

# Monkeypox (MPX)

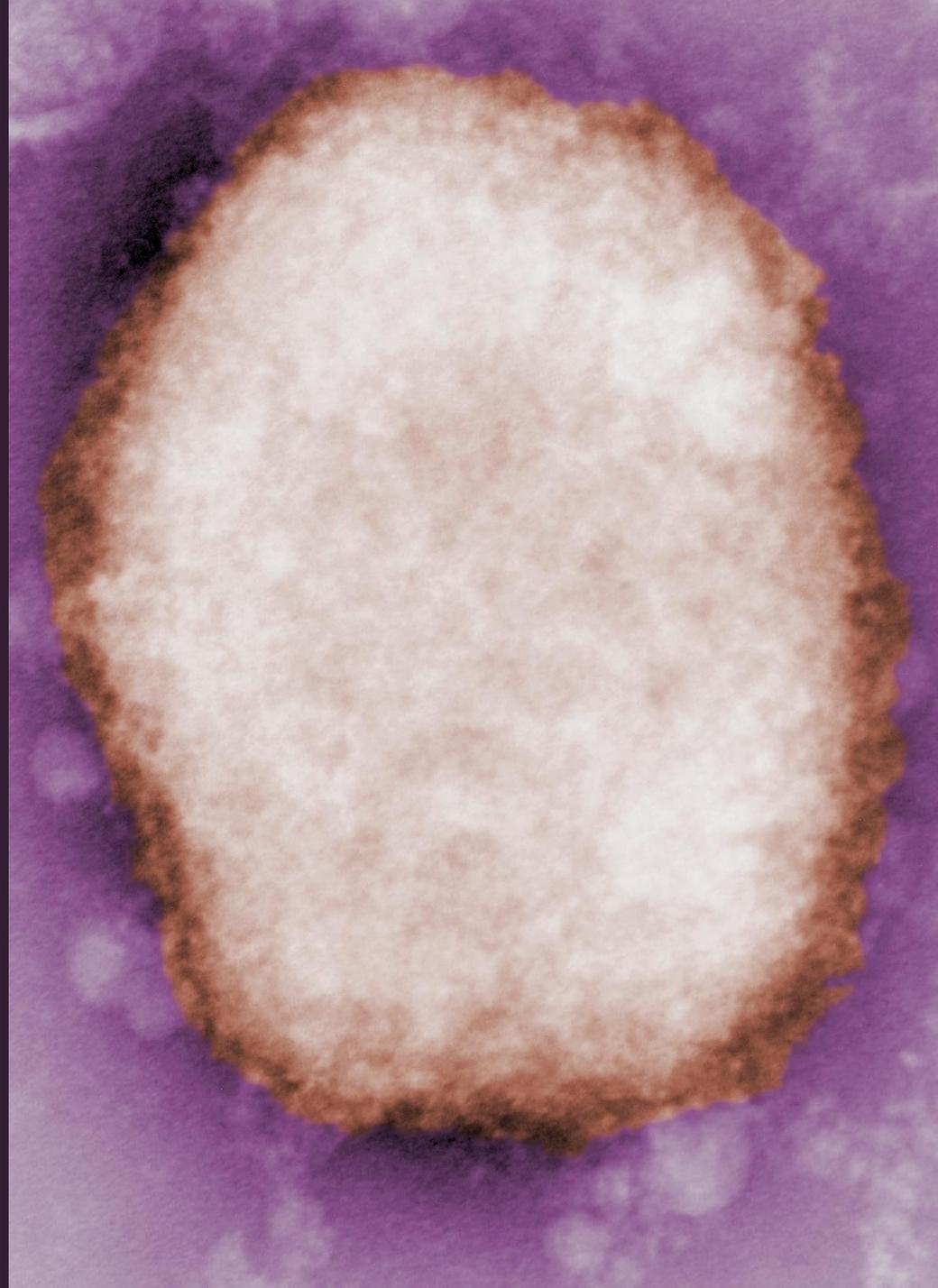
---

Tennessee Department  
of Health

August 18, 2022

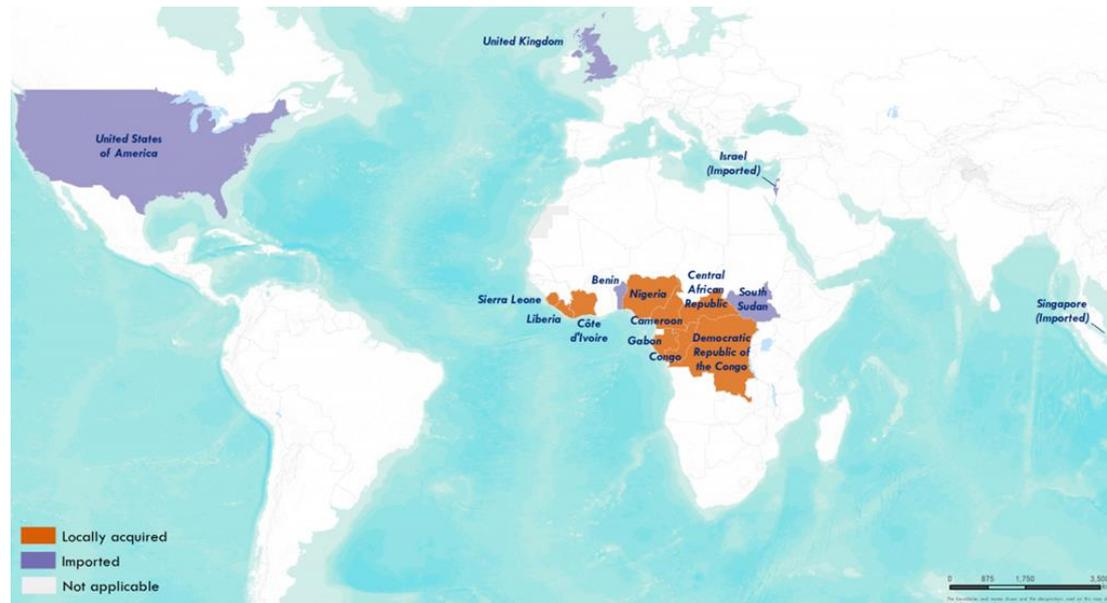
TN

Department of  
**Health**

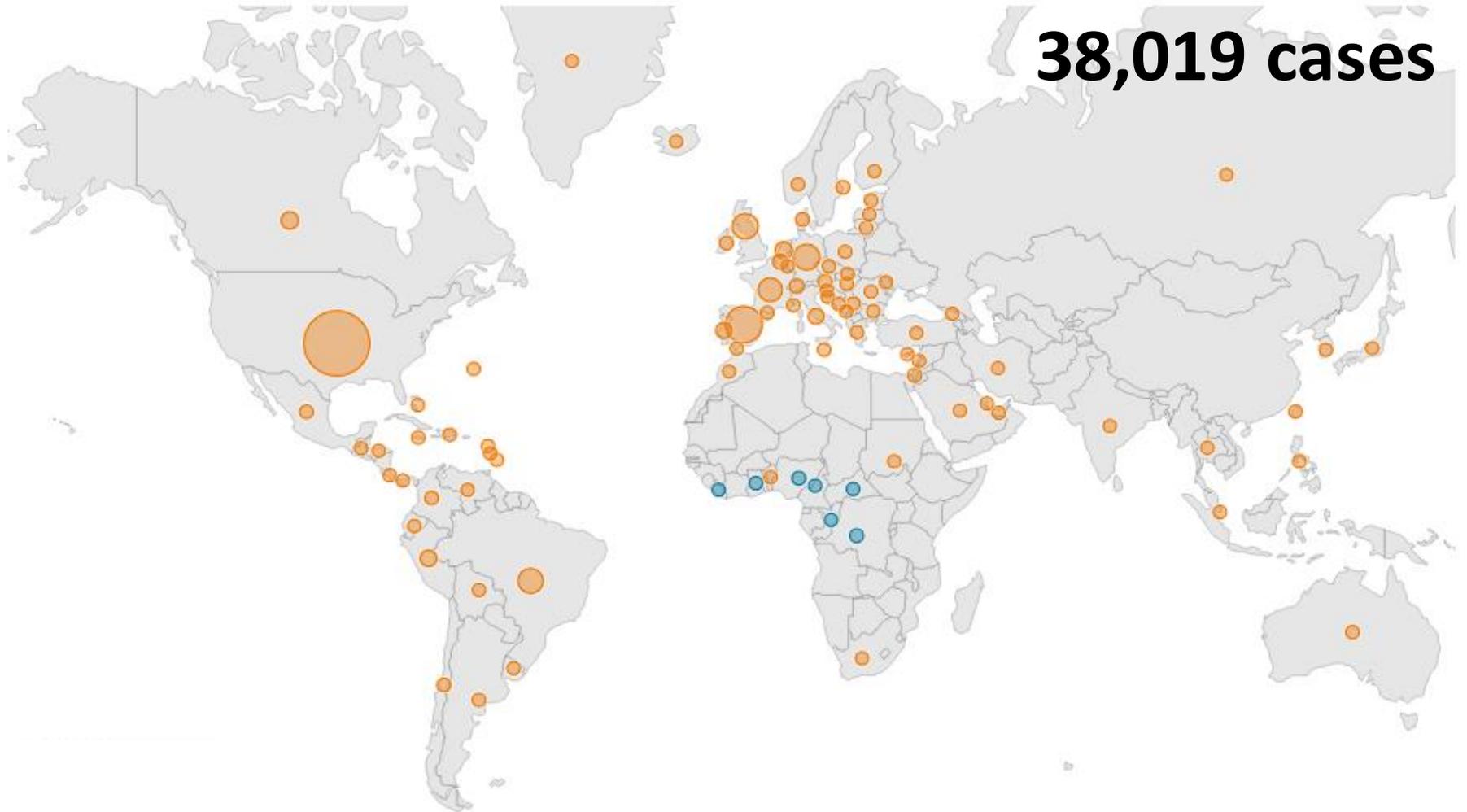


# Background + What's in a name?

- **Orthopoxvirus** (cousin to *variola*/smallpox, cowpox, *vaccinia* virus)
- Discovered in 1958 – **outbreak of pox-like disease in 2 colonies of research monkeys**
- **Enzootic in central and west Africa**; exact animal reservoirs unknown (squirrels, Gambian pouched rats, non-human primates)
- 2003 Outbreak in US – linked to imported exotic animals from Ghana



# Global Situation Summary: 17 August



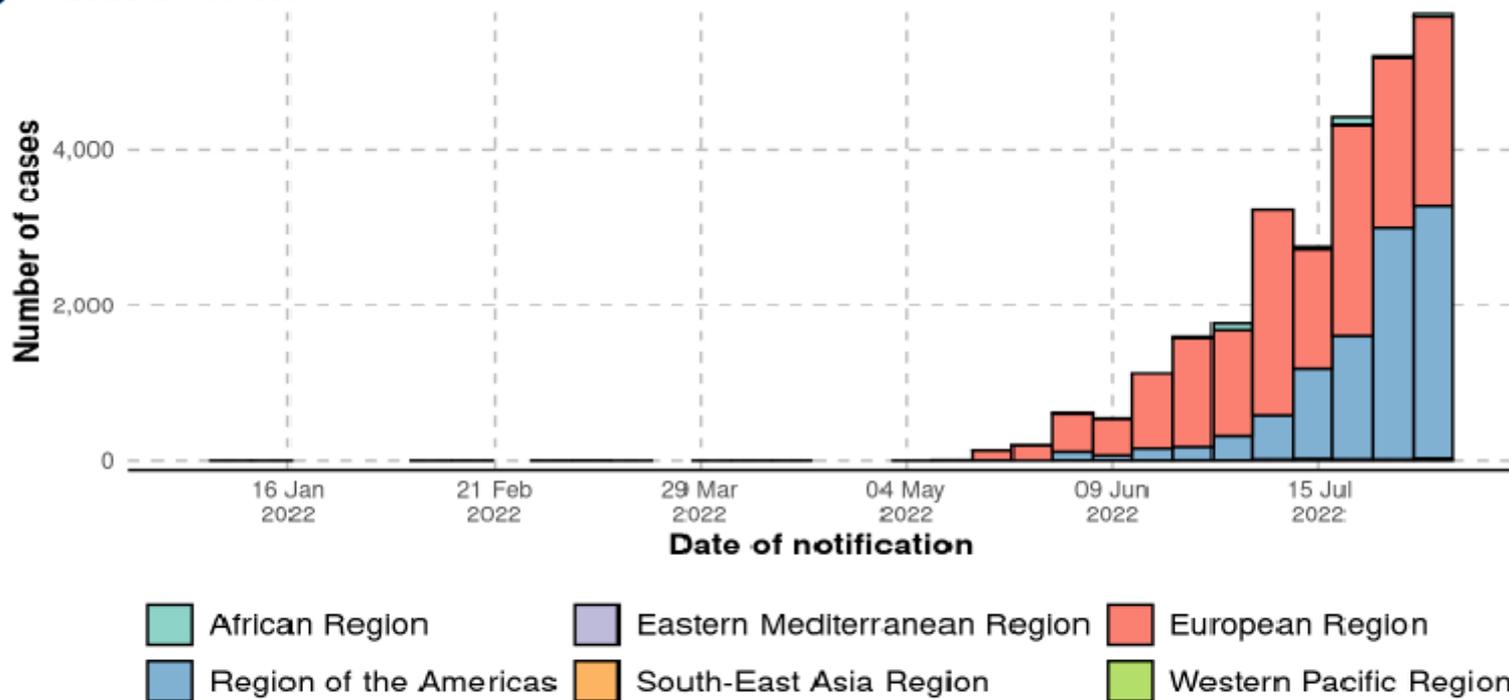
Has not historically reported MPX

Has historically reported MPX

TN

# Global Situation Summary: 17 August

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



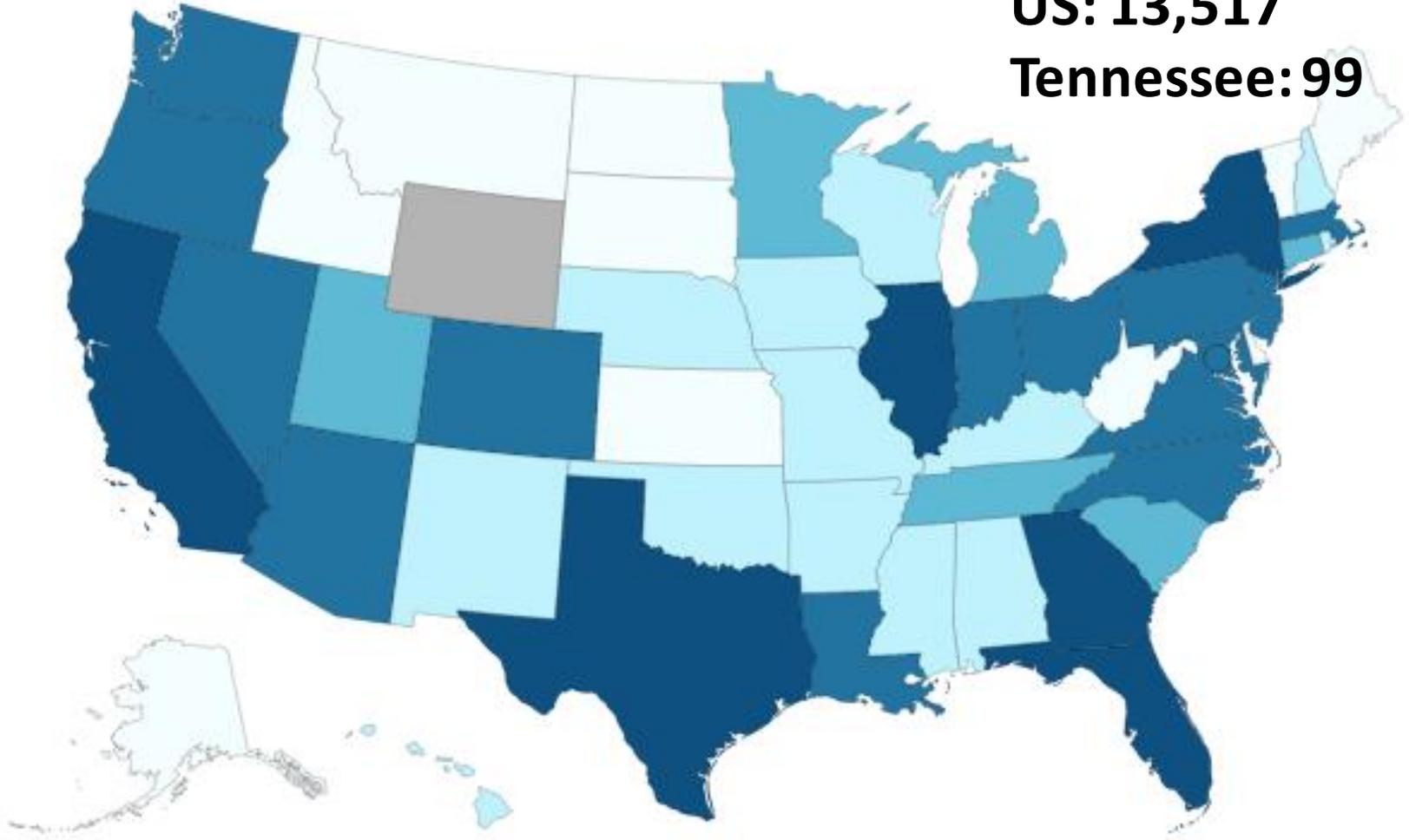
Source: WHO

\*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.

# Domestic Situation Summary: 17 August

**US: 13,517**

**Tennessee: 99**

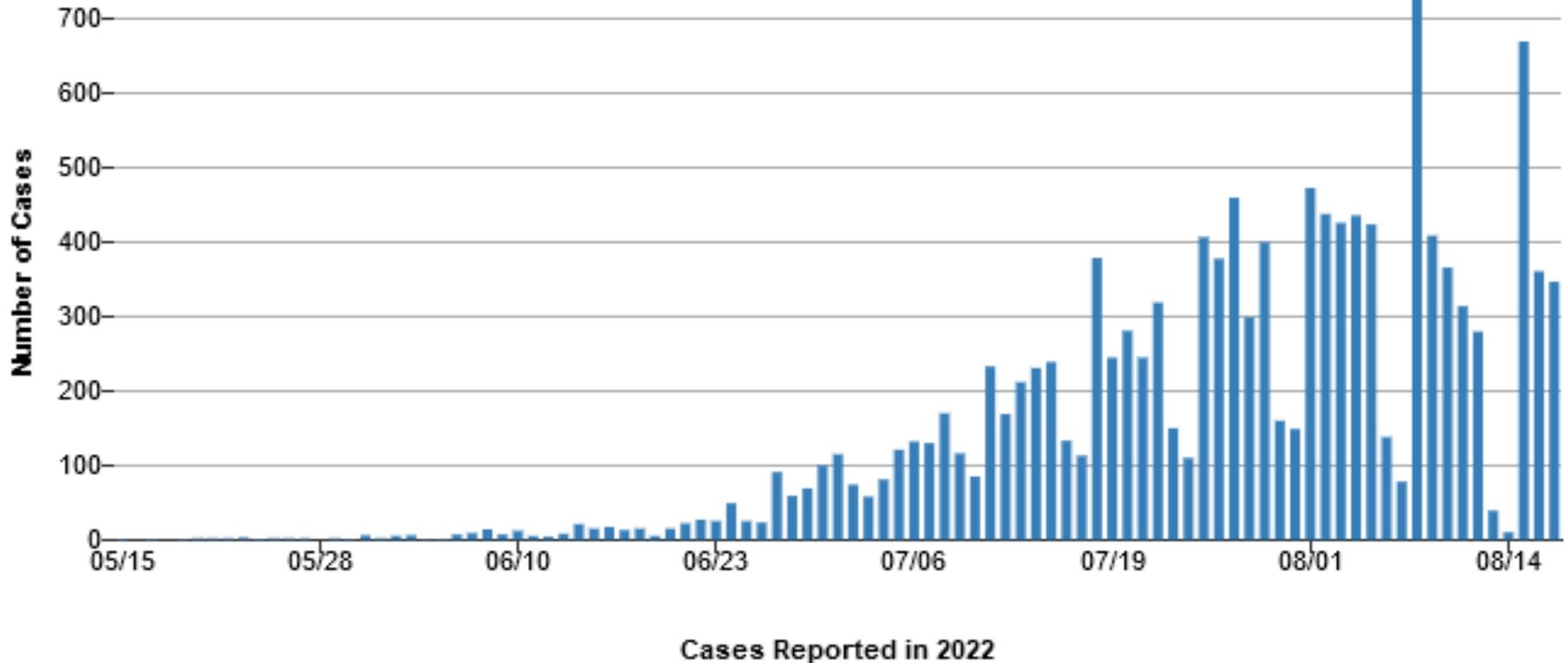


Territories

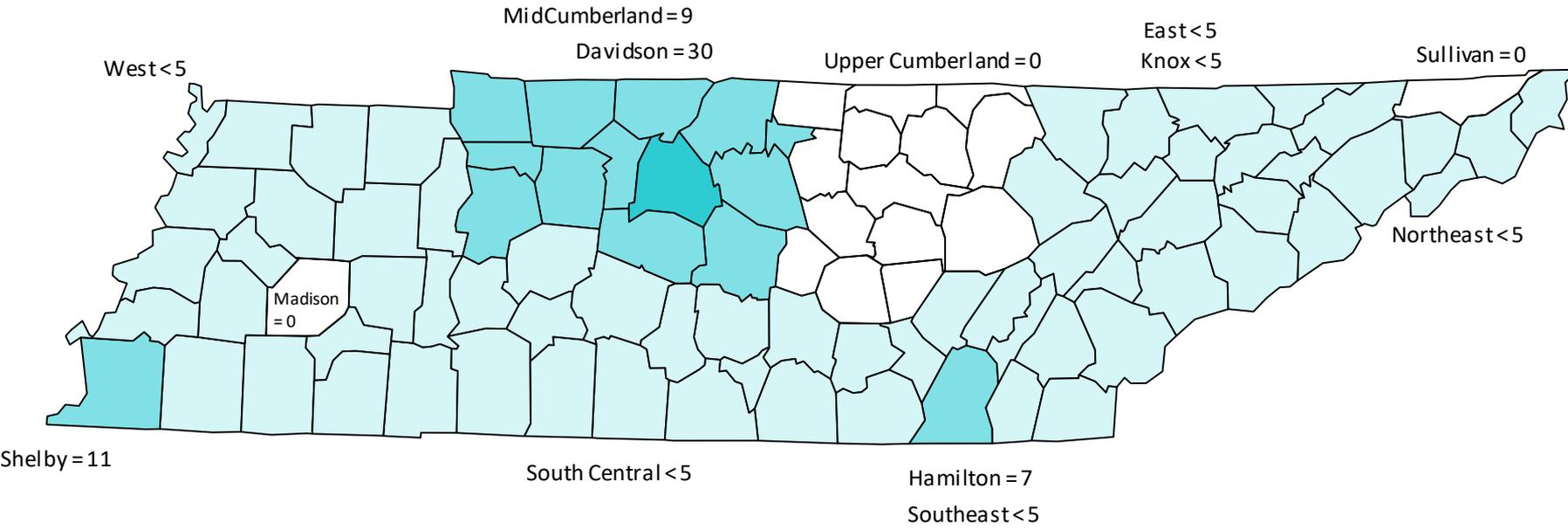
PR

# Domestic Situation Summary: 17 August

## U.S. Monkeypox Case Trends Reported to CDC

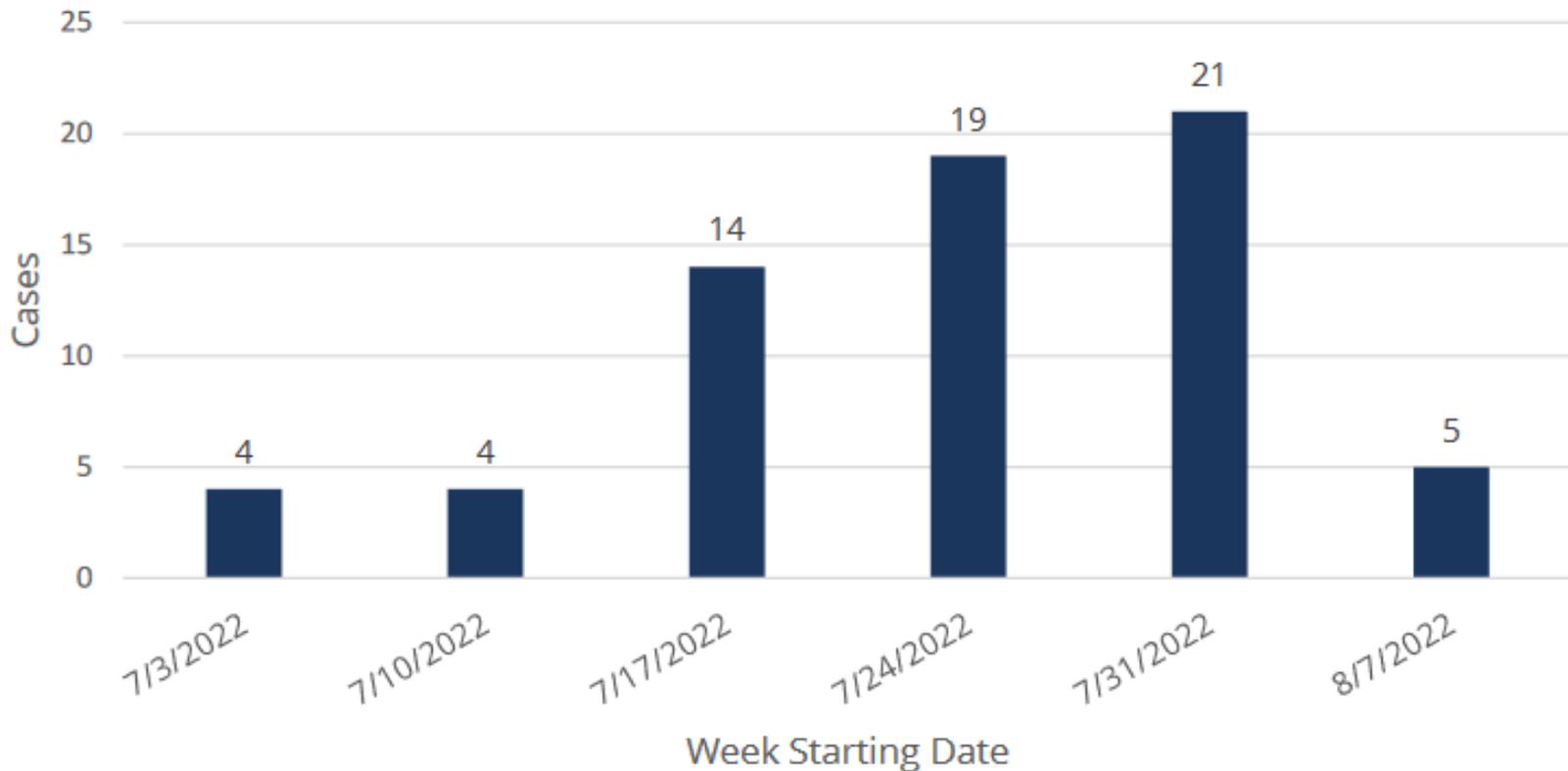


# Tennessee Situation Summary: 11 August



# Tennessee Situation Summary: 11 August

Monkeypox Cases by Week of Specimen Collection,  
Tennessee, 2022 (n = 67)



# Epidemiologic Details - Tennessee

- **Tennessee (*as of 11 August*)**

- Median age: 35 years (20–62 years)

- Male sex at birth: 94%

- Race

- White: 45%

- Black: 43%

- UNK: 4%

- Ethnicity

- Hispanic/Latino: 13%

- Not Hispanic/Latino: 73%

- UNK: 13%

# Epidemiologic Details - Tennessee

- **Tennessee (as of 11 August)**

- Median age: 35 years (20–62 years)

- Male sex at birth: 94%

- Race**

- White: 45%
- Black: 43%
- Other: 8%
- UNK: 4%

- TN Population**

- White: 77%
- Black: 17%
- Other: 6%

- TN HIV Cases (2020)**

- White: 30%
- Black: 59%
- Other: 11%

- Ethnicity**

- Hispanic/Latino: 13%
- Not Hispanic/Latino: 73%
- UNK: 13%

- TN Population**

- Hispanic/Latino: 6%
- Not Hispanic/Latino: 94%

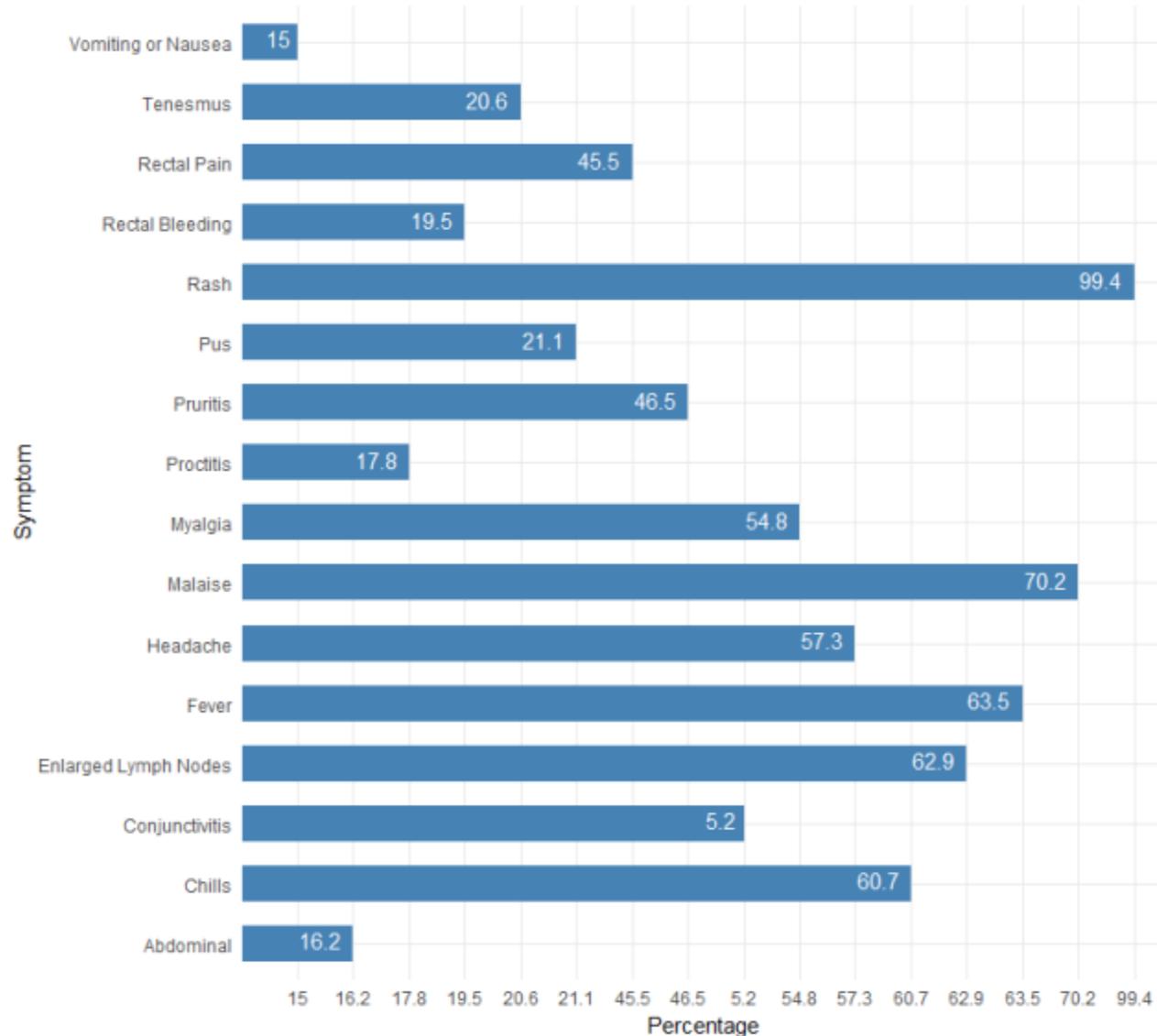
- TN HIV Cases (2020)**

- Hispanic/Latino: 7%
- Not Hispanic/Latino: 93%

# Signs & Symptoms

- Rash (99%)
- Malaise (70%)
- Fever (64%)
- Lymphadenopathy (63%)

Illness typically lasts  
2–4 weeks



# Rash Details

- Lesions are **well circumscribed**, **deep seated**, and often develop **umbilication**.
- Often described as **painful** until the healing phase when they become itchy (crusts).
- **Progresses through stages:** macular, papular, vesicular, pustular (not necessarily simultaneously)



# Transmission

**Average incubation period: 6–13 days (5–21 days)**

- 1. Direct contact** with bodily fluids (respiratory secretions) or monkeypox lesions or scabs
- 2. Indirect contact** with items that have been contaminated with fluids or sores, like clothing or bedding

**Example activities through which MPX can spread:**

- Prolonged face-to-face contact
- Intimate contact (sexual activity, hugging, massaging, kissing)
- Touching fabrics and objects during sex that were used by a person with monkeypox and that have not been disinfected



# MPX Testing

**Who should be tested? A person who presents with an otherwise unexplained rash.**

## **Specimen Collection:**

- **Direct swab of lesions** (consider 2 swabs from each lesion; max of 6)
- **Sterile, synthetic swab** (polyester, nylon, or Dacron) with plastic, wood, or thin aluminum shaft
- Place in a **sterile container** (no transport media required; VTM acceptable)

## **Test Specifics:**

- **PCR test** (orthopoxvirus)
- **~4h test time in lab; TAT varies by laboratory**

# In-Home Isolation

- **Remain isolated at home or another location for the duration of illness** (generally 2–4 weeks) - until **rash has fully resolved**, the scabs have fallen off, and a **fresh layer of intact skin has formed**.
  - **While symptomatic with a fever or any respiratory symptoms**, remain isolated and away from others unless it is necessary to see a healthcare provider or for an emergency.
    - Avoid close or physical contact with other people and animals.
    - Cover the lesions, wear a well-fitting mask and avoid public transportation when leaving the home as required for medical care or an emergency.
  - **While a rash persists but in the absence of a fever or respiratory symptoms**
    - Cover all parts of the rash with clothing, gloves, and/or bandages.
    - Wear a well-fitting mask to prevent the wearer from spreading oral and respiratory secretions when interacting with others until the rash and all other symptoms have resolved.

# Persons Living with HIV

- Available international data from the current outbreak indicate **30-51% HIV prevalence** among persons with MPX for whom HIV status was known.
- Persons with **advanced and uncontrolled HIV might be at higher risk for severe or prolonged disease**. Therefore, prophylaxis after possible exposure (e.g., vaccination), medical treatment and close monitoring are a priority for this population.

# Children and Adolescents

- At least **two cases of MPX have been identified in children** in the United States during the current outbreak.
- Limited pediatric data on infection with the Congo Basin clade of MPX virus suggest **increased risk of severe disease in children younger than 8 years of age**.
  - Rare complications of MPX include abscess, airway obstruction due to severe lymphadenopathy, cellulitis, encephalitis, keratitis, pneumonia, and sepsis.
  - However, the West African clade of MPX virus involved in the current outbreak typically causes less severe disease than the Congo Basin clade.

# People Who are Pregnant or Breastfeeding

- It is **unknown if pregnant people are more susceptible** to acquiring MPX virus infection **or if illness is more severe** during pregnancy.
- **MPX virus can be transmitted to the fetus during pregnancy and to the newborn by close contact during and after birth.** While most adults with MPX virus infection experience self-limiting infection and recover within 2–4 weeks, **pregnant and breastfeeding people should be prioritized for medical treatment.**

# Treatment

- TPOXX
- Smallpox treatment
- Investigational approval for MPX
- Who should be considered for treatment?
  - With severe disease (e.g., hemorrhagic disease, confluent lesions, sepsis, encephalitis, or other conditions requiring hospitalization)
  - Those are at high risk of severe disease:
    - People with immunocompromising conditions
    - Pediatric populations, particularly patients younger than 8 years of age
    - Pregnant or breastfeeding women
    - People with a history or presence of skin conditions
    - People with one or more complication
  - People lesions near/in eyes, mouth, or other anatomic areas where *Monkeypox virus* infection might constitute a special hazard (e.g., the genitals or anus)

# Vaccine

- **2 products, both licensed for smallpox**
- **ACAM2000**
  - Huge supply
  - Live, replicating virus
  - Not indicated for many
- **JYNNEOS**
  - Limited supply
  - Live, nonreplicating virus
  - Not as many contraindications
  - 2 doses, 28 days apart
- **Can be used BEFORE exposure and AFTER exposure**
- **Who is eligible in Tennessee?**
  - Individuals with a known contact/exposure to MPX identified through public health investigation
  - Individuals who *might* have been exposed to MPX in the past 14 days
  - Gay, bisexual, or other men who have sex with men (MSM), and/or transgender, gender-nonconforming or gender non-binary individuals who report any of the following in the last 90 days:
    - Having multiple sex partners or anonymous sex
    - Being diagnosed with a sexually transmitted infection (STI)
    - Receiving medications to prevent HIV infection (HIV PrEP)

# Questions?

*<https://www.tn.gov/health/cedep/reportable-diseases/monkeypox.html>*

TN

Department of  
**Health**

