Lessons from the Broad Street Pump: The importance of addressing structural factors that drive HIV

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Disease determinants

Factor → Biological, Behavioural, Social

Intervention → Bio-medical, Educational, Structural

Source: Adapted from Jim Thomas, Measure Evaluation
Structural interventions

(behavioral)

High  Personal Volition  Low

(behavioral)

HIV  “Have fewer partners”  Improve livelihoods (to reduce transactional sex)

Obesity  “Exercise more”  Create walkable neighbourhoods

Hazardous drinking  “Drink responsibly”  Regulate alcohol advertising and promotion

Source: Adapted from Jim Thomas, Measure Evaluation
Stemming the tide of cholera

London 1854

John Snow,
Father of modern epidemiology
The historical decline of TB deaths in England and Wales 1848-1961

Introduction of Chemotherapy

Source: Paul Pronyk
STRIVE: Tackling the factors that create vulnerability and undermine HIV prevention and treatment
Designed around 4 research themes

- **Theme 1:** Deepening fundamental understanding of structural factors and pathways
- **Theme 2:** Evaluating the impact and cost-effectiveness of structural interventions
- **Theme 3:** Advancing methods for evaluating structural interventions; and
- **Theme 4:** Enhancing insights into processes of change
Evidence of Impact: Partner violence

3 prospective studies link IPV with Incident HIV or STI

<table>
<thead>
<tr>
<th>Relationship power scale</th>
<th>IRR (95% CI)</th>
<th>p value</th>
<th>HSV2-adjusted IRR (95% CI)*</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium or high equity</td>
<td>1.00</td>
<td>..</td>
<td>1.00</td>
<td>..</td>
</tr>
<tr>
<td>Low equity</td>
<td>1.51 (1.05-2.17)</td>
<td>0.027</td>
<td>1.51 (1.05-2.17)</td>
<td>0.027</td>
</tr>
<tr>
<td>Physical or sexual intimate partner violence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None or one</td>
<td>1.00</td>
<td>..</td>
<td>1.00</td>
<td>..</td>
</tr>
<tr>
<td>&gt;1 episode</td>
<td>1.65 (1.13-2.40)</td>
<td>0.009</td>
<td>1.51 (1.04-2.21)</td>
<td>0.032</td>
</tr>
</tbody>
</table>

*Strongest data comes from South Africa: Jewkes et al, The Lancet, 2010;

Cross-sectional data more mixed; methodological limitations
Consistent association found between more severe IPV and HIV risk
Evidence of Impact:
Livelihood options, transactional sex & HIV

• 2 longitudinal studies; 1 RCT link transactional sex to incident HIV*

• Cohort study, embedded in intervention trial, enrolled 1077 sexually active, HIV- women 15-26 yrs in rural South Africa
  
  – HIV incidence:
    • 3 times higher among girls with a once-off partner
    • 2 times higher among girls with on-going concurrent partner
  
• Effect over and above adjustments for total number of partners, relationship control, violence and other potentially confounding factors

• Not mediated through partner age

* Shaffer et al, JAIDS, 2010
  Baird et al, Health Econ. 2010 & the Lancet, 2012
Cash transfer scheme to keep girls in school – Zomba, Malawi

$10/month provided to HH of in and out-of-school girls (13-22 yrs)

30% went directly to girls

(Baird et al., 2010 & 2012)

Results after 18 months among baseline school girls

- 35% reduction school drop-out rate
- 40% reduction early marriages
- 76% reduction in HSV-2 risk
- 30% reduction in teen pregnancies
- 64% reduction in HIV risk
Evidence of impact: alcohol use

Alcohol consumption

- Drinking norms
- Alcohol myopia
- Cognitive impairment
- Immune function

Risk taking personality

Drinking venue

Partner violence

- Partner selection
- Sexual frequency
- Partner turnover
- Unprotected sex
- Access to info & services
- Biologic susceptibility

HIV infection

Evidence of impact: alcohol use
Capturing the multiple benefits of intervening “upstream”

Indicators of Gender Inequality

Early sexual debut (≤16)  
Partner violence  
Lack of secondary education

HIV  
Teen pregnancy  
High fertility  
Unplanned pregnancy  
Home Delivery  
Child diarrhea  
Child fever

HIV  
SRH Indicators  
Maternal & Child Health Indicators

Malawi DHS – Stoekl, H. Thurs. Poster
RESEARCH ON STRUCTURAL CHANGE TO PREVENT HIV

Social forces drive the HIV epidemic and block prevention efforts. STRIVE partners investigate how structural factors create vulnerability and what programmes work to tackle them.

Phuza Wize
Phuza Wize (or “consume sensibly”) is a five-year campaign of STRIVE affiliate, Soul City Health and Development Institute, to reduce alcohol use.

Drivers: Alcohol, Gender inequality and violence
Methods: Changing social norms

Resources

What Works to Prevent Partner Violence? An Evidence Overview
Lori Heise reviews the empirical evidence of what works in low- and middle-income countries to prevent violence against women by their partners.

STRIVE on twitter
hivdrivers
Unicef’s Report Card on #Adolescents 2012, in Indian press. t.co/uKrMPhhg
1 day 8 hours ago.
## Measuring HIV stigma and discrimination

**Authors:** Anne L. Stangl, Laura Brady and Katherine Fritz from the International Center for Research on Women, Washington, DC

This brief is designed to guide researchers to study HIV stigma, either as the main focus or as an add-on. It outlines the key domains of HIV stigma that need to be measured if we are to understand how stigma works.

### Domain: General Populations, Health Care Workers, People Living with HIV, Anti-Stigma Activities

<table>
<thead>
<tr>
<th>Domain</th>
<th>General Populations</th>
<th>Health Care Workers</th>
<th>People Living with HIV</th>
<th>Anti-Stigma Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived stigma</strong></td>
<td>Are people living with HIV perceived to be unacceptable, harmful, or dangerous?</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Experience of discrimination</strong></td>
<td>Do people who have HIV experience unfair treatment or discrimination?</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Structural drivers and determinants</strong></td>
<td>Are structural drivers and determinants of stigma being addressed?</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Institutional stigma</strong></td>
<td>Are institutions, health care workers, and policies about health care services that create stigma for PLWHIV?</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### Reference

1. This is a sample of a research study that was designed with HIV researchers. The study involved with HIV stigma was undertaken in several different regions of the world.
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