



Supportive Environments for Healthy Communities

Issue 51 April 13, 2012 | A Hygiene Behavior Update

This issue of the WASHplus Weekly updates the [June 24, 2011 Weekly](#) on hygiene behavior. Included are eight reports and 10 journal articles that include studies of hygiene behavior in household water treatment, hand washing, school sanitation, and other topics.

Please let WASHplus know at any time if you have resources to share for future issues of WASHplus Weekly or if you have suggestions for future topics. An [archive](#) of past Weekly issues is available on the WASHplus website.

REPORTS

- **Achieving and Sustaining Open Defecation Free Communities: Learning from East Java**, 2012. N Mukherjee, Water and Sanitation Program. ([Full-text](#))
Objectives of this research study were: a) to identify the principal factors influencing the achievement and sustainability of collective behavior change by communities to become open defecation free (ODF); b) to identify links between influencing factors to help prioritize actions in response by various sector stakeholders; and c) to recommend strategies to accelerate the achievement and ensure the sustainability of ODF status by communities.
- **Assessing Hygiene Cost-Effectiveness**, 2011. A Potter, IRC International Water and Sanitation Centre. ([Full-text](#))
The purpose of this working paper is to introduce a conceptual approach to assess the cost-effectiveness of hygiene promotion. It introduces the use of *hygiene effectiveness levels* as a tool to analyze and compare the costs and outcomes of a number of hygiene promotion interventions. Evidence from a number of studies suggest that hygiene programs need to be an integral part of water supply and/or sanitation interventions to achieve behavior change.
- **Handwashing with Soap: Why It Works and How to Do It**, 2011. K Greenland, Sanitation and Hygiene Applied Research for Equity, SHARE. ([Full-text](#))
This four-page document explains the benefits of hand washing with soap, highlights

when it has the most significant public health impact, and provides tips on how to encourage the practice.

- **Information and Persuasion: Achieving Safe Water Behaviors in Kenya**, 2011. RAND Working Paper Series WR-885. J Luoto. ([Full-text](#))

The author ran a randomized field study in Kenya in which households received free point-of-use water treatment products to test the importance of informational and behavioral constraints on usage. Sharing information about local water quality increases water treatment by 7 to 10 percentage points (11-24 percent) above that achieved by providing free products. Persuasive social marketing messages that harness findings from behavioral economics increase water treatment by an additional 9 to 11 percentage points. These results suggest promising avenues for incremental improvements in encouraging water treatment (and possibly other preventive health) behaviors.
- **Making “What Works” Work: Changing Behavior in Sanitation and Hygiene, Africasan 2011 Presentation**. J Rosenbaum, WASHplus. ([Presentation](#))

This presentation discusses a community-led total behavior change in hygiene and sanitation approach used in Ethiopia.
- **Promoting Good Hygiene Practices: Key Elements and Practical Lessons**, 2011. WaterAid Australia, IRC International Water and Sanitation Centre, International WaterCentre. ([Full-text](#))

This compilation of three keynote papers and 31 case studies searches for answers to the question: What makes hygiene promotion work? The case studies are written by authors from a wide variety of organizations working in South Asia, Southeast Asia, the Pacific, and Africa.
- **Small Doable Actions Targeting Hygiene Improvement in Vulnerable Households: Poor Urban and Rural Households in Kenya**, 2011. E Wamera, C-Change Project. ([Full-text](#))

The Small Doable Actions approach seeks to improve hygiene practices within households that are considered vulnerable due to various factors that could include HIV and poverty. This approach looks at basic hygiene factors households seem to overlook that compromise their health, predisposing them to diarrheal diseases or disease transmissions such as diarrhea and HIV.
- **Water, Sanitation and Hygiene Behavior Change Communication (BCC) Strategy for the Urban Subsector (Ghana)**, 2011. CHF International. ([Full-text](#))

The process of preparing this BCC strategy began with a baseline study and formative research as part of CHF’s USAID-funded Water Access, Sanitation and Hygiene for the Urban Poor (WASH-UP) project. This included a situational analysis of the urban subsector in five communities in Ghana. The analysis included a review of national

level studies such as the Demographic and Health Survey reports, as well as studies, manuals and guidelines prepared by the Community Water and Sanitation Agency, among others.

JOURNAL ARTICLES

- **Epidemic Cholera in a Crowded Urban Environment, Port-au-Prince, Haiti**, *Emerg Infect Dis Nov 2011*. S Dunkle, Centers for Disease Control and Prevention.

[\(Full-text\)](#)

This case-control study investigated factors associated with epidemic cholera. Water treatment and hand washing may have been protective, highlighting the need for personal hygiene for cholera prevention in contaminated urban environments.

- **Changing Mother's Hygiene and Sanitation Practices in Resource Constrained Communities: Case Study of Turkana District, Kenya**, *J Community Health Apr 2012*. J Kariuki, Ministry of Public Health and Sanitation, Kenya. [\(Abstract\)](#)

This study set out to determine the extent to which sanitation and hygiene promotion influenced mothers' and children's health in Turkana District. Significant improvements were observed in hand washing practice, presence of hand washing soap at households and refuse pit ownership. A significant reduction of diarrhea prevalence was recorded in children under age 5. Sanitation and hygiene promotion based on community participatory approaches can lead to significant reduction of diarrhea in children.

- **The Effects of Informational Interventions on Household Water Management, Hygiene Behaviors, Stored Drinking Water Quality, and Hand Contamination in Peri-Urban Tanzania**, *Am Jnl Trop Med Hyg, Feb 2011*. J Davis, Stanford University. [\(Full-text\)](#)

This study investigates the extent to which personalized information about *E. coli* contamination of stored water and hands influenced knowledge, reported behaviors, and subsequent contamination levels among 334 households with children under 5 years in peri-urban Dar es Salaam, Tanzania. Findings from this study suggest that additional work is needed to elucidate the conditions under which such testing represents a cost-effective strategy to motivate improved household water management and hand hygiene.

- **Epidemic Cholera in Kakuma Refugee Camp, Kenya, 2009: The Importance of Sanitation and Soap**, *J Infect Dev Ctries Mar 2012*. A Mahamud, Kenya Medical Research Institute/Centers for Disease Control and Prevention. [\(Full-text\)](#)

A cholera outbreak with 224 cases and four deaths occurred in Kakuma Refugee Camp in Kenya from September to December 2009. This article discusses a case-control study to characterize the epidemiology of the outbreak. In a multivariate model, washing hands with soap was protective against cholera, while presence of dirty water storage containers was a risk factor. The study concluded that provision of soap, along

with education on hand hygiene and cleaning water storage containers, may be an affordable intervention to prevent cholera.

- **Impact of Integration of Hygiene Kit Distribution with Routine Immunizations on Infant Vaccine Coverage and Water Treatment and Handwashing Practices of Kenyan Mothers**, *J Infect Dis Mar 2012*. E Briere, Centers for Disease Control and Prevention. ([Abstract](#))

Integration of immunizations with hygiene interventions may improve use of both interventions. The study observed significant increases in reported household water treatment and correct hand washing technique in intervention households and no changes in comparison households. Hygiene kit distribution during routine immunizations positively impacted household water treatment and hygiene without having a negative impact on vaccination coverage.
- **Risk Management in a Developing Country Context: Improving Decisions About Point-of-Use Water Treatment Among the Rural Poor in Africa**, *Risk Analysis, Jan 2012*. J Arvai, University of Calgary. ([Full-text](#))

This research focused on the development of a deliberative risk management framework for involving affected stakeholders in decisions about point-of-use water treatment systems. Grounded in previous studies of structured decision making, the research took place in two rural villages in Tanzania.
- **Sanitation Behavior Among Schoolchildren in a Multi-Ethnic Area of Northern Rural Vietnam**, *BMC Public Health, Jan 2012*. L Xuan, Hanoi Medical University. ([Full-text](#))

In Vietnam efforts are under way to improve latrine use in rural and remote areas with particular focus on increasing coverage of sanitation in schools. However, there is a lack of information on how the school program affects latrine use by schoolchildren and at the community level. This paper analyzes sanitation use among schoolchildren in a multi-ethnic area to inform future school-based sanitation promotion programs. All surveyed schools had student latrines. However, the observed schoolchildren most commonly urinated and defecated in the open. Main barriers for latrine use included inadequate number of latrines, limited accessibility to latrines, lack of constant water supply in latrines, and lack of latrine maintenance by school management.
- **A Systematic Approach to Behavior Change Interventions for the Water and Sanitation Sector in Developing Countries: A Conceptual Model, a Review, and a Guideline**, *Int J Environ Health Res, Jan 2012*. H Mosler, Eawag, Swiss Federal Institute of Aquatic Science and Technology. ([Abstract](#))

This article presents a sound psychological model, which postulates that for the formation of new habitual behavior, five factors must be positive with regard to the new behavior: risk factors, attitudinal factors, normative factors, ability factors, and self-regulation factors. Standardized tools for measuring the factors in face-to-face interviews are presented, and behavioral interventions are provided for each factor

block. A statistical analysis method is presented, which allows the determination of the improvement potential of each factor.

- **Systematic Review of Behavior Change Research on Point-of-Use Water Treatment Interventions in Countries Categorized as Low- to Medium-Development on the Human Development Index**, *Soc Sci & Med*, Mar 2012. A Parker Fiebelkorn, Centers for Disease Control and Prevention. ([Abstract](#))

This article discusses a systematic literature review of published behavioral research on factors influencing adoption of point-of-use water treatment. Despite documented health benefits of point-of-use water treatment interventions in reducing diarrheal diseases, the study found limited peer-reviewed behavioral research on the topic. The scarcity of papers on behavior change with respect to point-of-use water treatment technologies suggests that this field is underdeveloped.

- **Which Psychological Factors Change When Habitual Water Treatment Practices Alter?** *J Public Health*, Jun 2011. M Hans-Joachim Mosler, Eawag, Swiss Federal Institute of Aquatic Science and Technology. ([Full-text](#))

Household water treatment systems (HWTS) and safe storage systems are an effective measure to ensure safe water supply. The adoption of HWTS requires long-term changes in behavior. This study analyzes which factors change when long-term users of HWTS, nonusers, or “tryers” (using HWTS occasionally) transform their behavior type or remain in their current behavior type.

Each WASHplus Weekly highlights topics such as Urban WASH, Indoor 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, creates supportive environments for healthy households and communities by delivering high-impact interventions in water, sanitation, hygiene (WASH) and indoor air pollution (IAP). WASHplus uses proven, at-scale interventions 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.

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