



Issue 220 | March 4, 2016 | Focus on WASH and Nutrition

This issue contains resources on nutrition in water, sanitation, and hygiene (WASH) programs, including project reports, learning briefs, tools, videos, and presentations.

We welcome suggestions for Weekly topics. If you would like to feature your organization's materials in the next issue, please send them to Antonia Wolff, WASHplus Knowledge Management Advisor, at awolff@fhi360.org by February 26, 2016. More than 100 past issues of the Weekly are [archived](#) on the WASHplus website.

REPORTS AND BRIEFS

WASHplus in Mali: Integrating WASH and Nutrition for Healthy Communities, 2016. R Bery (WASHplus), *ENN Field Exchange*. [Link](#).

This article outlines an integrated WASHplus WASH and nutrition project in northern Mali. It revolves around community-led total sanitation using behavior-change approaches to improve nutrition and hygiene practices. Activities have included hygiene promotion, water treatment, breastfeeding counseling, media and advocacy, and identification/referral of malnourished cases. Achievements to date have included improved regional policies; increased district capacity on WASH and nutrition interventions; and improved community infrastructure and practices around women and child health.

Improving Nutrition Outcomes with Better Water, Sanitation, and Hygiene: Practical Solutions for Policies and Program, 2015. World Health Organization (WHO), UNICEF, and USAID. [Link](#).

This publication summarizes the current evidence on the benefits of WASH for improving nutrition outcomes and describes how WASH interventions can be integrated into nutrition programs. It provides practical suggestions, targeted at nutrition program managers and implementers, on what WASH interventions should be included in nutrition programs and how to include them. It also seeks to help the WASH community to better understand its role, both as providers of technical expertise in WASH interventions and in prioritizing longer-term improvements to WASH infrastructure, in areas where undernutrition is a concern.

Use of Tippy Taps and Handwashing Practices in Southern Bangladesh, 2015.

Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING). [Link](#). This article examines a tippy tap and handwashing study conducted by SPRING/Bangladesh in 120 households in the Khulna and Barisal divisions of Bangladesh. The primary objective was

to explore whether promotion of handwashing and tippy taps through farmer nutrition school participation improved handwashing practices. Overall findings demonstrated that the presence of tippy taps in and around the household, as well as the promotion of handwashing, had a significant positive impact on handwashing practices.

Baseline Nutrition Survey in the Kyrgyz Republic, 2015. SPRING. [Link.](#)

This baseline survey studied three regions to gain knowledge of the status of a range of indicators related to nutrition practices. One section addresses water sources, hygiene, and toilet facilities. The survey examined access to water and hygiene practices, finding that in general, improvement is possible in many areas.

When WASH 1,000 Came to Piyaligo: A Village Chief Leads His People to Better Sanitation in Ghana, 2015. SPRING. [Link.](#)

This article relates the experience of handwashing interventions in a village in Ghana. Before SPRING/Ghana's WASH intervention, most residents of Piyaligo village engaged in open defecation and were unaware of the importance of handwashing at key times. Working with Government of Ghana environmental health officers, SPRING/Ghana promoted WASH 1,000 behaviors: safe disposal of feces, handwashing with soap, using boiled or treated water for consumption by children aged 6-24 months, and providing clean play spaces for children. The article states that Piyaligo has progressed toward becoming open defecation free, with the village chief observing that the community has become cleaner following the WASH 1,000 behavior adoption.

Multisectoral Approaches to Improving Nutrition: Water, Sanitation, and Hygiene, 2016. C Chase. [Link.](#)

This World Bank paper is intended to support task teams and senior management to integrate WASH into nutrition-specific programs (as well as nutrition-sensitive social protection, livelihoods, and community-driven development programs), and to make WASH interventions more nutrition-sensitive, and thus more impactful on nutrition.

The Impact of Poor Sanitation on Nutrition, 2015. SHARE; UNICEF. [Link.](#)

This policy brief summarizes the evidence on the impact of poor sanitation on nutritional outcomes and highlights the potential offered by greater integration of WASH within nutrition policy and programs. The systematic review of 14 studies on WASH interventions in 10 low and middle income countries found, for example, suggestive evidence that WASH interventions positively affect height-for-age scores in children under 5 years of age.

WASH and Nutrition: WASHplus Learning Brief. WASHplus, 2015. [Link.](#)

This learning brief documents WASHplus's WASH and nutrition integration programming efforts to stimulate the discussion and improve the evidence base, as well as share experiences and approaches to integrating the two sectors at the global and country level. The brief discusses several examples of nutrition integration with WASH, including the WASHplus program in Mali.

JOURNAL ARTICLES

Water, Sanitation and Hygiene (WASH) and Breastfeeding Contribute to Child Stunting in Rural Malawi, 2015. *The FASEB Journal.* J Ruel-Bergeron. [Link.](#)

Using cross-sectional baseline data of an impact evaluation of a nutrition program targeted at reducing maternal and child undernutrition, the authors assessed the extent to which optimal

WASH practices contribute to reduced odds of stunting among children 6-24 months of age living in two rural districts of Malawi. Funded by the Children's Investment Fund Foundation, UK, the assessment indicated that the integration of WASH and infant and young child feeding interventions in nutrition programs may contribute to reductions in stunting in Malawi.

The Sanitation Hygiene Infant Nutrition Efficacy (SHINE) Trial: Rationale, Design, and Methods, 2015. *Clinical Infectious Diseases*. J Humphrey. [Link](#).

This article describes the rationale, design, and methods underlying the SHINE trial, which is motivated by the premise that environmental enteric dysfunction (EED) is a major underlying cause of both stunting and anemia, that chronic inflammation is the central characteristic of EED mediating these adverse effects, and that EED is primarily caused by high fecal ingestion due to living with poor WASH conditions.

Water, Sanitation, Hygiene, and Nutrition in Bangladesh: Can Building Toilets Affect Children's Growth? 2015. I Mahmud. [Link](#).

Issued early in 2016, this World Bank study provides a systematic review of the evidence on the relationship between water and sanitation and nutrition in Bangladesh. The report is intended to accomplish two things. First is to synthesize the results/evidence evolving on the pathway of WASH and undernutrition for practitioners working in the nutrition and water and sanitation sectors to stimulate technical discussions and effective collaboration among stakeholders. Second, the report can serve as an advocacy tool to assist policy makers in formulating a multisectoral approach to tackling the undernutrition problem.

Small Intestine Bacterial Overgrowth and Environmental Enteropathy in Bangladeshi Children, 2016. *mBio*. J Donowitz. [Link](#).

This study confirms the finding that small intestine bacterial overgrowth contributes to the pathogenesis of environmental enteropathy, which has been postulated to be caused by poor WASH conditions. Overgrowth has been associated with intestinal inflammation and micronutrient malabsorption, which occurs at high rates in the developing world. This is the first study to show that overgrowth is associated with intestinal inflammation and linear growth delay in this setting and is the first to examine why children with no known gastrointestinal dysfunction develop overgrowth from the developing world environment.

Diet and Specific Microbial Exposure Trigger Features of Environmental Enteropathy in a Novel Murine Model, 2015. *Nature Communications*. E Brown. [Link](#).

Environmental enteropathy (EE) is a subclinical chronic inflammatory disease of the small intestine and has a profound impact on the persistence of childhood malnutrition worldwide. However, the etiology of the disease remains unknown and no animal model exists to date, the creation of which would aid in understanding this complex disease. The study findings provide evidence indicating that both diet and microbes combine to contribute to the etiology of EE, and describe a novel murine model that can be used to elucidate the mechanisms behind this understudied disease.

Associations between School and Household-Level Water, Sanitation and Hygiene Conditions, and Soil-Transmitted Helminth Infection among Kenyan School Children, 2015. *Parasites & Vectors*. M Freeman. [Link](#).

Soil-transmitted helminths, a class of parasitic intestinal worms, are pervasive in many low-income settings, and can lead to poor nutritional outcomes, anemia, and reduced cognition. Access to and use of sanitation facilities and proper hygiene can reduce infection, but rigorous data are scarce. This study explored the relationships between school and household WASH

conditions and behaviors during the baseline of a large-scale mass drug administration program for intestinal worms in Kenya. Results suggest a mixed impact of household and school WASH on prevalence and intensity of infection.

TOOLS

Farmer Nutrition School Session Guide, 2014. SPRING. [Link](#).

This guide incorporates essential nutrition actions and essential hygiene actions in each session to encourage families to adopt improved practices in health and nutrition, as well as homestead food production, when they have pregnant women and/or children less than 2 years of age (the first 1,000 days). SPRING/Bangladesh developed the guide, which has been used since 2012 as part of the implementation work being done in Bangladesh.

PRESENTATIONS AND EVENTS

The Multi-Sectoral Nutrition Strategy Global Learning and Evidence Exchange (MSN-GLEE), 2016. SPRING. [Link](#).

Experts in agriculture, economic growth, WASH, nutrition, and health gave presentations and led interactive sessions on a range of topics designed to strengthen country-led efforts to improve nutrition. The workshop included a multitude of sessions on topics including agriculture, social, and behavior change models, influencing the nutrition agenda, and an evidence update on WASH interventions for nutrition. USAID's [Multi-Sectoral Nutrition Strategy](#) and accompanying [technical guidance briefs](#) formed the basis for the agenda of 23 sessions designed to help participants identify places where multi-sectoral nutrition programming approach could be strengthened. The workshop included a multitude of sessions on topics including agriculture, social, and behavior change models, influencing the nutrition agenda, and an evidence update on WASH interventions for nutrition: **Water, Sanitation and Hygiene (WASH) Interventions for Improved Nutrition: Maximizing Impact**, 2016. R Rainey. [Link](#).

WEBINARS AND VIDEOS

Lack of Water, Sanitation, and Hygiene (WASH) and its Effects on Nutrition, 2016. [Link](#).

This video by Generation Nutrition relates the link between WASH and nutrition and how toilets and open defecation contribute to undernutrition. WASHplus provided funding for the English translation.

SPRING/Bangladesh Talks Handwashing on Jiboner Golpo, 2014. Dhaka Reporting Center. [Link](#).

Bangladeshi television channel Desh TV aired a public health show called "Jiboner Golpo" (Life's Story) in partnership with USAID and Voice of America. SPRING/Bangladesh was invited to participate in an episode to discuss the importance of handwashing, especially in the context of maternal and child health and nutrition.

Men Support Handwashing in Maradi, 2015. SPRING. [Link](#).

SPRING and Digital Green collaborated to produce a series of videos to encourage better maternal, infant, and young child nutrition and hygiene practices in Niger. This work builds off of a proof-of-concept conducted in 2013 to encourage better nutrition and hygiene practices

in the Keonjhar District of Odisha, India. In 2014, it was adapted for the resilience context of Niger and rolled out in partnership with three USAID projects: the Resilience and Economic Growth in the Sahel – Enhanced Resilience Program; Livelihoods, Agriculture and Health Interventions in Action; and Sawki. This video, one of 10, shows the importance of every family member washing his or her hands at key times

Bonn WASH Nutrition Forum, 2015. Sustainable Sanitation Alliance (SuSaNa). [Link](#). This set of videos provides presentations from the WASH and Nutrition Forum on November 11-12, 2015, held to discuss strategies for integrating WASH and nutrition programming in development and humanitarian contexts. The main aim of the forum was to bring together the relevant experts from both sectors. During so-called “mirror sessions,” relevant sector professionals in similar positions from both the WASH and nutrition sector presented their work and perspectives. Recommendations, next steps, approaches, research, policy, and advocacy issues were some of the outcomes of those sessions.

WASHplus Weeklies highlight topics such as Urban WASH, Household Air Pollution, Innovation, Household Water Treatment and Storage, Handwashing, Integration, and more.



About WASHplus - WASHplus, a multi-year project funded through USAID’s Bureau for Global Health, supports healthy households and communities by creating and delivering interventions that lead to improvements in access, practice and health outcomes related to water, sanitation, hygiene (WASH) and household air pollution (HAP). WASHplus uses at-scale, targeted as well as integrated approaches to reduce diarrheal diseases and acute respiratory infections, the two top killers of children under five years of age globally. For information, visit www.washplus.org or email: contact@washplus.org.