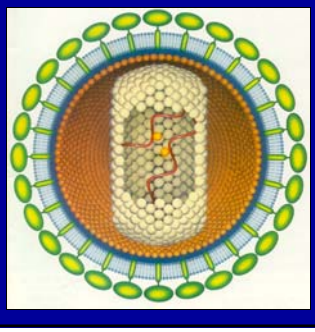
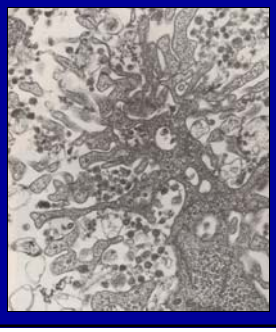
AIDS in Africa

Peter Katona, MD

The HIV/AIDS Pandemic: a convergence of the medical, cultural, economic and political

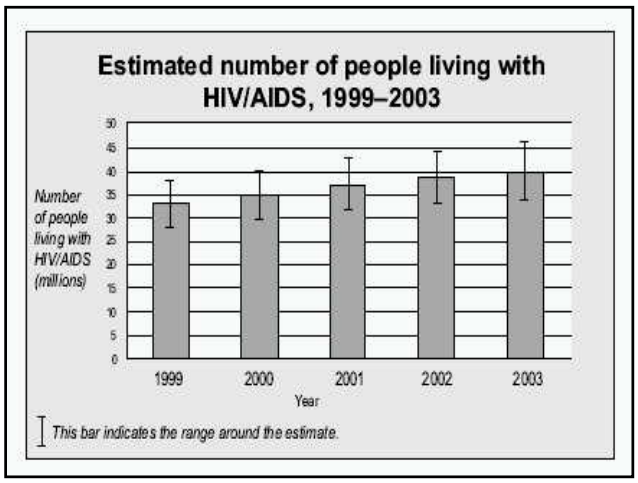


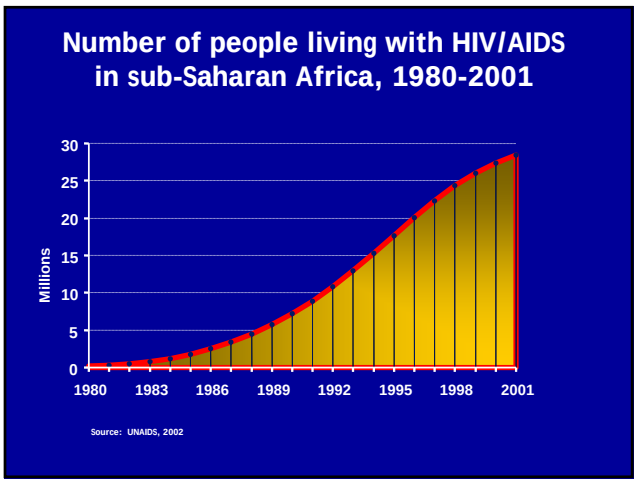


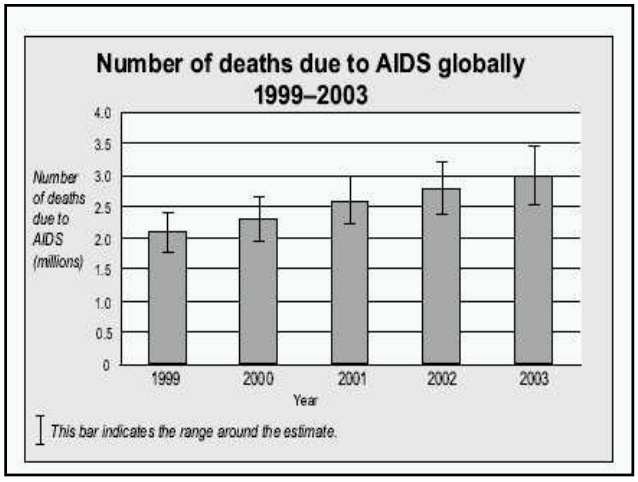
AIDS/HIV: a devastating effect!

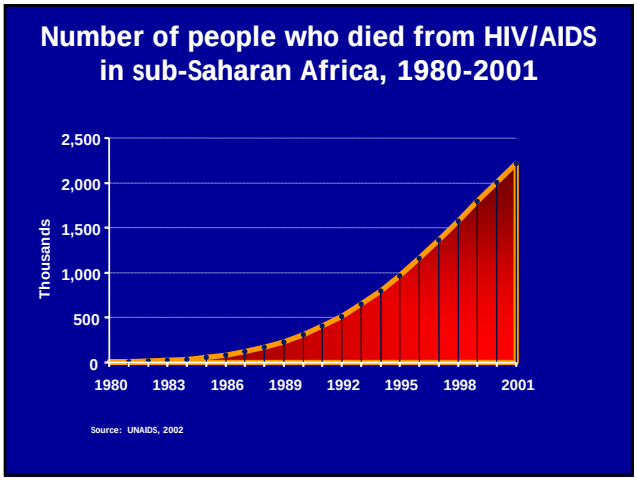
- A rising death rate
- Misconceptions
- Politicization and symbols
- Cultural and social issues
- Cost of care & treatment
- Microbial resistance

Only since 2000 has the United States formally viewed HIV/AIDS as a **threat to national security**


Estimated number of people living with HIV/AIDS, 1999–2003
Number of people living with HIV/AIDS (millions)
0
5
10
15
20
25
30
35
40
45
50
1999
2000
2001
2002
2003
Year
This bar indicates the range around the estimate.


Number of people living with HIV/AIDS in sub-Saharan Africa, 1980-2001
Millions
0
5
10
15
20
25
30
1980
1983
1986
1989
1992
1995
1998
2001
Source: UNAIDS, 2002


Number of deaths due to AIDS globally 1999–2003
Number of deaths due to AIDS (millions)
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
1999
2000
2001
2002
2003
Year
This bar indicates the range around the estimate.


Number of people who died from HIV/AIDS in sub-Saharan Africa, 1980-2001
Thousands
0
500
1,000
1,500
2,000
2,500
1980
1983
1986
1989
1992
1995
1998
2001
Source: UNAIDS, 2002

Region	Adults and children living with HIV/AIDS	Adults and children newly infected with HIV	Adult prevalence (%)*	Adult & child deaths due to AIDS
Sub-Saharan Africa	25.0 – 28.2 million	3.0 – 3.4 million	7.5 – 8.5	2.2 – 2.4 million
North Africa & Middle East	470 000 – 730 000	43 000 – 67 000	0.2 – 0.4	35 000 – 50 000
South & South-East Asia	4.6 – 8.2 million	610 000 – 1.1 million	0.4 – 0.8	330 000 – 590 000
East Asia & Pacific	700 000 – 1.3 million	150 000 – 270 000	0.1 – 0.1	32 000 – 58 000
Latin America	1.3 – 1.9 million	120 000 – 180 000	0.5 – 0.7	49 000 – 70 000
Caribbean	350 000 – 590 000	45 000 – 80 000	1.9 – 3.1	30 000 – 50 000
Eastern Europe & Central Asia	1.2 – 1.8 million	180 000 – 280 000	0.5 – 0.9	23 000 – 37 000
Western Europe	520 000 – 680 000	30 000 – 40 000	0.3 – 0.3	2 600 – 3 400
North America	790 000 – 1.2 million	36 000 – 54 000	0.5 – 0.7	12 000 – 18 000
Australia & New Zealand	12 000 – 18 000	700 – 1 000	0.1 – 0.1	<100
TOTAL	**40 million (34 – 46 million)**	**5 million (4.2 – 5.8 million)**	**1.1% (0.9 – 1.3%)**	**3 million (2.5 – 3.5 million)**

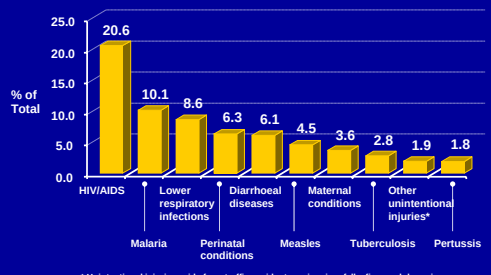
* The proportion of adults (15 to 49 years of age) living with HIV/AIDS in 2003, using 2003 population numbers.

The ranges around the estimates in this table define the boundaries within which the actual numbers lie, based on the best available information. These ranges are more precise than those of previous years, and work is under way to increase even further the precision of the estimates that will be published mid-2004.

The daily AIDS toll in 2003

- **~14,000 new cases**
- **13,300 (>95%) are in people from low and middle income countries**
- **Almost 2,000 are in children under 15 years of age**
- **About 12,000 are in persons aged 15 to 49 years**
  - **almost 50% are women**
  - **~50% are 15–24 year olds**

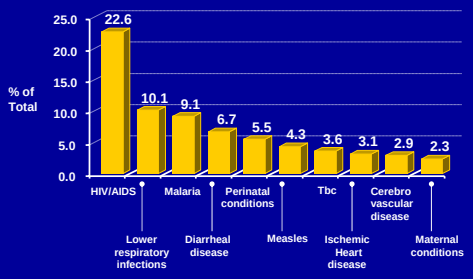
Leading causes of disease, Africa, 2000



* Unintentional injuries aside from traffic accidents, poisoning, falls, fires and drowning

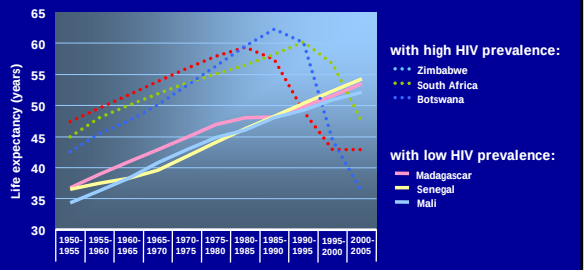
Source: The World Health Report 2001, WHO

Leading causes of death in Africa, 2000

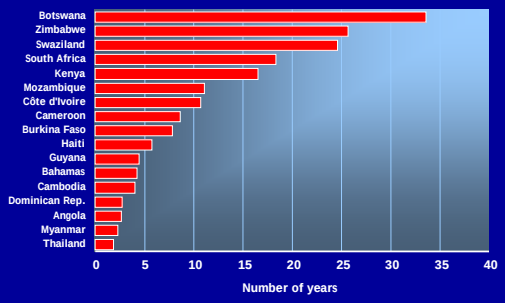


Source: The World Health Report 2001, WHO

Changes in life expectancy, 1950-2005



Reduction in life expectancy compared to the 'no AIDS' scenario in selected countries: 2000-2005



Source: UN Department of Economic and Social Affairs (2002) World Population Prospects, the 2000 Revision

The bubonic plague killed about ~30 million people in medieval Europe. AIDS deaths and the loss of future population from the deaths of women of child-bearing age means that by 2010, sub-Saharan Africa will have **71 million** fewer people than it would otherwise.

U.S. Census Bureau projections

Why is AIDS/HIV so different from other infectious diseases?

- Relatively new
- The first deadly and incurable STD
- Spreads rapidly
- Epidemiology overlaps groups in society that are often disliked causing politicization and the rise of many special interest groups
- Incurable although drugs available
- Changed how we do research and funding

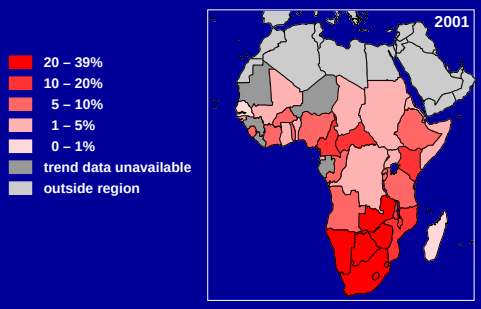
Viral Plagues of Africa

- **Rinderpest** (1891) - killed 90% of domesticated cattle, antelope
- **O'nyong nyong fever** (1959) - Uganda, from monkeys
- **Lassa fever** (1969) and other hemorrhagic fevers like Ebola & Marburg
- **AIDS** (1970s)

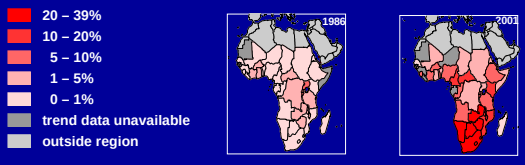
Why did AIDS spread in Africa?

- Trade routes & a mobile work force
- Constant wars
- Social customs
  - An aversion to discussing sex
  - Promiscuity and unsafe sexual practices
- Ignorance & lack of education
- Poverty & the lack of widespread availability of prevention programs, condoms & drugs
- STD's like chancroid

HIV prevalence in adults in sub-Saharan Africa, end 2001



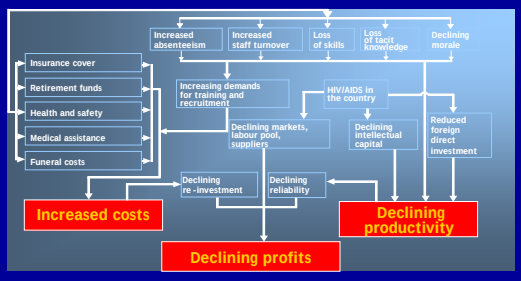
HIV prevalence in adults in sub-Saharan Africa, 1986-2001



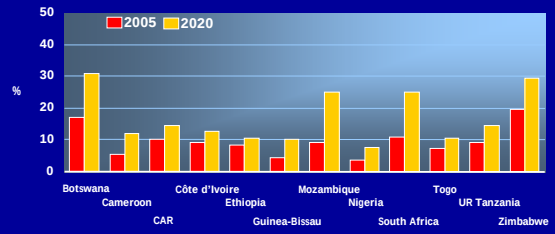
AIDS in Sub-Saharan Africa

- 10 of 11 new infections occur each minute
- In some countries teachers, doctors and nurses are dying faster than they can be replaced
- Treatment is from inadequate to non-existent
- by 2010 there will be 40 million AIDS orphans in Africa, most of whom will have grown up with little or no social structure

The impact of HIV/AIDS on industries



Percentage of workforce lost to AIDS by 2005 and 2020 in selected African countries



Sources: ILO (2000) POPILO population and labour force projection; UN Department of Economic and Social Affairs, Population Division (1998) *World Population Prospects: the 1998 Revision*

01 July 2002 slide number SSA-17

Health Care Costs

- The epidemic is responsible for the quadrupling of life insurance premiums in Zimbabwe
- Health costs to Botswana companies are escalating by 500 percent
- This is driving the health costs of a large Zambian company so high that they exceeded profits
- >10% of income is spent on funeral schemes

The Working Class

- Many companies hire and train two and even **three people to do the job of one** person because AIDS is certain to fell some of them.
- In Zimbabwe and Botswana one of every four have AIDS, and people are **dying** in the **years** when they're supposed to be most **productive**

Today's AIDS Orphans Tomorrow's Terrorists?

"Children orphaned by AIDS in Ethiopia"

Wars in Africa

- Like migrant workers, truck drivers and young men, African soldiers often visit commercial sex workers or prostitutes, 90 percent of whom are believed to have AIDS/HIV.
- Nigerian soldiers with the ECOMOG forces in Sierra Leone and Finnish soldiers serving as peacekeepers in Namibia took AIDS with them when they returned home.

African areas of Conflict,1992-2001

African areas of Conflict,1900-2001

HIV prevalence in African military

- ***Nigeria*:** **11% among peacekeepers returning from Sierra Leone and Liberia vs. 5% in adult population**
- ***South Africa*:** **60-70% in military vs. 20% in adult population**

Source: Nigeria AIDS bulletin No 15, May 20, 2000; The Mail & Guardian, Pretoria, March 31, 2000; UNAIDS/WHO 1999 estimate

Why the worldwide concern?

- Humanitarianism
- The vision of lawlessness and chaos
- The potential to destabilize the local, regional and global economies
- Breeding corruption with money

"If we don't work with the Africans themselves to address these problems we will have to deal with them later when they will get more dangerous and more expensive."

Richard Holbrooke
U.S. Ambassador to the UN, 2000

Global HIV/AIDS Programs

- USA
  - DoD HIV/AIDS Prevention Program (DHAPP)
  - President's Emergency Plan for AIDS Relief (PEPFAR)
  - USAID
- UN Agencies
  - UNAIDS
  - WHO
  - WFP
  - Global Fund on AIDS, Tuberculosis and Malaria
- Other countries
- NGOs

DHAPP

- **Mission**
  - Reduce the incidence of HIV/AIDS among uniformed personnel in selected African nations and beyond
- **Objectives**
  - Assist in developing and Implementing military-specific HIV prevention programs.
  - Integrate with other US government, NGO, allies, and United Nations programs
  - Assist selected African countries in development of military cultural interventions to affect high risk HIV behaviors and attitudes
  - Train military and uniformed services personnel in selected African countries to implement, maintain, and evaluate HIV preventive intervention programs

DHAPP Interests

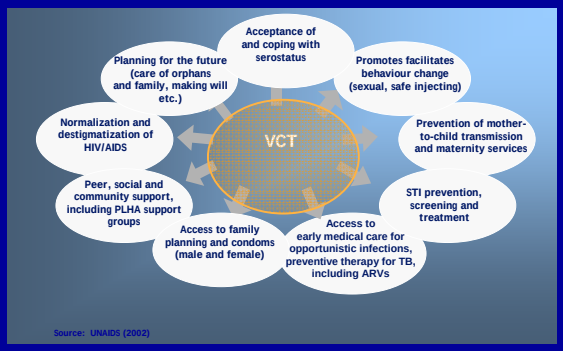
National security
Regional stability
Public Health
UN Peacekeeping
Humanitarian aid
Ultimately develop self-sufficiency

- 27 countries, and most of these programs fall within EUCOM area of responsibility
- Of the original $10 million received by the program in FY00, $8 million has been allocated for direct support of programs in Africa

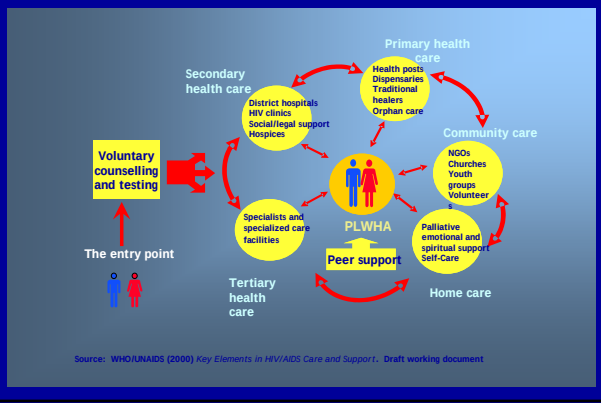
DHAPP: Elements for foreign militaries

- Communication and coordination
- Mass awareness campaigns
- Occupational exposure intervention
- Education and training
- HIV screening
- Development of policies and procedures
- STD syndromic management
- Evaluation metrics
- Laboratory technical support

Voluntary counselling and testing as an entry point for HIV prevention and care



The HIV/AIDS continuum of care



Process for Military-to-Military Cooperation

Initial **site visit** with Program staff, US Country Team & host military

▼

Internal USG **agreement** of process for technical assistance and resource support (Fund transfer, Technical assistance, Logistic support)

▼

Establish **procedures** for beginning support and reporting

▼

Begin technical **assistance** and resources support

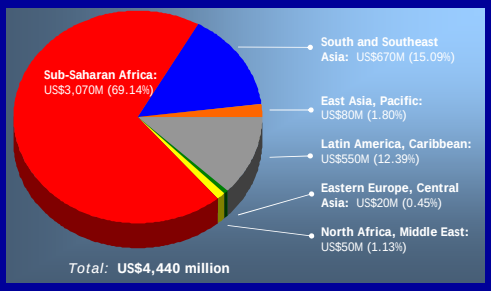
Program Security Cooperation (as of Nov 02)

- Angola
- Benin
- Botswana
- Congo-B
- Cameroon
- DRC
- Eritrea
- Ethiopia
- Ghana
- Ivory Coast
- Kenya
- Lesotho
- Malawi
- Mali
- Mozambique
- Namibia
- Nigeria
- Senegal
- Sierra Leone
- South Africa
- Swaziland
- Tanzania
- Togo
- Uganda
- Zambia

African nations spend only ~**$165 million a year** to combat AIDS, and it all comes from the industrialized nations.

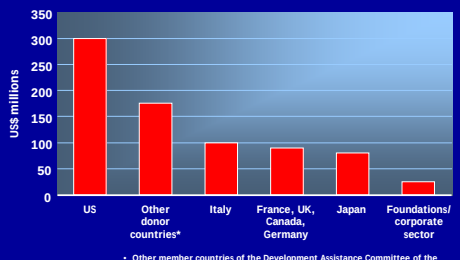
James Wolfensohn
President of the World Bank
address to the U.N. Security Council, 2000

Projected annual expenditure requirements for HIV/AIDS care and support by 2005, by region



Source: Schwartlander B et al (2001) Resource needs for HIV/AIDS, *Science*

Identified available resources for the Global Fund to Fight AIDS, Tuberculosis and Malaria, by source, as of April 2002

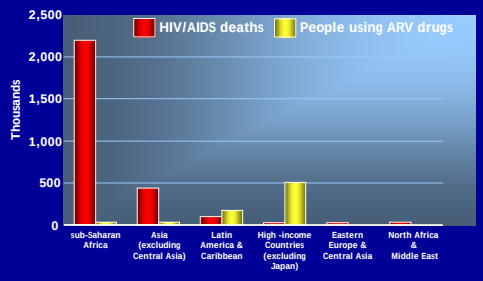


* Other member countries of the Development Assistance Committee of the Organisation for Economic Cooperation and Development and the European Union

6 million people of the 40 million people living with HIV/AIDS worldwide need ARV treatment

<u>but only 400,000 currently have access</u>

HIV/AIDS deaths in 2001 and number of people using antiretroviral drugs by end 2001: by region



South Africa & Anti-retrovirals (ARVs)

- Cost is achievable
- Triomune (d4T, 3TC, and NVP) costs only $140 per year
- average survival in absence of antiretroviral therapy is estimated to be 8-10 years
- Distribution has started due to pressure on the Presidential campaign by Doctors Without Borders

But consider that the US has refused to let the $15 billion that President Bush has committed to fighting AIDS in the 3rd World be used for generic drugs, arguing that there isn't enough proof that they are effective (despite scientific evidence to the contrary).

Where do you put resources?

- **Education**
  - Currently for the younger generation, not the caregivers
  - Lack of promotion of fidelity
  - Overcoming well established social mores
  - A very slow process
- **Treatment**
  - Cost still very high
  - Insufficient infrastructure for distribution
  - Overworked and underpaid staffing
  - Triage issues
- **Prevention**
  - Public health surveillance
  - Condoms
  - NGO vs. government

To be effective prevention must

- Be paired with investment that creates jobs
- Invigorate the educational system
- Pull the poor out of the "here and now" mentality that makes them susceptible to AIDS
- Understand the difference between those that live in the countryside and those that live in the cities
- Go primarily through grass routes NGOs rather than corrupt governments

Rwanda, Sudan, Bosnia, Cambodia

Is the lack of adequate response to the AIDS pandemic analogous to not intervening in the various genocides that are constantly occurring in the world?