AIDS in 2010: where are we?

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Health Economics and HIV/AIDS Research Division

Presentations
Berlin 25th September 2009
Outline

• Key dates:
  – 2010 Universal access
  – 5 years left to MDG deadline

• Events of the past 2 years
  – Changes of leadership; political – US, UK; UN and in health governance WHO, UNAIDS.
  – Attack on AIDS exceptionalism, call for mainstreaming
  – Global economic crisis

• The big issues in 2010
  – Nuanced responses
  – Prevention
  – Treatment: when, who, how
Key dates

- 2010 Universal access (to more than treatment)
- 5 years left to MDG deadline
  - Goal 4 reduce child mortality
  - Goal 5 Improve Maternal Health
  - Goal 6 Combat HIV/AIDS, Malaria and other diseases
Events of the past 2 years

- Changes of leadership
  - Political – US Obama replaces Bush but PEPFAR was Bush achievement; UK Brown replace Blair
  - International – Moon at UN; Chan at WHO; Sidibe at UNAIDS
- Attack on AIDS exceptionalism, calls for mainstreaming
- Global economic crisis
It is time to unwind the rhetoric, and reposition the responses to HIV/AIDS as one of several important health challenges. ..... UNAIDS needs to abandon AIDS exceptionalism.
Important publications

The Wisdom of Whores: Bureaucrats, Brothels and the Business of AIDS
Elizabeth Pisani

Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa
Dambisa Moyo

The Treatment Timebomb
Funding and the Economic Crisis

Economic Crisis

- Reduced Household Income
- Cuts in External Aid
- Reduction in Govn’t Revenues
- Increased morbidity and mortality
- Increased # of infections
- Lower demand for HIV services
- Reduced delivery of HIV Service

The Big Issues in 2010

• Nuanced responses
• Prevention
• Treatment
  – when
  – who
  – how (sustainability)
• Things to look out for
Global numbers living with HIV and adult HIV prevalence

Source: UNAIDS 2008
2007 Global HIV Infection
33 million people [30–36 million] living with HIV
2007 HIV Prevalence, African Adults (15–49)
## HIV and AIDS

<table>
<thead>
<tr>
<th>Country</th>
<th>Population</th>
<th>Number living with HIV/AIDS 18.8% prevalence rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swaziland</td>
<td>1,200,000</td>
<td>225,600</td>
</tr>
<tr>
<td>USA</td>
<td>301,140,000</td>
<td>56,614,320</td>
</tr>
<tr>
<td>UK</td>
<td>60,776,000</td>
<td>11,425,888</td>
</tr>
<tr>
<td>EU</td>
<td>492,964,000</td>
<td>92,677,000</td>
</tr>
</tbody>
</table>
Prevention: cholera to swine flu
AIDS: Mopping the Floor while the tap is running
We know what is needed: Prevention

• Prevention efforts must be targeted to most-at-risk-populations.
• Example: in Ghana sex workers prevalence 78% percent; they account for 76% of transmission sources, yet 99.2% of funding is targeted to general population.

‘For every one person that you put in therapy, six new people get infected. So we’re losing that game, the numbers game.’
Dr Anthony Fauci
The big issues in 2010

• Treatment
  – when
  – who
  – how (sustainability)

• Things to look out for
Number of people receiving ART in low- and middle-income countries, by region, 2002–2008

Souteyrand Y. Late Breaker
Evolution of Adult/Adolescent Antiretroviral Therapy Guidelines

1987-1995  Treat patients with AIDS-defining illnesses
    -- Various CD4 recommendations

1996-2001  "Hit early, hit hard"
    -- offer ART at CD4 ≤500

2002-2007  Weighing pros and cons
    -- Treat at CD4 ≤200; discuss/offer ART at CD4 200-350

2008  Moving toward earlier ART
    -- Treat at CD4 ≤350; consider ART at CD4 >350 depending on comorbidities/patient scenarios
HAART as Prevention?

- Granich Lancet 27/11/09 - Models taken up mainly in the west
- “By reducing morbidity, mortality and transmission the concept of ART as prevention has to be redefined as HAART is prevention, of avoidable disease, deaths and new infections” Cahn, IAS Cape Town 2009
Prospective cohort study

N=1020 adults in a high endemic area

Followed for 4 years

Kasirye et al
TUPDB104
Vertical Transmission is Unacceptable: HIV Transmission during Breastfeeding

- Significant reductions in transmission during breastfeeding with either
  - HAART for the mother
  - or NVP prophylaxis for the baby
- Longer HAART or infant prophylaxis is better
- Absolute reduction in transmission rates greater with lower CD4 counts
- All data being compiled for review of WHO ARV and infant feeding guidelines later in 2009
<table>
<thead>
<tr>
<th>Country</th>
<th>Health Expenditure Per capita (USD)</th>
<th>Cost of ARV treatment per person/year (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>171</td>
<td>1500*</td>
</tr>
<tr>
<td>Swaziland</td>
<td>66</td>
<td>168</td>
</tr>
<tr>
<td>Mozambique</td>
<td>11</td>
<td>960**</td>
</tr>
<tr>
<td>Rwanda</td>
<td>11</td>
<td>400</td>
</tr>
</tbody>
</table>

Source: Summary country profiles for HIV/AIDS treatment scale up, WHO 2005.


What we know is needed: Int’l and domestic capabilities

- Domestic sources supply roughly one third of AIDS financing, the rest has to come from international sources.

Source: UNAIDS
What we know vs. what we do

Funding gap between resource needs and resource availability 2005-2007

US$ Billions

- Funding gap = $2.8 Bn
- Funding gap = $6 Bn
- Funding gap = $8.1 Bn

Source: UNAIDS
What we know is needed: 2010 commitments

- $25.1 billion for low and middle income countries
- $11.6 billion for prevention
- $7 billion for treatment

Source: UNAIDS
Look out for …

- HAART as prevention (WHO)
- AIDS Security and Conflict Initiative report
- Emphasis on choices & making money work
- Issues of sustainability in poor and rich countries
- The IAS 2010 conference and IDUs
- The ‘no sex/safe sex’ campaign
- G8 elections
- An interesting year ahead
HEARD: who we are, what we need

Who we are
• Applied research unit located in Durban
• Working regionally and nationally
• PhD programme and capacity development

What we need
• People and support
• Money
  – Project (Boehringer Ingelheim, Merck)
  – Core (Merck in the past)
• Friends to support us and use our research

www.heard.org.za
## Cost-effectiveness Data for HIV prevention

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Low-level epidemic</th>
<th>Concentrated epidemic</th>
<th>Generalized low-level</th>
<th>Generalized high-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood safety</td>
<td>1 study</td>
<td>1 study</td>
<td>4 studies</td>
<td>2 studies</td>
</tr>
<tr>
<td>ART to reduce MTCT</td>
<td></td>
<td>2 studies</td>
<td>4 studies</td>
<td>3 studies</td>
</tr>
<tr>
<td>Sterile injection</td>
<td>1 study</td>
<td>2 studies</td>
<td>1 study</td>
<td>1 study</td>
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<tr>
<td>VCT</td>
<td></td>
<td>1 study</td>
<td>2 studies</td>
<td>1 study</td>
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<tr>
<td>Peer-based programs</td>
<td>1 study</td>
<td>4 studies</td>
<td>4 studies</td>
<td></td>
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<tr>
<td>STI treatment</td>
<td></td>
<td>4 studies</td>
<td>1 study</td>
<td>2 studies</td>
</tr>
<tr>
<td>ART for prevention and postexposure prophylaxis</td>
<td>1 study</td>
<td>2 studies</td>
<td>1 study</td>
<td></td>
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<tr>
<td>Condom promotion, distribution and IEC</td>
<td></td>
<td>1 study</td>
<td>2 studies</td>
<td>1 study</td>
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<td>School-based education</td>
<td></td>
<td>1 study</td>
<td>3 studies</td>
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<tr>
<td>Harm reduction for IDU</td>
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<td>1 study</td>
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<tr>
<td>Condom social marketing</td>
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<td>1 study</td>
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<tr>
<td>Surveillance</td>
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<td>IEC</td>
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<tr>
<td>Abstinence education</td>
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<tr>
<td>MTCT, feeding substitution</td>
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<tr>
<td>Drug substitution for IDU</td>
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<tr>
<td>Universal precautions</td>
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<tr>
<td>Behavior change for HIV+</td>
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</tbody>
</table>

* No cost-effectiveness studies found

The Natural History of HIV Infection

Clinical Latency?