

FINAL DRAFT

IMPACT ASSESSMENT OF HIV/AIDS ON THE EDUCATION
SECTOR

MINISTRY OF EDUCATION

MBABANE SWAZILAND

November 29, 1999



Preface

By the Principal Secretary

The HIV/AIDS epidemic has already hit Swaziland hard. HIV/AIDS infection rates had, by the mid-1990s, already reached alarming proportions, with an estimated cumulative 50,000 AIDS-related deaths by the year 1999 and an expected total 300,000 deaths by the year 2016.

In the face of the epidemic the Ministry of Education is concerned about its ability to continue to meet its mandate while playing its central role in reducing the epidemic's spread and in mitigating its impacts on society overall. For this reason, the Ministry commissioned a sectoral assessment of the impact of HIV/AIDS on the nation and on the education sector in particular.

This report presents findings from the study and a follow-up workshop involving educators from all levels and representatives from a number of ministries. Key findings are as follows:

- 1) There will be a drop in the number of school aged children, due to high death rates among women in their child-bearing years and the deaths of HIV positive children. The uptake of education may decline, due to the growing unaffordability of education to many homesteads, particularly homesteads looking after AIDS orphans.
- 2) Despite this slowing demand, the Ministry of Education will have to more than double the output of teachers being trained at various institutions *just to meet* pupil:teacher ratios existing in 1997, as well as expand the number of administrators in the system. If this does not occur, pupil:teacher ratios will fall below levels found at independence, exacerbating impacts on education quality, teacher resignation, etc.
- 3) The HIV/AIDS epidemic will strain resource allocation to the educational process. Children will become increasingly traumatised as they see sick teachers, having left sick family members at their homesteads. The extensive development of an already heavily burdened curriculum is required in the area of sex

education, taking more time to deal with the illness and death of educators, adopting learner-centred educational approaches that are more efficient than teacher-centred approaches and more able to deal with larger class sizes, allocating more resources towards dealing with homesteads affected by the HIV/AIDS epidemic so that children can still attend school, and spending more time working with community members on how to bring the epidemic under control.

The pandemic will, in short, require that fewer people with fewer resources do much more just to keep the educational system functioning and playing its role in stemming the tide of the epidemic.

While carefully considering its response to the supply, demand and process issues arising from the epidemic, the Ministry cannot lose site of the fact that the education system itself needs to begin a process of immediate integration of HIV/AIDS information, education, communications and counselling into its day-to-day activities. There is, in short, no need to wait for the planning process to be completed before doing something now at the local, regional and national levels to provide interim 'stop-gap' measures.

As readers will note when considering the findings and recommendations contained in the executive summary, this report and the workshop were only the first steps in the process of coming to terms with the epidemic. **By the middle of the year 2000, this Ministry intends to be able to look back proudly on the fact that it responded with a sense of urgency to Swaziland's national AIDS disaster.**

Acknowledgements

This Assessment of the Impact of HIV/AIDS on the Education Sector in Swaziland was prepared under the leadership of a Core Committee whose members were drawn from among the Ministry of Education's planners, managers and administrators. Members of this Core Committee ensured the involvement of all sections and staff of the Ministry and its institutions and wish to express their gratitude to all those who gave freely of their time and co-operation to the preparation of this report.

In addition, the assistance of other Ministries and organisations was sought, and information and data were provided by the Central Statistics Office, the Ministries of Health (particularly the Swaziland National AIDS Programme) and Economic Planning and Development, and teacher training institutions. Their assistance is gratefully acknowledged.

The assistance of those non-governmental organisations providing Information, Education, Communications and Counselling services regarding HIV/AIDS, especially SHAPE, FLAS and the Salvation Army Clinic were particularly important in the preparation of this report, and are thanked for their important assistance.

Finally, headteachers and their deputies, teachers, parents/guardians, students at the schools surveyed and out-of-school youngsters made themselves available for interview. Their willingness to participate in discussions and interviews, answering difficult questions about HIV/AIDS and sexual knowledge and attitudes, is gratefully acknowledged.

Principal Secretary, Ministry of Education

Table of Contents

Preface by the Principal Secretary, Ministry of Education
Acknowledgements
Table of Contents
List of Tables
List of Figures
List of Abbreviations
Glossary of Terms

Executive Summary: Findings and Recommendations	ES1
Introduction	ES1
Findings	ES2
Finding 1: AIDS Impacts on the Population	ES2
Finding 2: “We Are Confused”	ES3
Finding 3: Educating the Nation	ES4
Finding 4: Affordability	ES5
Recommendations	ES6
Recommendations From Parents/Guardians, Educators and Students	ES6
Workshop and Report Recommendations: General	ES8
Workshop and Report Recommendations: Specific	ES10
Chapter 1: Introduction	1
Introduction	1
Statement of the Problem	2
Scope and Character of the Epidemic	2
Possible Impacts of the Epidemic on the Education Sector	3
Terms of Reference	4
Background	4
Issues to be Investigated	5
Structure of the Report	6
Front Section	6
Introduction and Approach	6
Demographic Impacts	7
Field Findings	7
Annexes	7
Summary	7

Chapter 2: Approach and Methodology	9
Introduction	9
Rationale for the Data Collection Approaches	10
Primary Data Collection	10
Data Compilation	10
Primary Data Collection	11
Focus Group Discussions	11
Key Informant Interviews	11
Secondary School Interviews	12
Primary School Discussions	12
Orphans/Drop-Out Discussions	13
Secondary Data Collection	13
The Education Sector	13
The HIV/AIDS Epidemic	13
Modelling	14
Introduction	14
Spectrum System of Policy Models	14
Base Projection	15
Base Year Population	15
Fertility	16
Mortality	16
International Migration	17
HIV/AIDS Projections	17
Adult HIV Prevalence	18
HIV/AIDS Parameters	19
Incubation Period	19
Age and Sex Distribution of New Infections	20
Information Gaps	20
Summary	20
Chapter 3: Demographic Impacts of the HIV/AIDS Epidemic	22
Introduction	22
Adult HIV Prevalence	23
Number of Adults Alive With HIV	24
Deaths Due to AIDS	25
Total Population and the Impact of HIV/AIDS	27
Orphans	32
Possible Intervention Effects	35
Summary	36

Chapter 4: Demographic Impacts on the Education Sector	37
Introduction	37
Demand for Education	38
Introduction	38
Primary School Enrolment	39
Past Trends	39
Projections	40
AIDS/no AIDS Comparisons	43
Secondary School Enrolment	44
Past Trends	44
Projections	45
Supply	47
Introduction	47
Existing Situation	47
Projections	48
Costings	51
Teacher Training	51
Sick and Death Benefit Costs	52
Summary	53
Chapter 5: Findings From Field Interviews	55
Introduction	55
HIV/AIDS Prevention and Activities	56
Knowledge	56
Parents/Guardians	56
Teachers	58
Anti AIDS Clubs	59
Secondary School Children	60
Primary School Children	60
Lower Primary	61
Upper Primary	61
Out of School Youth	61
Attitudes and Perceived Problems	63
Parents and Guardians	63
Teachers	65
Secondary School Children	65
Perceived Problems	66
Teacher/Student Relations	66
‘Sugar Daddies’	67
Abuse	67
Perceived Impacts on the Education Sector	68
Demand for Education	68
Supply of Education	68
Costs	69
Education Sector Response to the Epidemic	69

Introduction	69
Policies on HIV/AIDS	70
Sex Education	70
Condom Availability	71
Guidance and Counseling	71
Peer Education and Anti-AIDS Clubs	73
Parents Committees	74
Affordability and Flexibility	74
Out-of-School Youth	74
School Health Teams	76
Summary	76
Chapter 6: Recommendations From the Field	78
Introduction	78
HIV/AIDS Education	78
HIV/AIDS Attitudes	81
HIV/AIDS Prevention	82
Summary	85
Bibliography	
Annexes	
Annex A: Detailed Findings	A1
Annex B: Discussion of Modelling	A54
Annex C: Detailed Costings	A59
Annex D: Data Collection Instruments	A63
Annex E: Workshop Findings and Information	A97

List of Tables

Table 4.1	Primary School Enrolment (1970-1997)	39
Table 4.2	Total Projected Primary School Population Including AIDS Deaths Impacts (1998-2016) (inc. repeaters) (assuming 100% enrolment)	42
Table 4.3	Secondary School Enrolment (1970-1997)	44
Table 4.4	# of Teachers and # of Pupils in the System and the Pupil:Teacher Ratio	49
Table 4.5	Number and Percent of Teachers Required to Maintain a 33.9:1 Ratio of Pupils to Teachers	50
Table 4.6	Additional Costs Arising from Additional Teacher Training Requirements	51
Table 4.7	Additional Costs Arising from AIDS-Related Deaths and Illness	52
Table A1	Number of Adult Swazis HIV Positive and Adult HIV Prevalence (Age 15+) (Males, Females and Total) (1991-2016)	A1
Table A2	Annual and Cumulative AIDS Death by Year (1991-2016)	A2
Table A3	Population Aged 5-18 With and Without AIDS (1991-2016)	A3
Table A4	Total Population With and Without AIDS (1991-2016)	A4
Table A5	Total Deaths With AIDS and Without AIDS (1991-2016)	A5
Table A6	Number of Orphans (Children Under 15 Whose Mothers Have Died of AIDS) (1991-2016)	A6
Table A7	Deaths by Age With and Without AIDS (5-Year Intervals)	A7
Table A8	Total Population With and Without AIDS by Age (5-Year Intervals)	A10
Table A9	Number of People Infected With HIV by Age and Sex (Still Living by Year)	A13
Table A10	Population Projections Without and With AIDS by Age Cohort (4 Year Olds) (1991-2016)	A26
Table A11	Population Projections Without and With AIDS by Age Cohort (5 Year Olds) (1991-2016)	A27
Table A12	Population Projections Without and With AIDS by Age Cohort (6 Year Olds) (1991-2016)	A28
Table A13	Population Projections Without and With AIDS by Age Cohort (7 Year Olds) (1991-2016)	A29
Table A14	Population Projections Without and With AIDS by Age Cohort (8 Year Olds) (1991-2016)	A30
Table A15	Population Projections Without and With AIDS by Age Cohort (9 Year Olds) (1991-2016)	A31
Table A16	Population Projections Without and With AIDS by Age Cohort (10 Year Olds) (1991-2016)	A32
Table A17	Population Projections Without and With AIDS by Age Cohort (11 Year Olds) (1991-2016)	A33
Table A18	Population Projections Without and With AIDS by Age Cohort	

	(12 Year Olds) (1991-2016)	A34
Table A19	Population Projections Without and With AIDS by Age Cohort (12 Year Olds) (1991-2016)	A34
	(13 Year Olds) (1991-2016)	A35
Table A20	Population Projections Without and With AIDS by Age Cohort (13 Year Olds) (1991-2016)	A35
	(14 Year Olds) (1991-2016)	A36
Table A21	Population Projections Without and With AIDS by Age Cohort (14 Year Olds) (1991-2016)	A36
	(15 Year Olds) (1991-2016)	A37
Table A22	Population Projections Without and With AIDS by Age Cohort (15 Year Olds) (1991-2016)	A37
	(16 Year Olds) (1991-2016)	A38
Table A23	Population Projections Without and With AIDS by Age Cohort (16 Year Olds) (1991-2016)	A38
	(17 Year Olds) (1991-2016)	A39
Table A24	Population Projections Without and With AIDS by Age Cohort (17 Year Olds) (1991-2016)	A39
	(18 Year Olds) (1991-2016)	A40
Table A25	Population Projections Without and With AIDS by Age Cohort (18 Year Olds) (1991-2016)	A40
	(19 Year Olds) (1991-2016)	A41
Table A26	Under-five Mortality Rates (per 1000 live births) (1991-2016)	A41
Table A27	Crude Death Rate (per 1000 population) (1991-2016)	A42
Table A28	Projected Primary School Aged Population by Grade (1998-2016) (inc. 16% repeater rate)	A42
		A44
Table A29	Projected Primary School Aged Population (AIDS/no-AIDS Comparison) (1999-2016) (inc. a 16% repeater rate)	A44
		A45
Table A30	Projected Secondary School Aged Population (AIDS/no-AIDS Comparison) (1998-2016) (inc. an 11% repeater rate) (assuming 100% enrolment rate)	A45
		A46
Table A31	Projected Secondary School Aged Population (AIDS/no-AIDS Comparison) (1998-2016) (inc. an 11% repeater rate) (assuming the 1990s enrolment trends continue at 5.3% per annum)	A46
		A47
Table A32	Secondary School Students: Knowledge	A47
Table A33	Secondary School Students: Knowledge by Sex and Location	A48
Table A34	Secondary School Students Knowledge Statements	A49
Table A35	Secondary School Students Knowledge Statements by Sex and Location	A50
		A51
Table A36	Secondary School Students Attitudinal Statements	A51
Table A37	Secondary School Students Attitudes Statements by Sex and Location	A52
		A53

List of Figures

Figure 3.1	Adult HIV Prevalence (1991 to 2016)	23
Figure 3.2	Number of Adults Alive With HIV by Year (1991-2016)	24
Figure 3.3	Annual and Cumulative AIDS Deaths by Year (1991-2016)	26
Figure 3.4	Annual Death Rates With and Without AIDS	27
Figure 3.5	Population of Swaziland With and Without AIDS (1991-2016)	28
Figure 3.6	Population Aged 5-18 With and Without AIDS (1991-2016)	29
Figure 3.7	Percent <u>Decline</u> in Population Cohort by Age and Corresponding Grade - Primary School Level (1991-2016)	30
Figure 3.8	Percent <u>Decline</u> in Population Cohort by Age and Corresponding Grade - Secondary School Level (1991-2016)	31
Figure 3.9	AIDS Orphan Population by Year (Children Who Have Lost Their Mothers or Both Parents) (1991-2016)	33
Figure 4.1	Projected Primary School Aged Population By Grade (1998-2016) (inc. repeaters)	41
Figure 4.2	Projected Primary School Aged Population (AIDS/no-AIDS Comparison) (1998-2016) (inc. a 16% repeater rate)	43
Figure 4.3	Number of Swazis of Secondary School Age (13-17) With and Without AIDS Assuming 100% Enrolment (1998-2016) (# includes 11% repetition rate)	45
Figure 4.4	Number of Swazis of Secondary School Age (13-17) With and Without AIDS Assuming Existing Enrolment Trends (1998-2016) (# includes 11% repetition rate)	46
Figure 4.5	Projected Availability of Teachers (Assuming a 3% per annum growth in the # of people in the age range 20 to 50 No AIDS scenario)	48

List of Abbreviations

AIDS	Acquired Immuno Deficiency Syndrome
AIM	AIDS Impact Model
CDR	Crude Death Rate
DemProj	Demographic Projections
FGD	Focus Group Discussions
FLAS	Family Life Association of Swaziland
HIV	Human Immunodeficiency Virus
IAP	Interested and Affected Parties
IEC	Information, Education, Communication
IMR	Infant Mortality Rates
KAP	Knowledge, Attitudes and Practice
KII	Key Informant Interviews
MOE	Ministry of Education
NUD*IST	Non-numerical Unstructured Data Indexing Searching and Theorizing
NGO	Non Governmental Organisation
SASO	Swaziland AIDS Support Organisation
SHAPE	School Health, AIDS/HIV and Population Education in Schools
SNAP	Swaziland National AIDS/STDs Programme
STDs	Sexually Transmitted Diseases
SWAGAA	Swaziland Action Group Against Abuse

SWOT	Strengths, Weaknesses, Opportunities and Threats Analysis
TFR	Total Fertility Rate
TOR	Terms of Reference

Glossary of Terms

AIDS	Acquired immuno deficiency syndrome, a collection of symptomatic conditions caused by the Human Immunodeficiency Virus.
AIDS Orphans	A child aged 0-15 who has lost her/his mother, or who has lost both parents to AIDS.
Asymptomatic HIV Infection	The stage of HIV infection prior to the development of illness or clinical signs and symptoms.
Base Year	Year upon which projections are based.
Counseling	Dialogue between a person in need and a care provider with the aim of reducing the stressful impact of HIV/AIDS on the individual and preventing transmission of HIV infection. Information, education and psychological support are given in a way which allows the individual to make decisions that facilitate preventive behaviours.
Demographic	Relating to the study of people.
Dropout Rates	The percentage of students in the educational system who are no longer able to attend school.
Epidemic	A situation where a disease is prevalent over an entire population.
Epidemiology	The study of the incidence, distribution and determinants of an infection, disease or other health-related event in a population. Epidemiology can be thought of in terms of who, where, when, what and why. That is, who has the infection/disease, where are they located geographically, and in relation to each other, when is the infection/disease occurring, what is the cause, and why did it occur.
Focus Group Discussion	A discussion held among a small group of people (usually 5-9) on a specific set of issues. Usually comprised of people who are in a similar situation, or are alike in another way.

Heterosexual	Sex between men and women.
HIV	Human Immunodeficiency Virus, the virus that causes AIDS. Two types of HIV are currently known: HIV-1 and HIV-2. Worldwide, the predominant virus is HIV-1. Both types of virus are transmitted by sexual contact, through blood, and from mother to child, and they appear to cause clinically indistinguishable AIDS. However, HIV-2 is less easily transmitted, and the period between initial infection and illness is longer in the case of HIV-2.
HIV Infection	HIV is primarily a sexually transmitted infection, passed on through unprotected penetrative sex. The virus can also be transmitted through blood transfusions, the use of unsterilised injection equipment or cutting instruments and from an infected woman to her fetus or nursing infant. While some individuals experience mild HIV-related disease soon after initial infection, nearly all then remain well for years (see Asymptomatic HIV Infection). Then, as the virus gradually damages their immune system, they begin to develop illnesses of increasing severity, characterised by various combinations of symptoms and diseases, such as diarrhoea, fever, wasting, fungal infections, tuberculosis, pneumonia, lymphoma, failure to thrive and Kaposi's sarcoma.
HIV Sentinel Survey	The systematic collection and testing of blood from selected populations at specific sites for the purpose of identifying trends in HIV prevalence over time and location. For example, pregnant women attending antenatal clinics.
Immunodeficiency	The inability of the immune system to satisfactorily protect the body, which results in an increased susceptibility to various cancers and opportunistic infections.
Incidence	The frequency of new infections during a designated time period expressed as a proportion of

the population at risk of the infection, disease or other health-related event.

Incubation Period	The time interval between HIV infection and the onset of AIDS.
Infectiousness	The relative ease with which a disease is transmitted. The degree of Infectiousness of HIV varies over the course of the incubation period, and is probably highest when people are first infected (prior to development of antibodies) and when they are symptomatic.
Interested and Affected Parties	Those who, due to their position or influence, are key parties to be consulted with reference to an issue.
Intervention	A set of activities through which a strategy is implemented. For example, promoting safer sexual behaviours is one intervention to reduce sexual transmission of HIV.
Intravenous	Within a vein or veins. It is the introduction of a solution into a vein, usually through a needle.
Key Informant Interview	One-on-one interviews with those who, by their position or through their influence, are interviewed with regard to an issue or set of issues.
Model	A model is a construct that is developed in an attempt to represent the real world. Models are usually expressed in the form of a mathematical equation or set of equations that represent an object or a system.
Morbidity Rates	The percentage ill over a particular span of time.
Mortality Rates	The percentage who die during a particular span of time.
Opportunistic Infections	Infections that are caused by microorganisms which the body's immune system is normally able to fight off. When the immune system is weakened or destroyed, as in HIV infection, opportunistic infections can then take hold.

Person Living with HIV	An individual infected with HIV, also called a person who is HIV positive or a person who is HIV seropositive. As soon as an individual becomes infected, s/he is capable of infecting others through sex, blood and perinatally. HIV infection is lifelong.
Prevalence	The proportion of a defined population with the infection, disease, or other health-related event of interest at a given point or period of time.
Preventive Measures	Measures aimed at stopping the sexual, bloodborne and perinatal transmission of HIV. For example, preventive measures aimed at decreasing sexual transmission include: education to encourage people to avoid high-risk sex; prevention and treatment of other sexually transmitted infections; and measures to make the environment, or overall situation, more supportive of safer sex.
Primary Data Collection	The collection of non-pre-existing information, usually carried out using structured data collection instruments. Collected via one-on-one or group interviews.
Projection	Estimate of future characteristic based on past trends, information known, and experience.
Qualitative Data	Data which is not statistically generalisable to a larger population. Tends to provide more depth than quantitative data.
Quantitative Data	Data generalisable to a larger population based on following careful sampling procedures, detailed question and questionnaire construction, and consistent implementation.
Repeater Rates	The percentage of students who have to repeat a grade.
Risk Factors	Conditions or behaviours which make it more likely that a person will become infected with HIV. These factors might include: involvement in any sexual relationship other than one which has been mutually

exclusive and HIV negative for a sustained period of time; presence of an STD; injecting drug use; history of blood transfusions, skin-piercing, invasive, surgical or dental procedures that were done under possibly unsterile conditions or with contaminated blood or blood products; and sexual intercourse with a partner who has any of these risks listed.

Secondary Data Collection

Data obtained from existing published materials or available from existing databases and sources.

Seroprevalence (HIV, STD)

The percentage of a population from whom blood has been collected that is found, on the basis of serology, to be positive for HIV or other STD agents at any given time.

Social Marketing

Application of private sector marketing techniques to the sale of products, such as condoms, that fulfill a social objective. Marketing refers to having the right product at an accessible place at an affordable price with appropriate promotion to one or more targeting audiences.

Socio-Economic

Refers to the investigation of both social and economic aspects of an issue. Tends to be broken down into 'macro', larger investigations, for example at the national or regional level, and 'micro' level, referring to an individual, a homestead, neighbourhood, or community.

Virus

One of group of minute infectious agents not visible using an ordinary light microscope. They are characterised by a lack of independent metabolism and by the ability to replicate only within living host cells. Viruses contain DNA or RNA, but not both. Viruses are customarily separated into three sub-groups on the basis of host specificity, namely bacterial viruses, animal viruses and plant viruses.

Executive Summary

Introduction

The Swaziland Ministry of Education has raised concerns about the possible effects of the AIDS epidemic on its ability to educate people to meet the challenges facing the Swazi nation. Specifically, two concerns were raised:

- 1) Will the Ministry be able to provide formal education to the majority of young Swazis into the future (maintaining near universal enrolment at the primary level and expanding enrolment at the secondary level)?
- 2) How can the education system contribute towards stemming the rising tide of the epidemic and assist in the mitigation of the impacts on society?

Swaziland has the dubious distinction of having *one of the highest rates of HIV infection in the world*, with the country currently ranked as fourth most infected behind Zimbabwe, Botswana and Namibia. In many respects this means that the interventions that would have been so important in preventing high levels of infection *are already a decade late*. A multi-sectoral, sustained response to the epidemic, which was already urgently required in the late 1980s/early 1990s, is now more than ever needed. In this regard the Ministry of Education can play a central role.

Its ability to play a central role in ‘containing’ the epidemic is, however, compromised by the effects of the pandemic on the education sector itself. Infection rates among Ministerial staff are likely to approximate infection rates in the 20-59 age group nationwide, and findings from the study suggest that a shortage of teachers is already emerging, a situation that will worsen rapidly particularly over the next five years.

Without the implementation of effective interventions, it is difficult to see how the epidemic can be contained. The model projects some **300,000 AIDS deaths** by the

year 2016, a figure which could be reduced by some 80,000 deaths with effective interventions. While numbers of this magnitude are difficult to come to terms with, AIDS orphan case studies contained in the report attempt to give some meaning to the effects of the pandemic on Swazi homesteads.

Findings

Finding 1: AIDS impacts on the population	The AIDS epidemic can no longer be considered something that can be prevented. It is already too late to stop the worst from happening, as this would have required a stronger response from the late 1980s/early 1990s. Instead, the aim now should be to consider how to ‘crest’ the epidemic at a lower infection rate than modelled in this study, and thereafter to level the epidemic at a lower rate than modelled.
--	---

Demographic projections were made based on the 1991 Household Survey and checked against the 1997 census. When taking into consideration other demographic variables as well, the modelled impacts of the pandemic were estimated as followed:

- 1) Some **20%** of the population aged fifteen and older are currently living with HIV (also known as being HIV positive), comprising some **115,000 Swazis**.
- 2) Some **50,000** Swazis may have died of AIDS by the year 1999. Indeed, the 1997 census suggests that the Swazi population is some 7% below expected levels, consistent with this estimate.
- 3) By the year 2016, the population of Swaziland will be **42%** lower than projected without AIDS.
- 4) By the year 2016, some **300,000** Swazis may have died of AIDS.
- 5) Annual death rates will be almost *three times projected levels* from the year 2002 onwards.
- 6) The epidemic will lower the number of children born as HIV positive mothers die after having given birth to fewer children, as some of these children die of AIDS, and as the population aged 20-49 shrinks.
- 7) There are currently (1999) some **35,000 AIDS orphans**, most of whom appear to be taken care of by extended family members. Given that there are already signs of stress on these extended families, it is difficult to see how extended families will be able to take care of the rapidly increasing AIDS orphans population, set to rise to a total of **120,000** by the year 2016.

- 8) Had there been a concerted response to the epidemic in the late 1980s, it might have been possible to stem the rise in infection from its anticipated 23% to a much lower **9%**.

**Finding 2:
“We are
confused”**

Almost all respondents strongly felt that they were confused about HIV/AIDS.

Findings from extensive field consultations show high levels of self-perceived and actual confusion surrounding HIV/AIDS. Parents and other community members were clearly the least informed about the epidemic, but confusion by no means stopped there. Teachers, headteachers and pupils all expressed concerns about their own knowledge and understanding of HIV/AIDS. Indeed, even members of the relatively few anti-AIDS clubs that still existed held deep-seated views that were at odds with the nature and scope of the pandemic.

It is nevertheless encouraging to note that secondary school students were the best informed, and were keen to learn more and take actions to prevent their own infection and to assist their peers. However, it is clear that some parents and other community members will resist any openness towards dealing with the epidemic in the schools, maintaining the line that abstinence is the only solution, and believing that an improved understanding of the biological and sociological aspects of sex among the youth will increase risk behaviours (information is, in this respect, *not* seen as empowering). While one might conclude that this would mean an approach of ‘slowly slowly’ and ‘quietly quietly’ would be best in the schools (e.g., quietly expanding sex education, ignoring and allowing the ‘underground’ distribution of condoms on campus), as noted above *this might have been effective had it been done ten years ago*.

The current scope and character of the epidemic will, therefore, no longer allow such an approach. This implies a more aggressive approach towards protecting and empowering the youth and coming to terms with homestead and community attitudes in this regard. Fortunately, some parents/community members are aware of the threat

posed by HIV/AIDS and believe that the youth need information and protection, and it is this changing attitude that could form the basis for community interventions.

**Finding 3:
Educating the
Nation**

The AIDS epidemic will make it increasingly difficult, if not impossible, for the Ministry of Education to fulfil its mandate as effectively as it has in the past.

The Ministry's mandate to meet the educational requirements of the Swazi population, in co-operation with Swazi families and communities, will be undermined due to the following:

- 1) For every teacher that would have had to have been trained over the next seventeen years, 2.21 will actually have to be trained *just* to keep services at their 1997 level. Rather than training 5093 new teachers during this period, over 13,000 will need to be trained.
- 2) Without significantly expanding the number of teachers trained and entering the system, the pupil:teacher ratio may decline to over 50:1 by the year 2006, and remain at this level for the foreseeable future. This will reverse all gains made in terms of pupil:teacher ratios since independence, with consequent implications for education quality.
- 3) There is already an emergent backlog in the number of teachers, a problem that will need to be considered as a matter of urgency. It should be remembered that teacher training institutions will also be affected by the epidemic, undermining their ability to expand teacher training.
- 4) Teacher training will take place in an environment where skilled people are being lost to all sectors. Thus the MOE may face having its staff poached, further contributing to the crisis.

It should be noted that these comments already **take** into account the decline in the number of school-age children needing to be educated due to the epidemic.

The alternative to meeting this emergent gap is, of course, to allow the efficiency and effectiveness of the system to decline, with pupil:teacher ratios growing dramatically, and the percentage of students entering particularly secondary school declining. This would reverse gains made from 1970-1997 (with almost universal primary education achieved by 1995, and some half of the population of school-aged children moving on

to secondary school). Declining education standards will have a ‘knock-on’ effect on the overall economy and Swaziland’s ability to attract investors.

Qualitative findings highlight the enormous lengths homesteads will go to in order to keep their children in school. Findings also point out the desire of many teachers and headteachers to keep these children in school. Nevertheless, with 35,000 AIDS orphans by 1999, and an anticipated rise to 120,000 in less than a decade, it is difficult to see how these AIDS orphans can be accommodated in the formal schooling system unless costs are shifted to Government. Even then, many children will drop out of the schooling system simply because their labour is needed at home.

Finding 4: Affordability	The costs to the Ministry of Education and its partners in educational development will rise dramatically due to the epidemic.
-------------------------------------	---

Additional teacher training costs may be as high as E400 million between now and 2016 just to maintain the system at its present level of service delivery. Sick and death benefit costs to the system for teachers falling ill due to HIV/AIDS and dying of AIDS could be as high as E1 billion. When expanded to the larger educational system, **additional** costs for teacher training and sick/death benefits for all, in the Ministry alone, may be as high as **E1.725** billion over the next seventeen years.

These figures are, of course, rough estimates, and are based on various cost assumptions (described in the report and detailed in Annex C). The important point is that the estimates are **not** based on a worse case scenario, but rather assume that certain costs to the system will not be incurred. The actual impact may be far worse.

In the fiscal year 1998 – 99 the ministry’s recurrent budget was E419,645,796, its capital budget allocation was 76,925,000. Thus its budget totalled 496,570,796 which represents 24.9% of the national budget. A one- percent increase for the ministry in the coming fiscal year is anticipated.

Recommendations

Recommendations have come from three different sources: 1) key decision-makers meeting during a two day workshop in November, 1999; 2) consideration of the findings of the study; and 3) from parents, guardians, educators and students obtained during extensive consultations held in mid-1999. Because the November workshop including consideration of study findings, recommendations from these two sources are grouped together below. We begin with recommendations from the field.

Recommendations From Parents/Guardians, Educators and Students

Recommendations on how to respond to the epidemic were solicited from those most directly affected, including teachers, headteachers, other educators, parents/guardians, and students. Summary recommendations are as follow:

- 1) People were confused and fearful at all levels of the education system, and desire more information and dialogue about the epidemic. They wanted to be directly engaged in the discussions, and want their traditional leaders and the King in particular to play a key role.
- 2) People believed that, without those HIV positive coming public with their status, many would continue to deny that the disease exists and behave accordingly.
- 3) Educators believed that the Ministry needed to develop internal policies and guidelines on HIV/AIDS. Policies were also sought covering any proposed expansion of the Ministry's efforts to respond to the epidemic.
- 4) Educators were uncertain how to proceed beyond the existing provision of sex education in the schools, but clearly felt that much more needed to be done.
- 5) Educators were concerned about proceeding too quickly with school-based innovations without the support of the community. They felt that the Ministry and others had a role in engaging the community in an education and discussion intervention so that school-based interventions could proceed. Parent Committees could be one starting point, as well as Open Days, but clearly more is required.

- 6) Educators, pupils and parents all felt that something must be done to ensure that orphans were still able to attend school. This was felt to require the shifting of educational costs from parents to Government in these cases.
- 7) Educators themselves felt ill-informed about HIV/AIDS, and stated that they required extensive education in this regard, and training in counselling and facilitation techniques if they were to take on new responsibilities.
- 8) Students felt that sex education started too late and that they needed to hear about sex, including HIV/AIDS and other sexually transmitted diseases, at a much younger age.
- 9) Some parents, on the other hand, felt that sex education should not focus on understanding sex, but rather on preventing HIV/AIDS transmission specifically through abstinence. Students were less optimistic regarding the efficacy of abstinence as being the only response to the epidemic. They felt that condoms needed to be made available, with some parents agreeing with this.
- 10) Teachers raised concerns about how sexual issues were handled in Swazi society. As one teacher put it, "as long as we are not free to talk about sex, we are not going to get anywhere".
- 11) School visits by those who were HIV positive were felt to be important in educating the youth.
- 12) Among the youth, there is almost universal demand for the widespread availability of condoms. However, there were mixed attitudes about the role of women in carrying condoms or initiating condom use.
- 13) Dramatically expanded school-based counselling services were universally supported, while informal counselling by well-informed teachers was also supported.
- 14) Students were particularly interested in effective peer education, but expressed concerns about uninformed peer educators.
- 15) Teachers urged the Ministry to reconsider its policy on housing, so that families could live together.
- 16) Teachers felt that Ministry policies regarding teacher:pupil sexual relations were inconsistently implemented.
- 17) Beyond accommodating non-paying orphans, other suggestions to keep children in school included expanding day care facilities, the creation of an educational insurance scheme, and the use of national funds as an investment agent for educating children whose families could not afford their education.

- 18) There was widespread support for NGOs to engage in HIV/AIDS education, but their capacity to do so nationwide was questioned.

Workshop and Report Recommendations: General

As noted above, a two-day workshop was held with decision-makers from within and outside the Ministry of Education. During this workshop, considerable attention was devoted to the role of the Ministry of Education in helping to respond to the epidemic, and how the Ministry itself would have to respond to the direct effects the epidemic was having on the education sector itself. Coupled with a review of the study report, recommendations emergent from the workshop are as follows:

- 1) **Political will** is central to the success of any anti-AIDS strategy. It is therefore **recommended** that the recent declaration of AIDS as a national disaster in Swaziland be used as the basis for the identification of actions to mobilise against the epidemic. Action was felt to be required immediately.

For the **education sector**, the actions of the Minister of Education and the Minister of Economic Planning and Development are especially important, but cannot be viewed in isolation from needed actions from His Majesty, Cabinet, Parliament and Traditional Leaders.

- 2) **Attitudes** in terms of the epidemic itself, women's role in sexual decision-making, casual sexual partners, and towards those who were living with HIV/AIDS are changing, but are changing slowly, and certainly not on a par with the scope of the epidemic itself. Denial remains strong, most people are confused, and strategies to help Swazi youth and their parents know more about the epidemic and its consequences need strengthening. It is therefore **recommended** that improved knowledge and access to the means of protection be combined with an emphasis on attitudinal change.

For the **education sector**, improving knowledge of the disease among teachers and administrators would form an important base for attitudinal change among the educators themselves, as well as students, parents/guardians and community leaders. Contrary to the popular notion that all parents oppose sex education, qualitative findings suggest that political will combined with a school-based student and community education intervention would be welcome and could have important impacts on attitudinal change.

- 3) The **orphan** population is increasing dramatically in Swaziland. There are already an estimated 35,000 AIDS orphans (1999 estimates), a figure which is set to rise to some 120,000 within the next ten years. Despite the magnitude of the problem, little is known about the situations facing these orphans, and what could

be done to help them and those who look after them. It is therefore **recommended** that Government consider a support programme for orphans and caregivers where such assistance is required. The first action would be a needs assessment, carefully defining what an orphan is in the Swaziland context, and identifying orphans in need. This needs assessment should include, as part of its Terms of Reference, an investigation of how financial incentives could be offered through the private sector to contribute towards orphan charities (e.g., through tax breaks or tax deferments).

For the **education sector**, the main issues surround providing education to orphans at two points in time: 1) prior to their emergent orphan status; and 2) following the death of their mother/parents. Children in homesteads with a parent dying of AIDS are often subject to economic pressures or time pressures resulting in children being withdrawn from school. After the loss of the mother/parents, these pressures often intensify as caregivers, frequently older women, are less able to provide the financial resources for schooling, particularly due to new responsibilities arising from the presence of the children and the loss of homestead income earners. It is therefore **recommended** that the Ministry of Education put forward a policy on the education of children covering, among other things, the following: the establishment of an educational fund to draw upon for the education of orphans; offering exemptions to homesteads/institutions with orphans to enable children to attend school; waiving school uniform requirements when affordability is a problem; expanding school-based feeding programmes for school-children; introducing flexible schooling hours, where possible, to keep children in school who might otherwise have to drop out due to labour requirements elsewhere; etc.

- 4) Enhanced **flexibility** in the Ministry of Education's approach to the provision of education is an important response to the epidemic. This includes flexibility in the academic schedule, flexibility in educating out-of-school youth, HIV/AIDS education, teacher supply, etc. The cost of the epidemic to the educational system has been estimated at upwards of E2 billion between now and 2016, funds which are unlikely to be available to the system. It is therefore **recommended** that the Ministry of Education prepare revised guidelines and develop detailed strategies regarding educational provision considering, among other things, the following: re-hiring retired educators; allowing senior students to provide after-school education to out-of-school youth; offering HIV/AIDS-specific education to adults and school children via trained educators or SHAPE (including peer educators); adopting learner-centred approaches to education (this is already advocated in previous Ministry materials) which would allow class size to grow without compromising educational quality); etc. HIV/AIDS education, attitudinal change and empowerment through giving women and men the means to prevent HIV transmission is especially important for those in teacher training institutions to reduce extra costs to the education system.

- 5) **Timeliness** is key to the success of any intervention, whether it is education-specific or general to the Swazi nation. Had the country mobilised in response to the epidemic in the late 1980s, the HIV prevalence rate of 23% could have been as low as 9%. In human terms, hundreds of thousands of lives could have been saved. Any further delays in mobilising will simply worsen the epidemic, raise death rates, and made future actions less effective.

For the Ministry of Education, it is therefore **recommended** that a detailed timeline be drawn up regarding actions to be taken within the sector itself, and what is required outside of its mandate from others. This timeline should be drawn up by no later than the end of February, 2000, ready for implementation in time to affect the 2001 academic year. This will require direct human, financial and time resource allocation to the task beginning in January 2000.

Three steps should be considered at the outset:

- a) While the November 1999 workshop focused on barriers affecting the ability of the nation to respond to the epidemic, a follow-up one-week workshop should be held focusing on demand for education and the ability of the Ministry, and its partners in the educational arena, to supply education to fulfil their educational mandate. This workshop should include educational planners, planners from the various line ministries, and in particular planners from the Ministry of Economic Planning and Development and the Ministry of Finance.
- b) A Working Group/Task Force should be established to consider the information needs for the education sector arising from the epidemic. For example, teacher illness, death and attrition data are not currently available in a format which could be used to consider the impacts on the education sector. As another example, there is no measure of the existence of, nor effectiveness of, Anti-AIDS Clubs. As a final example, information on teacher training was institution-based rather than being collected within the Ministry, and is therefore not being used in an effective to plan for the educational requirements of the sector. A report back from the Workshop Group/Task Force should be made available by mid-2000.
- c) By mid-2000, the Ministry has to be in a position to put into place plans, structures etc. that will allow it to begin implementation by the 2001 school year.

Workshop and Report Recommendations: Specific

In addition to the general recommendations put forward by the workshop participants, and arising from the findings of the study, a number of specific recommendations were also put forward for consideration. Some are specific to the education sector, while others are more general. These are listed below (not in order of priority):

- 1) The declaration of AIDS as a 'national disaster' by the Government of Swaziland should be backed up by the preparation of a national action plan by the recently established National HIV/AIDS Crisis Management and Technical Committee. This should be prepared in the first half of the year 2000.
- 2) A needs assessment for orphans and caregivers should be carried out, and a specific plan of action drawn up. This should be carried out in the year 2000.
- 3) Emotional and practical support should be offered to Swazis who come forward with their HIV positive status. These individuals should be contracted to provide HIV/AIDS education in schools throughout the country via SHAPE and through other programmatic interventions.
- 4) There should be recognition of the particular impacts of the epidemic on Swaziland due to the relative position of women and men in Swazi society. This does *not* require challenging Swazi culture. It *does*, however, require that women are supported in efforts to take on a stronger role in sexual decision-making. Initial interventions that can offer some support, such as the distribution of spermicides (which offers some protection against HIV transmission) and male and female condoms to women, are urgently required. Sex education can provide powerful messages to young women and men about the role of each in sexual decision-making. Further, rather than challenging Swazi culture, approaches to empowering women can use the very strengths of Swazi culture to respond to the epidemic. Political will is particularly important in this regard.
- 5) Fear and denial are strong in Swaziland. The only way past this is public education empowering people to make the right decisions. Of particular concern is the belief that the absence of condoms will mean that young Swazis will abstain from sex, and that the presence of condoms will result in more casual sex. Swazi children are *already* sexually active, most by the age of 15-16. The key to responding to the epidemic will be to give Swazis the information they need in a supporting context and the tools required to prevent the spread of HIV. This does not have to 'weaken Swazi culture', but can rather build on its many strengths.

- 6) Traditional leaders have an important role to play in HIV/AIDS education, as well as assisting orphans/caregivers and supporting homesteads living with HIV/AIDS.
- 7) Traditional doctors are powerful tools, given the widespread respect they are given by Swazis and given their central role in treatment of illnesses. There are a number of traditional healers who treat those with illnesses arising from HIV/AIDS, and many of these believe that HIV/AIDS does indeed exist and is a 'new' disease. Under these circumstances, these traditional doctors could become important change agents.
- 8) The Ministry of Education's policy on sexual relations between pupils and teachers should be strictly enforced, with the Ministry's Management Information System and inspection systems particularly geared to monitoring, and responding to, such cases.
- 9) School-based counselling on HIV/AIDS should be strengthened, requiring extensive HIV/AIDS education of teachers and counsellors. Peer education should also be strengthened and expanded.
- 10) Social marketing approaches to the distribution of information, condoms (providing condoms to males and females and, to the latter, female condoms), and STD treatment channels should be supported. School-based distribution should be considered, cognisant of negative parental attitudes towards condom distribution on campus. Overall, condoms should be made available on campus via Anti-AIDS clubs, peer educators and counsellors.
- 11) Given the high costs associated with teacher training, intensive IEC activities combined with condom distribution and access to health care regarding STDs must include teacher training institutions.
- 12) A review of the Ministry of Education's approach to sex education is urgently required. This should include outreach education about HIV/AIDS to parents. Private sector/NGO provision of sex education in innovative circumstances should be considered during the review. This should be carried out in early 2000.
- 13) Despite some negative attitudes towards sex education on the part of religious ministers, churches are powerful forces that can contribute towards the stemming of the pandemic. Beyond discussing the positive aspects of abstinence and avoiding extra-marital affairs and casual sexual relationships, the church can be part of a wider HIV/AIDS educational strategy.
- 14) Education interventions for out-of-school youth who are unable to re-enter the formal schooling system can still be based at schools, and can still be provided in

part by educators. This requires a review of the issue by the Ministry of Education. This review should be carried out early in the year 2000.

- 15) HIV prevalence statistics are poorly understood. This requires more focus on regular data collection, clear explanations of how rates are calculated and an understanding of how rates are translated into actual numbers.

Chapter 1: Introduction

Introduction

The Ministry of Education in Swaziland is the main body responsible for educating the nation to meet the challenges of the future. Historically its ability to meet this mandate has been limited by a lack of resources, both monetary and human, and a lack of facilities. Over the past two decades many of these limitations have been overcome, and today the average Swazi family is able to send its children to schools which have qualified teachers and fixed classrooms. The Ministry of Education nevertheless recognises that numerous challenges remain, particularly with regard to education quality (see Education and Training Sector Committee of the National Development Strategy, 1996). Improved efficiency of expenditure, an enhanced learning environment in the classroom, and strengthened curriculum are viewed as instrumental to meeting the educational needs of future generations of Swazi youth.

Despite gains made and the redoubling of attention towards enhancing service delivery quality, **no sector**, including education, **has fully considered the enormous impacts of the HIV/AIDS epidemic on the ability to provide services, and the nature and extent of demand for these services.** Given that the HIV/AIDS epidemic is altering the demographic and socio-economic landscape in Swaziland, it is an issue that cannot be ignored. In early 1999 Swaziland therefore conducted a rapid assessment of the HIV/AIDS epidemic and its effects on the country and its people. This assessment included a brief overview of the potential impacts of the epidemic on various sectors, including education. During this sectoral assessment, the Ministry of Education expressed an interest in understanding two basic aspects of the epidemic: 1) how would it affect the ability of the Ministry of fulfil its mandate?; and 2) what role

Swaziland has the dubious distinction of having one of the four highest rates of HIV infection in the world.

could Swaziland's educational system play in reducing the spread of the epidemic and mitigating its impacts on society?

For this reason, the Ministry of Education commissioned an education sectoral assessment on the HIV/AIDS epidemic, with funding from UNICEF/Swaziland and technical support from a local socio-economic research firm, JTK Associates. Findings from the study underline the fact that the education sector (and for that matter any other sector) cannot afford to ignore the brutal and widespread impacts the epidemic *is having* on virtually all planning parameters used to calculate resource availability and allocation and system sustainability over time.

Statement of the Problem

Scope and Character of the Epidemic

Swaziland now has the dubious distinction of being one of the four countries worst-affected by the HIV/AIDS epidemic (along with Zimbabwe, Botswana and Namibia). Despite the fact that the first case of AIDS was reported only twelve years ago (in 1987), as of early 1998, some 3,000 AIDS cases had been *reported*, with HIV positive figures estimated at almost 115,000 in a population of just under one million. Cumulative AIDS-related deaths are estimated at 50,000 as of 1999. According to the 1998 sentinel surveillance survey, 31.6% of all antenatal clinic attendees were HIV positive. Projected to the entire population of adult Swazis, it is estimated that some 20% of all adult Swazis (aged fifteen and older) are *already* HIV positive, suggesting that the epidemic is currently affecting many homesteads.

“... the epidemic will not stop population growth, nor will it cause populations to fall. What it will do is slow the rate of population growth and alter the structure of the population. The number of 20-40 year olds as a proportion of the entire population will decline, resulting in increased dependency ratios. The number of orphaned children will grow, increasing the burden on extended families to meet the needs of such children.” Loewenson and Whiteside, 1998: 20).

There are two main varieties of HIV--HIV-1 and HIV-2. The variety found in Swaziland is HIV-1, which is considerably more infectious and virulent than HIV-2.

This second variety is found mainly in West Africa, although it has been identified in Mozambique. HIV-1 has a number of sub-types, which is significant because a cure or vaccine (when they are developed) may have to be type-specific.

The period of time between HIV infection and the onset of AIDS is not clearly known in Swaziland. It varies based on diet, care, and access to prophylactic treatments, many of which are not widely used in Southern Africa due to cost. Without such effective treatment, and based on poor diets and mixed care, an estimate of six years from infection to AIDS can be considered to be a reliable figure. During this period, as the infection progresses, the body's defence system weakens and various symptoms appear, either on their own or at the same time as others appear. These symptoms include chronic fatigue, diarrhoea, skin infections, respiratory problems, sustained weight loss, swelling of the lymph nodes, and deterioration of the central nervous system. AIDS sets in as the immune system weakens to near failure. During this period more severe diseases affect the person, including meningitis, tuberculosis, pneumocystic pneumonia and cancer. Once this period of severe infections begins, the infected person will usually die within a period of six months to two years. Therefore, the average lifespan in Swaziland from infection to death is estimated at eight years.

The spread of HIV in Swaziland is almost entirely through heterosexual intercourse. Most of the remaining infections occur from an infected mother to her unborn child, often during childbirth, with a child having an estimated one-in-three chance of infection (Loewenson and Whiteside, 1998). The risk of HIV transmission in a single act of intercourse ranges from 1 in 25 for unprotected penile-vaginal intercourse from an infected male who has another sexually transmitted disease to an uninfected female, to 1 in 1000 for unprotected penile-vaginal intercourse from an infected female to an uninfected male when neither has another sexually transmitted disease.

Possible Impacts of the Epidemic on the Education Sector

HIV/AIDS is affecting, and will continue to affect, the education sector in Swaziland in three basic respects:

- 1) Supply - It negatively affects the supply of skilled personnel providing educational services, and reduces the efficiency in the sector by raising the costs of service delivery (e.g., payment for sick leave versus payment for working, increased throughput regarding teacher training to fill vacant posts, etc.).
- 2) Demand - It affects the demand for education due to the reduced number of children entering the system (that is, children who are never born or who die of AIDS before their fifth birthdays), and due to higher drop-out and repeater rates (due to AIDS-related stresses on the household economy and family/extended family unit).
- 3) Process - This includes curriculum development, teacher training, etc.

As more and more teachers, principals and education administrators fall ill due to HIV infection, the supply of all educational services will be reduced. Costs to the system due to sick leave and death will increase while at the same time the ability of trained individuals to deliver the requisite services will fall dramatically. Pension schemes may be depleted and the number of new contributors may lessen. Training costs will rise dramatically as more and more teachers and principals are required to replace those dying of AIDS. Inefficiency in the system, already acknowledged to be a problem, will increase as highly trained students become infected. A growing gap will emerge between this shifting supply of education and the demand for educational services, requiring adjustments that will be difficult to plan for and even more difficult to implement. The ability of families to pay for education will decline and will be matched by a decline in enrolment unless costs are shifted to the state or reduced through a change in focus (e.g., a willingness to accept lower education quality in larger classes, a shift in resources towards non-formal education, etc.).

“The AIDS epidemic in Swaziland threatens to erode whatever gains have been made in the indicators that contribute to longevity. UNDP, Human Development Report, 1997.

Terms of Reference

Background

It is clear that these effects on education are far-reaching, and will significantly affect plans for the sector. Will it be possible to maintain high levels of enrolment? Will progression to secondary school, which has improved dramatically in recent years, continue to rise? Will teacher to pupil ratios continue to improve? Will the sector's budget be able to meet the significant cost increases resulting from the epidemic? Will households be able to afford to keep their children in school? Can the education sector contribute towards reducing infection rates? Can the education sector help to inform adults and improve their attitudes towards preventative measures? Can condoms, pamphlets, etc. be distributed on campus? Can the Ministry of Education help to improve overall community understanding of the scope and character of the epidemic? Can the Ministry of Education help to improve attitudes towards those living with HIV/AIDS?

Because the effects of the epidemic on the education sector are so fundamental to the future of education in Swaziland, and because the education sector could play an instrumental role in HIV/AIDS prevention, the Ministry of Education drew up a detailed Terms of Reference (TOR) to investigate these and other questions.

Issues to be Investigated

According to the TOR, the investigation was designed to look into the following:

- 1) What will the loss of human resources be?
- 2) How will these losses affect the day-to-day operations of the system and its ability to provide quality education?
- 3) How can the education system help children, families and communities adapt to the changes in social structure created by the epidemic?
- 4) How can the education system accommodate the educational needs of marginalised children (e.g., street kids, institutional populations, neglected children, etc.)?

- 5) Finally, how can the educational system help prevent the spread of HIV/AIDS, reduce discrimination towards those HIV positive, and help create a more open, accepting attitude in Swaziland towards people affected by the epidemic? This includes curriculum interventions, the role of the education system in directly and indirectly empowering children and contributing to society more broadly.

Structure of the Report

To meet these information needs, this report has been organised into the following sections:

a front section, including a preface, foreword, acknowledgements and executive summary, introductory chapters, demographic chapters, chapters covering, in detail, field findings and recommendations from those closest to the problem, and finally, the findings and recommendations from the workshop which are included in the executive summary and detailed information in Annex E. More specifically, the structure is as follows:

Front Section

This consists of a Foreword and Acknowledgements, followed by a user-friendly executive summary presenting main findings and drawing initial conclusions. This executive summary includes recommendations put forward at the consultative workshop which involved key actors in the HIV/AIDS and educational arenas in Swaziland.

A user-friendly report has been prepared designed to aid policy-makers, both inside and outside the education sector, to make decisions that will help the Ministry and its partners plan for the dramatic changes already underway.

Introduction and Approach

Comprising this chapter and Chapter 2, this is designed to give readers adequate background information about the epidemic itself and the methodology employed to collect the requisite secondary and primary data. As explained in Chapter 2, the approach to data collection involved extensive consultations with various interested and affected parties, ranging from teachers and principals to administrators and regional and national level education sector personnel, from children who left school to children

currently in school, and from parents/extended family members to activists in the HIV/AIDS arena.

Demographic Impacts

Comprising chapters 3 and 4, the aim is to describe the demographic impacts of the epidemic on Swaziland in general and on the education sector in particular.

Field Findings

Comprising chapters 5 and 6, detailed opinion data are provided on the perceived effects of the epidemic on the education sector, and recommendations are put forward about how the crisis can be dealt with.

Annexes

A number of annexes are provided which give more detailed information relating to the above. These are included in Volume 2.

Summary

The HIV/AIDS epidemic is a reality in Swaziland, and projections that might have been considered alarmist just a few years ago have, unfortunately, come true today. Many of the people interviewed for this investigation knew that the problem was present in their communities, and knew of people who had passed away. This is not surprising, given that Swaziland is one of the four most affected countries in the world, along with Zimbabwe, Botswana and Namibia. Some 50,000 Swazis may have died of AIDS by 1999. Of a population of under one million, as of 1999 some **115,000** are HIV positive, meaning that some **20%** of the sexually active population is infected.

To avoid compartmentalising the epidemic as a problem for the Swaziland National AIDS Programme only, recent actions have been taken by Government and its partners in development to reshape attitudes towards the scope and impacts of the epidemic so that the cross-sectoral nature of the response can be considered. Within such a multi-sectoral approach, especially-affected sectors, including education, required both general and sector-specific information on the epidemic. For this reason, this consultancy was commissioned.

To improve the readability of this report, a brief executive summary has been included, while in the main report findings have been presented, where possible, in a short, visual manner. All Annexes have been included in a separate volume, distributed with this report.

Chapter 2: Approach and Methodology

Introduction

Three basic approaches were employed towards data collection: 1) primary data collection involving extensive nationwide interviews; 2) compilation of available information from the Ministry of Education and various non-governmental organisations; and 3) secondary materials review. The secondary materials review included a review of reports on the education system in

Three approaches were employed to collect data: 1) nationwide primary data collection; 2) compilation of data from various databases and sources; and 3) secondary materials review.

Swaziland and on the HIV/AIDS epidemic in Swaziland and elsewhere. Data compilation focused in particular on obtaining cost data related to education supply, as well as

demographic data needed for AIDS impact modelling. Primary data collection involved interviews at the national, regional and school levels involving MOE officials, health officers, non-governmental organisations, teachers, anti-AIDS clubs, parents/guardians, primary school pupils and secondary school pupils.

Two basic approaches were used for data analysis: 1) modelling of the demographic impact of the HIV/AIDS epidemic on Swaziland in general, and applying these figures to the education sector; and 2) analysis of qualitative data using the NUD*IST programme designed to systematically interrogate qualitative data. Modelling was carried out by Barbara Mason and Greg Wood (Mason and Wood cc), modelling consultants from South Africa, using the Spectrum System of Policy Models. This model was used previously in Swaziland, and has also been applied to KwaZulu Natal and other areas in Southern Africa.

Following data analysis, the next step was to conduct a Policy Barriers Analysis and identify methods to support implementation of varied actions. The aim of these two steps was to take the findings from the study and consider how various actors could respond to the epidemic within the context of meeting the objectives of the education sector ('providing quality education to Swaziland's children and adults to improve

quality of life and standards of living’, Ministry of Education, 1998), to consider points of weakness and areas of strength among these actors, and determine where ‘higher’ interventions might be needed (e.g., political will). This information is provided in Chapter 7, and also forms part of the recommendations found in the Executive Summary.

Rationale for Data Collection Approaches

Primary Data Collection

While demographic projections can model the effects of the epidemic on the population, they do little to give one a sense of how the epidemic actually affects people, communities, and schools. Models, in effect, lack the *texture* and *detail of interpretation* that are of equal importance in understanding the very real effects of the epidemic on the education sector and on Swazi society and homestead economy. Therefore, considerable attention was focused on soliciting factual and opinion data from a wide variety of affected parties. Further, these same respondents were asked to give their opinions about how the nation could respond to the epidemic, giving them an important role in determining how to stem the epidemic.

Data Compilation

Data compilation, as distinct from primary data collection, consisted of securing data needed for the model and data needed for costings so that the Emalengeni impact of the epidemic on the education sector could be estimated. These data were important in improving the rigour of the model and in checking the model’s projections against what appears to be going on in the education sector. It is important to note that models are, by definition, a *representation* of an *aspect* of reality. Models cannot, therefore, fully represent the complexity of real life. If used correctly, however, and if based on reliable data, models are the most effective way of projecting what might be taking

place in the population of Swaziland and within the education sector. Relevant demographic data of sufficient rigour were therefore collected from Government institutions, including the Ministry of Education and the Central Statistical Office, for use in the model.

The modelling consultants used the Spectrum System of Policy Models, a model commonly used to project HIV/AIDS demographic impacts in the region (this is explained in more detail in Annex C).

Primary Data Collection

Primary data collection involved parent/guardian and teacher focus group discussions, one-on-one key informant interviews, secondary school interviews, primary school focus group discussions, and group discussions with orphans and drop-outs.

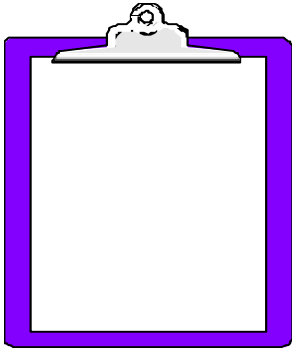
137 focus group discussions were held nationwide, as well as 44 key informant interviews, 6 secondary school group interviews, 14 primary school discussions, and 14 group discussions with orphans/drop-outs. A total of 36 schools were visited across all four regions.

Focus Group Discussions

Small homogeneous groups of parents/guardians were assembled and extensive discussions held covering HIV/AIDS knowledge and attitudes, anti-AIDS activities going on at schools throughout the country, and opinions regarding the impact of the epidemic on the education sector (including the demand for education by the public); for teachers, a one-on-one interview was conducted on the same topics. A total of 137 focus group discussions/teacher interviews were carried out nationwide, with 43 conducted in Hhohho Region, 46 in Manzini Region, 44 in Lubombo Region, and 45 in Shiselweni Region.

The parent/guardian focus group discussion instrument/teacher interview instrument is included in Annex D in Volume 2 of this report.

Key Informant Interviews



One-on-one interviews were held with a variety of key informants at the national, regional and school levels. Interviewees included national education officials, regional education officers and inspectors, health sector officials, non-governmental organisations, and others. Issues covered included anti-AIDS activities, opinions regarding the impact of the epidemic on the education sector (including the demand for education by the public), and how to respond to the epidemic. A total of 48 key informant interviews were carried out nationwide, with 22 conducted at the national level, 7 in Hhohho Region, 8 in Manzini Region, 6 in Lubombo Region, and 9 in Shiselweni Region.

The key informant interview instrument is included in Annex D in Volume 2 of this report.

Secondary School Interviews

At the secondary school level, selected classrooms were asked factual questions about HIV/AIDS, including how it is and is not spread, and student attitudes about the epidemic. Approaches included ‘test’ administration and small group, same-sex discussions.

A total of fourteen secondary school ‘tests’ were administered and six focus groups held nationwide, with 4 tests conducted in Hhohho Region, 4 in Manzini Region, 4 in Lubombo Region, and 2 in Shiselweni Region.

The secondary school interview instrument is included in Annex D in Volume 2 of this report.

Primary School Discussions

Same-sex group discussions were carried out at grades 4-7 at primary level. Issues covered included basic knowledge about reproduction, sexual diseases (including HIV/AIDS), and their home situations and how this affected school attendance. A total of eighteen primary school discussions were carried out nationwide, with 2 conducted in Hhohho Region, 4 in Manzini Region, 6 in Lubombo Region, and 6 in Shiselweni Region.

The primary school discussion instrument is included in Annex D in Volume 2 of this report.

Orphans/Drop-Out Discussions

Same-sex group discussions were carried out with children who had been orphaned or who had dropped out of school in fourteen cases. The orphans/drop-out instrument is included in Annex D in Volume 2 of this report.

Secondary Data Collection

The Education Sector

The Ministry of Education compiles annual data on variables such as primary and secondary school enrolment, repetition rates, drop-out rates, the number of teachers in the education system, the number of teachers trained per annum, pupil:teacher ratios, etc., and other data on a less regular basis, including the percentage of teachers trained and untrained in the system, educational costs, curriculum innovations, educational financing, etc. What was needed for the study, but proved to be unavailable, were teacher attrition absenteeism and mortality rates. Data on student absenteeism was found to be unreliable.

Published data were reviewed prior to the start-up of fieldwork and information from these sources was used for modelling activities as well as for instrument design. The types of documents consulted included the following:

- Annual education statistics (most recently available for 1997).
- Education information in various plans and planning documents/reviews.
- Reports reviewing various aspects of the education sector.

The HIV/AIDS Epidemic

In recent years considerable reports, journals, newsletters, toolkits and pamphlets have come available regarding the HIV/AIDS epidemic. The various aims have included

general information dissemination, public awareness, policymaker awareness and decision-making, and academic debate. A variety of these documents were reviewed for this investigation. For Swaziland, of particular importance in recent years has been the 1998 sentinel surveillance report, the 1999 study on orphans and the epidemic, and other recent publications on the various aspects of the epidemic.

For the model, of particular importance has been the 1991 Household Survey, the 1997 Census, the US Bureau of Census International Database for Swaziland, and the sentinel surveillance surveys.

Modelling

Introduction

To understand the demographic impacts of the HIV/AIDS epidemic on the population of Swaziland, and by inference on the supply of educators available to the education sector and the demand for education, a modelling procedure was used from the period of the 1991 Household Survey to the year 2016. The Spectrum System of Policy Models was used. The Spectrum Model is commonly used in southern Africa, as it has shown itself to be sufficiently robust to model actual impacts effectively over time.

In this section, more detail is provided about the application of the Spectrum Model and what data were used as the basis for modelling projections.

Spectrum System of Policy Models

The Spectrum System of Policy Models, or Spectrum Models for short, was used for the project. Two sub-routines, DemProj and the AIDS Impact Model (AIM), were used to develop projections of the HIV/AIDS epidemic in Swaziland and its impacts on the population. The Spectrum Models were developed by The Policy Project, a United

States Agency for International Development-funded project implemented by The Futures Group International. The Spectrum Models are designed to facilitate planning and policy formation. They were *not* designed to conduct in-depth research into the underlying processes; this was rather the focus of qualitative data collection.

DemProj is the demographic model in Spectrum and is used to create population projections. AIM is the model used for projecting the impact of the AIDS epidemic.

Base Projection

The first stage in the development of HIV/AIDS projections for Swaziland was to create a base demographic projection using DemProj. This is a demographic projection that does *not* include the impact of AIDS. The demographic projections require data and assumptions related to the population by age and sex for the base year, current and future fertility rates, current and future mortality rates, and international migration.

Base Year Population

This is the population by age and sex for the base year. Figures are usually obtained from census data. It is preferable to select as base year a year which is prior to the time when AIDS began to have a significant impact on the nature of the population, as the base projections run on the assumption of a no-AIDS scenario for comparative purposes.

For the Swaziland projection, the population figures from the 1991 Household Survey were used for the base projection. Although the HIV epidemic had already taken hold by 1991, because of the time delay between infection and death the population figures had not yet been significantly affected by AIDS deaths. This assumption is supported by evidence from the 1991 Household Survey of a continued increase in life expectancy from the 1986 Census (that is, figures suggest that, by 1991, AIDS had not

yet significantly affected the population size). While the 1986 Census could have been selected, there were concerns about the relative reliability of the data (despite efforts to correct known problems), and it was felt that the 1991 Household Survey figures were significantly more reliable. The other alternative would have been to use data from the 1997 census. However, the base projection requires figures *without* the impact of AIDS, and one can assume that the 1997 census figures would reflect an impact of AIDS deaths (this is borne out in the findings which follow this chapter).

Fertility

Information about current and future levels of fertility, as obtained through measures of Total Fertility Rate (TFR), are required by the model. In addition, the model needs information on the age distribution of fertility.

A TFR of 5.59 was entered for the base year of 1991. This was taken from the estimate made from the 1991 Household Survey. For future TFR an assumed decline of 0.1 per annum was used. This was based on empirical data linking level of socio-economic development and degree of family planning programme efforts with declines in TFR (Parker, Mauldin and Ross, in Stover and Kirmeyer, 1997). The Central Statistical Office made a comparable assumption in their medium scenario for the demographic projections based on the 1986 census, that is, they assumed a decline in TFR of 0.1 per annum. Using the empirical data linking decline in TFR to programme effort and socio-economic development and assuming a moderate programme effort, the assumption of a decline of 0.1 in TFR per annum is considered to be reasonable.

Regarding the age distribution of fertility, the estimates generated from the 1991 Household Survey data were used for the base year. The United Nations fertility survey models were then used to predict the age distribution of fertility for the final year (sub-Saharan Africa pattern) and the distribution was interpolated for the intervening years, thereby making use of the measured figures for the base year and the model table for future years.

The male:female sex ratio at birth was assumed to be 103:100 based on figures from the United States Bureau of Census International Database for Swaziland.

Mortality

Life expectancy at birth for males and females and a model life table of age-specific mortality rates is required to describe mortality.

Life expectancy at birth for males and females was taken from the 1991 Household Survey for the base year. Thereafter the United Nations Working Model of Life Expectancy Improvement was used to estimate future life expectancy improvement in the absence of AIDS (Stover and Kirmeyer, 1997). An assumption of a moderate rise in life expectancy was made.

For the model life table, the United Nations General Model provided the closest match to measured Infant Mortality Rates (IMR) and Crude Death Rates (CDR) for 1991. In previous projections the Coale-Demeny South model table had been selected (1986 Census). However, this proved not to be a good match for 1991 figures, and was therefore not used.

International Migration

In order to account for the effects of international migration on population figures, data on the net number of migrants by sex and year as well as the distribution of migrants by age for males and females is required.

Since the above data were not available, net migration was assumed to be zero. The possible impact of this on the projections needs to be considered. Typically, international migration does not account for a significant proportion of change in populations, however the possible effects do need to be considered particularly in the light of migrant labourers leaving the country. In most cases, it is important to note, these migrant labourers are seasonal or temporary migrants, and therefore still considered part of the *de jure* population.

HIV/AIDS Projections

The second stage of the projection process is to develop an AIDS projection using AIM. The model takes as its starting point the base population projection and then projects the impact of AIDS on the population given assumptions about HIV prevalence, age-sex distribution, progression of the disease, etc. Health and economic impacts may also be projected if the required input data are available.

Adult HIV Prevalence

The percentage of adults infected with HIV in the base year and estimates of prevalence for subsequent years of the projection are required. An adult is defined as anyone aged 15 or older.

Estimates of HIV prevalence are typically based on figures obtained from antenatal sentinel surveys. These figures cannot simply be transposed to represent the prevalence for the total adult population. For the current projections, the UNAIDS/WHO estimate of HIV prevalence for 1997 was used as a starting point. UNAIDS/WHO estimate that, at the end of 1997, there were approximately 81,000 Swazis living with HIV in the 15-49 age range (18.5%). The default age distribution of HIV infection corresponding to a 50:50 sex ratio in the Spectrum Model, estimates that 5.3% of adults aged fifty and older are living with HIV. Using this assumption, the total number of HIV infected adults aged fifteen and older by 1997 was 85,533. This yielded a total adult HIV prevalence of 16.55% for those aged fifteen and older, based on UNAIDS/WHO estimates of prevalence and 1997 population census figures.

This estimate of point prevalence was then used to estimate a likely projection for future adult HIV prevalence using the United Nations methodology for making

prevalence projections. Epimod-2 was used and it has been assumed that peak incidence is reached twelve years after the start of the epidemic.

As it is uncertain what the shape of the epidemic will be once the endemic stage is reached, for this projection it is assumed that HIV will become endemic and that there will not be a significant decrease in prevalence.

HIV/AIDS Parameters

Several parameters must be specified for the AIM model:

- 1) *The starting year of the epidemic.* This was assumed to be 1985.
- 2) *Perinatal transmission rate.* The default value of 35% (that is, 35% of babies born to infected mothers will be infected) was used, as this is the range normally found in sub-Saharan Africa.
- 3) *Percentage of infants dying within the first year of life.* This value is used to calculate infant mortality rates. The default value of 67% was used, meaning that it was assumed that two out of three HIV-infected infants would die within their first year of life.
- 4) *Life expectancy after AIDS diagnosis.* This typically varies from 6-18 months in developing countries. The default value of one year was used.
- 5) *Percent reduction in fertility for HIV-infected women.* In the absence of country-specific data, the default value of 30% was used.

Incubation Period

The incubation period refers to the amount of time between initial infection and the onset of AIDS. For the current projection, the adult incubation period pattern based on a model constructed by James Chin (1996, in Stover, 1997) was used. This is a fast pattern which has a median time from infection to AIDS of six years. For the child incubation period a fast pattern was also chosen. This was based on data collected in Rwanda and has a median time from infection to AIDS of 1.5 years. This is the default option in the Spectrum Model, and is considered to be the best option for sub-Saharan Africa in the absence of country-specific data.

Age and Sex Distribution of New Infections

The male to female ratio was assumed to be 1:1 as Swaziland has had a heterosexual epidemic from the outset. No reliable data are available regarding the ratio of male to female infections rates, so a 1:1 sex ratio was considered appropriate. The age distribution based on a 'typical' pattern for eastern and southern Africa was employed, again in the absence of country-specific data.

Information Gaps

As the modelling section suggests, gaps exist in available data. For the modelling, assumptions had to be made that the demographic and infection patterns in Swaziland were similar to other Southern African nations. With the exception of minor impacts expected from international migration, however, the modellers believe that the assumptions made are accurate, and that they have not seriously affected the reliability of the projections.

Of course, as noted earlier, no model can get at the nuances of the effects of the epidemic on the country, let alone the education sector. For this reason, considerable attention was focused on primary data collection to give relevant 'texture' to the demographic findings, and to focus on what could be done to mitigate effects on the education sector and Swazi homesteads with regard to educational demand. Given the extensive nature of primary data collection, the authors do not feel that significant gaps remain in this regard.

Summary

Three approaches to data collection were employed: 1) primary data collection covering all areas across the nation; 2) compilation of existing information; and 3) secondary materials review. For primary data collection, 137 focus

group discussions/teacher interviews were conducted nationwide, 44 key informant interviews were held, 6 secondary school tests and follow-up focus group discussions were held, and 14 group discussions were held with primary school students. Altogether national and regional level officers, principals, teachers, anti-AIDS clubs, students, and parents/guardians were interviewed covering the entire nation.

Regarding the model, the commonly-used Spectrum Model was employed using in particular two sub-routines, DemProj and AIM.

Two approaches were used for data analysis: 1) modelling of the demographic impact of HIV/AIDS on Swaziland in general, and applying these figures to the education sector; and 2) analysis of qualitative data using a qualitative data analysis software package.

Chapter 3: Demographic Impacts of the HIV/AIDS Epidemic

Introduction

The first case of HIV was reported in Swaziland in 1986. A year later, in 1987, the first AIDS case was reported to the Ministry of Health. As of 1999 an estimated 20% of the population aged fifteen and older was HIV positive, comprising some 115,000 people, mostly in the age range 20-39, the economically and reproductively active age group. Based on the model, an estimated total of 50,000 will have died of AIDS by the end of 1999.

According to projections, the 1999 population of Swaziland based on past trends was approximated at just over one million (1,043,755). With HIV/AIDS, however, the population was projected at just over 975,000, some 7% below expected levels (due to deaths and lowered numbers of births); this is largely consistent with the 1997 population figures collected during the most recent census. By 2016, the population is now projected to rise to 1,146,009, down from a no-AIDS estimate of 1,631,692, or a drop of 42% in expected population levels.

This chapter presents findings from the demographic projections. To assess the impact of HIV/AIDS, two projections are offered, one covering population growth based on past trends, and another including the impact of the HIV/AIDS epidemic. A number of issues are covered, including details on adult HIV prevalence, the number of adults alive with HIV, the number of new AIDS cases, projected annual deaths to young adults (15-49) due to AIDS, cumulative AIDS cases, the crude death rate, under-five mortality, and finally projected impacts on the overall population. These estimates are based on the approaches described in the previous chapter.

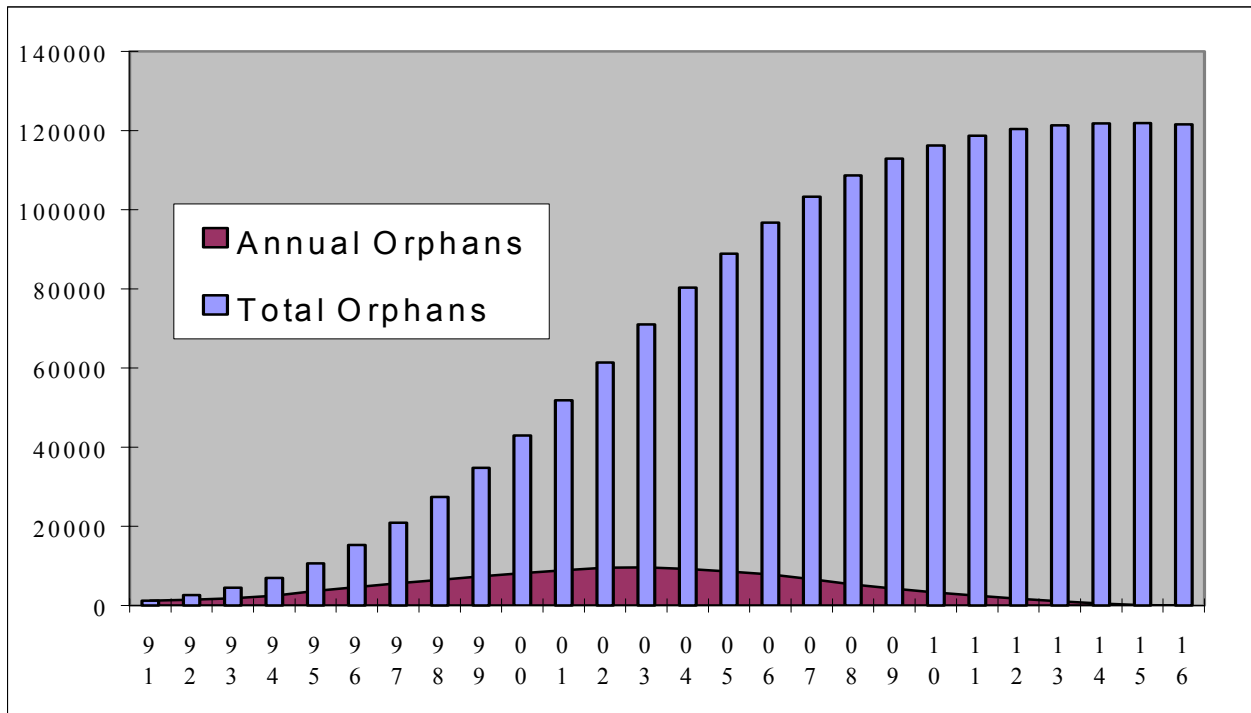
The growth in the Swazi population will be 42% lower than previously projected by the year 2016 due to AIDS.

Adult HIV Prevalence



Adult HIV prevalence from 1991 to the year 2016 is shown in the following figure:

Figure 3.1: Adult HIV Prevalence (1991 to 2016)



* See Table A1, Annex A.

At current rates of increase, HIV prevalence will climb to 23% by the year 2003, thereafter maintaining at a level of 20-22% unless the epidemic is brought under control. It is important to note that the rapid increase in HIV-infection **has already occurred** by 1999, growing rapidly from 4% in 1991 to 20% in 1999.

The epidemic has, in effect, already hit Swaziland very severely. Death rates, as will be seen below, lag some eight years behind infection rates, with the deaths from the epidemic cresting from 2003 onwards¹.

Barriers to effective AIDS control in Swaziland include:

- ~ silence and denial
- ~ most people including policymakers are unaware or are unwilling to accept that one-fifth of the adult population is HIV positive
- ~ inconsistent support to HIV positive people who have revealed their status and use it for public education
- ~ need for strategic multisectoral plan
- ~ central and line ministries have historically felt that the AIDS response should be handled by SNAP
- ~ women's low status and their position in a legal sense as minors
- ~ widespread poverty and dependence of rural homesteads on outside wage employment
- ~ the rapid growth of the epidemic is *historical*, that is, much of what needs to be done would best have been done in the early 1990s

UNICEF, report on orphans, 1999.

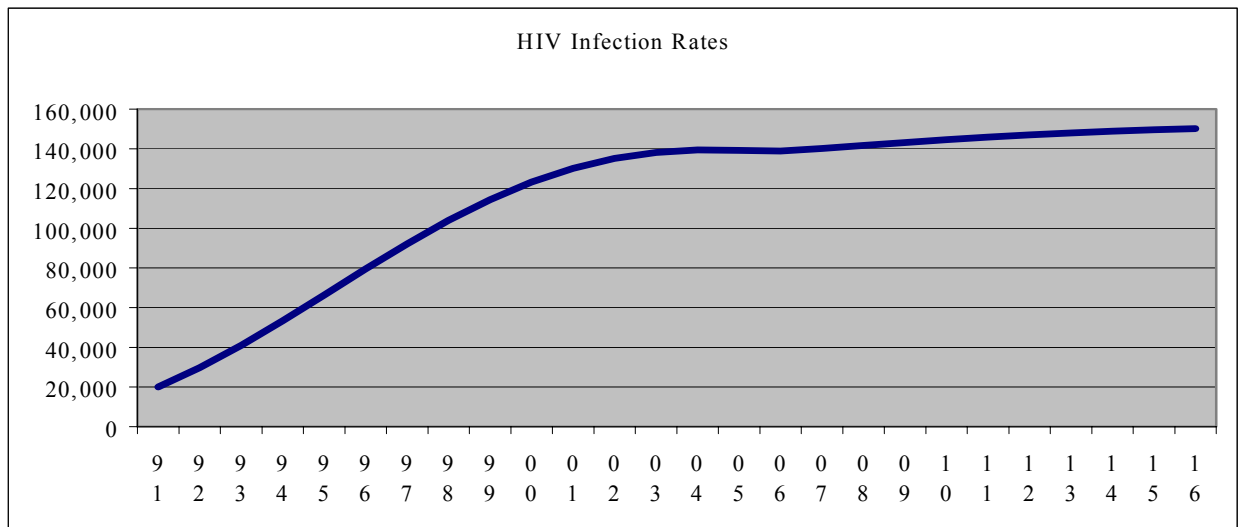
Number of Adults Alive With HIV

¹ Mason and Wood, the two modellers involved in this investigation, elsewhere describe why this crest occurs (Whiteside, Wilkins, Mason and Wood, 1995, discussed in Southall, 1993). They note that in order to project the course of the AIDS epidemic and hence estimate the impact of this epidemic, epidemiological models are needed. These models are based on observations of actual epidemics. In simple terms, an epidemic (whether HIV, measles or any other) arises when a number of *infective* people transmit infection to a number of *susceptible* people. This results in a very rapid increase in the total number of infected people (the *prevalence*). The number of new infections per year is called the *incidence*. Theoretically, the prevalence continues to increase rapidly until the number of people leaving the infective group (whether as a result of death or, in the case of epidemics other than HIV/AIDS, as a result of recovery and immunity) evens out the number of new infections. The initial rate of new infections will slow down as the susceptible group becomes saturated. In this way, the curve representing the prevalence of infected people is initially relatively flat as the infection is just beginning to spread. This is referred to as the *pre-epidemic stage*. The curve then becomes steep as the infection spreads rapidly among the susceptible people. This is referred to as the *epidemic stage* (or epidemic). Finally, as the number of people becoming infected begins to even out with the number leaving the infection group (on the one hand because fewer new infections are occurring as the susceptible group becomes saturated, and on the other hand because people leave the infected pool through recovery or, in the case of HIV/AIDS, death) the curve levels out. This is referred to as the *endemic stage*. The specific shape of the curve depends on the nature of the infection itself, how it is transmitted, the size of the susceptible group, whether recovery is possible, whether immunity is possible, whether infection can be prevented, and so on. While epidemiological modelling is clearly a highly complex process, these basic principles are among the core tenets upon which the mathematical models developed to simulate the HIV epidemic are based.

Based on estimates from elsewhere in Southern Africa, the average adult in Swaziland is estimated to live for an average of six years from HIV infection to the onset of AIDS and, within six months to two years thereafter, dies.

The number of Swazis HIV positive by year is indicated in the following figure:

Figure 3.2: Number of Adults Alive With HIV by Year (1991-2016)



* See Table A1, Annex A.

In 1991, some 20,000 Swazis were HIV positive and had not yet died of AIDS. This has risen rapidly to 30,000 in 1992, 40,000 in 1993, 55,000 in 1994, and now doubling to 115,000 by 1999. Rapid growth will level off by the year 2004 at around 140,000, with cases of people living with HIV, averaging near 150,000 from 2012.

Annual HIV positive births (the risk of transmission from mother to child is about one in three) where children born HIV positive have a 67% chance of dying in the first

Programme strengths in Swaziland include:

- ~ the King's public pronouncements about the epidemic
- ~ the Prime Minister's leadership
- ~ recent calls for intensified, rationalised epidemic planning by all sectors co-ordinated by a National AIDS Committee
- ~ the partnership between Economic Planning and Development and Health and Social Welfare in leading the response
- ~ realisation of the need to reallocate resources to care for the epidemic
- ~ recent, participative planning and assessment activities in each line Ministry
- ~ widespread concern and awareness of potential destructiveness of AIDS mortality and morbidity

UNICEF, report on orphans, 1999.

year, with most having died by their fifth birthday, follows a different trend. HIV positive mothers die before giving birth to the same number of children they would have given birth to had there been no AIDS. The model predicted in 1991, an estimated 518 HIV positive births occurred, rising to 1,518 by 1996, 2,322 by 2001, thereafter levelling off to 2,211 by 2006, 2004 by 2011, and

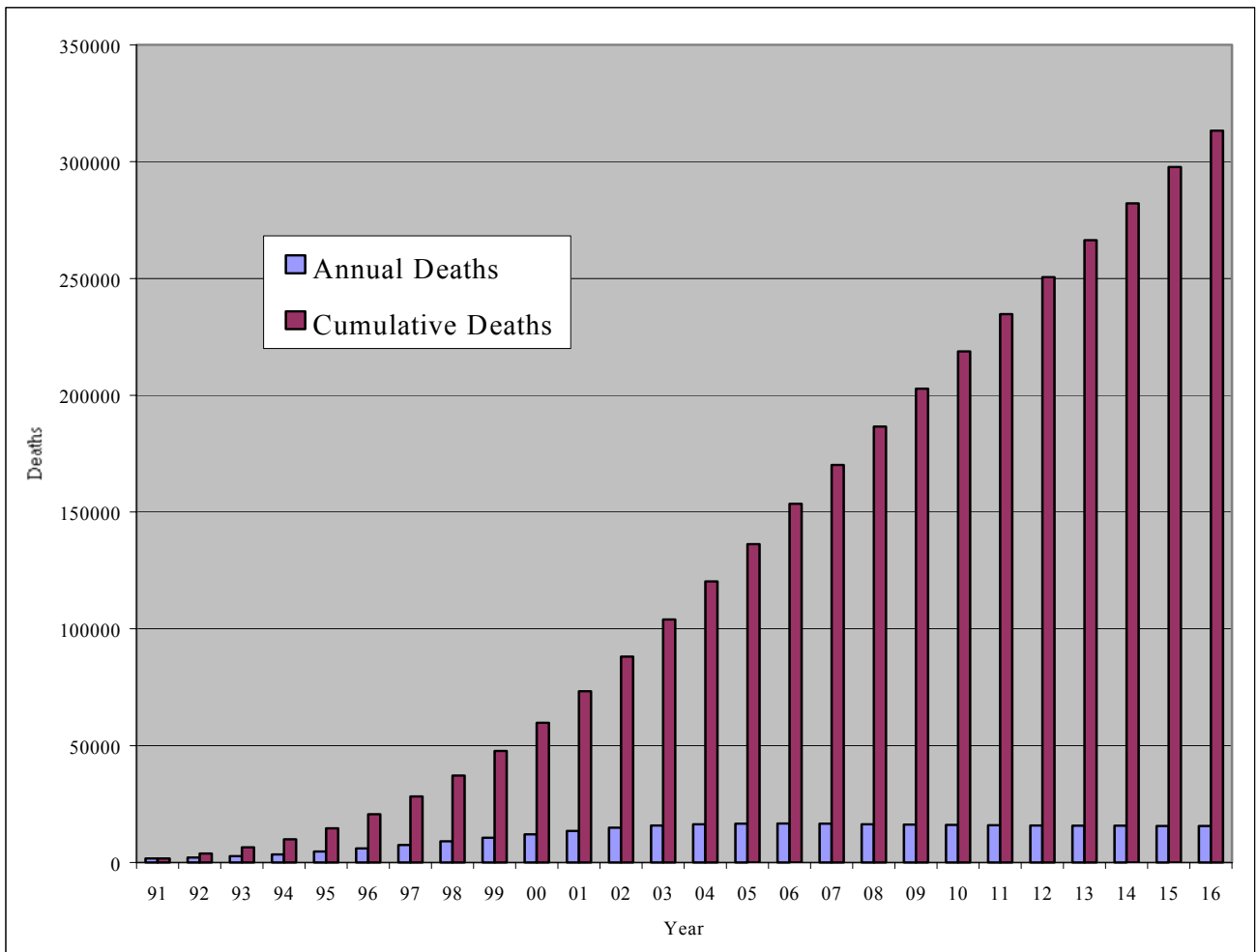
dropping to 1,741 by 2016. This means that the percentage of all HIV infections from mother to child comprised 2.5% of all infections in 1991, dropping to 1.9% by 1996, 1.8% by 2001, 1.6% by 2006, 1.4% by 2011, and 1.2% by 2016, as fewer and fewer children are both to HIV positive mothers who pass away before reaching an 'average' number of births.

Deaths Due to AIDS

As noted earlier, it is estimated that the average HIV positive person will take six years from infection before AIDS develops. Therefore, the number of AIDS deaths will lag behind HIV infection by an average eight year period.

Figures for annual and cumulative AIDS deaths are indicated in the following figure:

Figure 3.3: Annual and Cumulative AIDS Deaths By Year (1991-2016)

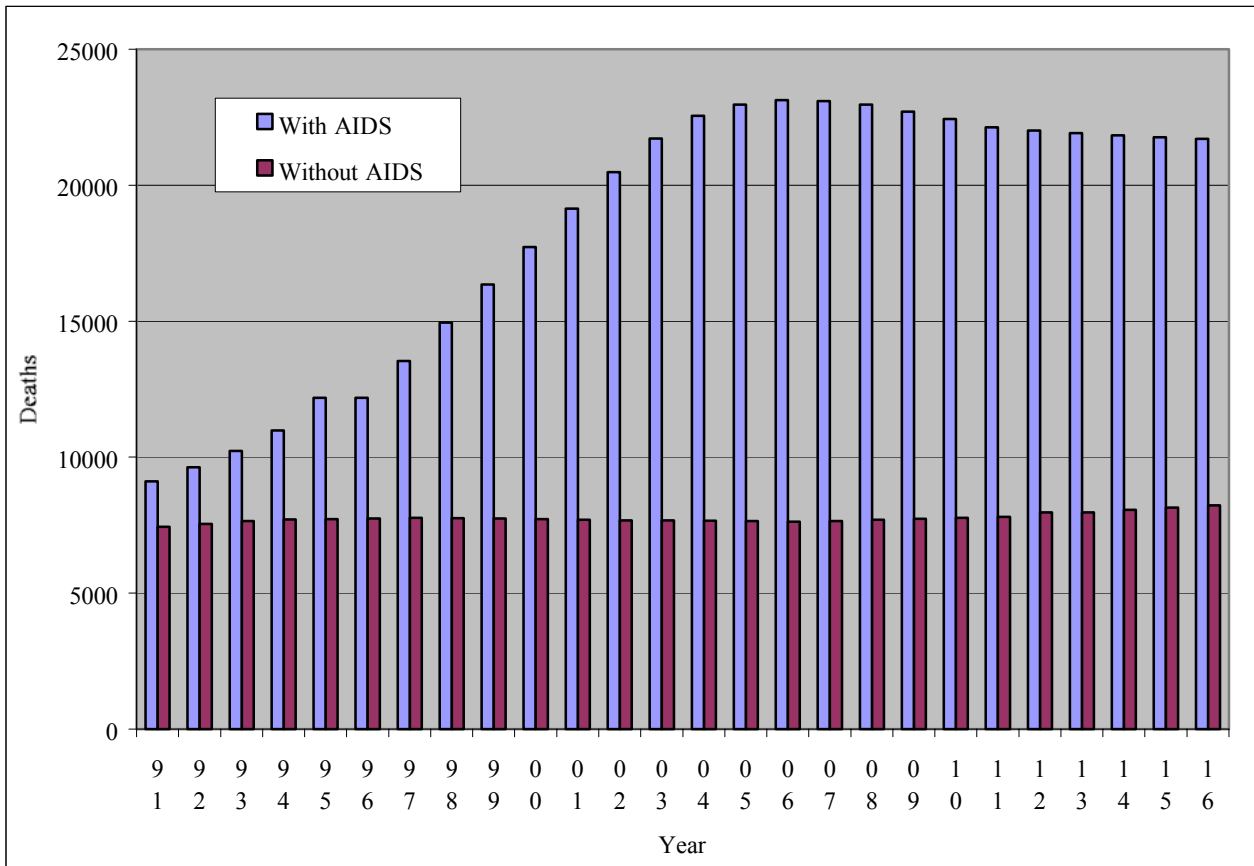


* See Table A2, Annex A.

This figure clearly shows the exponential growth in cumulative AIDS deaths, rising to over 300,000 deaths by the year 2016, while the annual deaths from AIDS will begin to flatten by 2003.

The impact on total deaths, with and without AIDS, is shown in the following figure:

Figure 3.4: Annual Death Rates With and Without AIDS



* See Table A5, Annex A.

By 2016, annual deaths will exceed expected death levels by 62% due to the AIDS epidemic. The difference in 1991 was estimated at 18%, rising to 30% by 1994, 56% by 1999, to a high of 67% for the period 2004-2007.

Total Population and the Impact of HIV/AIDS

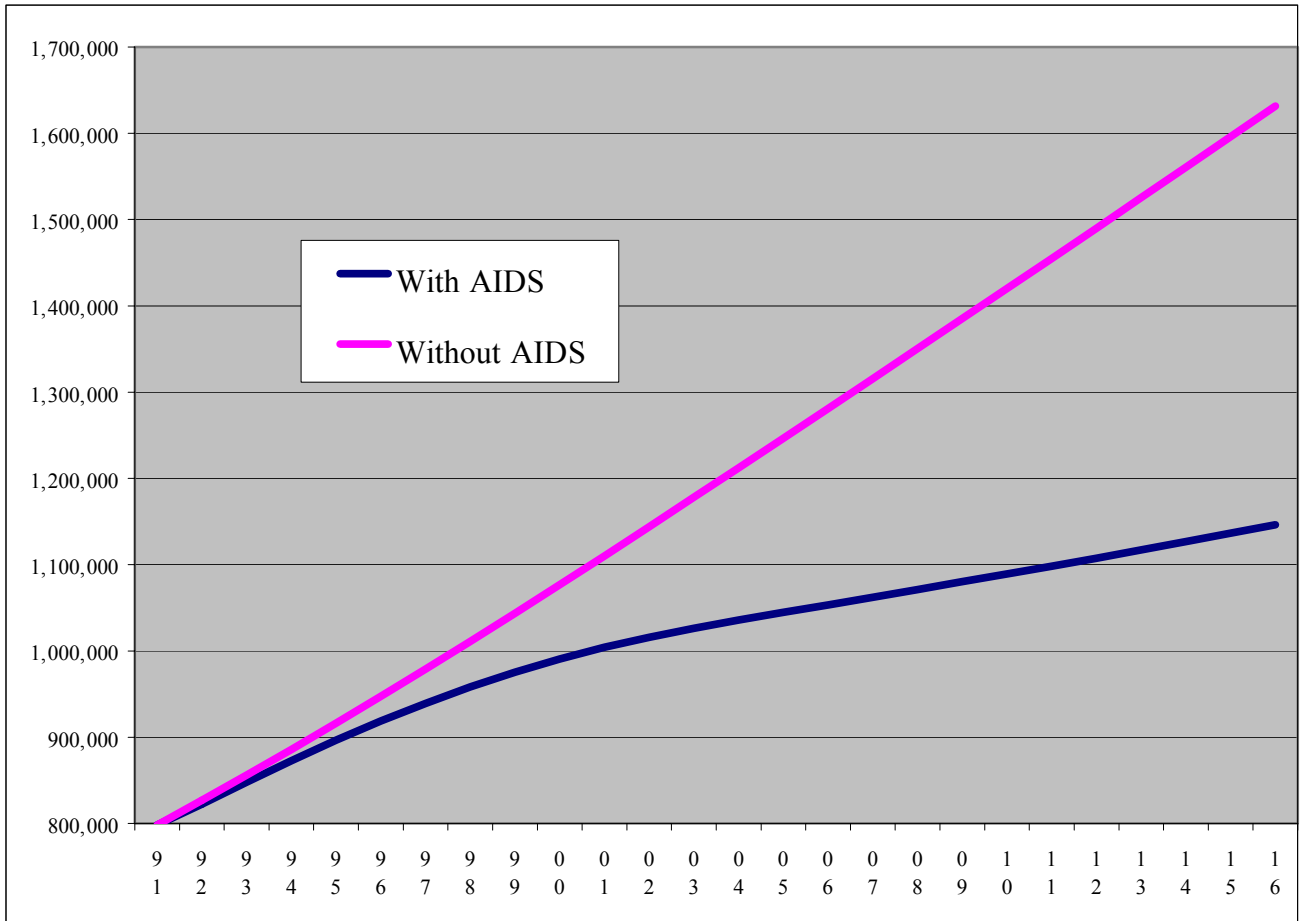
The total population calculated with and without AIDS is indicated in the following figure. Without AIDS, the total population of Swaziland would have

The total population is set to be 42% smaller than projected due to the impact of AIDS.

been just over 1.6 million. With AIDS, the population is set to increase to 1.15 million, a difference of 42%. The bulk of these deaths will be people in the reproductive age range of 15-49 years, as well as under-ones. As deaths increase

among those in their childbearing years, the number of children *never* born will increase, contributing to the gap between the two projections in the above figure.

Figure 3.5: Population of Swaziland With and Without AIDS (1991-2016)

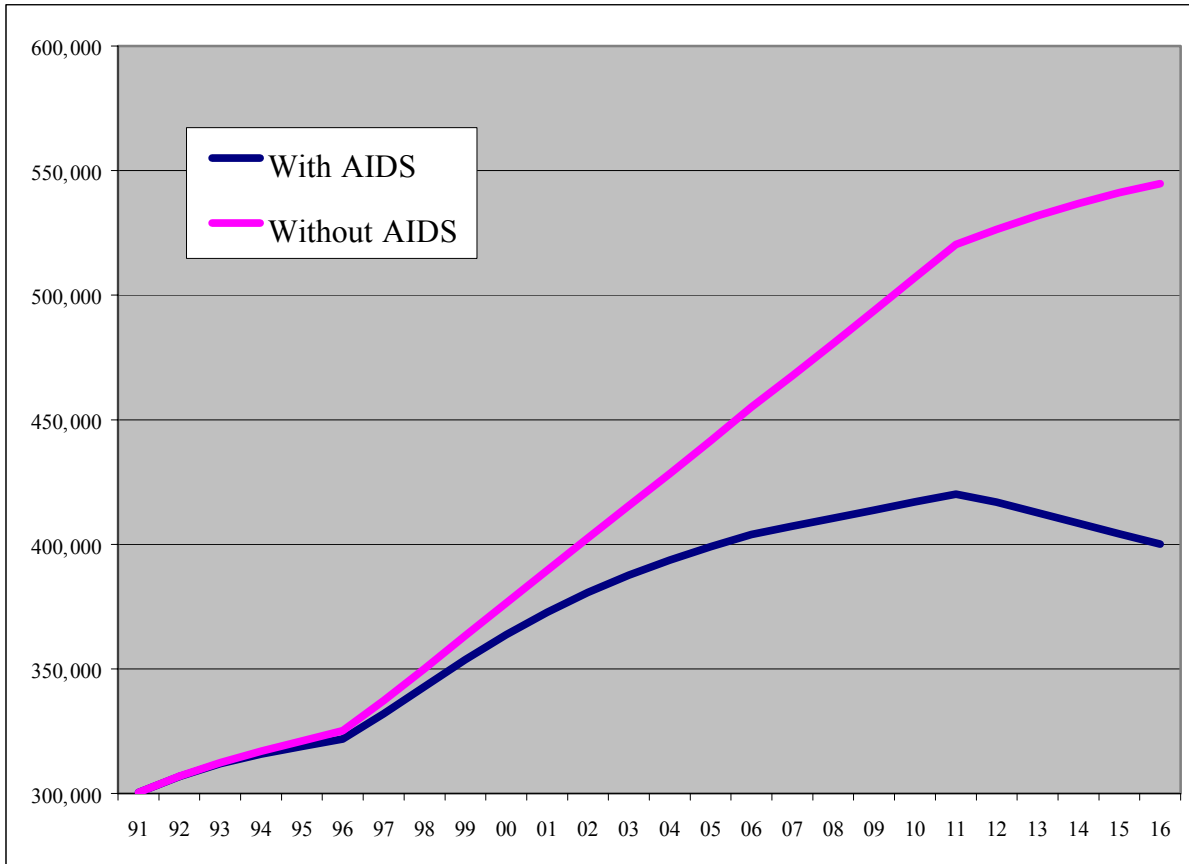


* See Table A4, Annex A. For further information on the modelling parameters that explain the nature of the curve, consult Annex B in volume 2.

The total population aged 5-18 will be similarly affected, with a 36% reduction compared to projections by the year 2016.

Detailed findings are indicated in the following figure:

Figure 3.6: Population Aged 5-18 With and Without AIDS (1991-2016)

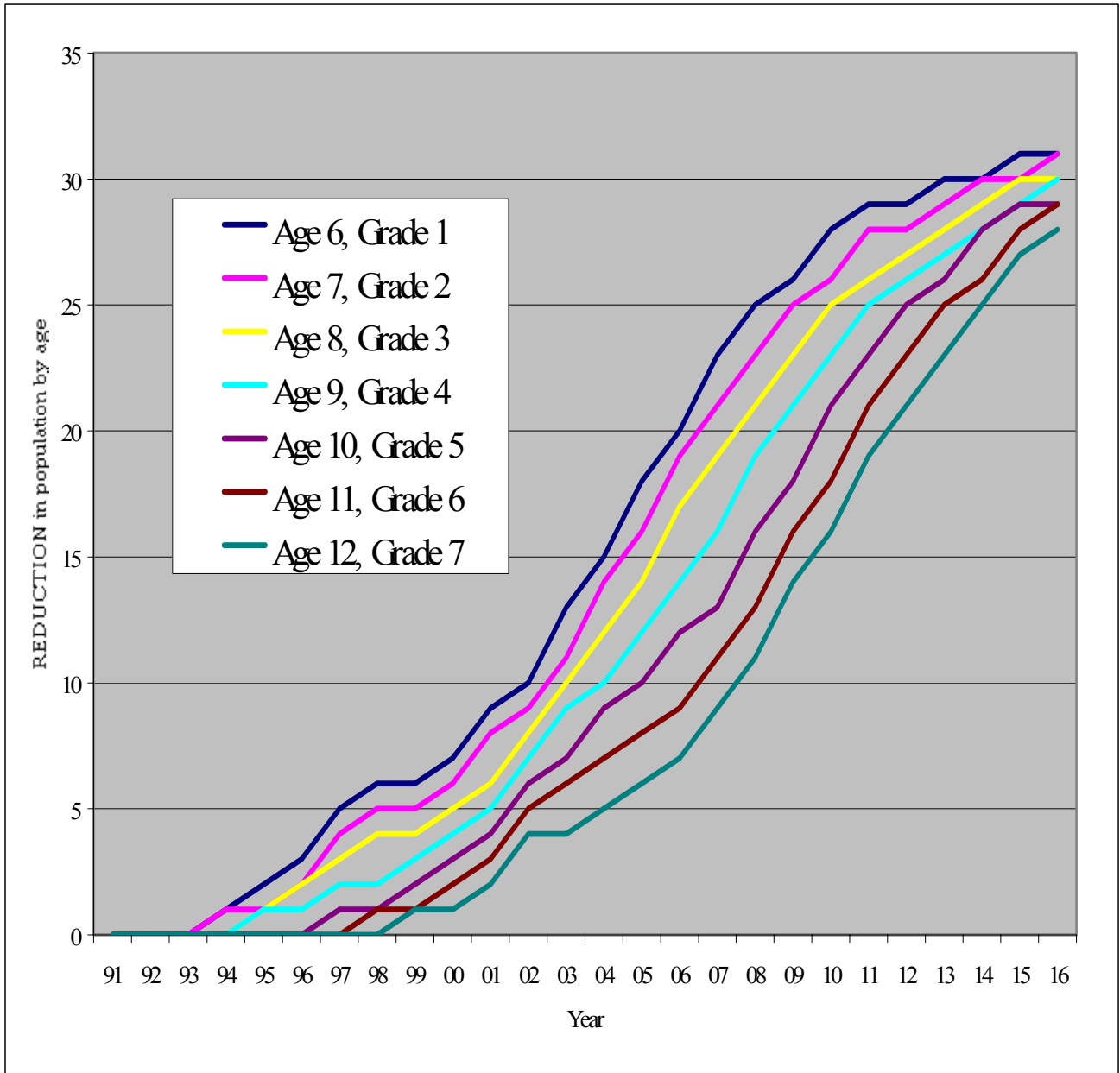


* See Table A3, Annex A. For further information on the modelling parameters that explain the nature of the curve, consult Annex B in volume 2.

For the age group 5-18, deaths from AIDS had little impact until the end of the 1990s, with 1995 showing the first year of decline (1%), rising to 2% in 1997, 3% in 1999, 4% in 2000, 11% in 2005, 22% in 2010, and 36% in 2016. Most of this decline is due to children never being born because one or more parent has died of AIDS, and to a lesser extent due to HIV positive children being born but dying before their fifth birthday.

Given that 6-17 year olds represent the school-going population, more detailed findings for each age cohort is provided below:

Figure 3.7: Percent Decline in Population Cohort by Age and Corresponding Grade - Primary School Level (1991-2016)



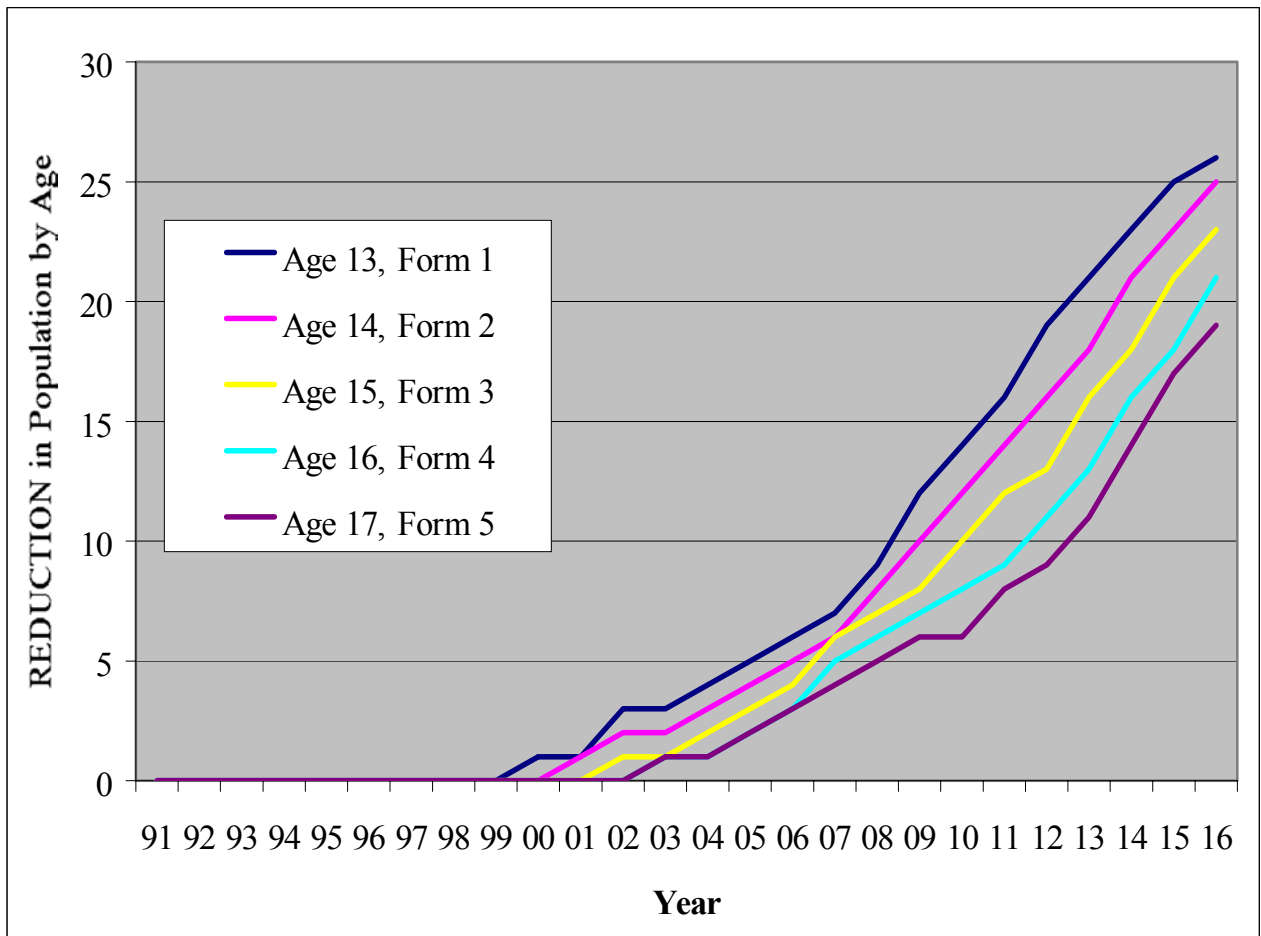
* See Tables A12 through A18, Annex A.

It is important to note that the figures refer to the reduction in the population, by age, due to the HIV/AIDS epidemic. As the figure shows, the epidemic has hit younger children first, due to HIV positive births.

By 1999, the population of children aged six (coinciding with the first year of primary school) had declined by 6%, compared to 5% for 7 year olds, 4% for 8 year olds, 3% for 9 year olds, 2% for 10 year olds, and 1% for 11 and 12 year olds. Overall, by the end of the planning period, there will be a 30% reduction in the size of the primary school population for each grade.

Findings for secondary schools are indicated in the following figure:

Figure 3.8: Percent Decline in Population Cohort by Age and Corresponding Grade - Secondary School Level (1991-2016)



* See Tables A19 through A23, Annex A.

As with the previous table, this refers to the percent reduction in the population by age. This figure shows a continued ‘lag’ factor from the primary to secondary level, and from lower forms to higher forms. Overall, by the end of the planning period, there will be between 20 and 25% fewer children to attend secondary school directly due to the demographic changes arising from the epidemic (this does *not* include drop-outs, but rather refers only to non-entrants; with the inclusion of drop-outs, expected to increase due to affordability and time problems, the rate of children available for secondary school, particularly in the higher grades, would be expected to increase significantly). *However*, due to the fact that only one-in-two Swazis of secondary school age is actually attending school, the actual impact on enrolment could be nil. This is discussed in more detail in the next chapter.

Assuming that 18 and 19 year olds would be the most likely age at which young Swazis would begin to attend tertiary education, detailed projections were also made for these age groups. Findings show that, by the year 2016, the population of 18 year olds would have been reduced by 17%, and the population of 19 year olds by 15% (see Annex A, Tables A23 and A24).

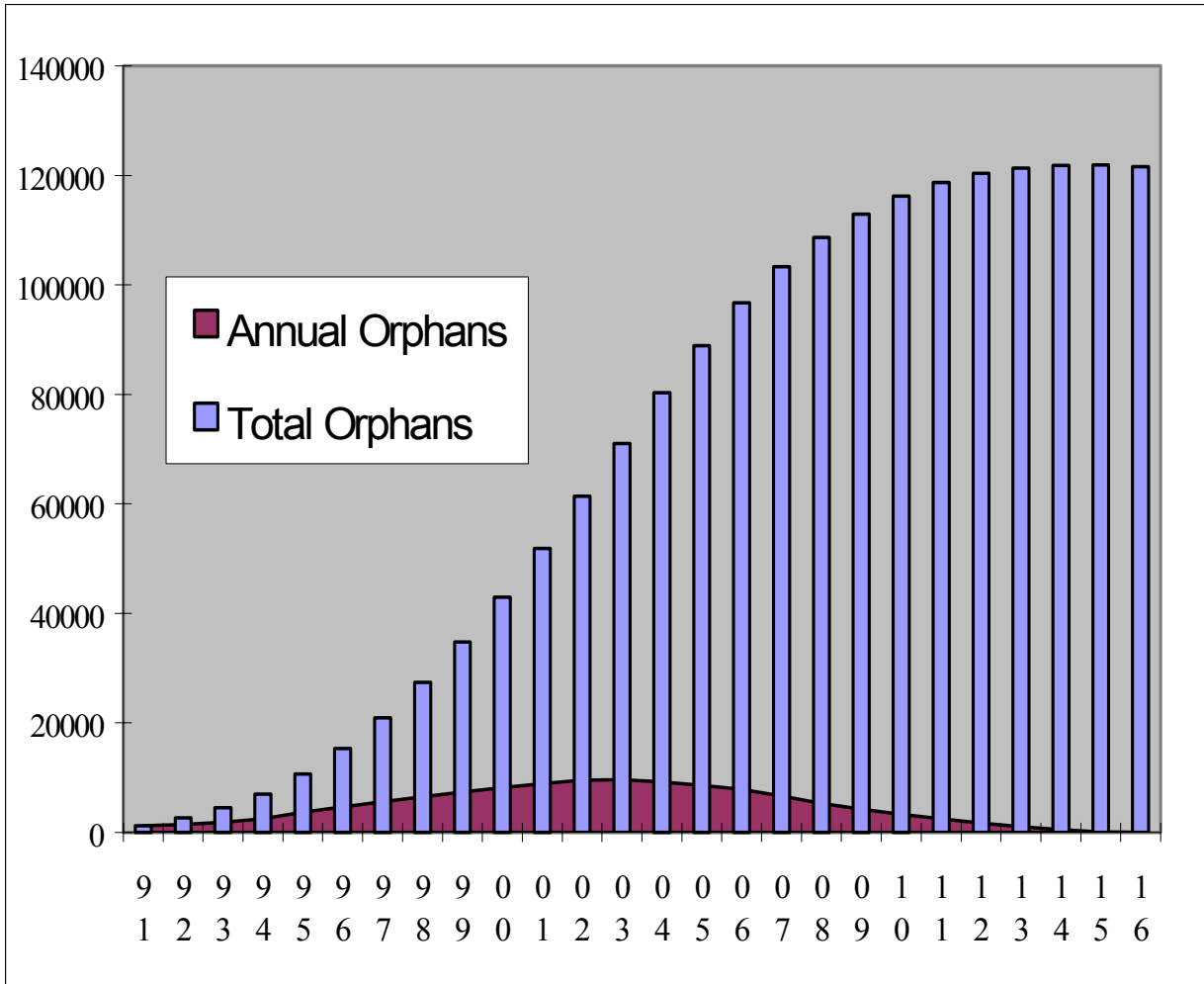
Orphans

Despite this reduction in childbirth levels, the number of AIDS orphans will continue to rise. Orphans are defined as those who have either lost their mother or both parents and are under the age of fifteen.

Findings are shown in the following figure:²

² The Spectrum Model factors in the under-five mortality rate in the calculation of orphans. Therefore, the impact of antenatal HIV infection is indirectly incorporated into the orphan figures. It also factors in deaths, that is, the orphan figures are for orphans who are alive. There will be some older orphans (10-14 years of age) who may become HIV infected via sexual transmission. However, most of this group would be aged fifteen years or older by the time they died, and would therefore still be included as AIDS orphans when they were under the age of fifteen.

Figure 3.9: AIDS Orphan Population by Year (Children Who Have Lost Their Mothers or Both Parents) (1991-2016)



* See Table A6, Annex A.

There were an estimated 1,166 AIDS orphans in 1991, rising rapidly to 34,771 by 1999.

By the year 2005, there will be an estimated 90,000 orphans who lost their mothers or both parents to AIDS, continuing to rise until 2012, when it levels off at just under **120,000**.

For orphans and caregivers, the following should be considered:

- ~ siblings should be kept together
- ~ children need to stay in their own homes and communities for continuity and security
- ~ many children are responsible for their own survival, and often the survival of siblings
- ~ many children will be forced to drop out of school
- ~ caregivers are often elderly women
- ~ psycho-social counselling is inevitably required, which can come from community-based counsellors
- ~ support systems in communities for orphans are becoming increasingly fragile

UNICEF, report on orphans, 1999.

In a case study with an AIDS orphan and her extended family, carried out in late 1998, case descriptions were obtained regarding the circumstances they faced. The following is a synopsis of one of the cases.

The interview took place in a peri-urban informal settlement. Present were Gogo, aged 63, and her three orphaned grandchildren, a girl aged 9, a boy of 13 years, and the eldest, a girl aged 15.

Gogo's place was on a rocky path up on a steep hill. Gogo and the children lived in a stick and mud house of two rooms joined together. The house and the yard are clean and well kept. However, all the windows are broken, and Gogo told us why later. There is a tap in the yard and pit latrine behind the rooms. We did not go inside the house, so did not see what possessions the family had. Gogo refused to let us sit on the ground, and fetched a bench from inside the house as well as a few tins that she placed upside down for us to sit on.

Gogo was born in Lundzi in the Manzini Region. She had four brothers and one sister, but there are all late. Her sister-in-law lives in Lundzi with her children and grandchildren. She says she would like to live at Lundzi and maybe try and build a homestead there, but she does not want to leave Msunduzi before her grandchildren are settled in life, because if she left now the children would have to leave school and she does not want that.

Gogo had three children, one boy and two girls. The boy, her eldest, is mentally disturbed and spends much time at the Psychiatric Centre in Manzini. He sometimes comes home and causes problems for Gogo, such as breaking all the windows in the house and scaring his mother and her grandchildren. Her second child, a daughter, got married and lived elsewhere in Msunduzi. Her husband died in 1991 and she died shortly after him. His relatives took in their children, and Gogo says they are fine. Gogo lived with this daughter for a while, but after she died she decided to rent the house they now live in.

Her last born died in 1995. Her husband died earlier in the same year. Gogo was crying when she told us this. She now lives with her three grandchildren from her last-born daughter, and pays E50 rent per month. It is a two-roomed house. The boy sleeps in the kitchen and the two girls sleep with Gogo in the other room.

Gogo was a vendor at the market, as was her daughter. Her daughter stopped selling at the market in the beginning of 1995 because she was always sick and people at the market used to say many bad things to her concerning her illness. Gogo had to stop selling at the market at the beginning of 1998, as she could not longer afford the E15 fee required to use a table. Also, her wares were not selling well anymore, so she felt it was better to stay at home. Gogo started crying again when she told us this, because she said she now feels helpless about her grandchildren and she just hopes someone can help them before she dies.

She said the children had often been sent home from school because their fees had not been paid but she somehow always managed to put them back in school. She fears that the children will never be able to finish school because she herself is ill and it is difficult for her to try and make any money. She cried again because she said her daughter really wanted all her children to be able to finish school.

The eldest granddaughter said they never get teased or ostracised at school because they get sent home to get fees or because their clothes are old and torn, because many other children had the same problems. She said they have a lot of friends at school and they play with them after school, but that they only have one school uniform and they want to save it from becoming dirty and torn too quickly. The girl said she had been wearing the same pair of school shoes for the last two years, and she did not know where the money is going to come from to buy a new pair or when she will be able to get new ones. (She was wearing these shoes when we talked and they are very torn and used.) This girl hopes to become a teacher. She also hopes that she and her brother and sisters will have no more suffering in their lives, because she feels it is not fair for them to have to suffer more.

Her eldest grand daughter who had moved away out of Gogo's earshot told us that sometimes she wishes she could leave school and help her grandmother. She says she really enjoys school but sometimes feels she could do more if she tried to find work. She told us she felt very angry and hurt when her mother died, because no one told her why her mother was so sick. It was very painful for all the children because their mother was in so much pain and nothing seemed to help her.

Possible Intervention Effects

The Futures Group, a United States-based consultancy firm, has projected the likely effects of key interventions on HIV prevalence rates (Stover and Way, 1995). While these are generic models which are difficult to apply to particular circumstances, and while the models assume that strong interventions will have occurred *prior* to the situation Swaziland finds itself in, the projections are nevertheless of interest. Basically, along with extensive information, education and communications interventions, three 'practice' interventions are key in responding to the epidemic: reduce casual sex (that is, reduce the number of 'high-risk'

contacts), increase condom use with all sexual partners, and treat sexually transmitted diseases effectively.

If Swaziland were in the position of having an HIV+ rate of 7%, an intervention to reduce the number of casual partners would lead, within a decade, to a drop in eventual prevalence from 22% to 15%, a total relative drop of just under 50%. The impacts of condom use are even more dramatic, with the rate dropping from 22% to 12%, or a drop of 83%. Regarding STD treatment, interventions were projected to reduce HIV prevalence increases from 22% to 14%, a drop of 64%.

When these three interventions are combined, and assuming that all three are strong and accepted, an HIV prevalence of 7% in 1995 would have only grown to a projected 9% by 2005, rather than the 23% without any of the interventions.

Given that Swaziland has not responded to the epidemic in its early stages, what are the implications of these three interventions? According to projections, while an early intervention would lead to a growth in the HIV prevalence rate from 7% to 9%, a later intervention could still result in the HIV prevalence rate being significantly lower than projections would suggest. For example, in Swaziland the HIV positive rate may climb to 23% by 2003, thereafter dropping to 20% and levelling off. With effective interventions along the lines just described, this rate could be as low as **15%** within ten years of intervention start-up.

These are, of course, the most optimistic scenarios, and are likely not applicable to Swaziland's current circumstances for the following reasons:

- 1) The epidemic is well advanced in Swaziland, and the three projections just made are based on the assumption that significant interventions were made *before* the crisis expanded to its current level. Therefore a levelling at 15% may be *the* most optimistic scenario.

- 2) There are mixed feelings in Swaziland regarding the efficacy of condom use, with parents particularly against the active promotion of condoms.
- 3) While sexual practices data are only sporadically available in Swaziland, findings from a study in Piggs Peak (AfriDev, 1999) as well as qualitative data collected for this and other studies suggest that it will be difficult to reduce the number of casual partners.
- 4) There is clearly considerable confusion surrounding what HIV is, what AIDS is, and how the two relate to each other.
- 5) While parents and general members of the public are concerned about HIV/AIDS, there are still strong elements of denial because of the 'secret' nature of the disease and the stigma attached to having it. This denial reinforces anti-sex education attitudes among a majority of the population.
- 6) Finally, there are problems with regard to STD treatment, both in terms of its timeliness and in terms of continued treatment after reporting to a health facility.

Summary

The model projects some 300,000 AIDS deaths by the year 2016, giving a death rate some **62%** higher than would have been the case without AIDS. HIV prevalence will peak in the first years of the 21st century, and will level off to about 20% prevalence for the planning period. By the year 2016, the population of Swaziland is projected to be at around 1.15 million, rather than previous projections (without AIDS) of 1.6 million. By the year 2016, there will be a total estimated AIDS orphan population of 120,000, or some 25% of the under-fifteen population.

For the education sector, there is an expected reduction of 30% in the number of primary school age children. At the secondary level, the findings suggest that there will be 20-25% fewer children in this age range by 2016.

Chapter 4: Demographic Impacts on the Education Sector

Introduction

A

As indicated in Chapter 3, the HIV/AIDS epidemic is currently changing the demographic landscape in Swaziland.

Effects of the epidemic will be far-reaching, and virtually all sectors will be affected. In agriculture, skilled personnel

In 1995, 66% of the population lived below the poverty datum line. 48% of all Swazis fell below a food poverty line, indicating that nutrition was not always adequate. UNDP, Human Development Report, 1997.

will not be available in sufficient numbers to offer effective extension, crop production will suffer from a lack of labour, households will become more vulnerable and will, as a result, need additional emergency assistance.

In the health sector, more and more health expenditure by the state will go towards caring for people who are HIV positive or who have AIDS. Homesteads will be increasingly unable to afford health care, suggesting delays in presenting themselves for medical attention. Actions to try and counter growing adult illness and death rates, increased infant mortality rates, and increased under-five morbidity and mortality rates will constitute an increased drain on resources, both on the part of the state and on the part of homesteads.

In business, the increased burden of higher illness rates and higher death rates will affect productivity and profitability, and will likely result in the higher capital intensity of industry and the loss of enterprises, making fewer future jobs available.

What are the effects for the education sector? Education, like health, has a particularly important role to play in HIV/AIDS prevention through education, as well as enhancing social acceptance of people living with HIV/AIDS. It can therefore play an

important, progressive role in attempting to stem the rising incidence rate (that is, having the epidemic crest at a lower level than projected and drop off more sharply more quickly).

At the same time, because of its labour intensive nature, and because of its particular susceptibility to changes in demand, the education sector is especially vulnerable to the epidemic. It is clear from demographic projections presented in Chapter 3 that the demand for education is going to drop, while those that do attend school will be coming from families less able to cope with educational costs. Indeed, in many respects poorer homesteads are being affected first, because of links between poverty and vulnerability and lack of information on the one hand and HIV infection on the other. While qualitative data clearly show that homesteads are doing everything possible to keep their children in school, homesteads will become increasingly unable to cope, and children will be withdrawn from school.

At the outset it should be noted that the model projecting *demand* for education, based on demographic trends on children 0-19, is more reliable than the modelling involved in establishing the *supply* of educators. This is due to problems arising in dealing with small populations, where individual circumstances may cause projections to vary more than would be the case for larger populations. Nevertheless, no alternative projection options are available, therefore projections for the population aged 20-59 were used as proxy indicators for teachers and educators.

Demand for Education

Introduction

To assess existing and potential demand for education, enrolment rates from 1970 to 1997 were obtained. Annual growth rates were then calculated. In addition, where data were available on the size of the population based on the 1991 Household Survey, the percent of the

population aged 6-17 attending school was calculated. Following these calculations, projections for the period 1998-2016 were made, including the impact of the HIV/AIDS epidemic. Thereafter, comparisons between the AIDS/non-AIDS situation were made.

Primary School Enrolment

Past Trends

Demand for education has increased steadily over the past few decades in Swaziland, reflecting the commitment of homesteads and the Government to the provision of this basic need.

The following table shows the number of pupils by year for the period 1970-1997:

Table 4.1: Primary School Enrolment (1970-1997)

Year	Pupil Enrolment
1970	69,055
1971	71,455
1972	76,343
1973	81,694
1974	86,110
1975	89,528
1976	92,721
1977	96,835
1978	100,700
1979	105,607
1980	112,019
1981	129,913
1982	125,303
1983	129,767
1984	134,528
1985	139,345
1986	142,206
1987	147,743
1988	152,895
1989	135,410
1990	166,454
1991	172,908
1992	180,258
1993	186,217
1994	192,599
1995	199,599
1996	202,439
1997	205,829

Gross enrolment, which includes repeaters, exceeded 100% by the 1980s. Even excluding repeaters, enrolment rates rose from an estimated two-thirds of all eligible pupils in 1971 to over 80% by the early 1980s to over 90% by 1990, approaching universal primary education by 1995. This reflects the expansion of education provision, both public and private, and the demand for education.

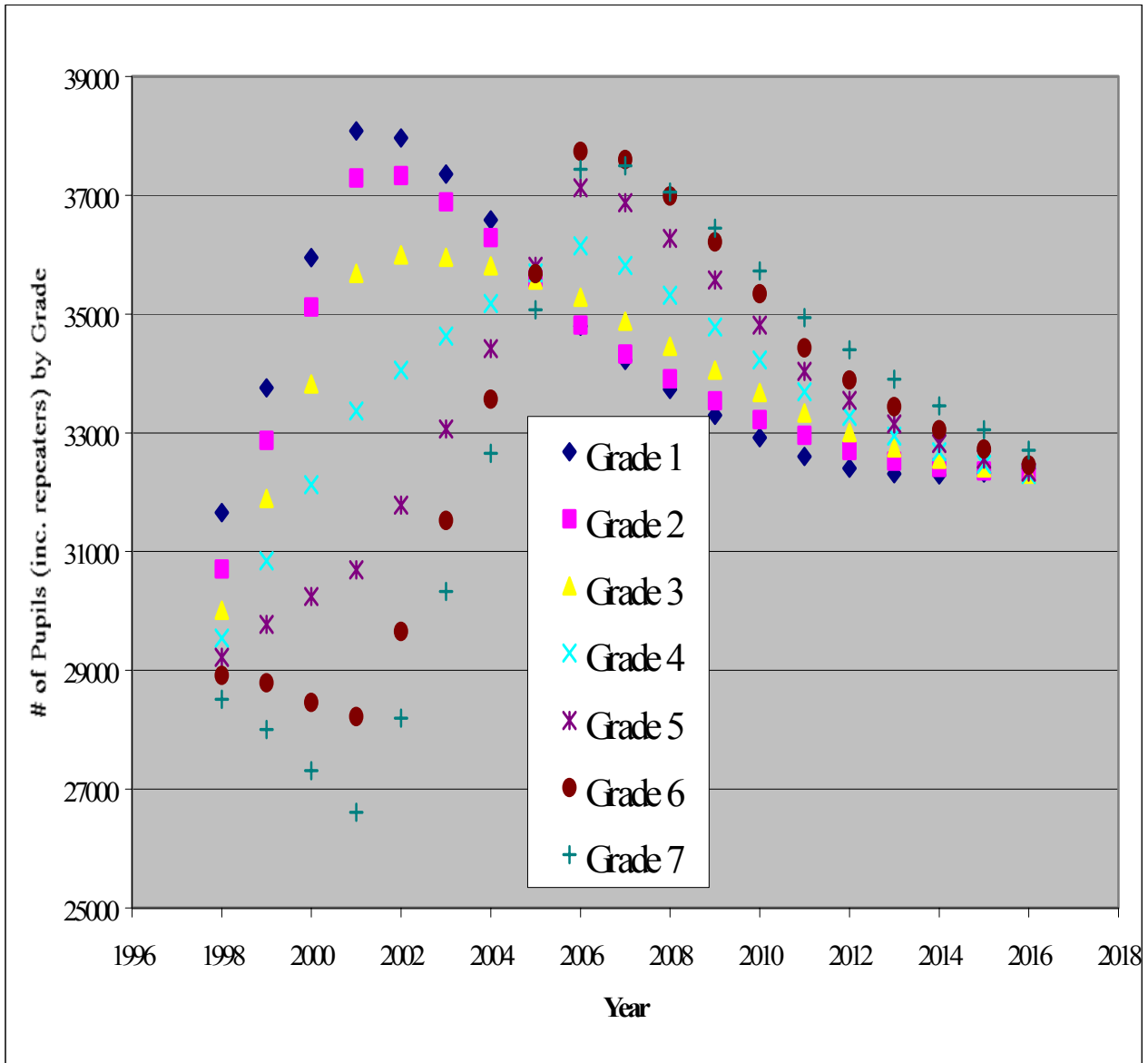
If affordability were not to become an increasing problem, it could be assumed that, given the value homesteads place on education, enrolment would continue at near 100%.

For the projections it is therefore assumed, affordability aside, that demand for primary education would remain at 100% despite the AIDS epidemic, following this historical trend (Chapter 5 discusses affordability issues and their perceived impact on enrolment).

Projections

Using the AIDS projections, how many pupils would attend primary education to maintain near universal enrolment? Preliminary projections for the period 1998-2016, broken down by grade, are indicated in the following figure (assuming no changes in repetition rates):

Figure 4.1: Projected Primary School Aged Population By Grade (1998-2016) (inc. repeaters)



* See Table A28, Annex A.

The figure shows the continued growth, for each grade, in primary school attendance through 2001, with the growth in higher grades reflecting past trends of the median length of primary school attendance increasing. However, for Grade 1, attendance will already start to drop off by 2001, and will decline rapidly from 2003 to 2011, thereafter levelling off. Each successive grade reflects the same trend, but occurring at a later

date; Grades 6 and 7 will continue to grow as access improves (based on past trends), but are affected by AIDS deaths by the year 2001.

Ultimately, by 2015 enrolment levels begin to stabilise at 1999-2001 rates. It is important to note, when reviewing the figure, that this assumes that affordability and time allocation will **not** become problems due to AIDS, which is certainly **not** the case.

Total enrolment projected from 1998 until 2016 is indicated in the following table, including the impact of AIDS deaths:

Table 4.2: Total Projected Primary School Population Including AIDS Deaths Impacts (1998-2016) (inc. repeaters) (assuming 100% enrolment)

Year	Projected Primary School Population	% <u>Annual</u> Increase (a ‘-’ refers to a Decrease) In Primary School Population Per Annum
1998	208,568	
1999	215,933	3.53
2000	223,025	3.29
2001	229,963	3.11
2002	234,973	2.18
2003	239,746	2.03
2004	244,490	1.98
2005	249,109	1.89
2006	253,336	1.70
2007	251,208	-0.84
2008	247,725	-1.39
2009	243,896	-1.55
2010	239,923	-1.63
2011	236,986	-1.64
2012	233,204	-1.18
2013	231,008	-0.94
2014	229,261	-0.76
2015	227,895	-0.60
2016	226,826	-0.47

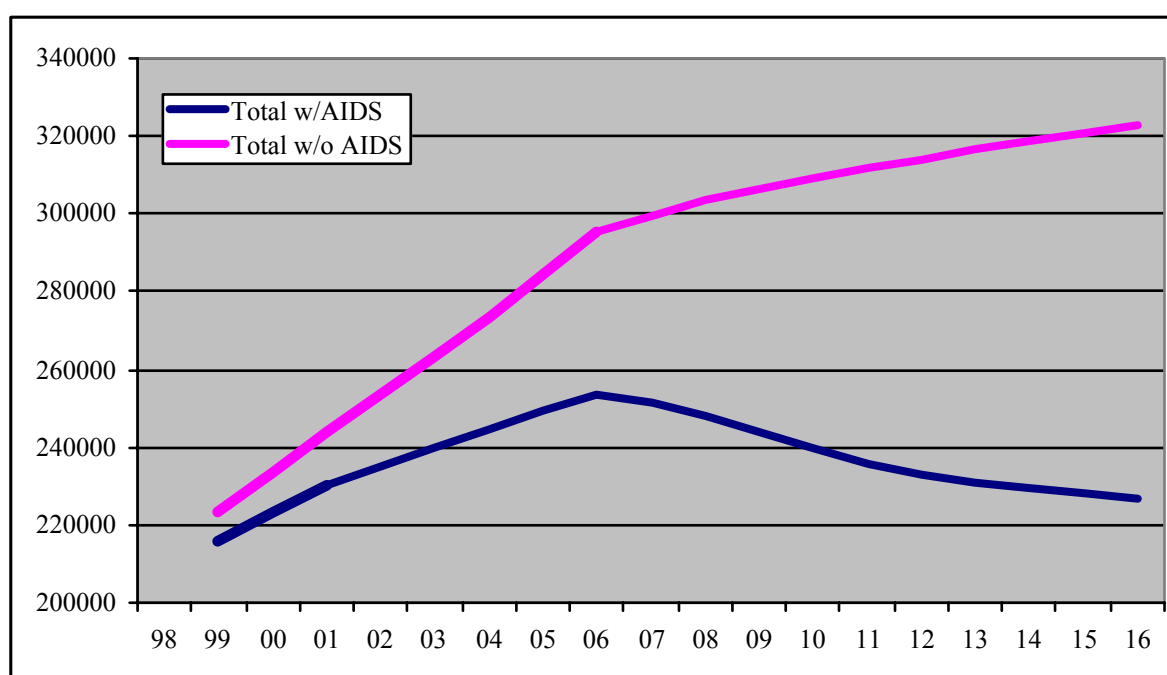
The number of children ‘available’ for primary school, including repeaters, continues to rise until 2006. However, the rate of increase drops off from the year 2000, declining

rapidly from 2001, and especially by 2006. By 2009, there will be fewer children of primary school age than in 2005; by 2016, there will be fewer children of primary school age than in 2001.

AIDS/no-AIDS Comparisons

The relative impact of AIDS compared to a no-AIDS scenario shows the difference in demand quite dramatically, as illustrated in the following figure. This figure shows the population of primary school age children without the AIDS epidemic, and compares it with the population of primary school age children with the AIDS epidemic:

Figure 4.2: Projected Primary School Aged Population (AIDS/no-AIDS Comparison)



See Table A29, Annex A.

For this educational year (1999), primary school enrolment is some 3.5% lower than expected due to the AIDS epidemic than it would have been without the epidemic³. This rises to 14.2% by 2006 and 30% by 2016.

³ It is important to note that this projection in particular, but also other enrolment projections, are affected by the assumptions regarding especially repeater rates, but also the age of learners. In Swaziland, both repeater rates and the percentage of overage learners are high, underling the point noted earlier that the modelling of impacts is only an estimate of reality, with the particular characteristics of the education sector in Swaziland impacting on the projections.

Secondary School Enrolment

Past Trends

Demand for secondary education has increased more rapidly than demand for primary education in more recent years, in part due to the fact that Swaziland has reached near universal primary education. The following table shows the year and number of pupils attending secondary school (including repeaters and over-age learners):

Table 4.3: Secondary School Enrolment (1970-1997)

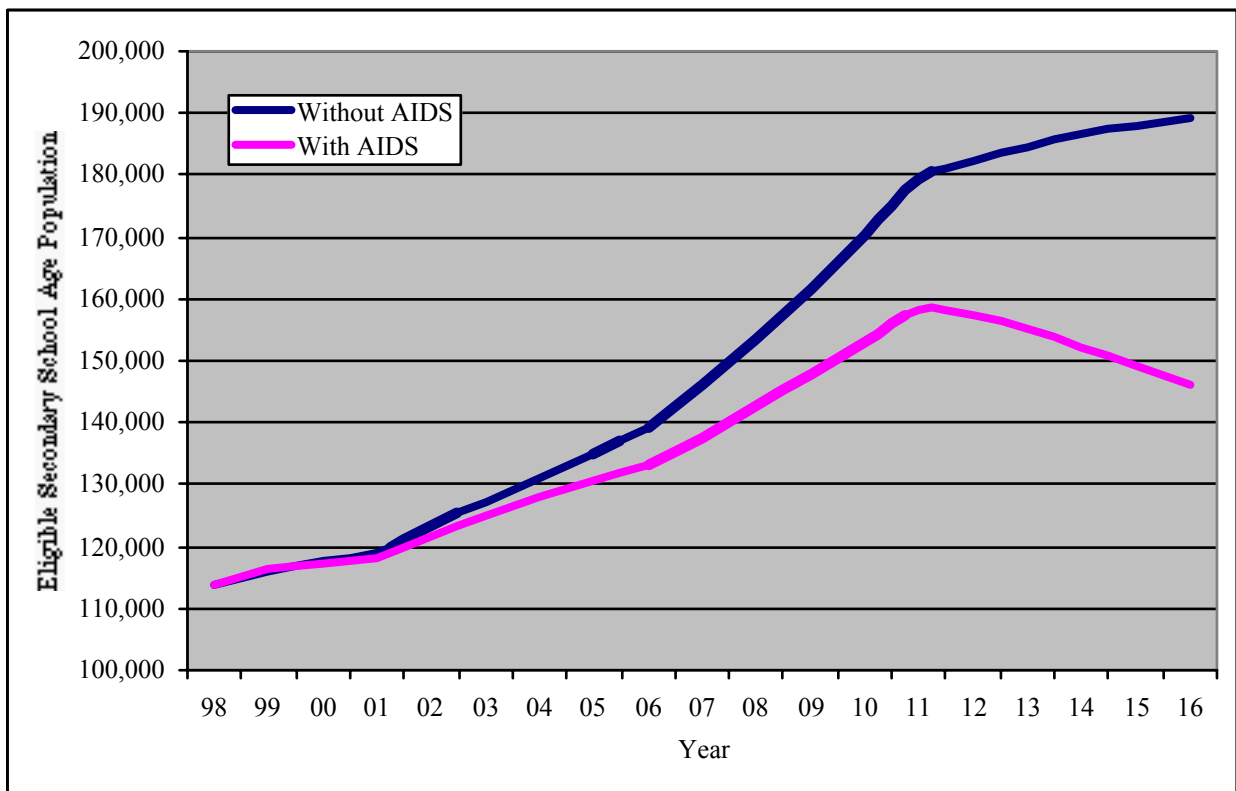
Year	Pupil Enrolment
1970	8,027
1971	9,001
1972	10,681
1973	12,459
1974	14,301
1975	16,227
1976	17,396
1977	19,359
1978	20,584
1979	22,091
1980	23,198
1981	24,826
1982	26,469
1983	27,801
1984	28,833
1985	29,914
1986	30,489
1987	32,942
1988	35,278
1989	38,882
1990	41,128
1991	44,085
1992	51,514
1993	50,304
1994	52,571
1995	54,933
1996	54,873
1997	58,197

Gross enrolment, which includes repeaters, grew sevenfold from 1970 to 1997, with almost 60,000 learners in 1997. This covered about 50% of the secondary school aged population by the mid-1990s. It should be noted, however, that there was a repeater rate of approximately 11% at the secondary level, meaning that the coverage of all secondary school age children was actually lower than this figure suggests. This *repeater* rate (at both primary and secondary levels) is actually likely to increase, despite reduced levels of enrolment overall, as the economic impact of HIV/AIDS on homesteads worsens.

Projections

Assuming that the enrolment rate was 100%, and not 50%, and assuming the continuation of an 11% repeater rate, the no-AIDS projection suggests that the secondary schooling system would need to accommodate 189,350 people by the year 2016. This projection, compared to the with-AIDS projection, is indicated in the following figure:

Figure 4.3: Number of Swazis of Secondary School Age (13-17) With and Without AIDS Assuming 100% Enrolment (1998-2016) (# includes 11% repetition rate)

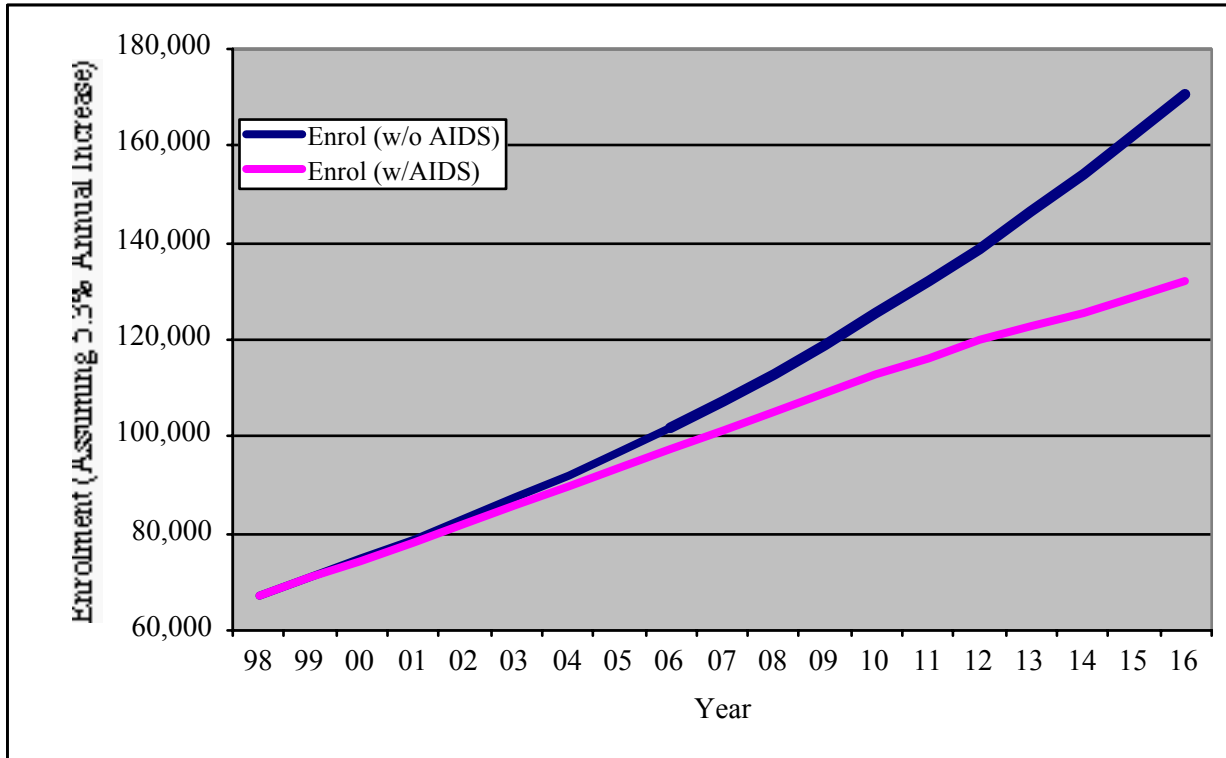


* See Table A30, Annex A.

By the year 2016, with AIDS, there would be almost 45,000 less Swazis of secondary school going age than without AIDS. In comparing this figure with full enrolment at the primary level (where the population of Swazis of primary school age drops 30%), while the above figure shows a less dramatic gap between the AIDS and no-AIDS scenarios, the number of secondary school age Swazis nevertheless drops by **22.7%** by the year 2016. The figure also represents the continuing age lag, as living children work through the system. Therefore, while the population of primary school age children drops off by 2006, the relevant change at the secondary level is five years later, in 2011.

The assumption of 100% enrolment is, of course, not a valid one, even if households living with HIV/AIDS could afford to have their children attend. Using the more realistic (albeit an optimistic) assumption of a continued growth in secondary school education along the lines of what occurred in the early 1990s, the following figure shows the relative numbers with AIDS and without AIDS:

Figure 4.4: Number of Swazis of Secondary School Age (13-17) With and Without AIDS Assuming Existing Enrolment Trends (1998-2016) (# includes 11% repetition rate)



* See Table A31, Annex A.

Using an increase in enrolment of 5.3% per annum for both scenarios, for the 'without AIDS' projection, this would result in 170,783 secondary school students (including 11% repetition) by 2016. For the 'with AIDS' projection, this would result in **131,934** secondary school students, a difference of 22.7% by 2016.

Supply

Introduction

To assess the supply of teachers and educational administrators available to meet education demand, the demographic projections employed for the general population aged 20-59 were applied to the population of educators.

Existing Situation

As of 1997 there were 7,777 teachers and 862 administrators in the education system in Swaziland, giving a total of 8,639. At the primary school level, there were an estimated 32 pupils per educator, while at the secondary level the ratio is 18:1. In both cases, ratios are above regional norms, meaning that Swaziland has a pupil:teacher ratio better than most sub-Saharan African countries (CODESRIA, 1999). Pupil:teacher ratios have shown a steady improvement since 1970 at the primary level, dropping from a ratio of 40.5:1. At the same time, the percent of qualified teachers has increased significantly, from 76.6% in 1973 to 92.4% by 1997 at the primary level, and from 84.9% in 1973 to 98.8% by 1997 at the secondary level.

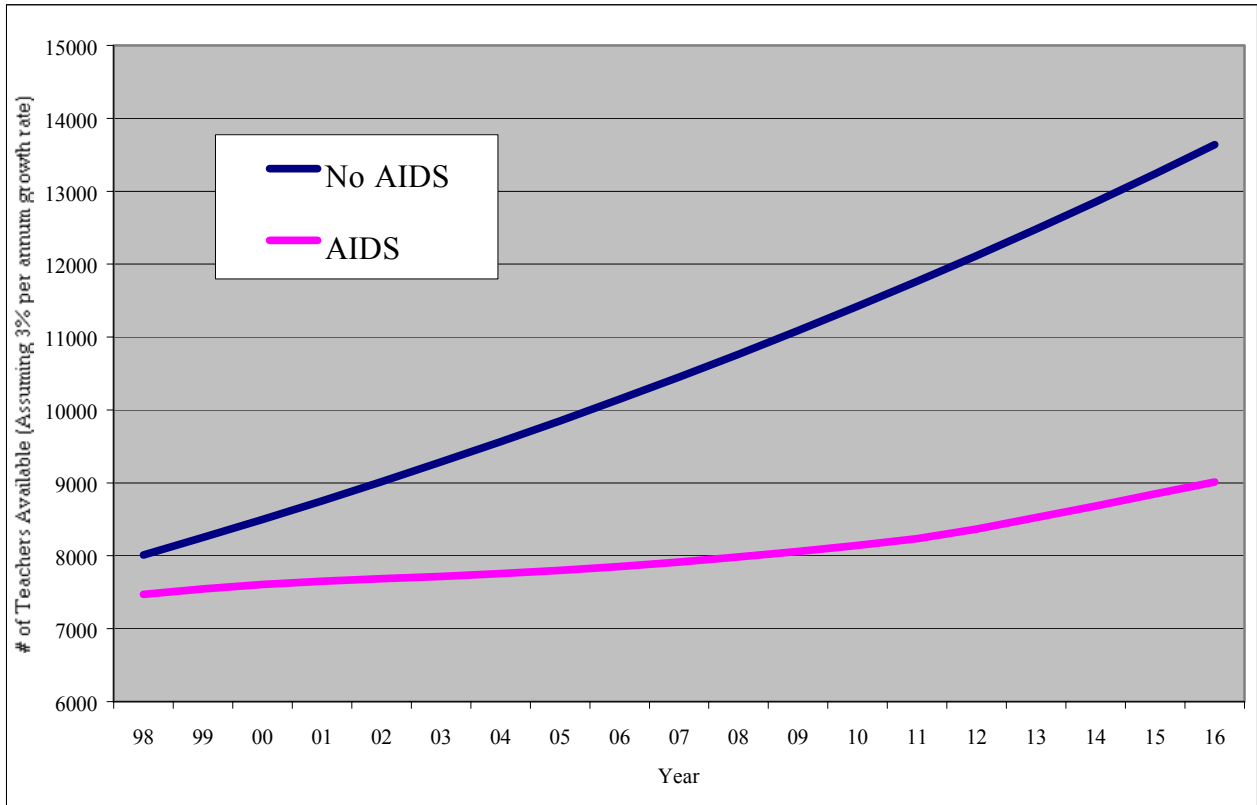
Personnel costs comprise 99.8% of the Ministry of Education's recurrent expenditures, while many operational and developmental costs are borne by homesteads and the private sector/non-governmental organisations. At the primary and secondary education levels, homesteads contribute half of all recurrent expenditures, covering school fees, examination fees, agricultural fees, home economics fees, book loan charges, stationary costs, sports fees, etc (CODESRIA, 1999). Therefore, Government,

the private sector/non-governmental organisations, and homesteads are all contributors to educational expenditures.

Projections

As noted earlier, in 1997 there were 7,777 teachers in the teaching service at the primary and secondary school levels, and 862 administrators, giving a total of 8,639 educators in the system. Because pupil:teacher ratios generally also include administrators, the pupil:teacher ratios noted in previous documentation slightly overstate the ratio. Grouping primary and secondary teachers and pupils together, the pupil:teacher ratio would be 33.9:1. Assuming that HIV infection rates and AIDS deaths for teachers would be similar to rates for others in the 20-59 age group, and assuming a 3% per annum growth rate in teacher numbers, the number of teachers available for the system is indicated in the following figure:

Figure 4.5: Projected Availability of Teachers (Assuming a 3% per annum growth in the # of people in the age range 20 to 59 for the No AIDS scenario)



By the year 2016, instead of 13,637 teachers being available for the educational system (assuming a 3% per annum growth rate under the No AIDS scenario), 9,012 would be available, a reduction in availability of some **33.9%**, *despite having to train the same number of new teachers per annum under both scenarios* (and based on the invalid assumption that none of the new teachers are HIV positive).

The following table shows the pupil:teacher ratio by year, based on the AIDS epidemic impact, assuming that no effort would be made to expand teacher training over time beyond 3%:

Table 4.4: # of Teachers and # of Pupils in the System and the Pupil:Teacher Ratio

Year	# of Students	# of Teachers	Pupil:Teacher Ratio
1999	294,775	7546	39.1 to 1
2000	307,955	7605	40.5 to 1
2001	322,223	7651	42.1 to 1
2002	339,127	7686	44.1 to 1
2003	348,977	7718	45.2 to 1
2004	363,265	7755	46.8 to 1
2005	377,873	7799	48.5 to 1
2006	392,715	7852	50.0 to 1
2007	400,574	7915	50.6 to 1
2008	408,205	7984	51.1 to 1
2009	415,369	8061	51.5 to 1
2010	421,982	8143	51.8 to 1
2011	427,830	8236	51.9 to 1
2012	434,166	8366	51.9 to 1
2013	439,590	8522	51.6 to 1
2014	444,741	8684	51.2 to 1
2015	449,710	8848	50.8 to 1
2016	454,631	9012	50.4 to 1

Figures show that the number of teachers in the system will decrease relative to the number of students from the 1997 level of 33.9:1 to almost 52:1 by the year 2010. Indeed, even by the year 2000, pupil:teacher ratios will exceed 40:1, **effectively negating improvements made since 1970.**

How many teachers would Swaziland need to train to achieve (or rather, ‘re-achieve’ the 1997 figure) a pupil:teacher ratio of 33.9:1? The following table shows the number of teachers required, the number of teachers available if 3% per annum are trained (adjusted to include HIV deaths among those trained), and the shortfall arising at this rate of training and deaths.

Table 4.5: Number and Percent of Teachers Required to Maintain a 33.9:1 Ratio of Pupils to Teachers

Year	Total # of Teachers Required to Maintain 33.9:1 Pupil Teacher Ratio	Needed Teachers Based on # of Pupils (excluding AIDS Impacts) (# Needed & % Per Annum Needed)		Total <u>Additional</u> Teachers Needing to be Trained Due to AIDS (# Needed)	Percentage Increase in Teacher Requirements Per Annum
		#	%		
1999	8695	377	4.34%	1427	378%
2000	9084	389	4.28%	367	94%
2001	9505	421	4.43%	429	102%
2002	10004	499	4.99%	542	109%
2003	10294	290	2.82%	337	116%
2004	10716	422	3.94%	494	117%
2005	11147	431	3.87%	517	120%
2006	11585	438	3.78%	527	120%
2007	11816	231	1.95%	281	122%
2008	12041	225	1.87%	270	120%
2009	12253	212	1.73%	245	116%
2010	12448	195	1.57%	219	112%
2011	12620	172	1.36%	171	99%
2012	12807	187	1.46%	147	79%
2013	12967	160	1.23%	78	49%
2014	13119	152	1.16%	55	36%
2015	13266	147	1.11%	31	21%
2016	13411	145	1.08%	13	9%
TOTAL		5093		6149	130%

* Note: 1999 ‘additional teachers needed’ figure includes projected backlog due to AIDS.

Assuming that new teachers have HIV prevalence rates similar to existing teachers and to the public at large aged 20-59, even with student enrolment affected by the epidemic

(with fewer births and the deaths of AIDS-infected under-fives), the number of teachers needing to be trained will need to increase dramatically to maintain current pupil:teacher ratios. In large part this is because the age group teachers fall in are the hardest hit by the epidemic.

While 5093 new teachers will need to be trained during the reporting period assuming that *none* were HIV positive, an additional 6149 new teachers will be required during the same period to accommodate the AIDS epidemic's effects on teachers (those in the system and those in training). In other words, for every 1 teacher expected to be needed if there was no AIDS epidemic impact on teachers, in fact 2.21 teachers will be required to accommodate the epidemic. Therefore, a total of 10,865 teachers will need to be trained instead of 5093 for the planning period, or 625 teachers trained per annum. By way of perspective, this total exceeds the current total of 7777 teachers in the system.

Costings

Teacher Training

The 'average' cost of training these additional 6149 teachers was calculated, based on the unit costs for training at UNISWA, William Pitcher College, Ngwane Teacher Training College, Nazarene Teacher Training College, and the Swaziland College of Technology, all of which fall under the Ministry of Education. 1999 was the base year in terms of average unit costs, with a 7.01% inflationary increment rising an additional 1% per annum thereafter (based on the 1998/99 inflation rate as reported by the Central Statistical Office). Costs are indicated in the following table:

Table 4.6: Additional Costs Arising from Additional Teacher Training Requirements

Year	Unit Cost to Provide One Teacher (Averaged) (E)	# of Additional Teachers to be Trained	Total Additional Cost (Em)
1999	18,495	1427	26.4
2000	19,808	367	7.3
2001	21,412	429	9.2
2002	23,361	542	12.7
2003	25,720	337	8.7
2004	28,575	494	14.1
2005	32,032	517	16.6
2006	36,229	527	19.1
2007	41,337	281	11.6
2008	47,579	270	12.8
2009	55,239	245	13.5
2010	64,685	219	14.2
2011	76,393	171	13.1
2012	90,984	147	13.4
2013	109,271	78	8.5
2014	132,328	55	7.3
2015	161,572	31	5.0
2016	198,895	13	2.6
TOTAL	65,772 (average)	6149	404.4

By the end of the reporting period, *additional* costs would exceed E400 million, with the average costs for each additional teacher set at E65,773 across years. This figure may be optimistic, it should be noted, because it assumes that teacher training can ‘catch up’ between 1999 and 2006, rather than occurring regularly across each year in the reporting period or occurring later. Both the cost and the additional teacher training requirements might escalate as the teacher training colleges and the university will be affected by AIDS. Also teachers may leave the profession (poached) to assume positions in other professions in greater numbers.

Sick and Death Benefit Costs

It is very difficult to calculate precise costs, because each teacher who dies will be in a particular situation (e.g., trained at x training institution for y years, in the teaching service for u years at v salary, etc., as well as discretionary benefits offered in particular circumstances). For the purposes of this investigation, it has been assumed that the ‘average’ teacher who dies of AIDS serves at the Grade 11, Notch 4 level, and has served in the teaching service for ten years. It also assumes that the person would be sick a total of one year during the HIV/AIDS period, and that the standard benefit of six months full pay and six months half pay would apply. It *excludes* any costs related to having to place a temporary teacher when this person gets sick. Based on these assumptions, the *average* cost for such a person would be E85,601.25 for 1999, rising by the inflationary increment as per comments from the Central Statistical Office. Findings for the projected number of teachers who die of AIDS and the Emalengeni cost are indicated in the following table:

Table 4.7: Additional Costs Arising from AIDS-Related Deaths and Illness

Year	Unit Cost (E)	# of Teacher Deaths	Total Additional Cost (Em)
1999	85,601	439	37.6
2000	91,679	183	16.8
2001	99,105	231	22.9
2002	108,123	326	35.2
2003	119,044	138	16.4
2004	132,258	281	37.2
2005	148,261	305	45.2
2006	167,683	305	51.1
2007	191,327	91	17.5
2008	220,217	262	57.7
2009	255,672	241	61.7
2010	299,392	218	65.2
2011	353,582	221	78.0
2012	421,116	239	100.5
2013	505,760	202	102.4
2014	612,475	230	140.9
2015	747,832	187	140.1
2016	920,581	147	135.7
TOTAL	304,428(average)	4248	1,162

Note: the figures in column three are based on modelled demographic projections. The 1999 figure includes 97 and 99 projections.

Additional costs arising from AIDS-related illnesses and deaths to the system was projected to be over E1 billion, covering over 4000 teacher deaths during the reporting period. Adding the illness and death costs to the additional teacher training costs, the total cost of the AIDS epidemic (based on the above assumptions) is in the order of **E1.5 billion**. It should be noted that this *excludes* costs related to non-teachers in the educational system. Assuming that the epidemic would have a similar effect on these educators, the total cost would increase by some 12-15%, or as high as **E1.725 billion**.

This figure should be seen in the context of overall educational expenditures. For example, for the 1999 academic year, the Government of Swaziland spent some E420 million on education, covering recurrent and capital expenditures, which comprises one-quarter of Government's total recurrent expenditure. The figure of E1.725 billion for the sixteen year period 1999-2016 is *only to replace lost teachers and administrators* by new personnel, new personnel that would result in recurrent costs being expended upon their entry into the schooling system. For teachers only, this would increase annual costs to the education sector in early years by 6%, dropping to 0.6% by 2016, and averaging 1.5% for the period 1999-2016. For all costs arising from HIV/AIDS, this would comprise an additional expenditure of some 25% in the early years and an average of 6% per annum for the period 2000-2016.

Summary

Significant advances have been made in the past two decades in the education sector in Swaziland. Unfortunately, the HIV/AIDS epidemic alone is currently reversing these gains, and projections suggest that the situation will worsen considerably over the next fifteen years.

Education, like health, has a particularly important role to play in HIV/AIDS prevention through education, as well as in enhancing social acceptance of people living with HIV/AIDS. It can therefore play an important, progressive role in attempting to stem the rising incidence rate, but only if it is coupled with direct

interventions (e.g., in the areas of condoms, STD treatment, sexual behaviours and gender issues surrounding sexual decision-making).

The model used to project demographic changes was applied to the primary and secondary school populations. Findings suggest that the population of primary school students will begin to decline absolutely from 2007 (with the rate of increase already in decline by 1999), with the effects first showing on Grade 1s as fewer children are born and under-fives die from AIDS. This will level out by the year 2015. For the secondary school level, the trend is complicated by the fact that enrolment is some 40% of new students (non-repeaters), and may continue to grow despite the pandemic (although affordability will become an increasing problem).

Regarding the supply of educators, the projected availability of teachers due to the AIDS epidemic is already an emergent problem. Pupil to teacher ratios are worsening, with figures for 1999 worse than for 1997. If the current rate of increase in the number of teachers trained continues, the ratio of pupils to teachers will nevertheless continue to decline to over 50:1 by 2006. In order to achieve a pupil:teacher ratio of 33.9:1, the percentage of teachers needing to be trained increases by 130% over the planning period. The costs arising from this additional teacher training, while only a rough estimate, may approximate E400 million. It should be noted that, as the epidemic worsens, the Ministry of Education will compete more and more with other sectors for fewer skilled personnel, undermining teacher supply. Further, training institutions, which would need to dramatically expand staffing to train new teachers, will have their own human losses.

Sick and death benefits are equally difficult to calculate. Based on a set of assumptions described in the chapter, costs would exceed E1 billion by the year 2016. Total costs to the system have been estimated at some **E1.725 billion** over the period of the model.

Chapter 5: Findings From Field Interviews

Introduction

This section of the assessment presents findings from qualitative data collection centred on HIV/AIDS knowledge and attitudes among school children, their parents, out-of-school youth and orphans and teachers. Its purpose was to provide information on which the workshop barrier analysis and recommendations were based. These analyses are intended to formulate the education sector's responses to the epidemic.

It should be noted that during data collection little to no variation was found across region or location (urban, rural or peri-urban) with regard to knowledge and attitudes

Extensive consultations were carried out nationwide with students, educators, and parents to better understand the impacts of the epidemic on the education sector and on the ability of homesteads to send their children to school, as well as to assess the possible role of the sector in dealing with the epidemic.

about the epidemic. For example, teachers are generally well-informed and knowledgeable about HIV/AIDS with no variation by region or whether they are in an urban, peri-urban or rural school. Therefore the analysis is not disaggregated by region or location, unless variation does occur.

However, the one exception to this finding is for secondary school children, where there are considerable differences in knowledge and attitudes between urban (and peri-urban) students and their rural peers. Urban secondary school children's knowledge is far higher than those in rural areas. The importance of this finding lies in the fact that, with the exception of secondary schools, *sectoral responses to the epidemic can be fairly uniform with no distinction being made for regional or locational differences.*

The data reveal a remarkable consistency – people know about HIV/AIDS, but are confused about the disease and thus have given little thought to its impacts.

HIV/AIDS Prevention and Activities

The focus group discussions and key informant interviews reveal that knowledge of HIV/AIDS as a sexually transmitted disease is widespread. This confirms the Swaziland National AIDS Programme's (SNAP) 1996 finding that over 85% of Swazis know about the disease and can correctly state how it is transmitted. Further, most people believed that there were HIV/AIDS infected people living in their communities and that the disease is severe in Swaziland. Beyond this, however, lies a great deal of *confusion* and *fear* across all groups interviewed. The data strongly indicate that, at the national level and for all groups, Information, Education and Communications (IEC) on HIV/AIDS has been inconsistent and weak. Responses to the epidemic from within the educational sector are no exception to this.

Knowledge

Parents/Guardians

The response which best sums up parents' knowledge about HIV/AIDS comes from those interviewed at Siphofaneni, who told the team: "We are very confused about HIV/AIDS". Of all groups interviewed, parents had the lowest level of knowledge about HIV/AIDS and exhibited the most confusion about the disease. This was confirmed in comments from school officials who almost universally believe that the parents with whom they worked knew almost nothing about the epidemic.

Most parents who participated in focus groups correctly identified HIV/AIDS as a sexually transmitted disease, while many had relatives or knew people who had died of AIDS. Most were able to describe symptoms accurately. These parents related how

Confusion and fear are prevalent throughout the country. Denial concerning the sexual activities of young Swazis is also common.

friends, relatives or neighbours had died of the disease, but were quick to point out that this was not because the cause of these deaths was known to them as AIDS, but because of the symptoms presented.

Misconceptions and confusion abounded, including most locally prevalent myths and fears, such as that condom use spreads the virus, that water transmits the virus, etc. Many related HIV/AIDS to *ligola*: “HIV/AIDS is like an old disease which men contracted if they slept with a woman who had just had a miscarriage, the symptoms and signs are like *ligola*.”⁴

Most parents interviewed believed that a pregnant woman who was HIV positive will always transmit the virus to her child and that intercourse with an infected person always leads to infection, although neither are true (see Chapter 1). Nearly one quarter of the parents stated that mosquitoes could spread HIV and one fifth believed that condoms actually *increased* the risk of transmission.

The level of confusion and misinformation is sufficiently high to warrant concern, particularly as most parents feel that the provision of information and education on sexuality, including HIV/AIDS, to their children was a joint responsibility, to be shared between themselves and the school system.

By contrast, teachers appeared able to provide limited but relatively correct information, both through the curriculum and when approached individually by students. Parents, on the other hand, were more likely to be spreading misconceptions, myths and fears, indicating that many students were receiving conflicting information on HIV/AIDS.

Levels of confusion are high particularly among parents and extended family members, although confusion was surprisingly high among teachers and club members.

⁴ Ligola is perceived as a traditional sexually transmitted disease (STD) and has the same symptoms as tuberculosis. It is believed to be caught by men who had intercourse with a woman who recently had a miscarriage or aborted. It is important to note that women do not catch ligola, but rather ‘create’ it via abortion. Therefore, a man cannot give ligola to a woman.

Teachers

Training on HIV/AIDS was relatively recently introduced into the curricula at the Teachers Training Colleges and the University of Swaziland (UNISWA). For the most part it is included in the science and home economics curricula, focusing on the biological rather than the social aspects of the epidemic. In addition it appears that all teachers who have recently undergone training have been exposed to the various NGO materials on HIV/AIDS during training.

However, teachers who went through training prior to the introduction of information on HIV/AIDS into the curriculum (and these constitute the majority) will not have received any training on HIV/AIDS although in-service workshops, which include the topic, are now being held.

All teachers interviewed could correctly state what HIV/AIDS is and how it is transmitted. Similarly, all teachers interviewed could state how transmission of the virus could be prevented.

Beyond this there were misconceptions. Most of the teachers interviewed believed that mosquitoes could transmit HIV/AIDS, and several stated that saliva, sweat and tears could also transmit the disease. In part these appear to stem from recent (1999) newspaper articles citing a SNAP official who stated that sweat could transmit the virus, but also reflects deeper confusion about how the disease is spread. Virtually all teachers believed that sexual intercourse with someone with AIDS would inevitably lead to infection.

While most respondents stated that AIDS was spread through sex, many were confused regarding how it could *not* be spread.

Anti-Aids Clubs

The School Health and AIDS Prevention Education (SHAPE) NGO started with assistance from CARE in 1990 which now operates from within the Ministry of Education. Its objective is to realise improved sexual reproductive health through a programme targeting the youth resulting in a reduced level of STDs and lower population growth. Its activities have been focussed within the education system, and one aspect includes the formation of, and support to, Anti-Aids Clubs in schools. Anti-Aids Clubs are formed by student groups with the aim of preventing and controlling the spread of HIV/AIDS through peer education.

While Club members could accurately state what HIV/AIDS is and how it is transmitted, many members of these clubs held other misconceptions, similar to teachers. Most of those interviewed indicated that unprotected sex always led to infection and over two-thirds stated that an HIV positive woman would always transmit the disease to her child. Fully one-third of Club members indicated that mosquitoes could spread the virus, and a similar number were unsure regarding whether or not traditional healers could cure the disease (implying that they thought that the disease was *curable*).

Club members were often just as confused as other students with regard to how HIV is *not* transmitted.

There was little difference in levels of knowledge held by Anti-Aids Club members and their peers. Members of these clubs provided a range of different and confused answers to questions about AIDS. “HIV is transmitted through squeezing pimples of an infected person”, and “you get it from heated rollers at the salon” were among these. Further, nearly all Anti-Aids Club members admitted to being confused about the disease.

Anti-Aids Club members were considered to be the primary peer educators within the schools. Yet while these students were able to correctly define HIV/AIDS and had a very clear understanding of abstinence or condom usage as the key preventative

techniques, they were unable to effectively deal with prevalent fears and misconceptions. One reason for this problem appears to be that most, if not all, of the Clubs were no longer receiving support from the teacher who had originally provided support to the groups as they had been transferred elsewhere. Indeed, most of the Anti-Aids Clubs appear to be operated by students with little or no support from teachers.

Secondary School Children

All of the secondary school students participating in the test and discussions knew that HIV was spread by contaminated blood and unprotected sex, and most could correctly define what AIDS was and how it could be transmitted. Nevertheless, approximately one-third of secondary school students believed that mosquitoes could spread the disease and the students admitted to being confused about the HIV/AIDS epidemic.

There is evidence from the interviews that secondary school students believe that they are better informed than adults. “People must be educated, especially our elders, members of parliament and priests, so that they can also understand” and “parents and teachers must come together on this”, said a rural group of students.

Secondary school students were, in general, more knowledgeable about HIV/AIDS than any other respondents and, of importance, were less likely to feel that abstinence was the only or even best solution. Peer education and peer condom distribution may therefore be effective, but may not be acceptable to all parents without considerable discussions beforehand.

Primary School Children

Primary school students were interviewed in two groups (Lower Primary – grades 3 and 4 whose average ages ranged from 12 to 15, and Upper Primary students in grades 5 through 7, in the age ranges 13 to 16). The wide age range and the overlap in ages reflects high repeater rates, or late entry into the schooling system.

Lower Primary

Most children in the lower primary grades had heard of AIDS and most of those interviewed, but not all, knew that it was a deadly disease that one got from “sleeping with boys/girls”. These children were obtaining their information from their peers, siblings and relatives, the vast majority of whom would not be expected to know much more than the respondent. As an aside, one respondent noted that “my uncle, who is a doctor, told me AIDS comes from monkeys and infected oranges”.

Upper Primary

These students have clearer ideas regarding HIV/AIDS, mainly because initial basic facts on the disease are now included in their curricula. Students in the upper primary grades know that HIV/AIDS is transmitted through contaminated blood and through sexual intercourse, and most of those interviewed mentioned condoms as a preventative measure. Most stated that they had learned this from their teachers. Beyond this myths abound, spread by their peers and siblings, with myths but also fear spread by their relatives.

Out of School Youth

The out of school youths interviewed included orphans and street children whose parents may still be alive, but who had left home. This group of children is likely to be particularly vulnerable to the epidemic both due to their lack of education and, for those on the streets, because they are particularly open to abuse.

The younger orphans and street children interviewed had no knowledge of HIV/AIDS. Those above 13 years of age knew that it was a sexually transmitted disease prevented by abstinence or condoms. While some were able to discuss symptoms of AIDS, this

was the extent of their knowledge. Those who claimed to be sexually active did not have access to condoms.

In a case study with an AIDS orphan and her extended family, carried out in late 1998, case descriptions were obtained regarding the circumstances they faced. The following is a synopsis of one of the cases.

The interview took place at the homestead. Present were Gogo, her youngest grandchild, Cebesile, aged 9 years, and two female relatives from the neighbourhood.

The family lives in a rural, middleveld area. The area is densely populated with reasonable farming land. There are now three children living with Gogo in a one-roomed and very small hut. Gogo's daughter, Make Tsiwane, used to live with her husband's family but they 'chased' her away after the death of a second baby shortly after its birth in 1995. Another baby had died at birth in 1993. Babe, her husband, died in early 1998. Tsiwane moved in and then stayed with Gogo, her mother, as her husband's family blamed her for his death. Tsiwane's three children came with her. Her husband's family continue to have nothing to do with his children, having given no support to them nor have they helped with their education. They did not attend Make Tsiwane's funeral when she died.

Tsiwane was sick for a long time, and her family took her to South Africa to many different hospitals and healers seeking treatment. By September last year she was taken to the hospital in the nearest town, where she was admitted and treated for TB. By December she was very sick and moved to the general ward, where she died on Christmas Eve. Her three daughters now remain with Gogo. There are also two older sons, who the family thinks are in Shiselweni somewhere, but the family is not sure of their whereabouts.

The oldest of the three daughters completed Form 5 and did a typing course, but has yet to find a job, although she keeps trying. The two younger girls (aged 9 years and 11 years) were kept out of school for all of 1998, as there was no money for school fees. Gogo says the 9 year old cries when she sees other children going to school, as she wants to go back so badly. This youngest girl, Cebesile, now works for a family living nearby. She says her job is to clean the homestead, wash the pots and look after a younger child. Cebesile is paid E50 per month for this. We asked her how the money was used in December. The children had used it for bus fare (they live 32kms from the town where their mother was in hospital) so that they could see their mother.

Their mother was a Rural Health Motivator, but was unable to work since she got sick. Gogo is now very upset that none of her RHM colleagues or their supervisors visited the family while her daughter was sick, and did not attend her funeral. Make knew she was dying because of AIDS. She learned of the disease through playing cards, which had messages about the disease on them, while she was in hospital. She told us, before she died, with tears in her eyes, that she could now die knowing that her children would get the cards and would themselves be able to learn about the disease. She was able to talk about her death to her children too. These cards were now in the room in which the interview took place and were obviously well used.

The hut is bare except for sleeping mats. Around the hut are a few clothes on a piece of string and some plates and glass jars. There is one candle in a holder. No other possessions are visible. Adjacent to the hut was a very small stand of maize, of about two square metres. The family is getting ready to harvest this. They do have access to one field, but the size was not known. However, because her daughter used to do the ploughing and she was too sick last year to do so, this year they have no maize to harvest from their field. They own no livestock, but do have two ducks. Their neighbours have been helping them with food, as have a few of the relatives.

Gogo would like the two younger granddaughters to attend school, and they are very keen to go back. When asked why they say this, they point out that it is because the teachers there have an understanding and caring towards orphaned children. The school is known to have a dynamic headteacher, has received much donor support and has put the Child-to-Child programme in place. When we asked Gogo what her biggest worry or fear was she answered hunger and 'we are poor, we have nothing'. However, the homestead was filled with love and support between Gogo and her youngest grandchild and the two female relatives.

Attitudes and Perceived Problems

Attitudes to HIV/AIDS are characterised by confusion, fear and denial. While parents, teachers and students can state what HIV/AIDS is and how it is transmitted, they are confused partially as a result of conflicting messages (e.g., saliva and sweat transmit the disease) and are scared of its impacts on their lives and livelihoods.

Denial is evidenced by the fact that, while most respondents in this study acknowledged that there were individuals with HIV or AIDS in their communities, that people were dying of it, no one openly stated that AIDS was the cause of death or illness. This lack of open debate and discussion around HIV/AIDS within Swazi society as a whole is reflected among the Ministry of Education client groups and provides a ready

Attitudes about AIDS are characterised by confusion, fear and denial.

opportunity for denial. As one teacher put it: “we cannot say there will be effects in our schools from people dying of AIDS because no one says this is what they died from. We need to know the real numbers and statistics.”

Parents and Guardians

Parental knowledge and attitudes can be characterised as those primarily of fear and confusion. While three quarters of those interviewed believed that HIV/AIDS was real (one-quarter did not!), levels of fear and denial are higher than among teachers and students. Even for those that believed that it did exist, more parents believed that AIDS was an urban and foreign disease than the other groups interviewed. Most believed that homesteads taking care of someone with AIDS would be avoided and nearly half believed that if AIDS patients were taken care of at home they would be a threat to other family members.

Parental attitudes towards their children’s sexuality are complex. While strongly believing that children should be discouraged from engaging in sexual intercourse, they

acknowledged that children were sexually active “in dark corners and behind bushes” and that “the youth are at risk because they do not heed the elders”.

Of interest, the general perception in Swaziland has been that parents were universally and fiercely opposed to sex education and counselling in the schools, as they believed that this would promote promiscuity among their children. In reality, opinion among those parents interviewed appeared to be evenly divided between those holding these views and those who felt that children *must* receive information, education and counselling about HIV/AIDS and their sexuality.

Those who believed that children should be educated and counselled in a positive manner about sexuality felt that “Fear is not sufficient, instead children should be educated and counselled. Discussions should be held with them to hear their opinions and we must learn to respect their opinions, offering guidance where it is needed” stated a group of peri-urban parents. A group of rural parents believed that if a negative approach was used with children, they would experiment anyway, so, “they must have the knowledge needed to protect themselves”.

Among these parents the general belief was that the responsibility should be shared between the parents and education system, and that parents themselves needed IEC on HIV/AIDS in order to discuss transmission and prevention of the virus with their children, providing an opening for the MOE to work with parent groups via their school committees.

Other parents believed that providing their children with information on these issues encouraged them to engage in sexual intercourse and did not want sex education and counselling provided in the schools. They felt that their children should merely be taught to abstain. “The youth must only be told that if they have sex they will die” said a group of urban parents. Overcoming these attitudes will be difficult, given the value placed on respect for parents and elders in Swazi society and the inhibitions placed on openly discussing sexuality.

All parents however, including those supporting the introduction of sex education and counselling in all schools, held strong views on condom availability through the schools. They felt that condoms should not be made available either through schools or other facilities (e.g., clinics) to school children, as would will encourage their children to have sex, “they will use them”. Even those who believe that their children were sexually active and needed IEC to protect themselves, felt the objective should be to promote abstinence and not encourage any other form of prevention.

Teachers

As a group, teachers overwhelming accepted the fact that HIV/AIDS was a threat and presented greater awareness of the reality of the disease in Swaziland. Indeed, many teachers acknowledged knowing someone who had died of AIDS. Nevertheless, as was the case with all other groups, they were scared and confused, and wanted to be provided with consistent and constant information.

As far as teachers were concerned, the majority indicated that students must be given the knowledge and counselling to protect themselves. Teachers viewed this as a responsibility they shared with parents. Many (but not all) teachers believed that condoms should be made available to older students, acknowledging that they are sexually active.

Secondary School Children

Secondary school students at six schools were asked a series of knowledge and attitude questions prior to holding group discussions. Virtually all knew that HIV was the virus leading to AIDS, and all knew that HIV was spread by ‘unprotected

Half of the respondents thought that ‘even if both sexual partners do not have HIV, it is still possible that they can give one another the virus if they have unprotected sex’. In other words, the act of sex ‘creates’ the virus. This may not be unexpected, given that students are often taught that you can get HIV through sexual intercourse, rather than unprotected sexual intercourse where one partner is HIV positive.

sex and contaminated blood’. They also knew that HIV was a virus that resulted in periodic illness, but that AIDS was ‘when the body’s defence system had been destroyed’. Overall, secondary school students had high levels of AIDS knowledge.

However, while many knew the correct answers to additional knowledge statements, there still remained a number of important misconceptions regarding HIV/AIDS. For example, almost half felt that mosquitoes could spread the disease, one-quarter felt that having another STD would *lessen* HIV transmission and a similar percentage felt that there were people in Swaziland immune to HIV/AIDS. Of interest, 96.2% did not know that vertical transmission (from mother to child) did not always occur (it is estimated that the transmission rate is one-third in this respect), and 98.6% did not know that HIV does not always transmit sexually from an infected person to an uninfected one. There was important variation across location, contrary to the findings for parents, teachers, etc., with secondary school students in urban areas more likely to answer questions correctly.

Regarding attitudes, findings were somewhat mixed. Most students knew that HIV/AIDS was a national problem, and was not limited to towns (contrary to the views of many parents). Virtually all knew that there were HIV positive people in their area, most held positive views towards condoms, and most felt that both boys and girls

should decide on condom use together; only 11.9% agreed with the commonly-expressed statement ‘condoms are not good because it is not flesh to flesh’. Of importance, few stigmatised those who were HIV positive.

Despite their higher levels of knowledge, an extremely high two-thirds of secondary school students interviewed agreed with the statement ‘we are mostly confused about AIDS’, paralleling the views of parents, teachers and Club members.

Those in rural areas were more likely to be confused about AIDS, were less tolerant of those HIV positive, were less likely to agree that girls should have a role in deciding whether or not to use condoms, and were more likely to agree that there was no one in their area with AIDS.

Perceived Problems

Teacher/Student Relations

Both teachers and parents perceived sexual relations between students and teachers as a widespread problem, with many indicating that that it was often hidden because the child’s parents colluded with the teacher concerned for economic reasons. Many teachers believed that parents did not report these relationships to the school authorities, or if they did it was generally the mother who complained, and she often withdrew this after pressure from other family members. It was viewed as a particular problem among male teachers and female students, although cases of relationships between female teachers and their male students were acknowledged. Both parents and teachers stated: “sexual encounters between students and teachers are widespread”.

Respondents acknowledged that the Ministry of Education had been responding to these cases, particularly those publicised in the media, but felt that additional and more stringent measures were called for with the issue being jointly addressed by both parents and the education system. Education and counselling for both parents and teachers was perceived as necessary.

“Sugar Daddies”

Sugar daddies are defined by both parents and teachers as adult men from outside the school system who enticed and exploited schoolgirls by giving them money, goods and entertainment in return for sexual relationships. Parents and teachers indicated that this problem was as serious as relations between teachers and students, but one that would be harder to control. While teachers could counsel their students against this behaviour, the responsibility for stopping it was perceived to belong to parents.

Abuse

Students were asked what they liked and disliked about their home environments. Many of their responses provided a disheartening picture of abuse, much of it associated with alcohol. Virtually all of the students interviewed mentioned their parents' use of alcohol as a problem, most associated this with consequent verbal or physical abuse, and a minority openly mentioned sexual abuse.

Solutions mentioned were counselling for their parents so that “parents learn to listen to and respect us”.

Perceived Impacts on the Education Sector

Demand for Education

Most respondents believed that the impact of the epidemic was already severe, and that children were dropping out of school because their parents were ill or had died. They perceived the impact as being one of unaffordability, with children whose parents were either ill or who had died not being able to afford schools fees. These impacts, as parents repeatedly mentioned, were already viewed as being severe.

“Homesteads are already negatively affected. My school has children whose parents cannot meet financial demands from the education system because they are ill. If both parents die the children remain with their grandparents who cannot afford school fees. The little money these old people get from selling drinks and fruits is used to buy food.”

Several headteachers indicated that they were already seeing the impact of the epidemic, with children dropping out because their parents were ill and could not afford to send them to school.

However, most school administrators believed that these impacts were not being assessed because “we do not have the statistics” or were masked by other factors (e.g., drought or unemployment). Many indicated that denial of the disease was further masking the impacts of the epidemic as people who were HIV positive or who had AIDS were not openly acknowledged. “Even AIDS patients are told by hospitals that they have pneumonia or TB and that is what we are dying of”.

Supply of Education

HIV/AIDS is viewed as a serious problem by managers and administrators, as well as teachers and parents. Respondents believe that it has a serious impact on the ability of the system to maintain the supply of education. “AIDS is a slow killer. When teachers get sick they are absent for many days. When the teachers dies his replacement may not be as good.” (Urban teacher)

However, there is a clear division among all respondents about the *current* status of the problem, with half believing that the effects of the epidemic on administrators and teachers in the system were visible now, and others believing this was a problem to be faced in the future. Many stated that the number of unemployed teachers was sufficiently large to accommodate the problem, but made no mention of how the system could accommodate increasing absenteeism as a result of illness and the effects on the quality of the teaching/learning environment.

“Teachers are dying now” stated one rural teacher.

Costs

The costs of education will increase as a result of the epidemic and respondents believed that HIV/AIDS was going to drain central government funds, with increasing demands from the health sector. This would result in less per capita spending on education. Sectorally, “we face large increases in costs as we lose teachers, and have to introduce new curricula to cope with the epidemic,” said one administrator.

Education Sector Response to the Epidemic

Introduction

It is important to understand the education system's present responses to the epidemic, both to protect future generations and to ensure that teachers, administrators and students presently in the system were able to protect themselves. The response of the system was perhaps central to inhibiting the spread of the epidemic. This section of the assessment discusses those sectoral responses to the epidemic identified by the respondents to the focus group, key informant and student discussions.

Parents, teachers and students agreed that the older school children were sexually active. Recent studies (AfriDev, 1998) in Piggs Peak and Nhlanguano found that over half the respondents were sexually active by age sixteen, with males usually starting younger than females. In 1998, SNAP found that, of pregnant women in the 15 to 19 year age group, over 25% were HIV positive. Further, of male and female patients between the ages of 15 and 19 years presenting with STDs at its surveillance study sites, 40% were HIV positive.

Policies on HIV/AIDS

All respondents indicated that they were unaware of any Ministry of Education policies related to HIV/AIDS (e.g., how to handle infected students or staff, HIV/AIDS education and counselling policies, etc.).

None of the schools included in the study indicated that they were aware of infected students, all indicating that, to their knowledge, there were none, although several headteachers indicated that they had lost students to "illness".

Sex Education

Sex education is not taught as a specific subject. Instead, it is taught within the science curriculum in the context of discussing reproductive health and family planning.

According to teachers it was initially introduced in Form 1 with additional topics being gradually added through Form 5. At the primary level, life skills are gradually being introduced and teachers indicated that initial information was presented across several courses in the higher primary grades.

There was a widespread belief that teaching sex education in the schools was socially unacceptable in Swaziland. It was held to be against local cultural, social and religious values. Therefore, while sex education itself was not a subject, the topics taught included reproduction, family planning, gender awareness and HIV/AIDS, with topics being gradually introduced as children moved up the system. However as one teacher put it: “Reproduction topic is under science, and discusses rather vaguely sex education”. Yet another said “The way sex education is taught leaves a great deal to be desired as the kids are not given extensive knowledge”.

All of the schools are basing their sex education on abstinence, many for religious reasons (“The gospel is abstinence”). Yet many teachers admitted that their students felt “that virginity is uncool”.

The level and depth of sex education available through the schools appeared to be widely varied and highly dependent on the individual teacher. Many are merely teaching the curriculum, allowing no time for discussion and questions. Others, who acknowledged that their pupils were sexually active, believed as one teacher put it that the topics in the curriculum “do not help my students in their lives as young adults”. They were expanding their lessons to include more in-depth approaches including discussions, outside speakers, and counselling. Further, there were those teachers whose curricula did not include sex education but who were trying to introduce it into their classes or providing extra lessons in their own time “because our children are in such danger”.

The majority of teachers, however, reflected the country's social and religious values, and were therefore preaching abstinence as the only form of sex education required by students.

Condom Availability

Students were taught about condoms from Grade 7 via the science curriculum. Nevertheless, only two schools in the sample (one rural and one urban) had made condoms available to students although several referred students to nearby places where they could be found.

Most schools are teaching abstinence instead of making condoms available, although as one teacher put it “we know the older youth are sexually active”.

Guidance and Counseling

While 13 schools where interviews were conducted had guidance teachers whose responsibilities included counselling, data on the number of these teachers in the system were not available. One school had created a counselling committee which included both teachers and peer educators. Guidance teachers were also viewed as providers of life skills training (together with SHAPE and the Anti-Aids Clubs), which was now being introduced into the curriculum. However, this was viewed by most as “a new thing”, and while all in the education sector supported its introduction, they believed that the system alone could not introduce the subject, life skills must be “taught to parents too” said one head teacher.

Several teachers mentioned that guidance teachers had a “wide” role and were “not specifically trained on HIV/AIDS”. Guidance teachers themselves indicated that they had to go and find the information they needed on HIV/AIDS in order to educate the students with whom they were in contact. It would seem that the schools in which they were placed were using them to fill what is perceived as a gap - the need for education on HIV/AIDS.

The rate at which guidance and counselling as well as peer education were being introduced into the schools was viewed by many teachers as slow. Many believed that the Ministry should join with other organisations to promote these, as neither SHAPE (which is responsible for Anti-Aids Clubs) and peer educators nor the Ministry had the resources to make an immediate impact on their own.

In schools with guidance teachers counselling was available for students both as individuals and groups. These sessions may include life skills, sex education and IEC on HIV/AIDS.

Several schools without assigned guidance teachers had adopted a variety of *ad hoc* solutions, the most frequent being to bring nurses from nearby clinics to the schools for sessions with the students. Others had developed contacts with social workers who visited the school regularly. In other schools students tended to approach individual teachers with whom they felt comfortable, noting that boys tended to approach male teachers and girls female teachers.

However, most schools relied on either their disciplinary committees or on talks during school assembly, generally delivered by the headmaster or deputy. “The only counselling students get is when they are warned by the headmaster in student assembly”.

Peer Education and Clubs⁵

Peer education is not officially provided as part of the Ministry of Education's services to school children, although it was available in many, but not the majority of, schools and was encouraged by the Ministry. As a result, the message on peer education and Anti-Aids Clubs was mixed.

Only 8 of the 36 schools interviewed had Anti-Aids Clubs, and in several instances where the MOE had indicated that there were these clubs, they were now inoperative. Anti-Aids Clubs are apparently successful in schools where they are receiving over-time support from teachers, particularly guidance teachers, and the school administration. In other schools where Anti-Aids Clubs are attempting to educate and counsel through plays, drama and one-on-one counselling, without this support, the results appear to be less successful. Many of the teachers and headteachers interviewed at schools with these Clubs had little or no knowledge of their activities, and several were less than supportive in their comments.

With several notable exceptions (schools where the Anti-Aids Clubs are active both in the student body and in the community), most Anti-Aids Club members indicated that they were groups of like-minded students who supported and counselled each other through their activities. Extension and outreach to their peers was limited, because in some cases it was felt that "students will not listen to peer educators because they do not believe others can know more than they do".

Two NGOs, the Family Life Association of Swaziland (FLAS) and the Swaziland AIDS Support Organisation (SASO) were identified as providing direct support to Anti-Aids Clubs. FLAS targets the youth (defined as those between 10 and 24 years)

⁵ No school in the study had a child-to-child programme, and they were therefore not included in this discussion. However, these programmes were reported to be quite successful in those schools which had them, and warrant further consideration.

for its activities and encourages peer educators. It is presently assisting several urban schools through its three youth teams. SASO members, many of whom were HIV positive, provided information to students on HIV/AIDS.⁶ Both organisations were under-funded and the number of schools receiving this type of support was limited and urban.

Parents Committees

Parents committees presently play no role in efforts to combat the epidemic. Respondents believed that they probably had the most important role to play, but that “they have yet to be educated on HIV/AIDS”.

Affordability and Flexibility

Even without the HIV/AIDS epidemic, the cost of education was viewed as a heavy financial burden on all families and this colours many of the responses. However, parents were pessimistic about their ability to meet their children’s educational obligations if their incomes were curtailed due to illness or death of a wage earning family member. Administrators and managers within the education system indicated that schools would lose their ability to expand and upgrade the quality of the education offered to students as parents became unable to pay school fees and contribute to building and other (numerous) funds.

The need for system flexibility was a common idea, with teachers providing lessons outside of normal hours to permit children to work either at home (in the fields) or to earn income. Another response was that schools should provide day care, to enable mothers and siblings to work and attend school.

⁶ SASO has approximately 45 members nationwide, amongst whom are those who are HIV positive, or their friends or family members are HIV positive.

Out-of-School Youth

Presently, the education system does not provide any service or support programme for out-of-school youth.

This group is marginally served by a range of urban-based NGOs (e.g., Lighthouse, the Catholic Church, Salvation Army, etc.). These organisations provide food, shelter and activities for the children, with only those able to raise financial support from other sources (e.g. Salvation Army and, presently, Save the Children) able to fund school fees for these children. Thus, most of these children remain outside the education system, although many would like to be able to return to school.

Sebenta National Institute, which has national responsibility for adult education (primarily literacy training) believes that it is accommodating more and more school age children in its classes, and it has been concerned about this. They were, however, unable to provide information on the number of these children.

The out-of-school youth interviewed were in the age range of 9 to 18 years. All of these had been to school but had dropped out because their parents or guardians could no longer afford school fees. Several had parents who had become sick and died, others had been abandoned by their parents. Half of those interviewed had drifted into the towns from rural areas.

In the rural areas there was no contact between the school system and out-of-school youth. However, several headteachers interviewed indicated that children had dropped out of their schools for financial reasons, and many of the parents participating in focus group discussions felt that children were already dropping out of school because of financial reasons resulting from the epidemic. As one said, “when people learn that they have the disease, they spend all their money going from doctor to doctor to find a cure until there is none left, least of all for school fees”. Others indicated that although

they knew of such cases, out-of-school youth would become a more serious problem in the future. Most looked to government or their traditional authorities to solve the problem, although how this could be done was not specified.

Across both urban and rural areas, education administrators and caregivers had a sense that the number of children out of school was rising. But, as other reports have indicated, the need to determine the extent of the problem remains.

School Health Teams

School health teams are comprised of Ministry of Health and Social Welfare officials who provide direct extension services at primary and secondary schools nationwide. In the past their primary role has been immunisation, a task that they felt they were already under-resourced to carry out. While the Ministry of Education wanted the health officials to play a preventative role in the schools through health education (including HIV/AIDS), there were considerable concerns about the ability of these officials to actually carry out the tasks.

Summary

“We are confused”. This statement best sums up the findings from the field. There is confusion regarding the many ways in which HIV is *not* spread, there is confusion over how HIV can be prevented, there is confusion over how, if at all, AIDS can be treated, and there is even confusion (or, in some cases, denial) regarding whether AIDS exists at all. This confusion, mixed with denial, is particularly important in people and agencies deciding that they do not have to come to terms with the epidemic and its effects on society.

Parents were well aware of relatives, neighbours, or others who had died of “this thing called AIDS”, but they quickly pointed out that no one could prove this. AIDS, in essence, is a shadowy disease that people know causes the deaths of those around them, but many appear to doubt that it actually causes the damage attributed to it.

Teachers are far better informed than general members of the public, although there is still considerable confusion. Higher levels of knowledge does not necessarily translate into effective information dissemination at schools for a number of reasons: 1) there are still pressures to prevent effective sex education, even assuming that most teachers were interested in dealing with the issue; 2) distribution of condoms through the

schools is widely rejected by community members (not surprising, when many felt that condoms would increase the risk of HIV transmission and increase sexual activity); 3) in places where the trained teacher was interested, there was little continuity regarding Anti-Aids Club interventions because of transfers; and 4) in places where the trained teacher was not interested, Anti-Aids Clubs were not active. There were additional problems, including the absence of identified counsellors dealing with sexual issues and sexual involvement of teachers and pupils. Without public support, in effect, a school was limited in what it could accomplish, and without strong central Government support for schools playing an active role in HIV/AIDS prevention, there was similarly little a headteacher could do other than proceed quietly if s/he was interested.

While there were still numerous misconceptions regarding HIV/AIDS, secondary school pupils were perhaps *the* most informed about HIV/AIDS. This was significantly less so, however, for rural secondary school pupils compared to their urban counterparts.

Those children who have had to leave school are perhaps the least informed and the most at risk.

While denial was strong and solutions presented were few, most respondents believed that the epidemic had already severely impacted the education sector, and had also negatively affected the ability of households to pay for education. Headteachers had noted with concern the increase in the number of students unable to pay the various fees for education. Many parents felt that Government should take on increased responsibilities in terms of payment for education, in cases where children could not attend without this support.

Chapter 6: Recommendations From the Field

“Our survival lies in our willingness to change our behaviour” – Senior Administrator, Ministry of Education

Introduction

Participants in the qualitative field investigations were asked to discuss possible education sector responses to the epidemic. Emerging from these was an overwhelming call for the provision of consistent education and information on HIV/AIDS. “We ourselves need education on this thing first”, was a often-repeated response from parents, administrators, teachers, and students to questions as to how the schools and the education system itself should respond to the epidemic.

While the need for education on HIV/AIDS may provide the starting point for the system’s response, it raises serious concerns as to the Ministry’s immediate ability to deal with the wider impacts on the demand for, and supply of, education.

HIV/AIDS Education

National – people are confused and fearful at all levels of the education system, and the data indicate that the need for education on HIV/AIDS--its transmission and prevention--is a national problem, and extends well beyond the education system.

Responses from participants clearly demonstrate that they were insufficiently informed, but also that they believed that those to whom they looked for answers were equally confused and puzzled. “Our chiefs must be taught too, so they can understand and help us” said those in rural areas, while students often looked to their parents and schoolteachers for information. Others looked to the King as the leader of the nation.⁷

⁷ It appears that respondent’s ready willingness to discuss HIV/AIDS with the team was influenced by recent Royal pronouncements on HIV/AIDS.

The fact that Swaziland is in the middle of a serious phase of the HIV epidemic has led to denial of the disease. “This virus is not visible when contracted. Thus people with it must be open and educate us”. At the national level, most respondents indicated that they would like medical officers and Government authorities to acknowledge the disease when patients present with HIV or die from AIDS. Several parents and many teachers stressed that this was important for the children of AIDS patients, so that they could be prepared for their parent’s illness and death.

Emerging from the data was the need for a system-wide expansion of HIV/AIDS awareness, with leadership provided by senior managers. Without this, it is unclear whether other interventions would be systematically effective, if at all.

Policies – there was a perceived need for the Ministry of Education to develop internal policies and guidelines on HIV/AIDS. Educational administrators (headteachers and regional officers in particular) stated that these were not in place and would be needed to deal with infected personnel and students. Policies were also sought covering the Ministry’s efforts to expand its response to the epidemic by an increase in the level of sex and HIV/AIDS education being made available to students.

Head teachers sought guidance on the extent and nature of HIV/AIDS education in the school system. As one rural headmaster said: “We know this thing is killing our nation and we must educate the youth so that they may protect themselves. But I do not know what to do beyond what is in the curriculum?”. Should the Ministry elect to expand the provision of sex education, in particular, and education and counselling on HIV/AIDS in general, line staff indicated a need for clear policies introducing these changes which would enable them to explain to both parents and students the need for enhancement of these programmes.

Parents – as a group parents were unanimous in their quest for further information about HIV/AIDS and particularly indicated that they would like AIDS to be more

openly acknowledged, both when people become ill and when they die. This is a national need, but one which respondents believed the Ministry could play a role through providing education to parents on HIV/AIDS, perhaps through Parent Committees and Open Days.

Teachers and administrators believed that the starting point for strengthening HIV/AIDS education in the school lied with parents. Involvement of Parents Committees in the provision of HIV/AIDS and sex education in the schools was viewed as a process that begins with providing members of these committees with education and information on the epidemic. “No programme will succeed unless it receives the support of parents.” (Headteacher) The recommendation that the Ministry begin working with and through Parents Committees on HIV/AIDS education was viewed by respondents as a starting point for community education and counselling if parents could be trained and educated.

Administrators – managers and administrators in the system believed that they required intensive training in HIV/AIDS counselling and facilitation techniques if they were to lead to any expansion of the education system’s HIV/AIDS education, information and counselling services. The objective of this would not only be to enable them to lead the introduction of an enhanced HIV/AIDS education and sex education intervention, but also to provide these individuals with the counselling skills they needed to deal with the impacts of the disease on the personnel and students for whom they have management responsibility.

Teachers themselves indicated a need for more detailed information about HIV/AIDS; the need for more factual information on knowledge and prevention was evident from the field findings. In this regard, field findings indicated that SNAT’s efforts to provide IEC were at least partially effective, with many teachers mentioning that they learned a great deal about HIV/AIDS at SNAT meetings.

School Children – Students wanted information about HIV/AIDS, but also about reproductive health, and believed that they should be taught about the disease from the primary grades.

Youth Education about HIV/AIDS was believed to be important by all respondents, although parents worried that this should not focus on sex education but rather on educating about HIV/AIDS. Almost half of the parents and many teachers felt that both HIV/AIDS and sex education should be introduced from the early grades - but “in a way that is suitable for their age that does not encourage them to engage in sex”. This reflects a continued concern that more information about sex would actually lead to more sexual activity.

Sex Education – most teachers (the exceptions being teachers in mission schools, older teachers and those holding strong religious views) and virtually all students advocated the introduction of sex education as a subject in its own right from the earliest levels of primary school. While a surprising number of parents agreed (just less than half) with the teaching of sex education, many did not, believing that children must only be taught about abstinence and not learn about their reproductive functions.

Between teachers and parents there was general agreement that educating children about sex was a shared responsibility. Students themselves indicated that their parents needed more knowledge; this attitude was particularly prevalent among urban secondary school students who believed that “we know more than our parents”.

HIV/AIDS Attitudes

Attitudes to HIV/AIDS are characterised by fear and denial. This appears to result from a lack of in-depth knowledge about the disease and denial of the extent of the epidemic in Swaziland. These fears can at least partially be overcome through intensive IEC at all levels of Swazi society. However, as HIV is primarily a sexually transmitted disease, this requires a degree of openness about sex and sexuality, and a better cultural understanding of why fears manifest themselves as they do. These are difficult concepts to deal with as Swazi culture holds that these are not topics that should be openly discussed. Nevertheless, as one teacher noted, “As long as we are not free to talk about sex, we are not going to get anywhere”.

Yet respondents stated that they wanted to know about AIDS patients and deaths, primarily in order to confirm that the disease was real. Open acknowledgement of the disease may be the first step in more open discussion of its primary mode of transmission in Swaziland. Similarly, most of the recommendations proposed by respondents were based on the need for openness (e.g., reporting sexual abuse).

School visits by those who were HIV-positive and/or those who have developed AIDS appeared to be particularly effective in permitting teachers and students to learn about the epidemic, leading to some changes in attitudes (knowledge, attitudes and practices studies in Swaziland [Piggs Peak and Nhlagano] and elsewhere in Southern Africa [Botswana and Namibia] confirm that attitudes towards those suffering from AIDS are more compassionate and positive when people know someone HIV positive). Those who had been reached by SASO demonstrated greater awareness of the epidemic and acceptance of those with the disease. The problem lies in the inability of many who are HIV-positive to openly acknowledge their status because of social stigmatisation that they believed would result.

HIV/AIDS Prevention

A

bstinence and Condom Availability — For the youth, many parents and teachers believed that teaching about HIV/AIDS and sexuality should be based on what several referred to as “the gospel of abstinence”. Beyond this there were divisions, with parents believing that teaching abstinence to the youth was the extent of their and the school system’s responsibility. Others, however, indicated that while abstinence should be the primary message provided to youth, condoms *could* also be made available.

Among the youth there was almost total acceptance that condoms prevent the transmission of HIV, and that abstinence alone was not practical. This was accompanied by their view that these should be made available through their schools and other facilities to those among them that were sexually active.

Counseling Services were viewed as needing strengthening, as one put it, “in the face of this epidemic”. Several teachers mentioned the need for all teachers to be provided with basic counseling skills so as to enable them to work with students on

these issues. Others felt that every school in the system must be provided with guidance teachers who were trained in HIV/AIDS.

Anti-Aids Clubs and Peer Education – the creation of new clubs and development of a cadre of peer educators were seen as two important components of the problem of mixed awareness and HIV/AIDS prevention among school children. Respondents believed that many schools administrators and teachers were not encouraging the Anti-Aids Clubs, tending to ignore their existence and being less than supportive of their activities. Others believed that SHAPE’s recent move into the Ministry of Education would strengthen the NGO’s ability to deliver services to teachers and students. All respondents believed that it was government’s responsibility to increase the funding and resources available to those NGOs providing HIV/AIDS education in the school system, mentioning the work of both SHAPE and FLAS in particular.

Teachers - Many teachers believed that the lack of housing at rural schools encouraged their promiscuity and believed that the Ministry’s policies regarding teacher housing needed to be re-examined in light of the epidemic. “The Ministry must find means to make sure we have housing so our families can live with us”.

Teacher/Student Relations – Respondents believed that the Ministry of Education had the policies in place to discipline teachers proven to engage in sexual relations with their students. These included suspension and a cut in pay for the duration of the suspension. However, the problem with implementation of this policy appeared to be twofold. First, teachers perceived the application of existing policies to be uneven, citing examples of teachers who were merely transferred from school to school where they repeated the offence. Secondly, parents were often held responsible for encouraging the development of these relationships for economic reasons.

Respondents believed that the only way to deal with this problem was strict enforcement of the rules and the teacher's professional code of conduct by both the Ministry and SNAT.

Abuse – respondents believed that increased openness would result in increased awareness of cases of physical and sexual abuse of children. These, they believed, should be dealt with using existing laws and NGOS (the Swaziland Action Group Against Abuse, or SWAGA, was mentioned in this regard).

System Affordability - education was viewed as already expensive, and most parents or guardians felt was already barely affordable. For many respondents this masked their appreciation of the impact of the epidemic on the affordability of education. Virtually all respondents turned to Government as the party responsible for ensuring that children, whose education was affected because of the death or illness of their parents, were able to remain in school. Suggestions included registering children whose parents could no longer afford to pay for education and providing them with scholarships, to providing free education to these children with Government also providing support for school books and uniforms.

As far as other costs to the system, such as the loss of teachers, increased training costs and the loss of experienced personnel, most managers indicated that little to no planning or thought had been given to these issues. Others indicated that, without data, it was difficult even beginning to deal with these issues.

Out-of School Youth and Orphans - respondents appeared to believe that the number of out-of-school youth was growing and that present programmes and institutions inadequately served these children.

Many recognised that traditional systems of catering for orphans have broken down and now look to Government or NGOs to provide for these children. Others interviewed, particularly parents and guardians, indicated that older, traditional coping systems (such as the chief setting aside land to be used for the benefit of orphans in the community) must be re-instated.

Other suggestions included:

- increasing day-care facilities, particularly at the schools, to allow children who would otherwise have to take care of their younger siblings to attend classes;
- the creation of an educational insurance scheme permitting parents to invest in policies catering for their children's school fees in the event of their death. (One respondent noted that it would be important to vest these in an independent body to prevent traditional inheritance laws from being applied, in which case some children might not get the funds);
- one respondent suggested the use of national funds (e.g., Provident Fund, expansion of Tisuka and Tibiyo scholarship programmes specifically for AIDS orphans) as an investment in the education of children which 'would pay dividends for the future of the nation by so doing'.

Summary

R

espondents were asked to advise Government regarding how the Ministry of Education could help respond to the epidemic. Unfortunately, when parents, administrators, teachers and students were asked what role they could play in this regard, their main answer was overwhelmingly that "we ourselves need education on this thing first". Students felt that they were insufficiently informed, but believed that those to whom they would normally look for answers were unwilling to deal with sexual issues at all in this regard (e.g., parents) or were confused themselves (parents, peers, teachers, Clubs). Beyond education on the basics, other recommendations emerged:

- HIV positive people must come to the fore so that people understand that the disease actually does exist.
- The King's recent pronouncements on HIV/AIDS were felt to be important in showing political will. It is unclear, however, whether these public pronouncements will continue in future, and whether other political authorities will be similarly vocal.

At the local level, the role of the chiefs in recognising the threat as serious was mentioned.

- There was a perceived need for the Ministry of Education to develop internal policies and guidelines with regard to HIV/AIDS. This includes coming to terms

with sex education, including the social aspects of reproductive health (not just the biological aspects), and allowing for open discussion.

- There was a perceived need for the Ministry of Education to expand counselling services at local schools, so that sexual issues can be discussed with a trained counsellor.

It is important to point out, however, that many students tended to discuss sexual issues with teachers they were comfortable with on an informal basis. Widespread information availability, as well as the tools to back up this information, would support this informal, yet important, teacher-pupil counselling.

- At the school level, there was a need to engage the community in an open discussion about sexual issues in light of the epidemic. Actions through the Parent Committees and Open Days are but two options, but unless this is backed up by AIDS education among community members on a more general level, it is unlikely that such initiatives will receive the support they require.
- Students believed that they should be taught about sex, including HIV/AIDS, from the primary level onwards. They tended to feel that waiting until they were sexually active was too late.
- While abstinence may be unrealistic for all, and while abstinence is often selectively implemented (that is, with some partners and not with others, with single partners over time and, following break-up, with another single partner thereafter) and *rarely* absolute, parents and others interviewed still felt that it was a key solution to the HIV/AIDS pandemic. Respondents were less certain regarding whether this required more or less sex education, however.
- There was widespread support for NGOs to engage in HIV/AIDS education.
- Teachers were particularly concerned about separation from their families due to the absence of teacher housing, and felt that this entire policy must be re-examined.
- Teachers felt that the Ministry's policy regarding teachers who were sexually involved with pupils was in place, but that its implementation was inconsistent.
- Many respondents felt that there was a lack of creative solutions to the issue of AIDS orphans, and that not all families were coping.

Bibliography

Abt Associates Inc. and HEARD (1999). “HIV/AIDS and the Department of Education”, sector-specific toolkits in preparation for the Durban Workshop, June 28, 1999, Johannesburg.

Central Statistical Office (1986). Report on the 1986 Swaziland Population census, Vol. 4, Analytical Report. CSO, Mbabane.

Central Statistical Office (1991a). Report on the 1991 Demographic & Housing Survey, Vol. 1, Statistical Tables. CSO, Mbabane.

Central Statistical Office (1991b). Report on the 1991 Demographic & Housing Survey, Vol. 2, Analytical Report. CSO, Mbabane.

Central Statistics Office (1994). 1994 Education Statistics, Mbabane.

Central Statistics Office (1995). 1995 Education Statistics, Mbabane.

Central Statistical Office (1999). Final Results of the 1997 Population and Housing Census. CSO, Mbabane.

CODESRIA (1999). National Case Studies on Education Financing Experiences and Budgetary Reforms in Africa: Swaziland Case, Council For The Development Of Social Science Research In Africa, Mbabane.

Commission of the European Communities (nd). “Considering HIV/AIDS in Development Assistance: A Toolkit”. Education and Training Sector Committee of the National Development Strategy (1996). Our Children First: Education and Training Development Strategy, Ministry of Education, Mbabane.

Gauteng Provincial Government (1999). 1998-99 AIDS Programme, Gauteng Provincial Government, Johannesburg, South Africa.

Government of Swaziland (1995). Development Plan 1995/96 – 1997/98, Mbabane.

Government of Swaziland (1996). National Development Strategy: “Our Children First”. Education and Training Development Strategy, Mbabane.

Government of Swaziland (1997). Development Plan 1997/98 – 1999/00, Mbabane.

Government of Swaziland (1999). Establishment Circular Number 3 of 1999. Salary Award for 1998/99 and 1999/2000 Financial Years, Mbabane.

Jackson, H. (1999b). "An uncertain future predicted in Lusaka", AIDS Analysis Africa, Vol. 10, No. 3, Durban, South Africa.

Maziya, R. & W. Dlamini-Kapenda (1994). "Clinical Presentation of AIDS Cases in Swaziland", AIDS Newsletter, Vol. 2, No. 1, pages 4-7.

Ministry of Education (1998). National Policy Statement on Education, Ministry of education, Mbabane.

Ministry of Health and Social Welfare (1998). Policy Document on HIV/AIDS and STD Prevention and Control, Mbabane.

Plan Inc. (1996). Swaziland National Physical Development Plan 1996 – 2006. Volume 1 Background Study, Mbabane.

Public Service Pensions Fund (1995). "Rule Booklet" Mbabane.

SAFAIDS (1997). "News", Vol. 5, No. 4, December, Southern Africa AIDS Information Dissemination Service Bulletin, (SAFAIDS), Harare, Zimbabwe.

SAFAIDS (1999a). "News", Vol. 7, No. 1, December, Southern Africa AIDS Information Dissemination Service Bulletin, (SAFAIDS), Harare, Zimbabwe.

SAFAIDS (1999b). "News", Vol. 7, No. 2, December, Southern Africa AIDS Information Dissemination Service Bulletin, (SAFAIDS), Harare, Zimbabwe.

SNAP (1994). Third HIV Sentinel Surveillance Report - 1994. Swaziland National AIDS/STDs Programme, Ministry of Health, Mbabane.

SNAP (1996a). Fifth HIV Sentinel Surveillance Final Report - 1996. Swaziland National AIDS/STDs Programme, Ministry of Health, Mbabane.

SNAP (1996b). AIDS: A Handbook for Teachers in Swaziland, Swaziland National AIDS Programme, Macmillan Boleswa Publishers, Mbabane.

SNAP (1998a). Sixth HIV Sentinel Surveillance Report, Swaziland National AIDS Programme, Mbabane.

SNAP (1998b). Report on HIV Prevalence Among Inpatients in Selected Hospitals, Swaziland National AIDS/STDs Programme, Ministry of Health and Social Welfare, Mbabane.

Stover, J. and P. Way (1995). "The Impact of Interventions on Reducing the Spread of HIV in Africa: Results From Computer Simulations", paper presented at the 1995 Annual Meeting of the Population Association of America, San Francisco, April, 1995, The Futures Group International, Washington, United States.

Stover, J. (1997). AIM: A Computer Program for Making HIV/AIDS Projections and Examining the Social and Economic Impact of AIDS, The Futures Group International, Washington, United States.

Stover, J. & S. Kirmeyer (1997). DemProj: A Computer Program for Making Population Projections, The Futures Group International, Washington, United States.

Teaching Service Commission (1983). The Teaching Service Act of 1982 and Teaching Service Regulations of 1983, Mbabane.

UNAIDS/WHO (1998). UNAIDS/WHO Epidemiological Fact Sheet on HIV/AIDS and Sexually Transmitted Diseases: Swaziland, Mbabane.

UNICEF/Swaziland (1999a). Report of an Assessment of the Situation of the HIV/AIDS Epidemic and its Consequences for Families and Children, Focussing on Orphans, Children and HIV/AIDS, Government and Community Response in a Multisectoral Context, UNICEF/Swaziland, Mbabane.

UNICEF/Swaziland (1999b). Children and HIV/AIDS. Government and Community Response in a Multisectoral Context, Mbabane.

UNICEF/Mozambique (1999). "Background Materials on HIV and Education Impact Studies", Maputo, Mozambique.

UNDP (1998). Swaziland National Human Development Report, 1997, United Nations Development Programme, Mbabane, Swaziland.

UNDP (1998). HIV/AIDS & Human Development South Africa, Pretoria, South Africa.

US Bureau of the Census (1997). International Data Base, Mbabane.

Whiteside, A. (ed.) (1998). Implications of AIDS for Demography and Policy in Southern Africa, University of Natal Press, Pietermaritzburg.

Whiteside, A. (1999). "HIV/AIDS and Development in the Education Sector", mimeo, Durban, South Africa.

VOLUME 11

ANNEXS A – E

IMPACT ASSESSMENT OF HIV/AIDS ON THE EDUCATION
SECTOR

MINISTRY OF EDUCATION

MBABANE SWAZILAND

November 29, 1999

Annex A: Detailed Findings

This annex is comprised of detailed tables showing the main findings from the demographic projections, as well as educational projections. These findings are linked to the summary presentation offered in Chapters 3, 4 and 5.

Table A1: Number of Adult Swazis HIV Positive and Adult HIV Prevalence (Aged 15+) (Males, Females and Total) (1991-2016)

Year	Number of Adult Swazis HIV Positive (All Ages)			Adult HIV Prevalence (Aged 15 and Older)		
	Males	Females	Total	Adult Population (Aged 15+)	# of HIV+ Adults	Adult HIV Prevalence (15+) (%)
1991	9,989	9,970	19,960	449,871	18,440	4.10
1992	14,860	13,830	29,690	463,481	27,901	6.01
1993	20,440	20,440	40,880	477,605	38,685	8.10
1994	26,660	26,670	53,336	491,185	50,590	10.30
1995	33,160	33,210	66,371	504,017	63,002	12.50
1996	39,689	39,780	79,469	516,380	75,442	14.61
1997	46,010	36,150	92,163	528,298	87,487	16.56
1998	51,850	82,050	103,899	539,698	98,602	18.27
1999	57,060	75,330	114,390	550,364	108,532	19.72
2000	61,440	61,780	123,218	560,035	116,879	20.87
2001	64,906	65,312	130,218	568,562	123,492	21.72
2002	67,350	67,820	135,163	575,816	128,175	22.26
2003	68,820	69,350	138,177	581,819	131,025	22.52
2004	69,420	69,990	139,413	586,966	132,185	22.52
2005	69,290	69,910	139,201	591,566	131,978	22.31
2006	69,136	69,791	138,927	596,114	131,741	22.10
2007	69,760	70,450	140,202	607,663	133,019	21.89
2008	70,490	71,220	141,711	620,545	134,534	21.68
2009	71,220	71,980	143,201	633,668	136,049	21.47
2010	71,910	72,700	144,610	646,764	137,502	21.26
2011	72,534	73,367	145,900	659,674	138,861	21.05
2012	72,530	73,370	147,054	672,296	140,107	20.84
2013	73,090	73,960	148,059	684,553	141,221	20.63
2014	73,970	74,940	148,908	696,385	142,202	20.42
2015	74,290	75,310	149,600	707,762	143,039	20.21
2016	74,534	75,605	150,139	718,671	143,734	20.00

Table A2: Annual and Cumulative AIDS Death by Year (1991-2016)

Year	Annual			Cumulative		
	Males	Females	Total	Males	Females	Total
1991	844	844	1,688	844	844	1,688
1992	1,073	10,73	2,146	1,917	1,917	3,835
1993	1,337	1,336	2,673	3,254	3,254	6,508
1994	1,711	1,711	3,422	3,965	3,965	9,929
1995	2,332	2,335	4,667	7,297	7,299	14,596
1996	3,033	3,040	6,072	10,330	10,339	20,669
1997	3,764	3,776	7,540	14,093	14,115	28,209
1998	4,507	4,526	9,034	18,601	18,642	37,243
1999	5,243	5,270	10,514	23,844	23,912	47,756
2000	6,005	6,042	12,047	29,849	29,954	59,803
2001	6,732	6,780	13,512	36,581	36,734	73,316
2002	7,405	7,465	14,870	43,986	44,199	88,185
2003	7,871	7,942	15,812	51,857	52,141	103,998
2004	8,126	8,203	16,329	59,983	60,344	120,327
2005	8,262	8,340	16,602	68,245	68,683	136,929
2006	8,300	8,378	16,678	76,545	77,061	153,607
2007	8,262	8,339	16,602	84,808	85,400	170,208
2008	8,157	8,231	16,388	92,964	93,631	186,596
2009	8,046	8,117	16,163	101,010	101,748	202,759
2010	7,989	8,056	16,045	108,999	109,805	218,804
2011	7,948	8,012	15,960	116,947	117,817	234,764
2012	7,896	7,956	15,852	124,843	125,773	250,616
2013	7,851	7,908	15,759	132,694	133,681	266,376
2014	7,817	7,872	15,689	140,511	141,553	282,064
2015	7,791	7,844	15,635	148,302	149,396	297,699
2016	7,776	7,827	15,603	156,078	157,224	313,302

Table A3: Population Aged 5-18 With and Without AIDS (1991-2016)

Year	With AIDS	Without AIDS	% Difference
1991	300,415	300,415	0
1992	306,790	306,883	0
1993	311,889	312,296	0
1994	315,754	316,899	0
1995	318,866	321,085	-1
1996	321,874	325,133	-1
1997	331,957	337,303	-2
1998	342,967	350,096	-2
1999	353,745	363,280	-3
2000	363,767	376,509	-4
2001	372,718	389,542	-5
2002	380,690	402,574	-6
2003	387,624	415,456	-7
2004	393,677	428,367	-9
2005	399,079	441,521	-11
2006	403,986	455,081	-13
2007	407,314	467,674	-15
2008	410,503	480,615	-17
2009	413,766	493,810	-19
2010	417,060	507,109	-22
2011	420,125	520,362	-24
2012	416,896	526,396	-26
2013	412,657	531,899	-29
2014	408,379	536,820	-31
2015	404,170	541,119	-34
2016	400,130	544,759	-36

Table A4: Total Population With and Without AIDS (1991-2016)

Year	With AIDS	Without AIDS	% Difference
1991	798,204	798,204	0
1992	822,313	826,821	-1
1993	847,819	856,037	-1
1994	872,756	885,878	-2
1995	896,507	916,346	-2
1996	918,791	947,410	-3
1997	939,425	979,021	-4
1998	958,320	1,011,151	-6
1999	975,437	1,043,755	-7
2000	990,691	1,076,799	-9
2001	1,004,141	1,110,247	-11
2002	1,015,869	1,144,023	-13
2003	1,026,296	1,178,059	-15
2004	1,035,870	1,212,281	-17
2005	1,044,860	1,246,607	-19
2006	1,053,488	1,280,945	-22
2007	1,062,208	1,315,564	-24
2008	1,071,144	1,350,365	-26
2009	1,080,256	1,385,257	-28
2010	1,089,385	1,420,161	-30
2011	1,098,449	1,455,003	-32
2012	1,107,707	1,490,084	-35
2013	1,117,173	1,525,349	-37
2014	1,126,772	1,560,743	-39
2015	1,136,418	1,596,210	-40
2016	1,146,009	1,631,692	-42

Table A5: Total Deaths With AIDS and Without AIDS (1991-2016)

Year	With AIDS	Without AIDS	% Difference
1991	9,106	7,434	18
1992	9,631	7,542	22
1993	10,224	7,652	25
1994	10,976	7,704	30
1995	12,187	7,726	37
1996	13,540	7,744	43
1997	14,948	7,765	48
1998	16,352	7,761	53
1999	17,725	7,748	56
2000	19,139	7,725	60
2001	20,475	7,692	62
2002	21,719	7,679	65
2003	22,554	7,673	66
2004	22,962	7,661	67
2005	23,126	7,646	67
2006	23,098	7,628	67
2007	22,960	7,654	67
2008	22,699	7,693	66
2009	22,429	7,730	66
2010	22,264	7,766	65
2011	22,129	7,798	65
2012	22,011	7,884	64
2013	21,911	7,972	64
2014	21,830	8,059	63
2015	21,760	8,146	63
2016	21,707	8,232	62

**Table A6: Number of Orphans (Children Under 15 Whose Mothers Have Died of AIDS)
(1991-2016)**

Year	# of Orphans
1991	1,166
1992	2,636
1993	4,458
1994	6,958
1995	10,627
1996	15,291
1997	20,888
1998	27,395
1999	34,771
2000	42,962
2001	51,870
2002	61,394
2003	71,029
2004	80,277
2005	88,886
2006	96,710
2007	103,331
2008	108,658
2009	112,874
2010	116,188
2011	118,666
2012	120,337
2013	121,343
2014	121,814
2015	121,866
2016	121,607

Table A7: Deaths by Age With and Without AIDS (5-Year Intervals)

Age	With AIDS			Without AIDS			% Difference		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1991									
0-4	3,829	2,183	1,646	3,070	1,805	1,265	20	17	23
5-9	252	150	102	251	150	102	0	0	0
10-14	147	88	59	142	87	55	4	1	8
15-19	254	136	118	181	111	70	29	18	41
20-24	369	179	190	173	102	71	53	43	62
25-29	365	181	184	170	90	80	53	50	57
30-34	335	193	142	173	87	75	48	49	47
35-39	291	170	121	174	99	75	40	42	38
40-44	290	178	112	223	137	86	23	23	23
45-49	297	180	117	251	153	98	16	15	16
50-54	341	226	116	317	210	107	7	7	7
55-59	341	207	134	327	199	129	4	4	4
60-64	382	227	155	375	224	151	2	2	2
65-69	289	150	139	286	149	137	1	1	2
70-74	534	276	258	532	276	256	0	0	1
75-79	443	199	244	443	199	243	0	0	0
80+	363	158	205	363	158	206	0	0	0
1996									
0-4	3,712	2,101	1,611	3,131	1,828	1,302	16	13	19
5-9	301	169	132	202	120	82	33	29	38
10-14	145	85	61	135	83	52	7	2	15
15-19	35350	155	196	158	100	58	55	35	70
20-24	1,165	490	675	190	117	72	84	76	89
25-29	1,302	585	716	170	98	72	87	83	90
30-34	1,148	636	513	171	91	80	85	86	84
35-39	941	557	384	185	106	79	80	81	79
40-44	639	385	253	199	115	84	69	70	67
45-49	562	338	224	262	161	102	53	52	55
50-54	469	290	179	309	187	122	34	35	32
55-59	473	301	172	386	250	136	18	17	21
60-64	450	262	187	401	238	163	11	9	13
65-69	448	250	198	427	243	184	5	3	7
70-74	332	162	171	320	158	162	4	2	5
75-79	332	162	171	320	158	162	4	2	5
80+	582	245	337	582	245	336	0	0	0

* Note: Male and female variation in death rates is due to different mortality rates and age distribution of mortality at the outset.

Table A7: Deaths by Age With and Without AIDS (5-Year Intervals) (continued)

Age	With AIDS			Without AIDS			% Difference		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
2001									
0-4	3,868	2,146	1,721	2,818	1,661	1,157	27	23	33
5-9	392	220	173	225	138	87	43	37	50
10-14	119	70	48	110	71	40	7	0	18
15-19	402	163	240	149	98	51	63	40	79
20-24	1,807	716	1,091	166	109	58	91	85	95
25-29	2,749	1,170	1,579	183	114	69	93	90	96
30-34	2,536	1,308	1,228	171	100	70	93	92	94
35-39	2,071	1,210	862	185	101	83	91	92	90
40-44	1,427	860	567	212	124	88	85	86	85
45-49	989	587	402	241	141	100	76	76	75
50-54	772	471	301	326	200	126	58	58	58
55-59	611	369	242	387	232	155	37	37	36
60-64	598	364	234	477	302	175	20	17	25
65-69	528	289	239	474	270	204	10	7	15
70-74	486	255	231	461	249	212	5	2	8
75-79	348	152	196	338	150	188	3	1	4
80+	771	328	443	771	329	442	0	0	0
2006									
0-4	3,631	1,986	1,645	2,455	1,447	1,008	32	27	39
5-9	472	255	217	195	120	74	59	53	66
10-14	124	76	48	124	81	43	0	-6	10
15-19	361	141	220	124	83	41	66	41	81
20-24	1,823	711	1,112	159	106	53	91	85	95
25-29	3,169	1,320	1,849	164	106	58	95	92	97
30-34	3,167	1,570	1,598	189	117	72	94	93	96
35-39	2,618	1,502	1,116	190	113	78	93	92	93
40-44	1,851	1,098	754	219	121	98	88	89	87
45-49	1,247	740	508	264	156	109	79	79	79
50-54	892	527	366	308	180	128	65	66	65
55-59	707	426	281	420	255	165	41	40	41
60-64	622	358	275	492	288	204	22	20	26
65-69	634	369	265	576	351	225	9	5	15
70-74	547	286	260	526	284	241	4	1	7
75-79	510	246	263	505	247	258	1	0	2
80+	712	295	417	718	297	421	-1	-1	-1

Table A7: Deaths by Age With and Without AIDS (5-Year Intervals) (continued)

Age	With AIDS			Without AIDS			% Difference		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
2011									
0-4	3,174	1,723	1,451	2,147	1,252	895	32	27	38
5-9	438	234	204	166	103	63	62	56	69
10-14	101	61	40	112	73	38	-10	-20	4
15-19	370	150	220	143	97	46	61	36	79
20-24	1,722	668	1,054	135	91	44	92	86	96
25-29	3,020	1,261	1,759	160	104	56	95	92	97
30-34	3,026	1,499	1,527	173	110	63	94	93	96
35-39	2,530	1,454	1,075	218	134	84	91	91	92
40-44	1,768	1,054	713	233	138	96	87	87	87
45-49	1,178	682	496	282	155	126	76	77	75
50-54	850	493	357	347	203	145	59	59	59
55-59	627	357	270	407	233	174	35	35	36
60-64	629	350	279	547	320	227	13	9	19
65-69	626	327	299	612	338	273	2	-4	9
70-74	642	359	284	651	375	277	-1	-4	2
75-79	584	280	304	600	289	311	-3	-3	-2
80+	844	365	479	867	371	496	-3	-2	-3
2016									
0-4	2,818	1,525	1,293	1,927	1,117	810	32	27	37
5-9	388	207	181	141	88	53	64	57	70
10-14	81	49	32	98	65	33	-21	-34	-2
15-19	340	132	207	131	91	41	61	32	80
20-24	1,739	681	1,058	159	109	50	91	84	95
25-29	2,991	1,246	1,745	139	92	48	95	93	97
30-34	2,997	1,492	1,505	173	111	62	94	93	96
35-39	2,479	1,435	1,044	207	131	76	92	91	93
40-44	1,753	1,057	696	278	171	107	84	84	85
45-49	1,132	664	467	311	184	128	72	72	73
50-54	798	441	357	384	210	174	52	52	51
55-59	604	333	271	475	273	202	21	18	25
60-64	548	276	273	549	303	246	0	-10	10
65-69	646	330	316	701	389	312	-9	-18	1
70-74	661	325	335	719	374	345	-9	-15	-3
75-79	719	369	350	771	398	373	-7	-8	-6
80+	1,015	444	572	1,069	461	608	-5	-4	-6

Table A8: Total Population With and Without AIDS by Age (5-Year Intervals)

Age	With AIDS			Without AIDS			% Difference		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1991									
0-4	125,143	62,298	62,845	125,143	62,298	62,845	0	0	0
5-9	120,461	59,808	60,653	120,461	59,808	60,653	0	0	0
10-14	102,729	51,093	51,636	102,729	51,093	51,636	0	0	0
15-19	94,528	45,756	48,772	94,528	45,756	48,772	0	0	0
20-24	71,440	32,782	38,658	71,440	32,782	38,658	0	0	0
25-29	58,920	24,746	34,174	58,920	24,746	34,174	0	0	0
30-34	47,700	21,689	26,011	47,700	21,689	26,011	0	0	0
35-39	37,661	17,178	20,483	37,661	17,178	20,483	0	0	0
40-44	34,328	16,830	17,498	34,328	16,830	17,498	0	0	0
45-49	28,094	13,732	14,362	28,094	13,732	14,362	0	0	0
50-54	23,628	12,778	10,850	23,628	12,778	10,850	0	0	0
55-59	17,282	8,668	8,614	17,282	8,668	8,614	0	0	0
60-64	13,002	6,433	6,569	13,002	6,433	6,569	0	0	0
65-69	7,340	3,234	4,106	7,340	3,234	4,106	0	0	0
70-74	8,428	3,772	4,656	8,428	3,772	4,656	0	0	0
75-79	5,013	2,089	2,924	5,013	2,089	2,924	0	0	0
80+	2,507	1,045	1,462	2,507	1,045	1,462	0	0	0
1996									
0-4	162,573	81,416	81,157	173,094	86,687	86,407	-6	-6	-6
5-9	120,165	59,647	60,517	123,077	61,101	61,976	-2	-2	-2
10-14	119,671	59,344	60,327	119,707	59,350	60,358	0	0	0
15-19	101,425	50,461	50,964	101,994	50,633	51,360	-1	0	-1
20-24	91,101	44,234	46,867	93,593	45,180	48,413	-3	-2	-3
25-29	67,264	30,864	36,400	70,577	32,280	38,298	-5	-5	-5
30-34	55,110	22,714	32,396	58,070	24,294	33,777	-5	-7	-4
35-39	44,495	19,808	24,687	46,807	21,181	25,626	-5	-7	-4
40-44	35,268	15,750	19,518	36,716	16,634	20,082	-4	-6	-3
45-49	32,180	15,526	16,654	33,109	16,083	17,026	-3	-4	-2

50-54	26,129	12,527	13,602	26,670	12,864	13,806	-2	-3	-1
55-59	21,563	11,447	10,116	21,851	11,622	10,229	-1	-2	-1
60-64	15,261	7,467	7,794	15,422	7,550	7,872	-1	-1	-1
65-69	10,909	5,236	5,673	10,986	5,264	5,722	-1	-1	-1
70-74	5,716	2,421	3,296	5,758	2,433	3,325	-1	0	-1
75-79	5,836	2,513	3,323	5,854	2,517	3,338	0	0	0
80+	4,12	1,674	2,449	4,126	1,674	2,452	0	0	0

* As per the model, the age distribution is different for males and females, but the overall sex distribution is equivalent. Again, these refer to numbers rather than percentages. So, for example, in the 0-5 age group there are more male infections than female infections, simply because there are more male births than female births. Similarly, for the elderly, there will be a greater absolute number of females infected because there are simply more females than males in this age range.

**Table A8: Total Population With and Without AIDS by Age (5-Year Intervals)
(continued)**

Age	With AIDS			Without AIDS			% Difference		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
2001									
0-4	158,676	79,601	79,076	188,199	94,416	93,783	-19	-19	-19
5-9	157,432	78,654	78,778	170,790	85,333	85,457	-8	-8	-8
10-14	119,467	59,240	60,227	122,458	60,716	61,742	-3	-2	-3
15-19	118,048	58,659	59,388	119,013	58,904	60,108	-1	0	-1
20-24	94,613	47,719	46,894	101,167	50,068	51,068	-7	-5	-9
25-29	80,449	39,668	40,782	92,658	44,598	48,060	-15	-12	-18
30-34	57,172	25,714	31,457	69,728	31,784	37,944	-22	-24	-21
35-39	46,751	17,886	28,866	57,179	23,810	33,369	-22	-33	-16
40-44	38,573	16,252	22,321	45,808	20,601	25,207	-19	-27	-13
45-49	31,100	13,270	17,830	35,601	15,984	19,617	-14	-20	-10
50-54	28,845	13,490	15,355	31,615	15,168	16,447	-10	-12	-7
55-59	23,402	10,872	12,530	24,900	11,797	13,101	-6	-9	-5
60-64	18,851	9,770	9,080	19,655	10,221	9,435	-4	-5	-4
65-69	12,787	6,079	6,709	13,194	6,258	6,936	-3	-3	-3
70-74	8,548	3,966	4,582	8,742	4,026	4,716	-2	-2	-3
75-79	4,000	1,636	2,364	4,092	1,657	2,435	-2	-1	-3
80+	5,425	2,226	3,199	5,450	2,229	3,221	0	0	-1
2006									
0-4	148,926	74,827	74,099	197,161	99,085	98,096	-32	-32	-32
5-9	151,819	75,999	75,820	186,238	93,238	93,000	-23	-23	-23
10-14	156,626	78,176	78,450	170,101	84,892	85,209	-9	-9	-9
15-19	117,963	58,636	59,327	121,882	60,336	61,546	-3	-3	-4
20-24	110,449	55,692	54,757	118,232	58,385	59,847	-7	-5	-9
25-29	80,020	41,678	38,342	100,339	49,559	50,780	-25	-19	-32
30-34	64,951	32,195	32,757	91,731	44,021	47,710	-41	-37	-46

35-39	44,107	18,351	25,756	68,822	31,248	37,574	-56	-70	-46
40-44	37,223	12,245	24,978	56,160	23,247	32,913	-51	-90	-32
45-49	32,171	12,435	19,737	44,602	19,892	24,710	-39	-60	-25
50-54	26,553	10,578	15,975	34,203	15,166	19,037	-29	-43	-19
55-59	25,309	11,343	13,966	29,714	14,011	15,704	-17	-24	-12
60-64	20,340	9,106	11,235	22,656	10,470	12,186	-11	-15	-8
65-69	15,793	7,967	7,826	16,973	8,563	8,410	-7	-7	-7
70-74	10,097	4,644	5,453	10,654	4,854	5,800	-6	-5	-6
75-79	6,066	2,722	3,344	6,314	2,788	3,526	-4	-2	-5
80+	5,070	2,025	3,045	5,164	2,042	3,122	-2	-1	-3

**Table A8: Total Population With and Without AIDS by Age (5-Year Intervals)
(continued)**

Age	With AIDS			Without AIDS			% Difference		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
2011									
0-4	145,523	73,257	72,266	202,327	101,853	100,474	-39	-39	-39
5-9	142,184	71,323	70,861	195,523	98,087	97,436	-38	-38	-38
10-14	151,067	75,565	75,501	185,626	92,844	92,781	-23	-23	-23
15-19	155,122	77,542	77,580	169,445	84,454	84,991	-9	-9	-10
20-24	111,075	55,975	55,101	121,221	59,893	61,329	-9	-7	-11
25-29	96,322	49,867	46,454	117,432	57,859	59,572	-22	-16	-28
30-34	64,393	34,266	30,127	99,496	49,020	50,476	-55	-43	-68
35-39	51,492	24,687	26,805	90,709	43,390	47,319	-76	-76	-77
40-44	34,254	12,502	21,753	67,749	30,614	37,135	-98	-145	-71
45-49	30,667	8,403	22,264	54,887	22,544	32,343	-79	-168	-45
50-54	27,536	9,726	17,809	43,043	18,980	24,063	-56	-95	-35
55-59	23,201	8,633	14,568	32,374	14,109	18,265	-40	-63	-25
60-64	22,193	9,562	12,631	27,246	12,545	14,701	-23	-31	-16
65-69	17,294	7,471	9,823	19,836	8,872	10,964	-15	-19	-12
70-74	12,644	6,181	6,463	13,855	6,730	7,126	-10	-9	-10
75-79	7,283	3,237	4,046	7,809	3,413	4,396	-7	-5	-9
80+	6,200	2,583	3,617	6,427	2,635	3,792	-4	-2	-5
2016									
0-4	146,266	73,738	72,528	207,729	104,724	103,005	-42	-42	-42
5-9	139,520	70,141	69,379	200,950	101,028	99,921	-44	-44	-44
10-14	141,549	70,960	70,589	194,989	97,740	97,248	-38	-38	-38
15-19	149,676	75,009	74,668	185,026	92,438	92,588	-24	-23	-24
20-24	147,976	74,746	73,231	168,675	83,927	84,748	-14	-12	-16
25-29	97,245	50,276	46,969	120,522	59,432	61,097	-24	-18	-30

				9					
30-34	81,099	42,574	38,525	116,596	57,322	59,274	-44	-35	-54
35-39	51,422	26,983	24,439	98,537	48,413	50,124	-92	-79	-105
40-44	41,955	18,973	22,983	89,453	42,616	46,836	-113	-125	-104
45-49	28,037	8,821	19,216	66,360	29,796	36,564	-137	-238	-90
50-54	26,374	5,990	20,384	53,187	21,609	31,578	-102	-261	-55
55-59	24,359	7,936	16,422	40,940	17,764	23,175	-68	-124	-41
60-64	20,494	7,215	13,279	29,923	12,734	17,189	-46	-76	-29
65-69	19,108	7,945	11,163	24,054	10,736	13,318	-26	-35	-19
70-74	14,105	5,865	8,240	16,442	7,061	9,381	-17	-20	-14
75-79	9,243	4,367	4,876	10,257	4,787	5,470	-11	-10	-12
80+	7,578	3,194	4,384	8,047	3,329	4,718	-6	-4	-8

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year)

Age	Total	Male	Female
1991			
0-4	1,290	655	636
5-9	0	0	0
10-14	231	35	196
15-19	2,563	944	1,619
20-24	2,563	944	1,619
25-29	3,794	1,944	1,850
30-34	3,092	1,320	1,272
35-39	2,000	1,222	778
40-44	1,276	768	508
45-49	778	483	295
50-54	416	261	155
55-59	239	131	108
60-64	119	48	71
65-69	64	19	45
70-74	33	7	26
75-79	7	0	7
80+	0	0	0
TOTAL	19,960	9,989	9,970
1992			
0-4	1,354	687	667
5-9	52	26	26
10-14	382	57	325
15-19	4,186	1,555	2,631
20-24	6,130	2,510	3,620
25-29	5,687	2,966	2,722
30-34	4,627	2,721	1,906
35-39	2,925	1,791	1,134
40-44	1,916	1,148	768
45-49	1,134	711	423
50-54	615	382	233
55-59	354	192	161
60-64	172	68	104
65-69	97	30	67
70-74	47	9	38
75-79	10	1	10
80+	1	0	1
TOTAL	29,690	14,855	14,834

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
1993			
0-4	1,582	800	782
5-9	78	39	38
10-14	534	80	454
15-19	5,841	2,171	3,670
20-24	8,463	3,467	4,996
25-29	7,878	4,113	3,766
30-34	6,417	3,766	2,651
35-39	4,051	2,480	1,571
40-44	2,668	1,597	1,071
45-49	1,569	985	584
50-54	856	530	326
55-59	490	267	223
60-64	237	94	144
65-69	135	43	92
70-74	65	12	52
75-79	14	1	13
80+	1	0	1
TOTAL	40,880	20,444	20,436
1994			
0-4	1,963	992	972
5-9	104	53	51
10-14	677	102	575
15-19	7,426	2,754	4,673
20-24	11,014	4,501	6,513
25-29	10,339	5,357	4,982
30-34	8,442	4,942	3,500
35-39	5,381	3,289	2,092
40-44	3,521	2,110	1,412
45-49	2,085	1,304	781
50-54	1,136	704	432
55-59	648	354	294
60-64	316	127	190
65-69	176	56	121
70-74	85	17	68
75-79	20	1	18
80+	1	0	1
TOTAL	53,336	26,661	26,675

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
1995			
0-4	2,448	1,235	1,213
5-9	130	66	64
10-14	791	119	673
15-19	8,753	3,229	5,524
20-24	13,645	3,229	5,524
25-29	12,961	6,627	6,334
30-34	10,617	6,198	4,418
35-39	6,882	4,197	2,685
40-44	4,441	2,667	1,774
45-49	2,670	1,660	1,011
50-54	1,447	901	546
55-59	822	452	370
60-64	406	166	240
65-69	220	69	152
70-74	109	23	86
75-79	27	2	25
80+	2	0	2
TOTAL	66,371	33,162	33,209
1996			
0-4	2,991	1,509	1,482
5-9	155	79	77
10-14	879	132	747
15-19	9,830	3,603	6,227
20-24	16,258	6,583	9,675
25-29	15,626	7,875	7,751
30-34	12,847	7,481	5,366
35-39	8,478	5,157	3,321
40-44	5,390	3,245	2,145
45-49	3,296	2,035	1,261
50-54	1,774	1,109	665
55-59	1,004	556	449
60-64	503	211	292
65-69	265	82	183
70-74	134	30	105
75-79	34	2	32
80+	3	0	3
TOTAL	79,469	39,689	39,780

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
1997			
0-4	3,553	1,792	1,761
5-9	157	79	78
10-14	967	154	813
15-19	10,647	3,874	6,772
20-24	18,747	7,554	11,192
25-29	18,238	9,060	9,178
30-34	15,056	8,743	6,313
35-39	10,108	6,133	3,975
40-44	6,340	3,826	2,514
45-49	3,938	2,417	1,521
50-54	2,107	1,323	785
55-59	1,189	662	528
60-64	602	257	345
65-69	310	95	214
70-74	160	37	123
75-79	42	3	39
80+	3	0	3
TOTAL	92,163	46,009	46,152
1998			
0-4	4,082	2,059	2,023
5-9	176	89	88
10-14	1,038	174	864
15-19	11,268	4,076	7,191
20-24	20,842	8,364	12,478
25-29	20,647	10,127	10,520
30-34	17,154	9,903	7,251
35-39	11,697	7,076	4,621
40-44	7,300	4,411	2,889
45-49	4,570	2,793	1,777
50-54	2,451	1,539	912
55-59	1,376	771	605
60-64	702	306	396
65-69	356	111	245
70-74	184	43	141
75-79	50	4	46
80+	5	0	4
TOTAL	103,899	51,847	52,051

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
1999			
0-4	4,556	2,298	2,258
5-9	208	104	104
10-14	1,094	192	902
15-19	11,708	4,216	7,493
20-24	22,507	8,999	13,508
25-29	22,789	11,051	11,738
30-34	19,086	10,934	8,153
35-39	13,195	7,957	5,238
40-44	8,242	4,982	3,260
45-49	5,174	3,154	2,020
50-54	2,795	1,752	1,043
55-59	1,560	881	679
60-64	801	357	444
65-69	402	128	274
70-74	208	50	158
75-79	59	6	54
80+	6	0	6
TOTAL	114,390	57,060	57,330
2000			
0-4	4,955	2,500	2,456
5-9	252	126	126
10-14	1,131	207	935
15-19	11,925	4,276	7,649
20-24	23,683	9,437	14,246
25-29	24,582	11,794	12,788
30-34	20,778	11,796	8,983
35-39	14,551	8,746	5,805
40-44	9,128	5,518	3,610
45-49	5,730	3,487	2,243
50-54	3,124	1,953	1,171
55-59	1,733	986	747
60-64	894	406	488
65-69	446	145	301
70-74	229	56	173
75-79	68	7	61
80+	8	1	8
TOTAL	123,218	61,440	61,778

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
2001			
0-4	5,269	2,658	2,611
5-9	307	154	154
10-14	1,151	219	932
15-19	11,922	4,259	7,662
20-24	24,385	9,684	14,701
25-29	25,997	12,347	13,650
30-34	22,184	12,473	9,711
35-39	15,731	9,423	6,308
40-44	9,923	5,999	3,930
45-49	6,222	3,782	2,441
50-54	3,430	2,137	1,292
55-59	1,891	1,084	806
60-64	979	453	526
65-69	487	162	325
70-74	249	62	187
75-79	77	9	68
80+	10	1	9
TOTAL	130,218	64,906	65,312
2002			
0-4	5,488	2,769	2,720
5-9	372	186	186
10-14	1,127	215	911
15-19	11,731	4,181	7,550
20-24	24,601	9,737	14,864
25-29	26,982	12,690	14,292
30-34	23,253	12,944	10,309
35-39	16,690	9,963	6,727
40-44	10,613	6,407	4,207
45-49	6,636	4,029	2,607
50-54	3,701	2,298	1,403
55-59	2,028	1,171	856
60-64	1,055	496	559
65-69	523	179	344
70-74	265	68	198
75-79	85	11	74
80+	12	1	11
TOTAL	135,163	67,346	67,817

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
2003			
0-4	3,609	2,830	2,779
5-9	435	218	217
10-14	1,107	215	892
15-19	11,471	4,081	7,390
20-24	24,521	9,681	14,841
25-29	27,499	12,835	14,663
30-34	23,947	13,217	10,730
35-39	17,379	10,330	7,049
40-44	11,134	6,712	4,422
45-49	6,963	4,223	2,740
50-54	3,916	2,425	1,491
55-59	2,140	1,243	898
60-64	1,117	534	583
65-69	553	194	359
70-74	279	73	206
75-79	92	13	79
80+	14	2	13
TOTAL	138,177	68,825	69,352
2004			
0-4	5,637	2,844	2,793
5-9	493	247	246
10-14	1,098	221	877
15-19	11,180	3,974	7,206
20-24	24,214	9,541	14,673
25-29	27,619	12,820	14,799
30-34	24,282	13,308	10,974
35-39	17,794	10,532	7,262
40-44	11,480	6,908	4,572
45-49	7,188	4,356	2,832
50-54	4,069	2,514	1,555
55-59	2,222	1,294	928
60-64	1,162	562	600
65-69	574	205	369
70-74	288	77	211
75-79	97	15	82
80+	16	2	14
TOTAL	139,413	69,419	69,994

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
2005			
0-4	5,583	2,817	2,766
5-9	545	273	272
10-14	1,095	232	863
15-19	10,822	3,845	6,978
20-24	23,678	9,314	14,364
25-29	27,418	12,666	14,752
30-34	24,338	13,251	11,987
35-39	18,010	10,610	7,400
40-44	11,706	7,028	4,678
45-49	7,343	4,445	2,897
50-54	4,182	2,579	1,603
55-59	2,282	1,333	950
60-64	1,196	584	612
65-69	590	216	374
70-74	295	81	214
75-79	101	17	85
80+	17	2	15
TOTAL	139,201	69,292	69,909
2006			
0-4	5,478	2,765	2,714
5-9	587	294	293
10-14	1,120	250	869
15-19	10,619	3,777	6,842
20-24	23,181	9,112	14,069
25-29	27,151	12,511	14,639
30-34	24,341	13,174	11,167
35-39	18,161	10,647	7,514
40-44	11,910	7,131	4,779
45-49	7,486	4,528	2,958
50-54	2,344	1,370	973
55-59	2,344	1,370	973
60-64	1,229	606	623
65-69	607	227	380
70-74	301	84	217
75-79	105	19	87
80+	18	2	16
TOTAL	138,927	69,136	69,791

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
2007			
0-4	5,369	2,710	2,659
5-9	620	311	309
10-14	1,195	281	915
15-19	10,815	3,860	6,955
20-24	23,112	9,097	14,015
25-29	27,123	12,522	14,600
30-34	24,534	13,224	11,310
35-39	18,392	10,730	7,662
40-44	12,191	7,274	4,917
45-49	7,674	4,639	3,035
50-54	4,417	2,711	1,706
55-59	2,424	1,416	1,007
60-64	1,268	629	639
65-69	630	241	389
70-74	310	88	222
75-79	109	21	88
80+	20	3	17
TOTAL	140,201	69,756	70,446
2008			
0-4	5,262	2,657	2,606
5-9	641	321	320
10-14	1,273	311	962
15-19	11,058	3,959	7,099
20-24	23,153	9,128	14,026
25-29	27,123	12,554	14,569
30-34	24,721	13,287	11,434
35-39	18,628	10,815	7,813
40-44	12,476	7,414	5,062
45-49	7,883	4,760	3,123
50-54	4,557	2,791	1,765
55-59	2,513	1,467	1,046
60-64	1,313	655	658
65-69	655	255	400
70-74	320	93	227
75-79	113	23	90
80+	21	3	18
TOTAL	141,711	70,494	71,217

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
2009			
0-4	5,160	2,606	2,554
5-9	652	327	325
10-14	1,341	339	1,002
15-19	11,246	4,036	7,210
20-24	23,237	9,172	14,064
25-29	27,118	12,575	14,542
30-34	24,872	13,345	11,527
35-39	18,866	10,900	7,966
40-44	12,757	7,546	5,211
45-49	8,111	4,887	3,225
50-54	4,709	2,880	1,829
55-59	2,611	1,523	1,088
60-64	1,365	685	680
65-69	683	271	412
70-74	332	100	232
75-79	119	26	93
80+	23	4	19
TOTAL	143,201	71,221	71,980
2010			
0-4	5,063	2,557	2,506
5-9	652	327	325
10-14	1,393	363	1,030
15-19	11,347	4,078	7,269
20-24	23,331	9,218	14,114
25-29	27,102	12,580	14,522
30-34	24,981	13,391	11,590
35-39	19,108	10,986	8,121
40-44	13,039	7,652	5,367
45-49	8,362	5,021	3,340
50-54	4,877	2,979	1,898
55-59	2,719	1,585	1,134
60-64	1,425	719	706
65-69	714	289	425
70-74	347	108	239
75-79	125	29	96
80+	25	5	20
TOTAL	144,609	71,908	72,702

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
2011			
0-4	4,967	2,509	2,458
5-9	645	324	321
10-14	1,427	381	1,046
15-19	11,362	4,086	7,276
20-24	23,424	9,258	14,166
25-29	27,072	12,565	14,506
30-34	25,045	13,422	11,623
35-39	19,352	11,073	8,279
40-44	13,313	7,789	5,523
45-49	8,630	5,162	3,468
50-54	5,061	3,088	1,974
55-59	2,836	1,652	1,184
60-64	1,493	758	735
65-69	749	309	440
70-74	364	118	246
75-79	132	32	100
80+	28	7	21
TOTAL	145,900	72,533	73,366
2012			
0-4	4,865	2,458	2,407
5-9	635	319	316
10-14	1,446	395	1,051
15-19	11,316	4,071	7,245
20-24	23,460	9,269	14,190
25-29	27,046	12,545	14,501
30-34	25,059	13,431	11,628
35-39	19,590	11,156	8,433
40-44	13,584	7,899	5,684
45-49	8,911	5,306	3,605
50-54	5,263	3,205	2,059
55-59	2,963	1,726	1,237
60-64	1,572	803	768
65-69	787	331	456
70-74	384	129	255
75-79	140	36	104
80+	32	9	23
TOTAL	147,053	73,090	73,963

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
2013			
0-4	4,757	2,404	2,353
5-9	623	313	310
10-14	1,455	403	1,051
15-19	11,249	4,050	7,199
20-24	23,421	9,252	14,169
25-29	26,992	12,509	14,483
30-34	25,036	13,413	11,623
35-39	19,789	11,222	8,567
40-44	13,858	8,007	5,851
45-49	9,201	5,450	3,750
50-54	5,486	3,330	2,156
55-59	3,105	1,810	1,295
60-64	1,660	854	806
65-69	831	356	475
70-74	407	142	265
75-79	150	41	109
80+	36	11	25
TOTAL	148,058	73,570	74,488
2014			
0-4	4,640	2,345	2,295
5-9	611	307	304
10-14	1,454	408	1,047
15-19	11,174	4,027	7,147
20-24	23,314	9,208	14,106
25-29	26,907	12,459	14,449
30-34	24,977	13,369	11,608
35-39	19,939	11,266	8,674
40-44	14,128	8,110	6,018
45-49	9,495	5,591	3,904
50-54	5,728	3,463	2,265
55-59	3,264	1,903	1,361
60-64	1,758	911	846
65-69	883	386	497
70-74	433	157	276
75-79	161	47	114
80+	41	13	28
TOTAL	148,907	73,970	74,937

Table A9: Number of People Infected With HIV by Age and Sex (Still Living by Year) (continued)

Age	Total	Male	Female
2015			
0-4	4,515	2,283	2,233
5-9	599	301	298
10-14	1,446	408	1,038
15-19	11,093	4,003	7,090
20-24	23,157	9,146	14,011
25-29	26,795	12,396	14,399
30-34	24,881	13,302	11,578
35-39	20,031	11,283	8,748
40-44	14,384	8,203	6,181
45-49	9,790	5,725	4,065
50-54	5,984	3,599	2,384
55-59	3,437	2,005	1,432
60-64	1,864	974	891
65-69	940	419	521
70-74	462	173	289
75-79	174	54	120
80+	47	16	31
TOTAL	149,599	74,291	75,309
2016			
0-4	4,384	2,216	2,167
5-9	588	296	292
10-14	1,431	404	1,027
15-19	11,009	3,979	7,030
20-24	22,968	9,073	13,896
25-29	26,660	12,324	14,336
30-34	24,749	13,215	11,533
35-39	20,061	11,274	8,787
40-44	14,621	8,283	6,338
45-49	10,075	5,847	4,228
50-54	6,248	3,738	2,511
55-59	3,623	2,113	1,510
60-64	1,979	1,041	938
65-69	1,004	457	548
70-74	494	191	303
75-79	190	63	127
80+	53	19	34
TOTAL	150,138	74,533	75,605

Table A10: Population Projections Without and With AIDS by Age Cohort (4 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	24,929	24,929	0
1992	25,807	25,615	-1
1993	26,636	26,252	-1
1994	27,435	26,801	-2
1995	28,225	27,284	-3
1996	29,025	27,712	-5
1997	30,420	28,582	-6
1998	31,908	29,549	-7
1999	33,500	30,554	-9
2000	35,201	31,582	-10
2001	37,017	32,584	-12
2002	37,589	32,400	-14
2003	38,135	31,992	-16
2004	38,639	31,536	-18
2005	39,080	31,047	-21
2006	39,443	30,537	-23
2007	39,643	29,956	-24
2008	39,770	29,379	-26
2009	39,823	28,828	-28
2010	39,801	28,313	-29
2011	39,704	27,845	-30
2012	39,914	27,741	-30
2013	40,138	27,773	-31
2014	40,379	27,881	-31
2015	40,638	28,042	-31
2016	40,920	28,233	-31

Table A11: Population Projections Without and With AIDS by Age Cohort (5 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	24,890	24,890	0
1992	25,487	25,391	0
1993	25,923	25,697	-1
1994	26,250	25,815	-2
1995	26,532	25,822	-3
1996	26,821	25,805	-4
1997	28,467	26,926	-5
1998	30,287	28,321	-6
1999	32,277	29,827	-8
2000	34,424	31,392	-9
2001	36,713	32,920	-10
2002	37,226	32,756	-12
2003	37,682	32,243	-14
2004	38,069	31,629	-17
2005	38,380	30,947	-19
2006	38,605	30,233	-22
2007	38,928	29,675	-24
2008	39,188	29,163	-26
2009	39,381	28,690	-27
2010	39,503	28,264	-28
2011	39,548	27,889	-29
2012	39,749	27,753	-30
2013	39,958	27,735	-31
2014	40,177	27,793	-31
2015	40,406	27,900	-31
2016	40,653	28,034	-31

Table A12: Population Projections Without and With AIDS by Age Cohort (6 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	24,712	24,712	0
1992	25,103	25,081	0
1993	25,261	25,157	0
1994	25,257	24,981	-1
1995	25,185	24,670	-2
1996	25,119	24,357	-3
1997	26,893	25,630	-5
1998	28,892	27,288	-6
1999	31,101	29,103	-6
2000	33,489	30,993	-7
2001	36,027	32,832	-9
2002	36,527	32,728	-10
2003	36,950	32,201	-13
2004	37,291	31,539	-15
2005	37,551	30,787	18
2006	37,729	29,995	20
2007	38,175	29,498	-23
2008	38,571	2,9076	-25
2009	38,913	28,701	-26
2010	39,191	28,378	-28
2011	39,396	28,106	-29
2012	39,596	27,933	-29
2013	39,796	27,851	-30
2014	39,996	27,837	-30
2015	40,197	27,868	-31
2016	40,406	27,925	-31

Table A13: Population Projections Without and With AIDS by Age Cohort (7 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	24,328	24,328	0
1992	24,604	24,629	0
1993	24,631	24,611	0
1994	24,481	24,325	-1
1995	24,247	23,891	-1
1996	24,005	23,459	-2
1997	25,757	24,761	-4
1998	27,735	26,471	-5
1999	29,921	28,336	-5
2000	32,280	30,271	-6
2001	34,784	32,149	-8
2002	35,364	32,180	-9
2003	35,874	31,799	-11
2004	36,314	31,281	-14
2005	36,688	30,669	-16
2006	36,999	30,012	-19
2007	37,537	29,592	-21
2008	38,032	29,232	-23
2009	38,481	28,913	-25
2010	38,872	28,641	-26
2011	39,192	28,412	-28
2012	39,408	28,189	-28
2013	39,615	28,037	-29
2014	39,810	27,946	-30
2015	39,996	27,895	-30
2016	40,177	27,871	-31

Table A14: Population Projections Without and With AIDS by Age Cohort (8 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	23,694	23,694	0
1992	23,953	24,000	0
1993	24,017	24,042	0
1994	23,930	23,856	0
1995	23,750	23,522	-1
1996	23,527	23,160	-2
1997	25,091	24,356	-3
1998	26,817	25,874	-4
1999	28,702	27,495	-4
2000	30,726	29,156	-5
2001	32,874	30,764	-6
2002	33,659	31,029	-8
2003	34,419	30,999	-10
2004	35,153	30,869	-12
2005	35,863	30,667	-14
2006	36,549	30,417	-17
2007	37,121	30,069	-19
2008	37,649	29,705	-21
2009	38,127	29,355	-23
2010	38,547	29,030	-25
2011	38,894	28,735	-26
2012	39,149	28,450	-27
2013	39,385	28,227	-28
2014	39,599	28,063	-29
2015	39,790	27,940	-30
2016	39,961	27,846	-30

Table A15: Population Projections Without and With AIDS by Age Cohort (9 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	22,837	22,837	0
1992	23,165	23,210	0
1993	23,414	23,452	0
1994	23,576	23,549	0
1995	23,640	23,509	-1
1996	23,604	23,383	-1
1997	24,834	24,353	-2
1998	26,111	25,470	-2
1999	27,452	26,588	-3
2000	28,875	27,695	-4
2001	30,392	28,767	-5
2002	31,490	29,354	-7
2003	32,643	29,852	-9
2004	33,845	30,324	-10
2005	35,085	30,768	-12
2006	36,355	31,161	-14
2007	36,908	30,875	-16
2008	37,404	30,445	-19
2009	37,838	29,981	-21
2010	38,203	29,507	-23
2011	38,492	29,041	-25
2012	38,807	28,685	-26
2013	39,095	28,400	-27
2014	39,350	28,171	-28
2015	39,570	27,989	-29
2016	39,753	27,844	-30

Table A16: Population Projections Without and With AIDS by Age Cohort (10 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	21,858	21,858	0
1992	22,310	22,338	0
1993	22,830	22,856	0
1994	23,346	23,339	0
1995	23,764	23,703	0
1996	24,020	23,913	0
1997	24,839	24,590	-1
1998	25,559	25,189	-1
1999	26,230	25,666	-2
2000	26,911	26,070	-3
2001	27,649	26,460	-4
2002	29,103	27,400	-6
2003	30,706	28,502	-7
2004	32,443	29,670	-9
2005	34,291	30,863	-10
2006	36,230	32,002	-12
2007	36,740	31,785	-13
2008	37,177	31,271	-16
2009	37,536	30,667	-18
2010	37,815	30,011	-21
2011	38,011	29,341	-23
2012	38,401	28,918	-25
2013	38,755	28,578	-26
2014	39,066	28,294	-28
2015	39,330	28,064	-29
2016	39,540	27,878	-29

Table A17: Population Projections Without and With AIDS by Age Cohort (11 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	20,925	20,925	0
1992	21,505	21,510	0
1993	22,281	22,285	0
1994	23,130	23,127	0
1995	23,889	23,875	0
1996	24,440	24,415	0
1997	24,871	24,814	0
1998	25,079	24,930	-1
1999	25,134	24,817	-1
2000	25,131	24,573	-2
2001	25,143	24,330	-3
2002	26,886	25,565	-5
2003	28,850	27,179	-6
2004	31,019	28,935	-7
2005	33,359	30,760	-8
2006	35,842	32,533	-9
2007	36,340	32,416	-11
2008	36,757	31,885	-13
2009	37,091	31,220	-16
2010	37,342	30,468	-18
2011	37,511	29,680	-21
2012	37,974	29,212	-23
2013	38,391	28,826	-25
2014	38,759	28,491	-26
2015	39,068	28,212	-28
2016	39,308	27,981	-29

Table A18: Population Projections Without and With AIDS by Age Cohort (12 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	20,235	20,235	0
1992	20,889	20,876	0
1993	21,791	21,777	0
1994	2,804	22,800	0
1995	23,745	23,757	0
1996	24,479	24,503	0
1997	24,664	24,732	0
1998	24,575	24,578	0
1999	24,282	24,144	-1
2000	23,884	23,544	-1
2001	23,457	22,942	-2
2002	25,290	24,307	-4
2003	27,360	26,146	-4
2004	29,655	28,149	-5
2005	32,142	30,235	-6
2006	34,794	32,273	-7
2007	35,378	32,324	-9
2008	35,898	31,942	-11
2009	36,351	31,418	-14
2010	36,738	30,795	-16
2011	37,063	30,121	-19
2012	37,577	29,651	-21
2013	38,040	29,226	-23
2014	38,445	28,837	-25
2015	38,783	28,493	-27
2016	39,042	28,195	-28

Table A19: Population Projections Without and With AIDS by Age Cohort (13 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	19,902	19,920	0
1992	20,541	20,524	0
1993	21,370	21,353	0
1994	22,288	22,285	0
1995	23,163	23,183	0
1996	23,896	23,937	0
1997	24,051	24,163	0
1998	23,985	24,057	0
1999	23,741	23,706	0
2000	23,376	23,190	-1
2001	22,940	22,637	-1
2002	24,589	23,906	-3
2003	26,412	25,566	-3
2004	28,407	27,337	-4
2005	30,563	29,162	-5
2006	32,869	30,945	-6
2007	33,670	31,247	-7
2008	34,458	31,235	-9
2009	35,227	31,121	-12
2010	35,975	30,929	-14
2011	36,699	30,680	-16
2012	37,236	30,266	-19
2013	37,714	29,812	-21
2014	38,128	29,362	-23
2015	38,471	28,933	-25
2016	38,729	28,536	-26

Table A20: Population Projections Without and With AIDS by Age Cohort (14 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	19,809	19,809	0
1992	20,371	20,358	0
1993	20,989	20,978	0
1994	21,633	21,632	0
1995	22,270	22,284	0
1996	22,871	22,903	0
1997	23,154	23,245	0
1998	23,341	23,411	0
1999	23,427	23,430	0
2000	23,403	23,306	0
2001	23,269	23,098	-1
2002	24,543	24,109	-2
2003	25,871	25,307	-2
2004	27,272	26,510	-3
2005	38,766	27,708	-4
2006	30,365	28,873	-5
2007	31,464	29,473	-6
2008	32,619	29,970	-8
2009	33,825	30,436	-10
2010	35,068	30,868	-12
2011	36,342	31,245	-14
2012	36,883	80,933	-16
2013	37,363	30,470	-18
2014	37,775	29,970	-21
2015	38,113	29,459	-23
2016	38,370	28,958	-25

Table A21: Population Projections Without and With AIDS by Age Cohort (15 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	19,821	19,821	0
1992	20,284	20,275	0
1993	20,639	20,631	0
1994	20,943	20,938	0
1995	21,287	21,282	0
1996	21,730	21,734	0
1997	22,187	22,228	0
1998	22,710	22,745	0
1999	23,228	23,234	0
2000	23,650	23,606	0
2001	23,090	23,827	0
2002	24,729	24,509	.1
2003	25,451	25,121	-1
2004	26,123	25,607	-2
2005	26,806	26,019	-3
2006	27,546	26,416	-4
2007	28,999	27,358	-6
2008	30,600	28,459	-7
2009	32,334	29,623	-8
2010	34,178	30,809	-10
2011	36,114	31,942	-12
2012	36,626	31,728	-13
2013	37,066	31,220	-16
2014	37,428	30,623	-18
2015	37,710	29,973	-21
2016	37,910	29,307	-23

Table A22: Population Projections Without and With AIDS by Age Cohort (16 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	19,695	19,695	0
1992	20,096	20,082	0
1993	20,257	20,241	0
1994	20,309	20,286	0
1995	20,442	20,406	0
1996	20,788	20,748	0
1997	21,370	21,349	0
1998	22,147	22,127	0
1999	22,996	22,972	0
2000	23,756	23,722	0
2001	24,310	24,265	0
2002	24,744	24,668	0
2003	24,956	24,792	-1
2004	25,016	24,687	-1
2005	25,019	24,452	-2
2006	25,036	24,216	-3
2007	26,776	25,451	-5
2008	28,737	27,063	-6
2009	30,902	28,813	-7
2010	33,236	30,629	-8
2011	35,713	32,395	-9
2012	36,214	32,283	-11
2013	36,635	31,761	-13
2014	36,972	31,105	-16
2015	37,227	30,360	-18
2016	37,400	29,579	-21

Table A23: Population Projections Without and With AIDS by Age Cohort (17 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	19,274	19,274	0
1992	19,669	19,647	0
1993	19,767	19,736	0
1994	19,727	19,678	0
1995	19,780	19,702	0
1996	20,086	19,986	0
1997	20,741	20,635	0
1998	21,644	21,531	0
1999	22,656	22,546	0
2000	23,597	23,495	0
2001	24,333	24,235	0
2002	24,523	24,464	0
2003	24,440	24,312	-1
2004	24,154	23,884	-1
2005	23,763	23,294	-2
2006	23,343	22,700	-3
2007	25,173	24,066	-4
2008	27,240	25,905	-5
2009	29,529	27,904	-6
2010	32,010	29,983	-6
2011	34,657	32,013	-8
2012	35,243	32,069	-9
2013	35,766	31,695	-11
2014	36,222	31,179	-14
2015	36,613	30,564	-17
2016	36,941	29,898	-19

Table A24: Population Projections Without and With AIDS by Age Cohort (18 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	18,435	28,435	0
1992	18,905	18,870	0
1993	19,126	19,074	0
1994	19,226	19,143	0
1995	19,390	19,259	-1
1996	19,745	19,571	-1
1997	20,385	20,173	-1
1998	21,214	20,973	-1
1999	22,132	21,878	-1
2000	23,007	22,752	-1
2001	23,743	23,489	-1
2002	23,903	23,712	-1
2003	23,844	23,601	-1
2004	23,606	23,254	-1
2005	23,248	22,745	-2
2006	22,818	22,205	-3
2007	24,466	23,481	-4
2008	26,286	25,148	-4
2009	28,278	26,922	-5
2010	30,429	28,744	-6
2011	32,731	30,522	-7
2012	33,533	30,826	-8
2013	34,323	30,817	-10
2014	35,094	30,706	-13
2015	35,844	30,519	-15
2016	36,570	30,277	-17

Table A25: Population Projections Without and With AIDS by Age Cohort (19 Year Olds) (1991-2016)

Year	Without AIDS	With AIDS	% Reduction In Population
1991	17,303	17,303	0
1992	17,902	17,850	0
1993	18,374	18,293	0
1994	18,773	18,649	-1
1995	19,178	18,989	-1
1996	19,645	19,387	-1
1997	20,208	19,878	-2
1998	20,828	20,435	-2
1999	21,474	21,033	-2
2000	22,114	21,642	-2
2001	22,718	22,231	-2
2002	23,005	22,563	-2
2003	23,197	22,718	-2
2004	23,287	22,735	-2
2005	23,268	22,619	-3
2006	23,139	22,426	-3
2007	24,414	23,453	-4
2008	25,741	24,668	-4
2009	27,142	25,885	-5
2010	28,634	27,088	-5
2011	30,231	28,251	-7
2012	31,330	28,848	-8
2013	32,485	29,340	-10
2014	33,690	29,802	-12
2015	34,933	30,234	-13
2016	36,205	20,615	-15

Table A26: Under-five Mortality Rates (per 1000 live births) (1991-2016)

Year	Without AIDS	With AIDS	% Increase in Under-five Mortality Due to AIDS
1991	95.5	117.8	23.4
1992	92.6	115.0	24.2
1993	89.7	108.3	20.7
1994	86.9	102.7	18.2
1995	84.0	101.4	20.7
1996	81.4	101.7	25.0
1997	78.9	104.2	32.1
1998	76.4	106.7	39.8
1999	73.8	109.2	47.9
2000	71.3	111.3	56.0
2001	68.8	112.9	64.0
2002	66.7	114.2	71.3
2003	64.6	114.8	77.7
2004	62.6	114.6	83.1
2005	60.6	113.5	87.3
2006	58.5	111.5	90.5
2007	56.8	108.8	91.6
2008	55.2	106.2	92.4
2009	53.6	103.7	93.5
2010	52.0	101.4	95.1
2011	50.4	99.2	97.0
2012	49.1	97.0	97.4
2013	47.9	94.6	97.6
2014	46.6	92.3	97.8
2015	45.4	90.0	98.2
2016	44.2	87.7	98.6

Table A27: Crude Death Rate (per 1000 population) (1991-2016)

Year	Without AIDS	With AIDS	% Increase in Crude Death Rates Due to AIDS
1991	9.3	11.4	22.5
1992	9.1	11.7	28.4
1993	8.9	12.1	34.9
1994	8.7	12.6	44.6
1995	8.4	13.6	61.2
1996	8.2	14.7	80.3
1997	7.9	15.9	100.6
1998	7.7	17.1	122.3
1999	7.4	18.2	144.8
2000	7.2	19.3	169.3
2001	6.9	20.4	194.3
2002	6.7	21.4	218.5
2003	6.5	22.0	237.4
2004	6.3	22.2	250.8
2005	6.1	22.1	260.9
2006	6.0	21.9	268.2
2007	5.8	21.6	271.5
2008	5.7	21.2	272.0
2009	5.6	20.8	272.1
2010	5.5	20.4	273.7
2011	5.4	20.1	275.9
2012	5.3	19.9	275.6
2013	5.2	19.6	275.3
2014	5.2	19.4	275.2
2015	5.1	19.1	275.2
2016	5.0	18.9	275.4

**Table A28: Projected Primary School Aged Population by Grade (1998-2016)
(inc. 16% repeater rate)**

Year	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
1998	31654	30706	30014	29545	29219	28919	28510
1999	33759	32870	31894	30842	29773	28788	28007
2000	35952	35114	33821	32126	30241	28463	27311
2001	38085	37293	35686	33370	30694	28223	26613
2002	37964	37329	35994	34051	31784	29655	28196
2003	37353	36887	35959	34628	33062	31528	30329
2004	36585	36286	35808	35176	34417	33565	32653
2005	35713	35576	35574	35691	35801	35682	35073
2006	34794	34814	35284	36147	37122	37738	37437
2007	34218	34327	34880	35815	36871	37603	37496
2008	33728	33090	34458	35316	36274	36987	37053
2009	33293	33539	34052	34778	35574	36215	36445
2010	32918	33224	33675	34228	34813	35343	35772
2011	32603	32958	33333	33688	34036	34429	34940
2012	32402	32699	33002	33275	33545	33886	34395
2013	32307	32523	32743	32944	33150	33438	33902
2014	32291	32417	32553	32678	32821	33050	33451
2015	32327	32358	32410	32467	32554	32726	33052
2016	32393	32330	32301	32299	32338	32458	32706

Table A29: Projected Primary School Aged Population (AIDS/no-AIDS Comparison) (1999-2016) (inc. a 16% repeater rate)

Year	Without AIDS	With AIDS	% Reduction In Population
1999	215933	223674	-3.46
2000	223029	233503	-4.49
2001	229963	243978	-5.74
2002	234973	253250	-7.22
2003	239746	263090	-8.87
2004	244490	273435	-10.59
2005	249109	284176	-12.34
2006	253336	295218	-14.19
2007	251208	299511	-16.13
2008	247725	303326	-18.33
2009	243896	306631	-20.46
2010	239923	309381	-22.45
2011	235986	311528	-24.25
2012	233204	314258	-25.79
2013	231008	316769	-27.07
2014	229261	319029	-28.14
2015	227895	321011	-29.01
2016	226826	322697	-29.71

Table A30: Projected Secondary School Aged Population (AIDS/no-AIDS Comparison) (1998-2016) (inc. a 11% repeater rate) (assuming 100% enrolment rate)

Year	Without AIDS	With AIDS	% Reduction In Students
1998	113,847	113,971	0.0
1999	116,048	116,239	+0.2
2000	117,782	117,319	-0.4
2001	118,761	118,062	-0.6
2002	123,128	121,656	-1.2
2003	127,130	125,098	-1.6
2004	130,972	128,025	-2.3
2005	134,917	130,635	-3.2
2006	139,159	133,150	-4.5
2007	146,082	137,595	-6.2
2008	153,654	142,632	-7.7
2009	161,817	147,897	-9.4
2010	170,467	153,218	-11.3
2011	179,525	158,275	-13.4
2012	182,202	157,279	-15.8
2013	184,544	154,958	-19.1
2014	186,525	152,239	-22.5
2015	188,134	149,289	-26.0
2016	189,350	146,278	-29.4

Table A31: Projected Secondary School Aged Population (AIDS/no-AIDS Comparison) (1998-2016) (inc. a 11% repeater rate) (assuming the 1990s enrolment trends continues at 5.3% per annum)

Year	Without AIDS	With AIDS
1998	67,411	66,928
1999	70,984	71,101
2000	74,746	74,452
2001	78,708	78,245
2002	82,879	81,888
2003	87,272	85,877
2004	91,897	89,830
2005	96,768	93,697
2006	101,897	97,497
2007	107,297	101,063
2008	112,984	104,879
2009	118,972	108,738
2010	125,278	112,601
2011	131,917	116,302
2012	138,909	119,908
2013	146,271	122,821
2014	154,023	125,712
2015	162,187	128,699
2016	170,783	131,934

Table A32: Secondary School Students: Knowledge

Responses	Percentage	Correct or Incorrect
<i>HIV is</i>		
A type of AIDS	3.2	Incorrect
The virus that leads to AIDS	96.6	Correct
A virus that only women get	0.2	Incorrect
Another name for tuberculosis	0.0	Incorrect
<i>HIV is spread by:</i>		
Coughing	0.0	Incorrect
Bewitchment	0.0	Incorrect
Unprotected sex & contaminated blood	100.0	Correct
Saliva	0.0	Incorrect
<i>AIDS is:</i>		
A type of cancer	3.6	Incorrect
When the body's defence system has been destroyed	80.4	Correct
A disease created by condoms	4.3	Incorrect
A made-up disease that really doesn't exist	11.7	Incorrect

Table A33: Secondary School Students: Knowledge by Sex and Location

Responses	Boys Versus Girls	Urban Versus Rural
<i>HIV is</i>		
The virus that leads to AIDS	Boys more likely to know	Higher knowledge, urban areas
<i>HIV is spread by:</i>		
Unprotected sex & contaminated blood	No difference	No difference
<i>AIDS is:</i>		
When the body's defence system has been destroyed	No difference	Higher knowledge urban areas

Table A34: Secondary School Students Knowledge Statements

Statement	True	False	Not Know	% Correct
Mosquitoes cannot spread HIV/AIDS	58.5	35.3	6.2	58.5
A person can get HIV/AIDS by shaking hands with someone who has the disease	1.6	98.0	0.4	98.0
A person cannot get HIV/AIDS by sharing cups, plates or food with someone who has the disease	87.9	11.3	0.8	87.9
HIV/AIDS can be spread by someone with the disease sneezing or coughing on other people	11.4	82.2	6.4	82.2
AIDS can be cured by some traditional healers	5.2	86.5	8.3	86.5
Someone who has the HIV disease that causes AIDS can look healthy	81.3	16.3	2.4	81.3
Condoms make the spread of HIV/AIDS more likely when coupled are having sex	9.1	84.9	6.0	84.9
Having a sexually transmitted disease such as syphilis or gonorrhoea means that the AIDS disease is not as powerful, and is therefore less likely to spread	9.4	72.0	18.6	72.0
Some sexually active people even here in Swaziland cannot catch HIV/AIDS	16.3	78.7	5.0	78.7
If a pregnant woman has the disease that causes AIDS, the child will also always develop AIDS	94.4	3.8	1.8	3.8
If a person has unprotected sex with someone who has the AIDS disease, they will certainly get the virus and then develop AIDS	96.2	1.4	2.1	1.4

Table A35: Secondary School Students Knowledge Statements by Sex and Location

Statement	Boys Versus Girls	Urban Versus Rural
Mosquitoes cannot spread HIV/AIDS	No difference	Urban areas better knowledge
A person can get HIV/AIDS by shaking hands with someone who has the disease	No difference	No difference
A person cannot get HIV/AIDS by sharing cups, plates or food with someone who has the disease	No difference	Urban areas better knowledge
HIV/AIDS can be spread by someone with the disease sneezing or coughing on other people	No difference	No difference
AIDS can be cured by some traditional healers	No difference	No difference
Someone who has the HIV disease that causes AIDS can look healthy	Females more likely answer true	Urban areas higher knowledge
Condoms make the spread of HIV/AIDS more likely when coupled are having sex	No difference	Urban areas higher knowledge
Having a sexually transmitted disease such as syphilis or gonorrhoea means that the AIDS disease is not as powerful, and is therefore less likely to spread	No difference	Urban areas higher knowledge
Some sexually active people even here in Swaziland cannot catch HIV/AIDS	No difference	No difference
If a pregnant woman has the disease that causes AIDS, the child will also always develop AIDS	No difference	Urban areas higher knowledge
If a person has unprotected sex with someone who has the AIDS disease, they will certainly get the virus and then develop AIDS	No difference	Rural areas higher knowledge

Table A36: Secondary School Students Attitudinal Statements

Attitudinal Statements	Agree	Disagree	Do Not Know
HIV/AIDS is really on a problem in the towns, especially for foreigners	14.1	82.1	3.8
I do not think that there are any people in the area that have HIV/AIDS	9.1	72.6	18.3
HIV/AIDS only affects people who are older, mostly those our parents age	1.6	97.6	0.8
I would still be friends with someone, even if I learned that they had HIV/AIDS	82.7	12.3	5.0
We are confused about what HIV has to do with AIDS	35.3	47.4	17.3
Households which are taking care of someone with AIDS at home would be avoided by other households	24.1	56.0	19.9
A person who finds out that they have the AIDS virus should give up on life, as they have no future	17.7	78.4	4.0
We are mostly confused about AIDS	67.7	28.4	4.0
It is becoming more and more okay to Swazi youth that condoms can be used	76.3	16.9	6.8
Girls who carry condoms are not respectable	31.1	61.4	7.5
If a girl wants to use a condom but the boy does not, the boy's decision should rule	11.1	85.1	3.8
Even if both sexual partners do not have HIV, it is still possible that they can give one another the virus if they have unprotected sex	42.4	48.9	8.7
Condoms are not good because it is not 'flesh to flesh'	11.9	82.3	5.8

Table A37: Secondary School Students Attitudinal Statements by Sex and Location

Attitudinal Statements	Males Versus Females	Urban Versus Rural
HIV/AIDS is really on a problem in the towns, especially for foreigners	No difference	Rural areas more agree
I do not think that there are any people in the area that have HIV/AIDS	No difference	Rural areas more agree
HIV/AIDS only affects people who are older, mostly those our parents age	No difference	Rural areas more agree
I would still be friends with someone, even if I learned that they had HIV/AIDS	No difference	Urban areas more agree
We are confused about what HIV has to do with AIDS	Females more likely to agree	Rural areas more agree
Households which are taking care of someone with AIDS at home would be avoided by other households	No difference	Rural areas more agree
A person who finds out that they have the AIDS virus should give up on life, as they have no future	Males more likely to agree	Rural areas more agree
We are mostly confused about AIDS	No difference	Rural areas more agree
It is becoming more and more okay to Swazi youth that condoms can be used	No difference	No difference
Girls who carry condoms are not respectable	No difference	Rural areas more agree
If a girl wants to use a condom but the boy does not, the boy's decision should rule	No difference	Rural areas more agree
Even if both sexual partners do not have HIV, it is still possible that they can give one another the virus if they have unprotected sex	No difference	No difference
Condoms are not good because it is not 'flesh to flesh'	No difference	Rural areas more agree

Annex B: Discussion of Modelling

Introduction

The following is extracted from the modelling module “Planning for HIV/AIDS in Developing Countries Workshop, Overseas Development Group, University of East Anglia, Norwich”, prepared by the modellers who worked on the Swaziland study, Barbara Mason and Greg Wood.

What is Modelling

A model is a construct that is developed in an attempt to represent the real world. Models are usually expressed in the form of a mathematical equation or set of equations that represent an object or a system. With the advent of the computer it has become possible to develop models of systems that would not previously have been feasible due to the complexity of calculations involved. The use of computers for modelling has meant that these tools are now far more accessible to planners and policy-makers.

Modelling involves several steps:

- 1) Hypotheses and assumptions about the components of the ‘real’ system and how they interact are generated.
- 2) These theoretical components and relationships are then translated into mathematical equations. Computer programmes may be written to make the calculations required.
- 3) Data are fed into the model to generate different scenarios.
- 4) The output is interpreted and used to inform policy-makers and planners.

Models are, by definition, an attempt to *represent* an aspect of reality. They are not a duplicate of reality. The accuracy with which a particular model represents reality, and

hence the degree to which the outputs can be applied to reality, depend on several factors include the validity of the original hypotheses upon which the model was based, the quality of the tools used and the reliability of the data.

Several models have already been developed for use in modelling the AIDS epidemic. Our focus, therefore, is not on actually creating new models but on understanding and utilising existing models.

Types of AIDS Models

Extrapolation Models

Extrapolation models extrapolate the number of AIDS cases to be expected in the future based on data on past AIDS cases. These models are simple and were used predominantly in the early stages of the epidemic before much information was available. Extrapolation models usually involved either developing a curve to fit existing data and then extrapolating this forward to predict future numbers, or calculating the doubling time of the epidemic and assuming a constant growth rate of the number of AIDS cases or infected persons. Extrapolation models assume that trends of reported cases will remain essentially similar to those observed in the recent past and are only suitable for short-term projections. A problem with these models is that frequently many mathematical curves can fit existing data and it is difficult to decide on the most likely curve.

Projection Models

Projection models (forward and backward) project the number of AIDS cases from information on the incubation period of the diseases. A backward projection model (or back-calculation model) begins with data on the current number of AIDS cases and then calculates the number of infected people that must have existed to give rise to the

observed number of AIDS cases. The model then projects future AIDS cases based on the number of past infections. The shortcomings of this type of model are (1) that they depend on high quality AIDS surveillance data; and (2) that the estimates of seroprevalence are only suitable for short-term projections.

Forward projections models begin with data on HIV seroprevalence and then estimate the number of AIDS cases that will result. Given a distribution of the incubation period of AIDS and an estimate of the number of people who become infected in a particular year, the number of people who will develop AIDS in each future year can be projected. The AIDS projections for a series of years are then added to provide a projection of future AIDS cases. This type of model is particularly useful where reporting of AIDS cases is incomplete and unreliable. *EpiModel* is a good example of a forward projection model. Projection models are based on fairly simple assumptions and are easy to use but they are limited in being unable to simulate the impact of the prevention programmes.

Simulation Models

Simulation models are large scale, sophisticated, complex mathematical models that simulate interaction about individuals or among population groups. They incorporate biological and behavioural variables that describe the transmission and natural history of HIV infection to simulate the epidemic. Many different simulation models have been developed. Two particularly well known and multipurpose simulation models are *SimulAIDS* and *iwgAIDS*.

SimulAIDS is stochastic (or Monte Carlo) model. In a stochastic model each individual is represented separately and single contacts between individuals are represented in the model. Simply, this model is based on probabilities of the individual becoming infected depending on his/her behaviour. This replicated for all individuals at each point in time in the model.

IwgAIDS is a deterministic model that uses a complex set of equations to represent the interaction between different groups of people. Many variables are considered such as age, marital status, sexual orientation, drug use and rate of partner turnover. This model enables the simulation of the impact of many different intervention strategies and allows for consideration of different modes of transmission.

An important strength of these more complex simulation models is that they allow for the simulation of the effect of different intervention strategies which can in turn be used to guide public health strategies. A difficulty is that they are complex and require extensive input data and a high degree of skill.

Impact Models

Impact models focus beyond the direct question of projecting the number of AIDS cases and look at the impact of AIDS morbidity and mortality. *DemProj* and *AIM* are models that are used together to provide outputs such as life expectancy, infant mortality, orphans, dependency ratios, health costs, tuberculosis, and others.

The Uses of Modelling

AIDS models may be used for several different purposes such as:

- To project future numbers of AIDS cases and hence answer questions such as how many AIDS-related deaths can we expect in year x .
- To examine the demographic impact of AIDS and address questions regarding the impact of AIDS on population growth rates, the population age structure, life expectancy, etc.
- To simulate different intervention strategies and to compare the strengths and weaknesses of possible interventions.

- To examine the impact of the AIDS epidemic, for example, in terms of increased health expenditure, number of orphans, interactions with other diseases such as tuberculosis and so on.
- To create different scenarios which illustrate the effect of different assumptions on the projected outcome.

These outputs are potentially invaluable as a guide to policy-makers and planners, to assist with formulation of public health strategy, in alerting decision-makers to the likely impacts and magnitude of the problem, and as a tool to support lobbying.

Cautions and Ethics

It is important to keep in mind that models are simply tools which may be used to guide decision-making. Models are by definition a *representation* of an *aspect* of reality and they cannot possibly replicate the complexity that the real situation presents. Furthermore, the degree to which the outputs of models are applicable to the real world depends upon the nature of the model itself and the reliability and validity of the data that is used. When using models it is important to bear in mind what the model was designed for and what the limitations are.

Modelling can present ethical issues that need to be recognised if one is to use these tools. It is important that modellers avoid presenting sensational projections. Inexperienced modellers should work in consultation with experienced modellers and the modelling process should involve a team of people who bring different expertise relevant to the model (e.g., demographers, epidemiologists, etc.). Modellers must also be explicit about the assumptions and input data upon which the model is based and clear about the limits, for example, that the further into the future one projects the less reliable the projections are likely to be.

ANNEX C: DETAILED COSTING DATA

The calculations below are based on The Teaching Service at of 1982 and Teaching Service Regulations of 1983 and Establishment Circular Number 3 of 1999, Salary Award for 1998/99 and 1999/2000 Financial Years.

If a head teacher on Grade 13 Notch five reaches 60 years (the mandatory retirement age) he would be entitled to a pension as follows:

One eightieth of the average of the total salary earned during the last five years of his pensionable service prior to his date of retirement.

60 880	Year 1
62 815	Year 2
64 808	Year 3
66 866	Year 4
68 994	Year 5

$$324\,362 \div 5 = 64\,873 \times .0555 = 3603.69 \text{ per month}$$

If this person decides to take one third of the pension as cash payment the pension pay out is calculated as follows:

$$64\,873 \times .333 = 19\,464 \text{ as cash payment}$$

$$64\,873 - 19464 = 45\,409 \times 0.0555 = 2520.20 \text{ per month}$$

Should a secondary teacher, grade 10 notch 5, decide to retire at age 55 (the minimum age for voluntary retirement) that person would be entitled to a pension as follows:

38 093	Year 1
39 302	Year 2
40 550	Year 3
41 838	Year 4
43 065	Year 5

$$202\,849 \div 5 = 40\,570 \times 0.0555 = 2252 \text{ per month}$$

Should this individual elect to take one-third cash payment, the pension would thus be calculated as:

$$202\,849 \div 5 = 40\,570 \times .333 = 13\,510. \quad 40\,570 - 13\,510 = 27\,060 \times .0555 \\ = 1502 \text{ per month}$$

Sick Leave

A person in the teaching service can be granted sick leave as follows”

- up to six-(6) month’s sick leave on full pay;
- up to six-(6) month’s sick leave on half pay thereafter.

The commission may grant an extension of sick leave on half pay for a period not exceeding thirty days.

Should a person on grade 12 notch 3 who has a base salary of 55 431 fall ill, this person would be able to receive full pay for six months at $55431 \div 12 \times 6 = 27716$. An additional six months at half would be $55431 \div 2 \div 12 \times 6 = 13858$. Should an additional month of sick leave be granted, this would be 2309. A short calculation of the above would be 75% of yearly salary plus one month 41 573, plus 2309, which totals 43 883.

Payment of death gratuity to beneficiary.

This section applies in respect of a member who is not entitled to a pension under any other provisions of this act and who dies in the service

If a member to whom this section applies dies, the minister may grant to the beneficiary of such member a gratuity of an equal to one year’s pensionable emoluments of such other amounts as maybe prescribed by regulations made under this act.

Nothing in this section shall be construed as affecting any person’s rights to workmen’s compensation under any law.

The above means that if a 28 year old teacher dies who has six years in service, that person is not eligible for a pension payout and his family has to appeal to the minister for payment as above. To calculate, one needs the grade and notch.

Should a teacher die in service after serving ten years or more, death benefits equivalent to the annual salary received during the last year of service is paid.

University of Swaziland, Terms and Conditions of Service for Permanent and Pensionable Academic and Administrative Staff (1996)

7. Probation

7.02 Subject to the provisions of Section 32 of the Employment Act, probationary periods are normally made for an initial period of two years. . .

9.0 Termination of Appointment

- 9.04 The university may require that a staff member resign and relinquish his/her appointment, if and when declared a duly qualified medical officer appointed by the University that he/she is incapable of rendering efficient service in his/her position at the University because of infirmity of mind or body. Termination of appointment under such conditions, entitles the staff member to a salary up to the date when resignation was tendered or the date when he/she was required to relinquish the position. The member of staff shall also be entitled to a salary in respect of leave standing to his/her credit on that date.
- 9.05 A certificate signed by a duly qualified medical officer appointed by the University or the members of a duly constituted medical board appointed by the University shall be conclusive evidence on the question of whether or not the University has the right to compel the member of staff to resign or relinquish his/her office, as the case may be, by reason of ill health within the meaning of this agreement.

23. Sick Leave

- 23.01 Sick leave shall be granted only on production of a certificate from a registered medical practitioner.
- 23.02 After three months that a staff member has been continuously employed by the University he/she shall be entitled to up to twenty-eight (28) days sick leave with full pay. Thereafter, in any twelve month period reckoned from the date of assumption of duty, a member of staff shall be entitled to a maximum of six (6) months sick leave on full pay.
- 23.03 The University may grant further sick leave on the recommendation of a medical Board appointed by the University, on full pay, or half pay or without pay. The member may exercise the right to nominate one member of the Medical Board who shall be a registered medical practitioner.

24. Compassionate Leave

- 25.01 When a staff member's next of kin dies, the staff member may be granted compassionate leave for up to five (5) days with pay. In the case of a staff member's husband who has died, the member may be given up to one month's compassionate leave with pay and, in the case of a staff member's wife's death, fifteen (15) days with pay. Compassionate leave is entirely at the University's discretion save that it shall not be unreasonably withheld.

25.02 For the purpose of above, next of kin is described as the staff member's natural father, mother, brother, sister, child, wife, husband or common law wife or husband.

Death Benefits

Dependents or beneficiaries will receive a lump sum of three times the annual salary (plus E2000 academic staff member or E500 if they are not) if one dies before normal retiring age in the service of the university.

There is an extra amount paid if the person has completed between five and fifteen year's pensionable service upon expiring. This amount is increased even further if you die after fifteen or more year's pensionable service. If a professor (step 3, 138 989), an associate professor (step 1, 122 831) and a senior lecturer (step 5, 108 326) were to die within one calendar year the cost to the pension fund would be more than a million emalengeni (1 110 438). In addition the university will contribute an amount towards funeral expenses as may be determined by the university council and the cost of transporting the remains, personal and house effects and books to the place of domicile will be for the university account.

Ill-Health Retirement or Disability Pension

If a person has to stop work because of serious ill-health or disability, that person will get an immediate pension calculated on the number of years and months of the completed pension fund membership.

Example

Musa became seriously ill and had to retire at age 36. He had been a member of the pension fund for 10 years and his final pensionable salary was E86 101.

His pension is calculated as follows:

$$86\ 101 \times 2\% \times 10 = 17220 \text{ a year (1435 a month)}$$

ANNEX D QUESTIONNAIRES

VERSION 9 FINAL 23/7/99

Local/Regional/National Level Key Informant Interview Instrument

Sectoral Assessment of the Impact of HIV/AIDS on Education - CONFIDENTIAL

Prepared and Administered by JTK Associates for
the Ministry of Education and UNICEF/Swaziland

1	Region	<input type="checkbox"/> - 1 Hhohho <input type="checkbox"/> - 2 Manzini	<input type="checkbox"/> - 3 Lubombo <input type="checkbox"/> - 4 Shiselweni
2	Name of Town and/or Chieftancy		
3	Rural or Urban Area	<input type="checkbox"/> - 1 rural <input type="checkbox"/> - 2 urban	
4	Level of Interviewee	<input type="checkbox"/> - 1 national <input type="checkbox"/> - 2 regional <input type="checkbox"/> - 3 local	
5	Type of Respondent	<input type="checkbox"/> - 1 MOE – National Level (individuals) <input type="checkbox"/> - 2 Regional Education Officers and Inspectors (group) <input type="checkbox"/> - 3 Health Sector – Government (individuals) <input type="checkbox"/> - 4 Non-Governmental Organisations (group) <input type="checkbox"/> - 5 other (specify) _____	
6	Name of Respondent		
7	Position of Respondent		
8	Address of Respondent		
9	Contact Details of Respondent		
10	N/R/LLKII Leader		
11	N/R/LLKII Translator		
12	Date and Time	Date: _____ Start Time: _____ Finish Time: _____ Total Time: _____	
13			

	Co-operation	- 1 High	- 2 Medium	- 3 Low
14	Person and Date of Note Rewriting			
15	Person and Date of Final Check			
16	Person and Date NUD*IST Entered			
17	Person and Date NUD*IST Checked			

My name is _____ and I work for JTK Associates in Mbabane. JTK Associates is a Swazi research firm that has been contracted by the United Nations, on behalf of the Ministry of Education, to discuss the challenges facing the education sector. Specifically, Government and the United Nations are interested in better understanding the challenges that are facing Swazi households in educating their children with the growing HIV/AIDS pandemic.

Everything that we are discussing today is confidential, and no names will be linked to comments made by any respondents in the report. Thank you.

Introductory Questions

- 18) [Int: Ask NGOs only] As a first question, we would like to clearly understand your anti-AIDS activities, if any. [Int: Probe EXTENSIVELY for specific activities, particularly over the past year. Get a sense of the actual scope of activities compared to their mandate. Get copies of any written materials.]
- 19) [Int: Ask NGOs only] What other organisations, if any, are you linked to that are working in the anti-AIDS field? [Int: Probe for specific links, particularly over the past year. Get a sense of the actual scope of links and their effectiveness compared to their mandate]
- 20) [Int: Ask NGOs only] What links, if any, does your organisation have with school-based anti-AIDS activities? [Int: Probe for curriculum development, training, anti-AIDS club links, condom distribution, peer education, etc.]

AIDS Impact Questions

A recent publication on the AIDS pandemic outlined key issues to be considered when investigating the potential impacts of the HIV/AIDS pandemic on the education sector. Basically, these impacts can be categorised into three categories: 1) changing demand; 2) changing supply; and 3) changing process. I would like to present each of their indicators to you and ask you to comment, keeping three things in mind:

- 1) what do you think the impact has been to date; 2) what will be in the impact in the near future; and 3) how the Swazi nation and its partners in development, including Government and NGOs, can respond in a fashion that can actually deal with the problem (keeping in mind the sensitivity of the issue and the problem of denial) in future.

Demand

- 21) [Int: Ask MOE only] How, if at all, has and will the AIDS pandemic affect the number of children who drop out or never go into school? [Int: Go through points 1, 2 and 3 above]
- 22) [Int: Ask all] Are homesteads being negatively affected by HIV/AIDS in such a way that financial demands from the educational system cannot be met? [Int: Go through points 1, 2 and 3 above]
- 23) [Int: Ask all] Is more and more child labour needed at home to replace the labour of those who are falling ill due to HIV/AIDS, or to take care of adults who are ill due to HIV/AIDS? Are there any seasonality effects? [Int: Go through points 1, 2 and 3 above]

Supply

- 24) [Int: Ask MOE headquarters and field only] What percentage of teachers are posted away from areas where the remainder of their family live? Will this be changing over time? Will policy possibly change? Should policy change, given the high supply of teachers currently available in Swaziland? What about teachers not interested in being posted to rural areas? [Int: Go through points 1, 2 and 3 above]
- 25) [Int: Ask MOE headquarters and field only] What planning has occurred, to date, with regard to the education system considering the impacts of staff illnesses and deaths, and plans are upcoming? What about loans, death benefits, paid sick leave, pensions, early retirement, etc. [Int: Go through points 1, 2 and 3 above]
- 26) [Int: Ask MOE headquarters only] As the AIDS pandemic begins to take its toll on central government's budget, with resources shifted to health, to replacing skilled personnel by expanded training, etc., will funding for operating costs from central government decline? [Int: Go through points 1, 2 and 3 above]
- 27) [Int: Ask all] Households contribute just over 50% to recurrent costs for the education sector at the primary, secondary and high school levels. As these households and homesteads are stressed because of the AIDS pandemic, will financing from the community and from parents decline? [Int: Go through points 1, 2 and 3 above]

Process

- 28) [Int: Ask all] In your opinion, to what extent has the education system incorporated life skills training which would directly affect sexual roles in society, sexual knowledge, attitudes and practices, sexual decision-making, etc. to

reverse the AIDS pandemic? To what extent is their room for improvement?
[Int: Go through points 1, 2 and 3 above]

- 29) [Int: Ask all] In your opinion, to what extent has the education system been willing to incorporate into its routine peer education and peer counselling activities at the school? What is needed in the future? [Int: Go through points 1, 2 and 3 above]
- 30) [Int: Ask all] In your opinion, to what extent do sexual encounters between teachers and students in the system occur? How is the Ministry trying to reduce these? How can the Ministry better reduce these? [Int: Go through points 1, 2 and 3 above]
- 31) [Int: Ask all] In your opinion, to what extent does the educational system deal with the special needs of infected students, infected staff, and AIDS orphans? How can the Ministry better respond? [Int: Go through points 1, 2 and 3 above]
- 32) [Int: Ask all] In your opinion, to what extent is the schooling system flexible to meet the labour needs of families, particularly with regard to the agricultural cycle? Is the Ministry trying to become more flexible? Does it need to do so? How can the Ministry better respond in future? [Int: Go through points 1, 2 and 3 above]
- 33) [Int: Ask MOE headquarters only] What provisions has the Ministry of Education made to date for out-of-school youth? How can the Ministry better respond in future? [Int: Go through points 1, 2 and 3 above]
- 34) [Int: Ask NGOs only] What provisions have various NGOs made to date for out-of-school youth? How can these NGOs better respond in future? [Int: Go through points 1, 2 and 3 above]

Response to Quotations on How to Deal With the Effects of the Pandemic on Education

We would like to present you with a set of quotations and ask you to consider two things: (i) what do you think of this statement;(ii) what can be done about the problem?

- 35) [Int: Ask MOE headquarters and REOs and NGOs only] “In situations where schooling costs money fewer children and their families will be able to afford education because of the direct loss of family income from AIDS-related illness and death, and costs of care and funerals; expansion of extended families, where more children require money for schooling, which cannot be provided by the less productive remaining adults (i.e., grandparents or teenagers); and the loss of the traditional economic safety net of extended family and community.” [Int: Go through points 1 and 2 above]

- 36) [Int: Ask MOE headquarters and REOs and NGOs only] ‘Aside from the lack of financial resources, other factors that will keep children out of school include *the need for children to work or care for ill adults; *trauma related to family illness and death; *ostracism, discrimination, and stigma suffered by children due to HIV/AIDS infection in the family; in extended families, lower motivation provided by less educated guardian grandparents and reduced attention given to orphans by heads of households; *and the perception that investment in education will not give returns due to premature death.’ [Int: Go through points 1 and 2 above]
- 37) [Int: Ask REOs and NGOs only] “HIV/AIDS may increase educational disparities between boys and girls because girls are removed from school to nurse siblings or relatives, to substitute for the productive work of other family members or to save the costs of school fees.” [Int: Go through points 1 and 2 above]

- 38) [Int: Ask REOs and NGOs only] For the schools, ‘... the result of HIV infection will be absenteeism caused by illness, tending to the sick, and attending funerals; loss of staff due to increased mortality; and problems getting teachers to work in areas known to be heavily affected’. [Int: Go through points 1 and 2 above]
- 39) [Int: Ask NGOs only] ‘AIDS exacerbates problems of poverty, disinheritance, migration, child abandonment, psychological trauma, ostracism, discrimination, physical and sexual abuse – the very conditions which might lead to the creation of orphans.’ [Int: Go through points 1 and 2 above]
- 40) [Int: Ask MOE headquarters only] In terms of education and quality, increased absenteeism of teachers and pupils caused by HIV/AIDS; *a less-qualified teaching force, as experienced teachers are replaced with those who are younger and less well-trained; discrimination and isolation of students and teachers who are infected or ill or who have families where someone is ill or has died of AIDS; *and an increase in older men, including teachers, having sex with younger girls who are viewed as uninfected. [Int: Go through points 1 and 2 above]
- 41) [Int: Ask MOE headquarters only] Those in higher education are more vulnerable and the potential impact increased because “... students of technical and vocational schools, colleges and universities are more sexually active, usually residing far from their families and in boarding hostels; and these establishments are often located in larger urban areas where the risk of infection is greater.” [Int: Go through points 1 and 2 above]
- 42) [Int: Ask all] “One of the problems is that most countries are experiencing an HIV rather than an AIDS epidemic, and this is not visible”. [Int: Go through points 1 and 2 above]

Coping Strategies

[Int: Ask ALL] A number of suggested coping strategies have been recommended. Look at the following cards. Assuming that the amount of resources to implement these activities did not exceed current spending on education, (a) which of these coping strategies do you find acceptable and which do you find unacceptable? [Int: Once these have been put into the two piles, ask the following] Now, (b) for those that you find acceptable, rank in order of importance. [Int: Once this has been done, ask the following.] 43) To what extent do you believe Swaziland has effectively dealt with these coping strategies, and what room is there for improving the response?

Card 1: Provide access by teachers, other ministry personnel, and older students to information and counselling concerning techniques to prevent HIV transmission, and possibly to condoms.

- Card 2: Locate in-service teacher training closer to schools where teachers are stationed, to limit long absences from home.
- Card 3: Implement strict and enforced prohibitions regarding the sexual exploitation of students by teachers.
- Card 4: Introduce special efforts to keep AIDS-affected children in school, through fee reductions, scholarships, and other support.
- Card 5: Focus on reaching those not in school and facing particular problems with education.
- Card 6: Focus specifically on orphans to ensure their educational, psychological and social needs are met.
- Card 7: Expand child-care programmes which permit older siblings to continue in school rather than care for younger children.
- Card 8: Provide for flexible school schedules to permit children to attend when they are not working in the home and in productive labour.
- Card 9: Involve the Parent Committees in decisions affecting the AIDS pandemic.
- Card 10: Training teachers and counsellors in the non-discriminatory treatment and psychological needs of AIDS-affected children
- Card 11: Introducing regulatory and legal instruments, embracing inheritance laws which make it possible for widows and orphans to inherit property, laws prohibiting early marriage, and ministry regulations concerning non-discrimination towards AIDS-affected children.
- Card 12: Documentation on the HIV/AIDS pandemic suggest that early childhood education can function as a protection mechanism for very young children.
- Card 13: How can students who drop out of primary school gain an education through non-formal channels? What about secondary school students? Can any system actually handle the likely dramatic increase in drop-outs arising from AIDS which might, for example, increase the number of children needing such an education by 500-600%?

Organisation-Specific Questions
--

- 44) [Int: Ask only to those who have direct experience with anti-AIDS clubs] Please tell us a little about the background to the anti-AIDS clubs. Whose idea was it? How were they started? What kind of training was offered?

- 44a) [Int: Ask only to those who have direct experience with anti-AIDS clubs] We have heard that there were some problems with the start-up of the anti-AIDS clubs. In some cases, the selection procedure for the teachers to go for training did not appear to give the teachers themselves much choice, and therefore that some of these teachers were not interested. Some were reported to be uncomfortable discussing sex with students. Is this your experience, or did the system have fewer problems? Whatever the case, how many of the anti-AIDS clubs would you estimate are still functioning effectively in schools and why?
- 45) [Int: Ask MOE headquarters and field only] The Ministry of Education has noted that the education sector suffers from certain problems, in particular high repetition rates and drop-out rates, as well as a lack of money for recurrent expenditures other than teacher salaries. How will the problems arising from the AIDS pandemic undermine the Ministry's attempts to overcome these problems?
- 46) [Int: Ask MOE headquarters and field only] With regard to pre-service training of teachers, what is being done about HIV/AIDS education? What is there with particular regard to teachers understanding how they might be at risk? [Int: Get copies of teacher training materials.]
- 47) [Int: Ask MOE headquarters and field only] With regard to in-service training of teachers, what is being done about HIV/AIDS education? What is there with particular regard to teachers understanding how they might be at risk? What role could the Teacher Innovation and Development Centres play? [Int: Get copies of teacher training materials.]
- 48) [Int: Ask MOE headquarters only] AIDS is likely to undermine education quality. Considering the shift to continuous assessment, what types of indicators would be best to measure the impact of AIDS on education quality?
- 49) [Int: Ask MOE headquarters and field only] To improve access to education by those who have dropped out, some have suggested that teachers teach out-of-school youth after hours, whether in the afternoon or evening. How would the Ministry/your school respond to this? How viable would this be? We understand that some teachers don't teach many classes. What difference would this make?
- 50) [Int: Ask MOE headquarters and field only] Consider a school with under 10 teachers. One dies of AIDS and cannot be replaced. What would be the impact on this school? How would the school try and cope, if at all? What if a second teacher dies of AIDS and cannot be replaced?
- 51) [Int: Ask MOE headquarters only] How could STDs in school students be quickly identified, so that the student can get prompt youth-friendly treatment and counselling?

- 52) [Int: Ask MOE headquarters and NGOs only] One possible mechanism to help reduce the impact of AIDS on young people is to introduce sex education at various levels in the formal schooling system, and through informal education channels (e.g., distance education out of the Emlalati Development Centre).
- 52a) What has been done to date? What is lacking? What are the opportunities in this regard? [Int: Get copies of relevant syllabi and other materials.]
- 52b) [Int: Ask MOE headquarters and NGOs only] What about wider in-school health education. What has been done to date? What is lacking? What are the opportunities in this regard? [Int: Get copies of relevant syllabi and other materials.]
- 53) [Int: Ask MOE headquarters and field and NGOs only] What is the role of School Health Teams? How effective are their activities in terms of the HIV/AIDS pandemic? What opportunities, if any, would there be to improve this?
- 54) [Int: Ask MOE headquarters and field and NGOs only] More and more attention is being devoted to peer education, that is, young people helping to educate other young people to prevent the spread of HIV/AIDS. To what extent is peer education being carried out in Swaziland? How is it viewed by the Ministry of Education in general, and by rural and urban school headteachers and teachers?
- 55) [Int: Ask MOE headquarters field and NGOs only] What role, if any, do guidance teachers play with regard to the HIV/AIDS pandemic? What types of training have they had in this regard? What role could they play? What types of training would be best?
- 56) [Int: Ask MOE headquarters and field and NGOs only] What role, if any, do Parent Committees play with regard to the HIV/AIDS pandemic? What role could they play? [Int: Probe extensively for complications arising from negative attitudes about children learning about sex, and the issue of certain topics being taboo. Include the community role of churches, chiefs, other traditional leaders, etc.]
- 57) [Int: Ask MOE, SHAPE, SNAP, and FLAS] What role, if any, does the Regional Education Officer play with regard to the HIV/AIDS pandemic? What types of training have they had in this regard? What role could they play? What types of training would be best?
- 58) [Int: Ask MOE, SHAPE, SNAP, and FLAS] According to a recent publication by the Ministry of Education, as an extension of the on-going secondary/high school AIDS programme, the country implemented a primary

school component. This programme was introduced as a pilot project that is to be extended throughout Swaziland. What has been your involvement, if any, in the secondary and primary programmes? What have been the successes and limitations of the programmes?

- 59) [Int: Ask MOE, SHAPE, SNAP, and FLAS] According to the most recent development plan, the aim of Government in social security and welfare is to 'provide social welfare services to children, the chronically ill, the elderly, war pensioners, the physically and mentally disabled and the destitute'. How will the AIDS pandemic affect Government ability to do so?

Closing Question [Ask ALL]

- 60) Do you have any closing comments?

**FOCUS GROUP DISCUSSION INSTRUMENT
PRIMARY SCHOOL CHILDREN**

Sectoral Assessment of the Impact of HIV/AIDS on Education
Prepared and Administered by JTK Associates for The Ministry of Education and
UNICEF/Swaziland

1	Region	_____ -1 Hhohho _____ -3 Lubombo _____ -2 Manzini _____ -4 Shiselweni
2	Name of Town And/or Cheiftancy	
3	Rural or Urban Area	_____ -1 Rural _____ -2 Urban
4	Type of Respondents	_____ -1 Children : Grade 4 and Grade 5 _____ -2 Children : Grade 6 and Grade 7
5	FGD Leader	
6	FGD Translator	
7	Date and Time	Date: Start Time: _____ Finish Time: _____ Total Time _____
8	Person and Date NUD*IST Entered	
9	Person and Date NUD*IST Checked	

FOCUS GROUP WITH THE PRIMARY SCHOOL CHILDREN.

Group 1 - Grade 4's & 5's

Group 2 - Grade 6's & 7's

(THE GROUP'S ARE ALL MIXED i.e BOYS AND GIRLS TOGETHER.)

Question 10:

	<i>Age</i>	<i>Where they are from</i>	<i>What they would like to do</i>
	1.		
	2.		
	3.		
	4.		
	5.		
	6.		
	7.		
	8.		
	9.		
	10.		
	11.		
	12.		
	13.		
	14.		
	15.		
	16.		
	17.		
	18.		
	19.		

20.		
-----	--	--

Question 11.

- A. Ask them what they like about the way their Parents / Guardian or Main Care Giver is bringing them up.
How does this affect them at school?

[INT: It may be their Grandparents or a Relative or even a Family Friend - Probe!]

- B. What are the things that some parents / Care Giver's do that you do not like or are unhappy with?
Ideally how would you like things to be?

Question 12.

[INT: Introduce the idea of life skills that are needed to move from childhood to adulthood i.e Adolescence]

- A. What do they know about growing up and body changes?
Who did they learn this from?
What else would they like to know about growing up and body changes?
Who would they like to learn this from?

Question 13.

- A. What do you know about **Pregnancy**?
- I. Who did you learn about this from?
 - II. What facts about pregnancy would you like to know?
 - III. Who would you like to learn this from? Why?
- B. What do you know about **Childbirth**?
- I. Who did you learn about this from?
 - II. What facts about childbirth would you like to know?
 - III. Who would you like to learn this from? Why?
- C. What do you know about **Contraception**?
- I. Who did you learn about this from?
 - II. What facts about contraceptives would you like to know?
 - III. Who would you like to learn this from? Why?
- D. What do you know about **STD's including HIV/AIDS**?
- I. Who did you learn about this from?
 - II. What facts about STD's: HIV/AIDS would you like to know?
 - III. Who would you like to learn this from? Why?

Question 14.

A. How does your relationship with:

- I. Peers (friends),
- II. Family Members and
- III. Teachers

Help you in your studies?

[INT: Find out how each of these relationships help the children grasp the whole concept of Education]

Question 15.

A. In light of our discussion, what other things concerning the topics we have just discussed, would you like to know or discuss with us?

[INT: Let them tell you a few stories about relationships they may have had with one another i.e The whole Boyfriend/Girlfriend thing and other stories they may have.]

Sum up the main points and thank them for their co-operation and contributions.

16	Level of Co-operation	_____ -1 High _____ -2 Medium _____ -3 Low
----	-----------------------	--

FOCUS GROUP DISCUSSION INSTRUMENT ORPHANS AND DROP-OUTS

Question 1:

- ❖ Age and Sex i.e Male or Female

Question 2:

- ❖ Tell us a little about your home situation, before you came here.

[Int: Probe, i.e they must tell you what sort of home environment they lived in and why they ended up where they are today.]

Question 3:

1. Have you ever been to school?
2. If yes, why did you drop-out and at what grade?
3. If never been, why not?
4. Would you like to go back to school? Why?
5. What kind of assistance would you need to go back to school?

Question 4:

- ❖ Tell us a little about what you know about HIV/AIDS, if you have heard of it.

[Int: Probe for their knowledge on what it is, how is it transmitted, have you heard of anyone who has died of it, who is at risk of catching it, etc.]

**Focus Group Discussion Instrument/
Local Level Key Informant Interview Instrument**
Parents/Guardians With School-Age Children
Teachers and Anti-AIDS Clubs

Sectoral Assessment of the Impact of HIV/AIDS on Education

Prepared and Administered by JTK Associates for
the Ministry of Education and UNICEF/Swaziland

1	Region	_____ - 1 Hhohho _____ - 2 Manzini _____ - 3 Lubombo _____ - 4 Shiselweni
2	Name of Town and/or Chieftancy	
3	Rural or Urban Area	_____ - 1 rural _____ - 2 urban _____ - 3 peri urban
4	Type of Respondents	_____ - 1 females aged 31+: parents/guardians with some/all children in school _____ - 2 females aged 31+: parents/guardians with some/all children dropped out of school _____ - 3 females aged 31+: parents/guardians with some/all children never in school _____ - 4 males aged 31+: parents/guardians with some/all children in school _____ - 5 males aged 31+: parents/guardians with some/all children dropped out of school _____ - 6 males aged 31+: parents/guardians with some/all children never in school _____ - 7 mothers aged 16-21 (married or unmarried) _____ - 8 mothers aged 22-30 (married or unmarried) _____ - 9 fathers aged 22-30 (married or unmarried) _____ - 10 teacher (regular teachers) _____ - 11 temporary teacher _____ - 12 anti-AIDS clubs _____ 13 other
5	FGD Leader	
6	FGD Translator	

7	Date and Time	Date: Start Time: _____ Finish Time: _____ Total Time:
8	Person and Date of Note Rewriting	
9	Person and Date of Final Check	
10	Person and Date NUD*IST Entered	
11	Person and Date NUD*IST Checked	

My name is _____ and I work for JTK Associates in Mbabane, which is a Swazi research firm that has been contracted by the United Nations, on behalf of the Ministry of Education, to discuss the challenges facing the education sector. Government is interested in better understanding the challenges that are facing Swazi households in educating their children with the growing HIV/AIDS pandemic.

Obviously, we will be touching on sensitive topics today, and recognise that some of the issues might be awkward. However, in light of the King declaring HIV/AIDS a ‘national disaster’, all of us as Swazis must do all that we can to help stop the spread of the disease and to help better care for those who are sick. Therefore, we would ask to hear your considered and open comments so that we can accurately reflect to Government what the situation is like.

Please note this is NOT a test, for example, of your knowledge of HIV/AIDS. Rather, it is aimed at trying to understand your views and recommendations about the epidemic, and what you think can be done by the education sector.

Everything that we are discussing today is confidential, and no names will be linked to comments made by any respondents in the report. We would like to record this information and request your permission to do so. Thank you for your co-operation.

Section 1
Introductory Questions [Ask ALL except teachers]

12) As a first question, we would like to know a few things about you. Please tell us you age, how long you have lived in this area, how many children you have aged 6-15 and aged underfive, whether you are a guardian for any children aged 6-15, whether you have any children in primary or secondary school aged 18 and older, etc.

AGE	LENGTH	CHILDREN (6 – 15)	CHILDREN PRIM./ SEC SCHOOL 18+	GUARDIAN/ PARENTS (6-15)	PARENT (6 15)

- 13) Please describe the major characteristics of the homesteads you live in. [Int: is a senior male present most of the time, or is the homestead principally female-headed or child-headed, is the homestead headed by someone in a polygamous or monogamous situation, how many members does the homestead have, how many households comprise the homestead, etc.]

Sr. Male Present	Female Headed	Child Headed	Polygamous	Monogamous	# in Homestead	# Households

- 14) Are some household members in formal employment? If yes, please indicate who and what their employment situation is. [Int: Probe for situations where few household members, if any, are in employment, and whether these are the same households where children have dropped out or have never attended school.]

Relation	Formal emp (yes)	Formal emp (no)

- 15) What is the educational status of senior homestead and household members? [Int: Probe for situations where senior members have low levels of education. Find out if these are the same households where children have dropped out or have never attended school.]

Educational Status of Senior Household and Homestead Members

Relation	None	Some Primary Completed Primary	Some Secondary	Completed Secondary	Tertiary

16) [Int: For those with children aged 6-15] In your situation you have at least one child of school-going age in school

[For those with at least one child in school] How old are your children and what grades are they in?

Grade	Age	Sup: Correct Age or Overage

If in school, find out a bit about the educational history of the child, such as performance, school transfers, etc.

17a) If dropped out from school please tell us at what grade this happened and how it came about

17b) If never in school find out what caused them never to go to school

[For both (a) and (b) Try to establish any relationships with female-headed households, poverty, and looking after a sick relative and dropping-out/never in school.]

Section 2

HIV/AIDS Knowledge and Attitudes Questions

[For groups, including those in anti-AIDS clubs, ask as group]

[For teachers, ask as individuals ONLY.]

18) Tell us a little about what you know about HIV/AIDS, if you have heard of it. For example, *what is it, *how are the various ways that it is transmitted, *has anyone in this area that you know died from it, *who is at risk of catching it, etc.
 [Int: Get a general sense of levels of basic knowledge of HIV/AIDS.]

[Int: for **groups**, go to questions 19,22,23, and 24, then skip to 29_. For **individuals**, go to questions 19,21,22,23,24,25(a,b and c)_ and 27_, then skip to _29_..for **Anti-Aids Clubs**, go to questions 19,20,22,23,24,25,26(a-P),27(a-f) and 28 then 29

- 19) [Int: For individuals and groups] Please listen to the following statements and indicate whether you believe that the statements are true or false: [for groups indicate in the cells the number that answer true false or do not know]

Statement	True	False	DK
Mosquitoes <u>cannot</u> spread HIV/AIDS			
A person can get HIV/AIDS by shaking hands with someone who has the disease			
A person <u>cannot</u> get HIV/AIDS by sharing cups, plates or food with someone who has the disease			
HIV/AIDS can be spread by someone with the virus sneezing or coughing on other people			
AIDS can be cured by some traditional doctors			
Someone with the AIDS disease can look healthy			
Condoms make the spread of AIDS <u>more</u> likely when couples are having sex			
Having a sexually transmitted disease such as syphilis or gonorrhoea means that the AIDS disease is <u>not</u> as powerful, and is therefore less likely to spread			
Some sexually active people even here in Swaziland cannot catch HIV/AIDS			
If a pregnant woman has the disease that causes AIDS, the child will also always develop AIDS			
If a person has unprotected sex with someone who has the AIDS disease, they will certainly get the disease and then develop AIDS			
Only foreigners have HIV/AIDS			

- 20) [Int: for groups] I would like to read to you a few ‘attitudinal statements’ and would like to know what you think of each comment. Do you agree or disagree, why do you agree or disagree, how strongly do you agree or disagree or, overall, are you uncertain? Please consider the following: [Int: record their answers, but also the debate around the responses]

Statement	SA	A	D	SD	U
A) HIV/AIDS is really only a problem in towns, especially for foreigners					
B) I do not think that there are any people in this area that have the AIDS disease					
C) Although there is much talk about HIV/AIDS, the problem really isn't so severe here in Swaziland like it is elsewhere in the region					
D) HIV/AIDS is just another sexual disease which, like other sexual diseases, should be taken to the traditional doctor for treatment					
E) I would still be friends with someone, even if I learned that they had the AIDS disease					
F) If someone is found to have the AIDS disease, they should still be allowed to live and work in their community					
G) AIDS patients taken care of at home would become a threat to other family members					
H) Households which are taking care of someone with AIDS at home would be avoided by other households					
I) A person who finds out that they have the AIDS disease should give up on life, as they have no future					
J) We are mostly confused about AIDS.					
K)..Women seem to be more likely to understand the seriousness of HIV/AIDS than men					
L) Unmarried women are increasingly refusing sex to men whom they know have other sexual partners					
M) It is becoming more and more acceptable that young Swazis use condoms					

- 21) [Int: for individuals] I would like to read to you a few ‘attitudinal statements’ and would like to know what you think of each comment. Do you agree or disagree, why do you agree or disagree, how strongly do you agree or disagree or, overall, are you uncertain? Please consider the following:

Statement	SA	A	D	SD	U
A) HIV/AIDS is really only a problem in towns, especially for foreigners.					
B) I do not think that there are any people in this area that have the AIDS disease					
C) Although there is much talk about HIV/AIDS, the problem really isn’t so severe here in Swaziland like it is elsewhere in the region					
D) HIV/AIDS is just another sexual disease which, like other sexual diseases, should be taken to the traditional doctor for treatment					
E) I would still be friends with someone, even if I learned that they had the AIDS disease					
F) If someone is found to have the AIDS virus, they should still be allowed to live and work in their community					
G) AIDS patients taken care of at home would become a threat to other family members					
H) Households which are taking care of someone with AIDS at home would be avoided by other households					
I) A person who finds out that they have the AIDS virus should give up on life, as they have no future					
J) We are mostly confused about AIDS.					
K) Women seem to be more likely to understand the seriousness of HIV/AIDS than men					
L) Unmarried women are increasingly refusing sex to men whom they know have other sexual partners.					
M) It is becoming more and more acceptable that young Swazis use condoms					

- 22) [Ask groups and teachers] Overall, in order to reach the youth effectively with HIV/AIDS messages, would it be better to focus on their fears about catching the disease, or would it be better to focus on how they can take control of their lives to prevent themselves from getting the disease. In other words, is a negative approach best to prevent the spread of the problem, or would

a positive approach be better. Please consider your answer in the context of how you think Swazi youth best learn.

- 23) [Ask groups and teachers] Are any of you personally aware of anyone who had died of AIDS?
- 24) [Ask groups and teachers] Have you personally lost one or more relative or friend who might have died of an HIV/AIDS-related illness?

Section 3

Teacher and Anti-AIDS Clubs Questions

[Ask teachers and anti-AIDS Clubs ONLY]

- 25) We first need to understand what is going on at this school, if anything, with regard to sex education, HIV/AIDS, sexual counselling, peer counselling, and the sexual problems and opportunities facing students here. Please consider the following:

Ask Teachers Only

- 25a) Int: Ask teachers only] Has there ever been an anti-AIDS Club at this school? If yes, and it is no longer existing, what happened to it? [Int: Get details]

If yes, and it currently exists, what activities does it carry out, if any? How do you feel about what it is doing? Are they doing things that you think are problems for students, or do they do things that you believe are more positive?

Overall, how effective or ineffective would you say the clubs have been in improving students' understanding of, and ability to respond to, HIV/AIDS? [Int: Probe in detail.]

- 25b) [Int: Ask teachers only] As a teacher yourself, can you give us an idea about the extent of the problem of teachers and students engaging in sexual relations? If it is a problem, how do these things start? How pervasive are these problems, only a few teachers around the country, many of the teachers, male teachers only or also female teachers? What about teachers and sexual relations with young people who have dropped-out of school?

25c) [Int: Ask teachers only] Did you receive any training at the Teachers Training College about HIV/AIDS. If yes, please describe what this consisted of and who was involved in your training in this regard. Also, what did these trainers expect you to do with what you had learned? Did this occur, or were things different? If yes, what happened? If no, why was it different?

Ask Anti-AIDS Clubs Only

- 26) [If active anti-AIDS club, ask club members the following; do not ask teachers] Do the teachers, including the headteacher, know and understand your activities, or are they largely unaware? Do you get any resources, financial or in kind, from the school or from the community? What about from outside the community, such as non-governmental organisations?
- 26a) [If active anti-AIDS club, ask club members the following; do not ask teachers] Do you sometimes or always lack important resources, including condoms? If so, please describe. Do some of these resource shortages result from interference from those who do not like what the anti-AIDS clubs do?
- 26b) [If active anti-AIDS club, ask club members the following; do not ask teachers] How do teachers and the headteacher view you and your activities? Do they passively support you, do they actively support you, do they interfere with your activities and try and stop you from doing certain things?
- 26c) [If active anti-AIDS club, ask club members the following; do not ask teachers] Give us a detailed description of what your club has done since it started up. [Int: Get details, including a list of activities over the past year. Following this introduction, find out about the following.]
- 26d) [If active anti-AIDS club, ask club members the following; do not ask teachers] How do adults in the community view you and your activities? Do they passively support you, do they actively support you, do they interfere with your activities and try and stop you from doing certain things? What about church leaders?
- 26e) [If active anti-AIDS club, ask club members the following; do not ask teachers] What about your fellow students. Do they listen to you? What about differences across older and younger students, male and female students, more popular or less popular students, etc.
- 26f) [If active anti-AIDS club, ask club members the following; do not ask teachers] Think about the students you have discussed HIV/AIDS and other sexual issues with. What would you say their attitudes are about having many sexual partners? [Int: What would boys and girls think would be 'many'

partners? Is this something that boys/girls feel is a measure of pride, do they think that it is associated with risk, do they feel that the need to have many partners just for fun? Overall, do you think that there are changes underway at your school with regard to the number of sexual partners boys and girls have? What about those students who have a single partner at one time, but tend to have many partners over the course of a year, as they break up with previous partners. Do they feel that they are at risk, or do they believe that there are not at risk because they only have one partner at a time?]

- 26g) [If active anti-AIDS club, ask club members the following; do not ask teachers] What would you consider to be the main risk behaviours students still face in this school? Has this changed over time? Are things getting better or worse? What are the reasons why these risk behaviours still exist? [Int: Probe for particularly high risk behaviours, specifically non-use or inconsistent use of condoms, dry sex, and many sexual partners]
- 26h) [If active anti-AIDS club, ask club members the following; do not ask teachers] Overall, what would you consider to be the main misunderstandings about HIV/AIDS among students at this school? [Int: Probe for misunderstandings about risk behaviours, but also about misunderstandings about how HIV is felt to be spread even though it is untrue.] What are the implications of these misunderstandings? Have these misunderstandings lessened or increased over time?
- 26i) [If active anti-AIDS club, ask club members the following; do not ask teachers] Have any or all of you been trained? If no, how do you know what you know so that you can counsel and advise and teach? [Int: probe for non-formal channels of learning, and how members have learned to 'cope' with a lack of training. If yes, get details of training, and what they have done with this knowledge.]
- 26j) [If active anti-AIDS club, ask club members the following; do not ask teachers] Overall, what kinds of training would most be needed by members of your club?
- 26k) [If active anti-AIDS club, ask club members the following; do not ask teachers] Overall, how would you

describe the level of support you have received from school authorities?
[Int: Have they supported your activities, ignored them, or undermined them? What about teachers? Is there a Parents Committee functioning at this school? If yes, what role, if any, has it played in supporting or undermining your activities? What about the local church? What role, if any, has it played in supporting or undermining your activities?]

- 26l) [If active anti-AIDS club, ask club members the following; do not ask teachers] Do any anti-AIDS clubs that you are aware of have members who have announced their HIV positive status? If yes, what impact has this had for their clubs and yours as well?

26m) [If active anti-AIDS club, ask club members the following; do not ask teachers] Have you been involved, in any way, with young people who have dropped out of school? If yes, please describe. If no, why not?

Do you think that those who have dropped out of school more likely to have taken sexual risks? If yes, why would this be? If no, why not? [Int: Probe for the link between education and risk.]

26n) [If active anti-AIDS club, ask club members the following; do not ask teachers] Have you been involved, in any way, with young people who never managed to attend school? If yes, please describe? If no, why not?

Do you think that those who have never attended school more likely to have taken sexual risks? If yes, why would this be? If no, why not? [Int: Probe for the link between education and risk.]

26o) [If active anti-AIDS club, ask club members the following; do not ask teachers] What about support for those who are orphans in the community?

Ask Teachers and Anti-AIDS Clubs

27) What is the nature of sex education, if any, that is being taught at this school? [Int: Is it based on existing curriculum? Does it cover only biological issues, or social and cultural issues surrounding sex? Does it cover sexually-transmitted diseases? What about HIV/AIDS? At what ages does such sex education occur (which grades)?]

27a) [Int: Ask teachers and anti-AIDS clubs] Are students at this school informed about condoms? [Int: What about boys versus girls, younger students and older students? Are condoms available, even if informally, to young people attending this school (including made available at the school itself)?]

27b) [Int: Ask teacheres and anti-AIDS clubs] Are students at this school exposed to ideas about abstinence? [Int: If yes, how is the message transmitted? Is it done in a way that students would actually listen to, or is it considered to be 'uncool'? What are the teachers saying and why about abstinence? Is it for religious reasons, or does the reasoning go beyond religion? What about abstinence in

situations where children are at a disadvantage (that is, grown-ups that they know, grown-ups that they do not know, someone in a position of power, someone who can offer them a way out of poverty in return for sex, older boys and younger girls, etc.)?]

- 27c) [Int: Ask teachers and anti-AIDS clubs] What kinds of counselling, if any, are available to students here with regard to sexual issues? Is there a teacher whom they tend to discuss sexual issues with? What about peer educators? What about an anti-AIDS club? What about someone in the community?

If any or all of these are available, do they actually *do* such counselling in any significant way? In other words, even if the service is available, is anyone using it? How many?

- 27d) [Int: Ask teachers and anti-AIDS clubs] When the anti-AIDS clubs were first being formed, headteachers were asked to provide two teachers from each school who would be trained by the NGO SHAPE. These teachers were then supposed to set up anti-AIDS clubs in their respective schools. We understand that, in some cases, the selection procedure for the teachers to go for training did not give the teachers themselves much choice, and therefore that some of these teachers were not interested. Indeed, these as well as other teachers were also uncomfortable about taking about sex with students. Did anything like this happen at your school, or did things go smoothly. [If the problems arose, get a clear idea of what happened. If things went smoothly, relate this to the current status of the anti-AIDS clubs, whether they are functioning or not.]

- 27e) [Int: Ask teachers and anti-AIDS clubs] Your anti-AIDS club has been operating for some time. Why has your club survived where others have not? What has been the role of students in this club surviving while others did not? [Int: Check their comments against their answer to d and e, and probe for the relationship between how the club was started, who was involved, and their responses to this question.]

Ask Only Those Providing Counselling Services

[Int: ONLY for those providing counselling services, formal or informal, including the anti-AIDS clubs]

28) What kinds of problems and issues do these students bring to counselling? [Int :
What kinds of problems do they *avoid* bringing to counselling? What kinds of advice do you give them? What about advice for the following particular situations: sexual relations with an older relative because they cannot say no; sexual relations with an older non-relative for favours; homosexual situations; how to use condoms; how to avoid STDs; understanding HIV/AIDS and how it is transmitted and how it can be avoided; sexual relations with a teacher; how to avoid pregnancy; how to show that you love someone without sex; how to avoid being pressured into sex to show love; etc.]

Educational Impact Questions

[Ask ALL]

29) Recent publications on HIV/AIDS here and in South Africa raised a number of concerns about the potential impact of HIV/AIDS on the education sector. We would like to share these stated concerns with you and ask you two questions:

Issue 1 to what extent do you feel that the stated problem is a problem in general and here in this community;

Issue 2 if it is a problem or *will become* a problem, what could be done about it and by whom, and what role would the education sector play. Keep in mind the following possible actors: mothers, fathers, gogos, headteachers, teachers, Anti-AIDS clubs, non-governmental organisations, traditional doctors, peer educators (or various types), health workers, new curriculum on sex and HIV/AIDS, etc.

29a) Concern: The King has declared AIDS a 'national disaster'. However, young people are still confused about how HIV/AIDS is spread and, equally importantly, how it is *not* spread. Therefore, they take risks without knowing it. [Int: refer to points 1 and 2 above]

29b) Concern: Because school-children will spend more and more time taking care of those with AIDS, they will miss school and get lower grades. They will therefore have to repeat grades more and more. [Int: refer to points 1 and 2 above]

29c) Concern: Some children are needed at home to look after a relative who is becoming increasingly sick with HIV/AIDS. Therefore, the child has to drop out of school. [Int: refer to points 1 and 2 above]

29d) Concern: As households become impoverished, they will no longer be able to send their youngest children to school. The children will therefore be denied an education, and may therefore never find work. [Int: refer to points 1 and 2 above]

29e) Concern: Some children are becoming orphans because their parents are dying of AIDS. Other family members are taking care of them, but this is becoming more and more difficult. Therefore, they cannot afford to educate these children. [Int: refer to points 1 and 2 above]

29f) Concern: Some children are becoming orphans and some homesteads can no longer take care of them. There are, therefore, more and more 'child

headed households/ homesteads'. They must drop out of school because of their responsibilities at home. [Int: refer to points 1 and 2 above]

29g) Concern: Young students, especially females, maybe required to have sex with older people, some do not have a choice, as the decision is outside of their control. [Int: refer to points 1 and 2 above]

29h) Concern: Some female students enter into sexual relationships with their teachers, making them vulnerable to HIV/AIDS. [Int: refer to points 1 and 2 above]

29i) Concern: Many men, especially those who are older, deny that HIV/AIDS is a new disease, and therefore believe that it can be treated by traditional doctors like other sexual diseases. Because they are decision-makers, they cannot be denied sex if they want it. The disease spreads, parents and guardians die, and children take on more and more home responsibilities. [Int: refer to points 1 and 2 above]

29j) Concern: Teachers will increasingly die of AIDS. As a result, the number of trained teachers will be reduced, and education quality will decline. [Int: refer to points 1 and 2 above]

30) [Ask teachers and anti-AIDS clubs only] Concerning all of the concerns we just discussed, who do you think would be best placed to act as 'change agents' to change the behaviours of adults and young people so that the HIV/AIDS pandemic is reduced? Specifically, who would be the main 'change agents' among the following, and how would they be so: mothers, fathers, gogos, headteachers, teachers, Anti-AIDS clubs, non-governmental organisations, traditional doctors, peer educators (or various types), health workers, new curriculum on sex and HIV/AIDS, etc.

Closing Question

[Ask ALL]

31) Do you have any closing comments?

Level of Co-operation	- 1 High	- 2 Medium	- 3 Low
-----------------------	----------	------------	---------

Secondary School Questionnaire

Sectoral Assessment - **CONFIDENTIAL**

Prepared and Administered by JTK Associates for
the Ministry of Education and UNICEF/Swaziland

1	Region	_____ - 1 Hhohho _____ - 2 Manzini	_____ - 3 Lubombo _____ - 4 Shiselweni
2	Name of Town and/or Chieftancy where school is located		
3	Rural or Urban Area	_____ - 1 rural _____ - 2 urban	
	Name of School		
	Test Administrator		
	Test Assistant		
	Date and Time	Date: _____ Start Time: _____ Finish Time: _____ Total Time: _____	
	Person and Date of Note Rewriting		
	Person and Date of Final Check		
	Person and Date SPSS Entered		
	Person and Date SPSS Checked		

My name is _____ and I work for JTK Associates in Mbabane. JTK Associates is a Swazi research firm that has been contracted by the United Nations, on behalf of the Ministry of Education, to discuss the challenges facing the education sector. Specifically, the United Nations and Government are interested in better understanding the challenges that are facing Swazi households in educating their children with the growing HIV/AIDS pandemic.

Obviously, we will be touching on sensitive topics today, and recognise that some of the issues might be awkward. However, in light of the King declaring HIV/AIDS a 'national disaster', all of us as Swazis must do all that we can to help stop the spread of the disease, and to help better care for those who are sick. Therefore, we would ask to hear your considered and open comments so that we can accurately reflect to Government what the situation is like.

Everything that we are discussing today is confidential, and no names will be linked to comments made by any respondents in the report. Thank you.

Section 1

Sex of Student: ____ - 1 male ____ - 2 female

Age of Student _____

Section 2

We will begin by asking you a few questions about HIV and AIDS. For each of the following questions, you can only tick one response from among the responses given.

HIV is:

- 2a) a type of AIDS
- 2b) the virus that leads to AIDS
- 2c) a virus that only women get
- 2d) another name for TB

HIV is spread by:

- 1a) coughing
- 1b) bewitchment
- 1c) sex and contaminated blood
- 1d) saliva

AIDS is:

- i) AIDS is a type of cancer
- ii) AIDS is when the body's defence system has been destroyed
- iii) AIDS is a disease created by condoms
- iv) A made-up disease that really doesn't exist

Section 3

Next, we would like you to look at the following statements and indicate whether you believe that the statement is true or untrue. If you do not know, that's okay, just circle 'do not know'.

5) Mosquitoes cannot spread HIV/AIDS.

- a) True
- b) False
- c) Do Not Know

6) A person can get HIV/AIDS by shaking hands with someone who has the virus.

- a) True

- b) False
- c) Do Not Know

- 7) A person cannot get HIV/AIDS by sharing cups, plates or food with someone who has the virus.
- a) True
 - b) False
 - c) Do Not Know
- 8) HIV/AIDS can be spread by someone with the virus sneezing or coughing on other people.
- a) True
 - b) False
 - c) Do Not Know
- 9) AIDS can be cured by some traditional healers.
- a) True
 - b) False
 - c) Do Not Know
- 10) Someone who has the HIV virus that causes AIDS can look healthy.
- a) True
 - b) False
 - c) Do Not Know
- 11) Condoms make the spread of HIV/AIDS more likely when couples are having sex.
- a) True
 - b) False
 - c) Do Not Know
- 12) Having a sexually transmitted disease such as syphilis or gonorrhoea means that the AIDS virus is not as powerful, and is therefore less likely to spread.
- a) True
 - b) False
 - c) Do Not Know
- 13) Some sexually active people even here in Swaziland cannot catch HIV/AIDS.
- a) True
 - b) False
 - c) Do Not Know
- 14) If a pregnant woman has the virus that causes AIDS, the child will also always develop AIDS.
- a) True
 - b) False
 - c) Do Not Know

- 15) If a person has unprotected sex with someone who has the AIDS virus, they will certainly get the virus and then develop AIDS.
- a) True
 - b) False
 - c) Do Not Know

Section 4

In this section, we will be giving you a statement and asking you whether you agree or disagree with the statement. If, after much thought, you do not really know whether you agree or disagree, just tick 'do not know'. However, as much as possible, avoid ticking 'do not know'.

- 16) "HIV/AIDS is really only a problem in the towns, especially for foreigners."
- a) True
 - b) False
 - c) Do Not Know
- 17) "I do not think that there are any people in this area that have the AIDS virus."
- a) True
 - b) False
 - c) Do Not Know
- 18) "HIV/AIDS only affects people who are older, mostly those our parents age."
- a) True
 - b) False
 - c) Do Not Know
- 19) "I would still be friends with someone, even if I learned that they had the AIDS virus."
- a) True
 - b) False
 - c) Do Not Know
- 21) "Households which are taking care of someone with AIDS at home would be avoided by other households."
- a) True
 - b) False
 - c) Do Not Know
- 22) "A person who finds out that they have the AIDS virus should give up on life, as they have no future."
- a) True

- b) False
- c) Do Not Know

23) “We are mostly confused about AIDS.”

- a) True
- b) False
- c) Do Not Know

24) “It is becoming more and more okay to Swazi youth that condoms can be used.”

- a) True
- b) False
- c) Do Not Know

25) “Girls who carry condoms are not respectable.”

- a) True
- b) False
- c) Do Not Know

26) “If a girl wants to use a condom but the boy does not, the boy’s decision should rule.”

- a) True
- b) False
- c) Do Not Know

27) “Even if both sexual partners do not have HIV, it is still possible that they can give one another the virus if they have unprotected sex.”

- a) True
- b) False
- c) Do Not Know

28) “Condoms are not good because it is not ‘flesh to flesh’.

- a) True
- b) False
- c) Do Not Know

Section 5 (Small Group Discussion)

[Int: Once the questionnaires have been filled out, collect them. Then divide the class into boys and girls, and the girls go off with the female interviewer and the boys with the male interviewer. Once this is done, move the desks and other things out of the way and get into a circle. Once everyone is comfortable, begin an open discussion based on the following.

Ask them their first name and have them tell us a little about themselves. Ask them what subject they like best, and anything else that would make everyone more comfortable.

29) Now, remember that you have been selected from many Swazis to help with this important survey. On behalf of people your age, we need your advice about how to handle some very sensitive but important issues.

- To remain healthy and not get infected with HIV needs education and information so that young people can make good personal decisions. What are the best ways to do this?
- Which ways do not work and why don't they work?

29a) Understanding what condoms are used for, how they can be correctly used, and what role they play in the prevention of HIV/AIDS.

29b) Understanding how HIV/AIDS is spread, and how it is not spread.

29c) Understanding what the HIV/AIDS pandemic will mean for us and our families, and what this means for our education.

29d) Understanding how both boys and girls can make important decisions about sex, considering the often serious consequences (e.g., pregnancy, STDs, etc.) that may result from bad decisions.

29e) Understanding how we can protect ourselves from HIV/AIDS and still have fun.

Annex E: Workshop Findings and Information

MINISTRY OF EDUCATION HIV/AIDS WORKSHOP HELD 24 – 25 NOVEMBER 1999 MOUNTAIN INN MBABANE

A two-day workshop held in Mbabane was attended by more than 50 participants. Including representatives from the Ministry of Education, other line ministries such as Agriculture and Cooperatives, Finance, Public Service and Information, Economic Planning and Development, Non-Governmental Organisations (NGOs), the South African Department of Education, the Swaziland National Association of Teachers (SNAT) UNAIDS, the United Nations Development Programme, (UNDP) the United Nations Children's Fund (UNICEF), members of the Komati Basin Water Authority's Health Intervention Team, Teachers, Parents and Students. Three major objectives were to be addressed during the workshop. They were:

describe the factors/barriers that make it difficult to tackle the HIV/AIDS issue for the parties involved in the education sector

identify

- strengths
- weaknesses
- opportunities
- threats

of the actors involved in the education sector

identify specific suggestions of actions for the parties to implement.

Participants were divided into four working groups, where they brainstormed ideas individually; they then shared the ideas and thereafter reached a consensus as to three or four main themes running through all the ideas. The themes for each group are as follows:

Group I	Group II	Group III	Group IV
Political Will Resources	Culture Policies	Policies Finance	Culture Policies

Academic Rigidity Attitudes Attitudes Attitudes
 Resources Information Resources

The groups next selected one theme for detail analysis. That analysis is presented later in this annex.

WORKSHOP PROGRAMME

Impact Assessment of HIV/AIDS on the Education Sector

Dates: 24 – 25 November 1999

Venue: Mountain Inn Hotel, Mbabane

Wednesday 24/11, 1999

- 07:45 - Registration of participants
- 08:30 - Opening Remarks Principal Secretary Ministry of Education
- 08:45 - Introduction and presentation of participants, facilitator and resource persons
 - HIV/AIDS in Swaziland - A discussion
 - Impact Assessment of HIV/AIDS on the Education Sector
 - Presentation of the Working Draft document
- 10.30 - TEA/COFFEE BREAK
- 11.00 - Introduction to the Barriers Analysis
 - Obstacles preventing the Ministry from implementing Report Findings
 - Break Away groups; defining and describing the barriers, Solutions?
- 12.00 - Official Workshop Opening, The Minister of Education
- 12.30 - LUNCH
- 14.00 - Continuation of Break Away group work
 - Finalisation of definitions and descriptions,
 - Organisation of findings for presentation
- 15.30 - Presentations of Barriers findings in a plenary session
- 16.30 - END OF DAY ONE

Thursday 25/11, 1999

- 08.30 - Introduction to Strengths, Weaknesses, Opportunities and Threats analysis
 - Who are the actors and what are their respective SWOT's?
 - Work in Breakaway groups; defining and describing the SWOT's
- 10.30 - TEA/COFFEE BREAK
- 11.00 - Continuation of Break Away group work
 - Finalisation of definitions and descriptions,
 - Organisation of findings for presentation

- 12.00 - Presentations of SWOT findings in a Plenary session
- 13.00 - LUNCH
- 14.00 - Work in Break Away groups; Actions to be taken
 - Discussion and identification of proposals for action
- 15.00 - Presentation of proposals in a plenary session
- 16.00 - WORKSHOP ENDS

Speech by the Hon. Minister of Education

Impact Assessment of HIV/AIDS on the Education Sector Workshop

I am delighted to be here you today to officially open this workshop. However, I am not happy with the message that I am bringing about HIV/AIDS and its affect on the people and the economy of Swaziland.

As His Majesty King Mswati III said on the occasion of the opening of parliament earlier this year “HIV/AIDS is a national disaster”. The disease is having a devastating effect on the country’s population and will increasingly affect the country’s economic performance as more people report sick at work and eventually die, more workers need to take time off to care for sick family members and to attend funerals of family and friends. HIV/AIDS has had its greatest impact on the educated and young in the labour force. In this regard, I might add that the Ministry of Education has made a very large investment in the future of Swaziland by providing students with government scholarships. But many of these people have or are dying from AIDS before they are reach their full productive potential and this investment in our future is not beginning fully repaid. The death of so many young adults is tragic not only for their families but also for Swazi society. We need to seriously consider what concrete steps can be taken to prevent the spread of HIV and AIDS and the loss of so many valuable members in our society.

I believe that government and in particular this Ministry has a central role to play in lessening the social and economic impact of HIV/AIDS upon the lives of Swazis. Education is central to achieving a reduction in the spread of this disease.

It is a difficult task, because of the nature of the disease and how it spreads. In Swaziland, HIV/AIDS is spread primarily through sexual intercourse. However, our traditional Swazi values towards sex and sex education (both in the home and the schools) has made it difficult to spread HIV/AIDS awareness and to change sexual behaviour. Thus it is a large and complex task that requires co-operation from all of us, that is politicians, administrators, teachers, parents students and the community at large. But it is a task at which we cannot afford to fail.

In the recently completed HIV/AIDS Impact Assessment of the Education Sector, interviews were conducted with primary and secondary students, parents, teachers, education administrators and NGOs among others. Among the questions asked of the students was what do you know about HIV/AIDS and where would you like to learn more about this disease? A common theme running through all student answers were “our teachers and parents should also be educated about this disease”. Indeed, a high degree of confusion as to what HIV/AIDS is and, as importantly, is not was displayed by both teachers and parents (and to a lesser extent the students) interviewed during this Ministry’s preparation of the impact assessment.

I will not quote the relevant statistics from the HIV/AIDS Impact Assessment as the document is here for you to review. However, it is enough to say that the data in the report presents a frightening picture that projects the impact of the epidemic on our education system over the next fifteen years. These projections include among others the number of teachers that will require replacement which mean increased training costs, projections as to the number of orphans created as a result of the epidemic and the cost to the education sector as a whole resulting from changes in the demand for and supply of education over the next fifteen years.

Your tasks during the two days you will meet here are to explore ways in which the ministry can meet the challenges posed by epidemic. What should our responses be?

How should we as the Ministry of Education prepare our children, our teachers, our managers and other staff to respond to HIV/AIDS?

I stated earlier that this ministry has a key role to play in lessening the impact of HIV/AIDS upon our society. But what is that role? This I believe can be accomplished by educating Swazi society about the nature of the disease, its causes, how it is transmitted and how one protects oneself from HIV and its inevitable consequence. Your task is to help us define the policies and procedures that are presently in place and to determine what additional policies and procedures are needed to deal the problems posed by the epidemic.

This will require the ministry to develop partnerships, not only with various line ministries such as Finance, Economic Planning and Development, Health, Labour and Public Service, but as importantly with our teachers and students and their parents. When determining the way ahead for the ministry I would ask you to consider what actions are required, what resources (motivation, time and money) and responsibilities (what is to be done, who will do it, when will it be done) have to be met.

Some of you will have noticed that the workshop programme does not contain an official closing. The reason for this is quite simple: this workshop **should not and can not** be viewed as an end of itself. Rather this workshop should be viewed as part of a process that allows the ministry to effectively respond to issues posed by the HIV/AIDS pandemic. It should be regarded as a step towards enabling the Ministry of Education to fulfil its central role in slowing the spread of HIV and AIDS. Your task is to help us define how we effectively achieve this.

The crisis we face as a result of the HIV/AIDS epidemic is unlike any faced before. It has impacted on all segments of society therefore our response has to be innovative

It is my task to declare this workshop officially open and I look forward to reviewing the workshop results. I wish you well in your deliberations.

Group Work Results

Group work findings are presented for each of the four groups. Key issues are presented in italics, with issues arising preceded by a '*'. The number in parentheses following the statement refers to the number of group participants who ranked the item as among their top five concerns.

Group 1

Communication

- *Regional / international networking (0)
- *Shirking responsibility (2)
- *Illiteracy (0)
- *Poor methods of communication (3)
- *Sharing of ideas between stakeholders (2)

Legal Framework (1)

- * Confidentiality (3)
- *Litigation (0)

Role of MOE

- * Government planning process (3)
- *Interference (0)
- * Protecting tuft (0)
- * Mandate (2)
- *Co-ordination (4)

Beliefs

- *Low status of women (4)
- *Out of school population (0)
- *Family size (0)
- *Sex (0)

Lack of financial and human Resources (7)

Misconceptions (1)

- * Condoms (2)
- *Life skills (2)

* Sex education (4)

Data (2)

Lack of Political wills (4)

*Lack of policy action/ plan (3)

*Work ethic

Poverty (2)

Issue: Academic Rigidity

Action to be taken	Stakeholders involved	How / whom should the actions be implemented	Resources	Time frame
1) Study tours	SADC,	MOE, SADC, Publishers, politicians ,bilateral	Financial and personnel training	ASAP
3)Pre service training on life skills	TTCs, Uniswa, Ministries' officials, bilaterals	TTCs, Uniswa, Ministries' officials, Bilaterals	As above	As Above
4) Evaluation and monitoring	TTC, students teachers, UNISWA, peer group counsellors, NCC, bilaterals, school managers, school health workers	Ministries' officials, bilaterals, NCC	As above	As above
5) Materials Production	SADC, NGO's, bilaterals, NCC, publishers	Politicians, publishers, ministries officials, NCC	Financial	As above
6) Extra curricula activities	Parents, students, teachers, support groups, peer group	Students, peer group counsellors, teachers, parents, religious leaders	Trained personnel and financial	As above

	counsellors, religious leaders			
7) Sensitisation	Ministries’ officials, support groups, peer group counsellors, NGOs, bilaterals, out of school youth	Parents, students, Ministries’ officials, school managers, out of school youth, traditional leaders, politicians	As Above	As Above
8) Materials development	NCC, bilaterals, politicians, ministries’ officials	SADC, NGO’s, bilaterals, students, Teachers, Parents, NCC, school health managers	Trained personnel and financial	As above
8) Awards	Ministries; officials, teachers, bilaterals, publishers, parents,	Parents, students, ministries’ officials, teachers, peer group counsellors, bileterals, politicians	Financial	As above
9) co-opt	Support groups, peer group counsellors, NGOs, bilaterals ,out of school youth	Ministry officials	Financial	As above

Group 2

Culture

- * Lack of women's empowerment (3)
- * Effects of disintegrated family values (2)
- * Religion (1)

Policies

- * Lack of national policies / legislation on HIV/ AIDS (5)
- * Education policies (4)
- * Migration (0)

Attitudes

- * Lack of involvement of people living with Aids (5)
- * Cultural norms and practices (3)
- * Access to communication (2)
- * Stigma (0)

Resources

- * Lack of information (5)
- * Socio-economic structures (1)
- * Lack of resources (1)
- * Poverty (1)

Behaviour

- * Lack of commitment advocated by leaders (5)
- * Lack of knowledge (2)
- * Drug abuse (1)
- * Negative peer pressure (0)

ISSUE: SUPPORT FOR ORPHANS

Actions to be taken	Relevant stakeholders	How and by Whom should the actions be implemented	Resources	Time Frame
1. Location of orphans per region	NGO's, MOE, Chiefs, parents, teachers, civil servants, churches, traditional leaders	MOE-to lead through schools' managers office	Create an enabling environment through: *housing *personnel *transport *training *training material	January
2. Identification of orphans	As above	As above	As above	January
3.Consolidate networking with all stakeholders	As above	MOE, NGO's	As above	January
4. Conduct a needs assessment for HIV/AIDS orphans	As above	MOE, MOH	As above	January
5. Ministry to provide information to the Master of the High Court	MOE	MOE	As above	January
6. Set up monitoring system through Regional Educational Officers	MOE	MOE	As above	January
7.Formulation of project proposal for the orphans	MOE	MOE, MOH/SW	As above	March
8.Get orphans to school or keep them in school	MOE	MOE, MOH/SW	As above	January
9.Ministry to improve MIS to include data on orphans	MOE, NGO's MOH/SH	MOE	As above	January
10.Improve the existing education	MOE	MOE	As above	January

bursary				
11. MOE/ MOHSW to set up a core team for support in the region	MOE, MOHSH	MOE, MOHSW	As above	March
12. Close liaison between Ministry and Chiefs	MOE, chiefs	MOE, Chiefs	As above	January
13. Decentralisation of activities	MOE	MOE, NGO's	As above	<i>January</i>

GROUP 3

Policies

- * Lack of political will (6)
- * No priority by policy makers (3)
- * Ethics of medical doctors-on non disclosure of people who are HIV positive (1)
- * Absence of national aids policy (5)
- * Absence of policy on sex education and population (3)

Resources

- * Financial constraints (6)
- * Poverty (0)

Attitudes

- * Denial (0)
- * Sense of false self hood (2)
- * Negative attitudes: (1)
 - Men
 - Parents
 - Traditional leaders
- * Secretiveness of Swazi's (0)
- * Stigma attached to people with Aids (3)
- * Fear to weaken cultural norms and values (0)
- * Silence of religious ministers on HIV/Aids (5)
- * Bad behaviour from role models (0)
- * Shifting of responsibilities (1)

ISSUE: POLITICAL WILL

Action to be Taken	Stakeholders Involved	How/by Whom Should Action be Implemented	Timeframe	Resources
1. Advocacy: dissemination of information education communication	Their Majesties Councillors Traditional leaders Cabinet Policy makers Business communities Donor agencies NGO's Unions Associations Parents/Guardians Youth Traditional healers Church org. Health Motivators	*Work shops, *media * convene an extra ordinary Parliamentary session on the HIV/AIDS crisis- (Prime Minister) *Convene an extra ordinary peoples Parliament on HIV/AIDS (HM) * Convene an extra ordinary meeting at chieftancy level (chiefs) *Advocacy (MOE, MOH, Prime Minister	4-6 months	Reallocation of budget to counter HIV/AIDS crisis
2. Draw up a national policy on HIV/AIDS	As above	Various Policy makers	As above	Trained Personnel
3. Set up a legal body to ensure compliance with the national policy	As above	Various Policy makers	As above	Trained Personnel
4. Set up special court to adjudicate on HIV/ AIDS cases	As above	Various Policy makers	As Above	Cabinet, Parliamentarians
5. Man power training	As Above	Trained personnel	As above	Trained Personnel

Group 4

Attitudes

- * Little empathy (0)
- * Silence (0)
- * Lack of support of HIV positive people

Lack of Resources

- * No resources –budget for HIV/AIDS (10)
- * No Personnel (0)
- * Lack of intensive campaigns against AIDS (0)

Insufficient understanding of Aids (15)

Negative peer pressure on youth (13)

Lack of co-ordination / modalities /policies (1)

- * No educational policy on HIV/AIDS and regulations to follow (0)
- * Slow commitment to crisis management (4)
- * Poor decision making structures (0)

Cultural Restrictions

- * No condom use (8)
- * Silence (0)
- * Gender imbalance (12)

Fear

- * Fear of talking about AIDS-taboo (2)
- * Fear of rejection (0)
- * Fear of confirming own HIV status (2)
- * Fear of taking responsibility over AIDS sufferers (0)
- * HIV is frightening

Religion (11)

Lack of Involvement

- * Shifting of responsibilities (3)
- * Lack of support from political level (0)
- * Lack of support of HIV positive people (0)

No clear support to orphans by MOE (14)

* Little Empathy (0)

* Unfriendly health service providers (0)

Undisclosed AIDS related deaths (7)

ISSUE: INFORMATION ON HIV/AIDS

Actions to be taken	Stakeholders involved	How / whom should the actions be implemented	Resources	Time frame
1) Data collection and processing of HIV/AIDS statistics	MOE, MOH	Collect information from hospitals and blood banks by MOE and SNAP	Human resources, transport and computers	Immediately
2) Identification training of resource personnel	MOE, MOH, SASO, MOPSI,	Criteria to be established	Finance, and human and material resources	As soon as possible
3) Mass production	Relevant companies	Contracting out to companies	As above	As above
4) Establishment and distribution centres	MOE, Tinkhundla centres etc.	Through existing institutions e.g. TRC	Human, material and financial resources	As Above
5) Distribution of material	Officers in centres identified	Through Public announcement	Human and material resources	As above
6) Implementation of programme	Teachers, councillors	No suggestions	To be determined	As above

**List of Attendees Ministry of Education HIV/AIDS Workshop
24th November 1999 Held at the Mountain Inn Mbabane**

Name	Organisation	Phone Number
Prof. A Whiteside	Univ. of Natal	07 31 260 2592
S. Simelane	JTK Associates	404 2456
M Mncina	The Lighthouse	404 2886
V S Matsebula	Health Intervention Team KOBWA	437 1954
K Mdluli	Health Intervention Team KOBWA	437 1954
L P Khumalo	Evelyn Baring High School	207 7127
Bongiwe Simelane	Evelyn Baring High School	207 7127
Thulile Dlamini	Evelyn Baring High School	207 7127
Elijah Ntshangase	Ndwandwe High School	518 5924
Ngwane Dlamini	Ndwandwe High School	518 5924
Sibongumusa Tsela	Ndwandwe High School	518 5924
D S Cownie	JTK Associates (SIAPAC)	404 3947
Polina Nxumalo	JTK Associates	404 3947
S L Mbingo	Nazarene T. T. College	505 2817
K. Suurna	Compete Consultancy	06 258 1 499517
S W Ntshakala	FLAS	505 3082
V L Kelly	FOE UNISWA	518 4658
H T Sukati	SCOT	404 426816
Martin Hayes	UNICEF	404 3725
J B Sprecker	UNICEF	404 3725
Vusi B. Kunene	UNICEF	404 3725
A P Mkhonza	Principal Secretary MOE	404 2496
J S Hlophe	Education (SHAPE)	404 3307
B S Ndlouv	Chief Inspector MOE	404 3307
S S Mkhonta	Director of Education	404 3307
J Y Manyatsi	W P C	505 4690
Lori Calio	UNCIEF	404 2496
B Gumedze	Ndwandwe High School	518 5882
Nhlanhla Mkhonta	Ndwandwe High School	518 5882
Pius Thwala	JTK Associates	404 4947
Nancy Mavuso	Ministry of Finance	404 4190
Mumly Musi	Ministry of Public Service and Information	404 4161
Lamanono Dlamini	MOE Information RPU	404 3307
D Mayisela	MOE (REO Shiseleweni)	207 8545
Sindisiwe Malindzsa	MOE (Career Guidance Inspector)	207 8239
Absolom Dlamini	Ministry Agric & Coops	404 6361

Name	Organisation	Phone Number
Cena Dlamini	MOE (Manzini Inspector)	505 2248/9
Alice Dlamini	MOE (Manzini)	505 2248/9
Brigid Dlamini	MOE (Hhohho)	404 3761/2
Phineas Masinga	Education (Lubombo)	343 4282/129
Dumisani Mahliudza	Ministry of Economic Planning & Development	404 6697
Thuli Nhlengetfwa	MOE National Curriculum Centre	505 2106/7
Evart V. Dlamini	Swaziland National Association of Teachers (SNAT)	505 2106/7
Sebenzile Ginidza	MOE (School Health)	404 3506/7
Leelama Mbobo	South African Department of Education	07 12 317 5239
Carol Nuga-Deliwe	South African Department of Education	07 12 317 5239
B Olowo-Freers	UNAIDS	404 8559
Ntuthuko Dlamini	Parliament Portfolio Education	604 4072
Desmond Maphanga	SHAPE	404 5066
Khawvlile Magagula	SHAPE	404 5066
Mduduzi Shongwe	Salvation Army Community Care	404 7365
Zelda Nhlabatsi	SHAPE	404 5066
Fikile Mathunjwa	SHAPE	404 5066
Venny Mvnyaneza	SHAPE	404 5066
John King	JTK Associates	404 3947
Zanele Dlamini	United Nations Development Programme	404 2301

**List of Attendees Ministry of Education HIV/AIDS Workshop
25th November 1999 Held at the Mountain Inn Mbabane**

NAME	ORGANISATION	POSITION	ADDRESS
Maguga Mncina	The Lighthouse	Boys Manager	Box 1141 Mbabane
Elijah Ntshangase	Ndwandwe High School	Headteacher	Box 224 Mankayane
Ngwane Dlamini	Ndwandwe High School	Parent	Box 224 Mankayane
B S Ndlovu	Ministry of Education	Chief Inspector	Box Mbabane
H T Sukati	SD College of Technology		Box 69 Mbabane
Nhlanhla Mkhonta	Ndwandwe High School	Student	Box 224 Mankayane
P S Dlamini	Ngwane Teachers' College	Lecturer	Box 474 Manzini
P M Masinga	MOE Lubombo Region	School Inspector	Box 104 Siteki
B Q Dlamini	MOE Hhohho Region	School Inspector	Box 229 Mbabane
J S Hlophe	Ministry of Education	Health Desk Officer	
Bongiwe Simelane	Anti AIDS Club Evelyn Baring High School	Student	Box 21 Nhlangano
Vusi Matsebula	Komati Basin Water Authority	Health Intervention Team	Box 678 Piggs Peak
Sindisiwe Malindzisa	MOE Shiselweni Region	School Inspector	
S L Mbingo	Nazarene Teacher Training College	Acting Principal	Box 602 Manzini
Cela Dlamini	MOE Manzini Region	School Inspector	Box 190 Manzini
Thulile Dlamini	Anti AIDS Club Evelyn Baring High School	Student	Box 21 Nhlangano
Lindiwe Khumalo	Evelyn Baring High School	Teacher	Box 21 Nhlangano
Mjanaleni Kunene	Evelyn Baring High School	Teacher	Box 21 Nhlangano
D Mayisela	Ministry of Education		Box 112 Nhlangano
Pius Thwala	JTK Associates	Consultant	Box 2778 Mbabane
Polina Nxumalo	JTK Associates	Consultant	Box 2778 Mbabane
S W Ntshakala	Family Life Association of Swaziland		Box 1051 Manzini
Alice Dlamini	MOE Manzini Region	Regional Education Officer	Box 190 Manzini
Jeanne Y Manyatsi	MOE William Pitcher College	Vice Principal	Box 87 Manzini
Thuli Nhlengetfwa	National Curriculum Centre	Director	Box 73 Manzini

NAME	ORGANISATION	POSITION	ADDRESS
Doctor Simelane	Ministry of Education	Under Secretary	
Evart V. Dlamini	Swaziland National Association of Teachers	Organising Secretary	Box 1575 Manzini
L Mbobo	Department of Education South Africa	Head Department Education Planning	P/Bag X895 Pretoria RSA
C Deliwe	Department of Education South Africa	Education Planner	P/Bag X895 Pretoria RSA
V Munyaneza	SHAPE		
Zelda Nhlabatsi	Shape	Training Officer	
Khumbulile Mdluli	Komati Basin Water Authority	Health Intervention Team	Box 678 Piggs Peak
Mumly Musi	Ministry of Public Service and Information	Alternate Member HIV/AIDS Crises Committee	
Victoria Kelly	University of Swaziland Facility of Education	Lecturer	P B 4 Kwaluseni
Desmond Maphanga	SHAPE	Director	Box 5218 Mbabane
Sibongomusa Tsela	Ndwandwe High School	Student	Box 224 Mankayane
Prof. A Whiteside	University of Natal	Head, Health Economic & HIV/AIDS Research Division	Durban 4041 RSA
S Simelane	JTK Associates	Consultant	Box 2778 Mbabane
David S Cownie	SIAPAC	Consultant	Box 90144 Windhoek Namibia
John King	JTK Associates	Director	Box 2778 Mbabane