Merck Commitment to Addressing HIV / AIDS in the Developing World

The Botswana/Merck/Gates Partnership
The African Comprehensive HIV/AIDS Partnerships
ACHAP

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Merck as a global citizen

- Merck is a research-driven pharmaceutical products company
  - We discover, develop, manufacture and market innovative products to improve human and animal health, directly and through joint ventures
  - In 2004, sales were US $ 23 billion, Merck employed 62,600 people worldwide, and spent over US $ 4 billion on R&D

- Merck’s core commitments as a global citizen are to:
  - Discover and develop innovative medicines and vaccines
  - Facilitate access to medicines
  - Promote and participate in public/private partnerships, particularly in the developing world, to help build infrastructure and achieve targeted goals in prevention and treatment of major diseases
Global health issues are high profile and emotional.

“This is a story about AIDS in Africa. Look at the pictures. Read the words. And then try not to care.”

Source: Time, February 12, 2001
HIV facts: Adults & children estimated to be living with HIV/AIDS, end 2004

39.4 million HIV-infected people worldwide (35.9 – 44.3)

5.8 million people should be on ARV therapy in the developing world -- ~ 17% are being reached
...and Merck values compel us to action

“We try never to forget that medicines are for the people. If we remember that, the profits will follow…”

“We cannot rest till the way has been found, with our help, to bring our finest achievement to everyone.”

-- George W. Merck, 1950
Merck’s response to the HIV/AIDS pandemic

- **Primary role**: develop innovative HIV/AIDS drugs and vaccines
- **Necessary role**: facilitate access to those in need
- **Inspirational role**: promote and participate in partnerships to improve HIV care and together bring hope to those living and fighting HIV/AIDS worldwide
Merck HIV/AIDS Research
Leading-edge research program for more than 16 years

NRTIs, NNRTIs work here

Integrase Inhibitor

HIV Vaccine

HIV

CD4+ T lymphocyte

NRTIs, NNRTIs work here

PIs work here

HIV

STOCRIN™
(efavirenz)

CRIXIVAN™
(indinavir sulfate)
Improving Access to ARVs
UN/Industry Accelerating Access Initiative

....an unprecedented cooperative endeavor among partners....

...seeking to identify practical and specific ways of working together to accelerate access to HIV related care & treatment

More than 427,000 patients in Developing Countries on ARVs from AAI-participating companies*

and

Merck’s Pricing Policy for ARVs

The company significantly reduced prices for CRIXIVAN and STOCRIN to countries in the developing world....

Offered to all purchasers, public and private

* AAI data as end of March, 2005
Pricing Policy for Crixivan™ and Stocrin™: simple, transparent

- Pricing policy linked to widely accepted measures of economic status & HIV prevalence
- Offered to all purchasers, public and private:
- Preferential pricing available to more than 110 countries
- Nearly 307,000 patients in 76 developing countries on treatment using CRIXIVAN and/or STOCRIN
The Power of Partnership - Understanding HIV/AIDS

Enhancing Care Initiative – 1998
• $ 5M grant from The Merck Company Foundation
  – Partnership with the Harvard AIDS Institute
  – Purpose: identify gaps in HIV prevention, care, treatment and support
  – Managed and led by teams of in-country experts
  – Brazil, South Africa, Senegal, Thailand

Romania Partnership - 1997
• $ 1.5M grant from The Merck Company Foundation
  – Purpose: help develop a network of regional HIV/AIDS treatment centers
  – Nearly 5,300 patients are receiving ARV therapy
  – Romania is the only country in Eastern Europe to offer universal access to ARV therapy

  – Romania Declares Victory in Fight Against AIDS
Access is not so much about the drugs, or even the money, but rather the local capacity and political will

Merck Mectizan® Donation Program

• More than 18 years of commitment fighting river blindness

• Reaching more than 40 million people annually in over 34 countries

• Commemoration of the 250 millionth treatment in September 2002

• Donation to date equals more than 1 billion tablets (including some 280 million for lymphatic filariasis, in countries where onchocerciasis and LF are co-endemic)

• Working together, the program partners expect to eliminate river blindness as a public health problem

• Key lessons:
  – Partnership
  – Community engagement / ownership
  – Leadership at all levels
The Botswana/Merck/Gates Partnership
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ACHAP

- Aims to
  - Build institutional capacity for Botswana’s response to the HIV/AIDS epidemic
  - Strengthen the health care system
  - Create and expand community initiatives for HIV/AIDS education and prevention, and for the care and support of people living with HIV/AIDS

- Merck and Gates Foundation each committing $50 million to help Botswana implement a comprehensive national HIV/AIDS strategy

- Merck is donating its HIV medicines CRIXIVAN & STOCRIN
Why Botswana?

- Manageable population size: ~ 1.7 million
- Stable, transparent democratic government
- Potential for sustainability:
  - political will & commitment from the top
  - thriving economy - diamonds, beef, tourism
- Relatively developed healthcare infrastructure
- Dramatic social economic crisis unfolding

* U.N. Wire, *Swazi HIV Rate Surpasses Botswana's As World's Highest*, March 22, 2004
### Status of the HIV epidemic in Botswana

- **Prevalence:** Estimated 38.5% of the 15-49 age group HIV+.

#### Age Distribution of Death

<table>
<thead>
<tr>
<th>Age Group</th>
<th>1991</th>
<th>2001</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>2429</td>
<td>3014</td>
<td>24.1</td>
</tr>
<tr>
<td>5-9</td>
<td>495</td>
<td>528</td>
<td>6.7</td>
</tr>
<tr>
<td>10-14</td>
<td>293</td>
<td>272</td>
<td>-7.3</td>
</tr>
<tr>
<td>15-19</td>
<td>409</td>
<td>421</td>
<td>3.0</td>
</tr>
<tr>
<td>20-24</td>
<td>493</td>
<td>1189</td>
<td>141.2</td>
</tr>
<tr>
<td>25-29</td>
<td>621</td>
<td>2281</td>
<td>267.3</td>
</tr>
<tr>
<td>30-34</td>
<td>580</td>
<td>2592</td>
<td>346.9</td>
</tr>
<tr>
<td>35-39</td>
<td>587</td>
<td>2224</td>
<td>278.9</td>
</tr>
<tr>
<td>40-44</td>
<td>530</td>
<td>1740</td>
<td>228.3</td>
</tr>
<tr>
<td>45-49</td>
<td>525</td>
<td>1455</td>
<td>177.2</td>
</tr>
<tr>
<td>50-54</td>
<td>524</td>
<td>936</td>
<td>78.6</td>
</tr>
<tr>
<td>55-59</td>
<td>532</td>
<td>730</td>
<td>37.2</td>
</tr>
<tr>
<td>60-64</td>
<td>637</td>
<td>696</td>
<td>9.3</td>
</tr>
<tr>
<td>65+</td>
<td>4254</td>
<td>3793</td>
<td>-10.8</td>
</tr>
<tr>
<td>NS</td>
<td>2312</td>
<td>844</td>
<td>-63.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15221</td>
<td>24717</td>
<td>62.4</td>
</tr>
</tbody>
</table>

#### Life Expectancy Trends

- **Source:** Sentinel Surveillance Report 2001; 2001 Population and Housing Census – Central Statistics Office Botswana
- **Source:** World Population Prospects: The 2002 Revision, database online, www.unpopulation.org
**ACHAP Vision & Mission**

**Vision:** To be a model public-private development partnership in the global fight against HIV/AIDS

**Mission:** To support Botswana in the development and implementation of a national comprehensive HIV/AIDS strategy that will prevent new HIV infections and reduce the morbidity and mortality of HIV/AIDS.

We do this in collaboration with government, civil society, development partners and the private sector by facilitating the development and implementation of strategic initiatives and providing human, technical and financial resources.
Strengthened Management of the National Response

• The Development of the National Strategic Framework 2003-2009

• Provision of Human Resources and to Government

• Training for Government of Botswana Staff

• Capacity Building in the Private Sector (BBCA Secretariat)

• Support for Monitoring and Evaluation Systems (BHRIMS)
Prevention of HIV Infection

• Teacher Capacity Building/Talkback Program
• Free Condom Distribution
• Condom Social Marketing
• Blood Safety and Youth Prevention
• HIV/AIDS Resource Centers at District Hospitals
• Grants to Community-Based Projects
Provision of Care and Support

- Support for the Masa ARV Therapy Program
  
  - Enhancement of National HIV/AIDS Laboratory Capacity
  - Clinical Preceptorship Program
  - Patient Education (IEC) Program
  - Healthcare Worker Training Program (KITSO)
  - Enhancement of Infrastructure (IDCC Construction)
  - Development of IT-based patient management system
Psycho-Social and Economic Impact Mitigation

• Dula Sentle Orphan Daycare Project, Otse

• House of Hope Orphan Daycare Project, Palapye

• Coping Center for People Living with AIDS (COCEPWA)

• Botswana Network of People Living with AIDS (BONEPWA)

• Botswana Christian AIDS Intervention Program (BOCAIP)
HIV/AIDS Training & Education for Health Care Workers

• **Comprehensive HIV/AIDS training**
  - ‘KITSO’ developed by the Harvard AIDS institute
  - over 1,700 physicians, nurses, pharmacists, counselors) trained

• **Clinical Preceptorships**
  - International clinical experts assisting nearly 2,000 local physicians, nurses, others in the introduction of antiretroviral therapy
Teacher Capacity Building Program

- Interactive, distance education on HIV/AIDS

- To build the skills and confidence of teachers to disseminate strong HIV/AIDS messages to students

- Partners: UNDP, Ministry of Education, Botswana TV

- Reaching 68% of all educational institutions (>500 schools) and more than 4,000 teachers
Behavior Change Strategy Development

Note: 81% of Not Sexually Active are defined as non-drinkers; 57% of Casual Partner(s) are drinkers (males 60%, females 52%)
Source: University of Botswana Quantitative Survey, March, 2003; Monitor Analysis
Support Services for People living with HIV/AIDS

- **Health resource centres (6)**
  - HIV/AIDS education to patients, their families, surrounding communities
  - Pre/post test counseling for patients and their families
  - Patient referral

- **Coping centers (6)**
  - Support networks for infected and affected
  - Membership > 1,200 people

- **Counseling centers (11)**
  - Reaching > 100,000 people through community mobilization & outreach activities
  - Pre/post test counseling services
  - Support for orphans (House of Hope & Dula Sentle)
Behavioral change communications

Stigma

Adherence

Disease awareness
Masa Program Results  –  Treatment Rates

Estimated HIV Prevalence and Need for Antiretroviral Therapy in Selected Low-and Middle-Income Countries *

<table>
<thead>
<tr>
<th>Country</th>
<th>No. Needing Therapy, 2004</th>
<th>No. of Adults Receiving Therapy, December 2004</th>
<th>Antiretroviral Therapy Coverage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>75,000</td>
<td>36,000-39,000</td>
<td>50</td>
</tr>
<tr>
<td>Cameroon</td>
<td>95,000</td>
<td>12,000-15,000</td>
<td>14</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>211,000</td>
<td>10,000-13,000</td>
<td>5</td>
</tr>
<tr>
<td>Kenya</td>
<td>220,000</td>
<td>24,000-33,000</td>
<td>13</td>
</tr>
<tr>
<td>Malawi</td>
<td>140,000</td>
<td>10,000-12,000</td>
<td>8</td>
</tr>
<tr>
<td>Mozambique</td>
<td>199,000</td>
<td>6,500-8,000</td>
<td>4</td>
</tr>
<tr>
<td>Nigeria</td>
<td>558,000</td>
<td>12,000-15,000</td>
<td>2</td>
</tr>
<tr>
<td>South Africa</td>
<td>837,000</td>
<td>37,000-62,000</td>
<td>7</td>
</tr>
<tr>
<td>Sudan</td>
<td>50,000</td>
<td>&lt; 500</td>
<td>--</td>
</tr>
<tr>
<td>Tanzania</td>
<td>260,000</td>
<td>1,650</td>
<td>0.6</td>
</tr>
<tr>
<td>Uganda</td>
<td>114,000</td>
<td>40,000-50,000</td>
<td>40</td>
</tr>
<tr>
<td>Zambia</td>
<td>149,000</td>
<td>18,000-22,000</td>
<td>13</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>295,000</td>
<td>7,500-9,000</td>
<td>3</td>
</tr>
</tbody>
</table>

*Data from the World Health Organization

Sources: Botswana National ARV Team Statistics, ACHAP M&E Unit and Botswana Harvard Partnership Abstract Data (Preliminary data based on analyzing 60% of the sample population); WHO, “3 By 5” Progress Report, December 2004 (Tanzania data from July 2004 report)
The Botswana/Merck/Gates Partnership

Accomplishments

- Supported the construction of 32 HIV/AIDS clinics
- Established 6 HIV/AIDS health resource centers
- Supported 17 counseling & coping centers
- Funded 100 community-based projects, including orphan-care and day-care centers
- Trained more than 2,300 healthcare workers
- Supported building laboratory capacity > 20,000 patients/year (Botswana/Harvard Partnership)
- Built teacher-capacity in > 500 schools (68% of all educational institutions), involving more than 4,000 teachers
ACHAP Strategy Priorities 2005-2009

• ACHAP developed a more focused strategy to achieve program synergy and integrate treatment and prevention more closely. Four strategic priorities are:
  1. Strengthening of current ARV program
  2. Support for the expansion of HIV counseling and routine testing
  3. Support for prevention including strengthening of post test services
  4. Enabling environment: stigma, community mobilization and policy

• The strategy comes after an in-depth strategic review which drew upon top HIV/AIDS experts from Botswana and around the world as well as the Government of Botswana, Development Partners and other key stakeholders

• The strategy is aligned with the National Strategic Framework and other development planning priorities established by the Government of Botswana and international development partners

• Welcomed and endorsed by President Mogae, NACA Coordinator and Ministries

• Seven Districts have been selected for Partnership with ACHAP
• ACHAP have worked with these Districts to develop costed HIV/AIDS Action Plans. Implementation started this month.
Continued Support for ARV Treatment

- Additional physical space through the construction of five new ARV clinics
- Equipping of ten District hospitals with blood diagnostic equipment for CD4 and Viral Load Testing
- Continued support for healthcare worker training through the KITSO program and the clinic preceptorship program
Expansion of HIV Counseling and Testing

- Support for both national and district level IEC efforts to promote HIV counseling and testing
- Procurement of over one million rapid test kits
- Strengthening of testing capacity by expanding physical and human resources
Prevention and strengthening of post-test services

- Support for the scaling up of GOB strategies dealing with HIV/AIDS risk-related behaviors (BCC)
- Strengthening of referral systems/networks and support services
- Recruitment and training of lay counselors
Advocacy and empowerment/mobilization of communities and PLWHA

• Support District Stakeholders and proactively engage communities such as traditional leaders, civil society, the private sector and PLWHA groups to mobilize people for services such as testing and ARV therapy

• Advocate for policy change to enhance the response
The Botswana/Gates/Merck Partnership
Lessons Learned

- Invest in building relationships with key partners and stakeholders
- Understand how to get things done within the country
- Clear roles, responsibilities and accountability of the partners
- Programs need to be locally-owned and driven to succeed
- ARV therapy is helping to change paradigms
- Implementation of Botswana’s national HIV/AIDS strategy will require significant building of human resource capacity
- Private sector approach helps drive results
- Public-private partnerships can catalyze the implementation of strategic interventions
Merck’s Commitment to an Ethical Environment - International Ethics Centers

- We have established centers of excellence in ethics in:
  - United Arab Emirates (1998)
  - Colombia (1998)
  - South Africa (2000)
  - Turkey (2003)

- Funded by The Merck Company Foundation
- Locally owned, managed
- Customized to address specific local needs related to ethical business practices

At industry level, we also continue to lead efforts in strengthening codes of conduct governing interactions with physicians.
Regional Ethics Centers supported by The Merck Company Foundation

- The Gulf Center for Excellence Ethics (GCEE):
  - The First Independent Center Of Ethics In Arab Region
  - Has a regional focus, with plans to assist Arab stakeholders in creating ethics and institutional governance organizations
  - Initial focus on Healthcare Ethics
  - Moved to Dubai in 2004 as Dubai Ethics Resource Center (DERC)

- The Ethics Institute Of South Africa (EthicSA)
  - An independent center for education and advocacy on professional and entrepreneurial ethics issues, consulting services and research
  - Initial Focus on Healthcare Ethics, now moving to business ethics
“This gives us hope.”

Joy Phumaphi, former Minister of Health, Botswana
Assistant Director General, World Health Organization

“The public-private partnership between Botswana, the Gates Foundation and Merck has been hailed as a model that should be followed by the world.”

Senator Bill Frist, Majority Leader U. S. Senate
Building hope one brick at a time

Questions & Answers

“We try never to forget that medicines are for the people. If we remember that, the profits will follow…”

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-- George W. Merck, 1950