

Company level Interventions on HIV/AIDS:

2: Assessing the impact of AIDS

The information below has been compiled from a range of sources to inform company level analysis. In particular, input has been drawn from literature and tripartite review by the OATUU HSEP, from the Malawi JSI/STAFH project analyses of cost implications of HIV/ AIDS in Malawi. Further information has been drawn from AIDSTECH/FHI analyses of economic impact, from the Bead Group, and from a range of publications referenced at the end of this text. Publications referred to are available from the OATUU HSEP.

This guideline is prepared as a support to companies wishing to carry out assessment of the impact of AIDS in order to identify cost benefit motivations for prevention and to highlight areas for interventions aimed at managing the impact of AIDS. Company application of the specific aspects of the framework provided below will depend on the nature of the enterprise, its operations, employment pattern and benefits provision, the specific areas of concern and the availability of data. It is also intended that this step of impact assessment and areas of vulnerability to HIV/AIDS be part of a bipartite process of assessment, planning, intervention and review that addresses health needs at workplace. This broader process is outlined in a separate document "A guide to company level action on health and HIV/AIDS".

1. What is our risk?

Susceptibility is the clustering of characteristics that enables the HIV virus to be more easily transmitted. Identifying susceptibility provides information on how companies can act to prevent HIV, in addition to prevention programmes such as raising awareness, condom distribution and control of communicable diseases, especially STD and TB. Companies would thus want to answer the question: *"Are there characteristics of this company that increase the risk of management and/or workers getting HIV/AIDS?"*

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HIV/AIDS is not generally spread in the course of work. HIV spreads through contact between body fluids, especially blood, seminal and vaginal fluids. Occupations where there is possible contact with body fluids carry a risk of HIV unless exposure is controlled. This includes health workers, hygiene workers, first aiders, laboratory workers dealing with human specimens. The checklist below shows factors that increase susceptibility of management and workers that will give a company rating of susceptibility. Tick the features that apply to your company:

CHARACTERISTIC	PRESENT?
Location of workplace	
Workplace located on major trading / transport routes	
Urban location of workplace	
Geographical isolation of workplaces	
Location of workplaces in very poor areas (including surrounding high female unemployment)	
Type of work and employment	
Occupational contact with body fluids	
Occupational risk of TB (eg: dusty occupations)	
Travel for work related purposes (mobile workers)	
Employment separating workers from families (migrancy, night shift work)	
Educated employees	
High income / professional employees	
Seasonal / insecure employment contracts	
Working conditions / industrial relations	
Poor housing security in employees	
Reduced sick leave and medical benefits provisions for Sexually Transmitted diseases (STDs rated as self inflicted illnesses)	
Poor access to health services	
Gender discrimination at work / in employment	
Poor control of sexual harassment	

Score one point each tick. Locate your total with an X in the line below:

0 **8** **16**

lowest susceptibility **highest susceptibility**

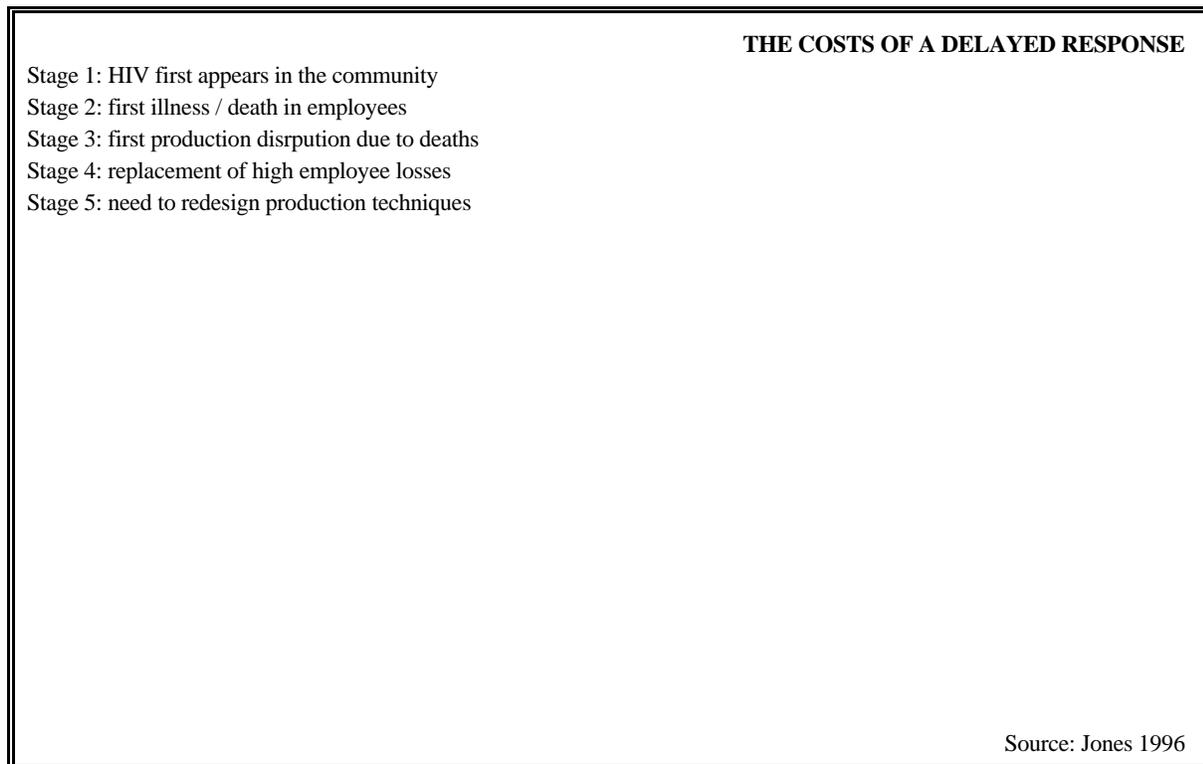
The closer to 16 the more the company is an environment where HIV is likely to spread. In these companies HIV levels may be higher than the national average for the age employed.

Companies can discuss actions to reduce or control these factors. They can also take measures to make people aware of the increased risk of HIV they face because of the characteristics of their employment. They can also take steps to ensure that employees exposed to high risk situations such as high levels of mobility are provided with the means to minimise the risk of infection including information, condoms and adequate accommodation.

2.How will AIDS affect us?

Vulnerability to HIV/AIDS reflects the extent to which AIDS will have an impact, whether on the individual, household, company or other levels. The costs of AIDS will be social and economic. Many of the social and psychological costs will be difficult to measure. Quantitative assessments thus give an indication but not a full measure of the impact of AIDS.

Companies can assess the impact of AIDS on the organisation and thus take measures to mitigate this impact. The earlier the company takes action, the less the costs of the epidemic and the greater the cost benefit of the interventions. This is shown in Figure 2.1 below.



AIDS will mainly lead to
-lost labour (quality and quantity) and
-increased consumption/ declining income, and
-reduced savings.

The impact will depend on
i.the production process, in terms of its inputs, process, outputs and product delivery and markets;
ii.the employment pattern and labour value added (top management downwards)
iii.the benefits and health provisions

iv.the savings and investment resources

2.1 The Production process

Analyse the business, its major activities, its turnover, its sales earnings, gross and net operating profit and the major categories of expenditure (e.g raw materials, fuel, rent). The impact on production may arise in the inputs, process, outputs and product delivery and markets.

THE INPUTS

Key resource, service, financial and infrastructural inputs

Possible constraints that may arise due to HIV/AIDS in inputs

THE PRODUCTION PROCESS

The stages of production and their resource requirements, particularly skills /human resource inputs

Key production stages, techniques or skills - critical process steps and stress points

Division / integration of tasks / flexibility / rigidity of functions

Locus of decision making and quality control in the process

Management structure

Accident / breakdown rate in the process

THE PRODUCT DELIVERY

Mechanisms of product delivery and their resource requirements, particularly skills /human resource inputs

THE MARKET

The nature of the market for the business products

Possible demands / constraints that may arise due to HIV/AIDS in markets

This will tell you qualitatively where loss of people (management and labour) might have an impact in and beyond the company. The company will also be affected by:

- susceptibility, HIV levels, sexual patterns and perception of risk in the surrounding community
- provision and costs of health services
- coverage by national social security safety nets
- public sector supported skills development programmes / subsidies
- availability of savings mechanisms to support consumption needs.

The cost of this impact is a sum of

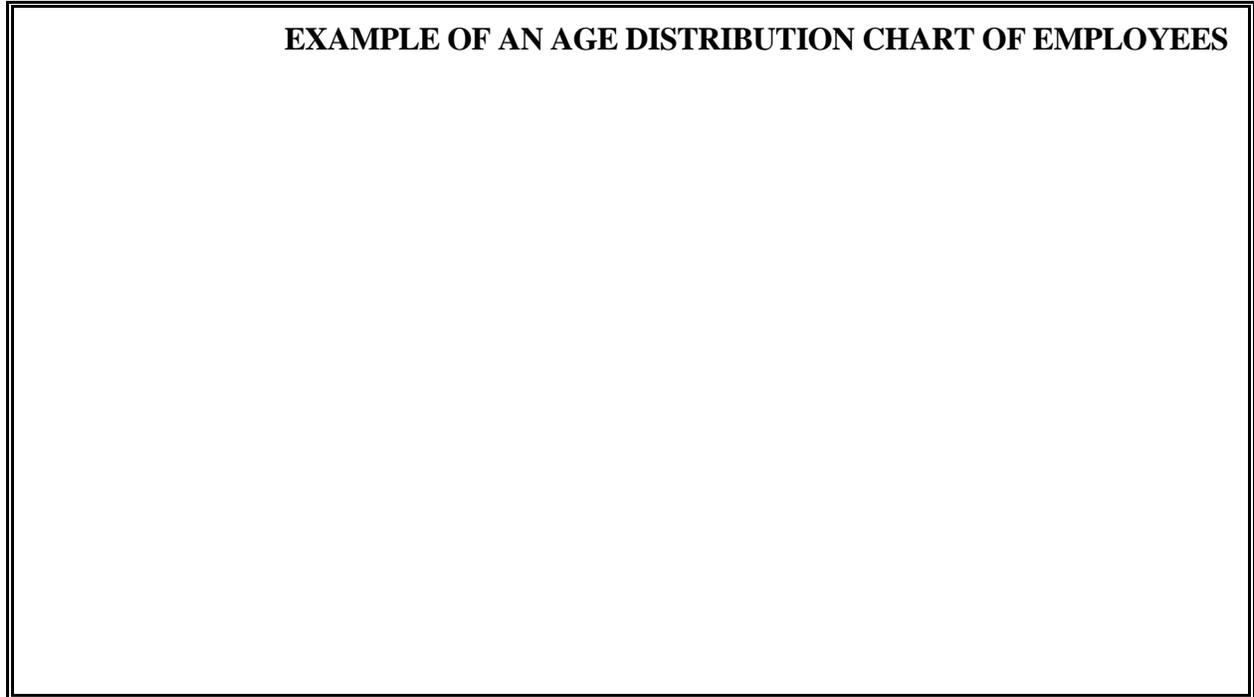
- i. The labour value added losses due to lost labour time*
- ii. The costs to the company of funerals (grants, coffins, transport etc)*
- iii. The direct medical costs*
- iv. The death, retirement and invalidity benefits*
- v. The costs of replacement of health related labour losses - training and recruitment*

This can be calculated from the most recent 12 month data available.

Lost labour time (Absence from work)

To quantify the cost of lost labour time on the company:

1:Identify the labour force patterns by division, age, sex and grade



2:Identify the labour value added per person day (by division and grade)²

3:Identify the causes and calculate the days of lost labour time due to absence from work (by cause, by division and by grade)

4:Calculate the total value added losses as a product of the total lost time and the value added per person day.

5:Add to this the costs of sick leave pay.

²Labour value added is that portion of profit attributable to employees (attributable profit)

The attributable profit = wage (employment) costs / total costs = (A)

The labour value added = (A) x total profit = (B)

The labour value added per day = (B) / total employee days = (C)

The Value of absence = Total days absence x (C)

A second approach to value absence is to use the total employment cost per day. Total employment costs includes salary plus pension contributions, bonuses, overtime)

Employee cost per employee day = Total annual employment cost / employee days per year = (D)

The value of absence = Total days absence x (D)

What proportion of this

is due to health causes? To assess this in (c) use health related causes (sickness, funeral, compassionate leave).

What proportion of this

is due to HIV/AIDS? This requires an assessment of what proportion of each type of leave is due to HIV related causes. How is such an assessment calculated?

Time trends (1990-1995) in absence rates by age and by cause of leave indicate possible contributions of HIV to these rates.

Health staff can provide an assessment of what proportion of sick leave they estimate to be HIV related

The proportion of compassionate leave time related to HIV can be estimated by the department handling these leave applications

HIV/AIDS data in the surrounding community can be used to project these proportions

A qualitative estimate can be used

*100% - All of the lost time / costs are HIV related

*75% - Most of the lost time / costs are HIV related

*50% - The lost time / costs have several components including HIV

*25% - Little of the lost time / costs are HIV related

The costs of funerals

Funeral costs are the sum of company payments (for employees and their dependants) for funeral grants, coffins, provision of transport, food etc, and other support provided.

What proportion of this

is due to health causes? It would be assumed that 100% of this is due to health causes.

What proportion of this

is due to HIV/AIDS? This requires an assessment of what proportion of deaths in service are HIV related. To address this the pattern of employee death can be plotted by age and over time (1990-1995). (ie: Figure with number of deaths by age group by year). This indicates not only a change in this pattern, which may show an HIV related increase with a particular increase in the 30-45 year age group. The pattern of death rate by salary / grade may also show in which levels the death is taking place.

Direct medical costs

For companies which provide medical facilities, the medical costs include all costs of providing medical facilities:

- the wages paid to medical personnel;
- the purchase of drugs and other medical supplies;
- medical tests carried out
- in patient costs (accommodation, food, services)
- vehicle maintenance and running costs;
- building maintenance and running costs;

The sum of the costs of these services is the total medical cost.

For companies which do not provide medical facilities but cover employee through a medical insurance scheme. The medical cost is the total of contributions paid by the employee and the employer for this scheme.

Some companies may provide a mix of services, contracted out and paid for through medical insurance and in house primary care. The costs would be a sum of the two sets of costs.

What proportion of this is

due to health causes? You could assume that 100% of this is due to health causes.

What proportion of this

is due to HIV/AIDS? For companies providing medical facilities, this requires an assessment of what proportion of illness attendance costs are HIV related. To address this the pattern of health facility attendance can be plotted by age and over time (1990-1995) for employees, and their dependents. (ie: Figure with number of attendances by age group by year). This indicates not only a change in this pattern, which may show an HIV related increase with a particular increase in the 20-45 year age group. The pattern of facility attendances by salary / grade may also show in which levels illness is taking place. Health staff can provide an assessment of what proportion of illness attendance they estimate to be HIV related. The proportion may then be applied to total medical costs.

For medical insurance schemes the costs are constant to the company regardless of the extent of employee morbidity. Changes may be plotted in the real contribution rates over time and a proportion of these changes may be attributed to HIV/AIDS. This proportion would depend on the judgement of the relative contribution other possible causes of increases in contributions.

Note whether an increase in HIV related attendances was not associated with a change (possible decrease) in attendances due to other illnesses or in other age groups. The cost implications of this change would also need to be included.

Costs of benefits

The legal agreements / policy / benefits rules can be used to obtain levels of contributions and benefits for (disaggregated if relevant by age, sex, grade)

- +retirement benefits
- +survivor benefits
- +death in service and life assurance benefits
- +invalidity benefits
- +other benefits: (e.g education for dependents, housing)

Plot the change over time in different benefit types by age, division and grade.

For benefits schemes that are contracted out, the costs are constant to the company regardless of the extent of employee morbidity and mortality and the risk is borne by the scheme. Changes in contribution rates or benefits structures over time may in part or total be attributed to HIV/AIDS. This proportion would depend on the judgement of the relative contribution other possible causes of increases in contributions.

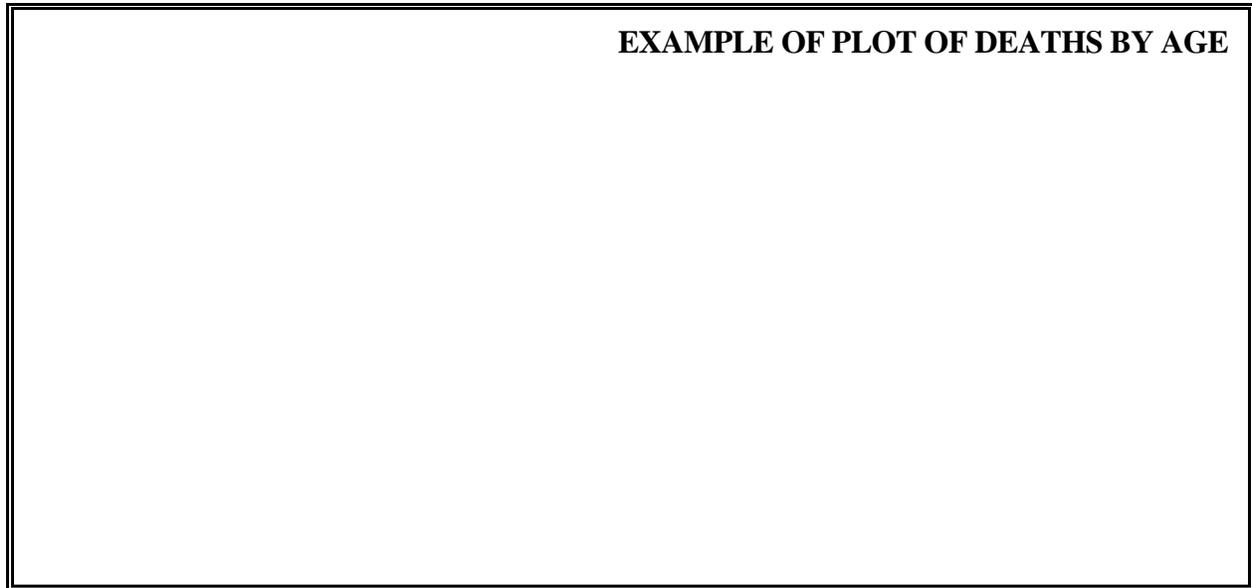
Retirement pension and provident fund payments are not affected by AIDS. In house benefits schemes will need to compute the sum of the death, invalidity, ill health retirement and survivor payments, as the excess cost of the benefit relative to the actuarial reserve accumulated (or to the amount that would have been paid out on normal retirement age with a five year survivor period). The proportion of this sum attributable to HIV/AIDS would need to be estimated and the proportion applied to the total cost. It would be important to note whether an increase in HIV related benefits was associated with a change (possible decrease) in other benefits that would be accumulated in other age groups. The cost implications of this change would also need to be included.

EXAMPLE OF CHART OF DEATH / ILL HEALTH RETIREMENT OVER TIME

Replacing lost labour

Analyze the rate of employee turnover by cause

- death
 - normal retirement
 - ill-health retirement
 - resignation
 - termination on medical grounds
 - termination due to occupational injury / fatality
 - other;
- by operating unit, grade, age and sex.



What proportion of this

is due to health causes?

The proportion of total terminations due to death, ill health retirement, on medical grounds and due to occupational injury are health related. Resignations may be health related but cannot be calculated in as this cannot be ascertained.

What proportion of this

is due to HIV/AIDS?

This requires an assessment of the proportion of the health related termination that are HIV related. The proportions of illness and death estimated in earlier costings could be applied here.

This turnover implies costs of recruitment and training of lost labour. Obtain total training costs by operating section and grade (if not compiled covering the costs of the trainer and the employee time, materials, the facilities used, the cost of external training (e.g facilitators' fees, teaching establishment fees). If in service training / induction is carried out include the employee and trainer time, facilities and material costs for this. Obtain costs of recruitment by operating section and grade. These include management and administration time, advertising costs, and other costs associated with recruitment.

Apply the health and HIV related proportions to these costs to ascertain the total replacement costs.

Total costs

Add these component parts to get total costs and express each element as a proportion of the total costs and as a percent of total operating costs.

Item	Costs of ill health		Costs of HIV/AIDS		% total operating costs
	\$	% total	\$	% total	
Lost employee time					
Funerals					
Medical costs					
Employee benefits					
Replacement and training					
Total costs					

Express total health and HIV related costs as a percent of operating turnover and of operating profit (gross and net).

Identify the components where the cost burden is highest. The table below shows the comparison between studies in the region on the relative burden of different areas of HIV related costs to companies:

Description of cost	Zambia 92/93 (%)	Kenya 94 (%)	Malawi (Makandi) 95/96 (%)
Absenteeism	31.8	54.3	25.2
Expatriate employment	12.7	-	-
Medical Service	14.7	12.1	37.8
Funerals	5.1	10.1	4.7
Deaths in service	15.9	-	32.3
Travel	12.5	-	-
Training	7.3	7.9	-
Recruitment		15.7	-
Total	100.0	100.0	100.0

Source: Jones C (1996)

3How will HIV affect us in the future?

The costs in the earlier section are based on HIV infection on the 5-10 year period prior to the year of costing. Eg: A costing based on 1995 data would derive from infection rates in 1985-1990, or a median of 7 years previously. These HIV prevalence rates can be found for the area where the company is located for the period 7 years before the costing. (Use infection rates in the sexually active population based on seroprevalence data from the surveys in Antenatal clinics in the area where the company is based).

Obtain the *current* HIV prevalence rates for the area where the company is located. Apply these rates to the management and employees by division and grade to identify the current estimated prevalence of HIV.

The ratio of current HIV infection rates to HIV infection rates in the 7 year period prior to the current costing estimate may be used to estimate crude projected costs in 5-10 years should all other factors remain equal and without interventions.

4What can we do?

What the company could do depends on

- its current strategic visions for / objectives of company development
- the critical bottlenecks identified in the audit of the production process, the human resources and the health system
- the areas where the cost impact will be high as identified in the impact assessment
- the need to protect employees through benefits schemes and to ensure viability of the schemes.

Management and labour should thus discuss the impact assessment to identify options to prevent and manage AIDS. Some of these options are outlined the third OATUU Guide 3: Preventing and managing HIV/AIDS.

6. References

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