

# Child Survival › Diarrheal Disease: Studies Reporting Behavior Change Outcomes

Title	Authors	Journal & Link	Location	Population	Intervention Description	Outcomes	Design	Sampling Method	SOE Score <sup>1</sup>	SMBC <sup>2</sup>
Narrowing the treatment gap with equitable access: Mid-term outcomes of a community case management program in Cameroon	Health Policy and Planning, 2013, 28 (7): 705-716 <a href="http://heapol.oxfordjournals.org/cgi/pmidlookup?view=long&amp;pmid=23144228">http://heapol.oxfordjournals.org/cgi/pmidlookup?view=long&amp;pmid=23144228</a>	East region of Cameroon	Households with children under age 5	Community case management for childhood illnesses. CCM package provided community-based diagnosis, treatment and referral for suspected malaria with artemisinin combination therapy (ACT) and diarrhoeal disease with ORS and zinc through community health workers (PSI)	<b>Behaviorial Factors</b>  Awareness, access, and attitudes towards CHW services among caregivers improved with intervention  <b>Behaviors</b>  Children living in intervention vs comparison areas were significantly more likely to receive treatment at a public health facility or through a CHW for fever and diarrhea Appropriate treatment was significantly higher among children in intervention vs comparison areas including: antimalarial treatment for fever , ACT for fever , ORS for diarrhea and zinc for diarrhea	Quasi-experimental	Purposive	4	2: Behavior, Method mix	
Evaluation of a social marketing intervention promoting oral rehydration salts in Burundi	BMC Public Health, 2011, 11 (155): 1-13 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3062608/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3062608/</a>	Burundi	Females of reproductive age from 30 households from each of the 115 "collines" in Burundi	PSI led this Social marketing intervention to promote the use of ORASEL for children under five. Campaign included mass media promotion and community outreach	<b>Behaviorial Factors</b>  Positive changes in behavioral determinants associated with ORASEL use  <b>Behaviors</b>  ORASEL use among caregivers at their children's last diarrheal episode increased significantly from 20% in 2006 to 30% in 2007	Observational	Probability	4	5:Behavior Customer orientation, Insight, Theory, Mixed methods,	

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1.    Strength of Evidence Score    2.    Social Marketing Benchmark Criteria

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National scale-up of zinc promotion in Nepal: Results from a post-project population-based survey	Journal of Health, Population, and Nutrition, 2011, 29 (3): 207-217 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3131121/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3131121/</a>	30 focus districts in Nepal	Households surveys with children under 6 years of age	The Social Marketing Plus for Diarrhoeal Disease Control: Point of Use Water Disinfection and Zinc Treatment (POUZN) project; Survey regarding knowledge and beliefs about zinc treatment after tha airing of a national mass-media campaign	<b>Behaviorial Factors</b>  Over half (53.1%) of all caregivers (n=3,550) interviewed had heard about zinc products; most (97.1%) of those who had heard of zinc knew that zinc should be used for the treatment of diarrhea  <b>Behaviors</b>  At follow-up, the majority (67.5%) of children (n=289), aged less than six years, with diarrhoea were treated with ORS, and 15.4% were treated with zinc. Children whose caregivers recalled the mass-media message that zinc should be used for 10 days and whose caregivers perceived that zinc is easy to obtain were more likely to be treated with zinc for 10 days, along with ORS	Observational	Probability	4	5: Behavior, Theory, Customer orientation, Insight Mixed methods	
Determinants of use of household-level water chlorination products in rural Kenya, 2003-2005	International Journal of Environmental Research and Public Health, 2010, 7 (10): 3842-3852 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2996196/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2996196/</a>	Nyanza Province, Kenya	Users and non-user controls of a new household water treatment product regarding drinking water and socioeconomic factors from 10 Villages with 1,452 compounds	Use of socially marketed household water treatment systems: flocculent-disinfectant and sodium hypochlorite	<b>Behaviors</b>  Reports of ever using the sodium hypochlorite solution ranged from 21% to 59%, while rates of use in the past 7 days ranged from 7% to 27%	Observational	Probability	4	5: Behavior, Customer orientation, Segmentation, Exchange, Method mix	
Shame or subsidy revisited: Social mobilization for sanitation in Orissa, India	Bulletin of the World Health Organization, 2009,87:580–587 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2733281/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2733281/</a>	India	Households	Intensive IEC campaign that used social marketing strategies and community led total sanitation	<b>Behaviors</b>  Latrine ownership did not increase in control villages, but in treatment villages it rose from 6% to 32% in the overall sample, from 5% to 36% in households below the poverty line and from 7% to 26% in households above the poverty line	Experimental	Probability	6	7: Behavior, Customer orientation, Insight, Exchange, Competition, Segmentation, Methods mix	

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Increasing equity of access to point-of-use water treatment products through social marketing and entrepreneurship: A case study in western Kenya	Journal of Water & Health, 2009, 7 (3): 527-534 <a href="http://web.ebscohost.com.proxygw.wrlc.org/ehost/detail?sid=c4cbb144-a0f9-485a-9593-f4d645dce3bc%40sessionmgr111&amp;vid=1&amp;hid=124&amp;bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=a9h&amp;AN=44231895">http://web.ebscohost.com.proxygw.wrlc.org/ehost/detail?sid=c4cbb144-a0f9-485a-9593-f4d645dce3bc%40sessionmgr111&amp;vid=1&amp;hid=124&amp;bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=a9h&amp;AN=44231895</a>	Nyanza Province, Kenya	487 randomly selected households in eight communities served by the women’s groups	Safe Water System is a simple, inexpensive, point-of-use (POU) household water quality intervention using: 1) locally produced sodium hypochlorite solution for water treatment; 2) safe storage with containers with a narrow mouth, tight fitting lid and tap; and 3) behaviour change communications; women’s groups in western Kenya were trained to educate neighbours and sell health products to generate income (PSI)	<b>Behaviorial Factors</b>  Knowledge of water treatment products was high  <b>Behaviors</b>  20% (range 5–39%) of households in eight communities purchased and used chlorine, as confirmed by residual chlorine observed in stored water	Observational	Probability	4	X: Exchange, Method mix	
Diarrhoea prevention in a high-risk rural Kenyan population through point-of-use chlorination, safe water storage, sanitation	Epidemiology and Infection, 2008, 136 (11): 1463-1471 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2870746/?tool=pmcentrez&amp;report=abstract">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2870746/?tool=pmcentrez&amp;report=abstract</a>	Nyanza Province, Kenya	Comparison of diarrhoea rates in 960 children aged <5 years in 556 households in 12 randomly selected intervention villages and six randomly selected comparison villages during weekly home visits over an 8-week period	Social Marketing to promote the Safe Water System (SWS) in collaboration with CARE Kenya's program to provide latrines and rainwater collection	<b>Behaviors</b>  Intervention households were also more likely to have residual chlorine in their stored water (43%of visits vs. 0%) and to possess a latrine (49% of visits vs. 27%)  <b>Health</b>  On multivariate analysis, chlorinating stored water [relative risk (RR)0.44, 95% confidence interval (CI) 0.28–0.69], latrine presence (RR 0.71, 95% CI 0.54–0.92), rainwater use (RR 0.70, 95% CI 0.52–0.95), and living in an intervention village (RR 0.31, 95%CI 0.23–0.41), were independently associated with lower diarrhea risk	Quasi-experimental	Probability	5	4: Behavior, Exchange, Insight, Methods mix	
Bringing safe water to remote populations: An evaluation of a portable point-of-use intervention in rural Madagascar	American Journal of Public Health, 2007, 97 (3): 398-400 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1805013/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1805013/</a>	Tamatave Province, Madagascar	Respondents from 242 households in 4 villages were interviewed	Social marketing campaign to promote SWS and SurEau water disinfectant. Campaign used community based sales agents	<b>Behaviorial Factors</b>  Respondents from 239 households (99%) had heard of Sûr’Eau, the SWS disinfectant  <b>Behaviors</b>  226 (95%) reported having ever used Sûr’Eau, and 166 (73%) reported current use. Current Sûr’Eau use was confirmed in 54% of households	Observational	Probability	3	3: Behavior, Exchange, Methods mix	

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Sustained high levels of stored drinking water treatment and retention of hand-washing knowledge in rural Kenyan households following a clinic-based intervention	Epidemiology and Infection, 2006, 134 (5): 1029-1036 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2870483/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2870483/</a>	Homa Bay, Kenya	Clinic clients	Nurses in a maternal and child health clinic were trained in household water chlorination with a locally available, social marketed product, and in six steps of proper hand washing. Nurses initiated client education sessions on the SWS, hand-washing techniques, and diarrhoea prevention messages at the MCH clinic	<b>Behaviors</b>  After 2 weeks, free chlorine residuals were present in stored drinking water in 68 % of clients' homes and, 1 year later, in 71 % clients' homes. After 2 weeks, all six hand-washing steps were correctly demonstrated by 44 % of clients, and by 34 % 1 year later	Observational	Probability	4	3: Behavior, Segmentation, Methods mix	
Acceptability of and adherence to dispersible zinc tablet in the treatment of acute childhood diarrhoea	Journal of Health, Population, and Nutrition, 2005, 23 (3): 215-221 <a href="http://www.jhpn.net/index.php/jhpn/article/view/330">http://www.jhpn.net/index.php/jhpn/article/view/330</a>	4 sub-districts in Dhaka, Bangladesh	Children between the ages of 3 and 59 months and their caretakers	Distribution and sales of zinc tablets by a social marketing firm	<b>Behaviorial Factors</b>  The formulation was acceptable to children; 90.1% of 303 caretakers perceived that the tablets were equally or even more acceptable to their children compared to other medicines  <b>Behaviors</b>  Ninety-eight percent of the children received the standard dose of one tablet per day, 55.8% completed the full 10-day course of zinc treatment	Observational	Purposive	3	1: Methods mix	
Social marketing and motivational interviewing as community interventions for safe water behaviors: Follow-up surveys in Zambia	International Quarterly of Community Health Education, 2002, 21 (1): 51-65 <a href="http://www.cdc.gov/safewater/publications_pages/2002/thevos_2002.pdf">http://www.cdc.gov/safewater/publications_pages/2002/thevos_2002.pdf</a>	Ndola and Kitwe, Zambia	Peri-urban households	Volunteer community health promoters in experimental (social marketing + motivational interviewing) and comparison (social marketing only) groups trained in causes of diarrhea and prevention through use of Clorin and safe water storage by SFH/Zambia. Health promoters in experimental group additionally trained in MI techniques. After training, promoters conducted weekly household visits to promote and sell Clorin	<b>Behaviorial Factors</b>  At 3 mos FU, 68% of households in SM group knew of correct disinfectant use vs. 80% in SM+MI group (p>0.05). At 16 mos FU, 80% of households in SM group knew of correct disinfectant use vs. 89% in SM+MI group (p>0.05)  <b>Behaviors</b>  At 3 mos FU in Ndola,48% of households in SM group storing water safely vs. 87% in SM+MI group (p<0.01). At 16 mos FU in Kitwe, 63% of household in SM group stored water safely vs. 64% in SM+MI group (p>0.05)	Experimental	Probability	6	2: Behavior, Theory	

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Evidence of behaviour change following a hygiene promotion programme in Burkina Faso	Bulletin of the World Health Organization, 2001, 79 (6): 518-27 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2566434/?tool=pmcentrez&amp;report=abstract">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2566434/?tool=pmcentrez&amp;report=abstract</a>	Bobo-Dioulasso, Burkina Faso	Mothers of children aged 0–35 months, older sisters, maids, and school-aged children	Social marketing campaign involving house-to-house visits, performance of plays, and school curriculum	<b>Behaviorial Factors</b>  Improved knowledge  <b>Behaviors</b>  Safe disposal of children’s stools changed little between 1995 and 1998 (80% pre-intervention, 84% postintervention); hand-washing with soap after cleaning a child’s bottom rose from 13% to 31% and the proportion of mothers who washed their hands with soap after using the latrine increased from 1% to 17%	Quasi-experimental	Probability	5	5: Behavior, Customer orientation, Insight, Segmentation, Methods mix	
Challenges in implementing a point-of-use water quality intervention in rural Kenya	American Journal of Public Health, 2001, 91 (10): 1571-1573 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446827/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446827/</a>	Nyanza Province, Kenya	24 villages	Behavior change campaign to promote use of Safe Water System included advertising tools such as posters and brochures, as well as puppet shows , skits, and public demonstrations	<b>Behaviors</b>  The project has resulted in adoption rates of 33.5% for chemical water treatment and 18.5% for clay pots modified for safe water storage	Observational	Probability	3	6: Behavior, Customer orientation, insight, Exchange, Competition, Method mix	
Collaboration, cholera, and cyclones: A project to improve point-of-use water quality in Madagascar	American Journal of Public Health, 2001, 91 (10): 1574-1576 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446828/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446828/</a>	Mahavita, Madagascar	CARE evaluated the program’s impact in Mahavita through baseline and follow-up surveys of a random sample of 375 households in 15 neighborhoods	CARE contracted PSI to socially market the Safe Water System; Campaign to increase sales of SurEau water treatment	<b>Behaviors</b>  The utilization rate of Sûr’Eau in Mahavita households was 11.2% after 6 months. Utilization in neighborhoods in the last stage of the community mobilization process was 19.7%, compared with 8.4% in those at an earlier stage (P=.01). Median free chlorine residuals in stored water were found to be 0.23mg/L in households using Sûr’ Eau, compared with 0.1 mg/L in households not using the product (P=.005)	Quasi-experimental	Probability	5	5: Behavior, Customer orientation, Insight, Exchange, Methods mix	
Analysis of different communication channels for promoting hygiene behavior	Health Education Research, 1998, 14 (5): 629-639 <a href="http://her.oxfordjournals.org/content/14/5/629">http://her.oxfordjournals.org/content/14/5/629</a>	Six sub-districts in Khon Kaen Province, Thailand	Households from selected villages and random selection of schools - study used questionnaires and FGD	Social marketing campaign to improve hand and dish-washing practices. Campaign involved both a variety of media outlets as well as village-level health workers	<b>Behaviorial Factors</b>  Strong correlation between number of communication channels remembered by respondents and knowledge  <b>Behaviors</b>  No significant improvements in behaviors outside of school children	Quasi-experimental	Probability	5	6: Behavior, Customer orientation, Insight, Competition, Segmentation, Mixed Methods	

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Measuring the effect of a hygiene behaviour intervention by behaviour and diarrhoeal disease	Transactions of the Royal Society of Tropical Medicine and Hygiene, 1996, 90 (4): 366-371 <a href="http://trstmh.oxfordjournals.org/content/90/4/366.abstract">http://trstmh.oxfordjournals.org/content/90/4/366.abstract</a>	Khon Kaen Province, Thailand	Households in 37 village	A social marketing-based hygiene improvement campaign to promote hand washing, especially before feeding a baby, cooking, eating, and after defaecation or cleaning a baby’s bottom, and dish washing immediately after eating	<b>Behaviors</b>  There was a significant improvement in both behaviors in intervention versus control communities  <b>Health</b>  Diarrhea was less common in young children from the intervention villages, with 11 villages having lower incidence rates of diarrhea than 5 control villages; overall this amounted to a 39% reduction	Quasi-experimental	Probability	5	5: Behavior, Customer orientation, Exchange, Insight, Segmentation, Methods mix	

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