

# Changing Patterns of Sexual Behavior and HIV/STI among Men who Have Sex with Men in Seattle, 2002 to 2018

[Christine M Khosropour<sup>1</sup>](#), [Julia C Dombrowski](#), [Lindley A Barbee](#), [Roxanne P Kerani](#), [Anna Berzkalns](#), [Matthew R Golden](#)

## Abstract

**Background:** The extent to which uptake of biomedical HIV prevention strategies has impacted population-level sexual behavior and sexually transmitted infections (STI) among men who have sex with men (MSM) is not well understood.

**Methods:** We collected data as part of routine care from MSM attending the municipal STI clinic in Seattle, Washington, 2002-2018. MSM were asked about condom use in the prior 12 months. We classified behaviors into four mutually exclusive categories: no anal sex; consistent condom use for anal sex; serosorting (condomless anal sex [CAS] only with HIV-concordant partners); and CAS with serodiscordant/unknown-status partners. STI/HIV testing was performed per routine clinic protocol.

**Results:** There were 45,656 and 6,987 visits by MSM without HIV and MSM with HIV, respectively. Use of antiretroviral therapy and pre-exposure prophylaxis increased substantially during the study period, to 94% and 50%, respectively, by 2018. CAS with serodiscordant/unknown-status partners decreased through 2013 but increased thereafter (to 40% among MSM without HIV; 68% among MSM with HIV). Serosorting increased among MSM without HIV, but declined after 2013 among MSM with HIV. Consistent condom use declined for all MSM (from 35% to 11% among MSM without HIV; from 20% to 5% among MSM with HIV). HIV test positivity declined substantially (3.5% to 0.5%) while STI test positivity increased over time.

**Conclusions:** Since 2013, CAS with HIV-discordant/unknown-status partners increased substantially concurrent with declining HIV test positivity and increasing STI test positivity. This highlights the success of biomedical HIV prevention strategies to reduce HIV incidence while affirming the need for new approaches to STI prevention.