

## SWASH+ BASELINE SURVEY – A CLOSER LOOK

### Overview



In January-April 2007, SWASH+ teams collected baseline data from 185 primary school-communities in Suba, Rachuonyo, Kisumu and Nyando. The baseline included 1) school data WASH facilities, educational outcomes, and organizational characteristics; 2) pupil information on absenteeism, knowledge, attitudes and behaviors; 3) household information on socio-economic status, watsan facilities, absenteeism and health of school children, health of children under 5, knowledge, attitudes and behaviors. Additional data were collected in selected schools and households on water quality, hand contamination, helminth infections, and anemia.

The main purpose of the baseline was to assess the impact of different school and community WASH interventions on: health of school children, absenteeism and educational performance of school children, health of children under 5, behaviors of school children, uptake of key WASH behaviors in households, and improvements in household water and sanitation characteristics. The baseline provides the comparison for the mid-term and final evaluation of the interventions in 2008 and 2009 respectively. It also provides a baseline for assessing the sustainability of water treatment, hand washing, sanitation, and water supply improvements in the schools.

### **How do school, household and child characteristic health and educational outcomes related to water, sanitation and hygiene?**

In addition to providing a basis for the follow up evaluations, the baseline survey provides an opportunity to examine how school and household level water, sanitation and hygiene characteristics affect key health and educational outcomes. The baseline provides information on over 10,000 school aged children in almost 5,000 households in the 185 schools. We conducted a cross-sectional analysis to identify to quantify the effect of household and school water, sanitation and hygiene on diarrhea and absenteeism in school-aged children.

**Approach:** We first looked at the relationship between each school, household and child variable on the likelihood of diarrhea and absenteeism. These variables included a long list including: school water, sanitation and hygiene facilities and their quality; general school facilities; household demographics and socio-economic status; household water, sanitation and hygiene facilities; and child demographics. For each outcome, we identified individual variables that were related to the likelihood of diarrhea or absenteeism. We then combined all of the statistically significant variables into a combined model to find out which ones are most important in determining absenteeism and diarrhea.

Key findings: The results demonstrate that poor school and household level water, sanitation and hygiene have an important negative impact on child health and education. All of the multi-variate results control for household economic status, parental education, household demographics, child age and child sex.

#### Absenteeism (in the past 2 weeks)

- Children in households with hand washing facilities (water and soap together) were 25% less likely to miss school
- Children from a home with a latrine were 21% less likely to miss school
- Children in household with a closer water source or one requiring fewer collection trips were significantly less likely to miss school
- Children in schools that ever provide water for hand washing are 30% less likely to miss school
- Children in schools that are closer to the recommended pupil:latrine ratio are significantly less likely to miss school
- Children in schools with better maintained latrines (less smell, flies and feces) are approximately 20% less likely to miss school

#### Diarrhea (in the past 2 weeks)

- Children involved in water collection at home are 35% more likely to experience diarrhea
- Children in households that report treating their drinking water are over 30% less likely to suffer diarrhea
- Children in a home with a hand washing station are 35% less likely to have diarrhea
- Children with diarrhea were significantly more likely to have siblings who also suffered from vomiting, diarrhea, and cough (potentially meaning that school may be exposing their younger siblings to illness)

*SWASH+ is a five-year applied research project to identify, develop, and test innovative approaches to school-based water, sanitation and hygiene in Nyanza Province, Kenya.*

*The partners that form the SWASH+ consortium are CARE, Emory University, the Great Lakes University of Kisumu, the Government of Kenya, the Kenya Water for Health Organisation (KWAHO), and Water.org (formerly Water Partners).*

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