Health Clinics: Saving Two Birds with One Stone

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Problem Statement
The amount of cases of malnutrition and HIV/AIDS in Nigeria must be reduced.

Project Goals/Objectives
- Reduce the number of children affected by malnutrition.
- Reduce the number of those infected with HIV/AIDS.
- Attain sustainability in the surrounding area.

Location
Abia State, Nigeria

Reason for Location:
Nigeria has moderate cases of both malnutrition and HIV/AIDS. Specifically, the villages in the South (Abia State) have serious malnutrition and AIDS issues.

Approach
Develop a health clinic that reduces the rates of HIV/AIDS and malnutrition through education, testing, and treatments.

Malnutrition
- Implement aspects of the Community based Therapeutic Care program into the health clinic
- Focus on treating children under 3
- Check for cases of severe acute malnutrition in local villages weekly
- Supply local villages with Plumpy Nut on a weekly basis
- Treat cases of moderate acute malnutrition as outpatients.
- Treat cases of severe acute malnutrition within the clinic with Plumpy Nut
- Keep outpatient and inpatient records

HIV/AIDS
- Provide HIV/AIDS education
- Provide HIV testing
- Treat patients with antiretrovirals
- Provide latex condoms
- Treat patients malnourished from HIV/AIDS with Plumpy Nut
- Encourage HIV testing in infants
- Keep patient records

Funding and Costs
Malnutrition: Valid International, and Concern Worldwide will provide supply of their product and help cover medical costs.

Previous AIDS Funding:
- World Bank – 2002 $90.3 million given to Nigerian government for HIV/AIDS. 2007 additional $50 million was loaned.
- PEPFAR – 2008 $448 million for HIV/AIDS treatment in Nigeria
- Global Fund - $98 million for HIV/AIDS for expansion of treatment

Personnel
- The health clinic will be a nonprofit organization employed by trained local volunteers and a reduced medical staff.
- The cultural barrier will be reduced because the health clinic will employ local volunteers.

Results/Outcomes
- Through the success of the health clinic, new possibilities will be opened.
- The program can expand its coverage of Plumpy Nut to more villages with delocalized feeding centers.
- The coverage of HIV testing can then, in turn, be expanded.
- We predict that decreased mortality in children will lead to more sustainable villages and thus, decreased malnutrition.
- A successful model for a health clinic that can be duplicated in other regions would be the ultimate success story for our project.

Bibliography
- <http://www.foreignpolicy.com/articles/2009/10/08/let_them_eat_plumpynut?page=0,1>
- <http://www.timesonline.co.uk/tol/news/world/asia/article6739362.ece>
Malnutrition:
• Fewer T lymphocytes
• Impaired lymphocytes response and phagocytosis
• Leads to severe chronic diseases, decreases nutrient absorption, and increases metabolic needs
• Lack of vitamins and minerals can lead to hair or nail changes or to more significant problems such as developmental delay or mental retardation
• Malnourished women have high risk of giving birth to underweight infants that may lead to growth failure that increases risk of early death

HIV/AIDS:
• HIV interferes with the body’s ability to fight off viruses, bacteria, and fungi that cause disease makes you more susceptible to certain types of cancers and infections
• Virus multiplies in lymph nodes and slowly begins to destroy helper T cells (white blood cells that coordinate the immune system)
• Causes acute and chronic malnutrition both directly through infection and indirectly through increasing poverty and vulnerability
• Research in 2000 in Malawi showed that 35% of severely malnourished children were HIV positive

Plumpy Nut:
• Promotes faster recovery than other Ready to Use Therapeutic Foods
• Plumpy Nut is made from peanuts, milk powder sugar, oil and a mineral/vitamin mix
• It can be made easily using low tech production methods
• The milk powder and peanuts can be removed with the addition of locally-available grains and legumes
• Plumpy Nut is cheaper than milk formula and is safer to use in areas where uncontaminated water is rare
• It helps children whose mothers cannot produce enough milk for all their children

Past Methods for Treating Malnutrition:
• Treated with Therapeutic Feeding Centers and Community-based Care
• More practical, cost effective, greater coverage
• Hires more local volunteers than the TFC
• Uses simplified equipment for determining severity of malnutrition in children
• Less severe cases are treated as out patients

Past Methods for Treating HIV/AIDS:
• Intensive HIV prevention campaigns reduced the number of pregnant women infected by HIV from 30% in the 90s to 10% in 2001
• Increase in supply of condoms: 4.6 supplied per man in 2001 to 10 supplied per man in 2004
• Voluntary HIV Counseling and Testing:
  • Those who test positive are less likely to transmit
  • Those who test negative, awareness increases
• Cheaper and more effective since introduction of rapid HIV testing
• Mother to child transmission:
  • Without intervention – 20-45% chance of MTCT
  • If mother given ARVs, risk significantly reduced
  • Mother must be aware, testing plays vital role
• Helped to virtually eliminate MTCT in developed countries

Antiretrovirals:
• Antiretrovirals are drugs for treatment of retroviruses, especially HIV
• Consists of different types of drugs
• Creates obstacles to HIV mutation by keeping offspring low and preventing mutation
• Offered to asymptomatic patients and patients with history of AIDS-defining illness or severe symptoms of HIV
• Photo on the left was before she started ART, photo on the right was taken six months after she was put on antiretroviral treatment
• 4,300 people die from AIDS each day