HHS Public Access

Author manuscript

Lancet Glob Health. Author manuscript; available in PMC 2022 October 03.

Published in final edited form as:

Lancet Glob Health. 2021 August ; 9(8): e1039–e1040. doi:10.1016/S2214-109X(21)00269-2.

Syphilis in men who have sex with men: advancing research and human rights:

Commentary to: *Prevalence of syphilis among men who have sex with men: A global systematic review and meta-analysis from 2000 to 2020*

Carlos F. Cáceres[1], **Kelika A. Konda**[1,2], **Jeffrey D. Klausner**[3]

[(1)]Center for Studies in Sexuality, AIDS and Society, Universidad Peruana Cayetano Heredia, Lima, Peru

[(2)]Division of Infectious Diseases, David Geffen School of Medicine, University of California, Los Angeles

[(3)]Division of Disease Prevention, Policy and Global Health, Department of Preventive Medicine, University of Southern California Keck School of Medicine

In the 69th World Health Assembly (2016), a commitment was made to a reduction of syphilis incidence by 90% from 2018 to 2030. The comprehensive meta-analysis by Tsuboi et al.(1) on the prevalence of syphilis among men who have sex with men (MSM) worldwide provides a much needed estimate of the burden of disease in this population and a defined baseline from which to measure any potential success.

The methods are appropriate. The data available for this kind of analysis are clearly limited: meta-analysis misses unpublished studies ; there are a variety of potential issues in laboratory diagnosis; the sampling is mostly snowball or convenience-based; and groups with distinct risk profiles are subsumed within the generic ‘MSM’ label, including not only male sex workers, but also transgender women (who are a separate group from a human rights perspective, but continue to be included within the MSM designation in many epidemiologic studies).

Clearly, syphilis prevalence is unacceptably high among MSM, 15-20 times higher than in the general male population. Moreover, prevalence seems to be increasing overtime in various regions – it was higher in the second than in the first decade of this century in Europe and North America, Latin America and the Caribbean, and Oceania. This situation seems, in part, indicative of lower access to health services among MSM – a global occurrence that is more significant in low and middle income countries. Additionally, it also may reflect the decay of condom use among MSM observed over the past two decades(2, 3), indicating a cultural change in this constituency: the emergence of effective antiretroviral treatment and then of PrEP may have increased the acceptability of new sexual ‘adjuvants’ (e.g. new apps, new party drugs) that led to increased exposure, especially in North America and Europe. Of particular concern is the situation in Latin America and the Caribbean, with a consistently >10% prevalence(1), where assimilation of the evolving cultural values of the North is quick, but access to STI screening and clinical services is limited.

Two seemingly counterintuitive findings may be explained herein: syphilis rates were lowest in both low-income countries (compared to those of other income levels) and in countries that criminalize homosexual activity. While one potential explanation is underestimation (i.e. due to weak surveillance systems, or the unwillingness of MSM to self-identify as such), it is also possible that economic limitations or legal restrictions make exposure too infrequent to maintain syphilis transmission. Of course, these findings should not suggest public health policies – poverty and limitations on human rights are unacceptable and have additional health consequences.

To achieve the desired 90% reduction in syphilis incidence among MSM requires several concrete lines of action:

- First, a full integration of biobehavioral STI prevention and control programs with HIV prevention, together with improved diagnostic technologies, including the availability of point-of-care tests.
- Second, the identification of new options in syphilis treatment (given frequent shortages in penicillin supplies); the expansion of antimicrobial prophylaxis as PEP/PrEP; and vaccine development.
- Third, a continued investment in eliminating homophobia and the criminalization of homosexuality, structures that put MSM at increased risk, by limiting MSM's access to preventive and clinical services, and countries' investment in such services.

Our own research and programmatic work and those of others over the past two decades have contributed to the above goals through integrating STI and HIV programs at the city level(4, 5), ensuring HIV testing activities include STI screening (6), evaluating and implementing dual rapid HIV/syphilis point-of-care tests(7, 8), demonstrating the potential efficacy of doxycycline prophylaxis for syphilis(9), and working to identify correlates of immunity in syphilis as a pathway to vaccine development(10).

Addressing and reversing structural factors that allow the exclusion of sexually diverse men is certainly difficult; however, through peer-based prevention programs that empower community members, and through analyses that demonstrate the benefits of sexual inclusion, policy makers and researchers have come together to overcome sexuality-focused stigma and human rights violations.

Ultimately, control of infectious diseases like syphilis may not be feasible without an effective vaccine. Dramatic successes were seen in syphilis without a vaccine, such as the rapid decline from over 10% to <1% in the U.S. general population in the late 1940s, achieved via extensive case-finding and early treatment. While highly resource-intensive public health programs remain unlikely for syphilis a vaccine could provide population-wide protection, but requires focused research for development.

Moving forward, sexual health advocates must continue to collaborate, demand greater research and clinical investment and hold policy makers accountable. Ultimately, sustained political will is necessary to prevent and control syphilis in the long term.

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