other resources</p> <p align="center"></p>	
<p>WHO consultation sets research priorities for monkeypox. 3 June 2022. Available at: https://bit.ly/39oTcJV</p> <p>WHO advisory committee on variola virus research: report of the twenty-third meeting, virtual meeting, 3-4 November 2021. Available at: https://bit.ly/3HeViss</p> <p>Additional resources: https://bit.ly/3tyDL8X</p>	

Sources of information

1. Epidemiological Alert Monkeypox in non-endemic countries, published on 20 May 2022. Available at: <https://bit.ly/3H5NrNL>
2. WHO. Multi-country monkeypox outbreak: situation updates. Disease Outbreak News (DON). Available at: <https://bit.ly/3mAkTCs>
3. European Centers for Disease Control and Prevention (ECDC). Interim advice on Risk Communication and Community Engagement during the monkeypox outbreak in Europe, 2022. 2 June 2022. Available at: <https://bit.ly/3NXQUQG>
4. European Centers for Disease Control and Prevention (ECDC). Epidemiological updates: Monkeypox. Available at: <https://bit.ly/3zBFk9Z>
5. **Argentina** Ministry of Health. Ministry of Health informs that the result of the PCR sample derived to ANLIS Malbrán of the second suspected monkeypox case was positive. 27 May 2022. Available in Spanish at: <https://bit.ly/3zCx2Pm>
6. Public Health Agency of Canada confirms 2 cases of monkeypox. 19 May 2022. Disponible en: <https://bit.ly/3G7Kyf4>
7. **United States** Centres for Disease Control and Prevention (US CDC). U.S. Monkeypox Outbreak 2022: Situation Summary. 7 June 2022. Available at: <https://bit.ly/3NygwwR>
8. **United States** Centres for Disease Control and Prevention (US CDC). Morbidity and Mortality Weekly Report (MMWR). Monkeypox Outbreak — Nine States, May 2022. Available at: <https://bit.ly/3MNjSlz>
9. Press release from the **Mexico** Secretariat of Health. Mexico confirms first imported case of monkeypox. 28 de mayo de 2022. Available at: <https://bit.ly/3tpxLiS>
10. Press release from the Jalisco Secretariat of Health. **Mexico**. General Directorate of Epidemiology notifies Jalisco of one case of monkeypox. Available at: <https://bit.ly/3tr2ZGp>
11. OMS. Weekly epidemiological record n° 11, 16 March 2018, Emergence of monkeypox in West Africa and Central Africa, 1970–2017. Available at: <https://bit.ly/3yPHsul>
12. US CDC. Monkeypox and Smallpox Vaccine Guidance. Available at: <https://bit.ly/3lxql90>
13. US CDC. Monkeypox Virus Infection in the United States and Other Non-endemic Countries—2022. Available at: <https://bit.ly/3xMqnk3>
14. United States Food and Drug Administration (FDA). FDA approves first live, non-replicating vaccine to prevent smallpox and monkeypox. 24 September 2019. Available at: <https://bit.ly/3PwsnUz>; <https://bit.ly/3sNxkhZ>; <https://bit.ly/3PBjZ5Y>; <https://bit.ly/3G55OSp>