



Cambodia Integrated Nutrition, Hygiene, and Sanitation Project (NOURISH) Impact Evaluation

Implementation Context and Background

Despite strong economic growth and rising living standards in the last two decades, high levels of undernutrition persist in Cambodia. Tackling childhood undernutrition requires a broad range of ‘nutrition specific’ and ‘nutrition sensitive’ interventions that act to ensure adequate dietary intake and address the multiple underlying or enabling determinants. However, when rigorously evaluated, interventions to improve dietary intake alone have not been successful in reducing stunting. Acute and persistent infections associated with unsafe water, poor sanitation, and inadequate hygiene may impact gut health and therefore overall nutrition and growth. Thus, complementary water, sanitation and hygiene (WASH) interventions aimed at reducing diarrheal disease and exposure to fecal bacteria may be an important means to securing optimal nutritional outcomes for children.

USAID’s Cambodia Integrated Nutrition, Hygiene, and Sanitation (NOURISH) Projectⁱ promotes essential WASH and nutrition behaviors with the aim of reducing stunting in children under two years old and improving the nutritional status of mothers in rural areas. The WASH interventions consist primarily of community-led total sanitation, coupled with supply-side support for sanitation and hygiene products, and social and behavior change communication. The nutrition interventions include complementary feeding activities and education through community-based growth promotion sessions, caregiver groups, and home visits, as well as conditional cash transfers linked to the utilization of key health and nutrition services focusing on first 1,000 days of life. The NOURISH project is implemented in the provinces of Battambang, Pursat, and Siem Reap.



To promote optimal child growth and development, Cambodia NOURISH targets women and children during the first 1,000 days—from the start of pregnancy until the child reaches two years of age.

Impact Evaluation Design

To test whether real-world programming on sanitation, hygiene and nutrition can deliver better results when implemented jointly, USAID commissioned an impact evaluation of the NOURISH Project.ⁱⁱ This impact evaluation will test how effective integrating sanitation and hygiene with nutrition programming is in improving child linear growth, as well as whether this integrated approach is more effective than stand-alone nutrition or sanitation/hygiene interventions. In addition to the primary outcome (child linear growth), this evaluation also will analyze the effects on secondary outcomes (prevalence of enteric infections) and tertiary outcomes (self-reported diarrheal disease) in young children. The three central questions for this impact evaluation are:

1. Do nutrition interventions, as delivered at scale, lead to improved linear growth in children?
2. Does expanded access to sanitation lead to improved linear growth in children?
3. Is the combined effect on linear growth in children of sanitation/hygiene and nutrition interventions delivered together greater than the additive effect of the two interventions delivered independently?

The NOURISH IE consists of a randomized controlled trial (RCT) with a factorial design in which 55 target communes were randomly assigned to one of three treatment groups or the control group; the treatment groups receive the relevant NOURISH intervention (or interventions), and the control group remains unexposed. The table below depicts the treatment and control arms included in the study. Assignment to treatment and control groups was randomized at the commune level (clusters) to contain spillovers across villages and to prevent cross-group contamination. Under this design, all villages within each treatment commune receive the assigned NOURISH interventions for their respective commune.

Table 1: Implementation Design for the Impact Evaluation

<p>Control Group: No project activities*</p>	<p>Treatment 1: <u>Nutrition interventions:</u></p> <ul style="list-style-type: none"> • Community nutrition (growth promotion, caregiver groups, and home visits) • SBCC package • CCT and integrated vouchers
<p>Treatment 2: <u>Sanitation/Hygiene interventions:</u></p> <ul style="list-style-type: none"> • CLTS • Supply-side support • SBCC package 	<p>Treatment 3: Nutrition <u>and</u> sanitation/hygiene interventions</p>

* The SBCC strategy includes four television spots, so communes in the control group may be exposed to some information via these television spots. However, beyond the television spots and visible campaign branding, these control communes do not receive direct SBCC messaging from the village health support group (VHSG) or any other NOURISH-related activities.

Baseline data consisted of household surveys with the primary caregiver of children under two years and anthropometric measures of all children in this age range. The NOURISH project then rolled-out project activities in 36 communes over the course of two years, while the remaining 19 control communes remain unexposed to the program. Endline measurement will take place 24 months after the end of the roll-out period. During these 24 months, the evaluation team is collecting implementation fidelity monitoring data to track the pace of roll-out, uptake of core interventions, and intermediate outputs along the causal chain. Endline data collection is planned to start in July 2019. Data will be collected through household surveys, direct observation, anthropometry measures, and stool samples. Results from this evaluation will contribute to an improved understanding of synergistic effects, if any, of integrating nutrition and WASH programming and will be used to inform future programming aimed at improving child nutrition outcomes.

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ⁱ The NOURISH Project is a five-year cooperative agreement implemented by Save the Children in collaboration with SNV, the Manoff Group, and three local partners,

ⁱⁱ Management Systems International (MSI) under the E3 Analytics and Evaluation Project, designed the RCT and conducted the baseline and implementation fidelity monitoring. In October 2018, Tetra Tech assumed management of the evaluation and the existing technical team under the Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability (WASHPaLS) Project.

Photo Credit: Pheak Chhoun, Field Coordinator- KHANA Center for Population Health Research (baseline survey partner).