CALIFORNIA HIV / AIDS POLICY RESEARCH CENTERS

Mpox Vaccination in California
Results from a Community Survey

Background

On November 19, 2024, the California Department of Public Health issued a health advisory that California had confirmed the first case of mpox infection from Clade 1B mpox (monkeypox) virus (California Department of Public Health (CDPH)a, 2024). While the overall risk of Clade I affecting the general population in California continues to be low, this case follows the August 14, 2024 World Health Organization declaration identifying mpox as a public health emergency of international concern. An alarming number of cases of Clade 1B in the Democratic Republic of Congo (DRC) and reported cases in nearby countries, such as Burundi, Rwanda, and Kenya have given rise to concerns of further spread across and beyond central Africa (World Health Organization, 2024). Africa has recorded 50,840 cases of and 1,083 deaths from mpox this year alone (Voice of America, 2024). Although its spread seems to be abating in the DRC recently, travel-related cases of Clade 1B have been reported in Sweden, Germany, India, Thailand, and the UK (Centers for Disease Control and Prevention (CDC)a, 2024). A few additional cases from household transmission have followed the initial case of Clade 1B reported at the end of October in the UK (BBC, 2024). Total confirmed cases through October 1, 2024 numbered 34,063 (Our World In Data, 2024), with 2,404 cases reported year to date as of November 2 (CDCb, 2024).

In its August 2024 assessment, the CDC deemed the risk of mpox in the US as low to moderate among men who have sex with men (MSM) that have more than one sex partner and to sexual partners of MSM, irrespective of gender (CDCc, 2024). By moderate, they mean there is potential for many people to be exposed or for a substantial proportion of the population or segments within it to experience severe disease (CDCd, 2024). An alternative and more recent November 4th risk assessment was made by the Center for Outbreak Response Innovation. Under the scenario in which both Clades I and II increase in spread through Africa, they believe that the health risk to the MSM community, as well as to sex workers, in the United States is moderate (Center for Outbreak Response Innovation, 2024). The possible impact of a Clade I outbreak on the US is uncertain, with only 1 confirmed case in the U.S.. However, better medical care and access to vaccination and therapeutics are likely to lead to lower morbidity and mortality, in comparison to the DRC.

From May 2022 to January 2023, the month that the US mpox public health emergency was declared over, close to 1.2 million vaccine doses had been administered in 57 jurisdictions across the US (Owens et al., 2023). Full vaccination against mpox requires two doses, whether delivered by subcutaneous or intradermal injection. In August 2022, the Food and Drug Administration approved the option to administer the vaccine as an intradermal injection to conserve doses. At the end of January 2023, one- and two-dose vaccination coverage among persons at risk of mpox in the US were 37% and 23%, respectively (Owens et al., 2023). Among California residents who initiated the mpox vaccination series between May 2022 to March 2023, 64.5% completed the series as of the end of April 2023 (Salih et al., 2023).

Mpox Exposure and Close Contact

Since the peak of the outbreak in 2022 affecting mainly MSM and people in their sexual networks, US cases have been low but have not altogether disappeared. In one study of 196 people presenting with mpox-like lesions at 13 hospital emergency department sites in the second half of 2023, the three patients (or 1.5%) that

did test positive for mpox identified as MSM, had engaged in sex with one or more partners they met through a smartphone dating app, and had not been vaccinated against mpox (Berdahl et al., 2024).

Using August 2022 to July 2023 data from MSM and transgender adults between the ages of 18 to 49 from 12 jurisdictions in the US, a study examined if different types of sexual and non-intimate contact—including condomless receptive or insertive anal sex, receiving or giving oral sex without a condom, and sharing bedding, towels, or clothing—increased the odds of mpox among persons who reported close contact with a person having mpox (Chard et al., 2024). When adjusted for "age, race, HIV status and HIV PrEP [pre-exposure prophylaxis] or ARV [antiretroviral] use, number of sexual partners, mpox vaccination status, and index month (Chard et al., 2024)," only condomless receptive anal sex persisted as a type of contact associated with higher odds of mpox. Among persons reporting close contact with a person having mpox, the odds of mpox for those who reported condomless receptive anal sex were 5.4 times that of peers who did not report such intimate contact (Chard et al., 2024).

An analysis of May to July 2022 data led to interviews with 162 nonsexual contacts of mpox cases in the District of Columbia. The most common exposure setting reported by 41% of nonsexual contacts was a large gathering, such as a festival (Thomas et al., 2023). In a separate study by Sharpe et. al (2024) 30% of mpox patients from six jurisdictions during the 2022 outbreak had missing data on possible exposure to mpox or no reported male-to-male sexual contact (MMSC). Of 52 people reporting no MMSC, 14 reported known exposure to a person with mpox, eight from sexual activity and the rest from household contact. Of 38 people with no known exposure to mpox, the most common activities preceding illness included sexual activity and other close intimate contact (45%), close facial contact (37%), and presence at large social gatherings (29%) and in occupational settings (26%).

Vaccination and Other Prevention Measures

Vaccination is the chief though not sole measure to avoid mpox or prevent serious illness resulting from infection, yet vaccination coverage remains low and "only one in four of the approximately two million persons eligible to receive the vaccine in the United States has received both doses" (Chard et al., 2024). Informing people of safer sex strategies remains important. They include discussing any mpox symptoms with sexual partners, noting any unexplained rashes or lesions on a partner's body, and refraining from close contact if one or one's sex partner experiences an mpox-like rash or becomes sick with mpox. Reducing one's number of sex partners, exchanging contact information with a new partner to facilitate a sexual health follow-up, limiting visits to sex-on-premises venues, washing sex toys after each use, and using condoms or gloves during sexual activity are other personal steps to reducing risk.

Demographic Characteristics of Mpox Cases and Vaccinations

According to a study by Salih et al. (2023), among 119,345 California residents who obtained their first dose of the mpox vaccine between August 9, 2022, and March 31, 2023, approximately 60% or 71,317 people received both doses. Persons assigned female at birth had lower odds of completing the second dose in comparison to people assigned male. Compared with those of White residents (64.1%), the odds of completing the series were lower among Black (51.3%), Hispanic or Latino (56.6%), Asian (60.8%), and multiracial peers or people of other races (58.1%). Younger age groups (i.e., 18-24, 25-34, 35-44, and 45-54) also had lower odds of completion, relative to the two oldest age groups (55-64 and 65 or older); the group with the lowest odds of completion were people aged 18-24.

After a long respite marked by a low incidence of mpox cases, Los Angeles County (LAC) saw an increase from early May to mid-August 2023, noteworthy because few other US jurisdictions experienced an increase during the same period. Admittedly, this local outbreak that averaged one case per day was far smaller than the August peak of the summer 2022 outbreak when LAC averaged 39 cases per day (Leonard et al., 2024). Of the 56 reported cases, four out of five identified as gay or bisexual and 57% were unvaccinated and 29% fully

vaccinated (Leonard et al., 2024). Black residents accounted for 23% of these cases, and not one of them was fully vaccinated. Similarly, among the 18 Hispanic people who comprised one-third of these cases, only three had been fully vaccinated (Leonard et al., 2024). Again, in late September 2024, LAC reported 52 cases of mpox over a four-week period, more than double the number in the preceding four weeks (County of Los Angeles Public Healtha, 2024). About 70% of mpox cases from April to September 2024 were among unvaccinated people (County of Los Angeles Public Healtha, 2024).

Vaccination Coverage and Access

As of November 22, 2024, California had administered 362,034 doses to 216,690 persons, accordng to data from the Department of Public Health (2024). The percentages of persons vaccinated against mpox with at least one dose who identify as Hispanic/Latinx (26%) or Black (7%) are lower than the percentages of mpox cases that these groups account for, 46% and 12%, respectively. LA County makes up 35% of people vaccinated against mpox in California or 75,740 people (CDPHb, 2024). In LAC, including Long Beach and Pasadena, as of November 14, 2024, 88,979 first doses have been administered (County of Los Angeles Public Healthb, 2024). Of that number, 34% are accounted for by people identifying as White, 31% Hispanic/Latinx, 10% Black, and 8% Asian.

Race/Ethnicity	Percent of Total Population	Percent of Mpox Cases	Percent of Persons Vaccinated
Hispanic or Latino	39.7	45.6	26.4
White	35.0	31.6	38.0
Black or African American	5.4	12.5	7.4
Asian	15.1	5.8	10.9
Multiple or Other Races	4.1	3.5	13.0
Native Hawaiian/Other Pacific Islander	0.3	0.5	0.4
American Indian/Alaska Native	0.4	0.4	0.4
Unknown			3.5

Although vaccination coverage in California is higher than comparable national figures, there remains a need to encourage initiation and completion of the two-dose Jynneos vaccine series. People in the US who received their vaccinations within two years of the start of the global outbreak obtained free vaccines through federal stockpile supplies distributed by local public health agencies. In April of this year, the Jynneos vaccine became commercially available at pharmacies, clinics, and physicians' offices. People on Medicaid (Medi-Cal in California) or the Children's Health Insurance program (CHIP) or people with Medicare Part D have coverage for mpox vaccination (Centers for Medicare & Medicaid Services (CMS), 2024). Group plans beginning October 26, 2024, (and January 1, 2025 for individual market plans) must also cover the vaccine without cost-sharing, if a person meets the Advisory Council on Immunization Practices' recommendations for mpox vaccination (CMS, 2024). The commercialization of Jynneos, however, leaves a gap in access to vaccination among uninsured people. Even as public health departments monitor continued transmission of Clade IIB and heighten their vigilance for Clade IB cases in the US, it remains to be seen if any federal, state, or local mechanisms will be established to address the vaccination needs of uninsured individuals.

About the Infographic

Characteristics of People in Southern California Vaccinated against Mpox

In LA County, the STICKITIN initiative exemplifies a community-based prevention effort to bring vaccinations directly to people attending Pride festivals and other community gatherings. During at least 20 such events in

2024 held in Los Angeles, Orange, San Diego, and Santa Barbara Counties, we surveyed a total of 255 individuals who had previously been vaccinated to understand their characteristics, the circumstances under which they received the mpox vaccine, and behaviors they adopted to avoid the virus and prevent its spread.

Our sample of mpox-vaccinated people had a median age of 36 years and 89% were assigned male at birth and 10% female at birth. Almost three-fourths or 74% identified as cisgender men, 12% as non-binary, 4% as transgender men, 4% as transgender women, and under 2% as cisgender women. Concerning sexual orientation, survey participants could select more than one response. In total, 74% identified as gay, 16% as queer, and 11% as bisexual. As for race and ethnicity, 41% of our sample identified as Latinx, 36% as White, 18% as Black, and 10% as Asian. Participants included 15% who stated their HIV status as positive and 83% negative.

At least nine out of ten in the sample were fully vaccinated with two doses, and 7.5% had received just one dose. Over two-thirds or 67% received their initial mpox vaccine dose in 2022, the first year of the global outbreak, 27% in 2023, and 4% this year, 2024. At least 65% received their most recent vaccine dose from a public health or community health clinic; followed by 16% who received it through a mobile unit, street outreach program, or vaccination event; and 12% who obtained their most recent dose from a private doctor's office. About 45% obtained most of their information on mpox from digital sources. Almost one-third relied most on social media, slightly exceeding the 30% who looked to their health care provider for most of their information. This sample of people already vaccinated for mpox have questions related to how long vaccine protection will last and if boosters are needed. It is important to note, boosters are not recommended currently (CDCe, 2024).

In comparison to 29% who said they were somewhat or very concerned, 65% said they were only a little concerned or not at all about contracting mpox personally. More pronounced was concern for mpox in their community, as 51% indicated they were somewhat or very concerned. The people in our sample did not rely wholly on vaccination. About one in five changed their sexual behavior as a means of prevention: 20% reduced their number of sexual partners, 18% had fewer one-time sexual encounters, 18% had less group sex, and 15% went to fewer sex venues and parties.