Structural and community-level interventions for increasing condom use to prevent the transmission of HIV and other sexually transmitted infections

HIV およびその他の性感染症感染予防のためのコンドーム使用増加に向けた系統的およびコミュニティレベルの介入に関する研究

Abstract

Objective: To assess whether structural interventions at the community level for increasing condom use to reduce the transmission of HIV and other sexually transmitted infections.

Methods: A systematic review and meta-analysis were conducted. All relevant medical databases from the mid-1980s to early February 2012 were searched. Only randomized control trials (RCTs) featuring interventions at community level, with serological confirmation of HIV and other STIs, and using one or more structural interventions aiming to promote condom use were selected. Relevant studies were assessed for quality using a standardized risk of bias assessment tool. The effect of treatment was

assessed by pooling trials with comparable characteristics and its effect size quantified

using relative risk. When there was no statistically significant heterogeneity (p<0.10), a

fixed-effect model was used to estimate the pooled relative risk. If significant

heterogeneity was identified, a random-effect model was implemented. The effect of

clustering at the community level was adjusted for using intra-cluster correlation

coefficients (ICCs), and sensitivity analysis was carried out with different design effect

values.

Results: A total of 6,312 citations were obtained. After thorough screening, 36 full-text

studies were selected and assessed for eligibility, but only eight studies, with a total of

73,962 participants, fulfilled all inclusion criteria for risk of bias assessment and seven

studies for meta-analysis. The main intervention was condom promotion and/or

distribution. Reported condom use showed a statistically significant increase (Risk

Ratio [RR] 1.20, 95% confidence interval [CI] 1.03 - 1.40), and knowledge about HIV

(RR 1.15, 95% CI 1.04 - 1.28) and other STIs (RR 1.23, 95% CI 1.07 - 1.41) also

improved. However, there was no statistically significant reduction in either HIV

sero-prevalence (RR 1.02, 95% confidence interval CI 0.79 - 1.32) or HIV

sero-incidence (RR 0.90, 95% CI 0.69 - 1.19) when compared to the control. There was

no effect of the intervention on other STIs measured either by incidence or prevalence.

Conclusion: Structural interventions at community level to increase condom use are not

effective for preventing the transmission of HIV and other STIs among the general

population in developing countries. Alternative strategies should be examined and

implemented in these settings.

Keywords: HIV, STIs, condom, community, structural-interventions, prevention.