Evidence for effective HIV prevention

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No perfect solution ...

A highly protective vaccine easy to administer and effective for all HIV transmission modes
Combination Prevention
“The evidence dilemma”

Firm evidence for efficacy is easier to obtain for well defined “technological” approaches
### What works in Prevention?

Results from Randomized Controlled Trials-2011

<table>
<thead>
<tr>
<th>Study</th>
<th>Effect size (95% CI)</th>
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<tr>
<td>Antiretroviral treatment for prevention (HPTN 052 - Africa, Asia, Americas)</td>
<td>96% (73; 99)</td>
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<tr>
<td>PrEP for discordant couples (PartnersPrEP - Uganda, Kenya)</td>
<td>73% (49; 85)</td>
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<tr>
<td>PrEP for heterosexuals (TDF2 - Botswana)</td>
<td>63% (21; 48)</td>
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<tr>
<td>Medical male circumcision (Orange Farm, Rakai, Kisumu)</td>
<td>54% (38; 66)</td>
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<tr>
<td>PrEP for MSMs (iPrEX - Americas, Thailand, South Africa)</td>
<td>44% (15; 63)</td>
</tr>
<tr>
<td>STD treatment (Mwanza - Tanzania)</td>
<td>42% (21; 58)</td>
</tr>
<tr>
<td>Microbicide (CAPRISA 004 – South Africa)</td>
<td>39% (6; 60)</td>
</tr>
<tr>
<td>HIV Vaccine (RV144 - Thailand)</td>
<td>31% (1; 51)</td>
</tr>
</tbody>
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*Abdool Karim SS, Abdool Karim Q, Lancet, July 2011*
Prevention tools cannot work without a behavioral component

- **Adhering** to ART, PreP or condom use
- **Seeking** health care for Male circumcision
- **Accepting** to be tested for HIV
- **Negotiating** condom use
- **Adopting** safer sex
- **Overcome stigma** to seek care
Combination prevention essential but evidence for effectiveness is more difficult to obtain.
Dealing with “complexity”
Learning from National Success stories

Source: Analysis and Advocacy (A²) Thailand Team, Pattaya presentation to ASAP meeting, January 2006.

Source: Hallett, Gregson, Gonese, et al., Epidemics, 2009

Thailand
Estimated number of new infections, 1988-2008

Zimbabwe
HIV incidence (modelled)
Success stories: female sex workers

Cambodia

Prevalence


Incidence

Côte d’Ivoire

100% condom use
HIV prevalence

Impact of harm reduction to prevent HIV among IDU in Ukraine

Median HIV prevalence among recent IDUs (less than 2 years of injection drugs), 8 cities in Ukraine

Programmatic monitoring (SYREX database): Coverage of harm reduction program

From: Tetiana Saliuk et al; Int AIDS Alliance, Ukraine

Presented at the 2nd Global HIV/AIDS Surveillance Meeting Bangkok, 2009
“Evidence informed” Combination Prevention

• Based on Understanding the EPIDEMIC-Prevention for **WHO**?

• Using effective TOOLS and APPROACHES **WHAT** to do?

• Into programs for and by communities in contexts- **HOW** to do it?
ADRESSING the IMPLEMENTATION GAP
Median Coverage prevention programs worldwide
(2010)

Intravenous Drug Users: 32%

Men who have Sex with Men: 55%

Sex Workers: 48%
**PREVENTION TOOLS**

**Sexual transmission**

- **Microbicides for women**
  - Abdool Karim Q, Science 2010

- **Male circumcision**
  - Gray R, Lancet 2007

- **Treatment of STIs**
  - Grosskurth H, Lancet 2000

- **Female Condoms**

- **Male Condoms**

- **HIV Counselling and Testing**
  - Coates T, Lancet 2000

- **Male Behavioural interventions**
  - Fisher J, JAIIDS 2004

- **Oral pre-exposure prophylaxis**
  - Grant R, NEJM 2010 (MSM)
  - Baeten J, 2011 (Couples)
  - Paxton L, 2011 (Heterosexuals)

- **Post Exposure prophylaxis (PEP)**
  - Scheckter M, 2002

- **Treatment for prevention**
  - Donnell D, Lancet 2010
  - Cohen M, NEJM 2011

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TREATMENT as PREVENTION: opportunity for synergies

Proportion of eligible population receiving antiretroviral therapy in Africa at end of 2010

Data source: UNAIDS and WHO, 2011
Universal access to treatment for <350 CD4

KEEP on Treatment!
Confront Epidemic & Context

Combine new with old tools

Customize programs

Communities center

Leadership

HOW to engage?