Understanding the epidemiology, clinical characteristics and infection severity of mpox cases in 2024 outbreaks in Victoria, Australia

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Background:
Following the global mpox outbreak in 2022, clusters of clade II mpox cases have continued to emerge in 2024 in Australia. This study describes the epidemiology, characteristics, and severity of mpox cases presented to a public sexual health clinic in Victoria during the 2024 outbreaks.

Methods:
We conducted a retrospective cross-sectional study of mpox-confirmed cases at the Melbourne Sexual Health Centre, Australia between January and September 2024. We collected data on demographic characteristics, sexual behavioural data, and vaccination history, clinical characteristics, and infection severity. We examined the factors associated with mpox clinical severity (mild, moderate, severe) using multinominal logistic regression.

Results:
We included 156 mpox confirmed cases (155 men and 1 woman) with the median age of 35 (IQR: 31-40), and most were MSM (98%, n=153). More than half (59%, n=89) had at least one mpox vaccine. Mpox vaccination was highest in PrEP users (73%, n=65), followed by persons living with HIV (PLHIV) (19%, n=17), and HIV-negative non-PrEP users (8%, n=7). One person had a previous mpox infection in 2022.
Most (92%, n=143) had mild or moderate symptoms, and 8% (n=12) had severe symptoms with 8 men requiring hospitalisations. One was lost to follow-up. Unvaccinated cases had higher mean number of lesions (n=8) compared to vaccinated cases (n=5, p=0.013). Vaccinated cases (n=89) had lower odds of severe disease than unvaccinated cases (n=64) (odds ratio[OR]: 0.22, 95%confidence interval [CI]:0.06-0.79, p=0.02). An increase in the number of lesions was associated with more severe disease (OR: 1.13, 95%CI: 1.05-1.23, p=0.002). PrEP use, HIV status, and age were not associated with clinical severity.

Conclusion:

Our findings suggest mpox vaccination reduces disease severity. However, the notable number of unvaccinated PLHIV and non-PrEP users highlighted the need for increased awareness and public health campaigns to boost vaccine uptake among MSM to protect the community.

Disclosure of Interest Statement:
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