Vaccine Access and Mpox Immunization Readiness Evaluation (VAMPIRE): A Cross-Sectional Study of High-Risk Populations in New York City

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Objective

To evaluate mpox vaccination uptake, provider recommendation patterns, and access barriers among PLWH and PrEP users receiving care in Bronx-based HIV clinics and an online NYC gay community.

Background

The 2022 global mpox (clade IIb) outbreak disproportionately affected MSM, transgender men, people living with HIV (PLWH), In response, the JYNNEOS vaccine was deployed across the United States to reduce transmission in these high-risk populations. Despite expanded availability, vaccination uptake and series completion have remained inconsistent, highlighting the need to better understand barriers in high-risk urban communities.

Methods

Setting and Participants

Participants were recruited from:
- The Oval Center at Montefiore
- The Center for Positive Living
- An NYC-based online gay community platform

Eligible participants were MSM or transgender men who were:
- Living with HIV and receiving routine HIV care, or
- HIV-negative and receiving PrEP care

Data Collection

A seven-item anonymous survey (English and Spanish) assessed:
- Mpox vaccination status (≥1 dose)
- Whether a healthcare provider offered vaccination
- Number of attempts required to obtain vaccination
- Perceived barriers to vaccination

Results

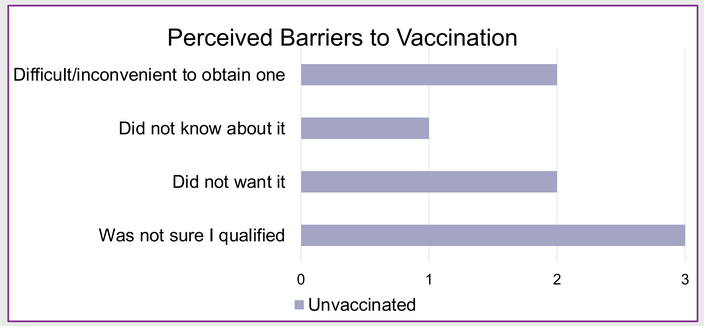
Participant Characteristics (n = 35)
- 12 PLWH (34.3%)
- 23 PrEP users (65.7%)
- Majority aged 26–35 years

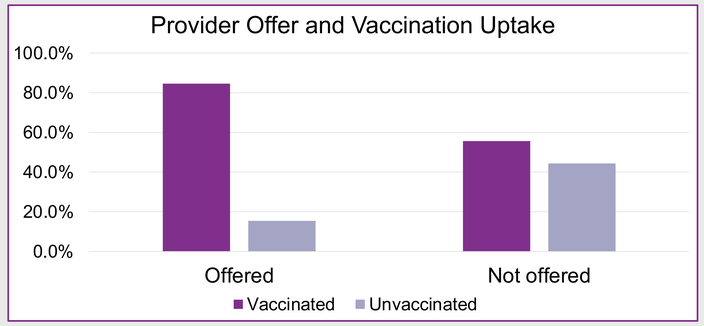
Vaccination Uptake
- 27 participants (77.1%) received ≥1 mpox vaccine dose
- 8 participants (22.9%) were unvaccinated

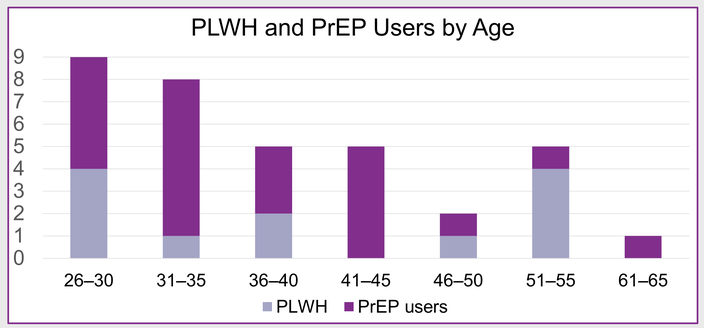
HIV Status and Vaccination
- PLWH vaccinated: 83.3%
- PrEP users vaccinated: 73.9%
- PLWH had higher odds of vaccination than PrEP users (OR 9.0) though not statistically significant ($\chi^2_1 = 1.92$; $p = 0.17$); however, the effect size is strong (Cramér's V = 0.4)

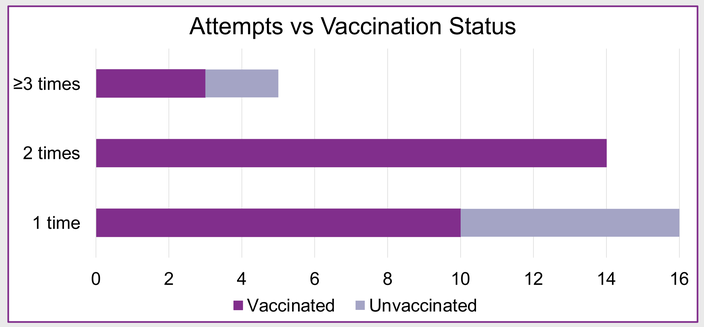
Provider Offer and Vaccination Uptake
- Individuals offered the vaccine had **4.4 times the odds** of being vaccinated compared to those not offered
- Though not statistically significant ($\chi^2_1 = 3.2$; $p = 0.07$), there was a demonstrated moderate association (Cramér's V = 0.3)
- 74.3% reported being offered the vaccine by a provider
  —84.6% vaccinated if offered by a provider
  —15.4% vaccinated if not offered by a provider

Reported Barriers Among Unvaccinated Participants
- Uncertainty regarding eligibility
- Limited awareness of vaccine
- Logistical/access barriers
- Multiple participants reported repeated attempts to obtain vaccination
- Lack of desire to be vaccinated









Limitations & Discussion

Limitations
- Small sample size
- Cross-sectional design
- Did not assess two-dose series completion
- Potential selection bias in online recruitment

Discussion
- **High uptake:** 77.1% of MSM receiving HIV care or PrEP in NYC reported receiving at least one mpox vaccine dose.
- **Provider offer matters:** Being offered vaccination was associated with **4.4x higher odds of vaccination** than not being offered.
- **Consistent across groups:** Similar effects were observed in PLWH and PrEP users, indicating the impact of clinician recommendation independent of HIV status.
- **Barriers persist:** Some participants reported multiple attempts to obtain vaccination, with eligibility uncertainty and limited awareness contributing to non-vaccination.

Key Takeaway

Offering the vaccine matters.

Even in a highly targeted population with strong overall uptake, provider recommendation remains central to improving vaccine coverage and preparedness for future mpox outbreaks.

References

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