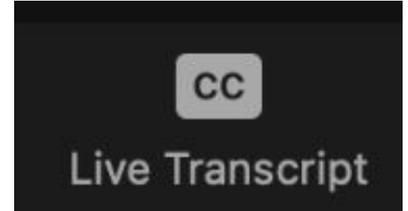
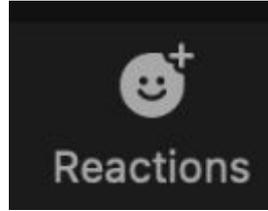
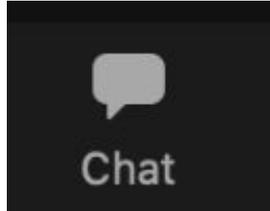
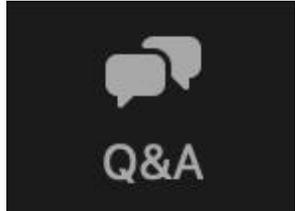




COVID-19 and Other Infectious Diseases Health Equity Response Network (CHERN) Learning Series

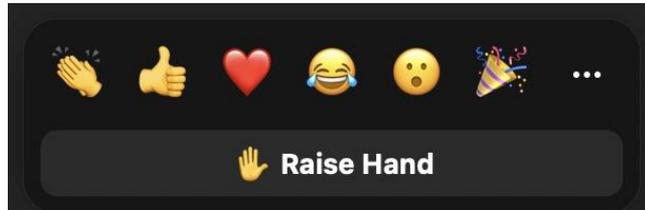
**Session 3: Lessons Learned During the COVID-19
Pandemic and Key Takeaways for Future Infectious
Disease Outbreaks**

Tech and Accessibility



Windows:
Ctrl+T

Mac: **⌘+K**



Windows:
Alt+Y

Mac:
Option+Y



Moderators



John Nguyen-Yap, MSW, *Associate Director of Health Equity*, AAPCHO (he/him/his)



Cara Skillingstead, CCHP, *Program Manager of Training and Technical Assistance*, AAPCHO (she/her/hers)



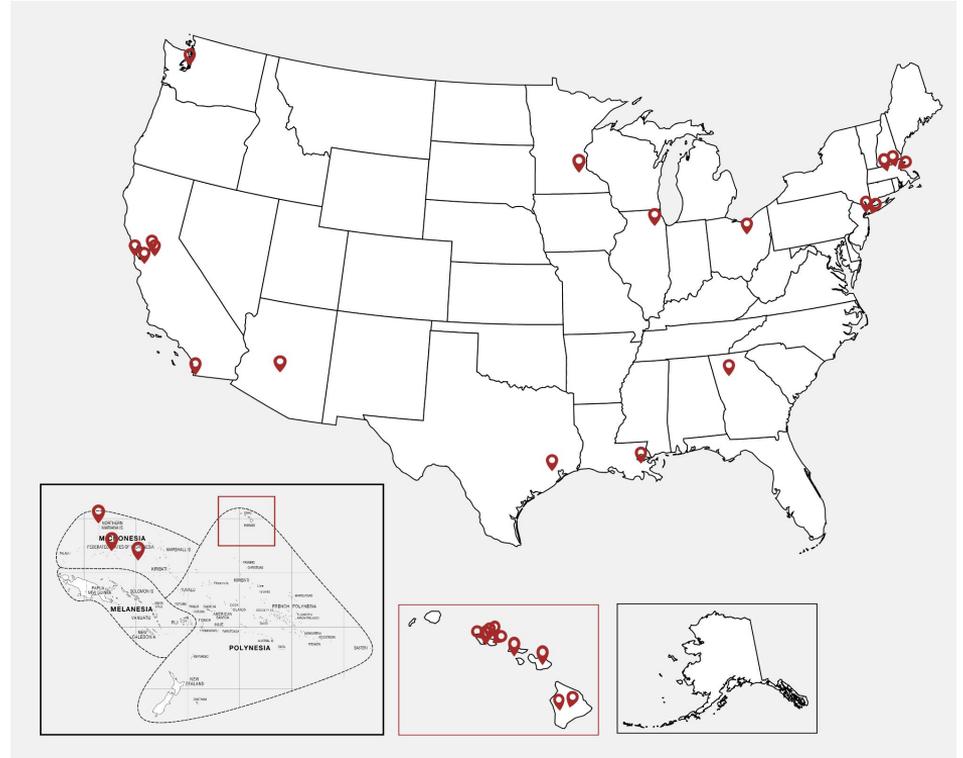
About AAPCHO.

The Association of Asian Pacific Community Health Organizations (AAPCHO) was formed to create a national voice to advocate for the unique and diverse health needs of AA and NHPI communities and the community health providers that serve their needs.



Mission & Impact

AAPCHO is dedicated to promoting **advocacy, collaboration,** and **leadership** that improves the health status and access of Asian Americans (AAs), Native Hawaiians (NHs), and Pacific Islanders (PIs) within the United States, the U.S. territories, and the Freely Associated States.



AAPCHO Members

AlohaCare (HI)

Asian Americans for Community Involvement (CA)

Asian Health Services (CA)

Asian Human Services (IL)

Asian Services in Action-International Community
Health Center (OH)

Bay Area Community Health (formerly Tri-City
Health Center) (CA)

Center for Pan Asian Community Services (GA)

Charles B. Wang Community Health Center (NY)

Chuuk Community Health Center (FSM)

Community Clinic of Maui, Inc dba Malama I Ke Ola
Health Center (HI)

Community Medical Wellness Centers, USA (CA)

Family Health Center of Worcester (MA)

Family Health Centers at NYU Langone (NY)



AAPCHO Members

Hawai'i Island Community Health Center (HI)*

Hawaii Primary Care Association (HI)

HOPE Clinic (TX)

International Community Health Services (WA)

Kagman Community Health Center (CNMI)

Kalihi-Palama Health Center (HI)

Kokua Kalihi Valley Health Center (HI)

Kosrae Community Health Center (FSM)

Lanai Community Health Center (HI)

Lowell Community Health Center (MA)

NOELA Community Health Center (LA)

North East Medical Services (CA)

Operation Samahan (CA)

Pacific Islands Primary Care Association (HI)

South Cove Community Health Center (MA)

Waianae Coast Comprehensive Health Center
(HI)

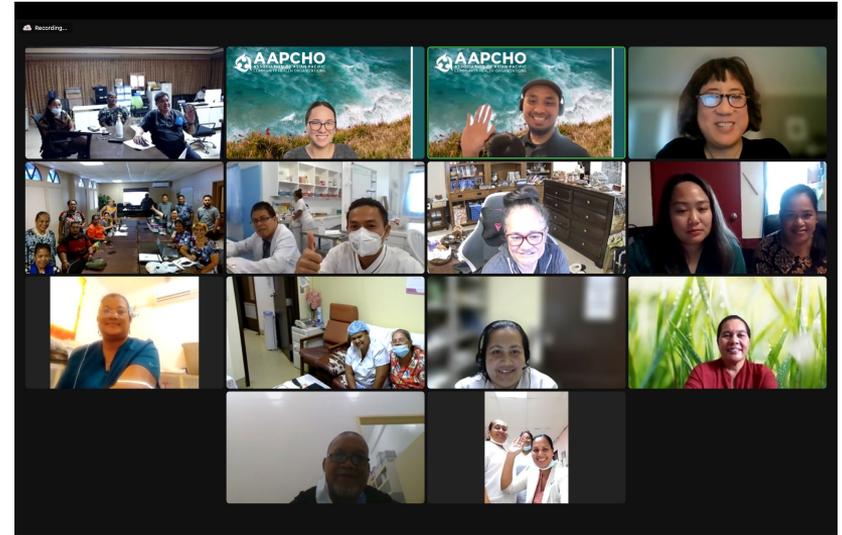
Waikiki Health Center (HI)

Waimanalo Health Center (HI)



Overview of CHERN

- The COVID-19 Health Equity Response Network (CHERN) is a national partnership of health centers dedicated to improving clinical outcomes among Asian, Asian American, Native Hawaiian, and Pacific Islander (A/AA and NH/PI) patients at risk for emerging infectious diseases through:
 - Webinars and virtual trainings,
 - Clinical and community leader guidance on COVID-19 priorities for AA & NH/PI serving CHCs
 - Resource curation as defined by partners and their patient and provider needs.
- Funding provided by CDC's National Center for Emerging and Zoonotic Infectious Diseases (NCEZID).



COVID-19 Management training with USAPI health ministries, March 2022



Session Agenda

Welcome
and Intro
5 min



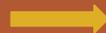
Overview
5 min

Chia Wang
15 min



Anthony
Fortenberry
25 min

Resources
5 min



Evaluation
5 min



Session Objectives

1. Recognize strategies learned from COVID-19 pandemic to address alternate public health emergencies.
2. Understand considerations for staffing, clinical care, and messaging in response to public health emergencies.
3. Identify resources to support clinical response to future infectious disease outbreaks.



Topic Intro and Overview

- Clinical Insights on Monkeypox (MPV)
- Public Health considerations addressing MPV and other infectious diseases
- Promising practices for clinical workflows and protocols for CHCs encountering co-occurring infectious disease outbreaks



Monkeypox - Clinical Update and Insights



Chia Wang, MD, MS
Infectious Disease
Consultant, CHERN



Monkeypox– Clinical Update

Chia Wang MD, MS
Section of Infectious Diseases
Virginia Mason Medical Center

Outline

- Epidemiology
- Clinical Features
- Diagnostics
- Antiviral Therapy
- Vaccine



Monkeypox rash. Source: Adobe Stock.

Monkeypox Virus (MPXV)

- *Orthopoxvirus* (DNA virus)
- Zoonotic infection, animal reservoir, likely small mammals. Name is a misnomer.
- Other diseases associated with *Orthopoxviruses*: smallpox (30% mortality), cowpox, vaccinia, camelpox, racoonpox, etc.
- Less deadly and less infectious than smallpox



AMERICAN
SOCIETY FOR
MICROBIOLOGY



Monkeypox



COVID-19

Causative Agent	Monkeypox virus (MPV)	SARS-CoV-2
Year of Discovery	1958	2019
Genome	Double-stranded DNA	Single-stranded RNA
Variants and Genotypes	2 clades	27 clades*
Primary Route of Transmission	Direct, prolonged contact with monkeypox rash, scabs or bodily fluids from infected person.	Respiratory droplets
Potential Animal Reservoirs	Monkeys, rodents, other small mammals.	Bats, pangolins, minks

<https://asm.org/Articles/2022/August/Monkeypox-vs-COVID-19>

**Based on Nextstrain analysis of GISAID data collected between Dec. 2019 and Aug 2022.*

1. <https://www.cdc.gov/poxvirus/monkeypox/transmission.html>
2. <https://www.cdc.gov/socialmedia/syndication/405380/403327.html>
3. <https://www.livescience.com/original-sars-cov-2-reservoir.html>
4. <https://www.who.int/news-room/fact-sheets/detail/monkeypox>
5. <https://nextstrain.org/ncov/gisaid/global/all-time>

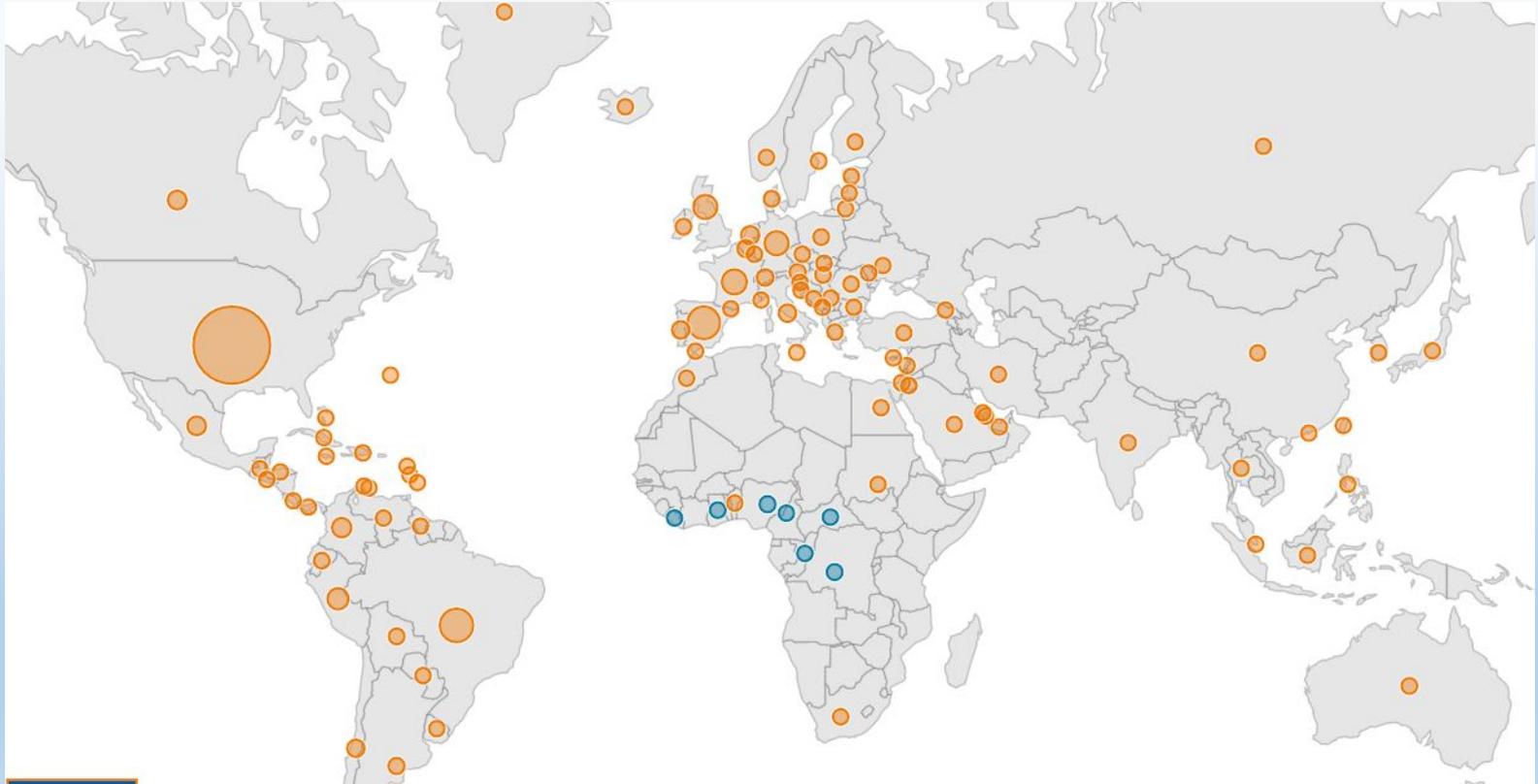
Characteristics of Monkeypox virus

- MPV is a member of the Poxviridae family—the virus is enveloped, brick shaped and large (220-450 nm long, whereas SARSCoV2 is ~100 nm long).
- Its double-stranded DNA genome is encapsulated in a core containing enzymes needed for replication and evasion of host immune defenses.
- Like SARS-CoV-2, MPV has surface proteins that facilitate its entry into host cells.
- However, rather than a single protein, poxviruses use 11 to 12 transmembrane proteins to fuse with host cells, likely binding glycosaminoglycans or laminin on the cell surface.

2022 Monkeypox Outbreak Global Map

Data as of 27 Sep 2022 5:00 PM EDT

<https://www.cdc.gov/poxvirus/monkeypox/response/2022/world-map.html>



Legend

● Has not historically reported monkeypox

● Has historically reported monkeypox

Why the current outbreak?

- Changes in biologic aspects of the virus.
 - About 50 single nucleotide polymorphisms and several mutations recognized
- Changes in human behavior
 - Sexual interactions associated with large gatherings/raves
- Waning smallpox immunity

Transmission

- Traditionally through contact with an infected animal's bodily fluids or a bite. Monkeys and humans have been incidental hosts.
- Current outbreak associated with close intimate contact.
- Transmission can also occur through large respiratory droplets; however, prolonged face-to-face contact may be required
- Possible role for fomites
- Vertical transmission and fetal deaths have been described.

ORIGINAL ARTICLE

Monkeypox Virus Infection in Humans across 16 Countries — April–June 2022

J.P. Thornhill, S. Barkati, S. Walmsley, J. Rockstroh, A. Antinori, L.B. Harrison, R. Palich, A. Nori, I. Reeves, M.S. Habibi, V. Apea, C. Boesecke, L. Vandekerckhove, M. Yakubovsky, E. Sendagorta, J.L. Blanco, E. Florence, D. Moschese, F.M. Maltez, A. Goorhuis, V. Pourcher, P. Migaud, S. Noe, C. Pintado, F. Maggi, A.-B.E. Hansen, C. Hoffmann, J.I. Lezama, C. Mussini, A.M. Cattelan, K. Makofane, D. Tan, S. Nozza, J. Nemeth, M.B. Klein, and C.M. Orkin, for the SHARE-net Clinical Group*

Among the 528 persons with monkeypox reported in the case series, 84 (16%) were in the Americas and 444 (84%) were in Europe, Israel, or Australia.

Demographics & Transmission (n = 528)

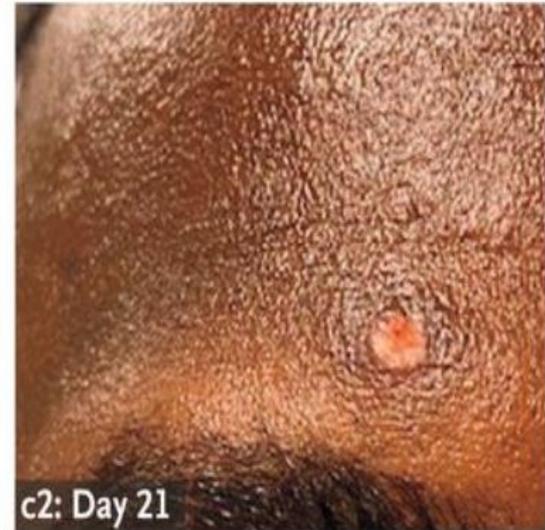
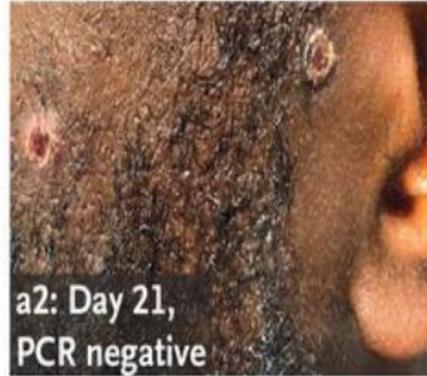
- >99% were Male.
- Sexual orientation: 96% were MSM; 2% bisexual men; 2% heterosexual men
- Median age was 38 years (18-68).
- HIV-infected 41%
- Incubation was 7 d (median, range, 3 to 20).
- Transmission suspected through sexual activity in 95%
- MPV DNA detected in the semen of about 90% of the patients (29/32).
- Concomitant STI were reported in 29% (109/377) who were tested.

Clinical Characteristics of Patients (n=528)

- Rash in 95%. 64% had <10 lesions. **Nearly 10% presented with a single genital lesion.**
- Anogenital lesions in 73%, and **mucosal lesions 41%**, face 25%, trunk/limbs 55%, palms/soles 10%
- Firm, deep-seated, well-circumscribed lesions, often with umbilication. Vesiculopustular most common (in nearly 60%). **Lesions in multiple phases often present simultaneously. Very painful.** Often itchy.
- Prodrome included fever (62%), lethargy (41%), myalgia (31%), and headache (27%). **Prodrome may be absent or follow rash onset.**
- Lymphadenopathy (56%).
- Anorectal pain, proctitis, tenesmus, or diarrhea
- Oropharyngeal presenting symptoms in 5%; pharyngitis, odynophagia, epiglottitis, oral or tonsillar lesions. Conjunctival mucosa lesions were among the presenting symptoms in 3 patients.



Evolution of Cutaneous Lesions in A Person with Monkeypox



Clinical Outcomes

- Most cases were mild and self-limited, and there were no deaths.
- Admission rate 13% (n=70), but no serious complications in the majority.
- Reasons for hospitalization were:
 - severe anorectal pain
 - soft-tissue superinfection
 - pharyngitis limiting oral intake, epiglottitis
 - eye lesions
 - AKI
 - myocarditis
- The clinical presentation and severity similar among persons with or without HIV infection

Evaluation and Diagnosis

- Diagnosis should be suspected in patients who present with a rash or other symptoms that could be consistent with monkeypox **and** have epidemiologic risk factors.
- Collect a complete sexual and travel history for past 21 days
- Thorough skin and mucosal exam in good lighting.
- Definitive diagnosis through demonstration of virus DNA or isolation of virus in culture.
- Presence of an STI does not rule out concomitant monkeypox
- Differential Diagnoses: Syphilis, HSV, Varicella, VZV, molluscum contagiosum, folliculitis

Prognosis

- Many have a mild self-limiting disease course
- Mortality rare, but high levels of morbidity. Patients may need multidisciplinary care.
 - Mucosal diseases, rectal, urethral and oral
 - Aberrant infections, e.g., ocular
- Persons at high risk of severe disease
 - Immunocompromised
 - Presence of atopic dermatitis or other exfoliating skin conditions
 - Inflammatory bowel disease
 - Pediatric populations, particularly < 8 years,
 - Pregnancy or breastfeeding

Diagnostics

PCR is optimal test

Where feasible – biopsy

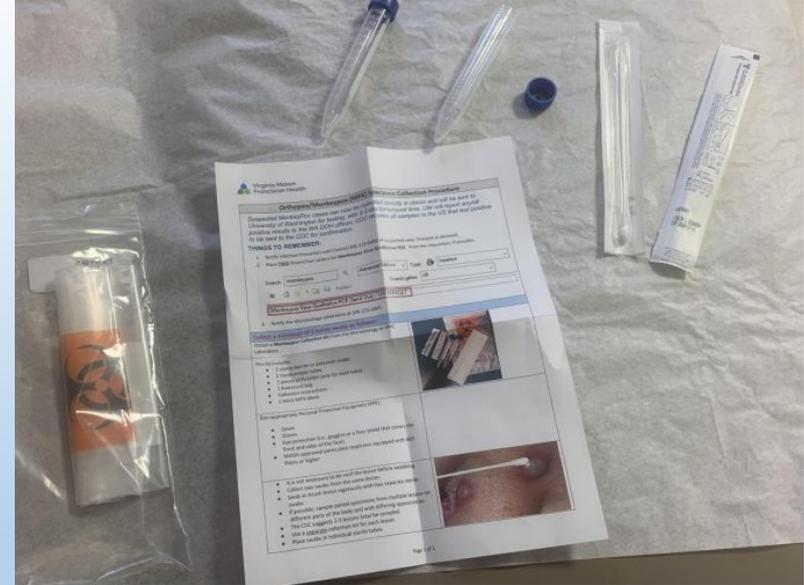
However expectable samples are the roof or fluid from vesicles/pustules and dry crusts

CDC recommends using two swabs for each

sample – sterile synthetic swab (polyester, nylon, Dacron – NOT COTTON) – needs to be in container with a screw capped O-ring.

Either sterile container with gasket seal or viral transport media – NO OTHER MEDIA

ACCEPTED



Treatment

No approved treatment

Generally, a self-limited mild disease

People who should be considered for treatment:

- Severe disease – hemorrhagic disease, confluent lesions, encephalitis, sepsis, other conditions requiring hospitalization
- Immunocompromised
- Pediatrics (especially <8)
- Atopic dermatitis or other exfoliative diseases
- Pregnant/Breast Feeding
- Those with other morbidities of disease (proctitis, [painful genital lesions] ?)

Tecovirimat (TPOXX) - 1

Antiviral approved for smallpox

No data on Monkeypox – animal data on treating disease caused by orthopoxviruses showing efficacy

Clinical trials – safe with minor side effects

Typical dose 600 mg Q12 x 14 days

Under EA-IND – so needs to be done in setting of trial – refer to ID to start (patient needs to be seen in person) – can be started empirically for severe disease prior to tests returning

Exclusion criteria – Unable or unwilling to give informed consent, allergy to medication, testing negative after starting empirically, for IV formulation – severe kidney injury

Monkeypox conclusions

- An old virus that has emerged anew
- Transmission is through close contact with infected lesions
- Evolving epidemiology, most cases in MSM
- Self-limited in most cases; treatment is available
- Vaccine appears to be effective and may be responsible for decreasing number of cases

Live Questions

1. What caused our smallpox immunity to wane? Is it because less newer members of our society are being vaccinated against it?
2. Do you think that the smallpox vaccine will once again be part of the regular vaccine schedule?
3. I know researches were able to find traces of COVID in sewage water; can Monkeypox be traced the same way?
4. Just curious, are people being re-infected with Monkeypox after initial infection, or do they get immunity from the initial infection?

Primary Care Considerations for Health Equity and Advocacy



Anthony Fortenberry,
RN, MSN, NEA-BC
Chief Nursing Officer,
Callen-Lorde Community
Health Center



Managing Outbreaks: Primary Care Considerations



Anthony Fortenberry, Chief Nursing Officer
Callen-Lorde Community Health Center

**CalLEN
-LORDE**

What is Monkeypox (MPV)?

- Background

MPV is a disease caused by infection with the monkeypox virus. MPV is part of the same family of viruses as variola virus, the virus that causes Smallpox. Symptoms resemble smallpox but are milder. MPV is rarely fatal.

- Social Considerations

Symptoms usually start in 3 to 17 days. They can last for two to four weeks.

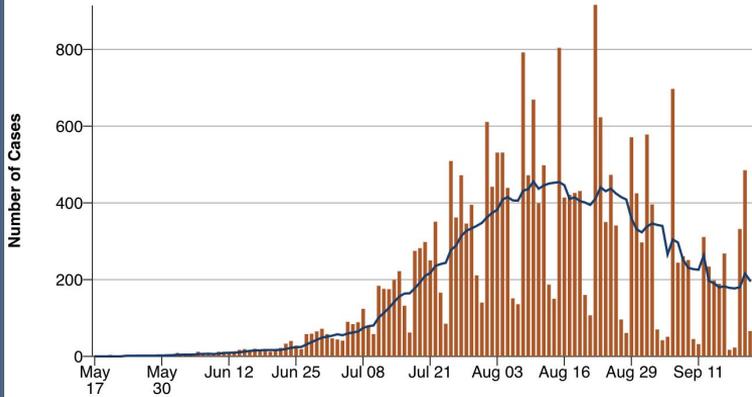
- Is MPV an STI?

In the recent outbreak, the rash or sores is often seen in the genital/groin area as well as in and around the anal area but can occur all over the body as well as on the palms of the hands and soles of feet. Complications can include inflammation of the lining of the rectum (proctitis), or sores that could result in scarring of the eye, mouth, anus or urethra. We do not know if monkeypox causes long-term health problems.

- Stigma

Although MPV can affect anyone regardless of sex, gender, or sexual orientation, recent clusters have disproportionately occurred in men who have sex with men.

Daily Monkeypox Cases Reported* and 7 Day Daily Average



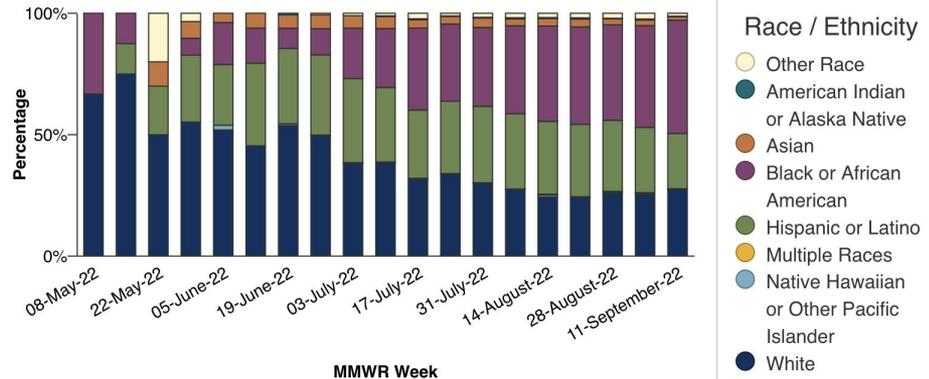
**Includes either the positive laboratory test report date, CDC call center reporting date, or case data entry date into CDC's emergency response common operating platform, DCIPHER.*

U.S. MPV Case Trends

24,364 total confirmed cases

CDC data as of 09/21/2022¹

Monkeypox cases reported to CDC: Race/Ethnicity by Week



How is MPV transmitted?

Direct, prolonged skin-to-skin contact with rash, scabs, or body fluids

Respiratory secretions during prolonged, face-to-face (unmasked) contact, or during intimate physical contact, such as kissing, cuddling, or sex

Touching porous items (such as clothing or linens) that previously touched the infectious rash or body fluids

In the current outbreak, MPV is mainly spreading through oral, anal and vaginal sex and other intimate contact such as rimming, hugging, kissing, biting, cuddling and massage.

How MPV is NOT spread:

- Brief conversations/interactions
- Brushing by someone with monkeypox
- Touching items like doorknobs or elevator buttons

Health Education Campaign

MONKEYPOX (MPV): GET THE FACTS

HELP REDUCE THE STIGMA OF MONKEYPOX (MPV):

- Anyone can get Monkeypox (MPV), regardless of gender identity and sexual orientation.
- Have open conversations with sexual partners about your status, and theirs. Lead with empathy! We are all going through a scary time, but we are in this together. Do not blame or shame anyone – including yourself.
- Don't panic, and seek medical attention if you have a new or unexplained rash. You can get tested, and find ways to keep you, your partners, and other close contacts safe.



Occupational Safety

Personal Protective Equipment (PPE) should include²:

- Gown
- Gloves
- Eye protection (i.e., goggles or a face shield that covers the front and sides of the face)
- NIOSH-approved particulate respirator equipped with N95 filters or higher

Isolation

- Isolation or quarantine should be maintained until all lesions have crusted, those crusts have separated, and a fresh layer of healthy skin has formed underneath

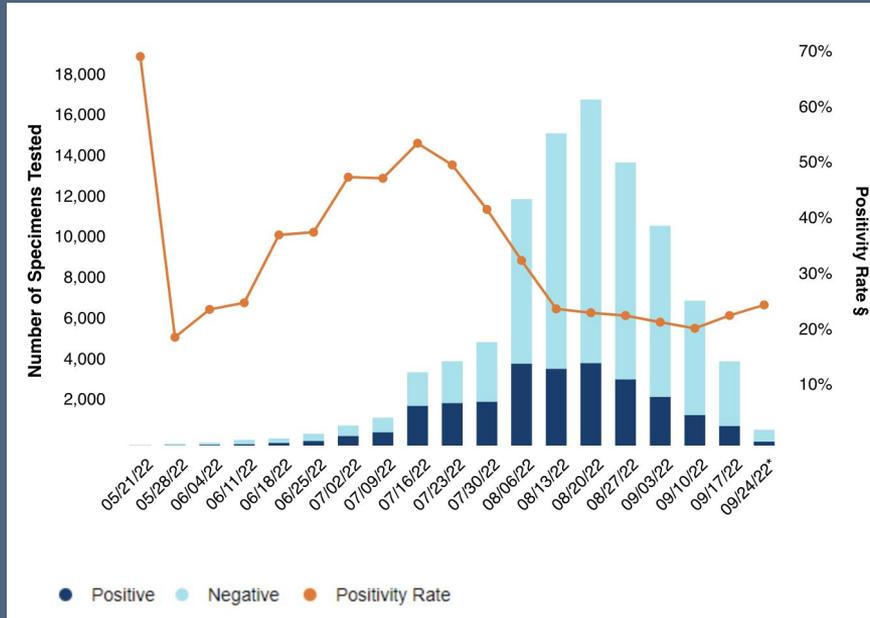
Environmental Infection Control

- Standard cleaning and disinfection procedures should be performed using an EPA-registered hospital-grade viral disinfectant
- Soiled laundry should be gently and promptly contained
- Activities such as dry dusting, sweeping, or vacuuming should be avoided. Wet cleaning methods are preferred

Testing Strategies

Mobile Health
Primary Care
Sexual Health Clinics

104,346 tests
28.6% positivity rates



CDC data as of 09/21/2022³

Equitable Access to MPV Treatment – Tecovirimat (TPOXX)

- Strategic National Stockpile (Smallpox)
- Expanded Access IND Protocol: Use of Tecovirimat (TPOXX®) for Treatment of Human Non-Variola Orthopoxvirus Infections in Adults and Children⁴



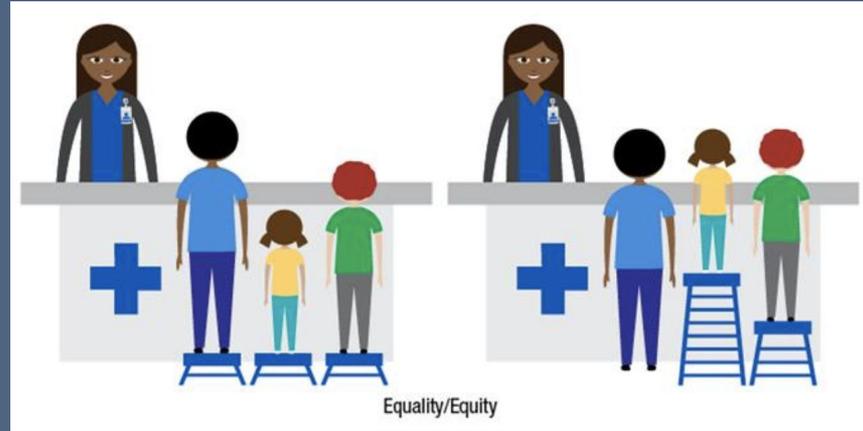
JYNNEOS Vaccine Considerations

Side effects

Intradermal vs Subcutaneous

History of keloids

Vaccine Equity



© 2022 Nationwide Children's Hospital

Race/Ethnicity	% of Vaccine Referrals to DOH	% of Callen-Lorde Patients
White	45	47
Declined	18	18
Black/African American	18	20
Hispanic/Latinx	12	14
Asian	7	7

Addressing Stigma

MPV does not discriminate.

Eliminate blame or shame

Encourage medical attention
for new or unexplained rash.

- Health Resources and Services Administration
 - HRSA Monkeypox Vaccine Distribution Initiative
- Centers for Disease Control and Prevention
 - Monkeypox Vaccine Equity Pilot Program
- National Association of Community Health Centers
- State Primary Care Associations
- Local Departments of Health
- Community Partners

Partnership & Resource Allocation

REFERENCES

¹Centers for Disease Control and Prevention. (2022, September 21). *U.S. Monkeypox case trends reported to CDC*. <https://www.cdc.gov/poxvirus/monkeypox/response/2022/mpx-trends.html>

²Centers for Disease Control and Prevention. (2022, September 21). *Infection prevention and control of Monkeypox in healthcare settings*. https://www.cdc.gov/poxvirus/monkeypox/clinicians/infection-control-healthcare.html#anchor_1653508869481

³Centers for Disease Control and Prevention. (2022, September 21). *Non-Variola Orthopoxvirus and Monkeypox virus laboratory testing data*. <https://www.cdc.gov/poxvirus/monkeypox/response/2022/2022-lab-test.html>

⁴Centers for Disease Control and Prevention. (2022, September 21). *Expanded Access IND Protocol: Use of Tecovirimat (TPOXX®) for treatment of human Non-Variola Orthopoxvirus infections in adults and children*. <https://www.cdc.gov/poxvirus/monkeypox/pdf/Tecovirimat-IND-Protocol-CDC-IRB.pdf>

⁵New York City Department of Health. (2022, September 21). *Monkeypox: vaccination*. <https://www1.nyc.gov/site/doh/health/health-topics/monkeypox-vaccination.page>

Thank you

Anthony Fortenberry, MSN, RN, NEA-BC
afortenberry@callen-lorde.org

**CALLEN
-LORDE**

Resources



Centers for Disease Control and Prevention

[Strategies to Mitigate Healthcare Personnel Staffing Shortages](#), Updated September 23, 2022

[Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure to SARS-CoV-2](#), Updated September 23, 2022

[Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the COVID-19 Pandemic](#), Updated September 23, 2022

Monkeypox Resources

[Listen Now: Monkeypox: Just The Facts](#), Pride in Our Health, July 2022

[Community Health Centers Focus on Monkeypox As a Public Health Threat](#), National Association of Community Health Centers, July 2022

[Monkeypox: What You Should Know](#), National Institutes of Health, September 2022

[New Low-Literacy Monkeypox Resource, in English & Spanish](#), Migrant Clinicians Network, August 2022

National Resource Center for Refugees, Immigrants, and Migrants (NRC-RIM)



NRC-RIM offers resources, information, and culturally/linguistically appropriate materials for responding to infectious disease outbreaks like COVID-19 and Monkeypox. They offer materials that are community vetted in over 30 different languages. Access their toolkit, [Applying Lessons Learned from COVID-19 to the Monkeypox Response](#), or browse their [COVID-19 Get The Facts campaign](#) resources.



We Can Do This



Join the [We Can Do This](#) national campaign to increase COVID-19 vaccine confidence including toolkits in multiple languages.

to giving them the health and safety for years to come.



VOICE OF:
Riya Amin
*Doctor of Nursing Practice,
Board Certified Family
Nurse Practitioner
Akron, OH*

AAPCHO Member providers share heartfelt experiences of COVID-19 vaccination with their patients.

National COVID-19 Resiliency Network



The National COVID-19 Resiliency Network (NCRN) has resources, publications, and supportive care available in 13 languages.

The screenshot shows the NCRN website interface. At the top is a blue navigation bar with the NCRN logo and menu items: Care Resources, News, Resources, Publications, and About NCRN. Below the navigation bar is a hero section featuring a large image of a young girl wearing white headphones and holding a red pencil. To the left of the image is a dark blue box with the text '12 Months of Free Internet Service' and a 'Click Here to Learn More' button. Below the hero section is a 'Find the right support near you' section with three steps: 1. Enter your zip code, 2. Choose a service (with options for Covid-19 Testing and Food), and 3. Find what you need in your area. A 'Find Support' button is located at the bottom right of this section. To the right of the support finder is an 'About the Network' section with a brief description of the network's mission and a quote: 'Together, we can reduce the negative outcomes and impact of COVID-19 on our communities.'

The NCRN support finder helps locate COVID-19 testing and vaccination as well as other supportive services by zip code.

Last CHERN Learning Series Session

Session 4: Health Center Preparations for
Clinical Care after the End of the Public
Health Emergency

Wednesday, October 19

1-2pm HT / 4-5pm PT / 7-8pm ET

**COVID-19 & Other Infectious
Diseases Health Equity Response
Network (CHERN) Learning Series**

August 17
September 14
September 28
NEW DATE! October 19

1-2pm HT / 4-5pm PT / 7-8pm ET

Register at
<https://bit.ly/CHERNSeries-Registration>





Questions?

Email us at training@aapcho.org

Visit us at aapcho.org/covid19