

Development of Evidence-Based Baby WASH Interventions to Reduce Exposure to Fecal Pathogens (REDUCE Program)

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- The REDUCE (Reducing Enteropathy, Diarrhea, Undernutrition and Contamination in the Environment) program is a USAID funded study which is a partnership between Johns Hopkins School of Public Health and Food for the Hungry.
- Recent findings from large scale trials of WASH interventions focused on the traditional exposure pathways from the F diagram for young children have not shown the expected improvements on diarrheal disease, environmental enteropathy, and child growth. This has highlighted the need for further research identifying the unique exposure pathways to fecal pathogens for susceptible pediatric populations, and WASH interventions tailored to young children extending beyond the standard approach of latrines, handwashing with soap, and household water treatment.
- The objective of REDUCE is to identify the exposure pathways to fecal pathogens that are significant contributors to morbidity for young children in the Democratic Republic of the Congo (DRC), and to develop and evaluate scalable interventions reducing fecal contamination from these pathways.
- The study site is Walungu Territory, South Kivu Province, DRC.
- The REDUCE program has three components a prospective cohort study, qualitative formative research, and a pilot study.
- Four hundred thirty three children under five years of age were enrolled in the REDUCE prospective cohort study. Study children were followed for a 6 month period.
- Five-hour structured observation of child mouthing behavior and spot checks of WASH conditions on the household compound were performed at baseline. Height and weight measurements were obtained from study children at baseline and the 6 month follow-up.
- Child mouthing of feces, feces in the child's sleeping space, and child contact with rabbits and guinea pigs were associated with impaired growth among young children in the cohort.
- REDUCE program formative research for intervention development included 91 semi-structured interviews, 6 focus group discussions, and a pilot study of 102 households.
- Formative research findings were used to develop Care Group Modules on child mouthing of contaminated fomites, animal hutches for rabbits and guinea pigs, and composting animal feces.