

Longitudinal trajectories of sexual risk behavior in men who have sex with men

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Introduction:

Sexual behavior changes during a person's life course. Insights in sexual careers of men who have sex with men (MSM) may optimize timing of HIV prevention methods. Our objectives were to develop a behavioral risk score for HIV seroconversion and study trajectories of sexual behavior over time.

Methods:

Longitudinal data from the Amsterdam Cohort Studies on HIV and AIDS (ACS) were used. We included HIV-negative MSM who visited the ACS at least once between May 2007 and April 2016 (N=820). MSM were bi-annually tested for HIV and completed a questionnaire about their sexual behavior in the preceding six months. The following behavioral variables were selected a priori: number of casual partners with insertive or receptive anal intercourse (AI), condom use during AI, number of condomless AI partners with unknown or positive HIV status, and AI during group sex. Using Poisson regression, we calculated a risk score for HIV seroconversion. This score was used in growth mixture modelling to examine trajectories of sexual behavior since first male sexual contact.

Results:

During follow-up 49 MSM seroconverted. Predictors of seroconversion in multivariable analyses were number of casual partners with receptive AI (log transformed IRR: 1.63, 95%CI: 1.20-2.22) and number of condomless insertive AI partners with unknown or positive HIV status (log transformed IRR: 1.73, 95%CI: 1.24-2.42). We identified 3 sexual risk behavior trajectories: Decreasing high risk (7% of MSM) with high risk behavior at start of sexual career and decreasing risk over time; Increasing high risk (3%) with low risk behavior at start of sexual career and increasing risk over time; and Low risk (90%) with relatively low risk throughout the career. MSM in the Decreasing high risk trajectory were younger at first sexual contact than MSM in the Low risk trajectory.

Conclusion:

We identified 3 distinct sexual career trajectories. Increasing risk behavior during the life course was found in a small group of MSM. The trajectories of these men might provide clues for time-tailored interventions.

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Disclosure of Interest Statement:

The authors have no conflict of interest.

