

THINK TWICE

Best Evidence – Risk Reduction

INTERVENTION DESCRIPTION

Target Population

- Men who have sex with men (MSM)

Goals of Intervention

- Increase knowledge about serosorting for HIV/STI prevention
- Develop a tailored risk reduction strategy for each participant

Brief Description

Think Twice is an individual-level, single session intervention. It focuses on highlighting misbeliefs about selecting sex partners; shaping accurate beliefs and perceptions of risk about the use of serosorting for HIV/STI prevention; and determining a practical, risk-reduction strategy tailored to each participant. A graphic novel is used to convey messages about serosorting. The counselor uses the story to identify behaviors and situations that may lead to becoming HIV infected. Guided by the conflict theory of decision-making, the counselor and participant work together to identify ways that the story character can reduce HIV risk. The participant creates a sexual network diagram to examine his own recent sex partners and sexual behaviors. The diagram is then used to compare his decisions and sexual behaviors to those of the story character. Together, the counselor and participants then develop a customized risk-reduction plan from a menu of harm-reduction options.

Theoretical Basis

- Conflict Theory of Decision-Making (CTDM)

Intervention Duration

- One 45-minute session

Intervention Setting

- Community-based research site

Deliverer

- Counselors trained in client-centered counseling and motivational interviewing

Delivery Methods

- Discussion
- Goal setting
- Graphic novel
- Sexual network diagram

Structural Components

There are no structural components reported for this study.

INTERVENTION PACKAGE INFORMATION

Intervention materials are in the Supplementary Appendix to the intervention article, downloadable [here](#).

Email for Lisa Eaton: lisaanne.eaton@gmail.com for details on intervention materials.

EVALUATION STUDY AND RESULTS

The original evaluation was conducted in Atlanta, Georgia between 2014 and 2015.

Key Intervention Effects

- Increase proportion of condom-protected sex acts
- Reduced condomless anal sex acts
- Reduced condomless insertive anal sex acts

Study Sample

The baseline study sample of 597 participants is characterized by the following:

- *89% Black/African-American/African Diaspora, 6% White*
- *100% assigned male at birth, 7% male-to-female transgender*
- *44% same gender loving/gay, 41% bisexual, 14% heterosexual*
- *Mean age of 34 years*
- *93% completed high school education or GED equivalent, 60% college educated*

Recruitment Settings

Lesbian, gay, bisexual, and transgender-identified venues (bars/clubs/parties), online sites (dating sites and apps)

Eligibility Criteria

Men were eligible if they identified as male or transgender female, were age 18 years or older, reported HIV-negative or unknown serostatus, two or more male sex partners in the past year, and condomless anal sex in the past year.

Assignment Method

MSM (N = 600) were randomized to 1 of 2 study arms: Think Twice intervention (n = 300) or a Centers for Disease Control and Prevention (CDC)-based, sexual risk reduction intervention control condition (n = 297).

Comparison Group

The CDC-based sexual risk reduction control condition was a single session, standard-of-care, HIV/STI risk-reduction counseling session. It was tailored to address inhibitors and triggers to sexual risk taking and safer sex practices. It also focused on substance use in the context of sexual decision making. Counseling on serosorting-related practices was not included to avoid contamination with the experimental arm.

Relevant Outcomes Measured and Follow-up Time

- Sex behaviors (including proportion of condom protected anal sex acts; number of condomless anal sex acts [overall, insertive, receptive], and number of male sex partners during the past 3 months) were measured at 3, 6, and 12-month follow ups.
- Self-reported STI diagnosis, symptoms of STI, and lab-diagnosed gonorrhea/chlamydia (via urine and rectal) were measured at 3-, 6-, and 12-month follow ups.

Participant Retention

- Think Twice intervention:
 - 89% retained at 3 months
 - 85% retained at 6 months
 - 82% retained at 12 months
- CDC-based Sexual Risk Reduction control:
 - 85% retained at 3 months
 - 87% retained at 6 months
 - 85% retained at 12 months

Significant Findings

- Across the 3 follow-ups, the intervention participants reported a significantly greater proportion of condom-protected anal sex acts during the past 3 months (Wald $\chi^2 = 4.09$, $p < 0.05$) than comparison participants.
- Across the 3 follow-ups the number of condomless anal sex acts was significantly lower among the intervention participants (Wald $\chi^2 = 4.00$, $p < 0.05$) than among the comparison participants.
- Across the 3 follow-ups there was a statistically significant interaction effect (Wald $\chi^2 = 7.98$, $p < 0.05$).
 - The number of condomless insertive anal sex acts was higher among intervention participants than among comparison participants at 3 months. However, the number was much lower among intervention participants than among comparison participants at 6 and 12 months. The main intervention effect was significant (Wald $\chi^2 = 10.53$, $p < 0.01$).

Considerations

- 50.1% of the baseline sample reported depressive symptoms needing further evaluation.
- Two outcomes were trending towards significance:
 - Across the 3 follow-ups, intervention participants reported reduced self-reported STI diagnoses (Wald $\chi^2 = 2.87$, $p = 0.09$) compared to comparison participants.
 - Across the 3 follow-ups, intervention participants reported reduced STI symptoms (Wald $\chi^2 = 3.59$, $p = 0.06$) compared to comparison participants.
- There were no significant intervention effects on:
 - Number of male sex partners
 - Condomless receptive anal sex acts
 - Lab diagnosed gonorrhea/chlamydia (rectal)
 - Lab diagnosed gonorrhea/chlamydia (urine)
 - However, post hoc pairwise analyses demonstrated significant difference in urine diagnoses between conditions at the 3-month follow up (1.5% intervention and 4.9% control, $p < 0.05$)
- An earlier pilot of this intervention was identified by PRS as a Best Evidence Based Intervention (EBI). The information sheet for the pilot can be accessed [here](#).

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REFERENCES AND CONTACT INFORMATION

Eaton, L. A., Kalichman, S. C., Kalichman, M. O., Driffin, D. D., Baldwin, R., Zohren, L., & Conway-Washington, C. (2018). [Randomised controlled trial of a sexual risk reduction intervention for STI prevention among men who have sex with men in the USA](#). *Sexually Transmitted Infections*, 94(1):40-45.

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