Educational Challenges in Building the Health Infrastructure to Combat HIV/AIDS

NELSON R. MANDELA SCHOOL OF MEDICINE

Partnerships towards enhanced Health in Africa
“We must meet the challenge of expanding access to HIV treatment. This requires overcoming the formidable barrier of creating sufficient operational capacity..... We have adopted a target of 3 million people on antiretroviral treatment by 2005 – a massive challenge, but one we cannot afford to miss.”

Dr Peter Piot, UNAIDS Executive Director
UNAIDS 3 X 5 Initiative
Global Health Spending (2000)

- Global GDP
  - US$ 31 Trillion

- Global Health Spending
  - US$ 2.6 Trillion (8 percent of Global GDP)

- Spending In Developing Countries
  - US$ 280 Billion (11 percent of total spending)

International Health Summit, Miami, 2001
Distribution of Health Spending
($2.6 trillion)

OECD
89%

Other
11%

0.4% Africa
Quadruple burden ...

- **Threats to Health**
  - Bio-terrorism & Terrorism
  - Natural & Non-natural disasters

- **Residual of Infectious Diseases**
  - Cholera, TB

- **Emerging Epidemics**
  - HIV/AIDS
  - Drug Resistance (TB, Malaria, etc.)
  - New Infections (SARS, avian ‘flu)

- **Epidemiological Transition**
  - Chronic Diseases and Injuries
  - Occupational & Environmental ill-health
  - Mental health
  - Food, Tobacco & Lifestyle related
Health Sector in ‘Pepfar’ countries

- Some significance in economy
- Dependent on donor aid
- Human resources
- Pharmaceuticals
- Technology
- Infrastructure
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The Health System Realities…

- Low confidence
- Wasted public health expenditures
- Shortages of drugs, equipment maintenance, logistical support & weak supervision
- Accountability to clients
- Health professionals in private sector
- Crowding out of other diseases / injuries
Inefficiencies & Waste in Use of Drugs

Better Health in Africa, World Bank, 1994
Infrastructure

- Poor planning
- Fragmentation
- Insufficient maintenance
- Inappropriate & insufficient expansion
- Technology transfer
- Technology choice
- Operational research
Human Resources

- Enhance motivation
- Professionally trained – need re-tooling
- Undersupply & under use
- Improve management & supervision
- Co-operation with Traditional Healers
- Involvement of other sectors
- Effect of the pandemic (affected & infected)
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<th>Country</th>
<th>Physicians / 100,000 people</th>
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Mars, 2004
HIV in Sub-Saharan Africa

- 2 epidemics:
  - Clade B in homosexual men
  - Clade C in heterosexual population
- Clade C epidemic started in late 1980’s
- Explosive epidemic
HIV/AIDS Epidemic Patterns: South Africa compared to USA

Similarities

- Initial epidemic in homosexual men and haemophiliacs
- First AIDS cases in 1980 - 1982
- Subsequently, heterosexual spread and perinatal transmission
- All socio-economic groups affected, but poor marginalised communities most affected
HIV/AIDS Epidemic Patterns: South Africa Compared to USA

Differences

• Explosive epidemic
• Young, especially women, most affected
• Perinatal transmission rate higher
• Intravenous drug use contribution minimal
• Clinical spectrum of disease
• Shorter survival time
  - HIV infection to AIDS
  - Onset of AIDS to death
Current Interventions...
Enhanced care

1. Voluntary HIV Testing and Counseling
2. Basic Medical Services
3. Laboratory and Diagnostic Services
4. HIV/AIDS Clinical Management
5. Antiretroviral Therapy & New Therapies
6. Community-Based Care
7. Social Services
8. Care Education and Information Dissemination
9. Support and Care of the Dying
10. Care for the carer
A Renewed Beginning: Care and Treatment

- Prophylaxis: Opportunistic Infections
- Treatment: Opportunistic Infections
- Affordable anti-retroviral therapy
- Compassionate Care
  - Home
  - Community
  - Orphans
A Renewed Beginning: Prevention

- Behaviour Change
- Counselling and Voluntary Testing
- STI Treatment and Control
- Mother-to-Child Transmission (pMTCT & MTCT Plus)
- Future
  - Vaginal Microbicides
  - Circumcision
  - Vaccines
A Renewed Beginning…

• Common Purpose - Social Movement
• Strong Political Commitment
• Partnerships
  » Inter Sectoral
  » Multi-Level
  » Globally
• Intervene for Greatest Impact
• Enhance Capacity
• Large Scale Implementation
• Openness and Non-Discrimination
• Keep uninfected…uninfected
Infrastructure

- Accredited service points
- Sufficient space
- Built environment
- Destigmatisation
- Accessibility
- Affordability
- Back office operations
Human Resources

• Availability
• Skills mix
• Education & training
• Mid-level worker
• Care for the carer
• Social mobilization & communication
• Foreign qualified professionals
Education & Training (Clinical Management of HIV/AIDS)

- Diagnosis of HIV/AIDS
- Epidemiology, HIV/AIDS programming, control
- Clinical aspects of adult & pediatric HIV/AIDS
- ARV therapy in adults & children
- HIV in pregnancy
- Palliative care
- Special issues (Post-Exposure Prophylaxis, Ethics, STIs, TB, Nutrition)
Education & Training
(Clinical Management of HIV/AIDS)

- Lectures
- Grand rounds
- Laboratory rounds
- Teleconferencing
- Journal clubs
- Home Study
- WEB-based support
KwaZulu-Natal

Hospitals | 65
Web | 65
VideoConf | 26
LANs | 5
IT Resources | 23
Education

HIV

Clinical Management
160 health professionals
3 sites – moving to 5
Face to face - CD

Counsellor training

Sentra (Harvard University)
Research Priorities

• Health systems / policy research
• HIV/TB co-infection
• Drug resistance
• Optimal efficacy and toxicity monitoring
Research Priorities

- Behavioral / social issues that affect success of treatment efforts
- Optimal ARV regimens and treatment strategies
- Nutrition in health maintenance in HIV infected persons
- Traditional, Alternate & Complementary interventions
Resource Needs

• Curriculum development
• National treatment guidelines
• Academic support & mentoring
• ‘Mirror site’ – materials
• Clearing house / Resource centre
• On site training & support
• Best practice models
• Networking & Partnerships
Entry Point for Postgraduate HIV/AIDS Training

CORE

Elective Clinical (Adults & Children)

Elective Social Science

Elective PHC

1-2 years + 1 – 2 years + 1-2 years

Faculty Certificate + Diploma + Masters / PhD

Occasional Students

NELSON R. MANDELA SCHOOL OF MEDICINE

UNIVERSITY OF KWAZULU-NATAL
Foreign Qualified Professionals / Volunteers

- Management
  - (logistics, operations, monitoring & evaluation)
- Laboratory
- Pharmaceutical (adverse events)
- Behavioral
- Clinical
- Academic
- Research
- Information Technology
Organizational Issues (Foreign Qualified Professionals / Volunteers)

• Registration (professional board)
• Culture / language
• Health system intervention
  – Clinical, academic, laboratory etc
• Period of involvement (short stay to long-term)
• Acceptance by host facility (NGO, government, university, health facility)
Organizational Issues (Foreign Qualified Professionals / Volunteers)

• Country bureaucracy
• Orientation
• Personal & social support
• Insurance, accommodation, transport and health
• Feedback / review
Models for delivery

• Uganda
  – Aggressive preventive program
  – ‘ABC’

• Haiti
  – Public-private partnership
  – ‘HIV Equity Initiative’
  – CHWs
  – Taking care of each other
  – HIV-EMR

• Brazil
  – Despite social inequalities
  – Access to HIV care (including ARVs)
  – Political will
"People talk about Africa as if there is something homogenous.... Every country is very different and there are different regions in every country. So it is a matter of seeing on the ground what the circumstances are, building a relationship with the leadership in the host country governments, seeing and spending time with the U.S. government people from various departments and agencies. They can show me and we can talk about the issues and opportunities that they face and also seeing the specific program activities that we are funding.... All of those are part of the objective."

Randall Tobias on his 4th trip to Africa
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