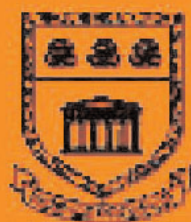


Equity Issues in HIV/AIDS, Nutrition and Food Security in Southern Africa

EQUINET
DISCUSSION
PAPER **11**

By
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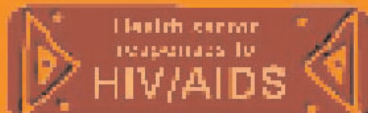
Regional Network
for Equity in
Health in Southern
Africa

In co-operation with



Oxfam

September
2003



Editors: B. L. Levenson, C. Thompson

EQUITY ISSUES IN HIV/AIDS, NUTRITION AND FOOD SECURITY IN SOUTHERN AFRICA

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Regional Network for Equity in Health in Southern Africa
(EQUINET)

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Executive Summary

As the HIV/AIDS epidemic spreads and matures, affecting large swathes of people across the southern African region, it is eating into the social, economic and political fabric of many communities. This became startlingly apparent with the recent humanitarian crisis in the region, when over 14 million people were threatened with starvation. The causes included the usual factors of bad weather, and economic mismanagement, but the added impact of HIV/AIDS seems to have tipped many people into destitution. The immediate response has been an emergency one with thousands of tonnes of food aid and emergency health care. At the same time, it is quite clear that the traditional health and agricultural services have not significantly reduced the vulnerability or susceptibility of millions of people to HIV/AIDS or malnutrition or food insecurity.

The Regional Network for Equity in Health in Southern Africa (EQUINET) and Oxfam GB along with government and civil society partners have, since early 2003, initiated a programme of research and analysis in support of policy and advocacy focusing on HIV/AIDS and equity in health sector responses. The programme, has initiated research in four southern African countries on equity in health sector responses (Zimbabwe, Malawi, Tanzania and South Africa) and, with support from DfID, undertaken regional analyses of specific health equity concerns relating to HIV/AIDS, covering issues such as health personnel, nutritional interventions, and gender equity in health sector responses (see www.equinet africa.org). This paper is one part of this overall project and deals with the nutritional dimensions of health sector responses to HIV/AIDS.

HIV, nutrition and food security interact at a number of different levels – biological, individual and community. At the biological level it is well established that good nutrition plays a critical role in the ability of the individual's immune system to withstand and respond to infections. HIV is no exception. At the individual level poor nutritional status (especially from a young age) leads to reduced physical and intellectual capacity, ultimately leading to reduced earning potential. Poverty is well recognised as an important factor in increasing vulnerability to HIV. Poor women are especially vulnerable. Finally, communities with poor food security are more likely to be engaged in high risk strategies such as increased migration, and have decreased access to health care services. They are therefore at increased risk of spreading or contracting HIV. Similarly, HIV erodes social capital and traditional coping mechanisms within communities, thus increasing food insecurity. For example, one common coping strategy is to grow and consume foods that are easier to cultivate and cheaper to purchase but these also tend to be nutritionally poorer foods (such as starchy foods). Many households also skip meals. Their vulnerability is increased by a reduction of their capacity to respond both at a biological level and at an individual and community level.



This paper argues that the traditional focus on efficiency has resulted in a narrow medical focus. The provision of free formula milk to some pregnant women who are HIV positive is an example of narrowly conceived policy that is actually increasing inequity. Women who have the resources to safely formula feed are provided with a substantial subsidy in the form of free formula milk. Meanwhile poorer women who cannot choose this mode of feeding are given nothing. A greater awareness of the synergy between nutrition, food security and HIV/AIDS could lead to more comprehensive policies, which encompass both greater efficiency and equity. Such an approach would be one in which prevention, treatment, rehabilitation and mitigation are combined in ways that will reduce vulnerability and susceptibility to the virus. It would encompass a participatory assessment of the factors that lead people to adopt risk behaviours and attempt to address and influence these factors, rather than the risk behaviour per se, thus addressing vulnerability to HIV. Consequently, if changes result from these awareness exercises in terms of enhancing the resilience of livelihood systems, then it can be argued that vulnerability to HIV is being reduced. The efficiency and effectiveness of such interventions can be considerably increased if they are targeted towards the most vulnerable, especially if this can be achieved in a participatory manner that promotes social justice.

Presently there is a growing movement towards the allocation of financial resources to provide a more focused approach towards HIV. However, unless these resources contribute to the development of infrastructure, human capacity and management processes, this response is likely to have only a short-term impact on health problems, which are ultimately manifestations of economic and social under-development and dysfunctional systems. The existing terms of trade and instruments of globalisation in turn aggravate this. The campaign for wider access to HIV medication needs to be fully supported, but it does, however, also need to be linked to addressing the underlying causes of HIV vulnerability if equity and effectiveness are going to be enhanced. Food and nutrition interventions can play an important role in bridging this gap.



1. Introduction

The Regional Network for Equity in Health in Southern Africa (EQUINET) and Oxfam GB along with government and civil society partners have, since early 2003, initiated a programme of research and analysis in support of policy and advocacy focusing on HIV/AIDS and equity in health sector responses. The programme, has initiated research in four southern African countries on equity in health sector responses (Zimbabwe, Malawi, Tanzania and South Africa) and, with support from DfID, undertaken regional analyses of specific health equity concerns relating to HIV/AIDS, covering issues such as health personnel, nutritional interventions, and gender equity in health sector responses (see www.equinetafrica.org). This paper is one part of this overall project.

Over 42 million people are currently infected with the HIV virus and over 27 million of them are in Sub-Saharan Africa (UNAIDS 2002). HIV/AIDS is now the single most pressing development challenge confronting African countries, especially in the southern African region. Almost 15 million people in southern Africa were living with HIV at the end of 2001; an estimated 1.1 million died of AIDS last year, the majority of them in their productive prime. In four southern African countries, national adult HIV prevalence exceeds 30%: Botswana (38.8%), Lesotho (31%), Swaziland (33.4%) and Zimbabwe (33.7%). A fifth country in the region, South Africa, has the largest HIV population in the world at over 4 million. HIV/AIDS will reduce life expectancy by 20 years or more by 2010–15. Even in a relatively wealthy country like South Africa it is estimated that the risk of death before the age of 50 for a young man will approach 80% (Dorrington R et al 2001).

HIV/AIDS is one more challenge that poor people have to face. However, there is increasing evidence that in many settings the devastating impact of the epidemic, especially since it impacts on the young and economically active, is leading to breakdown of traditional coping strategies. This is illustrated most starkly by the spreading famine and hunger across the southern African region. It was estimated in 2001/2002 that 14.4 million people were at risk of starvation across six countries (Zimbabwe, Zambia, Lesotho, Swaziland, Malawi and Mozambique) (WFP 2002). HIV, nutrition and food security interact at a number of different levels – biological, individual and community.

- Biological level – good nutrition plays a critical role in the ability of the individual's immune system to withstand and respond to infections. HIV is no exception.
- Individual level – poor nutritional status (especially from a young age) leads to reduced physical and intellectual capacity, ultimately leading to reduced earning potential (Mcguire & Austin 1987, Colombo et al 1988, Satyanaryana et al 1990). Poverty is recognised as an important factor in increasing vulnerability to HIV. Poor women are especially vulnerable.



- Community level – communities with poor food security are more likely to be engaged in high risk strategies such as increased migration and commercial sex, and have decreased access to health care services. They are therefore at increased risk of spreading or contracting HIV. Similarly, HIV erodes social capital and traditional coping mechanisms within communities, thus increasing food insecurity.

Whilst there has been an increasing appreciation of the relationship between HIV/AIDS and nutrition/food security, there has been very little published on how the terrible cycle of HIV/AIDS and malnutrition is impacting upon inequities in societies feeling the brunt of the epidemic. This is surprising since both HIV/AIDS and malnutrition are closely associated with poverty and inequity. This essay will conceptually clarify the interpretations of equity in health care; describe the scientific and epidemiological relationship between HIV and nutrition/food security; discuss how both conditions impact on inequities; and conclude with an analysis and discussion on possible public policy choices being made in relation to health sector response to HIV/AIDS in southern Africa with specific focus on food and nutrition interventions



2. Defining equity in health

There has been a recent resurgence of interest in equity issues, including some re-assessment of the definition and meaning of equity within the health sector. Whitehead's seminal paper 'The concepts and principles of equity in health' defined health inequities as differences in health that are unnecessary, avoidable, unfair and unjust (Whitehead 1992). The recent debate around the WHO's World Health Report 2000 highlights the importance of definitions and interpretations of equity in health. The Report focused upon what it refers to as 'pure health inequalities' – health disparities between the healthiest and sickest in a society regardless of social groupings. The measurement of health disparities without reference to the origins of the disparities or how they are distributed socially is not a measure of equity and does not reflect fairness or justice with respect to health (Braveman et al 2000). Without such comparisons between identifiable social groups, it will not be known who is benefiting most or least from health policies (Braveman & Gruskin 2003). To take this further, Mooney (1996) has suggested that vertical equity be considered more seriously. Whereas horizontal equity refers to the equal treatment of equals, vertical equity refers to the unequal (but equitable) treatment of unequals. This would be a departure for health systems that have traditionally championed the former (such as 'equal access for all' or 'universal access'). For Mooney it is important that preference be given to those with poorest health in order to counter the legacy of disadvantage and to target health resources more effectively.

The importance of vertical equity is shared by EQUINET (EQUINET Series 7). However they are concerned that this does not go far enough:

'Equity related work needs to define and build a more active role for important stakeholders in health, including communities, health providers and funders, health professionals and other sectors. This would need to incorporate the power and ability people (and social groups) have to make choices over health inputs and their capacity to use these choices towards health.' (EQUINET Policy series 7 p.3)

Explicit in this formulation is a recognition of the social justice element of equity. If this is to be taken further it also implies an active engagement of citizens. Indeed, in a later article Mooney and Jan (1997) suggest that in determining resource allocation patterns to achieve vertical equity goals, it is important to consult widely within a society to identify which groups should be prioritised in policy action, and how much additional weight they should receive compared to other groups. This in turn requires the strengthening of processes that would facilitate such discussions.

In summary, when considering the impact of, and possible responses to, HIV/AIDS, nutrition and equity consideration must be given not only to the differential impacts on different sections of society but also as to how vertical equity and social justice can be promoted.



3. The HIV and nutrition situation in Southern Africa

Many people in southern Africa are undernourished due to a combination of poor quality diets and infections. Typically, a poor quality diet supplies inadequate quantities of protein, energy and micronutrients that are essential for various human functions. Where the environment is poor in iodine, consumption of iodated salt by pregnant women is important for the normal development of the foetal brain. Furthermore, low intakes of fresh fruits and vegetables during certain seasons cause vitamin A, vitamin C and other nutrient deficiencies, making individuals more susceptible to disease. Because of poor sanitation and unhygienic environments, infectious diseases often deplete the body's stores of vital nutrients, such as iron. Many studies in developing countries have shown that poor nutritional status is associated with reduced productivity (Basta et al 1979, Spurr 1983); even the walking pace of individuals can be affected by iron-deficiency anaemia (Bhargava et al 1995).

Since 2002, when more than 14 million were at risk of starvation, there have been some improvements in all countries in the region, apart from Zimbabwe. In Zimbabwe the latest surveys from the Zimbabwe Vulnerability Assessment team (ZIMVAC) indicate that despite improved rains this year more than 55% of the rural population will require food aid this year (ZIMVAC 2003). More than 40% of communities report that they have seen very little cereal in the last three months. The lack of protein-rich foods is even more widespread (WFP 2003).

A recent UNICEF study provides some important insights into the present nutritional situation in the southern African region and its relation to HIV/AIDS (UNICEF 2003). The study examined all available large scale nutrition survey data over the last ten years in Lesotho, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe. Since good nutrition is essential for childhood growth and development and children are the most sensitive to changes in food security and disease in the community, measuring childhood nutritional status is a sensitive indicator of broader changes.

The study found that the slow national trend for improvement ceased in the 1990s. Latest data from Zimbabwe and Zambia shows deterioration in 2001–03. The levels of malnutrition remained shockingly high in Malawi and Mozambique with more than 30% of children exhibiting stunted growth. Overall 2.3 million children are underweight in the six countries. Importantly, these national figures hide important sub-national variations with some districts showing distinct improvements whilst others have deteriorated sharply. Interestingly, in all the countries except Lesotho and Swaziland, it is the urban and peri-urban districts – which started with the lowest prevalence of underweight children – that have deteriorated the most; the more rural districts have tended to improve. For example, Figure 1 illustrates the trend in two peri-urban districts compared with two rural districts in Zambia. The prevalence of HIV is much higher in



the urban and peri-urban areas. Across the region the study found a close relationship between the prevalence of HIV and deterioration in nutritional status. (See Figure 2) The study found that orphans had the worst nutritional status.

These findings raise some interesting questions – how is the HIV/AIDS epidemic making such an impact on nutritional status and food security? What is the impact on different segments of society? What should be the response?

Figure 1: Changes in nutritional status of children under five across four provinces in Zambia

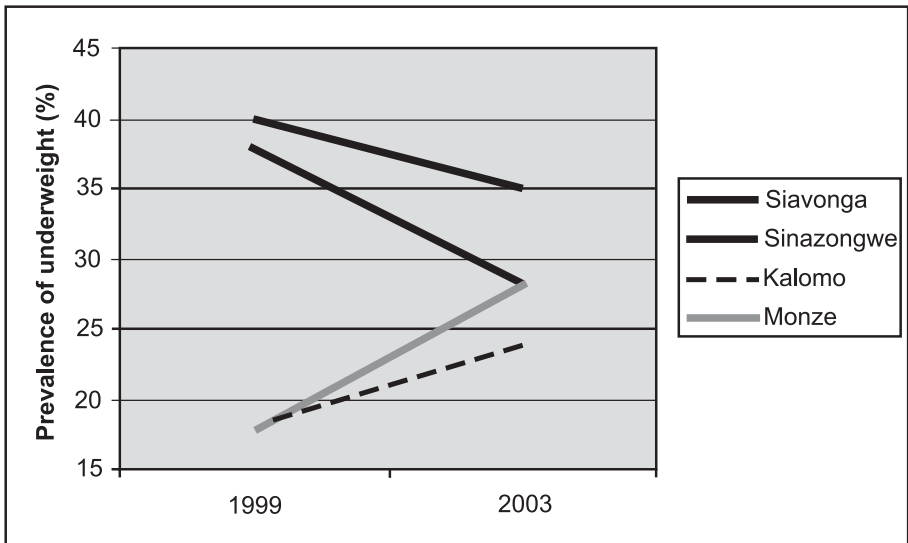
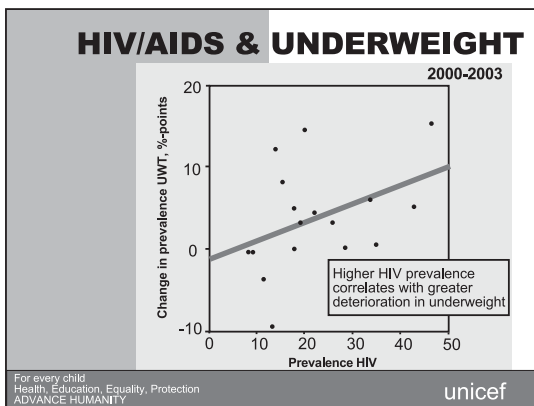


Figure 2: Correlation Between Change in Prevalence of Underweight and Prevalence of HIV/AIDS

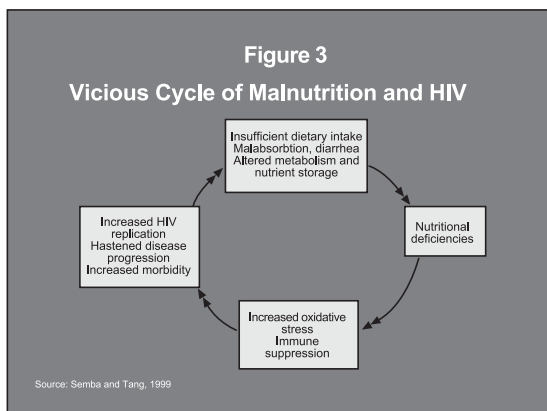


4. Interaction between HIV/AIDS, nutrition and food security

HIV/AIDS interacts with nutrition and food security at a number of different levels – biological, individual and community.

At the **biological level** the impact of malnutrition on infectious diseases is well established. There is a vast body of literature from Africa showing the crucial role macro- and micronutrients play in the immune response to infectious diseases and ultimately in survival (see Tomkins and Watson 1993 for review). It has been estimated that malnutrition underlies over half of all infant deaths. Substantial reductions in childhood mortality have also been achieved with vitamin A supplementation (Beaton et al 1993). The impact of HIV is particularly important as the virus directly attacks the immune system. Malnutrition and HIV work in tandem. HIV compromises nutritional status and this in turn increases susceptibility to opportunistic infections. Malnutrition, on the other hand, exacerbates the effects of HIV by further weakening the immune system. This vicious cycle is illustrated in Figure 3. Clinical studies show that HIV disease progression is more rapid in individuals with compromised nutrition.

Malnutrition in HIV/AIDS presents as weight loss and muscle wasting, altered metabolism and increased use and excretion of nutrients. Deficiencies of vitamins and minerals such as vitamins A and E, B vitamins, selenium and zinc, needed by the immune system to fight infection, are commonly observed. Wasting has been long recognised as an important risk factor for mortality in HIV. For example, one study (Semba R et al 1995) found that HIV-positive intravenous drug users with wasting (more than 10% loss of weight from baseline to last visit before death) had an approximately eightfold higher risk of mortality compared with controls, after adjusting for CD4 cell counts. The exact direction of causation (i.e. the degree to which malnutrition causes, as opposed to being the result of, the progression to AIDS) is difficult to ascertain. Unfortunately there have only been a few nutrition intervention trials in HIV in both developed and developing countries.



Some may argue that proper nutrition is a human right regardless of its exact role in HIV. But there is also, in addition to the uncontested evidence that nutrition plays a critical role in the progression of other infectious diseases, a growing body of evidence that macro- and micronutrient deficiencies are important risk factors in survival for HIV-positive individuals. The basic problem of poor dietary intake and appetite in HIV-positive patients is illustrated by a study in Abidjan, Cote d'Ivoire, where researchers measured the nutritional status and dietary intake of 100 HIV-positive adults attending the hospital OPD. Two thirds of the patients were malnourished with symptomatic patients being the worst off. 45% of subjects reported reduced appetite and their dietary intakes were well below that recommended (Castetbon et al 1997). In a study carried out among HIV-positive homosexual men, development of vitamin A deficiency over an 18-month period was associated with a decline in CD4 cell count, widely used as a marker of HIV immune impairment. Normalisation of vitamin A was associated with higher CD4 cell count (Fawzi & Hunter 1998). High energy-adjusted vitamin A intake at baseline was associated with higher CD4 cell count at baseline, as well as with lower risk of developing AIDS during the six year period follow up among men who participated in the Multicenter AIDS Cohort Study (MACS) (Tang et al 1993).

A few trials have established the efficacy of nutritional interventions for improving the well being and immunological markers for people infected with HIV. For example, a randomised controlled trial found that a cheap supplement containing the amino acid glutamine and various antioxidants significantly increased body weight and body cell mass compared with controls over a three-month period (1.8 kg vs 0.4 kg $p < 0.007$) (Shabert et al 1999). Another study in the United States found that a once daily, high energy, high protein liquid food supplement, along with nutrition education, achieved significant weight gain amongst asymptomatic HIV-positive subjects (Stack et al 1996). The potential importance of vitamin A is further supported by the results of a randomised trial, in which daily supplementation with 180 mg of beta-carotene for four weeks was associated with an increase in total white blood cell count, an increase in CD4 cell count, and a beneficial change in CD4/CD8 ratio compared with study participants receiving a placebo. These parameters decreased when participants in the beta-carotene arm were switched to the placebo arm (Coodley et al 1993). Whilst there are few data from Africa it is probably safe to state that studies suggest that interventions with food and supplements and nutrition counselling can have a positive impact on body composition and weight. However, this is rapidly diminished in the later stages of the infection especially after the onset of secondary infections. This further underscores the need for early testing of asymptomatic subjects.

Studies in South Africa and Tanzania have shown 50% reduction in diarrhoea morbidity, improved immune status and significant reductions in mortality (up to 63%) with vitamin A supplementation of HIV-positive children (Coutsoudis et al 1995, Fawzi et al 1999). HIV infected individuals have a far greater risk of death if they are anaemic. This risk increases with the severity of anaemia (Moore 1998) (one European study has estimated the risk of death to increase by 57% for each 1 g/dl drop in haemoglobin (Mocroft 1999)). Studies from



Malawi and Burkina Faso have found HIV women to be twice as likely to be anaemic as their HIV negative counterparts. However, increased iron stores can predispose to microbial infection and iron supplementation may therefore hasten progression to AIDS, with little effect on HIV-induced anaemia, but no conclusive data are currently available. There have been no recent published reports of iron supplementation studies.

The finding that HIV can be transmitted through breastmilk has put poor HIV-positive mothers in a terrible dilemma. They must weigh up the risk of transmitting the virus to their children (estimated to be about 5% in the first six months of breastfeeding rising to 15% if breastfeeding continues to 18 months) against the considerable risks of their infants dying if they are not breastfed (a pooled analysis found a six fold increase in mortality if a child is not breastfed after one month in low and middle income countries (WHO 2000)). Host susceptibility to HIV and opportunistic infections is critically undermined by malnutrition. Recurrent and chronic malnutrition, infectious disease and parasitosis severely weaken immune systems. Chronic parasitosis often leads to chronic immune activation, which in turn may exhaust the immune system and render it less capable of successfully repelling invaders (Bentwich et al 1995).

At the **individual level**, the link between poor nutritional status (especially from a young age) and reduced physical and intellectual capacity, ultimately leading to reduced earning potential, is well established. Poverty is well recognised as an important factor in increasing vulnerability to HIV. Poor women are especially vulnerable. The lack of energy is especially pernicious in HIV-infected individuals in whom a concomitant reduction in physical activity has been linked to depressed mental states.

Depressed mood, side effects from medication and chronic infections all reduce appetite in HIV-positive individuals. Combined with the increased nutritional needs of those infected with HIV – up to 50% more protein and up to 15% more calories – HIV has become an important reason for malnutrition (Piwoz & Preble 2000). (These estimates of requirements are based on metabolic studies; it is therefore likely that HIV-positive people who do not increase their intakes will suffer more than those who do, but the full benefits of supplementation have not been quantified.)

Communities are composed of dynamic, integrated and inter-dependent systems of production operating through a network of interrelated institutions, households and individuals. The efficiency and effectiveness of each institution, household, etc depends, to a large extent, on the capacity in other parts of the system. The enormous impact of HIV/AIDS on the food system is because HIV/AIDS does not merely impact on certain agricultural and rural development components leaving others unaffected. Because it strikes at the most economically active and is becoming so widespread the impact of HIV is not only cross-sectoral but, more importantly, systemic (UNAIDS/FAO 1999). The systemic impact of HIV/AIDS necessitates a multisectoral approach at all



levels (community, district, national and international). Table 1 summarises some of the impacts HIV/AIDS has on agricultural systems and hence household food security.

The recent famine sweeping across the region was not simply a 'natural' disaster caused by unfavourable weather patterns. Its origins can be traced to a deteriorating macro-economic situation with increasingly unfair terms of trade, contributing to economic decline and currency weaknesses. This in turn (in Zimbabwe for example), has led to a sharp rise in cost of agricultural inputs such as seed, fertiliser and other agrochemicals. Accentuating this is a complex web of mishaps and policy mistakes: mismanagement and poor governance; misguided market reforms; a lack of extension and other support services for stricken farmers; the removal of consumer protection (allowing food prices to rocket as the emergency worsens); and political instability are among the factors involved. The HIV/AIDS epidemic is also a factor in every country now facing a food emergency.

Table 1 Common impacts of HIV/AIDS on agricultural growth

How does HIV/AIDS change the context of agricultural growth?	Leads to...
<u>Labour changes</u>	
Shortages of household labour due to....	<ul style="list-style-type: none"> ● less land being farmed ● underfarming of land in absence of labour sharing and well-defined property rights ● more child labour ● less labour-intensive crops grown
<ul style="list-style-type: none"> ● mortality ● surviving adults take care of infirm 	
Shortage of hired labour due to	<ul style="list-style-type: none"> ● emphasis on small livestock cultivation and cash crops later ● greater emphasis on small livestock cultivation ● decline in marketed output for crop processors ● natural resource mining (the future is heavily discounted)
<ul style="list-style-type: none"> ● mortality ● migration to cities ● lack of cash to pay for it 	
<u>Loss of farm-specific knowledge</u>	
<ul style="list-style-type: none"> ● premature mortality curtails period for intergenerational role modeling and knowledge transfer 	<ul style="list-style-type: none"> ● less appropriate farming practices within a more hostile farming environment ● more farmers who are inexperienced and need training, role models (e.g. youth)
<u>Income changes</u>	
<ul style="list-style-type: none"> ● fewer earners, increase in dependency ratio ● greater expenditure on medical, transport, special needs of ill 	<ul style="list-style-type: none"> ● more off-farm income sources ● migration
<u>Institutional and organizational changes</u>	
<ul style="list-style-type: none"> ● loss of institutional knowledge, high turnover, low investment in staff development 	<ul style="list-style-type: none"> ● weaker rural institutions (e.g. extension services, microfinance institutions, NGOs) ● weaker social capital ● weakening of property rights for some ● weakening of asset base of women (especially land)



The more insidious role that HIV/AIDS is playing in undermining development in the region is shown by the experience of the recent climactic changes compared to the drought in 1991–92. The 1991–92 drought was far more severe and yet there were far fewer starvation deaths reported. Some commentators are now arguing that just as HIV destroys the immune system it has now disabled the body politic (de Waal & Whiteside 2003). Through its devastating impact on economically active members of society the epidemic is eroding the capacity of many communities to cope with the usual challenges that poverty brings. Young people are inheriting debts and having to increase cultivation to feed more dependents without the luxury of having gone through an apprenticeship in agricultural techniques and with less opportunity for accessing credit and knowledge through community and state institutions. In Zimbabwe, a study found that output on smallholder farms shrank by 29% for cattle, 49% for vegetables and 61% for maize if the household had suffered an AIDS-related death (UNAIDS 2002). Overall, in maize production, there was a decline of 54% of the harvested quantity. The amount of land planted to cotton decreased by about 34% and marketed output by 47%; while groundnut and sunflower production experienced an average decline of 40% (Kwaramba 1997).

In reading the literature on the impact of HIV on household food security, it is easy to forget that the epidemic does not just hit the most vulnerable households the hardest but also countries that have suffered the most with respect to new global trade and financial organisation. The focus in the literature has tended to be on how HIV/AIDS is destroying households and communities within African states too corrupt or incapacitated to help. This is an African problem. However, the underlying vulnerability of these countries, communities and households is inexorable linked to the deteriorating terms of trade with the rest of the world, and in particular the spectacular decline in commodity prices. In 2000, prices for 18 major export commodities were 25% lower in real terms than in 1980 and yet retail prices in the developed world continue to rise. For eight of these commodities, the decline exceeded 50% (Oxfam 2002).

The impact of such falls is captured by the experience of a rural woman in Southern Tanzania:

In 1998, she was being paid \$1 per pound for her coffee. At the time of the interview [2002], Tatu Museyni had sold her crop for \$0.30 per pound, leaving her with an income of \$35. These are her words:

'The price of coffee is destroying me. It is destroying this whole community. I cannot even afford to feed and clothe my children. How can I send them to school? Education is very important. It will give them a better life. But now I cannot pay for the school fees and books. Sometimes they are chased out of school because they cannot pay. Because I have so little from selling coffee, I will have to find work cutting grass or weeding on commercial farms.' (Oxfam 2002, p. 156)



The spectacular decline in commodity prices is exacerbated by the obscene agricultural subsidies in Europe and United States, which severely restrict the market potential for African agriculture. Space does not allow a fuller exploration but one example will have to suffice. Cotton grown in Southern Africa is 70% more cheaply produced than in the United States and yet American cotton is sold more cheaply on the world markets (FAO 2001).

The structural adjustment programmes, imposed by the IMF and World Bank, have also undermined the capacity of many households to resist threats to well being and food security especially in urban areas. These measures typically consisted of at least: a reduction of the budget deficit through a combination of cuts in public enterprise deficits and rationalisation of public sector employment; trade liberalisation, including price decontrol; and deregulation of foreign trade, investment, and production; phased removal of subsidies; devaluation of the local currency; enforcement of cost recovery in the health sector; and introduction of cost recovery for education. The impact of these measures on macroeconomic performance has been contested (Stiglitz 2003) but the negative impact on health and welfare is now widely acknowledged. A recent review of available studies on structural adjustment and health by a WHO commission (one of the authors is a World Bank officer) summarises:

'The majority of studies in Africa, whether theoretical or empirical, are negative towards structural adjustment and its effects on health outcomes.'
(Breman and Shelton 2001, p 15)

Ironically, the World Bank's own Health, Nutrition and Population Sector Strategy starts to point to the underlying causes of the problem:

'As shown by broad international experience, the underlying threats to good health, nutrition, and population outcomes are well known, and affordable solutions are frequently available. But, because of weak government implementation capacity and market imperfections in the private sector, potentially effective policies and programs often fail.' (World Bank 2000)

The recognition of weak government implementation capacity (which is also declining as a result of AIDS and increased attrition rates) and the clear acknowledgement of the 'market imperfections' of the private sector need to be explicitly linked to the inadequate financial resources available for food, health and nutrition interventions. A joint UNDP/UNICEF study in more than 30 countries across Africa, Asia and Latin America, found that public expenditure on basic social services is, on average, between 12 and 14% of government spending (Mehrotra and Delamonica, 2003). Many countries spend more on servicing external debt than they do on basic services. In many low-income, highly indebted countries, the low level of spending is explained by the lack of fiscal space. For instance, Ethiopia spends 22% of its national budget on health and education, but this amounts to only US\$1.50 per capita on health. Even if Ethiopia were to spend its entire budget on healthcare, it would still not meet the WHO target of US\$30–40 per capita (Save the Children Fund 2003).



In summary, HIV, nutrition and food security interact at the biological, individual, community and national levels. These are linked and reinforce each other. For example, one common coping strategy is to grow and consume foods that are easier to cultivate and cheaper to purchase but these also tend to be nutritionally poorer foods (such as starchy foods). Many households also skip meals. A particularly morbid example of how HIV is impacting on food security is the increasing loss of livestock through use as food during funerals of relatives who have died of HIV/AIDS (Barnett & Rugelama 2001). The above actions and reactions increase vulnerability to HIV infection and are probably accelerating the progress of HIV to AIDS.

Poor nutrition and food security increase the susceptibility of individuals and communities to HIV by making them more likely to engage in behaviours that put them at increased risk of HIV infection. Their vulnerability is increased by a reduction of their capacity to respond both at a biological level and at an individual and community level.

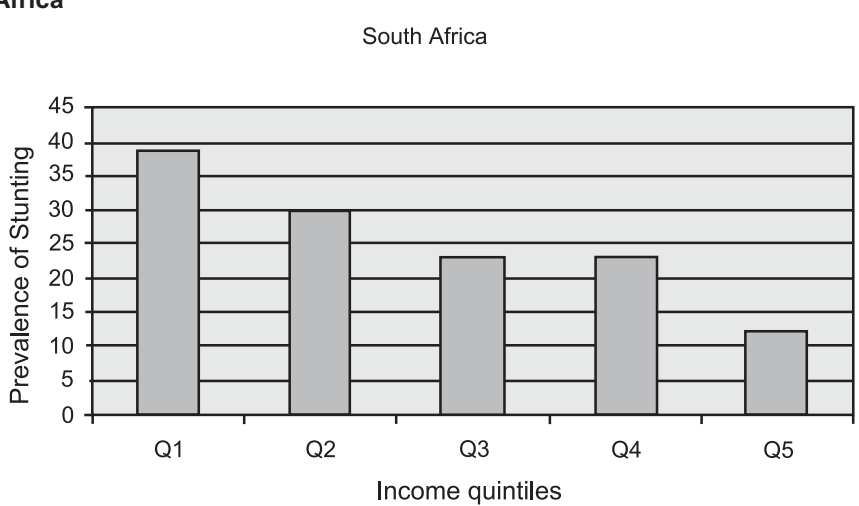


5. Malnutrition, food security, HIV/AIDS and equity

Having established some of the different pathways through which HIV/AIDS, food security and nutrition interact the question arises as to how these interactions differentially impact on different segments of society. This section will initially briefly review the evidence of the relationship between inequity and malnutrition and HIV/AIDS separately and then suggest how they might interact together.

Obviously under-nutrition differentially affects the poor and women and children. It is highly associated with poverty – levels of malnutrition are higher in poor countries than in better-off countries. In low income countries 36% of children are malnourished compared with 12% and 1% in middle income countries and the United States, respectively (Wagstaff 2000). There is now increasing evidence that within countries there is also a strong correlation between poverty and malnutrition. For example, Figure 4 presents the levels of stunting (low height for age) according to income quintiles in South Africa.

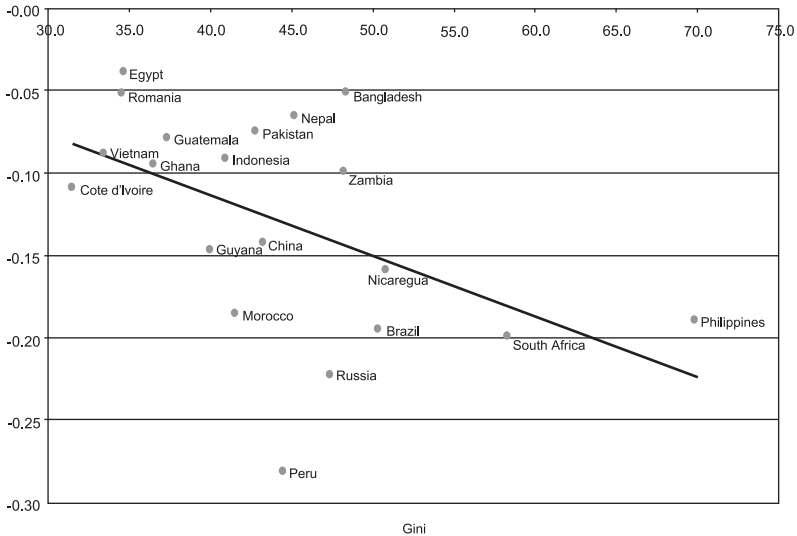
Figure 4: Prevalence of stunting according to income quintile in South Africa



Wagstaff and Watanabe (2001) have calculated the level of inequity in the distribution of stunting and plotted it against the general inequities in income for twenty countries (Figure 5). Not surprisingly, countries with unequal income distributions also tend to have unequal distributions of malnutrition. Unequal distribution of purchasing power, prima facie, leads to an unequal distribution of food spending (intake), health spending and utilisation of health services, and consequently unequal health outcomes.



Figure 5: Degree of nutritional inequity according to income distribution



The authors go on to point out that

“What is more interesting, perhaps, is the fact that the fit of the bivariate regressions is fairly bad – there are, in other words, many countries that buck the trend. Nepal and Peru, for example, have roughly the same level of income inequality, and yet Nepal has far lower levels of inequality in stunting and underweight than Peru. This implies that there must be some form of mechanism in these countries that breaks the link between poverty and malnutrition. For example, in the case of Egypt, which tends to positively deviate from the mainstream trend, it would be of interest to explore what factors, given the level of consumption inequality, contribute to relatively low inequalities in malnutrition.” (Wagstaff and Watanabe 2001, p 12; emphasis in original)

Public policies and interventions therefore have the potential to significantly improve equity.

Even though HIV infects all sectors of society it is fairly well established that once again it is the poorest that are the most susceptible and have the highest rates of infection. HIV/AIDS has a greater economic impact on poor households than on better-off ones because it forces them to draw on their meagre assets to cushion the shock of illness and death; and households with fewer assets are likely to have more difficulty coping than households with more assets. In



particular, it is women who are at increased risk. Overall, about twice as many young women as men are infected in sub-Saharan Africa. In 2001, an estimated 6–11% of women aged 15–24 were living with HIV/AIDS, compared to 3–6% of young men (UNAIDS 2002). Not only do women have an increased physiological risk of HIV infection but this is compounded by economic need, lack of employment opportunities, poor access to education, training and information, and local traditions. In a review of DHS surveys across 16 sub-Saharan countries Gwatkin & Deshewar-Bahl (2001) found knowledge about HIV/AIDS among men averaging around 77%, compared with an average of roughly 65% among women. However, in a country such as Mozambique the difference was as high as 20%. In rural areas, women tend to be even more disadvantaged due to reduced access to resources and services. A combination of these factors prevents women from having choices, especially choices about sexual risk and family health.

The synergistic manner in which HIV/AIDS and reduced household food security attack the most vulnerable in society can be illustrated by the results of two separate studies. Studies of the coping strategies households adopt when faced with reduced food security, or when an adult becomes sick or dies through HIV/AIDS indicate that the responses are largely similar (Thomson and Metz 1997; Donahue 1998). In other words, HIV/AIDS is in large part a problem of food insecurity. This juxtaposition of coping mechanisms also shows the catastrophic measures that the most vulnerable households are undertaking in much of the region. Quite often illness or death due to HIV/AIDS pushes the most vulnerable households into those choices likely to have the worst longer term outcomes: taking children out of school, stripping remaining assets, mining natural resources and selling land. Insecure access to land and other resources by widows and orphans restricts even these choices. Selling sex, often with limited ability to influence the conditions, is then one of a dwindling range of options. This heightens the risks of the downward spiral of infection–impoverishment–infection.

In particular, it is poor women who are bearing the brunt. In sub-Saharan Africa, women and girls make up the majority of those living with HIV/AIDS. They are also responsible for 50–80% of food production, including the most labour-intensive work, such as planting, fertilising, irrigating, weeding, harvesting and marketing. Their work also extends to food preparation, as well as nurturing activities. The impact on them of HIV/AIDS is multi-layered. It falls on their shoulders to care for sick spouses, children and relatives whilst continuing to strive for household food security. Quite often this is untenable: a survey carried out in two Zimbabwean districts in 2000 revealed that two thirds of households that had lost a key adult female had disintegrated and dispersed (UNAIDS 2002).



6. Public health response

Gilson (1998) has argued that there has been an overwhelming focus upon efficiency usually at the expense of equity. This has a number of important consequences:

- Health status gain is focused around medical interventions as opposed to intersectoral collaboration. This in turn promotes
- a return to vertical programmes that have been previously assessed as both inefficient and damaging to health systems (Rifkin and Walt 1988) and to
- an ignorance of the wider benefits of public health provision (for instance nutrition interventions may be judged according to their ability to reduce morbidity and mortality but the potential benefits of increased school attendance, improved productivity etc. are ignored). Finally
- 'the development of and application of efficiency-driven reforms is dominated by economists and health care managers and takes place in a 'black box' of specialist knowledge' (p 1893). The process of calculating and prioritising cost-effective packages of care is often performed with little or no involvement of other sectors and communities. Assumptions made in such calculations go unchallenged.

Within this dominant paradigm the emphasis in HIV/AIDS interventions has been on identifying high-risk populations and isolating individual risk factors for the transmission of HIV. The predominant health education messages reinforce the shift towards individual behaviour and lifestyle changes and the avoidance of 'risky behaviours'. Addressing risk to HIV infection alone, however, has certain limitations as it frequently leaves the underlying factors that render such groups 'high risk' intact. In fact, risk reduction tends to deal primarily with the proximate determinants of the HIV epidemic rather than with its causes. It could be argued that such an approach further exacerbates inequities as those with the resources and power are more easily able to change their individual behaviour. A lack of recognition of underlying causes of vulnerability can lead to further stigmatisation and isolation of vulnerable groups who are blamed for their ignorance or lack of moral fibre and labelled 'high risk'. Emphasis in the future should be on positive changes rather than what not to do, for example promotion of income-generating activities for women and intensive nutritious crop production close to the homestead (homestead gardens and provision of inputs etc).

This argument is supported by evidence of the uptake of other health interventions. For example, a study of over 40 countries found even those interventions generally thought to be especially 'pro-poor', such as oral rehydration therapy and immunisation, tend to attain better coverage among better-off groups than among disadvantaged ones (Gwatkin 2000). Benefit-incidence studies from a number of sub-Saharan countries consistently show that it is the better off who manage to secure a greater share of health services, especially those at hospital level (Filmer et al 1998).



In the present discussion this narrow focus manifests itself in the very limited roles that nutrition and food security play in the response to HIV/AIDS in most of the countries in the region. In the main, nutrition interventions are restricted to nutritional advice and education or the dispensing of vitamins and other nutrition supplements (paralleling an overwhelming emphasis upon medical treatment). Addressing the broader needs such as food, safe water and sanitation is relatively neglected (Chopra & Sanders 2002). Even within the ambit of health services there is an increasing shift towards home-based care, which is often a strategy for shifting the burden of care to households and communities. In many impoverished communities this translates into home-based neglect rather than care (Foster 1996). A recent survey of home-based care programmes in Zambia found that the vast majority of recipients requested food aid and yet this was not a component in any of the programmes (SCN 2002). At its most pernicious this narrow focus can exacerbate inequities. Such an example can be found in the response to the mother to child transmission (MTCT) of HIV.

Breastfeeding is responsible for a high proportion of MTCT in developing countries and may double the transmission rate. The additional risk of breastfeeding is thought to be between 14 and 29%, and 1 in 7 children born to HIV-positive mothers will be infected through breastmilk (de Cock et al 2000). However, not breastfeeding in areas with poor water supply, poor sanitation and facilities for boiling water and cleansing cups, bottles and teats, where supplies of artificial baby milk are not reliable, or where mothers may not be able to afford adequate amounts or not be able to make the feeds to the proper strength also places infants at increased risk of death due to other causes, such as infectious diseases and malnutrition. The current advice is for mothers to be given the choice of feeding options and to be advised not to breastfeed only if it is safe and feasible for them to be able to replacement feed.

The cost of milk powder was estimated in 2000 to range between \$72–120 for six months supply (Wilkinson et al 2000). The response of governments and agencies such as UNICEF was initially to supply free formula. UNICEF alone purchased over 360,000 kg of formula at a cost of nearly US\$500,000 (de Wagt 2003). It is estimated that the purchase of formula milk accounts for up to 60% of the cost of the PMTCT program in South Africa (Hensher 2002). However, as mentioned earlier, most of the mothers who benefited from this provision were those who had the social and economic capital to be able to safely prepare this milk. Poorer mothers were encouraged to breastfeed only and received no other support. But breastfeeding also has a nutritional and financial expense. Table 2 shows the cheapest foods that would fulfil such daily nutritional requirements and the prices of these foods from Cape Town in South Africa. At the least, a woman would need to purchase approximately US\$55 worth of foodstuffs over the six months (excluding transport, preparation, etc).



Table 2 Extra daily food requirements for lactating mothers

Food Item	Amount	Unit Price	Cost
Milk, fresh	250 ml	0.98/l	R 1.24
Meat	30 g	22.00/kg	R 0.66
OR legumes	30 g	0.89/500g	R 0.23
Vegetable	85 g	4.00/kg	R 0.34
Fruit	100g	3 00/kg	R 0.30
Bread (Brown)	2 slices	4.00/loaf	R 0.32
Margarine	10g	6.00/500g	R 0.12
		Total (\$1=R8)	R 2.99 OR R 2.56

Source: Sanders 2003

The desire to find a technical solution that could be managed within the boundaries of the existing health system has led to a policy that in effect gives better-off mothers a substantial subsidy whilst poorer mothers are having to purchase improved diets or risk further nutritional deprivation. There is some evidence that this might be leading to their own premature death (Nduati 2002). This is being done instead of taking a broader, social and equity-based approach that might have emphasised the need to collaborate with other sectors in providing income and more food based support to all HIV-positive mothers. The health sector is not alone in needing to change its focus if it is to more effectively and equitably address the HIV/AIDS pandemic. As Box 1 illustrates, agricultural extension services in Zimbabwe (and probably in nearly all the countries in the region) have not traditionally focused on the people who are now left with the responsibility of cultivation.



Box 1: A new paradigm for agricultural research

Conventional agricultural development in Zimbabwe has been largely based on top-down research and extension, which are concerned with the promotion of high input technologies to male smallholder farmers. That is, mainly male researchers who conduct trials intending to raise the yields of commodity crops, using high input technologies, irrespective of financial and other costs. The results of these trials are passed onto predominantly male extension workers who, with help from agrochemical companies, provide advice on the production of higher yielding cash crops to mainly male farmers. Women farmers, whose skills lie in the production of traditional food crops, have been marginalised by this process. This conventional approach to agricultural research is fast becoming irrelevant as a result of the AIDS pandemic, as the majority of AIDS survivors in Zimbabwe's rural areas are likely to be middle-aged widows, often caring for six or more children. These women, left destitute after paying funeral expenses, are unable to afford inputs and thus require low-risk survival strategies, which can assure household food security, as well as a cash income to pay for school fees and other basic necessities. The development of appropriate survival strategies for female smallholder farmers will require a substantial paradigm shift on the part of research and extension. The new paradigm would be concerned with the promotion of low input, labour-extensive sustainable agriculture and involve farmers in both the planning and implementation of the supporting research.

Source: (Page 1999)



7. Designing more equity-enhancing responses

The challenges for a health sector response to the HIV/AIDS pandemic that is effective, efficient and promotes equity are formidable. Gilson (1998) outlines the broader vision of policy making that is the hallmark of an equity-driven approach:

'Firstly, it requires consideration of the broader policy action required to promote health equity. Second, the concern for equity also points towards the broader policy goals that might be pursued through health policy. Third, the pursuit of equity forces consideration of decision-making procedures in society, and the extent to which they allow for broad representation and so expand choice.' (p 1894)

This echoes the argument made by Mooney that policies and programmes should aim to promote vertical equity and procedural justice. It is argued here that the experience of nutrition and food security programmes could significantly inform more equitable HIV/AIDS policies and interventions.

Countries which have achieved the greatest and most durable improvements in health tend to be those with a commitment to equitable development that is broad-based and to health systems that are comprehensive and engage related sectors (Halstead et al 1985). Comprehensive health systems include treatment and rehabilitative components to address the effects of health problems, a preventive component to address the immediate and underlying causative factors that operate at the level of the individual, and a promotive component, which addresses the more basic (intersectoral) causes operating usually at the level of society (Sanders 1998). The principles of comprehensive programme development apply to all health problems including HIV. Much experience has been gained internationally in the development of comprehensive and integrated programmes to combat undernutrition; these experiences can provide useful lessons for other programmes (Sanders 1999).

Malnutrition is the result of multisectoral failure and therefore cannot just be addressed through the health sector alone. Successful nutrition programmes have been based upon cost-effective health facility interventions linked with broader intersectoral interventions with active community involvement (Gillespie et al 1996). This is where the concept of nutrition being a bridge between health services and the broader welfare and development sector comes in. Box 2 is an example of how a nutrition/food security programme can initiate this process of intersectoral linkages.

Box 2: A comprehensive approach to undernutrition in Zimbabwe: the Children's Supplementary Feeding Programme (CSFP)

Poor nutritional status of children is a very sensitive indicator of household stress and was used by this programme to target interventions. Mothers evaluated their children's nutritional status by measuring and recording their upper arm circumferences. Those



below a cut-off value, which was explained to all parents, were included in the programme. Then they established locations for supplementary feeding (which the mothers preferred to be located close to their homes and fields), and the mothers themselves cooked the food and fed the underweight children.

The design of the programme was informed on the one hand by an understanding of the most important factors underlying rural child undernutrition in Zimbabwe and on the other by knowledge of rational dietary measures and identification of locally used and cultivable food sources (analysis). By deliberately selecting for use in the programme foods that were highly nutritious, traditionally used in weaning and commonly cultivated, and by reinforcing their value with a very specific message in the form of a widely distributed poster asserting the importance of groundnuts and beans in addition to the staple, it was possible to shift the focus of the intervention from supplementary feeding towards small-scale agricultural production. This was aimed at resuscitating the cultivation of groundnuts - culturally a 'women's crop' - which had been largely displaced as a food crop in Zimbabwe by the commercialisation of maize. The provision by local and national government of communal land, agricultural inputs and extension assistance, together with the policy of collective production on these groundnut plots, contributed to improving poor households' food security. The joint involvement of Health and Agriculture in this project led to the development of intersectoral Food and Nutrition Committees at ward (sub-district), district and provincial levels.

The programme design therefore allowed the linking of a rehabilitative measure (supplementary feeding) to preventive and promotive interventions (nutrition education and food production), thereby displaying the features of a comprehensive primary health care programme. This comprehensive approach to child undernutrition, widely displayed through the CSFP's operation, greatly influenced the management of this problem within the health sector. It resulted in a changed approach within health facilities to the dietary management of the sick child and to nutritional rehabilitation. It also created a community-level infrastructure of feeding points and (later) food production plots/child care centres to which recuperating undernourished children could be discharged. Thus the sequenced addressing of immediate (dietary) and underlying causes (household food insecurity, inadequate young child care and inaccessible health services) by the feeding and the communal plots and preschool centres respectively, was made possible by both careful design based on a prior analysis and by the presence of a well organised and motivated population. Intersectoral action and structures for nutrition and food security developed around the project, from bottom up and were supported at higher levels of government.

Source: (Sanders 1997)



This case study highlights how an emergency response can be used to initiate and support both rehabilitative and development processes simultaneously. In the present situation many of those affected by HIV/AIDS need special support to help them participate and benefit from interventions. Children and young people need the opportunity to develop their own skills and resources by staying in school; they should not have to drop out to keep their families alive. Those most affected by AIDS simply don't have the time or ability to engage in development efforts, and need relief, social protection or welfare over an extended period in order to survive. However, this immediate relief needs to be integrated with a longer term development strategy.

This shift in focus from selective disease specific interventions to a more comprehensive health systems approach implies a shift in policy emphasis, time horizons and scale and duration of investment. Policy needs to focus on the centrality of processes in health systems development and not only on the short term easily measurable outcomes achieved through vertical interventions; and recognise that this requires both time and sustained investment (Chopra et al 1999).

To secure sustained investment in the health and social sectors and the equity essential for a healthy society, evidence suggests that a strong, organised demand for government responsiveness and accountability to social needs is crucial. To achieve and sustain the political will to meet all people's basic needs, and to regulate the activities of the private sector, a process of participatory democracy – or at least a well-informed movement of civil society – is essential. 'Strong' community participation is important not only in securing greater government responsiveness to social needs but also in providing an active, conscious and organised population so critical to the design, implementation and sustainability of comprehensive health systems (Sanders 1998). Following multi-country assessments of successful HIV/AIDS mitigation projects Connolly (2003) outlines the following key principles:

- The most effective and promising approaches to mitigation have been those that have focused on participatory and group problem solving approaches facilitated with and for communities.
- Interventions focus on holistic and systemic processes in social community development and foster ownership, initiative and resilience on the part of communities. Those approaches strengthen communities to take responsibility for their own livelihoods through emancipation and empowerment.
- Need for competent facilitators – this is the area that often makes the difference between success and failure in community development processes – which is why support and investment in the training and development of such facilitation competencies merits priority attention in:
 - a. development agencies/ service organisations in districts/communities
 - b. local communities themselves.



Providing correct information is an important first step to addressing vulnerability to the HIV epidemic provided that the information imparted does not merely consist of IEC (such as abstinence, condom use, etc). Rather, if it encompasses a participatory assessment of the factors that lead people to adopt risk behaviours and an attempt is made to address and influence these factors, rather than the risk behaviour per se, then these projects will be addressing vulnerability to HIV. Thus, if changes result from these awareness exercises in terms of enhancing the resilience of livelihood systems, then it can be argued that vulnerability to HIV is being reduced. The efficiency and effectiveness of such interventions can be increased considerably if they are targeted towards the most vulnerable, especially if this can be achieved in a participatory manner that promotes social justice.

The capacity, tools and experience to perform participatory analysis of the food security and nutrition state of individuals and communities is present to some extent in all the countries in the region (though quite often it lies mainly in the NGO sector). Moreover, because malnutrition and poor food security have multi-causal origins the nutrition and food community have developed and operationalised various conceptual models that link holistically the different causal levels (cf the UNICEF conceptual framework). There are many trained facilitators and communities that have gone through a participatory process of assessing, analysing and taking actions to address the multiple causes of poor nutrition.

There are now numerous examples of groups adapting these tools to also incorporate HIV/AIDS – from the perspective of improving nutritional status and well being either directly (through the growth and consumption of more nutritious foods) or indirectly (through improving agricultural practices and livelihoods). Box 3 is an example of the latter.

Box 3: Adapting services to reach the most vulnerable

About 10% of the population in the Zambezi Valley is HIV positive. The Zambezi Valley Organic Cotton project is addressing a group of farmers who have up until now been largely marginalised as a result of traditional law and successive research and extension policies (pre- as well as post-independence): widows. Women (many of them AIDS widows), head more than one third of rural households in some areas of Zimbabwe and this figure is likely to rise to over 50%. Although many of these widows may be HIV positive, it is the older women - women over 40 years, who are likely to be safe from HIV infection. This is because, traditionally, a Shona woman ceases sexual activity when she approaches menopause. Many are struggling to survive as smallholder farmers. While in the past widows constituted a relatively small group of farmers, today, AIDS widows free of HIV over the age of 40 are likely to become among



the most productive groups of farmers in Zimbabwe. Using participatory and qualitative methods to conduct a rapid assessment it was found that shortage of labour and cash, and a lack of financial and farm management skills are particular problems. This is being tackled through the organisation of Farmer Field Schools which act as 'support groups' for AIDS widows and other marginalised smallholder farmers in three ways:

- By providing widows and other marginalised farmers with a regular opportunity to gain knowledge, support and confidence from their peers. School staff facilitate the exchange of traditional farming methods and build confidence in women who are not used to making technical decisions.

- By serving as a learning forum in which important financial and farm management decisions are made as a group activity through regular interaction with more experienced farmers. In the case of cotton, for example, widows learn about the main management decisions concerning the planting date, spacing, intercropping, picking, grading and marketing.

- By promoting labour extensive and low-input production technology. According to the project, organic production is appropriate for families affected by HIV/AIDS as production costs less in terms of inputs and labour. While conventional cotton farmers spend more than 15 hours per week on operations connected with pesticide use, organic farmers spend 1-2 hours per week scouting for pests and predators.

As more and more women join the organisation it is expanding its scope not just by encouraging the intercropping of more nutritious crops (such as groundnuts) but also by tackling more explicit HIV issues such as distribution of condoms.

Source: UNAIDS/FAO 1999

This case study illustrates how interventions to improve household food security (and thus reducing vulnerability) can move onto reducing more proximal risks for HIV transmission. Of course there are other vulnerable groups that would also need to be targeted by health and food interventions, especially orphans and young people.

Furthermore, since HIV and nutrition are so closely associated it might be more feasible in communities in which HIV is still mired in stigma to use nutritional status as a way of identifying and targeting the most vulnerable households who are also more likely to be affected by HIV.



8. Conclusion

'The microbe is nothing, the terrain everything' was Louis Pasteur's conclusion after a lifetime of investigating infectious diseases. Most resources in the response to HIV/AIDS have traditionally been channelled towards preventive and curative health and behaviour change interventions. Less attention has been paid to the social and economic impacts and context of the epidemic. There is a danger that a sole focus on a package of cost-effective preventive and treatment interventions may actually exacerbate inequities. This is not just because the wealthier tend to utilise existing health services more and are in a better position to be able to act on prevention messages but also because the impact of HIV/AIDS is far greater on poorer households. There is some experience that some HIV programmes may actually be encouraging differential uptake of services by only offering subsidies to those who are better off (through the provision of free formula milk). A greater focus on ways of mitigating the impacts of the epidemic especially on the most vulnerable (women, orphans and young people) would be a way of improving vertical equity. Improving the nutritional status of people is a cost-effective intervention that can play a crucial role in the treatment and care of those infected with the virus and may also reduce vulnerability to infection. It will also have some equity benefits as it is usually the poorest and most vulnerable (especially women and orphans) who are the most malnourished.

Nutrition and food security can play a critical role in mitigating the impact of HIV/AIDS. Improved nutritional status can directly improve the strength and resistance of individuals allowing them to function productively for longer, and improved food security reduces risky behaviour. Furthermore, food and nutrition programmes can provide valuable experience of engaging communities in the sort of participatory processes that have been found to be most effective.

For this to occur it is crucial to foster improved services coordination and to forge strong local partnerships among organisations with complementary skills spanning agriculture, health, education, social protection, and so on. For example, an integrated approach involving home-based caregivers, orphan committees, agricultural extension agents and health workers can ensure that food, school fee relief, home gardens and health care go directly to families that most need them. This is a broad version of the AIDS 'continuum of care' (IFAD 2002).



Topouzis (2003) has outlined some of the steps required to operationalise such a vision:

1. assess both the capacity of services to deliver and also the impact of existing sectoral policies on household and community capacity to cope with HIV/AIDS
2. mainstream HIV/AIDS
3. build gender-HIV linkages into the analysis and response of sectoral programmes
4. prioritise working with vulnerable groups
5. strengthen the resilience of existing farming and livelihood systems
6. link relief, rehabilitation and development
7. build conflict prevention
8. build scaling up mechanisms
9. monitor and evaluate responses.s

Presently there is a growing movement towards the allocation of financial resources to provide a more focused approach towards HIV. However, unless these resources contribute to the development of infrastructure, human capacity and management processes, this response is likely to have only a short-term impact on health problems, which are ultimately manifestations of economic and social under-development and dysfunctional systems. The existing terms of trade and instruments of globalisation in turn aggravate this. This paper suggests that a more comprehensive approach is required – one in which prevention, treatment, rehabilitation and mitigation are combined in ways that will reduce vulnerability and susceptibility to the virus. The campaign for wider access to HIV medication needs to be fully supported. However, it needs to be linked to addressing the underlying causes of this pandemic if equity and effectiveness are going to be enhanced. Food and nutrition interventions can play an important role in bridging this gap.



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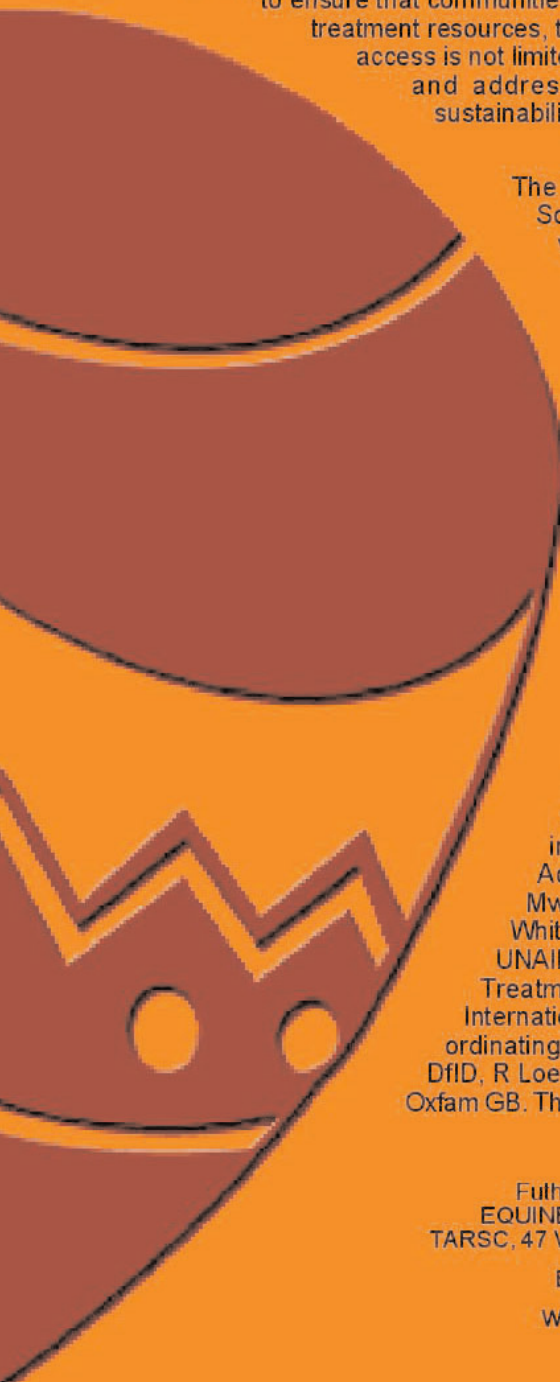
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HIV/AIDS has had a deep impact on health and health equity issues in Southern Africa. Health services in southern Africa have faced a significant challenge to ensure that communities access prevention and care. With new treatment resources, this now includes ensuring that treatment access is not limited to the wealthiest globally or nationally, and addresses wider health system needs for sustainability and equity.

The Regional Network for Equity in Health in Southern Africa (EQUINET) and Oxfam GB with government and civil society partners have initiated a programme of research, policy analysis and intervention on equity in health sector responses to HIV/AIDS. The programme has reviewed policy issues relevant to equitable health care responses to HIV/AIDS in Malawi, South Africa, Tanzania and Zimbabwe and in relation to health personnel and nutrition. The discussion papers in this series arise out of this work. They are also available on the EQUINET and Oxfam Websites.

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