# W O R K I N G P A P E R



# BOTSWANA INSTITUTE FOR DEVELOPMENT POLICY ANALYSIS

Impact of HIV / AIDS and Options for Intervention Results of a Five Company Pilot Study

> Paper written for the Botswana National Task Force on AIDS at the Workplace

> > By Robert Greener Senior Research Fellow, BIDPA

BIDPA Working Paper No. 10 August 1997

ATH FLOOR, TSHOMARELO HOUSE, BROADHURST MALL
PRIVATE BAG BR 29, GABORONE, BOTSWANA
TEL: 371750 - FAX: 371748

## Abstract

The paper presents the results of a study of the impact of HIV/AIDS on a sample of five companies in Botswana. It shows that the impact to date has been small, as a result of the fact that the HIV epidemic in Botswana is recent, and has not yet developed into an AIDS epidemic characterised by widespread sickness and mortality. The paper concludes with recommendations of measures that can be taken by companies to manage and mitigate the present and future impacts of HIV/AIDS

### Keywords

HIV AIDS Private Sector Africa

# Impact of HIV / AIDS and Options for Intervention Results of a Five Company Pilot Study

Paper written for the Botswana National Task Force on AIDS at the Workplace

> By Robert Greener Senior Research Fellow, BIDPA

> BIDPA Working Paper No. 10 August 1997

1092

**BIDPA** 

Impact of HIV/AIDS and Options for Greener, Robert; Botswana Institute for Book 330.4 Box BIDPA

# Botswana Institute of Development Policy Analysis

Working Paper, August 1997

Impact of HIV / AIDS and Options for Intervention Results of a Five Company Pilot Study

# Robert Greener, Senior Research Fellow, BIDPA

# 1. Introduction and Background

This report outlines a study of the impact of HIV/AIDS on five companies in Botswana, whose activities include manufacturing, transport, distribution and finance.

The report has been compiled on behalf of the Botswana National Task Force on AIDS in the Workplace, working with management and employee teams from the five companies, and assisted by the OATUU¹ Health, Safety and Environment Programme. The Task Force is a tripartite committee, established to carry out the recommendations of a national workshop on economic and employment issues and HIV/AIDS that took place in November 1996.

The Task Force has representation from Government, in the form of the AIDS/STD Unit and the Community Health Services Division from the Ministry of Health. Employees are represented by the Botswana Federation of Trade Unions (BFTU), and employers by the Botswana Business Coalition on AIDS (BBCA). The BFTU acts as the co-ordinator, while funding has been provided through OATUU by the Canadian International Development Agency (CIDA).

# 2. Objectives of the Study

There were three objectives of the study:

- To assess the impact of HIV and AIDS on the five companies during the year 1996;
- To identify strategies to manage and mitigate the current and future impact of HIV/AIDS on the companies;
- c) To link the companies with facilities and resources to support their mitigation efforts.

The impacts include those on health, on human resource development, on production and on employee benefits. The facilities and resources already identified included the government workplace programme operated by the Community Health Services Division of the Ministry of Health, as well as the

<sup>&</sup>lt;sup>1</sup> Organisation of African Trade Union Unity

support activities provided by the BFTU. Information could also be provided from experiences in other countries of the region.

It is important to stress that the companies were not selected at random in order to give a nationally representative sample. They were all members of the Botswana Business Coalition on AIDS, with a strong prior interest in mitigating the impact of AIDS in the workplace. Representatives from management and employees participated fully in the process of data collection, and in the identification of strategies. The study might be thought of as a type of participatory assessment that will led into the development of an ill-health monitoring guideline.

The conclusions of the study cannot however be assumed to apply to the national workplace situation.

# 3. Summary of Assumptions Made in the Study

The study made use of a number of assumptions about the prevalence and the nature of HIV and AIDS in Botswana. These assumptions are summarised in Table 1 below.

The infection rates of HIV in Botswana are based upon measurements of the prevalence amongst pregnant women attending ante-natal clinics, and among 12 men attending STD clinics between the months of January and April in any given year. (Ministry of Health, AIDS/STD Unit)

The impact of AIDS that is assessed in this report will relate to people who were infected with the HIV virus some five to eight years ago on average, i.e. between 1989 and 1992, and are now beginning to suffer from AIDS related diseases. The prevalence at that time was much lower than it is today, although it is difficult to obtain an accurate estimate. Best estimates based upon neighbouring countries would indicate that it was about one seventh of the 1996 level (i.e. just over 3%). This means that the impacts estimated in this report can be expected to increase sevenfold during the next seven to eight years.

Expert opinion was sought about how much of employee sick leave could be thought to be HIV related. The suggested range was between 5% and 20%, regarded as somewhat conservative. A different estimate was used for each company, based upon the qualitative information about susceptibility to HIV. The 7.9% quoted is an average (weighted by number of employees) of the estimates used for each of the companies.

The rate of 33% for the proportion of employee deaths that could be attributed to AIDS was based upon information from the life insurance industry, where about one third of claims paid out are for AIDS related deaths. The population of employees in this study was not for the most part covered by life insurance, but they cover the same age groups, and are in similar risk categories as the insured population. However, out of 13 health related terminations in 1996, six were due

to death in service either known or suspected to be AIDS related. This amounts to 46%. This may be a result of a difference between the insured population and the population of the study, or it may be a statistical fluctuation. This report has used the rate of 33% to apportion costs due to death in service, choosing to err on the conservative side.

Table 1: Summary of Principal Assumptions

| Item  | Value           | Justification  |
|---|-----------------|--|
| Incubation period of HIV before<br>developing AIDS              | 5-8<br>years    | Regional experience  |
| Period of acute illness after<br>developing AIDS                | 1-2<br>years    | Regional experience  |
| High risk age groups for HIV/AIDS                               | 15-49<br>years  | Derived from sentinel surveillance                                 |
| National adult HIV prevalence in<br>1996                        | 23%             | Derived from sentinel<br>surveillance, Jan-Apr                     |
| National adult HIV prevalence in<br>1992                        | 4%              | Derived from sentinel<br>surveillance, Jan-Apr                     |
| National adult HIV prevalence in<br>1989                        | - 3%            | Estimate from regional experience                                  |
| Gaborone adult HIV prevalence in<br>1996                        | 31%             | Derived from sentinel<br>surveillance, Jan-Apr                     |
| Increase in HIV impact between<br>1996 and 2004                 | 7 times         | Estimate from regional experience                                  |
| Percentage of current employee illness caused by HIV            | 7.9%            | Average of expert opinion for each company: ranging from 5% to 15% |
| Percentage of employee deaths caused by AIDS                    | 33%             | Based on information from Life Insurance industry                  |
| Percentage of employee benefit costs attributable to AIDS       | 20%             | Approximate average of 7.9% and 33%                                |
| 1996 expected annual adult death rate due to AIDS               | 4 per<br>1,000  | Based on estimate of prevalence in 1989                            |
| 2004 expected annual adult death rate due to AIDS               | 28 per<br>1,000 | 7 times the 1996 rate  |
| Initial productivity of a new recruit (% of experienced worker) | 70%             | Management estimate  |
| Average induction period of a new recruit                       | 4<br>months     | Management estimate  |

The proportion of employee benefit costs that is attributable to AIDS will depend upon how many of the health related terminations were the result of AIDS. This will lie somewhere between the 7.9% assumed to be the proportion of illness due to HIV, and the 33% assumed to be the proportion of deaths in service due to AIDS. The true figure may lie closer to the latter, since those who retire for reasons of ill health related to AIDS are likely to die within a period of one year. This report chose to use a conservative estimate of the average between these two which is about 20%.

The current expected death rate due to AIDS is related to the HIV prevalence between 5-10 years ago, which is not accurately known, but probably averaged between 1-3%. The number of annual new infections would be about one fifth of the prevalence rate. The current expected AIDS death rate would therefore be approximately one fifth of 2%, or about 4 per thousand. The 2004 rate is obtained simply by multiplying by 7.

### 4. Information about HIV/AIDS in Botswana

People infected with HIV can remain healthy for an average of five to eight years before their health starts to noticeably decline, and they are said to be suffering from "full blown" AIDS. The final stages last for about one to two years, when people with AIDS suffer from a range of communicable and immune related diseases. AIDS is always fatal.

The employment rights in the draft Botswana Code of Practice on AIDS and Employment reflect the fact that most HIV positive workers are healthy, and capable of productive work for many years.

At least 80% of the transmission of the HIV virus is estimated to be as a result of heterosexual contact. As a result, there is a tendency to prejudice against HIV as a "self inflicted" disease. The rate of transmission is enhanced when other sexually transmitted diseases (STD's) are also present. HIV has also been associated with a rise in the prevalence of tuberculosis.

# 5. Susceptibility of the Companies to HIV

People from all socio-economic groups are at risk from HIV. Within a company, HIV can affect anyone from top management down to the lowest grades. Evidence from some countries suggests that it is the well paid and skilled workers who are most at risk in the early stages of the epidemic, especially if they spend long periods away from home.

HIV is transmitted through contact between body fluids, especially blood, semen and vaginal fluids. HIV is not usually spread in the course of work. However, there are a number of characteristics of companies that might increase their susceptibility, such as:

- a mobile workforce spending time away from home;
- relatively well paid employees;
- poor housing conditions (e.g. single sex housing) or poor housing security;
- a high HIV prevalence in the surrounding community.

The susceptibility of the companies was assessed through a qualitative interview with representatives from management and employees. The five companies

varied in their degree of susceptibility to HIV - the highest level being in the transport sector, and the lowest in the finance sector. Manufacturing companies might also be affected by systems of shift work that mean that men will be away from home for parts of the night.

Both workers and management in the five companies are committed to the cause of reducing the impact of HIV/AIDS within the company. This will provide a conducive environment for the introduction of effective interventions.

# 6. The Assessment of HIV/AIDS Impact

### a. Introduction

The impact of AIDS on companies is generally felt through the following effects:

- Lost labour time due to sickness:
- Lost productivity due to sickness;
- Replacement of lost labour due to ill-health retirement or death in service;
- Contributions to funeral expenses;
- Direct medical costs, and contributions to medical aid schemes;
- Other kinds of benefits paid to employees or their dependants.

International experience suggests that lost time due to ill health is a more significant problem than the turnover resulting from mortality or health related retirement. Employees with AIDS are likely to experience an 18 month period of ill health alternating with periods when they are healthy enough to work. During this period, sick leave periods might become prolonged.

The impacts will therefore depend upon a number of factors:

# i. The nature of the company's business

This refers to the business process - i.e.:

- the key inputs of the production process;
- the potential production bottlenecks;
- the outputs;
- product delivery;
- markets and market demand

The last of these issues was considered beyond the scope of the study, although it was of concern to some of the participating companies.

### ii. The pattern of employment

This refers to the skills profile of the employees, the training needs, and the levels of productivity.

### iii. Policies on benefits and health provisions

National and sectoral policy with respect to employee benefits and health provision provide the framework within which companies will formulate their own policies.

The nature of the company benefits will to a large extent dictate the access of employees to health facilities, and the type and frequency of medical attention that they will seek. It will also influence the position of their dependants, and the way in which they plan their careers.

### iv. The company's savings and investment resources

This determines the extent to which a company will be able to absorb the negative impacts of HIV, and to which it will be able to invest in order to mitigate the impacts.

### b. Employee Profile

### i. Summary of the Sample

The five company sample included 1,266 employees. Information was collected concerning labour costs, company output, sick leave and turnover. Table 2 below summarises this information for the sample:

Table 2: Summary of Five Company Sample

| ltem                            | Values       |  |  |
|---------------------------------|--------------|--|--|
| Number of employees             | 1,266        |  |  |
| Wage Bill                       | P21,530,164  |  |  |
| Total Output                    | P101,906,074 |  |  |
| Production per employee per day | P350         |  |  |
| Labour cost per day             | P74          |  |  |
| Total Sick Leave Days           | 2,473        |  |  |
| Health Related Turnover         | 13           |  |  |
| HIV Related Turnover            | 6            |  |  |

# ii. Age and Sex Breakdown of Employees

Figure 1 below shows the age distribution of employees at the companies. Most employees are below the age of 40, with a peak in the two age groups from 25 to 34 years, containing 47% of all employees in the companies. The great majority of the employees are therefore in the high risk age groups for HIV/AIDS. The

employees are mostly male, who tend on average to be slightly younger than female employees.

The number of female employees in the sample was not sufficient to allow the subsequent analysis to be broken down by gender. The age groups over 50 years were aggregated together since they were also small.

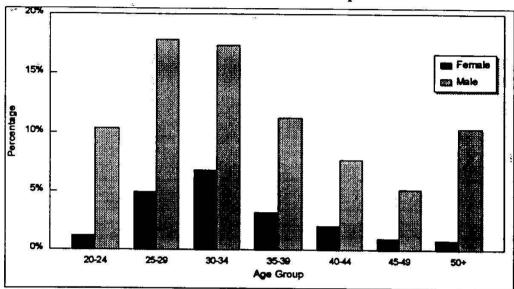


Figure 1: Age and Sex Distribution of the Sample

### c. Lost Labour Time due to Sick Leave

# i. Quantity of Lost Time

The analysis was based upon recorded sick leave. Policies on the recording of sick leave did however vary between the five companies. For example, short periods of less than two days were sometimes not recorded. In other cases, employees who left work after a certain time in the morning would not be recorded as taking sick leave. As a result, it was difficult to collect accurate data. This must be borne in mind when interpreting the results.

Approximately one third of employees recorded sick leave during 1996. The breakdown by age group is shown in Figure 2 below.

As can be seen, the proportion of employees taking sick leave is approximately uniform across age groups, with a lower level in the youngest and the oldest age groups. This might be a higher than expected level in the age groups between 25 and 34, although the differences are not large enough to allow any definitive conclusion.

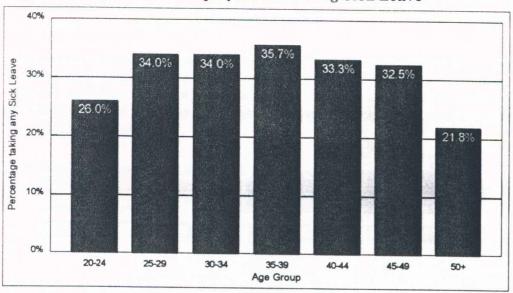


Figure 2: Proportion of Employees Recording Sick Leave

Figure 3 shows the average leave taken per employee, broken down by age group. This shows a rising trend with age, up to 39 years, and then an apparent levelling off.

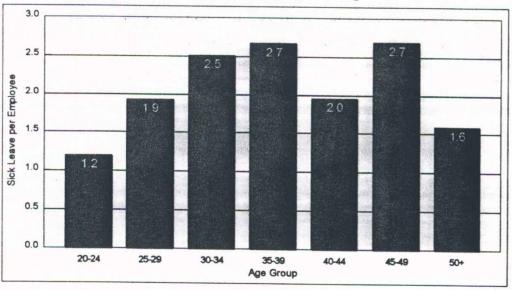


Figure 3: Sick Leave per Employee by Age Group

It would normally be expected that there would be an increase in sickness related absence with increasing age. The pattern here shows some evidence of raised levels of sick leave in the two age groups between ages 30 and 39, and possibly in the group 25-29. A proper interpretation could only be done if this pattern could be compared with the pattern some 10-15 years ago when HIV was not yet in evidence. It is however plausible that some of the illness seen in this group is

HIV related, where employees contracted the virus between 5 and 10 years ago. The average estimate of 8% used in the study does not seem incompatible with the pattern of recorded sick leave.

The average number of days taken is not large however, and would not in itself indicate the presence of a serious degree of employee illness. It is interesting however to look at the pattern of sick leave while excluding all those employees who did not record any. Figure 4 shows the average sick leave taken by those employees who took any.

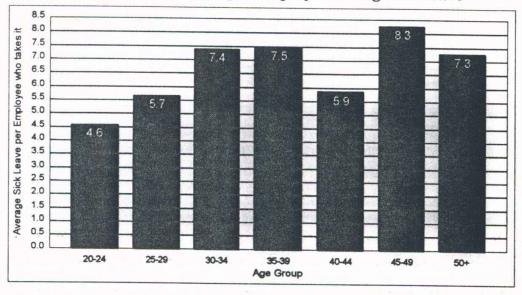


Figure 4: Average Sick Leave per Employee taking Sick Leave

The averages here are somewhat larger than those for all employees - those who actually take sick leave tend to take more than 5-6 days per annum. The pattern is once again suggestive of raised levels in the age groups between 25 and 39.

If there were significant AIDS related illness in the company, then the pattern of sick leave would contain a number of extended periods for the individuals concerned. Information about the length of sick leave episodes was not available for this study. Figure 5 shows the amount of annual sick leave taken by individual employees, which would be a first approximation. Each point in this chart represents one employee.

As can be seen, there are some outliers - people taking upwards of 25 days of sick leave during the year. These may or may not be related to HIV, and they are few enough that they do not significantly distort the averages. Almost all employees took less than the 14 days allowed for the year, while only about 30 employees took more. This pattern confirms that AIDS related illness is not yet a major problem in the companies studied.

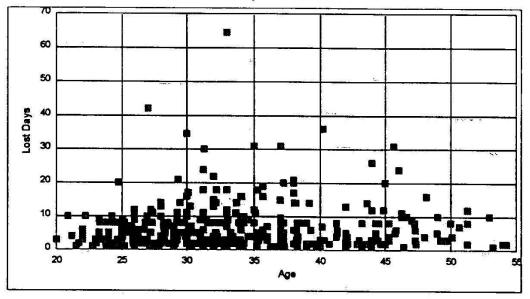


Figure 5: Sick Leave Recorded by Individuals

It is important to note however that the data used here did not include absenteeism - that is days absent and unpaid due to a failure to produce a sickness note. Inclusion of this information might alter the patterns shown in these graphs. It will be important to include this element of absenteeism in future recording systems. In addition, sick leave is often unrecorded, and is also distorted by flexible working practices, where employees may be able to cover for those who are ill.

Nevertheless, at least some of the sick leave taken is likely to be a result of AIDS related illness. The problem lies in estimating how much of it is so. In the absence of more detailed information about the reasons for sick leave, this can only be done in relation to the prevalence in the wider community.

The HIV epidemic in Botswana is still in an early stage, so most people who are infected with HIV have not yet reached the stage of AIDS related sickness. HIV related illness is probably still quite low in Botswana, but is increasing rapidly. It is already the case that the demand for beds for AIDS sufferers nearing the final stages is placing a considerable burden on hospitals, constituting around one half of the beds available at the present time. The incidence of less serious AIDS related illness in the population is more difficult to estimate. As already described, this report assumes an estimate of an average of about 8% of illness in the companies to be HIV/AIDS related.

### ii. The Cost of Lost Time

The cost of lost labour time is the value of the foregone production. There is no direct measurement of this value, so it is necessary to have some way of attributing the total value of production to employees. The relevant indicators in the companies are shown below:

Production per employee per day: P 350
Labour cost per employee per day: P 74
Ratio: 4.7

There are a number of possible approaches to estimating the value of labour time. One would be to value all labour at the level of production per employee per day, i.e. P350. This approach assigns the same value of production to high and low paid employees. In the case of the five companies, there is a very wide spread of labour costs. If this variation is related to productivity, then this method will introduce distortion to the value of lost labour, since it will overvalue production by low paid employees and undervalue production by high paid employees.

A second approach is to use the ratio - this will assume that each employee produces 4.7 times as much as he or she is paid. This may of course not be true for all grades, and individual contributions to production are difficult to measure. In general this method may tend to overvalue production by high paid employees and undervalue production by low paid employees. This method is only possible if the individual labour costs are know for each employee. This information was not supplied by all of the five companies, so only the first method could be applied to the aggregate sample.

The results for 1996 were as follows:

|                              | Pula   |       |   | % of Wage Bill |       |  |
|------------------------------|--------|-------|---|----------------|-------|--|
| Total cost of sick leave     | P1,005 | 5,760 |   |                | 4.67% |  |
| Cost of HIV related sickness | P79,   | 477 - | 2 | 5              | 0.37% |  |

It is also worth noting that there is likely to be a cost associated with low productivity caused by employees who come to work sick rather than take a day of sick leave. This cost is not measured, and is not included in these estimates.

# d. Replacing Lost Labour

Employee turnover is caused by normal retirement, retirement due to ill health or occupational injury, resignation or termination on other grounds. Turnover has been relatively low in the five companies. However, out of 13 health related terminations in 1996, six were due to death in service either known or suspected to be AIDS related.

The current expected death rate due to AIDS was assumed to be 4 per 1,000. In a sample of 1,266 this would imply an expected number of 5 deaths per annum. This would be compatible with 6 observed cases. This annual death rate is likely to rise sevenfold to between 30 and 40 by the year 2004 in this size of sample.

The costs of staff turnover include the direct recruitment costs, plus the costs of training and low productivity while the new employee learns the job. The total training and recruitment costs in 1996 were supplied by each company - allowing the calculation of the total cost per recruitment (P2,757). The health related

turnover of each company then gave an estimated of the health related training and recruitment costs.

The missing element of cost is the time taken for new employees to become fully productive. The companies provided estimates of how long new employees must remain supervised after recruitment, and this was used to estimate the total productivity loss. For example, if we assume that they are 70% productive at recruitment and fully productive after 4 months, then we can estimate a total productivity loss of 15% over the period, or 5% of average annual productivity. This gave an estimate of the total productivity loss per recruitment (P3,861). The total training and recruitment cost was as follows:

|                          | Per Recruitment | Health Related | AIDS Related |
|--------------------------|-----------------|----------------|--------------|
| Training and Recruitment | P2,757          | P36,689        | P14,532      |
| Lost Productivity        | P3,861          | P51,376        | P19,771      |
| Total Replacement Cost   | P6,618          | P88,065        | P34,303      |

### e. Funeral Costs

Funeral costs include all company payments (not paid by pension or insurance schemes) to the dependants of employees who die in service for the purpose of funeral expenses. Funeral grants are only paid by one of the five companies, and the amount paid was P2,000. This was however known to have been an AIDS case.

### f. Medical Costs

Medical costs include the direct costs of medical care paid for by the company, plus the company's contribution to medical aid or medical insurance on behalf of employees. One of the companies had all of its employees on a medical aid scheme. In the other companies, the medical aid cover was optional, with 50% of the premiums being paid by the company. The experience was that very few employees chose to take it up.

The total medical cost in this regard to the five companies in 1996 was P256,207. This report assumes that an average of 8% of these costs are attributable to AIDS, coming to P19,958.

# g. Costs of Other Benefits

The five companies operate a variety of retirement and benefit schemes for employees and their dependants, which are still under development. A total of P381,941 was paid out in benefit schemes during 1996. This sum was attributed to health related causes by using the proportion of health related terminations in each company. The resulting sum assumed to be paid out for health related causes was P63,029, or about 16.5% of the total.

The proportion of this that is attributable to AIDS was assumed to be 20%, as described in the summary of assumptions. The resulting benefits cost attributable to AIDS is therefore P12,388.

### h. Total Costs

The component costs estimated above have been combined to obtain the total costs. The table below shows the total health costs and the component of health costs attributable to HIV/AIDS. Each of the costs is expressed as a percentage of the total, and as a percentage of the total wage bill.

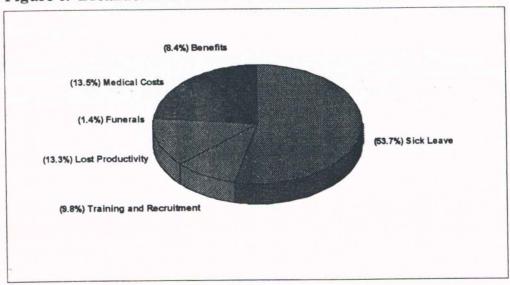
Table 2: Results of the Estimate of HIV/AIDS Impact

|                          | Health Costs | <b>HIV/AIDS Costs</b> | % of Total | % of Wage Bill |
|--------------------------|--------------|-----------------------|------------|----------------|
| Sick Leave               | P1,005,760   | P79,477               | 54%        | 0.37%          |
| Training and Recruitment | P36,689      | P14,532               | 10%        | 0.07%          |
| Lost Productivity        | P51,376      | P19,771               | 13%        | 0.09%          |
| Funerals                 | P2,000       | P2,000                | 1%         | 0.01%          |
| Medical Costs            | P256,207     | P19,958               | 13%        | 0.09%          |
| Benefits                 | P63,029      | P12,388               | 8%         | 0.06%          |
| TOTAL COSTS              | P1,415,061   | P148,127              |            |                |
| % of WAGE BILL           | 6.6%         | 0.7%                  | 1          |                |

The current cost of HIV/AIDS to the five companies as estimated in this report is low - only 0.7% of the wage bill. With the epidemic still in an early stage, there is therefore time and opportunity to develop appropriate responses to future losses.

The table also shows that the costs of HIV/AIDS are dominated by the costs of sick leave, replacement and training, amounting to 78% of the total. The proportions are presented graphically in figure 6 below:

Figure 6: Breakdown of HIV/AIDS Costs



The breakdown displayed here cannot be used to infer relative costs and benefits. For example, some of the medical expenditure on medical aid cover would be expected to lead to an improvement in the health of employees, and therefore have a positive effect on losses due to sick leave and productivity. This study provides no information on the relationship between cost and benefit in regard to medical aid expenditure.

It is interesting however that the current medical costs are somewhat smaller than the losses due to sick leave, and the further unmeasured productivity losses resulting from employees who come to work while sick. It would seem likely that an increased investment in medical cover would lead to an overall reduction in health costs in general, and HIV/AIDS costs in particular.

### 7. Future HIV/AIDS and Health Costs

The non-HIV related health costs are surprisingly high: 6.6% - 0.7% = 5.9%. There is no reason to believe that they will decrease significantly in the future as the HIV costs increase. The HIV costs may well increase sevenfold by the year 2004, as described above, to 4.9%. The total health costs in 2004 may therefore be about 5.9% + 4.9% = 11.8% of the wage bill. This prospect is sufficient to justify investment to improve the general health of employees.

# 8. Regional Comparisons

Similar studies have been carried out in other countries in the region. The results are presented in table 4 below.

As can be seen, the pattern in this five company sample resembles the pattern in a Kenyan sample. All of the samples show the dominance of the costs of lost labour, although the pattern of benefits (particularly funerals) differs between the countries.

It should be noted that the epidemic is in an earlier stage in the Botswana sample than in the other samples shown. Substantial problems due to illness or death in service related to AIDS are not yet being observed.

Table 4: Country Comparisons of HIV/AIDS Impact

| Description of Cost      | Botswana<br>1997 | Zambia<br>1992/93 | Kenya 1994 | Malawi<br>1995/96 |
|--------------------------|------------------|-------------------|------------|-------------------|
| Absenteeism              | 54%              | 32%               | 54%        | 25%               |
| Training and Recruitment | 23%              | 20%               | 24%        |                   |
| Funerals and Travel      | 1%               | 18%               | 10%        | 5%                |
| Medical Costs            | 14%              | 15%               | 12%        | 38%               |
| Other Benefits           | 8%               | 16%               |            | 32%               |
| Total                    | 100%             | 100%              | 100%       | 100%              |

Source: Jones C (1996), Botswana Task Force AIDS Impact estimate (this study)

# 9. Conclusions of the Study

- a) Patterns of sick leave in the five companies suggest that the HIV epidemic is in an early stage in Botswana, with as yet low levels of illness, absenteeism and turnover. This means that there is a good opportunity to introduce effective interventions at an early stage to avoid some of the negative impacts seen in neighbouring countries.
- b) Labour costs in Botswana are relatively low in relation to output. This means that lost time is strongly felt by companies, and also that there is some potential to intervene through the improvement of employee benefits.
- c) The most significant element of the cost of HIV/AIDS is the cost of lost time due to sickness. This result is compatible with the results of similar exercises carried out in other countries. This means that interventions aimed at reducing lost time are most likely to be cost effective.
- d) There is some reason to believe, as a result of the relative magnitude of health costs and the cost of lost time, that intervention in the form of improved medical benefits is likely to be cost effective.
- e) None of the five companies studied currently has explicit policies on how they will deal with HIV/AIDS issues. The cost estimates in this study were very conservative, but they still indicate that the costs of HIV are sufficient to justify intervention. Policies will be needed to manage the health and productivity situation in the near future.

# 10. Suggestions for Interventions

A workshop was organised at the end of the study, where representatives from management and employees of the five companies, in addition to representatives from a number of other interested companies, discussed the results and made a number of recommendations about possible areas of intervention. The recommendations are documented more fully in a separate report of the workshop. They were grouped into four main categories:

### a. HIV Prevention

### i. Information

Companies could provide more information on the modes of transmission of HIV, and on the correct use of condoms. This needs to be done regularly, on a sustained basis rather than as a one-off exercise.

### ii. Peer Education

There is considerable value in establishing a system of regular peer education to help change employee attitudes to sex. This could follow the example of successful schemes in a number of companies in Botswana and elsewhere. The media used should include videos, cartoons, songs and T-shirts.

### iii. STD Treatment and Diagnosis

Companies need to facilitate access for their employees to treatment for sexually transmitted diseases (STDs). For larger companies, this could be done through the establishment of a clinic in the workplace.

Employees also need information about when to seek STD treatment - i.e. they need to understand how STDs are manifested, and what symptoms they should regard as serious.

# b. Health Management

An important contribution can be made through the management of ill health. This can be done by ensuring that effective health care is easily and quickly accessible to all employees, either by promoting the medical aid system, or by providing direct access to medically trained personnel. Specific suggestions included the following:

### Education

Education provided to employees should include information about reproductive health generally.

### ii. Counselling

Employees should be given access to counselling services. This should include counselling about the use of available benefits, as well as on how to live positively with HIV for those who are already infected.

### iii. Extend Medical Aid Coverage

One suggestion was that companies could increase their 50% contribution to medical aid schemes to 75% or more for lower paid employees, in order to provide more incentive for participation. They could also consider making participation in medical aid schemes a compulsory condition of employment. This must be combined with adequate counselling to persuade employees of the benefit to themselves.

A further suggestion was the provision of a group medical service to help spread the costs of medical aid schemes. Larger companies may find it cost effective to establish their own facilities, or to share facilities with other companies in the same location.

### iv. Support Home-Based Care

While it is not feasible for companies to be directly involved in medical care, it was suggested that companies could contribute to organisations that promote and support home based care in the communities.

# c. Employee Benefits

The demands on company medical and benefit schemes will increase in future as a result of HIV/AIDS if workers are to be adequately covered. There should be some counselling of employees about the benefit schemes to encourage them to engage in long term personal planning. Specific suggestions included the following:

### i. Pensions

It was universally felt that companies should provide all employees with pensions or provident fund schemes to encourage long term security for dependants. Such schemes could even be made compulsory.

In addition, the structure, design and management of pension funds will need to be carefully examined in order to provide packages to meet the current and future needs as the HIV/AIDS epidemic evolves.

### ii. Housing

Employee housing security could be improved by providing employees with a group housing benefit.

### iii. Funerals

It was felt that company contributions to funeral costs would significantly ease the financial problems of the dependants of those who die in service.

### d. Human Resources

Human resource issues are dealt with in detail in the separate workshop report. A brief summary is given below:

### i. Lost Working Time

Lost work time due to sick leave and absenteeism will be the largest component of cost in the future. One approach to this is to allow for such losses by recruiting and training surplus labour. This is consistent with a policy of redeployment and multiskilling as followed by some of the five companies.

### ii. Productivity and Stress

Improvements in health management as outlined above, and the reduction of employee stress would lead to significant improvements in productivity, and an increase in the 5-8 year incubation period of HIV.

# iii. Voluntary Openness

It is important to move away from an atmosphere of secrecy about HIV, and a fear of discrimination. Employees will need to feel confident that disclosure of their HIV status will be helpful to them, rather than prejudice their chances of continued employment and of providing for their dependants.

Larger companies could probably benefit from the formal adoption of a company policy on AIDS that incorporates the Botswana code on AIDS and Employment. The public demonstration of management commitment to non-discrimination would encourage openness about ill health, including HIV and AIDS.