

# HIV/AIDS IN SUB-SAHARAN AFRICA: THE GROWING EPIDEMIC?

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It is widely believed that the AIDS epidemic continues to spread rapidly throughout the African continent with rising levels of HIV infection, especially among the youth. UNAIDS have been particularly concerned to rebut any 'dangerous myths' that the epidemic is levelling off or even declining in the worst affected 'AIDS belt' countries in Eastern, Central and Southern Africa. In its 2002 Report on the global HIV/AIDS epidemic, UNAIDS notes that 'circulating in Southern Africa has been the hope that the epidemic may have reached its 'natural limit', beyond which it would not grow. Thus, it has been assumed that the very high HIV prevalence rates in some countries have reached a plateau. Unfortunately, this appears not to be the case yet.<sup>2</sup> This conclusion has, in turn, been picked up on by the world's media. For example, the BBC News web site highlights 'Africa's growing epidemic'. The key message of many articles and television and radio programmes is that, apart from a few well-known success stories (in particular, Uganda and Senegal) the epidemic is not under control and that, therefore, patterns of sexual behaviour remain much the same and HIV prevention programmes are not working.

The enormity of the AIDS crisis in Africa cannot be under-estimated. And yet, it is extraordinary just how little good quality information is available that would enable the levels and thus trends in national HIV prevalence rates to be accurately monitored. Most countries do not even collect 'vital registration' data on deaths. Population-based surveys are the only reliable indicator of the levels of HIV infection among men and women according to age, location and socio-economic background. And yet, there is virtually no population-based survey data in most of the high-prevalence countries, including Botswana, Ethiopia, Malawi, Lesotho, Namibia, and Swaziland. No country in Africa has good quality national population-based survey data over a number of years. Primary reliance has instead been placed on anonymous testing of samples of pregnant women attending antenatal clinics. While these antenatal clinic (ANC) sentinel surveys are reliable in monitoring trends in HIV prevalence, they are not an accurate method for measuring HIV prevalence levels among both women and men. This is especially the case for young people (see below).

Notwithstanding these problems, a thorough examination of the limited information that is available suggests that the epidemic is not growing in many of the worst affected countries in Africa. This does not mean, of course, that the epidemic will not continue to have devastating impacts in these countries. But the widespread assertion that infection levels are still increasing throughout the region cannot be robustly substantiated. The true picture is, in fact, very much more mixed. There are countries where prevalence rates are still increasing very rapidly (most notably Cameroon, Lesotho and Swaziland). But this group comprises a small minority of the continent's nearly 50 countries. Among the majority of worst affected countries, there are clear signs that prevalence rates have already started to fall or that these rates are levelling off.

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<sup>2</sup> UNAIDS. 2002. Report of the global HIV/AIDS epidemic, UNAIDS, Geneva, p. 23

**Table 1: UNAIDS estimates of adult (15-49) HIV prevalence rates 1997-2001**

COUNTRY	1997	1999	2001	Dif 99-01
Botswana	25.1	35.8	38.8	3
Burkina Faso	7.2	6.4	6.5	0.1
Burundi	8.3	11.3	8.3	-3
Cameroon	4.9	7.7	11.8	4.1
CAR	10.8	13.8	12.9	-0.9
Congo	7.8	6.4	9.7	3.3
Cote d'Ivoire	10.1	10.8	9.7	-1.1
DRC	4.4	5.1	4.9	-0.2
Ethiopia	9.3	10.6	6.4	-4.2
Ghana	2.4	3.6	3	-0.6
Kenya	11.6	14	15	1
Lesotho	8.4	23.6	31	7.4
Malawi	14.9	16	15	-1
Mozambique	14.2	13.2	13	-0.2
Namibia	19.9	19.5	22.5	3
Nigeria	4.1	5.1	5.8	0.7
Rwanda	12.8	11.2	8.9	-2.3
South Africa	12.9	19.9	20.1	0.2
Swaziland	18.5	25.3	33.4	8.1
Togo	8.5	6	6	0
Uganda	9.5	8.3	5	-3.3
Tanzania	9.4	8.1	7.8	-0.3
Zambia	19.1	20	21.5	1.5
Zimbabwe	25.8	25.1	33.7	8.6

Source: UNAIDS

This note is based mainly on an analysis of UNAIDS publications and the recently updated HIV/AIDS database produced by the US Bureau of the Census, which presents all HIV survey data for every country in the world since the mid 1980s. In addition, it has been possible to review other recent data from some high prevalence countries, in particular Botswana, Rwanda, Zambia and Zimbabwe.

### The evidence

Firstly, the data presented in UNAIDS's own biennial global monitoring reports indicates that infection levels may be declining in a relatively large number of countries. Table 1 presents UNAIDS estimates of adult (15-49) HIV prevalence rates (HPR) for the worst affected countries in country. Between 1999 and 2001, these HPRs did not increase in 11 out of the 24 listed countries. Clearly, one has to be wary about reading too much into a few years of data, but there are hopeful signs that the HIV tide is turning in more than just one or two countries.

Secondly, the results of recent surveys in Botswana and Rwanda show that HPRs are declining. In Botswana, the national 15-49 ANC rate fell from 38.5 per cent in 2000 to 35.4 per cent in 2002 and, in Rwanda, from 12.8 per cent in 1997 to 4.5 per cent in 2002. The 2001 UNAIDS estimate of 33.7 per cent for Zimbabwe is over-inflated because 25 per cent of the ANC test results were 'false positives'. The Ministry of Health in Zimbabwe has now published robust ANC survey results for 2002 that show a national 15-49 ANC rate of 24.6 per cent, which suggests that prevalence rates have remained largely unchanged since the mid-1990s.

Thirdly, declining adult HIV prevalence rates in a sizeable number of countries are being driven by lower levels of HIV prevalence among young people. Table 2 shows that for the 15-19 age group that this appears to be the case in seven of the nine high prevalence countries for which reasonable time-series data are available. The national 15-19 ANC estimate in Uganda halved in the space of three years (1993 to 1996). In Malawi, also, these same prevalence estimates fell at eight out of 10 ANC sentinel survey sites between 1995/96 and 2001, with the sharpest declines being recorded after 1999. However, HIV prevalence among pregnant teenagers in Zambia fell from 15.6 per cent in 1994 to 12.3 per cent in 1998, but then increased to 14.1 per cent in 2002. The ANC estimates for this group increased at 9 out of 15 sentinel survey sites during these four years. And, while HIV prevalence among teenagers in South Africa appears to be falling, the incidence of HIV among older cohorts has increased.

**Table 2: Antenatal clinic HIV prevalence rates for 15-19 year olds in Africa, 1990-2002**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Botswana			16.4	21.8	20.7	<u>32.4</u>	27.2	28	28.6	21.5	22.9	24.1	21
Ethiopia							15.4	<u>17.6</u>	15.2	9.9			
Malawi							20.4	14.9	14.2	<u>20.9</u>		14.4	
Namibia					5.7		11.4		<u>12</u>		11.9		11
South Africa			1.6	2.8	5.1	9	12.7	12.8	<u>21</u>	16.5	16.1	15.4	
Swaziland			4.7		17.8		25		25.6		26.3		<u>32.5</u>
Tanzania			4.9	4.2	2.9	5.6	5.3	6.3	6.7	<u>8.8</u>	7.8	8.2	
Uganda	21.6	<u>25.9</u>	19.6	19.5	12.5	12	12	8.7	8.6	8.5	9.3	4.7	
Zambia					<u>15.6</u>				12.3				14.1

Note: Highest figures to date under-lined

Source: HIV/AIDS database, US Bureau of the Census

Finally, the minimal amount of time-series population-based HIV survey data that is available show falling prevalence among youth in Uganda and Lusaka (Zambia) during the 1990s, but rising HIV prevalence in Tanzania.

### HIV prevalence among youth

The general consensus is that it is young Africans aged under-25 who are at the greatest risk of becoming infected with HIV. The very high estimates of HIV prevalence for the 15-24 age group that are presented in the UNAIDS global monitoring report appear to provide powerful support for this assertion. However, population-based survey evidence shows that:

- It is misleading to lump together all youth in a single, ten-year age group. This is because prevalence rates among both female and male teenagers aged 15-19 are typically two-three times lower than for the 20-24 year group. In most countries, prevalence rates are low in absolute terms at least up until the late teens, but then surge during the next two-three years (see Table 3). Often, though, the largest increase in HIV prevalence occurs in the mid-late 20s. This is particularly the case in South Africa for both females and males, and males in Tanzania (Kisesa Ward), Zambia and Zimbabwe. In Uganda, on the other hand, HIV prevalence tends to increase most rapidly among the 20-24 age group. Only in Kisumu, Kenya can it be shown that teenagers do appear to be at greatest risk of infection.

**Table 3: Population-based HIV prevalence rates in Africa, late 1990s-early 2000s (percentages)**

COUNTRY	SURVEY COVERAGE	YEAR	SEX	AGE						
				15-19	20-24	25-29	30-34	35-39	40-44	45-49
Eritrea	National	2001	F	0.6	4.3	2.4	1.4	4.2	1.3	0.9
			M	0.6	0	1.7	3.6	4.2	2.5	1.3
Mali	National	2001	F	1.4	1.6	3.2	3.2	2.8	1.1	0.9
			M	0.2	0.3	1.7	3.8	1.1	1.7	2.3
South Africa	National	2002	F	7.3	17.1	32	24.1	13.8	19	11.2
			M	4	8	22	24	18	12	12
Zambia	National	2001-02	F	6.6	16.3	25.1	29.4	22.6	17.3	13.6
			M	1.9	4.4	15	20.5	22.4	20.5	20.2
Benin	Cotonou (urban)	1997-98	F	2.4	3.8	4.8	3.5		2.6	
			M	0	2.3	6.7	3.9		3.8	
Cameroon	Yaounde (urban)	1997-98	F	3.9	9.3	11.2	9.9	7.3		
			M	0	1.4	3.1	9.1	5.7		
Kenya	Kisumu (urban)	1998	F	23.4	39	38.8	31.6		19.3	
			M	4.4	13.7	30	34.1		30.6	
	Mombasa	2001	F	3	8	14.3	14.1	14.2	9.1	
			M	2	1	8.1	14	14	9	
Tanzania	Kisesa (urban/rural)	1999-00	F	3	9.2	12.2	12.3	11.5	7.7	na
			M	0.9	4.6	9.6	11.4	13.7	8.4	na
	Mwanza (rural)	2001	F	0.7	3.3	8.1	6	7	2.7	
			M	0	3.1	5.1	6.9	4.7	7.9	
Zimbabwe	Rural (Mutasa)	1998-99	F	7	26.4	40	39.8	32.2	20.2	21.9
			M	1.1	8.4	25.8	47.4	39.4	32.8	33.3
Uganda	Rural (Masaka)	1999	F	0.9	10.1	19	20.6	14.7	7	3.5
			M	1	2.2	10.9	19	17	16	7.5
	Rural (Rakai)	2001	F	1	9	10.1	33.5	24		

Source: HIV/AIDS database, US Bureau of the Census

- The UNAIDS estimates appear to be much higher than the actual levels of HIV prevalence among the 15-24 group. The results of national population-based HIV surveys in high prevalence countries are only available for South Africa and Zambia<sup>3</sup>, but in both these countries the UNAIDS estimates are 2-3 times higher than those from the population-based surveys. Among males, even larger differences exist in Eritrea and Mali (see Table 4). If this is true for other countries, then the extent of the epidemic among young people is being exaggerated.
- HIV prevalence rates appear to be considerably lower among teenagers who are in rather than out of school. Data from surveys in Burundi, Eritrea, Mozambique, Tanzania and Zimbabwe show sizeable HIV prevalence rate differentials between these two groups.

<sup>3</sup> Nation wide population-based HIV testing has been included in the most recent DHS surveys in Malawi, Kenya and Uganda, but the results have not yet been published.

**Table 4: Comparison of UNAIDS and population-based HIV prevalence rate for the 15-24 age group (percentages), 2001-2002<sup>4</sup>.**

COUNTRY	FEMALE		MALE	
	UNAIDS	Pop-based	UNAIDS	Pop-based
Eritrea	4.3	6.6	2.8	0.3
Mali	2.1	1.4	1.4	0.3
South Africa	25.6	12.2	15.3	6
Zambia	21	12.5	8.1	3.2

Source: HIV/AIDS database, US Bureau of the Census

## CONCLUSIONS

Five main conclusions can be drawn from this analysis.

- ✓ There is a danger that advocacy is getting in the way of objective assessments of the level and trends of the AIDS epidemic in Africa.
- ✓ It is not possible to generalise about the epidemic across the continent.
- ✓ HIV prevalence rates are not increasing in most countries as is usually stated or implied.
- ✓ HIV prevalence among youth, and especially teenagers, is often being seriously over-estimated which, in turn, has important implications for HIV prevention programmes among youth<sup>5</sup>. Thus, only population-based survey data should be relied upon. Recent data is essential because infection levels can change very quickly in response to behavioural change. Uganda is the prime example.
- ✓ HIV prevention programmes need to be targeted more on out of school youth and adults in their mid-late twenties.

<sup>4</sup> UNAIDS figures are the mid-point of the minimum and maximum estimates for the 15-24 age group presented in the 2000 Global Report. The population-based figures are the average of the 15-19 and 20-24 age group prevalence rates.

<sup>5</sup> See P.S. Bennell, P.S. 2003. HIV prevalence among teenagers in Africa, mimeo, Brighton

