



Issue 188 | April 24, 2015 | Behavior Change in the Clean Cooking Sector

This issue of the WASHplus Weekly features new findings on behavior change in the clean cooking sector, presentations from a U.S. Environmental Protection Agency (EPA) cookstove research meeting, and descriptions of American Thoracic Society cookstove research studies recently or soon to be launched.

JOURNAL ARTICLES

Advancing Communication and Behavior Change Strategies for Cleaner Cooking, *Journal of Health Communication: International Perspectives*, 2015. Guest editors: Jay Graham, assistant professor, George Washington University; Sumi Mehta, director of research and evaluation, Global Alliance for Clean Cookstoves; Julia Rosenbaum, deputy director, USAID/WASHplus Project; and Brendon Barnes, professor, University of Johannesburg.

The USAID funded TRAction project sponsored a special issue of the *Journal of Health Communication* to feature new findings on behavior change in the clean cooking sector and methods for promoting the adoption of clean cooking technologies and fuels. The issue aims to advance understanding of behavior change related to the technology, the enabling environment, and demand creation. Lessons are intended to inform household energy policy and program strategies.

- **Saving Lives by Building Bridges Between User Needs and Clean Cooking Technology.**—J Rosenthal and J Borrazzo. [Link](#)
- **Behavior Change Communication: A Key Ingredient for Advancing Clean Cooking.**—B Barnes, J Rosenbaum, S Mehta, K Williams, K Jagoe, and J Graham. [Link](#)
- **Quantitative Stove Use and Ventilation Guidance for Behavior Change Strategies.**—M Johnson and R Chiang. [Link](#)
- **Advocate Program for Healthy Traditional Houses, Ume Kbulu, in a Timor Community: Preserving Traditional Behavior and Promoting Improved Health Outcomes.**—R Prasodjo, D Musadad, S Muhidin, J Pardosi, and M Silalahi. [Link](#)
- **Understanding Consumer Preference and Willingness to Pay for Improved Cookstoves in Bangladesh.**—J Rosenbaum, E Derby, and K Dutta. [Link](#)
- **Piloting Improved Cookstoves in India.**—J Lewis, V Bhojvaid, N Brooks, I Das, M Jeuland, O Patange, and S Pattanayak. [Link](#)
- **Use of Behavior Change Techniques in Clean Cooking Interventions: A Review of the Evidence and Scorecard of Effectiveness.**—N Goodwin, S O'Farrell,

K Jagoe, J Rouse, E Roma, A Biran, and E Finkelstein. [Link](#)

- **Does Peer Use Influence Adoption of Efficient Cookstoves? Evidence from a Randomized Controlled Trial in Uganda.**—T Beltramo, G Blalock, D Levine, and A Simons. [Link](#)
- **Agency-Based Empowerment Training Enhances Sales Capacity of Female Energy Entrepreneurs in Kenya.**—A Shankar, M Onyura, and J Alderman. [Link](#)
- **Factors Influencing the Acquisition and Correct and Consistent Use of the Top-Lit Updraft Cookstove in Uganda.**—A Namagembe, N Muller, L Mueller Scott, G Zwisler, M Johnson, J Arney, D Charron, and E Mugisha. [Link](#)
- **The Role of Mixed Methods in Improved Cookstove Research.**—D Stanistreet, L Hyseni, M Bashin, I Sadumah, D Pope, M Sage, and N Bruce. [Link](#)
- **Integrating Behavior Change Theory and Measures into Health-Based Cookstove Interventions: A Proposed Epidemiologic Research Agenda.**—M Clark, J Heiderscheidt, and J Peel. [Link](#)

NEW RESEARCH STUDIES

How Cookstoves Research Is Changing the World, American Thoracic Society (ATS), March 2015. [Link](#)

A recent American Thoracic Society article highlights new research studies recently or soon to be launched by ATS members. Summaries of the studies are provided below.

- **Cooking and Pneumonia Study (CAPS):** This trial, the first large cookstove intervention trial in Africa, is being conducted by investigators from the Liverpool School of Tropical Medicine in 150 villages in rural Malawi. They plan to enroll 10,000 children who will be followed for 24 months for exposure to air pollution and episodes of pneumonia. In addition to the incidence of pneumonia in children under 5, the study will also look at measures of air pollution and the economic and social impacts of the stoves.
- **Burden of Obstructive Lung Disease (BOLD) Study:** Building on CAPS, the same researchers will explore how the respiratory health of men and women in the same Malawi villages are affected by traditional and cleaner cooking methods. The study will be part of the ongoing BOLD study, which is quantifying the international variation in the prevalence of chronic obstructive pulmonary disease. Every year for at least three years, and up to 10 years if additional funding is secured, BOLD participants will undergo spirometry and wear an air pollution monitor for 48 hours. The information will be used to assess participants' respiratory health over time.
- **Ghana Randomized Air Pollution and Health Study (GRAPHS):** Investigators from Columbia University and the Kintampo Health Research Centre are conducting this cluster randomized controlled study to understand how cooking might affect the health of pregnant women and their babies. GRAPHS will study two interventions: a cleaner burning biomass wood stove and a similar liquefied petroleum gas (LPG) stove. This will be the first randomized trial to consider if LPG significantly improves health outcomes. More than 1,400 women in their second or third trimester of pregnancy are being randomly assigned to one of these two arms of the study or to the control.
- **The In Utero Household Air Pollution and Lung Development Study:** Nested within GRAPHS, another study will begin to look at the effects of chronic in utero exposure to household air pollution on lung development. The study will also test the infants' pulmonary function through the first year of life. Pending additional funding,

children will undergo repeat pulmonary function testing at 6 years of age to assess the relative impact of in utero and early childhood biomass smoke exposure on lung growth.

PRESENTATIONS

U.S. EPA Cookstove Research Meeting, February 25-26, 2015. [Link](#)

The EPA convened a kickoff meeting ([agenda](#)) for research projects on the impacts of air quality and climate from residential cooking, heating, or lighting. Grantees and EPA scientists presented and discussed progress on their projects, which aim to quantify the extent to which interventions targeting cleaner cooking, heating, or lighting can impact air quality and climate, which in turn affect human health and welfare.

- **The U.S. Commitment to Clean Cookstoves.**—J Moss. [Link](#)
- **Experimental Interventions to Facilitate Clean Cookstove Adoption, Promote Clean Indoor Air, and Mitigate Climate Change.**—R Bailis. [Link](#)
- **Improving Air Quality, Health and the Environment through Household Energy Interventions in the Tibetan Plateau.**—J Baumgartner. [Link](#)
- **A Global Map of Feasible Residential Solutions, Emphasizing Stoves with Space Heating Uses.**—T Bond. [Link](#)
- **Characterization of Emissions from Small, Variable Solid Fuel Combustion Sources for Determining Global Emissions and Climate Impact.**—R Edwards. [Link](#)
- **REACTING: Research on Emissions Air Quality, Climate, and Cooking Technology in Northern Ghana.**—M Hannigan. [Link](#)
- **CSU Global Modeling and Climate Effects.**— J Pierce and J Kodros. [Link](#)
- **SOMAARTH-I Demographic Development and Environment Surveillance Site (DDESS).**—K Smith. [Link](#)
- **Household/Outdoor Pollution in India: EPA STAR Grant.**—K Smith. [Link](#)
- **Quantifying the Climate, Air Quality, and Health Benefits of Improved Cookstoves: An Integrated Laboratory, Field and Modeling Study.**—J Volckens and J Pierce. [Link](#)
- **Assessing Exposures and Health Effects Related to Indoor Biomass Fuel Burning.**—L Birnbaum. [Link](#)
- **Phase 2 Research and Evaluation Roadmap: Public Health, Environment, and Climate.**—S Mehta. [Link](#)
- **Evaluation of Acceptability and Performance of Stove Options for Reducing Household Air Pollution in Rural West Kenya.**—M Sage and F Yip. [Link](#)

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.



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.