

## THE IMPACT OF THE AIDS EPIDEMIC ON TEACHER MORTALITY IN SUB-SAHARAN AFRICA

Teachers in Africa are regularly singled out as being a 'high-risk group' with respect to HIV and AIDS. In particular, in the high prevalence countries, it is expected that the epidemic will cut a 'swathe' through the teaching profession. For example, BBC World reported in November 2002 that one in seven teachers in Malawi were likely to die during 'this year alone'.

Two sets of reasons are usually advanced for why teachers in Africa are particularly 'prone' or vulnerable to HIV infection. First, the teaching profession is relatively young in most countries, which means that the large majority of teachers are in the highest HIV prevalence age cohorts. Also, in many countries, the teaching profession is female-intensive compared to the other key service delivery sectors (with the exception of health). Overall HIV prevalence rates among the adult population are generally significantly higher among females. And secondly, it is commonly suggested that teachers are more likely to engage in high-risk sexual behaviour compared to the rest of the adult population. This is mainly because they are relatively well off, are frequently posted from one school to another, and in the case of male teachers, it is alleged that sizeable numbers have sexual relations with their students.

Given the overall size and key role of teachers, it is surprising that no detailed HIV risk assessment of the teaching profession has yet been undertaken in any African country. These assessments are now relatively common in the private sector. They include voluntary anonymous testing in order to establish the exact profile of HIV infection among the workforce and knowledge, attitude and behaviour surveys of high-risk behaviours (especially alcohol consumption, multiple sexual partners including commercial sex workers and condom use).

In the absence of this information, the only way to assess the impact to date of the epidemic is to analyse mortality rates among teachers. But, even for a well-defined and high profile occupation such as teachers, comprehensive mortality data since the start of the epidemic is difficult to obtain in most countries in Africa. The table below summarises teacher mortality rates since the mid-late 1990s in eight high HIV prevalence countries in Eastern and Southern Africa. It is important to stress though that this data covers teacher deaths from all causes. In the case of mature epidemics (as in Uganda and Zambia), 65-80 per cent of deaths are likely to be AIDS-related whereas in countries (such as South Africa) where the epidemic is still in its earlier stages, this percentage is typically around 40-50 per cent.

**Absolute mortality:** The number of teachers who have died of AIDS-related illnesses is tragically high. However, mortality rates among teachers are much lower than has been suggested by most expert commentators as well as in the media. It is noticeable that, with the exception of Malawi and Zambia, mortality rates (for all causes) have not yet exceeded 1.5 per cent any of the remaining six countries for which data is available. Actual mortality rates are also much less than the 'projected' rates that have been estimated for these years using standard demographic models. In Zimbabwe, for example, one percent of all teachers died in 2001, which is four times less than the projected rate for that year. In Botswana, which has the highest HIV prevalence rates in the world, the difference is nearly six-fold (i.e. 3.0 percent projected and 0.55 per cent actual in 2002). In ZwaZulu Natal Province in South Africa, teacher mortality was projected to be over 1000 in 2001 when actual mortality was only 620.

In large countries, such as Tanzania or Kenya, an AIDS-related mortality rate of one per cent means that over 1000 teachers died in a particular year. This is an appalling loss of human life and is a tragedy for the affected teachers and their families. However, given the high overall levels of teacher attrition in most countries in sub-Saharan Africa, AIDS deaths account for only a relatively small proportion of total teacher 'wastage'. In Uganda, for example, teacher mortality was only 20-25 per cent of attrition when AIDS-related deaths among teachers peaked

in the mid-late 1990s. The ratio of total attrition to deaths was 12.0 to 0.4 per cent in Rwanda and 2.4 to 1.6 percent in Zambia in 2002. In Botswana, total teacher turnover (attrition plus transfers and study leave) was 14 per cent in 2001, which is over 25 times greater than total teacher mortality in that year.

### Teacher mortality rates in eight high HIV prevalence countries in Africa

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Botswana						0.7	0.6	0.5	0.5
Malawi – rural				1.0	1.8	3.6	2.5	2.2	1.9
Malawi – Blantyre				1.2	1.3	2.9	3.3	2.5	3.2
Namibia	0.1		0.6		0.5		0.4		
South Africa –KZN					0.6	0.7	1.0	0.9	
Tanzania							0.8	0.9	0.8
Uganda primary		0.9	1.0	1.1	0.9				
Uganda secondary		1.3	1.1	1.0	1.0	1.0	1.0		
Zambia				2.7			2.0	2.0	1.6
Zimbabwe						0.4	0.9	1.0	

Source: AbT impact evaluations (Namibia, Zimbabwe)<sup>1</sup>, Babcock Walters et al<sup>2</sup> (KwaZulu Natal), Bennell and Kadzamira (Malawi)<sup>3</sup>, Bennell et al<sup>4</sup>(Zambia), Tanzania (Teacher Service Commission), Bennell (Botswana)<sup>5</sup>, and Hyde et al (Uganda)<sup>6</sup>

**Relative mortality:** The evidence is patchy, but teacher mortality rates are usually considerably lower than for the adult population as a whole. Consequently, with respect to mortality, it would appear that teachers are not a high-risk group.

- In Malawi, mortality rates for primary and secondary school teachers were 1.01 per cent and 0.8 per cent respectively in 1998 compared to the overall mortality rate of 1.37 per cent for the 20-49 adult population. Given the age and gender profiles of teachers, one would have expected much higher mortality rates among teachers than for the adult population as a whole. A recent study on morbidity and mortality in the public service in Malawi<sup>7</sup> also found that mortality rates for teachers were considerably lower than expected. The standardised mortality rate measures the extent to which mortality is above average for a particular group. The SMRs were 95 and 61 for secondary and primary teachers respectively in 2000.
- In Botswana, teacher mortality rates were well under half the mortality rates of semi-unskilled public sector workers in 2000.
- In Zambia, a survey of secondary school students in April-May 2003 found that the mortality rate among fathers who are or were teachers was 11 per cent compared to an overall mortality rate of 18 per cent for fathers as a whole.
- At the national universities in Botswana and Malawi, mortality rates among junior support staff (cleaners, cooks, maintenance personnel, gardeners, etc) have been much higher than for academics. Cumulative mortality among lecturers and senior administrators at the main campus of the University of Malawi at Zomba was 8 per cent between 1997 and 2002 compared to 14 per cent among support staff. At the University of Botswana one lecturer and 19 support staff died in 1999/2000.
- Even within the teaching profession, mortality rates are typically higher among primary than secondary schoolteachers, who are better educated and usually receive higher salaries.
- Projected mortality rates for teachers are calculated on the assumption that teachers have the same HIV prevalence profile as the rest of the adult population. The fact therefore that actual mortality rates are usually much lower than projected mortality rates suggests that teachers are relatively less prone than the adult population as a whole.

- A tracer survey of nearly 5000 university and secondary school leavers in four African countries (Malawi, Tanzania, Uganda and Zimbabwe)<sup>8</sup> also found that the cumulative mortality rates for Form Four leavers were two-three times higher than for university graduates of roughly the same age.

**Mortality trends:** The table also shows that, with the exception of Zimbabwe and possibly KwaZulu Natal, mortality rates appear to be declining or have peaked in the six remaining countries. This is quite unexpected and suggests that, in terms of teacher deaths, the worst may be over, especially in countries that have mature epidemics such as Uganda and Zambia.

In Uganda, mortality rates among secondary school teachers were already falling in the mid-1990s and they also appear to have peaked among primary school teachers in 1997. In Zambia, mortality rates have fallen very appreciably - from 2.7 per cent in 1997 to 1.6 per cent in 2002. They also fell by one-third in Namibia between 1996 and 2000 and by 20 per cent in Botswana for both primary school and secondary teacher between 1999 and 2002. In Tanzania, teacher mortality may also have peaked, although only three years of data are available. In KwaZulu Natal, which is the worst affected province in South Africa, the total number of teacher deaths fell by nearly 11 per cent between 2000 and 2001.

In Malawi, a survey was undertaken in May 2003 of 38 primary and secondary schools located in two high HIV prevalence areas, namely Blantyre (the commercial capital) and Chiradzulu District (a contiguous, mainly rural area). Annual mortality rates were less than 1.0 per cent among secondary school teachers between 2000 and 2002, although the trend was upward at the rural secondary schools. Among primary school teachers, mortality rates have been much higher, but appear to have peaked in 1999 and 2000, certainly among the schools in Chiradzulu District.

Annual mortality rates among lecturers at the University of Malawi increased appreciably in the late 1990s, but then declined equally dramatically during 2001 and 2002. In marked contrast, though, mortality rates among the junior support staff were much higher and continued to increase between 1997 and 2002. A similar widening in mortality rates over time has also occurred among academic and junior support staff at the University of Botswana. Evidence of this kind suggests that, increasingly, it is lower socio-economic groups and, in particular, the poor who are being most seriously affected by the AIDS epidemic in Africa.

There are two main reasons for these declines in mortality among teachers and lecturers, namely changes in sexual behaviour and the increasing availability of anti-retroviral drugs. UNAIDS data shows that overall adult HIV prevalence rates had already peaked in over half of the high prevalence countries by late 2001. It was mainly in Southern Africa where prevalence rates continued to increase appreciably during the late 1990s up to 2001. Given the nature of the epidemic, mortality can be expected to continue to rise for some years to come. If, however, teachers changed their sexual behaviour well before the bulk of the adult population then this would explain why their mortality rates have already started to fall. This must be the main reason in countries such as Zambia, Malawi, and Uganda where life-prolonging anti-retroviral drugs have not been available at all.

The number of teachers in Botswana taking anti-retrovirals increased from 62 in 1999 to 474 (two per cent of the total in-post) in April 2002. The corresponding figures for Namibia are not available but, as in Botswana, teachers have been able to access ARVs through public medical aid schemes since the late 1990s. Despite the controversy surrounding ARVs in South Africa, it is very likely that significant numbers of affected teachers are also taking these life-prolonging drugs.

If teachers continue to change their behaviour and anti-retroviral drugs can be made available in all countries, there is every reason to believe that teacher mortality rates could fall quite

significantly and quickly throughout the continent. It is essential therefore that teacher deaths in all countries are carefully monitored, especially over the next 3-4 years. Governments and their development partners must also act decisively to design and implement effective AIDS in the workplace programmes for teaching staff at all schools. These programmes should comprise of three inter-related components namely, comprehensive risk assessment, imaginative HIV education activities, and the provision of anti-retroviral drugs for all affected teachers as well as other support measures to mitigate the impact of the epidemic on both individual teachers and schools.

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## REFERENCES

- <sup>1</sup> AbT Associates. 2002. Impacts of HIV/AIDS on education in Namibia, Draft summary report; The impact of HIV/AIDS on the education sector in Zimbabwe, Johannesburg.
- <sup>2</sup> Babcock Walters, P., C. Desmond, D. Wilson, W. Heard. 2003. Educator mortality in-service in KwaZulu Natal. HEARD. University of Natal.
- <sup>3</sup> Bennell, P.S. and E. Kadzamira. 2003. Teacher mortality at primary and secondary schools in Malawi 1997-2002. Forthcoming.
- <sup>4</sup> Bennell, P.S. with G. Bulwani and M. Mukahanzi. 2003. Strategic options for secondary education in Zambia: a preliminary assessment. Study prepared for the World Bank Secondary Education in Africa research programme. World Bank, Washington, Forthcoming.
- <sup>5</sup> Bennell, P.S. 2003. Teacher mortality in Botswana. Forthcoming.
- <sup>6</sup> Hyde, K., A. Ekatan, P. Kiage and C. Barasa. 2002. The impact of HIV/AIDS on formal schooling in Uganda, Centre for International Education, Brighton.
- <sup>7</sup> Malawi Institute of Management/UNDP. 2002. The impact of HIV/AIDS on human resources in the public sector in Malawi. MIM, Lilongwe
- <sup>8</sup> Al-Samarrai S. and P.S. Bennell. 2003. Where has all the education gone in Africa? Employment outcomes among secondary school and university leavers in four countries. Institute of Development Studies at Sussex University and Knowledge and Skills for Development, Brighton

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