7 July 2009
SANAC Civil Society Meeting
Geoffrey Selawe, DPH, MPH

Prevention Interventions that work
Strategies for acceleration of HIV

5962

HSRC Research Outputs
In this presentation
1. Introduction

- Epidemiological and social science evidence
  Prevention efforts should be based on the best available
  evidence.

- Interventions.
  And many more people may die as a result of preventable
  HIV infections. However, for every patient who initiated ARV in
  recent years, attention to treatment access has undoubtedly increased.

- Therapeutic discoveries in the past 28 years of the epidemic.
  Remarkable advances in the molecular biology of HIV and major
  national effort for universal access to treatment will be in serious jeopardy,
  of a drastic reduction in the number of new infections. National
2. Measuring evidence in HIV prevention

1. Systematic reviews and meta-analyses
2. Experimental designs
   - Randomised Controlled Trials (RCT) are "gold standard"
   - Case-control studies
   - Cohort studies
3. Quasi-experimental designs
   - Pre and post-test intervention surveys
4. Survey designs
   - Cross-sectional surveys
5. Qualitative research
   - Case studies

6. Participant observation
7. Key informant interviews and focus group discussions
For obtaining evidence of effectiveness, RCTs in South Africa, Uganda, and Kenya were the "gold standard".

reduce the global burden of HIV/AIDS. None of the new prevention methods currently being tested is likely to be 100 percent effective, and all will need to be used in combination.

"It is critical to note that there is no "magic bullet" for HIV.

No "Magic Bullet" for HIV
STI treatment

Condoms

PMTCT

Antiretroviral Therapy (ART)

Male Circumcision (MC)

Prevention Interventions that Work

3. Accelerating on Biomedical HIV
3.1. Male Circumcision

3.1.1. Male Circumcision

Evidence studies in South Africa, Uganda, and Kenya:

There is compelling evidence that MC is 65% effective in reducing the risk of acquiring HIV in circumcised men.

A systematic review by the Cochrane Collaboration assessed the effectiveness of MC for preventing HIV in heterosexual men is conclusive.

Reviewers concluded that no further trials are required to establish that HIV infection rates are reduced in heterosexual men for at least the first two years after circumcision.


Case study 2: Rwanda - ARV coverage increased from 1% in 2003 to almost 60% in 2007.

Case study 1: Namibia - ARV treatment coverage was negligible in 2003. 88% of individuals in need were on ART in 2007.

And a tenfold rise over the previous five years.

Antiretrovirals - a 42% increase over December 2006.

Low- and middle-income countries were receiving.

By the end of 2007, an estimated 3 million people in

3.1.2. Antiretroviral Therapy (ART)
3.1.3. Preventing mother-to-child transmission (PMTCT) of HIV

Transmission (PMTCT) of HIV

Preventing mother-to-child
### Interventions that Work

**Summary:** Biomedical HIV Prevention

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Status</th>
<th>Ref.</th>
<th>Study Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HIV Vaccines</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>VaxGen, 2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>Grosskunth, 1995</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>Grosskunth, 1996</td>
</tr>
<tr>
<td><strong>STD Treatment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>NIAID/CPE, HSV-2, HSV-1, LSTNM (discriminant conjugates)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>Kaul, 2004</td>
</tr>
<tr>
<td><strong>HIV Treatment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>HTN 052 Pro2000 (unlinked, Pro2000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>Van Damme, 2002</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Richardson, 2001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Roddy, 1999</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kess, 1992</td>
</tr>
<tr>
<td><strong>Microbicides</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>ICTC</td>
</tr>
<tr>
<td><strong>RTs ongoing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Ref. not completed</td>
<td></td>
</tr>
<tr>
<td><strong>RTs showing efficacy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>ICTC</td>
</tr>
<tr>
<td><strong>RTs completed</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>ICTC</td>
</tr>
</tbody>
</table>

<p>| <strong>Intervention</strong> | | | |
| | | | |
| | | 1 | ICTC |</p>
<table>
<thead>
<tr>
<th>Transmission risk decreases</th>
<th>IRCTS</th>
<th>PMTCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Important for STI care</td>
<td>1 (4) CRCT</td>
<td>STI Treatment</td>
</tr>
<tr>
<td>HIV in a mature epidemic</td>
<td>0 (1) IRCT</td>
<td>Male &amp; Female</td>
</tr>
<tr>
<td>No population-level effect on</td>
<td></td>
<td>Condoms</td>
</tr>
<tr>
<td>&quot;natural experiment&quot;</td>
<td></td>
<td>Circumcision</td>
</tr>
<tr>
<td>Accepted on the basis of the</td>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>No RCT</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>be population level impact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modeling suggests likely to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compelling evidence</td>
<td>3 IRCTS</td>
<td></td>
</tr>
<tr>
<td>Community RCT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Level or Community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Summary: Biomedical HIV Prevention

Interventions That Work
3.2. Accelerating behavioural HIV prevention interventions that work

**Substance abuse:**
- Decrease sharing of needles and syringes, and decrease
- Provide access to make circumcision,

**HIV, those who are infected with HIV:**
- Provide HIV counseling and testing and access to treatment

**Increase the number of sexual acts that are protected:**
- Reduce number of sexual partners,

**Delay first intercourse:**
- Behavioural HIV prevention strategies are those that attempt to:
However, knowledge does not automatically translate into behavior change.

Implemented school-based HIV education is an effective prevention strategy. 70% of countries have monogamous relationships. 80% of young men and women are aware that being in a

by surveys based on five HIV-related questions.

In 2007, national surveys found that 40% of young men and 36%

complete knowledge of HIV by 2010. Countries which signed the 2001 UN/ASA document pledged to

3.2.1. Increasing Knowledge about HIV and AIDS
almost 50% more likely than boys to be sexually active.

In sub-Saharan Africa, adolescent girls under 15 are

from 14% to 12%.

Globally reporting sexual intercourse before age 15 tell

between 1998 and 2007, the share of young people

continuation of trends detected earlier this decade.

In most African countries, the percentage of young people having sex before age 15 is decreasing -

3.2.2. Age of sexual debut
Casual partners

These programs had only limited impact on condom use with casual partners. Although workers significantly increased condom use with clients, studies targeting sex workers in sub-Saharan Africa found that behavioral models targeting sex workers might be more effective.

- A meta-analysis of 62 well-designed evaluation studies from 44 countries found that male condoms are used correctly and consistently, the risk of HIV infection is 80-95% effective in reducing the risk of HIV infection when male condoms are used correctly and consistently.

- The female condom is 94-97% effective in reducing the risk of HIV infection if used correctly and consistently.

- Young people report having used a condom the last time they had sex. In most African countries, fewer than 50% of sexually active youth use condoms.
<table>
<thead>
<tr>
<th>Interventions That Work</th>
<th>HIV Prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Behavioral</strong></td>
<td></td>
</tr>
<tr>
<td>Comment</td>
<td></td>
</tr>
<tr>
<td>Individual level of RCT</td>
<td></td>
</tr>
<tr>
<td>Community RCT</td>
<td></td>
</tr>
<tr>
<td>Intervention</td>
<td></td>
</tr>
<tr>
<td><em>Stepbing Stones</em></td>
<td></td>
</tr>
<tr>
<td>0 CRT</td>
<td></td>
</tr>
<tr>
<td>0 RCT</td>
<td></td>
</tr>
</tbody>
</table>

- Emphasis on self-reported outcomes
- In some trials e.g. stepping stones
- Intermediate factors observed
- Impact on incidence of HIV
- In measuring impact on HIV
- Methodological challenges
- Accept on VCT
- Pending trials e.g. Project

( Condorn use 
Partner reduction,
Sex, sexual
abstinence/delay)
effective strategy for reducing HIV sexual risk behaviours among adults

Results from sub-Saharan Africa reveal that high-quality VCT is an

with an HIV-positive diagnosis

VCT assists people to cope with a range of psychological problems associated

positive individuals is less certain

people, as well as the long-term effects of VCT for HIV-negative and HIV

The efficacy of VCT as a primary prevention strategy for HIV-negative

particularly with their non-primary partners.

between couples tested together and among HIV-positive individuals,

unprotected sex, fewer multiple sex partners and casual partners

VCT is most effective in promoting behaviour change (i.e., reports of less

that evidence exists for VCT as an effective behaviour change strategy

A systematic review of the impact of VCT in developing contexts shows

3.3.1. HIV Testing and Counseling (HTC)

3.3. Accelerating Structural HIV Prevention Interventions that Work
obtained similar findings as the Zim study.

A community RCT conducted by RADAR on microfinance

associated with reduced rates.

Intervention, while membership of well-functioning groups was
community groups was associated with increased rates of HIV
found that membership of groups that were poorly functioning
A study in Zimbabwe of over 2000 women aged 15–24 years

Interventions and relative wealth

Independent of exposure to HIV prevention
structures and systems make populations more or less vulnerable,
There is increasing evidence that different kinds of community

and microfinance

3.3.2. Community structures, systems
3.3.3. Health and human rights approach

Research presented at the AIDS 2008 conference showed that there has been mixed results in this regard.

On the one hand, research identified a range of rights-based programmes currently in use. For example, Patel described an ambitious attempt in Africa to intervene in legal proceedings using an impact litigation framework.

Case study 2: The Ntengo Initiative

In 2006, Ntengo, an NGO in Zimbabwe, began a process of participatory research and advocacy to identify the factors that limit women and girls from realizing property and inheritance rights. It subsequently trained women and girls as educators to deliver community legal workshops and monitor observance of property and inheritance rights. Some 365 cases have since been handled resulting in 600 widows and families regaining their inheritance.
<table>
<thead>
<tr>
<th>Factors</th>
<th>Impact on Other Intermediate Methodological Challenges</th>
<th>0 (1) CRCT</th>
<th>Microfinance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RCT</td>
<td>Community</td>
<td>Intervention</td>
</tr>
<tr>
<td></td>
<td>Community Level or Intervention</td>
<td>Individual Level of intervention</td>
<td></td>
</tr>
</tbody>
</table>
- Voluntary counseling and testing
- ART
- Prevention of mother-to-child transmission
- Treatment of STIS
- Condom access and use
- Adult male circumcision

HIV prevention interventions that work include:

4. HIV prevention interventions that work

- Behaviour occurs.
- Are specific to the geographic and social context in which risk
- Ensure access to HIV prevention technologies and tools.
- (change social norms).
- Address the social dynamics that influence individual behaviour.
- Affect knowledge, attitudes, practices and behaviours (KAPB)
- Have optimal public health impact
- Must achieve sufficient coverage, intensity, and duration to
  Combination prevention
- Involve the simultaneous use of diverse prevention strategies.

Interventions:

4. Effective HIV Prevention
5. Challenges with Implementing HIV Prevention Interventions that Work

- Legal factors
- Political factors
- Economic factors
- Social and cultural factors
- Socio-economic challenges which deter individuals from seeking essential preventive services
- Stigma and discrimination
- Service fragmentation, and capacity limitations
- Misallocation of resources
- Inadequate financing
- Challenges related to systems which deter individuals from seeking essential preventive services
<table>
<thead>
<tr>
<th>180 sites</th>
<th>81 sites</th>
<th>Total Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 54 sites per province</td>
<td>= 6 sites per province</td>
<td>= 27 sites per province</td>
</tr>
<tr>
<td>Applied to 3</td>
<td>Applied to 3</td>
<td>Applied to 3</td>
</tr>
</tbody>
</table>

- **Alcohol Abuse**: Reduce
- **Interventions to Reduce Drug Use (e.g., Methadone)**
- **Interventions to Reduce Drug Use (e.g., Methadone)**
- **Interventions to Reduce Drug Use (e.g., Methadone)**
- **Interventions to Reduce Drug Use (e.g., Methadone)**
- **Interventions to Reduce Drug Use (e.g., Methadone)**
- **Interventions to Reduce Drug Use (e.g., Methadone)**
- **Interventions to Reduce Drug Use (e.g., Methadone)**
- **Interventions to Reduce Drug Use (e.g., Methadone)**

**Interventions**

---

**Prevention Interventions for the NSP**

6. Proposed targets for Implementing HIV

<table>
<thead>
<tr>
<th>2010</th>
<th>2009</th>
<th>Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Target groups** different adapted to distributed heroin, cocaine, crack, tick, use (e.g., Methadone), sexual transmission for the prevention of sexual transmission for the change behaviour Develop

---

25
Conclusions

Limitations be acknowledged and addressed.
Accelerating HIV prevention requires that these knowledge about what works in HIV prevention.

Important gaps and limitations remain in our

Important gaps and limitations remain in our

important context-specific, evidence-based interventions.

We now require serious commitment and leadership to

However, the HIV epidemic remains obstinate.

We have made serious progress in developing

Conclusions