

CASE STUDY



BUILDING AN INCLUSIVE BUSINESS ECOSYSTEM IN HEALTH:

Tackling child mortality in Kenya



Cover photos (from top):

Diarrhea message-branded water take at health center.

Zinc and ORS Co-pack display.

Dr. William Maina, Director of Disease Prevention and Control, donating co-packs.

Campaign launch.

(Photos: Courtesy of CHAI Kenya)

Abstract

Substantial investments in managing childhood illnesses in Kenya have yielded notable achievements in child health, but many Kenyan children continue to die unnecessarily as a result of poor access to treatment. Diarrhea is the second leading cause of death among children under 5 in Kenya, and is responsible for nearly 40,000 deaths each year.¹ Oral rehydration salts (ORS) and zinc are recommended by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) as the first-line treatment for diarrhea;² this combination can prevent up to 93 percent of diarrhea deaths.³ However, only 39 percent of afflicted Kenyan children have access to ORS and less than 1 percent receive zinc¹ as of the most recent DHS survey in 2008/2009. This can largely be attributed to a lack of awareness about the treatments and access to them.

In response to this problem, the Government of Kenya has developed an inclusive business ecosystem where the Government, NGOs, local pharmaceutical manufacturers and distributors collaborate to improve access to and information about this important treatment. Guided by the Government's strategic vision, the Clinton Health Access Initiative (CHAI) has played an important role in aligning incentives across multiple actors in the public and private sectors. Local pharmaceutical manufacturers were engaged to develop a new treatment based on potential market growth and government commitments, which include legislative changes to allow for over-the-counter sales and awareness-raising campaigns. This paper describes the interventions undertaken to create

an inclusive business ecosystem that involves public and private stakeholders in order to increase awareness of and access to ORS and zinc for treating childhood diarrhea.

Pediatric diarrhea: A leading cause of child mortality

Diarrhea is the second leading cause of death among children under 5 both globally and in Kenya, where it contributes to 20 percent of under-5 mortality in the country, amounting to nearly 40,000 child deaths.⁴ The burden of the disease is substantial: children

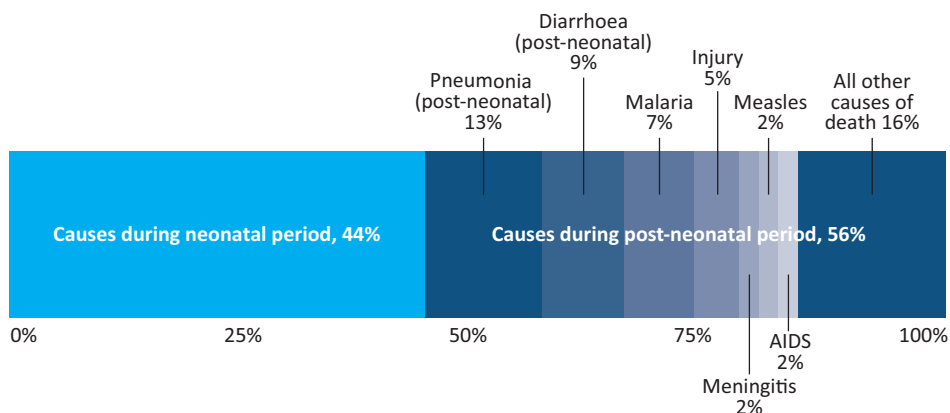
under 5 in Kenya have on average three episodes of diarrhea per year.⁵

Despite the high mortality rate from diarrheal disease in Kenya and other developing countries, pediatric diarrhea is easily treatable. Effective treatment ensures that children do not die of severe dehydration, which is the main reason why the disease is dangerous for small children. In 2004, the WHO and UNICEF revised the recommendations for treatment of diarrhea to ORS and zinc sulphate, and the use of antibiotics only for bloody diarrhea.⁶

Despite the adoption of these recommendations in Kenya in

Figure 1. Global distribution of deaths among children under 5 by cause, 2013

Pneumonia, diarrhea and malaria are the main killers of children under age 5, and 44 percent of under-5 deaths occur in the neonatal period.



Source: UNICEF:Committing to Child Survival: Progress Report 2014

Globally, diarrhea is the second leading cause of death among children under 5.

1. Ministry of Public Health and Sanitation, [Scaling Up Strategy for Essential Treatments in Children Under Five Years in Kenya](#)

2. WHO/UNICEF Joint Statement. [Clinical Management of Acute Diarrhoea. 2004](#)

3. Munos MK, Walker CL, Black RE. The effect of oral rehydration solution and recommended home fluids on diarrhoea mortality. *Int J Epidemiol.* 2010 Apr;39 Suppl 1:i75-87. Review. PubMed PMID: 20348131; PubMed Central PMCID: PMC2845864.150

4. Ministry of Public Health and Sanitation, [Scaling Up Strategy for Essential Treatments in Children Under Five Years in Kenya](#)

5. *Ibid.*

6. WHO/UNICEF Joint Statement. [Clinical Management of Acute Diarrhoea. 2004](#)

2007, the uptake of ORS remained at 39 percent, and was only 0.2 percent for zinc according to the 2008/09 Kenya Demographic and Health Survey. As shown in Figure 2, many children continued to be treated with suboptimal products including homemade remedies such as porridge and soup (25 percent) antibiotics (14 percent, although the prevalence of bloody diarrhea is just 2.6 percent) and anti-motility drugs (8.7 percent), or nothing at all. There

are many opportunities for improving uptake of ORS and zinc by generating demand, such as raising awareness among caregivers using substandard treatments, encouraging those not receiving treatment to seek assistance from health providers, and urging health providers to prescribe the most effective treatment.

Low uptake: A product of low awareness and low availability

Several factors contribute to low uptake of the recommended treatment in Kenya:⁷

Poor care-seeking behaviors: A large number of children succumb to diseases like diarrhea because of delayed access to health care. Research showed that just 49 percent of children with diarrhea received medical advice or treatment from a qualified health provider, while 13 percent did not receive any treatment at all.

Limited knowledge of recommended treatment among caregivers: ORS was adopted 20 years ago in Kenya for diarrhea management; despite numerous public awareness campaigns, knowledge of ORS remained at around 75 percent. However, even with this relatively high level of knowledge, the use of ORS remained much lower at 39 percent. While knowledge of zinc has not been documented, it was estimated to be less than 10 percent, while its use was below 1 percent.

Significant knowledge gaps among healthcare workers: Without proper training, healthcare workers may not be familiar with recommended treatments. WHO recommends that at least 60 percent of providers in a country be trained in Integrated Management of Childhood Illness (IMCI). In Kenya, studies showed that just 11 percent of those working directly in child health were trained in IMCI and 12 percent were trained in diarrhea treatment.

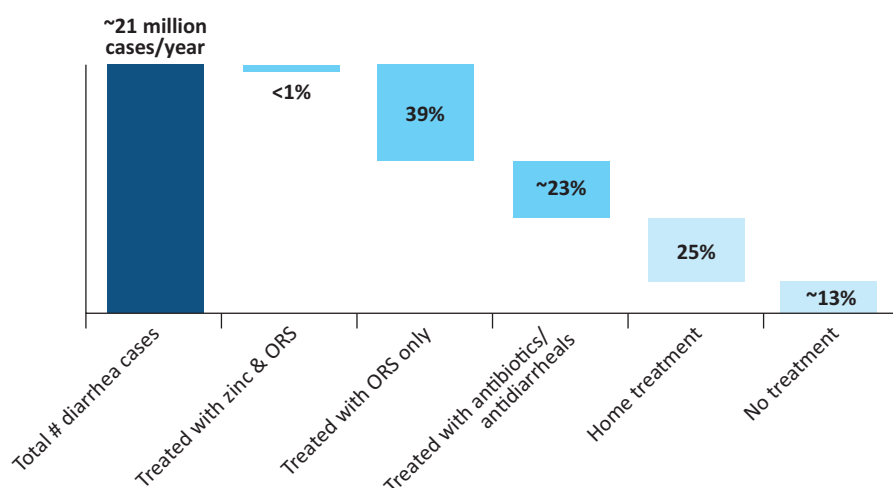
Widespread use of non-recommended diarrhea treatments: The Kenya Demographic and Health Survey for 2008/09 indicated an increased use of antibiotics for non-bloody diarrhea cases: 14.2 percent of children were reported to receive antibiotics, yet only 2.6 percent were reported to have

What is Inclusive Business?

Inclusive business models are sustainable business solutions that expand access to goods, services, and livelihood opportunities for low-income communities (those who live on less than \$8 a day).

These models include the poor on the demand side as clients and consumers, and/or on the supply side as producers, entrepreneurs or employees.

Figure 2. Cases of diarrhea and treatment methods (2008/09 Kenya Demographic and Health Survey)



Source: Number of cases derived from population figures (United Nations Population Fund) multiplied by incidence rates (Boschi-Pinto C. et al., The Global Burden of Childhood Diarrhea, Maternal, and Child Health: Global Challenges, Programs, and Policies. Ed. John Ehiri. New York: Springer, 2010.); Kenya Ministry of Public Health and Sanitation, [Scaling Up Strategy for Essential Treatments in Children Under Five Years in Kenya](#)

Note: Some overlap exists between treatments, leading to a total greater than 100 percent.

7. Kenya Ministry of Public Health and Sanitation, [Scaling Up Strategy for Essential Treatments in Children Under Five Years in Kenya](#)

bloody diarrhea. Anti-motility drugs had also become an alternative to ORS and zinc, with uptake at 8.7 percent, and the use of homemade remedies such as porridge and soup was 25 percent.

Insufficient quantities of ORS and zinc:

Procurement of ORS and zinc was not enough to meet the tremendous needs in Kenya. This could be partly attributed to a lack of adequate measurement of need, and partly to inadequate prescriptions by health workers.

Different access to ORS and zinc:

Prior to 2011, there was a difference between the drug classifications of ORS and zinc. While ORS was classified as an over-the-counter drug, allowing it to be sold directly in shops, zinc was classified as a prescription drug, restricting its use.

A national response: Engaging stakeholders to develop a business-based solution

As Figure 3 shows, of the estimated 21 million cases of pediatric diarrhea annually in Kenya, 42 percent were treated in public clinics, 18 percent in private clinics and pharmacies, and



Dr. William Maina launching diarrhea campaign on 6 December 2013

40 percent were treated at home. Any successful strategy for tackling this problem required increasing the uptake of ORS and zinc in each source of treatment. In 2011, the Division of Child and Adolescent Health within Kenya's Ministry of Public Health and Sanitation released its *Scaling-up Strategy for Essential Treatments in Children Under Five Years in Kenya: Diarrhea and Pneumonia*, which clearly diagnosed the problem and proposed a strategy for tackling it.

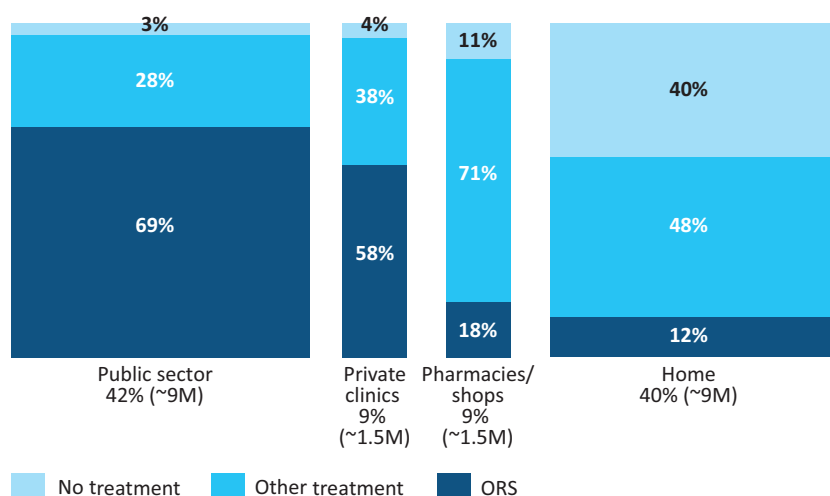
A key component of the strategy involved an important new innovation: given the differences in uptake of ORS and zinc and the fact that they are not generally prescribed together, the Ministry of Health (MOH) proposed co-packaging ORS and zinc, thus guaranteeing that the two products would be dispensed together. To ensure successful implementation, a wide variety of stakeholders in both the public and private sectors needed to be involved. With this innovation, the Ministry of Health and its partners set out to address the problem by tackling both sides of the equation: supply and demand. As a result, the MOH, CHAI, and other partners secured initial funding in order to embark on a multi-year initiative to implement this strategy.

Building demand

In order to scale up the combination of ORS and zinc for treating childhood diarrhea to 80 percent by 2015, the government-led strategy involves increasing awareness at each source of treatment – among caregivers, public health providers and private clinics and pharmacies.

For providers in both the public and private sectors, the aim is to ensure that healthcare workers are properly trained to assess children suffering from

Figure 3. Diarrhea treatment by source and type (Kenya Demographic and Health Survey 2008 & Kenya Service Provision Assessment 2010)



Note: Alternative treatments to ORS include home-based fluids, antibiotics and anti-diarrheals.



Health talk at Makadara health centre

diarrhea, and to use ORS and zinc as the first-line treatment. As a part of this effort, CHAI contracted the Kenya Pediatric Association on behalf of the MOH to take a “train-the-trainer” approach, targeting both public- and private-sector trainers in high-incidence regions across the country. The Ministry of Health with support from KPA, CHAI and others also developed a diarrhea Continuous Medical Education (CME) training package, which has been used to train approximately 2,000 health care workers in public health facilities and private clinics in high burden regions. Nearly 100 CME training modules have been delivered across the high-burden areas of Nairobi and the coast, and there are additional plans for expansion. This training has cascaded to several other counties, providing opportunities to extend the reach of

implementation through partnerships with county health directors.

In the private sector, local pharmaceutical companies Cosmos, Universal, and Phillips (PHSL) deployed sales teams to promote ORS and zinc co-packs in public and private clinics and pharmacies, and organized CME sessions reaching over 5,000 providers. These suppliers also donated thousands of co-packs to public- and private-sector providers in order to promote initial uptake of the treatment. In addition, pharmaceutical partners provided their sales reps with detailed materials, including point-of-sales promotional tools for providers to use with consumers.

The Ministry of Health’s aim was to build awareness of ORS and zinc among caregivers as the recommended treatment, and to encourage the public to

seek care from qualified health care providers. This involved the MOH-led technical working group that included CHAI, Population Services International, UNICEF, Micronutrient Initiative, USAID Strengthening Health Outcomes through the Private Sector (SHOPS), PATH, and Save the Children, UK which led to the development of a communication strategy and high-impact activities targeting key audiences. Their campaign officially launched in November 2013 with caregiver radio messages in 15 local languages and related print materials.

This significant public-sector commitment and investment in building demand for ORS and zinc also went a long way towards establishing an inclusive business ecosystem. It reduced the promotion costs required by private companies, making the business case more attractive.

Increasing supply

To engage manufacturers in the development of a co-pack, CHAI helped the Ministry of Health to build a business case in which various organizations play different roles in manufacturing, packaging, marketing, and distribution. Given the government's interest in distributing co-packaged ORS/zinc in the public sector, CHAI engaged with local manufacturers Cosmos and Universal, who were interested in developing a co-packaged product to meet this demand. CHAI also worked closely with the government to support accurate quantification and forecasting to determine the amount of co-packaged products that would need to be procured. This "market intelligence" was also valuable to the manufacturers as it helped them plan effectively for production and control their downside risk.

Another important step was working with the Pharmacy and Poisons Board to share data that allowed for the approval of zinc as an over-the-counter

product. This policy change (achieved in mid-2012) cleared the way for wide-spread marketing and distribution of the co-packaged product.

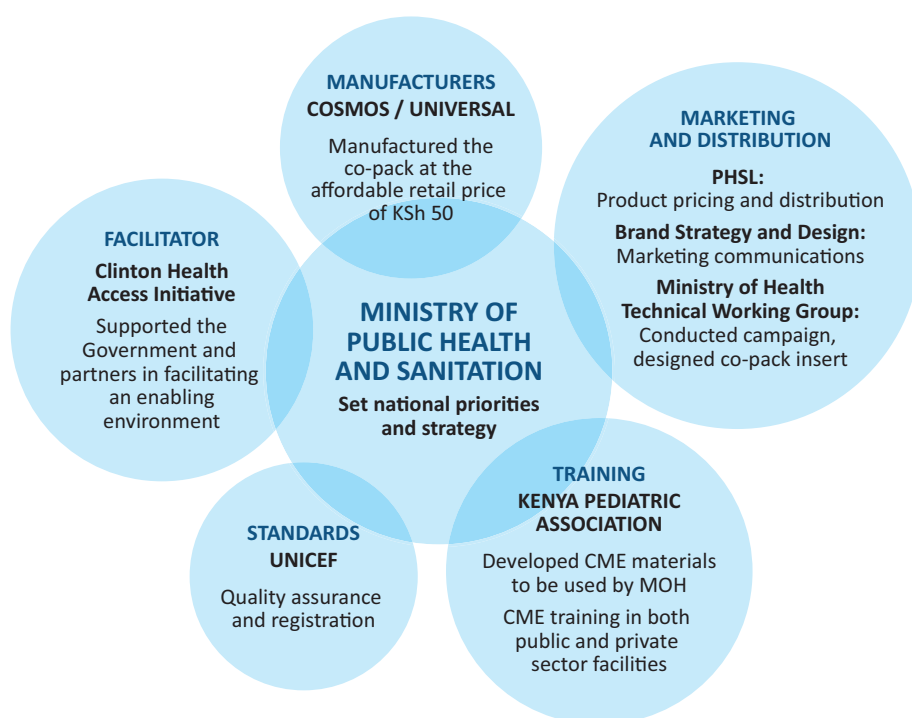
In terms of marketing and distribution, CHAI assisted the Ministry of Health to bring together the broad range of public- and private-sector actors necessary for implementing the inclusive business strategy. Coordinating this diverse group of stakeholders was a difficult task since the incentives needed to be aligned across all groups. The result was a value chain that ensured the co-pack reached providers, retailers, and ultimately, consumers. As shown in Figure 4, the co-pack was introduced into the market through the efforts of many actors playing different roles:

- Pharmaceutical Companies
Universal and Cosmos manufactured the co-pack and made it available at an affordable retail price (50 Ksh).
- UNICEF, SHOPS, and other partners conducted quality assurance

to ensure that the co-pack met WHO standards and assisted manufacturers in preparing dossier submission for registering the products to the Kenya Pharmacy and Poisons Board.

- Phillips Healthcare Services Limited (PHSL) promoted and distributed the co-pack, and advised on setting an affordable price.
- The communications company Brand Strategy and Design assisted in marketing by developing a radio campaign and print messages.
- The Ministry of Health-led technical working group, which included CHAI, Population Services International, UNICEF, Micronutrient Initiative, PATH, USAID SHOPS, and Save the Children, UK conducted a campaign on diarrhea management, recommending treatment with ORS and Zinc.
- CHAI contracted The Kenya Pediatric Association on behalf of MOH to conduct CME training, which helped to change the prescribing patterns of over 2,500 health providers and over 5,000 retailers and practitioners; this facilitated the distribution of over 80,000 co-packs in Q1/Q2 2014.
- The procurement agency Mission for Essential Drugs and Supplies converted its individual orders for ORS and zinc into new orders with Cosmos for the co-pack.

Figure 4. Stakeholders involved in the marketing and distribution of ORS Zinc co-pack



Early outcomes of the business model

While the initiative is still in its early stages, there have already been positive outcomes, which are providing a foundation for the inclusive business ecosystem:

Caregiver awareness: A Ministry of Health-led radio campaign launched in December 2013 was broadcast in 15 languages, with support from technical working group partners.



Diarrhea message-branded water take at health center

Provider awareness: The Ministry of Health, the Kenya Pediatric Association, and partners trained public- and private-sector trainers from high-incidence regions in abridged IMCI protocols. Following the training, every public and private health facility in seven counties had at least one IMCI-trained provider who could train other health care workers on the correct use of ORS and zinc. By 2014, over 1,000 public and 300 private health providers in Nairobi and coastal regions had been trained, resulting in full coverage of facilities within the target areas. The partners are planning to expand these efforts into additional regions. In the private sector, Kenyan drug manufacturers Cosmos, PHSL, and Universal have also dedicated and deployed sales teams to promote ORS and zinc co-packs in pharmaceutical outlets and organized CME sessions reaching hundreds of providers.

Availability and affordability: Over-the-counter status was secured for zinc, allowing the product to be broadly

distributed and marketed in the co-pack. Cosmos and Universal then introduced two new, affordable ORS/zinc co-pack products at a retail price 40 percent less than the original price of the medications, allowing many more patients to access treatment.

Beneficiary awareness: Survey data indicate that beneficiaries know they can access ORS-zinc co-packs in the nearest drug kiosk, which means that families do not need to travel and endure long wait times at public facilities. “Yes and it’s available. The other day I found it being sold at our shopping centre...” stated one mother from Kilifi County, who has used the co-pack to treat diarrhea in her 2-month-old baby.

Challenges ahead for scaling of the inclusive business model

While significant progress has been made with this initiative, the main challenge will be to scale

up nationwide. Inclusive business ecosystems often take a long time to be established, and even longer to reach scale. Given that this initiative is still at an early stage, it is natural for challenges to emerge as the model matures. The following challenges have been encountered thus far:

Higher volumes required to achieve sustainability: According to PHSL, the distributor of the co-pack, only about 20,000 co-packs were sold per month in the first half of 2014. For the business model to be profitable at the current price, the sales volume will need to scale to 100,000 co-packs per month. All stakeholders involved – both public and private – are motivated and interested in reaching this scale.

Procurement of essential medicines in the public sector: Following the adoption of a devolved structure, counties are now mandated to procure drugs directly from the Central Medical Stores (CMS). As a result of challenges with planning and financial processing, several counties had shortages of essential medicines, including ORS and zinc. To address this, CHAI is supporting government efforts to redistribute existing stocks of essential drugs among facilities, strengthen monitoring of ORS and zinc supplies, and roll out a Health Commodity Management Platform that empowers county governments to track use and ensure adequate supply at public health facilities.

Retention of trained health care workers in child health units: Health care workers who are trained in IMCI are expected to train their peers in treating diarrhea with ORS and zinc, but these workers are routinely transferred out of pediatric departments. To mitigate this turnover, the county MOH coordinators have communicated that IMCI-trained staff should remain in pediatric settings for a minimum of one year after their training in order to encourage mentorship.

Partner coordination: Current funding is only sufficient to cover training and social marketing of ORS and zinc in a

portion of the country. CHAI is working with the Ministry of Health and other partners to mobilize additional funding for accelerated implementation of the program nationwide. Support has already been secured from a number of partners for national scale-up, but this creates the risk of duplicating efforts. To improve coordination, the Ministry of Health and its partners are tracking critical resource gaps and mobilizing partner support through regular stakeholder meetings.

Lessons for building an inclusive business ecosystem in health

Building an inclusive business ecosystem in health that delivers social returns as well as profitability is a complex and challenging undertaking. To address the problem of under-5 mortality in Kenya, it was necessary to establish cross-sector partnerships where multiple stakeholders could add value to the model. Key elements of success are listed below:

Government ownership: The Government of Kenya has demonstrated unprecedented leadership in providing a national strategy for reducing childhood deaths, which has driven treatment efforts. The government has taken ownership of the process, provided a national framework to guide all partners and involved stakeholders from both the public and private sectors.

Quantification – a key component to enable coordination: CHAI played a critical role in supporting government efforts and coordinating many public- and private-sector actors. In order to engage the private sector, it was first necessary to quantify the problem, and then translate it into a market opportunity for private-sector actors. This unique example is an indication of the opportunities for non-government actors in facilitating complex cross-sector initiatives.

Aligning investments from the public and private sectors: To establish an inclusive business model, significant upfront investments are needed – but they are often too great for one party to bear on its own. In this example, partners discussed and agreed upon which investments each party was going to make, taking into account expertise and alignment with the objectives of each actor. The government invested in setting up the framework and strategy, and committed to the ongoing training of providers. NGOs focused on building demand for the product through mass-media social marketing campaigns, promotional materials, and health care provider training. With a government commitment to purchase the product and significant investments in generating demand, private-sector

actors could focus their investments on manufacturing the co-pack and managing the supply chain.

Private-sector actors with long-term objectives: Inclusive business models in the health sector are typically low-margin, high-volume businesses. This was definitely the case with ORS and zinc treatment, and it was necessary to engage private-sector actors that had the foresight to invest in an initiative where profitability would be measured over the long term.

As shown by the early outcomes of this initiative, an inclusive business ecosystem is most successful when stakeholders are encouraged to marshal the full strength of their specialized expertise to achieve a common goal.

Quotes from stakeholders

“The approach for CHAI has been to build a business case. For ORS/zinc, the case was that the manufacturers Universal and Cosmos could make the co-pack and the government could buy it. CHAI therefore created a bridge between the private sector and the government.”

— Gerald Macharia, CHAI Kenya Country Director

“The zinc/ORS case is a good example of how the public and private sectors can come together to address issues in the health sector.”

— Andolo Miheso, Zinc-ORS programme focal point, Division of Neonatal, Child and Adolescent Health, Ministry of Health

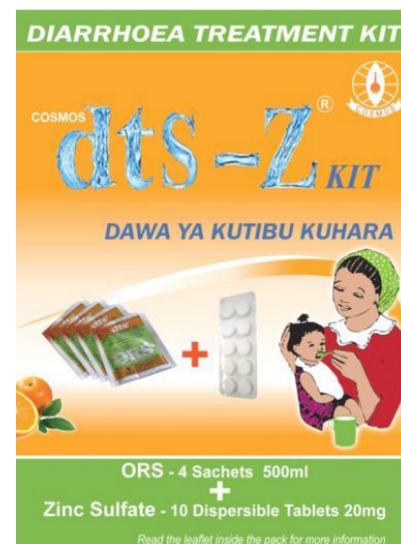
“One of the greatest success factors for this project was getting government partners around the table and helping everyone to understand and appreciate the concept. There was also significant dissemination of information through round-table meetings, which touched almost 700 people.”

— Parit Mehta, Business Development & Social Marketing Director, Phillips Healthcare Services Limited (PHSL)

Annex

Special thanks to the following individuals for providing valuable inputs that serve as the basis for this report:

- **Andolo Miheso**, Focal Point, Zinc-ORS Programme, Division of Neonatal, Child and Adolescent Health, Ministry of Health of Kenya
- **Gerald Macharia**, Vice President, Regional Director – East and Southern Africa and Country Director, Kenya, Clinton Health Access Initiative (CHAI)
- **Nancy Goh**, Partnerships Manager, Essential Medicines Initiative, Clinton Health Access Initiative (CHAI)
- **Chritopher Adomati**, Supply and Procurement Manager, UNICEF Kenya
- **Elijah Mbiti**, Senior Programme Officer, Micronutrient Initiative
- **Dr Peter Ngwatu**, Pediatrician/Gastroenterologist, Lecturer Kenyatta University School of Health Sciences, Executive Committee Member, Kenya Pediatric Association
- **Hemal Patel**, Commercial Head, Universal Corporation Ltd.
- **Sedera Solomon**, Brand Manager, Universal Corporation Ltd.
- **Suprakash Mandal**, General Manager, Marketing, Cosmos Limited
- **Parit Mehta**, Business Development & Social Marketing Director, Phillips Healthcare Services Ltd. (PHSL)



Photos: Courtesy of CHAI Kenya

Business Call to Action (BCtA) Member Work in Tackling Child Mortality in Kenya



BCtA member company, **Phillips Healthcare Services Limited (PHSL)**, is a wholly owned subsidiary of Phillips Pharmaceuticals Limited, which is part of the Phillips Pharma Group who are leading importers, distributors and marketers of pharmaceutical, surgical and diagnostic equipment in Kenya, Ghana, Nigeria, Rwanda, Tanzania, Uganda and Zambia. PHSL provides affordable, quality healthcare solutions to the working poor to ensure that the population at the base of the pyramid has access to quality healthcare. Among its varied activities, PHSL distributes Zinc and ORS kits in collaboration with the Clinton Health Access Initiative (CHAI). As part of its BCtA initiative, PHSL also plans to expand its pilot nutritional supplement programme to reach more than 150,000 young children with Micronutrient powder (MNP) by 2018.

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