Expanding ART South Africa
-Challenges and a SWOT analysis

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<table>
<thead>
<tr>
<th>Uninfected People</th>
<th>Exposed People</th>
<th>People Living with HIV</th>
<th>People Living with AIDS</th>
<th>Terminally Ill and beyond</th>
</tr>
</thead>
</table>

#### Prevention
- Prevention of Mother to Child Transmission
- Post Exposure Prophylaxis

#### Opportunities
- Opportunistic Infections and Related Illnesses: Diagnosis, Treatments, Preventive Therapies,
- Psycho-Social, & Spiritual Support: Individual & Family . . . Care providers . . . Bereavement . . . Orphans

#### VCT

#### Prevention
- STI Services, Behavior Change Communication, Education, universal precautions . . .

#### Palliative Care

#### Home-based Care

#### Antiretroviral Therapy

#### Home-based Care
Estimated HIV prevalence and current number of people initiated on ART for South Africa, Brazil, India, Botswana, and USA.
South Africa’s HIV epidemic remains the largest in the world, with an estimated 5.6 million [5 400 000–5 800 000] people living with HIV in 2009 (9). This figure equals the total number of people living with HIV in all of Asia. The annual HIV incidence in South Africa was still a high 1.5% [1.3–1.8%] in 2009, down from 2.4% [2.1–2.6%] in 2001, although it varied considerably – from 0.5% in Western Cape province to 2.3% in KwaZulu-Natal, the most severely affected province in the country (9). These trends have occurred alongside apparent shifts to safer sex among young people (mainly increased condom use) (10).
Fig. 1.1 Number of people with access to antiretroviral therapy and the number of people dying from AIDS-related causes, low- and middle-income countries, 2000–2010

- People receiving antiretroviral therapy
- People dying from AIDS-related causes

UNAIDS Global AIDS Report 2011
Note: PMTCT, Screening transfusions, Harm reduction, Universal precautions, etc have not been included – this is focused on reducing sexual transmission

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

Behavioural Intervention
- Abstinence
- Be Faithful

Vaccines
- Rerks-Ngarm S, NEJM 2009

Oral pre-exposure prophylaxis (PEP)
- Scheckter M, 2002

Post Exposure prophylaxis (PEP)

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

Behavioural positive prevention
- Fisher J, JAIDS 2004

Microbicides for women
- Abdool Karim Q, Science 2010

Grosskurth H, Lancet 2000

Baeten J, 2011 (Couples)

Paxton L, 2011 (Heterosexuals)

Grant R, NEJM 2010 (MSM)

Baeten J, 2011 (Couples)

Paxton L, 2011 (Heterosexuals)

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

Slide: Courtesy - Salim Abdool Karim CAPRISA
Revised SA Guidelines

- Phase out D4T and replace with tenofovir
- WHO stage 4
- TB – CD4 <350; MDR TB – all patients
- Pregnancy >350
- Infants
The imperatives to expand ART access

- Treatment is prevention
- High cost of treating complications
- Protect the workforce
- Reduce orphans
- Can we afford not to!
UN General Assembly Special Session – Ban Ki-moon (2011)

• Bold decisions must be taken to dramatically reshape the AIDS response to reach:
  – Zero new infections
  – Zero discrimination
  – Zero deaths
Targets set by UNGASS on HIV/AIDS - 2011

- **Target 4**
  - Have 15 million people living with HIV on ART by 2015
- **Target 5**
  - Reduce TB deaths by 50% by 2015
- **Target 6**
  - Annual global expenditure between US$22-24 billion in low and middle income countries
## Task shifting (sharing)

**Table 1** Types of task shifting commonly seen in Africa\(^{13}\).

<table>
<thead>
<tr>
<th>Type of task shifting</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I</td>
<td>The extension of the scope of practice of <em>non-physician clinicians</em> in order to enable them to assume some tasks previously undertaken by more senior cadres, e.g. doctors</td>
<td>Clinical officers deciding eligibility and prescribing ART (Malawi)</td>
</tr>
<tr>
<td>Type II</td>
<td>The extension of the scope of practice of <em>nurses</em> and <em>midwives</em> in order to enable them to assume some tasks previously undertaken by senior cadres</td>
<td>Nurses treating opportunistic infections and prescribing ART (Botswana, Ethiopia, Uganda, Malawi)</td>
</tr>
<tr>
<td>Type III</td>
<td>The extension of the scope of practice of <em>community health workers</em> or <em>lay providers</em> in order to enable them to assume some tasks previously undertaken by more senior cadres, e.g. nurses and midwives, non-physician clinicians or doctors</td>
<td>Community health workers providing ART counseling and HIV testing (Uganda, Rwanda, Malawi)</td>
</tr>
<tr>
<td>Type IV</td>
<td><em>People living with HIV/AIDS</em>, trained in self-management to assume some tasks related to their own care that would previously have been undertaken by health workers</td>
<td>Provision of basic HIV support, treatment adherence and psychosocial support (Botswana, Kenya, Nigeria, South Africa)</td>
</tr>
<tr>
<td>Type V</td>
<td>The extension of the scope of practice of other cadres that do not traditionally have a clinical function, e.g. <em>pharmacists, laboratory technicians, administrators, record clerks</em></td>
<td>Record clerks filling in basic patient information and measuring body weight at HIV clinics (Malawi)</td>
</tr>
</tbody>
</table>

Art: antiretroviral treatment.
Task-shifting

Figure 1  Quarterly initiation of antiretroviral treatment (ART) at clinics in Lusikisiki, South Africa, October 2004—June 2006.

Figure 2  Impact of task shifting from nurses to lay counsellors on the coverage of HIV testing services, Thyolo District, Malawi, 2003–2006.
ART – a treatment whose time has come?

• Accredited ART sites in SA public sector
• Doctors should be automatically competent in ART upon graduation
• Avoid making HIV an elitist disease
• Promotes task-shifting
Healthcare workforce

- Estimated shortage of 140,000 health care workers by 2020
- Lack of specific expertise in HIV care
- Failure to retain workforce in public sector
- Failure to attract and retain workforce in rural areas
- Lack of trainers
UKZN ENTREE MISSION STATEMENT

- The UKZN ENTREE program aims to increase the quantity, quality and retention of graduates with specific skills addressing the health needs of the South African population.

- ENTREE is based on the idea of Transformative Medical Education which is premised on the understanding that a nation’s HCWs, their education, the health system, and the health of the population are interrelated.

- ENTREE supports the MEPI objectives of:
  - Increasing the numbers of HCWs trained
  - Retaining HCWs over time and in areas where they are most needed
  - Supporting regionally relevant research.
MEPI MISSION STATEMENT

• ENTRÉE promotes strong links
  • Departments within the University
  • Research organisations within UKZN
  • South African Departments of Health and Education

• To promote
  • collaborative planning
  • retention of graduates
  • innovations in education and research.

• The success of ENTRÉE will be
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• The success of ENTRÉE will be judged on outcomes achieved with an emphasis on its impact on population health
ENTREE STRATEGY

Enhance quality of clinical and research capacity

Undergraduate students:
- Medical
- Pharmacy
- Nursing

Enrichment of curriculum in clinical HIV and public health

Dual qualification

Support of interns and CSO

Faculty

Providing enabling research environment

Faculty enrichment

Wellness program
Drug stock-outs

• A threat to expanded ART rollout

• Risks
  – Resistance
  – ARV failure
  – Death

• Will require an efficient and more effective drug supply system

• Co-operation with
  – International agencies, including bet countries
  – Pharma
<table>
<thead>
<tr>
<th>Country</th>
<th>Agency contacted</th>
<th>Risk-of-stock-out episodes*</th>
<th>Stock-out episodes*</th>
<th>Laboratory supply stock-out episodes*</th>
<th>Drugs affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>El Salvador</td>
<td>ISSS and NAP (Ministry of Health)</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>Didanosine (100 mg), ritonavir (100 mg)</td>
</tr>
<tr>
<td>Honduras</td>
<td>NAP (Ministry of Health)</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>Didanosine (100 mg), didanosine (200 mg)</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>NAP (Ministry of Health)</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>Efavirenz (200 mg), indinavir sulfate (400 mg), tenofovir disoproxil fumarate (300 mg), nevirapine (200 mg), abacavir (300 mg)</td>
</tr>
<tr>
<td>Panama</td>
<td>Pharmaceutical services (Ministry of Health)</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>Zidovudine intravenous (10 mg/mL)</td>
</tr>
<tr>
<td>Paraguay</td>
<td>PRONASIDA</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>Stavudine (30 mg)</td>
</tr>
<tr>
<td>Bolivia</td>
<td>NAP (Ministry of Health)</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>Efavirenz (200 mg), lamivudine (150 mg)+zidovudine (300 mg)+nevirapine (200 mg)</td>
</tr>
<tr>
<td>Chile</td>
<td>NAP (Ministry of Health)</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>Efavirenz (600 mg), abacavir (60 mg)+lamivudine (30 mg), nevirapine (200 mg), nevirapine (50 mg/5 mL), raltegravir (400 mg)</td>
</tr>
</tbody>
</table>

Sued at al2011. Lancet Inf Dis
Provinces face drug stock outs due to overspending

09.04.2010 Anso Thom and Lungi Langa

Massive provincial overspends have seen health facilities across South Africa running out of lifesaving drugs for anything from hypertension pills and paediatric vaccinations to tuberculosis and HIV treatment.

New budgets were expected to kick in on April 1, but the situation is dire at many hospitals and clinics, especially those in rural areas. Health-e has received stock-out reports from doctors, nurses and pharmacists in all provinces except the Northern Cape and NorthWest (although this does not mean there are no shortages).

There was only one report of a looming stock out in the Western Cape when details surfaced of a pending shortage of dialysis tubes and filters at Groote Schuur Hospital’s kidney dialysis unit.

Inadequate pre-antiretroviral care, stock-out of antiretroviral drugs and stigma: Policy challenges/bottlenecks to the new WHO recommendations for earlier initiation of antiretroviral therapy (CD < 350 cells/μL) in eastern Uganda
Common causes for non-adherence

- Side-effects
- Lack of food
- Long distances to clinics
- Long wait in clinics
- Forgetting
- Stigma
Improving adherence

• Continuous counselling
• Task-shifting
• Community support
• Technology
• Social assistance
Economic costs

• Increased cost of expanding ART access
  – Cost of drugs, esp 2\textsuperscript{nd} and 3\textsuperscript{rd} line Rx
  – Increased lab facilities
  – Increased clinic facilities
Patients on ART

- Massive burden of subjects on ART
- Re-tool health care system to gear up to deal with drug side effects
- Increased burden of non-communicable diseases
“If you don’t know where you are going you will be lost when you get there.”