

# Monkeypox (MPOX) Response

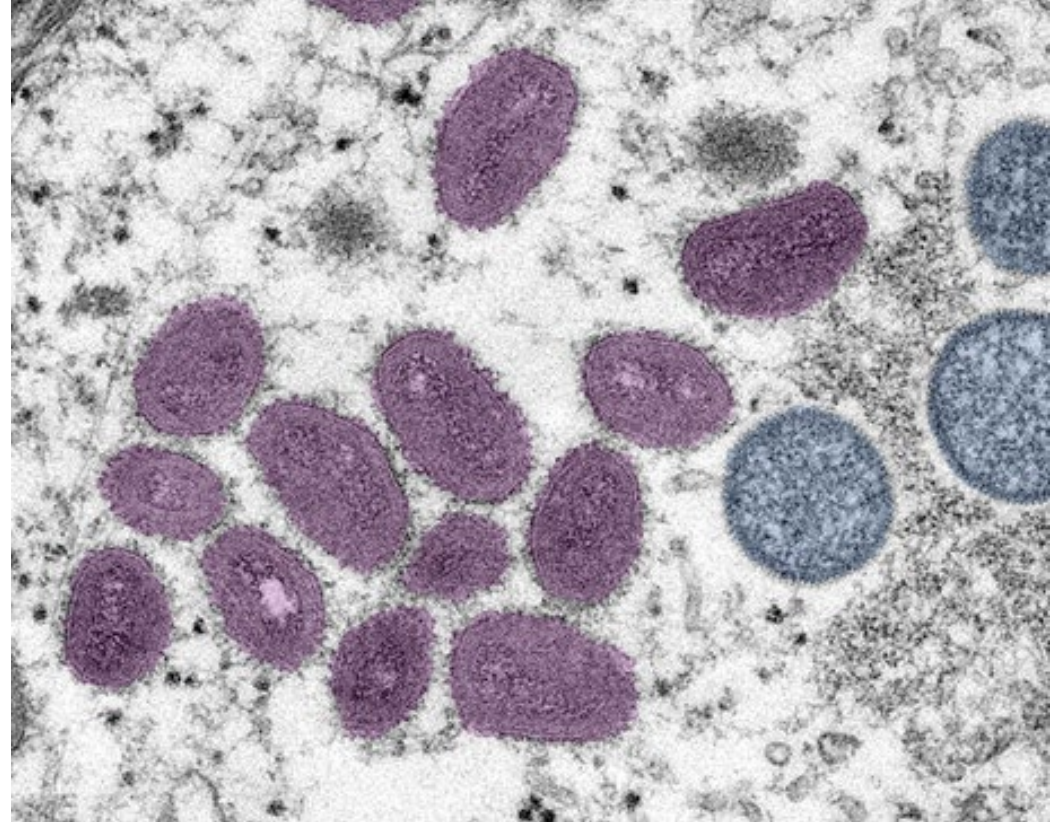
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CDC/HRSA Advisory Committee on HIV, Viral  
Hepatitis and STD Prevention and Treatment  
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# Monkeypox Virus

- ***Orthopoxviruses***
  - *Monkeypox (MPOX) virus*
  - *Variola virus* (causes smallpox)
  - *Vaccinia virus* (used in smallpox vaccine)
  - *Cowpox virus* (first virus used for smallpox vaccination)
- **First discovered in 1958 following two outbreaks of a pox-like disease in colonies of research monkeys**
- **Increasing numbers of cases and outbreaks attributed to reduced smallpox vaccine-derived immunity and changing geographic distribution of human populations**



# Characteristic Lesions



*Adler, et al. Lancet ID 2022*



*Reed, et al. NEJM 2004*



*Reed, et al. NEJM 2004*

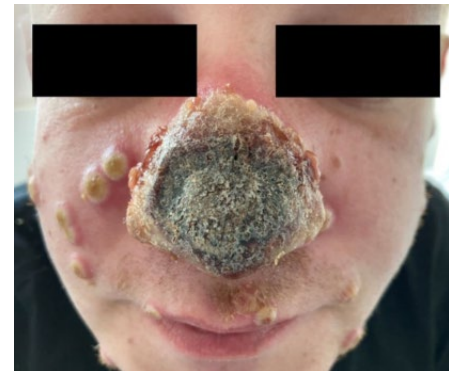
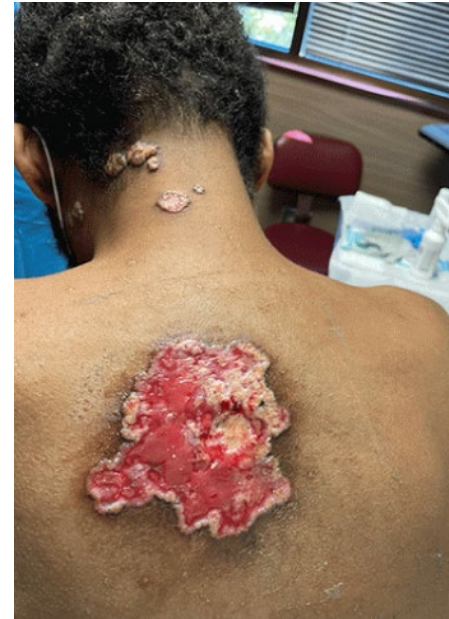


# Clinical Presentation in Current Outbreak

- Slightly shorter incubation period
- Lesions can be localized to a body site or develop in waves on different body areas
- Rash often starts in mucosal areas: genital, perianal, oropharynx
  - Urethritis: complicated by balanitis or phimosis
  - Proctitis: anorectal pain, rectal bleeding, perianal lesions, and proctitis
  - Oropharyngitis: complicated by tonsillar swelling, abscess, dysphagia
- “Prodromal” symptoms can be absent or follow rash onset
- Duration usually 2-4 weeks
- Clade IIb

# Severe Disease

- Persistent or recurring rash, coalescing or necrotic lesions (>100) despite treatment with tecovirimat and other antivirals
- Multiple organ system involvement
- Lesions leading to obstruction, stricture and scar formation, urethral and bowel strictures, phimosis, and facial scarring
- Secondary bacterial or fungal infections, sepsis and hemodynamic compromise
- Majority of cases in immunocompromised persons



# Who Has Gotten MPOX in the U.S.?

- Median age 34 years (range <1-89)
- 96% cisgender men 3% cisgender women; 1.6% transgender men, women, or other gender
- Majority of cases for which information was reported were in gay, bisexual, and other men who have sex with men
- 32% Black/African American, 31% Hispanic/Latino, 30% White, 3% Asian
- ~40% of cases have had HIV
- ~40% have had an STI diagnosed in past year
- One-third had >5 sexual partners in past 3 weeks
- Cases also associated with caregiving, nosocomial events

# **Epidemiology and Response**

# MSM Changed Sexual Behavior



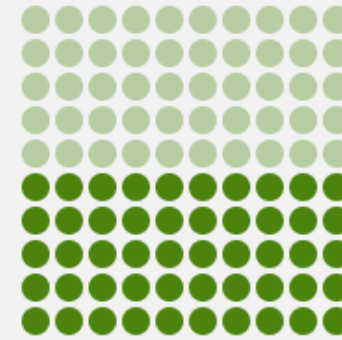
48%

reduced number of sex partners



50%

reduced one-time sexual encounters

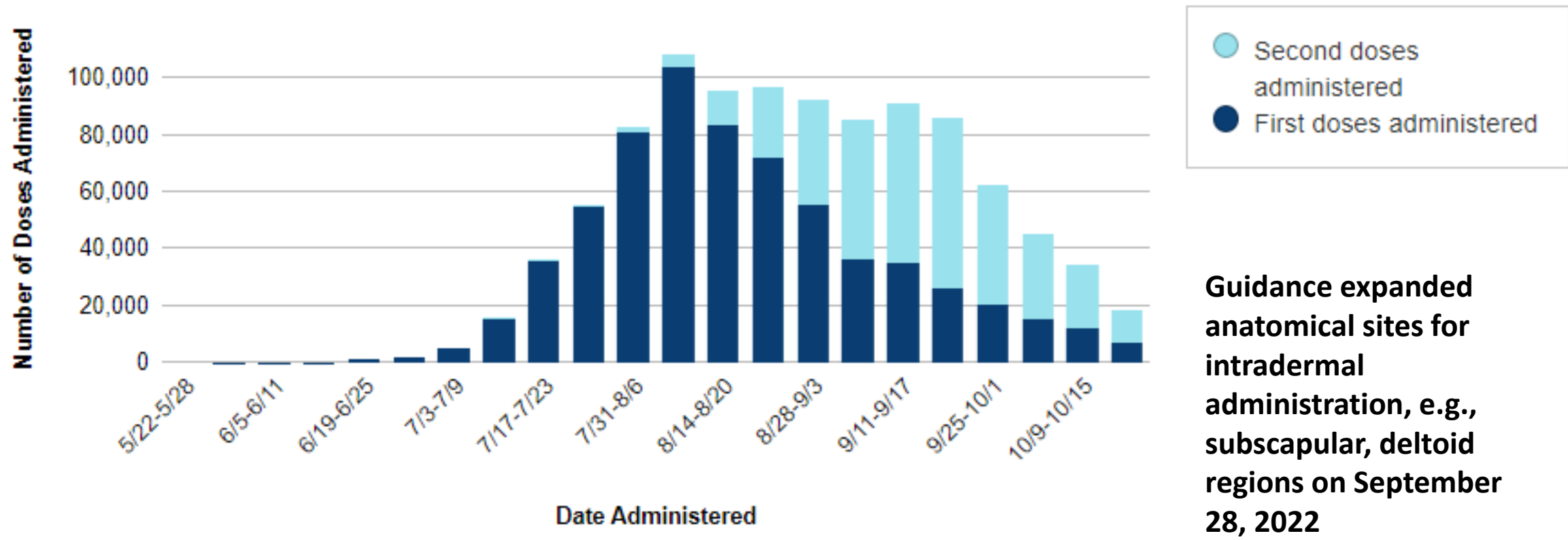


50%

reported reducing sex with partners met on dating apps or at sex venues

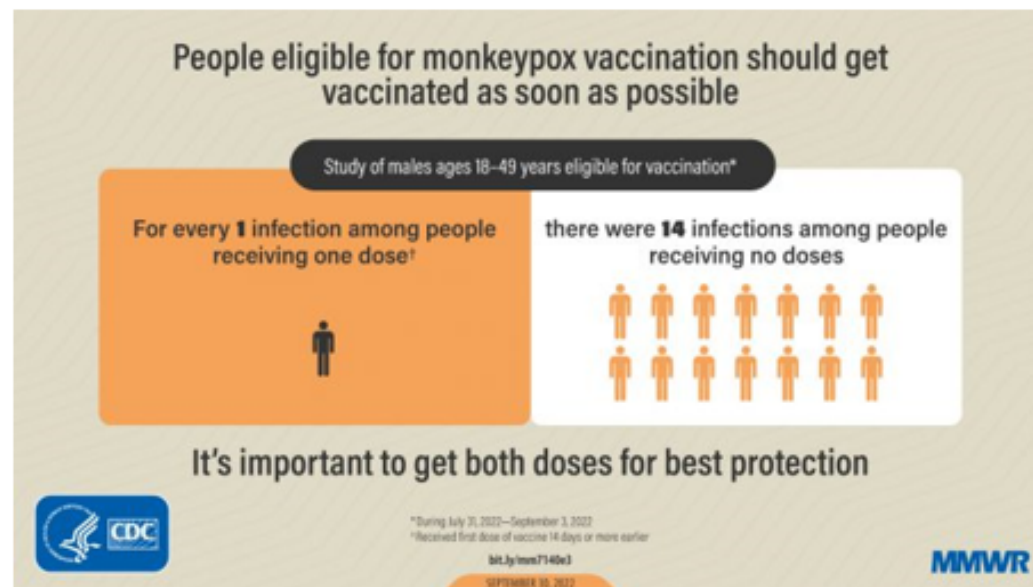
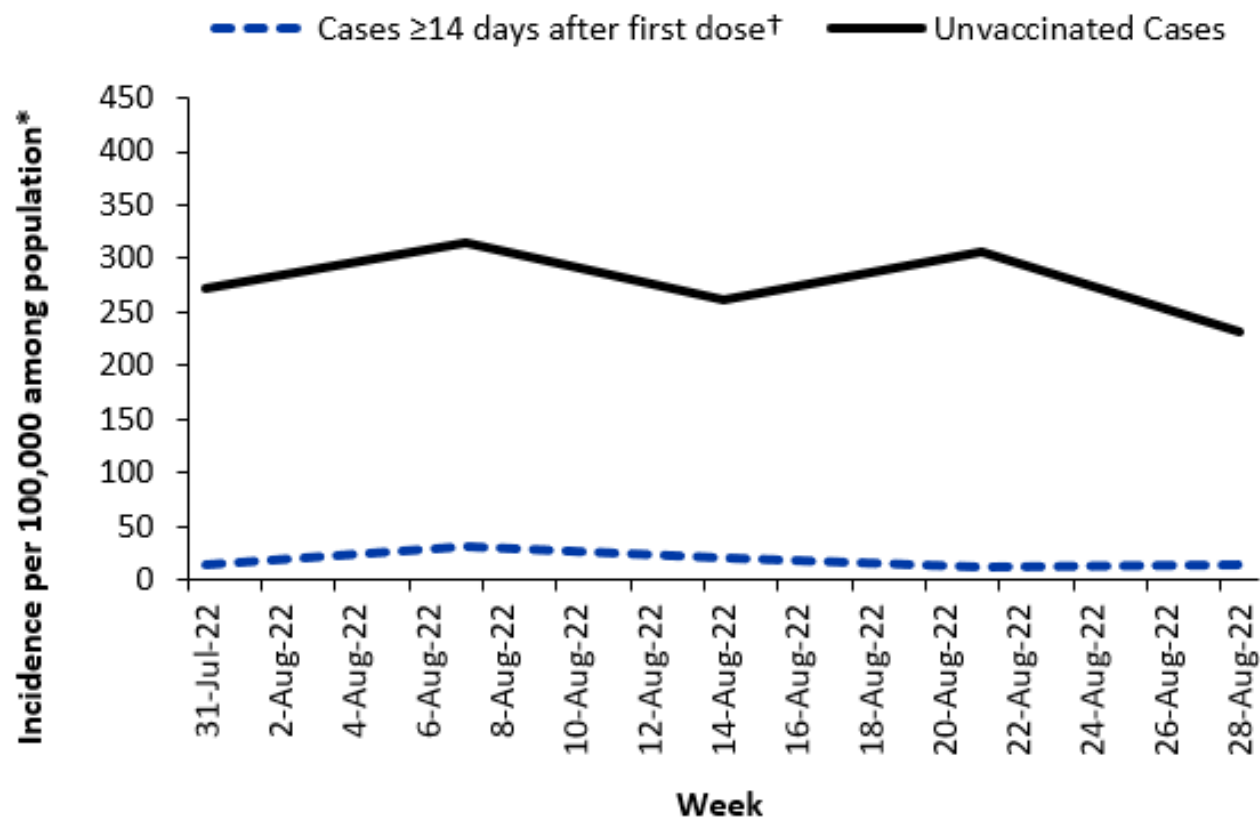


# JYNNEOS Vaccine Doses Administered and Reported to CDC



Data as of October 25, 2022

# Early Data on Vaccination

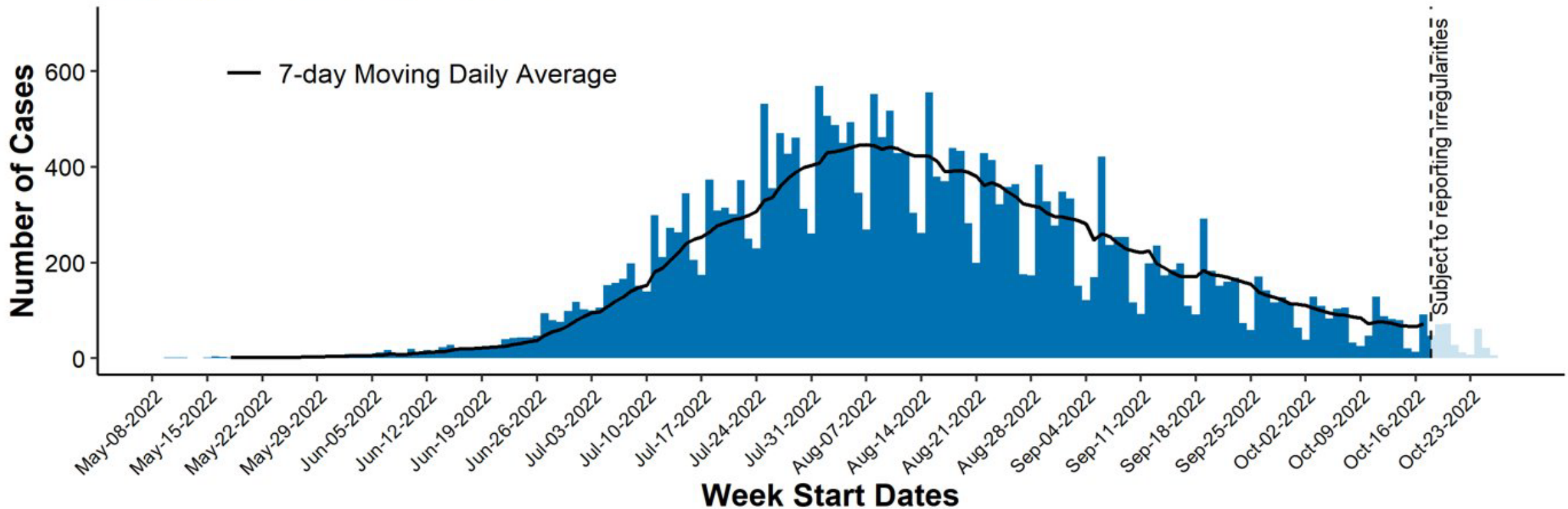


\*Population eligible for vaccination [estimated population per jurisdiction of men who have sex with men (MSM) who are living with HIV (as of 2020) and MSM who are eligible for HIV pre-exposure prophylaxis (as of 2021). Estimates obtained from CDC Atlas 2022]

<sup>†</sup>MPX post-vaccination case: A case entered into DCIPHER with positive orthopox test for monkeypox, illness onset, or specimen collection date (earliest available date)  $\geq 14$  days after receiving the first dose of JYNNEOS vaccine without a documented second dose of the vaccine

# Monkeypox Cases Reported to CDC: Epidemiologic Curve with 7-day Moving Average

Official Case Count: 28,073



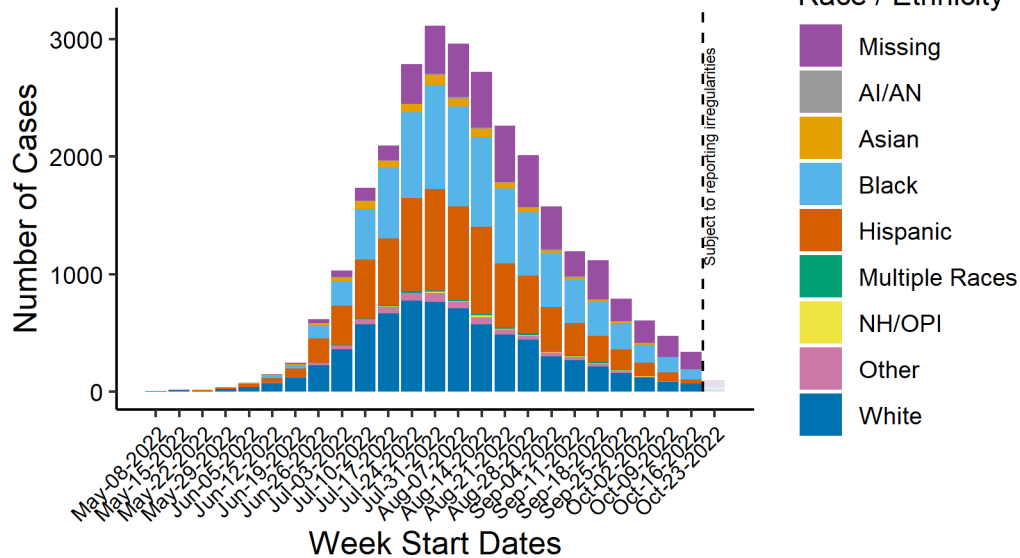
Data from recent days, shown in lighter colors, are not finalized and subject to change.  
0 case(s) missing reporting date are excluded from this epi curve.

Data as of October 26, 2022

# As Incidence Decreased, Disparities Increased

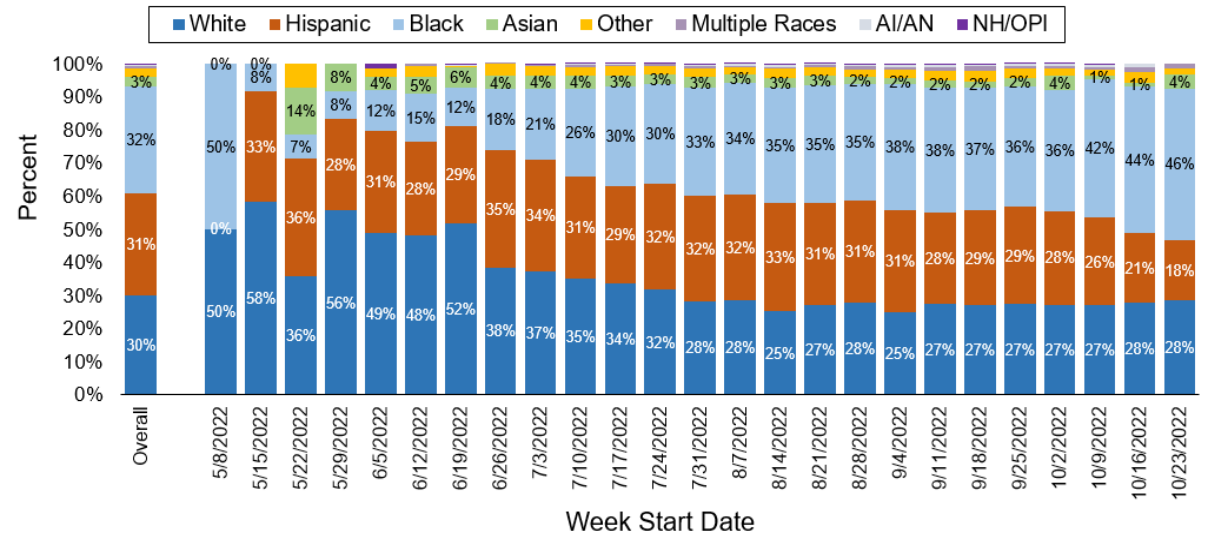
Proportion of Monkeypox Cases Reporting Race/Ethnicity by Week Start Date

All Cases by Race / Ethnicity by Week



Total cases, including those missing race and/or ethnicity: 28,073  
 Data from recent days, shown in lighter colors, are not finalized and subject to change.

Monkeypox cases reported to CDC by Race/Ethnicity  
 Data Reported to CDC as of October 31, 2022



# Community Engagement and Equity

- Incorporated into CDC IMS structure from onset
- Fact-based messaging to reduce stigma
- Focused digital media and other channels to reach MSM
- Continued engagement with communities, leaders, influencers
- Guidance to integrate equity into distribution and access to vaccination
  - >20 vaccine equity programs with jurisdictions reaching tens of thousands

## Summer 2022 Health Tips for Gay and Bisexual Men

As you celebrate Pride and other events this summer, get a few tips to stay safe and healthy at [www.cdc.gov/msmhealth/summerhealthtips](http://www.cdc.gov/msmhealth/summerhealthtips).



Scan This Code on  
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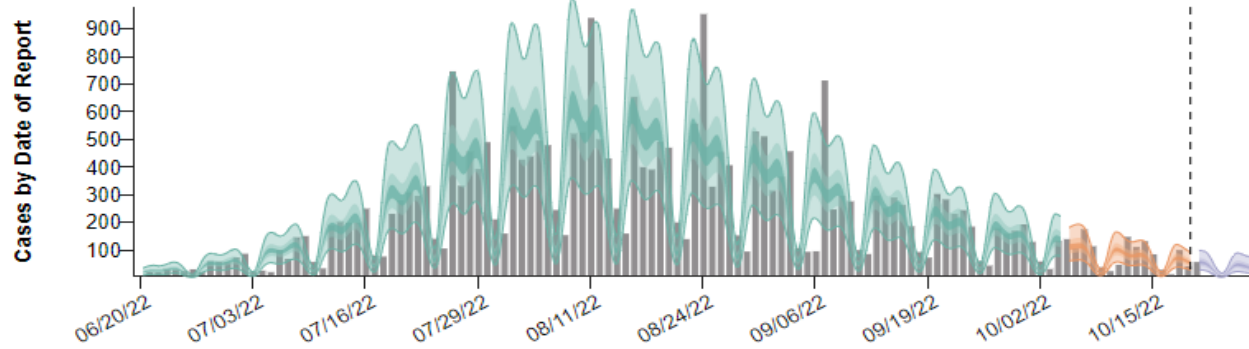


# Communication Challenges

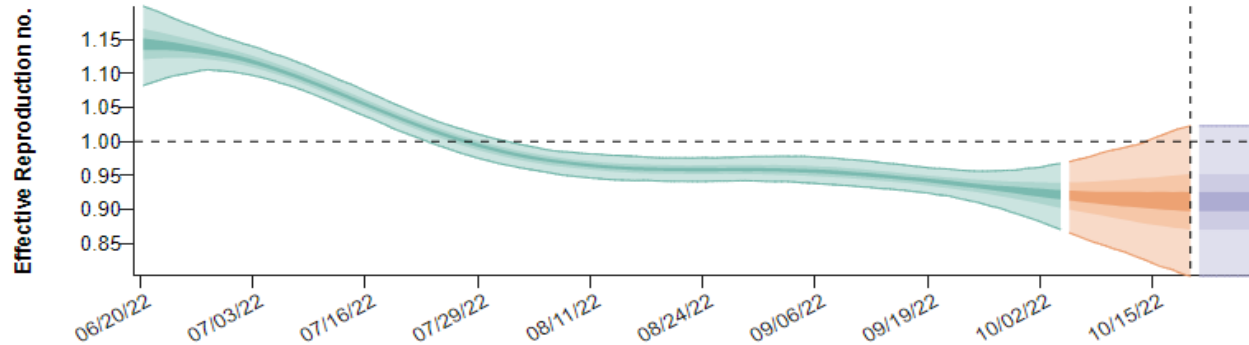
- **Vaccination uptake is decreasing**
- **LGBTQ community often reminded of HIV epidemic and being blamed for disease outbreak**
- **Intersectionality increases obstacles for African American and Hispanic/Latino MSM**
- **CDC criticized for increasing stigma by providing focused messaging for gay and bisexual community, and criticized for not highlighting disproportionate burden experienced by MSM and persons with HIV**
- **How do you disseminate messages and interventions to specific audiences without increasing stigma and discrimination?**

# Estimated Outbreak Trajectory

☑ REPORTED CASES    ☑ ESTIMATE    ☑ ESTIMATE BASED ON PARTIAL DATA    ☑ FORECAST



Estimated cases by report date based on complete data (green) or incomplete data due to reporting delays (orange). Gray bars represent the daily number of reported cases. Purple shows the 7-day forecast. Shading represents 20%, 50%, and 90% credible intervals.

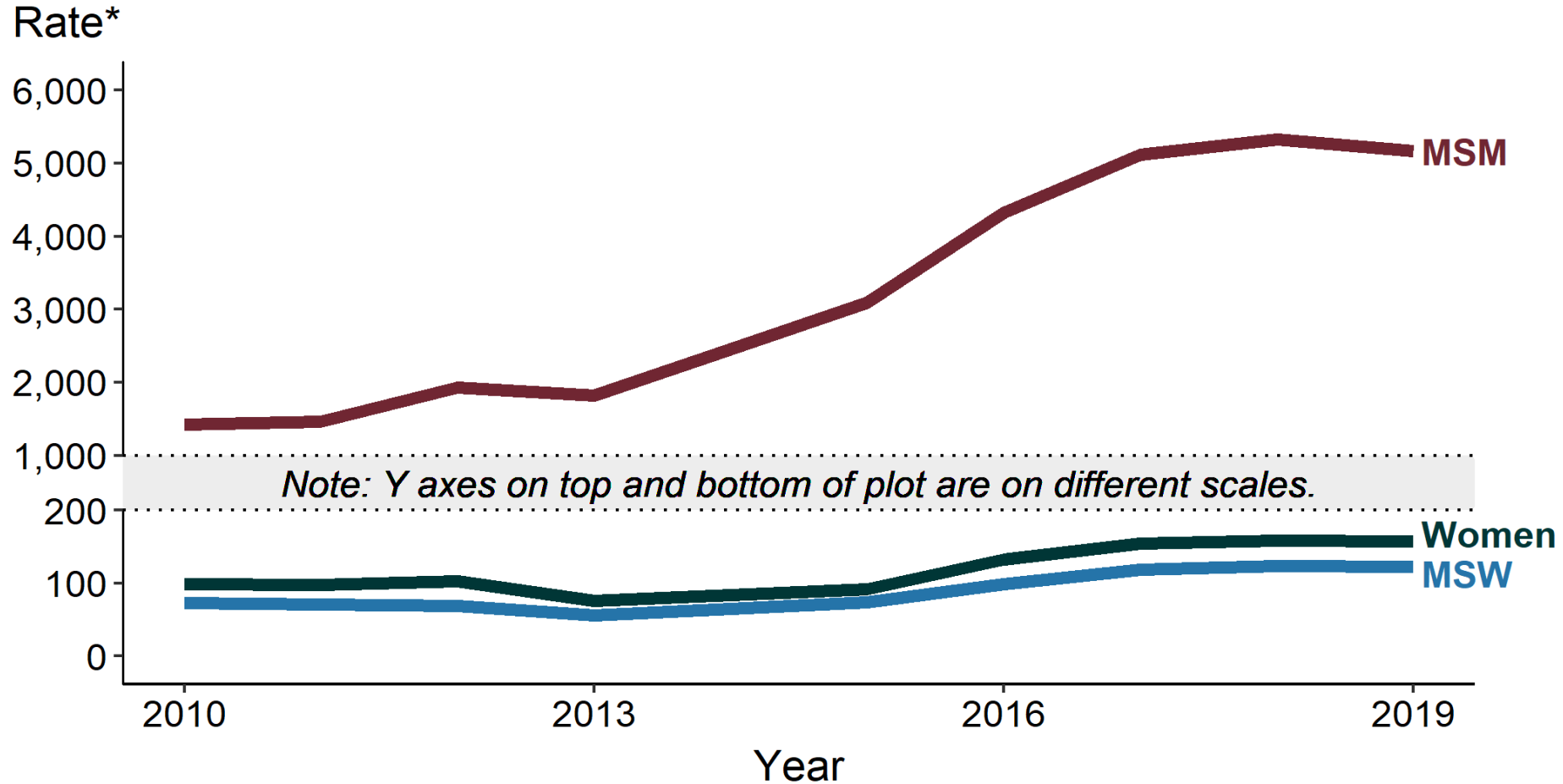


The effective reproduction number ( $R_t$ ) estimation over time based on complete data (green) or incomplete data due to reporting delays (orange). Purple shows the 7-day forecast. Shading represents 20%, 50%, and 90% credible intervals.

**Why Now?**



# Estimated Rates of Gonorrhea, STD Surveillance Network, 2010 - 2019



# State of Syndemics

- Inadequate STI infrastructure
- Systemic homophobia, racism, and economic policies associated with increasing STIs and major racial and ethnic disparities
- MSM and transgender persons bear largest burden of HIV, syphilis, and gonorrhea
- U=U, PrEP, reductions in HIV incidence changed prevention landscape
- Increasing incidence of STIs for past 7 years
- Rapid spread of rare viral infection with scientific unknowns—grey swan
- SNS supply of JYNNEOS vaccine and testing accessibility initially limited

# Key Issues for Public Health Response

- **Ensure routine MPOX vaccination in clinics that provide HIV STI, PrEP services, and link with community-based organizations**
- **Continue venue and event-based vaccine equity initiatives**
- **Nurture engagement with community organizations and leaders**
- **Continue research in treatment, vaccine effectiveness and mode of administration, animal reservoirs and zoonotic risk, viral shedding and transmission dynamics, diagnostics, surveillance**
- **Expand collaborations between communicable disease and STI/HIV components within health departments (and CDC)**
- **Ensure CDC public health authorities**

# Monkeypox Lessons and Obligations

- **Anticipate the future and act fast**
- **Focus on equity and work with communities**
- **Bring services to people and make prevention easy**
- **Trust grows with proof of action**
- **As societal concern decreases, public health needs often increase**

# Questions for CHAC Members

- **When is the MPOX outbreak over for U.S. and for the world?**
- **What policies, systems, infrastructure, and resources need to be in place?**
- **What has CDC and HRSA done well with MPOX and what should we stop doing?**