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## PrEP Eligibility, HIV Risk Perception, and Willingness to Use PrEP among Men who have Sex with Men in India: A Cross-sectional Survey

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### Abstract

With PrEP demonstration projects planned for MSM in India, we assessed: 1) associations between guideline-informed PrEP eligibility, HIV risk perception (Health Belief Model), and perceived PrEP benefits and costs (Rational Choice Theory), with willingness to use PrEP (WTUP); and 2) correlates of non-willingness to use PrEP among PrEP-eligible MSM. From December 2016 to March 2017, we conducted an interviewer-administered survey among MSM recruited from “cruising” sites in Mumbai and Chennai. PrEP eligibility criteria included condomless anal sex, sex work, >1 male partner (all past month), physician-diagnosed sexually transmitted infection (past-year), or alcohol use before last anal sex. Perceived benefits and costs of PrEP were assessed with Likert-type scales (Cronbach’s alphas >.85). Participants’ (n=197) mean age was 26.6 (SD 6.6); 34% completed college-degree education and 49% engaged in sex work. Three-fourths (77%) reported they would “definitely use” PrEP. Among the 93% who met ≥1 PrEP-eligibility criterion, 79% (n=145/183) reported WTUP. In logistic regression analyses, PrEP eligibility (aOR=5.31, 95% CI 1.11, 25.45), medium (aOR = 2.41, 95% CI 1.03, 5.63) or high (aOR =13.08, 95% CI 1.29, 132.27) perceived HIV risk, and greater perceived benefits (aOR=1.13, 95% CI 1.03, 1.24) were associated with higher odds of WTUP. Among PrEP-eligible MSM, non-willingness to use PrEP was associated with low HIV risk perception (aOR=2.77, 95% CI 1.15 to 6.69, p=.02) and lower perceived benefits (aOR=.85, 95% CI .77, .95, p=.005).

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#### Author Disclosure Statement

The authors declare that they have no competing interests.

#### Authors’ Contributions

V.C. and P.A.N. conceptualized and designed the study, and acquired funding. M.S., R.N., S.R., and D.B. conducted data collection. V.C. and M.S. conducted data analysis. V.C. critically reviewed data analysis and findings, and drafted the initial manuscript. P.A.N. revised the manuscript in its present form. All authors made contributions to interpretation of data, critically reviewed the manuscript for important intellectual content, and gave final approval for the article in its present form.