OVERLAPPING EPIDEMICS:
CHALLENGES AND STRATEGIES FOR INTEGRATING NUTRITION AND HIV PROGRAMS

Grassroots Perspectives on a Global Problem

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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+ Reseau 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.[i] 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 off 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 mulitisector 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 | 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

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, base on surveys completed by18 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 an 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 includes 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 HIVAIDS 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.[ii] 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.[iii] 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.[iv]

There are currently an estimated 820 million undernourished people in developing countries.[v] 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.[vi] 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.[vii]

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.[viii]. 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.[ix]

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' 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.[xi] 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.[xii] Since 1985, seven million farmers have died of AIDS.[xiii] 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.[xiv]

In 2003, Alex de Wall and Joseph Tumushabe published a sobering analysis of the increasing impact of HIV and AIDS on agriculture, going so to 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

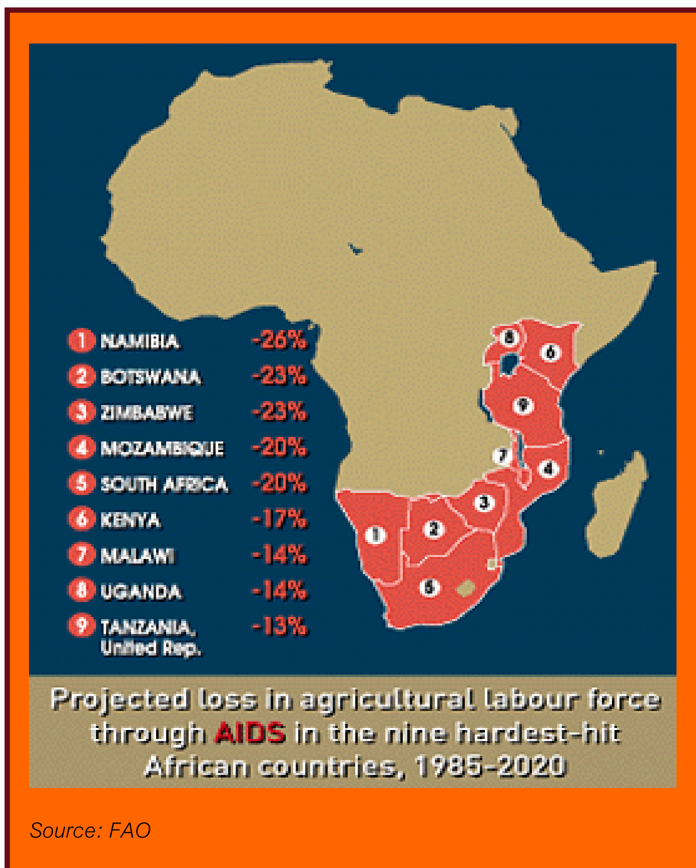
vulnerable farming systems are simply breaking down, threatening a social calamity on a scale not witnessed before in the continent."

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.*xv* 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.*xvi*



Source: FAO

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 20th 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.[xvii] 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.[xviii] 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.[xix]

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.[xx] 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.[xxi]

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.[xxii]

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.[xxiii]

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.[xxiv] 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.[xxv] 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.[1] 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 markers 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."[xxvii] 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."[xxviii]

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.*xxix* From April 10-13#,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 59th 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.*xxx* 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."*xxxi*

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."*xxxii* 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.[xxxiii]

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 is 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 musk 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 HIVAIDS service provider."[xxxiv]

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.[xxxv]

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.[xxxvi] 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 povert*y (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.[xxxvii] 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.[xxxviii] 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.

<u>The Challenges of Sustainability and Scaling Up:</u>

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 liked 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 l '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 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.

VII. HIV and Malnutrition:

Introduction:

On the ground, across Africa and in poor settings, those who are delivering HIV and health programs will be quick to agree: alongside medicine, food is the number one need cited by those living with AIDS/HIV. Nutrition and HIV are closely linked: HIV infection attacks the immune system, lowering the body's defense against infection. It can cause malnutrition, which also impairs immunity. The result is a weaker defense against HIV, which may progress more rapidly in someone who is malnourished. So the two work hand in hand, fueling a symbiotic attack on the body's health. The result is malnutrition, marked by loss of weight, muscle mass and energy and nutritional deficiencies that result in increased vulnerability to illness.

HIV infection puts a constant toll on the body and immune system, requiring expenditure of resting energy, decreased appetite and food intake, malabsorption of food, including vitamins and nutrients, and causing complex metabolic changes that result in the characteristic loss of weight, and loss of muscle, fat and tissue that have come to define AIDS Wasting Syndrome – a hallmark of AIDS. This condition is defined as a loss of 10% of one's baseline body weight or more, along with chronic diarrhea (twice-daily loose stools for over a month) or ongoing weakness and fever for a month -- in the absence of another illness or condition apart from HIV infection.[xxxix]

The critical window period for addressing malnutrition:

Birth to age 2

The window of opportunity for improving nutrition is small — from before pregnancy through the first two years of life. There is consensus that the damage to physical growth, brain development, and human capital formation that occurs during this period is extensive and largely irreversible. Therefore interventions must focus on this window of opportunity. Any investments after this critical period are much less likely to improve nutrition.*

This is a general finding related to malnutrition, which mandates that we target HIV-related nutrition interventions to pregnant and nursing women and infants under two. But there are important interventions that can improve malnutrition and health outcomes for children, adolescents, and adults with HIV and AIDS at different stages of illness and food insecurity.

Malnutrition, HIV and TB

The impact of malnutrition on TB and treatment of pediatric TB and and its close link to HIV also require urgent action by HIV, TB and global health policymakers. Here too, nutrition interventions aimed at infants under two with TB are critical.- AC

**Source: "Repositioning Nutrition as Central to Development," A Strategy for Large-Sale Action, Directions in Development, World Bank, 2006. Primary Source: Shrimpton and others (2001)*

Metabolic Problems:

The loss of lean tissue affects metabolic function, including the body's ability to process food and medication. ARV drugs are also processed by major organs such as the liver, kidneys, and pancreas. These potent drugs, used over time, may also cause metabolic problems, including drug side effects such as lipid dysfunction, and a metabolic condition called lipodystrophy, in which individuals on ARV therapy lose lean muscle and body fat on one hand, and may gain fat in other places. The long-term toll of ARV therapy on the body is not yet known, but experts worry about the health risks to major organs such as the heart, kidneys, pancreas, and liver, and to the bones.

Interactions between Medications and Food/Nutrition:

Food affects:

Medication Absorption, Metabolism, Distribution, Excretion

Medication affects:

Nutrient Absorption, Metabolism, Distribution, Excretion

Medication Side Effect affects:

Food Consumption, Nutrient Absorption

Medication + Certain Foods creates:

Unhealthy Side Effects

Source: FANTA Technical Note No. 7, August 2003

HIV and ART:

Without food, patients are often reluctant to start ARV treatment as the pills are difficult to take and often produce nausea and gastrointestinal (GI) distress. Without food, they throw up, and may not fully absorb the medicine, which in turn may not work as well. This then affects adherence, and raises concerns about the development of ARV resistance in patients who skip pills or stop taking treatment when they lose daily access to food.

The interactions of food and ARVs can affect how well the drugs benefit an individual, affecting drug efficacy, adherence to a given drug regimen, and the nutritional status of the individual on therapy. Other drugs used to treat HIV-related illnesses (opportunistic infections) can also interact with ARV drugs and with food.

Food-Herb Interactions:

There are also limitations posed by medication that has to be taken according to a certain schedule. There are also possible interactions of some HIV drugs with other drugs, with food, and with complimentary or traditional therapies, such as roots and herbs.

Managing malnutrition linked to HIV

According to WHO, national health authorities should prepare for ART services by providing training to relevant personnel on assessment, counseling, and management of short- and long-term nutritional aspects of ART. Dietary and nutritional assessment is essential to clinical management of HIV/AIDS both before and during ART.

The sophistication of assessment depends on the realities of the clinical care setting, but should include, at a minimum:

- Basic anthropometry (e.g. height, weight, MUAC, skin-fold measurements);
- Dietary assessment (e.g. food frequency to assess normal dietary patterns and periods of food shortage);
- Use of dietary supplements, including use of herbal and botanical therapies. Food and/or micronutrient supplementation programs (specific nutrients of concern include, but are not limited to, vitamins A, B6, B12, and D; folate; selenium; and zinc)*14*;
- And Hemoglobin levels.

Ideally, other aspects to include in client assessment are:

- Psychosocial and environmental variables; Food preparation limitations; Ethnic and cultural food preferences and practices; and Physical activity.

Although ART reduces many of the contributing factors that cause HIV-related weight loss, wasting continues to be a factor in determining the success of ART. Currently, body mass index (BMI) may be the “best predictor” of mortality in PLWHA.15 Thus, BMI and nutritional issues also need to be monitored once a patient is on treatment.

Source: Tang et al., 2005, JAIDS 40: 70-76.

A. Malnutrition and TB: A Warning for HIV?

Tuberculosis is the leading killer of people with HIV, and also a leading killer of those without HIV. Globally, TB is regarded as a possible indicator of HIV infection, given how closely the two go hand in hand.

Like HIV infection, TB infection has a profound impact on health and the immune system, and leads to loss of weight and energy, and then to malnutrition. As with HIV, there is a negative synergy between TB illness and malnutrition. In 2002, a Médecins Sans Frontières team working in Thyolo, Malawi reported that 57% of patients entering their TB department were deemed malnourished upon admission.[xl] They reported that food aid dramatically decreased the rate of death in beneficiaries in the first four months of TB treatment, compared to cases where no food aid was available.[xli] In Zambia,

researchers at the Chikankata Hospital report that malnutrition upon admission significantly increases the length of stay for TB patients.

The affect of providing food aid to TB patients is proving significant. In Malawi, food aid is a major priority in the treatment of TB and effort to decrease mortality rates. As with ART, having food supported better adherence to TB treatment, which is typically 8-9 months in duration, and reduced the rate of TB treatment failure (default rate). Such results have spurred WFP in Zimbabwe to examine the impact of food aid on TB adherence. (They also suggest that food aid may affect ART adherence in similar fashion).

As seen with HIV, providing food aid to TB patients led to reduced symptoms, increased weight gain and a greater productive capacity. Without food aid, TB patients often remain so weak and malnourished at the completion of their treatment regimen that they still cannot work or actively resume daily activities.

Another observation with TB bears and requires our close attention, particularly given the recent news related to the increase of super resistant TB (called “XDRTB” – a strain of TB resistant to existing TB drugs). New cases of super-resistant TB have caused several deaths recently in Africa that have sent TB experts scrambling to sound the alarm regarding the need to increase screening and monitor treatment of TB patients. Add malnutrition to the mix and the picture becomes more worrisome.

It is well known that malnutrition in general appears to have a profound impact upon cellular immunity, impairing both effector and regulatory T cell functions[xlii] . Resistance to TB is known to be dependent upon the normal activity of precisely those same kinds of immune cells (lymphocytes).[xliii] For this reason, TB experts posit that malnutrition “may trigger endogenous reactivation of TB in latently infected individuals” or render previously infected individuals more susceptible to reinfection.[xliv]

In lay language, that means being malnourished increases the risk of dormant TB flaring up in individuals who were previously exposed. Now, with super resistant TB turning up, that becomes a more serious risk, at least theoretically. Another observation, this one made in studies of mice and guinea pigs, found that protein deficiencies caused more severe TB illness in the animals after infection.[xlv]

What does all this mean for HIV? It means malnutrition could cause a breakout of TB illness in individuals who carry dormant TB, and that can in turn affect the progression of HIV disease. The two diseases are highly synergistic. Providing food aid, and nutrition interventions, may in turn provide a synergistic benefit in co-infected individuals, reducing symptoms of both HIV-related TB illness and other HIV-related illnesses that characterize AIDS.

The parallels with malaria.

The impact of malnutrition on treatment of TB is also relevant to malaria. Past reports have found that malaria can cause a six to eight week spike in the level of HIV in the blood, leading experts to warn that HIV-positive individuals with active malaria may be more contagious. The impact of HIV on the immune system also renders individuals with HIV more susceptible to malaria. Again, the impact of nutrition is significant, as those fighting malaria illness need greater energy. As with TB, malnutrition may impact on the course of treatment of malaria in co-infected individuals with HIV.

Given the overlap and synergy of these diseases, and the impact malnutrition has on all of them, it's clear that nutrition interventions are critical as a part of management of all of these diseases, and is very important part of HIV disease management.

Nutrition Requirements:

- All individuals require good nutrition, characterized by well-balanced daily diet of foods from the three major categories:
- Body-building foods (proteins, minerals) that help build bones and cells. These are found in legumes, milk products, animal foods, whole grains and cereals,
- Energy-building foods (Carbohydrates, fats) that provide the body with energy. They are found in starchy staple foods such as maize, sorghum, rice, millet, green banana, roots and tubers (cassava, taro, potato, sweet potato).
- Protective Foods (vitamins, minerals) rich in micronutrients (vitamins A, B, C, D, E) that help with digestion and absorption. These are found in green, leafy vegetables.

B. WHO Dietary Recommendations:

The WHO states that nutritional support is a key part of the comprehensive response to HIV and AIDS, helping to maintain immune strength needed to ward off illness, and to keep the body strong and able to engage in daily physical activity.[xlvi] Experts in nutrition recommend that individuals with HIV, regardless of HIV status, eat a balanced, healthy daily diet of food from the three major categories (listed above in box). They also recommend eating locally available foods and fortified food and/or micronutrient supplements when appropriate to achieve adequate nutrition. Since meat may be too expensive for a daily source of protein, or individuals may be vegetarians, a cheaper, nutritious alternative is to combine a cereal with a vegetable protein (legume such as soy). Example of suggested recipes used in Rwanda are listed in the Appendix section of this report. They rely on locally grown indigenous foods.

A good diet includes the right diversity and proportions of *macro*nutrients (proteins, carbohydrates and fats) and *micro*nutrients (vitamins, minerals).*xlvii* This is particularly true for people with HIV or AIDS, who are combating an active, daily infection – HIV --that uses up stored resting energy found in the muscles. Good nutrition is achieved by eating a diverse daily diet of foods that build body muscle (proteins, minerals), give you energy (carbohydrates) and provided needed vitamins and minerals necessary to body and immune function. That includes foods that are rich in micronutrients, including vitamins A, B6, B12, selenium, iron and zinc. Deficiencies in these vitamins and minerals have been reported in many studies involving HIV-positive individuals.*xlviii*

Overcoming Illness:

The challenge in overcoming illness is both to eat the right diversity of foods, and enough food every day. This is difficult when illness intervenes to reduce appetite, cause nausea, vomiting, or diarrhea, or when individuals develop infections like oral thrush (candidiasis) that make eating and swallowing difficult. HIV drugs may also need to be taken with or without food. The drugs may be noxious, causing gastrointestinal (GI) problems, making it more difficult for people to eat enough food to maintain their weight and energy. For this reason, people with HIV are urged to eat several small meals, and to take other steps to try to maintain adequate daily nutrition.

Calories Count:

There is also a recommendation to eat enough food a day – enough calories -- to generate additional needed energy. According to WHO HIV nutrition guidelines, someone with HIV who is healthy, without AIDS symptoms (stage 1) should try to increase their daily energy intake by 10% over what is recommended for individuals without HIV. Those with Stage 2 HIV diseases (symptomatic) should increase it by 20%-30%.

Eating Local Foods:

On the ground, in the poorest settings, where food is scarce, vitamins can be an expensive luxury. Instead, experts recommend individuals with HIV make meals from locally produced foods, when possible, that can provide sufficient calories and contain needed vitamins and minerals that are naturally found in many fruits and vegetables. A minimum of one daily source of protein – soybeans, chicken – is also recommended, if possible, to assure protein needs.

Nutrition Interventions:

Given the central role of nutrition in the health to PWLHAs, there is a role for nutritional therapy. Specific interventions can help restore lost nutrients and vitamins, and reverse nutritional deficiencies. Different interventions can benefit individuals at different stages of illness, including those requiring palliative care, pregnant and nursing women, infants moving from breast milk or formula onto solid foods. Nutrition interventions include education and counseling, as well as providing food supplements, and linking clients to food-based interventions and income-generation programs.*xlix*

Three different types of food supplements are generally offered to HIV-positive individuals: 1) food rations to address hunger, to manage mild weight loss, and nutrition-related ART drug side effects; 2) micronutrient supplements targeted specific HIV-positive populations; 3) and therapeutic foods for rehabilitation of moderate and severe malnutrition in HIV-positive adults and children.

Since vitamins and minerals boost immune function to help fight infection, experts recommend a daily multivitamin for people with HIV – something also recommended for healthy people without HIV. The WHO does *not* recommend taking extra vitamins or minerals for someone with HIV beyond what is recommended for healthy adults without HIV (of the same, age, sex and physical activity level). But if specific deficiencies are present in someone with HIV, there are nutritional therapeutic interventions and approved protocols that can help restore these lost micronutrients. These protocols and guidelines can be found on the WHO's website at www.who.int./

Other conditions such as pregnancy or lactation may require supplemental micronutrient supplementation for pregnant or nursing women. Children may also need supplemental infant feeding that provides additional micronutrients. For examples of suggested recipes and interventions, see the Appendix section this report.

A number of practical tips and suggestions culled from various sources that are related to hygiene, food, clean water safety and basic health maintenance as well as tips for food preparation and recipes are found in the Appendix section of this report.

VIII. Country Profile - Rwanda

A. Rwanda in Brief

Introduction:

The Republic of Rwanda is situated in East Africa, and has been independent since 1962, when it won independence from Belgium. The president of Rwanda is Paul Kagame, a dynamic leader who was elected to office in 2003 after winning a large majority of the votes cast, having served in that office since 2000, based on his appointment by members of Parliament. In 2003, Rwanda adopted a new Constitution and its post-genocide leaders have actively focused on rebuilding the country, population and economy. Rwanda has held successful local, legislative and regional elections. Rwanda's next legislative elections are scheduled for 2008.

Location: Rwanda is a small, landlocked country bordered by Uganda, Burundi, Tanzania and the Democratic Republic of Congo (DRC). It is called the Land of A Thousand Hills.

Population:

Rwanda has a population of over 9 million people, and new census results suggests the population is growing at a rate of 2.9% per year. It has an overwhelmingly young population, with 60% under age 20. (This figure reflects the death of nearly 1 million adult Rwandans during the 1994 genocide). Post-genocide, many Rwandan refugees and internally displaced persons have returned from neighboring Burundi, DRC, Tanzania and Uganda, where they sought exile starting in the 1960s. The ongoing civil conflicts in these neighboring countries have in turn led Congolese and northern Ugandan refugees., among others, to seek exile inside Rwanda.

Thousands of Rwandan refugees also continue to live inside the DRC border. They include elements of the militia and armed groups who perpetrated the genocide and fled to exile in the aftermath. These armed groups have tried to form an insurgency to overthrow the present Rwandan government.*li*

Recent History:

In 1994, Rwanda was the site of a historic genocide that followed years of conflict and civil war between two ethnic groups, Hutus and Tutsis, a conflict that has its roots in the earlier colonialist occupation of Rwanda by the Germans and the Belgians. During the 100-day Rwandan genocide of 1994, an estimated 800,000 people were murdered by their countrymen, acting on orders of the armed extremist militia, Hutu Power. Many others were wounded and displaced in this attempt to wipe out the Tutsi population.

The majority of survivors were women, while many men and boys were killed. They include an estimated 250,000 women, many of whom were mass raped in a deliberate attempt to seed genocide – and HIV and AIDS - to the future generation.

Today, an estimated 60%-70% of the genocide rape survivors are HIV-positive, and after more than 10 years, an unknown number have died, while others have AIDS. An unknown number of children born of these rapes are also HIV-positive. How many have died is unknown, but HIV rates are high among this population. Rwanda has a large number of orphans of the genocide.

A Decade of Progress:

Rwanda has shown remarkable ability and resilience in rebuilding its population and country post-genocide. Although much of the population was uprooted in 1994, efforts to resettle them have been ongoing. A national program of reconciliation and justice has been implemented, engaging the entire population in this effort. The government, assisted by foreign aid and local interventions, has also worked to help survivors groups and other Rwandans to rebuild their lives, but the money needed to do this, and the challenges, based on scale of need, pose a huge challenge.

Economy:

Rwanda has a primarily agricultural economy. Over 90% of the population lives in rural areas, and 80% engage in agriculture. Nearly every inch of the country is being cultivated, leading to soil exhaustion. Rwanda has few natural resources and little industry, though this is changing with greater foreign investment in recent years. Rwanda's economy, along with its institutions, were destroyed in the 1994 genocide, causing widespread poverty, unemployment, homelessness, loss of land and property, and dislocation. About 66% of Rwandans live below the poverty level, and struggle to generate enough to eat from subsistence agriculture. There are an estimated 1,300,000 orphans and vulnerable children (OVC), many having lost one or both parents in the genocide or to diseases like AIDS, as well as tuberculosis and malaria. A majority of the population lives in great poverty, and food shortages are recurrent in certain areas. Other seasonal and natural factors such as drought contribute to conditions of loss of harvests and severe malnutrition for rural residents in afflicted zones. Finally, the ongoing conflict in neighboring DRC, and the continuing return of repatriated refugees from DRC, Tanzania, Burundi and Uganda are examples of additional factors that add to the already great challenges facing the government to help settle individuals often suffering from post-traumatic effects of war who have lost homes or land, and lack access to income-generation activities.

Rwanda is experiencing an influx of foreign investment in recent years, as the country continues to stabilize. GNP was fixed at $1.8 billion, or $220 per capita in 2005, and inflation was brought under control.[lii] Rwanda has received a lot of foreign aid since 1994 (estimated to be about $40 a person in 2005) and many international governments, agencies and NGOs are working in the country. Rwanda recently had its outstanding foreign debt to the World Bank and International Monetary Fund lifted as part of a global debt relief initiative taken by world leaders to assist the world's poorest countries. The Kagame government recently embarked on an ambitious poverty reduction plan for itself called Vision 2020 with a

goal of becoming a mid-level income country by 2020 – a demonstration of its national commitment to lift Rwanda from its current socioeconomic status.

Vulnerability of Survivors:

Survivors of the genocide have faced huge challenges in rebuilding their lives and families, particularly as they cope with trauma associated with the genocide. In the wake of the genocide, many self-help survivors networks sprung up that have become nascent institutions, including national and local non-governmental organizations (NGOs) that provide an array of services to genocide survivors. Similarly, HIV-positive groups have been organized and are mobilizing to provide services to affected and at-risk families and communities, with the support of the government.

Women and Children:

Women head of households and their children, particularly genocide widows and orphans of the genocide, have faced additional challenges in rebuilding their lives. Post-genocide, some have lost their homes and land due to property and inheritance laws that are patrilineal (these laws have recently been changed).[liii] Many genocide widows who belong to the NGOs working with WE-ACTx in Rwanda, for example, are destitute, and cope with unemployment and malnutrition[liv]. Hunger is a constant threat. For those living with HIV, hunger and malnutrition are additional challenges of daily survival. They struggle to care for their surviving children and orphans in their care. The Kagame government, NGOs, and many faith-based groups are actively working to assist these women survivors and vulnerable families and the picture is steadily improving.

B. The HIV Picture

The AIDS epidemic in Rwanda has existed since the mid 1980s, and has had a huge impact on the country's development. The economic fragility of the country, and widespread poverty, coupled by the impact of the 1994 genocide and the destruction of the country's economy and institutions, have fueled the increase of the epidemic there.

The National Picture:

Since 1986 Rwanda has conducted sentinel seroprevalence surveys, largely among pregnant women, that have helped capture the changing picture of the AIDS epidemic. But the information provided via sentinel studies is viewed as limited because pregnant women are not considered as representative enough of the general population of sexually active adults in Rwanda.[lv] For example, HIV is disproportionately high among genocide survivors who suffered mass rape, and have borne children in the ensuing years. HIV also affects transient populations including refugees, transport and migrant workers, soldiers and sex workers, including women living close to military encampments. The incidence of HIV in Rwanda's prisons is also being assessed. The country's prisons are very overcrowded due to the number of people who participated in the genocide. The government is extending HIV services to prisoners. But there is limited information

available to date to assess the possible impact of periodic mass releases of prisoners who may be HIV-positive back into the general population)as part of the justice plan).

A 2005 national demographic health survey (DHS) of a representative sample of over 11,000 citizens found a 3% national seroprevalence rate, with a gender breakdown of 3.6% for women versus 2.3% for men. Nationally, an average 1.6% ratio of infection existed between women and men, with 100 men exposed to HIV per 160 women. As elsewhere in sub-Saharan Africa, statistics show that Rwandan women contract HIV at a younger age than young men and thus show signs of the disease at an earlier age.[lvi]

It is not clear how many Rwandans have died of AIDS, given the lack of data available until recently, and the stigma associated with the disease. In recent years, public HIV awareness has greatly increased, due to government efforts to spread the word using multimedia campaigns, including billboard messaging. The 2005 DHS study found that 90% of women and 99% of men surveyed were aware of the disease and had knowledge of at least one method of protection.[lvii]

Urban-Rural Divide:

Yet there is a sharp difference in HIV awareness and service delivery in the cities versus rural areas. The vast majority of Rwandans who live in impoverished rural areas may have heard of HIV and AIDS, but many lack education about aspects of the disease, including antiretroviral therapy, according to leading HIV NGOs working in the field.[lviii] Meanwhile, stigma and discrimination, coupled with ignorance of the disease, have made HIV and AIDS a difficult subject for open public discussion in Rwanda, particularly at the grassroots community and village level. This is starting to change, thanks to the government's efforts and the activities of a plethora of groups, including the growing visibility and activities of RRP+, the Rwandan national network of people living with HIV/AIDS.

Stigma and Fear of HIV: Although national attitudes are changing as HIV services penetrate rural areas, fear and ignorance continue to make it challenging for individuals with HIV and their families to cope with an HIV diagnosis in their communities. Many hide it, and confront their situation at a late stage, when they have fallen ill. The government's push to encourage HIV testing has been helped in recent years by the arrival of HIV therapy. Before that, local doctors report, many people were unwilling to seek HIV testing[lix]. The hope offered by universal ART access via the government's plan has greatly changed the equation. The arrival of new NGOs and funding from international sources has also increased delivery of health services to rural groups. Many local communities are now engaged in HIV education, prevention and care delivery, often in partnership with the government and outside and local NGOs.

Within community-based NGOs, leaders say there remains a broad need to educate HIV-positive individuals about their rights. Rwandan law is particularly strong with regard to providing protections for its citizens, and the Constitution offers solid protections. But many people are unaware of their rights, say legal advocates who are stepping in to respond. Here

again, the government has taken an active role, particularly the agency CNLS, which is responsible for overseeing the development of educational programs and curriculum tools for HIV-positive and vulnerable groups.[lx]

Prevention Approach:

Rwanda has taken an aggressive approach to education and prevention of HIV and AIDS, with large, public billboard campaigns promoting a range of messages. Rwanda's National Prevention plan for HIV and AIDS has adopted a national prevention message based on the EABC's (Education, Abstinence outside of marriage, Be Faithful, Condoms).[lxi] The government also worked with the Global Fund, World Bank and international NGOs who together provide more comprehensive prevention messages, some targeted to different groups considered at high-risk for HIV, including sex workers, soldiers, street youth, refugees and Internally Displaced Persons, prisoners, etc. The 2005 DHS shows that condom use remains extremely low in Rwanda, being estimated at only 3% among women and 5% among men, barely a change from 2000 statistics showing that 1% of women and 6% of men declared their usage of condoms.[lxii] Religion has also had an impact, since many Rwandans are practicing Catholics or Protestants. Conservative church leaders have largely promoted the "A" of ABCs -- abstinence --although some progressive church leaders support a more comprehensive approach to HIV prevention and education.

At the same time, the media has helped to create more national dialogue about HIV and AIDS. The government has used radio to promote education around HIV and AIDS, while private and NGO-based radio programs have included talk shows where HIV is discussed.

Rwanda's National AIDS Care and Treatment Plan:

The HIV picture in Rwanda is quickly changing, due largely to the arrival of more affordable HIV treatment, which was introduced after 2003 by the Kagame administration. The Rwandan National Multisectoral Strategic Plan provides a comprehensive approach to tackling the epidemic. The Clinton Foundation also helped government leaders draft a comprehensive, decentralized plan to provide universal access to ART to all Rwandans needing treatment. Its treatment protocols build upon guidelines set by the World Health Organization guidelines for management of HIV in resource-poor settings. Since 2005, the government has moved faster to decentralize delivery of ARVs, in partnership with multi-sector actors, including international and national and local NGOs.

The national AIDS plan is being implemented by the Ministry of Health, working closely with the Ministries of Finance and Economic Planning, Gender and Family, Youth, Agriculture and Education; and key government AIDS agencies: TRAC (Treatment and Research for AIDS Center; CNLS (Commission Nationale de Lutte contre le SIDA / National AIDS Control Commission); the National Reference Laboratory; and the National Institute of Statistics. The First Lady of Rwanda, Jeanette Kagame, like the President, has taken a very strong and active leadership role to fight HIV and AIDS, and herproject, PACFA, actively promotes services for women, youth, and vulnerable families. Rwanda's government has

worked quickly to try to implement HIV treatment to meet the overwhelming demand. Across the country, hospital beds are full of AIDS patients who are also suffering from TB, a leading killer of HIV-positive individuals. Like HIV, TB is a disease fueled by poverty.

Funding:

Funding for the national AIDS plan has come from international lending bodies, including the World Bank and targeted funding mechanisms like the Global Fund for AIDS, Malaria and TB, and PEPFAR, administered by USAID. Other development agencies include the British agency DFID, and Luxembourg's Lux-Development, UNDP and BAD.

HIV and ART Scale Up:

The national AIDS plan initially focused on quickly upgrading the public hospital and laboratories in Kigali, and then other larger cities and putting in place voluntary counseling and testing (VCT) sites, as well as programs to deliver HIV Pediatric Mother to Child Transmission (PMTCT) programs linked to maternal health programs for pregnant women, and HIV treatment programs to deliver antiretroviral drugs (ARVs). It calls for HIV training of health professionals, and technicians, and improving the overall infrastructure of health delivery systems. Global Fund monies have helped the government implement the upgrade of public sites to deliver VCT and care. International NGOs have stepped in to help deliver prophylactic HIV medicine for Opportunistic Infections. Médecins Sans Frontières was an early provider of OI prophylaxis and training. So was Project Esther – affiliated with Lux-Development – that works with TRAC. International agencies like CARE, Catholic Relief Services, DFID, and other groups like Columbia University, Project San Francisco and the CDC's MAP began supporting treatment scale up. Provider medical groups began arriving to help deliver ARVs in 2004, including WE-ACTx, and in 2005, Partners In Health.

The Bush administration has also provided funds from PEPFAR - the Presidents Emergency Plan for AIDS Relief (PEPFAR) which are administered by USAID and CDC and channeled to international NGOs and some local NGOs. PEPFAR funds in to date have largely been channeled to prevention-based activities, with a major emphasis on promote the ABCs – abstinence, betrothal (faithfulness), and condoms as a last resort, or for groups deemed at high risk for HIV, such as soldiers.

HIV-positive Leadership: Nationally, very few individuals choose to be publicly or openly identified as HIV-positive, due to the enduring stigma and discrimination they may face. But that is changing, due to national education and awareness campaigns, including Billboards across the country. The government has directly supported the establishment of a National Network of People Living with HIV/AIDS (Le Reseau des PPV, or RRP+). RRP+ formed an umbrella for 800 HIV-positive organizations (NGOs) and self-help groups in 2006. The rapid increase of HIV-positive groups was so great in 2005-06 that RRP+ is now asking new groups to join existing groups, having reached a maximum number of organizations that are manageable under this umbrella. The network's goals are to organize and support HIV-positive individuals and to

help mobilize community education, awareness, and advocacy, using a regional decentralization of satellite bureaus and outreach workers across the country.

New Women's Network:

In 2006, a nascent HIV-positive women's national network was launched as an offshoot of RRP+ by several openly HIV-positive women called FRLS+ (Femmes Rwandaises dans la Lutte contre le SIDA or Rwandan Women Fighting AIDS).[lxiii] FRLS+ is just getting organized to help build a movement of HIV-positive women, one that hopes to foster the grassroots leadership of HIV-positive women. FRLS+ will push for greater provision of health, education, and economic services for the great majority of Rwandan HIV-positive women who live in rural areas and are living in conditions of poverty in the countryside. Many are mothers raising children who are also HIV-positive, or raising orphans.

The Challenge of Scaling Up: Moving from Village to Nation

In the following pages, we present conversations held with a range of individuals representing agencies working at the international, regional, national and local level who are focusing on the challenge of providing food and nutrition-related services to HIV-affected and at-risk groups. We asked them discuss the challenges faced by their institutions and to reflect upon the role their group played within a multi-sector effort to deliver HIV services in a country. Their views reflect their personal opinions, and do not necessarily reflect the views or policies of their respective institutions.

IX. Field Perspectives

A. UN Agencies: United Nations Children's Fund (UNICEF)

UNICEF is the leading UN agency defending the rights and needs of orphans and vulnerable children (OVC). In recent years, UNICEF has stepped up its advocacy in the arena of global AIDS, and has pushed for access to HIV services for them. UNICEF has long been a provider of nutrition interventions for children within broader health programs. WE-ACTx interviewed Jane Muita, who heads the HIV/AIDS, Prevention and Child Participation unit for UNICEF- Rwanda. The conversation focused on the agency's mission related to HIV and AIDS and the intersection of nutrition and food security, particularly as related to children and families.

UNICEF has long been active in Rwanda and has been actively engaged in helping the government and civil society focus on the health needs of children and OVC in the wake of the 1994 genocide. In the 1990s through 2000, Muita said, UNICEF was primarily focused on primary health care and promoting nutrition programs and strategies such as developing kitchen gardens to help mothers grow food to feed their children. Today, the agency in Rwanda has shifted its focus more on child survival. This is where HIV and AIDS emerges as a major problem. "Malnutrition happens to be one of the challenges that children in Rwanda are facing," she said. "Malnutrition persists in the majority of children who are living without sufficient food. So any time there is a little stress, they will develop malnutrition. Adding HIV into the picture means

they are even more vulnerable and have increased food needs. UNICEF does not talk about feeding these children because they are HIV (-positive) but because they also have increased food needs.

"UNICEF does not separate the children who are HIV infected in our nutrition programming," she added. "We make sure that vulnerable children are included in services. And we ensure that in all areas of UNICEF, HIV and the specific vulnerabilities it creates are included and thought about in every programming area."

As an agency, UNICEF strongly focuses on nutrition, particularly for children and for mothers, rather than food security, for example. The agency's primary program focus is on policy, advocacy and research. "We participate in the policy development and advocacy so that we can say to governments, 'Look here at the policy you developed, the promises you made," explained Muita, "because sometimes even if we have policy, the policies are not being implemented. We also do research sometimes to figure out why certain things aren't working by looking at culture, looking at practices, looking at all those things. This is how we tackle the issues around nutrition."

Her group focuses on four primary areas: "Primary prevention and PMTCT (Prevention of Mother to Child Transmission); Pediatric treatment and care; Protection, Care and Support of OVC; and Nutrition." Primary prevention, she explains, "is preventing HIV among children." Here, nutrition interventions may play a role as "a prevention method, because malnourishment makes the immune system weaker. We talk about nutrition in terms of saying how it prevents disease. If you start with a low immune status, with a child that is already malnourished, then you have HIV -- it is likely to get worse." Much of the focus of nutrition implementation at the agency has been in the area of PMTCT, targeting what Muita called "socioeconomic cases" – children who were malnourished due to poverty. Another focus is support for nursing mothers to do exclusive breastfeeding. "This is a big challenge and that is one of the areas we really need to develop -- how to support mothers struggling with this issue," said Muita.

In the pediatric treatment area, UNICEF is focusing on the area of policy and holistic care. A recent example involved supporting the government's work in developing a standard package of care for all OVC that included a nutrition component. As she explained, different interventions related to HIV or nutrition may be handled by different program areas within the agency. "We have divided the tasks in terms of what areas they fall into. When I receive a proposal for an HIV program and there is a nutrition component then I give this part to my colleague in nutrition and they see if there are any programs in that area that could cover them and if not we negotiate to see what we can do."

One of the big challenges of [HIV] pediatric treatment, she said, is how to identify the children needing it. UNICEF does this via PMTCT sites, and when children come to health centers for immunizations, when they come to therapeutic feeding centers for nutrition support, and when they come into clinics for TB treatment. Supporting OVC, "is a very challenging area." Muita cited statistics suggesting that 30% of Rwandan children under 18 are orphans, though, she cautioned, not necessarily HIV orphans. "It is hard to know because there is little data that sorts them out," she admitted. "However,

sooner or later the proportion of HIV OVC will increase as time goes on because the farther we get from genocide, the more the children grow up, and then it will be clearer how many HIV orphans there are."

UNICEF does not directly provide HIV treatment and care, but works with partners who are already offering these services, and who provide holistic programs, including nutrition, psychosocial and follow-up care. "Now that we give the child the chance to be healthy and live [via HIV treatment]," explained Muita, "We need to follow them as they grow and ensure they can go to school. So we support model programs to see if they work and then can be scaled-up. If we have the proof, then we can go and fundraise for the scale-up."

UNICEF analyzes the potential impact of a given intervention to decrease malnutrition and affect the underlying root cause, which is often acute poverty. "When we look at trying to change this into a positive, then we have to look at all this, [and ask]: 'What is contributing to this? And then look at what are the solutions? For example, if I had one thousand dollars, where would I put it in terms of Rwanda? To be most effective at decreasing malnutrition?" The answer, she suggested, depends on the lens being used to measure impact.

"If you calculate using a rights-based framework, we would say 'Okay, we have high levels of chronic malnutrition here… where can we put our funds to make the biggest impact?' If you have someone who is very good at programming they can look at the data and say, 'Alright, if we put our money here will we see this percentage decrease in malnourished children.' If you take a dietary approach, then you're looking at food security. If you think about maternal care, [then] maternal nutrition or child nutrition, but also continuity of care, because if you end up with a child whose mother is already iron deficient she will not be able to care for baby as well as she should."

Another important focus, she added, is examining how to improve the public health system to keep children from getting sicker, or she clarified -- "how our health systems are managing even small illnesses… because if they do not manage even small illnesses, then the child itself will be terminally deficient or even severely malnourished. But if, for example, the health systems are improved then we would be able to get rid of this percentage of children who are malnourished." Similarly, if the focus in on funding diseases, she said, "we may find that we can manage the diarrheal diseases better." Part of UNICEF's job, she said, is to determine which interventions are likely to have the biggest impact and be most successful in a given target population.

Unlike its sister agency, the WFP, UNICEF is not mandated to provide food and relies on the WFP as the expert agency for this activity. UNICEF does do nutrition and therapeutic feeding. "If a child is under treatment for acute malnutrition we can provide therapeutic feeding, but after that it is WFP that provides any supplemental feeding," clarified Muita. UNICEF does focus on providing supplementation of Vitamin A and iron, and is starting to look at zinc and selenium as well.

In Rwanda, UNICEF has supported HIV nutrition-related initiatives by a number of NGO partners, such as Lux [the Luxembourg Agency for Development Cooperation], that works closely with the Rwandan government AIDS branch,

TRAC, to help implement HIV programs. UNICEF has provided funds to help train mothers in cooking and food preparation, and is currently working on a report about mothers who are coming in for treatment. The agency is also supporting the Luxembourg group to work with TRAC to train healthcare workers in nutrition, and hopes to fund a program to provide education for 190 children [with HIV]. The agency recently provided support for a pediatric treatment program run by Partners in Health in a rural district, a project being done with the Rwandan government. "We have worked with them to develop an integrated proposal that looks at the whole picture, not just the HIV --" said Muita. "-- health, water sanitation, education, child protection, hygiene. It's not health facility-based but community-based."

Looking outside Rwanda, Muita cited Botswana and South Africa as two countries she felt had offered model national programs that successfully address the issue of HIV and food security. Both offer comprehensive packages for HIV-positive children that include food supplements and nutrition, she said. "For Botswana they are not only providing infant formula, but food for follow-up feeding. And South Africa welfare support includes nutrition." At the same time, she is not sure Rwanda can follow their model because, she admitted, "They are all the countries with money. It is clear who is able to do these programs because they are expensive." She acknowledged, "Every time you mention food people groan because it's expensive. That's why we want to find the best practices -- to prove a model works so you can get support for it. We also try to demonstrate results and try to get other people to accept these results. Our biggest work is in policy development and advocacy."

Looking ahead, Muita feels there is still a lot of work that needs to be done in area of pediatric treatment in Rwanda. And there is a resource gap within government: nutritionists. "Last year when I came, 10,000 adults were on ARVs and 300 children, and there was no nutritionist in the Ministry of Health," she said. "The ARV situation is getting better and the policy and guidelines are being developed, but despite this there is still no nutrition department at the Ministry of Health. The scale-up of pediatric treatment is happening -- all the elements are in place. The environment is ripe for this to happen. But not in nutrition -- nutrition resources are not there." She was hoping that would change soon, and hoped there would be push by world leaders and donors on urgently needed resources related to nutrition.

With regard to the overall model that should be promoted, Muita favored a holistic model, but felt that it was important to carefully evaluate community programs in the field. She cautioned, "I think on paper it looks good, but in reality I've seen many projects that began and worked for a short time, but then something happened and they stopped working and fell apart. There were many projects here in Rwanda that were done, not with PLWHAs [people living with HIV and AIDS] but just women and they did well, but eventually didn't succeed. I think we should look at those to learn from them." She also agreed with those who say it is important to start holistic programs earlier than later for HIV-positive clients, especially those starting antiretrovirals, before people are too sick, "because if they start later it could take a long time for patient to recover."

One approach to combating malnutrition and poverty among HIV groups that interests her is to focus income-generation training activities within PLWHA networks. “Rwanda is very interesting. It has 800 associations of PLWHAs,” she said. “If one were to implement income generation activities in an organized manner across all of them, we [could] create labor and they become producers.” She cited a successful project ongoing in Rwanda in which women’s NGOs are making traditional baskets for Macy’s. “That worked very well and we can learn from that,” she said. “We need something where, if a member of the group gets sick and they can’t produce, then everything doesn’t fall apart. So you need associations that aren’t only sick PLWHAs, but healthy people too who can support the others when they are down.” Similarly, she saw potential in cooperative agricultural projects. “All these little individual agricultural interventions don’t help because they depend on the sick person and their family, and when they become ill their food source isn’t sustainable.” A better approach, she felt, was to organize the individuals into cooperatives– “where members of the group share the product, so if someone falls they are supported by the others.”

Looking to other challenges, Muita felt there was a priority need for monitoring and evaluation tools for community-based programs that integrate HIV with food security and nutrition. She cited Malawi as a country with a strong health surveillance system and coordinators that monitor activities at the community level. While many countries have such mechanisms in place, she said, “You need a very strong communications structure, which does exist here in Rwanda so it might be possible.” Among NGOs working in Rwanda, she cited the Partners in Health ‘accompagnateurs’ (‘one who accompanies’) model that relies of paid community outreach workers who have daily contact with patients on HIV treatment as a possible system worth looking into for conducting such monitoring at the community level.

Which brought Muita to the subject of research. “We need more studies on community care,” she said. “We don’t really know what is happening at the community level, what kinds of care is given, why mothers don’t use health centers, what they are doing themselves. We need more research on the question of breastfeeding or not with HIV-positive mothers.” – End

B. UNAIDS - Rwanda

The United Nations AIDS program (UNAIDS) is one of the UN’s two main agencies (with World Health Organization) focusing on coordinating the international response of the different UN agencies and governments to the HIV and AIDS epidemic. UNAIDS focuses on many aspects of HIV and AIDS policy and programs, including monitoring of the epidemic and dissemination of information about the epidemic globally and in different regions and countries. This interview was conducted with Kate Spring, Monitoring and Evaluation (M&E) Advisor, who joined UNAIDS in 2004 and provides technical support to the Rwandan National AIDS Control Commission (CNLS).

Monitoring and evaluation is regarded as a critical element of HIV program implementation, particularly since all actors – from patients, to providers, to policy makers, to donors – need to know how effective a given intervention is likely to be,

how much it may cost, the time it may take to see results, and whether a successful intervention can be replicated elsewhere. The issue of 'scaling up' grassroots community projects is a critical challenge in the AIDS epidemic, one that calls for innovative ways to monitor and evaluate particularly promising local programs or 'best practice' strategies to see if they can serve as national models. UNAIDS is playing a coordinator's role in Rwanda, helping the Rwandan government, sister UN agencies and other multi-sector actors to tackle myriad issues related to the challenge of responding to the intersecting issues of nutrition, food security and HIV, and evaluating what works and what doesn't in the field. The agency has been part of a recent multi-sector effort led by the Rwandan government to address the nutrition needs of OVC, for example. Doing this means getting better information about who and where orphans with HIV may be found, and how best to provide them with a range of health-related services including nutrition interventions and HIV care.

According to Spring, the government of Rwanda had identified problems in HIV service delivery linked to institutional red tape – too many intermediate layers of bureaucracy were hampering their effort to quickly deliver care and other services. Last year they began instituting radical changes to reduce bureaucracy that have improved the picture. "I think the government has done a lot of work to reduce levels of bureaucracy," said Spring, who explained that institutional restructuring required a strong emphasis on monitoring and evaluation of newly streamlined programs. Her job is to help put in place such M & E mechanisms, and to help the government institute surveys to determine the need for HIV services in target populations.

"What I have worked on more [lately], is looking at measurement of the welfare of orphans," she explained. She noted that in Rwanda, two groups were involved in offering programs to orphans and vulnerable children (OVC): the national network of people living with HIV/AIDS (Reseau des PPVs, or RRP+) and teams [NGOs] supporting orphans. "I'm not sure which one will develop a system first, but both are moving progressively to measure what is happening at the community level," she said. She hopes to bring some harmonization to the effort, to help groups avoid duplication, and help unify the information so that a fuller picture can be provided to assist the government in its policy and programmatic work. "The Network of People Living with AIDS (RRP+) has its own monitoring and evaluation unit now. Last year they made a plan, and this year they are putting the pieces of the plan together to operationalize it," explained Spring. "'How do we then monitor? How do we then measure our progress?' They have moved two steps down that road to monitor their plan and are setting up the monitoring systems." Within the government, there are units focused on M&E of HIV and AIDS too. "The National AIDS Control Commission, through the national multi-sector strategic framework, is looking at prevention and care, and treatment, and economic support -- those three areas are big for them."

One focus area for her M&E activity is "how to monitor what the community itself is contributing" – in other words, what is the community doing, versus NGOs working with affected communities. As she explained, not all NGOs can afford or have the human capacity or resources to conduct regular surveys or evaluations of the impact of their programs. Outside NGOs who come in periodically may help to fill in the picture, but what's really needed are ongoing ways to gather

information about the related issues of HIV and nutrition that are in many ways a moving target – constantly changing as interventions are introduced into communities.

Spring said a key challenge was how to develop and put in place systems for doing M&E activities at the community level that provided data about programs more frequently than t the extensive, highly detailed population-wide surveys periodically carried out by the government. "For example, you have the DHS [Demographic and Health Survey]," she noted. "That doesn't happen for five years and in between, what have you got? – nothing. So there's a need to balance that kind of quality information gathering with an improved gathering of the program type of information that will inform progress and management. I think that is where we are looking -- to see how the program data help. Because in between we don't monitor what is going on and we are assuming something, and then five years later we can find that, 'Oh, this is a shock.' We have to be more proactive in between to know what's going on."

UNAIDS is currently cooperating with UNICEF, the Ministry of Gender and Family, as well as CARE, and groups like Save the Children, and the lead government agency, CNLS, to focus on monitoring service delivery for orphans affected by HIV. "The general approach by government in Rwanda is not to separate out who are AIDS orphans from the rest of orphans. People monitoring HIV/AIDS want to know, 'What is the progression with orphanhood because of the illness?' Again it's a question of care and support. This year they'd like to have an updated baseline [data set] on where those children are and who they are."

One issue that concerns Spring is the frequent reliance of many NGOs on outside technical expert consultants to monitor and evaluate local projects. She's not convinced that's best, since locals are the real experts about community projects and outside consultants aren't involved in the projects themselves. "To me there's an issue of sustainability, of getting this information. You get in now once, but what's to say that we can follow-up what's happening at the low [local] level next year to know what has been done? Because the people that we need to survey or that we want information from are often low-skilled people, providing services. We need to help at the lower [community] level to be able to monitor what's going on."

At the same time, she warned against overcomplicating M&E program surveys or including so many indicators to measure 'outcomes' – the favored word of program managers. A few basic criteria would do the trick, she felt – clinical indicators such as weight gain, body mass index (BMI), or socioeconomic ones such as household assets -- the daily or weekly or monthly percentage a family spent on food, etc. "If we neglect to be simple we are putting ourselves in a trap again," she said. "Five years from now we will need to do this again and we will not have shifted from that final technical monitoring instrument to something very simple and manageable, that informs what we are doing. We have a lot of [outcome/progress] indicators that we have defined. Last year we looked at the national plan for OVC and I think that it has seven strategic axes. So we said. "Ok, what do you need in order to monitor and check that you are making progress?" I think we narrowed it down to 61 indicators. Then there was a re-working within the year to look at these indicators again.

Instead of reducing the number of indicators, we had a 150-something -- something ridiculous. PEPFAR told us, 'No, we are only looking at four indicators.' I'm saying to the team 'You have 150… Can't we just pick something from here and just monitor that and see what we can do? Do we need to re-invent this wheel?' It seems to me that it's been reworking it each time…. It's like we are afraid to get on with it. Maybe people are so worried that it has to be so perfect. I'm like, 'Can we just check five things [indicators] or three things and how are we doing this?' It's as if there's not a collective energy to focus and prioritize with so many things happening. I think that has something to do with it. We are not focusing."

One suggestion Spring had for monitoring nutrition in HIV-positive children is to take advantage of a tool commonly used in public health centers. "In many countries they have a child health card that would capture some aspect of nutrition, basically looking at the weights and heights depending on the age. That forms a record at the community level which can be monitored. If you have community kind of surveys you just use the card for the nutrition performance. So maybe a [confidential] code sentence [could be added to the health card] to indicate they are [HIV-] positive without saying it," she suggested. Rather than create new systems, why not modify simple ones now used?

In Rwanda, Spring has her eye on the new Millennium Development Village project championed by Dr. Jeffrey Sachs, author of The End of Poverty. The project has a site in Rwanda [see section, Best Practices and Model Approaches]. It takes a holistic approach to improving the community health and economic development of members of a group or village, focusing on innovative partnerships between different providers and introducing linked sustainable strategies for food and agricultural production, access to water and alternative energy, and technology. She's also interested in evaluating possible longer-term strategies for poverty alleviation, and the shorter-term pilot Food for Work programs that are being supported by agencies like the WFP. "They [government of Rwanda] don't want charity; they are trying to avoid charity. It's to link your work with food and if you get food it's because you have worked."

Spring is also personally interested in a program she was involved with in Sudan called Operation Lifeline Sudan (OLS) and the monitoring tool used by WFP called FEWS. The latter divided South Sudan into food zones and monitored the quality of the soil and food production. Spring, with OLS, assessed the annual non-food needs and WFP assessed food needs. She suggested one might use this model and look at food production this year in Rwanda to see how it impacts health. – End.

C. United Nations World Food Programme (WFP)

The UN's World Food Programme is a humanitarian and development agency that serves as the food aid arm of the UN system. In the global public's eye, WFP is the agency others turn to for emergency food aid for vulnerable populations – food for those facing natural or humanitarian catastrophes, food for asylum seekers and displaced groups, food for those suffering malnutrition, etc. WFP's mission is not limited to emergencies; it uses food aid to support economic and social

development. Its global objective is to promote world food security in accordance with the recommendations of the UN and its sister agency, FAO.[lxiv]

It's also becoming an agency more and more involved in fighting global AIDS, due to the natural link of malnutrition poverty and its sister diseases, TB and malaria.

Not surprisingly, then, WFP finds itself in the global spotlight today to respond to this growing problem. On the ground, WFP programs have been facing intense pressure in recent years to provide food aid to those living with HIV or AIDS who are also dying of starvation of suffering from chronic malnutrition. That pressure has increased with the advent of ART programs. Across the world, local communities implore WFP bureaus to help severely malnourished HIV patients starting on HIV therapy.

WFP provides food assistance in 21 of the 25 nations with the highest HIV prevalence rates and has active HIV interventions in 43 countries worldwide. In 2005, WFP provided food and nutrition through a variety of programs for nine million HIV-positive individuals and others affected by HIV in Africa, Asia and Latin America.[lxv] WFP currently provides food support alongside ARVs in 17 African countries, and is actively evaluating the merits of different programs. The agency estimates 3.8 million with HIV need food now. In 2008, 0.9 million of the 6.4 million people who are scheduled to be enrolled in ART programs will need some kind of nutritional support[lxvi]. Of course this number could be greater if the scale up of ART increases dramatically -- as many hope it will, to meet the urgent demand for universal ARV access.

According to WFP' 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 and ethical hand wringing that is felt by community groups and field providers who are forced to decide who of the few suffering from severe hunger– and HIV -- will benefit from food aid. "There's just an overwhelming need out there." admitted Laura Quay, who recently joined the WFP office in Rwanda as HIV Program Officer. "It becomes very difficult to know how to respond and to figure out how to have an impact with the limited food we have. We have to deal with food insecurity for the whole population – HIV [-positive] are not the only group. But HIV adds a huge problem in a country like Rwanda."

The hard reality is that the WFP, like many UN agencies, has always operated with far too little cash in its coffers to meet global emergencies, and, as Quay noted, the agency was already overwhelmed with the global demand for food quite apart from AIDS. It hasn't had a new large source of funding to address nutrition demands related to HIV and AIDS, and has had to rob Peter to pay Paul to give out food aid to HIV groups – reshuffling food delivery from one extremely needy group to another. That's caused tensions within the agency, within the UN body, within countries, and certainly within affected communities where food is the priority demand, along with ARVs. There are voices that will ask, 'Why should the

needs of those with AIDS be deemed more urgent than another person facing death by starvation?' And others that will reply, 'Because among those who are malnourished, HIV acts as a catalyst to speed up the course of illness, suffering and death. Without food, those accessing treatment can't survive AIDS." They argue that it is in our global economic best interest to provide food to such patients, to assure they benefit from huge collective effort we are making to deliver ARVs and HIV programs.

The question remains: How? With short-term food aid or funding for other types of interventions? And what is WFP's role in relation to a given national AIDS plan? Where, as Quay and others put it, does WFP start and where does it end? And – the global burning question – what donors will step up to fund these programs?

Mandate: Emergency Relief

As a humanitarian agency, WFP's mandate is to combat food insecurity and address the food needs of refugees and others who require emergency food. Food aid has traditionally been viewed as a short-term, emergency measure, and is provided to vulnerable groups using criteria that have been established to determine food insecurity. The WFP was not really set up to provide long-term food aid. Nor is long-term aid viewed as something desirable by different parties – governments, donors, recipient populations, even WFP. Almost everyone who spends two minutes in the field of development will agrees that food aid is an important short-term step, but it can lead to dependency and is not sustainable in itself.

For those with advanced HIV who need food, however, emergency food aid and supplemental nutrition represents a critical step—a lifesaving one -- including for people on ARVs who otherwise may not survive, even if they have the medicine but are lacking food. Yet WFP's mandate does not let it distinguish between needs of HIV-affected vs. other malnourished or food insecure groups. It does have a clear mandate to deal with refugees and "other emergency food needs," but HIV by itself does not spell the Other in this case. Instead, HIV competes with war, flooding, drought and any number of man-made and natural disasters that produce food insecurity and an emergency demand for food aid. In the eastern part of the Democratic Republic of Congo across from Rwanda, for example, volcanic eruptions are a feature of life. The civil war in the DRC has seen scores of asylum seekers seeking refuge in neighboring countries. Some of those refugees also have HIV. Rwanda now hosts 43,000 refugees, according to WFP. The agency has provided food for 38,000 of them, and is planning to reduce beneficiaries to 35,000. The total number of refugees with HIV receiving ART in Rwanda via WFP in the camps recently only numbered 100 people.

In this Faustian atmosphere, the WFP, like other agencies and governments, has tried to steer a rather rocky course. Along the way, it continues to been criticized by parties on different sides. There are those outside the field of HIV and AIDS who feel the agency should let its sister UN agencies like USAID and WHO address the food needs of HIV-affected and vulnerable groups, and stick to its refugee and emergency food aid mandate. But on the ground, program managers like

Quay face the anger and desperate pleas of patients who are severely malnourished and battling AIDS. Without food, they can't manage ART. Their survival *is* at stake, and the risk of death from AIDS increases with hunger. On the ground, local NGOs and HIV-positive groups criticize the WFP for failing to help save lives by providing food aid to more malnourished ART and HIV-positive patients. "There's no winning," Quay sighed an interview in Kigali on the challenges she and colleagues faced. "We keep taking steps. But AIDS… malnutrition… genocide... it's all pretty big."

The Basic Basket:

Food basket rations vary in different programs but generally include basics like rice, beans, fortified cereals, and iodized salt as well as oil and a cereal mix, ensuring essential nutrition to people living with HIV and AIDS. In Rwanda, as elsewhere, WFP has engaged in active discussions with the Rwandan government and multi-sector partners to try to determine the components of what is called the 'basic minimal package.' In 2005, WFP's most minimal package consisted of a corn-soya blend (CSB) porridge offered to some NGOs serving malnourished HIV clients. That was acknowledged as an insufficient daily ration for individuals since many relied on the ration as their only meal of the day. The minimum package now includes maize meal, beans, oil and CSB, sometimes supplemented with locally grown foods.

One innovative approach that WFP has highlighted involves its partnership in Malawi with Action Against Hunger. The two agencies provide a "ready to use" food (RTUF) peanut paste which provides a high-energy, high-protein source for severely malnourished patients. The RTUF paste is already known to be very effective for rehabilitation of severely malnourished children. For other patients, individual food baskets are offered, and generally include a corn-soya blend (porridge) and vegetable oil. (For more on RTUF, see Appendix C of this report).

As a UN agency, WFP also works to support national plans set by the host government in a given country where is operates. For most countries, that mandate is still being developed with regard to nutrition and HIV. Up to now, WFP continues to use its limited food aid stocks judiciously, targeting its efforts to help small numbers of HIV-positive individuals in every country while field testing and evaluating different nutrition interventions for individuals at different stages of hunger, HIV-disease and recovery.

WFP in Rwanda

Compared to other countries, WFP's scope of activity in Rwanda is far smaller than in, say South Africa, where there are large teams. Quay works with a nutritionist, with logistics staff who help delivery WFP food aid to programs in the country, and with the WFP field team in neighboring Kampala, Uganda.   "If you talk to my colleagues in Southern Africa, where the pandemic is much more severe, we're talking about five or six people at least working on HIV. But, in Rwanda, given the situation that funding is being cut over time, we just don't have a lot of staff for this issue," she explained. The agency's budget is small, and it has a very limited amount of food to give away or put aside for HIV-affected communities. Its

mandate continues to be focused on food security and supporting refugees, but HIV is recognized as an important, growing piece of the portfolio.

WFP has a long history of activity in Rwanda, particularly as an agency responding to emergencies that include the genocide and post-genocide challenges of reconstruction. The agency ran larger projects than it does now. “We moved from an emergency to a program stage in the late ‘90s and we’re now moving away from even the bridging period towards more development programs,” Quay explained, adding, “Even there, development programs for WFP are relatively unusual. We do have them; they are part of our standard actions. But what is considered our great strength is emergency work.” Although the demand for WFP’s food programs remains very high, the agency has started decreasing certain activities.

Quay joined WFP in Rwanda with instructions to help consolidate the agency’s various HIV portfolios under the direction of a single program officer. Her career background includes work in politics and research into social economic policy. She’s also worked on the issue of rape, and brings an analysis of gender to her work on the intersecting issues of HIV, poverty and malnutrition. The WFP HIV program started in 2002, and the first concrete interventions were launched starting in 2003. There are three components to the HIV program. The first is a bridging program (PPRO) -- “shifting from a response to emergency to development,” she explained. Within that, WFP has funded pilot programs linked to ART. (In 2005, for example, WFP supported a one year pilot food program by WE-ACTx that assessed the benefits of providing short-term supplemental aid (porridge) to malnourished patients starting ART. See Best Practices and Model Strategies section of this report). The last area is Prevention of Mother to Child Transmission (PMTCT).

The agency’s broader Country Program (CP) which is now wrapping up, supports a range of mainly income generating activities including training to do different IG activities, and support for microcredit to support the projects. On a policy level, the agency developed a White Paper in 2003 to help guide its country activities, but Quay acknowledged that the area of policy related to HIV and AIDS remains a shifting terrain.

The Rwandan government is developing a national policy and a specific protocol related to food security, nutrition, and HIV and AIDS, and has taken various several steps to move this agenda forward. WFP works closely with TRAC and CNLS, and the different ministries, including Health, Agriculture and Gender and Family, to assure its own nutrition activities are integrated in the government’s plans. A government-led technical working group recently developed new national guidelines for people living with AIDS – something Quay deemed “a very important first step.” The government now plans to train community health workers to teach others about the new national guidelines.

Another partner is the Le Reseau des PPV+, or RRP+ -- the National Network of People Living with AIDS. Their network comprises 800 groups in the country, mostly small associations led by and serving HIV-positive individuals. They will also help train and teach their members about the importance of nutrition –a message they will take into communities.

“Education is key,” stated Quay. “I think the guidelines will be the basis for the education.” WFP and UNICEF are also considering producing a nutrition radio program. “We think it is a great way to reach a lot of people,” said Quay. “We think it can have other very positive results, because malnutrition is so high in Rwanda.”

In a parallel action, the UN agencies in Rwanda are engaged in a broader UN reform to see how the different agencies – UNAIDS, UNICEF, WHO, UNHCR, etcetera – can work better together, and who will do what. WFP has been assigned to work on mainly on nutrition and take the lead on emergency relief to refugees with UNHCR. On the HIV and nutrition front, the UN agencies are developing a joint research ‘wish list’ that all parties feel is needed to know which action is likely to have the greatest impact. “We’ve been saying among ourselves, ‘We need research. We need to do a baseline study. We need to have some information so we can justify what kind of actions we really need to do,” stated Quay.

At the African regional level, WFP is working with FANTA on a forthcoming handbook to offer practical guidelines for programmers in the field related to HIV, nutrition and food security. “We have some policies, but we have a lack of clear information, of clear guidelines, [about] what sort of interventions work, what should be the criteria, why, what works where, what works best.” The forthcoming handbook guidelines will not offer “blanket solutions,” she cautioned, but some general guidance that can be adapted at the country level.

Rwanda has a government agency, the Rwandan National Institute of Statistics (NIS) that regularly conducts population-level national surveys that track many indicators, including the level of poverty and malnutrition in the country. In 2000, it released a preliminary analysis of a countrywide survey called the DHIS Survey of 2000 that provided very detailed and comprehensive information touching upon many aspects of life for Rwandan households, including food insecurity. But at that time, the government had yet to roll out services in many of the HIV Voluntary Counseling and Testing (VCT), PMTCT and ART sites where people are today accessing HIV services. The national roll out of ART really took off in Rwanda starting in mid-2004, and involves a decentralization of HIV services across many districts. Today, there are still many children, including orphans, for example, who have not been tested for HIV. Other factors such as the repatriation of new refugees from Burundi or DRC contribute to a changing a picture that makes it challenging to target nutrition-related interventions to HIV-affected and at-risk groups.

The NIS has since beefed up its staff to address the challenge of tracking HIV and the intersection of malnutrition, poverty, and other factors affecting the population. It has just launched the DHIS Survey 2005, that is a follow up of the 2000 survey. It includes national data on HIV and AIDS prevalence (3% in adult population of 15-49 years), nutrition, family planning, reproductive health, domestic violence and other topics. In mid-December, the agency is scheduled to launch another report, the Comprehensive Food Security and Vulnerability Assessment (CFSVA), which was done together with WFP.

These studies have confirmed "that there's huge levels of malnutrition in Rwanda," said Quay. "We know that 3% of the people are HIV-positive. We know that it's 7% in urban areas and 2.3% in rural areas." But she added, "It's difficult to have a very close, very low line breakdown about where those people are, [and] what the different rates are in different sectors, which would be very helpful. We need to know more about the socioeconomic background of people living with AIDS so we can know what kind of activities are going to be most appropriate and suitable for them. We tend to be just going on, [saying] 'there's a lot of need, we need to do something' without knowing who are these people, what are their needs and how can we best address them." More is known about the rates of malnutrition in the country. Today, 45% of orphans are estimated to be malnourished in Rwanda.

One group clearly in urgent need of food is a large percentage of very poor people starting antiretroviral therapy. Quay estimated that 22,000 Rwandans would be on ART by the end of 2006. But that figure did not take into account the expansion of NGO programs by field providers like PIH and WE-ACTx who are working in partnership with the government to scale up delivery of ART. The number could be higher. As Quay explained, that demand was not adequately considered back in 2002 or 2003. "We had no food set aside for those [ARV] initiatives," she stated. "It was very much an add-on activity when we saw there was a need to intervene. That is why it has been very much of an ad-hoc program...some food here...some food there...a bit scattered. We don't have a clear objective. We don't have a clear amount of beneficiaries we can help. The criterion is maybe not as clear as it should be."

As she explained, the 2000 DHIS study "was very important for defining what we were going to do in 2002 and 2006. It gave us an idea of some of the nutrition issues." Although it didn't provide HIV rates, WFP combined what was known about HIV prevalence with information gleaned from the DHIS to help guide its programs. Still, she said, the picture is far from complete, and the agency is still struggling to know how best to target its interventions. "It's hasn't been clearly documented enough to know, 'Okay, this is the situation, these are the sources.' The analysis part of why we are doing these interventions wasn't there and wasn't clear enough," she stated. "For myself, walking into this program five months ago, that was the areas I couldn't get a grasp on. Nobody could tell me why we were doing what we were doing -- why we targeted these particular types of interventions." Instead, she felt, the WFP program was following what she deemed "non-official standards." "Most WFPS in different countries are working on PMTCT," she said, citing an example. So that's one of the areas where the agency in Rwanda has focused its HIV-related interventions.

In order to get a better idea of both the shifting demand, and how to tailor its response, the agency conducted a Common Food Security Fundability Assessment – a CFSFA in the parlance of WFP. It's essentially a detailed needs assessment that will provide countrywide baseline data on food security at the household level to guide WFP's program in 2007. It is not specific to HIV, but covers questions relevant to HIV-affected households. "In the sense that it is integrated, there are certain questions that it will try to address -- to bring out whether the person might have someone who's HIV [-affected]

within their family," Quay explained. "It's the big gap -- we don't know enough about the people." The information WFP has gathered will be included within the forthcoming CFSVA document produced with the Rwandan NIS agency.

What should the criteria be for choosing who qualified for food assistance? Here, Quay has a clear opinion. She feels both health indicators – clinical markers of malnutrition – as well as socioeconomic ones are needed. Health providers should evaluate not only the individual's health, but consider the food conditions of other family members, especially when the HV-affected person is the main breadwinner and may have dependent children. The CFSFA's focus on household assets and family vulnerability will be useful in that regard.

In country, Quay works closely with TRAC's nutrition department, headed by Josephine Kayumba, a nutritionist. "We have been working with her on the modalities of implementing food aid to people on ART," explained Quay. "National policy, as you know, states very clearly that nutrition should be a key element towards care and treatment for people living with AIDS and those on ART in particular. But, there are no guidelines about how we should go about this, with the exception of the guidelines for the people living with AIDS that have just come out. But again, no modalities of how we are going to implement it. 'Who's going to [do it]? Who are we going to go through? Where are the partners? Who are the funding sources?' We're trying to get critical support to get those questions discussed."

The debate is not limited to Rwanda. On a global level, experts are debating who will ultimately provide the more holistic services needed. What is the role of government vs. NGOs? Should food assistance be given out along with medicine at a public health site? Or should medical providers refer patients to community-based associations and NGOs that have services like income-generation programs and also offer support groups and other social support? "We're still discussing with the government about how they would even want to move forward with this," said Quay of the situation in Rwanda. "We don't know what they want to do. When we do, then we can start surveying people and find out what they need." Compared to other countries, Rwanda is ahead of some in that the issue is a high priority for the government, and its AIDS leaders are working fast to develop a national policy to address the demand.

The Ethical Challenge: Who Will Benefit?

"What I keep hearing every time I go into the field is that 'We need food, we need food, we need food,'" stated Quay. "Now that, in itself is a huge challenge for me at WFP, because it's, 'Okay, how do we decide who gets food? What is going to be the criteria?' And that's something we need to be very clear about," stated Quay. The issue is being actively debated among the many players, as they struggle to determine both ethical and evidence-based criteria to use as guidelines for entry into (and exit out of) food aid programs linked to HIV programs.

A key group WFP is mandated to help refugees. WRP-Rwanda is currently helping to support repatriation of about 10,000 of an estimated 19,000 asylum seekers from Burundi, as are other NGOs on this issue, including the Carter Center, CARE, Concern and the International Red Cross. WFP hopes to support provision of supplementary and therapeutic feeding for

the refugees at WFP nutrition centers, while strengthening the linkage between other international NGOs and local Rwandan associations. There are an estimated 43,000 refugees in Rwanda now. No one knows exactly how many are HIV-positive, though HIV services have been expanding at refugee sites. About 100 people were accessing ART this summer, according to Quay. “We are providing food to 38,000 refugees here in Rwanda at the moment. The number is set to go down to about 35,000, but of course that all depends what goes on in Congo [DRC] because a majority come from Congo, “ she said. “A very small fraction -- about 1000--come from Burundi.”

The chance is high that a percentage of Congolese asylum seekers, particularly women and children, may be HIV-positive, based on recent statistics coming from emergency medical providers in eastern DRC, for example. An estimated 30 percent of the women raped in the years of fighting in the Congo are infected with HIV, while as many as 60 percent of the combatants are believed to have the virus, according to human rights groups, including Human Rights Watch and Amnesty International. In October 2006, WE-ACTx staff visited the DOCS Heal fistula clinic in Goma, which has been receiving a steady number of woman survivors of brutal and often-repeated rapes since the start of the war that trickle require fistula surgery. This has hardly changed during the eight years of the war. In interviews, Congolese women survivors and staff at the DOCS clinic confirmed that many of the rape survivors have tested HIV-positive, including young girls. Other groups like MSF who are active in Bukavu have reported similar findings.

Equally serious is the lingering physical trauma of the rapes. Many women at the DOCS clinic require repeated surgeries and some cannot heal. They further suffer when they are rejected by spouses and families due to being raped, and are forced to leave their homes and communities, losing access to homes and sources of livelihood. The reintegration of these women into their communities is a major challenge. Some cannot return, fearing further violence. The impact of sexual violence has created an ensuring cycle of crisis for these survivors marked by increased poverty and homelessness. With broken bodies, some cannot take up physical activities including work as before. They also suffer from extreme trauma, which affects their ability to resume normal life. All of this is linked to greater poverty, and in turn, food insecurity.

Human rights groups have also documented rapes occurring in refugee camps. Some rapes are directly linked to hunger and food insecurity, since they occur when women and children are forced to go outside of the camps to gather firewood for cooking fires. (This is where delivery of low-cost fuel-efficient stoves get added to the menu of resources linked to HIV service delivery for women refugees, too)

In northern Uganda, the Lord’s Resistance Army continues to wage war, rape, violence and kidnapping of children who are inducted into the LRA’s army. Today, NGOs who work to help reintegrate former child soldiers into their communities say it is challenge. Here too, one finds HIV among girls who were raped or kidnapped and kept as “wives” by LRA combatants. Here again, there is a direct link to poverty, hunger and homelessness among these youth, and a high degree of impact on girls and younger women.

WFP is working with UNHCR to determine which nutrition interventions can best serve HIV-affected and at-risk refugees. The questions Quay ticked off were, "Can we introduce HIV prevention at food distribution time? Since food distribution time is so chaotic would it be best to have [nutrition information] posters?" She added, "There are definitely people waiting outside [nutrition centers] to carry the food home, so one of the things we talked about what having community outreach workers ("animateurs") outside trying to look at some food and nutrition activities out there." Another goal: "Making sure that HIV prevention and discussion about HIV is part of our nutrition intervention so that when people come for therapeutic feeding or with the children, the nurse or the health care worker, mentions and talks about HIV and uses that as an opportunity to talk about HIV." And finally, she added, "Making sure that there is food for ART and people in refugee camps are completely reliant on the rations they get. We do not have a lot of incoming generating or self-sustainable activities in the refugee camps in Rwanda. The space that we have is so tight."

Quay said WFP's intervention may be for short-term emergencies, but they must address longer-term needs of refugees, including resettlement. "To avoid readmission, to avoid people just coming out of the program and being back a month later, we need to have a more sustainable, durable focus," she stressed. That where the linkage to local associations and other NGOs can offer that offer refugees a range of activities including income generation that will help them become self-reliant as they begin to rebuild their lives.

On the ground, WFP in Rwanda is also supporting a range of activities including food for work, which are generally agricultural projects. Not all projects will be ideal for HIV-positive people who may be ill and recovering from AIDS, she noted. "For example, we are talking about doing tree planting, anti-erosion, and road building, which may be suitable to some people," she said, but when it comes to HIV-positive individuals or those too weak to do manually labor, "How do we make sure that their needs are being taken care of in those kinds of community projects, which are part of our bread and butter about how we address food security in a more immediate and long-term way." The answer is not yet clear, and will only come from some evaluation of how such programs are serving clients with HIV. Who will do such surveys is also an open question.

Quay cited a "checklist" tool that WFP and other food agencies are piloting in the field to help programmers and community groups who serve HIV-affected populations think through the issues related to nutrition and food security. (For one example, see "Tools for Program and Field Providers" section of this report).

FANTA is another agency that works closely with WFP to help document and disseminate innovative strategies and tools to address nutrition and HIV. Quay said the forthcoming FANTA-WFP handbook for programmers would include a range of practical HIV interventions. Looking ahead, these agencies plan to continue collaborating with other groups in the field to document and disseminate information on best practice interventions, and innovative approaches being taken at the community level.

Unfortunately, funding remains a critical limiting factor in how much and how quickly WFP or other agencies can move. Within the agency, there's a race to catch up to the demand for tools and services. Within WFP as an agency, Quay said, few staff had benefited from training courses on nutrition and HIV, and their 2003 handbook on nutrition lacked information on HIV. "We need to update our materials and we need to update the training available for staff so we are better equipped to deal with it," said Quay, who noted that such steps are being taken.

Looking at the international arena, Quay also sees a role for the WHO and UNAIDS to help set international guidelines to help those in the field implement best practices. ""It would be great if someone had gone through and documented what works, what doesn't work, what nature those interventions should be," she said. "At the WFP level, we can then implement those recommendations. It's like breastfeeding -- they give us the guidelines on breastfeeding and when it is correct to use breast milk."

Quay estimates that WFP has food aid to cover a maximum of 2000-2500 people with HIV. Other larger donors have much more. Catholic Relief Services and World Vision are among the NGOs in Rwanda who have provided food programs for HIV groups. USAID, which administers the Bush PEPFAR program, represents a possible future source. So does money from the Global Fund. On the ground in Rwanda, little PEPFAR money has been earmarked for HIV nutrition programs, though that is changing to reflect emerging PEPFAR policy on this issue.

Quay's concern is that standards need to be adopted by different players in the field, which is why she supports having a national policy to guide everyone. She also sees a greater role for the Ministry of Agriculture and groups involved in rural development, to help communities engage in food production and income-generation activities that benefit HIV-positive members of communities. Here the FAO plays an important role.

Looking ahead, Quay cites several other factors that the regional UN agencies involved in relief work are tracking that could affect their ability to respond to food aid needs in the future. Seasonal drought threatens different parts of the country, and increase malnutrition. The specter of Avian Flu, which is making new headlines in South Korea, threatens successful, small-scale poultry raising programs that can provide a source of protein (both meat and eggs) needed by HIV-positive individuals. That is leading groups to consider projects to grow soybeans or other protein sources. The ongoing political crisis in neighboring Democratic Republic of Congo could also lead to more refugees. So could another eruption of the volcanic peaks overlooking Goma, DRC, which borders Rwanda. "A crisis in any of the Great Lakes region could mean a huge influx of refugees," said Quay. –End

D. US Government Agency: USAID

The United States Agency for International Development is a leading US government agency providing US federal support for Rwanda's national HIV and AIDS program, and to NGOs working in the field of HIV and the broad arena of development. USAID is also overseeing the implementation of the Bush administration's PEPFAR program. In the area of

nutrition, USAID has a long history of working on food insecurity and sustainable development issues. In Rwanda, agency officials focusing on nutrition are looking at HIV through the lens of food insecurity, while those working in the PEPFAR program or the HIV portfolio are looking at nutrition from the perspective of their target client population: HIV-positive individuals.

This interview took place in Summer, 2006, in Kigali, with Catherine Hastings, HIV Community Services Specialist, who was on the PEPFAR team; Ryan Washburn, Team leader in the Agriculture and Rural Enterprise area; and Venant Sefali, Food AID Specialist in the Rwanda bureau of USAID.

USAID Rwanda officials feel that the issue of nutrition and the link to HIV is very important, and they have been working closely with a variety of partners to both fund innovative approaches to nutrition and food security, and to bring together government and NGO partners to examine gaps in service provision for affected populations.

“We recognize the importance of nutrition in giving care to people living with HIV/AIDS,” said Washburn, who is especially focused on food security needs of rural residents. “For USAID Rwanda that it is a critically important issue. From the perspective of the agricultural team that manages the food aid, though, we look at the food insecure populations -- that is our number one objective. Now, some of those people that are food insecure also happen to be HIV-positive, that is where we have the overlap. But it is not a direct targeting of people living with HIV from the outset.” HIV, he stressed, is one element of “insecurity and vulnerability.”

At USAID, officials have also struggled with the question of how to select candidates for food aid, or programs in nutrition, when both HIV-affected and non-HIV populations lack enough to eat. Washburn said the agency approaches the issue by working with local partners who know their communities well and who know the players in the field. “At this state, we know that most food is insecure in the country,” said Washburn, who explained that USAID staff “ask the local authorities who know which families are more affected, who have more food than others, etcetera.” They take a family or household approach to assessing nutrition and food security needs, including household assets. The agency relies on criteria of food insecurity to help guide them in selecting recipients for nutrition interventions.

Washburn and his colleagues agreed about the potential positive benefits of including nutrition alongside medicine for those living with HIV. “Those who are on ARVs and get food do better than those who don’t have food,” said Sefali. “The complaint they have been giving [us] is that the medicine is too strong for them and they don’t have the good and nutritious food. Those on medicine who don’t have food, feel weak and they see those whose who have food get stronger, so they demand the food.” USAID food aid packets include vegetable oil, porridge of corn-soya blend (CSB), cornmeal and beans.

Hastings explained that USAID’s mission in any country must support its national government policy and programs. Rwanda’s government supports providing adequate nutrition for malnourished individuals with HIV. But the scale of

malnutrition in the country, whether for HIV--affected groups or the general population – far outstripped the ability of the agencies like USAID to do that much. Hastings also said that a specific funding track for nutrition interventions had not yet been included as part of PEPFAR, though that was changing.

USAID has certainly observed the negative impact of malnutrition on those with HIV, and they worry about the impact of food insecurity on adherence to ARVs in those starting treatment, said Washburn. “This issue is something we are struggling with,” he stated. “I mean, we see this as important, but all that we have is a bit of anecdotal data.” When he or others of his agency go into the field, he said, “You go and you see these people, [and] it is obvious… the people who are worse off in terms of low nutrition and their symptoms of HIV/AIDS -- it is clear they need something. Now, what that is, how long it should last, how to target within this group of PLWHAs, who should get the food who should not -- those are all difficult questions.”

“We hear testimony from people who lost tens of kilos and gain it back [on ARVs] and can do some work,” he added. USAID Rwanda has asked various partners, including World Vision, to try to gather some data on challenges to adherence linked to lack or interruption of food access in those on ART, and, he said, “How many people in each association have stopped taking the medicine because of nutritional problems.”

Food aid rations may be offered to the malnourished individual with HIV, or via a household ration. But it is coupled with other efforts to focus on sustainable sources of food security or income-generation. Sefali also said that his team is trying to determine how long ART patients who are malnourished require supplemental food – a question many groups are asking.

“The average [time] is between 6 and 12 months, depending on the situation of the patient,” said Sefali. He explained that patients getting short-term supplemental food are also offered other interventions such as education in the use of biofortified (vitamin-enriched) foods, seeds, and training in gardening techniques and innovative approaches to food or agriculture production, and income-generation. “One of the activities is teaching them how to prepare the food, especially the local food, such that they can have a better life -- that element of nutrition and training,” he added. The long-term goal is “to make sure that after they graduate [off food aid] they can take it over themselves,” said Sefali.

USAID partners with agencies like FANTA and World Vision to study the use of biofortified foods, and to disseminate them to different target groups. Training is key. Partners like Food for the Hungry International offer training programs that are part of their food distribution plan, while others offer Training of Trainer workshops (TOT) related to different food-related activities. For HIV groups, Hastings noted, “It is no one thing -- they need all of those things.”

The agency is also supporting partners to try innovative grassroots models and document their success – or difficulties. Hastings cited Catholic Relief Services as one group that’s been active in the field, supporting projects for HIV-affected groups that involve in goat rearing and the creation of small gardens for growing food.

Washburn also cautioned about the general difficulties faced by groups seeking to establish sustainable income-generation projects – a reality that applies to HIV groups, and may even be more difficult, given the additional impact of disease, stigma and other factors that could come into play. "There are loads of income generation activities for rural people in Rwanda that struggle to take hold and these are people that don't have HIV/AIDS. So if you say that thirty percent of those projects are extremely successful, it is not likely that any more than thirty percent dealing with HIV/AIDS infected population will be successful."

On the subject of best practices and grassroots models, Sefali felt that all parties in and outside Rwanda could benefit from greater sharing of successful approaches. But he added, "The situation is variable from country to country --the type of food we have here…the vegetables…are different from what people have in South Africa. So I'm thinking that is good to have that [sharing of models] program, but it has to be specific to each country."

Turning to research, Washburn was interested on how to get better evidence –concrete data – about the possible impact of malnutrition on adherence to ARVs. Citing an example, he asked, "Is there evidence that malnourished populations are not taking ARVs, or are getting off them, for some reason?" There's certainly anecdotal evidence, but we need concrete data, he felt. "That should be available from any country in Africa," he added.

Another question he'd like answers to is the million-dollar question: how do we help malnourished and poor ART patients become self-sufficient, with a sustainable means of food security? "What are the minimum [things] that could help ART patients? After having adequate enough nutrition to digest the ARVs, what is the minimum level of nutrition [needed]? What are crops that could be grown? How do we get off food aid? How do we get to food self sufficiency for this population that has specific nutritional requirements?"

"Added to what you are saying," Venali chimed in, "I am not sure what indicators to measure-- the benefit of the food itself or the beneficiary? If there is a problem? We have not been able to develop any formula to test for the affect [impact] -- positive or negative -- to measure the affect of the food on the individual. Venali said FANTA in Rwanda was among the agencies working to identify key markers to help measure such impact. Other groups are approaching the issue of assessing impact not from a clinical angle, but from an agricultural one, said Washburn.

Hastings has been involved in introducing other types of monitoring and evaluation activities (M&E). "We are looking at the impact of income-generating activities and how sustainable it is, and vocational training as well. We are doing that for a lot of the older child-headed households." Among their partners, Africare, CRS and World Vision are all engaged in M&E of programs addressing sustainability of programs targeting malnourished HIV-affected groups. Africare, Venali added, had recently produced a report that analyzed more holistic efforts integrating different activities such as food distribution to HIV affected families with income-generation activities. Such analyses, Venali felt, were a step in the right direction. "It is the beginning of trying to find a solution."

Looking at the national picture, Washburn agreed that progress was being made, but, given the level and scale of malnutrition, all parties needed to do more to help HIV-affected households access food. That included his own team. “USAID could be doing a better job… WFP could be doing a better job,” he acknowledged, agreeing that the time was ripe for the different actors to work together and share the insights being gained in the field. “Nutrition is a very critical issue,” he repeated. – End.

E. TRAC (Treatment and Research for AIDS Center), Rwanda

The Rwandan government has two main agencies responsible for implementing the National AIDS plan. TRAC is responsible for conducting research and developing national guidelines and norms for the management of HIV, working closely with its counterpart agency, CNLS (National Control Commission to Fight AIDS). This interview was conducted with Josephine Kayumba, a nutritionist working for the FANTA project (Food and Nutrition Technical Assistance) to support TRAC’s Nutrition department, which is focusing on the challenges of delivering nutrition services for HIV-affected and vulnerable Rwandans. Kayumba participated in a multi-sector Nutrition Working Group that developed newly approved national nutrition and HIV guidelines and protocol.

Rwanda’s government program has focused on a goal of how best to integrate a nutritional component in the management of individuals living with HIV. “First of all when we talk about nutrition, it’s not only food aid -- it’s also evaluation and the nutritional care, as well as education and follow up, of course,” Kayumba explained. “We have to provide food aid in a way that is sustainable. We can provide some short-term food aid, but then see, ‘What are the projects in areas of food security that can parallel this food aid so it does not create dependency?’” Given the scale of need in Rwanda, she added, the government cannot match the enormous demand for food aid. “There is a certain food supplementation that we give, a certain ration, to some people living with HIV, but it’s not enough and we can’t give it to everyone. The first thing is, then: ‘What are the criteria to use to give this supplemental food aid?’ It’s the first challenge. Here the majority of people are poor and everyone wants to eat. It’s going to improve adherence (to treatment) but we also want to try to avoid dependency on [that] food aid.”

Kayumba strongly stressed the need to target nutritional services and education to households. “One thing that’s very important is that, okay, we’ve given this ration to the person, but we must give it to the family--to the household-- because he or she is going to share it with others and it’s not going to be enough.” Food aid programs that only offer individual rations or target HIV-affected members are inadequate for this reason. A household with a family member who has AIDS and is too ill to work but is starting ART may have other members who are also malnourished, but are able to work. These families need resources and programs designed to produce a sustainable source of food or enough income to buy food. “For the household, it’s important to start something to accompany that [food aid]. If I want to give food aid up to the sixth

month [for someone starting ART], I have to do something in parallel to add on - a project as we say. For example, if you have a little farming you can do to generate food… because it [emergency food aid] is not going to last."

The government took the step of creating a national guide for nutritional support as a critical tool to help individuals and provider groups with knowledge. "It's counseling and nutritional education which means that as part of counseling we talk about how to take charge of one's needs regarding nutrition," Kayumba added. She cited a common example: "If you ask a pregnant woman to stop working, you need to have the man there too. The whole family must understand how to eat, what the mother needs to eat, the rest she needs, etc."

The focus on households extends beyond education to helping households engage in proven income-generation activities that will allow them to access the quality and quantity of food they need. "It's this education that in fact will help them. Even if there are income-generating activities, what are they going to eat? What will they be able to buy with that money? For example, if that milking cow gives five liters for milk, the household needs to know that one part will be consumed, the other part sold, but what type of food will they complement with milk? Often there are projects – what do they do? They earn a little money, but they can't buy just anything." This is where Kayumba sees an important role for multi-sector partnerships with NGOs who bring experience in agricultural production and economic development activities, including microfinance.

The issue of selecting which clients will benefit from food aid remains thorny, acknowledged Kayumba. At TRAC, she said, their approach is to use agreed-upon clinical indicators of malnutrition – for example body mass index (BMI) – and also socioeconomic measures – whether a family has any access to food or income-generation, for example. "It means that after the nutritional evaluation, if one measures BMI and it's a BMI of 18.5 or 20, there will still be some social cases [people needing supplemental food]. For example at TRAC clinic, there are some cases without signs of malnutrition, and we have to discuss it: 'Is it a social case, or not?' This social case will be determined by home visits'. You go to visit the patients, and the family, and see how they are doing. You can ask in an interview, for example, 'Have you eaten yesterday? Or, was it long ago? Have you sold anything in order to eat?' There are also other cases where the person is too sick. He hasn't gotten food, he's weak, he needs some supplement to recover and later be able to work."

At TRAC, they are steadily developing criteria to guide them in this selection process, but she admitted, it's not easy to give food aid to some clients and not others when so many are malnourished. The goal, she feels, is to increase the provision of resources for all those needing food. "If we move forward with criteria, and evaluations, we can get there. We need to manage to give them [food aid for those with AIDS] because they are vulnerable to more infection, and they have nothing. It's going to reduce the risk of infection and illness and prevent malnutrition."

She also focused on the importance of nutrition interventions for those with HIV who are healthier yet very malnourished. "I think we need to focus also on those who have not yet started treatment to avoid progressing in the disease so that they

will not need ARVs. We are only focusing on those on ARVs. People are doing that because they want to make sure it works, that people adhere, that the drugs have efficacy. The others will progress if we only act to save those [on ART] people." Added Kayumba, "There is still the problem of the perception that we are doing all these projects for HIV-positive people, but what about those who are HIV negative? They would prefer to be HIV positive in order to access food… it's a big challenge."

She feels one aspect that's still often overlooked by NGOs is their failure to work closely at the community level to adequately assess the existing capacity of affected groups to undertake various activities – before activities are started. "Someone comes along with his idea [for a project] and it doesn't address the real needs of the people or reach the level of the community. He thinks, 'Okay I think this will work.' Then he approaches the community and sees, 'No it won't work.' Before starting a project there is a need to assess the situation and collaborate with leaders. And that's not enough: you have to go to the field and evaluate the feasibility of the project. This is the reason why you cannot just sit down and say, 'Okay, here, we're giving you cows.' You have to have the capacity to do that."

Kayumba believes in strengthening the capacity of local community groups and associations to help deliver education and supplemental programs and services. That allows a level of closer monitoring of a client's access to food. Since food aid is often inadequate, it's common for clients to seek food aid wherever they can. Tracking clients becomes a challenge. "We have people who go from site to site looking for more food," she acknowledged. "What do to? We thought of doing this [distribution of food aid] in associations within the community, because they know each other. Community leaders know which person is able to have food and can guide the food distribution, this will avoid selling of food. Some people may sell in order to buy something else. They need to know which appropriate food to buy."

One problem hindering the government now is the lack of donor funding available within the national AIDS program for nutrition related interventions. "We need a complete approach of managing patients: the ARVs treatment, nutrition and psychosocial support, but up to now there are some donors who are not willing to support all these services."

The government is supporting the integration of nutrition component in a comprehensive package for people living with HIV and AIDS, but until now, it has not provided the money for food. "Nutrition support is not food aid, it's more than that, it include nutrition status assessment, nutritional counseling and education, food supplement, income generation for food security and follow up." In her view, the funding community needs to consider funding programs that aim at generating sustainable food access for households with HIV-positive members.

For her part, Kayumba sees a role for provision of emergency food aid to food insecure individuals, but is critical of NGOs and donors who provide food aid in a vacuum – without thinking of sustainability or other means of empowering individuals and families to access food. The government does not favor food aid, she explained, because it too often fosters dependency. "We need something that leads to durability." At the same time, she agreed that emergency food aid is often

a vital stepping-stone – a lifesaving intervention. That's where partnerships between the food donors and development agencies and private sector are so important for community groups who need sustainable programs related to food security.

"I went into the field and I found some nutrition centers that had closed because of a lack of [food] stock," she said. "They also need to provide counseling and nutrition education. When you close a center like that because WFP stopped giving food aid, it's where you have a problem. If the food aid isn't given, everything stops. So there is this issue of durability." If you provide food aid for a short period, she added, "They won't die today or tomorrow -- they may die after tomorrow; but what will happen when the donors will go? Sometimes it's the NGOs who have the money for short period, a year or two, or three, and when they are done, they pack their bags and leave." The solution, she suggested, "is a comprehensive package that can be a sustainable approach."

Turning to the topic of research Kayumba has a personal interest in the question of infant feeding. "In our country now, it's either breastfeeding or artificial milk [formula]. I'd like to look at those who are exclusively breastfeeding compared to those on formula milk, in order to say, at the end, what is better , because the formula is not regularly available. If the NGO isn't there, no one makes formula milk." Such research has been done in other countries, but not in Rwanda, she explained. TRAC has spent several months looking at the essential components of an HIV package that includes nutritional components. "We've started to do that – to really integrate a nutritional component -- as with ARVs, as with PMTCT," she said. Looking beyond Rwanda, she added, TRAC nutrition department has been so busy focusing on the country's needs that it hasn't yet tried to apply models developed in other countries. – End.

F. CIAT (The International Center for Tropical Agriculture)

The Rwandan branch of the International Center for Tropical Agriculture, located in Kigali, is a research institution that works closely with the Rwandan government to help provide needed evidence of the value of interventions related particularly to agriculture. Given the heavy impact of HIV and AIDS on agricultural workers and economic production in the rural sectors, CIAT has been focusing research into the impact of nutrition and agricultural interventions that aim to foster sustainable access to food production and food security. The agency is also interested in studying which indigenous foods and recipes can be developed and tested in the field to address nutritional deficiencies in malnourished HIV-positive individuals at different stages of illness or recovery. Martha Nyagaya, M.Sc., is a nutritionist who is in charge of the Nutrition portfolio at CIAT, and she works closely with TRAC and the Ministry of Agriculture and NGOs focused on helping farmers and rural residents.

Prior to her post at CIAT, Nyagaga managed the nutrition department at Kenya's National Hospital. She managed a program that did group monitoring and therapeutic feeding of children who were severely malnourished, and put mothers into community-based associations to help improve the nutrition status of their children.

She particularly favors a group mentoring approach to supporting mothers around feeding of children called the “HAP” or “positive deviance” model (see “Tools for Program and Field Providers” section of report). “It’s a model for sustainable habilitation of malnourished children,” she explained. “We look at what they have at the household and what they can produce, and see what we can do to modify that to be able to improve the nutrition status of a child. Now, if it works for one mother then we identify, ‘What is it that the mother of the same income and social status is doing right that the other mothers with the same status and have malnourished children are not doing?’ We get this mother as the model mother to train the other mothers to do what she is doing right to improve the nutritional status of the children.” Along with education, nutrition information and training, such programs offer simple nutrition assessments and even equipment to improve the group’s skills to be able to monitor the nutrition status of the children in that group. In Kenya, the HAP program she worked in involved 700 mothers living in slum areas.

“Most of the mothers did not have plots of land to grow food. We had to give them money to start income-generating activities, which are not generating much [revenue], and they had other family priorities. So it always got back to food aid distribution and supplementary feeding,” she said. Following her Kenya stint, Nyagaya worked with the CDC, where she helped implement clinical trials of micronutrients in mothers, including vitamin A for mothers with HIV who were pregnant. She also focused on a research question: how well HIV-positive mothers could manage to feed their infants via exclusive breastfeeding, a key issue being studied in many PMTCT programs. “They were giving highly active antiretroviral treatment [HAART] to women with HIV a month before delivery and then six months postpartum. We monitored about 400 mothers to see if HIV-positive mothers in resource-poor settings were able to exclusively breastfeed their babies without nutrition support, in relation to supplementary feeding, just using what they had at home with a little nutrition education, and then stop breast feeding and continue giving complementary food.” Most of the women succeeded during the program, she said, but not after it ended.

”The sixth month after they stopped breastfeeding,” she explained, “most of the babies were really getting malnourished.” She has since identified that as an important possible window period for supplemental nutritional intervention of some children - at six to nine months of age. “Some of them became so severely malnourished that we had to readmit them back. Most of the time women did not have milk to give the children after the supplement [food aid] and the cessation of breastfeeding.” The reason was simple. “They didn’t have the funds,” to buy food, she said.

To Nyagaya, that experience revealed other problems related to funding for nutrition interventions. “Normally what happens is that when donors bring money for nutrition interventions, they don’t critically look at the reason people are malnourished,” she said. “Sometimes it is not because there is no food; sometimes it’s because of ignorance, or because people have foods, but they don’t know how to make the right combinations for the children. Sometimes it’s also because the person who is taking care of the children has no knowledge, or is not the decision-maker, about what or how much is

supposed to be prepared. Some of those people produce a lot of food, but since their focus is on income generation, the good part of the food is sold and what is left for the household comes short [is inadequate].

"My observation is that most of the time when people think about nutrition interventions they think about food distribution, and sometime it is not that there is no food. Even the food distribution is normally based on a cereal product that most of the time is available. So when it's withdrawn, then people don't know what to do, because they think, 'That was the good food that we are getting and what we have at home is not good enough, so we need exactly something like that.'" She also feels NGOs should start by focusing on helping target groups engage in programs and activities that use existing resources and match their interests and capacity, rather than introducing potentially exciting programs that are too unfamiliar. Those can come later. "My observation is that when you are generating or improving livelihoods to improve food security, whatever you bring -- if it is not their original idea -- they will not do it," she noted.

The solution is to develop and implement programs that teach people to be self-productive and self-reliant – programs that aim at sustainability – but also are rooted in their local culture and practice, and make use of existing local resources. That's what she's now doing at CIAT. "For this project I actually developed it to have a really integrated food and nutrition strategy. This was originally an agriculture-based project. They were promoting food security for income generation, but at that time there was a lot of malnutrition in Rwanda in the post-war era, and most of the people were depending on food aid. So our strategy was to shift most of the communities from self-reliance on food distribution, to a more sustainable development through agricultural production."

Her goal was to generate some evidence that through agricultural production, one can improve nutrition even for the most vulnerable populations. "But it was difficult," she admitted. "I chose people with HIV." She did not select people based on their HIV status, but based on malnutrition, yet HIV surfaced as a factor. "I was not focusing on [the HIV] treatment program because in my personal opinion, that it actually not supposed to be criteria for selecting who is going on food distribution or not -- it is still supposed to be nutrition assessment. As much as we want to improve on this evidence that efficacy of medication can be improved through nutrition, ART is not the criteria for selecting who is going on food distribution or who is not. The bottom line should be nutrition assessment."

Tackling the thorny issue of how to select who receives food aid when so many have need, she did see the need for those on ART who were malnourished to have food – or they would die. "There have been a lot of arguments about whether malnourished people should be even started on ARTs before their nutrition status improves or not," she said. "We don't want to say that nutrition is going to provide treatment for the person who has HIV. But as much as it improves the efficacy of medication, it should be started even before a person gets to start ART. Those with HIV will be much more compromised, especially when they are taking ART and are also malnourished."

She has now started a HAP-type project, applying earlier lessons from prior programs. CIAT is supporting a project to study the different impact of food interventions on different groups: “We recruited people with HIV, with three criteria: the first one was people on ART with a CD4 count below 200 or 350 with clinical symptoms and a BMI of below 20.” The latter were divided into two groups, “Between 18 and 20 is not exactly malnourished, so [they] could do with agricultural production, education, and other things, rather than food aid. But below 18 we started them on food aid.

“We classify them into three categories,” she continued. “There are people who are at risk of malnutrition but are not yet malnourished. Then there’s the category of people who are on ART, but are also malnourished. Then the last category is the people who are at the borderline, and just need a little improvement to get to 18 or 20 [BMI].”

Instead of nutritionists, however, she has hired agronomists, and uses them to evaluate the potential of patients and affected groups to engage in agricultural production or projects to grow food. There, the agronomists advise medical providers and social workers about what nutrition strategies are likely to match the needs of the affected person or group, “I put them at the health center, [where] there are healthcare workers or social workers who have some knowledge in nutrition,” she explained. This summer, there were 350 participants in that study.

The agronomists help link the health centers to farmers who can produce food needed for patients if food aid is to be supplied and linked the farmer’s groups to a central processing unit. “They produce flour mixes locally. They were producing maize and soy plant that was fortified, for distribution to people who are malnourished.” As she explained, WFP would buy from the farmer groups, creating a source of income for the farmers and a direct link to a local market. “We then provided this [food] with a fortification formulation to distribute to the severely malnourished group that was on food aid,” she explained.

(Note: This type of model –working with local farmers to grow and supply foods needed by local food agencies to then distribute to hungry groups, or providing HIV groups with fortified low cost discounted flour to bake into bread and sell to the local market– is a good example of how agencies like WFP can support the local community and affected groups needing not only food assistance, but self-sufficient means of producing food or livelihood activities.)

The next step involved monitoring how individuals receiving food or training in agricultural production were managing. “We did the best line evaluation on nutrition status and cereal monitoring to see if they were improving with the food aid that we were giving. But at the same time monitoring on production at the household level.” They also linked patients up with the network of people living with HIV, “to be able to pool land and grow food in those associations,” she explained.

“So we have food production at three levels: [1] at the household levels for those who have family farms - the agronomists will do home visits to distribute seeds and provide technical knowledge on how to produce food; [2] then we have the associations of people living with HIV; and [3] the farmer groups”. Malnourished HIV patients had two options, she added:

once they joined the food aid program, they either joined an association to learn to be a food producer, or produce at the household level. In this approach, food aid provided a stepping-stone to learning and engaging in sustainable, group-oriented food production or income-generation activities, and education and training were offered within an association where people with HIV could also support one another.

The program also evaluated progress using a few outcome or 'progress' indicators – measurements of improvement-- but also using an estimate of household assets to determine the amount and duration of food aid. Once clients' health had improved to a certain point, the agronomists helped members of the household prepare for food production or other activities. "We didn't set the final durational food aid; we based it on nutrition improvement. So if your BMI was 16 and we started giving you food, we calculated household portions that would supplement for about 60% of their diet. But we monitored the nutrition status as a household, not just the persons who were suffering from HIV. So with the nutrition status and BMI, body mass index improves to 20. Then the role of the agronomist is to tell us whether the food production at the house of level has reached a stage where it can take over from the food aid," explained Nyagaga.

The answer was – most of the time -- she said, "Not yet." Once people reached a BMI of 20, food aid would be withdrawn, and households would then be monitored to see if the health of the ill person – and the food security of the household – were being sustained through either income generation or agricultural production. It took an average of eleven months for the first group – the very ill -- to successfully transition from food aid distribution to either agricultural production or income generation," she reported. "A few of them always came back, especially last year." The drought of 2005 made it impossible for some to achieve agricultural production. "They needed irrigation; they needed many other things apart from just agricultural extension, material, information and seeds. So we had to bring some of them again back to the food distribution because their BMIs had gone so low that we couldn't assume that they were still going to be able to sustain their nutrition improvement. But still we continue to monitor."

The role of longer term monitoring remains essential in her view. Such information provides both anecdotal and harder statistical evidence sought by governments who are weighing the cost and impact of different strategies in different populations. In the CIAT study, there is a report form for every beneficiary. "We get the location, the size of land, the idea of nutrition information, what is done at home, how they prepare food, what they like to eat, what we can modify," she said. "Then we get some clinical symptoms of HIV and what is happening to them that can affect their nutrition status." The program also did "recalls" of food – a survey of clients' food access in the previous 24 hours -- "to see what they normally eat, and really what could be causing their different types of nutritional deficiencies that they have had," she explained. "We continue doing it monthly to see if the dietary combination -- the foods that they eat --has changed because of what they are producing."

The program also monitors activity at the community level, and how well households work together. "Every month we report on all the cases." To date, over 2000 people have moved from getting food aid to engaging in sustainable activities. "A

few of them have been coming back" to seek food aid, she admitted. "It is one of the lessons we have learned: the general population is deficient -- is malnourished to some extent. So targeting is an issue." That's also taught a lesson about which interventions are likely to work, for which hungry groups. "For areas where a few people are malnourished it differs. It is easy to do individual targeting, like you just pick 'you, you, and you'--" she explained. "Then for the rest of the people who are also at risk you bring a blanket program like nutrition education. But the best strategy to go with is a greater nutrition intervention strategy with all four elements: nutrition education; food fortification if you have a good vehicle [or intervention, i.e., a specific micronutrient program]; supplementary feeding for the very severely malnourished; and appropriately targeted [interventions].

All of which brings her back to one group she will continue to target for extra nutrition: mothers and infants aged 6-12 months who stop breastfeeding and may not longer be accessing extra food through programs. By they time they pass through the PMTCT program and learn about breastfeeding, she hopes they will also have learned about ways to grow food and fortify their own diet and that of their children now starting on solid foods. "Up to the sixth month, if we have severely malnourished children, they have the ability to visit at the health center. [There] we have indigenous vegetables… we have orange-fleshed sweet potatoes -- the vitamin A rich sweet potatoes… we have some fruit trees like avocados and some medicinal plants that were identified by the health centers themselves. The program teaches the mothers what to grow, how to grow it, and to cook it. By then, the agronomists have stepped in to help to prepare the mothers and their households with the next step: implementing their new knowledge and skills at home and in the field. – End.

G. Partners In Health - Rwanda

Partners In Health is an international NGO started by Dr. Paul Farmer, a longtime champion of the rights of poor people, including their right to health care. PIH's mission has always focused on the issue of equity and approached the issue of access to HIV care and services from a rights-based perspective. In the mid-1990s, Farmer and physician-colleagues, including Jim Kim (who took over the reins of the WHO '3 x 5' program after Paolo Teixeira's departure) are credited with pioneering successful treatment of multi-drug resistant tuberculosis (MDR-TB) in Peru, Haiti, and Russia's prisons. Their approach included use of second-line TB drugs and Directly Observed Therapy (DOT), an approach to patient adherence that promotes the use of paid community health workers called 'accompagnateurs' (literally 'one who accompanies')" to directly oversee patients taking TB drugs. PIH applied lessons from TB to HIV and were among the first groups to prove it's possible to successfully treat and manage HIV among the poorest communities.

In 2005, PIH began an HIV program in rural Rwanda, upon invitation of the Kagame government which asked them to help upgrade public health facilities in two health districts, Rwinkwavu and Kirehe, and to integrate HIV care services within a primary health care model. An estimated 450,000 people live in the local area. Many live in acute poverty, eking out a

living as subsistence farmers. Malnutrition and diseases like malaria and TB are endemic. Not surprisingly, food is key demand of patients and their families.

Farmer has publicly spoken out about the need to integrate food and nutrition services as part of HIV programs, and stressed the critical role food can play to help those starting ARVs. PIH's approach is to deliver these services within an overall holistic program that focuses on the overall vulnerability and needs of households, not only individual patients. Rather than focusing on cost-effectiveness as the important bottom line criteria, Farmer has long argued for a focus on equity and high-quality services to patients, regardless of their ability to pay. In his view, the goal is not to lower the standard of care in poor countries, but to raise the bar, and provide the same quality of care for a patient in Rwanda as one in Boston. As he likes to say, shutting up the critics, "Poverty should not an excuse to provide poor services or withhold them from people who are poor."

Food is viewed as an essential service that is integral to good health. Farmer's view, expressed in writings and in lectures, is that our collective effort to treat HIV or TB or malaria must deal with the underlying socioeconomic conditions that foster disease. The goal of health programs must include not only improvement of health, but also an effort to address and improve social and economic conditions – to break the cycle of poverty - that foster disease. Although PIH's programs may require a larger up front investment of money, and initially cost more, Farmer argues that this approach will ultimately prove not only effective and more beneficial to patients but cost-effective in the longer term.

Michael Rich, a US physician who oversees PIH's Rwanda HIV program, agrees with his colleague Farmer. "As far as a philosophy goes, we never have thought, "It's just about HIV treatment. The main factor about HIV is poverty," he said. The goal is "to somehow reverse these virtual cycles downward, you know -- 'more poverty, more disease.' If you just treat the disease you're not going to do enough. That's why all our projects have some significant amount of income-generating projects, agricultural projects, school fees, outright grants and nutrition. We also try to build up the whole health infrastructure, not just create one HIV program or things like that." In Haiti, for example, PIH has helped build houses and local healthcare facilities, improved access to water and electricity. Globally, it has developed a Program on Social and Economic Rights that puts equity and social justice at the heart of its fieldwork and programs.

That said, the issue of nutrition is not simple, Rich acknowledged. "First I think you have to acknowledge that most HIV programs are not excited that they have to address nutrition problems," he said. "I think the resistance comes mostly from the cost, but also the incredible challenges around setting up systems to deliver food. But we do it because the need is there and we believe HIV programs will not work without addressing nutrition. When an HIV patient reaches the stage of needing ARVs, we feel a high percent of them also require food. They're usually the primary income generator in the family and the family's also suffering because the main breadwinner is sick. So you're kind of forced -- if you do good HIV care -- to not ignore this issue, even as difficult as it is to do."

Finding the resources for providing food as part of an HIV program is perhaps the most difficult aspect. PIH seeks donations of food donors like the UN World Food Programme but, if pushed, it also buys food for malnourished patients. “It’s a very expensive and time consuming,” admitted Rich. Warehouses and systems of delivery need to be set up. He estimated that, in the first year of the Rwanda HIV program, adding food is approximately three times the cost of ARV medications for a year. “ARVs cost approximately $130 per year and in the first year we spend an additional $400 that year. However, that cost is an investment to get the patient back on their feet and the benefits are seen years after the food stops

Rich confirmed that malnutrition is high among most people living in the district where PIH operates, and remains a major daily challenge for HIV patients. Rather than adopt a patient selection policy for entry into the food program, Rich explained, “We choose to start all HIV patients on a food package that need ART. We do this to in order not to create jealousies between patients, because almost all of our patients live in extreme poverty, and because we have found most patients needing ARVs are below ideal body mass.”

To date, the program has been successful, and interestingly, the provision of food coupled with a clinic visit may directly support adherence. “We’ve had excellent weight gains with the people who take ART and receive food, and we’ve had almost perfect compliance rates” said Rich. “We’ve only lost one or two patients out of 1,000 to follow-up. We still have almost 100% compliance on clinic visits because the food is coupled to the clinic visit.” And he noted, “They still come after they don’t get their food, but there is a little bit less of a high compliance.”

PIH has introduced several strategies to fight malnutrition in both HIV positive and negative patients (see “Grassroots Models and Best Practice Approaches” section of this report). Their pediatric ward includes “a refeeding center” and a malnutrition ward where children who have severe malnutrition can be treated and their parents educated. “We’ve just started making a teaching garden at the hospital where we have various fruits and vegetables and methods to grow them. The mothers of the malnourished patients can take some saplings and young fruit trees home and care for them. In a short time can have increased access to vegetables and learn how to grow more,” explained Rich enthusiastically. The vegetables and fruits can provide the vitamins and am more complete diet needed for malnourished children. “We hope to be offer more families suffering from extreme poverty a package of seeds and fertilizer with some education on how to use them.

Another other innovation concerns PIH’s famous ‘accompagnateurs– the community health care worker involved in the delivery of ARV. This program adds about $100 per year per patient on ART to the total cost of the program, said Rich, but he adds that the program may pay for itself by decreasing the number of patients that need to go on to expensive second-line ARVs PIH currently provides a monthly stipend of about 14 USD a month to around 500 community health workers in two health districts, mostly women, who do 1-4 home visits to patients taking ARVs and oversee ARV DOT. “I think most people see it as kind of a directly-observed therapy model to increase adherence and that’s certainly a benefit of the

system but there are many more co-lateral benefits from the system. One particular nice benefit in Rwanda is that we have started a system of neighbors helping neighbors, in a country riven by political divisions, resulting in improved community involvement against the HIV epidemic." In additions, added Rich, "The accompagnateur system creates jobs resulting in economic growth, empowers women -- (since most of the accompagnateurs are women --, allows a mechanism to identify children who need school fees paid, and decreases the late presentation of HIV illness for patients." Finally, he explained, the accompagnateurs can be trained to help improve the health of the community in areas other than HIV, such as family planning uptake, sanitation, care of malaria, and assuring women in their area get prenatal care. As a local employer of 500 people, PIH has become, "by far the largest employer," admitted Rich.

"The accompagnteur visits a maximum of four houses and the incentive an accompagnateur can earn can be up to 32 dollars a month," Rich said. "It's a significant income because the ministry of health pays a nurse about 48 dollars a month." At the same time, he conceded, that amount is not enough to support families. "We don't consider it their full economic activity," he stressed, "so they're allowed to have their fields or have their other income-generating activities."

Some have questioned the wisdom – and the price tag – of providing such a daily wage, which are not given to HIV clients themselves who are also hungry and need work. Others argue that other grassroots programs lack funding and cannot afford to pay community health workers to home deliver ARV care. While not all have as big donors as PIH has attracted, PIH argues that there is in fact a large amount of external resources coming into most countries to fight HIV. Yet much of this money never reaches the community health worker and is spent in much less productive ways.

A key goal for PIH is to break the chains of poverty in an affected community. "The women and the men who are accompagnteurs get more education, get some income generated, and they're free to do other things at the same time," argued Rich.. "It is a program that brings people out of poverty." And as Farmer often tells doubters, the community health workers often are individuals living with HIV too.

As for the DOT piece of things, Rich, like Farmer has grown a bit weary of defending their approach, which some criticize as too costly to be replicated or "scaled up" elsewhere. "Many over-focus on the DOT component. We are not saying that the only way to deliver ARV is to watch the patient swallow every pill for the rest of their life. We are however saying that successful programs are going to be ones that offer intensive support for their patients. We have proven that this model works." said Rich. "It's not easy for anyone to take ARVs for their whole life with 95% compliance, add poverty, illiteracy, and psychosocial problems into the mix and a less intense model often will not stand up." In his view, shared by Farmer, the key ingredient of the DOT model is the emotional support to patients and their families, the feeling of being cared about that comes from having someone visit them in their homes. "The adherence issue doesn't focus around DOT. It focuses around caring for the patient and engaging the patient," explained Rich.

In the Rwanda project, PIH also addresses other areas of needs., In Haiti, for example, PIH has helped build homes, wells, and other basic necessities for residents in the catchment areas where it has its operations.

Access to education is another area where PIH is strongly involved. Although tuition is free in Rwandan public schools, there are still costs involved, from food, to uniforms, pencils and books. PIH has started a small program to help some of the 800 children in the area to attend primary school. “It’s only about $25 a year [per student],” said Rich. “With that you help supplement the costs of school lunches and supply all school supplies. It is doing programs like this that gives a family a break and will keep their kids in school.”

Rich feels that HIV programs that decide to leave out what some regard as non-essential – meaning non-medical— services needed by patients such as food or school fees are failing patients because they are essential to HIV and health care. “I think sadly we’re going to see a lot of programs that didn’t work,” he predicted. “I think we’ll be able to look across them and see they completely ignored food, they completely ignored school fees....” He cited many programs in Rwanda that “essentially give one month of the [ARV] medicines to the patients since they see them once a month.” And after that, he said, lifting his hands up and dropping them heavily to illustrate his point – nothing. “Luckily in Rwanda we have a central government that is writing guidelines that insist of food and other ancillary services”. Unfortunately there is a lag time before all agencies and programs are adapting them.

Rich also concurred with an emerging global chorus that is calling for the funding of nutrition interventions by AIDS funding mechanisms like the Global Fund for AIDS, TB and Malaria. “I guess the argument is the model can’t be just about HIV or about three diseases and trying to cure those three diseases. It has to be about changing the social-economic situation. There should definitely be some kind of funding stream to say that agriculture, education, school fees -- anything that is going to really break the chains of poverty -- is how we fight these diseases.”

Rich isn’t sure how that should best be done, and what share of heavy lifting is needed by the Global Fund. “I think we want to keep the Global Fund as the major funding mechanism for those three diseases. But it is slowly expanding and everyone wants to integrate programs for better support for health infrastructure. As we deliver money for HIV, malaria, and TB programs, they should also expect those programs to help ameliorate some of the social injustices and economic forces against the very patients that they’re trying to treat.” To Rich, the way forward is to stop debating whether food is needed or funding for food, but to figure out to fund programs that will deliver nutrition via programs that are focused on not only HIV but overcoming poverty.

Turning to the subject of research, Rich began to tick off a list of issues that he felt needed to be studied to help providers in the field like PIH compare their approach to others. “We have to talk about how to best integrate food programs and income-generating programs with HIV care,’ he said. “ TB-HIV is the other big question we have. And then this support [model] with accompagnateurs. We do all three, and we’re funded well -- everyone says that. I don’t think a lot of them cost

a lot, and in the long run I think they end up saving money in the long run. Obviously teaching people better agriculture methods and income-generating projects keeps them out of poverty, keeps them free of diseases - and the programs end up paying for themselves. Giving away free food is very expensive, but if you combine it with quickly moving to a model where you teach, and then if you look at ten years of treating an HIV patient, well, that $500 or $400 you spent the first year is not that much now that they're ten years out."

Pausing, he added, "I think there's tons to research. There are questions out there around nutrition, around co-morbidity with other diseases, and simple socio-economic interventions. Better delivery of services around these areas could save thousands and thousands of lives – much more than we'd save with a new drug or some new inventions. Of course we're not saying 'Decrease the money to new HIV drugs.' But we're saying you can't ignore this other factor... getting the technologies that we know around agriculture and HIV treatment and development into the people that need it... and that's been one of our biggest missions at PIH. These technologies exist, but they're only helping 5% of the people who actually need them." That's what he and the PIH team are determined to do in rural, remote Rwanda, by adopting a partnership approach and linking HIV with development. "It's not easy," Rich concluded, acknowledging the scale of the challenge facing not just international agencies like PIH, but the government and people of Rwanda. "HIV has come on top of everything else here, with everything that's happened, and it's a big one. But we feel good about what we've started to do, and we're encouraged. The community is getting engaged. That's essential." – End.

H. Project Concern International (PCI) and Consortium for Southern Africa Food Security Emergency (C-SAFE).

Kate Greenaway is an expert in the area of food security and HIV and AIDS who has worked as a consultant for PCI and C-SAFE. She was a leading organizer of the African Forum 2006 held in May 2006 in Lusaka, Zambia. She recently launched a private consulting firm to assist agencies hoping to integrate nutrition into their HIV programs.

Greenaway has been looking closely at nutrition and food security interventions aimed at HIV-affected and -vulnerable populations at the grassroots level in a number of African countries in recent years, in an effort to identify elements that make up successful programs, and what tools are needed by community groups to implement such innovative programs. "I am not sure I could say that I've found a successfully integrated program, but where I see strength is in projects and programs that are much smaller," she said. "I think it is a real struggle to run a big HIV and food security program regardless of whether it comes from food security and tries to mainstream HIV, or whether it comes from the other angle."

In her experience, "The smaller you are, or the closer your connection is to a particular community within which you work, the better the programming." HIV, she said, is a complex problem that touches upon so many issues. "Because of the multidimensional aspects of food and nutrition and HIV, and because there are so many tangents and angles – so many interrelated pieces – it's very hard to do it at scale. The people who are doing it really well are doing it on a small scale and

there is nothing wrong with that. People shouldn't feel embarrassed or ashamed of having a beneficiary group of 3,000 or of 1200 or a community group of 5000. We've got to capitalize on what we have."

The advantage for small projects is clear to her: "You can spot the linkages, and it's easier to maintain relationships with the various referral partners and support mechanisms that surround you." Bigger projects are harder to keep track of, she feels. "People start to fall through the cracks."

While small projects may be easier to manage, how then do governments address the need to provide services for a large population? "That's the challenge and I don't have the answer to that," admitted Greenaway. But she countered, "I think our mistake is that we assume that there's an economy of scale that means it's cheaper to deliver your programming to people when there's more of them. In fact, she argued, “It's probably more expensive." Scaling up, she argued, is not just a simple case of multiplication. "We kind of think of it as a successful pilot because it's little. And then we think, 'Okay, how do we make it bigger?' Well, you could make it bigger if you offered exactly what that had, complete with the same attention to detail and careful adaptation to the context, but we tend not to do that. We tend to think, 'So the same regional coordinator will now coordinate four districts instead of just one, because now she knows how to do it.' It's never going to be the same.'"

"People say, 'Okay, but what's good enough?' I say, 'Well, what do you want? Good enough? Is it good enough just to be seen doing something or do you want quality programming? If you want holistic programming, it's personal, it's individualized, it's expensive, and that's just the way it is." Her frank advice was for organizations – and governments – to decide what they really were committed to providing. Some groups might want to only provide one service. To them, she suggested, "Go after that one thing and do just that. Do it well. And make every effort to link up with organizations that will do other things and then hope they do it. But don't make yourself crazy trying to deliver things you don’t know how to do and don’t lie about delivering holistic programming if it’s not actually happening."

There is one-step she feels organizations could take to improve their chances of providing higher quality services: hiring a person whose job it is to do outreach to link different partners, to forge the needed linkages. "You actually need sort of a middle level, well-connected, local manager person who likes to make connections and likes to go to meetings and knows everybody and chases people... somebody who's specifically selected because they are a *connector*– that's the kind of person they are," she explained. "Some of this holistic programming would work if we were allowed to hire somebody whose job was to do that." Such a person could help bring people together, to forge and maintain the partnerships.

Another challenge is the difference between targeting interventions that are individualized compared to broad population-level interventions. "Once you go from population-level strategies to trying to target your resources to those who really need it most because resources are scarce, that's when you really get yourself in trouble because you can't," she said, qualifying her statement. "I mean, you can, but you have to have a very good relationship with your community, which you

likely didn't cultivate during a population-level intervention." The latter goal isn't easy to achieve because the needs of communities being targeted are often changing as people move into and out of programs. "You get everyone all rounded up, and you come back next month, or in three months and by then their needs have changed," she explained. "They've declined, they've given birth, they've dropped out of school, they've died...so this targeted intervention you had lined up won't fit."

The attrition isn't limited to clients. Many HIV programs lack the capacity to deliver services because staff attrition is a huge problem, due largely to the death of employees. Organizations find it difficult to find qualified or trained individuals staff to replace them and they constantly have to start again at ground zero, retraining staff. "I have seen incredible turnover, even in the space of a year," Greenaway stated of her experiences working with organizations in Africa. "Everyone has been trained and you go back a year later and you can hardly find anyone that's remained." Local NGOs can't develop enough institutional capacity to operate with such high staff turnover.

"I think if you're working in a high prevalence country, we really need to be thoughtful about the environment from which most of our staff come every day," she stated. "Capacity building is really, really important," she stressed. She advocates "ongoing staff training and opportunities for staff to really think through the issues surrounding HIV and food and nutrition, so they become adept at this over time." What doesn't work well, or hasn't in her opinion, are "'one off trainings" – a single workshop or training, because "people don't keep it fresh."

"That's where I've seen the strongest programming – where there's been a lot of time spent making sure the staff felt really centered and capable and confident, so that the nuances of shaping programming then become almost second nature," she explained. "They become intuitive; you spot the gap, you spot the opportunity, you spot the linkages because it's become part of how you are processing your environment. If you have staff that are going to be with you for a while, that kind of investment is where the strongest programming comes from, because every time they are in the field, they are intuitively strengthening programming, and that works."

What about the role of outside agencies, such as relief groups? Where do they fit in? Here, Greenaway sees a partnership between emergency food aid agencies and HIV service providers – but only if food aid is linked to a sustainable food security program. That's where other linkages are needed, to groups in the area of development. "I believe there is a role for a short-term safety net style of food aid," she said, while adding, "I absolutely believe you don't go in unless you know how you're going to get out. The way out is through some kind of long-term food security strategy and/or livelihoods (income generation) strategy. That's where we don't know what to do or we don't take the time to figure out what to do."

Another problem she has identified is the lack of communication that occurs among groups engaged in relief work versus the broader HIV or public health field. "Their mindset is so different," she said, "They typically don't talk to each other -- and that's crucial. Finding structured ways in the development stage of your program and all through your implementation, of

making sure people talk to each other, makes or breaks a program" in her experience. "I find that people who work in emergency or food distribution systems tend to focus on logistics. They are driven by 'Get the food out. Do it yesterday -- get it out there.' Health and HIV people are much more developmental, much more like, 'Let's make a relationship with the government, let's make sure we're working within a system, let's make sure we're following the guidelines, and let's go talk to the community'. They make emergency people crazy. And equally, these guys [in HIV] think the emergency people are just cowboys and they're sucking up all our resources. So there's a huge divide," she concluded.

Although bringing together groups with different agendas is difficult, it can be done – and must be– in order to bring together the right partners with different resources. "My biggest pitch over the last years has been, 'I don't care if you don't talk to people outside of your organization'," said Greenaway. "'Start *within* and get your own house in order and make sure people are talking to each other.'"

She cited several examples of faith-based and church-led organizations that started out providing home-based care and later teamed up with organizations specialized in income generation or agricultural projects, such as CARE, CRS or World Vision. The partnerships are working.

She also stressed the importance of outside and local NGOs reaching out to government officials at the level of local clinics, hospitals and the Ministries of Health and Agriculture, etc. "There is huge role for government, but our linkages with them have to start at the beginning of programming, so that they understand to what end we are doing this and they are there at all the decision-making points," stated Greenaway.

Having said that, she had yet to see many programs started by NGOs that have been successfully transferred to a government agency. "I don't think we're very good at that in any program," she said honestly. "It's sustainability, and so much of good programming is actually somebody's passion. You can strengthen systems and structures for a while, but priorities change for a lot of reasons. I think that unless you can secure long-term funding that allows you [an NGO] to take a companion role over several years at just an arms length, I don't think it will ever work."

A realist, but not a pessimist, Greenaway has found some innovative approaches and tools to share. C-SAFE, the regional Southern Africa consortium focusing on the issue of food security and HIV, has developed a website to review concepts such as "food for work" and "food for assets." Food for work, which provides food in exchange for labor, evolved "out of a need to get food out quickly to the able-bodied to do whatever kind of work needed doing," Greenaway explained. Whereas food for assets is "much more about developing a community-based, community-owned asset that they decide on. It allows you a lot more latitude about who does the work, who benefits from the work, and whose asset it is in the end. This can be digging pit latrines for chronically ill members of the community. This can be roofing the community school that doesn't belong to the government." The point is, she stressed, "They decide what it's going to be and they decide how food plays a part in getting it done." Both approaches are being field-tested in a variety of settings, with promising results.

Summing up her views, Greenaway as advice to offer those who now face the challenge of trying to develop more holistic programs. "I think there's more hope in getting good at one thing and knowing what that is and doing something about scaling up that one thing, with an awareness of how it fits into the bigger picture," she suggested. "I don't think all of us can chase holistic programming, I really don't. I think maybe we need to pay attention to building it together, from our own streams." In her vision, small is good, and many streams can come together to form a river. The river represents a holistic program in which a variety of partners come together, each with the ability to scale up delivery of a given area of expertise and a commitment to a common goal. That holistic, partnership model more closely resembles a quilt made of many small patches, rather than a solid, uniform blanket, but is more likely to deliver services that can be expanded to reach a greater number of people without sacrificing on quality. –End.

X. Grassroots Models and Best Practice Approaches

A. AMPATH & HAART & HARVEST in Western Kenya

In Western Kenya, a unique holistic HIV model has emerged, driven by the dynamic partnership between Moi University School of Medicine, Moi Teaching and Referral Hospital and a consortium of U.S. medical schools headed up by Indiana University. The strength of AMPATH's (Academic Model for the Prevention and Treatment of HIV/AIDS) design lies in its system-based approach and its collaborative nature, linking research, clinical care and training through multiple donors and partners at the governmental, institutional and grassroots community levels.

AMPATH provides a comprehensive package of HIV and AIDS services and psychosocial and socioeconomic support programs. Among these services, their HAART 'n' Harvest Initiative (HHI) program has been widely acclaimed as a "particularly innovative and ambitious program… [where] food is actually "prescribed" to people with HIV on antiretroviral therapy."(2) The program began three years ago as the need for food support among patients ranged from 20-50% depending on the site. As most organizations tackling the issue have found, there are not easy answers and, likewise, "Understanding how to give hope to this desperate subset of patients without creating dependency is one of AMPATH's greatest challenges."(3)

The HAART 'n' Harvest Initiative is unique in the comprehensive and sustainable way it approaches nutrition and food security, including agricultural training, an innovative food support entry and exit criteria system and an income security program.

When patients enter the AMPATH program, they meet with a nutritionist who identifies their nutritional needs and food security status and prescribes an appropriate nutritional prescription. Those who qualify receive up to 100% of their nutritional requirements for them and their dependants for six months following the start of ARV medicine. So AMPATH's entry criteria carefully addresses both the nutritional needs and socioeconomic situation of patients to determine the exact prescription they need. Those who after six months are still found unable to meet their nutritional needs are placed on a weaning program, which reduces their support to 50% of their nutritional needs and provides targeted training to assist them in becoming food secure.

To sustain the nutrition support programming AMPATH, in partnership with Appropriate Grassroots Interventions, created (via HHI) three demonstration farms and two high-tech, high production farms, with a third in the works. The demonstration farms provide patients with an opportunity to learn how to improve crop, egg, yogurt, milk and chicken yields. Patients visit the farms for agriculture training and also attend cooking classes to learn how to prepare healthy, nutritious meals. As patients' health improves, they return to farm their own plots armed with their new knowledge.

Initially AMPATH intended to generate all the food support prescribed to patients at the HHI farms. However, production was unable to yield enough food to meet their needs. They then began to purchase supplemental food from recovered patients who had returned to farming. In addition, they eventually joined forces with the World Food Program, and later with USAID/ PEPFAR, to supplement HHI produce.

AMPATH patients enrolled in the HHI are eligible to participate in the Family Preservation Initiative (FPI), a micro-enterprise program that provides training and loans in small business development designed for PLWHA. Current FPI programs include rural economic security programs for patients enrolled in the Nutrition/WFP program (provides market linkages, technical support, and operations management services and training) and a business consultancy in partnership with the New York University's Business School.

Program applicability in other contexts: AMPATH has many successful elements that would make it a good model to apply in other contexts. It would require locating interested local and international universities to create the type of dynamic partnerships that are key to the AMPATH design, and appropriate cooperative governmental and local community context for the model to succeed elsewhere.

Test of sustainability: AMPATH's focus on utilizing a variety of partners as well as their cooperation with the government increases their level of sustainability. The cooperative nature of HHI farms is crucial, but ideally they need to find ways to further boost their capacity to sustain the food support demands of patients without a need for external food supplements

from donors if they are to really achieve long-term sustainability. AMPATH's income security program is another positive element as it assists patients to become self-sufficient.

Sources:

(1) Miller E (2005) Community Nutrition: Long-Term Solutions, Stability and Sustainability. http://www.goshen.edu/communication/CHSspeechwinn04-05.php;

(2) Smart T (2005) HAART and harvest: antiretroviral therapy and nutrition when food is scarce, in HIV & AIDS Treatment in Practice Newsletter, #50. http://hivinsite.ucsf.edu/InSite?page=pa-hatip-50;

(3) AMPATH, a comprehensive response to the HIV/AIDS epidemic in Kenya. http://medicine.iupui.edu/kenya/AMPATH1.pdf. (no other reference info available for this pdf)

(4) AMPATH website: http://medicine.iupui.edu/kenya/program.html

B. TASO's Holistic Approach to Sustainability in Uganda

The AIDS Support Organization (TASO) in Uganda has, over the last 19 years, built itself into a model AIDS organization. It roots are at the community level where the organization sprang up as a result of the great need for HIV and AIDS care, counseling, and support in the late 1980s. The agency's founders were all people infected or affected by HIV. TASO remains dedicated to incorporating their voices and input into all aspects of the organization. Today, TASO is the largest indigenous AIDS organization in Uganda, providing services to 90,000 clients, including nutritional support to 28,140 beneficiaries, and education and apprenticeship program assistance to 1865 children. TASO programs and services include: Medical and home care support services, social support (nutrition support, counseling, income generation assistance, and education and psychosocial support for children including child play centers at clinics, youth clubs and an apprenticeship program), community education and HIV and AIDS advocacy, and capacity building activities including an HIV and AIDS training center. TASO stands out as a model in the way they utilize linkages and incorporate PLWHA at every level, and together these elements create a holistic and sustainable continuum of care for PLWHA and their families in resource poor settings.

TASO contributes its success to a number of key elements. Namely, linkages are the cornerstone of their model: "HIV/AIDS service organizations on their own cannot provide all the scaled up services required and need to work in partnership and collaboration with other partners." They include: government, missionary and private health services, traditional healers, alternative medicine practitioners, and other AIDS service organizations. At the recent Africa Forum 2006, panelists lauded TASO for working with ministries at the district level to create vital linkages between organizations and government services to coordinate activities and build a strong system of referrals.

TASO has taken a model approach to collaborating with the government and some even feel their active engagement of the government, especially at the district level, has almost created new district functioning mechanisms. This collaboration

involves, “Active government support in various ways including morally, politically, materially and financially,” said a TASO representative. “For example, in addition to the goodwill and political support, government hospitals have historically hosted TASO offices and seconded medical personnel to work in TASO clinics. In addition the government makes direct financial contributions to TASO's programme activities. All these have greatly facilitated TASO's work.”

TASO's model also emphasizes networking and collaboration with other AIDS providers. “Most of their clients are referred to them after receiving voluntary counseling and testing (VCT) at one of their partner organizations. “If TASO were to do the whole spectrum of HIV and AIDS care and prevention services, it would probable break under the strain. So complimenting each other and networking is another factor making success easier,” added the spokesman. In addition, TASO’s strategy involves building the capacity of other organizations to carry out HIV and AIDS work. The focal point of this approach is the TASO Training Center, well recognized for providing quality training to HIV and AIDS educators and service providers from around the world. TASO’s successful collaborations also extend to their cultivation of funding support. They have long worked to bring together different donors to fund the various TASO activities. “Support largely comes from a basket funding approach, which allows a cohesive and integrated approach to programs while minimizing administrative requirements for programmatic and financial accountability to several donors.” They also leverage the training center and consultancy revenues to support TASO programs and promote sustainability.

Program applicability in other contexts: TASO Uganda stands out as a grassroots-based program that is not only highly transferable to other contexts, but they are even designed to promote and facilitate this process. The Training Center exists to improve the capacity of other organizations to apply their model. TASO’s emphasis on community input and participation in designing and selecting appropriate interventions when scaling up or developing HIV and AIDS programs is key to being able to successful apply the program in different contexts.

Test of sustainability: TASO’s focus on linkages and their basket funding approach greatly improves the sustainability of their model. By joining forces with other organizations they decrease the burden of having to fund all of the services needed by their clients and they reduce overhead costs by taking advantage existing government structures to house their offices.

Source: Interviews with TASO staff, Uganda spring 2006.

C. Rural Holistic Care Model: Partners In Health

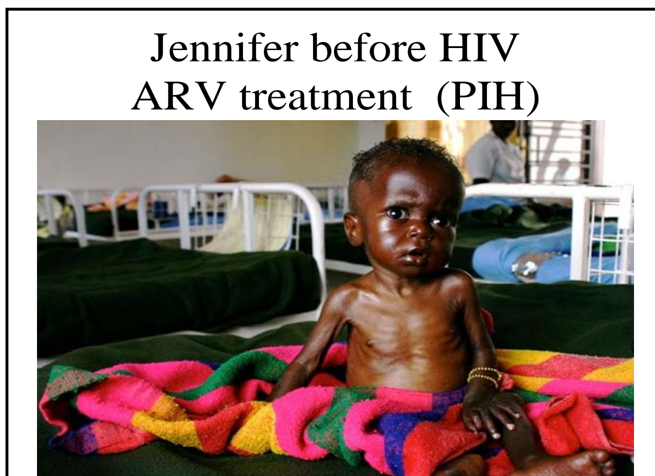
In 2005 Partners in Health (PIH), in collaboration with the Clinton HIV/AIDS Initiative and the Government of Rwanda, began working in two rural districts in Rwanda, using a successful model PIH pioneered in Haiti during the late 1990’s. This includes incorporating their “four pillars” approach providing: primary health care with integrated HIV care and treatment, TB treatment, maternal and child health, and screening and treatment of sexually transmitted infections. In

addition, their program employs a community-based care system supported by local health workers ("accompagnateurs") who are hired and trained to give care to patients on ART in their homes.

PIH currently provides patients beginning ART with a food package for four people for a period of six months and then reduces support to a package for two people for a remaining six months. While this food support is crucial, it's only an interim step, to be coupled with more sustainable solutions that will provide food security for patients in the long-term: "After one year of the project, we are now finally able to focus more on sustainable sources for food and income," said Mike Rich, PIH's Country Program Director in Rwanda. "We want everyone -- as soon as we identify them with HIV -- to start thinking about an income-generating project or a food-security project where they improve their ability to grow or obtain food." In the district, he added, "Most of them already have some small farms and improving their output and making sure they can realize the first steps is our focus.

To "jump start" the process, PIH reached out to 40 grassroots HIV associations early on to discuss possible collective income-generation activities. Explained Rich: "We gave a week long course to each HIV association leader and one designated person from the HIV association on writing and managing microloans. After the course, it was up to the HIV association to write an application with a proposal for an income-generating project. The microloan was given interest-free and if the HIV association proved to successfully manage the loan, they could qualify for a new loan." Most of the projects that have been proposed to date involve farming or buying and selling food stock, but some focused on livestock such as cows or goats that produce milk. "It's up to them to decide that and to structure it," said Rich.

The following pictures from the Partners In Health program illustrate the positive impact of their program:



Copyright Partners In Health

PIH has teamed up with partners like the Clinton Foundation, which is backing PIH's program via funds from the new Clinton-Hunter Development Initiative (CHDI).[lxvii] (The CHDI plans to invest an initial $100 million in education, health, infrastructure, agriculture and entrepreneurial support in Rwanda and Malawi.) They are also working with rural agricultural

experts to teach local farmers innovative techniques that will “double or triple their yield,” said Rich. PIH-Rwanda hopes to team up with Heifer International, an organization committed to combating hunger through livestock and agriculture programs.

Dr. James Kiyumba, Heife International’s Country Director, says the best way to combat HIV and food insecurity is to “come together, analyze the situation [and] attack the situation from different directions, by the end of the day we’ll succeed. Medicine alone is not enough. The approach we use of sustainable agriculture is an integrated approach.”(2) He favors giving cows because they provide both milk for consumption – and leftover milk for sale. The idea behind the possible partnership with PIH, explained Kiyumba, is: “They come in with drugs; they come in with initial food support. Then we shall go along with them to give them the support for self-sustaining [livestock] programs. We train them [patient groups] in sustainable agricultural practices; we provide the animals. So we don’t only get agricultural product, because we train them how to produce sustainably from small pieces of land that they own, using the fertilizers or manure that they get from the animals to improve their small pieces of land, which increases their food security along with provision or proteins from the animal products. I call it integrated because we are using both approaches. We are using agriculture and we are using the livestock….”

Program applicability in other contexts and test of sustainability: PIH has already proven that their model is applicable to other contexts as the Rwanda program was designed based on their successful model in Haiti. Elements that are key to its success include active participation and support of the government as well as strategic partnerships with different organizations. In terms of sustainability however, PIH-Rwanda is heavily funded by outside donor support and while the program is very comprehensive in the services it provides, it is also very expensive to operate, making it less sustainable. Fortunately, PIH has a history of providing long-term support and has a strong commitment to their programs. In addition, their collaboration with other organizations eases the burden of providing all the services themselves and thus some of the programs do provide sustainable activities.

Sources:

(1) Interview with Michael Rich, MD, June 8, 2006, Kigali;

(2) Interview with James Kiyumba, MD, June 5, 2006, Kigali.

D. IDE in Zimbabwe: Rural Development and Agriculture

International Development Enterprises (IDE) works to “assist smallholders to overcome barriers to clean water, agricultural inputs, technology, and credit so that they can be integrated into agricultural markets--both as consumers of products and services and as producers of saleable crops--with the end result being increased incomes and improved livelihoods.” (1) Since 2002, IDE has been implementing various agriculture programs in Zimbabwe and engaging partners with various

expertise in rural development to include Nutrition, HIV and AIDS, Gender, Natural Resources Management, Agro-processing and vulnerability assessments.

After four years building and shaping IDE's programs in Zimbabwe, Mukula Mukasa and his team have learned a great deal. They initially were contracted to implement a Quick Impact Food Security Project for rural HIV and AIDS affected households through the introduction of low-cost drip irrigation kits. IDE engaged 22 partner NGOs through which to distribute the kits. However, the results of the project were not as hoped, revealing important lessons. The major issues that arose were that the project did not utilize a comprehensive feasibility study to find out about the target community's needs and interests. This led to low adoption rates among households. Poor communication, planning and engagement among partners also led to poor design and implementation since many did not have the capacity to manage the installation and training required to install and maintain the systems among their beneficiaries. (2)

In Zimbabwe, IDE applied what is learned from these hard lessons. "The whole trick is creating partnerships, creating those functional synergies," added Mukasa. "The moment you acknowledge that you don't know everything, that you can learn from others and that others have something to contribute in whatever area of development you're working in [so] you can accomplish a lot."(3) To him, the ingredients of success are clear: "Small holistic programs that successfully create linkages between organizations that already specialize in the different invention areas and bring them together to provide the range of necessary services from medical care to temporary food aid to long-term agriculture capacity building and income generation programs." (3) With this in mind IDE has begun two projects of note: Gardens for Better Health and the Micro Irrigation Partnerships for Vulnerable Households (MIPVH). "The target groups, especially for the first one, [are] exclusively HIV-affected," explained Mukasa. "This is very much an HIV, food security driven project with some strong market elements and it's heading in the right direction."(3)

MIPVH's goal is to increase household food security, nutrition status and health among rural farming families in Zimbabwe. IDE has selected a group of partners already working with vulnerable families in the region to lend complementary areas of expertise to the project, from gender to nutrition, to HIV and AIDS to community-run gardens to increase household food production and income from surplus crops. Each partner is responsible for the area of expertise they are contributing to the project and provides training to the other partner organizations. IDE procures the irrigation drip kits and appropriate seeds and fertilizer (tailored to climate and soil specifications) and distributes these to beneficiaries with the help of partners. The goal is to assist vulnerable households to develop and maintain vegetable gardens to increase household food production and income from surplus crops.

Program applicability in other contexts: For Mukasa, programs like MIPVH are transferable as long as you: "Identify your strengths right from the outset. Where there are gaps, try to build partnerships with other stakeholders both from civil society, the private sector, and government. And see how you can work with them, and sit down and discuss with them very openly and transparently, and put your cards on the table --don't keep them in your pocket because that creates a lot

of suspicion, especially with international NGOs."(3) Such programs also rely on the local community to develop interventions based on their input, involvement, and expressed interests, making it more like to succeed in diverse settings.

Test of sustainability: The strong market elements woven into IDE projects like the MIPVH, are in place to create sustainability. "Viability and sustainability are key," stresses Mukaso. "We give advice on crops that have nutritious benefits -- such as cassava which has worked very well in Zambia, for example -- and also on crops and products that have high commercial value." Citing an example, he said, "One community produced pancakes, pies, donuts, and pumpkins. So you assist beneficiaries in locating commercialized products and invite the private sector in." In his experience, "viability has been sustained or enhanced as a result of private sector involvement, because the private sector will buy into any project if it's viable, if it can make money. They will always be where they can make money, and where there is money, in most cases there is sustainability."(3)

Sources:

(1) IDE website: http://www.ideorg.org/SectionIndex.asp? SectionID=125

(2) http://www.ideorg.org/page.asp?navid=248

(3) Interview with Mukula Mukasa, May 13, 2006.

E. Millennium Village's Poverty-Slashing Interventions

Starting in 2000, author and global economist Jeffrey Sachs brought global audiences to their feet by declaring that we collectively have the means to afford the global cost of HIV treatment for millions of the world's poor. What was required was greater political will and leadership. Today, the cheering section has increased as Sachs rouses more support for a related vision: 'breaking the cycle of poverty,' a goal that is inextricably linked with halting the spread and impact of HIV and AIDS, particularly in hardest-hit southern Africa. Sachs is credited with launching a holistic, village-oriented approach to slashing poverty – and decreasing malnutrition -- by bringing together a range of sustainable development interventions to a given target community, and making it cost-effective. His UN Millennium Project is led by the Earth Institute at Columbia University of New York and backed by $100 million in donor support to date. It has set up 12 model Millennium Village sites across Africa that aim to help tens of thousands step out of poverty and into prosperity with a plan that costs about $110 per person per year.

A new site is up and running in Kagenge (also called Mayange), in the Nyamata district of rural Rwanda which was devastated by the 1994 genocide. About 5000 people live in Kagenge, the majority in intense poverty. There, an estimated 70% of patients at one clinic were recently estimated to have malaria, while HIV is higher in the district –

estimated at 13% - than the national level of 3%. The latter is viewed as a reflection of who is affected – many in Nyamata are survivors in an area that lost half ifs population during the 1994 genocide.

The Millennium Villages projects are part of a plan to achieve some of the goals laid out in the 8-point UN Millennium Development Goals (MDG). As noted earlier in this report, too little progress has been made on the MDG goals – something Sachs had vowed to change. His approach is a zealous example of what is known as “horizontal development” by those in the field – a combining of multiple interventions and innovative approaches to sustainable development, education and training to arm villagers with tools to quickly achieve better collective health and greater productivity – and profitability. Rather than an individual approach to improving health or any other indicator of development, the Millennium Villages focuses on a community, and on the links that exist between, say, poverty and HIV, lack of a covered well and malaria. The model is viewed by many as the counter to efforts that foster dependence on outside food aid, though in fact, supplemental food is one piece of the pie that’s offered to villagers who may be very malnourished. But the larger, tastier piece is the array of resources and skills offered to villagers that support and produce self-sufficiency – and profit.

The Millennium Villages model fits nicely into Rwanda’s national plan to lift itself out of poverty – Vision 2020 – part of the government’s overall approach to providing tools to help individuals rebuild their lives – and the post-genocide economy.

At Kagenge, a Columbia University public health expert, Josh Ruxin, leads a small team of specialists who teach villagers about basic health care and maintenance, education, innovative approaches to energy, clean water, or techniques used in rural farming, environmental protection, and soil management, and resources such as drought-resistant seeds and insecticide-treated nets that ward off mosquitoes that carry malaria and other diseases. The creative minds behind the project are eyeing the most exciting possibilities that are arriving from the global world of technology and sustainable development field that are being tested across Africa and developing regions around the world. Elsewhere in Rwanda, other groups are linking rural farmers to markets via computers run on alternative energy, using the wind or sun or water or energy from bicycles.

It sounds great, but can it work – and for how long – ask skeptics? And how much does a ‘do it all’ approach cost in the long term? The short answers seem to be Yes, and it’s comparably cheap. The villagers do have to invest $10 of their own money; the rest is matched by donors, government and the project itself – for a total of $110 per villager annually. That money is supposed to last only five years – then the goal is: self-sufficiency. Here, there’s already early evidence of the potential of this approach to work: left over food. Not long ago, about 400 people were still visiting an emergency feeding center backed by WFP and UNICEF, but not those from Kagenge. They were eating leftover food picked from a successful harvest.

The clinic there offers a range of HIV services. The staff teach rural clients with HIV not only how to build wells and irrigate fields to grow their food, but how to cook it and eat it -- for health, then sell what’s left over. The Millennium Village project

offers a strong example a fully integrative, group-oriented approach to combating HIV – in which poverty alleviation – breaking the cycle of poverty that is so linked to disease -- is the central pillar of all program activity.

Source: Interviews, Rwanda; Sarah Tomlin, "Harvest of Hope," Nature, Vol. 442, July 6, 2006, pgs. 22-2

F. Nazarene Compassionate Ministries Community Gardens

Tucked down a long, straight dusty road outside of Lusaka, Zambia in Chipongwe sits the site of the small grassroots community-based project: Caregivers food security program for HIV- and AIDS-affected households. The project began as a result of the need in the community to support AIDS orphans and vulnerable children (OVC) and the families that were caring for them. Originally the community had a Canadian grant to support the purchase of fertilizers, but when the grant ended they needed to find a more sustainable solution. With the support of the Nazarene Compassionate Ministries, they set out to develop both a community garden at the church site and to implement sustainable agriculture methods for individual family plots in the surrounding community.

The community garden is intended to provide a place where the entire community participates in caring for and maintaining the fruits and vegetables. The idea is that those involved will learn new conservation farming techniques that they can then apply to their own plots at home. Meanwhile they use the fruits and vegetables they grow to improve the diets of OVC in the community and support caregivers to ease the burden of providing for so many orphans. The surplus then is sold and the profits are used to pay the school fees for the OVC.

The community garden is dynamic in its simplicity and sustainable, community-driven approach. The conservation farming techniques employed do not require expensive fertilizers, but rather use what the community already has to improve their agricultural yield and improve the overall food security for the OVC and families in the surrounding community. This includes using simple treadle pumps for irrigation, carefully selecting crop varieties that are nutritious and work well with the climate and soil, and using natural fertilizers, raised beds, and rotating crops.

Garden of an OVC caregiver family using conservation farming techniques

G. WE-ACTx – WFP Pilot Nutrition Program for ARV Clients (2004-2006), Rwanda

In October of 2004, (WE-ACTx, in conjunction with the WFP, began an initiative to provide food supplements to malnourished patients from their Kigali-area clinics. The goals of the program include:

- To provide supplementary food to severely malnourished clients of the We-ACTx program for the purpose of improving their health;
- To help support patient's adherence to anti-retroviral drugs;
- To assess the added value and efficacy of short-term food supplementation in improving the health of ill patients starting ARVs;
- To combine short-term food supplementation to a comprehensive approach to patient care, including nutrition education, food security counseling, and access or referral to food production and income generation programs, in order to ensure sustainable sources of food acquisition and food security of clients, including starting antiretroviral therapy.

The program began with 220 beneficiaries receiving 25kg of corn-soy blend per month. By May 2005, through increased support from the WFP, WE-ACTx was providing supplemental to approximately 600 clients per month. A total of 977 beneficiaries received 100,025 kg of food between October 2004 and April 2006, with 590 graduating from the program after successfully completing 6-9 months.

The pilot program was successful by a number of measures:

- Of the 207 beneficiaries that participated in the first 11 months of the program, nearly three-quarters experienced an increase in body mass index (BMI), with the increase of the mean BMI of the cohort being 1.1.
- The percentage of clients in this cohort with a BMI below 18 (clinically malnourished) declined from 16% to 8% over the course of the study.

In addition, WE-ACTx is implementing a peer-based nutrition education program for its patients with HIV to promote healthy living and improve management of ARV treatment. During this pilot program WE-ACTx also started two income-generating programs (sewing and crafts collectives) for graduates of the Food Program that currently provide 25 widowed HIV-positive women with a daily salary and promotes sustainable long-term food security.

Update:

As a result of the success of the WE-ACTx-WFP Pilot Food Program (October 2004 to April 2006), WE-ACTx requested a renewal and expansion of the program to support an additional 2500 beneficiaries slated to be on ARVs in 2006. Unfortunately, WFP was unable to support this expansion. WE-ACTx has since worked to focus on income generation activities for its ART clients.

What follows is a summary of the results of the pilot food program which were presented via a poster at the XVI International AIDS Conference in Toronto in August, 2006:

WE-ACTx-WFP Pilot Food Program (2004-2006)*

The information summarized below was presented in a poster at the August 2006 XVI International AIDS Conference in Toronto.

Poster ID: TUPE0860

Promoting ARV adherence, food security and self-sufficiency: the impact of short-term food supplements and income generation programs in resource-poor settings

Gisha Mugisha L. F., Starmann E., Munganyinka B.N., Anastos K., Cohen M., Hakizimana J., Umulisa H., d'Adesky A.–c.

Women's Equity in Access to Care and Treatment (WE-ACTx), US and Kigali, Rwanda

Overview

In 2003, 41% of the Rwandan population was categorized as undernourished and 66% of the population lived below the poverty line (1). The inaccessibility of food has had a substantial impact on the nutritional status of many HIV positive Rwandans considering that there are greater nutritional requirements for infected people. People living with HIV require 10-15% more calories and 50-100% more protein than regular dietary intakes (2). In addition, several HIV positive participants in the cohort reported having difficulty or not being able to take ARV's because they had no food.

For numerous reasons, this occurrence is alarming. Not only does decreased food intake have direct health effects on seropositive people, but not having food can also impede ARV treatment. For HIV infected people, malnutrition has grave consequences; reduced immune function, an increased incidence of infection, tissue damage in the form of lymphoid atrophy and a quicker progression of HIV disease (3). Conversely, improved nutrition leading to elevations in a patient's Body Mass Index may be associated with increases in CD4 count and a lesser risk of HIV progression (4). Therefore, access to food is a critical component of successful HIV treatment programs with or without ARV therapy. Food intervention must complement medical care for people living with HIV.

Introduction

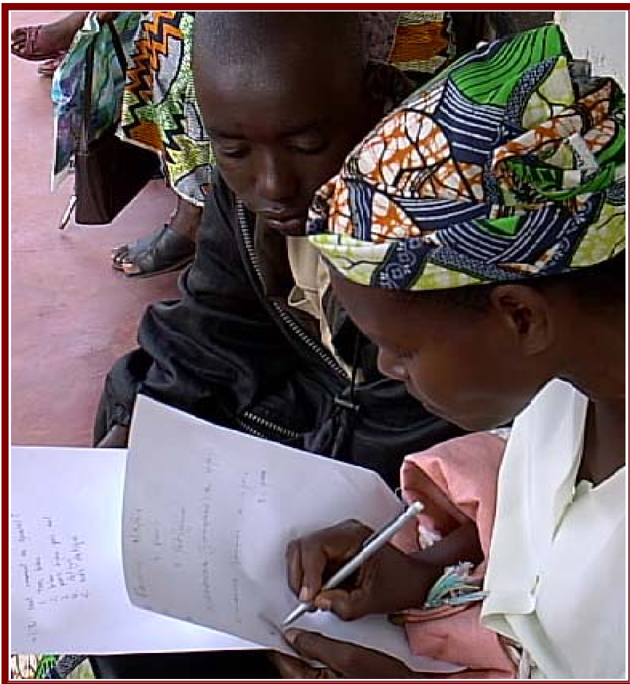
Socioeconomic factors and the unavailability of food in Rwanda diminish the nutritional status of already vulnerable HIV positive populations. Not only does this exacerbate the health status of seropositive patients, but it can also impede ARV therapy.

In light of this dilemma, we attempted to determine the following:

To determine the level of malnutrition present in a cohort of patients attending the WE-ACTx clinic through subjective and objective anthropometric criteria

To successfully implement a food program in unison with a clinical program to serve as a model of how comprehensive HIV care includes nutritional interventions

To assess the effects of food intervention by examining Body Mass Index (BMI) changes in a cohort of seropositive patients



Source: Food Program Staff Conducting Nutrition Interviews with Clients, WE-ACTx 2005.

Methods

Baseline BMI's were taken for a cohort of seropositive female patients (n=207) attending the WE-ACTx clinic. Patients were instructed to return on a monthly basis to receive a 25 kg bag of Corn Soya Blend porridge distributed by the clinic's food program. Monthly BMIs, and objective and self-reported health data were collected during each monthly visit.

Criteria for patient eligibility in the cohort were the following:

- All were female patients receiving ARV therapy or patients preparing to initiate ARV therapy;
- All were female patients with WHO Stage III HIV classification and 200<CD4<350;
- All were female patients with a baseline BMI<20.0

A survey was given prior to entering the food program in which participants answered questions about the number of meals that they ate per day, types of HIV-related symptoms that they experienced, their ability to work and their sense of

well being. The food program was developed with input from clients. Study participation was voluntary and subjects were informed of the study methods and consented. The food supplementation was provided for free and transportation fees to and from the food distribution site were provided as well.

Results

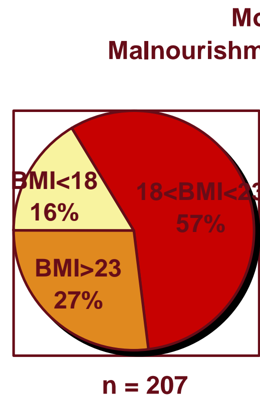
The use of objective and subjective, self-reported health data elucidated the level of malnutrition present in a cohort of 207 women. Baseline BMI's taken at Month 1 of a continuous food intervention program revealed that 16% of all women were clinically malnourished, with BMI's<18.0. Another 57% of the cohort had BMIs between 18.0 and 23.0 and were borderline clinically malnourished or at risk of becoming so due to persistent weigh loss. Only 27% of the cohort displayed BMI>23.0. Based on these findings, it appears that malnutrition is prevalent and comprises a serious health threat to HIV positive people.

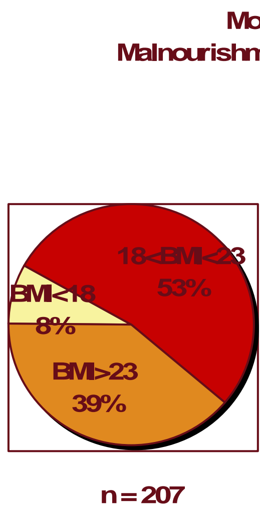
Treatment	Mean			p value
	Month 1 BMI	Month 11 BMI	Change in BMI	
Total Cohort (198)	21.4	22.5	1.1	p<0.05
Non-ARV Group (34)	20.4	21.2	0.8	p<0.05
ARV Group (164)	21.6	22.8	1.2	P<0.05

Table 1. Change in BMI during 11 months of food supplementation

Upward changes in BMI values were observed for both ARV and non-ARV groups who started on food supplementation. The value of these changes were statistically significant, at +0.8 for the Non-ARV group (p<0.05) and +1.2 for ARV group (p<0.05), and overall, a +1.1 increase in BMI for the entire cohort (p<0.05). Increased BMI's across both groups were predominant in descriptive and regression analysis. Month 11 BMI values compared to baseline BMI's showed a shift towards higher BMI values, exemplified by the difference between the average baseline BMI of 221.4 and the Month 11 BMI of 22.5 for the entire cohort. By Month 11, more patients had BMI>18.0 and BMI>23.0, leading to decreases in the numbers of clinically malnourished and borderline clinically malnourished.

Fig. 2. Difference in BMI distribution between Month 1 and Month 11 of subjects enrolled in food supplementation malnourished participants.





Conclusions

In a cohort of 207 women attending the WE-ACTx HIV clinic in Kigali, Rwanda, there was an identified level of malnutrition that was addressed through a co-operative food intervention. Infected patients who were on ARV therapy, soon to start therapy or clinically malnourished were supplied with continuous food supplementation. Baseline BMIs were taken for the cohort and after 11 full months of food distribution, significant upward changes in BMI were evidenced in both the ARV and non-ARV groups. The average BMI rose for the entire cohort, and participants receiving ARVs experienced a significantly larger BMI increase than Non-ARV participants.

These findings reiterate the need for integrating nutrition into ARV treatment initiatives and HIV medical care programs in developing countries. Malnutrition has the potential to exacerbate the health status of HIV infected people and ARV

therapy alone is not enough to tackle the complications that arise from nutritional deficits. Additionally, nutritional deficits impede ARV use. Comprehensive HIV care must include nutritional intervention as a central principle.

Since the start of the food program WE-ACTx has graduated 590 people who received food supplementation between 6 and 9 months. The next goal is to provide training for long-term solutions to allow people to provide for themselves. In this line, food program graduates have started to work in an income-generating project. Twenty-five former food program beneficiaries are now working on projects and the beginning pilot program has plans to expand.

References

Human Development Report, UNDP, 2003

A review of linkages between HIV/AIDS and nutrition interventions in Malawi, UNICEF, May 2003

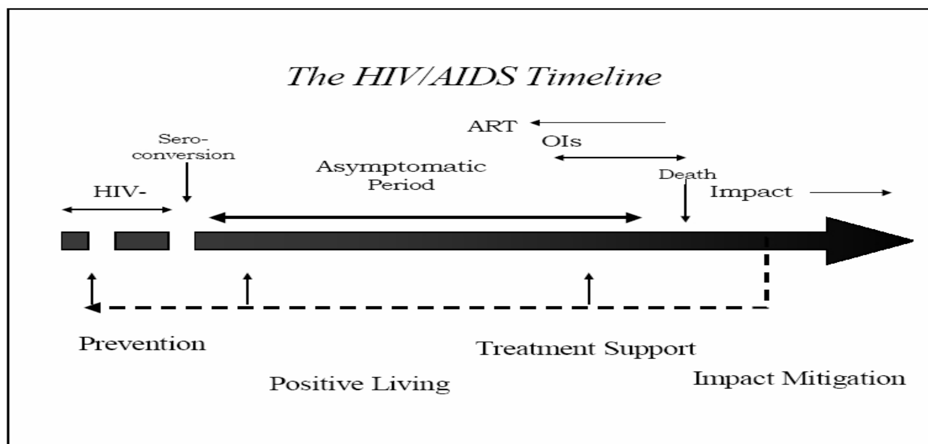
Anabawi & Navario, 2005

Jones et al, 2003

XI. Tools for Program and Field Providers

A. HIV/AIDS Timeline Tool (C-SAFE and CARE)

An understanding of the evolving needs of individuals and communities infected/affected by HIV and AIDS is a crucial foundation to the effective targeting of food security interventions. The nutritional needs of people living with HIV and/or AIDS are not static – they are dynamic, changing with time and eventual disease progression. While food aid provides a much-needed short-term safety net, it is only one piece of a much larger food security challenge. Creativity and 'thinking outside the box' are required to make the best use of scarce resources in the most appropriate, sustainable way. The scope and scale of need continues to overwhelm some of our best food security and livelihoods programmers. Our objective in developing this tool was to make thinking 'though an HIV/AIDS lens' simpler and more accessible to program designers from all sectors.



The HIV/AIDS Timeline is simply a visual representation of the major stages: from life without HIV, to life with asymptomatic HIV infection, progression from HIV to the development of Opportunistic Infections (OIs) and the onset of AIDS, the time around the death of a family member, and the period faced by the family left behind. This provides a starting point for thinking holistically and comprehensively about a complex problem, by enabling people to analyze the situation one stage at a time. The Timeline allows one to present a simple visual image of a concept that is often overlooked even in multisectoral programming: that HIV and AIDS involve fairly clear (though at times overlapping phases), which involve quite clear objectives, and by extension that specific interventions can be more relevant in one phase than in another. This helps emphasize that programs can be designed to address specific situations, including opportunities too often overlooked:

Prevention:

Food security programs may help some people to avoid HIV infection by helping them to access sufficient, nutritious food and income in ways that help avoid high-risk situations;

Positive Living:

The period between infection and the onset of AIDS-related illness spans several years (commonly cited as 4 – 10 years); secure access to sufficient nutritious food is one of the major aspects necessary to prolong the period of healthy living for people with HIV;

Treatment support:

Uptake and adherence to treatment protocols (i.e. antiretroviral and TB treatment) is improved when people with HIV have sufficient quantity and quality of food;

Impact mitigation:

Secure supplies of good food help minimize impacts on those affected by illness or death in their families and communities, for example, by lessening the pressure to sell off productive assets or engage in activities that increase risk of HIV infection.

[Excerpted and reprinted from "The HIV/AIDS Timeline as a Program Tool: Experiences from CARE and C-SAFE," co-authors Kate Greenaway (C-SAFE) and Dan Mullins (CARE), presented at the International Conference on HIV/AIDS and Food and Nutrition Security, International Food Policy Research Institute, Durban, South Africa, 14-16 April 2005.].

B. Positive Deviance – Hearth Model

Can It Be Applied to Nutrition and HIV?

Positive deviance is a development model based on the idea that in every community there are certain individuals who, despite having the same conditions and constraints as others, manage to thrive while the majority of their peers do not. These "Positive Deviants" are studied to gain insight into how others in the community could also adapt similar behaviors and learn to thrive as well. The positive deviance approach is unique from other development approaches in that it looks not for external resources to meet needs, but rather seeks solutions from within the community from those who manage to thrive with existing resources.

Positive deviance was originally developed to address child malnutrition and focused on investigating the "Positively Deviant" mothers whose children were healthy and well nourished in communities where most children were malnourished.

Over the last 20 years this approach has been adapted to address a multitude of community-level issues including female genital mutilation, reproductive health and family planning, HIV and AIDS prevention, school performance, education, and child trafficking prevention.

Given the success of this approach with a variety of social issues, positive deviance is well suited to address the challenges of nutrition, food security and HIV and AIDS, especially with regard to HIV-positive mothers and/or children. Save the Children has created a thorough and detailed step-by-step field guide, "Designing a Community-Based Nutrition Program Using the Hearth Model and the Positive Deviance Approach." While the guide is not targeted at HIV-affected households, it is easily adaptable to reach this target community and could be further adapted to analyze "Positively Deviant" communities and/or families that have found ways to address the larger issue of food security and HIV in their community or households. – End.

C. Checklist Tool: Food for Assets Programming Through an HIV and AIDS Lens

Authors: Kenton Kayira, FFA Technical Consultant, Primary Researcher, Kate Greenaway (C-Safe HIV/AIDS Advisor, Kara Greenblott (C-Safe Programming Manager), C-SAFE 2004.

CHECKLIST

ADAPTING FOOD FOR ASSETS PROGRAMMING TO AN HIV/AIDS CONTEXT

Programming Stages	Key Questions to Ask
Project Identification and Planning	1. What are the impacts of HIV/AIDS in the communities in which you are planning to work?
	2. What resources are available that could help you integrate HIV/AIDS into your geographical targeting?
	3. How are you involving community-level and district-level organizations who have experience, knowledge, or resources with HIV/AIDS issues?
	4. How are you intentionally involving PLHA and households affected by HIV/AIDS in the identification and planning of the project?
	5. Are there any assets included in your project that will be effective in mitigating the impact of HIV/AIDS? What types of assets could you include that would do this?
	6. What effect will the project have on traditional and existing coping mechanisms and strategies in the context of HIV/AIDS?
Building Staff and Community Capacity	7. What can be done to enhance the capacity of implementing agency to identify, understand, integrate and address HIV-related issues in program planning and implementation?
	8. What can be done to enhance the capacity of the community and its leadership to support the inclusion of PLHA and affected households as planners, participants, and managers in FFA projects?
Identification of	9. Will PLHA and affected households derive benefits from the assets being created? How could you modify the project to ensure that benefits are shared with the PLHA and

FFA Beneficiaries	affected households?
Identification of FFA Participants	10. Which targeting mechanisms have you included that seek to intentionally include PLHA and affected households as participants in the project?
	11. Which organizations, institutions, and referral mechanisms could be approached for assistance in targeting able-bodied HIV-positive participants?
	12. Are there households that qualify yet cannot participate in the project? What are the precise reasons for their inability to participate?
	13. How can the project be modified to accommodate those who are unable to participate for reasons identified above?
	14. How can your work norms be adapted to enhance participation of PLHA and affected households? Are there aspects of the work that are less labor intensive and can be reserved for participants requiring lighter duties?
Implementation	15. Are there ways you could organize forms of compensation (food and in-kind) that do not rely on traditional person/hours worked, so as not to discriminate against PLHA or affected households?
	16. How could you adapt the food ration to be more useful and appropriate for the needs of participant individuals and households?
Sustainability	17. How can you explicitly include PLHA and affected households in maintenance of the asset?
	18. How have you adapted your maintenance plan to enhance sustainability in the context of HIV/AIDS?
Monitoring & Evaluation	19. How can existing FFA monitoring and evaluation tools be adapted to capture information measuring the community's response to HIV/AIDS-related shocks?
Project Outcomes	20. Does any aspect of the project have the potential to influence stigma? What can be done to ensure the project does not increase stigma? What can be done to help decrease stigma?

21. Does the *asset itself* have the potential to increase the spread of HIV (or increase risk-taking behavior)? What ways can this be mitigated?

22. Does the *process of creating the asset* have the potential to increase the spread of HIV (or increase risk-taking behavior)? What ways can this be mitigated?

23. Will any stages of the project put people's health at greater risk, thereby hastening the progression from HIV to AIDS? Will any stages help to improve people's health status?

Checklist reprinted courtesy of Consortium for Southern Africa Food Security Emergency (C-Safe). www.c-safe.org

D. Gender Equity and Rural Livelihoods Toolkit

The Canadian Interagency Coalition on AIDS and Development (ICAD) has developed a toolkit on addressing HIV/AIDS and gender equality in food security and rural livelihoods programming. The toolkit can be used by program managers and their partners when working in situations where HIV and AIDS prevalence is high. While it is primarily geared towards the CIDA program cycle, the toolkit is also useful to a wider audience including NGOs, particularly those working closely with CIDA. The toolkit includes seven Guide Sheets which present key questions or issues that must be addressed at discrete points in the project or program cycle. The Guide Sheets cover topics such as: considering HIV/AIDS and gender equality issues in results oriented logical framework analysis; performance assessments and guidance on complying with the "Three Ones" principles.*

The kit also includes four "Tip Sheets" providing a glossary, selected resources and reference to key documents on international commitments and resources.

The guidelines are available at: http://icad cisd.com/content/pub_details.cfm?ID=173&CAT=13=e.

**Reprint excerpted from ICAD materials online at http://www.icad-cisd.com*

XII. Appendices

Appendix A: Hygiene and Food Safety

A focus on nutrition also calls for paying attention to hygiene, food safety, and access to clean water. Individuals with HIV are vulnerable to infections caused by organisms found in contaminated food and water.

Where you live, sleep, eat, and wash yourself is important when it comes to health. It is hard to stay healthy if you live or work in unsanitary places where you may be exposed to germs, where it may be overcrowded, and where you have no access to clean water. Many illnesses are spread by germs that pass from one person to another. Different germs are spread in different ways. For example, tuberculosis (TB) germs are spread through the air. Lice and scabies are spread through clothes and bed covers. Malaria and dengue fever are spread by mosquitoes, which breed in water that is not flowing.

Since family members are in close contact with each other, it is very easy to spread germs and illness to the whole family. A family will have less illness if they:

- Wash cooking and eating pots and utensils with soap (or clean ash) and clean water after using them. If possible, let them dry in the sun. Sunlight kills many germs.
- Clean the living space often; sweep and wash the floors, walls, and beneath furniture; fill in cracks and holes in the floor or walls where roaches, bedbugs, and scorpions can hide; hang or spread bedding in the sun to kill parasites and bugs.
- Do not spit on the floor. When you cough or sneeze, cover your mouth with your arm, or with a cloth or handkerchief. Then, if possible, wash your hands.
- Get rid of body wastes in a safe way. Teach children to use a latrine or to bury their stools, or at least to go far away from the house or from where people get drinking water. If children or animals pass stool (waste) near the house, clean it up at once.

Source: When Women Have No Doctor (WWHND), Hesperian Foundation

Appendix B. Accessing Clean Water

Since many individuals with HIV globally live in rural areas where there is no treated water, they can take steps to purify water and store it. Drinking water should be taken from the cleanest possible source. If the water is cloudy, let it settle and pour off the clear water. Then, before drinking, kill the harmful germs as described below. This is called purification.

Store the purified water in clean, covered containers. If the container has been used for storing cooking oil, wash it well with soap and hot water before storing clean water in it. Never store water in containers that have been used for chemicals, pesticides, or fuels. Wash water containers with soap and clean water at least once a week. Store water in covered jars and keep your living space clean.

PURIFYING WATER

Simple and inexpensive ways to purify your water:

Boiling water for 5-10 minutes will kill most germs. Because boiling water uses so much fuel, use this method only if there is no other way to purify your water. If you want to kill all possible germs, you will have to boil the water for 20 minutes. To avoid getting germs in the water, choose a spot away from children, dust, and animals. If you want the water to cool before using, bring the containers inside overnight. Water can be stored for a day or two in the same container.

Sunlight. Sunlight kills many harmful germs. To purify water using sunlight, fill clean, clear glass or plastic containers with water, and leave them outside from morning to late afternoon. Be sure to place the containers in an open space where they will be in the sun all day. (If drinking water is needed right away, putting the containers in the sun for 2 hours in the middle of the day should be enough for purification.) Sunlight purification works best in warm climates.

Lemon juice sometimes kills cholera (but not other germs). Add 2 tablespoons lemon juice to a liter (1 quart)

To keep a water source clean:

Do not let animals go near the water source. If necessary, build a fence to keep them out.

Do not bathe, or wash clothes, cooking pots or eating utensils near the water source.

Appendix C. Ready to Use Therapeutic Foods (RTUF) for Severe Malnutrition

In recent years, food aid programmers have successfully use of a novel ready-to-use therapeutic food (RUTF) spread in the rehabilitation of severely malnourished children, and is used in home-based therapy (1). The RUTF is a spread that combines an energy-rich mixture of milk powder, vegetable oil, sugar, peanut butter and powdered vitamins and minerals. The key requirement is water, albeit a precious resource in the poorest settings, but no other preparation. It can be stored in tropical settings without refrigeration for 3-4 months. 6 (7). RUTF can be safely and easily manufactured small or large quantities in most settings using simple technology that has been field tested Malawi, Niger and Congo and in settings of minimal industrial infrastructure. (6). The main ingredients needed to make it are milk powder, vegetable oil (alternative soy, cottonseed, rapeseed, corn oils), powder sugar (brown or white can used if ground to fine powder), peanut butter (roasted peanuts, no salt, oil or preservatives) and powdered vitamins and minerals (providing micronutrients for equal to F-100, the standard therapeutic food used to treat malnourished children. RTUF is commercially produced by Nutriset (Malaunay, France).

Source: " Local production and provision of ready-to-use therapeutic food for the treatment of severe childhood malnutrition," Mark J. Manary, Professor of Pediatrics, Washington University School of Medicine, St. Louis, MO, USA. Prepared as s Technical Background Paper for an Informal Consultation with UN agencies held in Geneva (21-23 November 2005). Note: This article discusses details of local commercial production of RTUF and the base requirements for manufacturing. For additional info, contact: DR. Manary at: manary@kids.wustl.edu.

Appendix D: HIV-Related Food Recipes for Specific Populations

People living with HIV face the possibility of developing malnutrition for a number of reasons. Some issues are metabolic, such as a decreased ability to absorb nutrients in food, increased energy needs of the body to fight HIV, and recurrent opportunistic infections. Others may be related to changes in food consumption due to demanding medication schedules, painful infections of the mouth or esophagus (such as Candida/thrush) or, finally, the likelihood that a caregiver is also ill and has a decreased ability to provide for others living with HIV (see www.hivpositive.com).

The following recipes may be used to help people living with HIV. They are grouped according to the populations for which they might be most helpful, though a person at any stage of life or disease may want to try any of the recipes.

For this report, which relies heavily on interviews carried out with different actors in Rwanda, we have attempted to use culturally appropriate recipes with ingredients available to people living in Rwanda. In encouraging people to obtain proper nutrition, recommendations should be practical and, whenever possible avoid forcing people to eat food that is unusual or uncomfortable for them.

The following recipes were adapted from documents developed for Rwandans by the Rwandan Minister of Health and as part of Initiative Esther, funded by Unicef and Lux-Development. Many are for full meals, but small, frequent snacks of fresh fruits, vegetables and nuts are recommended for most adults with HIV. If a person is on antiretroviral or other medicines, care should be taken to ensure that proper attention is paid to medication schedules so that food is taken at appropriate times.

Snacks

- Peanuts
- Avocado
- Papaya
- Pineapple
- Other fruits and vegetables

A. Child just beginning feeding:

Energy intake by children with asymptomatic HIV should be increased by 10% and in children experiencing weight loss, energy intake should be increased by 50-100%. Mother's should be encouraged to stop breast feeding at 6 mos. Babies from 6 – 24 months will need milk from other sources.

Small frequent meals with nutritious snacks in between are best. Serve and feed child on its own plate. Porridge enriched with milk, sugar, pounded groundnuts, bean powder or soybean and oil are recommended. For asymptomatic children with no diarrhea or fat malabsorption, a small amount of margarine/oil can be added to increase energy intake. Mashed fruits and vegetables such as ripe bananas, avocados, pumpkins can be used as snacks as frequently as possible to increase energy and nutrient intake.

Source: Nutrition Guidelines for Care and Support of People Living with HIV/AIDS. Chapter 5. National Food and Nutrition Commision (NFNC), Zambia. November, 2004. Link from www.fantaproject.org.

RECIPE:

Banana and Papaya Drink

Banana and Papaya Drink

Ingredients:

- Banana
- Papaya
- Milk

Steps:

Crush fruits together and mix with caille' milk.

Source : Guide National pour le Soutien et la Prise en Charge Alimentaires et Nutritionnels Pour les Personnes Vivant avec le VIH/SIDA au Rwanda. Ministere de la Sante, Republique Du Rwanda. P. 80

B. Pregnant Woman:

It is important that during pregnancy a woman gains the appropriate amount of weight so that the growing fetus can be sufficiently supported. Women with average Body Mass Index (BMI) prior to pregnancy gain 11-14 kg during pregnancy, though the amount may vary. In addition, pregnant women require significantly higher amounts of protein, folic acid, niacin, zinc, iron and iodine. Energy requirements increase due to HIV infection so it is particularly important that HIV-positive pregnant women obtain a stable source of nutrition.

Source: WHO. HIV and nutrition: pregnant and lactating women. Peggy Papathakis, Nigel Rollins. Consultation on Nutrition and HIV/AIDS in Africa: Evidence, lessons and recommendations for action, Durban, South Africa, 10–13 April 2005.

RECIPES:

Sorghum/Millet/Rice/Wheat Boiled

Sorghum/Millet/Rice/Wheat

Boiled

Ingredients:

Maize, Sorghum, Millet, Rice, Wheat or any combination of these

Milk

Butter / Margarine

Salt

Sugar

Steps:

1. Wash hands and clean material with clean water and soap
2. Mix maize, sorghum, millet, rice, wheat or combination flour with cold water
3. Cook and mix with milk or water for about 15 minutes.
4. Add a little oil
5. Add a pinch of salt and some sugar to taste
6. Serve warm

Guide National pour le Soutien et la Prise en Charge Alimentaires et Nutritionnels Pour les Personnes Vivant avec le VIH/SIDA au Rwanda. Ministre de la Sante, Republique Du Rwanda. P. 79

Vegetable Sauce with Meat

Vegetable Sauce with Meat

Ingredients:

- Meat
- Onions
- Peppers
- Carrots
- Potatoes
- Oil
- Water
- Garlic
- Salt and Pepper

Steps:

1. Wash hands and clean material with clean water and soap
2. Cut the meat and the vegetables into small morsels
3. Boil or fry the meat just until it is brown
4. Add onions and peppers
5. Add other vegetables, water, mashed garlic and cook until all becomes tender
6. Serve

Guide National pour le Soutien et la Prise en Charge Alimentaires et Nutritionnels Pour les Personnes Vivant avec le VIH/SIDA au Rwanda. Ministre de la Sant, Republique Du Rwanda. P. 79

C. Nursing mother:

A number of nutrients are required in higher amounts during breast feeding including A, B_{12}, C, and E, riboflavin as well as minerals such as iodine, selenium and zinc. To feed the child, it is recommended that the mother consume 500 kcal per day more than prior to pregnancy assuming some energy will be used from fat stores accumulated during pregnancy.

Source: Nutrition Guidelines for Care and Support of People Living with HIV/AIDS. Chapter 4. National Food and Nutrition Commission (NFNC), Zambia. November, 2004. Link from www.fantaproject.org.

RECIPE

Ndagala Sauce (Dried Fish)

Ndagala Sauce (Dried Fish)

Ingredients:

- Ndagala (dried fish)
- Onions
- Tomatoes
- Oil
- Water
- Salt
- Green Pepper

Steps:

1. Wash hands and clean material with clean water and soap
2. Wash carefully the fish
3. Boil until cooked
4. Fry the onions, tomatoes and green peppers
5. Add water and the fish
6. Boil for five minutes

(Ndagala can also be cooked in a peanut sauce)

Guide National pour le Soutien et la Prise en Charge Alimentaires et Nutritionnels Pour les Personnes Vivant avec le VIH/SIDA au Rwanda. Ministere de la Sante, Republique Du Rwanda. P. 78

D. Bed-ridden/palliative/home-based care:

It is important that people who are bed ridden or are suffering from sever opportunistic infections regularly replenish lost nutrients. In order to manage symptoms of AIDS it is important to avoid weight loss and prevent nutrient loss. Small, frequent meals are recommended and nutritious snacks such as peanuts, fruits and vegetables should be available. Food safety and hygiene are extremely important for avoiding food-borne illness when caring for a person with compromised immune system.

Source: Nutrition Guidelines for Care and Support of People Living with HIV/AIDS. Chapter 6. National Food and Nutrition Commision (NFNC), Zambia. November, 2004. Link from www.fantaproject.org.

Boiled Sorghum (Drink):

Boiled Sorghum (Drink)

Prep time: 10 mins.

Cook time: 20 min

5 portions

Ingredients:

200 g. sorghum flour

6 Teaspoons powdered milk

5 Teaspoons of sugar

2.5 Liters of water

Materials:

Wood stove, casserole pan with cover

Thermos or other canister

Bowl, wisk, wooden spoon

Steps:

1. Wash hands and clean material with clean water and soap
2. Put water in the casserole and cover and place on fire
3. Mix Sorghum flour and milk powder with a little bit of water until you have a homogenous mix.
4. Put the mix in the already boiling water and stir until it comes to a boil again and let it boil for 10 minutes
5. Add sugar & Serve hot.

Guide Alimentaire: Pour Eviter les problemes de malnutrition chez les enfants, les meres et les personnes vivant avec le VIH/SIDA. P. 33

E. Antiretroviral treatment:

Antiretroviral treatment has helped many people with HIV lead longer, healthier lives. There are a number of nutrition concerns that people living with HIV should keep in mind if they are on ART. ARVs often require eating at specific times before or after taking the medication since the effects of some medications may be reduced if taken on an empty or full stomach. This impact varies depending on the medication and it is very important that people taking ARVs follow the appropriate directions about what to eat and when.

Source: Nutritional considerations in the use of ART in resource-limited settings. Daniel J. Raiten, Steven Grinspoon and Stephen Arpadi. Consultation on Nutrition and HIV/AIDS in Africa: Evidence, lessons and recommendations for action. Durban, South Africa, 10–13 April 200)

RECIPE - Beef and Beans

Beef & Beans

Ingredients:

Minced beef

Onions

Oil

Beans (soaked over night)

Carrots

Salt

Water

Spinach (or other green leafy vegetable)

Lemon Juice

Pepper (optional)

Steps:

1. Wash hands and clean material with clean water and soap
2. Sautee the beef and the onions together
3. When the meat is brown, add the beans, chopped carrots, salt and pepper
4. Add the water, cover and cook until the beans are tender (approximately 30 minutes).
5. Add the chopped spinach (or chopped green leafy vegetable) and boil the water for ten more minutes.
6. Add a little lemon juice.

Guide National pour le Soutien et la Prise en Charge Alimentaires et Nutritionnels Pour les Personnes Vivant avec le VIH/SIDA au Rwanda. Ministre de la Sante, Republique du Rwanda. P. 78

Appendix E. Declaration on the Dual Epidemics of HIV&AIDS and Food Insecurity

Africa Forum 2006, Lusaka, Zambia

- Promote the documentation and sharing of existing positive coping strategies (including the use of indigenous foods), practical models of integration, and cost-effectiveness of integrated programming
- Empower community-to-community transfer of knowledge and skills across Africa
- Further research and disseminate information on optimal yet viable infant and young child feeding options
- Investigate and disseminate learning on the impact of stigma on integrated HIV&AIDS and food and nutrition security programming, and effective mitigation strategies
- Ensure that decision-making about integrated HIV&AIDS and food and nutrition security are guided by the voices of those most affected: “Nothing About Us Without Us”

Specifically:

- Establish and/or strengthen platforms to meaningfully involve people living with HIV, and others most affected by HIV&AIDS and food and nutrition insecurity, in decision-making about program design, implementation, research, funding, and policy
- Establish and utilize mechanisms to ensure that the voices of front-line practitioners are heard on issues that directly affect their work

MESSAGES TO KEY AUDIENCES

COMMUNITIES:

Recognize that you have the rights, abilities and resources to determine your own future. Challenge stigma— break the silence and make your voices heard. Actively demand services and information to make informed choices about HIV&AIDS and food and nutrition security.

NATIONAL GOVERNMENTS:

Recognize the integration of HIV&AIDS and food and nutrition security as a national priority, and reflect this in national development plans, budgets and policies, ensuring interventions are community-driven and sustainable.

MULTILATERAL AGENCIES:

FAO, UNAIDS, WFP and other UN agencies as appropriate, form an inter-agency working group to improve coordination, and develop and implement guidelines on how best to integrate HIV&AIDS and food and nutrition security strategies. Support governments in the development and implementation of integrated plans.

DONORS:

Create and implement funding mechanisms that enable integrated, scaled-up and longer-term HIV&AIDS and food and nutrition security programming, ensuring that interventions are community-driven and sustainable.

NON-GOVERNMENTAL ORGANIZATIONS:

Collaborate with each other to link and integrate programs at community level. Foster community dialogue and leadership on how best to integrate HIV&AIDS and food and nutrition security interventions. Document and share promising practices, tools and methods that support integrated programming.

RESEARCH/ACADEMIC INSTITUTIONS:

Partner with community organizations to carry out action and operations research, and build local capacity in monitoring and evaluation of integrated programs. Document and disseminate information on the cost-effectiveness of integrated programming. Research and disseminate findings on the impact of stigma/discrimination and the effectiveness of responses.

For more information on the Africa Forum 2006 and follow up activities, visit the Project Concern International website at: www.ProjectConcern.org.

Appendix F: Fifty-Ninth World Health Assembly WHA59.11

Agenda item 11.3 27 May 2006

Nutrition and HIV/AIDS

The Fifty-ninth World Health Assembly,

Having considered the report on nutrition and HIV/AIDS;1

Recalling resolution WHA57.14 which urged Member States, inter alia, to pursue policies and practices that promote integration of nutrition into a comprehensive response to HIV/AIDS;

Bearing in mind WHO's efforts to support access to antiretroviral treatment as part of the "3 by 5" initiative and to ensure a comprehensive package of care and support for people living with HIV/AIDS;

Recalling the recommendations of WHO's technical consultation on nutrition and HIV/AIDS in Africa (Durban, South Africa, 10-13 April 2005), which were based on the main findings of a detailed review of the latest scientific evidence on the macronutrient and micronutrient needs of HIV-infected people, including pregnant and lactating women and patients on antiretroviral therapy;2

Noting that food and adequate nutrition are often identified as the most immediate and critical needs by people living with, or affected by, the HIV/AIDS pandemic;

Bearing in mind that nutrition and food security require systematic and simultaneous action to meet the challenges of the pandemic;

Mindful of the complex interactions between nutrition and HIV/AIDS, and the increased risk of opportunistic infections and malnutrition;

Noting that some Member States already have policies and programmes related to nutrition and HIV/AIDS that can be used as a basis for developing priorities and work plans;

Underlining the importance of ensuring cooperation on this question with other bodies of the United Nations system, in particular, FAO, UNICEF and WFP,

1. URGES Member States:

(1) to make nutrition an integral part of their response to HIV/AIDS by identifying nutrition interventions for immediate integration into HIV/AIDS programming, including:

(a) strengthening political commitment to nutrition and HIV/AIDS as part of their health agenda;

(b) reinforcing nutrition components in HIV/AIDS policies and programmes and incorporating HIV/AIDS issues in national nutrition policies and programmes;

(c) developing specific advocacy tools to raise decision-makers' awareness of the urgency and steps needed to incorporate nutrition into HIV treatment and care programmes;

(d) assessing existing policies and programmes related to nutrition and HIV/AIDS and identifying gaps to be filled and further opportunities for integrating nutrition interventions;

(e) ensuring close multisectoral collaboration and coordination between agricultural, health, socioeconomic, education, financial and nutrition sectors;

(2) to strengthen, revise or establish new guidelines and assessment tools for nutrition care and support of people living with HIV and AIDS at different stages of the disease, and for sex and age-specific approaches to providing antiretroviral therapy, including nutrition counseling and special nutritional needs of vulnerable and marginalized populations;

(3) to provide support for and expand existing interventions for improving nutrition and managing severe malnutrition in infants and young children in the context of HIV by:

(a) implementing fully the global strategy for infant and young child feeding with its approach to feeding in exceptionally difficult circumstances and the United Nations framework for priority action in HIV and infant feeding;1

(b) building the capability of hospital- and community-based health workers, mothers, family members and other caregivers in order to improve the care of severely malnourished children exposed to, or infected by, HIV/AIDS;

(c) encouraging revitalization of the Baby-friendly Hospital Initiative in the light of

HIV/AIDS;

(d) accelerating training in, and expanding use of, guidelines and tools for infant feeding programmes that provide counseling on prevention of mother-to-child

transmission of HIV;

(e) ensuring that institutions training health workers review their curricula and bring them in line with current recommendations;

1 HIV and infant feeding: framework for priority action. Geneva, World Health Organization, 2003.

WHA59.1132. REQUESTS the Director-General:

(1) to strengthen technical guidance to Member States for incorporating HIV and AIDS issues in national nutrition policies and programmes;

(2) to provide support for the development of advocacy tools to raise decision-makers'

awareness of the urgency and the need to include nutrition and HIV/AIDS as a priority on the health agenda;

(3) to provide support, as a matter of priority, to development and dissemination of science based

recommendations, guidelines and tools on nutritional care and support for people living

with HIV/AIDS;

(4) to contribute to incorporation of nutrition in training, including pre-service training, of

health workers, in technical advice, and in training materials for community and home-based

settings, and during emergencies;

(5) to continue to promote research relative to nutrition and HIV/AIDS, addressing gaps in

knowledge and operational issues;

(6) to provide support for development of appropriate indicators for measuring progress

towards integration of nutrition into HIV programmes and the impact of nutrition interventions;

(7) to ensure collaboration between all concerned parties in this area so that progress may be

made by building on each other's achievements;

(8) to foster establishment of guidelines for including appropriate food and nutrition

interventions in funding proposals.

Ninth plenary meeting, 27 May 2006

A59/VR/9

1 Document A59/7.

2 Document EB116/12, Annex. WHA59.11

Appendix G: Selected Ongoing Research Studies

Collation of Nutrition and HIV Studies for the Standing Committee for Nutrition, Geneva. Food and Nutrition Technical Assistance Program (FANTA), Academy for Educational Development, April 20, 2006.

The following list of on-going food and nutrition studies was based on respondent information and is subject to change. Please provide updates or new studies to Bruce Cogill at bcogill@aed.org.

1. Neil Jarvis IAEA. Using Isotope Techniques to Assess Nutrition Intervention Programmes Related to HIV/AIDS in Africa.

2. Mark Manary Univ. Washington, St. Louis. Randomized controlled trial comparing the impact of nutrition counseling and supplementary feeding with either RUTF or CSB among wasted adult ART clients in Malawi.

3. Elizabeth Kamau-Mbuthia, University of Vienna/Egerton University, Prof. Ibrahim Imadfa, University of Vienna, Austria The impact of maternal HIV status on infant feeding patterns and growth in Nakuru, Kenya.

4. RENEWAL Kenya: Elizabeth Byron, Consultant (IFPRI) The Impact of a Nutrition Program for People Living with HIV and its Role in Household Response. Kenya

5. RENEWAL Zambia; Petan Hamazakaza, RENEWAL, HIV/AIDS and Community Resilience in Zambia: Understanding the Implications for Food and Nutrition Policies.

6. RENEWAL Malawi: Pauline E Peters The Effects on Rural Livelihoods of HIV-related Illness & Death in Zomba, Malawi: a longitudinal study

7. RENEWAL South Africa: Wayne Twine HIV/AIDS Mortality and the Role of Woodland Resources in the Maintenance of Household Food Security in a Rural District of South Africa

8. RENEWAL Regional 1: Virginia Bond Tuberculosis: An Additional Tipping Stress on Poor Households in South Africa and Zambia.

9. RENEWAL Regional 2: Bruce Frayne RENEWAL Migration, HIV/AIDS and Urban Food Security in Southern and Eastern Africa ILRI Campus Addis Ababa, Ethiopia

10. Anne S.W. Mburu (PI); David L. Mwaniki – Centre for Public Health Research; Kenya Medical Research Institute, Nairobi, Kenya The Effects of Multimicronutrient Supplements And Food Rations On The Nutritional Status

And Health Of HIV-Positive Adults. UNICEF courtesy of funding from the Dutch Government

11. Fathia Abdalla, Paul Spiegel, Gebrewold Petros, UNHCR; Implementation of program strategies to integrate HIV/AIDS and nutrition activities in refugee settings in Uganda and in Zambia.

12. Dr. Robert Kabumbuli, Department of Sociology, Makerere University. Land= ownership and food security in Uganda: A Study of the use and control of land among household of women affected by HIV/AIDS in four districts. IFPRI

13. Susan Thurstans, Action Against Hunger Malawi. A pilot programme to assess the impact of treating acute malnutrition on mortality in adults and adolescents starting ARV therapy in Malawi with UN funding.

14. Steve Collins and Paluku Bahwere, Valid International. Acceptability and effectiveness of nutrition support with a Chickpea-Sesame based Ready-to-Use- Therapeutic Food (CS-RUTF) in chronically sick adults delivered through a home based care (HBC) program

15. Steve Collins, Valid International. Integrating HIV services into a Community Therapeutic Care (CTC) program in Malawi: an operational research study. VALID, SARA/FANTA.

16. Marko Kerac, Steve Collins, VALID International. Moyo RUTF Study: A randomised controlled trial to compare the efficacy of three new formulations of Ready-to-Use Therapeutic Food (RUTF) in the treatment of severe acute childhood malnutrition (HIV positive and HIV negative children).

17. Paul Bukuluki RENEWAL Gender dimensions in food/nutrition security and HIV/AIDS in Internally displaced peoples' camps in Uganda Makerere University

18. Ann Strauss INIPSA A Nutrition Intervention within a comprehensive ART care package with an Impact Evaluation Benin, Burundi Mali WFP.

19. Prof. Maniki and FANTA: Randomized controlled evaluation of the impact of food supplements on malnourished HIV-infected adult ART clients and malnourished, HI-infected pre-ART adults in Kenya.

XIII. References (A):

Daniel J. Raiten, Steven Grinspoon and Stephen Arpadi, Nutritional Considerations in the use of ART in resource-limited settings, Consultation on Nutrition and HIV/AIDS in Africa: Evidence, lessons and recommendations for action, Durban, South Africa 10-13 April 2005.

Peggy Papathakis and Nigel Rollins, HIV and nutrition: pregnant and lactating women, Consultation on Nutrition and HIV/AIDS in Africa: Evidence, lessons and recommendations for action, Durban, South Africa 10-13 April 2005.

Stephen M. Arpadi, Growth Failure in HIV-Infected Children, Consultation on Nutrition and HIV/AIDS in Africa: Evidence, lessons and recommendations for action, Durban, South Africa 10-13 April 2005.

Randa J. Saadeh, Peggy Henderson and Cota Vallenas, Infant Feeding and HIV Transmission, Consultation on Nutrition and HIV/AIDS in Africa: Evidence, lessons and recommendations for action, Durban, South Africa 10-13 April 2005.

Executive Summary of a scientific review, WHO Department of Nutrition for Health and Education, WHO, Consultation on Nutrition and HIV/AIDS in Africa: Evidence, lessons and recommendations for action, Durban, South Africa 10-13 April 2005.

Lusaka Declaration 2006 ‘On The Dual Epidemics of HIV & AIDS and Food Insecurity’, 12 May 2006.

Stuart Gillespie and Suneetha Kadilaya, ‘HIV/AIDS and Food and Nutrition Security – From Evidence to Action,” Food Policy Review 7, published by Institute for Food Policy Research, Washington DC, 2005. ISBN 0-89629-506-0.

Tony Castleman, Eleonore Seumo-Fosso, Bruce Cogilee, ‘Food and Nutritional Implications of Antiretroviral Therapy in Resource Limited Settings,’ Technical Note No. 7, August 2003, Food and Nutrition Technical Assistance (FANTA).

HIV/AIDS: A Guide for Nutritional Care and Support. 2nd Edition. Food and Nutrition Technical Assistance Project, Academic for Educational Development, Washington, DC, 2004. Published October 2004. .

Rwanda National AIDS Program

TRAC HIV Nutrition Protocol, Rwanda, 2006.

WE-ACTx Report Interview Questionnaire Used to Gather Research for this Report/

WE-ACTx-WFP Pilot Food Project: Final Report (Updated, with Addendum 8/2006).

Vanessa Brocato, ‘SIECUS PEPFAR Country Profiles: Focusing on Prevention and Youth,’ 2005, Sexuality Information and Education Council of the United States, pg. 109

Background papers (Introduction and 5 papers, below)commissioned for joint WHO//SCN/UNICEF Meeting on Community-based Management of Severe Malnutrition in Children that was conducted in November 2005:

Briend A, Prudhon C, Weise Prinzo Z, Daelmans , Mason J. Putting back the management of severe malnutrition on the international health agenda (introduction)

Myatt M, Khara T, Collins S. A review of methods to detect cases of severely malnourished children in the community for their admission into community-based therapeutic care programs .

Ashworth A. Efficacy and effectiveness of community-based treatment of severe malnutrition

Collins S, Sadler K, Dent N, Khara T, Guerrero S, Myatt M, Saboya M, Walsh A. Key issues in the success of community-based management of severe malnutrition

Manary M. Local production and provision of ready-to-use therapeutic food for the treatment of severe childhood malnutrition.

Gatchell V, Forsythe V, Thomas PR. The sustainability of Community-based Therapeutic Care (CTC) in non-acute emergency contexts.

Source Documents available on the Internet:

Economic impact and food security

Ainsworth M. Setting government priorities in preventing HIV/AIDS. Finance & Development, 1998, 18-21.

Anand, K, CS Pandav, LM Nath. Impact of HIV/AIDS on the national economy of India. Health Policy, 1999, 47:195-205.

Barnett T, Blaikie P. AIDS in Africa. Its present and future impact. New York, John Wiley, and London, Guilford Press, 1992.

Barnett T, Blaikie P. Simple methods for monitoring the socio-economic impact of AIDS: Lessons from sub-Saharan Africa. In: Cross S, Whiteside A, eds. Facing up to AIDS: The socio-economic impact in Southern Africa. London, McMillan, 1993.

Bazira I. The spread of HIV/AIDS and its consequences in Africa: the Tanzania experience. International Conference on AIDS, 1994, 10(1):441 (abstract).

Bloom D, Lyons JV, eds. The economic implication of AIDS in Asia. Delhi, Regional Bureau for Asia and the Pacific, UNDP, 1993.

Cohen D. Socio-economic causes and consequences of the HIV epidemic in Southern Africa: a case study of Namibia. UNDP HIV and Development Programme, 1998 (Issues Paper, No. 31).

Forsythe S, Siegel G, Nyamete A. The evolution and role of socioeconomic impact assessments in the policy process. International Conference on AIDS, 1996, 11(2):402 (abstract).

Danziger R. The social impact of HIV/AIDS in developing countries. Social Science and Medicine, 1994, 39(7):905-917.

The social and economic impact of HIV on Thailand. Harvard University AIDS Institute, 1994 (The AIDS Report).

Loewenson R, Whiteside A. Social and Economic Issues of HIV/AIDS in Southern Africa. Harare, Southern Africa AIDS Information Dissemination Service (SAfAIDS), 1997 (SAfAIDS Occasional Paper Series, No. 2).

Squire L. Confronting AIDS. Finance & Development, 1998, 15-17.

Mann R et al. The economic impact of adult mortality in households in Rakai district, Uganda. In: Ainsworth M, Fransen L, Over M, eds. Confronting AIDS: Evidence from the Developing World. Brussels, The World Bank and the European Commission, Official Publications of the European Communities, 1998.

Mtika MM. The AIDS epidemic in Malawi and its threat to household food security. Human Organization, 2001, 60(2):178-188.

Over M. Coping with the impact of AIDS. Finance & Development, 1998, 22-24.

Over M. The macroeconomic impact of AIDS in Sub-Saharan Africa. Washington, DC, World Bank, Africa Technical Department, Population, Health, and Nutrition Division, 1992 (AFTPN Technical Working Paper, No. 3).

Stover J, Bollinger L. The economic impact of AIDS in Africa. Glastonbury, CT, The Futures Group International, 1999.

Topouzis D. Uganda: The socio-economic impact of HIV/AIDS on rural families with an emphasis on youth. Rome, FAO, 1994.

AIDS hindering economic growth, worsening poverty in hard-hit countries. UNAIDS/World Bank Press Release, 11 July 2000.

Wehrwein P. The economic impact of AIDS in Africa. Harvard AIDS Review, 2000.

Whiteside A, Stover J. The demographic and economic impact of AIDS in Africa. AIDS, 1997, 11(suppl. B):S55-S61.

World Bank. Intensifying action against HIV/AIDS in Africa: Responding to a Development Crisis. Washington, DC, World Bank, 2000.

World Bank. Confronting AIDS: Public priorities in a global epidemic. New York, Oxford University Press, 1997.

Food security at national level

Barnett T, Rugalema G. HIV/AIDS and food security. In: Flores R, Gillespie S, eds. Health and Nutrition: Emerging and Reemerging Issues in Developing Countries. Washington DC, IFPRI, 2001.

Bellin F, Benterbusch R, Dollinger A. AIDS - Konsequenzen für die Ernährungssicherheit in Entwicklungsländern. [AIDS – Consequences for the nutrition security in developing countries.] Entwicklung und ländlicher Raum, 1994, 28(6):14-17.

Botswana Institute for Development Policy Analysis (BIDPA). Impacts of HIV/AIDS on poverty and income inequality in Botswana. BIDPA, 2000.

Gillespie S, Haddad L, Jackson R. HIV/AIDS, Food and Nutrition Security: Impact and Actions. Prepared for the 28th Session of the ACC/SCN Symposium on Nutrition and HIV/AIDS, 1 May 2001.

World Food Programme (WFP). Food Security, Food Aid and HIV/AIDS Study. Part I: WFP Uganda Case Study and Part II: Strategy, Pilot Projects and an Agenda for WFP/Uganda. WFP, 2000.

World Food Programme (WFP). Food Security, Food Aid and HIV/AIDS Study. An Agenda, Strategy and Pilot Projects for WFP/Kenya. WFP, 2001.

World Food Programme (WFP). Food Security, Food Aid and HIV/AIDS Study: Ethiopia. WFP, 2001.

World Food Programme (WFP). Food Security, Food Aid and HIV/AIDS in Zambia. WFP, 2001.

World Food Programme (WFP). Food Security, Food Aid and HIV/AIDS Study. Report on a Mission to Cambodia for the World Food Programme. WFP, 2001.

World Food Programme (WFP). Food Security, Food Aid and HIV/AIDS: Project Ideas to Address the HIV/AIDS Crisis. WFP, 2001.

World Food Programme (WFP). Guidance Note on Food Security, Food Aid and HIV/AIDS. WFP, 2001 (draft).

Food security at household and community level

Aggleton P, Bertozzi SM. Report from a Consultation on the Socio-Economic Impact of HIV/AIDS on Households, Chiangmai, Thailand, 22-24 September 1995.

Ankrah EM. The impact of HIV/AIDS on the family and other significant relationships: the African clan revisited. AIDS Care, 1993, 5(1):5-22.

Baier EG. The impact of HIV/AIDS on rural households/communities and the need for multisectoral prevention and mitigation strategies to combat the epidemic in rural areas (with special emphasis on Africa). Rome, Food and Agriculture Organization of the United Nations, 1997.

Bailey M et al. Caring and coping strategies of families living with TB & AIDS in east Hararghe & Harar, Ethiopia. International Conference on AIDS, 1998, 12:482 (abstract).

Barnett T, Blaikie P. AIDS in Africa. Its present and future impact. New York, John Wiley, and London, Guilford Press, 1992.

Batusa RJ. From household to community concern. International Conference on AIDS, 1998, 12:483 (abstract).

Beegle K, Ainsworth M, Lwihula G. Reorganising household activities to cope with adult deaths. IX International Conference on AIDS and STD in Africa, 1995 (abstract).

Bharat S, Aggleton P. Facing the challenge: household responses to HIV/AIDS in Mumbai, India. AIDS Care, 1999, 11(1):31-44.

Bharat S. Household and Community Response to HIV/AIDS: Executive Summary of a Study in Mumbai. Indian Journal of Social Work, 1997, 58(1)90-98.

Bharat S. Singhanetra-Renard A, Aggleton P. Household and community response to HIV/AIDS in Asia: the case of Thailand and India. AIDS, 1998, 12(suppl. B):S117-S122.

Brown LR, Webb P, Haddad L. The role of labor in household food security: implications of AIDS in Africa. Food Policy (United Kingdom), 1994, 19(6):568-573.

Castro R et al. Family responses to HIV/AIDS in Mexico. Social Science and Medicine, 1998, 47(10):1473-84.

Donahue J. Discussion Papers on HIV/AIDS Care and Support: Community-Based Economic Support for Households Affected by HIV/AIDS. Arlington, VA, HIV-AIDS Division of U.S. Agency for International Development (USAID), 1998.

Egal F, Valstar A. HIV/AIDS and nutrition: helping families and communities to cope. Rome, FAO, 1999 (Food, Nutrition and Agriculture, No. 25).

Hansen K et al. The cost of home-based care for HIV/AIDS patients in Zimbabwe. AIDS Care, 1998, 10(6):751-9.

McGrath JW et al. AIDS and the urban family: its impact in Kampala, Uganda. AIDS Care, 1993, 5(1):55-70.

Mujinja P, Over M. Expenditures on medical care and funerals in household experiencing adult deaths in Northwestern Tanzania. International Conference on AIDS and STD in Africa, 1995 (abstract).

Bailey M et al. Caring and coping strategies of families living with TB and AIDS in east Hararghe & Harar, Ethiopia. International Conference on AIDS, 1998, 12:482 (abstract).

Mutangadura GB. Household welfare impacts of mortality of adult females in Zimbabwe: Implications for policy and program development. Paper presented at the AIDS and Economics Symposium, organized by the IAEN Network. Durban 7-8 July 2000. North Carolina, Carolina Population Centre, 2000.

Mutangadura GB, Mukurazita D. A review of household and community responses to the HIV/AIDS epidemic in the rural areas of sub-Saharan Africa. UNAIDS, 1999.

Mutangadura GB, Webb D. The socio-economic impact of adult mortality and morbidity on households in urban Zambia. SAfAIDS News, 1998, 6(3):14-5.

Mtika M. Illness, deaths, and social obligations: peasant food security in the context of AIDS in Malawi. International Conference on AIDS, 1998,12:472 (abstract).

Nampanya-Serpell N. Social and Economic Risk Factors for HIV/AIDS-Affected Families in Zambia. Prepared for AIDS and Economics Symposium, Durban, 7-8 July 2001.

Page SLJ. Longevity in HIV+ Mothers: The Need to Promote Good Health, Household Food Security and Economic Empowerment to Ensure Family Survival in Southern Africa. Report of the Expert Group Meeting: The HIV/AIDS Pandemic and its Gender Implications. Windhoek, Namibia, 13-17 Nov 2000 (draft).

Pitayanon S, Kongsin S, Janjareon WS. The Economic Impact of HIV/AIDS Mortality on Households in Thailand. In: Bloom D, Peter G, eds. The Economics of HIV and AIDS: The Case of South and South East Asia. UNDP, 1997.

Rugalema G. It Is Not Only the Loss of Labor - HIV/AIDS: Loss of Household Assets and Household Livelihood in Bukoba District. Tanzania Paper presented at the East and Southern Africa Regional Conference on: Responding to HIV/AIDS: Development Needs of African Smallholder, Agriculture, Harare, 8-12 June 1998.

Sichone M et al. Care of chronically ill/HIV disease at home: adequacy, coping capacities and support needs in selected Zambian communities. International Conference on AIDS, 1996, 11(1):44 (abstract).

Tapia-Conyer R et al. The economic impact of AIDS at the household level in Mexico. International Conference on AIDS, 1990, 6(2):291 (abstract).

UNAIDS. A review of household and community responses to the HIV/AIDS epidemic in the rural areas of sub-Sahara Africa. UNAIDS, 1999.

Warwick I et al. Household and Community Responses to HIV and AIDS in Developing Countries. Critical Public Health, 1998, 8(4):311-328.

Food security at individual level – orphans

Ayieko. From single parents to child-headed households: the case of children orphaned by AIDS in Kisumu and Siaya districts. New York, UNDP HIV and Development Programme, 1997.

Barnett T, Blaikie P. AIDS in Africa. Its present and future impact. New York, John Wiley, and London, Guilford Press, 1992.

De Capua J. Zambia AIDS Orphans Study. National Public Radio Correspondent Report. December 8, 1999 (interview).

Foster G et al. Orphan prevalence and extended family care in a peri-urban community in Zimbabwe. AIDS Care, 1995, 7(1):3-17.

Rugalema G. One life time, twice orphan: AIDS and the rural elderly in Africa. International Conference on AIDS, 1998, 12:252 (abstract).

Rutayuga JB, Mutakyahwa CF, Kidza M. Self-reliance empowers kinship systems to more effectively raise orphans in east Africa. International Conference on AIDS, 1996, 11(2):491 (abstract).

Children orphaned by AIDS: Front-line responses from eastern and southern Africa. UNAIDS and UNICEF, 1999.

Sectoral-level impact and food security

HIV/AIDS and small-holder agriculture in Zimbabwe. AIDS Analysis Africa, 1999, 10(2):5-6.

Anand K, Pandav CS, Nath LM. Impact of HIV/AIDS on the national economy of India. Health Policy, 1999, 47:195-205.

Barnett T. Subsistence agriculture. In: Barnett A, Blas E, Whiteside A, eds. AIDS Brief. GPA/UNAIDS, 1996:4-5.

Barnett T. The effects of HIV/AIDS on farming systems and rural livelihoods in Uganda, Tanzania and Zambia. Rome, Food and Agriculture Organization of the United Nations (FAO), 1994.

Barnett, T. & M. Halswimmer. The impact of HIV/AIDS on farming systems in Eastern Africa. Rome, Food and Agriculture Organization of the United Nations (FAO), 1995.

du Guerny J. AIDS and agriculture in Africa: can agricultural policy make a difference? Food, Nutrition and Agriculture, 1999, 25:12-19.

du Guerny J. Rural children living in farm systems affected by HIV/AIDS: Some issues for the rights of the child on the basis of FAO studies in Africa. Rome, Food and Agriculture Organization of the United Nations (FAO), 1998.

Engh IE, Stloukal L, du Guerny J. HIV/AIDS in Namibia: The impact on the livestock sector. Rome, Food and Agriculture Organization of the United Nations (FAO), 2000.

The Effects of HIV/AIDS on Farming Systems in Eastern Africa, FAO Farm Management and Production Economics Service. Rome, Food and Agriculture Organization of the United Nations (FAO), 1995.

What has AIDS to do with agriculture? Rome, Food and Agriculture Organization of the United Nations (FAO), 1994.

FAO/UNAIDS. Sustainable Agricultural/Rural Development and Vulnerability to the AIDS Epidemic. UNAIDS Best Practice Collection. Rome, Food and Agriculture Organization of the United Nations (FAO), 1999.

Haslwimmer M. Is HIV/AIDS a threat to livestock production? The example of Rakai, Uganda. World Animal Review of the FAO, 1994, 80-81:92- 97.

Norse D (FAO). Socio-economic impact of AIDS on food production in East Africa. International Conference on AIDS, 1991, 7(1):71 (abstract).

Rugalema. HIV/AIDS and the Commercial Agricultural Sector of Kenya: Impact, Vulnerability, Susceptibility and Coping Strategies. FAO/UNDP, 1999.

Tibaijuka, Anna Kajumulo. AIDS and Economic Welfare in Peasant Agriculture: Case Studies from Kagabiro Village, Kagera Region, Tanzania. World Development, 1997, 25(6):963-975.

Topouzis, D. Measuring the impact of HIV/AIDS on the agricultural sector in Africa. Joint and Cosponsored Program on AIDS. Geneva, UNAIDS, 2000.

Topouzis, D. The Implications of HIV/AIDS for Rural Development Policy and Programming: Focus on Sub-Saharan Africa. UNDP HIV and Development Programme and FAO, 1998.

XIV. References (B):

Community-based management of severe malnutrition in children.

In preparation of the joint WHO/SCN/UNICEF Meeting on Community-based Management of Severe Malnutrition in Children that was conducted in November 2005, four background papers were commissioned by the Department of Child and Adolescent Health and Development and by the Department of Nutrition for Health and Development of WHO. A fifth paper was written by an NGO. These papers can be downloaded from this web page: www.who.int/nutrition/topics/comm_based_malnutrition/en/index.html.

The meeting report and the background paper are presented by a short introduction paper.

Introduction: Briend A, Prudhon C, Weise Prinzo Z, Daelmans , Mason J. Putting back the management of severe malnutrition on the international health agenda.

Meeting report: Proceedings of the WHO, UNICEF and SCN Informal Consultation on Community-Based Management of Severe Malnutrition in Children

Background papers:

Myatt M, Khara T, Collins S. A review of methods to detect cases of severely malnourished children in the community for their admission into community-based therapeutic care programs

Ashworth A. Efficacy and effectiveness of community-based treatment of severe malnutrition

Collins S, Sadler K, Dent N, Khara T, GuerreroS, Myatt M, Saboya M, Walsh A. Key issues in the success of community-based management of severe malnutrition

Manary M. Local production and provision of ready-to-use therapeutic food for the treatment of severe childhood malnutrition

Gatchell V, Forsythe V, Thomas PR. The sustainability of Community-based Therapeutic Care (CTC) in non-acute emergency contexts

XIV. Links and Resources:

AGORES Renewable Energy portal www.agores.org

Bill and Melinda Gates Foundation www.gatesfoundation.org

CARE www.care.org

CDC Centers for Disease Control and Prevention (CDC) www.cdc.gov

CIAT International Center for Tropical Agriculture (CIAT) www.ciat.cgiar.org/

CNLS Centre National de Lutte Contre le SIDA (CNLS – Rwanda) www.cnls.gov.rw/

C-SAFE Consortium for Southern Africa Food Security Emergency www.c-safe.org

DFID UK Department for International Development www.dfid.gov.uk

FANTA Food and Nutrition Technical Assistance www.fantaproject.org

FAO (UN Food and Agriculture Organization) www.fao.org

FAO Rural Radio http://www.fao.org/sd/ruralradio/en/24516/index.html

FEMNET (African women's NGO network) http://www.femnet.or.ke

FIVIMS (Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS)) www.fivims.net/index.jspx?lang=en

FHI Food for the Hungry International www.fhi.net

GFATM The Global Fund to Fight AIDS, Tuberulosis and Malaria www.theglobalfund.org

GoR Government of Rwanda website www.gov.

Heifer International www.heifer.org

ICAD Interagency Coalition on AIDS and Development, Canada www.icad-cisd.com/

IFPRI International Food Policy Research Institute www.ifpri.org

IRC International Rescue Committee http://www.theirc.org/

IRIN United Nations Integrated Regional Information Networks www.irinnews.org

KCA Keep A Child Alive www.keepachildalive.

MSF Médecins Sans Frontières (Doctors Without Borders) www.msf.org

Oxfam www.oxfam.org

MWA Millennium Water Alliance www.mwawater.org

PACFA Protection and Care of Families Against HIV/AIDS www.pacfa.org.rw

PIH Partners In Health www.pih.org

PEPFAR The United States President's Emergency Plan for AIDS Relief www.pepfar.gov

Send A Cow www.sendacow.org

TAC Treatment Action Campaign, South Africa www.tac.org.za

TRAC Treatment and AIDS Research Center www.tracrwanda.org.rw/

WFP: UN World Food Programme www.wfp.org

UNAIDS Joint United Nations Programme on HIV/AIDS www.unaids.org

UNHCR Office of United Nations High Commissioner for Refugees http://www.unhcr.org/cgi-bin/texis/vtx/home

UNDP United Nations Development Programme www.undp.org

UNIFEM United Nations Development Fund for Women www.unifem.org

USAID United States Agency for International Development www.usaid.gov

WE-ACTx Women's Equity in Access to Care and Treatment www.we-actx.org

WHO World Health Organization www.who.int

Water Leaders www.waterleaders.org

Water Partners International www.water.org

William J. Clinton Foundation www.clintonfoundation.org

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). 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). 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)

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; mardgecohen@aol.com.

ELIZABETH STARMANN is a graduate of the American University of Paris. Her studies focused on Gender and Development and involved research on Gender and Social Policy in Sweden and an internship with the OECD researching agriculture and development in the Sahel region. She then worked with the Young Non-Profit Professionals Network in Chicago. In Rwanda she took a volunteer post with WE-ACTx and the lead on developing its nutrition and income generation programs for PLWHA. Following this she was a Capacity Building Consultant for the PEPFAR-funded Community HIV/AIDS Mobilization Program (CHAMP) in Rwanda. Currently, she works in the CHAMP technical team as the focal point for gender and communication. Starmann's interests include: transformative gender approaches to HIV prevention through both engaging men at the community level to develop positive behavior norms and through pleasure and positive sexuality-based prevention education; creating innovative community solutions to the problem of food security and HIV/AIDS in resource poor settings. Email: elizabeth@champ.org.rw.

For press inquiries or to get a copy of this report, contact us at: weactx@gmail.com. In US: (415) 648-1728.

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i IRIN Plus News online, December 11, 2006. According to Josephine Kayumba, a nutritionist with the Rwandan government AIDS agency, TRAC, an estimated 45% of HIV-positive children under five years are severly malnourished, a finding she presented at a recent national pediatric HIV conference. Her interview with IRIN Plus was posted online

ii 2006 Report on the Global AIDS Epidemic, UNAIDS, May 30, 2006.

iii Executive Summary, WE-ACTx- WFP Pilot Nutrition Program for ARV Clients (2004-2006), unpublished. February 2006.

iv AP/ABC2 News, November 13, 2006.

v "World Hunger Increasing," FAO Newsroom report, United Nations Food and Agriculture Organization,(FAO), October 30, 2006

vi Ibid.

vii Ezzati, M et al. (2002) Selected Major Risk Factors and Global and Regional Burden of Disease. The Lancet, 360 (9343), 1-14.

viii WFP Press Release, 16 August 2006, released at the XVI International AIDS Conference in Toronto.

ix Charlene Porter, "HIV/AIDS Locked in a Vicious Cycle, Washington File, October 16, 2006.

---

x Executive Summary of a scientific review, WHO Department of Nutrition for Health and Education, WHO, Consultation on Nutrition and HIV/AIDS in Africa: Evidence, lessons and recommendations for action, Durban, South Africa 10-13 April 2005.

xi Nicholas Eberstadt, 'The Future of AIDS," Foreign Affairs, November/December 2002.

xii Micheal R. Goe, "Livestock Production and HIV/AIDS in East Africa, FAO – Rome, 2005.

xiii "HIV/AIDS – A Rural Issue," United Nations Food and Agriculture Program (FAO), 2005

xiv Ibid.

xv FAO, 1994.

xvi FAO, 1998.

xvii Patricia Justino and Philip Verwimp, "Poverty Dynamics, Violent Conflict and Convergence in Rwanda," HiCN Working Paper 16, Households in Conflict Network, April 2006.

xviii Mocroft et al., 2000; Prins et al. 1999.

xix Human Rights Watch and Amnesty International have issued many reports in recent years that document the rise of rape in war and the link to increased HIV rates among refugees in East Africa zones of civil conflict, for example.

xx Poss et al, 1995; Long et all, 2000; Burget and Weiser, 2001; Hart et al. 1999; Kovacs et al., 1994.

xxi Hayes et al., 1995.

xxii To Have and To Hold – Women's Property and Inheritance Rights in the Context of HIV/AIDS in sub-Saharan Africa," Information Brief, June, 2004, International Center for Research on Women, Washington, DC.

xxiii HIV/AIDS and Food AID: Assessment for Regional Programs and Resource Integration, Workshop Report, Entebbe, Uganda, November 2-5, 2004, Food and Nutrition Technical Assistance (FANTA) Project, pg 20.

xxiv

xxv 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 (INFPRI), 2005, page 4. The authors present ample evidence of this negative synergy in a comprehensive review of myriad levels of interdependency between food insecurity, malnutrition, poverty and HIV/AIDS.

xxvi Anne-christine d'Adesky, Moving Mountains: The Race to Treat Global AIDS, Verso, Updated, 2006

---

xxvii UNAIDS. "Three Ones" key principles. Conference Paper 1: Washington Consultation 25.04.04.

xxviii "The development of programme strategies for integration of HIV, food and nutrition activities in refugee settings," UNAIDS Best Practice Collection, UNAIDS, May 2006. This document was a joint effort by UNAIDS, UNHCR and WFP.

xxix UN 2004. Citation reprinted in INFPRI journal article by 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, page 3, Box 1. 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, page 3, Box 1.

xxx Michael Fleshman, "New global anti-AIDS campaign kicks off, Africa Renewal, Vol 2-, No. 1, page, 4, April 2006

xxxi Ibid.

xxxii 2006 Report on the Global AIDS Epidemic, UNAIDS, May 30, 2006, pg 171.

xxxiii UNHCR/WFP 2004.

xxxiv HIV/AIDS and Food AID: Assessment for Regional Programs and Resource Integration, Workshop Report, Entebbe, Uganda, November 2-5, 2004, Food and Nutrition Technical Assistance (FANTA) Project, pg. 11

---

xxxv Ibid.

xxxvi 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.

xxxvii Interview with Mike Rich, MD, Partners In Health, Rwanda program, June 2006.

xxxviii UNAIDS. "The development of programme strategies for integration of HIV, food and nutrition activities in refugee settings. Best Practice Collection," May 2006. UNAIDS/06.21E. ISBN catalog number 92 9 173515 9.

xxxix HIV/AIDS: A Guide for Nutritional Care and Support. 2nd Edition. Food and Nutrition Technical Assistance Project, Academic for Educational Development, Washington, DC, 2004. Published October 2004. Page 14.

xl Kari Egge MPH, PhD and Susan Strasser RN, MS, MPH, Measuring the Impact of Targeted Food Assistance on HIV/AIDS-Related Beneficiary Groups With a Specific Focus on TB, ART, CI and PMTCT, Beneficiaries, a publication of the C-SAFE Learning Spaces Initiative,November 2005

---

xli Zachariah, R, Spielmann, MP, Harries, A. D. and Salaniponi, F. M., "Moderate to Severe Malnutrition in Patients with Tuberculosis is a Risk Factor associated with Early Death, " Transactions of the Royal Society of Tropical Medicine and Hygiene, 2002 May-Jun; Volume 96, Number 3: 291-4.

xlii Chandra 1992

xliii David N. McMurray, Impact of nutritional deficiencies on resistance to experimental pulmonary tuberculosis, Nutrition Reviews, January 1998.

xliv Balasubramanian et al. 1994.

xlv David N. McMurray, Impact of nutritional deficiencies on resistance to experimental pulmonary tuberculosis, Nutrition Reviews, January 1998.

xlviWorld Health Organization. "Nutrient Requirements for people living with HIV/AIDS: Report of a Technical Consultation." WHO: 2003 Geneva, 13-15 May.

xlvii Ibid, page 15.

xlviii Ibid, page 16.

xlix Ellen Piwoz et al., "NUTRITION AND HIV/AIDS: Evidence, Gaps, and Priority Actions," The Support for Analysis and Research in Africa (SARA) project, a joint publication supported by SARA-FANTA, USAID and AED, April 2004.

l (1) "Macronutrients and HIV/AIDS: A Review of Current Evidence." Consultation on Nutrition and HIV/AIDS in Africa: Evidence, lessons and recommendations for action. Durban, South Africa 10–13 April 2005. World Health Organization, Geneva; (2) Friis, Henrik. 2005. "Micronutrients and HIV Infection: A Review of Current Evidence." Consultation on Nutrition and HIV/AIDS in Africa: Evidence, lessons and recommendations for action. Durban, South Africa 10–13 April; Irlam JH, Visser ME, Rollins N, Siegfried N (2005); (3)"Micronutrient Supplementation in Children and Adults with HIV Infection (Review)." The Cochrane Library Issue 4; Wiysonge CS, Shey MS, Sterne JAC, recommendations for action Durban, South Africa 10–13 April 2005, Daniel J. Raiten, Steven Grinspoon and Stephen Arpadi Department of Nutrition for Health and Development, World Health Organization, 2005.ORT ON FOOD

l Ibid.

l Ibid.

l Rwandan laws governing family, property and inheritance are being reviewed by the government, in accordance with a 2003 constitutional mandate assuring equal rights for all Rwandan citizens. So are traditional practices that may lead to economic or social disempowerment and discrimination of women and girls.

---

l Rwanda Enquete Demographique et de Sante, 2005, Rapport Preliminaire, Institue National de la Statistique, Ministere des Finances et de la Planification Economique, Commission Nationale de Lutte Contre le SIDA, Centre de Traitement et de Recherche sur le SIDA, Laboratore National de Reference, MEASURE DHS, ORC Macro, Calverton, Maryland, USA, October 2005, page30-31.Brocklehurst P. (2005) "Vitamin A Supplementation for Reducing the Risk of Mother-to-Child Transmission of HIV Infection (Review)." The Cochrane Library Issue 4; (4) "Nutritional Considerations in the Use of ART in Resource-limited Settings." Consultation on Nutrition and HIV/AIDS in Africa: Evidence, lessons and recommendations for action Durban, South Africa 10–13 April 2005, Daniel J. Raiten, Steven Grinspoon and Stephen Arpadi Department of Nutrition for Health and Development, World Health Organization, 2005.ORT ON FOOD

li Ibid.

lii Ibid.

liii Rwandan laws governing family, property and inheritance are being reviewed by the government, in accordance with a 2003 constitutional mandate assuring equal rights for all Rwandan citizens. So are traditional practices that may lead to economic or social disempowerment and discrimination of women and girls.

liv Source: Data collected in summer 2006 by WE-ACTx via interviews and review of program documents with staff and clients in 18 of WE-ACTx's 24 partner NGOs in Rwanda. (Data analysed for a WE-ACTx survey of progress in delivery of HIV-related services August 2004-August 2006. (Unpublished, Internal WE-ACTx document. September 2006.)

lv Rwanda Enquete Demographique et de Sante, 2005, Rapport Preliminaire, Institue National de la Statistique, Ministere des Finances et de la Planification Economique, Commission Nationale de Lutte Contre le SIDA, Centre de Traitement et de Recherche sur le SIDA, Laboratore National de Reference, MEASURE DHS, ORC Macro, Calverton, Maryland, USA, October 2005, page30-31.

lvi Ibid, page 33.

lvii Rwanda Enquete Demographique et de Sante, 2005, Rapport Preliminaire, Institue National de la Statistique, Ministere des Finances et de la Planification Economique, Commission Nationale de Lutte Contre le SIDA, Centre de Traitement et de Recherche sur le SIDA, Laboratore National de Reference, MEASURE DHS, ORC Macro, Calverton, Maryland, USA, October 2005, page27.

lviii Source: Data collected in summer 2006 by WE-ACTx via interviews and review of program documents with staff and clients in 18 of WE-ACTx's 24 partner NGOs in Rwanda. (Data analysed for a WE-ACTx survey of progress in delivery of HIV-related services August 2004-August 2006. (Unpublished, Internal WE-ACTx document. September 2006.

lix This information comes from interviews with HIV doctors in Kigali in mid-2004 through 2006 by WE-ACTx executive staff, and from information garnered via a 2005 Situational Analysis of Needs of HIV-positive clients and NGOs carried out by WE-ACTx staff and Rwandan outreach teams. The survey was dong with 50 Rwandan NGOs serving HIV-positive clients in Kigali and several departments where HIV rates were high, but HIV service coverage was deemed very low by TRAC and CNLS.

lx This information comes from interviews and legal research on existing Rwandan law related to HIV and AIDS that was carried out by WE-ACTx legal interns in the US and Rwanda, working closely with lawyers from the Butare Clinique Juridique, and paralegal groups including Hagaruka and Ibuka, the law faculty staff of the Universite Libre de Kigali, and a number of NGOs and institutions in Rwanda focusing on legal reform and/or HIV. WE-ACTx facilitated an 8-week legal training seminar on HIV/AIDS and the Law that helped train 35 community legal advocates during the period of June-August 2006 in Kigali. Follow up research has found that HIV-positive clients of WE-ACTx partner NGOs complain of unresolved cases of discrimination, including seizure of land and property by relatives, and other charges of discrimination related to stigma of HIV/AIDS.

lxi Shelton et. al., 2004.

lxii Rwanda Enquete Demographique et de Sante, 2005, Rapport Preliminaire, Institue National de la Statistique, Ministere des Finances et de la Planification Economique, Commission Nationale de Lutte Contre le SIDA, Centre de Traitement et de Recherche sur le SIDA, Laboratore National de Reference, MEASURE DHS, ORC Macro, Calverton, Maryland, USA, October 2005, page 28.

---

lxiii Taped interview with FRLS+ members and organizers conducted by Anne-christine d'Adesky in July and October, 2006, in Kigali.

lxiv WFP Mission Statement, WFP, 2006.

lxv "Food and Treatment for the Very Poor," 2006 Report on the Global AIDS Movement, Treatment and Care section, p 171.

lxvi WFP Press Release, 16 August 2006, released at the XVI International AIDS Conference in Toronto.

lxvii Frank Phiri, "Clinton Urges Africa to Step Up AIDS Tests," Reuters, July 14, 2006.