



Upscaling Zinc & ORS Usage in India (2012-2016)
DISSEMINATION REPORT

Acknowledgments

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Abbreviations

ANM	Auxiliary Nurse Midwives
ASHA	Accredited Social Health Activist
AWW	Anganwadi Workers
BMGF	Bill & Melinda Gates Foundation
BLO	Block Level Orientation
CGPP	Core Group Polio Project
CHAI	Clinton Health Access Initiative, Inc.
CHC	Community Health Center
CMO	Chief Medical Officer
DCGI	Drugs Controller General of India
DHS/DLHS	Demographic and Health Survey/District Level Household and Facility Survey
DLO	District Level Orientation
FLWs	Frontline Workers
GoUP	Government of Uttar Pradesh
GoMP	Government of Madhya Pradesh
HMIS	Health Management Information System
IAPPD	Integrated Action Plan for Pneumonia and Diarrhoea
IDCF	Intensified Diarrhoea Control Fortnight
IEC	Information, Education and Communication
IZA	International Zinc Association
MI	Micronutrient Initiative
MIS	Management Information System
MP	Madhya Pradesh
NGO	Non Governmental Organization
NRHM/NHM	National Rural Health Mission/ National Health Mission
ORS	Oral Rehydration Salts
PHC	Primary Health Center
RGMVP	Rajiv Gandhi Mahila Vikas Pariyojna
RHCP	Rural Health Care Provider
RMNCH+A	Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCH+A) Strategy
U5	Children under-5
UP	Uttar Pradesh

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Program in Brief

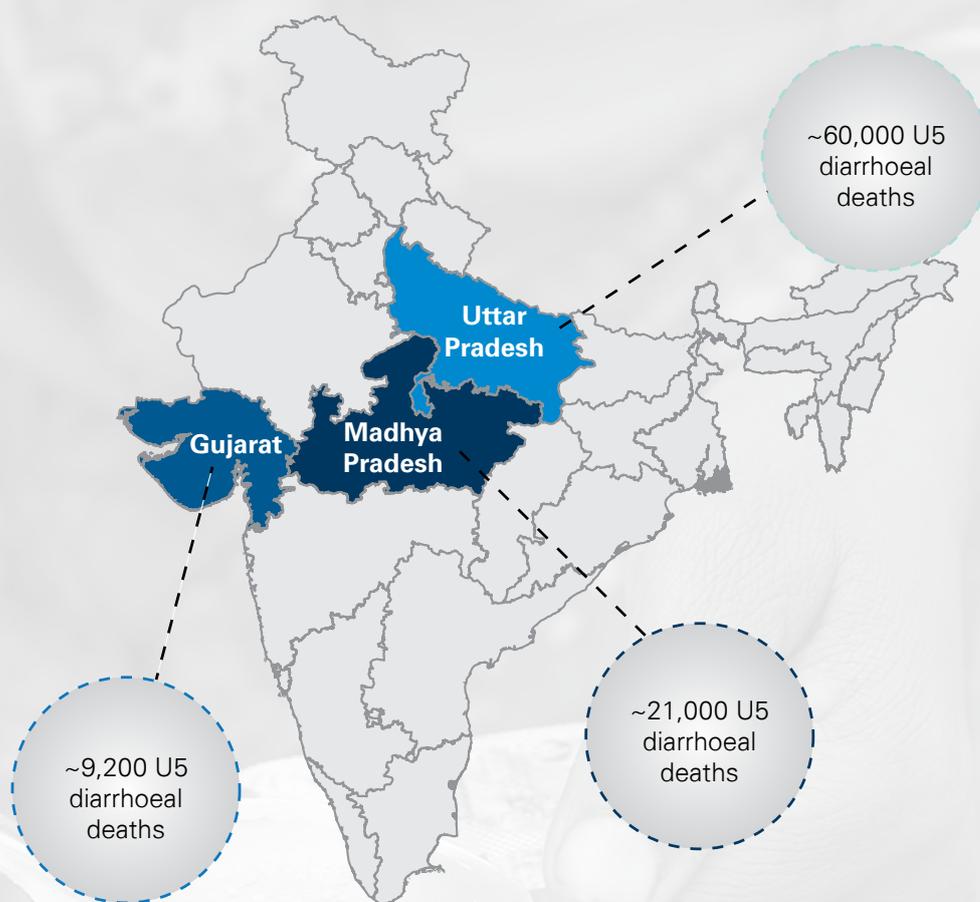
- **Geographic scope:** Uttar Pradesh (39 districts), Madhya Pradesh (all 51 districts), Gujarat (22 districts)
- **Donors:** Bill & Melinda Gates Foundation and IKEA Foundation
- **Duration:** July 2012 to December 2016
- **Program goals:** Increase state-wide coverage of zinc and ORS in children under-5 with diarrhoea cases
- **Main activities:** Build product demand, expand supply of high quality products, support government to create enabling environment, and leverage additional resources
- **Overall results:** Increased average state-wide ORS coverage from 28% to 51% and zinc coverage from less than 1% to 34% in a span of ~four years

Background



CHAI started the zinc/ORS program in India in 2012 because approximately 212,000 children under-5 were dying annually as a result of dehydration caused by diarrhoea. Diarrhoea was still the second-largest infectious cause of death among children and was responsible for 13% of all under-5 deaths in India. The focal states of MP, Gujarat and UP, accounted for 43% of the total under-5 diarrhoea burden in India (>90,000 deaths) annually.¹ These deaths typically happened in hard-to-reach, resource-compromised areas with limited access to health care. However, deaths from diarrhoea are easily preventable through the nationally-recommended combined treatment of zinc and ORS. Therefore, CHAI and partners developed a program that focused specifically on increasing the coverage of both zinc and ORS for children suffering from diarrhoea. The baseline for this program uses the state-wide estimates from DLHS-3 conducted in 2008 (see Figure 1 for detailed breakdown of state-level diarrhoeal deaths and coverage targets).

Figure 1: Number of diarrhoeal deaths annually in UP, MP and Gujarat. Coverage targets set through CHAI program



Coverage Targets:

Madhya Pradesh
 ORS: 30% to 50%
 Zinc: <1% to 50%

Uttar Pradesh
 ORS: 17% to 35%
 Zinc: <1% to 35%

Gujarat
 ORS: 37% to 50%
 Zinc: <1% to 50%

¹ Fischer Walker, Cynthia et al. *The Global Burden of Childhood Diarrhoea. Maternal and Child Health: Global Challenges, Programs, and Policies.* Ed. John Ehiri. New York: Springer. 2010

Approach

The root cause of low zinc/ORS use was not complex: providers and consumers were often unaware that zinc/ORS is the recommended treatment for diarrhoea in children; due to the anemic demand, suppliers had limited incentive to invest in distribution and promotion of these products. In the private sector, this resulted in poor product access and high consumer prices, especially in rural areas. In the public sector, lack of resources and suboptimal products had also contributed to lower uptake. The political and partner environment further impeded the uptake of zinc/ORS through limited attention, modest funding, and unfavorable regulatory conditions

where zinc was still a prescription-only product.

To overcome this market trap, CHAI worked with multiple stakeholders to catalyze significant scale up of zinc and ORS usage. Specifically, the work was focused on the following three objectives (also see Figure 2):

- ➔ **Building demand:** CHAI applied a business-orientated approach to generate demand using techniques from the pharmaceutical and consumer goods industries to change the practices of consumers and providers.

	Activities	Outputs	Outcomes	Impact
Build provider and consumer demand	<ul style="list-style-type: none"> » Conduct large-scale demand generation campaign » Develop and rollout RHCP detailing model to change private sector practices at scale » Provide supportive supervision to ASHAs to build capacity 	<ul style="list-style-type: none"> » Improve public & private provider knowledge of correct treatment » Improvement in caregivers' knowledge of correct treatment 	<ul style="list-style-type: none"> » Improvement in public/private provider dispensing practices » Improvement in caregivers' intention to use zinc and ORS for pediatric diarrhoea 	<ul style="list-style-type: none"> » Increase in % of children who receive zinc and ORS for diarrhoea » Ultimately, reduce child mortality related to diarrhoea by increasing the number of children receiving the correct treatment
Ensure widespread availability of high quality products	<ul style="list-style-type: none"> » Create self-sustaining, last-mile rural distribution channel to expand reach of zinc/ORS beyond traditional pharma channels » Optimize packaging & presentation of products » Partner with government to improve quantification and procurement of optimal zinc and ORS products in public sector 	<ul style="list-style-type: none"> » Increase sales volumes of zinc/ORS in private sector » Increase # of RHCPs stocking zinc/ORS » Improve quality of zinc/ORS products procured in public sector » Increase zinc/ORS volumes procured in public sector 	<ul style="list-style-type: none"> » Increase in availability of zinc and ORS at private and public facilities (with a particular focus on private outlets in rural areas which see the majority of cases) » Additional resources dedicated to scale of up zinc and ORS through government and other partners 	
Leverage additional resources	<ul style="list-style-type: none"> » Assist in coordinating government and partner efforts on diarrhoea treatment scale up to optimize impact » Mobilize additional resources for zinc/ORS scale up 	<ul style="list-style-type: none"> » Improve coordination of scale up efforts » Increase # of potential funding sources 		

Figure 2: CHAI Essential Medicines zinc/ORS program's Theory of Change



- **Expanding supply of high quality products:** CHAI helped to expand the availability of affordable, high quality, and optimal zinc/ORS products in the public and private sectors by partnering with suppliers to expand their distribution and promotion efforts and by ensuring products were taste-masked, dispersible, and packaged with the consumer in mind.
- **Creating an enabling environment and leveraging additional resources:** CHAI worked with governments and

non-governmental organization (NGO) partners to align and to optimize diarrhoea treatment scale-up efforts and to drive integration within existing child health services. At the national level, CHAI also worked to achieve over-the-counter status for zinc.

CHAI’s program was phased between 2012 and 2016; the focus at the beginning of the program was on healthcare providers and moved to target caregivers toward the end of the program (see Figure 3).

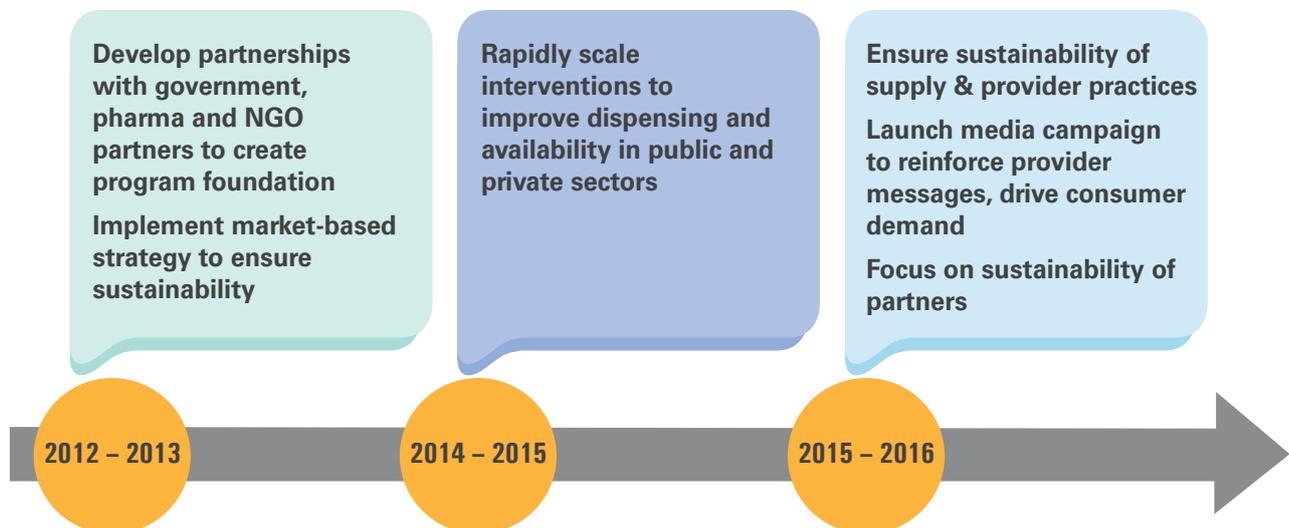


Figure 3: Timeline of zinc/ORS program with specific areas of focus

CHAI's interventions reached over 125,000 villages (almost one-fifth of total villages in India) and an estimated 24.6 million children across the three states. By 2016, through the contribution of partners and field staff, CHAI's program messages were reached to almost 145,000 Rural Healthcare

Providers (RHCPs) and retailers/drugstores and over 100,000 Accredited Social Health Activist (ASHAs); and through the mass media campaign, CHAI reached a population of over 230 million (see Table 1 for CHAI's footprint over the course of four years).

Table 1: Overall footprint of CHAI's program

	Est. U5 annual diarrhoea deaths	# of districts	# of villages	# RHCPs reached	# ASHAs reached	Under-5 population reached*	Total population reached*
UP	60,000	39 (of 75)	59,000	76,000	47,000	11.4 Million	120 Million
MP	21,000	51 (of 51)	53,738	57,104	55,000	8.7 Million	72.6 Million
Gujarat	9,200	22 (of 33)	12,345	11,851	n/a	4.5 Million	39.5 Million
Total	90,200	112 (of 159)	125,083	144,955	102,000	24.6 Million	232.1 Million

*This includes population reached through the media campaign



Objective

Building demand



CHAI's central strategy for generating zinc and ORS demand was to activate a cascade of influence. This was based on the premise that change to health-seeking behaviour is achieved most successfully if the message comes from a health "authority" or "expert": someone who is believed to have the required expertise and community trust to provide credible health advice. For caregivers, this is often the nearest community-level provider including clinicians, RHCPs and ASHAs. Hence, CHAI rolled out activities along this cascade of influence and phased activities accordingly, starting by first reaching out to providers, and eventually targeting caregivers and their key influencers with reinforcing messages.



Healthcare Providers

CHAI focused on improving prescription rates of zinc/ORS among frontline health providers – both RHCPs and public sector health workers - by educating RHCPs through targeted detailing² visits, updating public sector training modules, and training/mentorship to ASHAs.

In the private sector, to increase the number of RHCPs routinely dispensing zinc/ORS for pediatric diarrhoea, CHAI partnered with small pharmaceutical companies to conduct detailing visits aimed to convince providers that zinc/ORS alone were sufficiently effective to treat and stop diarrhoea and that zinc and ORS were profitable products to stock and sell, i.e. the economics worked - **see case study on Rural Health Care Provider Strategy on Page 18 for more details on the private sector intervention.**

In addition to routine detailing, CHAI pursued a new strategy in 2015 to leverage government medical officers to help engage RHCPs on optimal treatment of pediatric diarrhoea through District Level Orientations (DLO) and Block Level Orientations (BLO) – **(see case study on DLO/BLO on page 12 for additional detail).**

In the public sector, CHAI's program focused on leveraging India's large network of female community health workers to improve their skills on diarrhoea treatment and prevention. Specifically, this included engagement with the following: ASHAs³, community health workers who are trained to act as health educators and promoters in their communities; Auxiliary Nurse Mid-wives (ANMs)⁴, who supervise ASHAs and work at health

² "Detailing," a common tactic in the pharmaceutical industry in which repeated interaction/information-sharing facilitates change in health providers' practices over time

³ ASHAs tasks include motivating women to give birth in hospitals, facilitating children to undergo immunization and treating basic illness and injury with first aid, etc. They are the key communication link between healthcare system and rural populations

⁴ ANMs are supposed to take weekly/fortnightly meetings with ASHAs to review work done and guide ASHAs on aspects of healthcare

Case Study

DLO/BLO

Approach

The DLOs/BLOs were public-private partnerships in which the Governments of UP (GoUP) and MP (GoMP) issued letters instructing Chief Medical Officers (CMOs) of the district to conduct meetings with RHCPs to orient them on use of zinc/ORS as the first-line of treatment for diarrhoea. The orientations between officials and RHCPs took place at district/block headquarters. District/block level medical officers conducted training sessions with RHCPs to orient them on zinc/ORS usage.

DLO/BLOs also ensured that the RHCP's were motivated to work for this cause and commit to practice and spread accurate knowledge regarding correct diarrhoea treatment. The DLO/BLO platform allowed for the following to occur:

- ➔ Created a surround-sound effect by having government reinforce the same information that was being provided by CHAI partners, leading to more trust in the program
- ➔ Provided recognition to RHCPs that attended these DLO/BLOs through participation certificates
- ➔ Converted non-users and occasional users of zinc/ORS to regular users by leveraging government officials to communicate the same messages on diarrhoea management as CHAI partners

Results

The DLOs had an attendance on average of 78 RHCPs in MP and 100 RHCPs in UP per orientation while BLOs had an average attendance of 11 RHCPs in MP and 30 RHCPs in UP in each of the sessions. Between May 2015 and June 2016, 69 DLOs and 257 BLOs were conducted in UP and MP through which ~14,000+ RHCPs were sensitized.

sub-centres and are expected to be multi-purpose health workers; and Anganwadi workers (AWWs),⁵ who are health workers that are in-charge of Anganwadi center which provides basic health care in villages. The major focus of CHAI's work in the public sector was to leverage the huge field force of ASHAs and AWWs employed by the states for health care delivery and to strengthen their skills related to diarrhoea management.

To build capacity among ASHAs, AWWs and ANMs, CHAI worked with local implementing partners to reach these groups in both MP and UP. All CHAI public partners in MP and UP recruited, trained, and deployed large field forces—over 200 district and block coordinators collectively—to engage ASHAs and encourage them to adopt appropriate diarrhoea management practices and prescribe zinc/ORS to caregivers by focusing on the training of modules 6 and 7.⁶ CHAI also supported the training through inclusion of a one-pager on zinc since these two modules on diarrhoea did not have a reference to zinc.

Similar to the RHCPs, CHAI partners mapped out all ASHAs in the intervention districts and conducted capacity building trainings through interpersonal contact by using a detailing folder



specially designed for ASHA workers. CHAI developed materials for ASHA trainings including a film, detailers, training panels, leaflets, booklets, posters and stickers, all to help in disseminating and reinforcing messages over time. Field staff also made supportive supervision visits and met with ASHAs individually at least once a quarter to reinforce earlier training messages while also to address any key issues (e.g., supply issues for zinc/ORS). The partners also conducted trainings of the Anganwadi supervisors at district level who were further responsible to disseminate trainings to AWWs as well as distribute the booklets on diarrhoea management.

In addition to on-the-ground activities, CHAI engaged with state governments to institutionalize and advocate for changes to promote overall sustainability of delivering zinc/ORS through ASHAs. In MP and UP, CHAI secured government buy-in and support for the ASHA trainings and related activities as well as commitments to strengthen the Health Management Information System (HMIS) reporting and to ensure adequate stock levels at the district level. Through the efforts of all the partners in MP and UP, over 100,000 ASHAs were sensitized about proper diarrhoea management through the zinc/ORS program.

Caregivers

To reach caregivers, the program initially pursued direct community outreach through schools,

self-help groups, and other community forums. While these activities showed promising impact, it became cost prohibitive to reach the target audience of rural mothers with the necessary intensity and frequency at large scale⁷. The program therefore shifted to mass media as the primary channel to reach the target audience, since the cost per contact was lower at Rs. 2 per person (includes four to six times messaging), and further analysis revealed that mass media did in fact reach the rural and poor geographies as well (In UP, 50% of rural households saw the CHAI media campaign, while 69% of rural households in MP were exposed).⁸

CHAI ran three large mass media campaigns known as “Zinc-ORS Kacchua” (see **Figure 4 below and case study on demand generation on page 14 for more information**). The first one aired between August and September 2015 only in UP; the second one ran from April to May 2016 in both MP and UP, and the final one ran from July to October 2016 in both MP and UP. The target population group for the demand generation campaign was mothers/caregivers of children under-5 years as well as parents-in-law, key opinion leaders, RHCPs, and ASHAs in rural villages. It is estimated that the campaign reached a total of 130 million rural residents in UP and 48 million in MP. Overall, the campaign reached to 160 million total population in UP and 60 million in MP. The final results show that the campaign was able to reach 80% of the rural audience; on average, each person was exposed five times to the campaign.



Figure 4: Screenshots of the Zinc-ORS Kacchua campaign that aired on TV in UP and MP

⁵ AWWs scope of work includes contraception, nutrition and pre-school activities. The centers maybe used as depots for ORS, basic and contraceptive medicines

⁶ ASHAs are trained through multiple training modules. Module 6 and 7 refer to the treatment of diarrhoea and pneumonia

⁷ The cost per contact through on the ground activities was ~Rs. 22 compared to less than Rs. 2 using mass media

⁸ Results based on the endline survey that was conducted by CHAI in Q3 2016


Case Study

Demand Generation

Background

Rural mothers often do not access the recommended diarrhoea treatment because they do not believe that diarrhoea is a serious illness, and think that they can manage most diarrhoea episodes at home. They often “wait and watch” for several days until the condition worsens, before they decide to visit their health provider. Hence, as part of the program, CHAI developed a “pull strategy” in order to generate demand amongst the caregivers for the best treatment for diarrhoea and to affect sustainable change in their behaviour.

Approach

Building on the interpersonal demand generation work in 2013 and 2014, CHAI launched a mass media campaign in the 2015 and 2016 diarrhoea seasons that was developed to convince caregivers that zinc/ORS was the best treatment for diarrhoea and delivered the compelling end-benefits that they wanted from a diarrhoea treatment. The campaign needed to provide much more than just awareness; it needed to convince caregivers that it was worth leaving their homes to get zinc/ORS. For the campaign to do this, several requirements needed to be fulfilled:

- ➔ A creative message needed to be developed that resonated with the target audience and overcame the key barrier of not seeking care.
- ➔ The right channels of communication needed to be selected that reached the target audience.
- ➔ The message needed to reach the target audience with enough frequency to drive the behaviour change.

Creative/Message Development:

- ➔ CHAI conducted formative insight research to gain understanding about caregivers’ perceptions of diarrhoea and treatment experiences. Surveys found that caregivers wanted a product that worked fast to cure diarrhoea and restore their children to their happy, healthy, energetic best. Unless there was a product available that delivered this, they were happy using their home remedies.
- ➔ These key insights were used to brief a creative agency and two concepts were developed for pre-testing. The concepts were then pre-tested with the target audience (and their key influencers) to ensure they were understood, resonated, and compelled the caregiver to take action.
- ➔ The winning concept was refined based on the pre-testing and produced into a final campaign.

Channel and Media Planning:

For demand generation to be successful, it needs to reach the target audience at a high enough frequency to create behaviour change and then sustain it over time. The states of UP and MP presented a unique challenge, with data showing large media dark areas or areas with no information available on media habits. Community activation efforts in 2013 and 2014, while able to penetrate to small, remote villages, were not able to reach a critical mass of the population and could not be delivered at an effective frequency. Therefore, CHAI conducted additional research, which along with publicly available media data, helped us understand how far mass media truly penetrated into our focal areas. We found that about 90% of our target audience in villages of

less than 5,000 people watched some form of TV at least once per week, often via communal viewing of television sets. TV channels were then carefully analysed to understand those watched most frequently by both the target audience and their key influencers. Over 35,000 spots were aired on 25 national, regional, news, and music channels; support media including radio, mobile, buses and cinema halls was also used to reach completely media dark areas.

Key results⁹

- ➔ The campaign reached 53% of the target market in UP and 72% in MP.
- ➔ Even in the lowest wealth quintile 30% and 53% of the target market were reached in UP and MP, respectively.
- ➔ Every target audience reached was exposed to the messages on an average of 4.2 times per day during the campaign period.
- ➔ From Q1 2015 to Q3 2016, awareness of ORS at caregiver level increased from 42% to 81% in UP and from 60% to 92% in MP. Similarly, awareness of zinc at caregiver level also increased from 5% to 29% in UP and from 13% to 55% in MP during the same time.
- ➔ Intent to use ORS at caregiver level increased from 8% to 36% in UP and from 21% to 58% in MP. Similarly, intent to use zinc at caregiver level increased from 1% to 6% in UP and from 3% to 27% in MP.
- ➔ Mass media helped not just in reaching out to a larger audience but also in exposing audiences to the messages multiple times (on average 4.2 times per day), likely improving retention of messaging and possibly a change in behaviour.
- ➔ Coverage of both zinc and ORS was significantly higher among those exposed to the campaign vs those who were not exposed, even when accounting for urban/rural split, demonstrating that mass media does have the potential to reach a sizeable portion of the poorest segment of the population (see Figure 5).

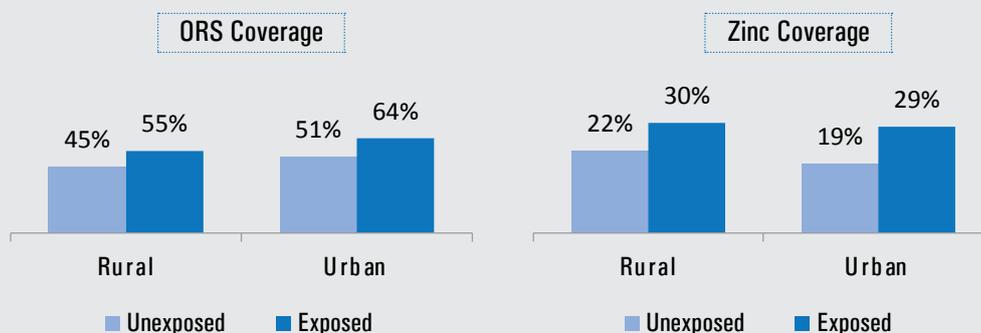


Figure 5: Zinc and ORS coverage by those exposed and unexposed to media (average of UP and MP)

⁹ The results are based on the endline survey conducted by CHAI in Q3 2016

Objective

Expanding supply of high-quality products



The program has helped to expand the availability of affordable, high quality, and optimal zinc/ORS products in the public and private sectors by partnering with manufacturers and suppliers to expand their distribution and promotion efforts.

Private sector

In order to improve zinc/ORS usage in rural areas, CHAI created an innovative, self-sustaining, last-mile distribution channel that expanded beyond traditional urban/semi-urban areas and brought product distribution and promotion efforts to villages with a population of less than 20,000. The extensive sales force of ~370 field staff reached RHCPs and chemists directly in all three states. (see Figure 6 for field force structure)

In order to ensure high-quality, affordable zinc and ORS products were available in rural areas of MP, Gujarat and UP, CHAI—through implementing partners—worked with manufacturers across the three states. These smaller manufacturers allowed the partners to market their own brands of medicines and close proximity of these regional manufacturers helped to decrease transportation costs, increase flexibility of supply, and improve overall margins. The purchase of products was fully funded by the implementing partners along with the profits from product sales (see case study on **Rural Health Care Provider Strategy on page 18 for more details on the private sector intervention**).

Public sector

In the public sector, CHAI worked with the state ministries of health to further strengthen forecasting and procurement of zinc and ORS. The state governments agreed to ensure availability of

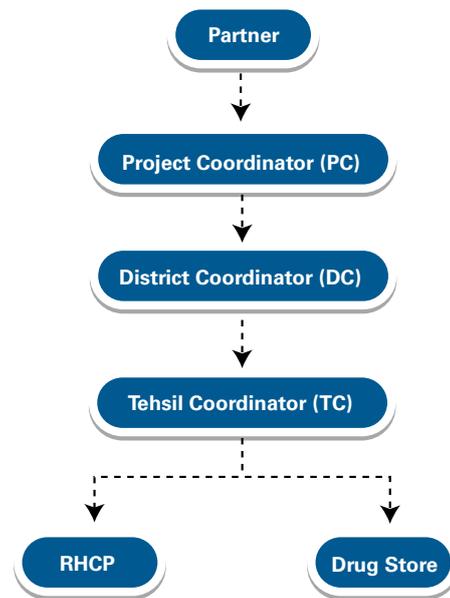


Figure 6: Rural supply chain of partners

zinc/ORS in optimal quantities across all districts by strengthening procurement and supply chain mechanisms, especially prior to onset and during the peak diarrhoea season. The governments in both UP and MP updated their rate contracts to include optimal specifications of zinc (taste-masked, dispersible, etc.) and ORS and to adopt consumer-friendly packaging.¹⁰

In 2015, new software for procurement called E-Aushadhi was launched, which took data from all levels and acted as a repository to understand stock level centrally. In addition, CHAI helped NRHM/ NHM in MP to develop a mobile app known as “ZO Calculator”; in order to improve zinc/ORS forecasting. Besides aiding with forecasting, the tool also provided information on dosage and usage of zinc/ORS. The app is currently being used by over 1,000 primary health center (PHC) drug dispensers and over 300 community health center (CHC) drug dispensers in MP.

¹⁰ In Gujarat, optimal formulations of zinc/ORS had been added to the rate contract list. No immediate forecasting and procurement support from CHAI for Gujarat was needed as Micronutrient Initiative (MI) was already providing effective assistance to the Ministry of Health

Objective



Creating an enabling environment and leveraging additional resources

One of the first priorities of the program was to achieve Schedule K over-the-counter status for zinc. In 2012, CHAI and other key stakeholders such as PATH engaged closely with the Drugs Controller General of India (DCGI) to provide necessary information and expedited the review/decision for zinc where feasible. Official confirmation of Schedule K status for zinc in India was received in 2013.

CHAI worked with the federal and state governments to improve coordination across partner organizations working on diarrhoea management to minimize duplication of efforts and maximize impact of investments. At the national level, CHAI participated in the National Partners Coordination Group on RMNCH+A; and at the state level, CHAI was a member of the Child Health Group, the Child Health Technical Support Group Unit, and NRHM Core Strategic Group in UP, and a number of multi-stakeholder committees focused on ASHA service delivery in MP. CHAI was also a member of two national task forces: IAPPD - Integrated Action Plan for Pneumonia and Diarrhoea and IDCF - Intensified Diarrhoea Control Fortnight, for knowledge sharing, and contributed Information, Education and Communication (IEC) and advocacy material for the national program on diarrhoea and pneumonia.

CHAI also worked with the government and stakeholders to mobilize additional resources to combat diarrhoeal deaths. The governments of MP and UP made substantial in-kind contributions through broadcasting zinc/ORS messages created by the program on government-funded airtime. In June 2013, CHAI secured a new, direct investment from International Zinc Association



(IZA) to extend the reach of caregiver and provider activities in one additional district of UP: Allahabad. CHAI also mobilized indirect support from two other partners—CORE Group Polio Project (CGPP) and Rajiv Gandhi Mahila Vikas Pariyojna (RGMVP)— who worked with CHAI to integrate diarrhoea management messages into their existing program activities and networks in UP, thereby further extending the reach of CHAI's program to rural audiences. Several other NGO partners working in northern India made additional financial commitments to support zinc and ORS scale-up, including a US\$5 million commitment to UNICEF (from Teck to support improved diarrhoea management in UP, MP, and Orissa) and a US\$1.5 million commitment to Micronutrient Initiative (from the Zinc Alliance for Child Health partnership to further build capacity among FLWs in Gujarat).


Case Study

Rural Health Care Provider Strategy

Background

The Rural Health Care Providers (RHCPs) are individuals from the village/town community who mostly lack a formal medical degree. They typically set up practices informally and procure drugs for various disease areas from the local semi-urban towns by paying cash up front. In rural areas, it is estimated that eight out of ten sick individuals seek intervention from the RHCPs, with an estimated ratio¹¹ of one RHCP for every 1,000 people. Given the geographic focus of this program, there are ~130,000 RHCPs in CHAI's catchment districts. Therefore, engaging RHCPs in the program was crucial. The greatest burden of diarrhoea mortality existed in towns/villages with a population size of less than 20,000. Large pharmaceutical companies did not reach these areas due to the heavy cost of investment in distribution infrastructure. Their interest in zinc/ORS promotion was typically low as these were low-volume products with no barrier to entry on small players who can compete on price. Therefore, manufacturers did not see the benefit of expanding their reach to small villages.

Approach

CHAI's intervention created a last-mile supply chain by engaging local partners in these areas. The partners, appointed by the CHAI state teams after a competitive bidding process, included a mix of local entrepreneurs, small companies, and small sales and marketing agencies who deployed a field force that detailed, supplied quality drugs, and offered credit to RHCPs. A key success factor of the last-mile supply chain was the ability to offer improved margins to RHCPs. The direct sales

model reduced the number of hand-offs in the rural supply chain, increasing RHCP margins on zinc/ORS from ~20% to ~50%. This created an incentive for RHCPs to engage with these partners to learn about and purchase zinc/ORS; it also built a foundation of RHCP customers to whom the partners could later sell additional products, thus increasing the partners' profitability and sustainability.

Training and provision of aids/tools to partners

CHAI set up linkages for these partners with quality zinc/ORS manufacturers and trained field supervisors in making successful sales calls and building soft skills. CHAI, through Ogilvy Action¹², developed and supplied product promotional materials that would allow the field force to communicate simply and effectively with standardized messages. CHAI also worked to develop a robust and simple management information system (MIS) to monitor and evaluate sales, use, accessibility, and availability of zinc/ORS across RHCPs. The field staff was provided with tools for feeding real-time data on a daily basis through personal devices.

Process of detailing

The field staff would visit RHCPs on a regular basis, both to explain the key messages for proper diarrhoea management and to sell zinc/ORS. In order to make the detailing more effective, detailing materials including visual aids, posters, leaflets, height charts, dosage stickers, and CHAI-produced promotional videos were developed and used by the field staff during each visit to the RHCPs. The field force employed tablets to enter sales records data, which was continuously monitored and verified by supervisors.

¹¹ *Barriers of Mistrust: Public and Private healthcare Providers in M.P. India; Doctoral Thesis; D' Costa, A; Karolinska University*

¹² *CHAI hired Ogilvy Action in 2013 to develop, test and refine a portfolio of creative materials to communicate consistent, compelling messages to caregivers, providers and other key influencers.*

Sustainability and Basket of Products

To ensure the sustainability of the last-mile supply chain model, CHAI launched a “Basket of Products” pilot across six districts in three states starting in late 2014. The pilot was successful and led to key learnings which were applied across all three states during full implementation. CHAI provided technical support to assist partners in developing the optimal product mix, particularly to ensure sales during the diarrhoea off-season. During the off-season, 43%-74% revenues were from sales of zinc/ORS, while they contribute 60%-82% of revenues during the diarrhoea season. Hence, the “Basket of Products” approach enabled partners to expand their product offering to ensure profits were sufficient to sustain their detailing/distribution efforts while continuing to focus on the sales of zinc/ORS. By end of 2015, 12/13 partners in all three states had launched the approach (with varying numbers of products) and trained their field force to increase their detailing accordingly.

Repeat purchase behaviour

Over the course of the program, almost half the RHCPs were seen purchasing zinc/ORS multiple times. A healthy and growing percentage of RHCPs buying zinc/ORS regularly (more than five times) indicated a behaviour change at the community level. The MIS was a major tool used to identify the RHCPs who were non-buyers or were fence sitters. Focus was laid on getting the non-buyers and less frequent buyers to improve their frequency of purchase. Regular updates were shared from CHAI to the partners helping them to know the focus areas and which RHCPs to continue to target during the detailing.

Rural stock points

The partners realized that RHCPs would likely buy more zinc and ORS if they had more frequent



opportunities to purchase, but since the partners were covering large districts with thousands of RHCPs, field representatives were unable to meet them more often. Therefore, each partner identified thousands of small pharmacies/retail outlets throughout all CHAI districts that now serve as “rural stock points” where the partner keeps larger quantities of zinc, ORS, and other commodities from the “Basket of Products”. This allows RHCPs, who are often unable to buy large amounts per visit due to lack of cash, the opportunity to restock between field visits by buying directly from these rural stock points.

CHAI / partner contribution

While partners covered the full expense of zinc/ORS product purchases, CHAI did initially contribute to other operating expenses (field force salaries, management, etc.) and provide in-kind zinc/ORS marketing materials. CHAI’s contribution at the beginning of the program was 70% of the total expenditure of the partners to run the program, though this contribution dropped to 45% towards the end of the program. The reduction in contribution was essential to CHAI’s strategy, as this allowed the partners to remain serious about their investment, to increase their stakes and opportunity for growth, and to eventually becoming sustainable. In June 2016, CHAI’s monetary contribution to the partners stopped completely, leading to sustainability of 11 partners across the three states who continue to promote and sell zinc/ORS as successful independent businesses.

Results

CHAI conducted an endline in Q3 2016 where ~31,000 household surveys, ~5,200 provider surveys, and ~1,200 standardized patient surveys were conducted across all three states.

Coverage of zinc and ORS has improved in all states compared to baseline

At the end of the program, CHAI achieved ORS coverage targets in all three states and saw substantial improvements in levels of zinc coverage. ORS coverage rose by 147% in UP, doubled in MP and rose by 43% in Gujarat compared to the baseline (see Figure 7a and 7b for comparison of baseline and endline results).

Across the three states, zinc coverage grew substantially as well – from an average of <1% to 34%.

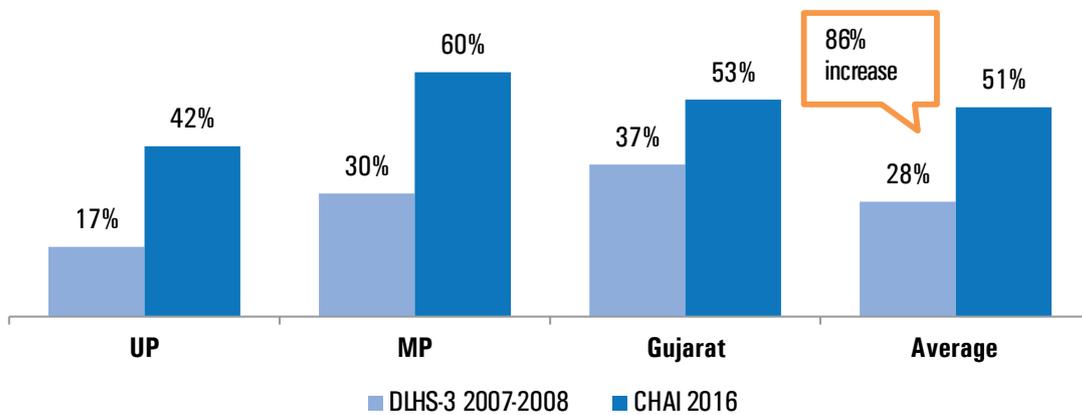


Figure 7a: ORS coverage rates in pediatric diarrhoea cases by state



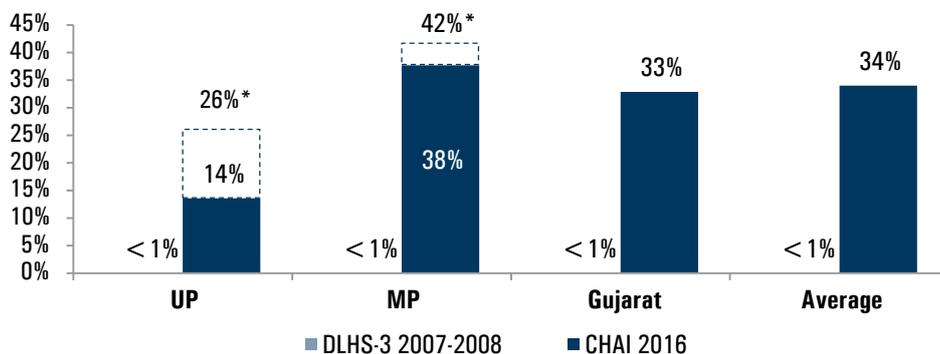


Figure 7b: Zinc coverage rates in pediatric diarrhoea cases by state

*At endline, in the household survey, 47% of UP caregivers and 15% of MP caregivers did not know what medicine they received for their child’s diarrhoea, and many of these “unknown tablets” were likely zinc. A follow-up mystery patient survey in UP and MP was conducted to determine the percentage of unknown tablets that were actually zinc. Based on this calculation, it was revealed that 26% of pediatric diarrhoea cases received zinc in UP and 42% received zinc in MP, which is likely closer to the “true” coverage rate for zinc in both of these states.

The endline results also revealed that in districts where detailing of RHCPs occurred, coverage of both zinc/ORS in the private sector was significantly higher compared to districts where no detailing occurred¹³ (see Figure 8 for average of results from UP and Gujarat). This indicates that detailing of RHCPs did contribute to the increase in coverage.

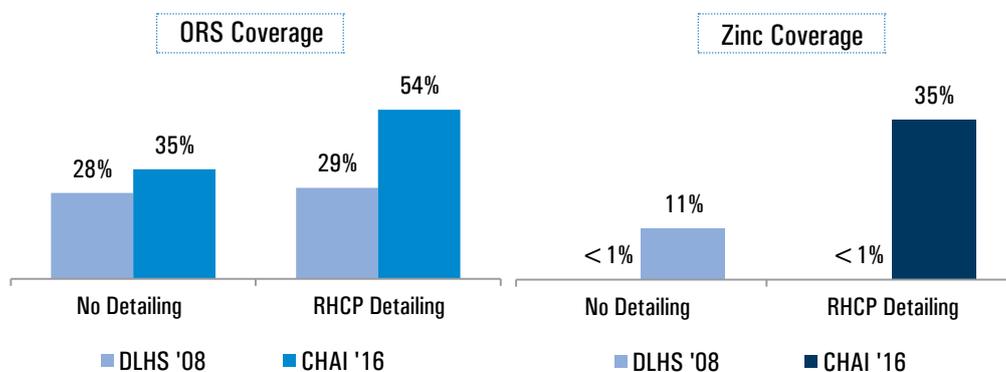


Figure 8: Average zinc/ORS coverage in UP and Gujarat in pediatric diarrhoea cases that sought care in the private sector by districts that were detailed versus not detailed¹⁴

Improvements in zinc and ORS coverage were especially strong among rural and poorer segments of the population. The percentage difference in ORS coverage between highest and lowest wealth quintile was reduced by 72% between baseline and endline (see Figure 9 for average ORS coverage by wealth quintile across all three states)¹⁵.

¹³ Figure 8 presents data on coverage from cases that sought care from the private sector and does not include cases that stayed at home or sought care in the public sector only. Care-seeking for diarrhoea was quite high across all three states, dominated by the private sector

¹⁴ ORS Coverage in UP: No detailing – Baseline 20%, Endline 37%; Detailing – Baseline 21%, Endline 46%. In Gujarat: No detailing - Baseline 35%, Endline 34%; Detailing – Baseline 38%, Endline 63%. Zinc Coverage in UP: No detailing – Baseline < 1%, Endline 11%; Detailing – Baseline < 1%, Endline 26%. In Gujarat: No detailing – Baseline < 1%, Endline 11%; Detailing – Baseline < 1%, Endline 43%

¹⁵ Similar graph comparing zinc coverage is not available since zinc coverage was less than 1% at DLHS '08

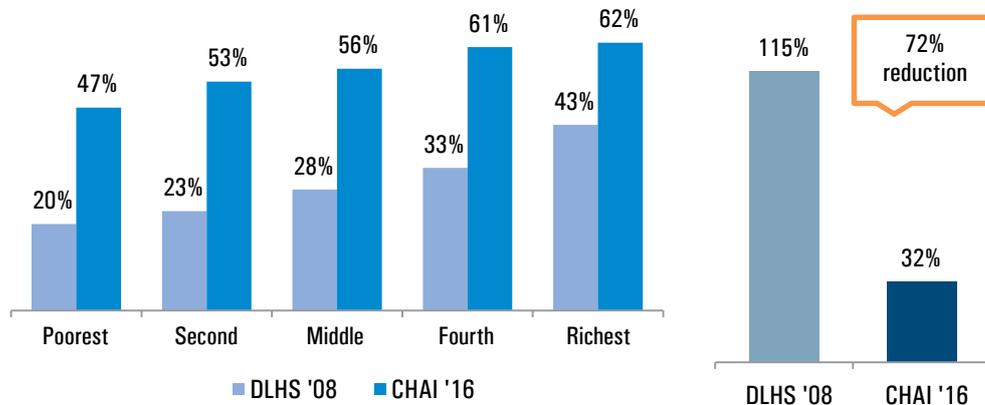


Figure 9: Average ORS coverage by wealth quintiles across all three states: DLHS '08 vs. CHAI '16 percent difference in ORS coverage between highest and lowest wealth quintiles

Similarly, the percent difference in ORS coverage between urban and rural areas was reduced by 49% between baseline and endline (see Figure 10 for average ORS coverage by urban/rural across all three states)¹⁶.

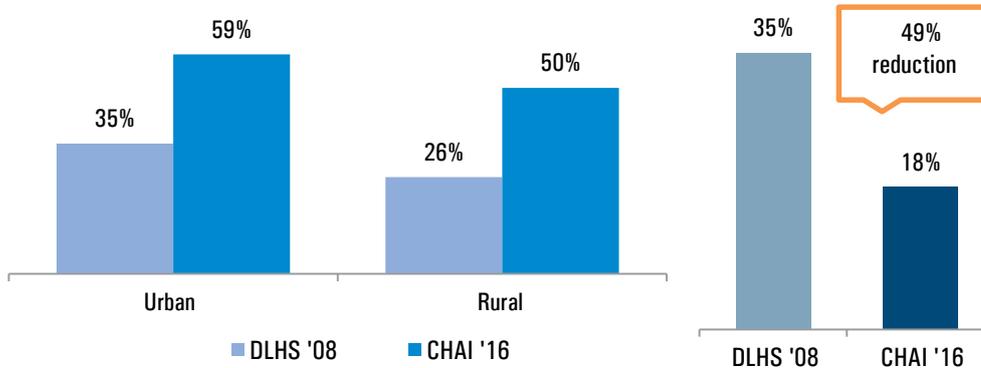


Figure 10: Average ORS coverage by urban/rural across all three states: DLHS '08 vs. CHAI '16 percentage difference in ORS coverage between urban/rural areas¹⁷

¹⁶ Similar graph comparing zinc coverage is not available since zinc coverage was less than 1% at DLHS '08

¹⁷ ORS Coverage: Urban Baseline – UP 24%, MP 45%, Gujarat 35%; Urban Endline – UP 48%, MP 69%, Gujarat 69%. Rural Baseline – UP 16%, MP 25%, Gujarat 37%; Rural Endline – UP 41%, MP 58%, Gujarat 52%

Availability of zinc and ORS have increased in the private sector

Results indicate that availability of zinc and ORS was significantly higher among RHCPs and retailers where CHAI’s detailing was rolled out compared to areas where CHAI had lighter touch activities (see Figure 11).

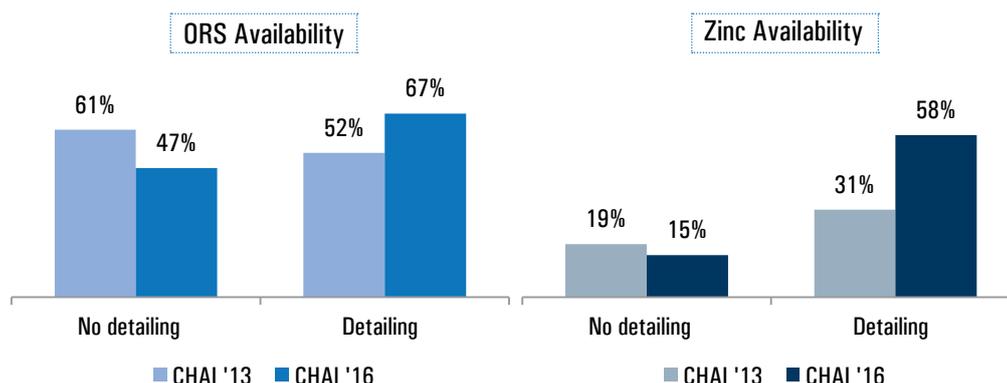


Figure 11: Availability amongst RHCPs in districts with CHAI’s detailing vs. those without – average of UP and Gujarat¹⁸

Access to high-quality zinc and ORS has improved in the public sector as well

CHAI’s work in MP and UP in the public sector also showed improvement in the availability of zinc and ORS (see Figure 12). Mostly all of CHC/PHCs have both zinc and ORS availability while majority of the ASHAs now also have both commodities.

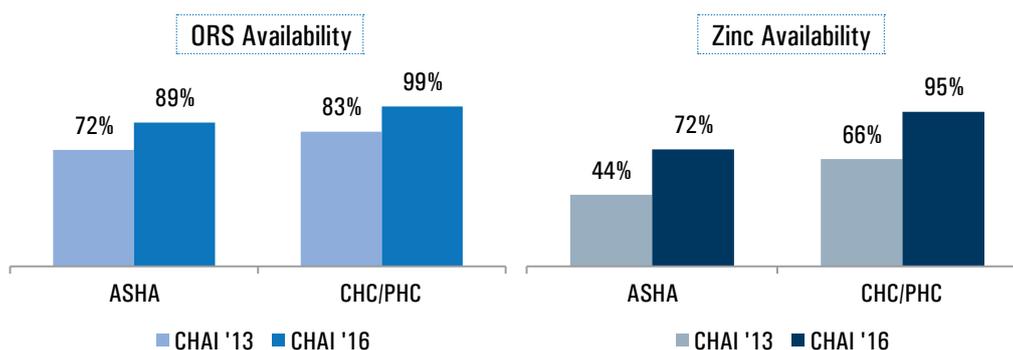


Figure 12: Availability of ORS and zinc in public sector – ASHAs and CHCs/PHCs – average of UP and MP¹⁹

¹⁸ ORS Availability in UP: No detailing – Baseline 36%, Endline 42%; Detailing – Baseline 42%, Endline 60%. In Gujarat: No detailing - Baseline 86%, Endline 52%; Detailing – Baseline 63%, Endline 73%. Zinc Availability in UP: No detailing – Baseline 9%, Endline 13%; Detailing – Baseline 15%, Endline 46%. In Gujarat: No detailing – Baseline 29%, Endline 17%; Detailing – Baseline 47%, Endline 70%

¹⁹ ORS Availability in UP: ASHA – Baseline 49%, Endline 80%; CHC/PHC – Baseline 80%, Endline 97%. In MP: ASHA – Baseline 95%, Endline 97%; CHC/PHC – Baseline 86%, Endline 100%. Zinc Availability in UP: ASHA – Baseline 17%, Endline 59%; CHC/PHC – Baseline 57%, Endline 91%. In MP: ASHA – Baseline 71%, Endline 85%; CHC/PHC – Baseline 75%, Endline 100%

Lessons Learned and Conclusions

The program has demonstrated that significant increases in zinc/ORS usage are in fact possible at scale in India. Upon reflection, there are several key ingredients for success that were likely most instrumental in achieving these results, including:

- ➔ **A 360-degree approach:** From the outset, the program was designed to address the greatest supply and demand barriers in both public and private sectors, with relative priority based on the patterns of care-seeking in each sector. This also resulted in large scale, formal engagement with hitherto overlooked segment of RHCPs who were the dominant source of care-seeking in rural areas.
- ➔ **Thoughtful sequencing:** The first priority of the program was to change the dispensing and stocking practices of providers for pediatric diarrhoea. Only after high availability of zinc/ORS and improved dispensing practices had been achieved in the public and private sectors did it make sense to invest in consumer-focused marketing and demand generation.
- ➔ **Real-time monitoring:** Daily tracking of sales and availability allowed the program to rapidly identify and correct program challenges.
- ➔ **Government engagement:** Strong leadership by the Government of India and by the state governments was instrumental to achieving a high sense of urgency around reducing diarrhoeal deaths and buy-in from all stakeholders.
- ➔ **Market-based solutions:** To be sustainable, the program did not provide any product subsidy and instead focused on sales at market rates. To increase distribution/sales in rural areas, the program reduced the “barriers to entry” for suppliers by investing in time-limited demand generation. The last-mile supply chain model also relied on improved margins (through a more efficient supply chain) and a “Basket of Products” approach to drive ongoing profitability and sustainability.



Throughout implementation, the program also encountered several challenges and learned lessons that led to adjustments to improve the program's effectiveness.

➔ **Consumer marketing – interpersonal vs. mass media:**

The program's initial approach to consumer demand generation was through interpersonal outreach at the village level. This approach was expensive and not possible to scale up with the available program resources. Despite initial beliefs that mass media would not reach rural, economically disadvantaged areas (as data on rural media penetration was extremely limited/not available), CHAI conducted new research to test this finding and found that media did in fact reach these areas at much higher levels than expected (30-50% across states). Consequently, CHAI shifted the program approach to use mass media. This proved to be highly effective and have much greater frequency and reach than would have been possible with interpersonal outreach.

➔ **Changing provider practices:**

From the outset, the primary method of changing providers' practices to increase zinc/ORS usage was through repeated detailing visits, a proven practice derived from the pharmaceutical industry. While effective for many RHCPs, there were some providers who were slow to change their practices and not open to listening and learning about diarrhoea treatment from rural sales representatives. To address these late adopters, CHAI and the government partnered to offer block- and district- level orientations led by government medical officers, who are highly regarded and trusted by RHCPs. These forums were well-attended by RHCPs, creating a "buzz" and reinforcing messages shared during detailing visits and through mass media. In retrospect, CHAI would recommend starting forums such as these from the outset of the program.

➔ **Direct distribution vs. village stock points:**

Initially, the rural sales model focused on detailing visits where sales representatives directly conducted both promotion and direct sales to RHCPs. Over time, it became physically difficult

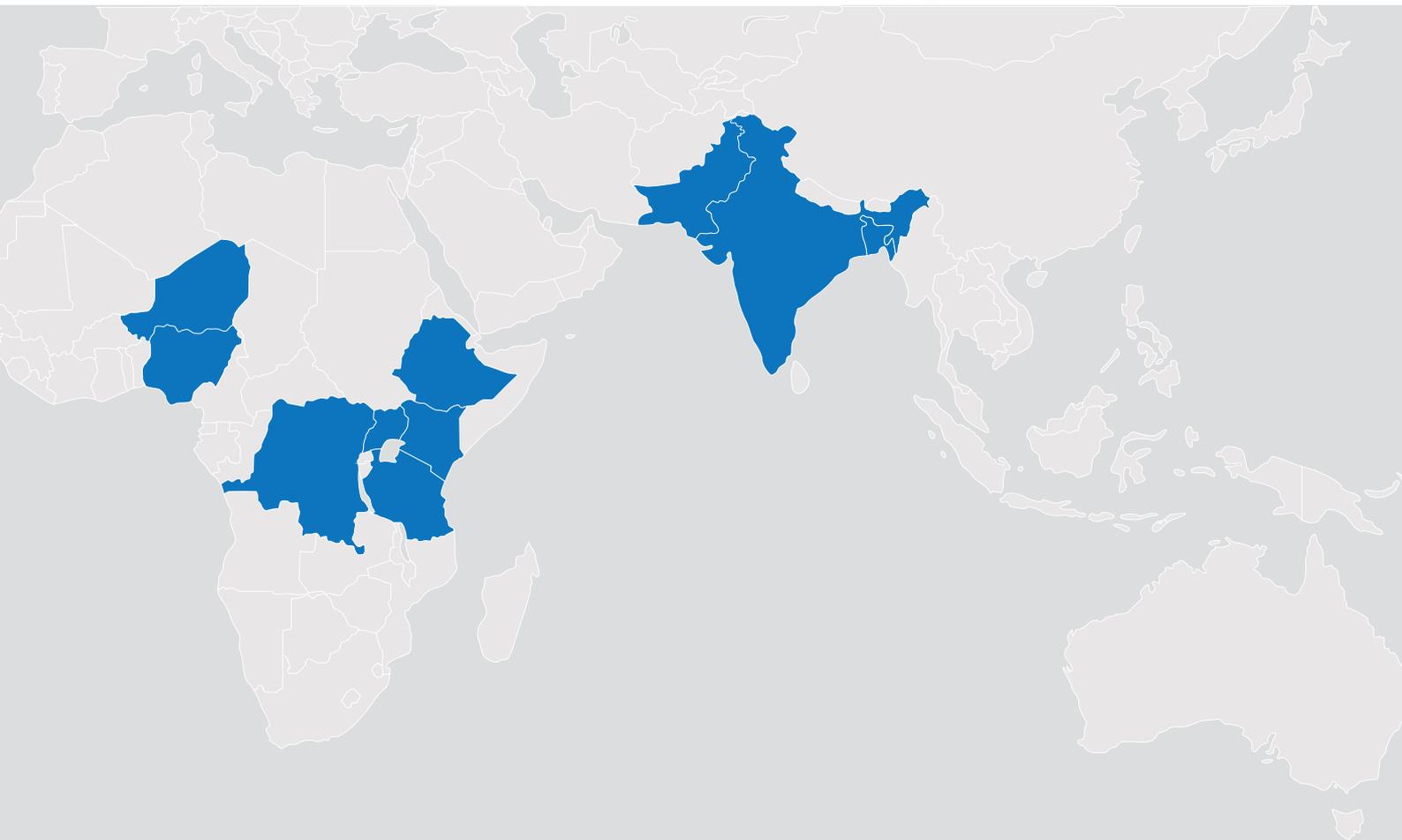


for sales representatives to carry all the products necessary to meet growing demand. In 2015/2016, the program shifted to creating rural stock points where RHCPs could purchase the zinc/ORS products at the same competitive price they had previously been offered. This allowed for more efficient sales calls and is another change that going forward, CHAI would recommend from program inception.

➔ **Capacity building of rural sales teams:**

The rural sales model was highly effective because it reduced supply chain hand-offs, thus increasing margins and profitability for RHCPs. It also improved rural employment opportunities, particularly as the program focused on hiring representatives from the local communities served. This approach reduced turnover and increased sales representative effectiveness because they were familiar with local norms and networks; however, most lacked knowledge in sales training and many of the entrepreneurs running these teams lacked business expertise as well. CHAI had to invest extensively in marketing, sales, and business training for these individuals. Going forward, CHAI plans to have a much greater investment in this skill development from the outset.

Overall, CHAI is encouraged by the promising results and lessons from the program so far – and hopes these experiences may help further expand and accelerate zinc/ORS scale-up efforts in India and globally. In India and in CHAI's four other focal countries (Ethiopia, Kenya, Nigeria and Uganda), the success of initial zinc/ORS scale up efforts has already lead to an expansion of the program to include the treatment for pneumonia, the #1 killer of children globally.



10 FOCAL COUNTRIES WITH HIGHEST BURDEN OF DIARRHOEA

Bangladesh, Democratic Republic of Congo, Ethiopia, India, Kenya, Niger, Nigeria, Pakistan, Tanzania, Uganda



