

# TANZANIA: Do Campaigns to Get People to Wash Hands & Use (Improved) Toilets Work?

Across the developing world, contaminated water and poor hygiene and sanitation cause some one million deaths every



year. In Sub-Saharan Africa, most of these deaths are among children under five years of age and are due to severe and recurrent diarrhea from the spread of dangerous pathogens from human feces.

Even when not fatal, severe diarrhea prevents children from absorbing nutrients, and research shows this can have lifelong consequences for their physical and cognitive development. Evidence from small-scale studies (known as “proof of concept”) support the theory that improvements in handwashing and sanitation can have a positive, and meaningful, impact on health. However, efforts to improve hygiene and use of latrines or toilets at a larger scale in real-world settings have had only

limited success. From curbing open defecation to convincing people to regularly wash their hands with soap and water, changing behavior has proven to be very difficult in many countries.

The World Bank is committed to providing opportunities for healthy child development, and ensuring safe sanitation and good hygiene is critical to achieving that. In Tanzania, the World Bank’s Water and Sanitation Partnership worked with the government to create and implement campaigns to improve sanitation and reduce illness among young children by encouraging handwashing and use of improved sanitation such as toilets. A randomized evaluation, built into the program, found that while open defecation was reduced, the handwashing campaign wasn’t successful at getting people to wash their hands with soap and water, and neither campaign led to meaningful health benefits, even when combined. **The evidence reveals the difficulties of reducing diarrheal disease and the need for more research to identify successful strategies.**

## Context

Around 70 percent of Tanzania’s population lives in rural areas, where poverty is high and an estimated 9 percent of children die before their fifth birthday. Open defecation is a critical problem. A cholera epidemic in the 1970s spurred the construction of latrines, but many of these have since fallen into disrepair and the use of improved sanitation has declined. While about 80 percent of Tanzanians have access to a latrine, less than 10 percent have latrines with a slab or some other floor material to help separate fecal matter from

human contact. Additionally, 18 percent of households in rural areas still regularly practice open defecation.

The World Bank’s Water and Sanitation Program is working with governments around the world to implement rural sanitation and handwashing campaigns. These efforts are part of two international campaigns, the Global Scaling Up Handwashing and the Global Scaling Up Rural Sanitation programs (see Evidence to Policy note “What Gets People to Wash their Hands? Impact Evaluation Evidence from Peru

and Vietnam”). In Tanzania, the government worked with the World Bank to implement and evaluate sanitation and handwashing campaigns that were rolled out between the end of 2009 and early 2011. The aim was to increase rates of handwashing with soap and boost demand for and use of

improved sanitation, such as properly constructed latrines and toilets. The Government of Tanzania and the World Bank also had a specific interest in understanding the individual and combined effects of implementing handwashing and sanitation programs separately and together.

# WATER AND SANITATION

## Evaluation

The government picked ten districts across the country to implement the programs. The districts contained a total of 245 wards—each ward has a population of around 12,000 people—and 181 rural wards were included in the evaluation. These wards were divided into four groups: one received the handwashing intervention only, a second received the sanitation intervention only, a third received both and the fourth received none. Overall, the sample was poorer than the national average because it was limited to rural areas.

The rural sanitation program used what is known as Community Led Total Sanitation to increase demand for services. Community members are brought together with a trained leader who focuses on the communal dangers of open defecation and how it can be solved. People are shown where open defecation occurs and how fecal matter ends up in their food and water. A mass media campaign promotes good sanitation, while public events use skits and songs to reinforce the message. To improve supply, local masons are trained in building slabs for latrines and other things to upgrade latrines.

The handwashing campaign was aimed at mothers with children under the age of five. It included print and radio media campaigns, training community activists, road shows, and promotional events urging people to wash their hands properly. The program also provided technical assistance to help build cheap and water-efficient handwashing stations, called tippy-taps. Both programs focused on positive messages, rather than shaming tactics, and neither provided subsidies.

The endline survey was conducted in 2012, about one year after the programs ended. The survey covered 3,619 households and 5,768 children under five. Researchers examined the programs’ impact on latrine construction, open defecation, handwashing and the health of children under five years old.

Nearly 58 percent of children in Tanzania are anemic, some 44 percent of children are stunted, and diarrhea is common, with 14 percent of children experiencing symptoms within a two-week period.

*Data from World Bank*

## Results

**Households exposed to the sanitation campaign were more likely to switch to private latrines or other improved sanitation systems.**

In areas where the sanitation campaign ran, private latrine construction rose between 10 and 12 percentage points

above the 38 percent of households that had built private latrines in areas where there wasn’t a sanitation campaign.

People exposed to the campaign were also less likely to use shared latrines, something which is common in rural Tanzania and can worsen the spread of fecal matter. There was a 9.2 percentage point drop in use of shared latrines

This policy note summarizes World Bank Policy Research Working Paper #7164, “Promoting Handwashing and Sanitation: Evidence from a Large-Scale Randomized Trial in Rural Tanzania,” Bertha Briceno, Aidan Coville, Sebastian Martinez, World Bank Water Global Practice & Development Research Group, January 2015. <http://documents.worldbank.org/curated/en/2015/01/23804984/promoting-handwashing-sanitation-evidence-large-scale-randomized-trial-rural-tanzania>

in areas where the sanitation campaign alone took place and a 7.6 percentage point drop in areas where both the handwashing and sanitation campaigns took place. The interventions also significantly increased access to improved sanitation. While half of households in the control areas had access to an improved latrine, this increased by 10 percentage points in areas that received both campaigns, and by 15 percentage points in areas that received only the sanitation campaign.

**Regular open defecation was reduced, but occasional open defecation continued.**

About 11 percent of people in areas where the sanitation campaign took place said they regularly defecated in the open, compared with 23 percent in the control group. However, more than half of households in all groups reported that they still sometimes defecated in the open, a rate unchanged from before the start of the campaign. Animal feces were still widespread around dwellings, underscoring the fact that containing human fecal matter was just part of the challenge.

**The campaigns were less successful at changing people’s handwashing behaviors, even while people’s knowledge of the importance of using soap and water did improve.**

Overall, the handwashing campaign had little success in translating knowledge into behavior change. Caregivers in areas where the handwashing campaign took place—with or without the sanitation component—were more likely to know about the critical times to wash hands with soap. However, people weren’t any more likely to wash their hands with soap, based on their self-reporting. Forty seven percent of caregivers in both the control communities and in areas where campaigns took place reported that they washed their hands after contact with fecal matter. However, when researchers directly observed people, only 12 percent actually washed their hands.

There was only a 1.6 percentage point increase in handwashing before food preparation (in areas where the handwashing campaign took place and in areas with both handwashing and sanitation campaigns). This compares with the 1.3 percent of caregivers in the control group

who were observed washing hands before handling food. Overall, the numbers remained very small.

There were some small improvements however in households exposed to the handwashing campaign, either on its own or in combination with the sanitation campaign: Children were more likely to be clean, based on whether or not they had dirty hands, fingernails or faces; and caregivers had cleaner hands.



**In Tanzania . . .**

- 46 percent of people lack access to improved drinking water sources
- 40 percent of the time, child feces are disposed of unsafely
- 84 percent of schools lack working hand washing facilities
- More than half the rural population spends at least 30 minutes a day collecting water

*Data from UNICEF and World Bank*

**Neither program—on its own, or in combination—had any positive impact on children’s health.**

Researchers looked at diarrhea rates as an indication of short term-health; and weight and hemoglobin levels (low levels indicate anemia, which can be a sign of poor nutrition) as a medium-term measure of health; and height and head circumference as a longer-term indicator of improved health. Individually, the campaigns showed no effects on any measure of child health. When looking at the combined intervention, the researchers find some statistically significant findings in health outcomes, but these are inconsistent and biologically insignificant, suggesting that neither the sanitation program, nor the handwashing program, nor the two together were able to generate meaningful health improvements for children under the age of five years.



## Conclusion

As development experts seek ways to improve the health and well-being of children around the world, identifying strategies that effectively reduce diarrheal disease and improve children’s health is proving difficult. Simple and cost-effective solutions like handwashing with soap and water have the potential to improve people’s lives, but if campaigns are unable to change the way people behave, billions of people around the world won’t realize the benefits.

It’s important to understand how to balance incentives to encourage people to use improved sanitation and wash their hands with the demands of implementing these programs at scale. It’s clear that water and sanitation programs can lead to health improvements, especially for children, but it’s harder to know how to structure and implement these programs so they are effective. The focus for researchers, policymakers and implementers alike needs to be on figuring out how to make these programs work at scale.

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