

THE IMPACT OF THE AIDS EPIDEMIC ON PRIMARY AND SECONDARY SCHOOL TEACHERS AND UNIVERSITY STAFF IN MALAWI

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1. INTRODUCTION

Malawi has one of the highest HIV adult prevalence rates in sub-Saharan Africa. However, even at this advanced stage of the AIDS epidemic, remarkably little robust evidence is available on mortality levels and trends among the population as a whole as well as specific occupational groups. Teachers, in particular have been frequently singled out as being a 'high-risk group'. For example, a report by BBC World in November 2002 on the combined impact of AIDS and famine in Malawi concluded with the statement that 'one in seven teachers will die this year (2002) alone'.

The most reliable basis for any HIV/AIDS risk assessment is to select representative samples from the particular population or group under investigation and to conduct voluntary, anonymous (blind) testing for HIV using standard protocols. To date, however, no population-based HIV survey of teachers has been conducted in any high prevalence country in Africa. In the absence of this information, reliance has to be placed on an analysis of deaths among teachers. In the context of a mature epidemic with adult HIV prevalence rates in excess of 15 per cent, over 85 per cent of deaths below 50 years old are likely to be AIDS-related. Unfortunately, official statistics on mortality among teachers employed in the 5,000 primary and 700 secondary schools in Malawi are neither reliable nor up to date. The only way, therefore, to assess what the impact of the epidemic has been on teachers is to survey a sample of schools directly.

This paper summarises the main findings of a survey of teacher mortality (from all causes) based on 38 schools located in two districts in Malawi, namely Blantyre, the commercial capital and the contiguous, mainly rural district of Chiradzulu. Adult HIV prevalence was 24.0 percent in Blantyre² in 2001 and 17.2 per cent in Chiradzulu in 2001. The national adult HIV prevalence rate was estimated to be 14.7 per cent in 2001.

2. SURVEY DESIGN AND IMPLEMENTATION

The sample frame for the survey was 30 primary and 10 secondary randomly selected schools equally divided between the two districts. However, data from one primary and one secondary school could not be obtained. A total of 1136 teachers were employed at these 38 schools (primary 977 and secondary 159) in May 2003. Given the relatively small number of secondary school teachers in the sample, particular care is needed in interpreting levels, patterns and trends in mortality among this group.

The head teacher at each survey school was asked to provide the following information for every teacher who had died (from whatever causes) between 1997 and 2002: gender, date of death, age at death, years of teaching experience, academic level, and professional training. In addition, information was requested on the total number of teachers who were in-post for each of these

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² The official prevalence rate combines both Blantyre City and Blantyre rural. Consequently, the prevalence rate for Blantyre City could be higher than for the district as a whole.

years in order that mortality rates could be calculated. No attempt was made to identify teachers who had died of AIDS-related illnesses. It is important to emphasise, therefore, that not all teacher deaths were due to AIDS.

Two research assistants, Elita Chiyala and Patrice Nkhonjera visited the schools during a two-week period in mid-May 2003. Apart from the two above-mentioned schools, head teachers were able to provide accurate information on both teacher deaths and total numbers employed.

The same information was collected for academic and support staff who had died at Chancellor College, Zomba, which is the main campus of the University of Malawi, between 1997 and April 2003.

3. TEACHER DEATHS

The mortality rates for primary and secondary school teachers at the survey schools between 1997 and 2002 in Blantyre and Chiradzulu Districts are presented in Table 1. The large differences in these rates according to type of school, gender, and location are particularly striking which, to some extent, is a reflection of the heterogeneous composition of the teaching force in Malawi. It is not possible, therefore, to make broad generalisations about the impact of the epidemic on teachers as a whole. Nor are differences in teacher mortality rates by location necessarily a reliable indicator of the spatial incidence of HIV infection among teachers, mainly because transfers are quite common, especially when teachers with HIV become ill.

Table 1: Annual mortality rates for primary and secondary school teachers, 1997-2002 (percentages)

PRIMARY

	1997	1998	1999	2000	2001	2002	Cumulative Mortality	Av annual mortality
BLANTYRE								
Female	1.0	1.2	3.1	2.6	2.4	2.8	13.0	2.2
Male	2.5	2.5	2.7	7.4	3.5	6.8	25.4	4.2
All	1.3	1.4	3.1	3.3	2.6	3.4	15.0	2.5
CHIRADZULU								
Female	3.0	2.8	3.7	2.0	2.6	1.0	15.1	2.5
Male	0.0	2.2	4.8	3.4	2.0	1.4	13.8	2.3
All	1.4	2.4	4.3	2.8	2.3	1.2	14.5	2.4

SECONDARY

	1997	1998	1999	2000	2001	2002	Cumulative Mortality	Av annual mortality
BLANTYRE								
Female	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.3
Male	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.3
All	0.0	0.0	0.0	0.9	1.0	0.0	2.0	0.3
CHIRADZULU								
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Male	0.0	0.0	2.6	2.4	2.6	4.4	12.0	2.0
All	0.0	0.0	2.2	2.0	2.1	3.8	10.1	1.7

Age and grade

The age distribution of teacher deaths is fully consistent with a full-blown AIDS epidemic (see Table 2). Almost three-quarters of female teachers who died during this period were aged between 25 and 39 and 82 per cent of male teachers who died were between 30 and 44. There

were no deaths among the five per cent of male teachers aged 20-24, which strongly suggests that the bulk of HIV infection among males occurs in their mid to late 20s and not during adolescence as is frequently suggested.

Teachers in Malawi have a young age profile, which is mainly due to the mass recruitment of school leavers after the introduction of free primary schooling in 1994. Table 3 shows that over two-thirds of the teachers who died were in the lowest promotion grade (PT4).

Gender

Average annual mortality rates are much higher for male teachers at both primary and secondary schools. Primary school teachers in Chiradzulu District are the exception; the cumulative gender differential over the period 1997 and 2002 is minimal at these schools. There were no major differences in the overall age profiles of male and female teachers during the late 1990s (see Kadzamira et al, 2001). Thus, it can be concluded that the age-adjusted mortality rates have been appreciably higher for male teachers, especially in urban areas. This is surprising given the much higher HIV prevalence rates among the female adult population in most countries. The reasons for this need to be investigated.

Table 2: Percentage age distribution of deaths among primary school teachers

Age	BLANTYRE		CHIRADZULU	
	Female	Male	Female	Male
20-24	3	0	0	0
25-29	21	7	31	0
30-34	30	38	39	44
35-39	24	14	0	33
40-44	14	31	15	6
45-49	5	7	8	6
50>	4	3	8	11
Number	87	32	13	18

Mortality among female teachers at secondary schools in both locations has been minimal. No female secondary teacher died at the four survey secondary schools in Chiradzulu District during this six-year period.

Only 17 per cent of primary school teachers at the survey schools in Blantyre were male and 41 per cent in Chiradzulu District. Thus, the relatively high proportion of female teachers in primary schools has meant that these schools may have been less affected by the epidemic than more male-dominated organisations in both the public and private sectors.

Table 3: Promotional grade and professional qualifications of deceased teachers at primary schools 1997-2002 (rounded percentages)

Promotional grade	BLANTYRE		CHIRADZULU	
	Female	Male	Female	Male
PT1	2	0	0	0
PT2	5	10	0	0
PT3	8	13	6	17
PT4	67	74	71	67
TT	18	3	24	17
Professional qualifications				
T2	30	44	18	17
T3	53	53	59	67
T4	1	0	0	0
TT	16	3	24	17

School type

Annual mortality rates have been consistently much higher among primary than secondary school teachers in both districts. The main differences between these two groups are that secondary school teachers are better educated and trained. Again, more research on the knowledge, attitudes and behaviour of teachers with respect to high HIV risk behaviour is needed in order to understand why mortality rates are so much higher among primary school teachers. It could be that secondary teachers engage in lower risk behaviour and/or they have receive better medical care and have a more nutritious diet.

Education and training

The majority of primary school teachers who died were poorly educated and trained. Well over three-quarters of deceased teachers in Chiradzulu District had only the Junior Certificate of Education, which is taken at the end of Form 2.³ Even in Blantyre, only one-third of female and slightly less than one-half of the deceased male primary school teachers had passed the Malawi School Certificate of Education, which is taken at the end of Form IV.

Four out of five teachers who had died had successfully completed the basic pre-service teacher training.

Location

With the exception of female primary school teachers, aggregate mortality rates were not appreciably higher in one district or the other. HIV prevalence rates are generally considerably higher in urban areas. Thus, if the HIV profile among teachers is the same as the adult population as a whole, one would expect that mortality rates among teachers working at urban schools would be appreciably higher. As noted earlier, however, a major complicating factor is that teachers in rural areas who have AIDS-related illnesses may transfer to schools in major urban areas so that they are can more easily access specialist clinics and referral hospitals. This would considerably increase the impact of the epidemic in urban schools and lower the impact in rural schools.

Cumulative mortality

Around one in seven primary school teachers died in the six-year period between 1997 and 2002 (see Table 1). The worst affected group was male teachers at primary schools in Blantyre, one-quarter of whom died during this period. Cumulative mortality among teachers at the secondary schools in Chiradzulu District was slightly lower than for primary school teachers, but it was nearly four times less among secondary school teachers in Blantyre.

Some schools have been far more affected by teacher deaths than others. Nearly one-quarter of the primary schools in Blantyre lost fewer than 10 per cent of their teachers between 1997 and 2002, but at another one-quarter of schools, over 20 per cent of teachers died (see Table 4). Four out of a total of the 20 survey schools in Chiradzulu District had no teacher deaths at all during this period and another three had just one death.

³ Most JCE holders have completed four years of secondary education, but have failed to obtain a passing grade in the Malawi School Certificate of Education, which is taken at the end of Form IV.

Table 4: Cumulative primary teacher mortality (1997-2002) among sampled schools in Blantyre and Chiradzulu (rounded percentages)

Cumulative deaths as % of total in-post	BLANTYRE	CHIRADZULU
<5	0	23
5 to 10	27	15
11 to 15	47	15
15 to 20	0	31
20 to 25	27	15

Note: Average total in-post 1997-2002

Overall attrition

Teacher attrition rates at primary schools have been in the region of 8-10 per cent since the mid 1990s. This means that teacher deaths accounted for around 25-30 per cent of total attrition during the period 1997-2002⁴. Thus, while teacher deaths have been tragically high, other types of attrition accounted for the bulk of total teacher 'wastage', even during what could well be the height of the AIDS epidemic in Malawi.

4 UNIVERSITY STAFF DEATHS

Mortality rates for academic and support staff at Chancellor College, the main campus of University of Malawi, at Zomba in the Southern Province are presented in Table 5. A total of 17 lecturers (16 male and 1 female) died between 1997 and 2002. The annual mortality rate for academics averaged 1.22 per cent during this period.

Year	Academic and senior administration			Junior support staff		
	Female	Male	Total	Female	Male	Total
1997	0	0	0	0	4	6
1998	0	0	0	2	1	3
1999	0	8	8	2	14	16
2000	0	3	3	2	13	15
2001	1	1	2	2	10	12
2002	0	4	4	4	13	17
Total	1	16	17	12	55	77

5. RELATIVE MORTALITY

It has been widely asserted that teachers are a 'high-risk group' with respect to HIV infection mainly because the majority of teachers are young, male, and mobile and have relatively high incomes, especially in rural areas where poverty is endemic. However, by the late 1990s, there was no strong (either positive or negative) relationship between HIV prevalence and educational attainment in Malawi.

⁴ Due to poor data management system, no official figures exist for teacher attrition in secondary schools.

Apart from the Population Census in 1998, there are no other sources of more recent information on mortality among the adult population as a whole and by socio-economic and other groups. The crude death rate for the adult population in 1998 was 2.1 per cent compared to 1.0 per cent for both primary and secondary school teachers in that year. A study by the Malawi Institute of Management also presents more recent data that also indicates that relative mortality is relatively low among teachers. The standardised mortality rates for primary and secondary school teachers were 43 and 59 per cent respectively for the ten year period 1990-1999, which means that teacher mortality rates were significantly lower than for the adult population as a whole.

An analysis of deaths among staff at Chancellor College also shows that mortality rates among academics have been considerably lower than among junior support staff. Cumulative mortality rates were 8.8 and 14.0 per cent among lecturers and junior support staff respectively. Annual mortality rates for lecturers were, on average, much lower than for primary school teachers, but higher than for secondary school teachers.

6. MORTALITY TRENDS

Considerable care is called for in interpreting mortality trends. In particular, there are large annual fluctuations among some groups of teachers. Among primary school teachers in Chiradzulu District, mortality rates fell steadily between 1999 and 2002. However, there has no such clear downward trend among both female and male teachers at schools in Blantyre. Looking at mortality trends at individual schools reveals that at only one of the 15 primary schools in Chiradzulu District were teacher deaths increasing. In Blantyre, teacher deaths were declining at nine primary schools and increasing at five others.

Mortality rate trends seem to be different among secondary schools teachers. In Blantyre, mortality rates increased slightly in 2000 and 2001, were zero in 2002, but increased appreciably for males during the first four months of 2003. In Chiradzulu, the annual mortality for male teachers increased from zero in 1997 and 1998 to 2.2 per cent in 2000 and 3.8 per cent in 2002. But, given the small size of the sample, these trends may not be reflected in the secondary school teacher population as a whole.

Turning to the university, mortality rates declined significantly among academic staff at Chancellor College – from 2.6 per cent in 1999-2000 to 1.4 per cent in 2001-02. In marked contrast, however, annual mortality rates among junior support staff tripled between 1997-98 and 2001-02 (see Table 6). Mortality rates for the adult population as a whole are not known, but junior support staff are closer to the overall adult population in terms of educational attainment and income than university lecturers.

Table 6: Mortality rates for academic and support staff at Chancellor College (percentages)

Year	Academics	Support staff
1997-1998	0.0	1.0
1999-2000	2.6	2.9
2001-2002	1.4	3.1

Note: Average mortality rate over two-year periods

There are two possible reasons for the observed declines in mortality rates among both teachers and university lecturers, namely less risky sexual behaviour and greater access to anti-retroviral drugs. Given that these drugs are unlikely to have been available to teachers, behavioural change has to be the dominant reason for the decline in mortality.

7. CONCLUSION

The results of this small survey of primary and secondary schools in two contiguous districts in southern Malawi highlight the appalling toll of the AIDS epidemic on teachers. In the six years between 1997 and 2002 approximately one in seven primary and one in 15 secondary teachers died. Given the young age profile of the teaching profession in Malawi, the large majority of these deaths were likely to have been AIDS-related. The impact on schools is twofold, namely high levels of absenteeism among teachers with full-blown AIDS and the replacement of teachers who are too sick to work or who eventually die. In such a resource-poor and fragile education system as in Malawi, these impacts can seriously affect education provision. This is especially the case for rural schools, which are already very under-staffed. In contrast, schools in urban areas are typically over-staffed and are, therefore, usually much better able to cope with increased teacher absenteeism and mortality.

More positively, though, the results of the survey suggest that mortality rates may have peaked among some groups of teachers, including rural primary school teachers who account for nearly 90 per cent of the entire national teaching force. But, clearly, more schools in other districts need to be surveyed before it is possible to reach firm conclusions. The survey also shows that the overall levels of teacher mortality (even in two relatively high prevalence districts) are much less than those reported in the national and international media.

Finally, even at this relatively late stage of the epidemic in Malawi, the survey highlights the urgent need for a comprehensive AIDS in the Workplace programme that targets teachers and other staff in all 6000 or so schools and other education and training institutions. This programme should have two main goals, namely to reduce significantly any further HIV infection among teachers, and to support teachers who are living with AIDS and thereby mitigate the impact of the epidemic on schools. In particular, anti-retroviral drugs should be made available to all affected teachers.

REFERENCES

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