

Understanding the diverse sexual repertoires of men who have sex with men, trans and gender-diverse groups is important for sexually transmitted infection prevention

Daniel Richardson ^{1,2} Kate Z Nambiar ^{2,3} Tom Nadarzynski ⁴

¹Sexual Health & HIV, Brighton and Sussex Medical School, Brighton, UK

²Sexual Health & HIV, Brighton and Sussex University Hospitals NHS Trust, Brighton, UK

³Gender Identity Clinic, Tavistock and Portman NHS Foundation Trust, London, UK

⁴Social Sciences, University of Westminster, London, UK

Correspondence to

Dr Daniel Richardson, Sexual health & HIV, Brighton and Sussex Medical School, Brighton BN1 9PX, UK; daniel.richardson7@nhs.net

Received 9 September 2020

Revised 14 September 2020

Accepted 16 September 2020

Published Online First

24 September 2020



► <http://dx.doi.org/10.1136/bmj.srh-2020-200720>



© Author(s) (or their employer(s)) 2021. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Richardson D, Nambiar KZ, Nadarzynski T. *BMJ Sex Reprod Health* 2021;**47**:e3.

The sexual repertoires of men who have sex with men (MSM), transgender (trans) and gender-diverse groups are poorly understood despite their disproportionate rates of sexually transmitted infections (STIs). The interrelated landscapes and syndemics of the social and sexual behaviour of MSM, trans and gender-diverse groups, and transmission of STIs have changed beyond recognition over the past 20 years.^{1–3} We are only beginning to understand the complex and evolving sexual behaviours of MSM in mainly urbanised Western populations such as described in the article by Kilner *et al.*⁴ The majority of our understanding of sexual behaviour in the trans population comes from studies of trans women, with much less being understood about trans men and almost nothing about non-binary or other gender-diverse people.⁵ Little is also known about the sexual behaviours of sexual orientations such as pansexual or individuals who mainly have sex with trans or non-binary people, for whom we still lack clear terminology. It is time we included all sexual and gender minorities in behavioural and epidemiological research of this kind.

The changes in the complex sexual and social lives of MSM has been driven partly by social networking, information technology and the increasing social acceptability of MSM in some societies. The internet, and in particular geosocial mobile phone apps, have transformed the way and frequency that individuals and groups meet socially and for sex.^{6,7} We are now seeing sexual risk behaviour, particularly with the use of pre-exposure prophylaxis (PrEP), in MSM associated with sexual freedom and empowerment.⁸

However, for trans women and gender-diverse groups there continues to be disempowerment, with syndemics of drug use, intimate partner violence, mental ill-health and transactional sex driving HIV and other STI acquisition: considerable stigma, discrimination, marginalisation and persecution remain.⁹

In MSM and trans women who do not inject drugs, HIV transmission is predominantly transmitted via penetrative penile–anal sex.^{10,11} Design and delivery of effective interventions for the prevention of HIV have focused on penetrative penile–anal sexual behaviours. A combination of effective HIV treatment, HIV treatment as prevention, a significant increase in HIV testing, access to HIV PrEP and vaccines against STIs, as well as interventions improving condom use, have significantly reduced the incidence of HIV in some populations of MSM.¹² Many of these interventions rely on MSM and other at-risk groups accessing clinical or bespoke community services or exposure to interventions mostly in ‘gay’ venues either real or online, which is why more work is needed among hidden or ‘seldom heard’ groups.¹³

Simultaneously, we have seen epidemics of infectious syphilis, antimicrobial-resistant gonorrhoea, lymphogranuloma venereum and significant sporadic outbreaks of other less recognised STIs such as *Shigellosis*, hepatitis A and other enteric infections (eg, *Campylobacter*, verotoxin-producing *Escherichia coli*) affecting MSM.^{14–16} STI prevalence (other than HIV) in trans people is highly variable but also confounded by many studies not sampling extragenital sites.¹⁷ Their transmission is associated with a broader

repertoire of sexual activities such as oral–genital sexual contact, oro-anal sexual contact (rimming) and fisting, which have not been widely described within sexual behaviour research.¹⁸ Intimate ‘sexual’ behaviours such as kissing are rarely considered by clinicians and clinical scientists as these are not considered a risk for STIs. Kissing may be important for the transmission of gonorrhoea; however, the intimate act of kissing probably provides significant emotional and physical well-being for MSM and any interventions for STI prevention involving kissing need to be carefully considered.^{18–20}

Currently, surveillance and surveys of sexual behaviour of MSM and other diverse groups is limited to addressing sexual activities such as anal, penile and oral sex through convenience samples of MSM where older individuals, gender-diverse people and minority ethnic groups are often underrepresented. Epidemiological modelling, as well as the development and delivery of prevention strategies against STIs, require an in-depth understanding of the ranges and types of behavioural factors affecting susceptible communities and individuals. Thus, we need to understand the demographic, psychosocial and clinical characteristics of at-risk populations, infection transmission dynamics, as well as the individual sexual behaviours and activities that contribute to the transmission of STIs, in order to design the most effective preventative measures. It is crucial to recognise the complex layers of syndemics that interact between sexual, physical and mental health to look beyond sexual behaviours as the main determinant of STIs.

Kilner and colleagues report in this journal issue on a large programme of research conducted at Melbourne Sexual Health Centre.⁴ This programme of research has already shown an association between the use of saliva as a lubricant and kissing with the transmission of gonorrhoea in MSM.^{19 20} Among 1596 MSM, asked about different sexual activities including ‘kissing each other’, ‘touching penises’, oral–anal sexual contact or ‘rimming’, kissing was the most common activity. Sexual activity with casual partners was strongly associated with age, indicating that younger MSM were more likely to engage in kissing, receptive rimming and receptive anal sex. The sexual repertoire of MSM with regular partners is broader than those with casual partners, particularly among older men.

This work should be of interest to clinicians, clinical scientists and wider public health for designing and implementing clinical services and public health strategies, but should also act as a springboard for future behavioural research of similar scope. The authors have described the sexual repertoire of MSM in an income-rich urban setting but still little is known about MSM from lower socioeconomic settings as well as minority ethnic groups who experience difficulties in disclosing their same/trans-sex practices to a healthcare professional. There is a need to establish a

gradient of sexual behaviours in accordance with their risk of STIs from the epidemiological perspective so that the given advice is developed in a sensitive and non-judgemental manner.

Sexual behaviour is highly complex, dynamic and hugely more varied than simply the act of penile–anal penetration.^{4 18} We call for research on the sexual repertoire of trans and gender-diverse groups. Understanding sexual behaviours is essential to improving the health of groups and individuals who are disproportionately affected by STIs and poor sexual health. Nevertheless, caution needs to be exercised so that some practices such as kissing, associated with the spread of STIs, are not stigmatised and condemned. Further health education is required to increase awareness of the complexity of sexual behaviours and their direct consequences.

Twitter Kate Z Nambiar @katenambiar

Contributors DR drafted the manuscript, KZN and TN revised the manuscript and all authors contributed to the final manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not required.

Provenance and peer review Commissioned; internally peer reviewed.

ORCID iDs

Daniel Richardson <http://orcid.org/0000-0003-0955-6307>

Kate Z Nambiar <http://orcid.org/0000-0001-8591-0203>

Tom Nadarzynski <http://orcid.org/0000-0001-7010-5308>

REFERENCES

- Hess KL, Crepaz N, Rose C, *et al.* Trends in sexual behavior among men who have sex with men (MSM) in high-income countries, 1990–2013: a systematic review. *AIDS Behav* 2017;21:2811–34.
- Landovitz RJ, Tseng C-H, Weissman M, *et al.* Epidemiology, sexual risk behavior, and HIV prevention practices of men who have sex with men using GRINDR in Los Angeles, California. *J Urban Health* 2013;90:729–39.
- Bellhouse C, Walker S, Fairley CK, *et al.* Patterns of sexual behaviour and sexual healthcare needs among transgender individuals in Melbourne, Australia, 2011–2014. *Sex Transm Infect* 2018;94:212–5.
- Kilner A, Fairley CK, Burrell S, *et al.* Age pattern of sexual activities with the most recent partner among men who have sex with men in Melbourne, Australia: a cross-sectional study. *BMJ Sex Reprod Health* 2021;47:e4.
- Van Gerwen OT, Jani A, Long DM, *et al.* Prevalence of sexually transmitted infections and human immunodeficiency virus in transgender persons: a systematic review. *Transgender Health* 2020;5:90–103.
- Benotsch EG, Zimmerman RS, Cathers L, *et al.* Use of the internet to meet sexual partners, sexual risk behavior,

- and mental health in transgender adults. *Arch Sex Behav* 2016;45:597–605.
- 7 Melendez-Torres GJ, Nye E, Bonell C. Internet sex-seeking is inconsistently linked with sexual risk in men who have sex with men: systematic review of within-subjects comparisons. *Sex Health* 2015;12:183–7.
 - 8 Collins SP, McMahan VM, Stekler JD. The impact of HIV pre-exposure prophylaxis (PreP) use on the sexual health of men who have sex with men: a qualitative study in Seattle, WA. *Int J Sex Health* 2017;29:55–68.
 - 9 Parsons JT, Antebi-Gruszka N, Millar BM, *et al.* Syndemic conditions, HIV transmission risk behavior, and transactional sex among transgender women. *AIDS Behav* 2018;22:2056–67.
 - 10 Garofalo R, Kuhns LM, Reisner SL, *et al.* Behavioral interventions to prevent HIV transmission and acquisition for transgender women: a critical review. *J Acquir Immune Defic Syndr* 2016;72:S220–5.
 - 11 Baggaley RF, White RG, Boily M-C. Hiv transmission risk through anal intercourse: systematic review, meta-analysis and implications for HIV prevention. *Int J Epidemiol* 2010;39:1048–63.
 - 12 Nwokolo N, Hill A, McOwan A, *et al.* Rapidly declining HIV infection in MSM in central London. *Lancet HIV* 2017;4:e482–3.
 - 13 Richardson D, Shapiro J, Lewis DA, *et al.* Inconsistent HIV pre-exposure prophylaxis use and HIV transmission in men who have sex with men (MSM). *J Int AIDS Soc* 2020;23:e25579.
 - 14 Pinto-Sander N, Youssef E, Tweed M, *et al.* A significant increase in cases of infectious syphilis in men who have sex with men since November 2013. *Int J STD AIDS* 2016;27:697–8.
 - 15 Lewis DA. The role of core groups in the emergence and dissemination of antimicrobial-resistant *N gonorrhoeae*. *Sex Transm Infect* 2013;89:iv47–51.
 - 16 Mitchell H, Hughes G. Recent epidemiology of sexually transmissible enteric infections in men who have sex with men. *Curr Opin Infect Dis* 2018;31:50–6.
 - 17 Van Gerwen OT, Jani A, Long DM, *et al.* Prevalence of sexually transmitted infections and human immunodeficiency virus in transgender persons: a systematic review. *Transgend Health* 2020;5:90–103.
 - 18 Rosenberger JG, Reece M, Schick V, *et al.* Sexual behaviors and situational characteristics of most recent male-partnered sexual event among gay and bisexually identified men in the United States. *J Sex Med* 2011;8:3040–50.
 - 19 Walker S, Walker S, Phillips T, *et al.* Risk factors for oropharyngeal gonorrhoea in men who have sex with men: an age-matched case-control study. *Sex Transm Infect* 2018;94:359–64.
 - 20 Chow EP, Fairley CK. The role of saliva in gonorrhoea and chlamydia transmission to extragenital sites among men who have sex with men: new insights into transmission. *J Int AIDS Soc* 2019;22:e25354.