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Monkeypox: Facts for Faith Community Nurses

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Monkeypox: Facts for Faith Community Nurses

Cover Page Footnote

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Faith community nurses provide services to diverse populations and should be aware of the recent outbreak of monkeypox. The multi-country outbreak was first reported to the World Health Organization (WHO) on May 13, 2022 (WHO, 2022b). An outbreak is defined as one reported case of monkeypox in a non-endemic country. What makes this situation unusual and concerning is that the cases were reported in non-endemic countries with most having no established travel links to endemic areas. Previous human outbreaks outside of Africa were linked to international travel to non-endemic areas (Centers for Disease Control and Prevention [CDC], 2022a). The vast majority of monkeypox cases in the United States have been diagnosed in gay, bisexual, and other men who have sex with men (MSM) (CDC, 2022i; WHO 2022b).

What is Monkeypox?

Monkeypox was first discovered in a colony of research monkeys in 1958 with the first human case reported in 1970 (CDC, 2022a). Monkeypox caused by the monkeypox virus of the Orthopoxvirus genus is milder than smallpox and is rarely fatal (WHO, 2022a). Transmission occurs through close contact to lesions, body fluids, respiratory droplets, fabrics (clothing or bedding) or objects of an individual infected with monkeypox (WHO, 2022b).

The incubation period ranges from 5-21 days with symptoms of monkeypox appearing within 3 weeks of exposure to include flu-like symptoms of fever, headache, lymphadenopathy, backpain, muscle aches, and weakness (CDC, 2022e; WHO 2022a). Lymphadenopathy is the distinguishing characteristic of monkeypox when compared to similar diseases such as smallpox, chickenpox, and measles. The rash appears 1-4 days after the appearance of fever and is concentrated on the face, hands, feet, and genitalia with the lesions developing in a sequential fashion (macules, papules, vesicles, pustules, scabs) (WHO, 2022b). The virus is usually self-limiting lasting 2-4 weeks and can be transmitted until the rash is completely healed with a fresh layer of skin (CDC, 2022e). The 2022 outbreak has an atypical presentation with a rash localized to the oral and genital areas accompanied by painful regional lymphadenopathy (WHO, 2022b).

What to Do if Monkeypox is Suspected?

Providers are encouraged to test individuals suspected of monkeypox who present with new onset of rash specifically if it is deep-seated, firm, well-circumscribed and umbilicated (CDC, 2022b; CDC,2022f). Providers should also test those patients presenting with at least one of the established epidemiologic criteria (see Table 1) (CDC, 2022b). Initial monkeypox testing involves obtaining two lesion specimens from different locations on the body (CDC, 2022h). Personal protective equipment (PPE) should be worn by those examining suspected individuals and those obtaining diagnostic specimens. Specimen testing is available at CDC Laboratory Response Network (LRN) laboratories or at authorized commercial laboratories (CDC, 2022h; FDA, 2022).

Table 1
Monkeypox 2022: Epidemiologic Criteria

EPIDEMIOLOGIC CRITERIA: Within 21 days of illness onset
Reports having contact with a person or people with a similar appearing rash or who received a diagnosis of confirmed or probable monkeypox **OR**
Had close or intimate in-person contact with individuals in a social network experiencing monkeypox activity, this includes men who have sex with men (MSM) who meet partners through an online website, digital application ("app"), or social event (e.g., a bar or party) **OR**
Traveled outside the US to a country with confirmed cases of monkeypox or where *Monkeypox virus* is endemic **OR**
Had contact with a dead or live wild animal or exotic pet that is an African endemic species or used a product derived from such animals (e.g., game meat, creams, lotions, powders, etc.)
EXCLUSION CRITERIA: A case may be excluded as a suspect, probable, or confirmed case if:
An alternative diagnosis can fully explain the illness **OR**
An individual with symptoms consistent with monkeypox does not develop a rash within 5 days of illness onset **OR**
A case where high-quality specimens do not demonstrate the presence of *Orthopoxvirus* or *Monkeypox virus* or antibodies to orthopoxvirus

Note. Adapted from "Monkeypox: Case Definitions for Use in the 2022 Monkeypox Response," by CDC, 2022, https://www.cdc.gov/poxvirus/monkeypox/clinicians/case-definition.html

The WHO and CDC recommend antiviral treatment be considered for severe cases and those individuals at increased risk of adverse outcomes (CDC, 2022d; WHO, 2022a). Severity of the disease is related to exposure, vaccination status, the underlying health status of the individual, concurrent illnesses, and comorbidities. Severe cases are more common in those with underlying immune deficiency, children younger than 8 years of age, a current or history of atopic dermatitis or other active exfoliative skin condition, complications, and pregnant or breastfeeding women (CDC, 2022d). Secondary infections, pneumonia, sepsis, encephalitis, and loss of vision due to corneal infections are possible complications of monkeypox (WHO, 2022a).

There is no approved treatment for monkeypox; however, tecovirimat (TPOXX), an antiviral medication approved by the FDA for the treatment of smallpox in adults and children, has received expanded access for the treatment of monkeypox (CDC, 2022g; FDA, 2022). The safety and efficacy for the treatment of monkeypox in humans with TPOXX has not been established. TPOXX is available through the Strategic National Stockpile and clinicians should request the medication from their state/regional health departments (CDC, 2022g). Providers can contact the CDC Emergency Operations Center (770-488-7100) for urgent clinical consultations.

Public Health Response

As of August 30, 2022, the CDC reported 18,101 cases of monkeypox in the United States (CDC, 2022c). All U.S. states including the District of Columbia and Puerto Rico have confirmed cases. The JYNNEOS vaccine to prevent monkeypox and smallpox was approved by the FDA in 2019 (FDA, 2022a; FDA, 2022b). JYNNEOS is a two-dose subcutaneous vaccine administered 28 days apart and indicated for use in adults 18 years of age and older at high risk

of infection. On August 9, 2022, due to the emerging public health crisis and the need to increase availability of vaccine, the FDA issued an emergency use authorization (EUA) to allow administration of the vaccine by intradermal injection at one fifth the original dose increasing the availability of vaccine (FDA, 2022b). The EUA also allows for subcutaneous use in individuals under the age of 18 at high risk of monkeypox infection.

On August 8, 2022, the WHO convened a group of experts to rename the monkeypox disease and virus variants (Center for Infectious Disease Research and Policy, 2022; WHO, 2022c). The Congo basin (Central African) variant was renamed clade one (I) and the West African clade was renamed clade two (II). Clade II was further delineated to clade IIa and clade IIb. Clade IIb is the variant associated with the global outbreak of 2022. The WHO is collecting new name proposals for the monkeypox disease, and the International Committee on the Taxonomy of Viruses (ICTV) is in the process of renaming the monkeypox virus.

Conclusion

The 2022 monkeypox outbreak is a public health concern (CDC, 2022i). Although most confirmed cases are in the MSM population any person who exposed to monkeypox is at risk for developing disease. As the number of cases in the U.S. continue to grow, faith community nurses need to be aware of the screening criteria, available treatment for severe cases, and availability of vaccine for prevention.

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