

AIDS Briefs

Integrating HIV/AIDS
into Sectoral Planning

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The Background

Globally, HIV/AIDS is mainly a heterosexually transmitted disease. Because of the distribution of death and illness predominantly among working age adults, HIV/AIDS is affecting and will continue to affect economy and society at all levels from the individual to the macro-economy. The most immediate effects are, of course, felt by the person who becomes sick and then usually by his or her immediate family or household. Between the extremes of the individual and the macro-economy, there are effects on communities, enterprises and economic and social sectors. It is at these middle levels, which include productive sectors, that interventions may be most urgently required.

The Problem

How are we to integrate HIV/AIDS into planning -- nationally, regionally and institutionally? How is this done in practice? The complex and often political and personal nature of the planning process means that we may be concerned as much with effective communications and marketing of ideas as we are with technique.

These AIDS Briefs are one way in which we can integrate HIV/AIDS into projects, plans, programmes and so affect sectors and target groups.

The idea is to tell key individuals that HIV/AIDS is not just about health education but also about issues of susceptibility and vulnerability

Basic Questions

- How does / will / might HIV/AIDS affect x ?
- How do we go about thinking about this?

The AIDS Briefs are an attempt to take these simple questions a little further and provide administrators and managers with a set of checklists for integrating HIV/AIDS into their planning processes.

Sectoral and Other Briefs

Sectors are determined by national accounting conventions which identify (among others):

- AGRICULTURE AND FISHERIES
- MINING AND QUARRYING
- MANUFACTURING
- SERVICES
- RETAILING

However, we can move outside this framework.

Although this set of AIDS Briefs deals with conventional economic sectors or their components, such as Subsistence Agriculture and Commercial Agriculture, an approach through sectors is not the only way to look at the problem. We could also prepare briefs for Tasks, Target Populations (as with the Military in this set), Projects and Programmes.

Basic Questions

- What is it about x that increases susceptibility to infection?
- What is it about x that makes it vulnerable to the impact of excess illness and death?
- How can or might we REDUCE SUSCEPTIBILITY AND VULNERABILITY in x ?

Acknowledgment

The idea of producing a series of briefs for busy programme managers was first introduced by Erik Blas of the WHO Global Programme on AIDS in 1994 and two samples were prepared -- on Commercial and Subsistence Agriculture. In late 1995 as the GPA wound down, to be replaced by UNAIDS, it was decided to produce, at short notice, a further six briefs and to typeset all eight. This was done and the series editors, Erik Blas, Tony Barnett, and Alan Whiteside are grateful to all the people who participated at such short notice.

There can be no doubt that this work has struck a chord among people working in the field, and we have heard that the briefs are being copied and used widely. We were, therefore, delighted by the decision of USAID's Africa Bureau to publish and make these briefs available through the Health and Human Resources Analysis for Africa (HHRAA) project, and Support for Analysis and Research in Africa (SARA). We would like to express our appreciation to USAID. Thanks must also go to the GPA for commissioning the work in the first place and UNAIDS, who technically own the copyright, for their willingness to allow the results to be further disseminated.

These briefs cover eight areas; had there been money and time, we would have included a number of other topics including, transport, construction, finance and the civil service. We hope others might develop their own briefs and amend and adapt these to suit their needs. These briefs represent the first and not the last word on the subject.

Professor Tony Barnett, Mr. Erik Blas, Professor Alan Whiteside

SERIES EDITORS

SECTORS

Commercial Agriculture
Subsistence Agriculture
Education
Health
Manufacturing
Mining
Tourism
Military Populations

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The AIDS Briefs, commissioned by the World Health Organization's Global Programme on AIDS, were compiled and edited by Professor Tony Barnett, University of East Anglia, United Kingdom; Mr. Erik Blas, WHO, Global Programme on AIDS; and Professor Alan Whiteside, University of Natal, South Africa.

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HIV/AIDS is affecting and will continue to affect economies and society at all levels, from the household to the macro-economy. Between these extremes are effects on communities, enterprises, and social and economic sectors. It is at the lower middle levels, which include productive sectors, that the worst effects may be experienced and interventions are most urgently required. The epidemic will affect production in two ways: firstly, increased morbidity (illness) and mortality (death) among workers; secondly, changes in earning capacity and the pattern of expenditure. People may earn less and divert their incomes from consumption and savings to health care.

This series of AIDS briefs examines key economic sectors; identifies their vulnerability; and provides policy makers, programmers, the private sector and donors with guidelines indicating broad areas of response. It should be remembered that the impact will vary between countries and within countries depending on local circumstances and conditions. There is at present only limited or no empirical evidence of the impact of the epidemic. Thus these AIDS briefs point to what is currently known and what may happen.

Background

Commercial agriculture is defined, for this AIDS brief, as farming in which the output is sold commercially, inputs are purchased, there is mechanisation, and labour is employed. This includes both estates and large family farms.

The commercial agricultural sector is of considerable importance in most developing countries. It is a major source of exports and foreign exchange earnings. It provides food to urban populations, and permanent and seasonal formal sector employment.

Key Elements

Labour

The first impact of the HIV epidemic will be felt in the labour force. Typically a person is infected in his or her late teens or twenties. Once a person is infected with the virus it may take five years or more before the individual experiences illness. Episodes of sickness will increase in frequency, duration and severity until the person is incapacitated. A person may live for one to two years after the first period of illness. The period of healthy life can be extended by early and appropriate health care and support. The age of persons developing AIDS is



Checklist

☐ Vulnerability to HIV Spread

- ☐ Large concentration of workers (single sex)
- ☐ Migrant/seasonal workers
- ☐ Multiple sex partners
- ☐ High level of alcohol consumption
- ☐ High levels of STIs among workers
- ☐ Drug usage prevalent
- ☐ Transport workers and transit points
- ☐ Low status of women

☐ Vulnerability to the Impact

- ☐ Does farming depend on skilled workers, experts, etc.?
- ☐ Does farming depend on experienced staff?
- ☐ Does the enterprise provide generous benefits: medical care, housing, etc.?
- ☐ Does farming depend on attracting capital, e.g. direct investment, loans, etc.?
- ☐ Is the enterprise located in an area with high levels of HIV-prevalence, etc.?

☐ Prevention

Give workers access to:

- ☐ Affordable, quality condoms
- ☐ Education on safer sexual behaviour
- ☐ Affordable (free) and effective diagnosis and treatment of STIs
- ☐ Access to safe free-time activity

☐ What Can Be Done

- ☐ Reduce unsafe behaviour
- ☐ Address other risk factors
- ☐ Provide health care and social services
- ☐ Broaden recruitment, training and promotion base

significant, as typically they will have received education and training and be gaining experience in the workplace (investment in human capital). They will also have families and so will leave orphaned children.

The effect of AIDS will be felt in:

- **Productivity:** The illness and premature death of employees will affect productivity through absenteeism, replacement of skilled and experienced workers with less skilled or experienced people, and a decline in the overall health of the labour force. Employees will take sick leave (paid and unpaid) and annual leave before being discharged.
- **Employee benefits:** These vary between enterprises, but in larger firms may include medical care, pensions, insurance, housing, and death benefits.
- **Replacement costs:** These will vary with the skill level and availability of replacement labour. It is often, initially, the most highly paid/skilled workers

who have the most unsafe sexual behaviour and who may be difficult and expensive to replace (the cost of replacing senior staff is estimated at 30% to 100% of annual salary).

- **Staff morale:** The loss of colleagues, increased workloads, and uncertainty as to their own sero-status may adversely affect staff morale.

Capital

Capital is essential for continuation and expansion of productive activity. Working capital is needed to cover the cost of seed, fertiliser, machinery, and other assets. Expansion of activities requires investment (fixed capital). If capital is raised from past profits, the diversion of funds to care may reduce this; if raised from outside investors, high HIV prevalence may reduce the perceived profitability and attractiveness of the firm.

Sectoral Response

Where enterprises have responded they have begun by assessing the problem: estimating the state of the epidemic, projecting its spread, and establishing risk factors which are particular to the sector or the individual enterprise.

The next step is to locate areas of vulnerability and develop plans for dealing with them. For example, if skilled labour is scarce then additional workers can be

recruited; if medical costs are likely to escalate then a treatment code can be drawn up and cost effective home-based care can be explored. Above all, every effort should be made to reduce the spread of the virus. The problem is a new one: no one is quite sure how it will affect any sector yet. It is certain to have an impact, the response will be costly, but not doing anything would be even more costly.

Reducing Vulnerability to the Spread of the Epidemic

The key to reducing vulnerability to the spread of the epidemic is to change behaviour. This means reducing the number of partners and encouraging condom use. Thus all enterprises should provide education and condoms. Help can be sought from professionals, including national AIDS control programmes, donor organisa-

tions, NGOs and private companies. The enterprise must also establish if they have work or cultural practices that facilitate the spread of HIV. Do they employ seasonal workers away from their families; are employees required to travel as part of their employment? If so, what can be done?

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HIV/AIDS is affecting and will continue to affect economies and society at all levels from the individual to the macro-economy. The most immediate effects are, of course, felt by the person who becomes sick, and then usually by his or her immediate family or household. Between the extremes of the individual and the macro-economy there are also effects on communities, enterprises and economic and social

sectors. It is at these middle levels, which include productive sectors, that interventions may be most urgently required.

This AIDS Brief endeavours to provide some ideas as to how the productive sector of subsistence agriculture may be affected and what types of response may be required.

Background

HIV/AIDS is predominantly a sexually transmitted disease. By affecting the sexually active it affects the most productive cohorts of a population (broadly speaking those aged 15 to 50 years of age). In the subsistence agricultural sector, labour is one of the main productive resources. Subsistence agriculture is of considerable importance in most low income countries because as much as 60% of the total population may depend upon it. Even though the specific level of national dependence

varies, subsistence households are usually relatively poor and may be marginalised in ways that result in their being overlooked by planners and policy makers - for example they may be geographically remote. In planning for the impact of HIV/AIDS on these populations, we are concerned with issues of food security, the point of interface between domestic and farm labour, and existing household and community coping mechanisms and their response to increased illness and deaths.

Definition

Subsistence agriculture describes farming and associated activities which together form a livelihood strategy where the main output is consumed directly by the household, where there are few if any purchased inputs and where only a minor proportion of output is marketed. The following features of the subsistence sector are important and should be borne in mind when planning for the impact of HIV/AIDS:

1. in contrast to commercial farming, where the organisation and running of the farm often approximate a business, subsistence farming is characterised by a very close relationship between the general activities of the household (for example child care and child rearing, recreation, support relations between adult members, home maintenance, food processing) and the production of crops and care of animals to feed that household;
2. while we may talk as though there is a "subsistence" sector, there are probably few people in the world today who are entirely self-provisioning and whose household-farming activities do not bring

them into contact with the wider economy and society (for example, through marketing some of their farm produce or household handicrafts, purchasing inputs and consumer goods, paying taxes, going to work for wages on an occasional or regular basis for shorter or longer periods);

3. it may be better to speak of a range of "rural livelihood strategies" which enable rural people to combine a number of activities - the work of the home, the work of the farm, activities entered into outside of the home and farm but within the local community (such as provision of craft skills to other local households), activities entered into outside the local community (labour migration, long distance trading) - into a livelihood strategy which enables individuals and households to "provision" themselves. This being the case, then it must be noted that:
 - many of these points of interaction between the subsistence household and the wider economy and society may provide conduits for the spread of infection into or out of local communities; and

- the impact of HIV/AIDS-related illness or death will not only affect labour inputs to “farm” production, but will also affect the balance of labour available to

the household and the farm considered as one entity - the “domestic-farm interface” which was referred to above.

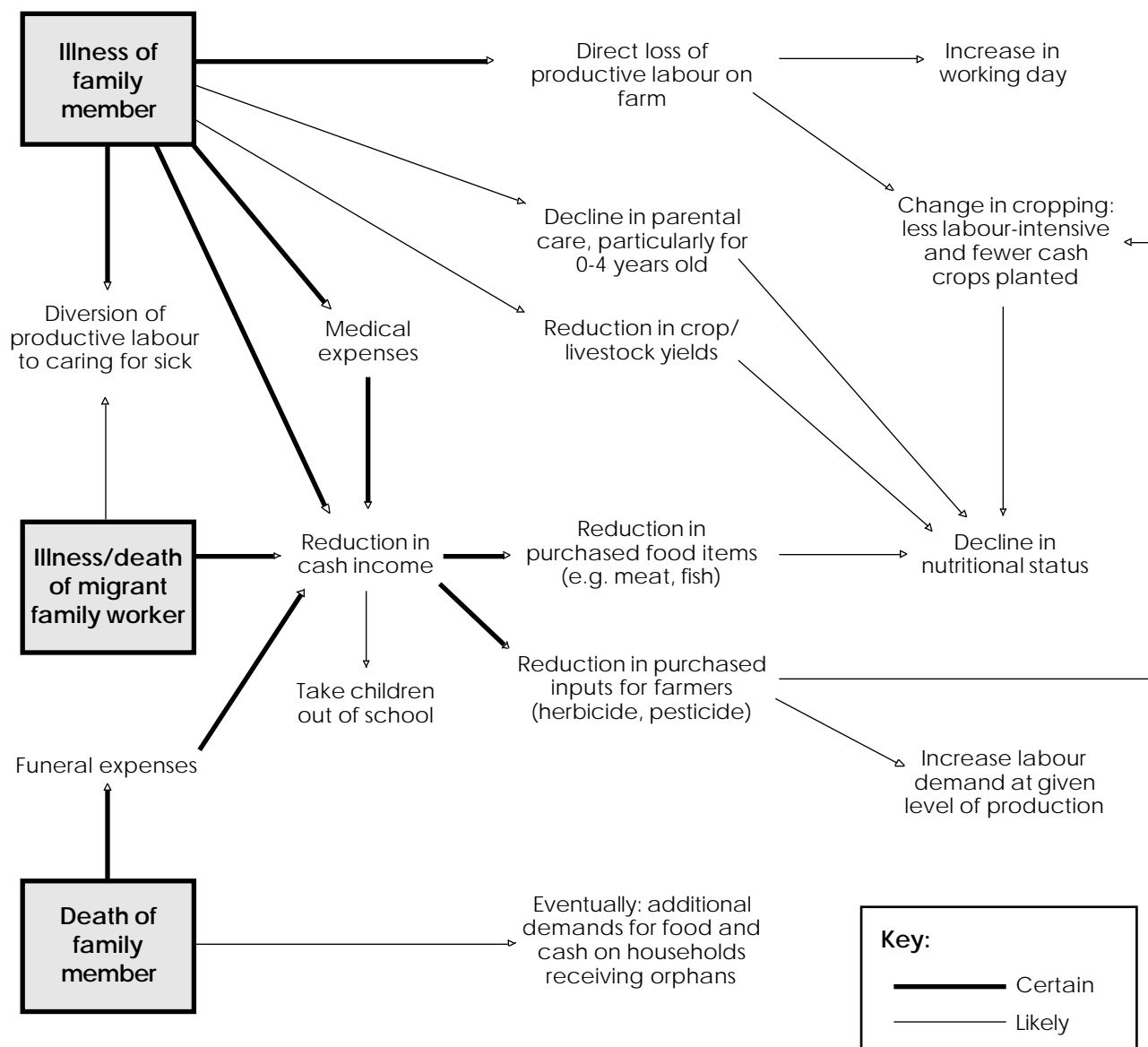
Key Elements

Labour

Subsistence production depends very heavily on human labour. Thus the social and economic impact of the epidemic on households and communities focuses on points

where domestic or farm labour supply may come under pressure. Diagram 1 shows some of the ways that HIV/AIDS may affect a subsistence household. In indicating some of the places where labour constraints may become

Diagram 1 The impact of HIV/AIDS on the household domestic-farm labour interface in subsistence communities



apparent, it also suggests areas where interventions may be appropriate and necessary - for example, pressure on a woman to nurse a sick household member may force her to make a choice between bringing another bucket of clean water for her children to drink, washing soiled bed sheets, or pruning a cash-crop one more time to ensure a good yield. Each arrow in Diagram 1 is a point at which interventions may be necessary and/or possible. As the epidemic takes hold, so the pressure on the interface between farm and domestic work becomes greater.

At each of these points, it may be possible to develop policy responses to relieve that pressure. For example, less time-consuming access to clean water may have a marked effect on the amount of time a woman has for other activities in the home, so piped water supply or improvement of a closer supply, either of which would cut down the time spent fetching water from a distant source, may help maintain standards of child care, crop and/or animal care, and household maintenance.

Climate

Labour is often a critical constraint in subsistence production, and its criticality may be closely related to climate. Where rainfall is seasonal, demand for labour is likely to be concentrated into short periods of a few months, or even (in very dry places) a few weeks. Death and illness reduce labour availability both directly through affecting productive members of the household, and indirectly through diverting labour to caring for the sick.

Both of these effects mean that during the rainy period - a period of high labour demand for land preparation, sowing and weeding - labour demand for farm work may remain unmet as urgent domestic tasks are forced to take precedence. In places where rainfall is more evenly spread through the year, demand for labour will not be so peaked, and it is probable that the impact of illness and death on the domestic-farm labour interface will initially be less intense, as the more even spread of labour demand over the year permits coping mechanisms (occasional assistance from relatives and neighbours, longer working hours, hiring labour) to come into operation.

Even so, evidence from high rainfall areas in Africa indicate that as the epidemic takes hold and the numbers of ill people and deaths in individual households become greater, there will increasingly be effective shortages of labour in some households. Thus, while rural livelihood systems in areas of low and markedly seasonal rainfall are most likely to be sensitive to epidemic-related labour loss, even in high rainfall areas HIV/AIDS can have marked impacts on the domestic-farm labour economy.

Farming System

In any rural livelihood strategy, the particular farming system is a major factor in determining the degree of stress which the epidemic will place on the domestic-farm economy.

It is possible to classify farming systems roughly in terms of their relative vulnerability to loss of labour. Different combinations of rainfall regime, soil type, and consequent extensive or restricted crop ranges, will be factors in determining a farming system's vulnerability to HIV/AIDS impact.

Diagram 2 provides an outline method for categorising different farming systems in terms of relative vulnerability. This method can be adapted to local circumstances and data availability.

Livelihood strategies and vulnerability

The particular livelihood strategies (of which subsistence farming forms one component) practised in a community, may have a role in increasing vulnerability both to the epidemic itself and to its later impacts. Some examples are presented below to illustrate these points:

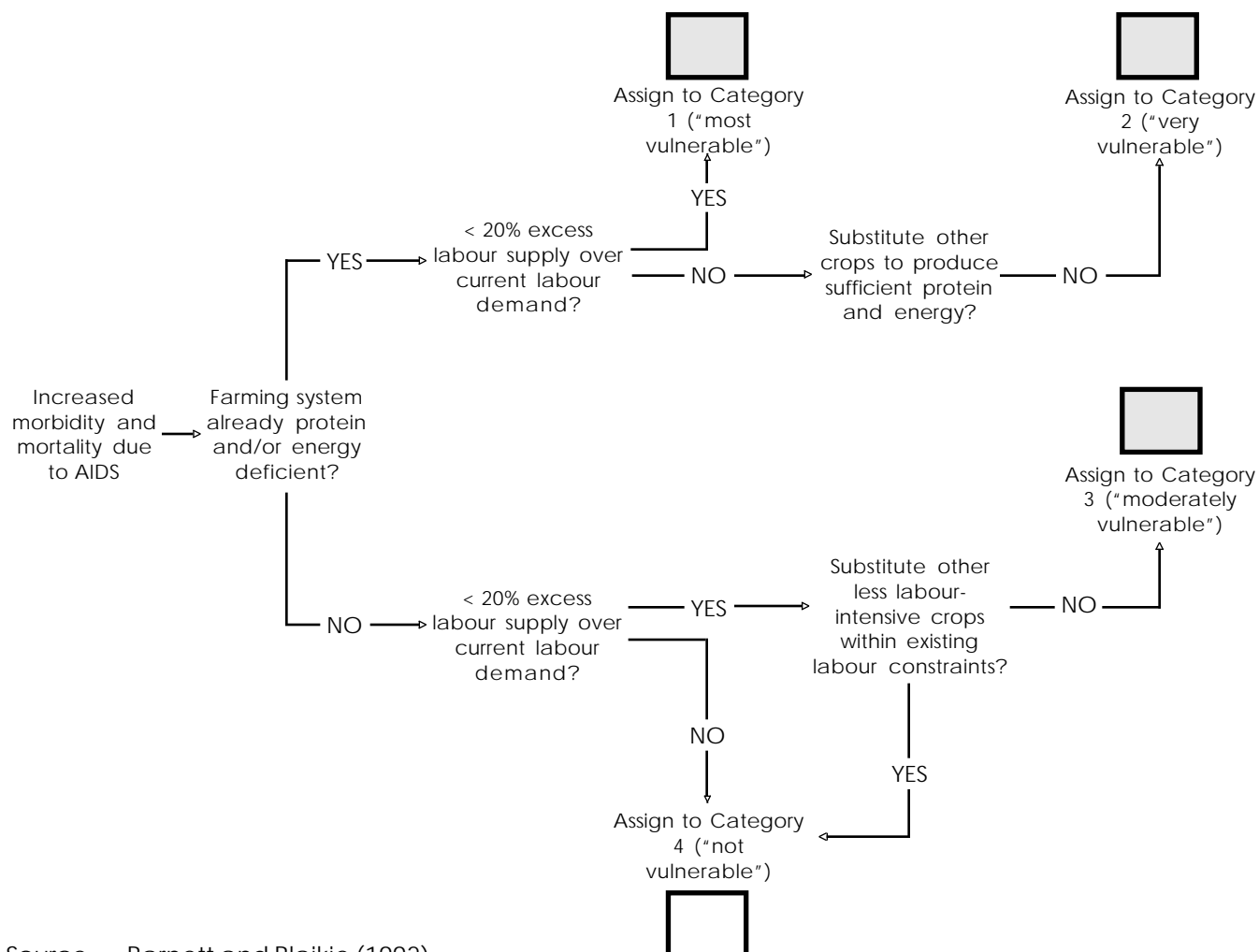
- **Vulnerability to infection:** in some places it is quite common for people to spend some periods each year as labour migrants to large commercial farms or to urban areas. The inability of rural households to provision themselves without this additional income thus exposes the men and women to infection and the household and the community to the longer term social and economic effects of their resulting illness and subsequent deaths.

In cultures where marriages are typically unstable, rates of infection are probably higher than among groups in the same country where marriages are of longer duration.

- **Vulnerability to impact:** in parts of the world where nuclear households are the norm and supportive links between such households are limited, death and illness are likely to have a more marked effect on food production, child care, make-up of diet, ability to send children to school, and care of orphans, than is the case in parts of the world where larger households or high levels of household interdependence are the norm.

Even so, research suggests that when the epidemic becomes very intense, the levels of illness and death rapidly affects the ability of quite large domestic units to provision and care for themselves. Thus, existing coping mechanisms cease to cope when excess illness and death reaches such levels as have been seen in some rural communities affected by HIV/AIDS.

Diagram 2 An algorithm for classifying the vulnerability of farming systems to loss of labour



Source: Barnett and Blaikie (1992)

Sectoral Response

Current research indicates that the impact of the epidemic may vary markedly between (a) quite small areas within regions, and (b) at least in the early stages, between wealthier and poorer households in the same community, as the former have more resources with which to cope. At national and regional levels it may be advisable to classify farming systems in terms of their relative vulnerability (see above), examine the relative rates of HIV infection (usually available in some form from the medical authorities), and combine the two sets of information so as to prioritise the types and areas of subsistence agriculture in which economic life might be earliest and latest affected.

This exercise, preferably undertaken before the epidemic has become widespread, provides a framework for both immediate and later intervention. Interventions

may include: development of labour-economising production technologies (such as intercropping, new varieties, hand tillers); labour-economising domestic technologies (such as hullers, improved storage, better access to clean water), support for orphaned children and care of the elderly whose adult children have died; inclusion of clear HIV/AIDS information in extension material and training of extension workers; and planning of rural development projects so as to take account of HIV/AIDS impact and consequent recognition that while labour may not be a constraint in the sector now, it may become a constraint in the medium term. In some communities, the impact may be so great that food aid to an area becomes necessary for some years in order to permit communities and households to recover and cope on their own again.

Checklist

☐ **Vulnerability to spread of HIV**

- ☐ multiple sexual partners
- ☐ migration for wage work
- ☐ high alcohol consumption
- ☐ proximity to transport or trading centres
- ☐ frequent interactions with market centres
- ☐ low status and limited economic independence of women
- ☐ physically damaging sexual practices
- ☐ widespread exchange of cash or favours for sexual services

☐ **Vulnerability to impact**

- ☐ dry climate
- ☐ limited range of crops
- ☐ marked labour peaks in the agricultural cycle
- ☐ labour-intensive processes
- ☐ absence of tradition of labour exchange between households
- ☐ existing pressures on the domestic-farm interface
- ☐ limited substitutability between existing labour-intensive and less labour-demanding crops
- ☐ food surpluses already low
- ☐ limited opportunities for off-farm income
- ☐ insecure land tenure

☐ **Prevention**

- ☐ access to affordable condoms
- ☐ installation of latrines (for discreet disposal of condoms)
- ☐ education on safer sex
- ☐ affordable, available, effective diagnosis/treatment of STIs
- ☐ access to safe non-sexual recreations - particularly for adolescents

- ☐ increase economic independence of women
- ☐ reduce alcohol consumption
- ☐ increase locally generated incomes, reduce migration
- ☐ integrate sex education with agricultural extension
- ☐ develop support groups for women and men to discuss problems of sexual health
- ☐ integrate information on the longer term impacts of HIV/AIDS on household income and welfare into extension programmes

☐ **Responses**

- ☐ classify farming systems in terms of potential vulnerability to increased illness and death
- ☐ explore labour-economising crop varieties
- ☐ explore labour-economising cultivation practices - e.g. development and improvement of existing inter-crops
- ☐ encourage labour exchanges between households
- ☐ explore ways of reducing women's work burden - for example labour-economising methods of food preparation, water supply, fuel supplies
- ☐ explore simple labour-saving cultivation technologies - e.g. hand tillers, draught animals
- ☐ explore ways of reducing post-harvest losses
- ☐ encourage use of bicycles for local marketing purposes
- ☐ introduce and improve poultry and small stock appropriate to local culture, to improve diets
- ☐ use paddocking for larger stock as a way of economising on labour used in herding
- ☐ ensure that orphaned children receive adequate education in local farming techniques
- ☐ review land tenure arrangements to protect the occupancy and inheritance rights of widows and orphaned children

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The most immediate effects are, of course, felt by the person who becomes sick, and then usually by his or her immediate family or household. Between the extremes of the individual and the macro-economy there are also effects on communities, enterprises and economic and social sectors. It is at these middle levels, which include both productive and service sectors, that interventions may be most urgently required. This AIDS Brief endeavours to provide some ideas as to how the educational sector may be affected and what types of response are required.

Background

Education (or human capital development) is critical for both economic growth and development. Evidence from the developing world shows that initially universal primary education will contribute strongly to growth. As economic growth continues so the importance of secondary, then higher level education, particularly of a technical and vocational nature, will increase. Education has many other positive developmental effects; the more education girls have, the lower the rates of infant and child mortality and the better the general health and nutritional status of families will be. Education is of particular importance in increasing life chances for the most disadvantaged sectors of any population, including girls and women. The education sector is usually the major employer of public sector staff and it receives the largest share of government revenue in a country. Because of its size, the status of teachers and the contact with young people, the education sector has an important role in responding to the AIDS epidemic.

In this AIDS Brief "education" includes school and out-of-school teaching-learning activities, from early childhood (including day care) to adulthood (including adult literacy programmes). It also includes post-school learning in universities, colleges and apprenticeships.

Key Elements

The impact of the AIDS epidemic on individuals, families, and communities at the micro-level of society can be immense. People fall ill, cannot work, and lose income. Their families spend money on care and treatment and lose further income in acting as carers. Traditional support systems are stretched and broken; families and communities lose their economic, social, and cultural viability.



Checklist

- ☐ Does the education system recognise the effect of the HIV/AIDS epidemic and its particular responsibilities?

Changing demand:

- ☐ Have actual numbers of school-age children declined?
- ☐ Will projected numbers decline?
- ☐ Are there financial demands (fees, uniforms etc.) that will keep children out of school?
- ☐ Is children's labour required at home? At peak period for agriculture?
- ☐ Are girls more likely to be pulled out of school?
- ☐ Can/should special provision be made for orphans?

Changing supply:

- ☐ Are teachers posted away from home?
- ☐ Is the education system planning for staff illness?
- ☐ Is it planning for increased death?
- ☐ Will quality and experience of teachers decline?
- ☐ Will funding from the community and parents decrease?
- ☐ Will funding from central government decrease?

Changing process:

- ☐ Can the education system incorporate life skills training?
- ☐ Can sexual encounters in the system be reduced?
- ☐ How will it deal with the special needs of: infected students; infected staff; orphans?
- ☐ Can schooling be made flexible to meet the labour needs of families?
- ☐ What provisions can be made for out-of-school youth?

Although the elite classes can be seriously affected, the greatest impact is on the poor. Poorer families and communities spend less on nutritious food, adequate shelter, routine preventive health measures, non-AIDS-related health care, education and other basic needs.

Women are at a special disadvantage. On the one hand they have fewer opportunities in terms of schooling and employment, land-ownership, security over land title, wage-earning and profitable self-employment (especially at times of recession and structural adjustment). On the other, they are at a special risk, often gaining access to income through sexual relationships with men. For widows and orphans, loss of land, shelter and inheritance may force them to depend on relatives or migrate to cities, where they might join an urban underclass of commercial sex workers and street children.

As a result of all these social and economic processes, the AIDS epidemic can have a serious impact on the education sector - specifically on the demand for, supply of, and quality of the education provided at all levels.

Demand

Numbers

As a result of HIV and AIDS, fewer children may need education because the birth rate will decline following the early deaths of potential parents. The transmission of HIV from mother to child (which is estimated to occur in 30% of cases where the mother is HIV-positive), will increase infant and child mortality and further reduce the numbers of children entering school. In general there will not be a fall in the absolute number of children, but rather the rate of increase will decline.

Affordability and availability

In situations where schooling requires a financial outlay 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;
- the loss of the traditional economic safety net of extended family and community.

However it is not just the lack of financial resources that will keep children out of school. Other factors 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 infection or HIV/AIDS in the family;

- in extended families, lower motivation provided by less educated guardian grandparents and reduced attention given to orphans by heads of households;
- illness of infected children entering primary school;
- the perception that investment in education will not give returns due to premature mortality.

Even if children enter school the above factors will reduce the chances of them completing their education.

Gender disparities

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. Moreover, girls may be encouraged to marry early - because they are pushed out or seek escape from overcrowded extended families; because men seek younger and presumably uninfected wives; and because parents want daughters removed from a "dangerous" school environment in terms of infection risk and sex education.

Special needs and orphans

Finally, it will become increasingly difficult for education to reach children, especially those defined as being in "difficult circumstances". AIDS exacerbates problems of poverty, disinheritance, migration, orphanhood, child abandonment, psychological trauma, ostracism, discrimination, physical and sexual abuse - the very conditions which create such children.

A major problem identified with the HIV/AIDS epidemic is the burgeoning population of orphans. Evidence shows that orphans have higher mortality rates; are likely to be less well nourished; may be overworked by their guardians; and lack supervision, proper care, and school or vocational activities. Such problems may be exacerbated if the child is uprooted from family and community, either through outright orphanhood or because of the often enforced migration of widows and their children. Such circumstances are resulting in increasing numbers of abandoned, exploited and unschooled "street children".

Supply

HIV/AIDS may affect the supply of education through deaths of personnel, school closures, and reduced budgets for education. Teachers and other education personnel are not immune to HIV infection, indeed in some instances HIV seroprevalence may be higher among teachers than other groups. Teachers' higher incomes and greater mobility are important risk factors, furthermore they may be posted to areas away from their families.

The result of HIV infection will be:

- absenteeism caused by illness, tending the sick, and attending funerals;
- loss of staff due to increased mortality;
- transfers from (or refusals to be posted to) heavily affected areas.

Of particular impact are the generous terms and conditions under which government staff are employed. In some countries they may have up to a year of sick leave with various levels of payment, and then their employment cannot be terminated unless a medical board is convened. This will create major difficulties for Ministries of Education, who have to pay staff who are not working.

A fall in pupils - through lower enrolment or non-continuation - will lead to a decrease in the number of classes and schools. Reduced supply of education may also stem from lack of support and finance from heavily affected communities and/or the government. As both have other competing demands for resources, funds for maintaining facilities and places, let alone building new ones, may be very limited.

At school and community level, as extended families grow, available income decreases while more financial resources are needed for illness and death; thus less money is contributed by the community to the school. At the level of the education system, funds may be required for health-related personnel costs such as treatment and care of staff, insurance, death benefits, etc.; training and paying replacements of affected personnel (who may still be on the payroll), and on implementing an effective AIDS education programme.

At the same time, increased funds might be required for new clients and roles which the education system may need to adopt - scholarships for orphans, teacher-training in counselling, new curricula in family life education, new school-based programs in income generation. The Ministry of Education, however, may receive a diminishing proportion of the national budget as demand for resources increases from other sectors.

Process and quality

The “numbers”, “tone” and quality of education are changing as a result of the impact of HIV and AIDS. The processes and social interactions which make education work are inevitably being coloured by the epidemic. These include:

1. increased randomness in education, especially where systems already affected by recession, debt, poverty, or disasters are further disrupted by absenteeism of teachers and pupils caused by HIV and AIDS;
2. a less-qualified teaching force, as experienced teachers are replaced with those younger and less well-trained;
3. discrimination, ostracism, and isolation of students and teachers who are infected or ill or who have families where somebody is ill or has died from AIDS. Teachers may face suspension of social and health benefits and/or dismissal. Pupils may face formal suspension or be pressured to leave “voluntarily”;
4. the occurrence in some societies of sexual relations in schools, voluntary or otherwise, among students and between teachers and students.
5. The need to include AIDS or life-skill education in the curricula. It is increasingly realised that education at the pre-secondary level will be needed if behaviour change is to occur. This will require development of new material, training of teachers to use this, and the possible need to obtain community acceptance of it.
6. The special needs of those children who are infected and are in schooling will need to be considered.

Higher Education

Most of the above processes are also present at higher education level, but here vulnerability and potential impact are exacerbated because: students of technical and vocational schools, colleges and universities, are more sexually active, usually residing far from their families and in boarding schools; and these establishments are often located in larger urban areas where the risk of infection is greater.

Sectoral Vulnerability and Response

Those in the education system are directly susceptible to infection because:

- teachers often belong to a relatively privileged layer of society in terms of income and mobility and because of their working practices;
- students, often beginning in upper primary school and continuing through higher education, engage

in sexual relations voluntarily among themselves or are compelled to do so.

The education system itself is vulnerable because:

- HIV/AIDS-affected families and children reduce demand for education;
- HIV/AIDS-affected schools and education systems are compelled to limit the supply of education,

because of teacher shortages and financial constraints;

- the presence of HIV/AIDS-affected teachers and students and the nature of their interaction leads to a reduction in the quality of education.

Coping strategies require:

- AIDS education policies and programmes within the ministry for teachers, other personnel and students. These should occur before sexual relations and drug injection practices begin; before large numbers of children leave the school system; and in the context of integrated health education activities and the promotion of healthy schools;
- access by teachers, other ministry personnel, and older students to information and counselling concerning techniques to prevent HIV transmission, and possibly to condoms;
- locating teacher training programmes, both pre-service and in-service, close to the teachers' place of residence, to limit long absences from home;
- ministry policies which encourage the assignment of teachers near their families;
- strict and enforced prohibitions regarding the sexual exploitation of students by teachers.
- special efforts to keep AIDS-affected children, especially girls, in school - through fee reductions, scholarships, and other support;
- focus on reaching those not in school and in "difficult circumstances" (on the street, in prostitution and child labour);
- special concern for AIDS-affected orphans, to ensure their educational, psychological, and social needs are met. Experience shows, however, that targeting only AIDS orphans (or even only orphans, when many children are in difficult circumstances) may be counterproductive and add to discrimination. Providing assistance to schools and communities heavily affected by AIDS may be more useful;
- expanded child-care programmes which permit older siblings to continue in school rather than care for younger children;
- flexible school schedules to permit children to attend when they are not working in the home and in productive labour;
- involvement of staff-parent associations in developing strategies;
- training teachers and counsellors in the non-discriminatory treatment and psychological needs of AIDS-affected children;
- 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;
- special training programmes for new teachers and para-professionals to rapidly increase competence and help to ensure they stay in the system;
- more money for education, despite the needs of other AIDS-affected sectors such as health;
- income generation schemes for families and schools affected by AIDS, to make up for lost income.

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The health sector is unique in that it is at once affected by the HIV/AIDS epidemic and is also the sector with the major responsibility for dealing with the epidemic, both in terms of preventing new infections and in caring for people with HIV/AIDS. Other ministries and sectors have been content to view the epidemic as a problem for the Ministry of Health, typically one of the weaker and less well funded ministries. Economic crises and structural adjustment policies have affected the level and funding of health activities as well as other social services, and thus may have created conditions which favour the spread of HIV while weakening the

ability to respond.

Even in the health sector itself the response has been complicated by the nature of HIV/AIDS: it is largely sexually transmitted, which means there is a stigma attached; and it potentially uses considerable resources, but patients die despite the best efforts of health professionals, which has an adverse effect on morale. Due to the long incubation period, even in situations where seroprevalence levels appear to have peaked, the number of AIDS cases will continue to grow for some years to come. The health sector has to respond in a dynamic and flexible way.

Definition

The health sector comprises government health facilities; private commercial facilities and practitioners, including medical, paramedical, and drug sellers of various kinds; private non-profit facilities and practitioners; and traditional medical practitioners. Each is involved in HIV/AIDS-related activities to some degree. This AIDS Brief relates primarily to the concerns of the public health sector, but is also relevant to the other actors.

Typically, public health care in developing countries will be provided at various levels. At the lowest

level are health posts and clinics (primary health care facilities), staffed by nurses and midwives; the next level is the health centres with some beds, offering intermediate health care, and staffed by one or more doctors. Above this are the regional hospitals, and finally the main referral and specialist hospitals. At the lower levels health staff combine curative and preventative health care activities, and if the system is to operate in a cost-effective and efficient manner the bulk of the patients should be seen and treated here.

Key Elements

Providing effective health care within resource constraints

At present the main burden of HIV disease often falls on secondary and tertiary hospitals, causing displacement and deterioration of care for other patients. This is because at the primary health care level staff are often trained in counselling patients with HIV, but not in the basic care the patients need. Staff may therefore believe that care of patients with HIV-related disease is the responsibility of the hospital, resulting in a tendency to refer patients upwards at the first suspicion of HIV infection.

Insufficient attention is directed to the needs of people in the earlier stages of HIV infection. Much life-prolonging and life-enhancing care can be provided, and emphasis should be placed on maintaining "wellness". The over-

burdening of hospitals can be alleviated by using all levels of the primary health care system and by effective planning for care, including provision of drugs required at lower levels of the health system. Effective care at health centre level can be provided using treatment protocols for common conditions and providing basic essential, inexpensive drugs. Where HIV testing possibilities are limited, health staff need not feel an HIV test result is essential for routine health care for people with HIV/AIDS.

Hospitals and health services are having to cope with a doubling or even tripling of TB patients, involving much greater demands of diagnostic services, outpatient short-course therapy, directly observed treatment, and emphasis on improving patient adherence to treatment. It is essential to plan for this rapid expansion of cases to avoid drug

shortages and disruption to treatment. Health centres can play an important role in TB treatment, especially in overseeing and supporting the patient during the maintenance phase. In situations where the health sector includes private, public, non-governmental, religious and other groupings, there may be an opportunity to allocate responsibility for different levels of care, or at least to co-ordinate it.

In many countries home-based care has been seen as a cost-effective way of providing for patients outside the formal health sector. Some of these programmes have been very costly, relying on expensive vehicles and salary incentives for staff, with little expenditure actually benefiting the patients. Home-based care can be effective in terms of patient needs and reduced costs, but it must be based on an assessment of what actual needs are, then be organised to meet those needs. For example, the opportunity should be taken to provide information and basic training to carers before a patient is discharged. In the wealthier countries there may be a hospice movement to care for the dying, and they can be involved in dealing with the epidemic.

The inevitability of death has to be faced, and in heavily affected countries additional provision of mortuary space is essential. In some countries the laws do not facilitate patients dying quietly at home, but encourage families to rush dying patients to hospital so the cause of death may be certified more easily without police involvement. This is stressful for staff and patients, and is not a good use of hospital resources. Changes in death certification would allow patients to die comfortably at home.

Labour

The health sector is one of the most labour-intensive services. HIV is reducing the effectiveness of the health labour force in several ways.

Stress and “burnout” among health workers

Around the world health workers caring for people with HIV/AIDS experience greater stress than other health workers. Causes include fear of contracting HIV from patient contact, social contamination (ostracism and stigma of working with people with AIDS), discomfort with the sexual dimensions of HIV/AIDS, and a sense of professional inadequacy due to high levels of patient mortality. They also experience “role expansion”, being asked to undertake tasks for which they are not prepared, such as advocacy and counselling. This is particularly stressful when patients and staff are from the same community (or even the same health facility) and may know each other well. They may also have difficulty dealing with patients’ emotional traumas. In some cases the opposite may be true

- health staff may dislike or feel a great social distance from patients or clients, such as commercial sex workers and patients with STIs. They may have religious, moral, or cultural objections to the advice they are expected to give, e.g. concerning the use of condoms or sexual behaviour.

HIV/AIDS coincides with diminution of resources in drugs, supplies etc.; front-line health staff are often blamed for shortcomings of the system. Proposed solutions include developing a team spirit and ethos; orientation programmes for new staff; training in coping skills, stress management, psychological aspects of dying, bereavement, relationships with dying patients, peer support and sharing of feelings; and participation in decision-making.

Ethical issues

Health staff may feel ill-equipped to face some of the ethical dilemmas posed by the HIV epidemic. In most societies they are expected to keep HIV results confidential, yet they may find this difficult if they know someone is repeatedly exposing others to HIV via unprotected sex. A further issue is the problem of displacement of non-HIV infected patients; resources are scarce and balance is required between the needs of all patients, yet they find it difficult to discharge a patient for whom little can be done.

Training compels health staff to do their best for each patient, yet this may be neither compatible with the needs of all patients, nor in the interest of the individual patient. Health staff may face pressure from families or colleagues to provide “heroic” care for dying patients. Even lower-level ward staff often have to make difficult decisions, when for example two patients simultaneously need the only oxygen cylinder available. Staff may face pressure for referrals to tertiary care or even abroad and have difficulty deciding what is “fair”, especially when referrals would use public funds, or the additional care is clearly futile.

The solution to these issues is twofold: firstly, open discussion where staff can exchange views and decide what care is within their powers to provide; and secondly, establishing treatment protocols for the most common complications, not only in planning for the availability of drugs but also in deciding what is reasonable care.

Mortality and absenteeism of health staff

Health staff themselves are being affected by HIV infection. In some countries very high levels of HIV seroprevalence have been recorded among health workers. A pilot study in Zambia found that mortality among female nurses had risen 13-fold from 1980 to 1991 to 2.67% and appeared in 1994 to have risen to 4%. Absenteeism had also risen, from about 10% to about 15%.

Doctors, laboratory technicians, and other health workers are also heavily affected in some countries; re-

ports indicate that some health professionals continue to take great personal risks, feeling somehow protected by their profession and education. Others so fear HIV that they are leaving the health profession or migrating to areas where the perceived risk is lower. Little evidence exists to prove or disprove any link with occupational exposure, but early studies show no association between HIV infection among health staff and exposure to patients.

Solutions to the problem of HIV among health staff would include providing better information and education about risks, both personal and professional, and reinforcing and adhering to safety procedures and provision of adequate protective equipment for high-risk tasks (e.g. long gloves for deliveries). HIV-positive staff are particularly vulnerable to exposure to TB; if staff are known to be HIV-positive, they ought not be asked to care for TB patients. In some countries better provisions are required to replace staff who are ill for a long period, to avoid the problem of “ghost workers” who are officially in service but unavailable for work. Further research is necessary on the contribution of occupational and personal risk to the high levels of HIV observed among health staff.

Training and replacement of health staff

High levels of mortality and absenteeism have profound effects on the health services. Whilst demands on the service are greater than ever, any expansion in training new staff is constrained by losses of appropriately trained teaching staff. Health ministries will need to consider ways to retain existing staff (raising the retirement age, improving service conditions, improving public perception of health care work etc.); increase the supply of staff through expansion of training schemes; and possibly maximise staff effectiveness by e.g. harnessing family members for basic nursing tasks, reducing time spent on paperwork, creating new cadres of staff to take on some basic nursing, and using all levels of the health system.

Co-ordination and funding issues

The HIV epidemic has engendered a world-wide mobilisation of funds and interest, which may cause problems for the health sector due to the influx of new NGOs, researchers, and donor agencies wanting to do AIDS-related work. They require co-ordination from the usually understaffed health sector; may have their own priorities and objectives; tend to work in isolation from and even in competition

with the government and each other; and may attract health sector staff away by offering better salaries.

The influx of funds may cause problems: it may not suit local priorities or existing structures. Jealousies and problems may arise concerning allocation of per diem allowances, travel, and opportunities for international exposure. The efforts to comply with donor accounting and reporting procedures may exceed the value of the support.

The solution to these problems lies in better communication. A co-ordinating council, and regular meetings at all levels, would reduce duplication of effort and gaps in provision, and provide an opportunity to share information and approaches. Donor agencies must be made aware of the problems their policies create. Researchers must ensure their work is reviewed by local ethics committees, and findings are made available locally as soon as possible.

The roles of the private and traditional sectors

Long-established missions and private sector practitioners may also be perceived as competing with the government, both for patient loyalty and trained staff. Private sector practitioners may in fact be working at cross-purposes, providing costly and/or sub-standard treatment for TB or for STIs and thus facilitating the further spread of the latter.

The traditional sector has also been active in provision of care for AIDS patients, and while in many cases this has been helpful to patients and has helped hospitals by diverting some of the care, in other cases the promise of a “cure” has lured patients who could have been helped away from standard care, which is especially important in treating TB. In addition, the private and traditional sectors charge for their services - which may have long-term consequences for household resources. In some instances a service such as condom provision may not, for various reasons, be provided, leaving a potential gap in health promotion.

The solution is to improve communications - to ensure that practitioners are at least aware of national treatment guidelines and have a clear idea of the role they can play. Both groups are usually organised through an association or other grouping, and might be willing to be brought into a dialogue about their role in treating HIV and related conditions. Training could also involve the pharmacists, etc. who provide the drugs widely used in self-care.

Sectoral Response

The HIV epidemic reveals and exploits weaknesses in the health sector. In several countries HIV seroprevalence

now doubles every 12 months or so, and its ability to spread rapidly before illness appears makes it

particularly dangerous to disorganised societies, with limited ability to believe the epidemic is happening and to take effective action. This is why this AIDS Brief

emphasises communication and open discussion of the many issues HIV raises for the health sector: HIV thrives best in conditions of secrecy, stigma, and denial.

Checklist

Problem	Proposed solution
○ Health staff stress and burnout	<ul style="list-style-type: none"> ○ Open discussion on concerns of staff ○ Training in coping and stress management ○ Participation in decision-making
○ Ethical dilemmas for health staff	<ul style="list-style-type: none"> ○ Open discussion of issues, case studies or specific examples ○ Treatment protocols setting standards of reasonable care
○ Mortality and absenteeism of health staff	<ul style="list-style-type: none"> ○ Better information on personal risks ○ Adherence to safety procedures and provision of protective equipment ○ HIV-positive staff not to care for TB patients
○ Training and replacement of staff	<ul style="list-style-type: none"> ○ Retain existing staff: improve public image of health professions, improve conditions of work, raise retirement age ○ Increase supply of staff: expand training places, create new lower-level cadre to do routine tasks ○ Improve effectiveness of staff: involve family members, reduce paper-work, use all levels of health service ○ Improve procedures to cope with long-term illness among key staff
○ Provision of effective health care within resource constraints	<ul style="list-style-type: none"> ○ Use all levels of the health services ○ Provide drugs and training especially at primary health centre level ○ Plan for expected rise in TB cases, and involve health centres ○ Emphasise “wellness” of people with HIV ○ Target home-based care on needs and those most in need ○ Facilitate peaceful death at home and provide adequate mortuary space
○ Co-ordination of donors and funding agencies	<ul style="list-style-type: none"> ○ Discuss priorities with donors ○ Discuss reporting and accounting needs with funding agencies ○ Hold regular co-ordination meetings
○ Co-ordination with private and traditional sectors	<ul style="list-style-type: none"> ○ Contact professional associations, discuss issues of interest ○ Provide training, especially in STI and TB treatment ○ Train drug sellers and other informal providers in use of basic drugs

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HIV/AIDS is affecting and will continue to affect economies and society at all levels, from the household to the macro-economy. Between these two extremes are effects on communities, enterprises, and social and economic sectors. It is at the lower middle levels, which include the productive sectors, that the worst effect may be experienced and interventions are most urgently required.

The epidemic will affect production in two ways. Firstly there will be increased morbidity (illness) and

mortality (death) among the workers. Secondly there will be changes in earning capacity and the pattern of expenditure. People may earn less and divert their incomes from consumption and savings to health care.

This AIDS Brief provides some ideas as to how the productive sector of manufacturing may be affected and what types of response may be required or possible from government officials, managers, enterprise owners and trade union officials or worker representatives.

Definition

Manufacturing is defined as the physical or chemical transformation of materials or compounds into new products. The assembly of products from component parts also falls under this sector, except where it is more readily defined as construction. Manufacturing is the most diverse sector of most economies. It includes as sub-sectors: food products; drink and tobacco; textiles; clothing and footwear; wood products and furniture; paper and printing; chemical and petroleum products; bricks, glass and cement; basic metals; metal products; electrical machinery; transport equipment; and jewellery.

Manufacturing concerns vary in size from small one or two person operations, organised and operating

in an informal manner, to massive multinational firms with plants in many countries and tens of thousands of employees. The impact of HIV/AIDS will vary with the type of operation, its size, location and employment package. These will themselves vary depending on the level of staff employed, the scarcity or otherwise of their skills, and whether they are locally or internationally recruited. This AIDS Brief is largely relevant to manufacturing enterprises with employees.

Manufacturing is generally the most dynamic part of the industrial sector and the economy, and anything that threatens manufacturing is likely to have a disproportionate effect on the overall economy. HIV/AIDS may be such a threat.

Background

Manufacturing is often seen as central to economic growth and development. It was long believed that countries had to move from production of primary products (agricultural goods and minerals), to developing industry, possibly through the processing of the primary products (agro-industry and mineral beneficiation). Once the industrial sector was sizeable and diversified, the country was regarded as developed. Thus one of the targets of most developing countries is to develop their manufacturing sector and various development strategies have been adopted to achieve this. Manufacturing is also seen as the major source of employment growth. As most manufacturing operations

are urban based this has led to rural urban migration, as rural people move to the towns in search of employment (and what may be perceived as a higher standard of living). Movement of people is associated with increased risk of disease transmission - including HIV/AIDS. In addition many new urban dwellers may find themselves living in shantytowns with few services.

The global share of manufacturing remains highly skewed in favour of the developed world. In 1990 the developed high-income countries with a sixth of the world's population accounted for 64% of the world's manufacturing. Despite the imbalances, the developing world's share of exported manufactured products

increased from 5% in 1970 to 22% in 1993, due largely to the rapid development of a few individual countries mainly in Asia. The ability of less developed countries to increase their global share of manufacturing, already

severely hampered by structural economic problems, will be threatened even more by the potential impact of HIV/AIDS on the economically active population.

Key Elements

Labour

Labour is, of course, an essential input in the manufacturing sector, but the sector itself can be organised to be more or less labour or capital intensive. These choices are dependent on factors such as the availability of labour, the cost of labour and the level of required or available skills. These choices are further affected by policy decisions made either by the state or the investors of capital. Furthermore, as industrial performance is dependent on the productivity of labour, any factor which affects the availability, performance or cost of labour will have a direct effect on the operation.

Productivity

Productivity will be affected by:

Morbidity: During the illness of the employees they will take as much time off as they are able to. This will include the maximum allowable sick leave (in some countries labour legislation may make provision for long periods of sick leave, and require a medical board before a person is dismissed), and annual leave before they are dismissed or resign on medical grounds. There will also be instances of unauthorised absenteeism.

Mortality: Once a person dies (or has been released from employment) they must be replaced, and productivity will be reduced while the replacement is trained.

Other absenteeism: This will include compassionate leave to care for sick family members. In some countries time spent on funerals of families, friends or colleagues is considerable.

Replacement and training of labour

The ease with which labour can be replaced will vary depending on the labour intensiveness of a specific operation, the level of skills employed and the general availability of labour. If suitably skilled labour is unavailable it may take time some to replace the person.

Staff Morale

The loss of colleagues, increased workloads, potential discrimination, and general uncertainty about HIV/AIDS and the fear of infection may undermine staff morale. There have been instances of workplace disruption where work-

ers refuse to work with a colleague known or believed to be HIV-positive.

Operations

Payroll costs: employee benefits

The costs of the epidemic will also be felt through the payroll depending on how this is structured. Where the employer simply pays a wage for work and the employee makes their own provision for health care, pensions, insurance and housing - or looks to the state to provide these things, then there will not be an immediate impact on the company's payroll cost. However in the longer term, if the state has to bear these costs, either revenue will have to be reallocated or additional revenue raised, possibly through higher taxes.

It is common for larger employers to provide benefits such as medical care, pensions, insurance, housing and death benefits to some (senior) or all of their staff. These benefits will have to be reappraised as their costs may increase or scale of benefits decrease.

Training and replacement cost for labour

Replacement cost of labour will vary depending on the labour intensity of a specific operation, the level of skills employed and the availability of labour. If suitable labour is not available additional costs will arise from the training.

Investment

All manufacturing enterprises require investment to maintain or increase capital stocks. The possible sources for this are either reinvested profits, or money raised through other sources such as the banks, financial institutions or stock markets. Major investments may depend on foreign direct investment, and indeed most developing countries actively seek to attract this. Some evidence suggests that AIDS will reduce sources of local capital as it is diverted in care and coping by the individuals and their families. There may even be dis-saving, when assets such as pension funds and insurance policies are surrendered in order to meet immediate needs. Foreign investors are sensitive to risks, and the HIV/AIDS situation in a particular country or region might

make them reconsider their investment decision. HIV/AIDS potentially increases training costs, as a "surplus training"

strategy will have to be adopted to take account of increased illness and death in trained cohorts.

Sectoral Response

The globalisation of the manufacturing process facilitated by transnational corporations, increasing interpenetrating of markets and international subcontracting emphasises the potential global impact of the AIDS epidemic. The global market in manufactured goods is also highly competitive and will therefore be sensitive to increases in production and input costs which may result from the epidemic. Thus for example, local companies sub-contracted to multi-nationals may find that the failure to maintain efficiency due to HIV/AIDS among their workforce may decrease their attractiveness to such companies as reliable sub-contractors.

There is general agreement, sometimes supported by constitutional rights, that pre-employment testing of potential employees is misguided, expensive and unfair. Individuals infected with HIV are able to lead productive lives for many years and the risk of workplace transmission, in most economic sectors, is very small. Basic educational programmes and simple precautions should eradicate even this small percentage. Of greater concern are the economic implications of the epidemic. These will be reflected in additional costs to pension funds and medical aid as well as a reduced dividend on investment in human capital. Discriminating against HIV-infected people will, however, not reduce the cost of the epidemic which will still ultimately be borne by the broader society.

Reducing Workforce Susceptibility- Employer's Responsibility

Employers have a responsibility to ensure that their employees are not put at risk of illness or injury because of the nature of their work. In most countries there is legislation that supports such an obligation on the part of the employers. Ensuring HIV/AIDS is not transmitted at the workplace is part of this general obligation on employers. In general, manufacturing sector workers should not be vulnerable to infection because of the nature of their work (unlike transport workers or construction teams). Basic educational programmes and simple

precautions (particularly in relation to the treatment of accidental injury in the workplace), should eradicate even the very small risk of accidental transmission.

Workers spend a large part of their time at work, and workplace education campaigns have been shown to be an effective way of combating the epidemic. The level of employer involvement can vary from providing space for educators to actively supporting such education with time and money. The greater the support the more effective campaigns will be, but the decision of how far to go should rest with the employers and will depend on their perception of the vulnerability of the company to losing labour, and the level of social responsibility.

If the labour force includes migrant workers, living away from their families, consideration should be given to recruiting workers who are not migrants; supporting those who are migrants in bringing their families to live with them, if possible; and providing more intensive education for workers and their dependants.

Reducing Employees' Vulnerability-the Trade Union's Responsibility

Where trade unions effectively represent the interests of their members they also have an important role in ensuring that:

- any potential for workplace transmission is reduced;
- larger employers introduce effective counselling policies for HIV-positive workers;
- employees who are HIV-positive are not discriminated against; and
- the unions are seen to be taking the epidemic seriously and supporting education programmes.

Reducing Sectoral Vulnerability

There are two aspects that require consideration: protecting the labour force, and controlling costs.

Protecting the labour force

AIDS education and prevention

Appropriate workplace AIDS education programmes can be effective. They must be correctly designed, and have the active involvement of senior management and

workers' representatives. It is crucial that management understands that AIDS education is a process that has to continue rather than a one-off event, and it will require a long term commitment. Workplace education campaigns aimed at behaviour change and condom promotion should therefore be put in place.

Treatment

Early and appropriate treatment of employees can extend their working lives and postpone the time when their employment will have to be terminated and they lose benefits. This is to the advantage of the worker, employee, families and state. As there is often a direct relationship between the spread of HIV/AIDS and STIs, as well as a variety of other diseases, these should be treated where possible.

Counselling

Counselling should be provided for infected and affected individuals. Part of the counselling should encourage infected individuals to continue working. Job security should not be threatened by disclosure of HIV-positive status.

Multi-skilling

Where the production process results in marked labour bottlenecks and/or is dependent on a few key individuals, multi-skilling should be encouraged. This means training workers for a variety of jobs and allowing them to be flexible.

Movement towards capital intensive operations

If labour is a serious constraint, consideration can be given to making the operation more capital intensive. However it should be noted that this will mean greater dependence on a smaller number of skilled workers, and may change the financial viability of the enterprise if its market position is dependent on using labour, which is, in terms of international rankings, cheap.

Controlling costs

The epidemic will result in loss of production and in-

creased costs. It is in the interests of all that these be contained. Managing the epidemic and understanding its implications require knowledge of:

- the labour profile of the workforce, including age, sex and job categories; costs of employment;
 - direct costs of illness-related benefits; employees' health and availability;
 - health facilities available to employees.
- Once these data are available they will help to:
- provide a profile and cost of the labour force; estimate the trends and consequences of ill-health;
 - assess the success of prevention.

Where possible for larger companies, consideration should be given to modelling the epidemic, either using public domain software or an actuarial calculation to estimate the burden of morbidity and mortality.

In order to understand and control costs they need to be calculated. There are two possible ways of assessing the impact. The first is to calculate the direct and indirect costs generated by an individual HIV/AIDS case and aggregate them. This approach is not satisfactory, as there will be different cost factors which it will be difficult to attribute to individuals. A more simple method is to look at the enterprise balance-sheet and estimate the proportion of costs that can be attributed to the disease. The advantage of this is that it allows trends to be established and will enable the company to respond to specific changes in the costs.

A method for doing this is set out below (Steps 1 to 3). It can obviously be adapted for specific situations. It should be noted that in most enterprises the cost due specifically to HIV/AIDS will not be clearly identifiable, as management will not (and should not) know which employees are HIV-positive. However, in situations where there is high HIV prevalence, increases in morbidity and mortality can be ascribed to HIV.

The purpose of Step 1 is to show how important labour is in the operations of the enterprise. To the costs

Confidentiality

HIV/AIDS is a non-notifiable disease, and there are no obligatory responsibilities for either the doctor or patient to notify an employer or fellow employees of an infection. If voluntary testing is encouraged, to enable enterprises to anticipate and plan with greater accuracy, results should be confidential unless indicated otherwise by the infected individual.

Step 1 Calculating the baseline labour and material costs

Input	Labour cost		Material cost		Total
	Money	%	Money	%	
...					
...					
TOTAL					

listed in the table must be added those costs generated by: absenteeism and morbidity; excess recruitment; replacement and training costs; the Medical Department; additional sick pay; premature retirement; pensions; dependant benefits; and funeral costs. The results are summarised in Step 2.

Step 2 Costs generated by ill-health in an enterprise

Description	Money costs	% of total
Lost workforce		
Additional recruitment		
Medical department		
Funerals		
Pension for death and medical retirement		
TOTAL		

Step 3 brings the two previous steps together to calculate the additional costs generated by ill-health within the enterprise over a time period.

Step 3 Costs increase from year to year

Description	Money costs		% increase
	Year 1	Year 2	
Lost workforce			
Additional recruitment			
Medical department			
Funerals			
Pension for death and medical retirement			
Training			
Other costs specific to the enterprise			
TOTAL			



Checklist

☐ Vulnerability to HIV Spread

Human Resources:

- ☐ Are employees particularly susceptible to infection?
- ☐ Concentrations of predominantly male workers
- ☐ A high percentage of migrant labour
- ☐ The possibility of multiple sex partners
- ☐ Employees travel away from home without the spouse
- ☐ Possibility of drug and alcohol abuse
- ☐ Workers drawn mainly from poor areas with little social infrastructure
- ☐ What are the minimum numbers/working hours necessary to maintain existing production?
- ☐ Are there bottlenecks in production, i.e. workers without whom the productive process can be crippled?
- ☐ Can more people be trained or employed if workers are lost? Are some skills scarce?

Training:

- ☐ Is training done?
- ☐ Current facilities and degree of utilisation?
- ☐ Potential for multi-skilling?
- ☐ Can HIV/AIDS awareness be included in all training programmes?

Productivity:

- ☐ Does the company have allowances for time off (sick leave, compassionate leave, funerals)? What effect will HIV have on these?
- ☐ What methods of monitoring this are in place? What can be put in place?
- ☐ What impact will AIDS have on numbers and working hours?

Employment benefits:

- ☐ In-house or external medical costs?
- ☐ Pension scheme and life insurance?
- ☐ Benefits for sick employees and for their dependants?
- ☐ Are these vulnerable to increased claims?

Prevention activities:

- ☐ Is there an HIV/AIDS workplace campaign?
- ☐ Does it have the support of management and unions?
- ☐ Is it ongoing?
- ☐ Are condoms available?
- ☐ Is STI treatment available?

AIDS impact assessment:

- ☐ Should the company carry out an impact assessment?
- ☐ Should the company prepare an AIDS or life-threatening disease policy?

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Useful Contacts

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HIV/AIDS is affecting and will continue to affect economies and society at all levels, from the household to the macro-economy.

Between these two extremes there are effects on communities, enterprises, and social and economic sectors. It is at the lower and middle levels, which include the productive sectors, that the worst effect may be experienced and interventions are most urgently required. The epidemic will affect production in two ways. Firstly there will be increased morbidity (illness) and mortality (death) among the workers. Secondly there will be changes in earning capacity and therefore in patterns of expenditure. People may earn less and divert their incomes from consumption and savings to health care.

This AIDS Brief provides some ideas as to how the mining sector may be affected and what types of response may be required from government planners, enterprise owners, managers and trade union officials.

Definition

In many countries mining is a vital component of the national economy. This is particularly the case because, although mining may not provide much employment or produce a large proportion of GDP, invariably the bulk of output is exported, making the sector a major foreign exchange earner.

Mining (which is always linked to quarrying as a sector) is defined as the extracting, dressing and treatment of naturally occurring minerals. This includes solids such as coal and ores, liquids such as crude petroleum, and natural gases. The sector includes underground and surface mines, quarries and the operation of oil and gas wells. Mining further includes all supplemental activities such as crushing, screening, washing, cleaning, grading, milling, flotation, melting, pelleting, topping and any other activities required to render the materials marketable.

These diverse operations vary from the very small one or two person enterprises involved in panning for gold in Brazil or Zimbabwe, to the vast sophisticated mines of Southern Africa, Papua New Guinea and East Asia, which may employ up to 50 000 miners and work to depths of up to three kilometres. Many of the larger mining enterprises may be wholly or partly owned by or subcontracted to major multinational companies. In some areas of the world, for example Western India, small-scale mining may provide an important seasonal addition to low regional agricultural incomes by employing the poorest rural sub-populations during periods of low demand for their labour in agriculture.



Checklist

☐ Vulnerability to HIV Spread

Human Resources:

- ☐ Are employees single/males?
- ☐ Drug and alcohol abuse?
- ☐ What are minimum numbers/working hours to maintain existing production?
- ☐ Are there crucial workers in the production process?
- ☐ Can more people be trained or employed if workers are lost?

Training:

- ☐ Is training done?
- ☐ Current facilities and degree of utilisation?
- ☐ Potential for multi-skilling?
- ☐ Can HIV/AIDS be included in all training programmes?

Productivity:

- ☐ Does the company have allowances for time off (sick leave, compassionate leave, funerals)?
- ☐ What methods of monitoring this can be put in place?
- ☐ What impact will AIDS have on numbers and working hours?

Employment benefits:

- ☐ In-house or external medical costs?
- ☐ Pension schemes, life insurance?
- ☐ Benefits for sick employees and for their dependants?

Prevention activities:

- ☐ Is there an ongoing HIV/AIDS workplace campaign?
- ☐ Does it have the support of management and unions?
- ☐ Are condoms and STI treatment available?

AIDS impact assessment:

- ☐ Should the company carry out an impact assessment?
- ☐ Should the company prepare an AIDS or life-threatening disease policy?

Background

Mining and agriculture are the primary sectors of an economy. In classic development economics, it was the surplus generated from these sectors and the related processes which stimulated economic growth leading to the emergence of a modernised economy. Many countries are still highly dependent on primary production. This has given rise to what are referred to as “mineral economies” - where typically 40% of exports and 10% of GDP is generated from minerals.

In global terms fuel, minerals and metals constituted 12% of world exports in 1992. Mineral and metal exports from low-income economies, excluding China and India, accounted for 40% of total merchandise exports from these countries in 1992. A large percentage of this was oil. Between 1990-1993, Angola and Nigeria were dependent on petroleum for 90% of their export earnings, with Zambia equally dependent on the sale of copper. Other countries dependent on the export earnings of a single mineral were: Botswana (87% - diamonds), Congo (75% - petroleum), Gabon (82% - petroleum), Guinea (70% - bauxite ore/alumina), Libya (95% - petroleum) and Mauritania (65% - iron ore).

The mining sector is not a major employer of labour, but nonetheless its use of labour has certain key characteristics that make it different from other sectors. In 1985 in China 8.7% of the working population was employed in mining. In many other Asian countries, however, this portion is less than 1%. In South Africa there are more than 610 000 individuals employed in the mining sector, which accounts for approximately 4.5% of formal employment.

Mining has remained relatively labour intensive, with large numbers of employees having fairly low skill levels while requiring a core of highly skilled people to keep the production process going. For example, in South Africa skilled personnel comprise only 11% of

the mine labour force. As mining develops it becomes more capital intensive and less dependent on unskilled labour.

Mining is also dominated almost entirely by males. In the developing world virtually no females are employed in the sector, the argument being that the work is too hard and too dangerous. Indeed in some countries the employment of females underground is prohibited by legislation. Mining still employs significant numbers of migrant workers. This is because mines are, of necessity, located where the minerals are; labour may not be available locally, thus workers will have to be brought in, and where the location is inhospitable they will not bring their families; providing infrastructure for single migrants is cheaper than providing it for workers and their families, and mines may have a limited lifespan anyway; and labour may not regard the location or the work as permanent, thus will not relocate wives and families.

An additional unique feature of mining is that as mines are often located in remote locations they may operate as self-sufficient communities, with the employer providing housing, health care, education and entertainment. In cases where precious minerals are being extracted, these may be closed communities, with the employees being confined to the area and outsiders not being allowed in.

A recent trend has been the growth of informal or subsistence mining in some parts of the world. It comprises small operations each employing a few people, normally in search of precious or semi-precious minerals or alluvial diamonds. The operations are usually located in remote areas and the resources exploited are generally of marginal value. A further consideration is the smuggling of minerals between various countries, which opens informal channels of mobility.

Key Elements

Labour

Labour is an essential input in mining, and the sector's use of and type of labour is unique. The key characteristics of mine labour are:

- most miners are male;
- miners are more likely to suffer occupational diseases such as silicosis (and in some settings TB);
- the work is dangerous and occupational injuries and deaths are higher than for other occupations;
- use of migrant labour is common;
- mines are located where the minerals are. This means that miners may live in remote and inhospitable parts of the world, often in closed communities;
- mines may be labour intensive but will always require a component of highly skilled and experienced employees, for example geologists and engineers. These specialists constitute potential “bottlenecks” in the production process if they become ill or die.

HIV/AIDS will have the following effects on labour:

Productivity: Productivity will be affected by morbidity (illness) and mortality (death) of workers. During illness employees will take as much time off as they are able to. This will include the maximum allowable sick leave and annual leave before they are dismissed or retired on grounds of ill-health. There will also be instances of unauthorised absenteeism due to illness. In situations where there is no job security once leave has been used up, employees may continue to work even though they are physically not really capable.

Once a person dies (or has been released from employment) they will have to be replaced, and productivity will be reduced while the replacement is trained. Employees will also require compassionate leave to care for sick family members who may be affected by HIV/AIDS. In some countries, time spent on funerals of families, friends or colleagues is considerable. In addition, with largely migrant populations, time spent away from work will be extended by periods spent travelling.

Training and Replacement of Labour: The ease with which labour can be replaced will vary depending on the labour-intensiveness of a specific operation, the level of skills employed and the general availability of labour. If suitably skilled labour is unavailable, it may take time to replace people who have become too sick to work or who have died. Because experience is very valuable in this industry, loss of experienced workers is a source of concern. There may also be small numbers of workers without whom the operation may have difficulty in functioning.

Staff Morale: The loss of colleagues, increased workloads, potential discrimination, and general uncertainty about HIV/AIDS and the fear of infection may undermine staff morale. There have been instances of workplace disruption in which workers refused to work with a colleague known or believed to be HIV-positive.

Operations

Capacity to work: The very strenuous nature of mining

plus the risk of occupational disease may speed the onset of illness among HIV-positive workers. This will not only be disadvantageous to the individual but will also have an adverse effect on productivity. It is estimated that in South Africa productivity could fall by up to 2.5% if 10% of employees are HIV-positive.

Payroll costs: employee benefits: The costs of the epidemic will be felt through the payroll depending on how this is structured. Where the employer simply pays a wage for work and the employee makes their own provision for health care, pensions, insurance and housing - or looks to the state to provide these things - then there will not be an immediate impact on a company's payroll costs. However in the longer term, it is likely that, where the state has to bear these costs, increases will be funded through higher taxes.

It is common for employers to provide benefits such as medical care, pensions, insurance, housing and death benefits to some (senior) or all of their staff. In the case of the mining industry these are likely to be provided to more employees, especially where the mine is isolated. The cost of these benefits will increase.

Medical costs: Most mining operations will provide some medical services, ranging from First Aid Stations to fully equipped hospitals. They may serve the miners only, or in some cases the neighbouring community as well.

Medical costs are set to rise with the increase in HIV, and treatment protocols are being established in a number of countries to deal with this. Of particular concern is the inter-relation between HIV and occupational diseases such as silicosis. TB is also associated with the mining industry because of both working and living conditions. These associations between diseases suggest that downstream costs of medical treatment can be avoided by greater attention to prevention measures.

Housing: Large mining enterprises will often provide housing for employees. Migrants may be accommodated in hostels. Senior workers will usually be provided with family housing, but in some cases all workers may be housed with their families. This may be a potential

Pre-employment testing

Given the nature of mine work, the issue of testing people is not a simple one in this context. There is general agreement that pre-employment testing of potential employees is misguided, expensive and unfair. Not only do individuals infected with HIV have the potential to lead productive lives for many years but the risk of workplace transmission is very small. A single pre-em-

ployment test is unlikely to be definitive unless it is confirmed by a second test some weeks after the first, and a person could contract the infection immediately after they have been tested. However, given the strenuous and stressful nature of the work, it may be in the interests of the employer and employee to know the latter's HIV status.

problem when a worker becomes incapacitated but has not left employment, as they may continue to occupy their house, and thus prevent recruitment of a replacement. It is important for employers and unions (where these exist) to develop a policy on this question if the profound traumas of illness, death and loss of household income are not to be magnified by loss of housing entitlements, and mines are to minimise difficulty in recruiting replacement staff.

Training and replacement cost for labour: The replacement cost of labour will vary depending on the labour intensity of a specific operation, the level of skills employed and the general availability of labour. If suitably skilled people are not available on the labour market, additional costs will arise from expenditure on maintaining an adequately trained labour force. There will always be frictional cost of replacing labour even if the person concerned is unskilled and there is ample labour available.

Investment: All medium and large scale mining enterprises require investment to maintain or increase capital stocks. The possible sources for this are either reinvested profits or money raised through other sources such as financial institutions or stock markets. Major investments may depend on foreign direct investment, and indeed most developing countries actively seek to attract this. Some evidence suggests that in countries where capital is in very short supply, HIV/AIDS will reduce sources of local capital as this is diverted into care and coping by the individuals and their families. There may even be “dis-saving” - the process whereby assets such as pension funds and insurance policies are surrendered in order to meet immediate needs. For foreign investors who might be considering inward investment, the HIV/AIDS situation in a country or in a particular sector or company within a country may be a consideration.

Sectoral Response

The mining sector is unique in its use of labour and style of operations. However it operates in a global market which is highly competitive and will therefore be sensitive to increases in production and input costs which may result from the epidemic.

Reducing workforce susceptibility

Workers in mining are probably more vulnerable to infection because of the nature of their work and lifestyles. The social context of dirty, dangerous work and often unpleasant living conditions, with few opportunities for leisure, create a “risk-taking environment”. This makes it difficult to reach miners with effective messages advocating behaviour change. Experience points to the following particular problems:

- opportunities for social support and intimacy are limited, particularly for migrants. Where there is little support, risk-taking is more likely;
- miners feel they have little control over their own lives. Workplace accidents may be frequent, while outside the work environment miners may feel they are controlled by the company. This means they are less open to health promotion messages, especially since alcohol consumption and sex are the two areas where they do have control; and
- exaggerated forms of masculinity - known as “machismo” in the Hispanic and Western world - is an important way in which miners overcome the fears and dangers of everyday work. This then extends into their sexual behaviour.

Workplace education campaigns must take into account the social and psychological pressures on miners.

Reducing workforce susceptibility - the employer's responsibility

Employers have a responsibility to ensure that their employees are not put at risk of illness or injury because of the nature of their work. Most countries have legislation which supports such an obligation on the part of employers. Ensuring that HIV/AIDS is not transmitted in the workplace is an extension of this obligation. Basic educational programmes and simple precautions (particularly in relation to the treatment of accidental injury in the workplace) should eradicate even the very small risk of workplace transmission.

In general workers should not be made vulnerable to infection because of the nature of their work. Workplace education campaigns should therefore be introduced and other responses will not be required unless the workers are mainly migrants living away from their families. In such situations consideration should be given to recruiting workers who are not migrants; supporting those who are migrants in bringing their families to live with them, if possible, and providing intensive health education for workers and their dependants.

Reducing employees' vulnerability: the trade union's role

In countries where trades unions are able to represent

the interests of their members, they also have an important role in ensuring that (a) any potential for workplace transmission is reduced; (b) larger employers introduce effective counselling policies for HIV-positive workers; and (c) that employees who are HIV-positive are not discriminated against in terms of employment practices, sick pay, pensions entitlements and other welfare benefits available as part of agreed employment packages.

Reducing sectoral vulnerability

There are two aspects that require consideration: protecting the labour force, and controlling costs.

Protecting the labour force

This can be done through AIDS education and prevention programmes (see above). Workplace AIDS education programmes can be enormously effective if they are run properly. It is crucial that they have the active involvement of senior management and workers' representatives. Appropriate workplace education campaigns aimed at behaviour change and condom promotion in the context of the industry should be established. In general, support can be sought from the government and non-governmental organisations.

Treatment

As there is often a direct relationship between the spread of HIV and STIs, as well as a variety of other diseases, care of the general health of the employed population is likely to (a) reduce the rate at which HIV/AIDS is contracted, and (b) reduce the rate of spread of other diseases, such as TB, which may develop in HIV-positive populations and spread into the workforce more generally. Early and appropriate treatment of employees can extend their working lives and postpone the time when employment will have to be terminated and benefits are lost. This is to the advantage of the worker, the employer (who retains skills and experience in the enterprise), families and state. Consideration may have to be given to moving workers to less strenuous jobs.

Counselling

Counselling should be provided for infected and affected individuals. Part of the counselling should encourage infected individuals to continue working. Job security should not be threatened by disclosure of HIV positive status.

Multi-skilling

Where the mine is operating with labour bottlenecks

and the productive process is dependent on a few key individuals, multi-skilling should be encouraged. This means training workers for a variety of jobs and allowing them to be flexible.

Movement towards capital-intensive operations

If labour is a serious constraint, consideration can be given to making the operation more capital intensive. However it should be noted that this will mean greater dependence on a smaller number of skilled workers and may change the financial viability of the enterprise if its market position is dependent on production using labour which is, in terms of international rankings, cheap.

Controlling costs

The epidemic will result in loss of production and increased costs. It is in the interests of all that these be contained. Managing the epidemic and understanding its implications require knowledge of:

- the labour profile of the workforce, including age, sex and job categories;
 - costs of employment;
 - direct costs of illness-related benefits;
 - employees' health and availability;
 - health facilities available to employees.
- Once these data are available they will help to:
- provide a profile and cost of the labour force;
 - estimate the trends and consequences of ill-health;
 - assess the success of prevention.

Where possible for larger companies, consideration should be given to modelling the epidemic, either using public domain software or an actuarial calculation to estimate the burden of morbidity and mortality.

In order to understand and control costs, they need to be calculated. There are two possible ways of assessing the impact. The first is to calculate the direct and indirect costs generated by an individual HIV/AIDS case and aggregate them. This approach is not satisfactory, as there will be different cost factors which it will be difficult to attribute to individuals.

A more simple method is to look at the enterprise balance-sheet and estimate the proportion of costs that can be attributed to the disease. The advantage of this is that it allows trends to be established and will enable the company to respond to specific changes in the costs.

A method for doing this is set out below (Steps 1 to 3). It can obviously be adapted for specific situations. It should be noted that in most enterprises the cost due specifically to HIV/AIDS will not be clearly identifiable,

as management will not (and should not) know which employees are HIV-positive. However, in situations where there is high HIV prevalence, increases in morbidity and mortality can be ascribed to HIV.

Step 1 Calculating the baseline labour and material costs

Input	Labour cost		Material cost		Total
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...					
...					
TOTAL					

The purpose of Step 1 is to show how important labour is in the operations of the enterprise. To the costs listed in the table must be added those costs generated by: absenteeism and morbidity; excess recruitment; replacement and training costs; the Medical Department; additional sick pay; premature retirement; pensions; dependant benefits; and funeral costs. The results are summarised in Step 2.

Step 3 brings the two previous steps together to calculate the additional costs generated by ill-health within the enterprise over a time period.

Step 2 Costs generated by ill-health in an enterprise

Description	Money costs	% of total
Lost workforce		
Additional recruitment		
Medical department		
Funerals		
Pension for death and medical retirement		
TOTAL		

Step 3 Costs increase from year to year

Description	Money costs		% increase
	Year 1	Year 2	
Lost workforce			
Additional recruitment			
Medical department			
Funerals			
Pension for death and medical retirement			
Training			
Other costs specific to the enterprise			
TOTAL			

References

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HIV/AIDS is a disease which spreads mainly through sexual intercourse or activities where human beings come into contact with each other's body fluids (such as using infected syringes for injecting drugs or by infected blood transfusions).

Illness and death resulting from this epidemic disease affects and will continue to affect economies and society at all levels, from the individual to the macro-economy.

The most immediate effects are felt by the person who becomes sick, and then usually by his or her family or household. Between the extremes of the individual and the macro-economy there are also effects on communities, enterprises and economic and social sectors. It is at these middle levels, which include many income-generating activities, that interventions may be most urgently required. This AIDS Brief provides some indications of how HIV and AIDS may impinge upon the economic sector of tourism and what types of response may be required.

Tourism in the global economy

Tourism and travel make up a vast and growing business. Current turnover is estimated at \$3.4 trillion and this is expected to rise to \$7.5 trillion by the year 2005. It is also estimated that the industry employs 212 million people - 10% of the global workforce. Tourism's share in the global economy is rising rapidly. Whilst in 1992 the sectoral share was estimated at 6.1%, by 1995 this is estimated to have risen to over 10%. It includes passenger-transport industries, hotels and accommodation, restaurants and other food and drink providers, recreational and cultural services, manufacture and sale of souvenirs, and information provision. It is a sector with many links to other sectors at local, regional, national and international levels. Indeed, it might be said that one of tourism's main functions is to develop and expand communication networks to facilitate the movement of people, and in 1994 some 528 million people travelled as tourists. Thus it facilitates the spread of disease.

Tourism, economic growth and risk

Tourism is seen as a potential growth area for many countries, especially those endowed with regions of unspoilt landscape, cultural monuments, exotic wildlife, world heritage sites, or a comparative advantage in recreational areas such as beaches, wilderness or mountains. Virtually all countries have some form of tourism marketing, and in many countries tourism is a major foreign exchange earner.

Checklist

☐ Vulnerability to HIV spread

Risk factors:

- ☐ Large numbers of single men or women working in the industry
- ☐ Many single, male visitors
- ☐ High levels of alcohol or other recreational drug consumption
- ☐ Sex as a major commodity in the tourist industry
- ☐ Insecure work contracts for workers in the tourist sector
- ☐ High levels of untreated STIs

Prevention:

- ☐ Available, affordable condoms
- ☐ Education on safer sex and on negotiating for safer sex
- ☐ Affordable, available, effective diagnosis and treatment of STIs
- ☐ Develop organisation or neighbourhood support groups to discuss sexual health
- ☐ Integrate longer-term impacts on household income and welfare into extension programmes
- ☐ Identify market sector(s) which attract minimum risk and generate maximum income
- ☐ Keep tourist areas as smart and clean as possible - avoid sleaze!

☐ Vulnerability to Impact

Risk Factors:

- ☐ Movements of people:
- ☐ Migrant population working in the tourist sector
- ☐ Frequent travel between tourist areas and more distant areas
- ☐ Low general status and economic insecurity of women

Responses:

- ☐ Endeavour to stabilise labour force in the tourist sector
- ☐ Encourage men and women workers to come accompanied

Tourism does not only create economic growth directly. The business of providing infrastructure and resources requires investments in other sectors which also contribute to economic growth.

Tourism thrives on the opportunities it offers for people to have new experiences. This fact alone accounts for the frequent identification in many minds (perhaps mainly, but not exclusively, men's minds) of tourism and travel with sexual adventure. Because tourists seek out new experiences, they also enjoy what they perceive as "safe risks" - such as gambling, sex or even drug use - all aspects of the "illusory" or "exotic" world created by the "tourist experience". Thus, tourism as a personal experience and as an industry creates environments where a disease such as HIV/AIDS may thrive.

At the level of the economy it has been widely recognised that unwise development of tourism can: (a) result in rapid diminution of precisely the features which attracted the visitors in the first place; and (b) incur "externalities" - such as environmental damage, the cost of which outweighs the income earned. Explosive spread of epidemic disease may be considered just such an "externality".

The medium-term prospects for tourism

The pattern of global tourism will change over the next decade. The European and American markets are likely to grow more slowly as growth in disposable incomes slows. The main boom in tourism will be from Japan and the newly industrialised countries of Asia. At present only one in ten Japanese travels abroad compared to one in two Europeans. Foreign travel is becoming increasingly popular. Whilst only 5% of Koreans and 2% of Thais travel for recreational purposes, this is set to boom; the result will naturally be a massive increase in demand for destinations - both globally and regionally.

HIV/AIDS and the tourism sector: sex and tourism and sex tourism

HIV/AIDS is not just another disease. It is a disease currently without cure or vaccine. As far as is known, all people who become infected with the virus (become

"HIV-positive" or "seropositive") ultimately develop AIDS and die. During part of the time a person is seropositive they are very likely to be well and able to lead a perfectly active life. They may be sexually active - and also infectious. From these facts there arise the following important implications for the tourist sector:

1. Sex and tourism have always to some degree been associated. In some places, "sex tourism" has become a key element in the tourist industry. This business attracts many types of "commercial sex workers" both male and female. Some of these are full-time and voluntary, some are full-time and forced and many others are part-time and work in the sex industry to supplement otherwise small incomes. All of these people will also have non-commercial sexual relations in which disease transmission may occur.

When a fatal sexually transmitted infection (STI) such as HIV is spreading and when drug use may also be a factor, the tourist sector can play an important role in that spread - not only into a country from visitors to nationals, or out of a country from nationals to foreigners - but also from the tourist areas to the rest of a country.

2. The disease has a dormant period and an infected person may be symptom-free but infectious for several years. This means that one person may unknowingly and unintentionally infect many others. Most of the people who are so infected will be in the age groups between 15 and 50 - sometimes called the "sexually active" groups. These people are also those members of a society who are working and producing to support the young and old. If they become sick and die, the social and economic effects on the entire country can be very serious indeed - large numbers of sick people to care for, loss of workers in many sectors, increasing numbers of orphans, loss of skilled people. All these effects are already being seen in some parts of the world where the epidemic has advanced steadily over the last decade. Thus the tourist sector has the potential to accelerate the epidemic and ultimately to cost a country more in lost human resources and additional expense than it may contribute.

Key Elements

Environments are risky - not people!

It is not groups of people (such as tourists or commercial sex workers) who are risky, nor even types of behaviour

(such as drug use). Rather it is the case that particular behaviours become risky because there is a disease in the environment. Thus we are best advised to think of the

tourist sector as a high risk environment in which a disease such as HIV/AIDS can thrive.

Transmission

There are two sets of issues to consider under this heading - reducing and/or preventing spread from:

1. tourists to nationals or *vice versa*; and
2. nationals working in the tourism sector to nationals in the wider society or *vice versa*.

Of course, all these possible transmission routes should be affected by general health education in a country. However, given the concentration and rapid turnover of both workers and visitors in the tourist sector, it is important to develop detailed and appropriate health education programmes for all these combinations.

1. Tourists <-> National transmission

It should not be assumed that either tourists or nationals are the potential source of infection. Both groups of people are at risk in the environment of the tourist industry. While it is inevitable that in any tourist area there will be sexual relations or sharing of hypodermic syringes between the two groups, the goals should be to:

- educate tourists and nationals to the dangers of unprotected sex or the sharing of hypodermic syringes;
- provide adequate supplies of condoms and sterile syringes - including the provision of the means of making syringes sterile - for example bleach;
- train vulnerable groups of nationals (such as hotel chamber maids, professional sex workers - both full time and occasional, street children) in negotiating safer sexual behaviours;
- monitor and legislate for employment practices and wages in the tourist sector to reduce the risk of low-paid workers supplementing their wages by sex work.

Education of visitors presents a specific problem - that of achieving an appropriate and practical balance between informing intending visitors of both the danger that they may bring infection and the danger that they may be exposed to infection. Such education should take place at four stages:

- before departure from their own country;
- en route, for example through short films on aeroplanes and boats;
- at the point of arrival;
- at their final destination(s).

2. National <-> National transmission

This should form part of general health education dealing with problems of both the sexual and the intravenous drug use [IDU] channels of infection. However, people working

in the tourist industry need to be made aware that in contracting HIV/AIDS they also put their spouse or partner at risk and ultimately their home communities if they:

- carry the disease back to distant parts of the country and infect others;
- die and leave orphans in the care of their relatives;
- die and cease to be able to support dependants.

Medium and long-term socio-economic impacts of tourism and HIV/AIDS

The most immediate medium-term social and economic effect of HIV/AIDS - beyond making people seriously ill - is that it will begin to destroy the tourist industry if a country becomes identified or stigmatised as having high levels of HIV/AIDS. This may discourage visitors even if they are not "sex tourists", because they will worry about the safety of hospitals, blood supplies, dentists and emergency medical services.

Beyond this immediate impact, the longer-term impact of infection channelled from the tourist sector into the wider economy and society may be very profound indeed. It may include the loss of highly skilled specialists, of teachers (and thus the education of the next generation), of carers for the young and old; it may lead to decline in production in important economic sectors as people die prematurely.

Main market sectors in current or planned tourist development

One way of thinking through how prevention programmes might be built into the tourism sector, is to consider the different types of markets which are contained within the "tourist sector".

Market sectors are most obviously differentiated by price, area of origin of the tourists, tourist destinations, and the main interests of tourists - in other words, what "products" do the tourists believe that they are purchasing? Possible answers may be any one of the following or a combination: "sun and beaches", "relaxation", "luxury", "culture", "exclusivity", "open air adventure", "wildlife", "helping poor countries", "discovering 'new' or 'unspoilt' destinations", "environment and wilderness", "sexual adventure", "gambling".

Within the general policy goal of maximising income while minimising risk, this would suggest strategies such as:

- careful identification of the relative "risk" of different sectors of the tourist market and the development of appropriate pricing structures to attract or repel visitors whose prime aim in travelling is sexual. For exam-

- ple wealthy couples visiting the historic sites rather than single men coming to gamble;
- making it more expensive for unaccompanied men and women to visit - for example by introducing high single room supplements for unattached visitors, or the development of carefully targeted information about the risks and the need for safer sex for particular market segments - for example men who want to visit prostitutes and men who are potential paedophiles. Such information to be available at ports of entry, in adequate amounts and in the appropriate languages as well as in tourist accommodation (possibly also at point of sale of holiday);
- in certain situations establishing relatively self-contained tourist developments which are remote enough for relations between visitors and local people to be discreetly but effectively controlled;
- consideration of legal provisions to regulate high-risk behaviour such as injecting drug use. Ideally this should allow for and might indeed encourage the possession of clean syringes while not condoning the use of injectable drugs;
- in those places where sex is the main commodity which attracts tourists, ensuring that this trade is closely regulated in terms both of training commercial sex workers and educating visitors.

Components of an HIV/AIDS and Tourism Programme

1. Identification of main areas of infection risk in the existing tourist industry, in particular, identification of points of interaction between tourists and people working in the industry.
2. Identification of main areas of infection risk between people working in the tourist industry and the broader society.
3. Identification of scenarios for long-term chains of transmission from the tourist sector to other sectors under existing arrangements, in particular the ways that infection may flow from urban centres and tourist foci into the wider society, and the medium to long-term implications of such infection and the consequent morbidity and mortality for other sectors of the economy and society - for example the impact on the agricultural/rural sectors (see *AIDS Briefs: Commercial Agriculture, Subsistence Agriculture*).
4. Assessment of the relative risks of different tourism marketing strategies by origin of tourists, their interests and their spending power. The aim should be to derive some kind of quantitative or qualitative assessment of the costs and benefits of different strategies measured against the criteria of:
 - total income generated from each strategy;
 - potential risk of infection associated with each strategy in terms of High, Low or Medium;
 - potential additional costs to the economy in terms of risk of major downstream effects assessed in terms of High, Low or Medium.
5. Identify the main target groups in the private and public sectors, local and regional areas, outside the tourist sector, with whom co-ordination will be necessary, and indicate the kinds of training or sensitisation which might be appropriate and at what level(s).
6. Indicative development of advisory material for overseas tour operators and travel facilities (e.g. airports and airlines) to enable them to communicate the problem to their clients without producing a negative image of the tourist destination. Tourists are quite used to taking "sensible" health precautions visiting countries where malaria and other diseases are endemic. HIV/AIDS might figure as "just another disease" against which it is sensible to take precautions.

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HIV/AIDS affects and will continue to affect economies and society at all levels from the individual to the macro-economy. The most immediate effects are, of course, experienced by the person who becomes sick and then by his or her family or household. Between the extremes of individual and macro-economy there are also effects on communities,

enterprises and economic and social sectors. It is at these middle levels, which include both productive and service sectors, that interventions may be most urgently required. This AIDS Brief provides some ideas as to how military populations may be affected and what types of response may be required.

Background

Throughout the world, military personnel are among the most susceptible populations to HIV and AIDS. They are mostly young and sexually active, are often away from home and governed more by peer pressure than social convention, are inclined to feel invincible and take risks, and are surrounded by opportunities for casual sex. Deployment to unsettled areas increases their chances of acquiring HIV, as they are exposed not only to socially disrupted settings where sexually transmitted infections (STIs) may abound, but also to the possibility of infection through wounding and contaminated blood. A frequent absence of adequate HIV testing and monitoring equipment, especially under field conditions, exacerbates the problem of avoiding exposure to the disease.

Definition

For the purposes of this AIDS Brief, military populations comprise members of national armed forces, including regular army, navy and air force contingents, militia and reserve units, and paramilitary/guerrilla groups.

Although all militaries are affected by HIV/AIDS, those of the developing world are especially vulnerable. In sub-Saharan Africa, for example, ministries of defence report averages of 20% to 40% HIV-positivity within their armed services, with rates of 50% to 60% in a few countries where the virus has been present for over 10 years. Such attrition causes loss of continuity at command level and within the ranks, increases costs for the recruitment and training of replacements, and reduces military preparedness, internal stability and external security. In this sense, HIV/AIDS can easily be-

HIV transmission is five to twenty times more likely where other STIs are present; peacetime STI infection rates among military populations are two to five times higher than in civilian societies. Indeed, evidence suggests that some soldiers consider the acquisition of an STI to be a symbol of sexual prowess and proof of manhood. During wartime, military risk increases by as much as 100 times that of civilians.

As a result of such factors, the HIV/AIDS pandemic now represents a direct threat not only to socio-economic integration and political stability, but also to national and international security and peace in many parts of the world. In this light, the development of effective military HIV/AIDS prevention and care programmes assumes vital and immediate importance.

come a regional destabiliser and a potential war-starter.

Unlike quickly-developing diseases such as malaria and dysentery, HIV/AIDS is not a war-stopper (it does not immediately take soldiers out of the front line). Thus many militaries have been slow to initiate HIV/AIDS programmes and have remained distanced from civilian programmes. As the impact of the disease becomes more apparent, however, most senior medical and, to a lesser extent, line officers, recognise the urgent need to provide information on avoiding infection. This includes promoting condom use, maintaining strict blood-safety procedures, and prevention and treatment of other STIs. Leaders also increasingly acknowledge that HIV/AIDS cannot be combated in isolation, but requires close co-operation with civilians in the public and private sectors, and cross-national civil-military collaboration.

Key Elements

HIV testing

For armed services in all world regions, no other health-related issue is as controversial as the question of universal testing for HIV. Those opposed to mandatory testing argue that it is inconclusive, expensive, and in direct violation of human rights to privacy and freedom from discrimination. Advocates maintain that the resulting statistical information is important in maintaining military readiness, in extending the length and quality of life of personnel and those with whom they come into contact, in evaluating the disease and in establishing preventive intervention.

On medical and cost-benefit terms, and also for human rights reasons, the World Health Organisation is opposed to routine HIV testing without consent. Only a few militaries have adopted mass testing policies. Of these, the U.S. armed forces require compulsory HIV screening of all recruits, biannual phased serological testing of active-duty and reserve units, screening of blood donors, and periodic testing of groups exposed to high risks including STI patients and some recipients of blood and blood products.

In many countries, however, military leaders are reconsidering the merits of universal testing. This has been prompted by the mounting costs, organisational dislocation and threats to mission fulfilment caused by the HIV virus. One possibility involves the release of test results, with policy options ranging from complete confidentiality to informing commanding officers and the families and/or sexual partners of test subjects. In Third World militaries especially, decisions on mandatory testing are influenced by questions of foreign training, peacekeeping participation, staffing, demobilisation, provision for the HIV-infected, and general stability.

Foreign military training

Because of personnel losses created by HIV/AIDS, overseas military training has assumed ever-greater importance for many Third World governments. Some countries offering training require that those selected be certified as HIV-seronegative. This prompts commanders either to require screening of candidates or to select host-countries which require no such tests. In a few cases, testing has been circumvented by HIV-positive nominees submitting false test results obtained from HIV-negative surrogates.

Peacekeeping

HIV prevention has gained a new urgency with the increasing deployment of soldiers on United Nations and other peacekeeping missions. By their very nature, these operations enhance exposure to disease. This risk is com-

pounded when peacekeeping contingents are expected not only to stand between contending forces, but also to separate them, help effect demobilisation and create institutions to maintain the peace.

Short-term assignments can thus subtly be transformed into lengthy peacemaking efforts, often in situations where HIV-seroprevalence is already high. The presence of refugees and displaced persons further heightens risk of exposure to HIV and other STIs; by late 1994 there were about 22 million of these uprooted civilians in Africa alone. In earlier times, military STI patients were usually cured before returning home. HIV, however, requires military and civilian populations to deal with a chronic and incurable disease with a high rate of transmission from the field to home and vice versa.

Countries contributing peacekeeping units are therefore concerned that returning troops might transfer HIV to their families. Host-country leaders express equal worry that foreign peacekeepers may transmit HIV to their own people. The UN Department of Peace-Keeping Operations recommends that training in HIV prevention be required of all militaries supplying peacekeepers, voluntary or mandatory HIV screening be employed prior to deployment, and troops and personnel infected with HIV and/or other STIs should not be deployed.

This is not always done. For example, several national contingents deployed to Somalia in the early 1990s were not tested before departure; none of the other governments participating in the Somali peacekeeping mission questioned this lapse for fear that those concerned would cancel their involvement. Conversely, peacekeeping participation has become significant to a number of Third World governments, which use the proceeds to help fund their defence ministries.

Military staffing

Universal screening and testing for HIV may have adverse effects on military staffing. Stigmatisation of those rejected before or after enlistment may seriously deplete potential military personnel.

If, however, the debilitating symptoms of HIV infection can be postponed in certain controllable situations, there may be no valid reason to deprive the HIV-positive of active service, promotion and rank, especially among highly trained personnel. Highly regulated military environments would seem especially conducive to such regimes. More conclusive evidence is needed about human environmental factors which may slow the development of symptoms resulting from HIV infection.

Demobilisation

International donor and lending institutions often require demobilisation of militaries and reduced defence spending as a condition of co-operation. Such reductions in force may result in smaller and more economical military structures, but may also lead to the further spread of HIV by discharged personnel.

AIDS care

As AIDS has become the leading cause of death in many military organisations, several controversial questions arise concerning the interface of military and civilian populations. For example, should special AIDS clinics be established for soldiers and their families? At what point should HIV/AIDS patients be discharged and sent home,

and with what consequences for spread of the disease? Should full medical benefits be provided for discharged AIDS patients and their dependants? What kinds of financial, legal, and other benefits should be extended to the survivors of deceased? In short, should the armed forces and their dependants receive privileged treatment as a "protected class" within societies exposed to HIV/AIDS?

Stability

Growth in AIDS-related deaths among young Third-World adults is likely to exert a highly negative impact on economic, political, and military stability. In military administrations especially, stability may be seriously undermined by depletion in the ranks of key officials and their potential successors.

Sectoral Coping Strategies

Military medical services generally agree that workable approaches to HIV prevention and AIDS care should embody eight main components:

1. information, education, and communication (IEC) programmes targeted toward HIV and other STI prevention;
2. condom procurement, dissemination, and promotion;
3. IEC initiatives to advance STI care-seeking behaviour;
4. prevention of HIV transmission through blood transfusions;
5. prevention of prenatal transmission;
6. care and support for those afflicted with AIDS, both before and after discharge from service;
7. close integration of military prevention and care activities within civilian AIDS programmes;
8. testing for the HIV virus combined with pre- and post-test counselling.

The only controversial aspect of these strategies concerns whether HIV testing should be voluntary or mandatory for in-service personnel and/or recruits.

Where put into effect, civilian national AIDS programmes largely determine the parameters of military HIV/AIDS policies. To a greater or lesser extent, military strategies are also co-ordinated with civilian government agencies and non-governmental organisations (NGOs).

Among Third World countries, Botswana provides one of the most comprehensive examples of a military sectoral response. Under specific civilian and military policies, HIV-positive members of the Botswana De-

fence Force (BDF) are treated the same as uninfected personnel. They are fully deployable within Botswana until a medical officer advises otherwise, and may not be discharged until they fall below minimum performance standards. Soldiers who no longer meet these criteria are discharged for medical reasons, with full medical benefits for themselves and their beneficiaries. HIV-positive personnel who choose not to remain on active duty may apply for discharge on compassionate grounds, and also receive full medical benefits.

HIV-positive military trainees, including ordinary recruits and officer cadets, complete their training and are assigned to duty. If clinical deterioration means that they fall below retention standards, they are discharged on medical grounds.

Irrespective of HIV status, all members of the BDF and their families receive education and counselling on HIV prevention. Thus the BDF currently maintains one of the world's most constructive approaches to HIV in the military, although as the epidemic gains momentum these policies may require reappraisal.

Except under explicitly stipulated conditions, HIV examinations are voluntary, whether for recruits, soldiers suspected of being HIV-positive, STI patients, rape victims, or military medical beneficiaries/non-beneficiaries who may have had sexual conduct with or received blood from active-duty personnel.

BDF members selected for training in countries requiring HIV screening can choose to be tested or to decline the training, with no penalties in terms of career advancement. The test results of those who are examined are held in strict confidence and only released to

relatives and/or partners with their consent.

This voluntary testing policy carries one partial exception - pilots and troops destined for peacekeeping missions. If a fighter-pilot becomes HIV symptomatic, he is tested; if found to be HIV-positive his pilot's com-

mission is cancelled. HIV-positive transport pilots may continue to fly until they fall below an established standard of fitness, after which they retire with full benefits. HIV-positive soldiers and aircrews are not eligible for deployment outside Botswana.

Strategies to Reduce Vulnerability to HIV/AIDS

For both the military sector and the civilian society of which it is part, strategies to reduce vulnerability to HIV/AIDS must embody five essential components - they must:

1. foster a positive social environment conducive to value change so that changes in terms of sexual behaviour can result;
2. seriously attempt to bring infection rates to a level of stasis and offer support to the already-infected and their dependants;
3. minimise the short-term psychological, social, economic, and political effects of the HIV/AIDS pandemic on individuals, communities and civilian/military institutions;
4. counter long-term reductions in standards of living, productive capacities, and civil order; and
5. contain innovative and yet realistic organisational and funding provision to maximise their impact on military and civil populations.

The chief military-related target groups are active-duty and reserve forces and their dependants; sex workers catering to the armed forces; voluntary and/or conscripted recruitment pools.

On the basis of epidemiological, socio-cultural, and behavioural research, the most straightforward aspect of reducing vulnerability to HIV entails efficient distribution and adequate supply of condoms, blood-testing equipment and disposable medical supplies. On-site (media-independent) and remote (media-dependent) preventive information, education, and communication programmes, together with efforts to identify and treat other STIs, are also required. The more difficult aspects are ensuring adequate funding and inter-agency co-ordination within and

among militaries, and establishing effective linkages between military and civilian institutions. However, the armed services may themselves offer distinct advantages in attacking these problems. With their regularised channels of internal and international communication, and their relatively sophisticated health-care and command systems, militaries may be ideally positioned to interact with each other and jointly to devise risk-reduction initiatives that can serve as models for their societies at large. In addition, employing soldiers in community peer-education roles may afford a partial alternative to economically well-motivated but politically destabilising reductions in force, and may also improve the status of the military in civilian society.

In policy terms, reducing vulnerability to HIV/AIDS in military and counterpart civilian populations will necessitate the following changes:

- greater training co-operation and epidemiological data sharing between the civilian and military sectors;
- encouraging greater international co-operation in HIV prevention and AIDS alleviation through increased South-South, South-North, and North-South information and resource transfers;
- changing the perception of HIV/AIDS from that of an immediate medical crisis and domestic political issue to that of a serious but approachable long-term obstacle to national and international stability, peace, and development;
- inter-sectoral collaboration that moves beyond traditional ministerial divisions and time-honoured distinctions between the roles of private and public, or civil and military, to promote the common welfare.



Checklist

☐ Vulnerability

Spread of HIV virus:

- ☐ Initially hidden but increasing infection
- ☐ Military personnel among core groups for HIV acquisition and transmission

AIDS-related illness and death:

- ☐ Spread of HIV continues with more civilian and military illness and death

Survivors:

- ☐ Surviving military dependants left without support

Checklist (continued)

Immediate security impact:

- Depletion of force strength
- Loss of command capacity

Long-term potential impact:

- Social and political unrest
- Loss of control over national security
- Generalised breakdown of public order

☐ Responses

Spread of HIV virus:

- Behaviour change through information, education and communication programmes encouraging condom use
- Ensuring adequate numbers, quality, and appropriately distributed condoms
- Prevention through condom use, blood screening
- Prevention impact assessment by periodic voluntary or mandatory testing for HIV or other STIs.
- Human rights protection: confidentiality of HIV test results and protection of job security until medical discharge from service becomes necessary

AIDS-related illness and death:

- Social and psychological support through pre-test and post-test counselling of military personnel and of their dependants
- Employment and income maintenance: protection of employment security and possibility of advancement in rank until medical discharge is necessary
- Confidentiality, care and treatment
- Legal protection
- Provision of continuing medical care of HIV-infected personnel, discharges and their dependants

Survivors:

- Emergency assistance to dependants of deceased personnel through temporary continuation of

military salary and provision of death benefits including expenditures to cover funeral costs

- Reintegration of survivors within their communities through assistance in relocation of survivors' households and through provision of educational benefits for surviving children
- Assistance in protection of family property rights

Immediate security impact:

- HIV impact monitoring and increases in numbers of personnel to maintain armed forces' strength and command and control capacity
- Protection and strengthening of military recruitment pool through HIV prevention-related information, education and communication campaigns targeted towards adolescents and through recruitment limited to literate school-leavers
- Strengthen health and social welfare sectors through increased domestic and donor-assisted civil-military co-operation in the HIV/AIDS areas

Long-term potential impact:

- National and international actions to reduce adverse effects on people and their communities through greater HIV/AIDS information and resource-sharing among militaries
- Change perception at senior military and civilian levels from viewing HIV only as an immediate medical crisis to HIV treated as a serious but approachable challenge to national and international security, peace and socio-economic development
- Increased inter-sectoral co-operation in HIV prevention and AIDS care, moving beyond traditional ministerial distinctions between the roles of military and civilian institutions and between public and private sectors, to promote common welfare - e.g. encouraging greater military co-operation with effective NGOs working in HIV prevention

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