

# The 29th Annual Canadian Conference on HIV/AIDS Research Le 29e Congrès annuel canadien de recherche sur le VIH/sida

Session: **EPH2**: Friday May 1 – 15:00:17:00 – HIV Epidemiology and Public Health: Various Topics

Track: Epidemiology and Public Health

Subject: Interdisciplinary Epidemiology (Biological, Behavioural and Social) of HIV infection, including structural, social and individual determinants

Presentation Type: Oral

Title of Abstract: **Depression is associated with bacterial sexually transmitted infections (STIs) among gay, bisexual, and other men who have sex with men (gbMSM)**

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## Abstract

**Background:** Depression is consistently associated with both stimulant use and HIV risk behaviour among gbMSM. However, there is a lack of data on how depression may be associated with outcomes related to bacterial STIs among gbMSM.

**Methods:** We examined the associations of depression and stimulants with recent syphilis, gonorrhea, or chlamydia diagnosis. We recruited 2449 sexually-active gbMSM via respondent-driven sampling in Toronto, Vancouver, and Montreal. Participants completed questionnaires in French or English and nurse-assisted HIV and STI testing. We fit a series of structural mediation models of the associations between depression, any stimulant use (SU: e.g., crystal methamphetamine, cocaine) in the last 6 months, condomless anal sex (CAS) in the last 6 months, and bacterial STIs diagnosed at the study visit. We estimated the indirect path from depression to bacterial STIs, testing a path from depression to SU to CAS to STI diagnosis. For HIV-negative gbMSM, we also examined CAS while using PrEP. The structural mediation models were adjusted for age, ethnicity, income, city and recruitment related clustering, and further stratified by participant HIV-status.

**Results:** In the full sample (mean age:36.8; 71%White), the models fit the data well [root mean-square-error approximation for each model<.05, 90%CI(.00-.07)]. The model for HIV-negative participants demonstrated positive effects from depression to SU ( $\beta=.09$ ;  $p<.01$ ), from SU to CAS ( $\beta=.37$ ;  $p<.001$ ), and from CAS to STI ( $\beta=.41$ ;  $p<.001$ ). An identical pattern was found when examining CAS for HIV-negative men using PrEP. Among HIV-positive participants, the path from depression to SU was non-significant ( $\beta=.08$ ;  $p=0.26$ ), but the path from depression to CAS was significant ( $\beta=.20$ ;  $p=.03$ ).

**Discussion:** Depression was correlated with confirmed diagnoses of bacterial STIs, partially because depression was associated with stimulant use, which, in turn, was associated with CAS. Addressing determinants of and treating depression could be associated with reduced STI incidence among gbMSM.