Epidemiology of HIV in Africa

NeuroAIDS in Africa

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Global HIV Epidemic
Adults and children estimated to be living with HIV, 2005

Total: 38.6 (33.4 – 46.0) million
Estimated number of adults and children newly infected with HIV, 2005

Total: 4.1 (3.4 – 6.2) million
Estimated number of people living with HIV globally, 1985–2005

Year:
- 1985
- 1990
- 1995
- 2000
- 2005

Million

Number of people living with HIV

0
10
20
30
40
50

Estimated number of adults and children living with HIV by region, 1986–2005
Sub-Saharan Africa
Sub-Saharan Africa-2005

• 64% of all PLWH
  – 2.7 million new infections
  – 2 million deaths

• ♀
  – Global-17.5 million
  – Africa-13.2 million (75%)
    • 59% of adults living with HIV in Africa are women

• Children
  – 2 million children <15 yrs living with HIV
    • 90% of global total
HIV prevalence in adults in sub-Saharan Africa, 2005
Estimated number of people living with HIV in sub-Saharan Africa, 1985–2005
HIV prevalence in adults in sub-Saharan Africa, 1990–2005
The Encouraging News
Trends in HIV infections

• Peaking and decline in some countries
  – Uganda
    • Steep decline in mid and late 90s-6.7%
  – Kenya, Zimbabwe & urban Burkina Faso
    • ↑ condom use, delay in sexual debut, ↓ no. of casual sexual partners
    • High mortality rates

• Prevalence leveling off
  – Number of new cases matching the number dying
  – Very high death rates still the order in southern Africa
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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>38.5</td>
<td>25.2 (2004)</td>
<td>38.0</td>
<td>24.0</td>
<td>24.1</td>
<td>Stable</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>2.5</td>
<td>1.8 (2003)</td>
<td>4.2</td>
<td>2.1</td>
<td>2.0</td>
<td>Decline in urban areas</td>
</tr>
<tr>
<td>Burundi</td>
<td>4.8</td>
<td>3.6 (2002)</td>
<td>6.0</td>
<td>3.3</td>
<td>3.3</td>
<td>Decline in capital city</td>
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<tr>
<td>Cameroon</td>
<td>7.3†</td>
<td>5.5 (2004)</td>
<td>7.0</td>
<td>5.5</td>
<td>5.4</td>
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<tr>
<td>Ethiopia</td>
<td>8.5</td>
<td>1.6 (2005)§</td>
<td>4.4</td>
<td>(1.0–3.5)</td>
<td>(0.9–3.5)</td>
<td>Decline in urban areas</td>
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<tr>
<td>Ghana</td>
<td>3.1</td>
<td>2.2 (2003)</td>
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<td>2.3</td>
<td>2.3</td>
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<td>Guinea</td>
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<td>2.8</td>
<td>1.6</td>
<td>1.5</td>
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<td>Lesotho</td>
<td>28.4</td>
<td>23.5 (2004)</td>
<td>29.3</td>
<td>23.7</td>
<td>23.2</td>
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<td>Rwanda</td>
<td>4.6</td>
<td>3.0 (2005)</td>
<td>5.1</td>
<td>3.8</td>
<td>3.1</td>
<td>Decline in urban areas</td>
</tr>
<tr>
<td>Senegal</td>
<td>1.9</td>
<td>0.7 (2005)</td>
<td>0.8</td>
<td>0.9</td>
<td>0.9</td>
<td>Stable</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>3.0</td>
<td>1.5 (2005)</td>
<td>-</td>
<td>1.6</td>
<td>1.6</td>
<td>Stable</td>
</tr>
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<td>South Africa</td>
<td>29.5</td>
<td>16.2 (2005)</td>
<td>20.9</td>
<td>18.6</td>
<td>18.8</td>
<td>Increasing</td>
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<td>UR Tanzania</td>
<td>7.0</td>
<td>7.0 (2004)</td>
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<tr>
<td>Uganda</td>
<td>6.2‡</td>
<td>7.1 (2004–5)</td>
<td>4.1</td>
<td>6.8</td>
<td>6.7</td>
<td>Stable</td>
</tr>
</tbody>
</table>

§ Preliminary result. Additional analysis is ongoing.
Current Status
Sub-Saharan Africa & HIV

• Transmission
  – Generalized epidemic
    • Feminization of the epidemic
  – Long distance truck drivers along trade routes
    • Mozambique (links to Malawi, Zim, RSA)
  – Commercial Sex workers
    • Senegal, Ghana
  – Blood transfusion recipients
  – Special Groups-Migrant workers-miners, Armed forces, etc
HIV & AIDS-Ramifications

- **Health**
  - Overwhelmed services
  - \(\downarrow\) health providers-migration, death
- **Economy**
  - \(\uparrow\) Poverty
- **Agriculture/Industry**
  - \(\downarrow\) Workforce
- **Education**
  - \(\uparrow\) death rate among teachers
  - School drop outs, etc
Estimated number of adult and child deaths due to AIDS globally, 1985–2005
Estimated number of adult and child (all ages) deaths due to AIDS in sub-Saharan Africa, 1985–2005
Other Effects of the Epidemic in Sub-Saharan Africa

TB notification rate in 20 African countries* versus HIV prevalence in sub-Saharan Africa, 1990–2004

- Consistently reporting each year: Algeria, Angola, Botswana, Cameroon, Comoros, Congo, Côte d'Ivoire, Democratic Republic of Congo, Ghana, Guinea, Kenya, Malawi, Mauritius, Mozambique, Nigeria, Senegal, South Africa, Uganda, United Republic of Tanzania, Zimbabwe

The Future
Antiretroviral Therapy in Africa
People in sub-Saharan Africa on antiretroviral treatment as percentage of those in need, 2002–2005

Impact of three scenarios on HIV infection in sub-Saharan Africa, 2003–2020

Source: Salomon JA et al. (2005). Integrating HIV prevention and treatment: from slogans to impact
Impact of AIDS-related deaths in sub-Saharan Africa, 2003–2020

Source: Salomon JA et al. (2005). Integrating HIV prevention and treatment: from slogans to impact
Conclusions

• Sub-Saharan Africa continues to be the region worst-affected by the HIV/AIDS epidemic
• The epidemic has matured in most countries on the continent
• Stabilization and reduction in prevalence and infection rates—seen in some countries
• To reduce infection rates and death rates a comprehensive response is likely to yield best rewards
Thank you