

Trans women 66 times more likely to have HIV, with trans men nearly 7 times more likely, global analysis finds

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The Gender Spectrum Collection. Images are for illustrative purposes only.

Updated prevalence estimates based on a systematic review by Dr Sarah Stutterheim and colleagues at Maastricht University published in *PLOS*

ONE show that not only are trans women much more likely to acquire HIV than previously thought, trans men are also at a substantially higher risk than the general population.

Transgender individuals – especially trans women – are at an increased risk of HIV infection. Structural factors, including transphobia, result in discrimination, limited work opportunities, reduced access to healthcare services, legal barriers and challenges with mental health. These factors influence behavioural risk factors, including condomless anal receptive sex, transactional sex, and sharing needles for hormone injections.

While [previous global prevalence estimates established that trans women are at a dramatically higher risk of getting HIV](#), there are [limited data on trans men](#). It has been unclear if trans men have a substantially higher risk of acquiring HIV than the general adult population. Many previous studies have either combined HIV prevalence for trans women and men, or have included trans women with men who have sex with men (MSM).

Glossary

[transgender](#)

[sample](#)

[systematic review](#)

[meta-analysis](#)

[odds ratio \(OR\)](#)

Additionally, there are discrepancies in figures based on how the presence of HIV is measured – whether this is based on self-report data or laboratory-confirmed testing. It has also been suggested that a possible reason that prevalence estimates for trans women are so high is because many researchers rely heavily on methods such as convenience sampling, and may end up over-sampling trans female sex workers, thereby inflating prevalence. Prior research has also been unable to provide estimates of HIV prevalence for trans people in different world regions.

The study

The researchers conducted a systematic review and meta-analysis of all studies published between 2000 and 2019 pertaining to HIV prevalence among trans people. They included 98 studies from 34 countries published in any language that included laboratory-confirmed HIV prevalence. Most studies (78) pertained

to trans women, four related to trans men and 16 to both. In total, 48,604 trans women from 34 countries and 6,460 trans men from six countries (Australia, Brazil, Canada, Italy, Spain and the US) were included.

As opposed to merely pooling prevalence rates, they calculated standardised prevalence rates based on country-level HIV prevalence by year of data collection. This was done globally and for different geographic regions. The researchers also considered prevalence estimate differences generated by different types of sampling and estimated prevalence in the pre-PrEP and post-PrEP periods in the US specifically.

Global and regional HIV prevalence

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Globally, overall standardised HIV prevalence was 19.9% (95% Confidence Interval [CI] 14.7% - 25.1%) for trans women and 2.56% (95% CI 0.0% - 5.9%) for trans men. Trans women had a staggering 66 times higher odds of being infected with HIV compared with HIV rates for with people 15 years and older in the general population, while for trans men, this was 6.8 times higher.

For trans women, regional analysis revealed that standardised HIV prevalence was at 29.9% (95% CI 22.5% - 37.3%) in a sub-Saharan African sample of 1,192 individuals, with 21.5 times higher odds of infection compared to the general population. In Latin America, prevalence was 25.9% (95% CI 20.0% - 31.8%), with a 95.6 times higher chance of having HIV in a sample of 7917 individuals. In Asia, HIV prevalence was 13.5% (95% CI 2.3% - 17.7%) among a sample of 14,798 people, with 68 times higher odds. Lastly, in Australia, Europe, and North America standardised HIV prevalence was 17.1% (95% CI 13.1% - 21.1%), with an odds ratio of 48.4 in a sample of 24,697 individuals.

The most commonly used sampling methods provided prevalence estimates in similar ranges. Respondent-driven sampling, which is based on networks of connected individuals, was used in 33 studies, and was associated with the highest prevalence at 23.3% (95% CI 18.0% - 28.4%). When prevalence rates were based on patients at STI clinics (used in 26 studies), standardised prevalence was lower at 17.4% (95% CI 12.2% - 22.7%). Convenience sampling, based on finding easily accessible groups of trans people – such as at a dedicated trans health clinic – yielded a similar prevalence to the overall estimate for trans women, at 19.7% (95% CI 14.8% - 24.5%).

Interestingly, the researchers did not find evidence of reduced prevalence after the introduction of PrEP in the US. In fact, prevalence increased among trans women from 18.4% (95% CI 14.8% - 22.0%) in the pre-PrEP period (1997 to 2011) to 23.7% (95% CI 20.2% - 27.2%) for the period 2012 to 2017. This could have to do with there only being six studies on prevalence conducted after the introduction of PrEP, leading to a skewed estimate. The researchers also note that PrEP provision for trans women has been limited so far.

Conclusion

“This systematic review and meta-analysis affirms that transgender individuals are disproportionately burdened by HIV, and that this is the case for not only trans feminine individuals, but also for trans masculine individuals. Using a larger pooled sample than ever compiled before, we ascertained that trans masculine individuals almost seven times more likely to have HIV, and trans feminine individuals are 66 times more likely to have HIV, than other individuals over 15 years of age,” the authors concluded.

“Additionally, based on data from 34 countries across major geographic regions, we found support for the contention that the disproportionate burden for HIV carried by transgender individuals is a worldwide phenomenon, and that some regions, such as Africa and Latin America, may be impacted more than others.”

References

Stutterheim S et al. [The worldwide burden of HIV in transgender individuals: An updated systematic review and meta-analysis](https://doi.org/10.1371/journal.pone.0260063). PLOS ONE 16: e0260063, 2021 (open access). <https://doi.org/10.1371/journal.pone.0260063>