Epidemiological Update
Monkeypox in children, adolescents, and pregnant women

4 August 2022

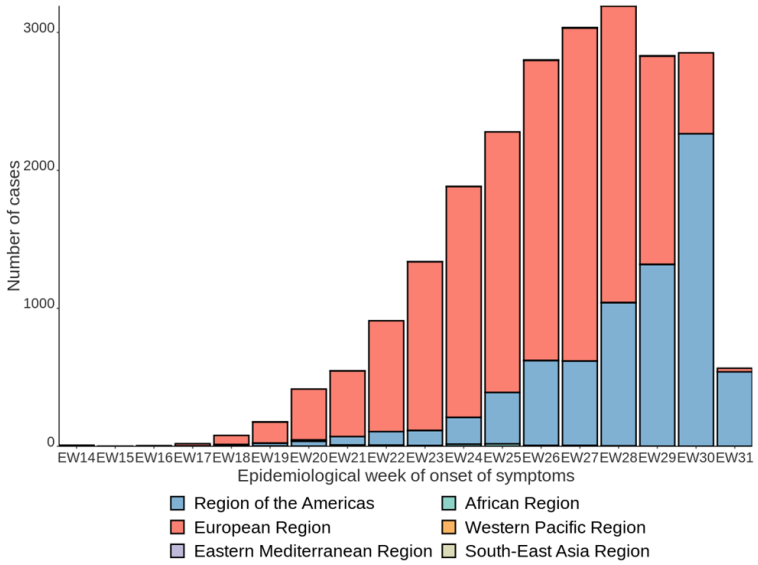
Global situation summary

Between 1 January and 2 August 2022, a total of 25,022 confirmed cases, including nine deaths, were reported from 83 Member States in six World Health Organization (WHO) Regions. The nine fatal cases were reported in Brazil (1), India (1), Nigeria (3), Spain (2), and the Central African Republic (2).

As of 2 August 2022, 64% (15,926 cases in 38 countries) of the confirmed cases were reported in the WHO European Region; 35% (8,644 cases in 20 countries and territories) in the WHO Region of the Americas, 1.4% (349 cases in 9 countries) in the WHO African Region, <1% (67 cases in 8 countries) in the WHO Western Pacific Region, <1% (28 cases in 6 countries) in the WHO Eastern Mediterranean Region, and <1% (8 cases in 2 countries) in the WHO South-East Asia Region (**Figures 1-2**).

During the last 7 days there was an increase of 33.5% and 70% in the number of reported cases globally and in the WHO Region of the Americas, respectively. During the same period, there was an increase of 20% in the WHO South-East Asia Region, 15% in the WHO European Region, 9% in the WHO African Region, 8% in the WHO Western Pacific Region, and 4% in the WHO Eastern Mediterranean Region.

Figure 1. Confirmed cases of monkeypox by date of symptom onset and WHO Region, as of 2 August 2022.



Source: Cases reported to WHO or published by Ministry of Health or Health Agencies.

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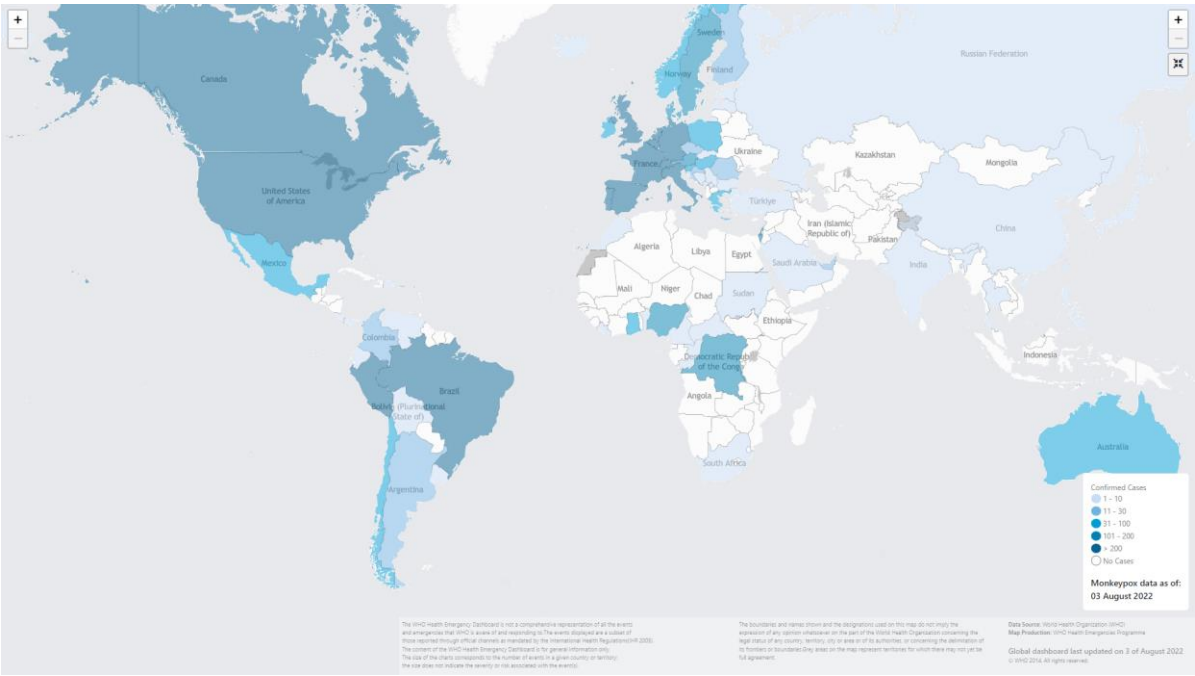
Globally, among confirmed cases for which information is available (n=16,719), 99% are males with a median age of 37 years old. Regarding sexual orientation, of cases with available information, 98% were identified as men who have sex with men (MSM). Of the cases where information on HIV infection is available, 38% are HIV positive. Regarding exposure, 22% of the cases indicated that they had exposure during social events with sexual contact. Regarding the type of transmission reported, sexual encounter was the most frequent in 4,808 of 5,255 (91.5%) cases (1).

Of the confirmed cases for which hospitalization data are available (n=7,903), 2% required hospitalization for isolation and 2.2% for treatment. Three cases required management in an intensive care unit (ICU)[1].

Figure 2. Global geographical distribution of monkeypox cases as of 3 August 2022.



Source: This map includes cases reported to WHO or published by Ministry of Health or Health Agencies.

The real magnitude of the outbreak could be underestimated specially in countries that have not reported monkeypox cases previously, as clinical diagnosis may be a challenge as well as limited access to testing. There is the possibility of a greater impact of the outbreak if vulnerable population is affected; according to historical data, case-fatality is highest among children, young adults, and immunocompromised people, including people living with uncontrolled HIV infection, who are at higher risk of developing severe disease (2).

Monkeypox among children and adolescents

Of the reported cases for which information on age is available (n=16,969), 96 are among minors (<18 years old); of these, 61% are male. Regarding age, 51% (49 cases) are aged 11-17 years, and

[1] No information is available on the cause of admission to the intensive care unit.

26% (25 cases) are children aged 0-4 years. No deaths have been reported in these age groups. Of the 33 confirmed cases for which hospitalization data is available, 42% required hospitalization for isolation or treatment. None of the cases had any comorbidities.

Sixty-eight percent of the confirmed cases in persons under 18 years of age were reported in the WHO African Region (65 cases, including 21 cases in children aged 0-4 years), 27% in the European Region, and 5% in the Region of the Americas.

The 26 cases in persons under 18 years of age reported in the WHO European Region were identified in Germany (2), Belgium (1), Spain (16), France (2), the Netherlands (1), the United Kingdom (3), and the Czech Republic (1). Only two of these cases indicated exposure to the disease during their stay at home.

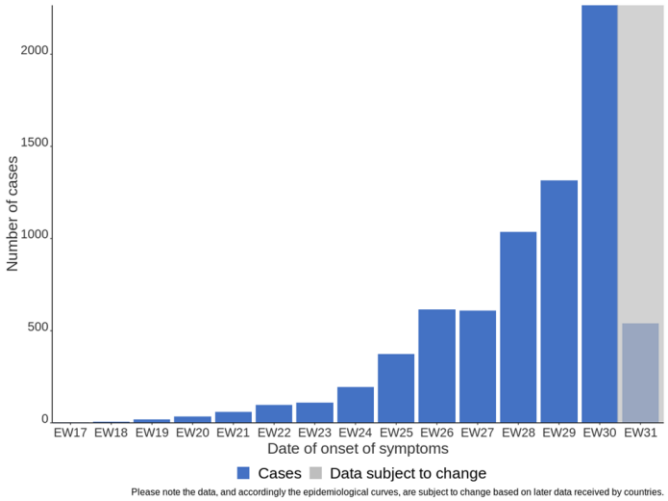
Monkeypox among pregnant women

Intrauterine transmission of monkeypox virus (MPXV) has been documented as well as mother-to-child transmission by direct contact (3). The first is from a longitudinal case series that reported the outcomes of four pregnant women: one delivered a healthy baby, two had early miscarriages, and one stillbirth in which the stillborn had a diffuse skin rash with virologic confirmation of MPXV. This suggests that MPXV infection may result in adverse fetal outcomes such as death or spontaneous abortion (3). The association between the severity of maternal disease and these outcomes is unclear (3).

Epidemiological situation in the Region of the Americas

Between 10 May and 2 August 2022, a total of 8,644 monkeypox cases including one death in Brazil were reported in 20 countries and territories. Overall, 84% of confirmed cases were reported by the United States of America (67%) and Brazil (17%), with a relative increase of 68% and 112% in the last 7 days, respectively. During the same period, Mexico and Peru reported an increase of 52% and 50%, respectively.

Figure 3. Confirmed cases of monkeypox by epidemiologic week of symptom onset. Region of the Americas. As of 2 August 2022.



Source: Cases reported to PAHO/WHO or published by Ministry of Health of Health Agencies.

Of cases with available information on gender and age (n=1,186), 85% correspond to men between 18 and 44 years of age. Of cases with available information on sexual orientation (n=670), 96% identify themselves as men who have sex with men (MSM) and of these, 49% are HIV positive. Of cases with available information on probable place of exposure (n=52), 35% referred to social events with sexual contact.

The deceased case reported in Brazil was a man aged 41 years old, immunocompromised due to relevant comorbidities.

Monkeypox among minors

Of the 1,426 confirmed cases reported between May 6 and 2 August 2022, and for which information on age is available, 5 cases are under 18 years of age, of which one is under 10 years old and 4 correspond to children between 11-17 years old, 50% of the cases with available information on sex (4 cases), correspond to females. No deaths have been recorded in these age groups.

Cases in children under 18 years of age have been identified in Brazil, Canada, the United States of America and Mexico. In 80% of the cases there is no information available on the type of exposure to the disease and only one case reports exposure during an event and epidemiological link with a confirmed case. None of the cases reported hospitalization or any comorbidity.

Table 1. Confirmed cases of monkeypox and the relative increase in the last 7 days. Region of the Americas. As of 2 August 2022.

Country/Territories	Total cases	Total cases per 1M	Cases - last 7 days	% variation - last 7 days
United States of America	5,825	17.6	2,347	67.5
Brazil	1,474	6.9	778	111.8
Canada	803	21.3	59	7.9
Peru	313	9.5	105	50.5
Mexico	90	0.7	31	52.5
Chile	55	2.9	16	41
Puerto Rico	21	7.3	8	61.5
Argentina	20	0.4	0	0
Colombia	20	0.4	8	66.7
Ecuador	6	0.3	3	100
Costa Rica	3	0.6	2	200
Dominican Republic	3	0.3	0	0
Jamaica	2	0.7	0	0
Uruguay	2	0.6	2	-
Bahamas	1	2.5	0	0
Bermuda	1	16.1	0	0
Bolivia (Plurinational State of)	1	0.1	1	-
Barbados	1	3.5	0	0
Martinica	1	2.7	0	0
Panama	1	0.2	0	0
Venezuela (Bolivarian Republic of)	1	0.0	0	0

Source: Cases reported to PAHO/WHO or published by Ministry of Health of Health Agencies.

Guidance for national authorities

Although the highest proportion of identified cases are found in men who have sex with men, any exposed person can contract monkeypox, and it is recommended that countries take measures to reduce the risk of transmission to other vulnerable groups, including minors, pregnant women, and immunocompromised persons.

Guidance for clinical management in minors and pregnant women, adapted from the Clinical Management and Infection Prevention and Control of Monkeypox, available at: https://www.who.int/publications/i/item/WHO-MPX-Clinical-and-IPC-2022.1, is summarized below.

Clinical management among minors

Children with monkeypox (MPX) may be at higher risk than adults for serious conditions such as encephalitis and sepsis, as well as death (3). To decrease the potential risks of complications, the following measures can be considered:

- Newborns of mothers with MPX should be closely monitored for evidence of possible congenital or perinatal exposure or infection.
    - Children should not sleep in the same room or bed or drink/eat from the same utensils as a person with MPX.
    - Given these potential risks, admitting young children to a heath institution for monitoring disease progression and providing treatment for complications may be considered.
    - Young children should not be isolated alone. There should be a person (parent or caregiver), who is healthy and not at high risk, providing care for the child with MPX with appropriate IPC measures.
- Children exposed to MPX should be fully vaccinated for their age according to the national immunization schedule.
- Infant feeding practices, including whether to stop breastfeeding for a mother with MPX, should be assessed on a case-by-case basis, considering the general physical status of the mother and severity of disease, which could impact the risk of transmission of MPX from mother to infant.
    - It is currently unknown whether MPX virus or antibodies are present in the breast milk of lactating women.
    - Infants of mothers with MPX should be closely monitored for signs and symptoms with the primary goal of providing early supportive care to prevent the development of severe disease.
    - Mothers with MPX should take general IPC protective measures when handling and feeding their infants, e.g., wash hands before and after each feeding, wear a mask (if possible), and cover any lesions on the areola or areas that have direct contact with the infant. Alternatively, if only one breast has lesions, mothers can express milk

from the breast with lesions on the areola and discard the milk, and nurse from the unaffected breast.

- In all cases, the mother-infant pair should be closely monitored for the development of signs and symptoms of MPX and treated accordingly. If the infant is younger than 6 months and separated from a mother who has MPX, the infant should be fed donor human milk or appropriate breast milk substitutes, informed by feasibility, safety, sustainability, cultural context, acceptability to the mother, and service availability.

- For infants 6 to 23 months of age who cannot access donor human milk or appropriate breast milk substitutes, pasteurized whole cream animal milk is appropriate as part of a balanced diet along with complementary foods.

- Comprehensive assistance should be provided to any mother who has stopped breastfeeding due to MPX (or any other reason) for re-lactation to re-establish a milk supply and continue breastfeeding. In the case of replacement feeding with a breast milk substitute, it is essential to monitor the infant's growth, development and other illnesses, as well as signs and symptoms of MPX.

- If the mother of an infant or young child has been exposed to MPX and has no symptoms suggestive of infection, the infant or child should not be separated. They should continue to breastfeed while closely monitoring for signs and symptoms of MPX.

Clinical management during pregnancy and postpartum

Monkeypox virus infection in pregnant women can lead to vertical transmission as well as adverse fetal outcomes, such as spontaneous abortion and stillbirth (3). To decrease the potential risks of complications, the following measures can be considered:

- Pregnant or postpartum women with monkeypox characterized by mild/uncomplicated disease may not require hospitalization but should be considered for care in a health facility. Women with severe or complicated disease should be admitted to a hospital in order to provide appropriate supportive treatment and/or interventions necessary for improving maternal and fetal survival.

- Access to respectful, skilled, and patient-centered care must be guaranteed, including midwifery, obstetrics, gynecology, fetal medicine, and neonatal care, as well as mental health and psychosocial support, along with preparing for potential maternal and neonatal complications.

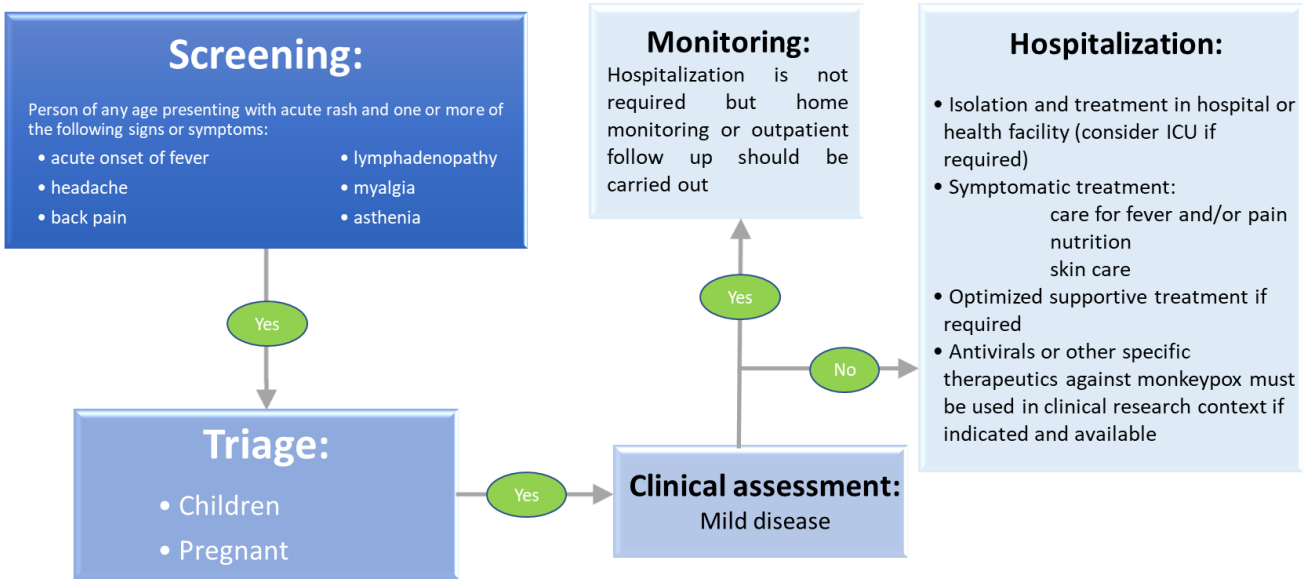
- WHO recommends that the mode of delivery be individualized, based on obstetric indications and the woman's preferences. Induction of labor and cesarean sections should only be performed when medically justified and based on maternal and fetal conditions.

    - Delaying umbilical cord clamping (no earlier than 1 minute after birth) is recommended to improve maternal and infant health and nutrition outcomes. There is no evidence that delaying umbilical cord clamping increases the likelihood of viral transmission from mother to newborn.

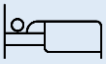
- Pregnant women who have recovered from monkeypox should be counseled and encouraged to receive routine prenatal, postpartum, or abortion care as appropriate. Additional care should be provided if there are any complications.
    - Pregnant women with or recovering from monkeypox should be provided with information regarding the potential risk of adverse pregnancy outcomes and offered counseling if requested or desired. Women's choices and rights to sexual and reproductive health care, including access to contraception and safe abortion according to the WHO guideline on abortion care, should be respected.
    - Provide advice to women on safe sexual practices.
    - All pregnant women with confirmed monkeypox and their babies should be followed through national registries for signs of complications.

Guidance on **surveillance, laboratory diagnosis and testing, clinical management, infection prevention and control, vaccination, mass events, and international travel** for monkeypox was shared in the Epidemiologic Updates on monkeypox, published on 20 May, 13 June, and 9 July 2022, which remain current. Available at: https://www.paho.org/en/epidemiological-alerts-and-updates?topic=87192.

Flowchart for initial care of minors and pregnant women



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

Surveillance, rapid response teams, and case investigation 	**Clinical management** 
WHO. Monkeypox minimum dataset case reporting form (CRF). 4 June 2022. Available at: https://bit.ly/3xtUT21 WHO. Surveillance, case investigation and contact tracing for Monkeypox. 22 May 2022. Available at: https://bit.ly/3toy25B WHO. Monkeypox outbreak toolbox. June 2021. Available at: https://bit.ly/3lz59iA	WHO. Clinical management and infection prevention and control for monkeypox: Interim rapid response guidance, 10 June 2022. Available at: https://bit.ly/39i91SX WHO. Update 77 – Monkeypox outbreak, update and advice for health workers. 30 May 2022. Available at: https://bit.ly/3xtXglr PAHO. Guidance on Clinical Suspicion and Differential Diagnosis of Monkeypox. Provisional Technical Note. June 2022. Available at: https://bit.ly/3vIcAtz
Laboratory 	**Infection and prevention control** 
WHO. Laboratory testing for the monkeypox virus: Interim guidance. 23 May 2022. Available at: https://bit.ly/3zrLB8j PAHO/WHO. Laboratory Guidelines for the Detection and Diagnosis of Monkeypox Virus Infection. 25 May 2022. Available at: https://bit.ly/3NBtDUx	WHO. Clinical management and infection prevention and control for monkeypox: Interim rapid response guidance, 10 June 2022. Available at: https://bit.ly/39i91SX WHO. Update 77 – Monkeypox outbreak, update and advice for health workers. 30 May 2022. Available at: https://bit.ly/3xtXglr
Critical preparedness and response 	**Risk communication** 
WHO. Technical Brief (interim) and Priority Actions: Enhancing Readiness for monkeypox in WHO South-East Asia Region. Available at: https://bit.ly/3Hd1Yax	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 WHO. Public health recommendations for holding events during the current monkeypox outbreak. July 2022. Available at: https://bit.ly/3uygi8g
Investigation, training, and other resources 	
WHO consultation sets research priorities for monkeypox. 3 June 2022. Available at: https://bit.ly/39oTcJV 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 Additional resources: https://bit.ly/3tyDL8X	

Sources of information

1. WHO. Internal Report - Multi-Country Monkeypox Outbreak - Global Trends. Available at: https://bit.ly/3P7WP6j

2. WHO. Multi-country monkeypox outbreak: situation update. Disease Outbreak News (DON). Available at: https://bit.ly/3mAkTCs

3. WHO. Clinical management and infection prevention and control for monkeypox: Interim rapid response guidance, 10 June 2022. Available at: https://bit.ly/39i91SX

4. WHO. Second meeting of the International Health Regulations (2005) (IHR) Emergency Committee regarding the multi-country outbreak of monkeypox. 23 July 2022. Available at: https://bit.ly/3zZMNja

5. IHR National Focal Points of the Member States that reported cases to WHO and PAHO/WHO.