

The Mantra of Delivery

Four lessons for scaling social impact that arose from curing children's diarrhea in Bangladesh in the 1980s.

By Mushtaque Chowdhury Nov. 26, 2014

Diarrhea caused by contaminated water is the single greatest killer of children in much of the world. In the 1980s, the Bangladesh-based organization to which I belong, BRAC, ran a program that helped reduce children's deaths from diarrhea by 80 percent nationwide. The project was fraught with difficulties and challenges, taking a decade to complete. Looking back years later, I think the experience holds important lessons that apply far beyond public health.

There is much talk of "the science of delivery (<http://blogs.worldbank.org/category/tags/science-delivery>)"—the delivery of services to people in need—in development circles today. Jim Kim, the World Bank president, says it's no longer so much a question of *what* to deliver, but *how* to deliver it. Perfecting the science of delivery, even for the simplest solutions, can help us uproot deeply entrenched poverty, illiteracy, and ill health.

Our anti-diarrhea effort was a "simple solution" in every sense: nothing but water, sugar, and salt, spooned to sick children. *The Lancet* reported (<http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2868%2990591-6/abstract>) on the first trials of this oral rehydration therapy (ORT) in 1968. Today it ranks among the greatest medical advances of the 20th century, with some putting the estimate of lives saved upward of 50 million. Ours was the first effort to deliver it on a nationwide scale.

We saw that in the villages and slums where death comes in the form of water-borne bacteria, intravenous fluid was hard to find, let alone the money to buy it and the expertise needed to insert a needle into a vein. But we knew that nearly every mother had access to water, sugar, and salt. The hard part was teaching millions how to mix the solution correctly close to 100 percent of the time,

and to understand when, and how often, to give the solution to a sick child.

When we began in 1979, the World Health Organization opposed our efforts, arguing that it would be dangerous to try to teach illiterate mothers to make their own oral rehydration solution. They said it would put even more children's lives at risk. What if the mother got the proportions wrong, or mixed up the salt and sugar? The attempted cure might kill more people than the disease itself, they said.

We proved them wrong. Our experience showed that even people with no formal schooling and zero literacy could retain basic life-saving health knowledge like ORT. We eventually reached 14 million mothers; the teaching spread almost entirely person to person. Bangladesh now has the world's highest ORT usage rate, and we've meanwhile been able to treat the underlying causes by improving hygienic practices and the supply of clean water.

In the hope of advancing the science of delivery, here are four lessons we learned for delivering simple but life-changing solutions to massive numbers of people:

1. Deliver through the most proximate channels. The delivery agents for ORT training were female health workers who came from similar and nearby villages. Hundreds of small teams of these workers traveled the country in mobile camps to teach mothers to mix the solution in person. Because measurements like "a half-liter of water" didn't have meaning for many women, the trainers began marking common household containers for reference. They measured salt by the finger and common molasses by the fistful.

2. Achieve scale through simplicity. Deliverers must simplify and routinize tasks before replicating them. Through trial and error, we fine-tuned a systematized routine of person-to-person contact and frequent iteration that ensured maximum retention of knowledge while eliminating unnecessary steps. In the end, we reduced the core messages of ORT to seven simple steps that mothers could commit to memory.

3. Create a learning culture by embracing feedback and failure. The first versions of the ORT program were actually a disaster: Fewer than 10 percent of mothers who retained the knowledge necessary to make the solution actually used it. We found that the trainers themselves didn't

completely believe in the solution. At another point, we realized we weren't adequately engaging the men in each village. At each stage, we redesigned the intervention and tested the results again.

4. Build robust management and monitoring systems. Though "bottom up" community involvement was essential, we also maintained a tight top-down management structure. We paid trainers on an incentive system, based on the amount of knowledge retained by the trainee one month later. At one point, we suspected that some of the monitors measuring these retention rates were cheating, filling out forms at a tea stall with fictional results. We adjusted the monitoring system to have the initial trainer record the name of the youngest person in the household during the initial training. The name was kept from the monitor, who had to provide it during his report on the follow-up. If the names didn't match, the monitor obviously hadn't visited the household. We had to sack quite a few monitors.

These lessons apply to many areas. In education, local women with little schooling themselves can become champion schoolteachers and role models for girls, even in more conservative areas of Afghanistan and Pakistan. This is one of the most cost-effective and rapid ways to bring quality schooling to the unreached. Following the lessons above, organizations can massively scale up these systems too. There are more than 40,000 such women already teaching 1.2 million students in BRAC schools, and we have plans to reach at least as many more (<http://www.brac.net/content/brac-commits-massive-scale-girls%E2%80%99-education>) .

In agriculture, with the right training, women from poorer villages in South Sudan, Tanzania, and Uganda can spread basic knowledge to their neighbors as self-employed "agriculture promoters" and model farmers. Using similar methods, we've started training Ebola response workers in Sierra Leone and Liberia.

Historic advances have a way of going unrecognized in the present. Rightfully, there is much excitement today about the potential for new technology to end human poverty, but it's easy to forget that many solutions already exist. We're just missing effective delivery mechanisms. We can reach millions more today by focusing less on what and more on how.



Mushtaque Chowdhury is the vice-chairperson and interim executive director of BRAC (@BRACworld), formerly Bangladesh Rural Advancement Committee, in Dhaka. He is also a



professor of population and family health at the Mailman School of Public Health of Columbia University and co-author, with Richard Cash, of *A Simple Solution*, a book about the BRAC oral rehydration program.

If you like this article enough to print it, be sure to subscribe to SSIR!

Copyright © 2016 Stanford University. Designed by Arsenal, developed by Hop Studios