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

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STRIVE Research Symposium
24 July 2012
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  
(structural)

Individual responsibility

**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

McKeown T, Record RG, Turner RD Population Studies 1975

Introduction of Chemotherapy

Source: Paul Pronyk
STRIVE: Tackling the factors that create vulnerability and undermine HIV prevention and treatment

STRIVE Priority Research Topics

- HIV
- Gender Norms & Violence
- Lack of livelihood options
- Migration
- Alcohol & drinking norms
- Stigma and Criminalization
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
Conceptual framework

MACRO LEVEL

Structural Drivers

Proximate Determinants of Risk

Structural Interventions
**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>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>


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
**Transactional sex & HIV:**
Conditional Cash Transfer Trial in Zomba, Malawi

- **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

- Risk taking personality
  - Drinking norms
  - Alcohol myopia
  - Cognitive impairment
  - Immune function

Drinking venue

Partner violence

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

HIV infection
Capturing the multiple benefits of intervening “upstream”

Indicators of Gender Inequality

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

SRH Indicators:
- Teen pregnancy
- High fertility

Maternal & Child Health Indicators:
- Unplanned pregnancy
- Home Delivery
- Child diarrhea
- Child fever

HIV

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.

Affiliated projects

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/UKRMPH8g

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 operates.

#### Table 1: Questions to measure HIV stigma and discrimination

<table>
<thead>
<tr>
<th>Domain</th>
<th>General Population</th>
<th>Healthcare Workers</th>
<th>People Living with HIV (PLHIV)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived stigma</strong></td>
<td>Are people who are HIV positive discriminated against?</td>
<td>Do you believe that caregivers are stigmatized?</td>
<td>Are you stigmatized in your community?</td>
</tr>
<tr>
<td><strong>Experienced discrimination</strong></td>
<td>Would you say that you have experienced HIV-related discrimination?</td>
<td>Have you been discriminated against for your HIV status?</td>
<td>Are you stigmatized in your community?</td>
</tr>
<tr>
<td><strong>Structural drivers and bottlenecks</strong></td>
<td>Are there structural barriers or bottlenecks that prevent or limit access to care?</td>
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</tr>
<tr>
<td><strong>Dysfunction in care practices</strong></td>
<td>Are you in a position to provide care to people who are HIV positive?</td>
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#### Figure 1. Reducing HIV stigma and discrimination for programme implementation and monitoring

A graphic illustrating strategies to reduce HIV stigma and discrimination.
Visit us at strive.lshtm.ac.uk

STRIVE TV

STRIVE Digest

STRIVE Learning Labs

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