



Scaling up oral rehydration salts and zinc to prevent child deaths from diarrhea

KEY MESSAGES

- Diarrhea kills about 800,000 children each year, making it the second leading cause of death in children under five years worldwide
- Over 95% of these diarrhea deaths could be prevented with oral rehydration salts (ORS) and zinc, which together cost only about \$0.50 per treatment course
- Eight years have passed since the WHO and UNICEF jointly recommended using ORS and zinc for childhood diarrhea, yet fewer than 1% of affected children receive this combination
- Strategies to boost ORS and zinc use include awareness campaigns, approving zinc as an over-the-counter treatment, and incentivizing private sector actors to make, market, and sell these products

After pneumonia, diarrhea is the second biggest childhood killer worldwide, causing about 800,000 deaths in children under five each year.¹ In 2004, the WHO and UNICEF issued a joint statement recommending that all children with diarrhea should receive ORS and zinc, which could prevent over 95% of diarrhea deaths.² Scaling up the combination in just four high-burden countries alone could prevent over 640,000 child deaths by 2015.³ The combination costs only about \$0.50 per course of treatment, yet today fewer than 1% of children are receiving it⁴— so the avoidable death toll continues.

WHY IS COVERAGE SO LOW?

Low awareness of the effectiveness of ORS and zinc among health providers is one critical barrier to scaling up ORS and zinc. Globally, most children receive some form of treatment for diarrhea, but most of these children are given inappropriate treatments such as antibiotics, antidiarrheal drugs, and local remedies.³ The WHO's diarrhea treatment guidelines clearly discourage the use of these ineffective

products, but clinicians and pharmacists continue to prescribe them. Other barriers include:

- Low parental awareness of, and demand for, ORS and zinc as treatments when their children have diarrhea
- Limited access to zinc in informal shops and kiosks
- A lack of incentives for the private sector to produce and supply ORS and zinc.

When demand is low, pharmaceutical suppliers and drug vendors do not actively procure, distribute, or promote ORS and zinc. These conditions have created a “market trap” in high-burden countries in which life-saving treatments for diarrhea are not reaching the millions of children in need.

CREATING DEMAND THROUGH PROMOTION CAMPAIGNS

Mass media campaigns promoted increases in coverage of ORS and zinc in Bangladesh, Nepal, and Tanzania.⁵ The Scaling Up of Zinc for Young Children (SUZY) Project in

Bangladesh has been particularly successful in promoting ORS and zinc among caregivers and providers. During the first three years of this national promotion campaign, caregiver awareness of the health benefits of zinc increased from 1% to 90% in city slums.⁵ The proportion of children receiving zinc treatment for diarrhea over the same time period increased from 4% to 23%.⁴

When children develop diarrhea, their parents often seek treatment in the private sector from informal “village doctors” or local drug vendors.⁶ Therefore promotional campaigns should be accompanied by training private sector health workers to prescribe ORS and zinc.

In some countries, zinc can only be sold by licensed drug stores and chemists, which greatly reduces access to this medicine. Obtaining over-the-counter approval for zinc, which has a strong safety profile,³ is an essential step to making zinc more widely available. Many caregivers seek initial treatment from informal pharmacies that are only authorized to sell over-the-counter products.

INCENTIVIZING SUPPLIERS

Pharmaceutical manufacturers currently have little incentive to produce and promote ORS and zinc, because they are low-demand products with little profit margin compared with more lucrative antibiotics.⁵ But volume incentives (e.g., discounts, rebates) can be used to nudge suppliers and vendors to manufacture and market ORS and zinc. These practices are commonly used in the pharmaceutical and consumer packaged goods industries to improve sales volumes, especially for new product introductions.⁷

PREVENTING DIARRHEA DEATHS: A CALL TO ACTION

The combination of ORS and zinc is safe, with few side effects, and it can be scaled up without the threat of drug resistance.⁶ It is also much cheaper than other combination therapies that have been recently prioritized for scale-up, such as artemisinin-based combination therapies for malaria and anti-retroviral combinations for HIV/AIDS.^{8,9} Now is the time for the global health and development community to find the commitment and funding to urgently translate evidence into action to end childhood diarrhea deaths.

*This policy brief was written by **Alexander Anthony Rosinski**, a Masters in Global Health Sciences student at the University of California, San Francisco. It underwent expert peer review ahead of publication. The brief was one of five winning entries in a competition held during the summer 2012 UCSF masters course, *Global Health Policy: Transforming Evidence into Action*.*

For further details about the competition, see e2pi.org/education

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