

## WASH/Nutrition Literature Update - January 2014

This update contains recent studies and reports on WASH and nutrition issues plus updates on new publications and resources from members of the USAID Community of Practice on WASH and Nutrition. Please contact WASHplus if you have new publications or upcoming events you would like to feature in the February 2014 update. Most of the studies below can also be found on the WASH/Nutrition Library at: <http://blogs.washplus.org/washnutrition>.

### UPDATES FROM COP MEMBERS – New Publications, Upcoming Events, etc.

#### **Alive & Thrive - Ensuring Adequate Nutrient Intake.** *Insight*, Issue 7, 2013. ([Link](#))

This issue examines why infants require a much higher quality diet than other members of the household, identifies nutrient gaps in typical complementary food diets, and describes strategies for achieving adequate nutrient intake among children 6-24 months old.

#### **FANTA III - Nutrition Assessment, Counseling, and Support (NACS): A User's Guide**, 2013. ([Link](#))

The NACS User's Guide is a series of modules that provide program managers and implementers with a package of essential information and resources. These modules are living documents and will be updated as appropriate when new evidence, guidelines, or field experience emerges.

#### **London School of Hygiene & Tropical Medicine (LSHTM) - Water, Sanitation and Hygiene (WASH), Nutrition and Infection: Learning Module Update.** ([Link](#))

The latest evidence from a Cochrane systematic review found a small but significant improvement in the growth of children under the age of 5 who have access to clean water and soap. Analysis of the data from 14 studies conducted in low and middle income countries suggested that interventions to improve the quality of the water in the household and provide soap resulted in an average 0.5 cm increased height growth in children under the age of 5.

#### **USAID SPRING Project - The Nigeria Community and Facility Infant and Young Child Feeding Package**, 2013. ([Link](#))

This Infant and Young Child Feeding Package is a necessary tool to ensure uniform training and information sharing throughout Nigeria.

### REPORTS

#### **USAID DRAFT Agency-wide Nutrition Strategy [public comment sought]**, December, 2013. ([Link](#))

A technical working group, comprising individuals across USAID, has developed a draft nutrition strategy and is seeking public comment.

#### **Cyclosporiasis: An Emerging Potential Threat for Water Contamination.** *Water and Health* 2014. H Ahmad. ([Abstract](#))

*Cyclospora cayetanensis* is an emerging protozoan parasite that causes small intestine gastroenteritis. There is apparently a worldwide distribution, including regions of endemicity, for example, in Nepal, Haiti, and Peru. Due to the lack of a quantification technique, there is limited information on the prevalence of *Cyclospora* in water environments, necessitating the need for further research on pathways and transmission dynamics and encouraging

innovative research in water treatment for improving sanitation and public health.

**Public Health and Social Benefits of At-Home Water Supplies**, 2013. [\(Link\)](#)

B Evans et al.

The headline conclusion from this research is that at-home water supply has significant, measurable benefits when compared with shared water supply outside the home provided that the service is reliable enough to ensure access to adequate quantities of water when required. Reliable at-home water supply results in higher volumes of water consumption, greater practice of key hygiene behaviors, a reduction in musculoskeletal impacts associated with carrying water from outside the home, and improved water quality.

**Sanitation and Externalities: Evidence from Early Childhood Health in Rural India**, 2014. The World Bank. [\(Link\)](#)

This paper examines two sources of benefits related to sanitation infrastructure access on early childhood health: a direct benefit a household receives when moving from open to fixed-point defecation or from unimproved sanitation to improved sanitation, and an external benefit (externality) produced by the neighborhood's access to sanitation infrastructure.

**Social Protection and Resilient Food Systems: The Role of Cash Transfers**, 2013.

Overseas Development Institute. [\(Link\)](#)

If linked to education and awareness-raising, cash transfer programs can improve water and sanitation hygiene practices.

**What Do We Know About Non-Clinical Interventions for Preventable and Treatable Childhood Diseases in Developing Countries?** 2013. M Seguin, LSHTM. [\(Link\)](#)

The fact that a large proportion of child deaths are caused by preventable and treatable diseases is symptomatic of dysfunctional policy strategies and health systems in the developing world. Improved water supply and quality, sanitation and hygiene, as well as the provision of medical equipment that detects symptoms of childhood diseases, along with training and education for medical workers, are effective policy instruments to tackle diarrheal diseases and acute respiratory infections in developing countries.

**JOURNAL ARTICLES/BLOG POSTS**

**Assessing Hand Hygiene Practices in Schools Benefiting from the Ghana School Feeding Programme.** *Science Journal of Public Health*, 2014; 2(1). I Monney. [\(Link\)](#)

School feeding programs have been shown to impact positively on nutritional status and cognition of school children as well as hunger and poverty alleviation. There is, however, a dearth of information regarding hand hygiene in schools benefiting from these programs. This study assesses hand hygiene practices, barriers, and compliance to proper hand hygiene in schools benefiting from the Ghana School Feeding Programme.

**Association of Food-Hygiene Practices and Diarrhea Prevalence among Indonesian Young Children from Low Socioeconomic Urban Areas.** *BMC Public Health* 2013, 13:977. R Augustina. [\(Link\)](#)

Information is lacking about the role poor food-hygiene practices play in the development of diarrhea in low socio-economic urban communities. This study was aimed at assessing the contribution of food-hygiene practice to the prevalence of diarrhea among Indonesian children. Overall poor food-hygiene practices were not associated with the prevalence of diarrhea among children under five, but were significantly associated with more diarrhea among

children under 2 years. Therefore, food safety education should be especially targeted to this age group.

**Enteric Pathogens in Stored Drinking Water and on Caregiver's Hands in Tanzanian Households with and without Reported Cases of Child Diarrhea.** *PLoS One*, Jan 2014. M. Mattioli. ([Link](#))

The prevalence of enteric pathogen genes and the human-specific *Bacteroidales* fecal marker in stored water and on hands suggests extensive environmental contamination within homes both with and without reported child diarrhea. Better stored water quality among households with diarrhea indicates caregivers with sick children may be more likely to ensure safe drinking water in the home. Interventions to increase the quantity of water available for hand washing, and to improve food hygiene, may reduce exposure to enteric pathogens in the domestic environment.

**Fecal Contamination of Food, Water, Hands, and Kitchen Utensils at the Household Level in Rural Areas of Peru.** *Journal of Environmental Health*. Jan/Feb 2014. A Gil. ([Abstract/order info](#))

The study described in this article evaluated sources of contamination of children's food and drinking water in rural households in the highlands of Peru. These findings indicate a need to develop hygiene interventions that focus on specific kitchen utensils and hand washing practices, to reduce the contamination of food, water, and the kitchen environment in these rural settings.

**Food Hygiene and Sanitation in Infants and Young Children: A Paediatric Food-Based Dietary Guideline.** *South Afr Jnl Clin Nutrition*, (26) 2013. L Bourne. ([Link](#))

This paper has three related aims. Firstly, it aims to profile the current food hygiene and safety needs of children under the age of 5 in South Africa. Secondly, to reflect the importance of domestic hygiene and access to water and sanitation in reducing the transmission of gastrointestinal pathogens while feeding infants and young children. And, thirdly, to highlight the need for collaboration between healthcare professionals and the local authorities who provide basic services.

**Long-Term Impact of Community-Based Information, Education and Communication Activities on Food Hygiene and Food Safety Behaviors in Vietnam: A Longitudinal Study.** *PLoS ONE*, Aug 2013. K. Takanashi. ([Link](#))

Ingestion of contaminated water or food is a major contributor to childhood diarrhea in developing countries. In Vietnam, the use of community-based information, education, and communication (IEC) activities could be a sustainable strategy to improve food hygiene and food safety behaviors. This study thus examined the long-term impact of community-based IEC activities on food hygiene and food safety behaviors.

**Measuring Disparities in Sanitation Access: Does the Measure Matter?** *Trop Med Int Health*, Jan 2014. R Rheingans. ([Link](#))

Initiatives to monitor progress in health interventions like sanitation are increasingly focused on disparities in access. This study explores three methodological challenges to monitoring changes in sanitation coverage across socio-economic and demographic determinants: confounding by wealth indices including water and sanitation assets, use of individual urban and rural settings versus national wealth indices, and child-level versus household-level analyses. Standard asset indices provide a reasonably robust measure of disparities in improved sanitation, although overestimation is possible. Estimates and disparities in

household-level coverage of improved sanitation can underestimate coverage for children under 5.

**Socio-Economic Inequalities in Malnutrition among Children and Adolescents in Colombia: The Role of Individual-Household-and Community-Level Characteristics.** *Public Health Nutr. Sept 2013 Sep.* S Garcia. ([Abstract](#))

Children and adolescents living in the poorest households were close to five times more likely to be stunted, while those from the richest households were 13–28 times more likely than their poorest counterparts to be overweight. Care practices and household characteristics, particularly mother’s education, explained over one-third of socio-economic inequalities in stunting. The proportion explained by access to services was not negligible (between 6 percent and 14 percent). Access to sanitation was significantly associated with a lower prevalence of stunting for all age groups.

**Spoiled Breast Milk and Bad Water; Local Understandings of Diarrhea Causes and Prevention in Rural Sierra Leone.** *BMC Public Health, Dec 2013.* S McMahon. ([Link](#))

Categorizing behaviors as beneficial, harmful, nonexistent, or benign enables tailored programmatic recommendations. For example, respondents recognized the value of clean water and we correspondingly recommend interventions that reinforce consumption of and access to clean water. Respondents also reported denying “contaminated” breast milk to breastfeeding children—a harmful practice that merits attention. The role of open defecation and poor hygiene in causing diarrhea was less understood and warrants introduction or clarification. Finally, the role of exposed feet or curses in causing diarrhea is relatively benign and does not necessitate programmatic attention.

**WASHplus Weekly: Focus on Food Hygiene,** July 2013. WASHplus. ([Link](#))

This issue contains studies and resources on food hygiene from 2012 and 2013. Included are studies on weaning foods, food hygiene in households, food hygiene in schools, and informal sector street food vendors.

**LINKS**

- [WASH/Nutrition Library](#)
- [WASH/Nutrition Literature Update, December 2013](#)
- [Alive & Thrive/Clean, Fed and Nurtured](#)
- [Care Groups-Food for the Hungry](#)
- [FANTA Project](#)
- [Food Security and Nutrition Network](#)
- [PATH-Maternal and Child Health and Nutrition Program](#)
- [RICE Institute \(Research Institute for Compassionate Economics\)](#)
- [SPRING Project](#)

The USAID Community of Practice on WASH, Nutrition, and Food Security was established to facilitate a dialog between and among the staff at USAID and partner organizations. The goals are to encourage discussion around unanswered questions for integrated programming and to provide a clearinghouse for informative articles, events, and recent studies and datasets.