

Institutionalizing
Use of
Zinc and LoORS
for Diarrhoea
Management
in Children
Under 5 Years

NUTRITION INTERNATIONAL

Nutrition International has been working in Pakistan since 2001 to improve the health of people in need, especially women and children, through better nutrition. Working in partnership with national and provincial government, Nutrition International focuses on improving access to much needed micronutrients for the most disadvantaged.

GREENSTAR SOCIAL MARKETING

Greenstar Social Marketing Pakistan is a not-for-profit organization established in 1991 to contribute towards the development of Pakistan through Family Planning and Family Health Solutions. Greenstar Social Marketing (GSM) has the largest network of private sector healthcare providers in Pakistan. Around 7,000 Sabz Sitara Franchised clinics, 3,000 General Practitioners, 40,000 chemists, 3,000 female and male community mobilizers are serving the communities across Pakistan to provide family health solutions.



ABOUT PROJECT

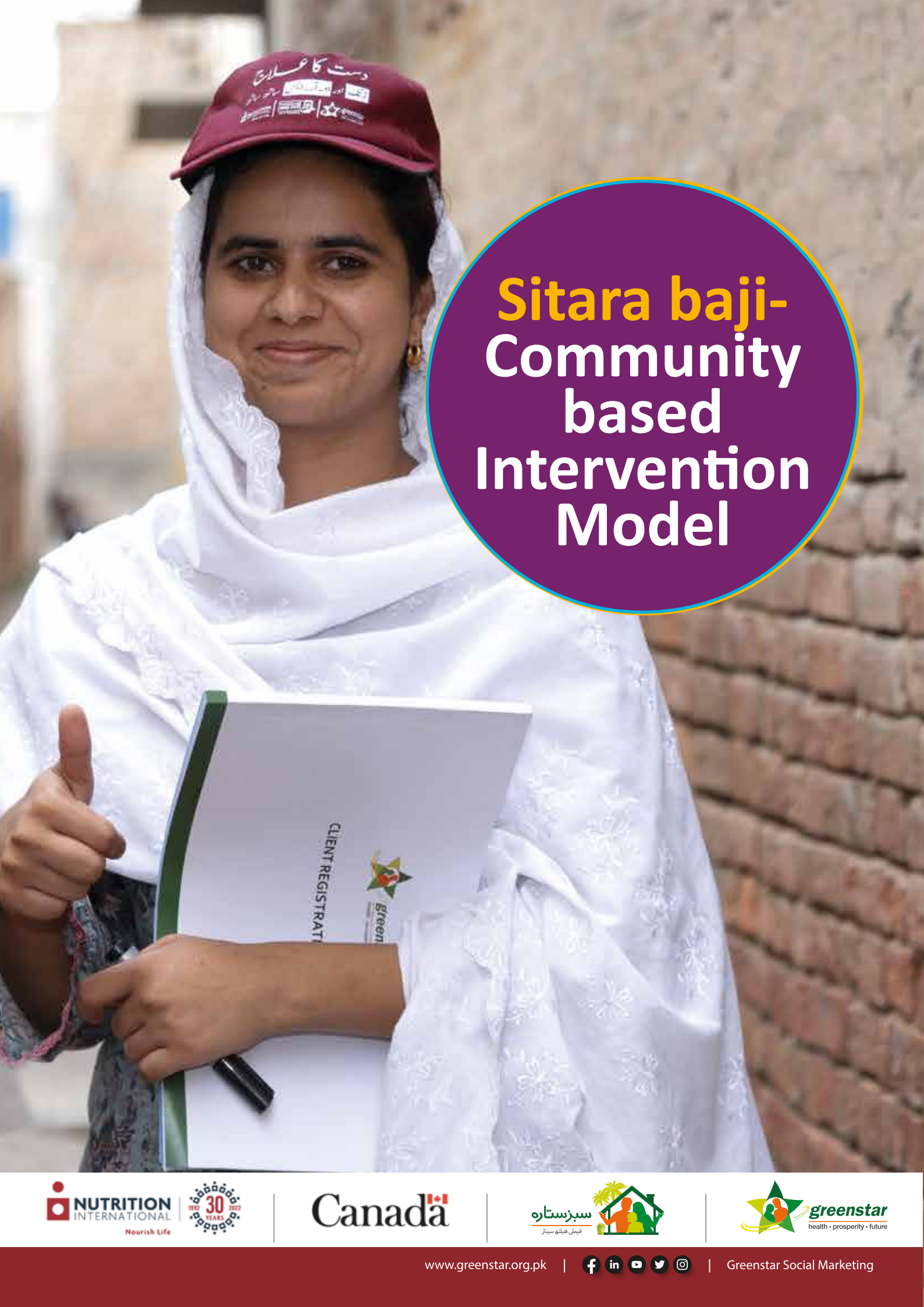
Greenstar joined hand with Nutrition International (NI) to implement a sustainable public health program to introduce the combination of Zinc and Low Osmolarity ORS (LoORS) intervention as first line of treatment for diarrhoea in children under 5-year age. The project aimed to contribute towards reducing child morbidity and mortality in Pakistan.

The project has been implemented across 55 districts of Sindh, Punjab, and Khyber-Pakhtunkhwa from December 2020 to August 2022.

The objectives of this project are to:

- Institutionalize Zinc and LoORS in Private Sector for treatment of diarrhoea in children under 5 years of age.
- Train Private healthcare providers on treatment of using Zinc and LoORS.
- Increase community awareness and knowledge on prevention and management through use of Zinc & LoORS as the first line of treatment for diarrhoea through community mobilizers (Sitara Baji) and private healthcare providers (Sabzsitara)





Sitara baji- Community based Intervention Model

Problem

Diarrhoea remains one of the leading public health issues globally. Diarrhoeal diseases alone account for 1 in 9 child deaths worldwide, making it the second leading cause of death among children under the age of 5 years.¹ Almost 60% of these deaths occur in only 10 countries of Asia and Africa region including Pakistan. It is one of the major contributors to morbidity and mortality in the country among children under five years of age with approximately 53,000 deaths every year². These deaths can be prevented by simple, cost-effective intervention at the household level, if all children suffering from diarrhoea receive timely treatment of Zinc and LoORS combination.

Inadequate availability of the Zinc and LoORS at the primary healthcare level in both public & private sectors and caregiver recognition of the need for help or their ability to seek care resulted in poor control of the disease in Pakistan. According to the National Nutrition Survey, onset of diarrhoea in under-five children is around 22%³. PDHS (2017-2018) revealed that 19% of the mothers reported that their children suffered from Diarrhoea in the past two weeks; out of these, 41% received LoORS, and only 8.0% of children received the recommended treatment with Zinc and LOORS in combination.

This document showcases the learning and experience of a community-based intervention to improve access to LoORS and Zinc, create demand among caregivers and to bring sustainable behavioral changes about the use of LoORS and Zinc in combination to treat.



Approximately
53,000
children die every
year due to
diarrhoea in
Pakistan²

Solution

The World Health Organization (WHO) has already included LoORS and Zinc in its Essential Medicines List and provides clear recommendation on the use of LoORS together with Zinc through the integrated community case management⁴. Where access to facility-based care is low, community case management of Diarrhoea is considered as one of the most effective interventions for reducing under-five mortality⁵.

**An estimated
94% of deaths
could be
prevented with
full coverage
and use of Zinc
and Low
Osmolarity Oral
Rehydration
Salt (ORS)⁴**

Community workers with minimal prior education but have access to the community can be trained on WHO Diarrhoea treatment guidelines and provided with LoORS and Zinc to treat mild to moderate cases of childhood Diarrhoea at home while referring severe cases to the nearest health facility. Community mobilization on the use of LoORS and Zinc, and identification of the danger sign for timely decision making to seek care from a skilled health provider can have an impact on disease outcome.

Greenstar Social Marketing (GSM) initiated a diarrhoea management project in collaboration with Nutrition International (NI) to contribute to reducing child mortality in Pakistan. Objective of project was to promote the use of Zinc and LoORS as the first-line of treatment for Diarrhoea through its franchised network of private healthcare providers (Sabz Sitara Clinics) and community-based health workers (Sitara Baji). Project was implemented from December 2020 to August 2022 in 3 provinces (Khyber Pakhtunkhwa, Punjab, and Sindh) of Pakistan

products. Sitara Baji model effectively caters the capacity building & behavior change of caregivers regarding appropriate treatment of childhood Diarrhoea.

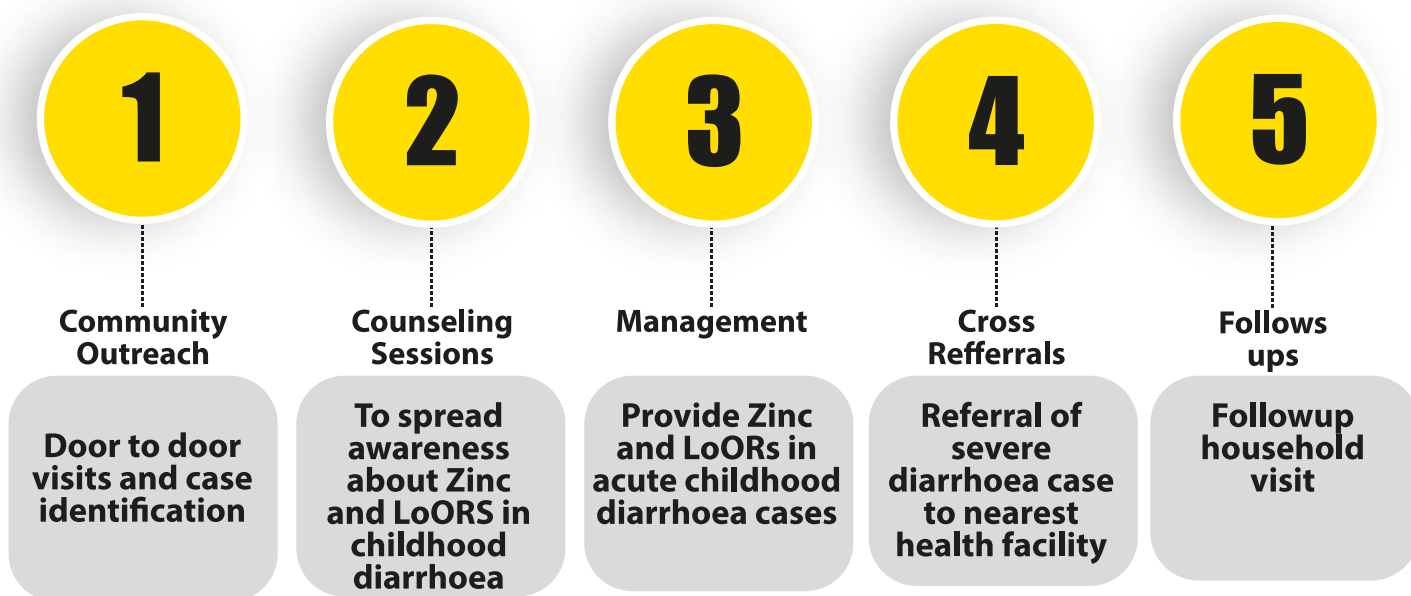


Sitara Baji- Community based Intervention

This community-based intervention was implemented to create demand and bring sustainable behavioral changes in the community through community health workers called Sitara Baji. Sitara Baji (SB) is based in a community catering to a population of approximately 10,000 individuals and conduct mobilization activities for a specific time duration of 3-6 months. In this project, total 350 Sitara Bajis were being provided with relevant knowledge, skills, and job aids to carry out integrated demand generation activities on all aspects of diarrhoea management. They conducted household visits to provide one to one counseling to the caregivers of children under 5 years with the help of behavioral change communication materials in the local language. This was amplified by community support group, and neighborhood meetings with caregivers (male and female) which further helps create an enabling environment. Under this model, SBs were provided with Zinc & Low Osmolarity ORS bundled in a bag (10 ml Zinc syrup bottle with 3 Sachets of LoORS) and a leaflet with instructions to use both products to treat mild to moderate cases of childhood Diarrhoea at home. They were also trained to identify danger signs to refer severe cases to the nearest healthcare facility where children may receive further appropriate treatment.

The model constituted intensive social mobilization, demand generation activities, and regular follow up visits by Sitara Bajis. It was intended to extensively encourage the use of Zinc and LoORS as the first line of treatment of Diarrhoea and stopping utilization of anti Diarrhoeal antibiotics in the early stages of childhood Diarrhoea. All community mobilization data was collected from the client record books maintained by each Sitara Bajis and submitted electronically on monthly visits.

Activities conducted by Sitara Baji



Key Results

The results of community-based interventions were evaluated based on data from June 2021 to July 2022. During this period, a total of 162,332 children under 5 years were registered and their caregivers were counselled by using job aids and materials during household visits and neighborhood meetings (NHMs). As a result of these activities, 101,583 children under 5 with diarrhoea were treated with Zinc and LoORS in the community by Sitara Bajis. On average, ~290 episodes of diarrhoea were treated directly by each Sitara Baji during 15 months of intervention. This Sitara Baji model effectively engaged caregivers using context-specific Behavior change communication materials that result in so many treated cases in community.

162,332

care givers of children
under 5 years
counselled

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children under 5 with
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Zinc and LoORS

~290

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Sitara Baji

Ms. Javeria Shareef, age 24 years, is working as a "Sitara Baji" in a remote district of Pakpattan in Punjab. According to her, childhood Diarrhoea is very common in her catchment population and poor community knowledge is the main barriers in seeking appropriate Diarrhoea treatment. People often relies on traditional home-based remedies they heard from their parents or grandparents and are part of diarrhoea treatment regime for generations.

"I have been working as community health worker for about a year and was completely unaware of the appropriate Diarrhoea treatment. Since it is very common here, I have been asked by the mothers many times to give them solution, but I used to refer them to the doctor. I have seen children in my area getting hospitalized many times since I started working as community worker. Things got completely changed when I attended the Diarrhoea management training. I was blown away with this information that a simple and low-cost method at home can save a child's life. The best part is that I am literally carrying the solution for diarrhoea management in my backpack to supply where it's needed and when it's needed."



One of the interesting factors observed was peer referral in the community. Most of the mothers have already referred cases to Sitara Baji, which shows caregivers' satisfaction with the services.

Ms. Samina (Age: 22 years) have 2 children under five years of age. Her younger daughter is Fatima who is 2 years old. From the last 8 months, she had 3 episodes of , diarrhoea and each time they had to spend a significant amount of money for treatment. She said,

"My husband is a daily wager and can't afford costly treatment. My 2 years old daughter was admitted twice in City hospital, and we had to spend a lot of money each time. It was not just the cost of treatment, both times my husband had to leave the work for almost a week. Then I got a chance to attend a session in my mohalla (vicinity). Where baji Sakina came to told us about the common reasons of diarrhoea episodes, preventive measures, and how to use Zinc & LoORS in case of its onset. It was a blessing for me. I feel empowered that I have something in my capacity to reduce my child suffering. I had already recommended the treatment to many mothers from my family and friends."



Challenges/Lesson Learned

The greatest challenge was to overcome caregiver's recognition to seek timely care. Inability to recognize the symptoms and severity of its episode prevent caregivers from seeking timely care. Medical consultation was sought in only severe cases which leads to increased burden on tertiary care and out of pocket expenses.

Caregivers use family experiences as the main source of information about diarrhoea care. Almost invariably the care process begins with home remedies followed by self-prescription of medicines. Improved caregiver's knowledge about preventive factors such as immunization, exclusive breastfeeding, adequate nutrition, good hygiene, could decrease diarrhoea episodes in children under 5 years.

Project was implemented during the COVID-19 pandemic, when access to routine services at health facilities was extremely limited. Sitara Bajis' community-based intervention played an effective role where she continued door-to-door visits (by following the social distancing) and ensured access to information and treatment at the doorstep.

Improved community based interventions to change health seeking behavior complimented with better quality of services at referral health facilities could improve uptake of healthcare services and health outcomes for communities at large.

Conclusion

Improved access to LoORS and Zinc in combination and awareness building using effective behavior change communication material through community health workers showed high acceptability in targeted low-income peri-urban communities.

There is a growing need for scale-up of community-based programs through well-trained community health workers to prevent and control Diarrhoea and other preventable diseases at the household level. Community health workers with minimal prior education can be trained to assess, qualify, and treat/manage the Diarrhoea cases and bring the desired behavior change in society. This may lead to the reduction of hospitalization costs incurred for the treatment of a severe cases of diarrhoea and can contribute to reducing the mortality rate of children under 5.

This community-based intervention also has the potential to be implemented on a large scale especially in Lady Health Workers (LHWs) uncovered and in far-flung areas with no nearby health care facility. Community health workers are often the first and only point of care for childhood Diarrhoea in remote areas, and should be adequately equipped with the knowledge, skills, and motivation needed to manage and treat Diarrhoea. Diarrhoeal cases are mostly from the poor and marginalized communities with poor sanitation and hygiene practices, and the risk of future Diarrhoea caseload can be prevented by changing behaviors towards safe drinking water, adequate sanitation and hygiene and breastfeeding practices.



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2. <https://www.unicef.org/pakistan/wash-water-sanitation-and-hygiene>
3. National Institute of Population Studies (NIPS) [Pakistan] and ICF. 2019. Pakistan Demographic and Health Survey 2017-18. Islamabad, Pakistan, and Rockville, Maryland, USA: NIPS and ICF
4. [https://www.unicef.org/supply/media/466/file/Oral%20rehydration%20salts%20\(ORS\)%20and%20zinc%20market%20update.pdf](https://www.unicef.org/supply/media/466/file/Oral%20rehydration%20salts%20(ORS)%20and%20zinc%20market%20update.pdf)
5. Bhutta ZA, Das JK, Walker N, Rizvi A, Campbell H, Rudan I, et al. Interventions to address deaths from childhood pneumonia and equitably: what works and at what cost? *Lancet* (London, England). 2013;381(9875):1417-1429. doi: 10.1016/S0140-6736(13)60648-0.

**Greenstar Social Marketing
Pakistan (Guarantee) Limited**

8th Floor, Ocean Tower G-3, Block 9,
Main Clifton Road, Karachi, Pakistan.

