Low prevalence of asymptomatic mpox in populations at high risk

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The 2022–23 global mpox outbreak mainly affected the population of men who have sex with men, with high incidence among people living with HIV and people who use HIV pre-exposure prophylaxis (PrEP). The role of asymptomatic carriers in spreading mpox remains an ongoing controversy. Published retrospective data show a low prevalence of asymptomatic carriers among people living with HIV and people who use PrEP (from 0% to 6·5%),[1–3] but mathematical modelling has suggested that asymptomatic transmission might have played a role in the outbreak.[4]

We aimed to prospectively determine the prevalence of asymptomatic mpox infections in men who have sex with men in Geneva, Switzerland, and Zurich, Switzerland, who were enrolled in the SwissPrEPared programme, an ongoing, nationwide Swiss cohort of PrEP users.[5] Screenings every 3 months for sexually transmitted infections (STIs) are recommended among all programme participants. For this substudy, pharyngeal and rectal swabs for mpox PCR testing were additionally offered to all participants without any signs and symptoms of an active mpox infection who were sexually active in the past 3 weeks. Data were collected digitally via the SwissPrEPared web application. Mpox vaccination was not available in Switzerland before November, 2022.

Between Aug 23, 2022, and Oct 4, 2022, 201 participants (median age 36·0 years, IQR 31·0–45·0) were enrolled in the study. All participants were assigned male at birth (one identifies as female and two as non-binary). 90% (n=180 of 201) had previously been diagnosed with an STI, and 14% (n=27 of 197; the remaining four people were either not tested or did not have results recorded) were diagnosed with an STI other than mpox during their appointment. 194 (97% of 201) participants filled out the pre-appointment questionnaire on risk behaviors. Of these 194 participants, 190 (98%) reported taking PrEP at the time of the appointment. Participants reported a median of eight sexual partners (IQR 4·0–12·0) since their last visit. Two participants (1%, 2 of 201) tested positive for mpox; both reported being in steady relationships, but with multiple sexual partners in the past 3 months (7 partners and 15 partners). One individual aged 25 years was presymptomatic and developed classic mpox symptoms 3 days after diagnosis. The other individual, aged 40 years, remained asymptomatic. Neither were vaccinated against mpox.

Our findings suggest that prevalence of asymptomatic mpox infection is low. However, more people might have been asymptomatic during the peak of the epidemic in June, 2022, and July, 2022. The virus is detectable in asymptomatic and presymptomatic individuals, raising the possibility that paucisymptomatic or asymptomatic transmission could play a larger role in future mpox outbreaks.

The SwissPrEPared study was approved by all Swiss cantonal ethical committees (lead canton: Zurich, Switzerland, registration number: 2018–02015) and was registered with Clinical Trials.gov (NCT03893188). Written informed consent was obtained from all participants included in this study. BH, JSF, AC, and MS conceptualised and designed the study. BH, AF, CC, and JSF analysed and discussed the data, and wrote the Correspondence. PJL-M and PUA collected samples, enrolled patients, and collected and managed clinical data. All authors read, revised, and approved this Correspondence.

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