

School health and nutrition: An overview

Successes and lessons learned from Nasirnagar, Bangladesh, March 2009

BACKGROUND

Between 2002 and 2008, Save the Children implemented a school health and nutrition (SHN) program in the remote and flood-prone area of Nasirnagar, Bangladesh. During that time, the Agency gained substantial expertise in planning and managing SHN programs at the district and community level to improve school-children's health and nutrition status and increase their school attendance and performance. Save the Children's aim is to ensure that lessons gathered from its program in Nasirnagar are documented and shared to improve SHN programming in Bangladesh and other countries initiating SHN. As such, the organization created a series of four program briefs to document the successes, challenges, and lessons learned from the SHN program in Nasirnagar (see list, right).

In the past several decades, Bangladesh has made significant progress in reducing infant mortality and ensuring more children survive to five, the typical age at which most children begin schooling. Increased access to primary school and greater awareness of the importance of education have also increased the number of children receiving a basic education, and 89 percent of primary school-age children are now enrolled in school.¹ Although the mortality rate among school-aged children is relatively low, the burden of disease is high², affecting children's ability to attend, learn, and remain in school. Only 65



An eleven-year-old girl reads her school book.

Successes and lessons learned in Nasirnagar

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percent of schoolchildren reach grade 5.¹ Adding to this problem is a lack of access to safe drinking water and inadequate or nonexistent sanitation facilities at many schools, encouraging the spread of disease and preventing girls from regularly attending school.

In an effort to understand and address these issues, Save the Children conducted a situational analysis in Nasirnagar in 2002. The results revealed that most schoolchildren suffered from micronutrient deficiencies, worm infestations, and regular bouts of diarrhea. All are among the leading health-related causes of school absenteeism—and all are preventable. The situational analysis also revealed that schools offered only limited health services and inconsistent provision of safe drinking water and adequate sanitation facilities.³ Education statistics were also substantially worse in Nasirnagar than the national rates. In 2001, only 61 percent of school-aged boys and 65 percent of girls were enrolled in school in Nasirnagar, compared to 80 percent for both sexes at national level. The number of children per class also suggested a high dropout rate between first and fifth grades.⁴ During interviews, school and community



representatives named poor school attendance due to illness as one of the main reasons for the high level of dropout.³

In 2004, Save the Children conducted a survey in 55 schools across the 13 unions of Nasirnagar to assess the prevalence of health and nutrition problems; children's knowledge, attitudes, and practice around key health behaviors; and their access to safe water and sanitation at school and community level. In 2006, with funding from GlaxoSmithKline, NGO Forum conducted a community-based survey to assess the health and sanitation situation in seven of the most remote unions of Nasirnagar. The project partners also conducted an inventory of the water and sanitation situation in all schools in the same seven unions. Save the Children used both surveys and the inventory as baselines to evaluate the school health and nutrition program described in this brief.

The baseline results confirmed the findings from the situational analysis and showed the need for a comprehensive school health and nutrition program (see table, page four). The data showed nearly all school children to be infected with intestinal worms; most had heavy worm loads, a health problem associated with higher morbidity levels. The prevalence of anemia made the condition a public health problem according to WHO criteria.⁶ Stunting and wasting were also concerns.

Although most schools had separate latrines for boys and girls, many were locked, dirty, and unusable. Many school tube wells were not functional or needed repair. Hand-

washing facilities were rare. At community level, though most households had access to tube well water, very few had access to a tube well deep enough to be safe from microbial and arsenic contamination—a serious problem in a region where 50 to 80 percent of tube wells are contaminated with arsenic⁹, which increases the risk for cancer. Interviews with community members (primarily parents) found that few reported washing hands after defecation or wearing sandals in latrines.

APPROACH

To address the health and nutrition problems faced by schoolchildren, in 2002 Save the Children began introducing school health and nutrition activities in six of Nasirnagar 13 unions using private funds. In 2006, the SHN program integrated PHASE (Personal Health and Sanitation Education program) into its approach. PHASE, a hand-washing program targeting school-aged children, was pioneered and funded by research-based pharmaceutical company GlaxoSmithKline. It allowed Save the Children to strengthen the behavioral element of its SHN program and expand the program to all 13 unions of Nasirnagar. Save the Children utilized the existing education infrastructure to deliver basic health and nutrition services, provide health education, improve the water and sanitation situation in schools and communities, and build school and community capacity to support and sustain these activities. Save the Children follows the principles of an internationally recognized SHN framework¹⁰, and draws on the experience of nearly twenty other Save the Children-led SHN programs around the world and PHASE programs in Africa and Latin America. The program has four main components:

- **School-based health and nutrition services:** Deworming and vitamin A supplementation twice a year, weekly iron supplementation and annual vision screening (followed by classroom remediation, referral or treatment) to all school children; and provision of first aid kits to all schools with training and maintenance support
- **School environment:** Provision of safe drinking water, child-friendly latrines for girls and boys and hand-washing facilities with soap in every latrine cubicle. Training of student brigades and school management committees to maintain these facilities.



Nasirnagar Upazila, Bangladesh

- **Promotion of healthy behaviors:** School and community-based health communication activities focused on health, hygiene, sanitation, and nutrition, using adapted versions of the GlaxoSmithKline’s PHASE program materials.
- **School and community support:** Training school and community groups to support and sustain SHN activities.

Save the Children designed and implemented the SHN program in partnership with the Ministry of Health and Family Welfare, Ministry of Education, district authorities, schools, communities, and local partner NGOs. Save the Children’s goal was to create a model SHN program in Nasirnagar that could be scaled up by the government or other partners across the country.

COVERAGE

Save the Children’s SHN program initially reached 72 schools across six unions of Nasirnagar with funding from the Agency’s sponsorship program. Save the Children implemented the SHN program alongside sponsorship-funded basic education, early childhood development, and adolescent reproductive and sexual health programs. In 2006, the introduction of PHASE both allowed it to scale up to another 55 schools in the remaining seven unions of Nasirnagar. By 2007, the program reached all 127 schools in Nasirnagar, and approximately 33,500 schoolchildren. In 2008, Save the



A crowded classroom in a remote village school, Nasirnagar

Essentials for program success

Capacity building of program staff and partners on SHN before launching the program is key to ensure the program follows pre-defined standards and that messages are consistent.

Sensitization and **participation of communities and schools** in program design, implementation and monitoring throughout the life of the program is necessary to ensure full support from all stakeholders including parents and children.

A strong monitoring system and regular supervision to identify and resolve issues as they arise is important. **Monthly meetings** with school and community representatives, and regular supervisory visits were key to ensuring quality interventions with high coverage

Children began reducing its support for SHN in Nasirnagar as the GlaxoSmithKline grant ended and private funds were moved to a new district in September 2008. Save the Children has since introduced SHN and PHASE into this new district in Western Bangladesh (Meherpur) that has not previously had SHN programming, using its experience from in Nasirnagar. Over the next few years, the SHN program is expected to cover all 18 unions in the district and reach some 25,000 children.

SUCCESSSES

In June 2008, Save the Children and NGO Forum repeated the school and community based baseline surveys conducted in 2004 and 2006 to assess changes in children’s health and nutrition status and behaviors. The project team also repeated the school inventory to assess changes in the school water and sanitation situation and compared education statistics collected by Nasirnagar health authorities from 2004 and 2008 (see table, next page).

The end line data show that the school and household environment improved significantly with respect to water, sanitation, and hygiene over the life of the project. At the school level, the project’s support for repair and construction of facilities meant that nearly all schools now have safe drinking water; separate, child-friendly latrines

Comparison of conditions at baseline and endline^{5,7,8}

School environment (observation)	Portion of schools ⁷ n=55 schools	
	2006	2008
Has functional tube well	74%	96%
Has separate latrines for girls and boys	67% <i>not all functional</i>	98% <i>all functional</i>
Has hand-washing facilities	5%	97%
Household environment (observation)	Portion of households n=2948 (2006), n=330 (2008)*	
	2006	2008
Access to hygienic latrines	22%	87%
Access to safe tube well	5%	21%
Community behavior (interviews—reported)	Portion of respondents n=2948 (2004), 330 (2008)*	
	2006	2008
Wear sandals in latrine	6%	78%
Wash hands with soap/ash after defecation	34%	86%
Wash hands before eating	47%	78%
Wash hands with soap/ash after cleaning baby's bottom	9%	51%
Children's health status (physical exam)	Portion of children n=1480 children	
	2004	2008
Anemic	40%	35%
Intestinal parasites	90%	81%
Heavy worm burden <i>more than 1,000 eggs per gram</i>	66%	0.1%
Stunting <i>low height for age, WHO growth index</i>	24%	17%
Wasting <i>low body mass index, WHO</i>	25%	25%
Education indicators (MoE statistics)	Rate n=127 schools	
	2004	2008
School completion rate	55%	68%
School pass rate	82%	91%
Dropout rate	20%	15%
School enrollment rate	82%	91%
Attendance rate	66%	75%

*Save the Children sampled fewer villages in 2008 than in 2006 due to budgetary constraints.

for girls and boys; and hand-washing facilities with soap. While two-thirds of schools had separate latrines at project start, many were locked, dirty, and inappropriately constructed for children, who often chose to defecate outside as a result.¹¹ Today, community members know how to maintain and repair the sanitation facilities.

The education situation also improved substantially in Nasirnagar between 2004 and 2008. School completion and attendance rates are up and dropout has fallen. Although these changes cannot be linked directly to the SHN program, poor health was identified as one of the main reasons for poor attendance and dropout at baseline. Addressing these health problems, alongside other factors, is likely to have influenced the education situation in Nasirnagar.

Health indicators showed less obvious changes. Two months after the last deworming, most children had been re-infected, but worm loads were light, implying a reduced effect on children's health and education. Prevalence of anemia fell only slightly, which may suggest the need to provide iron twice a week rather than once. The portion of children who were underweight remained the same, and without a change in caloric intake, the indicator is unlikely to improve. Fewer children were stunted at end line, which may be a consequence of improved health and nutrition during their preschool years. However, there is evidence that suggests that SHN interventions (deworming and micronutrient supplementation) prevents children from becoming more stunted during their school years and may even reverse it.¹²

Due in part to Save the Children's success in implementing the school health and nutrition program, the Ministry of Health conducted a national deworming program, rolled out across the country in November 2008. The country also participated for the first time in Global Hand-Washing Day on October 2008, with events in several districts across the country, including Meherpur, with support from Save the Children. School health and nutrition staff were present to assist in facilitation of activities and provide practical training and demonstrations.

CHALLENGES AND LESSONS LEARNED

- Factors affecting the impact of SHN activities included low school attendance due to illness, seasonal flooding hindering access to schools,

children being required to work in the field and lack of resources at school (few teachers and crowded classrooms). However, information, facilities, and services introduced in schools through the SHN program encouraged children to remain in school. Communication campaigns also helped families and communities develop an understanding of the link between health and education.

- Key behaviors like regular hand-washing with soap, use of latrines among males, and proper disposal of waste were difficult to change. Despite the challenge, the project achieved significant improvement in the practice of these behaviors. The project partners identified cultural, social, and economic barriers to adopting these behaviors and suggest that the national SHN project develop strategies to overcome barriers with appropriate, targeted messages.
- School management committees are most effective when consistently involved and given clarity about their support role. As the school's core administrative body, the school management committee should be actively engaged throughout the life of the program—from design and implementation to monitoring and evaluation. The responsibilities of committee members must be addressed clearly during training at project start-up, and committee activities to support SHN must be monitored consistently at the national level by the district education officer.
- Engaging and mobilizing parents to support the health and hygiene practices children learn in school

and model proper practices themselves is very important. While work has been done in this area, there is room for more efficient coordination at the field level. Methods to engage parents could include teachers sharing health education plans, progress, challenges and ideas, as well as organizing community-based activities that target parents with specific health messages.

- Because SHN falls under the auspices of both the Ministry of Health and Ministry of Education, it is not clear which government body is responsible for the support and continuation of SHN program activities. To increase the sustainability and scalability of SHN programs, government ministries should be actively engaged from the program design and development phase, through implementation, to phase-out. Appropriate approvals from ministries prior to and during program implementation are essential to ensure their full support and the smooth running of activities.
- A lack of coordination at a national level among government ministries, district authorities, and other NGOs is an ongoing challenge. In 2007, the World Bank commissioned Save the Children to conduct a national situational analysis of SHN to guide the elaboration of an SHN strategy for Bangladesh. Save the Children presented the analysis at a meeting of partners in June 2007 and all parties agreed on the need for greater oversight and coordination.

ক্লাস রুটিন

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বহুতে দুইবার কুমির ওষুধ খেতে হবে

হাতের নখ কেটে পরিষ্কার রাখতে হবে

কি টি ফি ন

কলম্বন টিউনওয়েল এর পরিষ্কার করতে হবে

সকলের সামগ্রিক শাফাফি কক্ষের করতে হবে

Save the Children USA

PHASE Project

Class routine where children note their class timetables and iron supplementation days

NEXT STEPS

As Save the Children phases out of Nasirnagar to initiate SHN in a new district, most of the SHN activities are expected to continue, managed and coordinated by upazila education authorities, communities, and local NGOs who are convinced of the need for SHN and committed to ensuring the program continues. Brahmanbaria District education authorities already requested that Save the Children provide health education materials to the district's 950 schools and support the training of teachers to deliver health education once a week to all schoolchildren. As a result 310,000 school children across Brahmanbaria district are now benefiting from weekly health education sessions using the new PHASE materials and approaches.

The Government of Bangladesh has demonstrated a commitment to improving schoolchildren's health and nutrition, by including SHN as a priority in its 2005–2010 *Health, Nutrition and Population Sector Plan*. The adoption of a national deworming campaign and participation in Global Hand-washing Day are both strong signs of progress and serve as examples of the impact Save the Children has had on the development of national school health policy. Based on Save the Children's successes in implementing the SHN program in Nasirnagar, the Ministry of Health and Family Welfare has plans to expand its existing, geographically limited, national SHN program. If the deworming campaign is a success, a vitamin A and iron supplementation campaign will hopefully be launched as a collaboration between the Ministry of Health and Family Welfare and Ministry of Education. Other SHN interventions and services, such as vision screening, first aid kits, and information dissemination on health and hygiene will hopefully continue at the school and community level in Nasirnagar with support from school management committees, teachers, parents, student brigades, and other community members using existing materials and expertise.

Despite challenges, there is a growing interest in and concern for SHN within Bangladesh. With improved coordination, oversight, and financial support, the opportunity exists to take advantage of current SHN expertise in the country to create and implement a national SHN policy to improve the health, education, and future of the children of Bangladesh.¹³

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Photos by Michael Bisceglie and Natalie Roschnik

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