

Vaccine Update

PrEP4All's M-Pox Alert is a bimonthly bulletin containing key information for activists, advocates and impacted communities on the evolving response to the monkeypox in the United States and worldwide. We will issue our alerts every two weeks—please follow us on Twitter and Instagram for more regular information and action.

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Epidemic Update

[New CDC Data on Uptake, by Race, on Second Dose of JYNNEOS](#)

The United States CDC website tracking monkeypox vaccine distribution has recently been updated to include some [data on how many second shots have been administered](#). The CDC already provides racial and demographic information about people who've received one shot of the JYNNEOS vaccine that protects against monkeypox. These data tell the story of a broken, racist health system. Just about 9 percent of those who've gotten a single shot identified as Black. Yet Black people, predominantly gay men and transgender people, [made up over forty percent of new monkeypox diagnoses in the United States in the most recent week for which the CDC reported data](#).

PrEP4All M-Pox Community Monitoring Project

PrEP4All has a community monitoring project focused on access to monkeypox testing, vaccines, and treatments in the United States; we encourage activists and impacted people in diverse communities in the US and in other countries to reach out to share tools, information and updates as we track this outbreak.

The second dose information isn't yet disaggregated in the same way on-line, but such analysis has been publicly presented on at least one community conference call. **The data shared verbally must also be added to the site and updated regularly.** But even this preliminary glimpse should be used by communities to sharpen demands and accountability work.

Here's what the CDC has shared so far: 57 percent of people eligible have received a second shot. The CDC considers someone to be eligible if 28 or more days have passed since they got their first shot. About 60 percent of eligible white people have gotten the second dose, compared with roughly 55 percent for Black and Latinx people.

While a gap is still present, the racial disparity in uptake of the second shot is much smaller than it is for the first shot. More than half of the people who are motivated and/or able to get an initial immunization are going back for the second shot. On the other hand, nearly half of the people who got one shot haven't gotten a second one—even though the vaccine is designed and recommended for use as a two-shot strategy.

The number of people getting vaccinated has declined sharply over the past two months. Now that the CDC is breaking down doses by first and second shot, it is clear that, since September, the majority of shots administered in the United States have been second doses. The overall number of immunizations delivered is dropping week after week—within that, more people are coming to finish their series than to start it.

If these trends continue, many, many other people at risk of monkeypox will remain unvaccinated and at risk of infection as new clusters of infections emerge—which they undoubtedly will, as people travel to and return from communities and countries where monkeypox is circulating.

Action Step:

The CDC, working with health departments and community organizations across jurisdictions, must act now, with investments of time, energy and money in fact-finding and research to understand:

- ▶ Why overall rates of immunization are going down
- ▶ What the best practices are from ongoing efforts to address racial disparities in uptake of the first shot
- ▶ How to ensure that people with one shot complete their regimen

On the last point—ensuring everyone at risk gets two shots—the US government may find that it is fixing a problem that it also created. In July and August, as cases climbed, the CDC told providers to prioritize first doses, and people who'd received their first shot were sent into scheduling limbo—unsure if or when they could get the second jab. Mid-summer messages encouraged people to get one shot because even a single dose was believed to confer some protection. Recent publications support this, too, as described in the next section.

But the available data also suggest that two doses offers the best and longest-lasting protection. One dose is better than none, but likely not as good as two for individuals, or for communities that may face low levels of circulating monkeypox for years to come.

CDC and jurisdictions must ensure that resources for messaging and engagement respond to these new data: With limited resources, the data suggest that intensive community-based and -led work is needed to understand and reach people who haven't had any vaccines and those who've had one shot. Both groups need and deserve the full benefit of the vaccine regimen. The communications and program needs may be different. The CDC should put the data on second dose recipients by race on-line—and also share its plans for getting to above 90 percent full immunization.

Updates on Vaccine Effectiveness

Earlier this month the CDC's Morbidity and Mortality Weekly Report published an [analysis of monkeypox cases in people who had received at least one dose of Jynneos compared to those who had not](#) and concluded that unvaccinated people had 17 times the risk of acquiring monkeypox compared to people who had been vaccinated.

An [Israeli study published in pre-print](#) (that has not been peer-reviewed) reported on rates of monkeypox infection in 1970 people, 44 percent of whom had received one dose of the Bavarian Nordic vaccine. The researchers calculated that a single shot reduced the risk of acquiring monkeypox by 79 percent.

These studies look at vaccine effectiveness, which is sometimes abbreviated as VE. Vaccine effectiveness is a measure of how well the vaccine works in the real world, outside of clinical trials (see our box on definitions for more). These data on VE strongly support continued and expanded immunization campaigns for people who are at risk of monkeypox. But they also have real limitations.

Both studies looked solely at people who received one subcutaneous dose of the vaccine. They don't provide any information about the intradermal dose-sparing regimen that the US government adopted during the summer of vaccine scarcity. There may be differences between the groups of people who did and did not get vaccinated that led to different risks of getting monkeypox. And the United States' broken health system means that it's almost impossible to link a person's vaccination status with their diagnosis—so some of the people in the US who tested positive for monkeypox might actually have received the vaccine.

As we described in [M-Pox Alert #6](#), there's an urgent need to fill in the research gaps on vaccine effectiveness that remain after these studies including:

- ▶ How long it takes for people to be protected after they are vaccinated
- ▶ How long protection lasts after one dose versus two and depending on how the shot was given
- ▶ What are correlates of protection (immune responses can be measured in the blood to assess whether a person is protected)
- ▶ What, if any, are the differences for people living with HIV, who make up nearly half of monkeypox diagnoses in the United States and Europe

This information is essential—even, and perhaps especially, as concerns about monkeypox wane. Gaps in knowledge about how this vaccine works in different groups and contexts, increases the risk that new and additional outbreaks will occur and will not be effectively managed.

Public health officials and impacted communities need estimates of how long immunity lasts, when it emerges after immunization, and more concrete information about the immune responses that can be measured to assess protection (correlates of protection). This information can be used to craft guidance and messages about getting boosted, how long it takes before vaccine protection kicks in after a first or second shot (for people who are living with HIV, long COVID or other chronic conditions, and those who are not.) It can also be used to estimate how many vaccine doses will be needed for the short-, medium- and long-term.

This information is important, and it's going to take time to collect. To make solid estimates of vaccine effectiveness (VE) scientists need to look at rates of infection in the population over time. A certain number of infections are needed to draw conclusions. Dropping rates of new infections is a good thing, but it means that it will take longer to get reliable answers. There is always the risk that the US, with its short attention span and cash-strapped research budget, will simply move on before this information comes together. This should not be allowed to happen. Not for COVID-19, or monkeypox or other pandemics

Action Step:

Keep the pressure on the US government to get answers: The US government has told PrEP4All and other advocates that it will convene a strategy-setting session on measurements of VE and other questions in the coming months. PrEP4All will share updates on the plans for this meeting, solicit input for priority areas for community members, and continue to work with allies to keep the pressure on the White House monkeypox coordinators, the National Institute of Allergy and Infectious Diseases, CDC, the White House and Congress to fund research that will end this crisis and contribute to future pandemic preparedness.

Vaccine Effectiveness and Vaccine Efficacy - The Basics

There are two ways to talk about how vaccines work. Vaccine efficacy and vaccine effectiveness. Efficacy is the level of protection seen in a clinical trial which usually involves a group of people who received the vaccine, and another group who did not—with close and careful follow up to see how many people in each group get the virus or pathogen the vaccine is designed to fight.

Effectiveness is how the vaccine works in the real world—when people aren't in a trial setting, being counseled about risks and benefits, and so on. Both kinds of information are important: the first is precise, the second practical. Together, strong data on vaccine efficacy and vaccine effectiveness support accurate, effective messaging about, planning for, purchasing and distribution of vaccines.