



Center for  
Communication  
Programs

# HIV Communication Programs, Condom Use at Sexual Debut, and Protection from HIV in South Africa 2005

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# Background

- Condom use at first sex linked with subsequent condom use
  - Also linked to reduced risk of STIs
- Communication programs for HIV prevention have been implemented in South Africa since the 1990's
  - Designed to educate the public about HIV and promote prevention methods

# Background cont.

- Stabilization of HIV prevalence between 2002 and 2008
- Evidence of decrease in HIV incidence among youth
- Increased condom use is a possible reason for decreased incidence (Rehle et al., 2010)

# Methods

- Analyzed results of the 2005 HSRC/Nelson Mandela national cross-sectional survey
  - 6829 adults reporting sexual intercourse in last 12 months
  - Condom use at sexual debut measured by:
    - Did you use a condom the first time you had sexual intercourse?

# Methods cont.

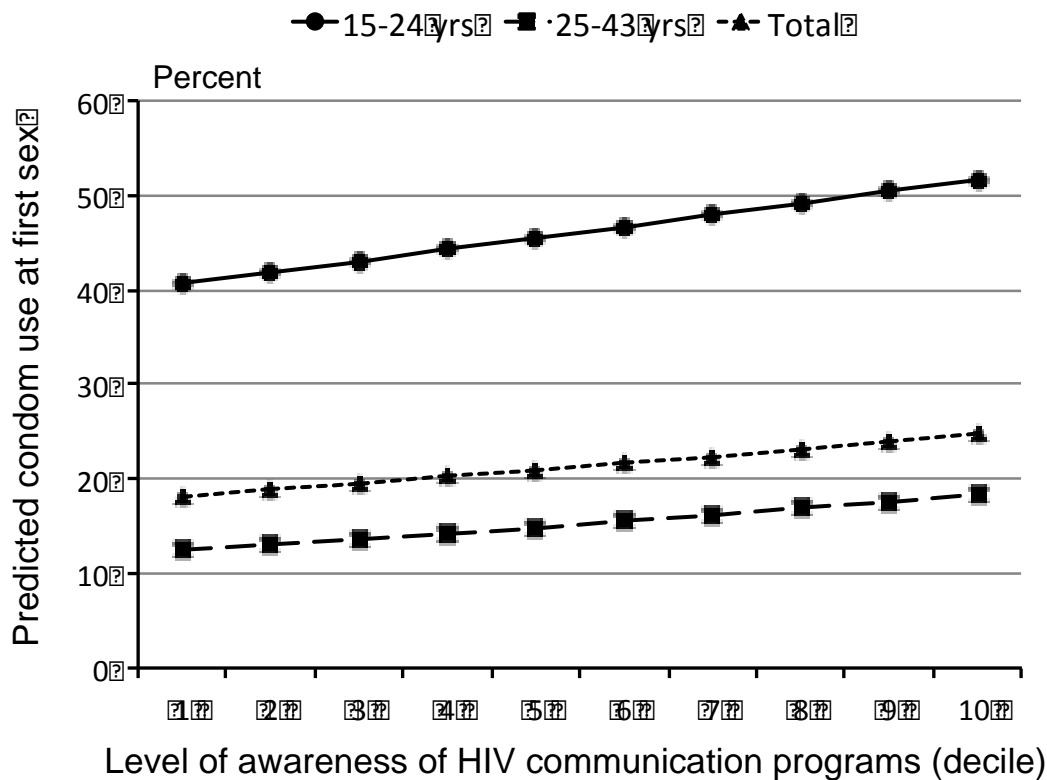
- Exposure to AIDS communication programs
  - measured by awareness of eight national HIV-prevention campaigns
- HIV infection testing

# Analysis

- Multivariate causal attribution (MCA) analysis
  - structural equation modeling (SEM)
  - bivariate regression
  - propensity score matching (PSM)
  - sensitivity analysis
- Addresses threats to validity and strengthens claim of causality

# Results

# Predicted condom use at 1<sup>st</sup> sex by predicted level of HIV program awareness



N = 1778, 16829, 3170, respectively;  $p < 0.001$ ; adjusted by logistic regression



# Condom use at first sex and HIV negative status

- SEM: Odds ratio 1.38
- PSM: condom use at 1<sup>st</sup> sex increases HIV negative status by 3.6 percentage points
- Result robust to potential violations in the strong ignorability assumption

# Condom use at first sex and HIV negative status

- Estimated increase in HIV- status equivalent to a reduction of 25% in HIV+ status among those who used condom at 1<sup>st</sup> sex
- Estimated Infections averted: 139,835

# Discussion

- Communication programs have an indirect effect on HIV infection by increasing condom use at first sex
- Condom use at 1<sup>st</sup> sex increases the odds of remaining HIV negative
- Results are likely causal

# Limitations

- Cross-sectional data but analytic methods help to address most related threats
- Self-reported data subject to memory lapse and social desirability bias