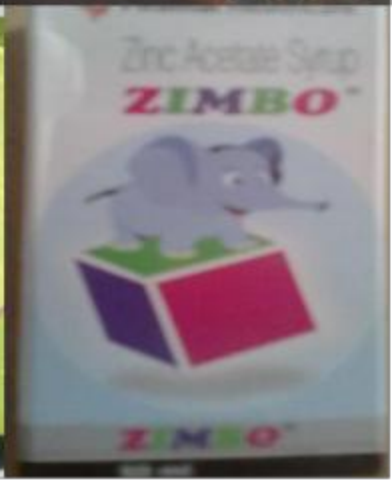


FORMATIVE RESEARCH FOR DEVELOPING COMMUNICATION STRATEGY TO PRIVATE SECTOR

DIARRHEA ALLEVIATION THROUGH ZINC & ORS THERAPY (DAZT)



Report Submitted to

AEDARTS LLC
Applied Research and Technical Services

By



Business Mind Social Heart

Executive Summary

This Report presents the findings of the formative research conducted in the states of UP and Gujarat to understand the underlying needs of the community, their health seeking behaviour and practices in terms of childhood diarrhea treatment and influences and triggers to adopt ORS and Zinc supplements as the solution. The report is based on data collected from the field through focus group discussions and in-depth interviews with mothers/caregivers of children under five years of age, health service providers like Rural Medical Practitioners, General Physicians and Pediatricians and drug store owners in the villages of UP and Gujarat. At the end, the study provides a cue on the possible communication approach and tools that could be used to reach the target audience in the near future.

The study specifically answers the four key research questions:

- Why mothers/caregivers do not take diarrhea as serious/ life threatening?
- Why RMPs give antibiotics and anti-diarrheals?
- What can motivate RMPs to look at ORS and Zinc as a treatment for child diarrhea?
- Who are the authority figures/influencers for RMPs and mothers/caregivers?

It was found that mothers/caregivers identify diarrhea with some of its major visible signs like watery stools, vomiting, abdominal pain, fever, child getting thirsty and inactive. They identify different types of diarrhea based on the colour of the stool (yellow, green etc) and different seasons in which it occurs. They call it “*ulti-dast*”/ “*pet-jharna*” in UP and “*jhaada rog*” in Gujarat.

Since the symptoms of diarrhea are visible and external, mothers feel they can keep a tab on the child’s condition and calculate its seriousness on their own. It makes them take a ‘wait and watch’ attitude towards it. They feel they have knowledge regarding its home based solutions and easy and timely availability of diarrheal medicines and treatment at RMP level (within village) at early stages makes them feel under control of the situation. Mothers also believe that diarrhea is a short duration disease, has a quick recovery and gets cured within 3-4 days on its own. They feel it is a common disease which happens to every person in his/her lifetime. Overall, the health seeking behaviour and attitude of mothers towards diarrhea is found to be casual even though in some cases they mention it as a serious disease.

The diarrhea treatment generally starts with a ‘wait and watch’ attitude, followed by the home based diarrhea management by mothers/caregivers where they mostly sought to the age old salt-sugar-lemon solution. However, they do not follow any standard measure or preparation method for the same. Use of commercially available ORS solutions as a part of the home based diarrhea management is almost negligible in UP, whereas it is comparatively high in Gujarat. The decisions related to home based diarrhea management of the child is largely driven by mother-in-law and she plays a significant role in the same. While mothers in UP continue their home based diarrhea management for the initial 1-2 days, those in Gujarat continue this for the initial first day.

While the home based diarrhea management is on, a few mothers go for self medication, where they seek direct help from the drug store owners or *kirana* stores in case of UP and Gujarat respectively. Self medication is comparatively high in case of Gujarat than in UP.

Further mothers approach RMPs on the 2nd or 3rd day after inadequate response of home remedy and self medication. However, in case of Gujarat, mothers do not resort to home remedy and self medication beyond first day and child is taken to RMP mostly on second day.

Anti-diarrheals and antibiotics usually form a crucial part of the prescription of RMPs in case of any type or stage of diarrhea. They say since the patients approach them at a later stage, they believe they can treat them only through antibiotics and anti-diarrheals. Also, they do not want to take any risk or changes since their reputation in the village would be at stake. Moreover, their lack of correct knowledge of symptoms and appropriate treatment leads to use of antibiotics and anti diarrheal in all stages of diarrhea.

More number of medicines at lesser cost is perceived as a better treatment by mothers/caregivers. This also encourages prescription of antibiotics and anti-diarrheals over costlier Zinc bottles. Further, easy availability of these medicines at low costs in the market and high margins encourages its prescription by RMPs.

In cases where the treatment by RMPs does not cure child's diarrhea, mothers/caregivers approach general physician/pediatrician between 3rd to 5th day. However, in certain cases in Gujarat, mothers approach private pediatricians at town level on the 1st or 2nd day since there is better health infrastructure and accessibility to specialist doctors as well as higher awareness levels among mothers/caregivers.

Again, in case of doctors in UP irrespective of severity and type of diarrhea only anti-diarrheal and antibiotics treatment is done and ORS solution is being given very rarely, and zinc finds no mention in the prescription list. But in Gujarat, ORS solution, supplemental zinc and plain anti-diarrheals do form a part of the prescription in case of bacterial diarrhea. This treatment by GP/Pediatrician usually continues for a maximum of 3-5 days.

As far as knowledge, attitude and usage practice of ORS is concerned, mothers/caregivers in UP do not have much clarity on what it is and how it helps the child during diarrhea. They even confuse it with 'Glucose'. However, in Gujarat the awareness levels are much better. Mothers usually identify ORS sachets with the pack colours and not with the brand names. In UP, in case the doctor (RMP) gives ORS then only mothers prefer to give to their child and very few of them give it on their own. However, in Gujarat they keep ORS packets at home that are distributed by ASHA or ANMs and give to the child on their own in case they have had a prior experience of using it. Prescription of ORS by RMPs is high in Gujarat as compared to UP.

Awareness of Zinc among mothers in UP is very low whereas in Gujarat there is complete lack of awareness about it. In case of UP, the source of information is either the doctor (RMP) or in a few cases ANM.

In case of AED's past intervention areas in UP, among most of the RMPs, there is low to moderate awareness about zinc's precise role in diarrhea management. However, in spite of the awareness, zinc finds negligible presence in their prescription due to their low believability on the efficacy of zinc to treat diarrhea, not an immediate reliever, zinc treatment versus antibiotics

comes to be costlier affair and misconception of usage of zinc leads to more dehydration. Further in the non intervention areas of UP, there is no awareness about zinc therapy. In case of Gujarat, awareness and knowledge about precise usage of zinc in diarrhea management among RMPs is low, whatever little information is known it is due to their close proximity with GP/Pediatrician practicing in nearby towns.

Looking at the above scenario, a two phase communication approach is suggested in the report along with possible communication tools for attaining the desired behaviour change of each of the target audience. In the first phase, the focus would be on the awareness generation among the target audience and in the second phase the objective would be to encourage actual usage of ORS and Zinc during diarrhea treatment.

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Acronyms

ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activities
AYUSH	Ayurveda Yoga & Naturopathy Unani Siddha and Homoeopathy
BAMS	Bachelor of Ayurveda, Medicine and Surgery
BHMS	Bachelor of Homeopathic Medicine and Surgery
BUMS	Bachelor of Unani Medicine and Surgery
CHC	Community Health Centre
DCH	Diploma in Child Health
DTH	Direct to home
FGD	Focus-group discussions
GP	General Practitioner
IDI	In-Depth Interview
OPD	Outdoor Patient
ORS	Oral rehydration salts
ORT	Oral rehydration therapy
PRA	Participatory Rural Appraisal
PHC	Primary Health Centre
Ped.	Pediatrician
POUZN	Point-of-use Water Disinfection and Zinc Treatment (Social Marketing Plus for Diarrheal Disease Control project)
POP	Point of Purchase
RMP	Rural Medical Practitioner
UP	Uttar Pradesh
WHO	World Health Organization

I Background

Diarrhea is one of the single most common causes of death among children under age five worldwide, following acute respiratory infection. Deaths from acute diarrhea are most often caused by dehydration due to loss of water and electrolytes. As per National Family Health Survey (NFHS-3), around 9 per cent of children under age five were diagnosed having diarrhea in the two weeks preceding the survey in India (2005-06). Also, out of these around 1 per cent had diarrhea with blood. It is seen that among children within 6-11 months are most susceptible to diarrhea in India.

Nearly all dehydration-related deaths can be prevented by prompt administration of rehydration solutions. Because deaths from diarrhea are a significant proportion of all child deaths, the Government of India has launched the Oral Rehydration Therapy Programme as one of its priority activities for child survival. One major goal of this programme is to increase awareness among mothers and communities about the causes and treatment of diarrhea. Oral rehydration salt (ORS) packets are made widely available and mothers are taught how to use them. Further, several recent studies in developing countries have found that Zinc supplementation is also efficacious in reducing the severity and duration of diarrhea resulting in lower rates of Diarrhea-associated mortality. It is also found that when zinc supplementation is given along with ORS, it is doubly effective for acute watery diarrhea. The World Health Organization (WHO) and UNICEF both support zinc as a treatment that can reduce diarrheal mortality rate by 13 to 21 per cent. These organizations have declared the use of ORS and Zinc as the first line of treatment of childhood diarrhea, and this is also being endorsed by Indian Academy of Pediatrics

Looking at this background, US Fund for UNICEF had tasked AED-ARTS, LLC in partnership with a consortium of organizations to implement 'Diarrhea Alleviation Through Zinc and ORS Therapy (DAZT)' project to reduce and rationally manage childhood diarrhea in the states of UP and Gujarat.

An important component of the whole project is to promote the use of Zinc tablets/ syrup and ORS solution as the first line of treatment of childhood diarrhea. The communication challenge in this programme is to design messages and promote the benefits of ORS and Zinc in such a way that the health concerns of mothers/care givers are addressed.

In this regard, MART was approached to conduct formative research to understand the underlying needs of the community, their health seeking behaviour and practices in terms of childhood diarrhea treatment and influences and triggers to adopt ORS and Zinc supplements as the solution. This would help in developing the right messages that are culturally appropriate and are reached in the right manner through the right communication channel to the target audience.

This document provides the final findings of the formative research.

2 Research Design and Approach

2.1 Research Objective

1. To understand the health seeking behavior and practices in terms of childhood diarrhea treatment in UP and Gujarat
2. To identify current challenges associated with the use of Zinc and ORS as the first line treatment in childhood diarrhea
3. To suggest a roadmap to communication strategy that can be adopted for each DAZT stakeholder

Based on the above mentioned research objectives, following were some specific research questions which had to be focused during the study:

- i. Why mothers/caregivers do not take diarrhea as serious/ life threatening?
- ii. Why RMPs give antibiotics and anti diarrheal?
- iii. What can motivate RMPs to look at ORS and Zinc as a treatment for child diarrhea?
- iv. Who are the authority figures/influencers for RMPs and mothers/caregivers?

The present report is divided into five chapters as given below and the above mentioned key questions have been accordingly dealt in the subsequent chapters:

Chapter 3: Knowledge, Perception and Attitude towards Diarrhea (*Specifically answering Q i*)

Chapter 4: Diarrhea Treatment Practices covering: (*Also answering Q ii*)

- a. When, what, where and why it is done.
- b. What additional advisory is given/not given
- c. How effective is the drug compliance among mothers/caregivers
- d. Factors affecting diarrhea treatment decision (any rational, emotional, socio-economic, cultural, supply related and knowledge related factors)

Chapter 5: Knowledge, Perception and Attitude towards ORS and Zinc (*Answering Q iii*)

Chapter 6: Media Exposure and Influencers (*Answering Q iv*)

Chapter 7: Roadmap to Communication Strategy

2.2 Research Methodology

Qualitative research approach was used for the formative research study to identify the challenges and pain point associated with the use of Zinc and ORS as first line of treatment in child diarrhea.

However in the initial stage of the study, secondary data was collected for all thematic areas for developing an understanding of diarrhea management practices.

After secondary research, qualitative research methodology was used to conduct the primary research. For this purpose, formal qualitative research techniques like focus group discussion,

participatory rural appraisal (PRA) and in-depth interview were used for capturing information on all research areas. (Refer Annexure 6 for a detailed Survey Process)

Focus group discussion of mothers/caregivers and RMPs



2.3 Respondent Segment

The following respondent segment were covered during the study

Table I: Defining Respondent Segments

S. No.	Respondent Segment	Definition
1	Mother/caregivers	Of children below the age of 5 years and who have had diarrhea episode in the past 2 weeks belonging to less educated families living largely in <i>kutch</i> or semi-pucca dwellings
2	Rural Medical Practitioner	Qualified (BAMS or BHMS) or unqualified (without any formal qualification) practitioner who has maximum patient footfalls from the village.
3	Pharmacist/Drug Store Seller	Selling medicine for the last 2 years
4	General Physician	MBBS/MD doctor having their own private clinic
5	Pediatrician	DCH/MD-Paed. doctor having their own private clinic looking at children from 0-14 years

2.4 Research Instrument

For the purpose of conducting the qualitative research with the above mentioned stakeholders, discussion guides were used as the research instrument. Separate discussion guides were prepared for each of the stakeholders. (Refer Annexure 7 for the final discussion guides).

2.5 Geography

The study was conducted in AED (POUZN)* intervention and non-intervention area of Uttar Pradesh and Gujarat respectively. In UP, three districts - Ambedkarnagar, Badaun and Lucknow were covered and in Gujarat two districts – Patan and Surendranagar were covered. Thus a total sample size of five districts and nine villages were covered. For representing intervention areas, the study covered rural areas of Ambedkarnagar (UP) (sampling villages from the data provided by AED). Villages having more than 4000 population, located at a minimum distance of 15km from the block town were selected for the study. Details of which are enumerated below.

States		District HQ	Block Town Covered	Villages Covered
Uttar Pradesh	Intervention Areas	Ambedkarnagar	• Gossainganj	• JalapurSehra • Kaancha • Basuri
		Badaun	• Badaun	• Ramzanpur
	Lucknow	-	-	
Gujarat	Non Intervention Areas	Surendranagar	• Limbdi	• Ralol • Shiyani • Ranagarh
		Patan	• Siddhpur	• Sunsar • Kakoshi

2.6 Sample Design and Size

The weightage to the sample was kept as 50:50 for capturing of information of both intervention and non-intervention area. The complete sample plan with state wise and district wise detailing is enumerated below:

State Wise Sampling:

S. No	Respondent Segment	Research Tool	Sample Achieved State wise		Total Sample Achieved (Two States)
			Uttar Pradesh	Gujarat	
1	Mother/caregivers	FGD/PRA	4	4	8
2	Rural Medical Practitioner	FGD	4	1	5
3	Mother /caregiver	In-depth Interview	8	6	14
4	Pharmacist/Drug Store Seller		8	6	14
5	Rural Medical Practitioner		-	3	3
6	General Physician		4	3	7
7	Pediatrician		4	5	9
8	Key Opinion Leader		1	1	2
Total			33	29	62

District Wise Sampling:

Table 4: Sample Distribution of FGDs (District Wise)

FGDs/ Mini Groups	Intervention Area	Non-Intervention Area				Total
	Ambedkarnagar	Lucknow	Budaun	Patan	Surendranagar	
RMPs Mini group (4-5 nos)	3	-	1	1	-	5
Mothers/ caregivers(10 nos)	3	-	1	2	2	8
Total	6	0	2	3	2	13

Table 5: Sample Distribution of IDIs (District Wise)

In-Depth Interviews	Intervention Area	Non-Intervention Area				Total
	Ambedkarnagar	Lucknow	Budaun	Patan	Surendranagar	
Drug Seller	6	-	2	4	2	14
RMP	-	-	-	-	3	3
GP	3	-	1	2	1	7
Paediatrician	-	3	1	4	1	9
Mothers/caregivers	6	-	2	2	4	14
KOL (Key opinion leader)	-	-	1	1	-	2
Total	15	3	7	13	11	49

Thus, a total of 49 IDIs, 5 FGDs and 8 FGDs including PRA exercise were conducted during the study.

2.7 Duration of the Study

The fieldwork for the study was conducted for a period of 9 days, starting 9th to 17th May, 2011



Chapter 3: Knowledge, Perception and Attitude towards Diarrhea

3 Knowledge, Perception and Attitude towards Diarrhea

This chapter talks about knowledge, perception and attitude towards diarrhea among mothers/caregivers and service providers.

3.1 What do Mothers/Caregivers Know about Diarrhea?

According to mothers/caregivers frequent watery stools, vomiting, abdominal pain, fever, child getting thirsty, inactive and weak are some of the major visible signs of diarrhea. Mothers in UP perceive it as diarrhea when the child is vomiting along with having frequent loose stools and hence called “*Ulti-dast*”. However, in Gujarat once the child has had 4-5 loose discharges of stools, it is perceived as diarrhea (*Jhaada rog*).

Common Local Terms used to describe Diarrhea

UP - *Pet Jharna, Palti-Dast, Ulti-Tatti, Ulti-Dast*

Gujarat – *Jhaada rog*

They identify different types of diarrhea based on colour and different seasons as described below:
(See Figure 1)

- Summers – stools are loose watery and yellow in colour in this season and children get completely dehydrated during this time
- Winters – stools are green in colour, semi-solid and sticky
- Rains – stools are similar as in summers

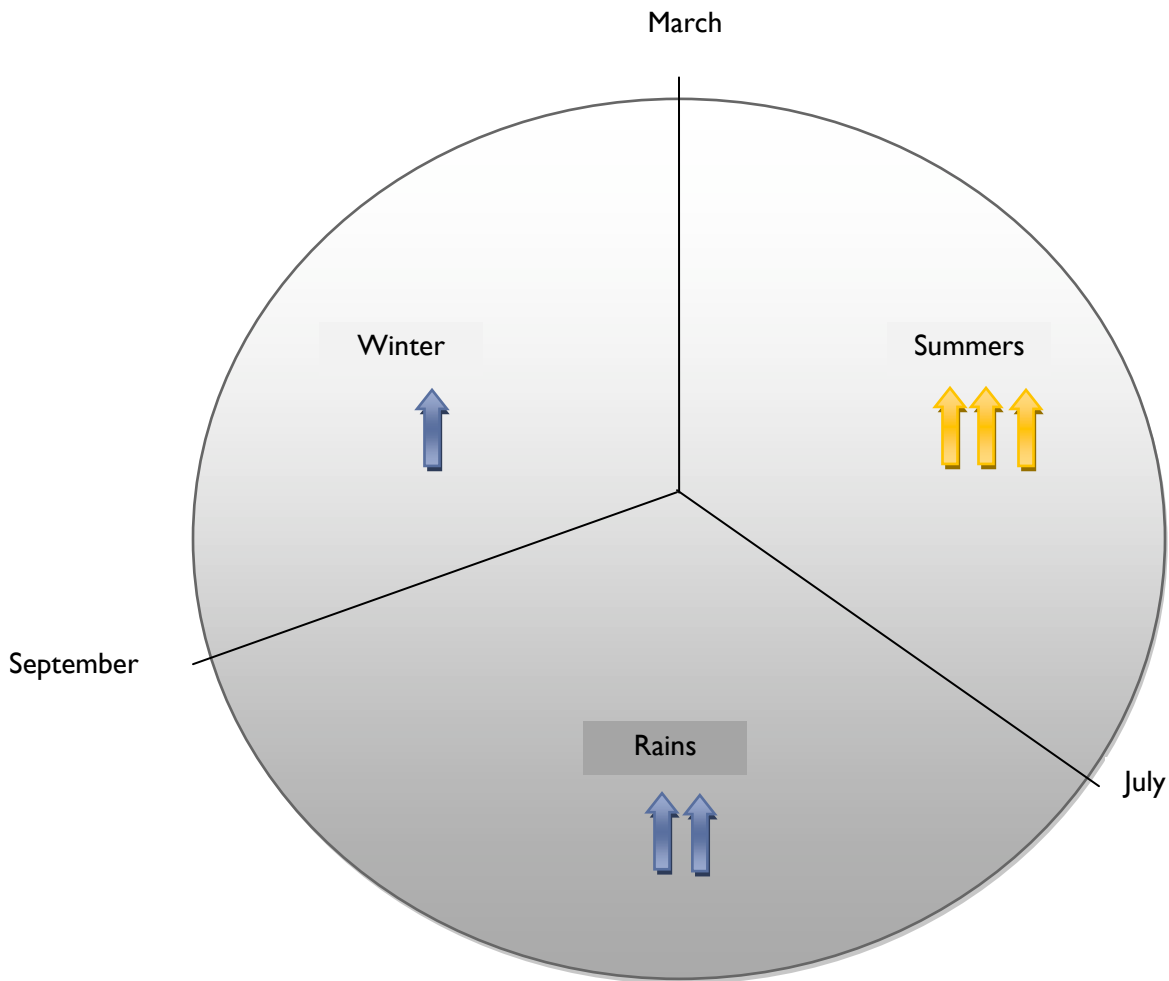
Types of Diarrhea as described by Mothers/Caregivers

Summer Diarrhea - “*pichkaari jaisa pele rang ka paani jaisa.....bacchey mein paani ki kami ho jaati hai....jaan nahi rehti*”

Winter Diarrhea - “*haraa, phata-phata aur thaka-thaka*”

Diarrhea in Rainy season – “*garmion jaisa he hota hai...peeley rang ka patla-patla*”

Figure 1: Seasonality Map for Diarrhea



According to them, incidence of diarrhea is highest in summers (March to July) followed by rainy season and subsequently in the winters. In summers, diarrhea and fever are the two most common ailments, among children below 5 years, cited by mothers.

3.2 Myths and Misconceptions about Diarrhea

Mothers are not aware of the real cause as to why diarrhea occurs. Most of them cite hot air and extreme heat as the major cause of diarrhea in summers. In UP, mothers feel that the food doesn't digest easily in summer season and eating out causes diarrhea among children. Consuming unhygienic food from outside, specifically 'pepsi pouch' (a cola added ice dish) by children in Gujarat is also voiced as one of the major causes of diarrhea. A few myths like breast feeding causes diarrhea in children and if mothers eat anything hot, that might affect her child and become a cause of diarrhea, exists among some mothers in UP. In Gujarat, misconceptions like teething causes diarrhea exist among a few mothers.

Causes of Diarrhea as described by Mothers/Caregivers

“bacchon ko loo lag jaati hai aur garmi mein khaana jaldi pachta bhi nahi, usse dast ho jaate hain” – Mothers FGD, Village Jalalpur Sehra, Ambedkarnagar, UP

“maa agar garam cheez kha le toh aur apna doodh pilaane se bhi dast ho sakta hai” – Mother IDI, Village Basauri, Ambedkarnagar, UP

“bacche pepsi pouch peetey hain, usse jhaada ho jaata hai” – Mothers FGD, Surendranagar, Gujarat

3.3 Attitude towards Diarrhea: Why Mothers/Caregivers Do Not Take Diarrhea as Serious/Life Threatening?

Through our interactions during the study the following observations were made regarding the current attitude of mothers/caregivers towards diarrhea:

- Since the symptoms of diarrhea are visible, observable and external and mothers are able to make an early judgment regarding the nature of disease, they feel they can keep a tab on the child's condition and calculate its seriousness on their own. There does not exist any fear of the unknown for them in case of this disease. They correlate frequency of stools with the seriousness and accordingly evaluate when to go to the health service provider. It makes them have a 'wait and watch' attitude towards diarrhea.
- Mothers feel that they have knowledge regarding home based solutions in case of diarrhea (for example the age old salt-sugar-lemon solution) which makes them feel comfortable on the aspect of controlling diarrhea in its initial stages. These home based remedies have been passed to them from their mothers, grandmothers and have also acted as a complete cure in few cases.
- Mothers feel that since diarrheal medicines are easily and timely available from the nearest healthcare providers, it can be easily cured in time. Also, the aspect that its treatment is easily available and adequate at RMP level (within village) at early stages and she can rush to them whenever required makes them feel under control of the situation.
- Mothers believe that diarrhea is a short duration disease, has a quick recovery and gets cured within 3-4 days on its own.
- Again, mothers feel diarrhea is a common disease which happens to every person in his/her lifetime. It is not rare and this makes them take a casual attitude towards it.
- They feel that diarrhea doesn't require strict dietary and personal hygiene care as is required in case of diseases like jaundice, where even a little carelessness can aggravate the condition of the child leading to his/her death.
- Generally, mothers believe that diarrhea will not lead to death, however in cases where they have come across such instances, they feel it is life threatening.

All these above stated observations indicate that mothers have a casual attitude towards diarrhea and they do not consider it as serious/life threatening. Although in some cases mothers/caregivers have mentioned that diarrhea is a serious disease, however their health seeking behaviour and attitude towards it was found casual.

Why Mothers don't consider Diarrhea as serious/life threatening?

“Jis bimaari ko samajhne mein der lagti hai vo he serious hoti hai....bacchey ko baar-baar dheeli tatti hone se humein samajh aa jaata hai ki use kya hua hai” – Mother IDI, Ambedkarnagar, UP

“Ulti-dast itni serious bimari nahi hai kyonki yeh jaldi 3-4 din mein theek ho jaati hai aur iska ilaaj bhi aram se ho jaata hai gaon mein” – Mother IDI, Badaun, UP

“humne bacchey ko jhaada se martey hue nahi suna” – Mother IDI, Surendranagar, Gujarat

Mothers unaware about preventive measures like hygiene during child diarrhea





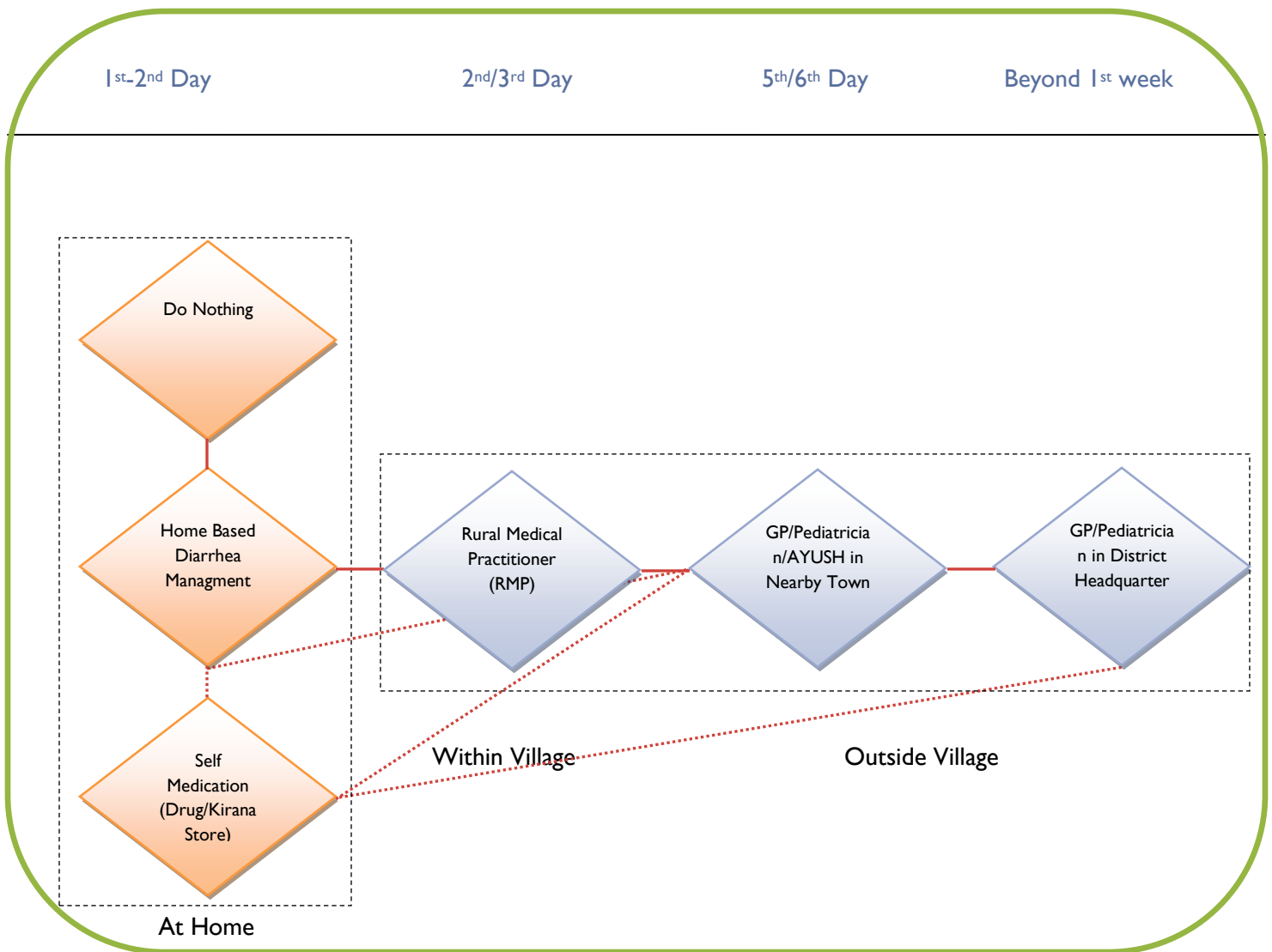
Chapter 4: Diarrhea Treatment Practices

4 Diarrhea Treatment Practices

This chapter talks about how, where and why diarrhea treatment is sought by mothers/caregivers, what are the different practices, additional advisory services provided and the major factors leading to their decision at each stage.

Figure 2 provides an overview of the stage by stage diarrhea treatment as sought by mothers/caregivers for childhood diarrhea. This has been explained in detail in the sub-sections of this chapter.

Figure 2: Diarrhea Treatment Sought by Mothers/Caregivers



4.1 Diarrhea Treatment at Home

For the initial 3-4 loose stools on the very first day, mothers wait before starting any kind of treatment for their child. They feel that the child will get well but if the stools do not stop even after that, they start their home based diarrhea management.

4.1.1 What is Done at Home?

During the home based diarrhea management, mothers/caregivers mostly sought to the age old salt-sugar-lemon solution. In case lemon is not available, plain salt-sugar solution is given. In UP, some mothers follow alternatives like fennel seeds (*saunf*) boiled in water; onion juice (*pyaaz ka ras*); roasted mixture of asfoetida (*heeng*), carom seed (*ajwaain*) and myrobalan (*harad*). In case of mucus in stools they give tea leaves with water and honey or gripe water is given in case of diarrhea during teething of the child. Very few of them give commercially available ORS solutions as a part of their home based diarrhea management. However, in Gujarat, apart from the most common salt-sugar-lemon solution, usage of ORS as a part of home based diarrhea management is comparatively high. This is due to higher level of awareness among community and availability of WHO-ORS packs because of Gujarat government's initiative and active participation of ASHA and ANMs in the programme. But again, its usage as a part of home based diarrhea management is only in case the mothers have had a prior experience of using the same. A few mothers in Gujarat also use poppy seeds (*khas-khas*) as one of the alternatives.

It is observed that there is no standard measure and preparation method followed by mothers for these remedies, especially the salt-sugar-lemon solution. Water is generally taken in a bowl or a glass and a pinch of salt and one spoon of sugar is added to it to make the solution.

4.1.2 When is the Treatment Sought?

The most commonly used salt-sugar-lemon solution is generally given to the child after every 15 minutes or whenever he/she feels thirsty throughout the day. While mothers in UP continue their home based diarrhea management for the initial 1-2 days till the child's condition is not too grave, those in Gujarat continue this for the initial first day.

Home based diarrhea management acts as the first line treatment for the child but in case of Gujarat, where the child is less than 6 months, mothers take lesser risk and avoid giving any home based solution as has been instructed by their doctors.

4.1.3 Preventive Measures and Dietary Practices Followed

There are hardly any preventive measures like maintaining hygiene, cleanliness of the child, house etc., that mothers take for diarrhea. Not much awareness is there as to what should be done to prevent diarrhea from reoccurring.

Regarding dietary practices during diarrhea, most of the mothers in UP and Gujarat do not stop their own milk, while a few in UP stop breast feeding during this time. Other foods like *khichdi*, liquid rice, pulse/lentils soup, curd etc. is generally given during diarrhea.

4.1.4 Factors Affecting Home Based Diarrhea Management Decision

Within the household, mother-in-law plays a significant role during the home based diarrhea management of the child. The decisions are largely driven by her and the young daughter-in-law,

being the new bride in the village, doesn't have much say in the same. Apart from this, some prior knowledge of mothers/caregivers regarding the home based diarrhea management solutions acts as a decision making factor at this stage.

Home Based Diarrhea Management by Mothers/Caregivers

*“saunf ko paani mein ubaal kar dete hain.....heeng, ajwaain, harad ko bhoon kar dete hain” -
Mothers FGD, Village Basauri, Ambedkarnagar, UP*

*“humein lagta hai ghar ke ghol se baccha theek ho jayega” – Mother IDI, Village Ramzanpur,
Badaun, UP*

“saas ki baat sunni padti hai” - Mother IDI, Village Sunsar, Patan, Gujarat

*“hum nayi bahu hain toh humein apni saas ki baat sunni padti hai.....unki ijaazat ke bina hum
ghar se nahi nikalte” – Mother IDI, Village Kaancha, Ambedkarnagar, UP*

4.2 Diarrhea Treatment through Self Medication

While the home based diarrhea management is on, a few mothers go for self medication, where they seek direct help from the drug store owners or *kirana* stores in case of UP and Gujarat respectively (Refer Annexure 2 for detailed profiling of drug sellers). Self medication is comparatively high in case of Gujarat than in UP. This is due to low penetration of Rural Medical Practitioners within villages of Gujarat.

4.2.1 What is Done during Self Medication?

In UP most of the times it is the male member of the family who goes to the medical store to buy medicines for the child. The drug store owner gives advice and medicine based on the age, condition of the child, time from onset of diarrhea, and affordability of the customer. Usually syrups are given to children less than one year and crushed tablets to children above one year. This costs around Rs10-20.

Further, it was found that some mothers/caregivers also keep the left over medicine packs for future reference in case of reoccurrence of diarrhea and take these to the medical store directly for purchasing it the next time. They often remember the medicine by its colour and not by name – *“peeli waali goli.....laal syrup”*

Leftover medicine packs kept by mothers

In case of the kirana stores in Gujarat, mothers themselves approach them and the child is very rarely taken to the shop. At the shop, mothers directly ask for the medicine for diarrhea - “jhaadaa ni tikdi” (Gujarati) and often one single tablet (Loperamide) worth Re1-2 for a day is taken. The kirana store owner also doesn't differentiate between adults and children while giving this medicine, however the dosage is reduced in children (1/2 tablet to children).



4.2.2 When is the Treatment Sought?

In case self medication is sought, then it continues maximum for one day.

Mothers expect their child to get cured with a day's medicine, but this very rarely happens. Though the stools get stopped but not the vomiting. This often makes them rush to the next level of treatment.

4.2.3 Why Self Medication is Sought?

In case of UP, self medication acts as a low cost alternative and in Gujarat it acts as a first line treatment on account of non-availability of RMPs within the village.

4.2.4 Factors Affecting Self Medication Decision

The decision of approaching the drug store/kirana shop during self medication is largely influenced by either the neighbours whose children have had a diarrhea episode in the past and they had resorted to these stores or if one has a self prior experience and trust on the store owner's experience.

Triggers for Self Medication

- Non-availability of RMP in village (Gujarat)
- Low cost alternative (UP)

Diarrhea Treatment through Self Medication

“Jhaadaa ni tikdi” – Mothers FGD, Village Kakoshi, Patan, Gujarat

“Kabhi paise ki majboori ki wajah se doctor ke paas na jaake medical store pe seedhey chale jaate hain” – Mothers FGD, Village Jalalpur Sehra, Ambedkarnagar, UP

“Seedhey dukaan se bine doctor ko dikhaye dava lene par reaction ho sakta hai” – Mothers FGD, Village Jalalpur Sehra, Ambedkarnagar, UP

A male member of the family buying medicine from drug store in UP



Role of Drug Seller during Self Medication by Mothers/Caregivers

“We need to push Zinc forcefully and need to given guarantee to villagers for its effectiveness.” – Drug store owner, Village Kaancha, Ambedkarnagar, UP

4.3 Diarrhea Treatment at RMP (Rural Medical Practitioner) Level (Village)

Mothers/caregivers mostly approach Rural Medical Practitioner (Refer Annexure 3 for detailed profiling of Rural Medical Practitioner) on 2nd or 3rd day after inadequate response of home remedy and self medication from the drug or kirana stores. They act as first point of contact for diarrhea treatment. However, in case of Gujarat, mothers do not resort to home remedy and self medication beyond first day and child is taken to RMP mostly on second day. Many educated families often approach on the first day itself.

Mothers rationalize this behaviour of theirs of not taking their child to the RMP on the very first day of diarrhea. They cite various reasons like:

- Non-availability of husband or other male member of the family for taking the child to the health service provider – *“kisi ke ghar mein uss time pe aadmi nahi hota toh nahi leja paatey bacchey ko turant doctor ke paas”*
- Pressure of mother-in-law or other elderly member of the family for initially resorting to home based diarrhea management on the first day before rushing to the doctor – *“unki baat nahi maanengey toh vo jhagda karegi, daantegi ki bohot paise waali ho gayi hai jo turant bhaag rahi hai doctor ke yahan aur gharelu upchaar nahi kar rahi”*
- Avoid spending money in the initial stages of the disease – *“hum sochtey hain paise kum kharch ho...kharcha bach jaaye”*

RMPs in UP and Gujarat



4.3.1 What is Done at RMPs Level?

Once mothers/caregivers approach RMPs, they explain the disease in local terms about the symptoms of child diarrhea to the RMP. They often talk about duration, number of stools, color of stool etc.

Description of Child's symptoms by Mothers to the RMP

“bacchey ka pet jhar raha hai...palti tatti ho rahi hai” – Mothers FGD, Village Ramzanpur, Badaun, UP

“Bacche ko jhada ho jata hai...peeli tatti hoti hai” – Mothers FGD, Village Ralol, Surendranagar, Gujarat

Diagnosis

The RMP enquires about the child's disease history from the caregiver and examines the child using stethoscope, checks the dehydration state by looking at the hand's skin, checks the eyes, asks about the frequency and color of the stool.

It was observed that most RMPs (especially quacks) are unable to diagnose the problem correctly due to poor technical knowledge about various types of diarrhea and symptomatic treatment is provided. They do similar treatment in different types of diarrhea in most cases. This was found as a common practice in UP.

In some cases, RMPs diagnose the type of diarrhea based on the symptoms. Generally, it is classified into viral, bacterial and amebic diarrhea. Viral is the most common. Although diarrhea is common in summers but cold diarrhea is considered more severe as it is not easily curable.

Prescription & Treatment

Irrespective of the type of diarrhea, anti-diarrheal and antibiotics are given as first line of treatment. Initially, low cost treatment in form of crushed tablet is given, costing Rs10-20, for 1-2 days. In addition, sugar-salt solution is also recommended but ORS is given in fewer cases in UP. Depending on seriousness of the case, antibiotic injection and IV fluids are also given as depicted in table below:

Symptom	Treatment
Acute Diarrhea (5-6 stools)	• Anti diarrheal, antibiotic
Loose motion with mucus	• Antibiotic
Loose motion with vomiting	• Injections (perinorm, Vomkind) with anti- diarrheal syrup
Crying during diarrhea	• IV fluids (UP)
Dysentery (loose motion with blood)	• Injections along with antibiotic
Severe Dehydration	• IV fluids, antibiotics etc

Anti – Diarrheal	Antibiotics	Anti –Vomiting	Injections	Proboitics	ORS	Multi Vitamins
Metrogyl/ Normetrogyl	Norflox	Perinorm	Perinorm	Doramac	Electral	Vita Z
Noragyl/Pow ergyl	-	Vomkind	Mecasin	-	Enerzal	Zincovit
Entroquinol	-	Domperidon tab	Streptochro m	-	WHO ORS	-
Zifi tablet, siphthoonidex	Oflaxacin- oinidazole suspension, Ofen- OZ	Vominilondansetr on syrup	Septretazone	-	Recizyl	-
Noltini- (norfloxacin idazole & beta cyclodexotrio)	-	Abomin, Domestal	-	-	-	-
Flox M	-	-	-	-	-	-

During first visit, syrup is given only in case of children below 1 year or in case caregiver demands for it. Recently few semi-qualified RMPs have started prescribing probiotics in powdered form (sachets) and ask to give it in lukewarm water thrice a day.

Child Diarrhea Treatment by RMPs

“Injection denge to hi paisa milega” – RMP, Village Ramzanpur, Badaun, UP

*“ we give ¼ tablet or ½ cap syrup to 1-2 child and ½ tablet or 1 cap syrup to 3-5 year children” –
RMP, Village Ralol, Surendranagar, Gujarat*

4.3.1.1 Why Antibiotics and Anti-Diarrheals are Given?

The anti-diarrheal and antibiotics are prescribed by all RMPs across UP and Gujarat. The prime reasons for such prescription are as follows:

- Since the patients approach them mostly in the stage 2 of diarrhea and also at stage 3 in some cases (refer WHO guideline in Annexure 5 for the stages and symptoms of diarrhea), therefore RMPs believe at this stage the patient can be treated only through antibiotics and anti-diarrheals. Even ORS is not prescribed in most cases.
- Even if the patient approaches in stage 1, they continue to treat through antibiotics and anti-diarrheals since they are unwilling to take any chances – **“zaroorat nahi bhi ho tab bhi dena padta hai antibiotic, anti-diarrheal bacchey ki suraksha ke liye....hum stage ka intezaar nahi kar sakte”**
- Lack of correct knowledge of symptoms and appropriate treatment leads to use of antibiotics and anti diarrheal in all stages of diarrhea.

- Patients demand quick and immediate relief, else they threaten to consult other doctors which puts pressure on RMPs to prescribe antibiotics – **“public ka dabaav bhi hota hai”**
- More number of medicines at lesser cost is perceived as a better treatment by mothers/caregivers. This encourages prescription of antibiotics and anti-diarrheals over costlier Zinc bottles – **“Rs25 mein 3 shishi antibiotics, anti-diarrheals ki aati hai per zinc ki ek he shishi Rs30 ki aati hai”**
- Easy availability of antibiotics and anti-diarrheals at low costs in the market encourages prescription.
- High belief in efficacy of antibiotics to treat diarrhea in shortest time.
- High margins on generic drugs in antibiotics also encourages its prescription.

Some of the medicines given by RMPs during child diarrhea



Prescription by RMPs is often influenced by prescription written by GPs/Pediatricians in nearby town. The choice of drugs is guided by price of drugs as well as the quality. Often, combination of generic drugs is preferred as they get high margins. Also, since RMPs in UP are unable to charge fee separately, they make money by dispensing high margin drugs from their outlets.

The medicines are given in the form of tablets, syrup and injection depending on the condition of the child and economic conditions. The treatment usually starts with tablets and if the disease prolongs it ends with syrup and injections depending on the condition. The medicines are given according to age and weight of the child. Also, to ensure drug compliance every dose is given in a packet (*pudia*).

Drug Compliance by Mothers/Caregivers

Drug compliance has been found to be unsatisfactory as most of the mothers often do not complete the full course as prescribed. They tend to stop the treatment as soon as they see that the child is recovering. This tendency often leads to relapse or re-occurrence.

Most of the times, the treatment by RMPs is immediate and satisfactory for the mothers/caregivers. There is high belief on the treatment of RMPs and mothers hardly question them during treatment. Mothers/caregivers expect that their child should get cured within a day which puts pressure on the RMP to give injections and antibiotics.

Mothers/Caregiver's Expectations and Satisfaction with Diarrhea Treatment by RMPs

“agar dava zaada din ki hoti hai toh phok dete hain” – Mothers FGD, Village Kakoshi, Patan, Gujarat

“dose teen khuraak mein davaka faayada ho na chahiye” – Mother IDI, Village Shiyani, Surendranagar, Gujarat

“teen din ki dava di thi...jab bachhe ko araam aa gaya toh band kar di” – Mother IDI, Village Ranagarh, Surendranagar, Gujarat

“mere bacche ko yahan ke doctoron ki dava suit nahi karti” – Mother IDI, Amedkarnagar, UP

Few mothers also keep the leftover medicine packs for reference but hardly reuse it during reoccurrence. They avoid giving the medicine on their own since they consider this a risky behavior, rather refer to the doctor and believe on his medication.

In case the previous treatment was satisfactory, the child is taken to the same doctor at the time of reoccurrence of diarrhea. However, at most of the times the medicine is changed. Past unsatisfactory experience of getting the treatment from the village doctor (RMP) forces mothers/caregivers to seek advice from qualified doctors outside the village. Also, complicated cases and children below 1 year are often referred to GPs or Pediatricians available in nearby towns.

4.3.2 Where RMPs are approached?

Mostly RMPs are approached by community within the village or in nearby large villages in case of non-availability of RMP in resident village. Their clinics are located mostly in village marketplace or in some cases along with their residence.

4.3.3 Who approaches RMP?

Mostly mothers of breast feeding children are accompanied by their mother-in-law or husband. The role of elderly female members is critical at this stage as they are supposed to accompany the child. Only in few cases where in laws are not present, mother is accompanied by husband. Being

a new bride in the village, especially in case of first time mothers, they are not allowed to go out of home. In such a situation only mother-in-law takes the child to the RMP.

4.3.4 Why Treatment at RMP is sought?

RMPs being in proximity to the villagers become the first contact point for diarrhea treatment after home remedies and self-medication at home. Also, since community approach providers mostly in emergency situation after worsening of the case, it is not possible to take the child far off in diarrhea episode. Also, round the clock availability along with medicines, injections etc. make them one stop solution for the community.

Only in rare cases in Gujarat (where government health services are better than private), the community goes to PHC/CHC instead of RMPs. In few instances, educated families directly seek treatment from private pediatrician at town level.

Triggers to Access RMPs

- Proximity
- 24x7 availability
- Affordable
- Medicine availability
- Credit availability

4.3.5 Preventive Measures and Dietary Practices Followed

Apart from prescription, the advice on diet and hygiene maintenance is also given in most cases. It was found that some RMPs (especially quacks in UP) discourage mother's milk during diarrhea. In case of Gujarat, the caregivers are told about cleanliness of clothes, not taking stale food, cleaning of hands after meals and defecation etc.

Normally, duration of treatment ranges between 1-4 days. The 2 day treatment usually costs Rs 50-60. For 3-4 days treatment, community spends around Rs 100-200 if the child doesn't get cured with the initial treatment.

4.3.6 Factors Affecting RMP Decision

The decision of approaching the RMP is largely influenced by the past experience of mothers/caregivers or references of relatives/neighbours in the village.

Mothers/Caregiver's Behaviour towards Seeking Diarrhea Treatment from RMPs

"Teen-chaar tatti aane ke baad saas ne bola doctor ke paas le kar jao" – Mothers FGD, Village Basauri, Ambedkarnagar, UP

4.4 Diarrhea Treatment at General Physician/Pediatrician Level (Town)

Mothers/caregivers mostly approach general physician and pediatrician (Refer Annexure 4 for detailed profiling of GP/pediatrician) on 3rd to 5th day after inadequate response of medicine given by the RMP. They act as second point of contact for diarrhea treatment. However, in certain cases in Gujarat, mothers approach private pediatricians at town level on the 1st or 2nd day since there is better health infrastructure and accessibility to specialist doctors as well as higher awareness levels among mothers/caregivers.

GPs/Pediatricians in Gujarat



4.4.1 What is Done at GP/Pediatrician Level?

Often mothers along with some male member of the family take the child to the doctor since the condition of the child at this time becomes critical. Also, because of the distance, mother never travels alone to the town.

The GP/Pediatrician give advice and medicine based on the age, condition of the child, time of onset of diarrhea, symptoms described like color and type of stools, frequency of stool passage, whether accompanied with vomiting or fever, loss of appetite and affordability of the mothers/caregivers. The choice of drugs is guided by quality as well as the price of drugs. However based on these symptoms the doctors judge the type of diarrhea – viral or bacterial.

In case of viral diarrhea, doctors in Gujarat prescribe as much fluid as the child wants along with ORS solution, supplemental zinc and plain anti-diarrheal for curing of any secondary infection. However, in purely bacterial diarrhea or viral diarrhea cases under suspicion of being bacterial, children are prescribed anti-diarrheal and antibiotics as the first line of treatment with ORS solution. Further in very few cases, doctors in Gujarat have discontinued giving ORS due to low acceptance of non-flavored ORS by children.

In case of doctors in UP irrespective of severity and type of diarrhea only anti-diarrheal and antibiotics are prescribed with ORS solution being given very rarely, and zinc finding no mention in the prescription list.

Common medications prescribed for childhood diarrhea by GPs/Pediatricians in the below table:

Table 8: Medicines Prescribed by GPs/Pediatrician

Common Medication For childhood diarrhea	Salt Compositions	Brand
	Metronidazole	Metrogyl
	Ofloxacin	-
	Co-trimoxazole	Septran
	Norfloxacin	NorfloXTZ
	Tinidazole	-
	Furazolidone	Furoxone
	Ofloxacin +Metronidazole	-

Usually medicine in liquid (syrups) or soluble tablets format are prescribed for a period of 3-5 days. Syrup find more preference over non-soluble forms, as non-soluble tablets are considered to be not very convenient as consuming of tablets is found to be difficult for the small child.

The cost for diarrheal medicines, along with ORS (for five days), range from Rs 100 to Rs 150 with treatments for severe cases costing as much as Rs1500-Rs 2500 plus medicine cost. The cost of medicine varies by the amount needed and number of days for which it will be taken. Generally, mothers/caregivers buy medicine for five days worth of treatment, dosage they comply fully with.

Diagnosis of Diarrhea by GP/Pediatrician

“Common cause of bacterial diarrhea are intake of outside foods like ice dish (local pepsi made of raw water)” - General Physician, Village Siddhpur, Patan, Gujarat

4.4.2 When is the Treatment from GP/Pediatrician Sought?

In case treatment from GP/Pediatrician is sought, then it continues for a maximum of 3-5 days.

Mothers/Caregiver’s Behaviour towards Seeking Diarrhea Treatment from GP/Pediatricians in Town

“Only 4-5% of the patients end up coming directly” - Pediatrician, Block Siddhpur, Patan, Gujarat

4.4.3 Why Treatment at General physician /Pediatrician is Sought?

Treatment from General physician /pediatrician is sort as they serve as the last treatment for mothers/caregivers of children suffering from diarrhea. Making them the pivotal bridge

Triggers to Access GP/Pediatrician

- Last treatment resort

4.4.4 Preventive Measures and Dietary Practices Followed

Apart from therapeutic counseling doctors give dietary counseling, whereby mothers/caregivers are advised to continue their feed and give the child more and more liquids and soft food like kichadi, rice /dal water, sabudana water etc.

Further the mothers/caregivers are also counseled to adhere to proper sanitation and cleanliness practices like washing hands and ensuring food safety, giving boiled water to the child etc.

4.4.5 Factors Affecting GP/Pediatrician Decision

The decision of approaching the GP/Pediatrician is largely influenced by the village RMPs or neighbor's word of mouth to take their child to the doctor in the town. Town level doctors usually refer the patients to the district headquarter level in case of very severe case which they themselves cannot treat.



Chapter 5: Knowledge, Attitude and Practices towards ORS and Zinc

5 ORS and Zinc – Knowledge, Attitude and Practices

This chapter talks about knowledge, attitude, awareness and usage practices towards ORS (Oral Rehydrated Salt) Zinc from both mothers/caregivers and provider's perspective. It also talks in detail as to what can motivate, especially the RMPs, to look at ORS and Zinc as a treatment to child diarrhea.

5.1 ORS - Knowledge, Attitude and Practices

5.1.1 Mothers/Caregivers

Though mothers in the villages of Uttar Pradesh have heard about ORS but very few of them are actually able to explain what it is. There is not much clarity on what it is and how it helps the child during diarrhea. Some say it helps in rehydration, others opine it is a medicine. A few of them believe it is given only in case of vomiting plus loose stools. Most of the mothers relate it with 'Glucose' and do not have much clarity on the difference between glucose and an ORS solution. Every mother describes in a different way regarding preparation of the ORS solution as has been told to her by the village doctor (RMP) she seeks. However, the scenario is a little different in Gujarat – since the ASHAs and ANMs under the state government programme are quite active in the villages, they have created good awareness and availability of ORS packs which mothers are able to immediately recall and recognize. They know its role in diarrhea management and even its preparation method as explained to her by the village ASHA.

Mothers usually identify ORS sachets with the pack colours and not with the brand name. Only a few of them in UP could mention about 'Electral' brand.

Knowledge and Perception about ORS by Mothers/Caregivers

“ORS pet ki garmi dur karta hai...paani ki purti karta hai...isko pilaane se uli-dast mein farak padta hai” – Mother IDI, Village Jalalpur Sehra, Ambedkarnagar, UP

“ORS glucose hai, dava nahi hai” – Mothers FGD, Village Ramzanpur, Badaun, UP

“Green-white, orange packet mein milta hai...Rs5 ka packet hota hai” – Mothers FGD, Village Jalalpur Sehra, Ambedkarnagar, UP

“White-silver packet mein hota hai” – Mothers FGD, Village Shiyani, Suredranagar, Gujarat

In UP, in case the doctor (RMP) is giving ORS then only mothers prefer to give to the child and not without his guidance. Very few of them keep it at home and give it on their own when her child is sick. However, in Gujarat the mothers keep ORS packets at home that are distributed by ASHA or ANMs and give to the child on their own in case they have had a prior experience of using it.

Packs of ORS as shown by a few mothers



Mothers/caregivers are aware that ORS is available at medical stores, *kirana* stores and also is being distributed by ANMs and in few cases given by the village doctors (RMPs). Major source of information for ORS in UP is the doctor (RMP) and ANM. In Gujarat, ASHA and the government hospital play a more active role as its key informants. Also, a few mothers cite about the ORS television commercial on Doordarshan and promotional campaigns like the 'ORS Week' as conducted by Gujarat government through which they got to know more about its usage.

Recommendation by RMP/ASHA/Doctor acts as the trigger for usage of ORS among mothers/caregivers. Barriers to its usage are lack of awareness and clarity on its actual role and preparation method. Also, it doesn't act as a differentiator.

Triggers for Usage of ORS

- Recommendation by RMP/ASHA/Doctor

Barriers to Usage of ORS

- Lack of awareness/knowledge
- Lack of clarity on the role and preparation
- No differentiator

5.1.2 Provider

5.1.2.1 Rural Medical Practitioner (RMP)

There is high level of awareness about ORS usage in diarrhea among RMPs. Awareness of ORS has been generated by government functionaries like ANM and ASHA workers. Also, RMPs have seen TV ads of the product.

Prescription of ORS is high in Gujarat as compared to UP. Both small and large packs are given. Normally, small Rs 3-5 pack is given to poor patients and regular pack of Rs 15 to others. Brands like Electral, Enerzal, Sporilac are preferred.

Perception about ORS among RMPs

“Diarrhea mein ORS bina jeevan adhoora hai” – RMP, Ambedkarnagar, UP

“ORS is more effective than medicine” – RMP, Surendranagar, Gujarat

“Give ORS mixture as per taste the child likes” - RMP, Badaun, UP

“Cool boiled water, mix one spoon of ORS in a glass of water, prepare small quantity which child can consume” – RMP, Patan, Gujarat

It was observed that ORS is not recommended as first line of treatment in most cases. Rather sugar salt solution (also known as ‘home made glucose’) is prescribed by RMPs. Many RMPs are also of the opinion that ORS provides slow recovery and is not efficacious to treat diarrhea without other medicines.

Low acceptance of ORS because of its taste also puts challenge to RMPs. Most prescribe flavoured ORS available at their dispensary. Also, RMPs do not follow standard practice for preparation of ORS while explaining it to mothers. Based on the child’s age and severity, different preparation is told, which sometimes is difficult to follow.

Triggers for Usage of ORS

- Recommendation by peer and past experience
- Government emphasis

Barriers to Usage of ORS

- Low efficacy..slow recovery
- Taste not liked
- Difficult to prepare correctly by caregivers
- Pressure for immediate relief

5.1.2.2 General Physician/Pediatrician

There is high level of awareness about ORS usage in diarrhea among GPs/Pediatricians. It is observed that doctors recommend ORS as first line of treatment in all types of diarrhea. All general physicians and pediatricians opine that ORS is the life line for every type of diarrhea. They firmly believe that it is only through ORS that the nutrients lost in the process of diarrhea can be recovered. Further, there is high acceptance of prescribing flavoured ORS

Perception about ORS among GP/Pediatricians

“ORS is life line for any type of diarrhea” – Pediatrician, Block Limbdi, Gujarat

5.2 Zinc - Knowledge, Attitude and Practices

5.2.1 Mothers/Caregivers

Awareness of Zinc among mothers in the villages of Uttar Pradesh is very low. However, a few of them have heard about it from ANMs who provide zinc tablets to kids for 14 days. Also, there is lack of correct knowledge of its course. A few literate mothers mention about the brand name ‘Zincovit’ syrup which was given to their child by the doctor in a previous diarrheal episode. Whereas, in Gujarat there is complete lack of awareness about Zinc.

In case of UP, the source of information for Zinc is either the doctor (RMP) or in a few cases ANM.

Since the awareness level for Zinc is very low, its usage is also negligible unless and until prescribed by the doctor.

Knowledge and Perception about Zinc by Mothers/Caregivers

“hum ne ANM didi se suna tha ki aadhi tablet zinc ki deni chahiye bacche ko 14 din ke liye...lekin zaada tabiyat kharab ho toh he dete hain” – Mothers FGD, Village Ramzanpur, Badaun, UP

“Humne Zinc ke baarey mein kuch nahi suna...humein bilkul nahi pata” – Mothers FGD, Suredranagar and Patan, Gujarat

Recommendation by RMP/ANM/Doctor can only act as a trigger for usage of Zinc among mothers/caregivers. Barriers to its usage are lack of awareness and clarity on its actual role.

Triggers for Usage of Zinc

- Recommendation by RMP/ANM/Doctor

Barriers to Usage of Zinc

- Lack of awareness/knowledge
- Lack of clarity on the role

5.2.2 Provider

5.2.2.1 Rural Medical Practitioner (RMP)

In case of AED (POUZN) intervention areas of Uttar Pradesh among most of the Rural Medical Practitioner there is low to moderate awareness about zinc's precise role in diarrhea management. Most of these RMPs are aware of the role and benefits of zinc in diarrhea management but correct knowledge of dosage is not known. However, in spite of the awareness zinc finds negligible presence in prescription of RMPs due to their low believability on the efficacy of zinc to treat diarrhea, not an immediate reliever, zinc treatment versus antibiotics comes to be costlier affair and misconception of usage of zinc leads to more dehydration. Further in the non intervention areas of Uttar Pradesh, there is no awareness about zinc therapy.

In case of Gujarat, awareness and knowledge about precise usage of zinc in diarrhea management among RMPs is low, whatever little information is known it is due to their close proximity with GP/Pediatrician practicing in nearby towns. Like their counterpart in Uttar Pradesh, RMPs in Gujarat also believe that zinc is not an immediate reliever from diarrhea and it is an expensive product which cannot be prescribed to all patients who come to them.

5.2.2.2 GP/Pediatrician

Doctors state that zinc is given in diarrhea and that it is not just confined to being a multivitamin. They further state that zinc not only helps in quick recovery of the G.I. tract whereby reducing frequency /severity of diarrhea ,but it also helps in immunity building and growth of the child. However among doctors there is a belief that zinc does not provide immediate relief and it requires a lot of monitoring post medicine administration.

Doctors do opine that zinc has very restrictive usage and is effective only in cases of mild diarrhea. Among doctors in Gujarat and UP, zinc usage is found to be relatively higher in Gujarat, however even these doctors restrict zinc prescription to their urban patients as affordability of zinc is perceived as a purchase barrier among rural patients. In UP, doctors are not prescribing zinc to urban and rural patients as patient from rural areas reach late and condition of the patient becomes severe they expect fast recovery which leads them to use antibiotics and anti-diarrheal instead of zinc.

Common zinc compositions brands being prescribed either for childhood diarrhea or as multivitamin are given in the table below:

	Brand	Company
Common Zinc Medication for childhood diarrhea	Zimbo	Abbot
	Zinconia	Zuventus
	Zincy	-
	Zincolite	-
	Zioral	-

Major source of information of zinc are peers, medical representative and WHO guideline. Recommendation by peer and past experience act as trigger for usage of zinc among doctors. Barriers to zinc usage are that it has restrictive use, does not provide immediate relief, lot of monitoring is required on dosage administration and cost of the medicine is high for patients to take.

Triggers for usage of Zinc

- Recommendation by peer and past experience

Barriers to usage of Zinc

- Restrictive use
- Does not provide immediate relief
- Dosage monitoring compliance is an issue
- Affordability

Perception about Zinc among GP/Pediatricians

“For prevention for diarrhea, zinc is not given, every child has his/her own immunity” – Pediatrician, Patan Gujarat

Some Zinc packs as observed in the market



5.3 What can motivate RMPs to look at ORS and Zinc as a treatment for child diarrhea?

Current Scenario: Zinc

- Currently there is low to moderate awareness of Zinc among RMPs in intervention areas of UP. Many are aware of role and benefits but correct knowledge of dosage was missing. In non – interventional areas of UP, there is no awareness about Zinc therapy
- On the other hand, awareness and knowledge about correct use of zinc is low in Gujarat about Zinc among RMPs (semi qualified) through Pediatrics/ GPs practicing in nearby towns.
- Prescription of Zinc is negligible because of
 - Low believe on efficacy to treat diarrhea
 - No immediate relief...it has to be continued for 14 days
 - Costlier than antibiotics treatment
 - Poor availability
 - Patients often comes after severe dehydration when Zinc and ORS therapy alone is not effective
 - Misconception that use of zinc may lead to dehydration

What can motivate RMPs to prescribe Zinc?

Challenges	What can motivate for Zinc prescription
Low belief on Zinc efficacy to treat diarrhea	<ul style="list-style-type: none"> • Convince RMPs about Zinc efficacy by following actions: <ul style="list-style-type: none"> ○ Educating about long term immunity through zinc therapy by administering right dosage ○ Educating that Zinc and ORS is as effective as their current therapies with antibiotics/ anti-diarrheals ○ Encouraging GPs/Pediatrics (who are key influencers for RMPs) to prescribe Zinc which may motivate RMPs to start prescribing zinc
No immediate relief...it has to be continued for 14 days	<ul style="list-style-type: none"> • Educate about importance of completing full treatment course to get the maximum protective benefit and cure diarrhea without side effects • Sensitize that quick fix solution through antibiotics may benefit patient in short term but will not help for long term retention
Costlier than antibiotics treatment Poor availability of Zinc	<ul style="list-style-type: none"> • Ensure the availability at RMPs/drug stores... give attractive margins to promote it • Make efforts to provide Zinc at the cost antibiotics/anti diarrheas • Incentivize RMPs for promoting Zinc
Patients often comes in stage 2 or 3 when the condition become severe	<ul style="list-style-type: none"> • Educate both community and RMP about 3 stages of diarrhea. • Encourage usage of Zinc therapy by community in stage 1 along with ORS at home during onset of diarrhea • In case, patient approaches RMP in stage 1, encourage him to treat with ORS and Zinc only • Educate community to take the child to RMP only in stage 2 • Encourage RMP to prescribe Zinc and ORS in stage 2 • Sensitize RMPs to start antibiotics and anti-diarrheals only in stage 3

Current Scenario: ORS

- High awareness about ORS and its role in diarrhea treatment among RMPs through ANMs/ ASHA workers (governments health programs)
- However, the prescription of ORS as first line of treatment was found to be low (especially in UP) because of following reasons:
 - Slow recovery
 - Pressure for immediate relief
 - Difficulty in following RMP instruction for preparing ORS in right proportion (measure of water and ORS quantity)
 - Taste not liked by children

What can motivate RMPs to prescribe ORS?

Challenges	What can motivate for ORS prescription
Low believe on ORS efficacy due to slow recovery	<ul style="list-style-type: none">• Educating about role of ORS in diarrhea• Convincing RMPs for adoption of ORS as first line of treatment
Pressure for immediate relief	<ul style="list-style-type: none">• Sensitize that quick fix solution through antibiotics may benefit patient in short term but will not help for long term retention
Difficulty in preparing ORS correctly by mother	<ul style="list-style-type: none">• Demonstrate how to prepare to mother and induce trials
Taste not liked by children	<ul style="list-style-type: none">• Promote flavored ORS

Therefore, addressing the concerns as stated above, there should be combined promotion of Zinc and ORS for diarrhea alleviation.

- Zinc should be given along with ORS on the first sign of diarrhea in stage I and continued till it persists.
- Zinc to be given for two weeks (approx) depending on the child's age
- Zinc is both curative and preventive. On the one hand, it alleviates severity and duration of diarrhea and on the other it builds resistance to prevent re-occurrence and transformation to more life threatening diseases like cholera.



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Chapter 6: Media Exposure and Influencers

6 Media Exposure and Influencers

This chapter talks about media access and exposure; sources of health related information for mothers/caregivers as well as the health service providers. Later it maps the authority figures/influencers for these stakeholders.

6.1 Media Exposure and Health Communication Received

Table 10: Media Exposure and Health communication Received by Different Stakeholders

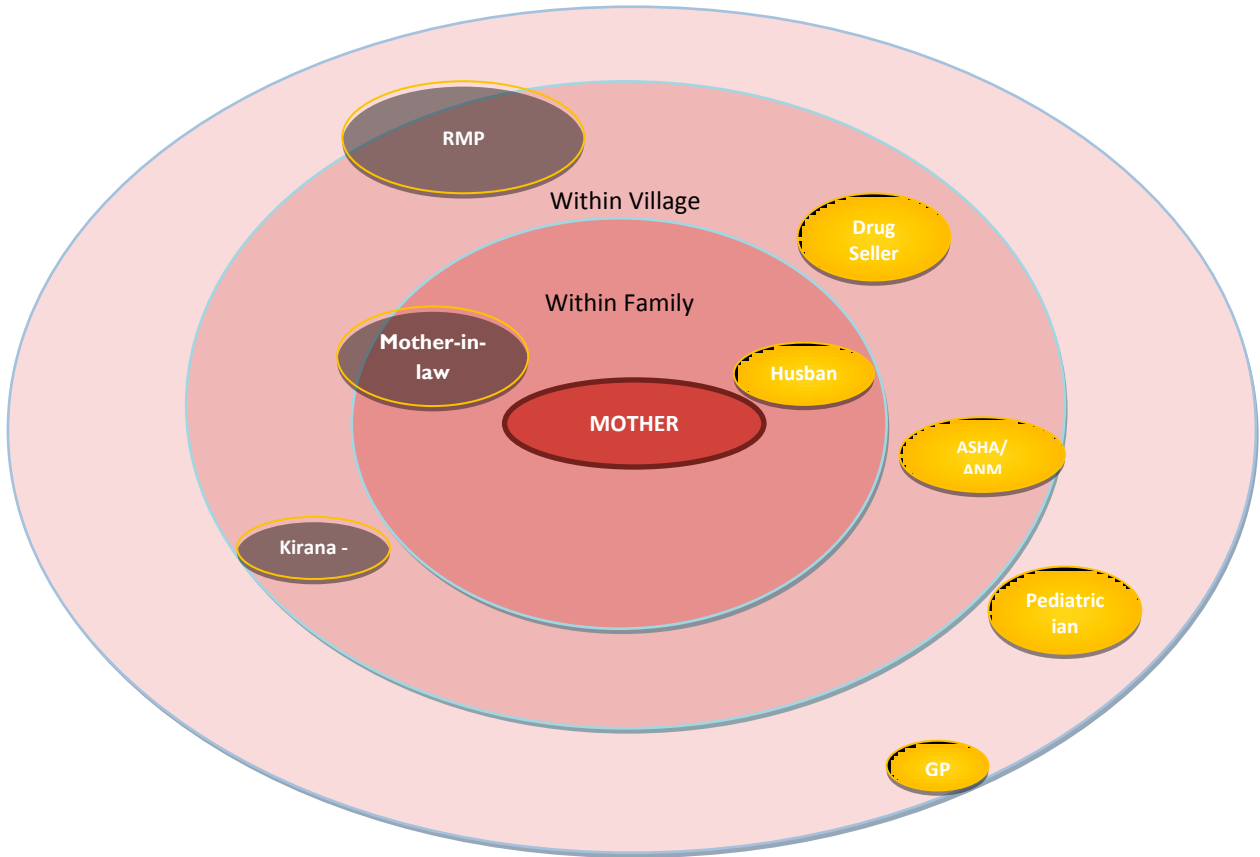
	Mothers/Caregivers	RMPs	GPs/Pediatricians
Media Access	<ul style="list-style-type: none"> There is almost negligible mass media (TV/Radio) access among mothers/caregivers especially in UP. In Gujarat, TV (DTH) viewing is comparatively high and the most suitable time is between 11:00AM-1:00PM. Below the line media channels like local melas are regularly accessed by the community, especially in UP 	–	–
Source of health related information	<ul style="list-style-type: none"> ASHA and ANMs in the village act as a source for all health related information like Polio, immunization, vaccine. These health workers usually conduct community meetings in the villages and also go house to house to disseminate the information. However, most of the women do not prefer attending community meetings rather wish ANMs and ASHAs should come to their door step to give information. In addition to ANMs and ASHAs, mothers in Gujarat also mentioned their exposure to wall paintings on child health. 	<ul style="list-style-type: none"> There is no formal access to reliable sources for updated information on new medicines, especially in case of unqualified RMPs. They depend on chemists for the same. However, some of the RMPs (largely qualified ones) mentioned about Medical Representatives, journals like Indian Drug Review, SIMS. Some of the young RMPs also access internet to know about new treatment and drugs 	<ul style="list-style-type: none"> Medical representatives Journals of Indian Medical Association Indian Pediatric Association conferences Medical related websites
Recall of any past health related campaign	<ul style="list-style-type: none"> Polio campaigns are on the top of mind recall among the community. Apart from this, there is not much recall of any other health related campaign in the village (<i>not even previous zinc promotions in AED intervention villages</i>) 	<ul style="list-style-type: none"> Government's Polio campaigns are on the top of mind recall of RMPs Also, in the intervention areas of AED, they could also recall the Zinc promotion campaign 	–

6.2 Authority Figures and Influencers for Mothers/Caregivers and Providers

6.2.1 Authority Figures for Mothers/Caregivers

Figure 3 depicts the entire eco-system and circle of influence for mothers/caregivers in their health seeking behavior for child diarrhea management and treatment. Each circle, depicting a separate entity, is placed at different levels - within household, within village, outside village. The distance of these circles from the centre shows its accessibility and the size of the circle shows its level of importance/influence on mothers/caregivers.

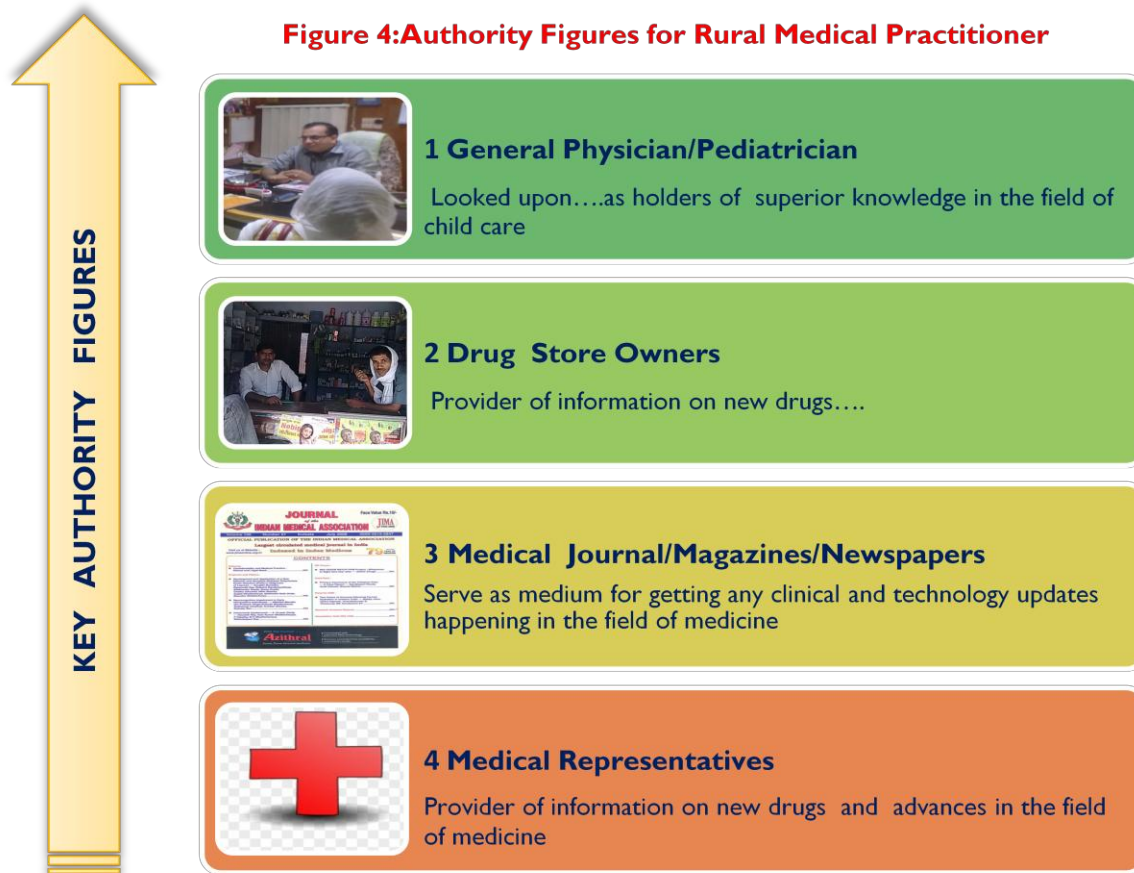
Figure 3: Circle of Influence for Mothers/caregivers in Diarrhea Treatment



As shown, mothers are most influenced by their mother-in-law within the household in their health seeking behavior for child diarrhea management and treatment. There is also some level of influence by the husband. However, they only act as a support mechanism for taking the child to the doctor. At the next level within the village, RMPs (Rural Medical Practitioners) form the most crucial link since they are the most accessed and act as the first port of call for the child diarrhea treatment. They are the most trusted source and belief on them by the mothers/caregivers for treating their children is high. Some of the other lesser important entities which are accessed by mothers during child diarrhea are drug store owners, *kirana* stores (mostly in case of Gujarat) and government entities like ASHA/ANMs.

6.2.2 Authority Figures for Rural Medical Practitioner

Figure 4 depicts different entities of influence for Rural Medical Practitioner in their information seeking behavior for disease management and treatment. The upward arrow and different entities placed on it depicts the level of importance/influence each one of them embraces on the Rural Medical Practitioner.



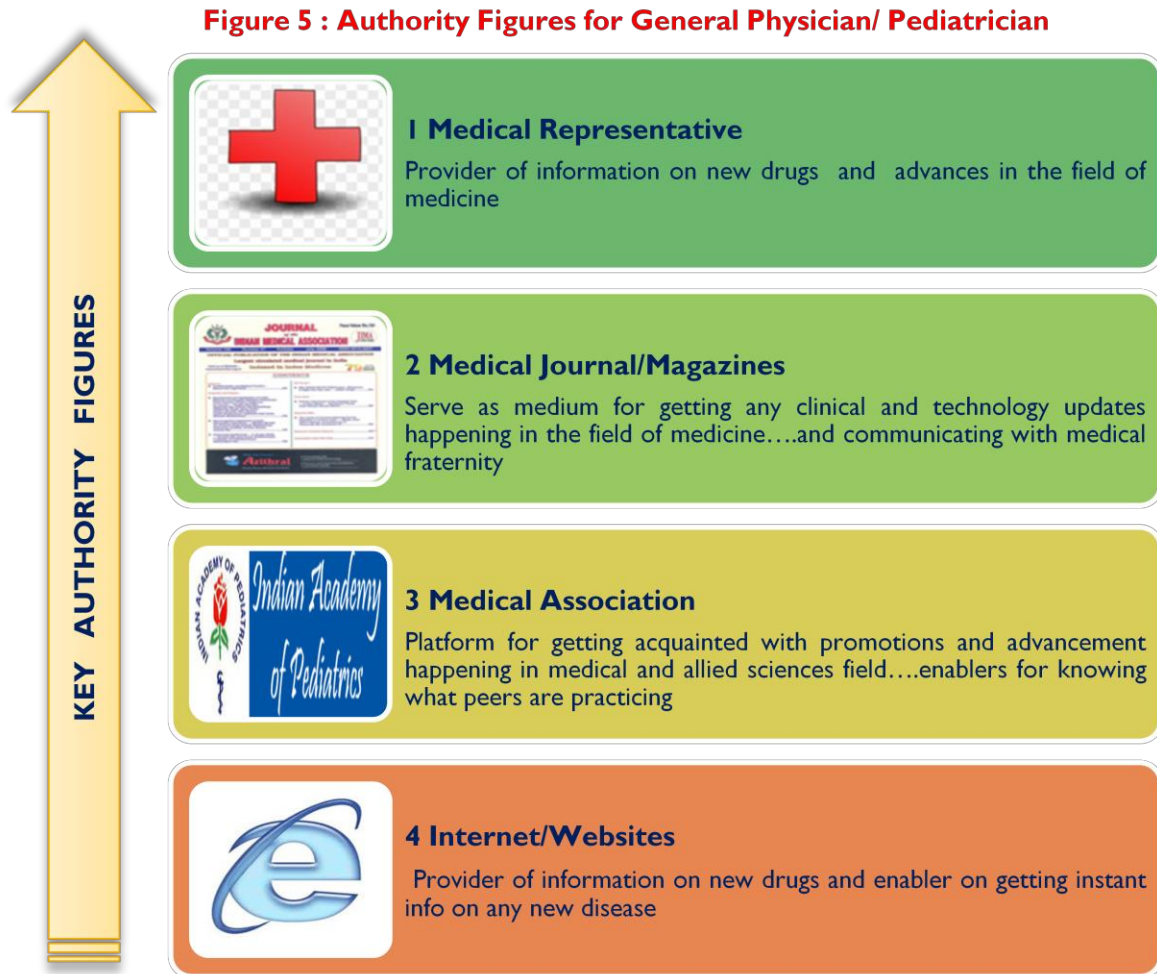
As shown, Rural Medical Practitioners are most influenced by the General Physician/Pediatrician in their information seeking behavior for any disease management and treatment since the General Physicians and Pediatricians are looked upon by them as specialists having in-depth medical knowledge and expertise. Therefore many RMPs in both Uttar Pradesh and Gujarat try to refer to the prescription written by GP/Pediatrician in towns and try to imitate the same and bring it in their own practice.

At the next level, Drug store owners form the next crucial authority/influencer, being present in the village they are regularly available to RMPs whenever new information on medicine is required to be sought unlike medical representative whose visitation to the villages is very limited.

Besides the above entities majority of the RMPs do regularly read/subscribe to medical journal/magazines of known associations like Indian Rural Medical Association, other journals like Indian Medical Review, SIMS etc. which they refer to upgrade their knowledge on primary health care, clinical and technological advancement in the field of medicine.

6.2.3 Authority Figures for General Physician/Pediatrician

Figure 5 depicts different entities of influence for General Physician/Pediatrician in their information seeking behavior for disease management and treatment. The upward arrow and different entities placed on it depicts the level of importance /influence each one of them embraces on General Physician/Pediatrician.



As shown, General Physician/Pediatricians are highly influenced by Medical Representative who provide information on new drugs and any advances happening in the field of medicine. At the next level, medical journal/magazines of association like Indian Medical association, Indian Academy of Pediatrics etc form the next crucial authority/influencer figures, for both GP/Pediatrician. These journals are regularly prescribed.

Apart from the above entities, majority Pediatricians unlike General Physician are active members of medical associations like the Indian Academy of Pediatrics. Further in Gujarat, Pediatricians not only actively participate in meetings at the state level but are active participants of meeting at the block town level. These associations serve as a platform for pediatrician for getting acquainted with any advancement having in medical and allied science field etc.



जिंक (ZINC) की दवायगी उपयोगिता क्यों ?

- बच्चे को पूर्ण स्वास्थ्य, विकास एवं रोग प्रतिरोधक क्षमता बढ़ाने के लिए।
- दवायगी उपयोग करके वे दुर्लभ जिंक (ZINC) की मात्रा को पूरा करने के लिए।
- अधिकांश में बच्चे को स्वास्थ्य एवं रोग प्रतिरोधक क्षमता को बढ़ाने दवायगी के लिए।
- दवायगी उपयोग अंतर्द्वारा वे होने वाले खराब से बचाव के लिए।

जिंक (ZINC) की दवायगी उपयोगिता को फायदे :

- वे दवायगी उपयोग करके देता है।
- बच्चों की प्रतिरोधक क्षमता को बढ़ाता है, जिससे दवायगी अपने रोग ग्राहक तक होने की सम्भावना कम हो जाती है।
- वे इम्यून प्रणाली सुदृढित व अकारण है और इससे एन्टी बायोटिक जैसे साईकल इन्फेक्शन नहीं होते हैं।
- इससे जीवन दवायगी को भी नहीं, बल्कि अन्य रोगों जैसे कालरा, जीरोटी से भी बचाने की क्षमता बढ़ती है।

इस तरह बच्चों को बचाव होने पर WHO ORS को साथ ZINC दें :

- WHO ORS दवायगी से होने वाले फायदे, जिंक को साथ देना है।
- जिंक दवायगी को साथ, WHO ORS दवायगी को साथ देना है और अपने रोग ग्राहक तक दवायगी को बचाव तक ही जाती है।

इस तरह बच्चों को बचाव होने पर WHO ORS को साथ ZINC दें :

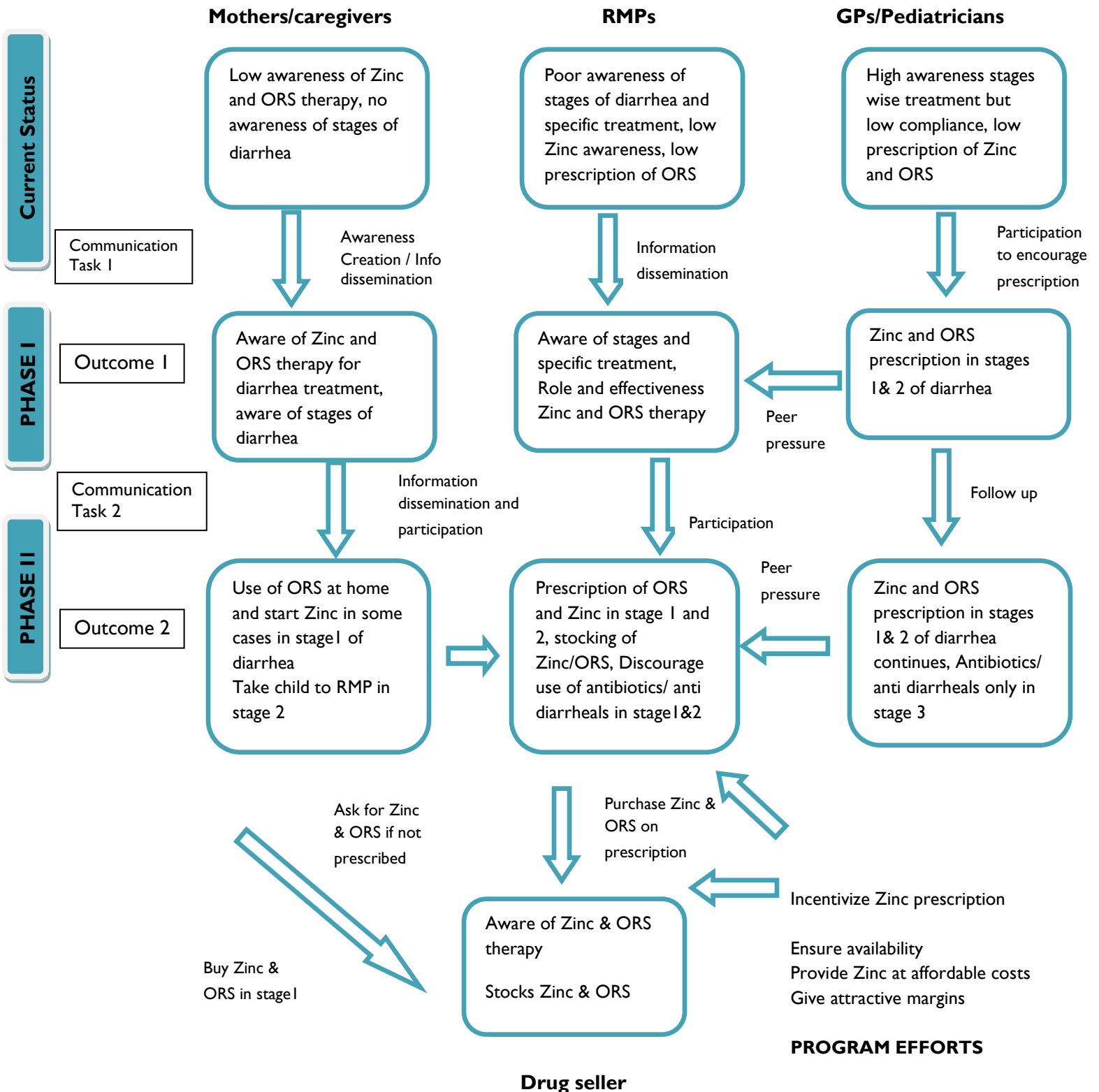
- WHO ORS दवायगी से होने वाले फायदे, जिंक को साथ देना है।
- जिंक दवायगी को साथ, WHO ORS दवायगी को साथ देना है और अपने रोग ग्राहक तक दवायगी को बचाव तक ही जाती है।



Chapter 7: Roadmap to Communication Strategy

7 Communication Approach and Possible Tools for Zinc and ORS Promotion

Figure 6: COMMUNICATION APPROACH – ZINC & ORS PROMOTION



- Communication needs to cover all four stakeholders namely – mothers/caregivers, RMPs, GPs/ pediatricians and drug sellers.
- Maximum emphasis is required at RMPs and mothers/caregivers level as they are critical to the success of the programme.
- A **two phased communication approach** is proposed for the programme. A behaviour change model (as depicted below in the section) has been used to develop this approach.

Phase I:

Three stakeholders mothers/caregivers, RMPs and GPs/pediatricians should be simultaneously covered at this stage.

In phase I, awareness generation about Zinc and ORS therapy and information dissemination about three stages of diarrhea (as per WHO guidelines) should be done among **mothers/caregivers**. For this purpose, **inter personal communication (IPC)** should be used by organizing community meetings and one-to-one contacts at home by programme staff. This was also found to be the most preferred communication medium for health information by mothers/caregivers since currently too they receive similar communication through these mediums from government health workers.

“Samohik 10-12 logon ke saath ya ghar ghat jaa kar charcha honi chahiye” – Mothers FGD, Ambedkarnagar, UP

After IPC, we suggest use of outdoor communication and below-the-line mediums due to low literacy and poor access to mass media of mothers/caregivers. Here, tools like **flip charts with visuals and/or audio/visual films** should be used. Also, **stickers/posters on local transport vehicles** (bus, auto rickshaw, tractor trolley, *jugaad, chadga*) and **wall paintings with high visual content** should be used as they act as reminder media for creating high recall of the campaign.

We recommend posters/stickers on the local transport vehicles, especially in Gujarat, where most of the mothers have mentioned that they commute by “*chagda*” while taking their child to the doctor. Also, health related wall paintings were recalled by mothers in Gujarat.

These outdoor communication materials should be put at strategic locations like dispensary /health centre, drinking water source, chemist shop, entrance of the village and bus stops for high visibility. In case of wall paintings, the suggested size is atleast 8 ft x 6ft (smaller sizes of wall paintings as used by AED in their previous phase had poor recall and had low visibility).

In case of **RMPs**, information dissemination is required for sensitizing them about the three stages and stage wise treatment of diarrhea. This should include specific communication about role and effectiveness of Zinc and ORS in diarrhea. For this purpose **mini groups** or **one-to-one meetings** should be organized by programme staff for information dissemination. The **audio visual film of**

debate on diarrhea among RMPs and town level GPs/Pediatricians can be shown to them later on. This came as a suggestion by the RMPs in the focus groups – **“humari charcha ka he film banaiye toh vo zaada real hoga”** – RMP FGD, Ambedkarnagar, UP

Further, **leaflets/ brochure, calendars** containing relevant information on diarrhea can be given to them after the meeting for better comprehension and reinforcement. Repeat visits should be done after 2-3 months by programme staff to build rapport and confidence (again as suggested during RMPs focus group discussions – **“aapko har 3 maheney ke baad aana chahiye humare paas...usse aap humari problems bhi sun sakenge aur aapko bhi time milega apna program implement karne ke liye”** – RMP FGD, Ambedkarnagar, UP)

All this will inculcate correct knowledge of stages and stage wise treatment among RMPs and make them realize the importance of Zinc and ORS in diarrhea treatment.

With **GPs/Pediatricians**, the intervention should focus on participation of programme staff in district level conferences of pediatricians and one-to-one interaction to reinforce the efficacy of Zinc and ORS therapy and encourage prescription in stage 1 and 2 of diarrhea. **Samples of Zinc and ORS** should be given at this stage and communication material like **table calendars, posters** should be displayed at doctor’s clinic. These efforts will create favorable environment for Zinc and ORS treatment and motivate them to start its prescription. This behavior will create peer pressure on RMPs to take it seriously as GPs/Pediatricians are the key influencers for them.

Phase II:

At this stage, in addition to the above mentioned three stakeholders, drug sellers will also be covered. After achieving the outcomes of phase I, programme should focus on bringing behaviour change among RMPs and mothers/caregivers in phase II.

In this phase, **mothers/caregivers** should be engaged through an event (**Diarrhea Alleviation Day**) in the village for disseminating diarrhea messages through participative process. On this occasion, a community meet can be organized by programme staff in school/private clinic and local RMPs, drug sellers, parents of children having diarrhea episode and other parents of children under 5 years and caregivers (mothers-in-law) should be invited. During this event following activities can be done:

- **Role plays (natak)** to communicate seriousness of diarrhea and its treatment and prevention through a storyline in local language for better comprehension.
- Physical examination of children (height-weight measurement), counseling for prevention and treatment of affected children through Zinc and ORS by RMPs.
- **Free sampling** of ORS and Zinc through RMPs for affected children.
- Information sharing about how to treat diarrhea with Zinc and ORS in stage I (refer to communication messages section for details).

- **Demonstrate** how to prepare ORS and get it prepared by them.
- Information about how to give Zinc dosage to their children.
- Database generation of the families with below five year children for disseminating communication messages.

The inclusion of RMPs here will not only build their image and credibility within the community, but also develop a sense of ownership with the programme.

After organizing event in village, regular follow up visits should be done to reinforce the behaviour change. During follow up visits, focused gathering of affected children should be done at RMP clinics. Along with it, testimonials of benefited children should be shared by inviting them to demonstrate the efficacy of Zinc and ORS therapy for diarrhea treatment.

Afterwards, **pre-recorded messages on mobile** can be sent to the families at regular intervals as mobile penetration among mothers has been found impressive during the study. Since mothers do not read SMS due to their low literacy, hence pre-recorded messages are recommended.

These interventions will lead to outcome 2 as depicted above and mothers will start identifying and treating stage I diarrhea with ORS at home and start Zinc in some cases instead of resorting to other home remedies done earlier. They will be encouraged to buy these drugs from the local drug seller. This will result in many cases being addressed in stage I of diarrhea. Therefore, the child will be taken to RMP mostly in stage 2.

Similar to phase I, **RMPs** will be simultaneously covered in this phase also. The programme staff will conduct demonstrations of ORS preparation and share details of Zinc dosage along with giving **sample bottles** of Zinc and ORS packets. Taking lead from peer pressure generated in phase I, RMPs will be encouraged to treat children with ORS and Zinc in stage 1 and 2 diarrheal cases. In addition, to drive compliance mothers will be encouraged to demand Zinc and ORS in case it is not prescribed by RMPs. The RMPs will also be sensitized to start antibiotics and anti-diarrheals only in stage 3 of diarrhea.

Since RMPs also dispense medicines, availability of drugs should be ensured at clinic as well as drug stores. RMPs should be incentivized for promoting Zinc and ORS. Also, these drugs should be provided at affordable costs not exceeding the cost of medicines prescribed earlier. An attractive margin also needs to be ensured for RMPs as they do not charge consultancy fee separately. To build the imagery of clinic, **branded name plates and utility items (prescription slips, pens)** with diarrhea messages can be provided. To encourage healthy competition among RMPs and motivate them for programme, a **best practices award** should be instituted.

Also, the intervention with **GPs/Pediatricians** should continue to keep the peer pressure on RMPs as done in phase I too.

The **Drug seller** should be approached in this phase. After sensitizing him through diarrhea alleviation day programme, he should be encouraged to stock Zinc and ORS by offering him attractive margins and low cost drugs. Point-of-purchase (POP) material like **posters/danglers**

and stickers, display racks/dispensers, chemist boards with branding (dealer Boards) can be put up at outlet to ensure high visibility and recall. Regular visits should be made by programme staff to ensure the availability of drugs. He should also be advised to explain the dosage of Zinc and preparation of ORS when mothers/caregivers come to him for buying medicines on their own in phase I.

Thus, this approach will bring desired behaviour change and lead to the success of the programme.

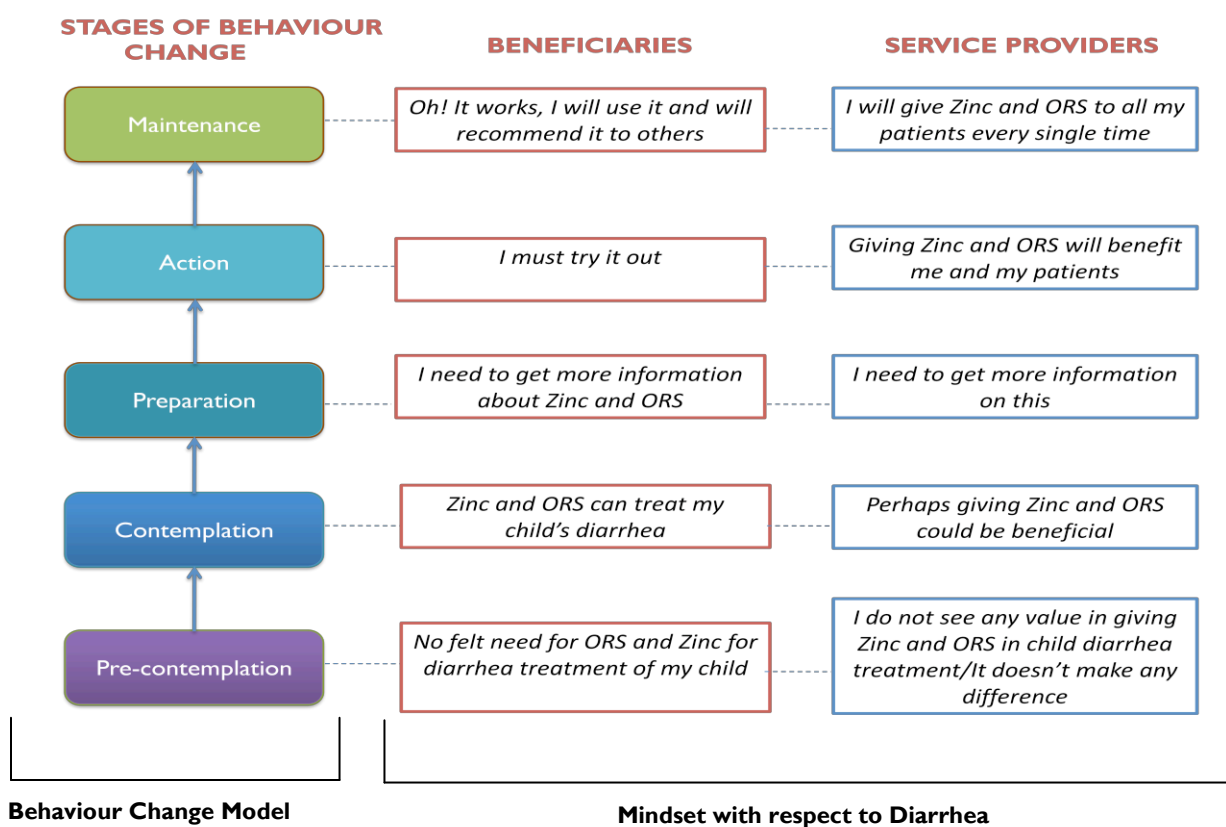
Further, the details related to possible communication messages and tips for programme implementation have been provided in section 7.3 and 7.4.

7.1 Proposed Construct for Behaviour Change

Since the objective of the communication programme for diarrhea alleviation through Zinc and ORS involves changing the behaviour of the target audience to a desired level of adopting the ideal practices of diarrhea treatment, the following behaviour change construct is proposed for the programme. The overall objective during the communication programme would be to move each target audience to an upper level from their current stage by addressing their respective communication challenges.

At present, the mothers/caregivers are at the pre-contemplation stage and the service providers are at the contemplation stage.

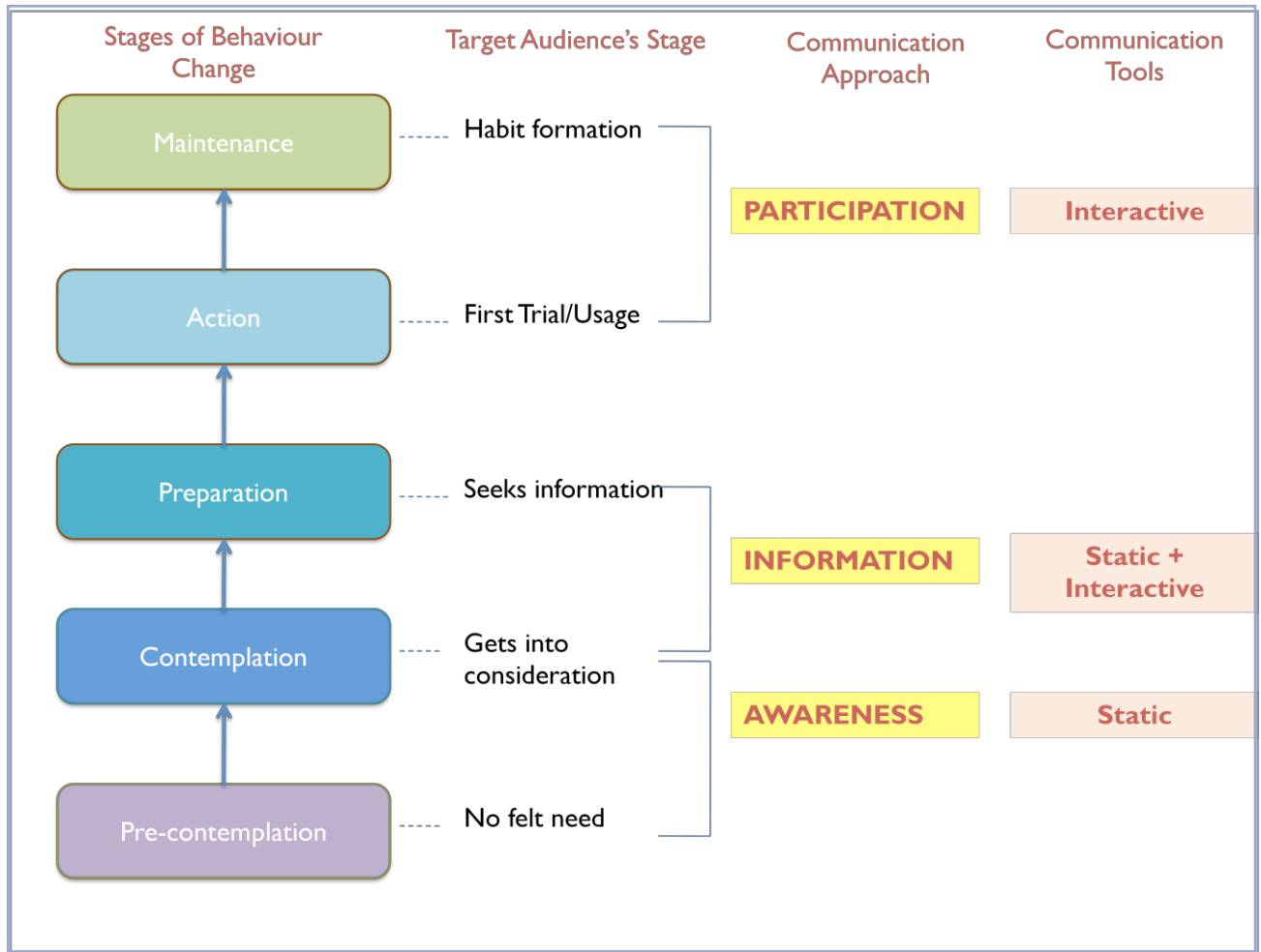
Figure 7: Construct for Behaviour Change



7.2 Behaviour Change Communication Model

The following model of behaviour change communication is proposed in order to address communication challenges of different target audience and to move them to the upward ladder of the desired behaviour of adopting the ideal practices of diarrhea treatment. On each category of diarrhea issues, a SIGNIFICANT shift upward is sought.

Figure 8: Behaviour Change Communication Model



7.3 Communication Messages

The suggested communication messages based on communication gaps identified during the study are as follows for mothers/caregivers and providers.

Mothers/Caregivers

Themes Comm Approach	Communication Construct		
	Create Awareness	Provide Information	Initiate Participation
About Diarrhea	<ul style="list-style-type: none"> Diarrhea can be fatal if not treated immediately Causes and types of diarrhea Immediate action steps for treatment / prevention Myths are baseless 	<ul style="list-style-type: none"> Correct and timely diagnosis of Diarrhea Preventive measures (including health and hygiene) 	
Home remedy/Self medication	<ul style="list-style-type: none"> Myths are baseless 	<ul style="list-style-type: none"> Zinc to be made a part of all home remedy solutions Efficacy and suitability of treatment is more critical than the cost 	<ul style="list-style-type: none"> Zinc dosage/ measure and medicine course to be discussed and demonstrated
Diarrhea Treatment	<ul style="list-style-type: none"> Poor course compliance Believe that drugs should be stopped once symptoms disappear/ avoid medication/quick fix solution not healthy 	<ul style="list-style-type: none"> Dosage not taken in right proportion...reduces efficacy Actual efficacy determined by full course, compliance is important to avoid relapse Myths are baseless (how?, why?) 	
Zinc & ORS	<ul style="list-style-type: none"> Zinc and ORS both are very necessary for diarrhea treatment (Zinc+ ORS) is far more effective than just ORS Zinc builds immunity 	<ul style="list-style-type: none"> ORS to be initiated on the first sign of diarrhea and continued till it persists Zinc to be given for two weeks(approx) depending on the child's age Zinc builds immunity in long, prevents re-occurrence 	<ul style="list-style-type: none"> Demonstrate how to prepare ORS and get it prepared by them

Service Providers

Table 12: Communication Construct for Service Providers

Table 12: Communication Construct for Service Providers			
Themes / Comm Approach	Communication Construct		
	Awareness	Information	Participation
About Diarrhea		<ul style="list-style-type: none"> Breast milk should never be stopped during diarrhea How to diagnose diarrhea Correctly (Types/stages of diarrhea) 	
Diarrhea Treatment		<ul style="list-style-type: none"> Quick fix is not healthy in the long run Correct treatment is good for patients. Probability of customer retention increases if they see value in treatment 	
Zinc & ORS		<ul style="list-style-type: none"> (Zinc+ ORS) is far more effective than just ORS. ORS to be initiated on the first sign of diarrhea and continued till it persists. Zinc to be given for two weeks(approx) depending on the child's age Zinc builds immunity in long, prevents re occurrence Zinc also cures diarrhea. It has no side effects. It is effective for other diseases as well Myths are baseless 	<ul style="list-style-type: none"> Demonstrate how to prepare ORS and Zinc and get it prepared by them

Message Approach

The message design should focus on following aspects:

- Positive effects of adhering to desired behavior
- Effects of NOT adhering to desired behavior
- Personal down-time, loss of income and inconvenience to family

7.4 Suggested Tips for Programme Implementation

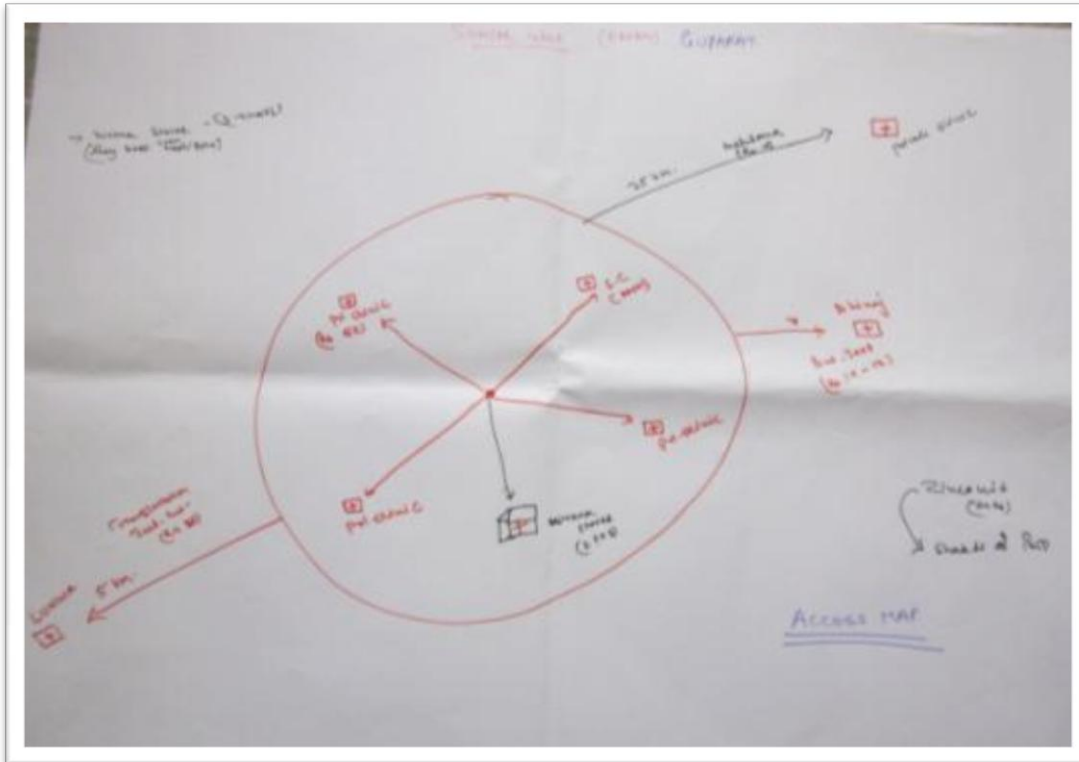
- Create programme identity – logo, mnemonic, tagline
- Create uniformity of design
- Brand animators/promoters (uniform code)

- Select change agent from the community, preferably women
- Incentivize change agent, provide branded merchandise
- Create hype through small interventions culminating into day long village level activity celebration
- Felicitate best practitioners
- Involve schools and students as effective change agent
- Do an event at the district level for providers to ensure local media coverage

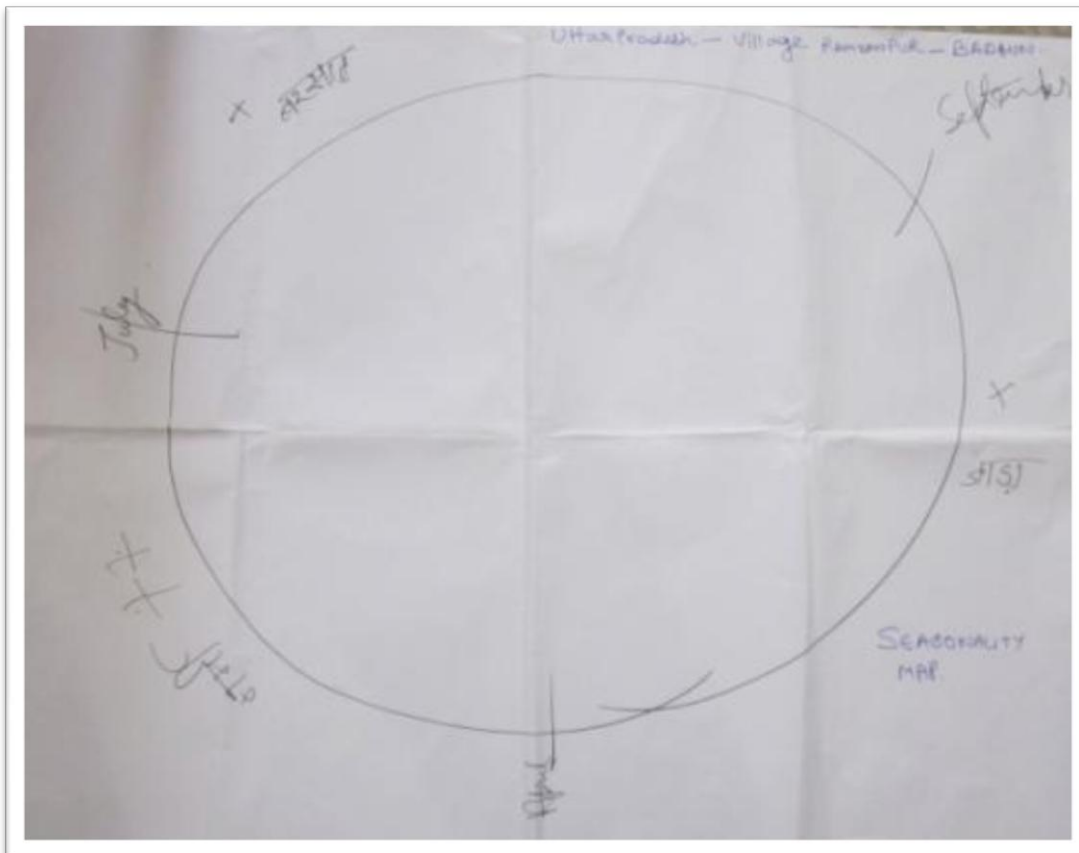
Annexure I: Participatory Rural Appraisal (PRA) Maps

Following are the sample PRA maps drawn during mothers/caregivers FGD:

Access Map



Seasonality Map



Annexure 2: Profile of Drug Store Owners

Profile of Drug Sellers

The Drug sellers covered in rural areas during the study were mostly unlicensed shops without any signboards. However, shops located in nearby towns, where community goes to buy medicines, were licensed drug stores. The presence of unlicensed drug stores is high in UP whereas there is no presence of chemist shops in villages of Gujarat. In such a situation, purchase of medicines is done from the *kirana* stores stocking few medicines in case of self medication or provided by RMP who stocks the medicines. These rural drug sellers mostly reside in the village and sell medicines during day time. In emergency situation, drugs are bought from the RMP.

Profile	UP	Gujarat
Status and location	<ul style="list-style-type: none"> Unlicensed shop in village 	<ul style="list-style-type: none"> Licensed shop located in towns
Coverage	<ul style="list-style-type: none"> 5-10 km periphery, 8-10 villages 	<ul style="list-style-type: none"> 10-30 km periphery, 20-50 villages
Concentration / Presence	<ul style="list-style-type: none"> Very high, 3-4 in large villages and low presence in small villages 	<ul style="list-style-type: none"> No presence in villages except very large ones, kirana stores stock some drugs in villages
Patient profile & No of customers visiting	<ul style="list-style-type: none"> Mostly male, 20-50 customers, 70-80% with prescription RMPs from small villages also visit these shops to buy drugs 	<ul style="list-style-type: none"> Both male/female, 100 % customer with prescription
Type of Drugs stocked	<ul style="list-style-type: none"> Anti diarrheal, antibiotics, anti vomiting ORS, Zinc (few) Pro-biotic (few) Syrups, IV fluid, injections, tablets 	<ul style="list-style-type: none"> Anti diarrheal, antibiotics, anti vomiting ORS, Zinc (few) Pro-biotic Syrups, IV fluid, injection
Brands Stocked	<ul style="list-style-type: none"> Branded, national & regional , generics also stocked 	<ul style="list-style-type: none"> Branded, mostly reputed brands
Procurement of drugs	<ul style="list-style-type: none"> From wholesaler in nearby town 	<ul style="list-style-type: none"> From wholesaler in nearby town, also door delivery
POP	<ul style="list-style-type: none"> Low POP visibility and branding 	<ul style="list-style-type: none"> High POP visibility and branding
MR visit	<ul style="list-style-type: none"> Negligible 	<ul style="list-style-type: none"> Regular visits

The drug stores are mostly stocking all major drugs prescribed by doctors in that area. The drug seller has some knowledge of the medicines used in diarrhea and how to prepare the ORS. However, the awareness of Zinc is very low except among few in Ambedkarnagar who were contacted by *Pani Sansthan* during the previous programme of POUZN by AED. But no one is aware of role of zinc in diarrhea treatment.

Also, very few drug stores are stocking Zinc as it is not prescribed by doctors in most cases. They are willing to stock if RMPs start prescribing it.

Annexure 3: Profile of RMPs

Profile of Healthcare Providers

The healthcare providers covered during the study were largely unqualified or under qualified professionals who are practicing in rural areas. Majority are quacks (also known as Bengali or *JholaChap* doctors) in UP, whereas alternate medicine doctors (AYUSH, BAMS, BHMS, BUMS) are largely practicing in Gujarat in most cases. These providers mostly reside in villages and offer 24x7 service to the community. In case of Gujarat, few providers commute from nearby towns.

Profile	UP	Gujarat
Qualification & Experience	<ul style="list-style-type: none"> Quacks trained under some doctors , few semi qualified 5-20 years 	<ul style="list-style-type: none"> Mostly Semi qualified , few MBBS 10-30 years
Coverage	<ul style="list-style-type: none"> 5-10 km periphery, 8-10 villages 	<ul style="list-style-type: none"> 2-3 km periphery, 2-3 villages
Concentration / Presence	<ul style="list-style-type: none"> Very high, 3-6 in large villages and 1-2 in small villages 	<ul style="list-style-type: none"> Low, 1- 4 in large villages, no presence in small villages
Patient profile &No of patients attended per day	<ul style="list-style-type: none"> Low and middle income families 20-50 patients, 30-40% children (0-5 years) 	<ul style="list-style-type: none"> Mostly low and some middle income families 10- 40 patients , 15-30% children (mostly 1-5 years)
Services Provided	<ul style="list-style-type: none"> OPD, medicines & injections, saline , day care (few) Dispenses medicines mostly, few write prescription 	<ul style="list-style-type: none"> OPD and medicines Writes prescription in most cases, gives few medicines
Common Child diseases treated	<ul style="list-style-type: none"> Cough & Cold, Diarrhea, malaria 	<ul style="list-style-type: none"> fever, cold & cough, allergies, jaundice , malaria, small pox
Fee charged	<ul style="list-style-type: none"> No fee, clubbed with medicines 	<ul style="list-style-type: none"> Rs 10-20 charged as fee
Facilities	<ul style="list-style-type: none"> Dispensary, 1-2 beds in some cases 	<ul style="list-style-type: none"> Dispensary only

These Rural Medical Practitioners are the first level service providers for the community. Being local residents, they enjoy high level of trust among community. Patients from nearby villages visit these doctors.

Due to low presence of drug stores in rural areas, the RMP also dispenses medicines along with prescription. Being quacks, most RMPs avoid writing prescription slips. However, in case of non availability of medicines at dispensary, prescription is written on plain paper or small pad supplied by Medical Representatives or Chemist.

Generally, treatment of more than one year old child is undertaken by RMPs and cases of smaller children is referred to GPs or Pediatricians in nearby town especially in Gujarat. Proportion of 0-5 years children visiting RMPs is more in UP than Gujarat due to low literacy among community and poor presence of qualified providers. With changing times, now-a-days RMPs are reachable on mobile phones. In emergency cases, they also make personal visits to the patients' homes.

Annexure 4: Profile of General Physician and Pediatrician

Profile of Healthcare Providers (General Physician and Pediatrician)

The healthcare providers covered in the study were largely qualified MBBS professionals with advanced academic degree like diploma in child health care (DCH) or M.D.Pediatrics. Dominant presence of pediatrician and general physician was seen in block/district level towns of Gujarat unlike UP, where their concentration is focused only at the district town level.

Profile	UP	Gujarat
Qualification & Experience	<ul style="list-style-type: none"> Qualified holders mostly MD pediatrics 	<ul style="list-style-type: none"> Qualified holders mostly diploma in child health care
Coverage	<ul style="list-style-type: none"> 5-30 km periphery, 100 villages & more 	<ul style="list-style-type: none"> 5-40 km periphery, 100 villages & more
Concentration / Presence	<ul style="list-style-type: none"> Low, 1-2 in block town....3-4 in district town 	<ul style="list-style-type: none"> High ,1-3 in block town....5-9 in district town
Patient profile &No of patients attended per day	<ul style="list-style-type: none"> Mix of socio-economic income families 	<ul style="list-style-type: none"> Mix of socio-economic income families 40-60 patients, 40-60% children (0-5 years)
Services Provided	<ul style="list-style-type: none"> OPD and medicines 	<ul style="list-style-type: none"> OPD and medicines Neonatal Intensive care unit
Common Child diseases treated	<ul style="list-style-type: none"> Common cold and cough, fever, diarrhea, dysentery, respiratory concerns, typhoid 	<ul style="list-style-type: none"> Common cold and cough, fever, diarrhea, dysentery, respiratory concerns ,typhoid
Fee charged	<ul style="list-style-type: none"> Rs 100- Rs 150 charged as fee 	<ul style="list-style-type: none"> Rs 200/- charged as new case feeRs 100/-charged as old case fee
Facilities		<ul style="list-style-type: none"> 10-15 bedded

Annexure 5: WHO Guidelines on Diarrhea

What is Diarrhea?

It is the passage of liquid or watery stools more than 3 times a day. A recent change in character of stool is more important.

Assessment of the child with diarrhea

A child with diarrhea should be assessed for dehydration, bloody diarrhea, persistent diarrhea, malnutrition and serious non-intestinal infections so that an appropriate treatment plan can be developed and implemented without delay.

Dehydration

Stages	Stage 1	Stage 2	Stage 3
	No dehydration	Some dehydration	Severe dehydration
Condition	Well, alert	Restless, irritable	Lethargic or unconscious
Eyes	Normal	Sunken	Sunken
Thirst	Drinks normally, not thirsty	Thirsty, drinks eagerly	Drinks poorly, or not able to drink
Skin pinch	Goes back quickly	Goes back slowly	Goes back very slowly
Treatment	Plan A	Plan B	Plan C
Fluid deficit	< 5% of body wt or < 50 ml/kg body wt	5-10% of body wt or 50-100 ml/kg of body wt	> 10% of body wt or > 100 ml/kg of body wt
Recommended Treatment	ORS + Zinc Supplement at home	Frequent ORS up to 4 hours + Zinc supplement, doctor consultation after 4 hours	Doctor consultation/hospitalisation

Annexure 6: Detailed Survey Process

Research Design

I. Research Methodology

Qualitative research approach was used for the formative research study to identify the challenges and pain point associated with the use of Zinc and ORS as first line of treatment in child diarrhea.

However in the initial stage of the study, secondary data was collected for all thematic areas for developing an understanding of diarrhea management practices.

After secondary research, qualitative research methodology was used to conduct the primary research. For this purpose formal qualitative research techniques like focus group discussion, participatory rural appraisal (PRA) and in-depth interview were used for capturing information on all research areas.

II. Target Respondent & Selection criteria

The following respondent segment were covered during the study

S. No.	Respondent Segment	Definition/Selection Criteria
1	Mother/caregivers	Of children below the age of 5 years and who have had diarrhea episode in the past 2 weeks belonging to SEC R3 & R4
2	Rural Medical Practitioner	Qualified (BAMS or BHMS) or unqualified (without any formal qualification) practitioner who has maximum patient footfalls from the village.
3	Pharmacist/Drug Store Seller	Selling medicine for the last 2 years
4	General Physician	MBBS/MD doctor having their own private clinic
5	Pediatrician	DCH/MD-Paed. doctor having their own private clinic looking at children from 0-14 years

The study covered limited stakeholders from the government system as this phase of AED project is primarily private sector focused. So the interactions with KOLs like ANM, AWW and ASHA was kept very limited.

III. Research Instrument

For the purpose of conducting the qualitative research with the above mentioned stakeholders, discussion guides were used as the research instrument. Separate discussion guides were prepared for each of the stakeholders. Further, these discussion guides were translated into local languages (Hindi and Gujarati) for using them in respective field areas. Post translation, the guides were also proof read to ensure exactness of the meaning and that the essence of the subject is maintained.

IV. Geography

The study was conducted in AED (POUZN) intervention and non-intervention area of Uttar Pradesh and Gujarat respectively. In UP, three districts - Ambedkarnagar, Badaun and Lucknow were covered and in Gujarat two districts – Patan and Surendranagar were covered. Thus a total sample size of five districts and nine villages were covered. For representing intervention areas, the study covered rural areas of Ambedkarnagar (UP) (sampling villages from the data provided by AED). Details of geography with names are enumerated below.

States		District HQ	Block Town Covered	Villages Covered
Uttar Pradesh	Intervention Areas	Ambedkarnagar	• Gossainganj	• Jalapur Sehra • Kaacha • Basauri
		Badaun	• Badaun	• Ramzanpur
		Lucknow	-	-
Gujarat	Non Intervention Areas	Surendranagar	• Limbdi	• Ralol • Shiyani • Ranagarh
		Patan	• Siddhpur	• Sunsar • Kakoshi

V. Timelines for conducting the survey

The entire study covering the identified segments was covered in a total of 9 days. The first phase of the survey started in Uttar Pradesh whereas second phase of the field work started in Gujarat four days later. Detailed timeline of the survey is enumerated below:

S No.	Specific Task	Timeline
1	Phase I -Uttar Pradesh	9th -16th May 2011
	Training of Interviewers in Uttar Pradesh	9th May 2011
	Field Work	10th-16th May 2011
	Ambedkarnagar	10 th -13 th May 2011
	Lucknow	14 th May 2011
	Badaun	15 th -16 th May 2011
2	Phase II-Gujarat	14th-17th May 2011
	Training of Interviewers	13th May 2011
	Field Work	14th-17th May 2011
	Surendranagar	14th May -15th May 2011
	Patan	16th May -17th May 2011

Sampling Plan for Primary Survey

- The weightage to the sample was kept as 50:50 for capturing of information of both intervention and non-intervention area.
- The complete sample plan with state wise and district wise detailing is enumerated below:

State Wise Sampling:

S. No	Respondent Segment	Research Tool	Sample Achieved State wise		Total Sample Achieved (Two States)
			Uttar Pradesh	Gujarat	
1	Mother/caregivers	FGD/PRA	4	4	8
2	Rural Medical Practitioner	FGD	4	1	5
3	Mother /caregiver	In-depth Interview	8	6	14
4	Pharmacist/Drug Store Seller		8	6	14
5	Rural Medical Practitioner		-	3	3
6	General Physician		4	3	7
7	Pediatrician		4	5	9
8	Key Opinion Leader		1	1	2
Total			33	29	62

District Wise Sampling:

FGDs/ Mini Groups	Intervention Area	Non-Intervention Area				Total
	Ambedkarnagar	Lucknow	Budaun	Patan	Surendranagar	
RMPs Mini group (4-5 nos)	3	-	1	1	-	5
Mothers/caregivers(10 nos)	3	-	1	2	2	8
Total	6	0	2	3	2	13

In-Depth Interviews	Intervention Area	Non-Intervention Area				Total
	Ambedkarnagar	Lucknow	Budaun	Patan	Surendranagar	
Drug Seller	6	-	2	4	2	14
RMP	-	-	-	-	3	3
GP	3	-	1	2	1	7
Paediatrician	-	3	1	4	1	9
Mothers/caregivers	6	-	2	2	4	14
KOL (Key opinion leader)	-	-	1	1	-	2
Total	15	3	7	13	11	49

Thus, a total of 49 IDIs, 5 FGDs and 8 FGDs including PRA exercise were conducted during the study.

Survey/ Data Collection Methodology

I. Pre-Testing/ Pilot Phase:

Initially, interviews with rural medical practitioner, drug seller, mother of children below the age of 5 years, general physician was carried in village Chalera in Noida (UP) by MART consultants. This aided in further refinement of the discussion guides for the survey. Efficacy of the discussion guides was also pre-tested in this phase to ensure that the required data is being captured in the desired format.

Some of the key gaps noticed in each of the discussion guides during the pilot phase are as follows:

Mothers/Caregivers:

- During the pilot, it was found that mothers/caregivers were not opening up for the discussion initially. To handle this problem, the seasonality map was introduced in the discussion guide in the starting. This helped in providing a starting point for the discussion.
- Mothers were not able to relate with certain questions like ‘type of diarrhea’. This was further made simpler by focusing more on the symptoms and then assessing their understanding of the different types.
- Since mothers were relatively less literate, hence the questions were simplified and shortened.
- Mothers were not able to mention the names of the medicines prescribed to their child, hence this question was re-changed to asking them to identify the medicines by its colour, form/shape and size of the pack.
- Earlier the questions were not divided in different sections and it was felt during the discussion that the interviewer was not able to focus on the important questions. This led to placing all the questions in four broad sections of knowledge and perception; treatment practice; awareness and perception of ORS and Zinc; and mapping media habits. Further, time for each section was allocated so as to focus on the important sections.
- To capture the health seeking behavior of mothers/caregivers during child diarrhea, the accessibility map was introduced in the discussion guide. This helped in layout out the complete picture of the process.

Service Provider:

- Earlier the questions were not divided in different sections and it was felt during the interview that the interviewer was not able to focus on the important questions. This led to placing all the questions in five broad sections – background understanding of service provider; knowledge on childhood diarrhea; treatment practice; attitude towards ORS and Zinc; and source of information. Further, time for each section was allocated so as to focus on the important sections. Here, the maximum focus was given on understanding the service provider’s treatment practice.
- More probing points in the Zinc and ORS section was built like the brands prescribed; their efficacy; any communication on the same heard/seen before.
- Questions were made simpler and in a language which could be easily comprehended by the interviewee.

Drug Seller:

- Earlier the questions were not divided in different sections and it was felt during the interview that the interviewer was not able to focus on the important questions. This led to placing all the questions in four broad sections – background understanding of drug store; knowledge and understanding on childhood diarrhea; drug seller’s practice; and source of information. Further, time for each section was allocated so as to focus on the important sections. Here, the maximum focus was given on understanding the drug seller’s practice.
- In order to improve the flow of the questions in the drug seller’s practice section, the questions related to advice and those related to prescription by doctor were separated. This helped in capturing a detailed understanding of the mother/caregiver-drug seller interaction.

II. Planning the Main survey (Post Pre –Testing /Pilot Phase) – Field work preparation

- After the Pre-Testing/ Pilot Phase, a list of the sample villages was prepared by MART consultants, based on the following village selection criteria:
 - i. The village should have population greater than 4000
 - ii. The village should be at a minimum distance of 10-15 km from the block town
 - iii. If two villages within the same block were selected then the two villages should be directionally opposite to each other. For e.g. if one village is in the east the other would be in west.
- On selection of villages in consultation with MART senior consultant and the client, the names of final list of villages were sent to MART partner recruitment agencies in Uttar Pradesh and Gujarat for identification of village on the field and thereafter recruiting the respondents from the same.
- Simultaneously for both the locations, two local resource persons having five to six years of experience in doing research work in the health sector were identified for ensuring in –depth capturing of the exact dialect of the two states.
- A day prior to beginning of the actual field work, training was conducted for these local resource persons by MART consultant. During the training, the interview protocol manual along with the discussion guides was shared with the team and their queries were addressed. Mock interview sessions of the local resource persons were also conducted to their complete understanding of the subject and to assess their confidence. The section given below explains in detail the complete training process:

Team Composition for Training

At both the locations of the survey, two local resource persons each, having five to six years of experience in doing research work in the health sector, were identified for conducting the interviews in respective places. Though most of the interviews were conducted by MART consultants themselves, the local resource persons only acted as a support team. Since these resource persons were not a part of the core MART team, it was important to conduct their training and briefing session for the current research project.

Thus, training session was held for these resource persons by the MART consultant from a day prior to the actual start of the field work.

Duration of the Training

One day training was conducted for the local resource persons at both the locations.

Activities Done During Training

The training session involved the following step by step activities:

1. The interview protocol manual along with the translated versions of the discussion guides was shared with the team and they were asked to go through it thoroughly.
2. Post their reading of the documents, the interview protocol was explained to them so that there exists consistency in conducting the interviews by the entire team. Also, they were asked to follow all the instructions given in the manual.
3. Then, the research subject – child diarrhea, was introduced to the team. As a support document in this case, the WHO guidelines on child diarrhea management and treatment was referred and shared.
4. Further, the entire background of the project was discussed with the team. The MART consultant also explained the client’s objective of conducting the research, the methodology to be used and end results expected. Also, they were made aware about certain key facts like current status of child diarrhea incidence in the respective states (UP and Gujarat).
5. Following this, briefing of the discussion guides was done. The briefing was done in a sequential manner and each and every question was read aloud and explained.
6. While explaining the questions, the purpose and importance of each question was told with key emphasis on the specific terminologies used in the discussion guide.
7. While doing the briefing, the team was encouraged to ask specific queries related to different questions and these were addressed by the MART consultant.
8. Post the completion of the briefing and the query handling session, mock interview sessions of the local resource persons were also conducted to assess their complete understanding of the subject and their confidence. During the mock session, the MART consultant acted as respondent and the local resource person as the interviewer. In case of any inconsistency in the method of asking questions, MART consultant rectified the mistake there and then.

Problems Faced During Training and its Rectification

Few of the problems faced during the briefing of the discussion guides and training the local resource persons were:

Problems Faced	Solutions Sought
The team was not getting clarity on certain points like type of diarrhea, role of Zinc and antibiotics and anti-diarrheals in diarrhea management.	To explain various types of child diarrhea and role of zinc, WHO guidelines on diarrhea management was shared with the team. Also, to identify the difference between antibiotics and anti-diarrheals, their different salt composition was introduced and the team was asked to note them down.

During the mock sessions, it was seen that the team not putting more emphasis on the questions like home remedies used by mothers in child diarrhea management and their media habits. Also, in the service provider DGs, emphasis was not being given on the patient-provider interaction.

MART consultants first explained the importance of incorporating these questions in the discussion guides and how it would help in further analysis of the information. Repeated mock sessions were taken till the time MART consultant was sure that enough probing was being done on these points and this problem was rectified.

III. Conducting the Field Work

How the data was collected:

- Face to face interviews were conducted on the field with all the stakeholders – Mothers/caregivers, RMPs, GPs/Pediatrician, Drug store owners. For conducting the interviews, separate discussion guides for stakeholders were used by the interviewers
- Each location (UP and Gujarat) had a separate three member team for conducting the interviews – 1 research consultant from MART and 2 local field research support members. Also, 1 senior consultant from MART accompanied both the teams for getting an in-depth understanding of both the states.
- In-depth interviews with the mothers/caregivers were conducted in their respective houses and the focus group discussion with them was conducted at a common location within the village. However interviews with RMPs, GPs/pediatrician and drug store seller were conducted in their respective place of work like clinics and shops of the drug store owner. For conducting focus group discussion of RMPs, their consent was taken and they were called to the clinic of one of the RMP in the village.
- Each interview and focus group discussion was conducted on the scheduled time as per consent of the respondent. Approximate duration of in-depth interviews was around 30 mins-1 hour and for the focus group discussions it was around 1.5hours-2hours.

Key challenges faced by the teams during data collection:

- One of the key challenges faced during mothers/caregivers' focus group discussion and in-depth interviews was that their children had accompanied them and this led to a little distraction during the discussion. To handle this situation, the support staff was used for handling the children so that the interviewers could conduct the interview/discussion in the desired manner.
- Another challenge was to ensure that the respondents stayed throughout the discussion and did not leave in between. Especially in case of mothers/caregivers, they used to get restless and would think of leaving the group discussion. This was handled by providing them refreshments after every half an hour which acted as an incentive to stay for long.
- In case of some group discussions with mothers/caregivers, village KOLs (key opinion leaders) like ANMs (Auxiliary Nurse Midwife) / ASHA (Accredited Social Health Activist) and mothers-in-law used to join the discussion on their own whereby creating hindrance. Since they hold

importance within the village, it was not possible to ask them to leave the group but they were asked to be a silent observer.

- In case of Gujarat, it was difficult to bring together the RMPs at a single place for conducting their focus group discussion. They were not comfortable in discussing their treatment practices with their counterparts on the same platform. This situation was handled by conducting separate interviews with each RMP.
- Another key challenge faced in Gujarat was absence of drug stores at the village level. In order to ensure completion of the sample, the interviews with drug store owners were conducted at the block town level.
- The time schedule of certain interviews had to be changed on account of non-availability of the respondent due to certain unexpected event. Such respondents were contacted later as per their convenient time leading to re-scheduling and stretching of the day's work hours for the interviewers.

Changes in original plan for selection of respondents:

- Since in Gujarat the incidence level of diarrhea was found to be relatively low versus that of Uttar Pradesh, therefore the selection criteria of mothers/caregivers was altered from their children's diarrhea episode in the past 2 weeks to past 1 month. This was done in order to achieve the sample size.

Annexure 7: Research Instruments – Discussion Guides

The following discussion guides were used for conducting the interviews/ focus group discussion with different stakeholders:

DISCUSSION GUIDE FOR FGD – MOTHERS/CAREGIVERS

This document is the road map for interacting with the Mothers/Caregivers

Selection Criteria for Mothers/Caregivers

- The group to comprise of 8-10 women having their children aged between 0-5 years who had a diarrheal episode in past 2 weeks
- The sample to comprise of women largely from R3 and R4 households

NOTE: <The FGD to be conducted in the village at a common and neutral place>

FGD and Moderator Identification Details

Name of the Moderator	
Date of FGD	
Start time of FGD	
End time of FGD	
Village/Block/District Name	

Introduction - Warm up and setting up the context

(3-4 min)

- Welcome: Moderator to introduce himself/herself and to say....
Namaste I am _____ from MART, a rural marketing consultancy company based in Noida, UP. We conduct a number of healthcare studies for rural India. Today we have come to your village to talk with you and understand more on the childhood diarrhea and its causes, how you seek treatment and what all is being done in this aspect. We would like to talk to you regarding this and would be grateful if you could spend 40-45 minutes with us.
Please be rest assured that the information which you give us is strictly confidential and at any point of time your identity will not be disclosed to anyone and further this survey is being conducted purely for research purposes only.
- Like I have already told you about myself, we would like to know something about you and your village.....
 - Name of the village.....its population.....major occupations
 - Your name....your husband's occupation.....number of children and their age

Section A – Knowledge and Perception (8-10 mins)

Instructions: Moderator to place the **PRA** sheet (White Chart Paper) on the floor, while the respondents are sitting in a semi circle and moderator is facing them. Moderator to draw the **SEASONALITY MAP**..... a circle broadly depicting different seasons/months in the year (summer, rains, winter etc).

Lead the discussion using this chart....

1. If we talk about childhood diarrhea, then in which of these seasons/months you think it is most common? Why? (**Probe** for reasons)
2. How do you generally come to know that your child is suffering from diarrhea? Describe the state of child. (**Probe** for symptoms like loose-watery stools, colour of stools, frequent stools, blood in stools, abdominal pain, nausea, vomiting, fever, loss of appetite etc.)
3. Are there any different kinds/types of diarrhea common among children between 0-5 years? What are they, does it have any relation to seasons....how do you differentiate between them? (**Probe** for colour of stool...yellow, green, white, seed like appearance etc.)
4. In case diarrhea happens to your child in one season, then does it reoccur? How frequently and why? What is the normal duration/period of each episode?
5. According to you is diarrhea a serious disease among children and potentially life threatening or is it just a part of growing up? Why? (**Note** verbatim of their perception)
6. Are there any measures that can be taken to prevent diarrhea among children in the family, or do you believe that diarrhea is inevitable, that will happen regardless?

Section B – Treatment Practice (20-25 mins)

If we talk about the treatment practices followed by you when your child is affected by diarrhea.....

7. Whenever your child is affected by diarrhea, what do you do? Why? Describe the complete step by step approach followed by you in such a situation starting from the immediate action taken:

For each of remedy/step **Probe** for reasons and time duration followed)

- **Nothing:** Why isn't anything given to the child and till what time?
 - **Home remedies/herbal treatment:** What kind of home remedies do you follow? Why, when and for how long?
 - **Seeking advice and treatment:** From whom? (e.g. Mother-in-law, husband, elderly relatives, friends/ neighbours, health service provider, drug store owner) What advice and treatment do they give and what do you follow? When and Why?
8. Among these above mentioned remedies, which one you think is most effective? Why?
9. Does the treatment differ in case of different types of diarrhea? How and Why?
10. When and at what stage (time from onset) of diarrhea do you feel that it is time for medical advice and treatment? How do you realize that the situation is becoming serious? (**Probe** for condition of the child when he/she is taken to the health service provider)
11. Are home remedies only given if diarrhea is not severe and treatment from health service is sought when diarrhea is severe....Why?
12. Which types of diarrhea, as mentioned by you, are the most serious ones and Why? Do you think the age of the child has a bearing on the severity of diarrhea? How?
13. What kind of things do you keep in mind when planning your child's diet during diarrhea? What kind of food do you withheld/give during this time? Why? (**Probe** for No solids, Lots of liquids: barley water, Semi solids, no rich food, breast milk...)Who tells you about this?
14. **Instructions:** Moderator to place the **PRA** sheet (White Chart Paper) on the floor and draw the **ACCESSIBILITY MAP** for health care service in village for diarrhea management as the respondents instruct.....

Ask the following to complete the drawing.....

- i. Which are the various health care providers or institutions in your village that provide help in case of child diarrhea? (**Probe** for RMP, GP, Drug seller, govt. dispensary, ASHA/Anganwadi, traditional healer)
- ii. Where are they located? Are they close to the village or far?
- iii. Which health service providers do you seek advice from? When and why?
- iv. Whom do you trust and believe the most? Why?
- v. What is the average fee per visit?
- vi. What kind of advice do these health service providers give to you and what kind of treatment do they prescribe? (**Probe** on medicines given)
- vii. Does it differ from one health service provider to the other and different types of child diarrhea?
- viii. What are generally your expectations from these providers? (**Probe** on explanation of disease, of treatment, advice on prevention, any other)

- ix. How satisfied are you with their current services? Are there any reasons for dissatisfaction with it? (**Probe** for Distance, Good doctors are not available, Expensive, Others such as differential treatment because of being from a particular social category/class, any other)

Section C – Awareness and Perception of ORS and Zinc (15-20 mins)

15. If ORS is mentioned as one of the treatments by any of the service providers as mentioned above, then ask else Probe for the same.....

- i. What do you know and understand about ORS? Is ORS a medicine?
- ii. What do you think ORS does? How does it help in diarrhea management?
- iii. From where did you learn about ORS?
- iv. Is the ORS packet also available in the market? Where (within village/nearby village/town)?
- v. For how much and in what form and quantity (sachets etc.) Name the ORS brands available in the market.
- vi. Who in the family actually goes and purchases a pack of ORS? Is there any other source apart from market that the ORS is made available to you? (**Probe** for availability through government channel –ASHA/Anganwadi etc....frequency and dosage)
- vii. Is there any specific manner of preparing ORS formulation? If so, how? What about dosage of consumption? How do you come to know about this? What is the duration for giving ORS to the child...reasons for the same.
- viii. Are there any other things also that are given along with ORS during diarrhea. (**Probe** for any household alternatives, home remedies, other medicines etc. If follow other practices also....**Probe** for reasons)

16. Awareness and perception regarding Zinc.....We just spoke about ORS, do you know about any other medicines that are given to the child suffering from diarrhea which can prevent diarrhea for longer duration? If yes, what is that? (**Probe** for Zinc Products)

- i. What do you know about Zinc? What is it? How does it help?
- ii. **In case aware then ASK:** Where did get to know about zinc?
- iii. In what form and quantity is it available and consumed (bottle, tablets etc.)?
- iv. Which are the brands of zinc available in market? What is the price of each of the forms and quantity of zinc available in the market?
- v. Does your health service provider prescribe zinc as a treatment for diarrhea....what is the recommended dosage and time duration?
- vi. In case zinc is recommended, then is it given along with ORS or any other medicine....is it given pre, during or post diarrhea attack? Why?

17. Do you follow the complete course for your child as suggested by the health service provider, especially in case of ORS and Zinc. Why/Why not? (Probe** if the course is completed or stopped once the stools are controlled...any myths, beliefs related to it)**

18. Compare the effectiveness of ORS vs. Zinc.

19. Now that we have talked about Diarrhea and overall health of the child. There could be times when even after taking the precautions the child gets affected by diarrhea or any other disease. In such a

situation what do you do for long term immunity building in your children? (**Probe** for methods/ways/practices followed by caregivers for long term immunity building...**Probe** for use of Zinc in the same)

20. Please illustrate any one of your previous experience with successful as well as unsuccessful diarrhea treatment of your child or any other child in your village that you might have heard/experienced. (**Note Verbatim** of words used to depict emotions, moods etc.)
21. What according to you is the ideal way/method of treating diarrhea among children aged 0-5 years?

Section D – Mapping Media Habits (5-7 mins)

22. Where do you generally get information related to child health and specifically on diarrhea management? (Probe for ATL and BTL media, other sources of information).
23. Which is the most reliable and trusted source among these mentioned by you? Why?
24. Have you seen/ heard anything in the media related to diarrhea in the recent past? Where?
25. What do you remember about it? What did it say?
26. Was it useful in any manner to you and did you believe it? Why? How could this have been better?
27. Apart from the sources and ways mentioned by you, do you feel any other source and method would be more effective in communicating the message on diarrhea in your village community? Would people believe in that source and why?

DISCUSSION GUIDE– SERVICE PROVIDER

This document is the roadmap for interacting with the Health Service Providers

Selection Criteria for Rural Medical Practitioner for FGD

For Selecting Rural Medical Practitioner in the Village:

- The RMP should be qualified (BAMS or BHMS) or unqualified (without any formal qualification)
- The RMP should be having the maximum footfalls from the village
- The RMP should be either residing in the village or coming from outside to practice in the village

FGD and Moderator Identification Details

Name of the Moderator	
Date of FGD	
Start time of FGD	
End time of FGD	
Village/Block/District Name	

NOTE: <The FGD to be conducted in the village at a common and neutral place>

Selection Criteria for General Physician/ Pediatricians for In-depth Interview

For Selecting General Physician in the Block Town:

- The GP should be qualified MBBS/MD Doctor having his own private clinic

For Selecting Pediatricians in the District Town:

- The pediatricians should be qualified MD/PAED Doctor having his own private clinic looking at children from 0-14 years

TO BE FILLED IN CASE OF IN-DEPTH INTERVIEW

Interview and Interviewer Identification Details

Name of the Interviewer	
Date of Interview	
Start time of Interview	
End time of Interview	

Respondent Identification Details

Info to be observed and noted by the interviewer	Name of the Clinic (if any)	
	Name of the Respondent	
Interviewer to ASK the respondent	Professional Qualification	
	Contact Details	
	Address	
	Village	
	Block	
	District Name	
	Mobile Number	

Introduction - Warm up and setting up the context (3-4 min)

Welcome: Facilitator to introduce himself/herself and to say....

Namaste I am _____ from MART, a rural marketing consultancy company based in Noida, UP. We conduct a number of healthcare studies for rural India. Currently we are conducting a research study on diarrhea and its causes, how people seek treatment and what all is being done in this aspect. We would like to discuss with you regarding this would be grateful if you could spend 1 hour with us.

Please be rest assured that the information which you give us is strictly confidential and at any point of time your identity will not be disclosed to anyone and further this survey is being conducted purely for research purposes only.

Seek consent of the Respondents and if he agrees then continue else terminate the interview

Section A - Background Understanding of the Service Provider (5 Min)

1. Since how many years have you been practicing in this village? (**Probe on** number of years....can also note the setup year)
2. Before starting your own practice were you working in some clinic/hospital/health center?(**Probe** for the past clinic/hospital/health center name, location) Are you a part of any formal health service provider association?(**Probe for** name of association)
3. Apart from giving advice and examining, do you dispense medicine to patients? (**Probe on** the aspect of range of medicine stocked)
4. Do people from this village only come to you or from nearby villages as well? In case people come from other villages also then how many villages and approximate distance. (**Note** the number of villages catered to and the distance – catchment area)
5. Approximately.....in a day/month how many patients visit your center? Out of those visiting approximately how many are children below 5 years of age?
6. The people who visit your clinic..... what is the profile of such people? (**Probe** for income, occupation, gender).Does anyone accompany them? If yes who?
7. For what all diseases/ailments do they come to you? (**Probe** on the most prevalent diseases in the village)
8. If I specifically ask you about children between 0-5 years....then what are the most common diseases/ailments for which people come to you? (**List** all the diseases mentioned and specifically **Note** if **diarrhea** is mentioned.....In case diarrhea is not mentioned then specifically probe on the same)
9. If you were to look at your practice, how many children below 5 years do you treat for diarrhea

in a month? (**Probe for** number of patients in different months depending on general diarrhea incidence)

Section B– Service Provider Knowledge and Understanding of Childhood Diarrhea. (5 Min)

10. Like you have just mentioned about diarrhea.....so can you tell me something more about it...are there any particular months in the year when diarrhea incidence increases? (**Probe for** months of high incidence and a month of lower incidence.....is there incidence throughout the year).
11. What are the various causes and reasons behind children getting affected by diarrhea in this village? (**Probe** for his understanding about causes of diarrhea and which is the most prevalent cause ... water, medicines, unhygienic conditions, teething problem, food habits etc.)
12. Are there any different kinds of diarrhea prevalent among children? What are they and what are its symptoms? (**Note** what is mentioned and how he describes the different kinds of diarrhea.....the color of stool – yellow, green, white; appearance – watery, loose, seed like etc.....) Which type of them is prevalent in your village?
13. Is there any relation of different kinds of diarrhea to different seasons? What and How?
14. Do you think diarrhea is a serious disease/problem among children? Do you feel it is potentially life threatening or just a part of growing up? Do you believe that there are measures that one can take to prevent diarrhea among children in the family, or do you believe that diarrhea is inevitable, that it will happen regardless? **NOTE VERBATIM OF THEIR PERCEPTION**

Section C – Understanding Service Provider Practice (20-25 Min)

15. Now that you have told me about the diarrhea and its causes.....after how many days of onset of their child's diarrhea do people come to you? Why?
16. Before coming to you what do they do...any home remedies? (**Note** if he is aware and what he mentions)
17. What are the common diarrheal symptoms described by the mother/caregiver and how do you evaluate the severity?(List all judgment mechanisms used)
 - a. Do mother/caregiver recognize the danger signs of the dehydration that diarrhea can cause? What are they, please describe.
 - b. Can they differentiate between different types of diarrhea? If yes, how? If no?

18. Basis the duration and symptoms described..... what do you suggest to them and on what basis? (**Probe** on both medication and advice given based on different symptoms)
- a. **Probing on medicine** given.....(**List** down all the medicines mentioned like Oral rehydration salts, multi-vitamins, zinc products, anti-diarrheal, antibiotic tablet or injection etc.....specifically note if **ORS or Zinc** is mentioned.....if not then probe on the same. **Note** their trade names).
 - i. What dosages of medicine do you normally prescribe? Why?
 - ii. For a minimum of how many days do you prescribe the medication? (**Probe further** for preference of duration of prescription i.e. full course or 2/3 days at a time preferred? Why?
 - iii. Which medicinal format do mother/caregivers prefer giving to their children- in tablets, syrup or fluids, injections etc.?
 - iv. Do mothers/caregivers ask for a specific medication/treatment or do they ask for advice? What are the preferred treatments? (**Probe** for treatments like injection, antibiotic etc.)
 - b. **Probing on advice** given.....(**List** down all the advices givenfor instance ensuring giving of full dosage, maintain cleanliness, clean water, diet to be followed for child and mother, management of dehydration, educating mothers on how to build immunity among children)
19. Is your line of diarrheal treatment influenced by someone? (**Probe** on influencerpast experience, general physician/pediatrician under whom worked, WHO, UNICEF GOI etc.)
20. Is the medication which you prescribe influenced by any other factors? (**Probe** for factors like affordability of customer etc.)
21. What do you think are the challenges you face in diarrhea management? (**Probe for** lack of awareness among mothers/fathers about diarrhea posing as a potential death threat delay in seeking treatment home remedies not giving right dosage of medicines /completing prescribed medicine dosagenon-availability of medicines)

Cost of Diarrhea treatment

22. What is an average duration for treating a diarrhea case? Probe for variation in duration due to levels of infection.
23. What do you think is the total treatment cost including doctor consultation, medicines, fluids and other nutrients, bed charges, other charges if any?
24. Do you think treatment of diarrhea is affordable? Probe for ease of paying for the treatment.

Section D – Attitude towards ORS and Zinc as treatment supplements for diarrhea (15-20 Min)

Now that you have told me about your practicescould you please tell me more

Regarding ORS:

25. What does it do and how does it help in childhood diarrhea? (**Probe** on his perception and understanding of ORS)
26. Do you prescribe ORS? For which levels of severity of diarrhea do you prescribe ORS?
27. What do you tell people about ORS.....its dosage, number of days and how to prepare?
28. In your opinion can ORS be given in with any other diarrheal therapeutic medicine? Why do you say so?
29. Approximately how many people come and ask you for ORS directly? What do they say (**Note** any local names or trade names mentioned by people)
30. Has there been any communication/promotion in the past on ORS in your village or nearby village that you can recall? Describe (**Probe** for the communication medium, message, tool used).....How could this have been better?

Regarding Zinc:

31. What else as per you should be given to children when they have diarrhea?
 - a. Do children need nutrients such as vitamins and minerals when they have diarrhea? If yes whyif no why
32. Have you heard of Zinc supplements? (If yes) what does it do and does it help in childhood diarrhea? How? Where did you come to know about it?
33. Do any of your current prescriptions have Zinc in them prescribed separately or in multivitamin format? If prescribed separately, which are these medicines?
 - a. When you prescribed zinc how effective has zinc in diarrhea management? Please sight an incident elaborating.....the efficacy of zinc when given to patients?
 - b. What dosage, form (tablets/syrup bottles etc.) and number of days do you normally prescribe zinc to people?
34. Has there been any communication/promotion in the past on Zinc in your village or nearby village that you can recall? Describe (**Probe** for the communication medium, message, tool used).....How could this have been better?
35. In all these years of experience, have you developed any special approach by which you have been able to treat diarrhea better? Your approach may be improvement in traditional medicine or modern medicine.

Section E - Source of Information (5 Min)

- 36. How do you get to know about any new diarrheal drugs which come in the market? Who informs you about these products? **ALLOW FOR SPONT MENTIONS AND THEN PROBE for referrals from fellow health service providers, medical representatives, TV, radio, central or state government policies. Probe for each source.**
- 37. What kind of information do they give? Is it useful and how?
- 38. Which is the most credible source which can assist you in working towards diarrhea alleviation?

Promotional Activities

- 39. Are there any promotional activities are being done by pharmaceutical companies? Describe Can you recall any of them? Has it been useful to you and in what way?
- 40. Do you recollect any effective marketing message concerning diarrhea treatment that has caught your attention? **IF YES** Can you please describe the message and what impressed you most about it and where did you see it?
- 41. What kind of promotional activity as per you would be the most ideal for promoting ORS and Zinc treatment for diarrhea in your area? (**Probe** for medium, message, tool).Why? Which media can assist in your current work towards diarrhea alleviation?

Thank respondents warmly for their time and end discussion.

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IN-DEPTH INTERVIEW GUIDE – DRUG STORE SELLER

This document is the road map for interacting with the Drug Store Seller

Selection Criteria for Drug Store seller

For Selecting Drug Store in the Village:

- The drug store owner should be having his shop in the village from at least past 2 years
- The store should be having the maximum footfalls from the village

For Selecting Drug Store in the Block Town:

- The drug store owner should be having his shop in the block town from at least past 2 years
- The store should be having the maximum footfalls from the village.

NOTE: <Interview to be conducted at the drug store>

Interview and Interviewer Identification Details

Name of the Interviewer	
Date of Interview	
Start time of Interview	
End time of Interview	

Respondent Identification Details

Info to be observed and noted by the interviewer	Name of the Store (if any)	
	Point of purchase material available in the shop	
Interviewer to ASK the respondent	Name of the Respondent	
	Contact Details	
	Address	
	Village	
	Block	
	District Name	
	Mobile Number	

Introduction - Warm up and setting up the context**(1-2 min)**

- Welcome: Interviewer to introduce himself/herself and to say....

Namaste I am _____ from MART, a rural marketing consultancy company based in Noida, UP. We conduct a number of healthcare studies for rural India. Currently we are conducting a research study on diarrhea and its causes, how people seek treatment and what all is being done in this aspect. We would like to talk to you regarding this would be grateful if you could spend 20 - 25 minutes with us.

Please be rest assured that the information which you give us is strictly confidential and at any point of time your identity will not be disclosed to anyone and further this survey is being conducted purely for research purposes only.

Seek consent of the Respondent and if he agrees then continue else terminate the interview

Section A - Background Understanding of the Drug Store (5 Min)

1. Since how many years have you been running your medical shop in this village? (**Probe on** number of years....can also note the set up year)
2. Do people from this village only come to you or from nearby villages as well? In case people come from other villages also then how many villages and approximate distance. (**Note** the number of villages catered to and the distance – catchment area)
3. Approximately.....in a day/month how many people come to your shop?
4. The people who visit your shop..... what is the profile of such people? (**Probe** for income, occupation, gender).Does anyone accompany them during purchase? If yes who?
5. For what all diseases/ailments do they come to you? (**Probe** on the most prevalent diseases in the village)
6. If I specifically ask you about children between 0-5 years....then what are the most common diseases/ailments for which people come to you? (**List** all the diseases mentioned and specifically **Note** if **diarrhea** is mentioned.....In case diarrhea is not mentioned then specifically probe on the same)

Section B - Drug Seller's Knowledge and Understanding of Childhood Diarrhea (5-7 Min)

7. Like you have just mentioned about diarrhea.....so can you tell me something more about it....what are the various causes and reasons behind children getting affected by diarrhea in this village? (**Probe** for his understanding about causes of diarrhea and which is the most prevalent

cause ... water, medicines, unhygienic conditions, teething problem, food habits etc.)

8. Are there any particular months in the year when diarrhea incidence increases in your village? (**Probe** for months of high incidence and months of lower incidence is the incidence throughout the year) Why?
9. Are there any different kinds of diarrhea prevalent among children? What are they and what are its symptoms? (**Note** what is mentioned and how he describes the different kinds of diarrhea.....the colour of stool – yellow, green, white; appearance – watery, loose, seed like etc.....) Is there any relation of different kinds of diarrhea to different seasons? What and How?

Section C – Understanding Drug Seller’s Practice (15-20 Min)

10. Now that you have told me about the diarrhea and its causes.....the people who come to you for medicines related to childhood diarrhea,.....among them approximately what proportion of people come to you with prescription and how many come for direct advice and medicine? (**Note** approximate percentage)
11. **First ask for patients who come for direct advice and medicine:** After how many days of onset of their child’s diarrhea do people come to you? Why?
12. Before coming to you what do they do...any home remedies? (**Note** if he is aware and what he mentions)
13. Do mothers of children below the age of 5 come to you or is their husband or other male members of the family who come to you? Do they also bring their children along with them?
14. What are the common diarrheal symptoms described by them and how do you evaluate the severity?
15. What do you suggest to them and on what basis? (**Probe** on both advice and medication given based on different symptoms)
 - a. **Probing on advice**(**List** down all the advices givenfor instance cleanliness, clean water, diet to be followed for child and mother, management of dehydration, acute weakness, controlling loose motion)
 - b. **Probing on medicine** given.....(**List** down all the medicines mentioned like Oral rehydration salts, multi-vitamins, zinc products, anti-diarrheal, antibiotic tablet or injection etc.....specifically note if **ORS or Zinc** is mentioned.....if not then probe on the same. Also **Ask** him to show these medicines and **Note** their trade names).
 - c. **Regarding ORS: Can you tell me more on the ORS....**

- i. What does it do and how does it help in childhood diarrhea? (**Probe** on his perception and understanding of ORS)
 - ii. Can you please show the packets of ORS sold by you? (**Note** the trade names and forms)
 - iii. Which is the SKU (Stock Keeping Unit) and the brand among these that you prefer stocking? Why? (**Probe for** price, demand, credit, push by the company sales people etc.) Which one is most preferred by people? Why?
 - iv. What do you tell people about ORS.....its dosage, number of days and how to prepare?
 - v. Do you recommend use of ORS at a specific level of severity or is it given irrespective of it?
 - vi. Is ORS given in combination with any other medicine? What and why?
 - vii. Approximately how many people come and ask you for ORS directly? What do they say (**Note** any local names or trade names mentioned by people)
 - viii. Has there been any communication/promotion in the past on ORS in your village or nearby village that you can recall? Describe (**Probe** for the communication medium, message, tool used).....How could this have been better?
- d. **Regarding Zinc: Now can you tell me more on the Zinc....**
- i. What does it do and does it help in childhood diarrhea? How? Where did you come to know about it? (**Probe** on his perception and understanding of Zinc)
 - ii. Do you keep zinc medicines in your shop? Can you show it to me (**Note** the trade names and forms/types...bottles, sachets, tablets; as a component in multi vitamin or zinc as a separate medicine) Where do you buy your stocks? How far is this place from your village?
 - iii. Which is the SKU (Stock Keeping Unit) and the brand among these that you prefer stocking? Why? (**Probe for** price, demand, credit, push by the company sales people etc.)
 - iv. Is there any specific brand among these that is most preferred by people? Why?
 - v. **If not stocking Zinc Products then ask:** Why do you not stock zinc products? What are the reasons that prevent you from stocking zinc? (**Probe for** causes like lack of demand, lack of awareness on zinc efficacy to treat diarrhea, low margins etc.)

- vi. Do you tell about zinc when people come to you for diarrheal medicines? What do you tell? (**Probe** on the advantages mentioned by him)
- vii. How frequently and based on what symptoms of the patient, do you suggest and give zinc to people as a diarrheal medicine? What dosage, form (tablets/syrup bottles etc.) and number of days do you normally prescribe zinc to people?
- viii. Is zinc given in combination with any other medicine? What and why?
- ix. Approximately how many people come and ask you for Zinc directly? What do they say (**Note** any local names or trade names mentioned by people)
- x. Has there been any communication/promotion in the past on Zinc in your village or nearby village that you can recall? Describe (**Probe** for the communication medium, message, tool used).....How could this have been better?

16. **Ask for patients who come to him with doctor's prescription:** What kind of medication is commonly prescribed by doctors for treatment of diarrhea among children between 0-5 years? (**Probe for** antibiotics, anti-diarrheal, ORS, zinc tablets etc.....and their brand names).Which is the most prescribed medicine? Why?

17. **Ask for patients who come without doctor's prescription and even do not take advice from the drug store:** What do these people ask for? (**Probe** for medicines, brand names mentioned)

18. What sort of challenges do you face in selling diarrhea medicines? (**Probe for** availability of products, supply related issues, credit related issues, product movement)?

Section D - Source of Information (5-7 Min)

19. How do you get to know about any new diarrheal drugs which come in the market? Who informs you about these products? (**Probe on** medical representatives, any other drug store owner, doctor/RMP, mass media etc.)

20. What kind of information do they give? Is it useful and how?

21. Which is the most reliable and trusted source among these as mentioned by you? Why?

Promotional Activities

22. Are there any promotional activities are being done by pharmaceutical companies? Describe Can you recall any of them? Has it been useful to you and in what way?

23. What kind of promotional activity as per you would be the most ideal for promoting ORS and Zinc treatment for diarrhea in your area? (**Probe** for medium, message, tool).Why? Which media can assist in your current work towards diarrhea alleviation?

INTERVIEWER TO ALSO OBSERVE IN THE DRUG STORE:

24. Kind of posters present and what they talk about
25. How are the medicines for children advertised
26. What kinds of pictures or drawings, if any, are used

Annexure 8: References

- World Health Organization (WHO), Department of Child and Adolescent Health and Development, 2005 - A manual for physicians and other senior health workers.
- Pediatric Oncall, Acute childhood diarrhea: a review of recent advances in the standard management
- Indian Academy of Pediatrics, Guidelines 2006 on Management of Acute Diarrhea. Indian Pediatrics, 2007
- Path, Zinc treatment of diarrhea, Fact Sheet 2008
- World Health Organization (WHO), United Nations Children's Fund (UNICEF), USAID and Johns Hopkins Bloomberg School of Public Health, Implementing the New Recommendations on the Clinical Management of Diarrhea 2006