HIV & FOOD SECURITY

FACE AIDS Monthly Theme: February

In Rwanda food is farmed in terraces along the hillside since the dual forces of population density and land scarcity are at play

The Problem

Food Insecurity and HIV/AIDS in Sub-Saharan Africa

Food security is a significant consideration in understanding and addressing the global HIV/AIDS epidemic. The majority of HIV affected populations in Sub-Saharan Africa depend on agriculture as their primary source of income and food. The term "food security" refers to the existence of a stable, adequate food supply, access to sufficient and nutritious food, and the ability to consistently consume and benefit from such food. Food insecurity, or lack of one or more components of food security, currently threatens basic livelihoods among HIV affected populations in Sub-Saharan Africa, leading to compromised treatment plans, and severely threatening overall efforts to combat the epidemic. According to the Food and Agriculture Organization of the United Nations, the number of undernourished people in Sub-Saharan Africa has steadily increased over the past decade, and the region is second only to Asia and the Pacific in terms of overall level of food insecurity. Economic crisis and increasing food prices have compounded the issue of food insecurity in Sub-Saharan Africa, which has in turn increased the vulnerability of many HIV affected populations. In 2009, approximately 265 million people in Sub-Saharan Africa qualified as "undernourished," or unable to obtain sufficient daily calories, which means that an even larger number were considered "food insecure," as the term "food insecurity" is less urgent than "undernourished." This number is likely to increase as population growth in Sub-Saharan Africa continues, unless the need for solutions and technologies that improve rural livelihoods and food access with minimal environmental impact can be met.

Research has shown that food insecurity and inadequate nutrition significantly reduce the effectiveness of anti-retroviral treatment programs, because, like any medical treatment, ARV treatment requires a diverse and stable diet in order to remain effective. According to the International Food Policy Research Institute, "HIV incidence rates are fueled by food insecurity while subsequent AIDS-related

morbidity and mortality, in turn, further exacerbate food insecurity." In other words, food insecurity leads to nutritional deficiencies, which lead to immune suppression, causing increased HIV replication, increased disease progression, and decreased drug effectiveness. Because malnutrition weakens the immune response in general, food insecurity drastically enhances risk factors for the spread of the epidemic. As organizations such as Partners In Health have recognized, successful HIV/AIDS interventions require solutions to issues of food insecurity, particularly in Sub-Saharan Africa where food insecurity and HIV/AIDS coexist in many vulnerable populations.

For more information, check out:

Food and Agriculture Organization of the United Nations Food Insecurity 2009 report: http://www.fao.org/publications/en/

International Food Policy Research Institute's RENEWAL program on AIDS and Food Security: http://programs.ifpri.org/renewal/

PNAS 2010 Project Report - "Solar-powered drip irrigation enhances food security in the Sudano-Sahel" www.pnas.org/cgi/doi/10.1073/pnas.0909678107

Sources and more information:

(1): Rosamond Naylor and Walter Falcon, "Our Daily Bread", Boston ReviewSeptember/October, 2008: pp. 13-18.

(2): Walter Falcon and Rosamond Naylor, "Rethinking Food Security for the 21st Century," American Journal of Agricultural Economics, Volume 87, November 2005: pp. 1113-27.

BBC News articles on aid and food aid controversy: http://news.bbc.co.uk/2/hi/africa/4185550.stm, http://www.bbc.co.uk/worldservice/africa/2010/01/100105_somaliwfp.shtml

Haddad, Lawrence"Leveraging Food Security With Food Aid: The Role of Applied Policy Research," The African Journal of Food and Nutritional Security 2001, Volume 1, pp 26-34.

Global Policy Forum: How does Food Aid work? http://www.globalpolicy.org/component/content/article/217/46186.html

International Food Aid Debate
Benefits and Inefficiencies

Inefficiencies:

- Food packages are often inefficiently or incompletely delivered
- For U.S. food aid, laws restrict origin of food aid: Aid must be U.S. produced commodities shipped on U.S. vessels (1)
- Can create dependence on international aid
- Unfair or incorrect targeting of food aid recipients, and a widespread food crisis that cannot be solved by isolated emergency aid (2)
- Food packages are not a long-term, sustainable solution
- Political relations, rather than need, sometimes determine recipient countries
- Not enough food aid to meet total need: Food aid deliveries at lowest in 2007 since 1961, despite rising food prices (1)
- Transport of U.S. food aid from donor to recipient countries is environmentally unsustainable: Only 40% of designated U.S. food aid money is spent on food itself, remainder spent on transportation and administrative costs (1)
- Results in underdeveloped domestic agriculture industries by creating disincentives for agricultural growth (2)

Benefits:

- Provides some food relief in short-term humanitarian crises that would not otherwise exist, and is essential for disaster situations such as Hurricane Katrina, Haiti earthquake, etc.
- Can supplement food supplies in developing countries during long term food crises, particularly through the World Food Program model, which uses cash donations from Canada the EU to buy supplies regionally (1).
- Provides destination for US food/corn surpluses that otherwise might be wasted: Most of U.S. food aid originates as agricultural surplus (2)
- Serves as the only source of food for some populations: in 2007 6 million metric tons of food aid in the form of grains/cereals was delivered (2)
- Supports domestic agriculture for donating country

What do you think?

Food for thought... If the total grain/cereal production in 2007 had been distributed equally amongst the world's 6.6 billion individuals, the food crisis would not exist. (1) Clearly we have the capacity to feed the entire world, so what is the problem?

Food aid in itself can, and has the potential to, provide sustenance in emergency situations and long-term food shortages; however, the current system in place for international food aid is insufficient and inadequate. In order to find a long-term solution for food security, we need to change the way we approach food aid by including agricultural development, rural infrastructure investment, and domestic production under the umbrella of "food aid."

Interview with Claire Watt, FACE AIDS Africa Program Director

Claire began working for FACE AIDS after she graduated from Stanford in 2009. She works as the Africa Program Director overseeing FACE AIDS' programs in Rwanda and our relationship with Partners In Health.

What kind of issues do HIV patients in Africa face in getting proper nutrition and general food security?

The most proximal issue is the need for a proper diet while undergoing ARV (antiretroviral) therapy. Without a proper, strong diet, the adverse affects of the ARVs are greatly increased and can make patients very sick. While a well-rounded diet is necessary for good health in general, especially in bolstering a strong immune system, it is even more important for patients on ARVs. Sadly, the availability of resources to fulfill this need for a well-rounded diet is very scarce in Rwanda. Many people undergoing ARV therapy cannot afford the necessary nutrition, or it is simply just not available.

What work is FACE AIDS doing to try to help the issue of food security and nutritional need?

FACE AIDS takes an educational approach to helping HIV patients gain better food security and nutrition. We put on educational seminars in Rwanda so that individuals and families can learn to combat the lack of nutritional availability as effectively as possible. The seminars generally include general nutritional information, presentations from nurses and staff at local health centers, and demonstrations on how to gain better nutritional intake and grow productive gardens. For example, tofu is something stressed heavily at these seminars because of its accessibility and excellent nutritional value. Ultimately, these educational seminars seek to get to the core of the problem instead of simply putting a temporary band-aid on it.

"I think the most important thing to do is spread awareness of the important link between nutrition and HIV/AIDS. Most people do not realize how vital a well-balanced diet is to fighting the disease, as well as preventing sickness from ARVs."

Claire Watt, FACE AIDS Africa Program Director

Partners In Health is very active in fighting the lack of food security in Rwanda. What sort of work are they doing, particularly in agriculture?

Agriculture is a vital part of Rwandan life. Approximately 90% of the population's food and income come from agriculture. The country goes through very distinct dry and rainy seasons, and the dry season creates a very large challenge for many families as their food and income from the wet season become very scarce towards the end of the dry season. Partners In Health works to increase the agricultural capabilities of families, particularly the youth. PIH brings in agricultural and farming experts to teach kids to farm. Also, PIH gives out farming tools and seeds to further increase the potential for successful gardening. Most families who receive this farming education are tracked by PIH to make sure they are having success growing food. Like the FACE AIDS program, PIH is helping individuals and families support themselves instead of relying solely on aid.

Recently, Rwandan President Paul Kagame initiated the Rwandan Malnutrition Initiative. What kind of effect will this have on improving food security for HIV patients?

President Kagame's new program is a great policy that will help quite a bit. By distributing nutritional supplements, working with PIH, and using a comprehensive model to get to the source of of the problem, a major portion of Rwanda's nutritional needs will be addressed.

What can FACE AIDS Chapters do to get involved with helping the food security issues for HIV patients?

I think the most important thing to do is spread awareness of the important link between nutrition and HIV/AIDS. Most people do not realize how vital a well-balanced diet is to fighting the disease, as well as preventing sickness from ARVs. Also, PIH needs all the funds it can get to keep its agriculture program going, so raising money for their cause is very important.

Taking on Food Insecurity
Innovative Solutions

AMPATH

A partnership between the Indiana University School of Medicine and the Moi University School of Medicine, Academic Model for Prevention and Treatment of HIV/AIDS (AMPATH), treats more than 70,000 HIV positive patients at 18 sites across Kenya. One of the main programs of the organization aims to alleviate the poor nutrition of many of their patients. Individuals entering the program are screened to identify if their nutritional needs are being met; if not, AMPATH provides them with enough food to meet 100% of daily nutritional requirements for 6-months. This program is intended to last during the patient's most vulnerable months-when he or she is first starting out ARVs and still rebuilding his or her immune system. Participants are then encouraged and expected to provide for themselves after this time period; however, there is an additional program to provide food to those who are unable to do so that provides limited nutritional support and food security training.

References: http://www.iukenya.org/nutrition.html

The Malawi Nutrition HIV/AIDS Program

In 2004 the Malawi government expressed its commitment to making food security a priority in its efforts to treat and prevent HIV/AIDS. The president, Dr Bingu wa Mutharika, created a Department of Nutrition, HIV, and AIDS. Through the country's extensive antiretroviral therapy program, 60,000 individuals receive nutritional support and another 50,000 receive support to help grow their own food. The country is also training thousands of community health workers and specialists in nutrition about the importance of a balanced and varied diet. The Malawian government's commitment to food security was further demonstrated in series of substantial subsidies provided to small farmers in 2005, which resulted in a surplus of crops several years in a row.

References: UNAIDS Policy Brief : HIV, Food Security and Nutrition
http://www.mdgmonitor.org/factsheets_00.cfm?c=MWI&cd=454

"Gardens for Health is precisely the sort of effort that might permit us to break the cycle of disease and poverty. If we neglect either affliction — disease or poverty — we won't be able to help our patients and their families lift themselves out of poverty. The great majority of Rwandans, especially in rural areas, are involved in agriculture. They need land as much as they need health care."

-Dr. Paul Farmer

Gardens for Health International

In the summer of 2006, Gardens for Health International was founded by two college sophomores in an effort to address the malnutrition that was a major obstacle to the effective treatment of HIV/AIDS in Rwanda. Gardens for Health International helped coordinate the organization of cooperatives that were given land for agriculture. This system of cooperatives is useful in battling both the isolation of being HIV positive and the logistics of being ill and not always being able to work. The organization also provides these cooperatives with the materials and training needed to successfully grow their own food and generate an income.

References: http://www.gardensforhealth.org/index1.php
http://food.theatlantic.com/sustainability/in-africa-fighting-

Solar-Powered Irrigation

A study conducted by the Program for Food Security and the Environment at Stanford University recently found that solar-powered irrigation systems are a cost effective method to increase agricultural yields in low-income settings. The study revealed that the solar-powered systems are not only environmentally friendly, but that they are feasible to operate and maintain in rural, low-resource settings. The pilot project was conducted in Benin, but the results should translate throughout sub-Saharan Africa to areas with high prevalence of both HIV and poverty.

References: http://news.stanford.edu/news/2010/january4/solar-irrigation-africa-010610.html

A woman in Benin cleans a solar panel that powers her drip irrigation system

Photo Courtesy of Stanford News Service