Capacity Statement

School-Based Health and Nutrition Programs[1]

Global Overview and Plan's Reach

Health and nutrition programs among school-aged children in low-income countries have shifted over the past decade from an individual-based diagnosis-and-treatment approach which favored elite schools in urban centers to improving the health and nutrition of all children, particularly girls, the poor and disadvantaged. Due to the successes of these child survival programs, the number of children reaching school age (defined as 5 to 14 years of age) is increasing and is estimated to be 1.2 billion children, with 88 percent living in less developed countries.[2] A range of infectious diseases affect school-age children:

- ✓ Helminth infections - between 25 and 35 percent of school-age children are estimated to be infected with one or more of the major species of worms.[3]
- ✓ Infectious diseases - in areas of unstable transmission, malaria accounts for 10 to 20 percent of all-cause mortality among school-age children.[4] Acute respiratory infection is the most common acute infection in school-age children globally and is a significant cause of absenteeism.[5]
- ✓ HIV/AIDS - although school-age children have the lowest infection prevalence of any age group, an estimated 3.8 million children under 15 years of age have been infected with HIV and more than two-thirds have died.[6]
- ✓ Nutrition - chronic and acute malnutrition has led to a significant number of school aged children who suffer from stunting or are severely underweight. Short term hunger and micronutrient deficiencies (iron, iodine and vitamin A) also have negative impacts on children's abilities.

Recognizing that the goal of universal education cannot be achieved while the health needs of children remain unmet, the Focusing Resources on Effective School Health (FRESH) framework was launched by a number of international organizations and non-governmental organization at the World Education Forum in Dakar in April 2000.[7]. Early partners of this initiative include the Education Development Center, Education International, the Partnership for Child Development,

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[1] Prepared by Sabrina Kwauk, Ryan Lander and Luis Tam in August, 2009
[2] US Consensus Bureau. 2002. "Global Population Profile." http://www.census.gov
[3] Bundy, D.A.P. 1997. "This Wormy World: Then and Now." *Parasitology Today* 13: 407-8.
[4] Bundy, D.A.P., S. Lwin, J.S. Osika, J. McLaughline and C.O. Pannenborg. 2000. "What Should Schools Do about Malaria?" *Parasitology Today* 16: 181-182.
[5] Cohen, S., and A. Smith. 1996. "Psychology of Common Colds and Other Infections." In *Viral and Other Infections of the Human Respiratory Tract*, ed. S. Myint and D. Taylor-Robinson. London: Chapman and Hall.
[6] UNAIDS 2002. *Report on the Global HIV/AIDS Epidemic: The Barcelona Report*. Geneva: UNAIDS.
[7] World Bank 2000. *The FRESH Framework: A Toolkit for Task Managers*. Human Development Network, World Bank, Washington, DC.

UNESCO, UNICEF, the World Food Program, WHO and the World Bank. The FRESH framework proposes four core components that should be considered in designing an effective, equitable and cost-effective school health and nutrition program. These are:

- ✓ Policy - non discriminatory, protective, inclusive and gender sensitive policies that promote nutrition and physical and psychosocial health.
- ✓ School environment - access to safe water and provision of separate sanitation facilities for girls, boys and teachers.
- ✓ Education - skills-based education, including life skills in health, nutrition, HIV prevention and hygiene that promote positive behaviors.
- ✓ Services - simple, safe and familiar services that can be delivered cost-effectively in schools and increased access to youth-friendly clinics.

As part of its Child Centered Community Development approach, Plan has progressively embraced the FRESH approach in its school-based health programs because it supports a community's involvement in looking after its children's health, and develops partnerships between communities, community-based organizations and all levels of government. In the year ending June 2008 (FY08), Plan expended more than $2.6 million on health programs for school-aged children in the areas of health promotion, school hygiene, child-to-child health, dental services, visual/hearing defects, de-worming treatment, school meals and school gardens. Additional $14 M investments were made by Plan in school infrastructure related to health and nutrition, e.g. water and sanitation facilities and kitchens.

Plan's Application of Four Components of the FRESH approach

On Influencing Policies - Plan's experience in influence school-based health and nutrition policies is convincing. Through the National Health Council, Plan Ecuador participated in the creation of Cantonal Health Councils and action plans, paving the way for the promotion and exercise of children's rights to health. Plan Bolivia implemented two pilot projects at the national level in association with the Ministry of Health, which monitors the effect of various interventions on child health and nutrition. The results of these pilot projects were used as inputs to prepare the current government health policy in child heath and nutrition.

Case Study- Child Medical Insurance: Sustainable Innovations
For a Public and Private Partnerships in Rural China (2005-2007)

Sixty two percent of rural households in China cannot afford medical services; and the Rural Collaborative Medical Security System (RCMSS) cannot effectively help rural children because it focuses on adult chronic diseases.
Method - Plan China implemented a pilot children's medical insurance program for 12,000 families living in six rural villages of Xixiang county of Shaanxi province to ensure rural children's access to adequate health services. Eligible children are from 3-16 years old. Through local partnerships between communities, local government health service providers and private insurance companies, a new medical insurance policy was created with low annual premiums (5 RMB (~$0.73) per child from each family, which was matched by Plan China) to cover children in prevention, outpatient and inpatient care. The ceiling of cash benefits was up to 4,000 RMB (~$585) per child; the deductible was 50 RMB (~$7.30) per accident (none for disease); and 80% of medical costs were reimbursed by the insurance company.
Results - 6,376 children were covered by the policy; 49 sick children and 40 children claimed their expenses on hospitalization or outpatient service; total settlements paid by the insurance company amounted to 28,480 RMB (~$4166); and the average reimbursement per family was 62.3% of the premiums paid. All groups were satisfied with the results. Villagers learned to trust the insurance company and received proper medical care.

On Improving the School Environment - Plan improves school environments through interventions including the construction of latrines; provision of separate sanitation facilities for boys and girls; toilet facilities for disabled children; equipping latrines with their own water supply systems; access to safe drinking water through distribution of purification filters; and installation of hand-washing facilities. In the year ending June 2008, Plan spent a total of nearly $4M in the construction and rehabilitation of school latrines and kitchens. In the same time period, Plan's estimated investment in improving water supplies at schools is $10M.

On Improving Health Outcomes through Education – Plan, in partnership with the Ministries of Health and Education and schools, works to provide skill-based health education including life skills relevant to children's lives. Training programs on health and nutrition are also targeted towards mothers, caregivers, teachers and community health workers. Plan Indonesia trained children in third to fifth grade in ten schools to become "little doctors" as part of the hygiene promotion in schools. This training empowers children to be the agents of change in their communities. In Cambodia, teachers were trained to provide key health messages to students; and girl counselors were trained in sexual and reproductive health issues to provide support, conduct home visits to children who are absent from school in an effort to help them return to class, and refer students to health care services where needed.

Case Study – Hygiene promotion in Nicaragua:
Preventing childhood diarrhea by empowering schoolchildren (2001-2005)

Method – Plan has been implementing a four year Personal Hygiene and Sanitation Education (PHASE) project in Nicaragua., Funded through a grant from Glaxo Smith Kline the project has directly benefited nearly 20,000 students across 40 schools in 126 rural communities. The area is marked by a high prevalence of childhood diarrhea and other water-borne diseases. Through the innovative peer education methodology called Child-to-Child, PHASE aimed to reduce diarrhea cases by assisting children as they support each other in developing sustainable practices in personal hygiene and sanitation. More than 1,000 children (child monitors) were trained in personal hygiene and sanitation and leadership. Under the guidance of teachers, they disseminated their knowledge to 9,393 children through functional groups of 15 children each. In addition, mothers were motivated by children to practice more hygienic ways to prepare their meals, while fathers were encouraged by children to improve the household supply of water and sanitation services.
Results - After the first three years of PHASE, a 42% decrease in the cases of diarrhea among under-five children was documented. At the same time, (1) the percentage of families with access to safe drinking water increased from 58% to 100% and, (2) the number of families that had not reported cases of diarrhea in the past 15 days increased from 59 percent to 86.3 percent. The number of families showing improvement in handling and conserving drinking water tripled from 33.5 percent to 95.9 percent.

On Improving Health and Nutrition Services at Schools - Plan facilitates the provision of youth-friendly school health services to promote physical and mental health among children. In FY08, Plan Zimbabwe conducted 142 health promotion activities in primary schools, resulting in the formation of 200 school health clubs. Additionally, Plan Zimbabwe in partnership with the Ministry of Health and Child Welfare and the Ministry of Education supported the supplementary feeding project which has reached 178,932 children in schools with one nutritious meal a day.

In Burkina Faso, Plan provided classrooms, water and sanitation facilities, school lunches and take-home rations (the latter only for girls who had at least 90% attendance in the previous month) to 30,000 primary school students in rural communities. As a result of these improvements, children who started at the 50th percentile increased their learning test scores, on average, to the 80th percentile. Most importantly, girls had a 97% attendance rate.

Case Study- A community-managed educational fund to keep HIV infected and affected children in school

In 2004, an estimated 23,000 people in Chiang Rai Province in northern Thailand were living with HIV; almost 1,400 (6%) of them were children under 15 years of age. Many children in families affected by HIV are forced to abandon school for economic reasons. Although the Government of Thailand has since 1999 made education compulsory and free of charge up to grade nine, parents still have to pay for transportation, textbooks and other materials.
Method - In 2003, Plan Thailand formed a partnership with the Provincial Department of Social Development and Human Security, the Provincial Non-Formal Education Department and the Provincial Health Office. A Community Educational Fund was developed to support schooling up to grade nine for educationally marginalized children. Plan facilitated the formation, financial and organizational capacity, and education of committees in four districts of Chiang Rai Province to manage the Community Educational Fund. The committees then proceeded to select children in need of assistance.
Results - By the end of the project, the funds had helped the families of 605 children affected by HIV to allow them to continue their schooling. Some support to families was provided in the form of loans. Additionally, there has been a noticeable decrease in discrimination and stigmatization of children affected by HIV in the school environment. Plan Thailand is working with local partners to integrate the Educational Funds into the Community Development Plans of the four districts, and to replicate the concept in other districts.

In Kenya, Plan is working with children clubs to participate in environmental activities such as tree planting and growing school gardens. School communities were mobilized and participated in enabling school children to have access to water and sanitary facilities. Ministry of Health staff conducted health checks for children who had dental, hearing and eye sight impairments; thereby giving children access to treatment, checkups and training on personal hygiene. In Cambodia, Plan conducted outreach services for medical consultations at 5 schools. As a result, schoolchildren and communities as a whole are more involved in village clean-up days to prevent dengue fever during the epidemic season; and mosquito breeding grounds in the village and primary schools were lessened.

Plan's Application of Effective School-based Health Interventions

Deworming - As part of its school healt programs, PLAN has conducted deworming programs in Benin, Burkina Faso, Cameroon, Dominican Republic, Ecuador, El Salvador, Guinea Bissau, Haiti, Kenya, Malawi, Mali, Niger, Pakistan, Philippines, Senegal, Togo and Zimbabwe. Deworming programs are offered to children as part of a mass drug administration strategy, i.e. all children living in a geographical area receive these drugs because of their low cost, their high effectiveness and the almost non-existent side effects. In Guinea, Plan and the government provided praziquantel (against schistosomiasis) to 12,459 school-children in Gueckedou and Macenta districts. Similarly and in Togo, Plan and the government provided albendazole (against soil-based helminths) and praziquantel to 16,750 children in 82 primary schools of the Central and Plateaux regions.

Prevention and control of infectious diseases - Plan engages in a number of activities to prevent and treat infectious diseases among children. Malaria prevention actions include supporting the training of professional health workers in home management of malaria in Ghana; distribution of long-lasting insecticide treated nets; and health education on malaria control measures. In Cambodia and Pakistan, Plan trains community health workers to increase awareness on acute respiratory infections and diarrhea management. In Malawi, Plan trains students and caregivers on causes, prevention and treatment of infectious diseases (e.g. malaria, diarrhea, skin infections). Additionally, Plan Malawi's work in construction of boreholes in target schools increases access to clean drinking water, thereby is reducing the incidence of diarrhea and other water-borne diseases among children.

Case Study - Chagas: A forgotten but deadly disease in Bolivia (2002-8)

Chagas is a deadly disease caused by a protozoan called Trypanosoma cruci and is transmitted to humans by a blood-sucking insect known as Vinchuca or 'assassin bug'. Chagas is the most life-threatening parasite disease in Latin America and is closely related to poverty. The disease is endemic in Bolivia, causes 15% of deaths among people aged 15-75 years, and significantly impacts the country's economy and the life expectancy of its people.
Methods - Due to this situation, Plan and Pro-Habitat implemented a six-year prevention and control project (2000-2006) in the departments of Sucre and Tarija. Both departments harbor the heaviest burden of Chagas disease in the country. The project was funded by the Government of Bolivia, DFID, the European Union and the Government of Netherlands. The project aimed to: (a) the reduction of the house infestation by the Triatoma vector, by promoting preventive behaviors among household members, by improving the physical environment and by providing indoor residual spraying, and (b) in communities achieving low infestation rates, the provision of treatment (with Benznidazole) to sero-positive children aged 5-12 years. Once the vector was controlled, screening tests were conducted at the community level and infected children received ambulatory treatment with standard doses of Benznidazole.
Results - Among 6,364 screened children, 1,137 were found to be infected and treated (21%). A study revealed that children who had completed the treatment presented a significant decrease in their serologic titers. However, 22.1% of treated children presented low (45.9%), moderate (48.9%) and serious (5.2%) adverse reactions to the treatment. Frequency of adverse reactions was directly related to the age of treated children. Due to these adverse reactions, 9.9% of children did not complete their treatment and 7.7% suspended treatment temporarily.

HIV/AIDS - Plan carries out health education on HIV/AIDS, sexually transmitted infections, family planning, and adolescent-friendly reproductive health services in schools. Through the formation of school health clubs, students learn life-skills including HIV/AIDS prevention, and share experiences and problems encountered on adolescent reproductive health issues. In Cambodia, Plan partnered with KAPE to implement school health projects, including "Lesson for Life"- an HIV/AIDS awareness campaign where primary school students and key stakeholders were interviewed and broadcasted about HIV/AIDS in their communities.

Case Study- Supporting young people in HIV/AIDS and adolescent reproductive health programs in Ethiopia (2004-2007)

In Ethiopia, young people are the center of the AIDS pandemic in terms of transmission, impact, vulnerability and potential for change. The prevalence of HIV among young women and men aged 15-25 is high (5.6%) compared to adults (2.1%). Only 24.8% of this group has a good understanding of HIV transmission due to the lack of youth organizations, which provide HIV intervention in rural areas.
Method - Plan supported the capacity building for 85 school youth clubs with 3,500 members through trainings on adolescent sexual reproductive health, club management, program planning, and monitoring and evaluation. The more than 900 peer educators working with more than 45,400 youth facilitated sessions on topics ranging from reproductive health, HIV/AIDS/STIs, life-skills to gender issues. Strong partnership and referral links were established among the youth clubs and health service delivery points to provide youth friendly voluntary counseling and testing (VCT) and family planning services.
Results – The program evaluation indicated that 98% of youth can now identify at least two modes of HIV transmission and 94% of those could now identify two methods for avoiding HIV infection; and VCT uptake among rural youth increased by 22% since 2004.

Nutrition - Plan empowers children to adopt healthy eating behaviors through the creation of school gardens. Children are trained on gardening techniques, healthy eating and cooking practices, and provided with simple tools and seeds to grow vegetables and other crops for nutritional meals. Plan also distributes vitamin A supplements to primary schools to reinforce their diets. In addition, mothers, caregivers and teachers are trained in food nutrition to improve food utilization of children in households and schools.

Case Study - Transferring innovative approaches in food security and economic strengthening to communities to support orphans and vulnerable children in Kenya (2004-2009)

With funding from USAID/PEPFAR and through Plan, the Breaking Barriers project uses school as an entry point of interventions with OVC. The Rangala Family Development Program (RFDP) in Kenya has been running a school feeding program benefiting 2,088 children.

Method - In partnership with the Ministry of Agriculture, RFDP introduced a high yield species of banana called Okhasia to the rural community of Ugunja to improve food security and supplement household incomes. Training was conducted for selected teachers and youth volunteers from schools on plant propagation. Seven schools, 48 OVC, 20 home-based care providers and 6 women groups were provided with banana sucklings. The beneficiaries replant the banana sucklings and pass these onto other community members.

Results - 21 out of the 27 supported schools, 400 OVC households, 60 home-based care providers including people living with AIDS and 60 women groups are currently growing this particular species of bananas. The training on banana propagation has had a multiplier effect and the community has embraced banana growing as a way of addressing food security within this region.