



**The Impact of HIV/AIDS on Human Resources:
A Literature Review**

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I. OVERVIEWS

Impact and Costs of HIV/AIDS

International Labour Office. “HIV/AIDS: A Threat to Decent Work, Productivity and Development.” [<http://www.ilo.org/public/english/protection/trav/aids/pdf/aidse.pdf>]. 2000.

See especially chapters 2 and 3 which include sections on the impact on the workforce, the impact on employers and their organizations and the responses to the epidemic by employers and workers. The principal ways in which HIV/AIDS affects macroeconomic performance, according to the study are:

- Population growth rates are reduced. Life expectancy declines. The labor force is smaller than it otherwise would be. The labor force in high prevalence countries is estimated to be about 10 to 22 percent smaller than it otherwise would be.
- Death of workers especially skilled ones, leads to replacement by less-skilled workers and greater training costs, leading to reduced productivity/increased costs.
- Higher costs and possibly less-adequate performance can lead to a reduction in international competitiveness.
- Various sources of savings (government revenues, health insurance, social security and pension funds, and private savings) are reduced, and this can lead to reduced investment and job creation.
- Government health and other HIV/AIDS–related expenditure increases.

Health and Human Resources Analysis for Africa (HHRAA) Project. “AIDS Briefs.” [http://www.usaid.gov/regions/afr/hhraa/aids_briefs/intro.htm]. N.d.

These AIDS Briefs attempt to address the question of integrating HIV/AIDS into development planning—nationally, regionally and institutionally. The AIDS Briefs are an attempt to provide administrators and managers with a set of checklists for integrating HIV/AIDS into the planning processes. Sections on commercial agriculture, subsistence agriculture, education, health, manufacturing, mining, tourism, and military populations are included.

World Bank. “Considering HIV/AIDS in Development Assistance: A Toolkit” [<http://www.worldbank.org/aids-econ/toolkit/>]. N.d.

A World Bank web site, this toolkit has been prepared to assist staff of the Commission of the European Communities and Consultants in considering the implications of the HIV epidemic in the provision of development assistance. Site includes a *Sectoral Checklist* addressing issues specific to Infrastructure, Transport and Rural Development, among other areas.

Sehgal, Jag M. “The labour implications of HIV/AIDS.” The International Labour Organization. [http://www.ilo.org/public/english/protection/trav/aids/labour_impl.htm]. 1999.

At the end of 1998, around 33 million people were affected with AIDS, with a large majority in Africa. Life expectancy at birth in some of the 29 most affected African countries has declined by 7 years on average, to as much as 20 years in the most severe cases. The HIV/AIDS pandemic engulfing Africa has completely reversed the improvements in health that were achieved during the 1980s. While populations continue to increase, they are not increasing as rapidly as if there were not an AIDS epidemic. For 29 African nations, it is estimated that by 2015 the total population will reach 698 million, about 61 million (8 percent) less than it would have been in the absence of AIDS. The impact of the AIDS epidemic will be felt severely in the working population, since a large proportion of the HIV-infected population is in the age group 20–49 years. What effect does a reduced labor force have on society and the economy? Possible effects are:

Household and Community Level Impact:

- Drop in household income and consumption, increase of debt
- Withdrawal of children from school
- Early entry of children in the labor market in order to supplement family income
- Continued presence of older household members in the labor market
- Loss of family support and social exclusion for those infected with HIV
- Increased number of orphans in society

National Level Impact:

- Redistribution of scarce resources with an increasing demand for expenditure on health and social services.
- A collapse of the educational system due to high morbidity and mortality rates in the teaching force and school-age population.
- As younger and less experienced workers replace older, more experienced AIDS-related casualties, reduction in productivity may be an outcome.
- Employers are likely to face increased labor costs because of low productivity, absenteeism, sick leave and other benefits, early retirement, and additional training costs.

While the immediate impact on employment may be mitigated by excess capacity due to un- or under-employment, there may be a mismatch between available human resources and labor requirements in terms of training and qualifications.

Donahue, Jill, and John Williamson. 1998. *Community mobilization to address the impacts of AIDS: a review of COPE II [community-based options for protection and empowerment] program in Malawi: January 17-30, 1998*. Washington: USAID. (PD-ABQ-647)

Roberts M.; B. Rau; and A. Emery. *Private sector AIDS policy -- businesses managing HIV/AIDS : a guide for managers*. by USAID and Family Health International. (PN-ACA-378) [<http://www.fhi.org/en/aids/aidschap/aidspubs/policy/psapp.html>]. 1996.

The first of a six-module series is available on Family Health International's web site. The complete document can be ordered from the Development Experience Clearinghouse at <http://www.dec.org>.

This manual describes a step-by-step approach to help senior business managers, especially those in the private, for-profit sector, plan and implement HIV/AIDS prevention programs and policies in the workplace. Though its six modules provide a balanced progression for establishing a comprehensive program, each module is written so that it may be used independently. Module 1 discusses why HIV/AIDS is a business issue, describes the components of a workplace HIV/AIDS prevention program, and presents basic information on HIV/AIDS. Module 2 discusses the advantages of a team approach in establishing HIV/AIDS policies and prevention programs and how to build a team. The importance of leadership and how to develop and use it effectively are also discussed. Additionally, this module outlines the necessary supports and approvals needed to develop an HIV/AIDS program. Module 3 discusses the potential costs of HIV/AIDS to a business and the corresponding costs of maintaining a prevention program. Connected with this module, in Appendices 9 and 10, are spreadsheets for a detailed examination of both sets of costs. Module 4 clarifies different kinds of HIV/AIDS policies and how policies reflect company practices. It describes basic principles and rationales to incorporate into policies, provides a series of steps to develop policies, and suggests ways to implement formulated policies. Module 5 describes the steps necessary to create and implement comprehensive HIV/AIDS prevention and education activities. Module 6 presents appendices which provide examples of existing company policies and other supplemental materials that can be used in designing programs. A companion guide, African Workplace Profiles (XN-ACA-378-B), provides 17 case studies of business responses to the disease. Also available is a facilitator's guide to conducting business manager presentations (XN-ACA-378-A), and a user's guide to policy needs assessment (XN-ACA-378-C).

N'Daba, L., and J. Hodges-Aeberhard. 1998. *HIV/AIDS and employment*. Geneva: International Labour Office. ISBN: 922110334X.

Using an international comparative survey conducted by the ILO in 12 countries, the document examines the legal framework and enterprise practices (e.g., codes of conduct on AIDS, AIDS agreements concluded in important industrial sectors, as well as negative practices), the impact of the measures taken, and recommendations for practical strategies. It proposes a number of criteria for the development of a tripartite strategy to combat AIDS at the workplace, and provides a model policy guide on measures that can be taken at the national level to prevent and combat discrimination in employment on the grounds of HIV-positive status or infection with AIDS.

Strategies and Programs to Cope with HIV/AIDS, Including Human Resource Strategies.¹

Hoover, Deborah A. 2000. *Workplace Interventions in Response to HIV/AIDS*. Cambridge, MA: Harvard Institute for International Development.

“Until recently most workplaces across sub-Saharan Africa had done nothing to directly address the HIV/AIDS pandemic. The predominant response has been selected *ad hoc* efforts to create awareness. Few organizations have done little more than encourage the distribution of posters with warnings of the nature of HIV/AIDS and urging caution. Businesses avoid facing the systemic issues raised by HIV/AIDS by finding ways to rid the employee pool of HIV-positive employees. The majority of company intervention strategies, when they do occur, typically focus on a combination of preventing new infections and avoiding and/or reducing the costs associated with existing and probable infections. A smaller number of workplaces have adopted interventions which raise costs to the company, by making adjustments to employment, training and benefit schemes. Her classification is as follows:

- Prevention of new infections
 - AIDS education and awareness programs
 - HIV/AIDS counseling, STD testing, and treatment
 - Distribution of male condoms
 - Control of organizational and environmental factors increasing the risk of HIV. (e.g. controlling safety issues relating to blood and tissue in hospitals.)
 - In-kind services (i.e. providing services such as food or released time from work to encourage HIV prevention activities)
- Cost avoidance and/or cost reduction
 - Companies avoid hiring infected or high-risk employees
 - Modifying benefits to reduce costs (e.g. by making employees pay more or by not paying for AIDS-related illnesses)
 - Outsourcing production activities and taking other measures such as short term contracts to reduce benefit costs
 - Where possible, shift to more capital-intensive production technologies
 - “Counseling” of HIV positive employees to retire, or modification of funeral ceremonies, to hold them outside of working hours
- Adjustments to employment, training and benefit schemes.
 - Additional hiring to compensate for illness
 - Increased insurance coverage
 - Multi-skilling strategies
 - Succession guidance and training

¹ This literature review focuses on human resource strategies to cope with AIDS, not AIDS prevention strategies per se. However, the importance of AIDS prevention strategies is not far in the background, principally for cost-effectiveness reasons. “An ounce of prevention is worth a pound of cure” and it is probably worth a pound of coping as well. Secondly it should be recognized that what is true of the part may not be true of the whole. A given firm may cope with the loss of skilled employees by increasing wages to attract new employees. But this is not necessarily a viable strategy for the economy as a whole if the death rate from AIDS is high among skilled workers.

- Other (socially responsible) interventions
 - Assurance of care and non-discrimination
 - Adjustments to employee benefits
 - Hospice programs
 - Company foundations and fund-raising efforts
 - Return to work programs

II. SECTORAL STUDIES

Workplace

Aventin, Laurent, and Pierre Huard. "HIV/AIDS and business in Africa: a socio-medical response to the economic impact? The case of Côte d'Ivoire." UNESCO. [<http://unesdoc.unesco.org/images/0011/001119/111990eo.pdf>]. 1997.

Using the findings of research carried out from 1995 to 1996 on the economic impact of HIV/AIDS on three firms in Abidjan, the researchers look into companies' reactions to the dysfunction caused by the epidemic. The dysfunction results in two main categories of costs: the observable and quantifiable costs, absenteeism on health grounds, the cost of medical care and falling productivity; and the less easily perceptible effects of the gradual disorganization of work. The complexity and diversity of the effects of HIV/AIDS on businesses raises the question of devising an appropriate strategic response. In this context, it would appear that the key variable is the turnover level, and that this, therefore, is where the action should be taken. Such action may, for instance, be in the form of improved medical monitoring of employees in the workplace or participation by employers in employee's health insurance. In the analyses such measures are not just socially sound, but make economic sense in that they would help check the deterioration in socialization and learning capacities and in working relations, and skills and routines. Data and tables are provided.

Michael, K. 1999. "Best practices: a review of company activity on HIV / AIDS in South Africa." *AIDS ANALYSIS AFRICA*. 1999. Oct–Nov 10(3): 5–6. PIP/146199.

[A search of 200 documents in Popline concerned with AIDS in the workplace located only seven where human resources were mentioned and only one—this article—where it was addressed in a substantive fashion.]

This article presents the 1998 survey results conducted by the Health Economics and HIV/AIDS Research Division of the University of Natal in South Africa with the goal of documenting the best practices of managing HIV/AIDS in the workplace. The five key areas of the study are: HIV prevention; managing ill health; human resource development and industrial relations; employee benefits and survivor support; monitoring and planning for change in the workplace. The research comprised 14 companies used during the case studies. A few notable cases were observed among companies attempting to create awareness about HIV/AIDS. The Best Practice Survey highlighted issues about the private sectors in South Africa and their HIV management. First, companies conceptualize AIDS as either a health or poverty problem. Second, the environment is affected by the hazards of economic downturns, labor action, and economic inflation while the AIDS problem is neglected. Third, indirect costs were not considered and most companies feel that the conversion to a defined contribution arrangement compensates against escalating payouts for benefits. Fourth, long-term plans of the companies did not utilize the ill health statistics for the past 5 years.

Snodgrass, Donald R. 2000. *Framework for Thinking about Workplace Interventions in Response to HIV/AIDS in Southern Africa*. Cambridge, MA: Harvard Institute for International Development.

Williams, B., and C. Campbell. 1998. "Creating alliances for disease management in industrial settings: a case study of HIV/AIDS in workers in South African gold mines." *International Journal of Occupational and Environmental Health*. Oct–Dec 4(4): 257–64.

The epidemic of HIV/AIDS is at an advanced stage in many African countries, but little attention has been given to the impact that this will have in industrial settings. Using the Southern African mining industry as a case study, the authors consider the state of the HIV epidemic and discuss programs that have been undertaken to manage HIV. They critically analyze the reasons current interventions have had little impact on HIV among mine workers, tracing the lack of success to neglect of the social and community contexts within which HIV transmission takes place, as well as the lack of attention to the psychosocial processes and mechanisms underlying disease transmission. Finally, they present an intervention that aims to address the limitations of existing industrial programs and improve the management of sexually transmitted diseases (STDs), including HIV, in a particular occupational setting through creating alliances between a wide range of community stakeholders. The intervention aims not only to reduce STDs, promote awareness of HIV risks, and distribute condoms, as existing programs have done, but also to address the broader social, cultural, and community contexts that facilitate HIV transmission.

Family and Community Impact

Ainsworth, Martha, and Mead Over. World Bank. "AIDS and Poverty: Who Needs Help." [<http://www.worldbank.org/aids-econ/confront/confrontfull/chapter4.html>]. In *Confronting AIDS: Public Priorities in a Global Epidemic*. 1997.

Donahue, Jill, and John Williamson. *Community mobilization to address the impacts of AIDS : a review of COPE II [community-based options for protection and empowerment] program in Malawi : January 17-30, 1998*. Washington: USAID. (PD-ABQ-647). [http://www.dec.org/pdf_docs/PDABQ647.pdf]. 1998.

Reviews the COPE (Community-Based Options for Prevention and Empowerment) II project in Malawi, aimed at demonstrating a systematic approach to mobilizing community-based responses to the needs of orphans and others made vulnerable by the impact of HIV/AIDS.

Efforts have focused in the Mangochi District's Namwera area, where a 1996 COPE workshop spurred development of the Namwera AIDS Coordinating Committee (NACC). NACC, in turn has, first with COPE's help and then on its own, organized a number of Village AIDS Committees (VACs) that have identified orphans, people who are ill, and other vulnerable individuals; helped orphans return to school; trained care

givers in home-based care; raised funds and provided material assistance; started youth anti-AIDS clubs; developed community gardens; and organized structured recreation activities to respond to the psychosocial needs of orphans. AIDS committees have also been formed at the district and community levels. Community ownership is the essential element in COPE's approach and the key to project sustainability.

A key COPE strategy for mitigating the impact of HIV/AIDS is to strengthen the economic stability of communities. The evaluation suggests that this can be done through two complementary approaches: by creating a community safety net by generating resources locally to mitigate the consequences of HIV/AIDS, and by providing microenterprise services to enable poor families and households to shore up their resources. Five types of microenterprise services have potential for the latter purpose: microcredit (organizations in Malawi with which COPE can work in this area are identified in the report); savings mobilization; linking producers to markets and to sources of agricultural inputs and advice; and apprenticeships linking youth to artisans in the informal system.

Foster, G., R. Shakespeare; F. Chinemana; H. Jackson; S. Gregson; C. Marange; and S. Mashumba. 1998. "Orphan Prevalence and Extended Family Care in a Peri-Urban Community in Zimbabwe." *AIDS Care* 7: 3-17.

An orphan enumeration survey of 570 households was conducted in and around Mutare, Zimbabwe in 1992; 18.3% (95% CI 15.1-21.5%) of households included orphans; 12.8% (95% CI 11.2-14.3%) of children under 15 years old had a father or mother who had died; 5% of orphans had lost both parents. Orphan prevalence was highest in a periurban rural area (17.2%) and lowest in a middle income high density urban suburb (4.3%). Recent increases in parental deaths were noted; 50% of deaths since 1987 could be ascribed to AIDS. Orphan household heads were likely to be older and less educated than non-orphan household heads. The majority of orphaned children are being cared for satisfactorily within extended families, often under difficult circumstances. Caregiving by maternal relatives represents a departure from the traditional practice of caring for orphans within the paternal extended family and an adaptation of community-coping mechanisms. There was little evidence of discrimination or exploitation of orphaned children by extended family caregivers. The fact that community coping mechanisms are changing does not imply that extended family methods of caring are about to break down. However the emergence of orphan households headed by siblings is an indication that the extended family is under stress. Emphasis needs to be placed upon supporting extended families in the community by utilizing existing community-based organizations. Orphan support programs may need to be established initially in high risk communities such as low-income urban areas and peri-urban rural areas.

Pitayanon, Sumalee; Sukhontha Kongsin; and Watanna S. Janjareon. "The Economic Impact of HIV/AIDS Mortality on Households in Thailand." In *IAEN* [<http://www.iaen.org/impact/thai/thai.pdf>], 28 October 2000.

A summary is available at [<http://www.iaen.org/impact/thai/thaisum.pdf>]

This paper measures and analyzes the economic impact of adult AIDS deaths on rural households in Thailand based on a primary survey of rural households in Chiangmai province, which has the highest number of reported AIDS cases. The study finds that the economic impact of an adult AIDS death is sizeable and significant despite all the coping strategies employed. The least able to cope were the poorest and least educated households engaged in agricultural work. The economic impact of an adult AIDS death was more severe than the impact of death from other causes. Policy implications are that existing government measures to alleviate rural poverty should be broadened and strengthened to include those rural households badly affected by an adult AIDS death.

Agriculture and Rural

Baier, Erich. 1997. *The Impact of HIV/AIDS on Rural Households/Communities and the Need for Multisectoral Prevention and Mitigation Strategies to Combat the Epidemic in Rural Areas (with special emphasis on Africa)*. Rome: FAO.

FAO. "The Effect of HIV/AIDS on Agricultural Production Systems in West Africa." [<http://www.fao.org/sd/wpdirect/wpre0002.htm>]. 1996.

Hemrich, Günter. 1995. *The effects of HIV/AIDS on farming systems in Eastern Africa*. Rome: FAO.

Mutangadura, G.; Dududzile Mukurazita; and Helen Jackson. "Review of Household and Community Responses to the HIV/AIDS Epidemic in the Rural Areas of sub-Saharan Africa." Part of the series "UNAIDS Best Practice Collection: Key Material." UNAIDS and USAID. (PN-ACJ-486). [<http://www.unaids.org/publications/documents/economics/agriculture/una99e39.pdf>]. June 1999.

Rugalema, Gabriel; Silke Weigang; and James Mbwika. 1999. *HIV/AIDS and the commercial agricultural sector of Kenya – impact, vulnerability, susceptibility and coping strategies*. FAO/UNDP. 1999.

Topouzis, Daphne. 1998. *The implications of HIV/AIDS for Rural Development Policy and Programming: Focus on Sub-Saharan Africa*. Rome: FAO.

Topouzis, Daphne, and Guenter Hemrich. "The Socio-Economic Impact Of HIV and AIDS On Rural Families In Uganda: An Emphasis On Youth." Study Paper No.2. [<http://www.undp.org/hiv/publications/study/english/sp2e.htm>]. N.d.

Vick, Karl. "Death Watch: Disease Spread Faster than the Word." Washington Post. [<http://www.washingtonpost.com/wp-dyn/world/issues/aidsinafrica/A58203-2000Jul6.html>]. July 7, 2000.

Shows that little is being done in Kenyan rural areas. Information on a Futures Group project using community health workers to educate about HIV/AIDS.

Education

Birdthistle, Isolde; Cheryl Vince-Whitman. 1997. *Reproductive health programs for young adults: school-based programs*. Newton, MA: Educational Development Center. (PN-ACB-119)

Drawing on research and expert opinion, this background paper provides information for improving the quality and quantity of school-based reproductive health (RH) programs at the primary, secondary, and tertiary levels. After documenting the rationale for, and benefits of, addressing RH through schools, the report reviews the types of school-based RH programs: family life education, sexuality education, population education, HIV/AIDS education, peer education, and school-based RH services, including school condom programs. The report then discusses lessons learned from published and unpublished literature and from experts in the field regarding the process of planning, designing, and implementing a school-based RH program. Appendices contain examples of school-based RH programs and references.

AIDS Public Health Communication (AIDSCOM). 1993. *Lessons Learned: AIDS Prevention in Africa*. Washington: Academy for Educational Development and USAID. (PN-ABQ-40)

Since its initiation in 1987, the AIDS Public Health Communication (AIDSCOM) project has assisted over 50 developing countries, including 22 in Africa, in mounting HIV prevention activities. This document identifies a great many lessons which have been learned from the broad range of AIDSCOM-assisted activities, focusing on the African context. Lessons learned are described for AIDSCOM's experiences with: 1. sexual behavior and communications research; 2. HIV/AIDS prevention counseling; 3. partnerships with local NGOs, PVOs, and other private sector groups; 4. the use of personal testimony as a communication tool to motivate changes in sexual behavior; 5. the use of mass media campaigns to raise awareness of HIV/AIDS prevention issues among general populations; 6. AIDS education for in- and out-of-school youth; 7. training of trainers; 8. providing HIV prevention and information services through family planning programs; 9. efforts to target women; 10. social marketing of condoms and design of promotional brochures; and 11. the cross-cultural effectiveness of a Ugandan AIDS film, "It's Not Easy," with U.S. audiences. The bulk of the document consists of field notes upon which the report bases its conclusions for each of the above categories. General lessons include the need for all individuals to be armed with HIV/AIDS prevention information; the importance of targeting high-risk behaviors rather than high-risk groups; the need for explicit discussion of the full range of sexual activity and sexuality; the importance of targeting women and youth; the effectiveness of humanizing the epidemic through the personal testimony of those affected by it; and the advisability of working through established community-based organizations.

Cohen, Desmond. "The HIV Epidemic and the Education Sector in sub-Saharan Africa." Issues Paper No. 32. [<http://www.undp.org/hiv/publications/issues/english/issue32e.htm>]. 1999.

Investments by countries in education are being increasingly threatened by the HIV/AIDS epidemic. There is little direct information on the impact of the HIV/AIDS epidemic on human resources directly employed in education. However, it is probable that the rate of HIV infection among employees of the education system is at least as high as that of the adult population as a whole. The human resources at risk are not confined to teachers, but include all of those who have roles in the delivery of educational services. These include, but are not limited to central and local administrators and planners, as well as those involved in the teaching and training of teachers. The sector is seen as critical for human development because education and skills development are a way to raise the living standards for the country as a whole. The threat posed by the HIV/AIDS epidemic is eroding the human resource base of educational systems in ways that are generally not being measured, assessed or responded to.

This paper attempts to raise important factors that need to be identified and addressed in order to coordinate an effective response to the threat posed by the HIV/AIDS epidemic. The following issues are raised: 1. Human Resources and the Education System (the evidence of the AIDS impact and undertaking a situation assessment). 2. Educational Services- Assessing Needs and Performances (how families and communities responding; planning for the impact on the educational system; policy development in education and other sectors). 3. Restructuring Educational Institutions - Epidemic Imperatives.

Health and Human Resources Analysis for Africa Project (HHRAA). "USAID Africa Bureau. A USAID AIDS Brief." [http://www.usaid.gov/regions/afr/hhraa/aids_briefs/educate.htm]. N.d.

From the Health and Human Resources Analysis for Africa (HHRAA) Project of the USAID Africa Bureau, this AIDS Brief covers the key points related to how HIV/AIDS impacts the Education sector; school supply and demand, effect on education quality, and some suggestions for how the education sector can respond to the crisis.

The demand for schooling may be decreasing for various reasons. These may include lack of attendance due to the need for children to work or care for sick family members, inability to afford school because ill parents are not able to generate the necessary income, and ostracism due to infection or HIV/AIDS in the family. Girls may be disproportionately represented in the numbers of children not attending school. In addition, girls may be encouraged to marry early in order to leave overcrowded, extended families, because men are seeking younger and presumably uninfected wives, or to escape a 'dangerous' school environment that represents a risk of infection due to consensual, or forced sexual activity.

Schooling supply may suffer due to deaths of teachers and other personnel, school closures related to decreasing numbers students in affected areas and decreasing budgets for education as competition for scarce resources intensify. The quality of education may

suffer as a less qualified teaching force replaces more experienced teachers who die or may otherwise be unable to teach due to illness. Teacher absenteeism may increase along with discrimination and isolation of teachers suffering from HIV/AIDS.

Kelly, M.J. "The Encounter Between HIV/AIDS and Education." UNESCO. [<http://www.unesco.org/education/educprog/pead/GB/AIDSGB/AIDSGBtx/ImpEduc/Impact.pdf>]. February 2000.

This is a comprehensive paper that describes the interrelationship of HIV/AIDS and education clearly and concisely. Kelly discusses the ten major ways that HIV/AIDS impacts education systems and the ways that education can be used as a mitigating force to combat HIV/AIDS. Using Zambia as a case study example, the author describes the powerful ways that HIV/AIDS can undermine education systems. HIV/AIDS has the potential to affect education through the following ten mechanisms: reduction in demand, reduction in supply, reduction in availability of resources, adjustments in response to an increasing number of orphans, curriculum modification, changes in the roles of teachers and the education system, changes in education system organization, modification of planning and management systems, and donor support for education. The report continues by describing how education can lessen the impact of HIV/AIDS and slow down the transmission of the disease. The paper also highlights lessons from experience in HIV/AIDS education and includes the following information tables: 1. Projected Impact of HIV/AIDS in Selected Countries. 2. The Impact of HIV/AIDS on Economic Growth. 3. Orphan Estimates, 2000.

Shaeffer, Sheldon F. "The Impact of HIV/AIDS on Education: A Review of Literature and Experience." UNESCO. [http://www.unesco.org/education/pdf/335_41.pdf]. 1995.

In the introductory section of his paper, Shaeffer provides an overview of AIDS and socio-economic development and discusses how the disease has differential impacts across and within particular societies. The paper focuses on how education is and will be affected by AIDS and how education must change in order to effectively cope with the epidemic. In the absence of vaccines, treatment and cures, education is the only means of inhibiting the transmission of HIV. The education system must take on an advocacy role rather than simply acting as a disseminator of knowledge. Shaeffer presents a detailed explanation of the impacts of HIV/AIDS on the demand, supply, and processes of education systems. He also describes how educational institutions should respond to the HIV/AIDS crisis. The education sector will have to meet the needs of new types of students-- students who are orphans, have high absentee rates, or are working to support their families. The school will also have to assume new roles (E.g.: counselors and sex education advocates) and develop new programs such as anti-AIDS clubs. The curriculum content will have to change so it includes information about the impact of HIV/AIDS and teaches new skills, attitudes, and values. In the final section of this paper, Shaeffer describes the implications of HIV/AIDS for training, research and donor programming.

UNAIDS. “Learning and Teaching About AIDS at School.”

[<http://www.unesco.org/education/educprog/pead/GB/AIDSGB/AIDSGBtx/School/CadScho.html>]. October 1997.

This paper makes a case for early AIDS education and suggests ways to develop effective AIDS education programs. UNAIDS argues that young people are particularly vulnerable to HIV, but that they can also be a great asset in helping prevent infection and spread of the virus. By promoting effective AIDS programs in schools and encouraging preventative efforts in the community and the media, youth can protect their health and ultimately, the health and well-being of their nations. Good AIDS education covers effective prevention, care and support for infected people, and non-discrimination. Successful AIDS education programs also tend to focus on life skills, such as decision-making, negotiation, and communication. However, AIDS education is often denied to young people because: the subject is considered too sensitive or controversial; the curriculum is too over-crowded; there is incomplete national coverage of AIDS education programs; education is limited to certain age groups; behavioral skills are not taught; the curriculum is of low quality. UNAIDS suggests the following ways to overcome these problems: create partnerships between policy-makers, religious and community leaders, parents and teachers; set sound policies on AIDS education; design good curriculum. AIDS programs should: aim towards 100% AIDS education coverage; facilitate policies towards this goal; monitor implementation and evaluate impact of programs.

USAID. 1997. *Early Intervention: HIV/AIDS Programs for School-Aged Youth*. SD Publication Series, Paper No. 55, Office of Sustainable Development. Bureau for Africa. Washington D.C.

This report argues that the role of education in the fight against HIV/AIDS is crucial and that development workers should examine existing innovative AIDS education programs and adopt similar efforts in other locations. The Advancing Basic Education and Literacy Project (ABEL), in cooperation with USAID, carried out a study to identify successful low-cost HIV/AIDS awareness programs. Two promising programs—one, a Zambian community-based outreach program and the other, a U.S. Peace Corps school-based program in Cameroon, were selected for in-depth review. The Zambian Morehouse HIV/AIDS Prevention Project selects and trains teens to serve as volunteer peer outreach workers who provide information, counseling, and instruction to other at-risk youth. The school-based Peace Corps program integrates AIDS education into the standard school curriculum, using a teacher’s manual designed by Peace Corps volunteers and Cameroonian teachers. The program also provides two-week teacher training to familiarize educators with the content and strategies for incorporating AIDS prevention into the curriculum. ABEL’s research confirmed that community-based and school-based approaches to AIDS education can both be effective. Much of the report focuses on the lessons learned from both programs and highlights the components of effective AIDS education strategies. This is a very useful resource for readers who are interested in designing or improving HIV/AIDS awareness and prevention programs.

Health

Ainsworth, Martha, and Mead Over. "How HIV/AIDS Will Affect the Health Sector." World Bank. [<http://www.worldbank.org/aidsecon/arv/conf-aids-4/ch4-1p2.htm#T2>]. In "Confronting AIDS: Public Priorities in a Global Epidemic." [<http://www.worldbank.org/aids-econ/confront/confrontfull/>]. 1997.

"Most people who develop AIDS are prime-age adults. Without AIDS, this 15-to-50 age group accounts for only 10 to 20 percent of all deaths in a developing country, but these deaths typically generate a disproportionate share of total health care demand . Moreover, since several studies suggest that adults with AIDS use more health care prior to death than those who die of other causes, or even of other prolonged illnesses, the percentage increase in the demand for care by adults is likely to exceed the percentage increase in their mortality due to AIDS. As a result of these two factors, in a country where prime-age adults utilized one-quarter of all health care before AIDS, a given percentage increase in their demand for health care will increase *total* demand by *at least* one-quarter of that percentage. For example, a 40 percent increase in the mortality rate of prime-age adults will increase total demand by at least 10 percent, even though total mortality has increased by only 4 percent to 8 percent."

Macroeconomic/Global

Cohen, Desmond. "The Economic Impact of the HIV Epidemic." Issues Paper No. 2 [<http://www.undp.org/hiv/publications/issues/english/issue02e.htm>]. N.d.

This paper has three main objectives.

1. To identify and analyze the primary channels through which human immunodeficiency virus (HIV) reveals its impact on economic and social systems. A model is developed to show that the main effects will be on the level of Net Savings, with consequences for the rate of investment, the rate of economic growth and the level of Gross National Product (GNP) per capita; and on the size of the Effective Labor Supply, which has critical implications for what can be produced, and under what conditions of production.
2. To establish the economic case for effective policies for HIV prevention, and to place this analysis within the framework of the social-economic impact of the epidemic.
3. To review a selection of methodologies and empirical evidence on the impact of HIV on households, productive sectors and government. The economic and social impacts of HIV are shown to be pervasive, with all sectors of economic activity and all segments of society affected by the epidemic. The case is made for focusing policy interventions at the levels of the community and households, where the costs of HIV will be concentrated, and where policies for behavior change need to be made effective.

A relatively early (about 1993) paper. The diagram of the model is not reproduced in the text, complicating understanding.

III. COUNTRY STUDIES

Multicountry

Schoofs, Mark. "The Agony of AIDS." [http://www.villagevoice.com/specials/africa/]. N.d.

This Pulitzer-prize winning eight-part series explores AIDS in Africa. Based on hundreds of interviews conducted in nine countries over six months, the series covers the social, biological, and human ramifications of HIV: the deadly consequences of denial, the heroic response of some African communities, the origin and future of HIV, the corrosive effects of racism and colonialism, the role of women in the spread and prevention of HIV, the grim options for treatment, and the hope for a vaccine.

UNAIDS. "Epidemiological Fact Sheets by Country." [http://www.unaids.org/hivaidsinfo/statistics/june00/fact_sheets/index.html]. November 2000.

Epidemiological Fact Sheets contain the most recent country-specific data on HIV/AIDS prevalence and incidence, together with information on behaviors (e.g. casual sex and condom use) that can spur or stem the transmission of HIV. The data include prevention indicators that aim to measure trends in knowledge of AIDS, relevant behaviors, and a host of other factors influencing the epidemic.

Medline search on the Economics of AIDS in Africa.

http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=PureSearch&db=PubMed&details_term=%28%28"Acquired%20Immunodeficiency%20Syndrome/economics"%5BMESH%5D%20AND%20"Africa"%5BMeSH%20Terms%5D%29%20AND%20notpubref%5Bsb%5D%29

This is bookmark of articles published in medical journals on the economics of AIDS in Africa, fairly broad but still useful. The bookmark is designed to add new articles as they are published.

Brazil

Buckley, Stephen. "Brazil Becomes Model in Fight Against AIDS." [http://www.washingtonpost.com/wp-dyn/articles/A20559-2000Sep16.html]. September 16, 2000.

According to this article, Brazil has made dramatic strides in reducing its HIV infection rate (to 1995 levels) through a multi-pronged strategy that has included producing generic AIDS medicines and distributing them to patients.

At the heart of Brazil's success is its drug-distribution program. Begun in 1992, it became dramatically more far-reaching when the government decided to manufacture its own anti-AIDS drugs. Today, government labs churn out five generic AIDS medications.

A decade ago, roughly 200 non-governmental organizations in Brazil had AIDS programs; today some 600 do. Aided by World Bank loans totaling \$325 million, the groups have touched parts of Brazil that the government has not had the time, funds or personnel to reach. They carry out needle-exchange programs, distribute condoms, organize support groups, provide counseling and have kept AIDS at the top of the public health agenda

India

Anand, K, and C. S. Pandav. 1999. "Impact of HIV/AIDS on the national economy of India." *Health Policy* 47 (1999): 195–205.

Namibia

Cohen, Desmond. "Socio-Economic Causes and Consequences of the HIV Epidemic in Southern Africa: A Case Study of Namibia." Issues Paper 31. HIV and Development Program. UNDP. [<http://www.undp.org/hiv/publications/issues/english/issue31e.htm>]. 2000.

This paper is organized in three parts. Part One provides a schematic review of the existing knowledge of the socio-economic causes and consequences of the HIV epidemic in sub-Saharan Africa (1. The roles of income, occupational status and poverty 2. Economic organization and public policy 3. Social organization, gender and public policy 4. Social learning). Part Two looks more closely at the socio-economic impact of the epidemic on Southern Africa (1. Epidemiological situation in Southern Africa. 2. Demographic effects of HIV and AIDS. 3. Estimating the impact of HIV and AIDS on human development). Namibia serves as a specific case study, addressing demographic and developmental impacts. Estimates are provided on the effects on human development for both South Africa and Namibia. Part Three is a review of the impact on the economic sectors of Namibia (1. Household 2. Productive sectors).

Southern Africa

Loewenson, Rene, and Alan Whiteside. "Social and Economic Issues of HIV/AIDS in Southern Africa." Southern Africa AIDS Information Dissemination Service. [<http://www.iaen.org/impact/sfaids1.pdf>]. 1997.

Whiteside, Alan, and Mary O'Grady. "The Economic Impact of HIV and AIDS in Southern Africa." [http://www.aidsnet.ch/e/infothek_edition_2_00_020.htm]. November 2000.

A good basic article emphasizing the impact on business and what businesses might do.

Swaziland

“Swaziland education sector begins to respond.” *AIDS Analysis Africa* 2000 Jan 10(4):16. PIP/147596.

Reports on the growing AIDS orphan crisis prompted Swaziland to finally begin to consider the potential effect of AIDS on the educational sector. A study on the impact of HIV/AIDS on the educational sector was carried out in the region and findings were presented in Mbabane in late November 1999. Respondents believed that the AIDS epidemic can no longer be considered preventable and stopping the worst to happen is too late. The aim now should be on how to “crest” and “level-out” the epidemic at a lower infection rate. Moreover, almost all respondents felt that they were confused about the HIV/AIDS phenomenon. This epidemic will make it increasingly difficult, if not impossible, for the Ministry of Education to implement its mandate as effectively as it has in the previous years. Meanwhile, the costs borne by the Ministry and its partners in educational development will increase dramatically due to the HIV/AIDS crisis. Swaziland, particularly the Ministry of Education, has, with the assistance of the UN International Children’s Emergency Fund, made real developments in recognizing the scale of the HIV/AIDS problem in the country.

Tanzania

World Bank. “Tanzania: AIDS Assessment and Planning Study.” [http://www.worldbank.org/aids-econ/tanz-report/execsum.htm]. 1992.

This early report contains sections on the impact on the economy and the health sector.

Ainsworth, Martha, and Innocent Semali. January 2000. *The Impact of Adult Deaths from AIDS and Other Causes on School Enrollment in Tanzania*. Washington: World Bank.

The AIDS epidemic is dramatically increasing mortality of adults in many Sub-Saharan African countries, with potentially severe consequences for surviving family members. Until now, most of these impacts had not been quantified. The authors examine the impact of adult mortality in Tanzania on three measures of health among children under five: morbidity, height for age, and weight for height. The children hit hardest by the death of a parent or other adult are those in the poorest households, those with uneducated parents, and those with the least access to health care. The authors also show how much three important health interventions (E.g.: immunization against measles, rehydration salts, and access to health care) can do to mitigate the impact of adult mortality. These programs disproportionately improve health outcomes among the poorest children and, within that group, among children affected by adult mortality. In Tanzania there is so much poverty, and child health indicators are so low that these interventions should be targeted as much as possible to the poorest households, where the children hit hardest by adult mortality are most likely to be found. (Conceivably, the targeting strategy for middle-income countries with severe AIDS epidemics, such as

Thailand, or countries with less poverty and better child health indicators might be different.)

Uganda

Anderson, S.R.; J.W. Bainbridge; A. Shah; P. el-Jassar; G. Schofield; H.D. Brook; and M. Kapila. 1999. "AIDS Education in Rural Uganda—A Way Forward." *International Journal of STD AIDS* Sep 1(5): 335–339.

In July and August of 1988, researchers from Kings College in the U.K. conducted a survey to explore people's attitudes about AIDS and to examine their levels of AIDS-related knowledge. The survey was carried out in rural southwest Uganda. The aim of the study was to assess the impact of Uganda's AIDS education program and to consider how future programs could be implemented more effectively. Four hundred and seventy-six individuals, aged 12–45 years, were selected by a quota method to form a sample stratified by age and sex. According to study results, Uganda's mass AIDS education campaign had successfully raised levels of knowledge about HIV/AIDS, but misconceptions about the disease persisted. Research showed that the education program failed to stress AIDS as a personal issue and failed to change negative attitudes toward infected people (57% reported they would avoid or stigmatize an individual with AIDS). Unexpectedly, findings showed that a correlation existed between high levels of "correct" beliefs and negative attitudes toward people with AIDS. To achieve future behavioral and attitudinal changes, the authors of this article suggest: involvement of HIV carriers in education, small-scale approaches developed by the target groups, and role playing with people who have AIDS.

Kinsman J.; S. Harrison; J. Kengeya-Kayondo; E. Kanyesigye; S. Musoke; and J. Whitworth. 1999. "Implementation of a Comprehensive AIDS Education Programme for Schools in Masaka District, Uganda." *AIDS Care* 1999 Oct 11(5): 591–601.

Over a one-year period, the Masaka Intervention Trial and MRC Program on AIDS implemented and evaluated a comprehensive school-based AIDS education program in fifty primary and sixteen secondary schools in twelve parishes of Masaka District, Uganda. The program introduced teachers to a nineteen-lesson curriculum through a series of teacher-training and evaluation workshops that were held in each parish. Throughout the year, teachers implemented the program in school classrooms. The program trained one hundred and forty-eight teachers and reached approximately 3,500 students. Both teachers and students responded positively to the program, however, the following problem areas were identified: language of instruction, program content, community resistance to teaching about condoms, and several practical issues. Proposed solutions include: greater flexibility with the English language policy, alternative approaches to role play activities, persuading influential individuals about the need for young people to learn about safe sex, designing a parallel community-based program to facilitate community acceptance of AIDS education.

Shuey D.A.; B.B. Babishangire; S. Omiat; and H. Bagarukayo. 1999. "Increased Sexual Abstinence Among In-School Adolescents as a Result of School Health Education in Soroti District, Uganda." *Health Education Resources* 1999 Jun 14(3): 411–419.

This article focuses on a study conducted by the African Medical and Research Foundation (AMREF) of a school-based AIDS education project aimed at primary schools in the Soroti District of Uganda. The education program emphasized improved access to information, improved peer interaction and improved quality of performance in the existing school health education system. Researchers surveyed a cross-sectional sample of adolescent students before and after two years of intervention. The percentage of students who stated they had been sexually active fell from 42.9% (123 out of 287) to 11.1% (31 out of 280) in the intervention group, but researchers did not record a significant change in the control group. The changes remained significant when segregated by gender or by rural and urban locations. Researchers discovered that students who were in the intervention group tended to speak to peers and teachers more often about sexual matters. After participating in the AIDS education project, students reported that they were more likely to abstain from sex not out of fear of punishment, but because abstaining from sex was consistent with rational decision-making. The authors of this report argue that primary school health education program which emphasizes social interaction methods are most effective in encouraging sexual abstinence among Ugandan adolescents. They also point out that AIDS education programs need not be expensive and can be implemented by simply using current local staff.

Ukraine

Barnet T.; A. Whiteside; L. Khodakevich; Y. Kruglov; and V. Steshenko. 2000. "The HIV/AIDS Epidemic in Ukraine: Its Potential Social and Economic Impact." *Social Science & Medicine*. 2000 Nov 51(9): 1387–1403.

Present and immediately foreseeable medical knowledge suggest that HIV infection cannot be avoided by vaccination and that an affordable cure for the resulting syndrome, AIDS, is a long way off. There is a strong possibility that Ukraine is confronted by an HIV epidemic which will spread into the general population and that the most common mode of transmission will be through heterosexual intercourse. The epidemic in the Ukraine is currently concentrated among intravenous drug users. It is estimated that between 60,000 and 180,000 people may currently be infected. In present economic and social circumstances there are many features of Ukrainian society that may add to the probability of the epidemic becoming widespread in the general population. It is likely that this process may have already commenced. The result of this will be numerous additional deaths and illness over the short (5 years) (19,000-23,000 deaths), medium (10-15 years) (61,000-111,000 deaths), and longer term (>20 year) (in excess of 40,000-160,000 years). The research reported here was undertaken in 1997-98 and describes the potential medium to long term social and economic impact of an HIV epidemic in Ukraine. Using the concepts of risk environment, susceptibility and vulnerability, it reports the problems which might be expected to develop in relation to care for excess orphans, the elderly, vulnerable households and regions as well as among those working

in the 'third sector', a social sector upon which exponents of the importance of developing 'civil society' in 'transitional economies' place heavy emphasis.

Zambia

Kelly, M.J. "The Impact of HIV/AIDS on Schooling in Zambia." University of Zambia School of Education.
[<http://www.unesco.org/education/educprog/pead/GB/AIDSGB/AIDSGBtx/ImpEduc/CadImpEd.html>]. September 1999.

Zambia is one of the countries hardest hit by the HIV/AIDS epidemic. Between one-third and one-quarter of children below age fifteen have lost one or both of their parents. The large number of orphans and the demographic, economic and social effects of AIDS have impacted the education sector in several ways. As a result of the epidemic, demand for schooling is reduced and the supply of education and resource base are jeopardized. A large section of the potential clientele for schooling is forced into activities that are not compatible with regular school attendance. Major adjustments are required in the process, content, role and organization of the traditional education system. The education sector's planning and management teams are suffering tremendous strain. Kelly argues that donor support has to be reconsidered and revamped.

Kelly presents evidence that HIV/AIDS is having a great impact on teacher supply and morale, on school participation, and on curriculum content in Zambia. He argues that the limited availability of systematic information suggests the need for more focused research. The paper proposes a taxonomy for the guidance of such research. Given that behavioral change is the only current way to deal with the AIDS pandemic, and that the people most likely to be HIV-free are in primary and secondary school age groups, the paper stresses the urgent need to make school systems proactive about communicating messages and information about HIV/AIDS.

Kalikiti, W., and L. Mukuka. "The Impact of HIV/AIDS on Education in Zambia." Zambian Ministry of Health. [<http://www.medguide.org.zm/aidsbibl/impact2.htm>]. 1995.

This study was designed to examine the impact of the AIDS epidemic on the education sector in Zambia. The study focuses on twenty rural and urban primary and secondary schools in Lusaka and Northern Province. Fifty-nine per cent of teachers in urban schools responded that there were no cases of AIDS in their school over the previous three years while thirty-seven percent indicated that there had been. Similar figures came out of the rural schools. When questioned about causes of death, however, AIDS was named the major cause (contradicting the previous finding). In the eleven rural schools surveyed, there was an average of five AIDS-related teacher deaths over the three previous years, compared to an average of seventeen in the urban schools. The authors of the report argue that school enrolment rates are not likely to be affected, but absenteeism rates are expected to increase, especially for girls. Teachers and students were unsure if AIDS had affected the quality of education in the schools. AIDS cases among teachers had the following perceived negative impacts: 1. Teachers nervous and depressed. 2. Teachers

frequently absent. 3. Teacher attitudes toward work deteriorate. 4. Teachers unable to perform well. 5. Negative psychological impacts on children. The average number of teaching hours per week lost to teacher illness and/or teacher attendance of funerals was higher in the urban areas. Increased mortality rates among teachers is expected to increase the teacher/pupil ratio in schools, expand class size and reduce the hours of instruction. Costs, both human and economic, will be incurred in five areas: 1. Loss of labor due to illness 2. Loss of labor due to funeral attendance 3. Increased expenditures on teacher recruitment and training. 4. Costs for teacher funerals 5. Payment of benefits in the case of teacher deaths. The authors discuss policy options in regard to: curriculum, teacher training, school maintenance and community services.

IV. USEFUL WEB SITES

The AIDS Economics Homepage

<http://www.worldbank.org/aids-econ/>

International AIDS Economics Homepage

<http://www.iaen.org/index.htm>

International Labour Office. HIV/AIDS and the World of Work.

<http://www.ilo.org/public/english/protection/trav/aids/index.htm>. The ILO website on AIDS in the workplace.

United Nations Development Program AIDS and Development Website

<http://www.undp.org/hiv/publications/>

UNAIDS

<http://www.unaids.org>

USAID Population, Health & Nutrition AIDS web site.

http://www.usaid.gov/pop_health/aids/index.html

U.S. Census Bureau HIV/AIDS Surveillance Data Base. You can download the Census Bureau database and access statistical information about HIV/AIDS in countries around the world.

<http://www.census.gov/ipc/www/hivaidsd.html>

World Bank web site on AIDS.

<http://www.worldbank.org/html/extdr/hivaid/default.htm>

World Health Organization AIDS web site.

<http://www.who.int/health-topics/hiv.htm>

“The largest HIV/AIDS web site in the world.”

<http://www.aegis.org/>