

symptoms or visible discharge and ≥ 5 PMNs/high powered field (HPF). Absence of CT, MG, adenovirus, and HSV was considered as idiopathic NGU. Men without NGU had no urethral symptoms, no discharge, and < 5 PMNs/HPF. Broad-range 16S rRNA gene PCR with deep sequencing was used to characterize the urethral microbiota. Compositional lasso analysis of bacterial taxa was conducted to identify associations between bacteria and NGU; beta coefficients (β) giving change in probability of NGU per log₂ change in relative abundance are reported.

Results Of 434 (199 MSM, 235 MSW) urine samples, 330 yielded sequence data. NGU+ men were less likely to yield sequence data (70% vs 84%, Fisher's $p=0.001$). Of 328 men with ≥ 1000 sequence reads/sample, 95 MSM (44 NGU+) and 143 MSW (46 NGU+) were negative for CT, MG, adenovirus, and HSV. Higher relative abundances of *Haemophilus influenzae* ($\beta=0.0139$) and *Mycoplasma penetrans* ($\beta=0.0095$) were positively associated with idiopathic NGU in MSM, while *H. influenzae* was positively associated with idiopathic NGU in MSW ($\beta=0.0184$). The model also identified bacterial species that were negatively associated with NGU in MSM and MSW. Notably, *Lactobacillus iners* was negatively associated with idiopathic NGU in MSW ($\beta=-0.0006$) but not MSM.

Conclusion Different bacterial species are associated with NGU in MSM and MSW. We identified two bacterial species infrequently detected in the male urethra as positively associated with NGU.

Disclosure No significant relationships.

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GAYS, GOVERNMENT AND BIG DATA: SHOULD ROUTINE HEALTH RECORDS INCLUDE SEXUAL ORIENTATION?

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Background Sexual orientation minorities continue to experience poorer outcomes in sexual health, mental health and addictions. Despite clear information needs, routine data identifying gay, lesbian and bisexual (GLB) individuals are seldom collected by governments, rendering these populations invisible. In New Zealand (NZ), everyone is assigned a unique National Health Index (NHI) number used across all health systems to improve clinical and public health decision-making. In 2017 the NZ Ministry of Health proposed adding sexual orientation and other fields to NHI, however sexual orientation was rejected after consultation. We sought to better understand these viewpoints.

Methods We used the Official Information Act (OIA) to request the complete list of submitters, their support or opposition for adding sexual orientation and written comments. We allocated submitters to six groupings: Government (G); Health provider including District Health Boards (H); NGO or civil society (N); Academic (A); Data management firm (D) or Unspecified (U). Submitters did not necessarily represent the official views of their organisation. We present descriptive summaries and feedback themes.

Results 130 submissions were received. Overall 27 supported sexual orientation in NHI and 35 were opposed, the remainder being neutral or conditional. Support by grouping (high to low) was: Academic (100%); Government (56%); Unspecified (44%); NGO (40%); Health (36%) and Data firm (25%). Supportive reasons included: service planning; evidence-based policy; equity; GLB-specific health delivery (e.g. HPV vaccines, HIV and STI screening, pre-exposure prophylaxis); normalisation; health workforce development. Opposing reasons included: sexual orientation being irrelevant to clinical decision-making; classification challenges (e.g. sexual orientation fluidity); data quality; privacy; discrimination.

Conclusion Barriers to sexual orientation data collection include practical concerns but also well-meaning paternalism and heteronormative assumptions. Better information about NHI uses and protections, data governance, and healthcare service obligations to GLB communities, may improve support.

Disclosure No significant relationships.

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PREVALENCE OF MYCOPLASMA GENITALIUM BY ANATOMICAL SITE IN MEN WHO HAVE SEX WITH MEN: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background With the current debate over testing and screening for *Mycoplasma genitalium* (MG) in various populations, more information on the prevalence of MG is needed particularly in populations at high risk of sexually transmitted infections, such as men who have sex with men (MSM). We assessed the available data on the prevalence of MG in MSM across three anatomical sites: the urethra, pharynx and rectum.

Methods Ovid Medline, PubMed, Embase were searched for all peer-reviewed studies published until 1st June 2018 (in addition to conference proceedings from 2015), that reported prevalence of MG (using nucleic acid amplification testing) in the urethra, rectum and/or pharynx in at least 50 MSM. Data were extracted by anatomical site, symptom and HIV status. Pooled estimates (95% confidence intervals [CIs]) were calculated using random effects meta-analysis. Subgroup analyses were performed to assess heterogeneity between studies.

Results Forty-six studies met inclusion criteria. The overall prevalence of MG at any site was 5.8% (4.5–7.3%, $I^2=95.0\%$). MG prevalence was 4.6% (3.0–6.4%, $I^2=94.4\%$) in the urethra, 6.1% (4.5–7.9%, $I^2=89.0\%$) in the rectum, and 1.0% (0.0–5.1%, $I^2=96.0\%$) in the pharynx. Pooled estimates of MG prevalence were higher among HIV-positive compared with HIV-negative men (9.0% [5.2–13.4%, $I^2=90.7\%$] versus 5.7% [3.5–8.2%, $I^2=93.1\%$], $p=0.019$), and among symptomatic men compared to asymptomatic men (9.2% [6.2–12.7%, $I^2=87.3\%$] versus 4.0% [2.3–6.2%, $I^2=90.7$], $p=0.003$).

Conclusion MG is commonly detected in MSM, particularly in the urethra and rectum. Prevalence was highest in HIV

positive and symptomatic men. While a prevalence of 9% would prompt discussion of screening, more needs to be known about the natural history of MG in MSM, given the high levels of antimicrobial resistance and risk associated with quinolones. MG was uncommon in the pharynx of MSM (1%), suggesting this site is not a significant source of transmission and testing is not indicated.

Disclosure No significant relationships.

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HIGH PREVALENCE AND INCIDENCE RATE OF RECTAL CHLAMYDIA AND GONORRHOEA INFECTION AMONG MEN WHO HAVE SEX WITH MEN IN TOKYO

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Background Rectal *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG) infection have been neglected and epidemiological data is not available in Japan. Thus, we evaluated prevalence and incidence of rectal CT and NG in non HIV-infected men who have sex with men (MSM) cohort, Sexual Health Clinic (SHC) established in National Center for Global Health and Medicine (NCGM), in Tokyo in January 2017.

Methods Non HIV-infected MSM with aged 16 years old and over were included in SHC. Prevalence of rectal CT/GC infection in SHC were compared with those of an existing HIV-infected MSM cohort in NCGM. The participants of SHC were examined HIV infection and rectal and pharyngeal CT/NG every 3 months. Urethral CT/NG infection were evaluated at physician's discretion. Incidence rate of HIV, CT and NG were evaluated at the time of December 2018.

Results 502 MSM had been included into SHC by December 2018 and 13 were diagnosed with HIV infection at the enrollment and excluded. 561 HIV-infected MSM were evaluated rectal CT/NG infection cross-sectionally. Between the two cohorts, mean age was 33.6 and 46.4 years old ($p < 0.001$). Prevalence of rectal CT or NG infection were 18.4% and 16.8% ($p = 0.483$). Prevalence of rectal CT was 16.4% and 15.5% ($p = 0.707$) and prevalence of NG was 4.1% and 2.3% ($p = 0.101$). Of the 489 subjects in SHC, 326 were followed at least twice, with 291.8 person-years during the study period. The incidence of HIV, rectal CT and NG infection were 3.8, 18.8, 4.9/100 person-year. The incidence of pharyngeal CT and NG infection were 1.5 and 8.3/100 person-year. 33.8% of the incidental cases were recurrent infection. In this study, HIV seroconversion was not associated with rectal CT or NG infection at the enrollment ($p = 0.438$).

Conclusion The prevalence and incidence of rectal CT and NG infection are high among MSM in Tokyo, which requires urgent countermeasures.

Disclosure No significant relationships.

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HIV TESTING UPTAKE AMONG YOUNG MEN WHO HAVE SEX WITH MEN IN MYANMAR: SELF-EFFICACY AND HIV TESTING BEHAVIOR

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Background Men who have sex with men (MSM) are disproportionately affected by the HIV epidemic. HIV testing coverage among MSM, particularly in low-resource settings, remains low. Self-efficacy is an important individual psychosocial factor associated with access to health care and health outcomes but the association between self-efficacy and HIV testing uptake among key populations is poorly understood.

Methods A cross sectional study was conducted with 585 MSM aged 18–24 years recruited by 33 seed respondents from six urban areas in Myanmar via respondent-driven sampling (RDS). RDS analyses were performed to provide population estimates of HIV testing coverage. Sensitivity analysis was performed to assess potential bias due to inclusion of seed and HIV positive respondents on final population estimates. Multinomial logistic regression was used to examine the relationship between self-efficacy and HIV testing uptake.

Results More than a third (34.5%) had never been tested for HIV (never tester), 27.5% and 38.0% had their most recent HIV test more than three months (non-recent tester) and within the past three months (recent tester), from the time of interview, respectively. Sensitivity analysis showed similar point estimates excluding seed or HIV positive respondents (Table 1). Results of multinomial logistic regression analyses show that YMSM who reported high self-efficacy (adjusted Relative Risk Ratio [ARR] = 7.35, 95% CI: 2.29–23.5) and moderate self-efficacy (ARR = 8.61, 95% CI: 3.09–24.0) are more likely to report having tested for HIV in the past three months compared to their counterparts who reported low self-efficacy after adjusting for potential confounders.

Conclusion HIV testing coverage among YMSM is suboptimal and there is a positive association between self-efficacy and HIV testing uptake among YMSM. Further research is needed to examine the direction of this association to inform future public health interventions targeting YMSM in Myanmar.

Disclosure No significant relationships.

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RATES OF PRIMARY AND SECONDARY SYPHILIS AMONG MEN WHO HAVE SEX WITH MEN BY HIV STATUS – 24 STATES, 2011–2015

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Background During 2011–2015, approximately half (48% to 53%) of reported primary and secondary (P&S) syphilis cases occurred among men who have sex with men (MSM) with diagnosed HIV. However, comparing rates of reported P&S syphilis by HIV status among MSM requires MSM population denominators stratified by HIV status.

Methods We used previously published state-level estimates of the MSM population and publicly available data on diagnosed HIV infection among MSM to determine population denominators of MSM living with or without diagnosed HIV infection. We then examined rates of reported P&S syphilis per 100,000 MSM by HIV status using national case-based surveillance data in 24 states with $\geq 70\%$ complete reporting of sex of sex partners and HIV status among syphilis cases during 2011–2015.

Results During 2011–2015, rates of reported P&S syphilis among MSM in the 24 states included in the analysis increased 45% (188.7 to 272.8 per 100,000). Concurrently,