Global Scaling Up Handwashing Project

Promoting Handwashing Behavior: The Effect of Mass Media and Community Level Interventions in Peru

September 2012

INTRODUCTION

Preventable diseases exact a high cost among the world's poor. Diarrhea and acute respiratory infections account for two thirds of deaths among children under five. Handwashing with soap can prevent these diseases by minimizing the transmission of harmful pathogens found in fecal matter into the home. Hygiene programs can become a potentially effective way to improve public health, and the health of children in particular. Despite potential benefits, however, handwashing with soap remains uncommon:

KEY FINDINGS

- Respondents exposed to mass media and direct consumer contact activities only (radio, print and public events like parades) did not recall handwashing messages.
- In contrast, intensive activities in community and school settings translated in higher recall of handwashing messages, showed positive effects on handwashing knowledge, and resulted in greater availability of water and soap.
- Program effects were most consistently observed in households with children in target schools. These improved self-reported and directly observed handwashing behavior in two of four critical times. However, these improvements in handwashing behavior did not translate into significant impacts on environmental conditions or child health.
- Yet, observed rates of handwashing behavior, still under 35%, indicate there is significant room for improvement of this practice in Peru.

wsp water and sanitation program

rates of handwashing after defecation are below 35% in many developing countries.

In Peru, a baseline survey conducted during 2008 found that only 46% of caregivers reported washing hands after defecation. Evaluation results from The Handwashing Initiative (HWI) in Peru show that a behavior change campaign consisting of radio, print and public events alone was not successfully recalled by target audiences and did not prove to stimulate any behavior change. However, when this strategy was coupled with more intensive activities in community and school settings, the program positively affected the handwashing practices of caretakers of young children, although not to an extent that showed improved child health.

THE HANDWASHING INITIATIVE (HWI)

The Handwashing Initiative consisted of marketing and strategic communication activities at multiple levels, aimed at reaching large populations. HWI delivered two levels of behavior change interventions between September 2009 and December 2010. The first intervention operated at the provincial level and consisted of mass media and direct consumer contact (DCC) activities, while the second intervention operated at the district level with additional activities delivered in communities and schools.

The mass media-DCC intervention, comprised of radio advertisements, posters, comic books, brochures and public marketing events, emphasized the need to wash hands with soap at critical times (after defecation, after cleaning a child's bottom, before preparing food, and before feeding children).

The community and school intervention supplemented the mass media and DCC activities with training to community-based agents of change such as teachers, medical professionals and community leaders. This included handwashing with soap demonstrations and educational sessions to highlight the link between soap use and child health. Finally, a handwashing curriculum was implemented in a certain number of schools, and classrooms were outfitted with a designated place for handwashing with water and soap.

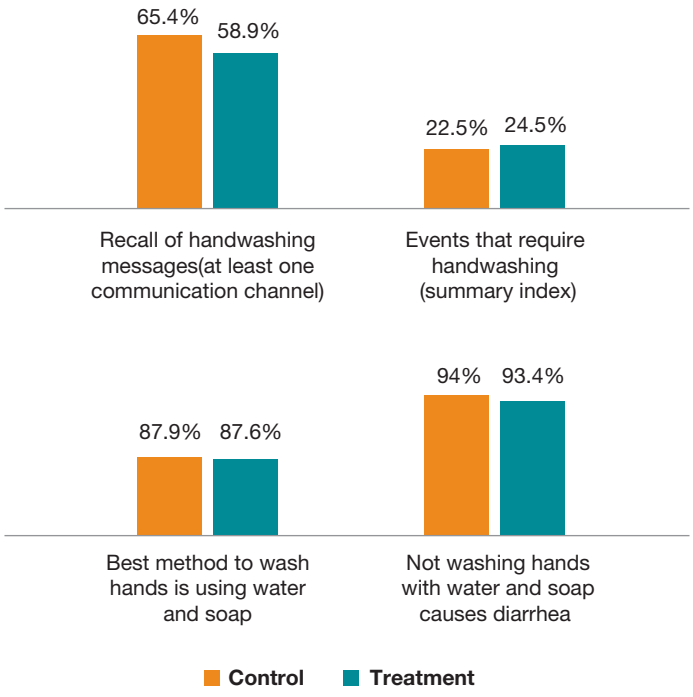
A rigorous evaluation design ensured the validity of the study's findings. The methodology used (randomized controlled trial) enabled to identify causal linkages between program activities and outcomes of interest. Provinces and districts throughout Peru were randomly selected for participation in the study and randomly assigned to receive the behavior change intervention (treatment) or not (control). This process ensured that the households across groups differed only in respect to whether they received HWI activities.

One group of 40 districts received the mass media-DCC behavior change intervention only. A second intervention group received both mass media activities as well as the community and school activities (44 districts). Within this second intervention group, certain households were tracked to isolate the impacts of activities at target schools. A third group of 41 districts served as control. Baseline household surveys were conducted among approximately 3,500 households from May through August 2008; post-program surveys to the same households were completed from March through June 2011.

The evaluation assessed efforts to influence the behavioral determinants, practice and effects of handwashing. The specific aspects evaluated included (i) self-reported recollection of exposure to handwashing messages; (ii) knowledge about the best way to wash hands; (iii) availability of soap and water in the home at a place convenient for handwashing at critical times; (iv) self-reported handwashing with soap; (v) observed handwashing with soap; (vi) environmental contamination; and (vii) child health.

Survey respondents from the community and school intervention recalled exposure to handwashing messages while respondents from the mass media-DCC activities alone did not. When asked whether they had encountered promotional handwashing messages during the past year, caregivers in the mass media-

Figure 1. Respondents Exposed to Mass Media and Direct Consumer Contact Activities Only (Radio, Print and Public Events) Did Not Show More Recognition of Handwashing Messages or Higher Knowledge



DCC activities group did not recall additional exposure to any messages (Fig.1). Because the theory of this intervention relies on effective exposure to behavior change communication messages, no other causal effect on relevant outcomes can be attributed to the mass media-DCC intervention alone. In contrast, community and school activities were considerably more successful in reaching target audiences. The proportion of mothers or caregivers exposed to the community and school interventions who recalled having received handwashing messages through at least one of the communication channels was 19.4% higher than the recall of the control group (78.1% vs. 65.4%). The proportion of caregivers from households with children in a school with the handwashing curriculum who reported exposure to handwashing messages through at least one channel increased by 10.6% relative to similar families in the control group (77.6% vs. 70.1%).

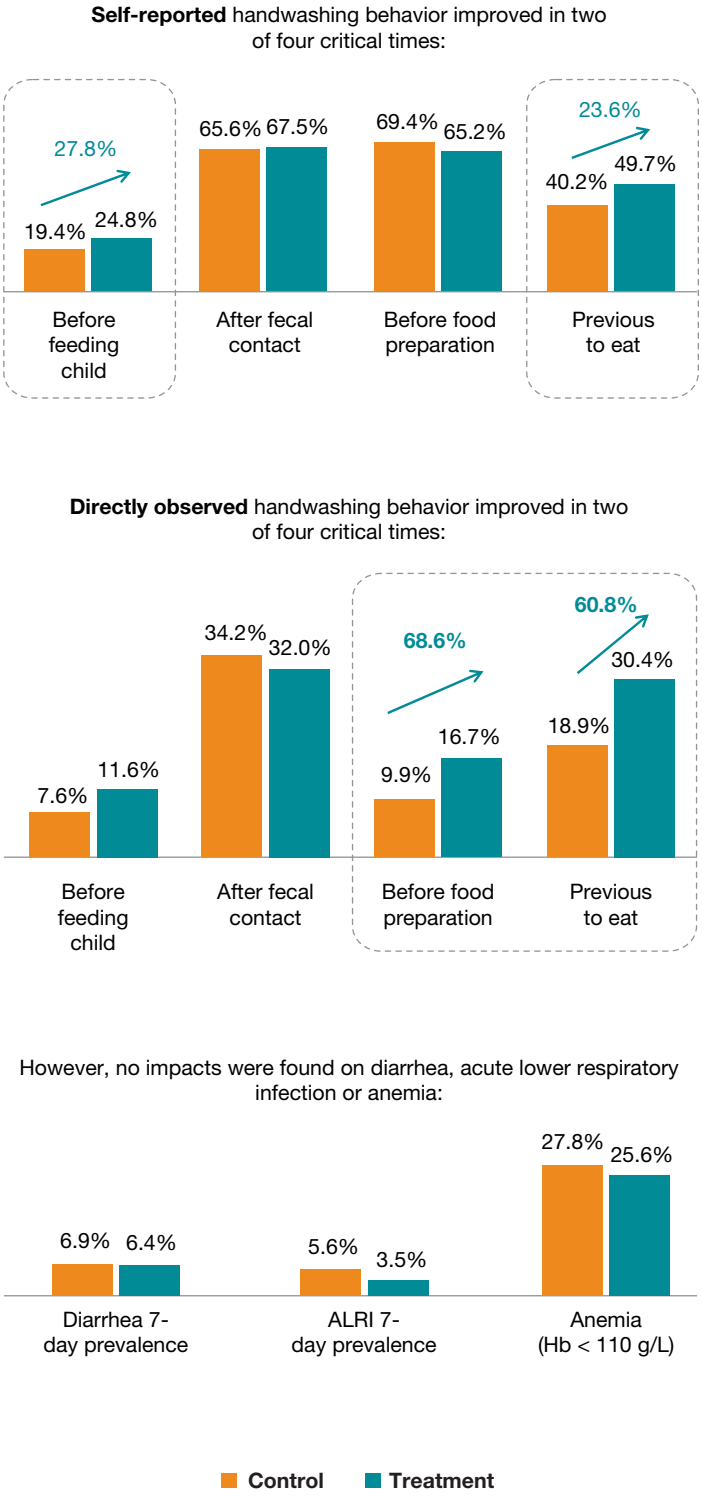
Community and school activities increased not only the exposure to handwashing messages, but also the knowledge of mothers and caregivers regarding handwashing. Respondents in the community and school component answered that the best method to wash hands is using water and soap at around a 5% higher rate than

the control group. In addition, 3.3% more households in the community knew that the main cause of diarrhea is inadequate handwashing.

Given the high level of knowledge at the baseline for both these indicators (over 85%), the increased rates represent significant progress in closing existing knowledge gaps. Also, the availability of soap and water anywhere in households with students in target schools was 8.4% higher than for similar households whose children attended other schools (83.3% vs. 76.8%). In contrast, the mass media and DCC intervention was ineffective both in improving knowledge of participants and in increasing availability of soap and water in the household, as expected.

However, only the households with children in schools with handwashing curriculum showed improvements in handwashing practices. Despite increases in knowledge of proper handwashing techniques, community and school intervention respondents without children attending the target schools did not report increases in handwashing during any of the four critical times. In contrast, households with children attending target schools showed a consistent increase in self-reported handwashing behavior for two of the four critical handwashing times: 23.6% more respondents reported they washed their hands with soap before eating and 27.8% more reported they washed with soap before feeding a child, relative to the control group. No effects

Figure 2. Households with Children in Target Schools Showed Positive Effects on Behavior Change



were detected for self-reported or observed handwashing with soap after fecal contact (Fig. 2).

Finally, direct observations, conducted only among households with children in target schools and a control group, showed substantial effects in two of the four critical times: 61% more households with students in target schools washed hands with soap before eating than those in the control groups. Similarly, households with children in target schools were 69% more likely to wash hands before food preparation than households in the control group. Still, directly observed rates of handwashing behavior were consistently lower than self-reported rates and did not exceed 35% in any of the critical times studied (Fig. 2).

Program effects were most consistently observed in households with children in target schools. Households with older siblings who attended schools where behavior change activities took place showed the most consistent shift in handwashing behavior, supporting the hypothesis that siblings can serve as agents of change.

With respect to the control group, these households reported higher recollection of program activities, more availability of water and soap in the house, higher rates of self-reported handwashing with soap behavior in two of the critical times (prior to eating and prior to feeding a child) and better observed behavior at two of the four critical times (prior to eating and prior to preparing food).

Finally, the improvements in handwashing practices did not produce significant impacts on environmental conditions or child health. Analysis of drinking water samples showed that the prevalence of E. Coli was lower in the treated households than those in the control group, but not at a statistically significant level. Child health and wellbeing were measured in the program using a number of variables, none of which was significantly affected by program activities.

There are no statistically significant differences in the prevalence of diarrhea or acute respiratory illness among children in treated households in any of the components. Similarly, no improvements in child anthropometric measurement or anemia levels are observed, and the prevalence of parasites and parasite count obtained from the stool samples was not significantly different among intervention and control groups.

LOOKING FORWARD WITH LESSONS LEARNED

Despite known health benefits, handwashing with soap has proven to be a complex behavioral phenomenon resistant to change. In this large-scale intervention in Peru, the mass media - DCC component when implemented alone failed to ensure greater awareness of messages, which prevented further behavioral change. In contrast, the intensive activities delivered at the district level

successfully reached the target audience with the handwashing promotion messages, generated learning about best handwashing practices, increased availability of water and soap in the house and improved handwashing practices in two of the critical times. Yet, observed levels of handwashing behavior indicate that there is considerable room for improvement of handwashing practices in Peru.

Finally, although the behavior changes mentioned did not translate into improved health outcomes for children under five, the results provide evidence in support of supplementing mass media and DCC events with intensive activities at the school level. Future efforts should focus on identifying other complementary interventions and removing environmental barriers to ensure significant and sustainable improvements in child health.

WSP is a multi-donor partnership created in 1978 and administered by the World Bank to support poor people in obtaining affordable, safe, and sustainable access to water and sanitation services. WSP's donors include Australia, Austria, Canada, Denmark, Finland, France, the Bill & Melinda Gates Foundation, Ireland, Luxembourg, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States, and the World Bank.

Related reading

For the full report, please see: Galiani, Sebastian, Paul Gertler, and Alexandra Orsola-Vidal (2012). ***Promoting Handwashing Behavior: The Effect of Mass-Media and Community Level Interventions.*** Water and Sanitation Program; forthcoming in World Bank Policy Research Working Paper Series.

Acknowledgments

This research brief was prepared by Bertha Briceno, senior evaluation specialist for WSP, with valuable contributions by Rocio Florez, Glenn Pearce-Oroz, and Eduardo Perez.

About the program

Global Scaling Up Handwashing is a Water and Sanitation (WSP) project focused on applying innovative behavior change approaches to improve handwashing with soap behavior among women of reproductive age (ages 15–49) and primary school-age children (ages 5–9). It is being implemented by local and national governments with technical support from WSP in four countries: Peru, Senegal, Tanzania, and Vietnam.

More information about the project at: www.wsp.org/scalinguphandwashing

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