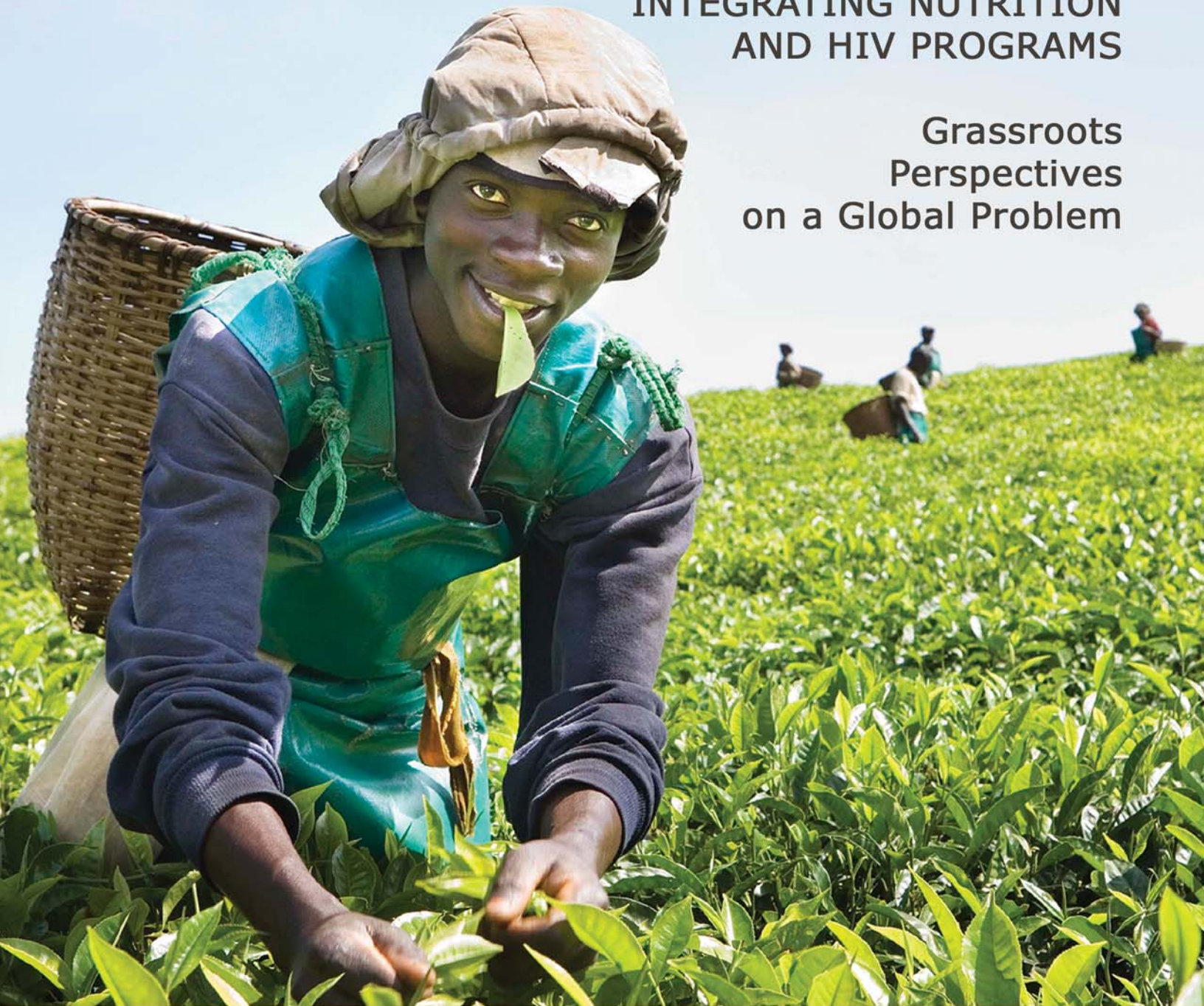


# OVERLAPPING EPIDEMICS:

## CHALLENGES AND STRATEGIES FOR INTEGRATING NUTRITION AND HIV PROGRAMS

Grassroots  
Perspectives  
on a Global Problem



[www.we-actx.org](http://www.we-actx.org)

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## The following acronyms may be found in this report:

AIDS Acquired Immune Deficiency Syndrome

ARV antiretroviral drug

ART antiretroviral therapy

BMI body mass index

BMR basal metabolic rate

CDC Centers for Disease Control

CIAT International Center for Tropical Agriculture

CNLS Commission Nationale de Lutte contre le SIDA (National AIDS Commission) Rwanda

C-SAFE Consortium for Southern Africa Food Security Emergency

CSB Corn soya blend

DOT directly observed therapy

DFID Department For International Development (UK)

FANTA Food and Nutrition Technical Assistance

FRLS+ Femmes Rwandaises dans la Lutte contre Le SIDA (Rwandan Women in the fight against AIDS)

GoR Government of Rwanda

HAART highly active antiretroviral therapy

Kg kilogram

IRC International Rescue Committee

MSF Médecins Sans Frontières / Doctors Without Borders

OVC orphans and vulnerable children

ORS oral rehydration salts

PACFA Protection and Care of Families Against HIV/AIDS

PEPFAR Presidential Emergency Plan for AIDS Relief

PIH Partners In Health

PLWHA (PPV+ in French): person/people living with HIV or AIDS

PMTCT prevention of mother to child transmission

RDA recommended dietary allowance

RRP+ Réseau des Personnes Vivant avec le VIH/SIDA (National Network of PLWHA in Rwanda)

TB tuberculosis

TOT training of trainers

TRAC Treatment and Research for AIDS Center (Rwanda)

UNAIDS Joint United Nations Programme on HIV/AIDS

UNDP United Nations Development Programme

UNICEF United Nations Children's Fund

UNIFEM United Nations Development Fund for Women

UNHCR United Nations High Commission on Refugees

USAID United States Agency for International Development

VCT voluntary counseling and testing

WFP UN World Food Programme

WHO World Health Organization



## Foreward

Hunger and malnutrition are widespread among people with HIV and AIDS globally. In all countries, individuals living with HIV often live on the economic and social margins. After three decades of this epidemic, we recognize the global faces of people dying of AIDS with their hollowed eyes and skeletal, wasted bodies ravaged by a virus that leaves them vulnerable to a host of illnesses. But do we also see malnutrition and acute hunger? These problems lie in the shadow of HIV and AIDS, and present a daily threat to their survival. It is not by accident that HIV is worst in the poorest countries: Like TB, HIV is a virus and AIDS a disease that reflect poverty, social vulnerability, and gender inequity, an epidemic fueled by underlying socioeconomic factors and political and cultural realities. Our global response to HIV and AIDS must in turn address the complex interplay of poverty, malnutrition, food insecurity, gender dynamics and illness -- and vice-versa.

Today, a great majority of people with HIV fall into a modern category called the “food insecure.” The old-fashioned word is simpler, and starker, and harder to ignore: *hunger*. Millions battling AIDS and HIV are desperately hungry and in the worst cases, they may be starving. HIV worsens hunger, while hunger worsens the suffering of those ill with HIV and AIDS and their families and communities. Malnutrition, we now know, also greatly increases the risk of death among those starting antiretroviral therapy who are malnourished. Today, there is a growing global crisis of malnutrition and food insecurity directly linked to HIV, a crisis that is likely to increase as people live longer with the advent of ART, since they require a sustained source of food to take with daily HIV medicine. AIDS has already caused a devastating impact on the agricultural economies of southern and eastern Africa, where the majority of farmers are poor women living in rural areas. As HIV and hunger spread together, one analyst even warned in 2003 of a possible new ‘variant famine’ that threatens these women farmers and their families. The impact is severe in children. In Rwanda, to cite one example, nearly 45% of children with HIV under age five are severely malnourished, according to new government estimates.<sup>i</sup> Malnutrition and HIV join forces to shorten lives, stunt growth, and cut short the great potential of the next generation of children from Africa, Asia and elsewhere.

The global rollout of HIV treatment coupled with education, prevention and research programs offers a new tool – a wedge – to change this dire picture. But it cannot deliver on the global promise of survival from AIDS without food being on the menu. We urgently need to adopt a more holistic approach to these overlapping epidemics of HIV and poverty, hunger and gender inequity, to assure not only the survival of millions, but the ability of vulnerable families and communities to take a step up and away from the chronic downward spiral of hunger, poverty, illness and crisis that mark their lives today. That means creating new alliances and new types of programs with a greater range of actors working in the arena of development. It calls for new investments and money directed for nutrition and programs to fight gender-based violence, not only HIV medicine.

By adopting a more integrative model, by focusing our sights on the core problems of poverty and social inequity within the epidemic of AIDS, we can begin to shift the direction of our collective future away from the doomsday forecasts of

increased death, poverty, hunger and economic ruin linked to AIDS and HIV (and its sister epidemics, malaria and tuberculosis), and toward a more hopeful vision of greater prosperity and economic productivity for the people and communities in the world's hardest-hit regions. We need to hold the current picture of these overlapping epidemics in our global mind's eye, and look ahead. We need to see that we do have the global resources and talent and innovation to address these issues. We need to envision healthy people with HIV and their children living long, productive lives, working and rebuilding their embattled countries and economies, via novel North-South and multisector public-private partnerships. We need to commit to the survival and empowerment of the women farmers of hard-hit rural Africa and Asia, and their children, and the men – a potential grassroots army to lead the AIDS fight.

That is the greater promise of our global AIDS effort – to help end not only HIV illness and hunger, but to improve upon the bleak economic and social conditions and poverty that foster the spread of HIV and AIDS. This is the great global opportunity we now have to act upon – with urgency. – AC

**“If I wasn’t getting this food, I wouldn’t be alive.”**

-- Rwandan client on ARVs in WE-ACTx-WFP pilot food program, 2005

## About This Report

This research and report was conceived and carried out in response to the urgent demands for access to food and sustainable sources of food production and income-generation programs by HIV-positive clients in the joint clinical program that WE-ACTx operates in Rwanda, in partnership with the Rwandan government and now 24 local NGOs. It was done to gain a better understanding within our grassroots organization of these complex challenges, what models exist to address them, and what steps might be taken by community providers and local NGOs serving clients with AIDS who are malnourished and poor.

Research and reporting was done by Anne-christine d’Adesky, a journalist, author and Executive co-Director of WE-ACTx, and Elizabeth Starmann, from February-October 2006. We undertook this research in an effort to identify and study the overall challenges of integrating nutrition into grassroots HIV programs and vice-versa, and the role of different multisector actors in this effort. Taped interviews were conducted at a May 2006 conference on food and HIV in Lusaka, Zambia where many key agencies met to share their experiences, and in Rwanda with international and local NGOs. Other interviews were carried out with agencies globally via telephone and the Internet. This report examines current activities, goals and views of a range of actors at various levels within a multisector framework of HIV program activity.

One goal was to identify the key elements that make up successful grassroots programs and innovative approaches that can address the nutritional needs of HIV-affected and -vulnerable clients, and whether and how these approaches might be implemented elsewhere. We focused the bulk of our field research on activities in Rwanda because our organization works there. This report is *not* meant as a comprehensive overview of all AIDS and nutrition programs in Rwanda, nor as a comprehensive analysis of national or government activity. Not all main agencies or players who work on the ground in Rwanda are included; some representatives were unavailable for interviews during the period of this research. Instead, we hope the insights and models gleaned here will be useful to the global AIDS community that is concerned about these issues, and especially to policymakers and program managers tackling these issues in the field, and to HIV-positive individuals who are mobilizing at the community level.

A related goal was to develop a deeper understanding of the overall integrative *global* model of care and best practice strategies needed to address the complex dynamic intersection of malnutrition and poverty on HIV and vice-versa – one that can help assure the sustainable, long-term benefits of HIV care and treatment.

Disclaimer: The observations and initial recommendations made in this report ultimately reflect the authors’ views, though they are based on a culling of the views, opinions and recommendations of many interview subjects, agencies and other documents consulted for this report. It must be stressed that individuals interviewed offered their personal views and experiences related to these questions; their views do not necessarily reflect the policies or views of their respective institutions. This report is being released for open review. It will be available for downloading on the WE-ACTx and KCA websites ([www.we-actx.org](http://www.we-actx.org) | [www.keepachildalive.org](http://www.keepachildalive.org)). – ACD

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Keep A Child Alive is dedicated to providing life-saving anti-retroviral treatment to  
children and their families with HIV/AIDS in Africa and the developing world by  
directly engaging the global public in the fight against AIDS.

For information: [www.keepachildalive.org](http://www.keepachildalive.org)



We also thank everyone who agreed to complete field surveys and be interviewed for this report, and to those who supported us to do this work. In particular, we thank individuals with HIV, especially WE-ACTx's clients in Rwanda, including women survivors of the genocide and their families, and local partner NGOs in our joint HIV program. We are especially grateful for the ongoing collaboration of the Rwandan government and its leaders in the key ministries, including the Ministry of Health, and leaders in the key AIDS agencies TRAC and CNLS.

We also acknowledge the UN World Food Programme for supporting a pilot WE-ACTx-WFP food program (2004-06) benefiting malnourished patients starting ARVs in our Rwanda program. Thanks to Kate Greenaway, a consultant to C-Space, for assistance with securing interviews at the Africa Forum 2006 in Lusaka, Zambia, and providing expert outside review of this report.

## **B. Organizational Description:**

WE-ACTx is an international NGO initiative based in San Francisco that began a grassroots joint HIV treatment program in Rwanda in late July 2004 in partnership with the government and 4 initial NGOs to provide accelerated comprehensive HIV services to Rwandans with HIV, particularly genocide and rape survivors and their children. The majority live in extreme poverty. In 2004, many genocide widows were very ill or dying of AIDS due to lack of access to lifesaving antiretroviral (ARV) medicine. Due to our partnership with the Rwandan government and now 24 local NGOs, we now have ~ 5000 clients in clinical care. All clients needing access to ARVs have gotten them free of charge. Others are taking medicine to prevent opportunistic infections. Our clients include adults (80% women, 20% men) and children. To date, over 500 children are on ARVs, via our family-based model of care. Our grassroots model takes a holistic, family-oriented approach to the needs of HIV clients, and focuses on empowering them to become self-sufficient and take charge of their lives and health. Along with technical assistance and training, medical care and services, our comprehensive approach to managing HIV includes integration of critical non-medical services needed by our clients, including access to trauma counseling and support groups, nutrition and nutrition education, patient transport support, and access to income-generation activities. In our partnership model, the different partners provide services in order to deliver a holistic program.

### Programs:

WE-ACTx currently operates two clinics in Kigali, and is helping the Rwandan government open a semi-urban public health clinic outside Kigali at Nyaconga that will offer primary care and HIV services to a large, underserved population. To date, near 2000 WE-ACTx clients have started ARVs, including over 450 children. A recent survey carried out by WE-ACTx with partner NGOs suggests that an estimated 90% of the initial target population of clients urgently needing ARVs in 2004 has accessed HIV care and treatment, based on surveys completed by 18 of our partner NGOs.

However, the new survey also indicated that food access remains a huge challenge for many of our HIV clients. Many also suffer from TB, which also interacts in a negative, synergistic way with malnutrition. A small, but significant percentage of

patients now on ARVs lack adequate food or jobs, to the point where they feel it threatens their ability to adhere to daily HIV therapy, barring other interventions to address food production, food security or income-generation. WE-ACT has expanded our focus on strategies to help them access food production or income generation activities as a key element of HIV service provision, with a goal of helping them achieve a sustainable source of food or livelihood that will support good adherence to treatment and help assure the long-term benefits of HIV care and treatment, and serve as a step to poverty alleviation. Our approach continues to stress partnerships to help deliver a range of services needed by this population.

### C. Target Population Served:

The majority of our clients are HIV-positive widows of the genocide who live in conditions of extreme poverty and malnutrition, as do their children. Others are among Rwanda's estimated 200,000 orphans, many with parents who died in the genocide, others of AIDS. Lacking food, clients self-report that they are reluctant to start ARVs or continue them when food is interrupted or unavailable.

A survey carried out jointly with partner NGOs in 2004 showed that ~90% of clients entering the WE-ACTx pilot food program in 2004-2005 self-reported that they were "frequently or always hungry." Food remained the number one survival challenge, alongside ARVs, for these clients. Many lost access to farming land or property because of genocide, and have little means of employment. Many are widows caring for dependent children, some ill. They include a large number of orphans, some having lost parents in the genocide, others to AIDS.

An updated survey carried out in summer 2006 by WE-ACTx in our new Family Program shows that poverty and hunger remain pressing issues for many households. Recent data generated from home visits to 200 families by WE-ACTx's local Rwandan staff found a critical need for food among children starting ARVs in the WE-ACTx program. **The median age of children in care in WE-ACTx's Family Program at 8 years old.** Households are made up of an average of five people. Of children surveyed, 17% are orphans, and 34% lost one parent to AIDS. Those with HIV need psychosocial support: 20% are depressed, don't want to go to school, and don't want to take their HIV medications. On a positive note, 78% of children over age 7 do attend school. But 94% of children lack enough clothes, and while public education is free, households lack funds to purchase school uniforms or pay minor school fees. This is one reason why school feeding programs can play such an important role for impoverished and malnourished children, particularly those facing the difficult daily challenge of taking medicine on a schedule while at school.

#### D. Focus of Report:

This report touches on several key areas of inquiry:

- Scope of problem of nutrition for HIV-affected population
- Key challenges of integrating ARV and nutrition at grassroots level
- Different role and perspective of multi-sector actors in the field
- Best practice/model grassroots approaches for sustainable programs
- Applying policies to programs in the field
- Funding for local provider groups
- Grassroots mobilization

#### E. Key Questions Report Aims to Address:

- What are the conversations that are taking place on this issue?
- What are the strategies, best practices and models?
- What are feasible steps to addressing the issue? What needs to be done?
- What are existing cost scenarios? What are sustainable ways of addressing the issue?

#### WHO/UN/WHO:

- What are key UN agencies doing regarding food and ARVs? What strategies are they discussing?
- What can grassroots organizations do on the ground? What is not happening?
- What are the challenges facing grassroots organizations related to food and nutrition for HIV clients? What are their goals?
- What are the nutritional needs of ARV patients at different stages? Adults versus children?
- What are key findings of experts and think tanks?

#### For Field Interviews in Rwanda, also:

- What is the relationship of government and the national plan for ARVs and food and other multisector actors?
- What is government's role and responsibility related to nutrition for HIV-affected citizens?

#### UN agencies and International NGOs:

- What role do foreign NGOs play in food delivery?
- How many people on ARVs are covered?
- How does Rwanda compare to other countries?
- What are these agencies doing elsewhere that may be applied to Rwanda?

Grassroots associations:

- How are Rwandan NGOs meeting the needs of HIV clients versus other clients who need food?
- Those on ARVs versus HIV-positive?
- How are HIV services integrated into broader programs of NGOs?

**F. Methods:**

- Conduct tape interviews and broad analysis of the current research on this topic.
- Interview people at a range of provider levels: government, large international agencies, multilateral organizations, small grassroots organizations, local NGOs, HIV and AIDS care providers.
- Carry out field interviews with key providers in Rwanda, providing grassroots perspectives from one country as an example of challenges facing national governments in hard-hit countries.
- Review and compare emerging nutrition-HIV protocols.
- Identify several best practice grassroots programs that represent different approaches to goal addressing HIV and nutrition needs.
- Identify key elements of best practice community approaches to provision of nutrition, food security and HIV.

Research:

Research for this report was carried out via in-person taped interviews with:

- presenters and participants at the Africa Forum 2006 in Lusaka, Zambia, May 2006;
- with multi-sector agencies in Rwanda;
- with NGO clients of HIV and nutrition programs in Rwanda;
- and via telephone interviews e-mail interviews with interview subjects and consultants internationally.

Additional online research and documents related to food security provide broad background research.

Supplemental data was garnered about the baseline nutrition status and surveys of needs of WE-ACTx clients collected in 2004-2006 as part of the ongoing monitoring aspect of the WE-ACTx-WFP joint pilot Food Program. This research was done via confidential client interviews with trained Rwandan counselors during monthly visits to the food program, which benefited over 600 participants. This comprehensive data collection provided baseline and monthly data to help assess their needs and the impact of the nutrition intervention with respect to improving malnutrition, improving health, and supporting adherence to ARV therapy. Family counseling for clients and follow up surveys and interviews were carried out with graduates of the food program to help evaluate the longer-term impact and needs of these clients. (See WE-ACTx-WFP Pilot Food Program in Field Perspectives section of this report).

## G. Interview Instrument:

For this report, the authors created and distributed a questionnaire (below) for individuals in agencies being interviewed. These questions formed the basis of the interview format:

### Interview Questions

General:

- What are the issues and challenges you (your org/the community or country you work in) are facing in regards to food security and PLWHA?
- What are the conversations that are taking place within your organization/local community/ field on the issue of food and HIV AND AIDS?
- What are the strategies you/your organization is employing to address the issue of food and HIV and AIDS?
- Do you know of any best practices or models that have successfully addressed the issue?
- What do you feel are feasible steps to address the issue? What needs to be done?
- What are the cost scenarios? What are sustainable ways of addressing the issue? How have you/your org/ your community or country been dealing with the issue finding sustainable, long-term solutions?
- What do you think about income generation vs. food aid vs. cash for food vs. farming/food production techniques to improve the food security of PLWHA? What would work or works best? What about programs like work for food, job training for food. Do you think these are good models and/or have you seen any that have been successful?

For NGOs:

- In general, how do you think the government should be involved in addressing the problem of food insecurity for PLWHA?
- How is the government involved in the country you work in?
- Alternatively, is the issue only being addressed at the local level or via int'l NGOs?

For International Food AID providers:

- What is their food aid delivery in Rwanda/X country they work in?
- How many people on ARVs do they seek to cover?
- How do their programs/activities in Rwanda/their country compare to other countries?
- What else are they doing or do they hope to do?

For UN Agencies:

- What are they doing regarding food and ARVs?

- What strategies are they discussing?
- What do they see their role as in regards to food security and HIV AND AIDS?

For Government and consultant agencies:

- How does the government view national food security needs of HIV groups?
- What new steps has government taken to integrate nutrition programs into the national AIDS plan?
- What is the approach to scaling up delivery of food to vulnerable, HIV-affected groups?
- How does government view the role of grassroots organizations in providing nutrition to HIV groups?
- What are the priority research gaps in the view of the government? Can you cite any excellent research that has been done on the issue of food and HIV AND AIDS?
- What are the key questions you would like to see answered concerning food and ARVs? What would be useful to investigate?
- Any additional concerns/gaps/questions not addressed in this interview?

#### H. Agencies Contacted for This Report:

##### UN Organizations:

- UN World Food Programme (WFP )
- Joint United Nations Programme on HIV/AIDS (UNAIDS)
- United Nations Children's Fund (UNICEF)

##### National Government Agencies:

- United States Agency for International Development (USAID)
- Treatment and Research for AIDS Center (TRAC) - Rwanda

##### International NGOs:

- International Center for Tropical Agriculture (CIAT acronym in French)
- Food and Nutrition Technical Assistance (FANTA)
- CARE
- Partners in Health (PIH), Rwanda
- Project Concern International (PCI), Washington DC.
- Project Against Malnutrition (PAM), Africa
- Consortium for Southern Africa Food Security Emergency (C-SAFE)
- Emmanuel International, Malawi



- Heifer International
- Voluntary Services Overseas (VS), Malawi
- Catholic Relief Services / C-SAFE. Zambia
- International Development Enterprize (IDE), Africa
- Rural Outreach Program, Kenya
- Women's Equity in Access to Care and Treatment (WE-ACTx)

Field Site Visits:

- Nazarene Compassionate Ministry, Project Name: "Caregivers Food Security Program for HIV/AIDS- affected Households." Location: Rural, Chipongwe, outside Lusaka. Zambia
- Partners In Health, rural Rwanda
- USAID Field Projects (mushrooms), Rwanda
- WE-ACTx-WFP pilot partner program (NGOs: Icyuzuzo, AVVAIS, Urunana, SWAA), Rwanda
- Moringa ("Miracle Tree") farming project , rural Rwanda.

## DEFINING FOOD SECURITY

- Food Security: Physical and economic access to food of sufficient quality and quantity. Food security is necessary, but of itself insufficient, for ensuring nutrition security.
- Nutrition security is achieved for a household when secure access to food is coupled with a sanitary environment, adequate health services, and adequate care to ensure a healthy life for all household members
- The hungry (having hunger) are a subset of the food insecure, who in turn are a subset of the nutrition-insecure. Some of the food-insecure are not currently hungry, although they are at risk of becoming so because of their uncertain access to food. Moreover, some of the nutrition-insecure are not food insecure, as their condition may result from deficits in the health- and care-related determinants of food nutrition.

*Source: Stuart Gillespie and Suneetha Kadiyala, "HIV/AIDS and Food and Nutrition Security – From Evidence to Action," Food Policy Review 7, International Food Policy Research Institute, 2005, p. 3.*

## II. Executive Summary:

### A. Findings:

#### Global Picture:

- Malnutrition, food insecurity and poverty remain critical overlooked factors in the global HIV pandemic. HIV and malnutrition interact in a dynamic synergy that has a progressive negative impact on health and the ability of the immune system to combat HIV and illness.
- Globally, starvation and malnutrition are "fast becoming the twin perils" in the fight against HIV AND AIDS, say experts. They warn the need for food soon might surpass the need for antiretroviral drugs among many HIV-positive people in the developing world.
- The number of hungry people globally is increasing at a rate of four million a year.
- The devastating impact of HIV and AIDS on the rural agricultural sector is greatly increasing food insecurity. This particularly threatens women who make up the majority of smallholder farmers in hardest-hit southern Africa. The trend is so serious it has led one analyst to warn that, in a worst-case scenario, HIV could lead to a 'new variant famine.'
- A July 2006 study published in *HIV Medicine* found that people taking ARVs who are malnourished are six times more likely to die than people taking ARVs who are not malnourished. Malnutrition decreases an HIV-positive person's ability to absorb the drugs and cope with side effects, and prolongs the length of recovery to natural immunity. These findings prompted a recent urgent call to action by world experts to integrate food into the global HIV response.
- According to the World Food Programme, 3.8 million people with HIV or AIDS need access to food aid and that number could rise to 6.4 million in 2008. By then, 0.9 million on ART will need food aid. WFP estimates it costs US .66 cents per person per day to provide a minimum packet of food assistance. It is currently feeding 9 million people with HIV AND AIDS a day.
- Specific funding for nutrition interventions must be included in global HIV funding mechanisms. Experts estimate the global cost of providing nutrition assistance to HIV-positive individuals for the next two years to be \$1.1 billion – just 2% of \$55 billion required to tackle the pandemic by 2008.
- The 2001 'Three Ones' global framework for HIV AND AIDS developed by consensus at the 2001 ICASA meeting called for a unified country approach to HIV care delivery, monitoring and evaluation but failed to include a specific focus on nutrition or food security – an overlooked gap.
- Globally, a more holistic model of care that fully integrates nutrition interventions into existing clinical guidelines to managing HIV (and TB and malaria) disease is sought by field providers. The call upon the World Health

Organization to quickly develop and disseminate field guidelines and examples of “best practice” holistic interventions to address HIV and malnutrition.

- A partnership approach between AIDS groups and those working in the broader arena of horizontal development, including the private sector, can bring needed expertise in poverty alleviation, rural development, sustainable agriculture, food production, and income-generation to HIV programs.
- The related issue of gender dynamics, including women’s often-lowered socioeconomic status and dependency on men, as well as laws and customs governing property, land and inheritance rights, often leave women, girls, and children, particularly orphans, more vulnerable to the dynamic impact of HIV, food insecurity and poverty. Specific interventions to address gender inequity should be included in holistic HIV programs.
- The overlapping problems of HIV, malnutrition and poverty affect families and households, not just the HIV-affected individual.

#### On the WHO ‘3 x 5’ Treatment Rollout and Global Response:

- The global rollout and scaling up of HIV programs, particularly antiretroviral treatment, including the WHO “3 x 5” effort, initially failed to adequately address the nutritional needs of HIV-positive individuals and affected families and the synergistic impact of malnutrition, acute and chronic poverty on HIV disease management, treatment outcomes, medium-and long-term survival and health.
- Other UN, international food agencies and national governments were not prepared or did not set aside separate food stocks or specific funding for nutrition to match the needs of so many individuals who would be accessing ARV treatment as countries began scaling up HIV programs.
- Some relief agencies did and still do not regard provision of emergency or supplemental food aid which is designated for short term food security emergencies, as being part of their mandate because they regard HIV AND AIDS as a long-term crisis, versus a short-term, cause-specific, limited catastrophic emergency.
- The WHO’s recent Resolution to integrate nutrition into national HIV programs is a positive step, but has not led governments to take much action to date.
- Money freed from debt relief offers a source of funding for nutrition interventions targeted at HIV-affected populations for poor governments. It could be used to support the Brazzaville Declaration’s call for a greater investment by African governments.

#### HIV Disease Management and Food:

- WHO global guidelines for HIV disease management do address the clinical impact of malnutrition on HIV-positive individuals and provide basic clinical parameters for treating HIV-related malnutrition. However, field providers seek international guidelines that address the complex interplay of HIV, malnutrition and poverty in

chronically HIV-affected individuals, including those on ARVs, and the additional impact of HIV-related opportunistic infections, notably tuberculosis, malaria and parasitic infections.

- Field providers at the community level seek better practical guidelines and ‘best practice’ examples of programs to help them manage the impact of HIV and intersecting factors including acute and chronic malnutrition, poverty, and gender dynamics.
- Various grassroots or community programs around the world are showing early success integrating HIV and nutrition/food security and poverty alleviation interventions. The results of these programs suggest that this integrated approach can:
  - help assure the recovery from AIDS of HIV-affected individuals and their families and their ongoing survival
  - reduce the greater risk of death or illness that exists in malnourished individuals starting ARVs versus those who are not malnourished, based on new studies
  - reduce the risk of developing HIV resistance among individuals on ARV therapy who lack or lose access to a source of food or income to purchase food;
  - reduce the health threats posed by malnutrition;
  - help assure the long-term benefits of HIV care, education, prevention and support including the goal of long-term survival and wellness.
- Offer an opportunity via HIV programs to introduce interventions to increase food production, income generation and poverty-alleviation for households with HIV-positive members.

#### National Challenges:

- Many national governments are struggling – and failing - to provide for the nutritional/food security needs of very ill, HIV-positive individuals, including those starting ARV therapy. The scale of the demand outweighs existing food aid stocks and governments do not have specific budgets for nutrition for HIV patients.
- Governments and health officials could benefit from practical WHO field guidelines to address the complex intersection and health impacts of hunger, poverty and HIV. A more holistic template would allow governments to modify global guidelines/approaches to match specific national and local needs, as is now done with the existing WHO HIV treatment and prevention guidelines.
- Governments, international donors, and policy makers seek an evidence-based approach to the integration of nutrition and food security into HIV programs. Such evidence is currently lacking in a number of areas.
- National governments and field providers could benefit from expert guidance and clarity about useful entry and exit criteria, impact outcomes, and nutritional markers for nutrition-related programs linked to HIV service delivery.

- Such assessments and criteria should ideally reflect household, family and community needs and assets, not merely the HIV-affected individual's capacity to generate or access food production, food security, income generation or poverty-alleviation programs.
- Governments need to increase funding for HIV-related nutrition programs, as well as nutrition education and nutrition interventions for HIV-affected and vulnerable communities and promote examples of successful community interventions.
- Governments could benefit from an active partnership between Ministries of Health, Agriculture and Gender or Family to address the issue of food security, gender inequity and HIV at the national level.
- Nutritionists and Agronomists with expertise in HIV and AIDS should be placed within national AIDS programs to help inform policy and programs. Agronomists can help guide health centers and community groups to implement agricultural programs and strategies, particularly in rural settings.
- Similarly, governments can benefit from a multisector partnership approach to HIV and AIDS service delivery that includes groups working in AIDS and those working in the broader arena of horizontal development who offer expertise in poverty alleviation, rural development, sustainable agriculture, food production, and income-generation.
- The vulnerability and socioeconomic status of women requires a strong focus on gender equity and inequity, including an examination of the need to reform national laws governing property and inheritance that impact on the ability of women and orphaned children to be self-sufficient in areas of food production and income-generation.
- Governments need to address the dynamic link between gender inequity, sexual violence and poverty that affect women and children, especially girls, and are linked to HIV in a downward spiral of poverty and disease.
- The needs and rights of vulnerable children to food and food production and security should be integrated into HIV programs. Strategies to improve vulnerable children's access to food via school-based feeding programs offer avenues for intervention that can help HIV-positive children, particularly in very poor settings.

#### Development & Funding:

- National governments aim to address the overlapping crises of HIV, food security, poverty and gender inequity within national and regional development frameworks, including the 'Three One' principle of a unified national approach to HIV program delivery. But most have failed to take much action on the challenge of integrating delivery of food to HIV-affected or vulnerable groups as part of overall national development challenges.
- The lack of international and national funds for food, or stocks of donated food dedicated to national HIV programs remains a critical issue limiting the success of HIV programs in the field.

- There may be other national or emergency crises related to war, drought, and famine, political or economic chaos that affect food security and compete for limited national dollars needed to assist other food-insecure populations.
- Debt relief represents a possible source of funding for food-related programs linked or integrated into national HIV programs. However, there is a current gap in economic forecasting and analysis of the cost-benefit of given interventions related to HIV and food security and poverty alleviation to help guide AIDS and economic policy makers.
- More input is needed by health economists to assist governments and stakeholders in evaluating the positive short vs. medium, vs. longer term benefits in terms of savings of integrating food-and poverty-related interventions on HIV prevention, treatment, and notably, on the potential of HIV or related programs (TB, malaria) to help lift individuals out of poverty.

#### The Challenge of Scaling Up:

- The issue of “scaling up” requires close examination of the key ingredients of success of model community-based programs. While the stated goal of scaling up at the national level is to reach a certain mass of an affected population, rapid scale up often spells a loss of the essential elements that contributed to the success of a given model community-based program. This is true for nutrition interventions that rely on local resources, including agricultural resources, say grassroots experts.
- Rather than multiplying numbers of people who need services, experienced field providers argue that it may be more effective, and cost-effective, for governments to invest in many more smaller community programs – a patchwork quilt, rather than top-down or pyramid, approach.
- Everywhere, there is a great need to document successful community programs and experiences that may serve as models for scaling up and to disseminate them to a range of multi-sector providers who seek this information. This is a role for WHO, UNAIDS and international agencies who can partner with national government and community actors, to document successful approaches -- as well as failed ones. The latter provide an important opportunity to learn from mistakes, yet field providers argue that too often, they are not documented and thus we lose an important opportunity to learn from past efforts.

#### Research Challenges:

- The dynamic synergy of HIV, malnutrition and poverty (and malaria and TB and malnutrition) require research at many levels, including economic research to provide concrete evidence and cost-benefit analysis and data needed to inform policy makers and providers about the effectiveness, cost and benefit of a given nutrition intervention related to HIV care.
- Such research is needed to evaluate short/medium/long-term interventions.



- Globally, international agencies, national governments, and field providers are interested in evidence-based programs that provide concrete “proof” of the “added value,” (including cost and cost-benefit analysis) of specific interventions that integrate nutrition and therapeutic feeding interventions into HIV programs (as well as TB and malaria programs) for HIV-affected patients and individuals and their families.
- Grassroots field providers seek more information about best practice programs and evidence (data) that a particular intervention will work in a given setting and what the impact is likely to be. Such evidence would include comparative analyses of the effectiveness and cost-effectiveness of reported “best practice” and model programs at the community level, and viability in terms of scale-up for a national program.
- Longer term monitoring and evaluation, documentation and research is needed to address our collective need for longer-term forecasting and long term impact outcomes, including the long-term cost and effectiveness of more integrative models.
- The close link of TB and HIV means that TB programs (like malaria programs) also offer opportunities for nutrition interventions and call for integration of nutrition into TB (and malaria) service delivery, including for HIV-positive clients. As with HIV, a more holistic approach to care is required to address the overlapping needs of HIV-affected clients who are malnourished and vulnerable or suffering from multiple illnesses.

#### Initiatives to Consider:

- At all levels (international, national, local) individuals interviewed for this report say they would welcome international, national and local meetings that bring together key stakeholders across disciplines (HIV AND AIDS, public health, nutrition, economic development, humanitarian, etc.) to examine the intersecting epidemics of HIV, malnutrition, poverty and gender, and to share ‘best practice’ approaches. Donors should consider funding such initiatives, aimed at educating affected groups who are eager to implement and test such programs.

## B. Initial Recommendations:

- UN agencies and the international HIV community should move faster to develop and promote a more global, holistic approach to HIV care and disease management that integrates interventions to address the overlapping epidemics of malnutrition and food insecurity, poverty, and gender inequity.
- Creation of a multi-sector partnership approach to delivery of integrative HIV programs is recommended.
- The WHO should respond to a broad request by field providers and community groups for practical guidelines that reflect the integration of a range of nutrition interventions into existing clinical guidelines.
- Service delivery should be rooted in community-based programs that take advantage of local resources, local providers, local sources of food, and local community best practice experience, rooted in locally defined needs, and benefiting from local leadership. Here, HIV-positive groups should play a leadership role, and be included in decision-making related to programs.
- A partnership that unites HIV groups with those having expertise in development, new technologies, agriculture and gender, income generation, microcredit and business is recommended as an approach to deliver the holistic range of services and programs needed by HIV-affected households and communities. Donors should consider funding such partnership initiatives, including global and community North-South partnerships.
- A much greater involvement of the private sector is urgently needed at all levels to help governments, NGOs and community groups develop and roll out programs to address hunger and poverty. Innovative “public-private” partnerships can help accelerate funding, procurement and delivery of low cost food, seeds, equipment and other resources to groups engaged in farming, income generation and other programs to address poverty. There is a potentially large role for the food and agriculture industries.
- There is a large demand for business expertise and training to help grassroots groups who are developing business models and income-generation revenue streams for their operations, including cooperatives. These grassroots groups still have a great need for capacity building due to high staff attrition. Training in the area of nutrition is a high priority.
- UN agencies should work quickly with multi-sector partners, including HIV-positive networks, to document, and disseminate existing “best practice” strategies and community models that integrate nutrition and HIV. Videotaped training modules could then be widely shared and taught to grassroots groups. A centralized Internet source for posting this information would benefit many parties.
- WFP and UNICEF should lead the effort to rapidly develop and field test a simple, standardized tool for Monitoring and Evaluation of food interventions in HIV programs, and help widely disseminate these to field providers. The potential adaptation of existing tools used routinely in public health clinics such as child health cards warrants

investigation. Such simple M&E tools could help gather much-needed evidence about the comparative impact of different interventions, and their actual cost.

- More analysis and costing exercises are needed to compare and determine the best approach to the national challenge of “scaling up” holistic AIDS programs. The scaling up of myriad grassroots ‘best practice’ programs may provide a more cost effective model to deliver high-quality services at the community level that can be sustained, engaging affected communities in the effort. These models should be compared to the cost and effectiveness of large-scale national programs that are integrating nutrition into HIV programs, such as Botswana and South Africa.
- HIV programs integrating nutrition and addressing food security and poverty should target families and households, not only affected individuals.
- The adoption of more holistic global standard of care for HIV/AIDS should reflect a continuum of care in which interventions around nutrition are offered upon entry into HIV testing or care, and are targeted to individuals at different stages of illness and malnutrition. Governments should put high priority on interventions to address malnutrition in vulnerable and HIV-affected pregnant women and children below age 2 to capture the most important window period for nutrition interventions in children.
- Short-term food aid is a lifesaving intervention for ART patients who are malnourished and have a much greater risk of dying compared to those who have food, according to a new study. Such short-term supplemental nutrition should be linked to sustainable food security and income generation programs. Immediate funding should be provided within national AIDS programs to target short-term food aid to patients starting ART who suffer from malnutrition. Similarly, national TB programs should also provide food interventions to patients starting TB regimens – a step that has implications for HIV and AIDS control.
- Food aid donors like WFP and UNICEF have an important role to play in helping to deliver food aid to HIV programs and patients, given their expertise, but these agencies need to dedicate much more funding to their HIV portfolios.
- Specific funding for nutrition-related interventions is urgently needed as part of HIV global funding mechanisms, including Global Fund, PEPFAR, World Bank, IMF, CDC MAP and other HIV and AIDS funding initiatives. Private foundations should also consider funding nutrition-related programs and those related to food security and poverty alleviation.
- Similarly, African governments should act on the Brazzaville Declaration and set aside 15% of national funds for public health and assure that a portion be used to provide emergency food to HIV-affected individuals who suffer from malnutrition. They should also commit to using a portion of funds garnered from debt relief to address food needs among HIV-affected populations.

- Funding for research related to nutrition, food security and HIV is needed to provide evidence to support targeted interventions. Here, global North-South partnerships, and collaborations between academic groups and multi-sector providers offer models for collaboration. Such research should engage HIV-positive groups at all levels of program design and development.
- Governments and multi-sector actors should consider the potential of HIV-positive networks to serve as a community based infrastructure to deliver HIV programs and services, including community education related to nutrition and HIV, nutrition interventions within home-based care, community-level monitoring and evaluation of food programs, , and involvement in food security and income-generation activities.
- A key step toward fighting poverty and hunger among affected HIV groups is to help people find employment. Creating economic training centers that can benefit HIV-positive individuals and NGOs could help accelerate their ability to engage in income-generation activities. Engaging the private sector to hire HIV-positive individuals is another step.
- Specific interventions are needed to educate and empower women. In addition to education, training and access to microcredit, women (and children) need greater protection in the area of land rights. Governments should act to reform property and inheritance laws that discriminate against women and children, particularly orphans.
- Similarly, governments need to act urgently to implement or reform laws, policies and traditional practices to address gender-based violence – a huge problem fueling HIV among women – and children. The provision of mental health services, including trauma and rape crisis counseling, access to safe housing, and other services should be included in HIV programs, as part of a more holistic package.
- Urgent action is needed to address poverty-related issues like child marriage that greatly increase the risk of acquiring HIV for younger girls who are partnered with older men. Education of girls is paramount to fighting poverty and gender inequity.
- The food security needs of HIV-positive refugees, who are malnourished, including those on ART, require close attention. A partnership approach between humanitarian and relief agencies and community groups and HIV positive networks can help refugees access a more holistic range of services.
- In particular, medical and psychosocial services targeting women and children war-rape survivors are critical, as are income-generation activities for this group. The stigma of rape in some societies causes women to be socially outcast, lose homes and family support, and lose custody of their children, while the trauma and physical harm caused by multiple rape leaves them less able to do physical work. Trauma counseling is a major need in many countries where mass rape is linked to war, and to increasing HIV rates in this population.
- There is a great need at all levels –international, regional, national, local – to raise public awareness and identify action steps that can be taken by different parties within countries to address the overlapping crises of HIV and

AIDS, malnutrition, poverty and gender inequity. Outreach to media, particularly radio in poor countries, is essential to help raise public awareness

- Other movements and groups outside the field of HIV and AIDS need to get involved in combating hunger and poverty that are fueling the HIV epidemic. These include labor groups; the women's movement; groups working in sustainable development on issues of poverty, food, water, technology, agriculture and environment; human rights groups, and the broader social justice movements. Bringing together actors from across these disciplines with groups working in HIV and AIDS can foster new alliances that offer potential new global resources, money and programs to the HIV movement.

### III. INTRODUCTION:

#### A. Overlapping Epidemics: HIV, Hunger, and Poverty

The global epidemic of AIDS is in its third decade, and continues to grow, despite accelerated efforts to prevent spread of the virus, and to treat those with disease. Today, an estimated 40 million people live with HIV, and of them, some 35 million live in less-developed countries where there is often widespread poverty and economic crisis, and where public health systems are weak.<sup>ii</sup> The majority – 25 million -- live in sub-Saharan Africa, the burning epicenter of the global epidemic, where hunger is rampant and where many people lack access to their most basic needs for food, shelter, some source of daily income, as well as health care, or education. Everywhere one looks, one finds individuals with HIV among the most vulnerable and the poor.

Globally, it is widely acknowledged by frontline providers that people with HIV and AIDS who live in conditions of acute poverty regard food as their highest priority alongside ARV drugs.<sup>iii</sup> Experts now warn that starvation and malnutrition are "fast becoming the twin perils" in the fight against HIV and AIDS and that the need for food soon might surpass the need for antiretroviral drugs among many HIV-positive people in the developing world.<sup>iv</sup>

There are currently an estimated 820 million undernourished people in developing countries.<sup>v</sup> Ten years after the 1996 World Food Summit in Rome, where global leaders pledged to cut in half the number of undernourished people by 2015, "virtually no progress" was reported. Instead, hunger is increasing, at the rate of four million more hungry people a year.<sup>vi</sup> We know that malnutrition is a leading cause of decreased human development, lowered national productivity, and is a global killer of adults and children. Malnutrition is linked to 60% of child mortality globally, indirectly or directly, and is the key factor contributing to the burden of disease in developing countries.<sup>vii</sup>

How many of them are HIV-positive? We don't know, but we are glimpsing the tip of the iceberg. There are no rock-solid, global statistics or macro studies to provide us with an accurate overall picture of the scope and impact of malnutrition on HIV-positive individuals and their families. But we do have rough projections made by the World Food Programme (WFP), among other agencies. The UN food agency recently estimated that approximately 3.8 million people with HIV need access to food aid. In 2008, 0.9 million of the 6.4 million people who are scheduled to be enrolled in ART programs will also need some kind of nutritional support.<sup>viii</sup> Of course these numbers could go up if the scale up of ART increases dramatically -- as many hope it will -- to meet the urgent demand for universal ART access. The WFP is currently feeding 9 million people infected with HIV and AIDS, according to Jordan Dey, director of the program's U.S. relations office.<sup>ix</sup>

Backing these figures are many broad snapshots, as well as nuanced field surveys of different kinds conducted by governments, international agencies, academic researchers and community groups that all reach the same basic



conclusion: poverty, which leads to hunger and malnutrition, has emerged as the great shadow epidemic of HIV, and seriously threatens the health of affected and at-risk individuals and their ability to fight HIV illness.x

The need is likely to increase too, as HIV prevention programs continue to expand and testing becomes more available. The great majority of the 25 million Africans with HIV live in serious poverty, and lack food. Asia and Eastern Europe are seeing breakaway mini-epidemics in populous countries like India and Russia, where the disease targets the socially vulnerable and poor. UNAIDS recently reported the number of new infections rose to 4.3 million this year, while 2.9 million people died of AIDS. The math continues to favor rapid expansion of the epidemic, which will increase poverty and the subsequent need for food.

“Funding antiretrovirals with no thought to food is a little like paying a fortune to fix a car but not setting aside money to buy gas,” stated Robin Jackson, Chief of WFP’s HIV and AIDS Service in Rome and Head of Delegation at an August 16 press conference during the XVI International AIDS Conference in Toronto. In short, he and others argued, it won’t work. “It is time to deliver more than drugs. It is time to deliver cost-effective and comprehensive programs that include the basic food and nutrition needed for people living with HIV/AIDS and their families,” said Jackson. Our response to HIV and AIDS must be viewed through the lens of development, and calls for integrating interventions to alleviate hunger and address poverty as important end goals to assure long-term survival from AIDS.

According to WFP’s own calculations, the cost of providing someone with food assistance – the ‘minimum’ packet of rations -- is just US .66 cents per patient per day, including all transport and program costs. Multiply that by over 800,000 Africans now on ARVs, many of whom lack enough food to eat to take with their pills and you begin to feel a measure of the pressure that gets put on HIV and food program providers in the field. The United States is the largest donor of food assistance worldwide, investing more than \$2.4 billion for food aid in 2005, according to a report presented to the U.S. Congress in early 2006. But globally, there is an enormous lack of food available to meet the present demand.

#### National Trends:

What affects the individual also affects the family and community. Illness and loss of strength make it more difficult for a person to access and produce food, particularly agricultural workers, and to maintain adequate nutrition when sick. When the breadwinner is ill, the entire family and children are affected and may go hungry, extending malnutrition and vulnerability to illness to other members of the household. HIV has attacked adults in the prime of their productive lives, from ages 15-50, and left millions of orphaned children, many also HIV-positive. Across Africa, generations of orphans are being raised by grandparents and foster families who are unable to grow enough food for the number of children in their care.

Across the world, the devastating impact of HIV and AIDS on the economic status and productive capacity of hard-hit nations has produced impossibly bleak economic forecasts that project negative decline and failed states in years to

come in southern Africa if the epidemic rages along the current trajectory.<sup>xi</sup> The alarm has sounded in the huge, populous countries like Nigeria, India, Russia, and China, – where the virus is racing forward. In Botswana, where 40% of adults are HIV-positive, AIDS has reduced the lifespan of adults in countries down from 73 to 36 years.

#### Impact on Agriculture and Food Production:

The impact of HIV and AIDS on agricultural production and on the economic productivity of the labor force is cataclysmic in the hardest-hit countries of sub-Saharan Africa. Agriculture accounts for 24% of Africa's gross domestic product, 40% of its foreign exchange earnings and 70% of its employment.<sup>xii</sup> Since 1985, seven million farmers have died of AIDS.<sup>xiii</sup> It is estimated that two-thirds of the population of the 25 most-affected countries live in rural areas. In Africa, 2 out of 3 Africans live in rural areas. Experts predict that by 2020 the epidemic will have claimed the lives of one-fifth or more of all those working in agriculture in many southern African countries.<sup>xiv</sup>

In 2003, Alex de Wall and Joseph Tumushabe published a sobering analysis of the increasing impact of HIV and AIDS on agriculture, going so far as to posit a sobering thesis -- that the epidemic, at its most extreme, threatened to create a "new variant famine," a crisis that particularly targets rural women farmers. Here is an excerpt from their report, which was prepared for the British development agency, DFID:

"Evidence suggests that the HIV epidemic is disproportionately affecting agriculture relative to other sectors (IFAD 2001). This is not because rates of HIV are higher among workers in the agricultural sector than elsewhere (indeed they are usually lower), but because the structure of the agricultural sector, especially the smallholder subsector, is such that it is much less able to absorb the impacts of the human resource losses associated with the pandemic. Moreover this impact on agriculture, is likely to be far reaching as over 70% of the population depend on the sector for livelihood.

In agrarian societies, the HIV/AIDS epidemic is intensifying existing labor bottlenecks, increasing widespread malnutrition; proving a barrier to traditional mechanisms of support during calamities, massively adding to the problems of rural women, especially female-headed farm households arising from gender division of labor and land rights/resources, and deepening macroeconomic crises by reducing agricultural exports. In extremis, it is creating the 'new variant famine.'

Among the reasons why HIV/AIDS has this severe impact are the pre-existing fragility of most African farming systems, the distortions built into international markets in agricultural produce, and the role of the agrarian sector in most African countries as an unacknowledged social safety net. Under the strain of the HIV/AIDS epidemic, the more

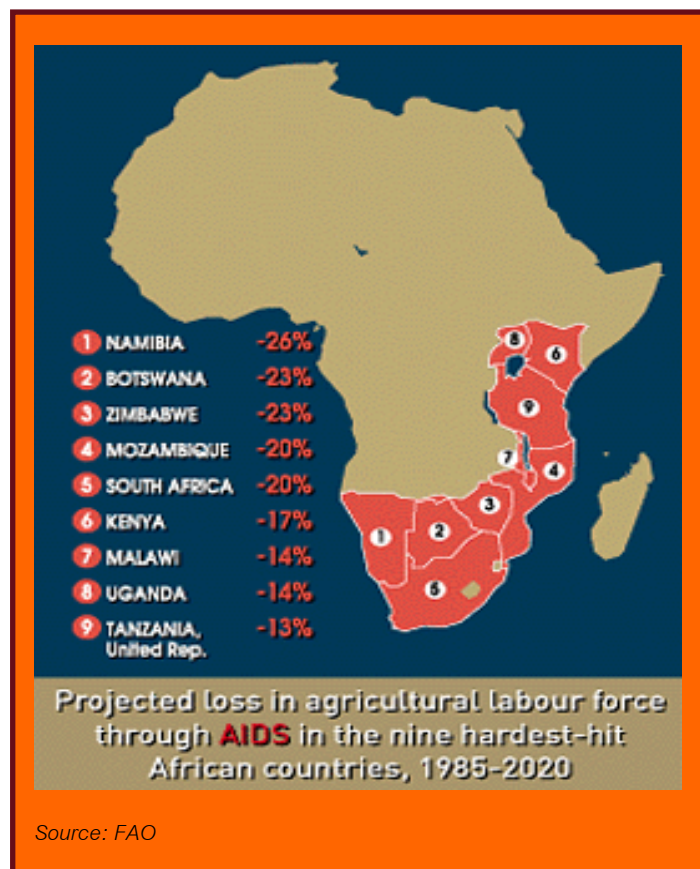
vulnerable farming systems are simply breaking down, threatening a social calamity on a scale not witnessed before in the continent.”

Source: Alex de Waal and Joseph Tumushab, “HIV/AIDS and Food Security in Africa,” A report for DFID, 1 February, 2003.

This bleak projection does not, however, reflect the potential of lifesaving ART and food, as well as low-cost seeds and equipment and training, to improve the picture. But it should spur us to greater and urgent action, especially since we have such resources and the drugs. We should also remember that what happens in rural Africa impacts elsewhere and impacts globally.

#### The affect on women:

The majority of those affected in rural areas are likely to be women, who make up 60%-80% of the labor force in sub-Saharan Africa producing food, both for consumption and sale.<sup>xv</sup> There women make up 57% of HIV cases, and that figure is rising steadily. In many countries, agriculture is fast-becoming a predominantly female sector as men move into other employment sectors, and due to the number of men who are too sick to work, or died of AIDS.<sup>xvi</sup>



Women now make up the majority of smallholder farmers. At the same time, AIDS and the migration of men to other jobs or urban areas has also increased the number of female-headed households. Globally, women now make up over half of HIV

and AIDS cases, and in some parts of hard-hit South Africa, for example, over 70% of young girls who living in communities near mining areas are reported to be HIV-positive. HIV is truly wearing a woman's face across Africa. That face is often very young, as the epidemic strikes girls disproportionately harder than boys. Today, experts have sounded the alarm about practices like child marriage that are exposing young girls to HIV via arranged marriages with older men. Here, the cause of the problem is traced back to poverty – to the exchange of a dowry for a daughter's hand in marriage. In Africa and elsewhere, for younger women and child brides, marriage is no protection from HIV; instead, it is emerging as a greater risk factor. Studies in Africa show married women are contracting HIV faster than unmarried women, and the age trend is downward, showing younger and younger girls exposed.

Given the impact of the disease on these women, who are in charge of food production and preparation, and who are caring for children, including large numbers of orphans of parents who died of AIDS, food production and sales are declining due to the manifold impact of HIV and AIDS. The death of men has also greatly affected households, because women have lost family farmlands and property, due to patrilineal inheritance laws. Women who are the main breadwinners in rural areas become dispossessed of their livelihood assets and, if they get sick, are unable to work. The combined impact of these factors helps explain what has been reported for some years now: the increase of poverty among rural residents, particularly women, the decrease in economic output, and the increase of malnutrition among rural households, and among children of these affected families.

On a macro level, the prediction is grim: By 2010, when we aim to deliver universal ART, the life expectancies of many countries in Southern Africa will fall to almost 30 years of age – down to levels that existed 100 years ago, at the start of the 20<sup>th</sup> century.

Those who are ill leave fields unplowed, crops that can't be planted or harvested, seeds that are lost, and thus, future harvests. Lost too is local knowledge of farming and agriculture – survival skills passed on within families. When husbands die, wives and children lose the family property, including not only land, but livestock, equipment fertilizer, seeds and often, access to credit, and therefore the family's source of income. The widowed women or surviving children may not be trained to use farming equipment. Or children must go to work in the fields too, and remain out of school, uneducated. The cycle of poverty and economic decline related to HIV and AIDS is thus felt at every level, from the nation down to the family and individual -- a destructive, negative spiral. The picture is made worse by natural factors like drought that lead to famine, seasonal floods or volcanic activity, as well as man-made factors like war that force people to abandon their homes, farms and fields, contributing to further economic decline and economic instability.

Without money or work, families fall deeper into poverty, and may engage in activities that increase their risk of exposure to HIV. Many studies have documented the link between poverty, hunger, and commercial prostitution. Equally common is the informal exchange of transactional sex for food by women and youth struggling to survive. The added factor of HIV stigma and discrimination, linked to public fears and ignorance of the disease, may also result in affected some individuals

being rejected by their families or community and thus unable to secure work. All these factors lead to a greater risk of poverty and hunger for people with HIV.

#### Gender Dynamics and Women's Rights:

Add to this picture the underlying issue of gender dynamics and lack of women's rights that leave women and girls susceptible to poverty, malnutrition, violence – and HIV.<sup>xvii</sup> Being poor or economically dependent on men often places women at a higher risk for vulnerability to HIV. Women everywhere are more economically vulnerable, earning less than men on average do. It is well known that women often lag behind men in accessing health care and some researchers have suggested this pattern may hold true for HIV.<sup>xviii</sup> In many countries, law and traditional practices and customs discriminate against women and may increase their vulnerability to HIV.

Many studies have now documented the relationship of poverty or food insecurity to a greater risk of women and girls exchanging sex for money, goods or food. This risk increases during periods of acute economic or food crisis, when women may have to travel further from homes to engage in work. In IDP and refugee camps, many women and girls are vulnerable to rape when they leave the camps to gather wood for cooking fires.<sup>xix</sup>

Women's lowered social and economic status and relative powerlessness contributes to an increased risk of exposure to HIV and to STDs. The latter serve as cofactors affecting HIV acquisition and impact on health. It is well documented that women are biologically more susceptible to HIV infection than men are, and that the female genital tract is a reservoir for latent HIV infection.<sup>xx</sup> Some groups have estimated, for example, that women are five times more vulnerable to contracting genital ulcer diseases than men, a cofactor that has been linked to higher rates of HIV in African groups.<sup>xxi</sup>

#### Property and Inheritance Rights:

Today, property and inheritance rights are emerging as another important factor that contribute to women's and children's vulnerability to poverty and malnutrition. The ownership of land, housing and other property provides women and families with basic needs of shelter, access to food and water, and serves as a direct resource for income generation, via farming for land, or as an economic asset such as a home to be leveraged for credit. Access to a home provides access to basic services provided by the public sector that affect health maintenance, such as sanitation, access to water, and electricity.<sup>xxii</sup>

The theft of land and property by relatives belonging to HIV-positive individuals, particularly widowed women and surviving orphans, is by now a familiar tale in many countries, one that reflects the level of discrimination that continues to be leveled at those coping with HIV. This has been particularly true prior to the advent of therapy, when, in a typical narrative, a person who was known to be HIV-positive or was ill was deemed as condemned to die by others in the family or community. Rather than risk the loss of a family asset, relatives seized it to assure it remained in the extended family's control. Now that women and children across Africa and elsewhere are accessing therapy, and regaining their physical

health, many are battling to reclaim their rights to stolen property. Here again, one sees how HIV may introduced a chain of events that results in a reduced ability to produce or access food or income generation.

#### Violence and Sexual Violence:

Violence against women is another significant factor that contributes to women's food insecurity and increased vulnerability to HIV. Women threatened by violence may lose their homes or property, and thus, economic protection or stability provided by spouses or extended families. The impact of this violence also affects their families and especially dependent children. The impact of war on women who may lose spouses and are left to cope as single heads of households is yet another factor. When violence arrives, it affects the entire family and often on their ability to maintain access to shelter, food and a source of income generation. The link of violence to poverty is well established, as is the cycle of problems that ensue.

#### A Family Problem That Affects Children:

Across Africa, women and men with HIV struggle to feed their children and families, while those who become too ill and weak to work lose this ability to care for their families. Younger and younger children today have become the family breadwinners, especially across hard-hit southern Africa. The increase of poverty among these already very vulnerable children is gaining greater global attention, but the programs to help them access food, education and income-generation activities lag behind.

Many HIV programs have addressed the nutritional needs of pregnant women and nursing children. However, they have failed to sufficiently consider or integrate food and food security and nutritional interventions for young children and adolescents. It's well known that HIV and malnutrition both greatly impact upon the physical development of children. The best evidence of this is the scores of malnourished, HIV-positive children and teenagers in poor countries who are far shorter and smaller than other children their age. Food helps them recover their health. And when ART is introduced, they really shoot up in size as they gain weight. What's overlooked are the increasing food needs of these children, which will increase as they begin ART and regain their appetites. They need more food.

Globally, then, the related issues of malnutrition, food insecurity and poverty should not be treated as an individual problem. They affect the entire family and often extended families and communities -- as does HIV. That's why our global and national and local responses to the HIV epidemic need to reflect community-and family-based models and solutions that consider the survival needs of both the individual with HIV, and his or her family. It is particularly important, field workers argue, to integrate nutrition interventions into both ART and home-based care.<sup>xxiii</sup>



A Vicious Cycle:

A recent report has raised fresh alarm about the impact of malnutrition on the ability of individuals to benefit from ART access. A new study published in *HIV Medicine* found that patients who start ART and are malnourished are six times more likely to die than patients who are well nourished.<sup>xxiv</sup> The study authors assume the reason for this is that malnutrition reduced patients' ability to absorb the ARV medicine, reducing the amount of drug in the body, and thus the power of the medicine, to fight HIV. Malnourished individuals also find it harder to cope with the debilitating side effects of ARVs and may take longer to recover their body's immunity to infection.

Studies to date have shown that lack of food increases one's susceptibility to HIV exposure and infection, while HIV illness increases one's vulnerability to malnutrition and food insecurity.<sup>xxv</sup> Malnutrition can contribute to the progression of HIV and be the result of HIV. HIV weakens the immune system, causing vulnerability to infections. It physically weakens the body and causes muscle loss, leading to decreased muscle strength, weight loss, and decreased energy. This impact initially led Africans to brand AIDS as 'slim disease': even among those who are hungry everyday, the skeletal frames of those with advanced AIDS provide stark proof of the advance of a disease that lays waste to the body in those unable to access treatment. Moreover, a body fighting infection uses additional energy and needs to eat more to have this energy. Yet illness blunts one's appetite, causing a lack of energy.

The Impact on Mental Health:

Poverty, illness and hunger also have a negative affect on mental health, on the psyche and spirit and will to live. The psychological stress of being starving or desperately hungry, of being threatened with daily survival due to lack of food, compounded with the daily challenge of coping with a life-threatening disease, particularly for individuals living in settings of limited health access – exacts a powerful negative toll. Acute stress is well known to depress the immune system, leaving one more vulnerable to infections. Individuals with HIV, whose immune systems are compromised by HIV, remain susceptible to opportunistic infections.

Globally, these overlapping factors – hunger, malnutrition, poverty and gender inequity and HIV -- acting in catalytic concert, speed the course and impact of illness and malnutrition in the poorest countries. The result is more poverty, more malnutrition, more economic crisis, and more HIV and AIDS, affecting vulnerable women and children in particular. It is critical to understand this symbiotic dynamic in order to create a global approach to AIDS that address these overlapping crises. It's equally important to consider the overlap with malaria and TB.

Why malnutrition persists in many food-secure households:

- Pregnant and nursing women eat too few calories and too little protein, have untreated infections, such as sexually transmitted diseases that lead to low birthweight, or do not get enough rest.
- Mothers have too little time to take care of their young children or themselves during pregnancy.
- Mothers of newborns discard colostrum, the first milk, which strengthens the child's immune system.
- Mothers often feed children under age 6 months foods other than breast milk even though exclusive breastfeeding is the best source of nutrients and the best protection against many infectious and chronic diseases.
- Caregivers start introducing complementary solid foods too late.
- Caregivers feed children under age two years too little food, or foods that are not energy dense.
- Though food is available, because of inappropriate household food allocation, women and young children's needs are not met and their diets often do not contain enough of the right micronutrients or protein.
- Caregivers do not know how to feed children during and following diarrhea or fever.
- Caregivers' poor hygiene contaminates food with bacteria or parasites.

Source: "Repositioning Nutrition as Central to Development," *A Strategy for Large-Scale Action, Directions in Development*, World Bank, 2006.

## IV. Discussion:

### A. Background: The Global Rollout of HIV Treatment (2000-2006)

On a global level, the impact of acute hunger on the successful take up of HIV treatment is viewed with great concern by governments and field providers in less-developed regions who are racing to scale up delivery of ARVs. People with AIDS who need access to lifesaving ARV medicines are often reluctant to start therapy without access to food. Others discontinue ARVs when food becomes unavailable—a step that can quickly lead to HIV drug resistance, and subsequently, drug failure.<sup>1</sup> Lack of food security is thus a paramount issue that threatens to blunt the potential benefit of ARVs for individuals.

Until recently, however, the parallel crises of food insecurity, poverty and HIV and AIDS in developing countries were largely overlooked by global health policy makers and the international community in the collective rush to implement a global response centered on ARV drug delivery. The architects of the global response initially focused on a medical model of health care delivery, in which provision of lifesaving antiretroviral (ARV) medicine is and remains the most urgent need and issue. This is in part because the global response was built upon models of HIV disease management developed in and for richer Western countries, where hunger and extreme poverty is not a daily crisis for so many on the scale that you find in many of poor countries.xxvi

The international grassroots treatment-access movement, influenced strongly by US and Western European activists, also shaped the urgent demand for pills – not pills with food. Up to now, the broad access movement has failed to highlight the critical link of food and nutrition and treatment access, or demand funding and resources for programs that address these intersecting problems. One reason for that may be the lack of a blueprint or even rough guides for how countries can best integrate nutrition interventions into HIV programs, and vice-versa.

#### Missing from 3 x 5: Food and Nutrition Interventions

At the World Health Organization (WHO), the architects of the innovative '3 x 5' global program of HIV treatment committed the agency to a goal of providing 3 million people with ARVs by 2005. Although the 3 x 5 effort fell far short of this goal – just over 1 million more accessed ARVs by that deadline – the global momentum it generated ushered in myriad programs and attracted multi-sector actors at all levels. Governments responded by implementing national plans that called for the rapid scale up of HIV services, including prevention, education and ARVs.

The 3 x 5 program, and many national AIDS programs, have approached the underlying issue of poverty and scarce resources as it affects public health delivery: the impact of poverty on depleted public health systems, the lack of enough health professionals, the urgent need to train doctors and nurses to manage HIV and ARV treatment, the need for community health and outreach workers, the need for affordable ARV pills and cheaper diagnostic tests, and the need, on

a mass scale, for HIV education and prevention programs targeted at high-risk populations, and at a broader public living in limited-resource settings. This last challenge calls for the creation and adaptation of tools and materials initially developed for resource-rich settings.

But on a global level, food was left out of the plan. Global AIDS leaders failed to address the issues of food security and poverty mitigation as relevant components of the global HIV response— not with anything approaching the degree of attention and public debate and analysis they brought to the challenge of delivering ART in poor countries.

The 3 x 5 rollout is directly linked to the effort to combat tuberculosis and malaria, using the vehicle of the Global Fund for AIDS, Tuberculosis and Malaria (GFATM or “Global Fund”) to support TB and malaria programs that overlap with HIV – and vice versa. However, food, hunger, malnutrition, acute poverty – these common threats to human health and survival in the poorest places – were not regarded as fundamental issues that would determine how well someone might respond to treatment, or adhere to a regimen or drop out of a program and develop resistance when a source of food became scarce.

To their credit, the 3x5 team that was led by Dr. Jim Kim did address medical aspects of nutrition and HIV. They did issue clinical guidelines and protocols related to nutrition for HIV patients, and raised the issue of food as one that had to be addressed by national governments, NGOs and other providers. They cited a plethora of studies that document the well-established link of HIV disease and malnutrition. However, there was and is still no similar 3 x5 global plan that integrates nutrition into the global HIV treatment rollout, into what many feel should be a holistic approach to addressing access to nutrition and food security along with lifesaving medicine.

#### The ‘Three Ones’: Another Gap

The principle of a unified country level response to AIDS called the “Three Ones” grew out of a consensus at the International Conference on AIDS and STIs in Africa (ICASA) 2003. It stipulated that countries should have ‘One agreed HIV/AIDS Action Framework that provides the basis for coordinating the work of partners; one National AIDS Coordinating Authority, with a broad-based multi-sector mandate; and One agreed country level Monitoring and Evaluation System.”<sup>xxvii</sup> But as noted in a 2006 report by UNAIDS that focused on HIV and nutrition services for refugees, “The ‘Three Ones’ fails to make specific mention of the need to programme at the intersection of nutrition, food security and HIV.”<sup>xxviii</sup>

The absence of concrete blueprints to integrate nutrition and food into the Three Ones, or into other development frameworks means just that: it was overlooked. Provision of food is largely absent from national AIDS budgets. The money is not allotted or not specifically within the AIDS portfolio. Funding for specific nutrition programs is broadly and acutely lacking. It remains unclear at both the international level exactly where the money should come from, and how much of a role broader development agencies can play. (Similarly, funding for food is limited for malaria and TB programs, and very much needed.)

Meetings & Declarations: But too little action

Over the past two years, experts in food security and HIV have increased their high-level discussions of what the UN has recently branded “the triple threat” of food insecurity, AIDS and deteriorating capacity of nations to cope.<sup>xxix</sup> From April 10-13<sup>th</sup>, 2005, the WHO convened a range of experts across disciplines for a consultation on nutrition and HIV and AIDS in Durban, South Africa to discuss an evidence-based framework for global action. On May 15, the WHO Secretariat issued its report, which led the WHO’s Executive Board to adopt a Resolution on Nutrition and HIV/AIDS on January 17, 2006. It calls on Member States to make nutrition an integral part of their national response to HIV and to act quickly to identify and implement nutrition interventions that can be integrated into HIV and AIDS programming. On May 27, 2006, the 59<sup>th</sup> World Health Assembly approved the Resolution. These actions by the UN body represent an important step forward, signaling a growing collective awareness by government leaders that past inaction to address food insecurity threatens to blunt the benefit of the global effort to treat, harm parallel prevention efforts and – another specter – fuel the risk of an increase of ART drug resistance across the world.

The UN Assembly vote came after a March 8 call for action by groups from across African civil society – and particularly affected communities – who met in Brazzaville, Congo. Over 250 delegates attending a meeting on scaling up universal ART in Africa by 2010 highlighted the issue of economic and food insecurity and gender inequity that underlie AIDS, demanding more action from their African leaders. They issued the “Brazzaville Declaration”, urging African governments to put aside 15% of national budgets to health services.<sup>xxx</sup> They also called on the international community and multilateral donors to support national AIDS programs, and to do more to coordinate their funding to avoid duplication, and uneven, piecemeal support for favored programs. They also urged coordination with regional development initiatives like NEPAD – the New Partnership for Africa’s Development – and pledged to “put people at the centre of the HIV and AIDS response” – particularly women, young people and the soaring number of AIDS orphans.

“We are ever mindful of the disproportionate share and severe impact of the HIV and AIDS burden in Africa,” the delegates declared. They noted that the pandemic is driven by “deep and persistent poverty, food insecurity, indebtedness . . . gender inequality and stigma and discrimination.”<sup>xxxi</sup>

Yet very little action by governments has followed so far, a fact raised by UNAIDS in its summary 2006 Report on the Global AIDS Epidemic, which states: “To date, nutrition interventions have not been widely integrated into national treatment plans.”<sup>xxxii</sup> The report cited the example of the Harriet Shezi Clinic of Chris Hani Baragwanath Hospital in South Africa, where only 6% of children on ART have access to nutritional support, including fortified maize meal and milk formula, and there is not enough staff to educate patients about nutritional issues.

Meanwhile, among the UN agencies, UNICEF, WFP, UNHCR and FAO have raised the ante in recent months. UNHCR and WFP are working actively on addressing food insecurity among refugees, and have begun field testing some 20 program strategies that integrate food and nutrition support in refugee camps in Uganda and Zambia, among others.<sup>xxxiii</sup>

The UN agencies have also been reviewing their respective roles. However, the coordination between agencies and donors, governments and NGOs is never easy and can be fraught with red tape. There remain turf wars and ego battles, and underneath all debates, hard core struggles for control of the leadership, money and the agenda. The discussion is also happening late, after the initial rollout of 3 x 5, not alongside it. Moreover, it is occurring because of extreme crisis -- a crisis of food and poverty that getting bigger as HIV spreads, and we roll out HIV programs that increase the demand for food aid.

Nationally, the same problems of coordination exist for governments, who are trying to determine their relationship to the big NGOs and the private sector and the local HIV communities. The call to quickly integrate nutrition interventions into their existing AIDS plan is not simple, particularly when no new funds have come to support that move. They are revising which ministries and portfolios will deliver the programs, and how this overlaps with food programs run by branches of government responsible for agriculture or rural development, or gender, or youth, or finance. It is a very complex challenge, given the overlapping issues and their strapped budgets.

To their credit, several governments like Botswana, South Africa and Rwanda, among others, have started to address the challenge, working with multi-sector partners, including NGO pioneers in HIV and in the area of development and agriculture. Together, they are modeling pilot public-private initiatives that offer pieces of the puzzle and hints of what may emerge as a global more holistic road map to address the food and poverty crisis that underlies HIV and AIDS. Unfortunately, here the experiences and models borrowed from wealthy, industrialized countries offer less of a useful guide for developing nations.

The fact of the matter is that the holistic national template that is needed for Bangladesh or India in Asia, where severe malnutrition is high in some regions, or in parts of Africa where the specter of future drought, failed harvests and famine is discussed, does not yet exist – it is only now being cobbled together. It will ultimately need to reflect the needs and living conditions of vulnerable groups affected by HIV in remote settings of extreme poverty that fuels chronic overlapping diseases including HIV, TB, malaria and water-borne diarrheal diseases -- and malnutrition.

#### Funding Needed for Nutrition Interventions:

The push to treat was backed by funding from the newly created Global Fund, as well as from the World Bank and myriad multi-sector agencies and donors. Today, the Global Fund is at work developing a plan to address a crisis they recognize has not been part of their portfolio, but must be. New guidelines related to nutrition for the Global Fund are expected soon.

The same is true for the World Bank, which has also convened its experts to determine how to delivery money earmarked for food and income generation within HIV programs.

The Bush administration has provided funds for global AIDS in 15 hard-hit countries via the Presidential Emergency Program for AIDS Relief (PEPFAR or “Emergency Plan”). To date, the bulk of that money has been earmarked for prevention, and specifically, for programs that support abstinence as a key prevention message. However, it has also included a strong focus on the most vulnerable groups, including pregnant women, and orphans and vulnerable children. PEPFAR money is routed through USAID and is then directed to myriad grassroots programs in different countries. On the ground, PEPFAR program managers have also felt the pressure by governments and community groups to fund nutrition as an essential health service for HIV-positive individuals suffering from malnutrition.

In May, the government released new PEPFAR guidelines that recognized the importance of integrating nutrition into the HIV care package. But is also stressed the limits of PEPFAR to respond to the enormous demand. “The Emergency Plan has a clear responsibility to prevent, treat and care for people with HIV and AIDS, but comprehensively addressing issues of food insecurity is beyond the scope of the Emergency Plan,” state the new guidelines for PEPFAR on the subject. “Yet PEPFAR recognizes that specific and targeted nutrition interventions can be integrated within HIV treatment and care programs in an effort to improve outcomes for PLWHA.”

Under the new “wraparound” policy, the Office of the Global AIDS Coordinator (OGAC) is partnering with other US government agencies, including the Department of Agriculture (USDA), Health and Human Services and the Peace Corps, as well as other relevant UN agencies and the private sector to “leverage resources to carry out supplementary feeding, micronutrient supplementation, and food security and livelihood support.” The policy also stresses that, “A key precept of the Emergency Plan is to remain focused on HIV/AIDS, provide support for food only in limited circumstances and maximize leverage with other donors who provide food resources.” They include USAID (Title II and agricultural development assistance), USDA (Food for Progress, Food for Education and market development assistance) and the World Food Program (with USF Title II and funding support). The Emergency Plan will allow limited therapeutic feeding to malnourished AIDS patients, especially during ART, in cases where there is evidence of clinical malnutrition and no other food support resources are available. It also puts a priority emphasis on meeting the nutritional needs of pregnant and nursing women, malnourished orphans and vulnerable children born to HIV-positive parents. The Emergency Plan also calls for linkages to programs focused on food security and income generation in order to provide long-term sustainable HIV and AIDS services.

The Western European government agencies that focus on national development, such as DFID in the UK, which is playing an important role in the HIV field in many countries, have also stepped in. Many channel money into capacity building, gender, and food security and income generation programs of grassroots NGOs who are working on HIV program service delivery.

New money has also come from international lending agencies like the World Bank and International Monetary Fund, who recently provided major debt relief representing millions of dollars that poor governments can use to fight AIDS and malnutrition. Whether they will use the money to pay for food for hungry, HIV-positive people is another issue. More pressure by civil society and AIDS groups is needed to push the issue forward.

The private sector is also a major player with multiple roles to play, including forming public-private partnerships with government and NGOs, including grassroots groups. Multinational companies like Coca Cola and mining companies in southern Africa have already rolled out employee-based HIV education, prevention and treatment programs. The private sector is being led by the Global Business Coalition on HIV/AIDS, which is uniting the international business community to respond. In addition to cash, companies represent a wealth of resources needed by groups in countries where they do business. Food, beverage, and other producers can make, store and help distribute food. Those working in agriculture can provide needed supplies such as low-cost equipment, seeds and fertilizer to farmers. Media and technology companies can bring in innovative technologies, from low-cost computers, to water pumps, solar-powered water treatment, and other tools that can help farmer and small projects grow food...the list is long. Companies can also offer business expertise needed by small NGOs who are launching income generation schemes for their HIV-positive clients.

There are also several private foundations, including the Bill and Melinda Gates Foundation that have heavily invested in AIDS, as well as TB and malaria. Gates Foundation money has largely focused on prevention, but has included support for the national ARV rollout in Botswana, as one example. Gates money is also backing efforts to combat other neglected diseases that affect the poor. It has also supported new innovative demonstration projects such as the Millennium Villages launched by Jeffrey Sachs, a concept that focuses on a holistic approach to “breaking the cycle” of poverty as a key element of the AIDS fight.

For its part, the William J. Clinton Foundation has also brought in more government and private industry money that is increasingly being channeled to support treatment and HIV programs that are aimed at poverty reduction. Recently, Clinton has embraced poverty-alleviation and rural development in Africa as a new priority related to his AIDS work, and is focusing on supporting innovative agricultural initiatives there. On the ground, the Clinton Foundation is working with Partners In Health, for example, helping to field-test rural HIV programs linked to poverty alleviation (see Field Perspectives section).

In Rwanda, for example, a host of newer, smaller foundations are also focusing on the treatment needs of vulnerable women and children, such as the Stephen Lewis Foundation, Keep A Child Alive, and various European groups. Other foundations like amfAR and the Elisabeth Glaser Pediatric AIDS Foundation support innovative research targeted at women and children, respectively, and some provide technical expertise. Joining them to combat AIDS are new players from the field of rural economic development like Heifer International or Send A Cow – groups who have pioneered sustainable approaches to economic and rural development, agricultural and food production, etc.



At the grassroots level, myriad agencies and smaller foundations are actively engaged in the HIV portfolio. In Rwanda, for example, USAID, DFID, and many European development agencies have channeled money into HIV projects. So has the US Centers for Disease Control. So have UN relief agencies and long-established international NGOs including CARE, Catholic Relief Services, the International Red Cross, Caritas, and Population Services International, etc. At CARE, Dr. Helene Gayle is leading the agency in a new global campaign to combat HIV and poverty in women. Then there are myriad small NGOs and faith-based organizations that offer food programs, gardening projects and a host of approaches to help feed poor people, many of whom are living with HIV. The challenge is coordination, which is often lacking. Even with all these groups involved, the need for services on the ground is huge, far outstripping the supply.

An increasing number of celebrities have become global ambassadors for AIDS treatment. For years, Elton John, Sharon Stone, Elizabeth Taylor, Richard Gere, and Magic Johnson were among the most active champions of the cause. Today, Oprah Winfrey has spotlighted the issue of HIV, and particularly its impact on children, and has raised considerable global funding for critical programs in Africa. So has Ashley Judd, an ambassador for Youth AIDS. Rocker Bono launched DATA to focus on debt relief for AIDS and is making fighting global AIDS and poverty a hot issue via the successful RED product campaign launched by the ONE Campaign. Angelina Jolie and Brad Pitt are also aligned with the new One Campaign. Other stars like Alicia Keys and Jay-Z, Iman and David Bowie, are helping KCA raise international awareness of the urgent need for new dollars to flow to African women and orphans in particular. Tom Cruise and Katie Holmes turned up at KCA's latest fundraiser— a sign of the growing engagement of Hollywood, where the new MTV buzzword linked to global AIDS is poverty — a growing public awareness among Americans, and particularly the young generation. In Europe and Africa, the celebrities tend to be soccer stars — Roberto Baggio, Raul Gonzalez -- and musicians — Gilberto Gil, Youssou N'Dour, Noa, the rock group Mana -- who have jumped on the train.

All this funding and celebrity involvement has helped raise more money, but it has not been particularly directed to date at HIV nutrition programs or interventions. There is no dedicated global funding stream to match the projected ARV scale up or any other new mechanisms for money to support nutrition programs for HIV-affected groups. Here, the global gap remains great. Without a specific funding earmark for nutrition programs within the Global Fund, or specific plans at the World Bank or IMF, and with PEPFAR taking a cautious and very limited approach to delivering funding or food, the short-term picture remains critical. Last year, 5 million more new HIV infections were reported. UNAIDS has now projected over 4 million new HIV cases next year. As the WFP recently estimated, almost 1 million of 6.4 million who will be accessing ART will need food within than two years. The demand is vastly outstripping the pace of deliberations among the big funders and agencies.

What we're left with is despair and hand wringing of doctors, government officials, humanitarian agencies, family members and most of all people with HIV who have fought to access ART, but whose survival is still threatened by hunger.

The Challenge for Food Agencies:

A different challenge faces UN humanitarian and food relief agencies that traditionally provide emergency and short-term food aid for those facing catastrophic crises. In hard-hit countries, governments and medical providers have turned to the UN humanitarian agencies such as the World Food Programme for emergency food aid and different rations for the HIV-ill or vulnerable. But, at the onset of 3 x 5, there was no plan put in place to set aside either food or a large slice of the relief money pie to support the nutritional needs of the projected 5 million who might be starting ARVs. It wasn't clear how many would need food aid, or for how long. Yet the extreme poverty of so many living in sub-Saharan Africa has put great pressure on these agencies, who have struggled to balance their existing mandate with this new request.

Until recently, the UN and other international food agencies balked at having to respond to what they viewed as a long-term crisis of food insecurity for people with HIV and AIDS versus their traditional mandate to provide short-term support for a group facing catastrophic crisis -- refugees from drought or civil war, for example. As a sector, these already-strapped relief and food agencies lack food or funds for the many groups clamoring daily for emergency food aid for HIV-positive, malnourished clients. Yet they feel a responsibility to provide help and know they are best poised to respond, given their expertise in food security or development.

A capsule of this debate is summarized here, in an excerpt from a FANTA technical workshop held in Entebbe, Uganda, in 2004, in which different World Food Programme managers discussed their interventions and how to respond to the demand for food by HIV programs:

"Differing food distribution capacity among partners is another challenge. It is not reasonable to expect that every HIV/AIDS service delivery agency will develop high quality food logistics and delivery systems, so it is critical to develop strong linkages between HIV/AIDS service delivery and food delivery systems. When designing integrated food and HIV/AIDS activities, agencies must ask whether it makes sense to distribute food through all HIV/AIDS service delivery centers or if it makes more sense to deliver food through a central location that beneficiaries can access by referral from the HIV/AIDS service provider."<sup>xxxiv</sup>

Hunger and Political Instability:

The relationship of sudden or chronic political crisis to food insecurity hunger and HIV vulnerability adds another dimension to the problem of malnutrition for those with HIV. This particularly affects individuals who become homeless or temporarily displaced or live in refugee camps where access to food is limited, and where it may be difficult to access land to farm or do any income-generation activities that could provide a measure of sustained food production or access. It is also very difficult to assess HIV rates and conduct accurate needs assessments in such settings of conflict and chaos, where there is little security for agency providers, and where constant migration is a factor hampering service or care delivery and follow up of individuals. Taking one example, Uganda, where civil war has been ongoing in the north for many

years, HIV prevalence rates are greater than elsewhere in the country. It is estimated that 10%-15% of the internally displaced persons receiving food aid in refugee camps in Northern Uganda are HIV-positive.<sup>xxxv</sup>

#### Debt Relief:

A new source of funds for governments has come from international debt relief. Here, the World Bank and International Monetary Fund recently cancelled billions in longstanding debts held by the poorest nations to these banking institutions. That has freed up millions for the poorest countries that are to be used to combat AIDS, among other national goals. Of the 42 poorest countries eligible for debt relief, 30 are seriously affected by AIDS.<sup>xxxvi</sup> These funds could be used to offer nutrition and nutrition education, income-generation and poverty mitigation to vulnerable individuals and families battling HIV and AIDS, among other goals. But will it happen? So far, there's been more talk, or planning, than action on the ground. Here, civil society and the community groups working with government need to be involved and put pressure to assure that national money freed up from debt relief is used to provide food, versus, for example, fighting wars.

### **B. Current Context: Lack of an Integrative Blueprint**

At the close of 2005, when statistics showed the WHO 3 x 5 program had made great progress, but failed to reach the 3 million target date for delivery of ARVs, world leaders began to adjust their target. '3 x 5' became '8 x10'. Now, in mid-2006, the new WHO goal is "universal access by 2010" – a hugely ambitious target. This goal is being promoted as part of regional and country development frameworks discussed above. More and more, leaders are acknowledging the dramatic impact of HIV on economic development and vice-versa, to the point where AIDS is now a key indicator used to assess national development.

Quite rightly, national government planners are focusing on how best to integrate the fight against AIDS into larger national development goals using a poverty-reduction framework. These include the 'Three Ones', the Millennium Development Goals (MDG) Plan and, for hard-hit sub-Saharan Africa, regional plans like the Southern African Development Community (SADC) framework and similar multi-sector, macroeconomic projects. Looking at the MDG, the news is very good regarding poverty, but masks too little progress on halting malnutrition. According to a 2005 World Bank review of global progress on malnutrition, less than 25% of the world's nations will achieve their MDG target for nutrition. Moreover, in hard-hit regions, like East Africa, malnutrition will go up 25% from 1990 by the MDG target timeframe of 2015.

Malnutrition and the Millennium Development Goals

- Improving nutrition is essential to reduce extreme poverty. Recognition of this requirement is evident in the definition of the first Millennium Development Goal (MDG), which aims to eradicate extreme poverty and hunger. Many countries (excluding several in Sub-Saharan Africa) will achieve the MDG income poverty target (percentage of people living on less than \$1 a day), *but less than 25 percent will achieve the non-income poverty* (nutrition) target. Even if Asia as a whole achieves that target, large countries there including Afghanistan, Bangladesh, India, and Pakistan will still have unacceptably high rates of undernutrition in 2015, widening existing inequities between the rich and the poor in these countries.
- The situation in Eastern Africa—a region blighted by HIV/AIDS, which has major interactions with malnutrition—is critical. Here underweight prevalences are forecast to be 25 percent higher in 2015 than they were in 1990.
- Deficiencies of key vitamins and minerals continue to be pervasive, and they overlap considerably with problems of general undernutrition (underweight and stunting). A recent global progress report states that 35 percent of people in the world lack adequate iodine, 40 percent of people in the developing world suffer from iron deficiency, and more than 40 percent of children are vitamin A deficient.
- A renewed focus on this nutrition (nonincome) poverty target is clearly central to any poverty reduction efforts.

Source: De Onis and others, WHO 2004.

The question remains how should this be done? And who will fund it? And the multibillion dollar question: how much will it cost? How much will it save nations in health costs to invest in a more holistic program to combat AIDS, one that aims at surviving AIDS and poverty mitigation as a national outcome? No one knows. We're just starting the work to figure it out. We have a rough idea of what the cost may be, using the new WFP estimates. We can start estimating what the potential billions in savings may be. ART offers a good example, since there is plenty of evidence that investing in HIV treatment has spelled a huge savings in hospital and care costs in many countries, including Brazil, which made the universal case for treatment as a cost-effective national step. But the math has yet to be done. Knowing how much we would save in the long run might tip the scale for donors worried about investing in food programs today.

One general truism applies here though: *the cost of inaction trumps the cost of action*. Given new evidence that malnutrition can greatly increase the risk of death in patients starting ART, there is little argument. There is no cost as great as a human life. But lifelong ARV therapy calls for lifelong food to take with medicine. That's why the most cost-effective approach is to help clients develop their own means of producing or accessing food. This is where the link of HIV programs to development activities is so critical.

It's also important for donors and governments to consider if and why they're willing to allow an absence of food to blunt the impact of ART, given how much they're investing in treatment and prevention programs. That's not a cost-effective position.

### Three myths about nutrition

Poor nutrition is implicated in more than half of all child deaths worldwide — a proportion unmatched by any infectious disease since the Black Death. It is intimately linked with poor health and environmental factors. But planners, politicians, and economists often fail to recognize these connections. Serious misapprehensions include the following myths:

#### Myth 1:

Malnutrition is primarily a matter of inadequate food intake. Not so. Food is of course important. But most serious malnutrition is caused by bad sanitation and disease, leading to diarrhea, especially among young children. Women's status and women's education play big parts in improving nutrition. Improving care of young children is vital.

#### Myth 2:

Improved nutrition is a by-product of other measures of poverty reduction and economic advance. It is not possible to jump-start the process. Again, untrue. Improving nutrition requires focused action by parents and communities, backed by local and national action in health and public services, especially water and sanitation. Thailand has shown that moderate and severe malnutrition can be reduced by 75 percent or more in a decade by such means.

#### Myth 3:

Given scarce resources, broad-based action on nutrition is hardly feasible on a mass scale, especially in poor countries. Wrong again. In spite of severe economic setbacks, many developing countries have made impressive progress. More than two-thirds of the people in developing countries now eat iodized salt, combating the iodine deficiency and anemia that affect about 3.5 billion people, especially women and children in some 100 nations. About 450 million children a year now receive vitamin A capsules, tackling the deficiency that causes blindness and increases child mortality.

New ways have been found to promote and support breastfeeding, and breastfeeding rates are being maintained in many countries and increased in some. Mass immunization and promotion of oral rehydration to reduce deaths from diarrhea have also done much to improve nutrition.

Source: "Repositioning Nutrition as Central to Development," *A Strategy for Large-Scale Action, Directions in Development*, World Bank, 2006. Extracted from Jolly (1996).

Cost: The Billion-Dollar Question

The addition of nutrition to the menu of HIV programs adds a considerable cost, according to field providers who have taken the challenge.<sup>xxxvii</sup> But how much? Globally, we have not yet done the math at a macro-level to know what the real funding challenge looks like to support true mainstreaming of nutrition interventions into the existing global HIV care plan. The WFP has made its projections of food aid for those starting ART: \$ 1.1 billion for the next two years – just 2% of the \$55 billion required by 2008. But that doesn't include programs to get food to healthier, but still hungry HIV-positive patients, a step that prevents progression of disease.

The costs will vary, depending on how many services we include on the menu of holistic care, and who delivers the services – whether, for example, we train locals in the community to do home visits of patients on managing ART, or whether we create a team with development partners. The expertise of partners and their ability to introduce innovative, cost-effective technologies and strategies – all this will also affect short and long-term costs. Helping a group build a well to have clean water or irrigate plants may represent a greater initial investment but spells savings in the long run. Unfortunately, we're really at an early stage of evaluating the long-term costs of such a global holistic model of care.

For now, though, there's no question that providing food interventions adds to the cost of HIV programs. In Rwanda, the international NGO Partners In Health, has found that providing supplemental food makes their rural HIV programs three times more expensive. The PIH model is also unique and may not necessarily reflect a micro model that compares to other projects.

We also don't know what the costs might be if strategies borrowed from the treatment battle were applied to food – if, for example, the UN agencies or the Global Fund did bulk purchases of low-cost generic foodstuffs, or seeds, and made these available to HIV grassroots groups. The Clinton Foundation has successfully negotiated for lower prices of ARVs—the same ideas are needed for food. The foundation is turning its attention to seeds and agricultural supplies needed in rural Africa by HIV-affected groups. We need bulk purchase and delivery of generic infant formula for nursing HIV-positive women living in poor settings who might consider using formula, if it was available – along with clean water. We need the big food producers brought into the global HIV tent, along with the innovative technology, water and energy providers. Scaling up, in other words, must go beyond medicine and even food, to include a range of low-cost, innovative tools and training that offer new weapons against poverty.

New Steps and Partnerships:

On a positive front, there are examples of how high-level partnerships can work, when political will is forthcoming. There are recent examples of effective partnership among interagency actors. One is the 2006 UNAIDS Best Practice paper on food and HIV and refugees, which was the fruit of a collaboration by three key UN agencies: UNHCR, WFP and UNAIDS, and other members of the UN body.<sup>xxxviii</sup> As UNAIDS noted, UNHCR and WFP focus primarily on humanitarian situations.

Meanwhile UNICEF had 155 country offices in 2003, and has longstanding roots in many countries. UNICEF often works in countries before, during and after the period of crisis that engages the other UN humanitarian aid agencies. Each has a role to play.

Such efforts showed the agencies involved the value of defining the “roles and interest of the various cosponsors regarding HIV and refugees and set a model for future collaboration. Similarly it established a model for research with a high degree of interaction with, and participation by, refugees themselves, which was an essential component of this activity.” Clearly, such interagency partnerships and multi-sector collaborative models can work to bring in a larger range of expertise and funding. In the US, the Carter Center is newly focusing on the importance and challenges of partnerships.

Another example are new public-private partnerships that bring together larger and smaller actors, such as the collaboration between the Clinton Foundation, PIH, the Rwandan government and Heifer International – a partnership highlighted in this report as one example of an innovative approach to the challenge of responding to nutrition and food production needs of HIV positive clients. There are many innovative projects across the globe. Unfortunately, we don’t know about most of them. Within countries, governments can do more to share examples that are working among HIV groups active in the field.

## V. The Way Forward: Promoting a Global Holistic Model

Today, in mid-2006, the overlapping issues of nutrition, food insecurity, gender inequity and poverty, are just starting to rise to the forefront of the attention of many in the international AIDS community. That marks an important opportunity for collective action. By integrating these issues across the board into the global AIDS menu – by mainstreaming a holistic set of services into the global AIDS plan -- we can help assure that the steps we take now will allow communities to continue benefiting from our interventions. *The outcome must be focused on sustainability of improved health and wellness in the long term, and on the related goal of adherence to ARV therapy, which will help assure long-term survival.* By keeping an eye on poverty, we will be able to see if HIV programs and the resources they introduce can serve to provide a step out of poverty at both the household and community level. Along with the survival of millions, that's the real promise – the big picture golden egg.

### The Challenges of Sustainability and Scaling Up:

Within all of this looms the question of sustainability, which is needed to secure long-term health for families coping with HIV in resource-poor settings. To date, a wide range of small-scale initiatives have been implemented, many borrowed from successful and 'best practice' initiatives of grassroots economic development, modified to fit the HIV and AIDS picture. Globally, we are gathering information on the success of these small-scale interventions, but we only have information on their short-term impact so far. We need funding for programs and models that aim at long-term sustainability and effectiveness. To this end, we need some way to measure their success, what development specialists call "a range of indicators" to help us assess what spells sustainability for a given program, target population, or family. We need to be able to measure outcomes. What are they? One is clearly the decrease of malnutrition and illness linked to HIV, and the increased ability of families to access a secure -- sustained -- source of food or income to purchase food.

The issue of sustainability is critical, and deserves serious consideration. It can also be a bit of a buzzword, a term that gets bandied about by donors or outside groups who cite the question of sustainability as the bar by which to measure whether a given group or program merits to be supported. From a donor perspective, sustainability is often defined as how well a group or program can continue operating once outside funding or support is withdrawn. Will the target beneficiary group continue to benefit from the program?

In reality, the concept of sustainability is far more complex than that. It really demands that we examine the question: How are we defining sustainability? And what relationship does the demand for sustainability have to the larger demand for rapid scale up of HIV programs to match the target number of universal access for all by 2010? How do we move from excellent grassroots programs that may be sustainable on a very small scale, or benefiting a specific group or community, to a national model that remains sustainable and equally beneficial to a larger, broader population? Is that really possible? What might it look like? Do we envision a national plan that resembles a huge quilt of myriad community-based programs,



each tailored to meet the needs of specific populations? Or do envisage some global or international template that is then adapted and integrated into an existing national framework and tries to emulate local best practices gleaned from community programs?

This issue has not been adequately discussed, some feel. Field experts argue that the key elements that often spell success in community-based programs cannot simply be multiplied to reach greater numbers of people. They argue that model grassroots programs reflect a unique combination of local and specific factors – community stakeholders, investment and involvement of local groups, local needs, cultural and social issues – that may get lost if the goal is simply to multiply the scale. Community best practice is not necessarily national best-practice, they warn. It may be more successful to support many smaller streams that, together, will reach the targeted numbers needed for a country program, rather than a more blanketed, large-scale approach to HIV service delivery.

Others may agree, but still argue that a national program must reach a large population. That's why they're eyeing the national programs of Botswana and South Africa, two examples that have caught the attention of experts.

The same lesson applies to NGOs or agencies. While their goal may be a “holistic” approach to HIV service delivery – with a menu of integrated services like food and income generation -- they may find that their organization or group lacks the expertise or capacity to provide the needed range of programs under a single roof. The goal is to provide clients with a range of services, but the means for achieving what maybe defined as a holistic model can vary. Creating partnerships between providers, whether government and private sector, or medical and food provider, can provide a good solution. But partnerships also require cooperation, rather than competition, which too often makes it very difficult for partnerships to be productive.

For both larger and smaller players, that first step – forming a partnership – requires a willingness to share not only ideas, but resources, and, the big one – ownership and control -- of the money, of the agenda. Such alliances require trust – something often in shorter supply in settings of deprivation, where there is intense need, but also intense competition for resources. The reality is that many groups have limited experience working with others, and fear losing their mission or resources or future funding if they invite another group in to provide a given service to their clients, even if they are unable to do so. Going forward, more attention and funding of partnership models is needed to support productive partnerships and cooperative working relationships between multi-sector players.

#### Widening the Discussion – and Including Affected Communities:

Although more groups at the international level are starting to examine these issues, by and large, the discussion has remained at the level of academic, technical and policy debate – a debate among WHO or other UN technical advisors, nutritional experts and field agronomists, government officials and budget analysts. It is time for this to become a broader

discussion among all players at all levels of the global AIDS response, and particularly at the community and grassroots level.

The voices, experiences and views of those who are HIV-positive and battling hunger, who also have TB and malaria, must be sought and listened to as experts who know better than most experts what they need to survive, to manage the multiple challenges of daily life, and what interventions are likely to work given their reality. We need to engage them in the process of documenting and disseminating 'best practice' models being developed at the local level. Their voices are essential to inform 'best practice' at the national and international level.

#### Broad Suggestions:

Different groups and settings require different strategies, but the key elements of the approach to integrating nutrition into HIV programs can be put in place now. Many suggestions have been made.

They include:

- Mainstreaming nutrition and nutrition counseling into a basic care package. Delivery and maintenance of a reliable, sustainable supply of this basic care package to vulnerable groups
- Developing a multi-sector approach that supports government plans and makes use of NGOs to help deliver a stream of services to HIV positive individuals needing food
- Focusing on use of nutrition to keep HIV-positive individuals from progressing to illness
- Use of micronutrients and targeted vitamin-based interventions
- Integrating education about nutrition, food preparation and food security into existing HIV education and prevention programs.
- Determining the household assets and nutrition needs of different affected groups, such as pregnant or nursing women, infants vs. children at risk of malnutrition, orphans vs. vulnerable children in HIV-affected households, or those in refugee camps vs. food insecure households in safer zones.
- Identifying and implementing nutrition interventions that are appropriate at different stages of illness and/or health for at-risk and HIV-positive individuals
- Having clarity of entry, graduation and exit strategies for food assistance programs
- Developing and implementing ongoing community-level monitoring and evaluation programs to assess the impact and benefit of nutrition interventions in HIV populations and local programs.
- Using simple technologies for safe water, reduction of diarrhea incidence, use of daily antibiotics to decrease opportunistic infections, use of insecticide-treated nets

The goal: a continuum of care.

What's needed, agree field providers and clients, is an HIV model that integrates nutrition interventions in an overall continuum of care, one in which different partners deliver essential services. This approach provides a more comprehensive, sustainable model of HIV health delivery, one that will also help clients to move away from the cycle of chronic illness linked to poverty.

What's certain to arise amid this debate is an old canard: Why should medical providers be required to create or integrate programs that address the complex socially-driven issues of nutrition, food insecurity, poverty alleviation, and economic development -- which some view as "non-medical" issues or social services. The answer is simple: because HIV programs everywhere are currently failing HIV patients who are suffering or dying of severe malnutrition and are living in acute poverty. Pills are simply not enough.

That said, medical providers are not experts on food security. Nor are the experts in refugee affairs necessarily well versed in HIV disease management. However, both have expertise to offer that is needed to create such holistic programs, in which different actors can bring in different services. With government leading, and programs supporting the national plan, partnerships can move the agenda forward. Add in the development experts, the private sector and HIV-positive groups that will keep these programs grounded in the reality of people's lives. That is the multi-sector "holistic" model favored by pioneering groups in the field who say the time has come for us to forge more active partnerships among the larger and smaller players if we really want to scale up and retain elements of best practice.

The questions remain: What defines holistic? What scope of services? How do we approach the national challenge of scaling up and sustainability, of trying to multiply the best practice approaches and models that work very well in small-scale programs run by local communities?

Needed: A Holistic Blueprint:

What are currently lacking are the detailed blueprints of different approaches to implementing more holistic multi-sector partnership programs. It's hard to compare small pilot programs in one country to another to determine which might be replicated in another setting and scaled up. But there is no shortage of interest in such innovative models, and in data that will help prove the merits and "added value" of integrating food aid and nutrition into HIV treatment programs.

Research Gaps:

There is a gap of information on many aspects of the overlapping epidemics of HIV, malnutrition, food insecurity and poverty. We lack information on the comparative short, medium and longer-term merits of different nutrition-related initiatives, and we lack monitoring and evaluation tools to measure their impact. We need to know, ultimately, how and how

well these more holistic HIV programs work, how much they may cost, how much they may save us, and the impact on prevention of malnutrition and illness. That's the start of a long list of research questions.

At the top of the list are the big billion dollar questions: How can we best integrate nutrition into the global AIDS effort? Who will lead the effort? Who will coordinate? At national country levels? Where will the funding come from? Whose role is it to provide nutrition-related HIV service delivery? Which agencies within the UN system, UNICEF and WFP, or WHO and UNAIDS? How can we get them to better coordinate their activities? Where does government come in? Where does funding for nutrition, nutrition education, food aid and palliative nutrition interventions, infant feeding, child food programs – fit into their national AIDS plan? What role are they assigning to community NGOs and grassroots actors? What kind of nutrition interventions are needed for different groups, depending on their stage of illness? What are existing local best practice models? Where are the programs for women that address gender inequity or property rights? Who needs to be brought together to the table? Who are the new potential partners?

#### Conclusion:

As we move forward, the answers to these questions will continue to generate enormous debate. But we need to move faster into action. We can do this with a collective recognition that AIDS is a global epidemic rooted in poverty and social inequity, including gender inequity, one that continues to be fought at the community level. By adopting a more holistic global framework for action, we can forge new partnerships with groups working in the arena of sustainable development and implement these holistic programs at the grassroots level. This more holistic approach to the HIV epidemic will allow us to offer a greater range of critically-needed resources and programs, including medicine and food, to millions of HIV-affected individuals, households and communities who are battling the overlapping epidemics of AIDS, hunger and poverty and gender inequity.

## VI. Eyeing the Future: New Innovations and Visions

The introduction of HIV programs offers opportunities for community development that go well beyond the sphere of health or economic development. Similarly, interventions aimed at addressing malnutrition offer significant benefits that will extend beyond affected individuals and households, to benefit communities and sectors.

Given the great potential for new partnerships among HIV groups, government, NGOs and actors in the fields of development and business, there are new opportunities now to create and test novel programs that combine the best innovations of low cost, new technologies, from use of wireless computers that can be used to network remote communities, to bicycle powered pumps to drill for water, to solar and wind-powered systems, to cell phone reporting of health data by field workers. Technology offers us tools that can be used in the field to fight poverty and HIV in ways we have barely begun to envision. And community groups across the world are hungry to access these resources.

### New visions:

Imagine a partnership between a technology provider of low cost computers run on solar or wind-power and backed up by a battery. Such equipment is being used in schools and NGOs in Africa already, to great success, linking remote communities where there are no land lines for electricity or telecommunications. Some projects use radio linked by satellite to communicate, share and educate, and allow their experiences to become known to a global public. Some projects run Internet cafes that provide a source of income for NGOs. After all, there is a huge consumer market for computers and Internet access in developing countries. Everywhere, budding entrepreneurs, many of them women, are moving to access such technology. Such computers can be loaded up with HIV materials, and training modules. They provide a critical resource for communities where so many people are gaining literacy and seek access to the global resources of the world.

Now imagine a project in which wind or solar energy that helps run the network of computers used by a group of HIV NGOs is also used to drill a well, and irrigate farmland, or deliver drinking water to the community. Imagine projects in which bulk purchases of fortified flour are made by NGOs or locally produced. The flour processing factories or dairy farms are run by groups who employ HIV-positive individuals. The flour is used by women to bake bread and run small businesses, for school feeding programs. Imagine large cooperative gardens or dairy plants created by and for HIV groups that team up with local businesses who purchase the food for their employee lunch programs, or help the project sell their food locally or export it. Or a cooperative producing Ready To Use Therapeutic Foods and selling it to the World Program for distribution to other needy food insecure groups. These are the types of visions and the scale of economic activity that is needed, and that is possible. Across the world, such projects are underway, usually on a small-scale. We need to invest in them, and test them. In the pages to come, some of these projects are showcased. They represent the tip of the iceberg.

The promise of a more holistic approach to global HIV service delivery is its potential to do much more than help people survive AIDS and manage treatment. It offers a model for empowerment and innovation and community self-sufficiency. It makes use of local resources and local talent that can serve the local community's needs for food and other essential services. It links the resources, and best ideas and innovative new products emerging from the industrialized world and puts them to the service of fighting disease and poverty in the developing world. The transfer of this knowledge will also be a significant positive step that will reap benefits far beyond the field of AIDS or even public health. Yes, this is development in its essence. It is also the dream of transforming AIDS, and the enormous hope that has been generated with the advent of HIV therapy – the hope held by millions that they will live and that a future beyond suffering and hunger and fear of death is theirs to dream.

As we look ahead at the daunting task of delivering emergency food to millions needing it today to fight the root causes of HIV – poverty and social inequity -- let us keep our eyes on the prize: the future of these individuals and their families and communities, and the huge potential they offer to contribute and produce and build their societies and economies, to transform the global fight against AIDS on the ground, in the field, and at home, to bring new leadership and innovation, and new visions that will generate a brighter future for us all.

## About the Authors:

ANNE-CHRISTINE D'ADESKY is an award-winning journalist, author, filmmaker and AIDS activist who has covered the field of HIV and AIDS since the mid 1980s. She has published articles in major publications, including the Washington Post, Los Angeles Times, Nation and Village Voice, and the medical journals JAMA and AIDS. She founded the American AIDS magazine, HIV Plus. Her 2004 non-fiction book, "Moving Mountains: The Race to Treat Global AIDS" (Verso) was recently issued in paperback (updated, 2006, [www.versobooks.com](http://www.versobooks.com)). A first novel, Under the Bone, set in post-Duvalier Haiti, was published in 1994 by Farrar, Straus and Giroux. She co-directed and co-produced the 2004 documentary film, "Pills, Profits, Protest: Chronicle of the Global AIDS Movement" (with Shanti Avirgan and Ann T. Rossetti) which was broadcast on the US Showtime network in 2005-06 and is available on DVD (with multiple language subtitles) from Outcast films ([www.outcast-films.com](http://www.outcast-films.com)). The national US magazine POZ recently named her among their "35 Ones To Watch" people making a difference in global AIDS (December 2006). She was given a local San Francisco "AIDS Hero" award in 2005, and amfAR's inaugural 'Honoring with Pride - Award of Courage' in 2000 for pioneering public information about HIV and AIDS. (email: [weactx@gmail.com](mailto:weactx@gmail.com))

In late 2003, Ms. d'Adesky co-founded the Women's Equity in Access to Care (WE-ACTx) global initiative with two physician-researchers who are pioneers in HIV women's health, Dr. Kathryn Anastos and Dr. Mardge Cohen, both affiliated with the US Women's Interagency HIV Study (WIHS). Together, the trio launched a parallel Rwanda Women's Interassociation Study and Assessment (RWISA), an ongoing study of HIV in Rwandan women, including many genocide and rape survivors. RWISA is directed by Dr. Anastos who serves as Principal Investigator, and is a collaboration with the Rwandan government, Rwandan scientific investigators, WE-ACTx's Rwandan partner NGOs and clients, and the US WIHS. RWISA is administered by WIHS staff at Montefiore Medical Center in New York. Email: [kanastos@gmail.com](mailto:kanastos@gmail.com); [mardgecohen@aol.com](mailto:mardgecohen@aol.com).

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