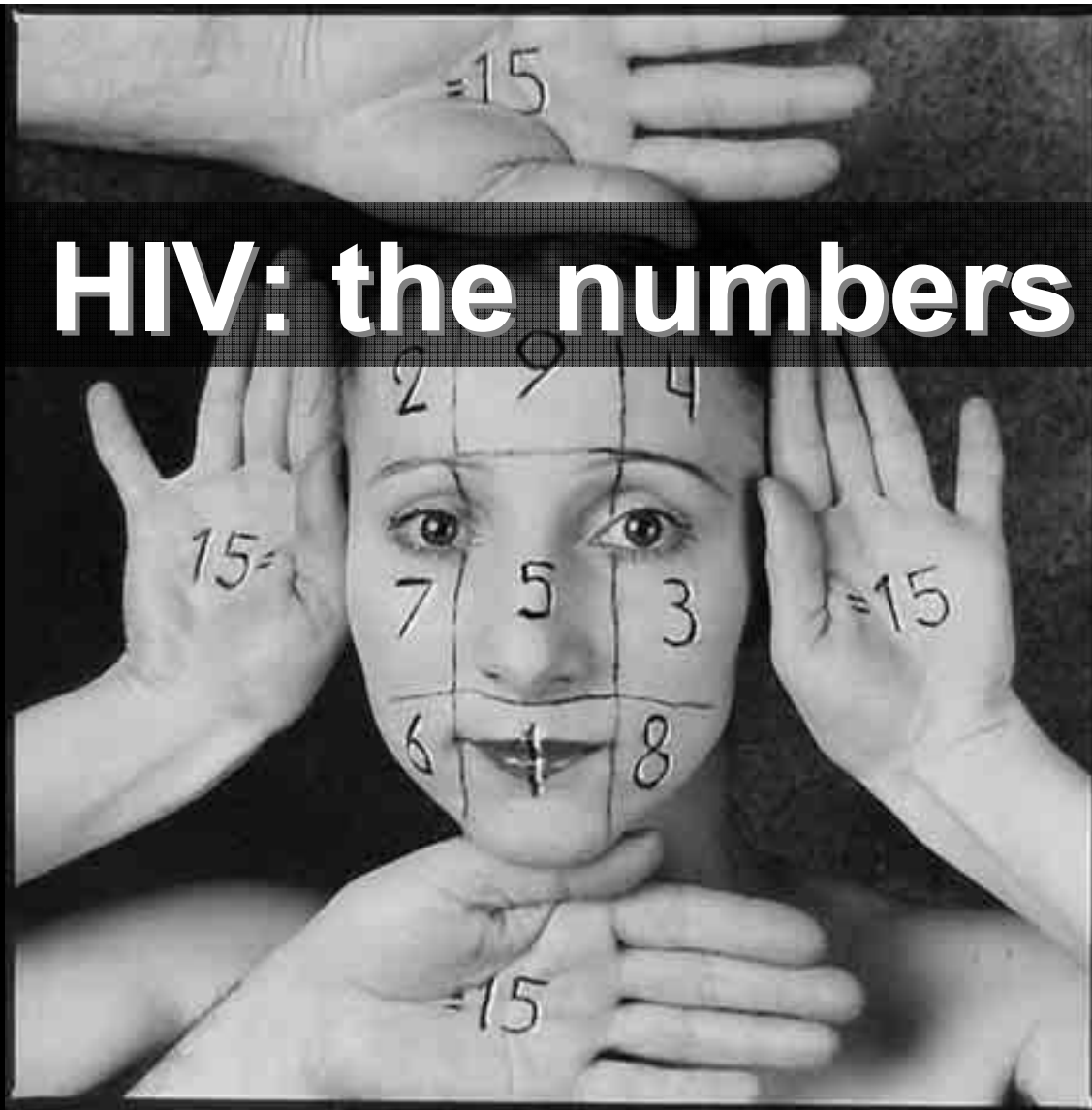


The Economics of HIV in Africa

**Wolfgang Rennert M.D.,
DMSc., DTM+H
Georgetown University**



HIV: the numbers



Adults and children estimated to be living with HIV/AIDS as of end 2003

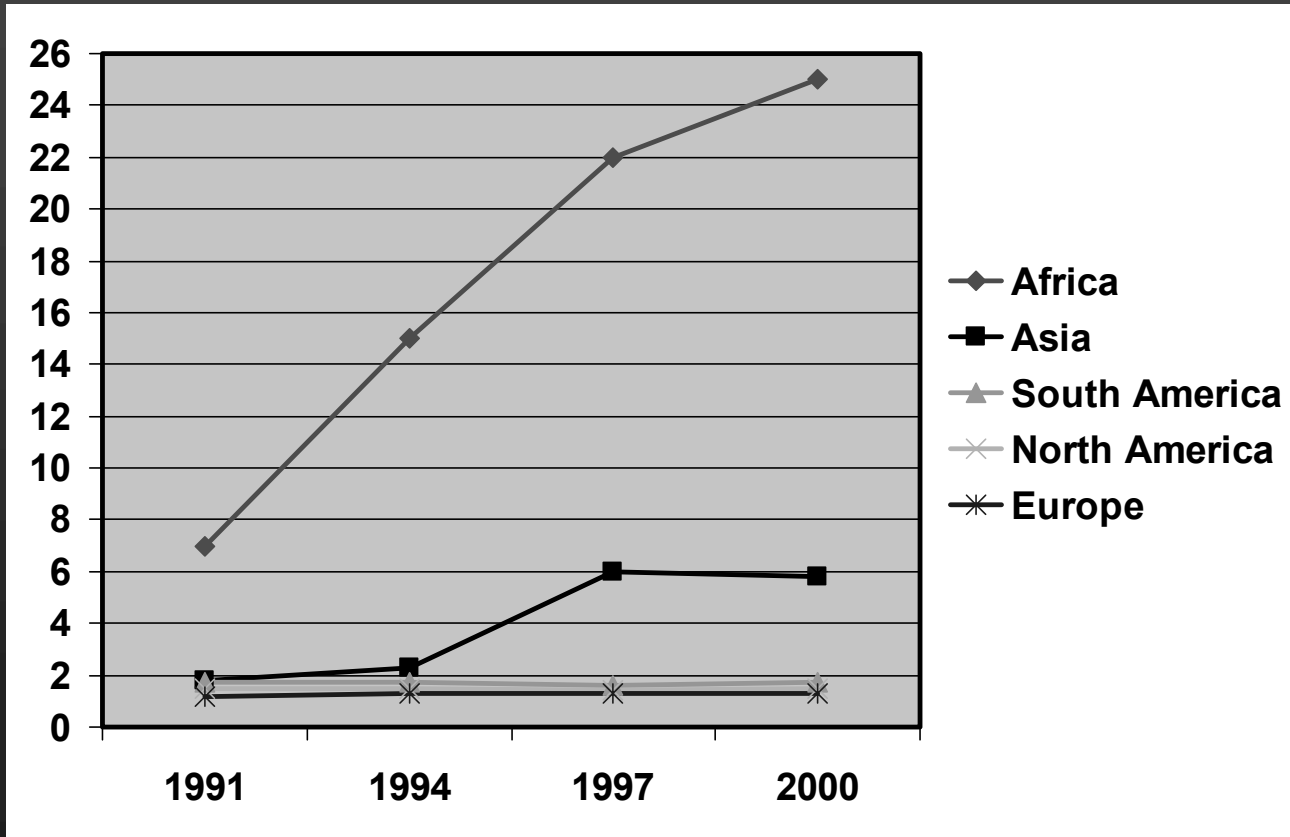
95 % of HIV positive people live in the developing world



Total: 34 – 46 million

HIV positive population

(in million people)



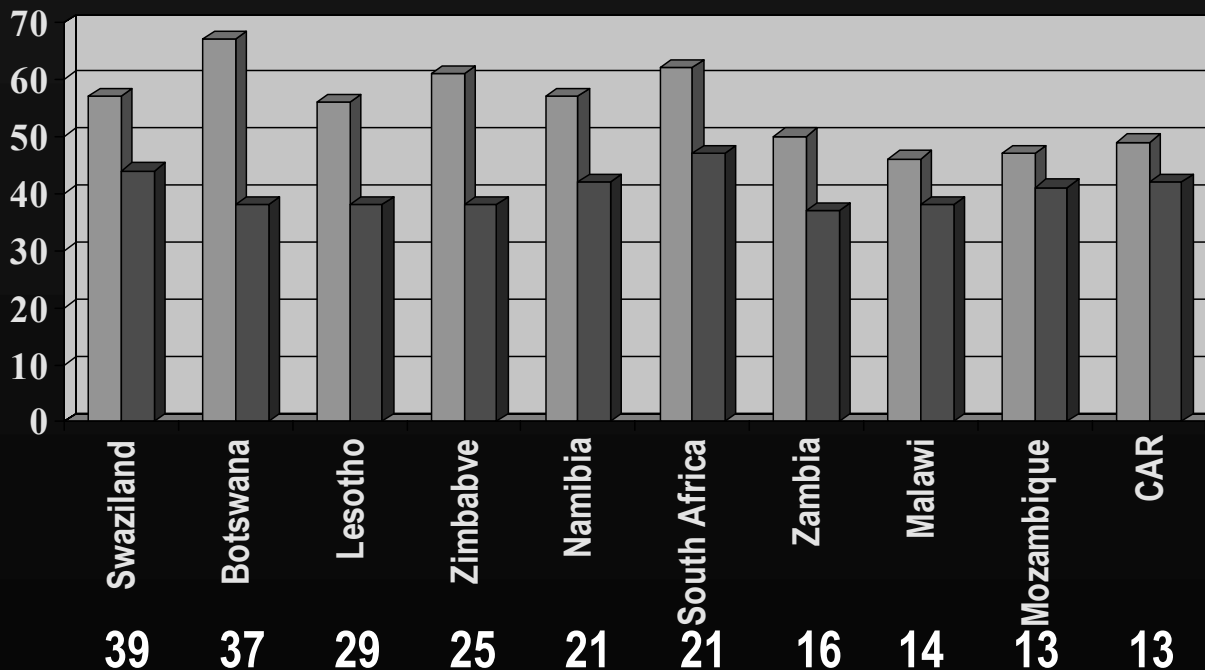
Life expectancies in 1990 and 2002



1990

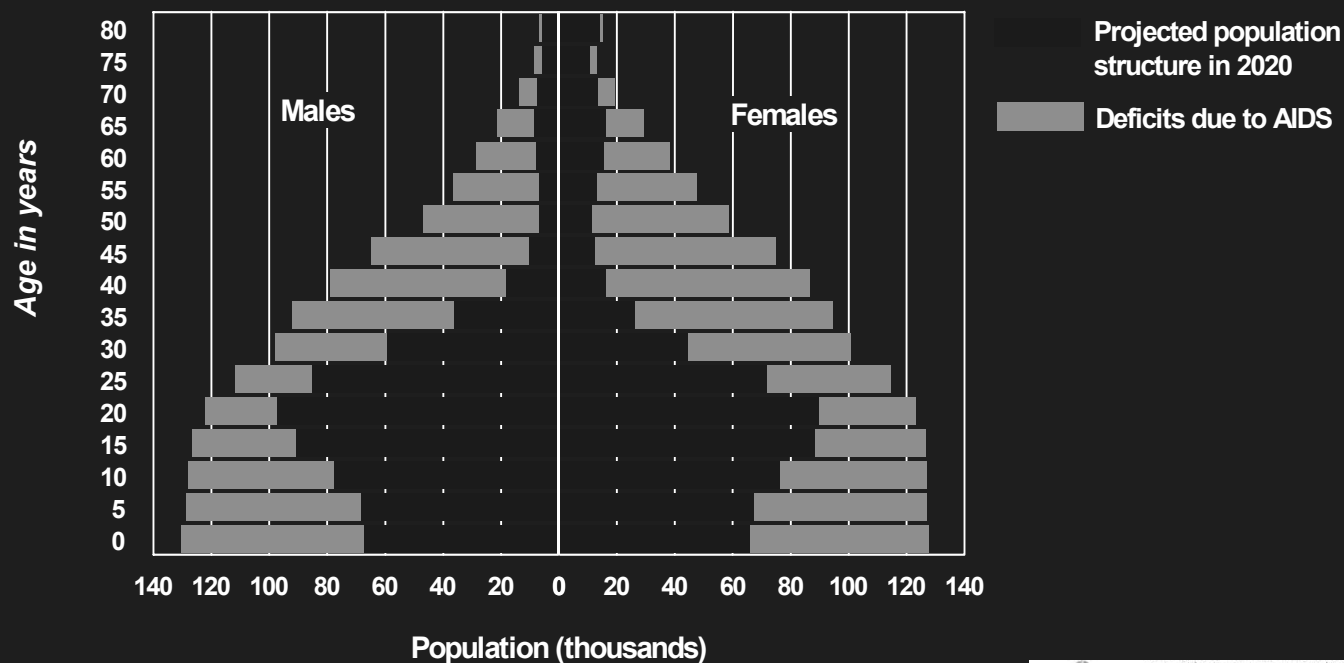


2002



Country HIV + adults aged 15 – 49 (%)

Projected population structure with and without the AIDS epidemic, Botswana, 2020



Poverty – HIV/AIDS - Poverty



**The relationship
between HIV and
poverty is bi-directional**

Macroeconomic

Loss of human capital in business and the public sector

Highly mobile (most productive) populations most affected

Decreased industrial productivity

Decreasing tax revenue

Fewer community members completing education and professional training

Increased expenses for health care, social services, and orphan care

Macroeconomic

Africa's per capita income decreases by 0.7 % per year

Kenya's GDP will be reduced by 14.5 % at the end of 2005 compared to 1996

The South African GDP in 2010 will be 17 % lower than in 2000

World Bank estimates that an African country with a 20 % HIV prevalence will show an annual decline of GDP of 2.6 % (or 67 % after 20 years)

'Poverty, ignorance, unemployment and inequality are the handmaidens of the epidemic. They help spread HIV.'

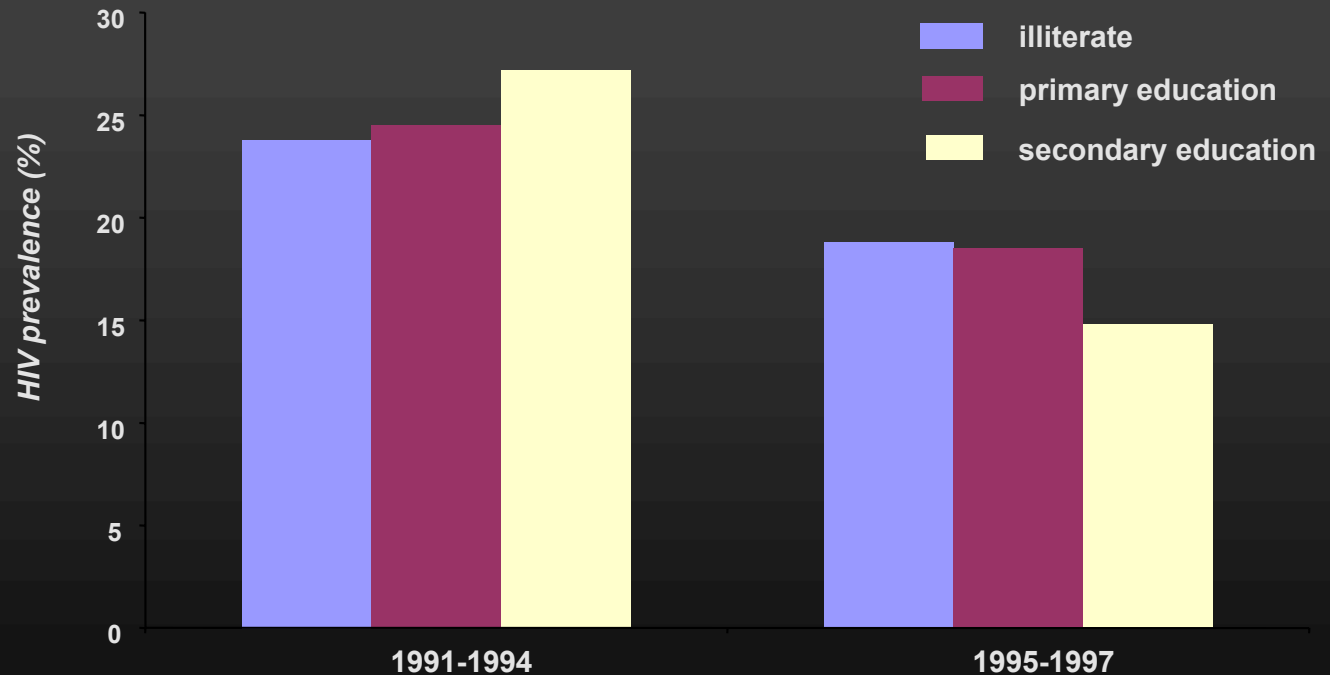
(Peter Piot, director UNAIDS, November 2003)



Goldfields, South Africa estimates the cost of HIV at \$ 10 per ounce of gold by 2009 without HIV care.

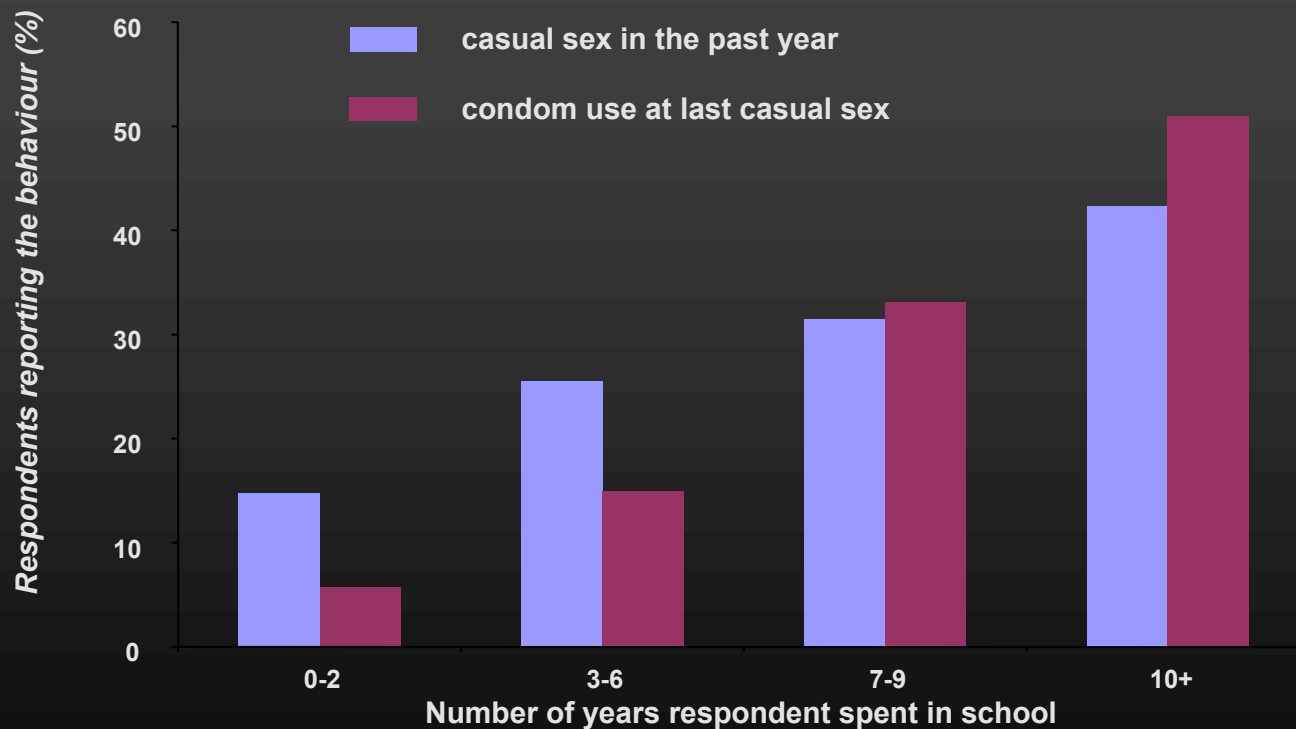
The cost will be around \$ 5 per ounce with adequate healthcare for infected mine workers.

HIV prevalence rate among pregnant 15-24 year-olds by educational status, Uganda



Source: Kilian A et al. AIDS 1999, 13: 391-398.

Casual sex and condom use by educational status, Mozambique



Source: Agha S, et al. *The promotion of safer sex among high-risk individuals in Mozambique*, Population Services International, USA, 1999

Microeconomic

Zimbabwe: small farm output decreased by 50 %

**Botswana: household income decreased by 13 %
among poorest 25 %**

**Tanzania, Cote D'Ivoire: increased out-of-pocket
expenditure for health care**

Thailand: 15 % of families take children out of school

**Thailand: \$ 1000 per year for health (average annual
income) for the last year of life**

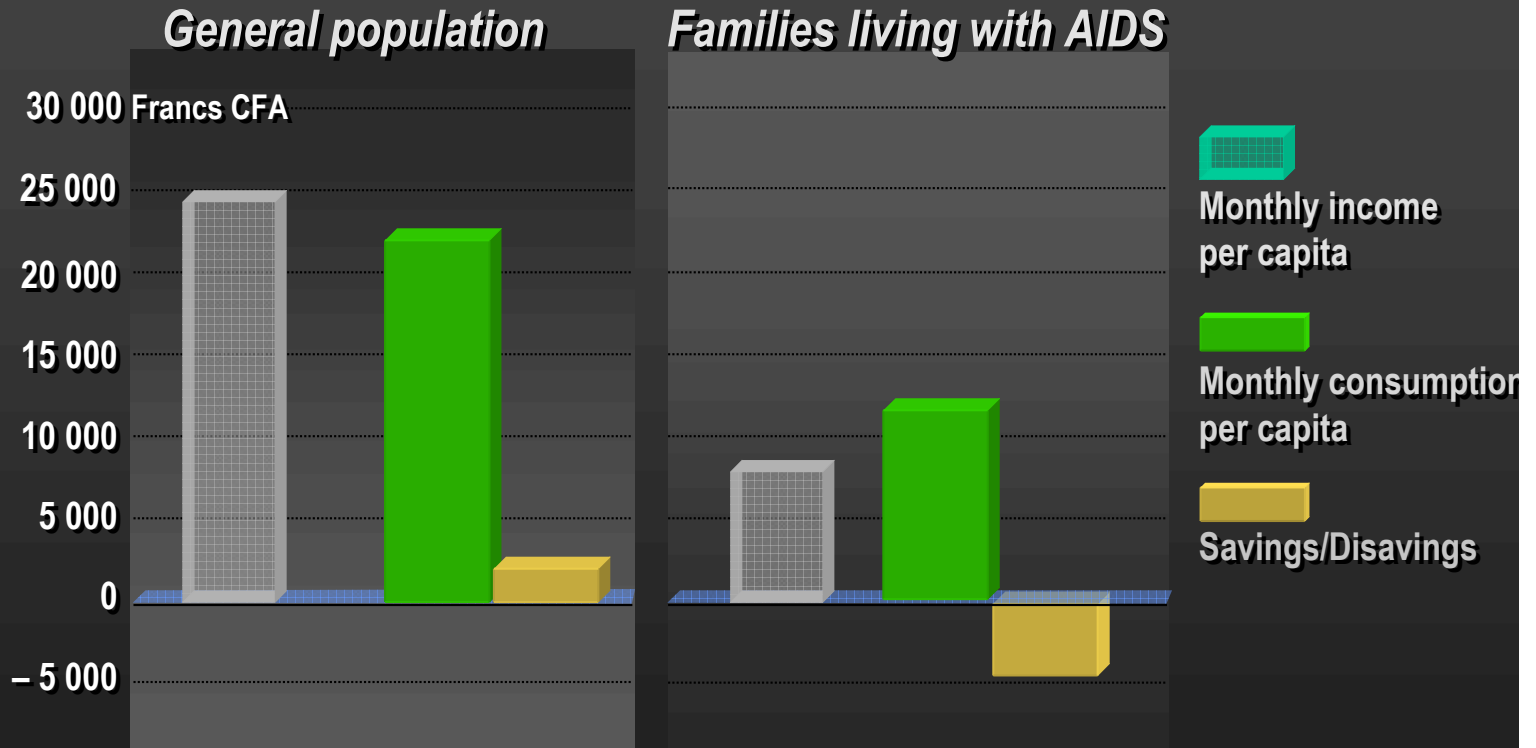
**Cote D'Ivoire: money for school decreased by 50 %,
for food consumption decreased by 41 %, for health
quadrupled**

Reduction in production in a household with an AIDS death, Zimbabwe

<i>Crops</i>	<i>Reduction in output</i>
● Maize	61%
● Cotton	47%
● Vegetables	49%
● Groundnuts	37%
● Cattle owned	29%

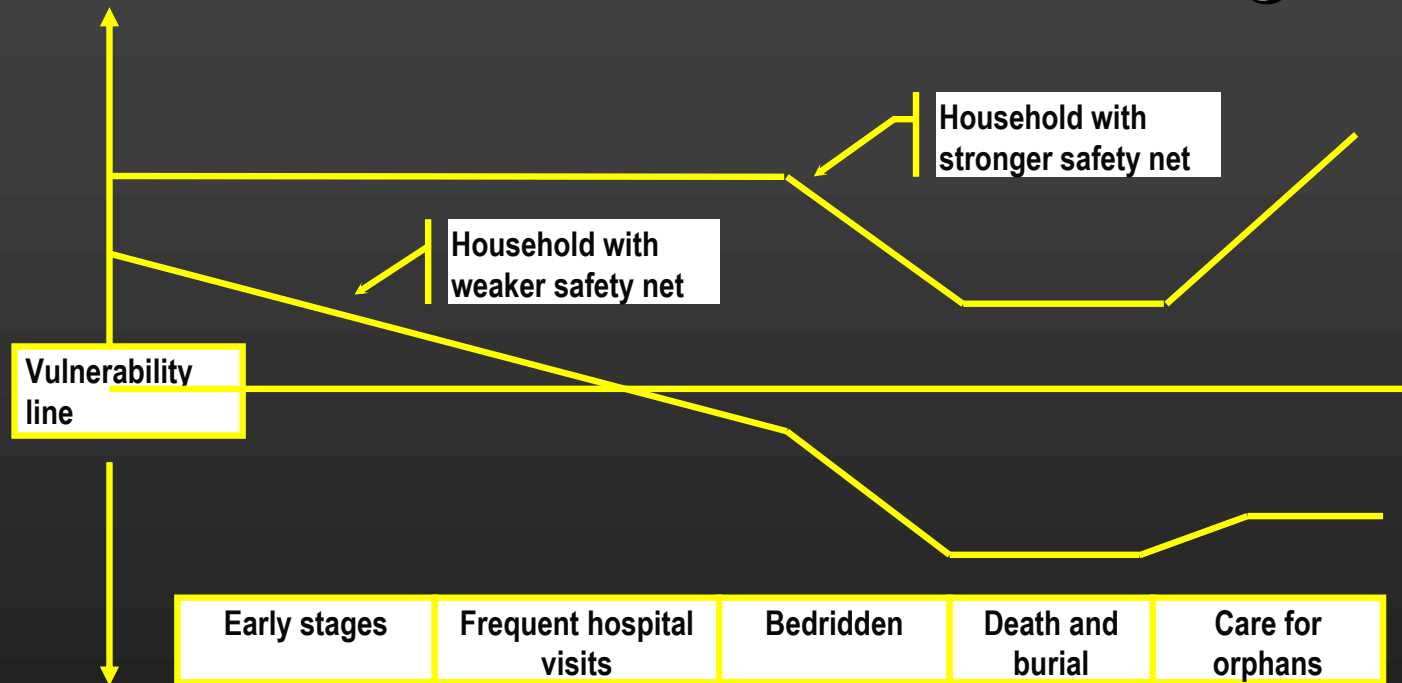


Impact of HIV/AIDS in urban households, Côte d'Ivoire



Source: Simulation-based on data from Bechu, Delcroix and Guillaume, 1997

The effect of HIV/AIDS on households/livelihood strategies



Source: Donahue *et al*, 2000

**Who carries the
burden of HIV**



Women and AIDS

In South Africa, Zambia and Zimbabwe women aged 15 - 24 are 3 to 6 times more likely to be infected than men.

HIV subtype C (most prevalent in sub-Saharan Africa) has specific affinity to vaginal lymphocytes.

HIV positive women are more likely to be in violent relationships than HIV negatives (Tanzania, South Africa, Rwanda).

One in six girls (< 16) in Zambia (1 in 10 in South Africa) reported to have been forced to have sex.

Incomplete education is related to HIV infection (Nigeria, Ghana, Botswana, South Africa, Zambia, Swaziland).

Women and AIDS

Cultural stigma against contraception prohibits use of preventive measures. Women are defined through their ability to have children.

Female controlled prevention is not widely available.

Transactional sex, survival sex, transgenerational sex. Women whose partners are 10 years older are twice as likely to be infected (Kenya).

The burden of care (90 % of AIDS care happens at home).

75 % of AIDS affected households are female headed. 40 % of women had to stop working to care for AIDS victims (South Africa).

Denial of inheritance or right to property.

South African Women and HIV

	HIV positive (51)	HIV negative (54)	P-value	CI
Married	18	42.6	< 0.01	0.01-0.79
Household income	625 R	905 R	< 0.01	134-955
Formal housing	46	66.7	< 0.05	0.17-1
Knowledge about HIV	70.6	83.3	NS	
Regular condom use	5.9	22.2	< 0.025	0.04-0.91
STI in previous year	33.3	13	< 0.025	1.14-10.13

76.2 % dropped out of school (41 % pregnancy; 44 % poverty)



The Global Coalition on Women and AIDS

- **Preventing HIV infection among adolescent girls**
- **Reducing violence against women**
- **Protecting property and inheritance rights of women and girls**
- **Ensuring equal access to care and treatment for women and girls**
- **Supporting improved community-based care, with a special focus on women and girls**
- **Promoting access to new prevention options, including female condoms and microbicides**
- **Supporting on-going efforts towards universal education for girls**

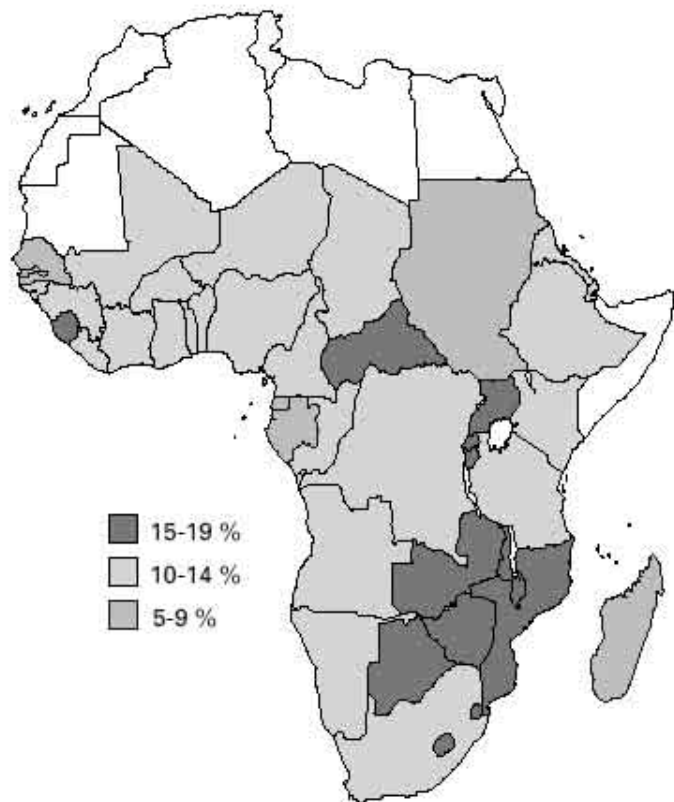
UNAIDS, 2004



**Children and AIDS -
Orphans**

34 MILLION CHILDREN ORPHANED IN SUB-SAHARAN AFRICA

Estimated % of children orphaned, 2001.

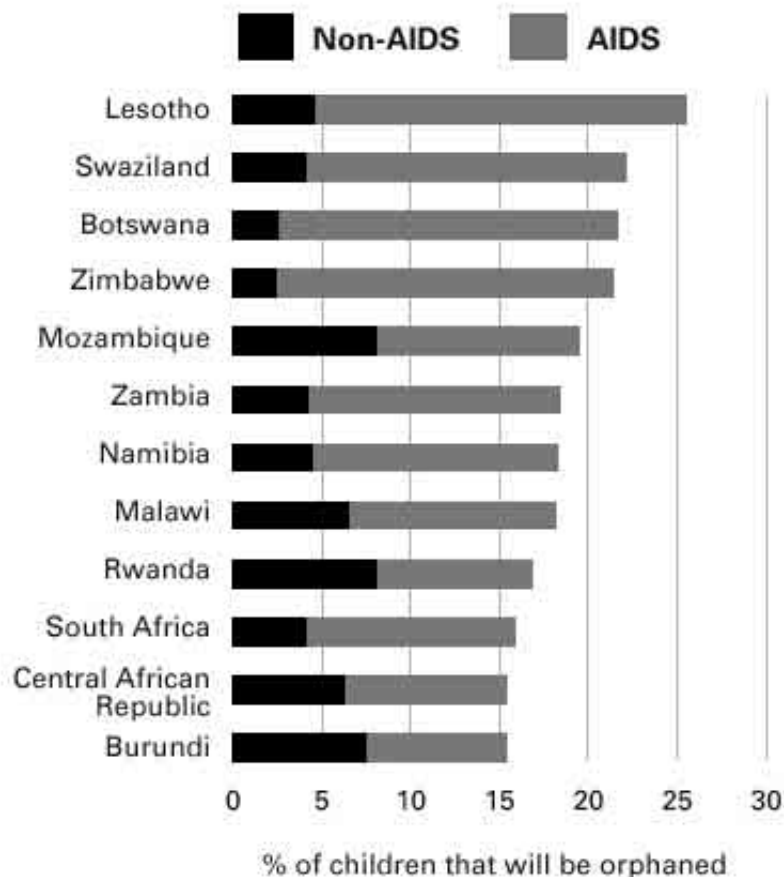


This map does not reflect a position by UNICEF on the legal status of any country or territory or the delimitation of any frontiers.

Source: *Children on the Brink 2002.*

ORPHAN PROJECTIONS, 2010

By 2010, orphans will account for 15% to over 25% of all children in 12 sub-Saharan countries



Source: *Children on the Brink 2002.*



Schooling

**Support of extended
families**

Professional development

Health care

What needs to be done

Macroeconomic: national coordinating bodies integrating public, private and donor directed activities

Integrate HIV into poverty relief initiatives

Debt relief allowing for donor - independent initiatives

National and multinational programs to de-stigmatize HIV and promote voluntary counseling and testing

Provision of access to health care including cheap, reliable and practical ARV's beginning with prevention of mother-to-child transmission, health care and educational professionals

National programs to provide care, shelter and education to orphans

What needs to be done

Microeconomic: economic, cultural and social emancipation of women

Community based initiatives for AIDS care and orphan care

Education programs aimed at children and adults at all educational levels with a focus on de-stigmatization of HIV

Provision of safe and cheap disease prevention measures to the whole community

Education of community health workers

Provision of access to health care including cheap, reliable and practical ARV's beginning with prevention of mother-to-child transmission, health care and educational professionals

STOP AIDS



**It's Your Life,
Your Decision....
But we care.**

Ministry of Health
National AIDS Control Programme
1997

Use Condoms every time you have Sex!



**YOU ARE NOW LEAVING
THE REPUBLIC OF NAMIBIA**
Dhaka 205 km
Kang 287 km
PLEASE DRIVE SAFELY

Okaona Nyanja Anakaona
Ndi Mvuu Zomwe



CHISHANGO



**“Even the best ballers take
a safe dunk with it!”**

Sylvester 'Sly' Noko - Botswana National Basketball Player

Lovers



NDS



**HIV
PREVENTION
SERVICES**

**850 BARRET AVENUE
SUITE 300**

FREEDOM is knowing your HIV status.

HIV tests are FREE, confidential and convenient.



Thank You