

NOVEMBER 5, 2010, 6:57 PM

## **A Sugar and Salt Solution for Haiti's Cholera Epidemic**

By *JOSH RUXIN*

Twenty years ago I witnessed what seemed to be a medical miracle in a village deep in Bolivia: a nearly lifeless child dehydrated by severe diarrhea was given sips of a sugar and salt solution and recovered in a couple of hours. Curious about this simple yet lifesaving mixture called oral rehydration solution, I learned that United States-funded scientists had discovered it in 1968 in then-East Pakistan as a simple, cheap alternative to intravenous treatment. Defying all expectations, the researchers learned that at the right proportions, oral rehydration could resurrect even severely dehydrated adults suffering from cholera.

At the “Cholera Hospital” (as its affectionately called) in Dhaka, Bangladesh, I’ve seen infants survive the worst cholera symptoms thanks to spoonfuls of solution administered tenderly by their mothers. Remarkably, the solution is effective even when it must be mixed with dirty water. That’s in great part why the scientists that discovered this breakthrough treatment are frequently nominated as recipients of the Nobel Prize in Medicine.

Despite the current outbreak of cholera in Haiti—sadly predictable in the wake of the devastating January earthquake—no one need die from this historic killer. In South Asia, oral rehydration therapy has helped to reduce the fatality rate among those infected with cholera from 30% to less than 1% in just a few decades. Here in Rwanda, where I live, a 2006 outbreak that caused 20 deaths was rapidly quelled as 600 community health workers fanned out with oral rehydration packets in hand. Even a poor country has no excuse for letting people die from this disease.

In spite of the existence of a counter-intuitively simple treatment, cholera continues to cause panic, sickness and death in places made most vulnerable by poor sanitation, displacement, and natural disasters. In the long run, though, there is no magic bullet for the diseases of poverty. John Snow’s 19th century discovery of the link between cholera and contaminated water led to major prevention and sanitation programs that essentially eliminated the disease in the developed world. A few feet from the spot where he famously closed a contaminated London well is a new source of dehydration: a pub named in his honor. Sadly, only developed countries can celebrate such discoveries with a pub.

Jim Grant, the legendary director of Unicef, used to show off packets of oral rehydration solution at diplomatic functions. He enjoyed remarking that while diarrheal disease didn't make for palatable dinnertime conversation, it was one of the top preventable killers of kids. The World Health Organization estimates the global burden of cholera at 3 to 5 million cases every year, including more than 100,000 deaths. Cholera disproportionately affects regions without adequate sanitation infrastructure: in poor countries, diarrheal disease is second only to pneumonia in causing the deaths of children under five years, and causes approximately 4,500 deaths each day.

In Haiti, the existing sanitation system— and related health indicators – were already in dire condition months ago. Warning bells were ringing loud and clear when hundreds of thousands of Haitians relocated to tent cities with exposed latrines and scattered garbage. While approximately a quarter of all Red Cross funds have been allocated to water and sanitation projects in Haiti, increasing rain has only aggravated the absence of a municipal sewage system – and the potential for major disease outbreaks. Now, the challenge looms large.

While the best way to address cholera is through prevention – universal access to clean water and sanitation – when outbreaks do occur oral rehydration therapy should be able to save nearly all lives. Surely the Haitians falling ill with cholera today need much more than oral rehydration therapy: the water sources in ever-expanding refugee camps must be treated, and people need to be educated about water, sanitation and hygiene.

But in the meantime, there's no excuse for preventable deaths. Packets of oral rehydration solution need to get to everyone who needs them, along with training in its administration. These combined measures would prevent calamity, and provide aid workers and citizens with the time they need to make the investments that would avoid this type of outbreak in the future. In the here and now, may the correct combination of kitchen salt and sugar make its mark: the rehydrating elixir that has saved millions of lives from Bolivia to Bangladesh can easily do the same for Haiti.

*Some organizations on the ground in Haiti that are distributing oral rehydration salts and solutions are:*

*[Save The Children](#)*

*[Doctors Without Borders](#)*

*[Samaritans Purse](#)*

*[Partners in Health](#)*

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