

Neisseria gonorrhoeae and *Chlamydia trachomatis* Infections among Men who have Sex with Men Living in South Africa

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ABSTRACT

Background: Men who have sex with Men (MSM) are a key population at higher risk for sexually transmitted infections (STIs) including *Neisseria gonorrhoeae* (NG) and *Chlamydia trachomatis* (CT). Since access to MSM in many countries of Africa remains generally difficult due largely to stigma and discrimination, data regarding STIs among this group have become scarce. South Africa, a country with one of the highest HIV prevalence rates in the world is no exception despite significant research on STIs prevalence. This study determined the prevalence of and risk factors associated with NG and CT infections among South African MSM.

Methods: This cross-sectional study consisted 200 MSM resident in Durban. Urine samples were collected and analyzed for the presence of NG and CT. Participants' Data were also collected using a self-administered questionnaire. Deoxyribonucleic acid (DNA) was extracted from sample pellets using commercially available kit, and PCR amplification was performed on the Quant Studio 5 real-time PCR detection system. NG and CT were detected using the Applied Biosystems™ TaqMan® Assays. Analysis further explored the associated risk factors for each of the STIs as well as the barriers or facilitators to care.

Results: The prevalence of NG and CT in the studied population were 3.0% and 6.0%, respectively. Of the MSM who tested positive for NG and CT infections 38.8% were asymptomatic. Being between the ages of 30-39 years old reduced the risk of acquiring CT infection (OR: 0.10, 95% CI: 0.0120-0.7564, p=0.026). In addition, being circumcised reduced the risk of contracting CT (adjusted OR: 0.01, 95% CI: 0.0005-0.3516, p=0.01). However, having between 2-4 sex partners increased the risk of testing positive for CT (adjusted OR: 107.45, 95% CI: 1.3467-8573.3130, p=0.036). The following factors were significantly associated (p<0.05) with testing positive for NG infection: cohabiting with sex partner, engaging in group sex, and drug use. Fear and stigma were the main barriers to accessing health care in this key population.

Conclusion: This study provides evidence of STI prevalence rates, particularly the high rates of *C. trachomatis* infection among MSM resident in Durban, confirming reports from other studies that CT is the most common STI among South African men. A few MSM who tested positive for NG and CT infections were asymptomatic. This poses a treatment challenge since South Africa employs the syndromic management approach.

Keywords: *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, Sexually transmitted infections, MSM, South Africa

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