



Issue 171 | Dec 12, 2014 | Focus on WASH & Nutrition

This issue provides updates on new resources since the September 2014 WASHplus Weekly on WASH and nutrition with links to a December 15, USAID webinar; the recently published Global Nutrition Report; presentations at the UNICEF Stop Stunting Conference in India; and just-published studies on stunting, environmental enteropathy, and other WASH and nutrition topics.

EVENTS

December 15, 2014, Draft Guidance for USAID-Funded Nutrition-Sensitive Programming - [Link](#)

During this webinar, Richard Greene, senior deputy assistant administrator with USAID's Bureau for Food Security, will share a two-page draft guidance document that will assist implementers in applying the new USAID Multi-Sectoral Nutrition Strategy to nutrition-sensitive agriculture programs.

November 19–21, 2014, The Second International Conference on Nutrition (ICN2) - [Link](#) | [Vision statement](#)

The Second International Conference on Nutrition (ICN2) was a high-level intergovernmental meeting that focused global attention on addressing malnutrition in all its forms. The two main outcome documents—the Rome Declaration on Nutrition and the Framework for Action—were endorsed by participating governments at the conference, committing world leaders to establishing national policies aimed at eradicating malnutrition and transforming food systems to make nutritious diets available to all.

November 10–12, 2014, UNICEF Stop Stunting Conference, India. [Link](#)

The Stop Stunting regional conference provided a knowledge-for-action platform where state-of-the-art evidence, better practices, and innovations were shared to accelerate sectoral and cross-sectoral policies, programs, and research in nutrition and sanitation to reduce the prevalence of child stunting in South Asia.

REFERENCE MANUALS

Global Nutrition Report, 2014. International Food Policy Research Institute. [Link](#) | [WaterAid review of the Global Nutrition Report](#)

The first-ever Global Nutrition Report provides a comprehensive narrative and analysis on the

state of the world's nutrition. The Global Nutrition Report convenes existing processes, highlights progress in combating malnutrition, and identifies gaps and proposes ways to fill them. Through this, the report helps to guide action, build accountability, and spark increased commitment for further progress toward reducing malnutrition much faster.

Water, Sanitation and Hygiene in Nutrition Efforts: A Resource Guide, 2014. WASH Advocates. [Link](#)

This resource guide includes manuals, reports, academic studies, and organizations working on WASH and nutrition. The guide can serve as a tool for implementers and advocates in the WASH/Nutrition nexus looking to pursue and promote integrated programming.

REPORTS/BLOG POSTS

Place and Child Health: The Interaction of Population Density and Sanitation in Developing Countries, 2014. P Hathi, The World Bank. [Link](#)

This paper assesses whether the importance of dense settlement for child mortality and child height is moderated by exposure to local sanitation behavior. Is open defecation, without a toilet or latrine, worse for infant mortality and child height where population density is greater? This paper finds a statistically robust and quantitatively comparable interaction between sanitation and population density: open defecation externalities are more important for child health outcomes where people live more closely together.

Advocating for Children at the 2nd International Conference on Nutrition. Feed the Children, Nov 2014. T Davis. [Link](#)

No nutrition program/project conducted at scale (e.g., with 1 million or more beneficiaries) in a developing country has come close to normalizing child growth. We still need more research and examples of the sort of interventions that reduce maternal depression and eliminate open defecation (when people don't properly dispose of human waste, it contaminates their water and soil and sickens their children). One study by Pamela Surkan found that we could potentially reduce stunting by about 19 percent to 23 percent through the elimination of maternal depression, and a randomized trial has been done that shows that depression can be reduced 93 percent at low cost in a developing country.

Understanding the Context for Agriculture for Nutrition Research: Identifying Country Typologies of Child-Stunting Determinants, 2014. E Maruyama, IFPRI. [Link](#)

Authors used data from 52 countries on child stunting, poverty, determinants of food security, environmental health, and quality of maternal and child care to carry out a cluster analysis of country typologies. The purpose is to identify where agriculture-led interventions might address binding constraints to progress in improving nutrition outcomes and to identify how existing research on the links between agriculture and nutrition in particular country contexts may or may not be representative. They find that countries with average-to-poor nutrition outcomes within this sample set fall into groups where one supporting area tends to lag, such as environmental health or food security.

Understanding the Rapid Reduction of Undernutrition in Nepal, 2001–2011, 2014. D Headey, IFPRI. [Link](#)

South Asia has long been synonymous with unusually high rates of undernutrition. In the past decade, however, Nepal has arguably achieved the fastest recorded decline in child stunting in the world and has done so in the midst of civil war and postconflict political instability. The authors identify four broad drivers of change: asset accumulation, health and

nutrition interventions, maternal educational gains, and improvements in sanitation.

Prevalence of Undernutrition and Evidence on Interventions: Challenges for India, 2014. B Viswanathan. [Link](#)

Focusing on key sectors like agricultural production and prices, food distribution networks, water, sanitation, and hygiene with the involvement of multiple agents like households, communities, local governments, and NGOs is essential to address the multiple dimensions of undernutrition prevalent in India.

Open Defecation in India. *Econ & Political Wkly*, Dec 2014. A Doron. [Link](#)

This study identifies eleven issues that have inhibited the spread of a comprehensive sanitation program. It emphasizes the complexity of issues and helps avoid the facile targeting of the poor as deficient citizens, whose latrine practices are viewed as a “primitive” source of social disorder and disease.

JOURNAL ARTICLES

Beyond Malnutrition: The Role of Sanitation in Stunted Growth. *Env Health Perspec*, Nov 2014. C Schmidt. [Link](#)

It has become clear that nutritional interventions are only part of the solution to stunted growth. In countries such as India, for instance, stunting occurs even among well-fed children, and that’s led investigators to consider other causes, especially poor sanitation and hygiene. Evidence shows that children who live without adequate sanitation, hygiene, and clean drinking water don’t grow as well as children who do. Meanwhile, more than 626 million people in India (nearly half the population) routinely defecate on the ground outdoors and this practice has been proposed as an important cause of India’s stunting epidemic, which affected an estimated 48 percent of the country’s children as of 2005–2006.

Stunting, Poor Iron Status and Parasite Infection Are Significant Risk Factors for Lower Cognitive Performance in Cambodian School-Aged Children. *PLoS One*, Nov 2014. M Perignon. [Link](#)

Poor cognitive performance of Cambodian school children was multifactorial and significantly associated with long-term (stunting) and current nutritional status indicators (iron status), as well as parasite infection. A life-cycle approach with programs to improve nutrition in early life and at school age could contribute to optimal cognitive performance.

An Evolving Perspective about the Origins of Childhood Undernutrition and Nutritional Interventions That Includes the Gut Microbiome. *Ann New York Acad Sci*, 2014. T Ahmed. [Link](#)

This paper summarizes work on mechanisms underlying the varied manifestations of childhood undernutrition and discusses current gaps in knowledge and challenges to our understanding of undernutrition and infection/immunity throughout the human life cycle, focusing on early childhood growth. It proposes a series of basic and clinical studies to address this global health challenge.

Is Targeting Access to Sanitation Enough? *Lancet Global Health*, Nov 2014. S Luby. [Link](#)

We do not have strong evidence about the relation between sanitation and health because such data are difficult and expensive to generate. Environments highly exposed to fecal pathogens are remarkably diverse. Different latrine technologies are appropriate with different water-table depths and different population densities. Communities vary in their preference

for and acceptance of different latrine designs. The relative importance of sanitation in the interruption of pathogen transmission almost certainly varies by community.

Effectiveness of a Rural Sanitation Programme on Diarrhoea, Soil-Transmitted Helminth Infection, and Child Malnutrition in Odisha, India: A Cluster-Randomised Trial. *The Lancet Global Health*, Oct 2014. T Clasen. [Link](#)

Increased latrine coverage is generally believed to be effective for reducing exposure to fecal pathogens and preventing disease; however, our results show that this outcome cannot be assumed. As efforts to improve sanitation are being undertaken worldwide, approaches should not only meet international coverage targets, but should also be implemented in a way that achieves uptake, reduces exposure, and delivers genuine health gains.

Influence of Nutrition on Infection and Re-Infection with Soil-Transmitted Helminths: A Systematic Review. *Parasites & Vectors* 2014, 7:229. P Yap. [Link](#).

The relationship between nutrition and soil-transmitted helminthiasis is complex and warrants further investigation. Researchers conducted a systematic review examining the influence of nutrition on infection and re-infection with soil-transmitted helminths (i.e., *Ascaris lumbricoides*, hookworm, *Trichuris trichiura*, and *Strongyloides stercoralis*) in humans. Emphasis was placed on the use of nutritional supplementation, alongside anthelmintic treatment, to prevent re-infection with soil-transmitted helminths.

The Stunting Syndrome in Developing Countries. *Annals of Tropical Paediatrics*, Apr 2014. A Prendergast. [Link](#)

Stunting is a cyclical process because women who were themselves stunted in childhood tend to have stunted offspring, creating an intergenerational cycle of poverty and reduced human capital that is difficult to break. In this review, the mechanisms underlying linear growth failure at different ages are described; the short-, medium- and long-term consequences of stunting are discussed; and the evidence for windows of opportunity during the life cycle to target interventions at the stunting syndrome are evaluated.

Environmental Enteropathy and Malnutrition: Do We Know Enough to Intervene? *BMC Medicine*, Oct 2014. W Petri. [Link](#)

Environmental enteropathy (EE) is a poorly defined state of intestinal inflammation without overt diarrhea that occurs in individuals exposed over time to poor sanitation and hygiene. It is implicated as a cause of stunting and malnutrition, oral vaccine failure, and impaired development in children from low-income countries. The burden on child health of malnutrition alone, which affects 25 percent of all children and is estimated to result in more than a million deaths annually due to heightened susceptibility to infection, makes a solution to EE urgent.

Tackling Undernutrition in Children – New Opportunities for Innovation and Action. *Paediatrics and International Child Health*, Nov 2014. A Tomkins, Institute for Global Health at the Institute of Child Health. [Link](#)

There is clearly an urgent need for collaborative research examining combinations of dietary, supplemental, infection control, and environmental interventions and their impact on infant health, growth, and cognitive function.

WASHplus Weeklies highlight topics such as Urban WASH, Household Air Pollution, Innovation, Household Water Treatment and Storage, Hand Washing, Integration, and more. If you would

like to feature your organization's materials in upcoming issues, please send them to Dan Campbell, WASHplus Knowledge Resources Specialist, at dacampbell@fhi360.org.



About WASHplus - WASHplus, a five-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.