Translation of a Sexual Risk Reduction Intervention in Zambia

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Globally, ~2 million children younger than 15 are living with HIV — 90% of these are living in sub-Saharan Africa.

Zambian youth aged 15 have a 50% likelihood of dying of AIDS by age 35.

24.7 million people are living with HIV in sub-Saharan Africa.

The largest concentration of the HIV epidemic in the world.
ZAMBIA

- Population 10.2 million
- 50% Urban
- 1 million people infected
- 17% National HIV prevalence
- 19.7% Urban HIV prevalence

Marketplace in Zambia
**CONTEXT: HIV IN COUPLES**

- **WOMEN**
  - Infection rates are higher (54% of all infections are among women)
  - Majority of women are in marital (85% of all cases) & cohabiting relationships

- **MEN**
  - The primary sexual decision makers

- **COUPLES:**
  - If both members of the couple do not receive voluntary counseling & testing, one may not disclose and/or protect the uninfected partner
  - Condom use more frequent outside the marital relationship and seen as intrusive within the marriage

- **IMPLICATIONS:**
  - Increased risk of transmission of resistant virus between infected partners
THE PARTNER PROJECT: PILOT STUDY

- Enhance acceptability & use of sexual barrier products
- Reduce sexual risk behavior
- Compared the level of male involvement on sexual risk behavior over time
  - Compared
  - Sero-concordant & Sero-discordant couples
  - Using Male & Female groups

SEXUAL RISK REDUCTION INTERVENTION

PILOT COMMUNITY TRANSLATION: MTENDERE COMMUNITY HEALTH CENTRE
POSITIVE PREVENTION: THE PARTNER PROJECT

- **Voluntary Counseling & Testing (VCT)**
  - Current HIV prevention approach for couples in Africa
- **Partner Project** - pilot project linked with VCT services
- **Community Health Centers**
- **Sites for HIV Medical Care & ARV distribution**

**Strategy:** Maintain post VCT risk reduction among greater numbers of couples over time at the community level.
1. Feasibility of conducting group sexual risk reduction interventions in a Community Health Center setting

HIV seropositive and serodiscordant couples

Lusaka, Zambia

OUTCOME VARIABLES

- Sexual barrier use, condom use attitudes, HIV/AIDS knowledge, and sexual self-efficacy

INDEPENDENT VARIABLES

- A three session or single session intervention
## Recruitment: Comparison between Sites

### University Teaching Hospital
- Participants were recruited from the hospital VCT, outlying CHCs and non-governmental organizations (NGOs)
  - ~30% tested positive at VCT
- Located at University of Zambia (UNZA) School of Medicine
  - The only public hospital in Zambia
  - Largest hospital in Lusaka

### Community Health Centre (CHC)
- Participants were recruited from the M'Tendere CHC VCT.
- M'Tendere CHC provided health services to
  - 92,440 patients, comprising 20,865 households
- Medical services provided at low/no cost to vulnerable low income populations
- M'Tendere CHC provided administrative and logistic support
  - VCT referrals to the project staff
  - Space to consent participants
  - Space for intervention sessions
UTH & CHC
**ELIGIBILITY**

- > 18 years of age
- HIV sero-positive or discordant couple
- Verified couple relationship
  - Minimum 6 months
- Sexually active
  - Within the last month
- Ineligibility primary cause
  - Lack of sexual activity within the last month

**RECRUITMENT & ENROLLMENT**

- Screened for STDs & penile/vaginal infections
- Notified & treated for STDs prior to study enrollment
- 55 cases of syphilis identified & treated at baseline
**Protocol**

- **Intervention Conditions**
  - Female participants completed three sessions
  - Male partners were randomized to one of two conditions:
    1) Three-session group intervention
    2) One-session group intervention
  - No true control group: due to ethical considerations regarding the transmission of HIV
  - Previous studies indicated that even enhanced usual care VCT clients significantly decreased use of sexual barrier products over time

- **Assessments**
  - Baseline, in-session, 6 months, 12 months
GROUP INTERVENTION
(N = 10, GENDER SPECIFIC)

- Communication techniques
- Negotiation skills
- Role plays
- Experiential/interactive training
- Self-efficacy
- Skill mastery
- Expand/reframe perceptions of barrier use

- Session 1: Male & female condoms
  - Sexual risk reduction, HIV/STD transmission, skill training on male and female condom use

- Session 2: Vaginal lubricants (Astroglide®, KYA gels, & Lubring suppositories) as surrogates to assess acceptability for vaginal microbicides
  - Included skill building and risk reduction strategies

- Session 3: Reinforced plans for risk avoidance and sexual communication strategies
Male Condom Use Baseline

<table>
<thead>
<tr>
<th>Reported Consistent Male Condom Use in the Last 7 Days</th>
<th>UTH</th>
<th>CHC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>48%</td>
<td>80%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reporting No Male Condom Use in 7 Days</th>
<th>24%</th>
<th>9%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Reported Consistent Male Condom Use Over the Last 7 Days</th>
<th>57%</th>
<th>71%</th>
</tr>
</thead>
</table>

Sero-negative participants (UTH = 90, CHC = 35) at both sites were less likely to use male condoms (UTH, $F = 31.8, p < .001$, CHC, $F = 6.46, p = .012$)

Study Findings
6 Months Post Baseline

Participants at both sites:
Improved their level of HIV/AIDS related knowledge.
Improved condom use attitudes/sexual self efficacy.
Improved consistent condom use.

HIV negative participants:

<table>
<thead>
<tr>
<th></th>
<th>CHC</th>
<th>UTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condom use</td>
<td>100%</td>
<td>84%</td>
</tr>
</tbody>
</table>

Inconsistent condom users:

<table>
<thead>
<tr>
<th></th>
<th>CHC</th>
<th>UTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistent condom use</td>
<td>95%</td>
<td>94%</td>
</tr>
</tbody>
</table>
12 Month Follow-up

Maintained at both sites:
- Higher levels HIV/AIDS related knowledge
- Improved condom use attitudes/sexual self-efficacy

HIV neg. participants at CHC: maintained higher sexual barrier use than UTH (F = 7.17, p = .001).

Inconsistent condom users: initial gains were maintained and did not differ between sites.

Consistent condom use:

<table>
<thead>
<tr>
<th></th>
<th>CHC</th>
<th>UTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV+</td>
<td>100%</td>
<td>91%</td>
</tr>
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</table>

HIV neg. participants:

<table>
<thead>
<tr>
<th></th>
<th>CHC</th>
<th>UTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV-</td>
<td>↑ 100%</td>
<td>↓ 62%</td>
</tr>
</tbody>
</table>

Inconsistent condom users:

<table>
<thead>
<tr>
<th></th>
<th>CHC</th>
<th>UTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 session</td>
<td>89%</td>
<td>85%</td>
</tr>
<tr>
<td>3 sessions</td>
<td>100%</td>
<td>91%</td>
</tr>
</tbody>
</table>

CHC, F = .766, p = .396
UTH, F = .912, p = .343
Outcomes between sites were similar

Among inconsistent condom users, condom use increased over time, and among HIV seronegative participants, condom use was significantly higher at the CHC.

Provides intervention to larger numbers of people who then receive mutual support following an HIV diagnosis.
DISCUSSION

- Results support the use of cognitive behavioral interventions among HIV sero-concordant and discordant couples in Zambia.
- Both multiple and single group interventions appeared to reduce risk in this population.
  - The single group intervention strategy may represent an effective brief intervention for sero-positive men at the community level.
- Disparity in condom use at baseline between HIV sero-positive and sero-negative participants highlights the importance of interventions in both infected and at-risk populations.
LIMITATIONS

✗ **Perceived lack of confidentiality at the CHC**
  + Those at UTH may be avoiding CHC VCT services
    ✗ May be associated with a denial of HIV status

✗ **UTH interviewers provided patient assessments at the CHC**
  + May be associated with more honest data
COMMUNITY BASED RISK REDUCTION

- **VCT plus VCT+ group intervention strategies**
  - Enhance the effectiveness of VCT & population focused prevention
  - Tailor intervention to local populations
  - Reach more patients and reduce staff burden
  - Use peers for motivational counseling
  - Provide a platform for sharing experiences and risk reduction strategies with skill building
  - Promote health behaviors & behavior change

- Underway - large scale translation project at 5 CHCs
IMPLEMENTATION

CDC Zambia initiatives

+ Train CHC healthcare and counseling personnel to implement and sustain the intervention
+ Community advisory board involvement
+ Identification of funding lines for intervention supplies and staff supervision and training
+ Target sero-positive and discordant couples
+ Follow with sero-negative couples