

# Mpox Equity Report Update

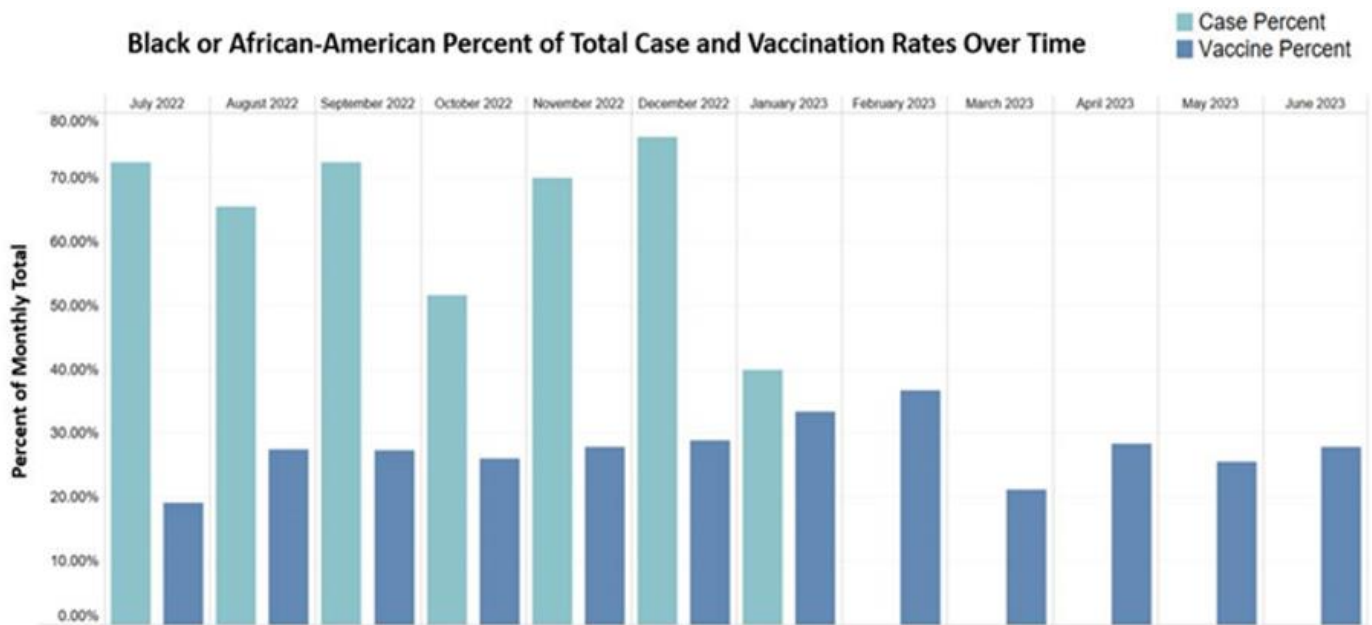
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## Summary

On May 10, 2022, the first case of a new mpox outbreak was identified in the United States, with the first case in North Carolina reported on June 23, 2022. On June 28, 2022, the US national mpox vaccine strategy was announced by the Food and Drug Administration (FDA) for protection against smallpox and mpox in individuals 18 years and older. The vaccine, known as JYNNEOS, was distributed through the Strategic National Stockpile to states and territories across the country for use in individuals at high risk for infection. JYNNEOS, a two-dose vaccine series, can be administered both as a post-exposure prophylaxis (PEP) to people with known or presumed mpox exposure and for prevention prior to exposure for individuals with high risk of infection. From June 23, 2022, through June 22, 2023, a total of 709 cases have been identified in North Carolina and more than 26,000 doses of JYNNEOS have been administered to over 15,000 individuals. Early data indicated that nearly all cases in North Carolina were among men who have sex with men (MSM).

In August 2022, DHHS released the [first mpox equity report](#) identifying the disparity that Black or African American individuals accounted for 70% of all cases but only 24% of vaccine doses administered. The report also highlighted concerted actions for health departments, community partners, and the public to decrease this disparity. Due to extensive outreach efforts, vaccine uptake among at risk Black or African American individuals subsequently increased from 19% in July 2022 to nearly 37% in February 2023. As of June 22, 2023, Black or African American individuals accounted for 67% of all cases but only 27% of all vaccine doses administered indicating the need for continued efforts to reach this population.

**Figure 1.** Percent of Black or African American cases in Proportion to Black or African American Vaccinations Over Time



Note: zero cases were reported during the months of February – June 2023, with the exception of one White/Non-Hispanic case in April.

Through the Centers for Disease Control and Prevention (CDC) Public Health Crisis Response Cooperative Agreement, funding was made available to address urgent mpox response needs and implement activities to increase vaccine accessibility and uptake and prevent future outbreaks. Five counties in North Carolina received mpox funding based on the number of cases and racial disparities between incidence rates and vaccine uptake (Mecklenburg, Wake, Guilford, Forsyth, and Cumberland). Additionally, two community-based organizations also received funding and will work with local health departments to provide mpox vaccine to communities. Beyond these funded partners, DHHS is working with other state and local partners to increase vaccine uptake across the state. These partners include LGBTQ centers and other community-based organizations serving LGBTQ+ communities across North Carolina.

## PURPOSE

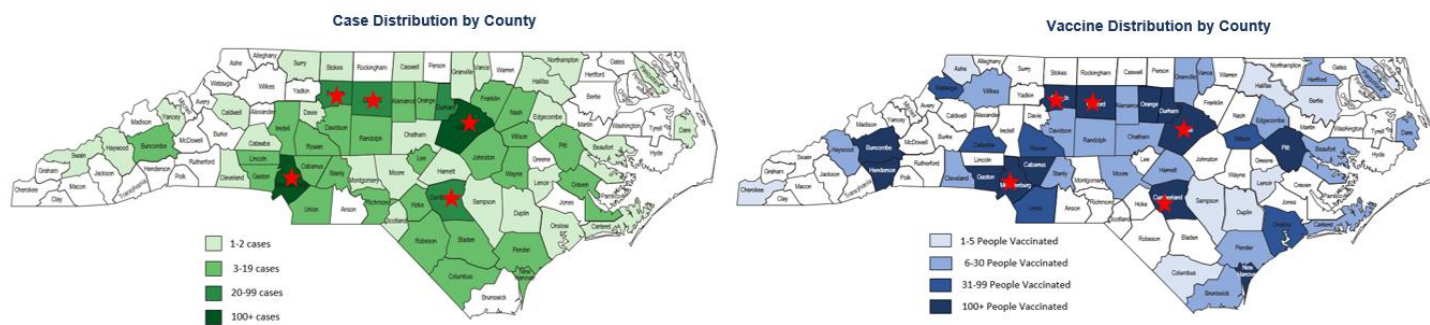
The purpose of this report is to provide an update on the state- and county-level distributions and demographics of North Carolina’s mpox outbreak and vaccination campaign and to identify gaps for targeted response. Identifying and engaging populations at the highest risk for mpox and disparities in vaccination coverage is a critical step in eliminating health disparities and creating an equitable mpox response. As a resource for local health departments, this report highlights areas for outreach and offers insights into data-driven strategies for short- and long-term goals to minimize health equity gaps. This data will also serve as a baseline and allow us to evaluate the impact of specific outreach initiatives as we continue working to provide a more equitable vaccine response moving forward.

# Statewide Mpox Outbreak Status Update

## GEOGRAPHIC DISTRIBUTION

As of June 22, 2023, a total of 709 cases had been reported in North Carolina and over 26,000 doses of JYNNEOS had been administered to over 15,000 individuals. Seventy percent of cases and over 60% percent of all people vaccinated in North Carolina were in the five aforementioned counties: Mecklenburg, Wake, Guilford, Forsyth, and Cumberland. In addition to these high-vaccinating counties, Buncombe County also led a large-scale mpox vaccination campaign, accounting for nearly 10% of all doses administered statewide. Geographic distributions of both cases and vaccinees are in Figure 2. Counties designated with a red star are participants in the CDC Public Health Crisis Response Cooperative Agreement for mpox.

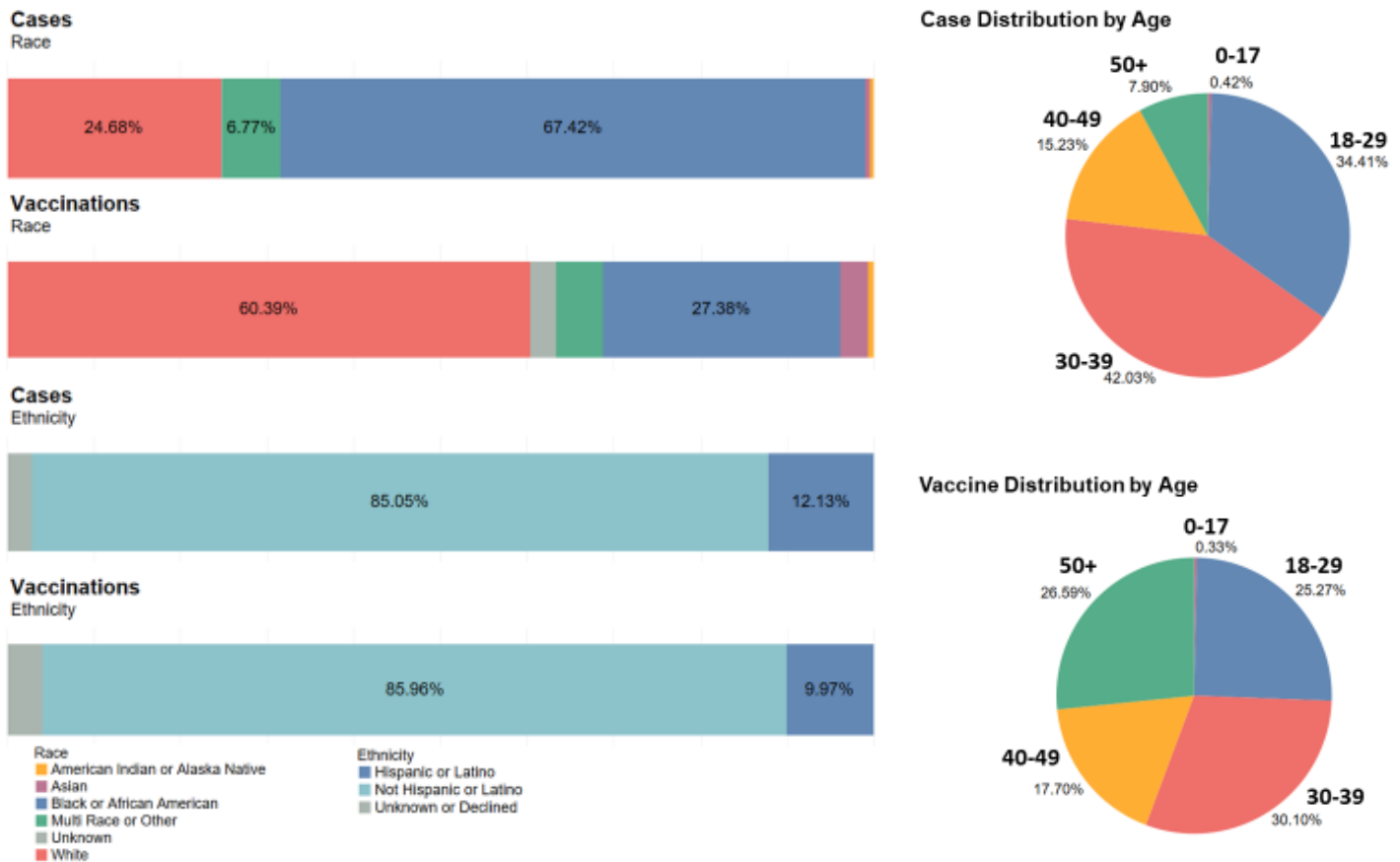
**Figure 2.** Incidence of mpox and vaccine uptake by county, North Carolina, 2022-2023.



## DEMOGRAPHIC BREAKDOWN

Black or African American men continue to be disproportionately impacted by the mpox outbreak in North Carolina. Of the 709 cases reported statewide through June 22, 2023, Black, or African American men accounted for 67% of cases, but had received only 27% of doses administered (Figure 3). In comparison, white men accounted for roughly 25% of cases and had received over 60% of doses administered. Hispanic individuals accounted for over 12% of cases and had received nearly 10% of all doses administered. Thirty-four percent of cases occurred among people aged 18-29 years, while 25% of doses had been administered to this age group. Similarly, 42% of cases occurred among individuals 30-39 years of age, but account for 30% of doses administered. While roughly 8% of all cases were in individuals 50+ years of age, over a quarter of all doses administered have been to this age group.

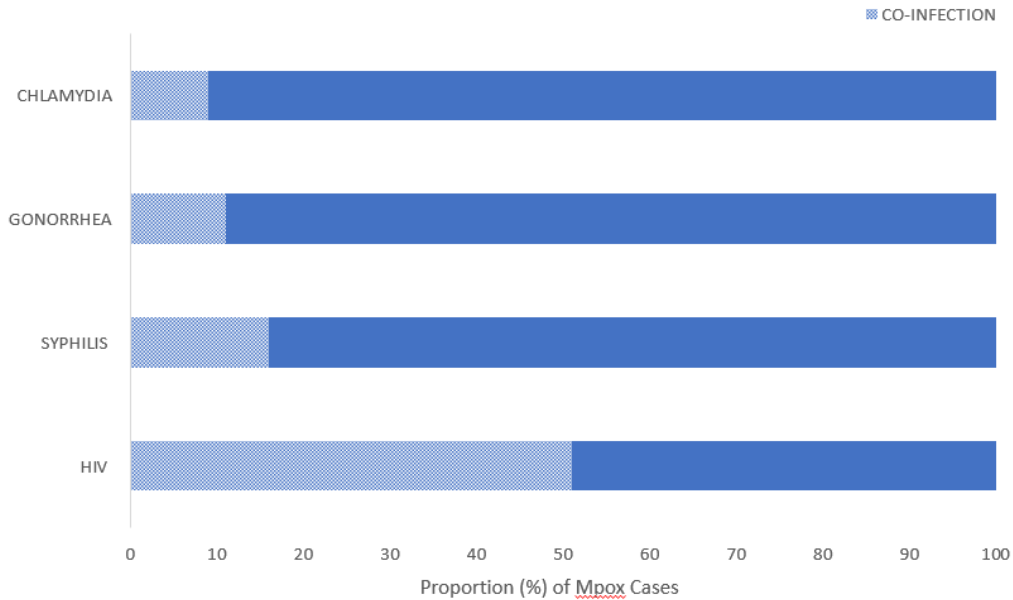
**Figure 3.** Demographic profile of mpox cases and vaccine recipients in North Carolina, 2022-2023.



## CO-INFECTION

Co-infections with HIV and other sexually transmitted infections (STIs) were commonly identified during the 2022 mpox outbreak (Figure 4). More than 50% of mpox cases occurred among individuals living with HIV, and among those cases, 31% were not in care or not virally suppressed. Black or African American individuals with mpox were 3.3 times more likely to be coinfecting with HIV than those who are not Black or African American. Co-infections were most commonly identified among individuals between 25-34 years of age. The graph below shows the proportion of mpox cases co-infected with chlamydia, gonorrhea, syphilis, and HIV at the time of mpox infection.

**Figure 4.** Co-infections among mpox cases in North Carolina, 2022-2023.



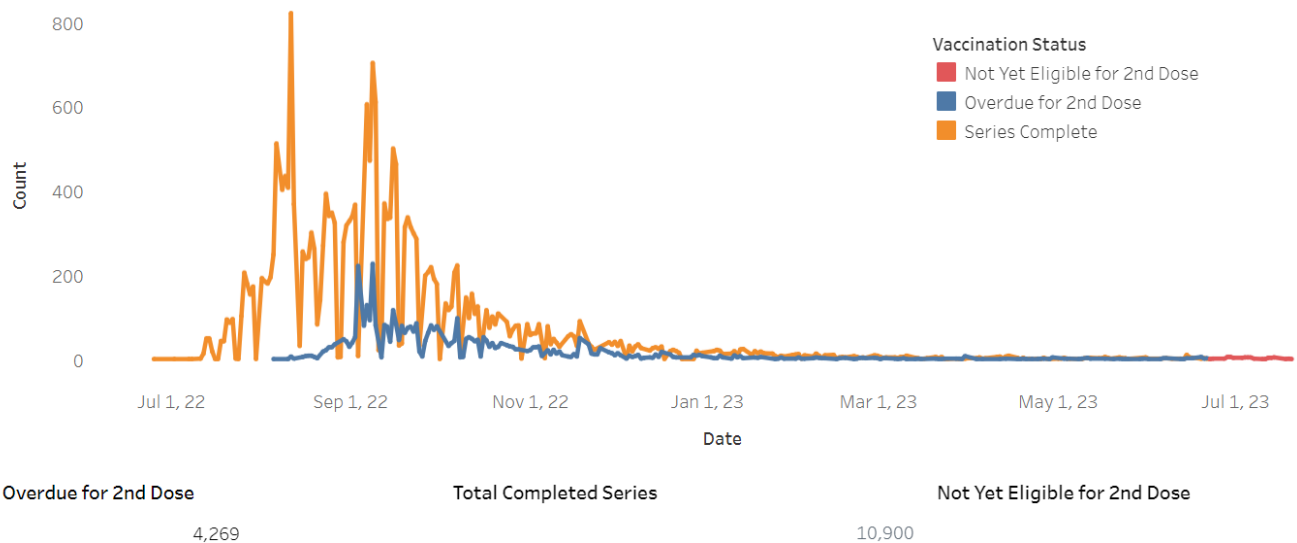
*\*Chlamydia, gonorrhea, and syphilis infections were included if identified within 70 days before or after the mpox infection.*

## VACCINE SERIES COMPLETION

As of June 22, 2023, 26,296 doses had been administered to 15,230 individuals in North Carolina. A total of 10,900 people completed the two-dose JYNNEOS vaccine series; and 4,330 received only a single dose (Figure 5).

A CDC Morbidity and Mortality Weekly Report published on December 9, 2022, found that among vaccine-eligible men aged 18-49 years in 43 U.S. jurisdictions from July 31 to October 1, 2022, mpox incidence was estimated to be 10 and 7 times higher among unvaccinated individuals compared to those who had completed the vaccine series or received only one dose, respectively. While vaccination is an important prevention measure, vaccinated individuals should continue to use safe practices to protect themselves against mpox, such as avoiding close, skin-to-skin contact, including intimate contact, with someone who has known or suspected mpox.

**Figure 5.** Vaccine uptake over time in North Carolina, 2022-2023.



## Cooperative Agreement Partnership

As described, Mecklenburg, Wake, Guilford, Forsyth, and Cumberland counties have been selected for partnership in CDC’s Public Health Crisis Response Cooperative Agreement for mpox due to their volume of cases, doses administered, and observed racial and age disparities in vaccine uptake (Table 1). Cases in these five counties account for 67% of all cases statewide. Funding provided through this cooperative agreement will be used to implement mpox response-related activities including efforts to increase vaccine accessibility and uptake and enhance communication, education, and outreach. Data and insights provided below are intended to guide local-level short- and long-term strategy development aimed at increasing vaccine uptake among high-risk individuals and narrowing inequities.

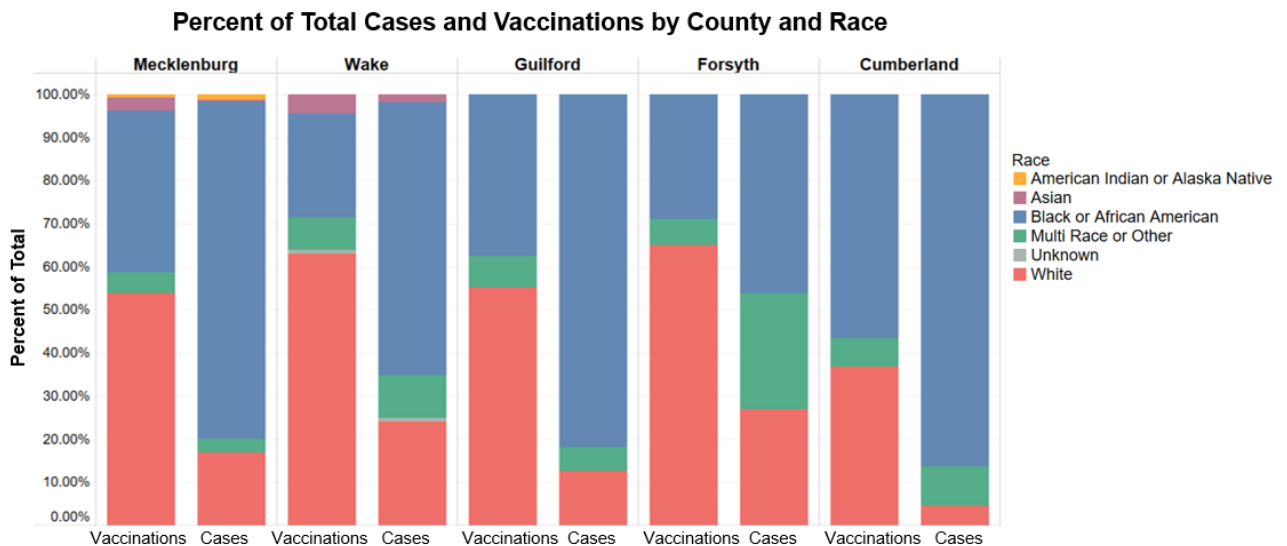
**Table 1.** Case incidence and vaccine uptake by funded county, North Carolina, 2022-2023.

Case and Vaccine Summary [CoAg Counties Only]				
County	Case Count	Percent of Statewide Cases (n=709)	Doses Administered	Percent of Statewide Doses Administered (n=26,296)
Mecklenburg	244	34%	9,299	35%
Wake	112	16%	4,463	17%
Guilford	72	10%	968	4%
Forsyth	26	4%	1,471	6%
Cumberland	22	3%	396	2%
<b>Total</b>	<b>476</b>	<b>67%</b>	<b>16,597</b>	<b>64%</b>

## RACE

Among the five participating counties, 74% of the 476 cases were in Black or African American individuals, while this group received only 31% of the 16,597 doses administered (Figure 6). By contrast, 18% of cases were in white individuals, while this group accounted for over 56% of doses administered. Less than 5% of cases were in American Indian or Alaskan Native or Asian individuals. In Forsyth County specifically, 27% of cases were in people who identified as “Multi-Race” or “Other,” yet this group made up less than 6% of doses administered.

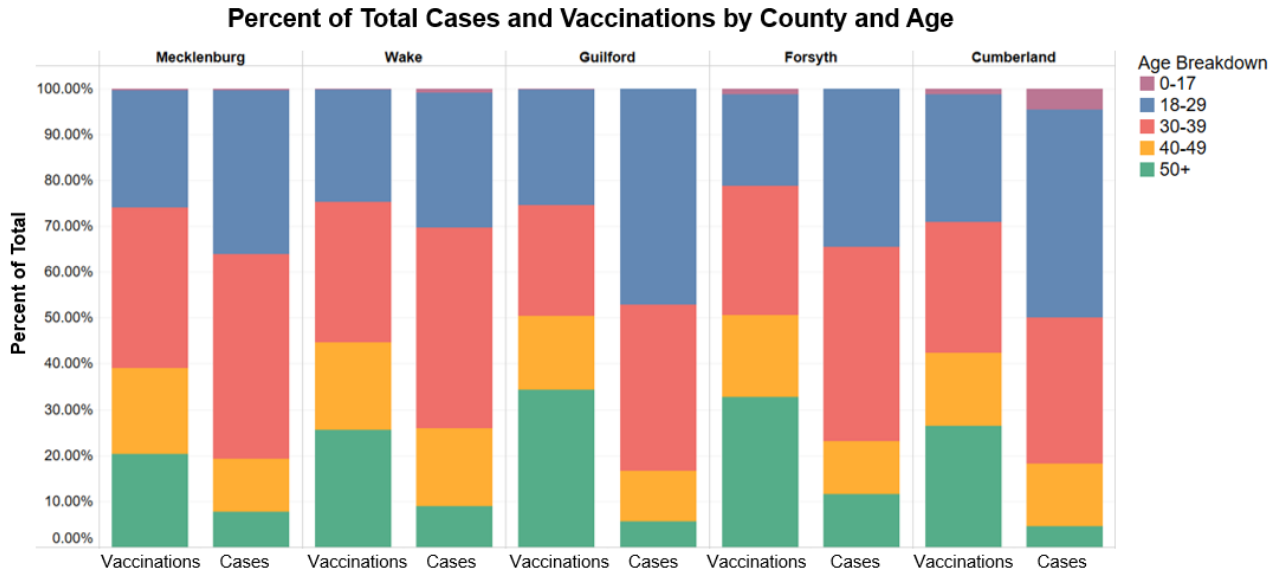
**Figure 6.** Case and vaccine recipients by race and funded county, North Carolina, 2022-2023.



## AGE

Of the 476 cases reported in Mecklenburg, Wake, Guilford, Forsyth, and Cumberland counties, over 36% were in individuals aged 18-29, while this age group accounted for less than 25% of all doses administered (Figure 7). Individuals aged 30-39 accounted for 42% of cases and approximately 32% of doses administered. Lastly, less than 8% of cases were reported in individuals 50+ years, while nearly a quarter of all doses were administered to individuals in this age group. Age data for both cases and vaccinations in the five participating counties is consistent with statewide averages for every age category.

**Figure 7.** Case and vaccine recipients by age and funded county, North Carolina, 2022-2023.



## RECOMMENDATIONS

Identifying and engaging populations at the highest risk for mpox and lower rates of vaccination coverage is a critical step in eliminating health disparities and creating an equitable mpox response. This report highlights opportunities for targeted outreach initiatives to align vaccination efforts with data indicating the subpopulations at highest risk for infection.

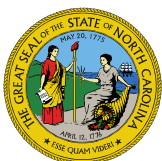
While anyone can spread or contract mpox regardless of sexual orientation, gender identity, race or ethnicity, state and national data show that the current outbreak continues to disproportionately impact MSM and particularly those who are Black or African American. In addition, those under 39 years of age made a larger proportion of cases but smaller proportion of those receiving vaccine.

As work to prevent future mpox cases and outbreaks continues in North Carolina, achieving health equity should serve as a key goal in the development of program, outreach, and communication strategies. The current cooperative agreement provides us with an opportunity to build stronger and more effective relationships based on trust and reciprocity in LGBTQ+ communities across the state. In service to these goals, our priority next steps include:

1. Continue to build on the “Take Pride Now” campaign launched during Pride Month by implementing communication strategies that include social media and education materials for MSM with key messages of getting mpox vaccine as well as information about safer sex practices to protect against mpox even after vaccination.
2. Work with existing sexual health providers, particularly those who provide HIV care, to ensure that mpox vaccination or referral is routinely offered to high-risk patients.

3. Work with county health departments to identify individuals for outreach who initiated the mpox vaccine series but did not yet complete it.
4. Beyond these activities, integrating mpox education into ongoing routine sexual health work will allow us to build long-term prevention efforts. Additional steps that health departments, clinicians, and community organizations can take to connect mpox response with existing sexual health efforts include:
  - Incorporating JYNNEOS administration within local health department sexually transmitted infection clinics
  - Providing testing, condom distribution, mpox education, and mpox vaccine referrals with a specific focus on individuals ages 18-39 and African American MSM in a variety of settings including places where they will be more readily accessible to those at higher risk, or at fixed testing sites such as homeless shelters, detention centers, drug treatment/mental health centers, housing developments, migrant health camps, nightclubs, and colleges
  - Given the high co-occurrence of mpox with other STDs and HIV, providing targeted HIV/STD counseling, testing and referral services at hours that are accessible to people at high risk and in communities of high incidence of HIV and other STDs
  - Incorporate information on mpox in educational materials focused on HIV pre-exposure prophylaxis (PrEP) and make referrals for mpox vaccine and PrEP using the CDC [PrEP criteria](#), provider judgement, or client request
  - Actively engaging with the key priority groups through social media to ensure that priority groups are aware of testing locations, dates, and times
  - Ensuring that newly diagnosed HIV positive clients are connected to their initial medical appointment and are also referred for mpox vaccine

The relationships we build in LGBTQ+ communities will form the foundation for impacts made through work related to this project and beyond. Utilizing consistent and ongoing engagement, including a focus on PRIDE events, but ultimately focused on much broader opportunities for partnering, are key to addressing disparities and improving wellbeing across public health issues for all LGBTQ+ North Carolinians.



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