Suicidal Ideation Is Associated with Stimulant Use and Transmission Risk
Adam W. Carrico, PhD; Judith T. Moskowitz, PhD; & Mallory O. Johnson, PhD
University of California, San Francisco

Abstract:
Even in the era of anti-retroviral therapy (ART), suicidal ideation (SI) is common among HIV-positive persons. Although there is growing recognition that SI is associated with a variety of health risk behaviors, this has not been examined in HIV-positive persons. As part of a clinical trial of a behavioral intervention, 208 ART-treated HIV-positive men who have sex with men (MSM) completed computerized self-administered measures at baseline. Specific outcomes in the current study included: at least weekly stimulant use and sexual risk taking. Greater than one-fourth of participants (59/208) reported SI in the past week. SI was associated with a 3 fold increase in the likelihood of reporting at least weekly stimulant use in the past three months. Individuals with SI were also more than 3 times more likely to report unprotected insertive anal intercourse with HIV-negative or unknown status partners. Finally, SI was associated with a 40% increase in the likelihood of reporting unprotected receptive intercourse with HIV-positive partners. SI may represent feelings of hopelessness that impair motivation to avoid stimulant use and sexual risk taking.

Introduction:
• Even in the ART era, approximately 1 in 5 HIV-positive persons endorse thoughts of suicide in the past week (Carrico et al., 2007).
• SI may increase engagement in health risk behaviors, but this issue has not been examined in HIV-positive persons.
• A prior meta-analysis observed that negative affective states (e.g., depressive symptoms) are not associated with sexual risk taking, but the specific influence of SI was not examined.
• The goal of the present study was to examine whether SI is independently associated with more regular stimulant use and sexual risk taking in ART-treated HIV-positive MSM.

Methods:
208 HIV-positive MSM provided baseline data for a randomized controlled trial of a behavioral intervention designed to assist individuals in coping with ART side effects. Computer-assisted self interviewing techniques were utilized to maximize the validity of self-report data on stimulant use and sex risk.

Measures
Suicidal Ideation: One item from the Beck Depression Inventory (BDI) assessed thoughts of suicide during the past week. SI was classified as any thoughts of self harm.
Depressive Symptoms: A modified composite score of the remaining 20 items from the BDI.
Weekly Stimulant Use: Self-reported use cocaine, crack, or methamphetamine at least weekly during the past three months.
Sexual Risk Taking: Any unprotected anal sex with men during the past 3 months as a function of role (insertive vs. receptive) and partner status (HIV- or unknown vs. HIV+).

Statistical Analyses:
We utilized logistic regression to examine the association SI with at least weekly stimulant use and sex risk. We created four sex risk outcomes by examining unprotected insertive anal intercourse (UIAI) and unprotected receptive anal intercourse (URAII) as a function of the partner serostatus (HIV-/unknown or HIV+).

Results:
Demographics
The sample was predominantly gay (90%) Caucasian (60%) men. The mean age of participants was 47 (SD = 8) years. Individuals had been diagnosed with HIV for an average of 14 (SD=6) years and had been taking ART for a mean of 10 (SD = 6) years.

Weekly Stimulant Use
SI was associated with an increased likelihood of reporting at least weekly stimulant use:
OR = 3.17 (95% CI = 1.16 – 8.68)
Depressive symptoms were unrelated (p > .10)

HIV Transmission Risk
SI was associated with an increased likelihood of reporting URAII with HIV-/unknown partners:
OR = 3.18 (95% CI = 1.22 – 8.27)
SI was not associated with UIAI with HIV-/unknown partners:
OR = 1.40 (95% CI = 0.56 – 3.51)
Depressive symptoms were unrelated (p > .10)

Sex Risk with HIV+ Partners
SI was not associated with UIAI with other HIV+ persons:
OR = 1.42 (95% CI = 0.71 – 2.84)
SI was associated with an increased likelihood of reporting URAII with other HIV+ persons:
OR = 2.15 (95% CI = 1.08 – 4.27)
Depressive symptoms were unrelated (p > .10)

Discussion:
• SI is associated with an increased likelihood of reporting more regular stimulant use, HIV transmission risk as the insertive partner, and URAII with HIV+ partners.
• SI may represent feelings of hopelessness that impair motivation to avoid stimulant use, protect sex partners from HIV, and protect one’s self from other STIs.
• Consistent with the results of a prior meta-analysis, depressive symptoms were unrelated to sexual risk taking. This indicates that the association between SI and sex risk may be independent of depressive symptoms.
• Taken together, these data highlight that individuals with SI may be good candidates for psychological interventions that are designed to reduce sexual risk taking in HIV+ persons.

Contact:
Adam Carrico, Ph.D.
University of California, San Francisco
Center for AIDS Prevention Studies
adam.carrico@ucsf.edu

Associated with Stimulant Use and Transmission Risk