



Management Practices for Childhood Diarrhoea in India

Survey of 10 Districts

2009

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Acronyms

ANM	auxiliary nurse midwife
AP	Andhra Pradesh
ASHA	accredited social health activist
AWW	Anganwadi Worker
AYUSH	Ayurvedic Unani Sidha Homeopathy
CEB	Census Enumeration Blocks
CHC	community health centre
CS	can't say
DK	don't Know
FGDs	focus group discussions
HH	household
HQ	headquarter
ICDS	Integrated Child Development Services
IEC	information education and communication
IMNCI	Integrated Management of Neonatal & Childhood Illness
MOHFW	Ministry of Health and Family Welfare
MP	Madhya Pradesh
NFHS	National Family Health Survey
NRHM	National Rural Health Mission
OBC	other backward castes
ORS	oral rehydration salt
ORT	oral rehydration therapy
PHC	primary health centre
PIP	project implementation plan
PPS	probability proportional to population size
PSU	primary sampling unit
RCH	Reproductive and Child Health
RMP	registered medical practitioner
SC	Scheduled Castes
ST	Scheduled Tribes
ToT	training of trainers
TN	Tamil Nadu
TV	television
UNICEF	United Nations Children's Fund
UP	Uttar Pradesh
WB	West Bengal
WHO	World Health Organization

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Executive summary

Executive summary

Background

Diarrhoea continues to be an important contributor to childhood deaths in India. NFHS-3 data shows that about 9 per cent of under-five children suffered from diarrhoea in the two weeks preceding the survey. The Sample Registration Survey (SRS) report suggests that diarrhoea is among the top 10 causes of death among infants and children 0-4 years of age. About 10 per cent of infants and 14 per cent of 0-4-year children die due to diarrhoea in India.¹

In conjunction with measures to promote sanitation and hygiene practices, appropriate diarrhoea management at household level and in health facilities remain important interventions in reducing mortality due to childhood diarrhoea. In the last decade, two technical advances have further improved the outcome of children suffering from diarrhoea: 1) introduction of low-osmolarity oral rehydration salt (ORS) and 2) zinc therapy.

Application of the diarrhoea management guidelines in communities remains suboptimal.

Only about 43 per cent² children suffering from diarrhoea in India receive any oral rehydration therapy (ORT). What is worrisome is that this proportion seems to have stagnated or declined in most states in the last decade.

The Government of India has issued the 'Revised Diarrhoea Management Guidelines'³ that include therapeutic advances such as low-osmolarity ORS and zinc. These guidelines have also become an integral part of integrated management of neonatal and childhood illness (IMNCI). Steps have also been initiated to improve supplies of low-osmolarity ORS and zinc through the public health system under the National Rural Health Mission (NRHM). Increasing compliance to the diarrhoea management guidelines remains a challenge for district/block health officials and community health workers.

This study was, therefore, conducted to understand the current practices by caregivers and service providers related to the management of childhood diarrhoea. Such an understanding – it is hoped – will assist in improved strategic

¹ Report on Causes of Death: 2001-03, Office of Registrar General, India

² NFHS-3 (2005-06), data from Table 9.12

³ Revised Guidelines for Management of Diarrhoea in Children, MOHFW, Government of India, 2007

planning, design, implementation, and monitoring of programmes aimed at controlling childhood diarrhoea and to accelerate expanded utilisation of low-osmolarity ORS and zinc.

Study area

The study was conducted in 2008 in one district each in 10 states of India. These districts were: 1) Medak in Andhra Pradesh; 2) Dibrugarh in Assam; 3) Vaishali in Bihar; 4) East Singhbhum in Jharkhand; 5) Guna in Madhya Pradesh; 6) Latur in Maharashtra; 7) Koraput in Orissa; 8) Krishnagiri in Tamil Nadu; 9) Lalitpur in Uttar Pradesh; and 10) Purulia in West Bengal.

Study objectives

The overall objective of the study was to assess the behaviours and practices related to the management of childhood diarrhoea. Specifically, the study attempted to find out the following:

- Household practices for the management of childhood diarrhoea.
- Knowledge, attitudes, and practices of healthcare providers on the management of diarrhoea.
- Availability and prescription of ORS and zinc from public and private providers of health services for diarrhoea management.
- Rates of ORS and zinc use among children 2-59 months suffering from diarrhoea.
- Compliance with ORS and zinc prescription by mothers of children with diarrhoea.

Study design

The study was cross-sectional and included both quantitative and qualitative methods.

Quantitative household survey

In each of the identified districts, 1,230 households with children age 2–59 months who had diarrhoea in the two weeks preceding the survey were selected using a multi-stage sampling

technique. The sample was split into rural and urban based on the district's urban population proportion. Structured, pre-tested questionnaires were administered to the caregivers of the children.

Qualitative study

In-depth interviews were conducted with doctors qualified in modern medicine (medical officers working in the government, private service providers), auxiliary nurse midwives (ANMs), anganwadi workers (AWWs), accredited social health activists (ASHAs), unqualified medical practitioners (those without a medical degree), professional practitioners in Ayurveda, Unani, Sidha, and Homeopathy streams of medicine (AYUSH), and chemists.

In addition, 10 focus group discussions (FGDs) with eligible mothers (8 in rural and 2 in urban areas) and three FGDs with service providers including chemists (2 in rural and 1 in urban) were conducted in each district. Together, 130 FGDs were conducted across 10 districts in this survey. About 8–10 mothers and 3–5 service providers, on an average, participated in one FGD.

Salient findings

Consolidated findings from all districts surveyed are presented below. Detailed district-wise data are presented in the annexes.

Prevalence of diarrhoea

- Overall, 19.8 per cent of children aged 2–59 months had diarrhoea in the two weeks prior to the survey. There was no difference in prevalence between rural and urban areas.
- Around 12 per cent of the children who had diarrhoea also had blood in their stool. The proportion of children who had blood in stool varied from 6 per cent in Krishnagiri district to 20 per cent in Vaishali.
- Fever, cough, and loss of appetite were other problems that the children suffered along with diarrhoea. Overall, about one-tenth of these children had cough with fast breathing during diarrhoea.

Table 1: Mother’s health-seeking behaviour, knowledge and utilisation of ORS (%)

District/State	Total number of mothers whose children had diarrhoea (n)	Health-seeking behaviour		Knowledge of ORS among mothers whose children had diarrhoea (%)		Utilisation of ORS for treatment of diarrhoea (%)		
		Number of mothers who sought outside healthcare	%	Yes	No	Treatment outside home	Only home treatment	Total
Total (all 10 districts)	12,570	9,298	74.0	70.0	30.0	34.9	3.1	38.0
Rural	10,137	7,554	74.5	68.3	31.7	36.1	2.4	38.5
Urban	2,433	1,744	71.7	70.7	29.3	33.9	3.3	37.2

Treatment-seeking by mothers

- Overall, 74 per cent (range 58–88%) of the children who had diarrhoea in the two weeks prior to the survey were taken outside home to a healthcare provider for treatment of diarrhoea; with no significant rural–urban differentials (Table 1). Of those who sought care, median duration between onset of diarrhoea and seeking treatment was 1.2 days.
- Another 13 per cent of these children received some kind of home-based treatment only (including ORT), while a similar proportion did not receive any treatment at all (Table 1).
- “Child was having too many stools”; “child was feeling very weak”; “child was not eating anything”; and “diarrhoea was continuing for too long” were reported as main considerations behind seeking outside treatment/consultation.
- Of those who sought care outside home (n = 9,298), 72 per cent of the children went to a private hospital or private-sector provider (Figure 2). This proportion was a little higher in rural areas as compared to urban probably

due to better accessibility to public sector health facilities.

- Overall, 70 per cent of the mothers had heard of ORS. On the other hand, only 38 per cent of the mothers actually gave ORS to their children suffering from diarrhoea. Of these, about 35 per cent gave ORS on the advice from a healthcare provider and 3 per cent gave ORS on their own. Possible reasons behind such low utilisation rates of ORS could be low prescription rates of ORS and even lower rates of ORS dispensing at the time of prescription, particularly in the private sector.

Mother’s report on treatment/prescription received from healthcare providers

- Of those who sought care, only 47 per cent of the children were prescribed ORS (Figure 3).
- Tonics, anti-diarrhoeal drugs, and injections continued to be prescribed for diarrhoea. Overall, 23 per cent of the children who had diarrhoea in the two weeks prior to the survey received an injectable drug, 18 per cent were given anti-diarrhoeal drugs, and 6 per cent were treated with antibiotics.

Figure 2: Place of care-seeking for treatment of diarrhoea

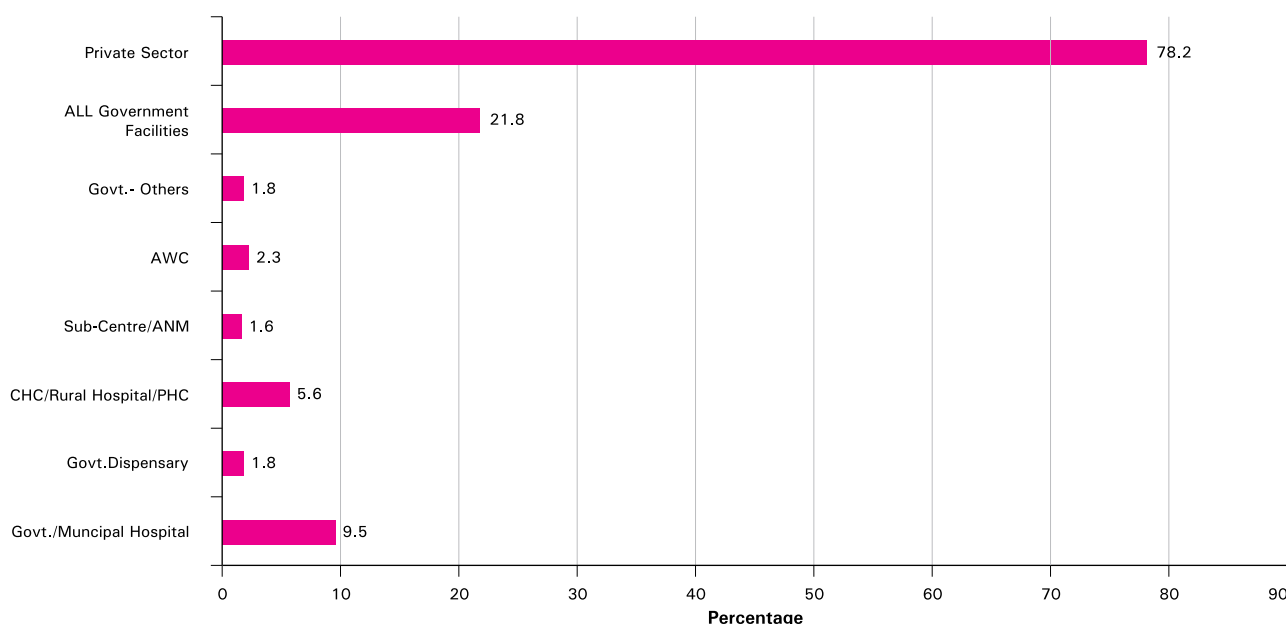
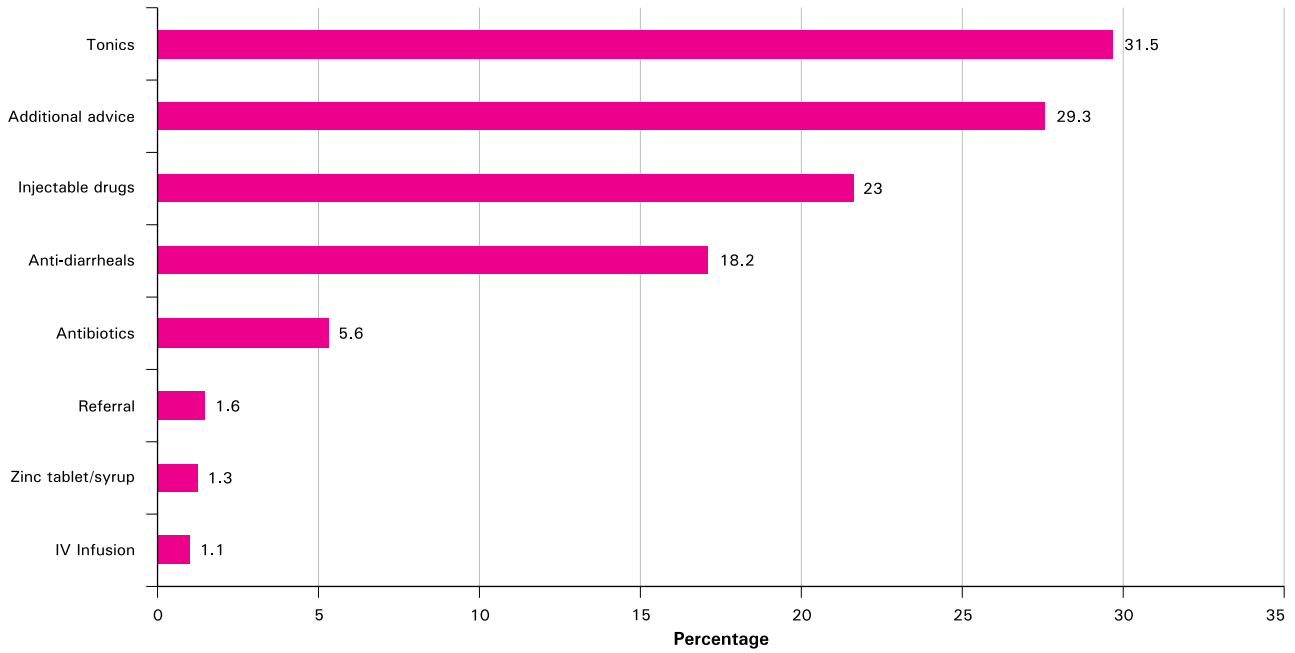
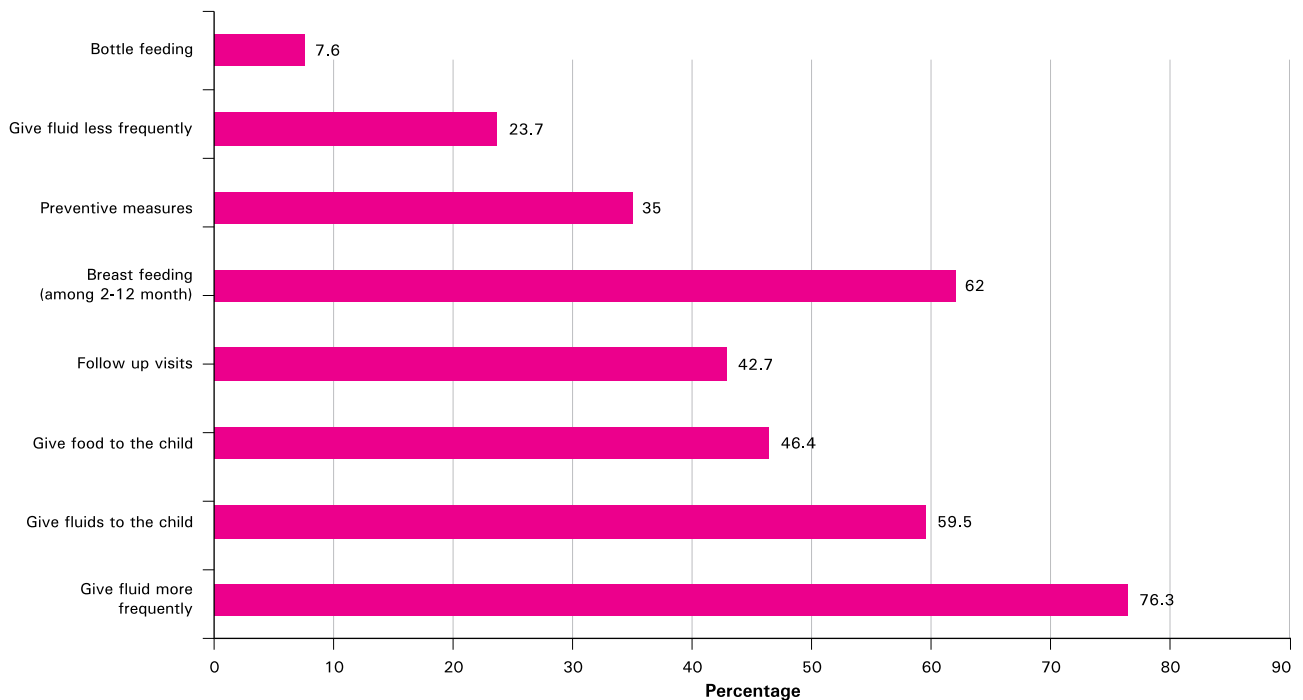


Figure 3: Types of treatment received for childhood diarrhoea from service providers (n = 9,298)



- Of those 47 per cent who were prescribed ORS, about 54 per cent of the mothers reported receiving ORS packets from service providers.
- Around 1 per cent of the children were prescribed zinc.
- Less than 10 per cent of the mothers who sought outside treatment for their children during diarrhoea reported being advised to continue or increase the frequency of breastfeeding during diarrhoea episodes.
- Less than 10 per cent of the mothers (who approached health service provider(s) for treatment of their children with diarrhoea) were advised to give more-than-usual fluids to the child during diarrhoea.
- Overall, only about 30 per cent of the mothers, with large variation across the districts, were provided additional advice apart from medicines. The types of advice mothers received are listed below (Figure 4):

Figure 4: Advice received from service providers for diarrhoea management by mothers [n = 2,724; those who received any other advice were (29.3%)]



- Continue breastfeeding and increase frequency: 62 per cent of mothers (range 42.3– 87.5%) with children between 2-12 months of age.
- Continue feeding the child during diarrhoea: about 46 per cent mothers (range 25–62.9%)
- Continue bottle feeding: on an average 7.6 per cent of mothers (range 2.7–23.5%). Considerably higher bottle feeding advice was given in Vaishali (19.5%), and Dibrugarh (23.5%).
- Increase fluids during diarrhoea: about 76 per cent mothers (range 16.2–98%).
- Give **less fluid** to children during diarrhoea: about 24 per cent mothers. This irrational advice by service providers was alarmingly high in Dibrugarh (33.3%), Vaishali (24.1%), Latur (29.2%), and Krishnagiri (83.8%) districts.
- Majority of service providers did not inform their clients about danger signs and “when to return immediately”.

Mother’s knowledge of ORS and Zinc

- More than 70 per cent mothers (range 46.6–89.2%), whose children had diarrhoea in the two weeks prior to the survey, reported to have knowledge about ORS.
- About 51.5 per cent mothers who did not give ORS during the recent diarrhoea episode acknowledged knowing about ORS (with or without being shown ORS packets). Out of those mothers who knew about ORS,

68.2 per cent also had some knowledge of how to prepare an ORS solution for use.

- The knowledge of zinc was almost “nil” among caregivers.

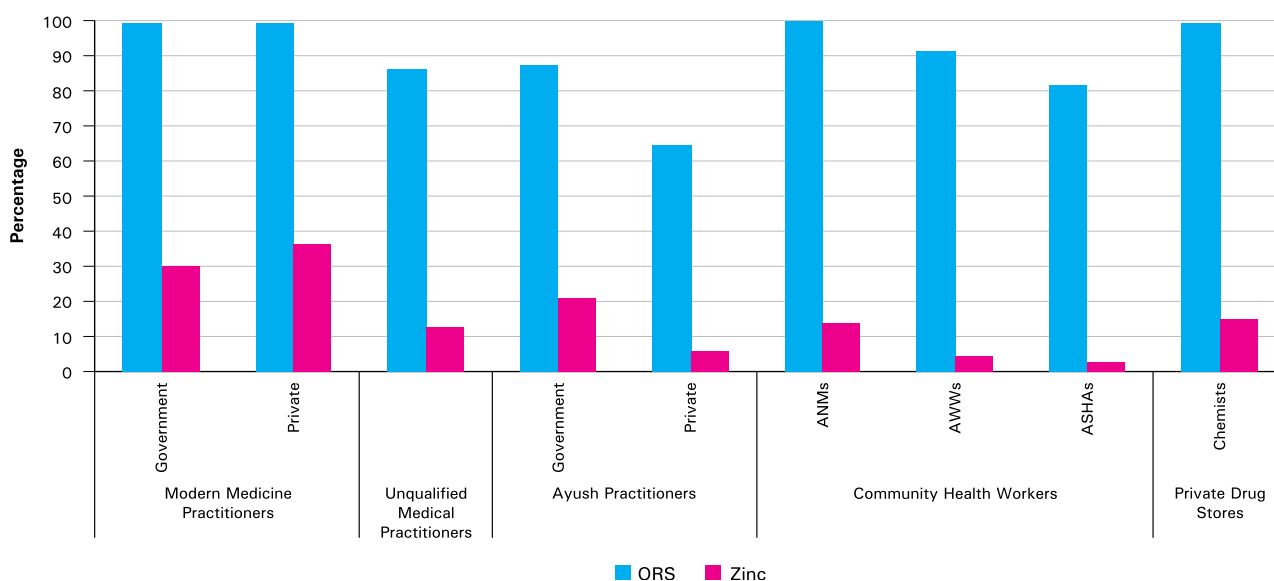
Mother’s practice of home treatment

- About 13 per cent caregivers reported giving some home treatment to their children with diarrhoea.
- Among them, salt-sugar solution (48%), ORS (23%), rice water (19%), and dal water (15%) were reported as the main types of home treatment.

Practices of service providers in treating childhood diarrhoea

- Most service providers claimed that they prescribed ORS for treatment of childhood diarrhoea that ranged from 65 per cent (private AYUSH practitioners) to 100 per cent (ANMs) (Figure 5).
- However, this claim of service providers seems to be exaggerated if we compare data with the mothers’ report.
- Antibiotics were more commonly prescribed by government/private practitioners of modern medicine (71–75%) and unqualified health practitioners (55%) as compared to other providers such as ANMs.
- Similarly, anti-diarrhoeal drugs were also prescribed frequently by practitioners of modern medicine (government/private) (52–54%); unqualified health practitioners (44%), and AYUSH practitioners

Figure 5: Prescription of ORS and zinc for diarrhoea (as claimed by service providers)



(govt/private) (30–42%). These practices were contrary to national childhood diarrhoea management guidelines.

- More than 90 per cent of the service providers (who prescribed ORS) reportedly claimed that they advised on “how to prepare ORS solution”. Most of them reported having been advised on preparing ORS solution by mixing one big packet of ORS in one litre of water or one small packet of ORS in one glass of water.
- Zinc was prescribed more by government and private practitioners of modern medicine (range 30–36.3%) than other service providers. However, as pointed out earlier in section 5.3, actual zinc prescription was negligible.
- Quite a large number of service providers, ranging from 33 per cent of private practitioners of modern medicine and government AYUSH practitioners to 55 per cent of unqualified health practitioners reported that they advised giving food to the child less frequently during diarrhoea.
- Among those who gave additional diarrhoea advice, more than 85 per cent reportedly claimed that they recommended their clients for a follow up visit.

Availability of low-osmolarity ORS

- Availability of low-osmolarity ORS was considerably higher from public sector healthcare providers (79–89% across districts) than private sector providers (38–53% across the districts).

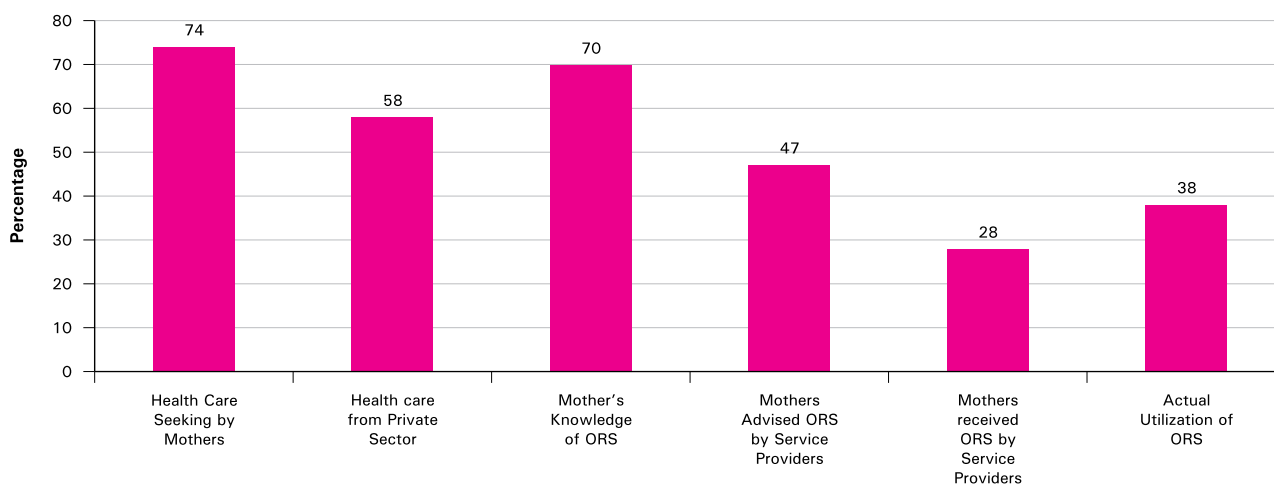
- Majority of the service providers in the government sector (practitioners of modern medicine, ANM/AWW/ASHA) and private chemists kept supplies of ORS (79.3–89.5%) with them. In contrast, most private practitioners of modern medicine (only 38.1%), unregistered medical practitioners (at 55.4%), and private/government AYUSH practitioners (at 48.4–57.1%) kept no stock of ORS packets.
- Data show that majority of private practitioners, while being more popular with mothers, did not stock ORS and, therefore, were unable to distribute it.
- At least one brand of low-osmolarity ORS was available in the government sector. In the private sector, about 4-12 brands of low-osmolarity ORS were available with the service providers all taken together.

Conclusion

The survey confirmed the low use rates of ORS across the 10 districts of the country, and highlighted inadequate management of childhood diarrhoea at the household level and at health facilities. Extremely low prescription and use rate of zinc as an adjunct therapy for diarrhoea is also evident.

Some of the findings that have relevance for programming for childhood diarrhoea control in India are:

Figure 6: Critical issues that limit widespread use of ORS for diarrhoea management



- While large proportions of mothers do seek outside healthcare for childhood diarrhoea, most often they seek treatment from private sector healthcare providers instead of from the public sector. This leads to out of pocket expense to the family for treating childhood diarrhoea. National program for control of childhood diarrhoea continues to focus on government's public sector. It is not possible to implement and improve coverage of national childhood diarrhoea management guidelines without actively involving private sector.
- Knowledge and awareness of the providers and mothers about ORS is considerably high, however, lesser numbers of service providers were actually prescribing ORS and dispensing them to their clients. Due to this factor, actual utilisation of the ORS for childhood diarrhoea remains low.
- Irrational practices for management of childhood diarrhoea like prescription of anti-diarrhoeals drugs, tonics and injectable drugs continued to be widespread among healthcare providers both in public as well as the private sectors.
- Inappropriate prescription of antibiotics is widespread among all categories of service providers.
- Knowledge among service providers of some specific aspects of current diarrhoea management guidelines is lacking, especially on how much ORS to give and how often; indications for use of antibiotics in diarrhoea; need to increase/continue feeding during diarrhoea; and on use of zinc as an adjunct therapy.
- Almost 50 per cent of the service providers (especially those in the private sector) do not dispense ORS. Since zinc has been recently introduced in the national programme, its coverage and availability remains low. Hardly anyone dispenses zinc. Comprehensive efforts will be required to increase coverage of zinc that should include advocacy, training, logistics and supply chain management, IEC campaign, and involvement of the private sector.
- Practice of giving additional advice remains suboptimal. Additional advices such as increased fluids, continued feeding, breastfeeding, hand washing, and recognition of danger signs which together should become an integral part of diarrhoea management.
- Persistence of some inappropriate advice from service providers continues to be disturbing such as bottle feeding, and withholding fluids and food during diarrhoea. As a result, caregivers carry on with these harmful practices. These erroneous behaviours need urgent correction.
- Availability of low-osmolarity ORS is good in both public and private sectors.

Chapter 1

Introduction

1.1 Background

Diarrhoeal diseases are a leading cause of childhood morbidity and mortality in India, and an important cause of malnutrition.⁴ On average, children below 3 years of age in developing countries, including India, experience about three episodes of diarrhoea each year.⁵

Essential elements in the management of childhood diarrhoea include the provision of oral rehydration therapy (ORT), increased and continued feeding, and the use of antimicrobials for those with bloody diarrhoea or severe cases of cholera. In conjunction with measures to promote sanitation and hygiene practices such as hand washing with soap, and use of latrines and safe disposal of excreta, appropriate diarrhoea management at household and in health services remains an important intervention for reducing mortality due to childhood diarrhoea.⁶ In the last decade, two technical advances have further improved the outcome of children suffering from diarrhoea: introduction of low-osmolarity oral rehydration salt⁷ (ORS) and zinc supplementation.⁸

Application of the diarrhoea management guidelines in communities remains suboptimal. Only about 43 per cent⁹ children suffering from diarrhoea in India receive any kind of ORT or increased fluids. Even more worrisome is the fact that this proportion seems to have stagnated or declined in most states in the last decade.

The Government of India has issued revised diarrhoea management guidelines¹⁰ recently that include revised therapeutic advances such as use of low-osmolarity ORS and zinc.

These guidelines have also become an integral part of Integrated Management of Neonatal and Childhood Illnesses (IMNCI). Steps have also been initiated to improve supplies of low-osmolarity ORS and zinc through the public health system under the National Rural Health Mission (NRHM) of the Government of India. Increasing compliance with diarrhoea management guidelines remains a challenge for district/block health officials and community health workers.

1.2 Objectives of the study

This study was conducted to understand the knowledge, attitude and practices of caregivers and health service providers in relation to the management of childhood diarrhoea. Such an understanding, it is hoped, will assist in improved planning, design, implementation and monitoring of programmes aimed at controlling childhood diarrhoea.

Specifically, this study proposes to answer the following questions:

- What are the knowledge, attitudes and prescription practices of service providers for the management of diarrhoea?
- What is the availability of ORS and zinc from public and private providers for diarrhoea treatment?
- What are the knowledge and practices of caregivers for the management of childhood diarrhoea:
 - Care seeking.
 - Administration of increased fluids, ORS and continued feeding.
 - Compliance with treatment.

4 *The Treatment of Diarrhoea: A Manual for Physicians and Other Senior Health Workers*. 4th rev. World Health Organization WHO/CDD/SER/80.2
5 *Ibid.*

6 Jones G, Steketee RW, Black RE, Bhutta Z, Morris SS, and the Bellagio. *Child Survival Study Group*. "How many child deaths can we prevent this year? *Lancet* 362, July 5, 2003, 65-71.

7 World Health Organization. "Reduced osmolarity oral rehydration salts (ORS) formulation – Report from a meeting of experts jointly organized by UNICEF and WHO". WHO/FCH/CAH/01.22, New York, 18 July 2001.

8 Lazzarini M et al. "Oral Zinc for treating Diarrhoea in Children." *Cochrane Database of Systemic Reviews* 2009, Issue 3

9 NFHS-3 (2005-06), data from Table 9.12.

10 *Revised Guidelines for Management of Diarrhoea in Children*, MOHFW, Government of India, 2007.

Chapter 2

Methodology and data collection

This chapter describes the study methodology adopted for selecting the target respondents, the study tools for data collection, and field operations for carrying out the baseline survey.

2.1 Study design

This baseline survey was a cross-sectional study that was conducted in one district each from 10 states of the country. These districts are:

Districts	States
Medak	Andhra Pradesh
Dibrugarh	Assam
Vaishali	Bihar
East Singhbhum	Jharkhand
Guna	Madhya Pradesh
Latur	Maharashtra
Koraput	Orissa
Krishnagiri	Tamil Nadu
Lalitpur	Uttar Pradesh
Purulia	West Bengal

UNICEF entrusted the responsibility of performing this study to GfK Mode, New Delhi. The study included study design, preparation of study tools, sampling, field data collection, and data analysis.

Both quantitative and qualitative approaches were used for data collection. The field work of the study was conducted during April–June 2008. On an average, 12 enumerators per district (i.e. 120 for all 10 study districts) were deployed for quantitative data collection. In all, 18 persons per district (i.e. 180 for all 10 study districts, including supervisors, field executives and persons for conducting FGDs) were deployed.

Training of field staff was organized in two phases. Training of trainers (ToT) was conducted in New Delhi in April 2008. This training was facilitated by the state field managers/executives of GfK Mode and professionals from UNICEF.

The field managers and executives who attended the ToT in New Delhi imparted training to their field teams in their respective states of the study. Details of this training are given at table 1.

Pre-testing of the questionnaires was done in two states of Uttar Pradesh and Andhra Pradesh in villages, and in rural and census wards of urban areas in the districts, which were not selected for our study.

Baseline and end-line surveys were planned to identify key factors limiting the use of ORS and zinc; demonstrate changes in the coverage and utilisation rates of ORS and zinc for management of childhood diarrhoea; and determine improvements in the management of childhood diarrhoea by healthcare service providers as prescribed in the national diarrhoea management guidelines.

The end-line survey is envisaged about two to three years after the baseline survey.

2.1.1 Quantitative household survey

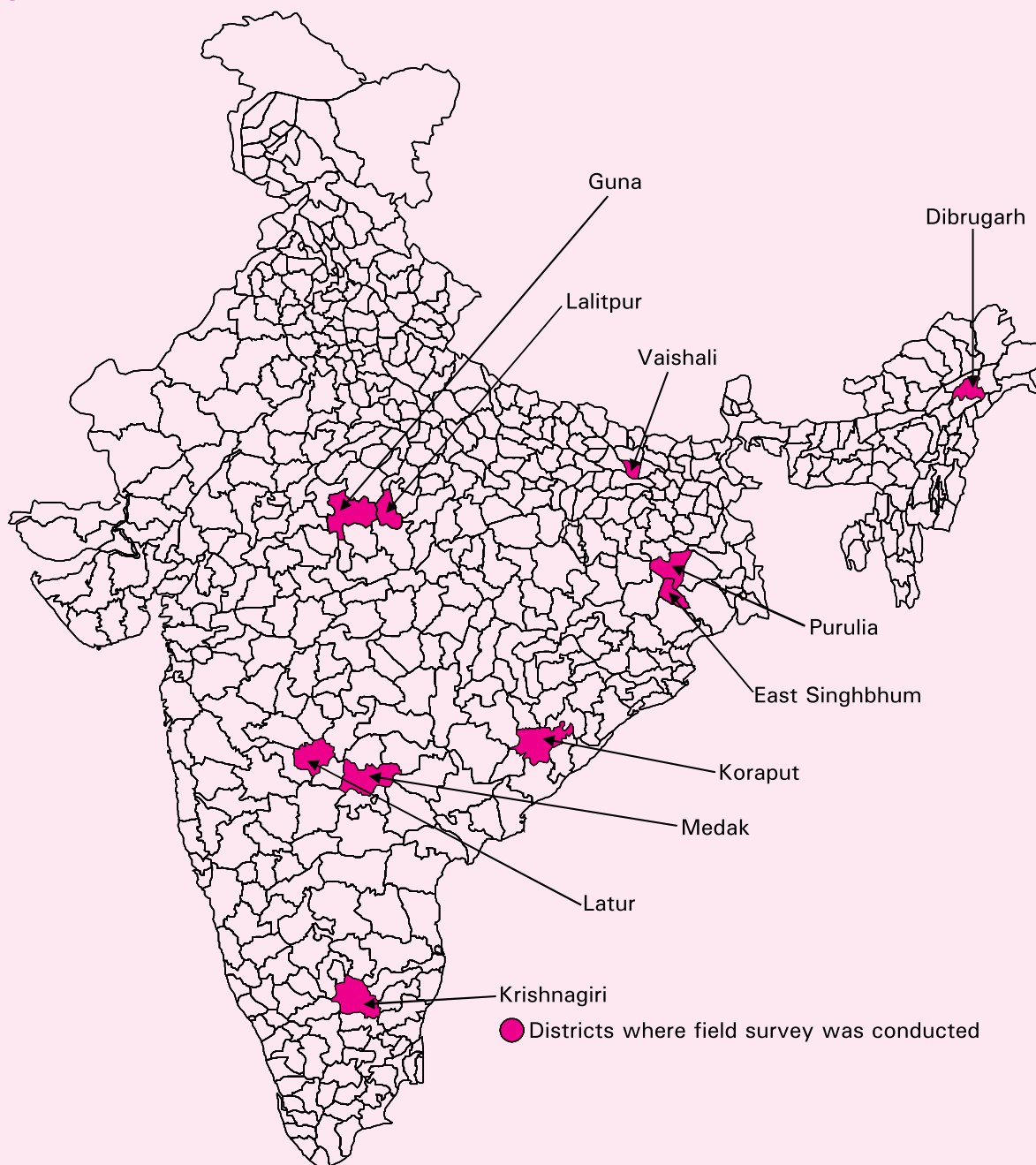
Sample size for each district

It was decided to estimate the utilisation rates of ORS and zinc for childhood diarrhoea within the precision of 3 per cent points at 95 per cent confidence level.

The estimate of the use rates for ORS for children under age five years with diarrhoea in the two weeks prior to the survey was found to be 26 per cent (NFHS-3, 2005-06). Taking this as the expected level, the sample size required to estimate the use of ORS/zinc with three percentage precision is 819 (or 820) [WHO, Geneva: *Sample size determination in health studies*].¹¹ Assuming the design effect of 1.5, the required sample size of mothers of children aged 2-59 months with diarrhoea in those two weeks comes to 1,230.

¹¹ Stephen K., Lwanga S., Lemeshow. *Sample Size Determination in Health Studies: A Practical Manual*. WHO 1991.

Figure 2.1: Location of the districts



Thus, the sample size of 1,230 households having children aged 2-59 months with diarrhoea in the two weeks prior to the survey, was taken from each district. This sample was split into rural and urban areas of the district in proportions to the district's rural/urban population.

Sampling design

Sample of rural mothers was selected by a two-stage sampling design. The first stage was selection of villages. The second was selection of a sufficient number of households with mothers who had children aged 2-59 months and who might have suffered from diarrhoea in the

two weeks prior to the survey (herein after called eligible mothers/households). As per NFHS-3 findings, it is estimated that about 9 per cent of under-five children suffer from diarrhoea in any given 15-day period.

In urban areas, a three-stage sampling design was adopted: 1) wards, 2) census enumeration blocks (CEB) within the selected wards, and 3) eligible mothers/households in these selected CEBs, in that order.

For rural areas

Forty-five primary sampling units (PSU) were selected in a district (except in East Singhbhum

[Jharkhand] from where 30 PSUs were selected – rural population in Jharkhand is 45% and urban 55%). All villages in a district were first arranged in descending order of population size; they were then grouped in three equal-population-size groups (called strata). Within each stratum, all the villages were arranged in a descending order by proportion of female population literate. Then a systematic probability proportional to population size (PPS) sample of 15 PSUs was taken from each stratum. It made female literacy as an implicit stratification variable.

For the second stage, all households in the selected PSU (including all its hamlets) were listed to prepare a sampling frame for eligible households. The required number of eligible households was selected by systematic sampling design from the sampling frame. A village with more than 200 households was divided into two equal segments, with each segment of about 100 households. Then two segments were selected randomly for preparation of the sampling frame. In case the desired number of eligible households was not available in the selected village/segments, then the nearby village/other segments of the village were covered to get the required number of eligible households.

For urban areas

Five wards (Exception: 10 wards in East Singhbhum where urban population was 55%) were selected by systematic PPS sampling from the list of wards in the district. Then from each selected ward, three CEBs were randomly selected, thus making 15 CEBs (30 in East Singhbhum) from the urban areas of the district. Then the required number of eligible households (1,230 multiplied by the proportion of urban population in the district) was selected from the CEBs by the same approach as suggested for rural areas.

2.1.2 Quantitative village- and facility-level survey

For rural areas

Community members/leaders were contacted, and a list of places where villagers go to seek services for childhood sicknesses including chemists was prepared. All these facilities (up to three per village) were covered for the survey in randomly selected 20 villages/PSUs (out of 45 villages selected for interview of mothers). If more than three facilities existed that were used by the villagers to seek services, then only the three most-frequently-used facilities were covered. If less than three such facilities existed in a village, then all were covered.

The facilities were of the following types: Allopath with a degree in modern medicine (government medical officers, private service providers), ANMs, AWWs, ASHAs, unqualified medical practitioners without a medical degree, AYUSH (Ayurvedic, Unani, Sidha, Homeopathy) practitioners and chemists.

For urban areas

A maximum of a sample of three healthcare providers (similar to rural areas) were visited from randomly selected 10 CEBs or the neighbouring CEBs (if not available in the selected CEBs). Other criteria were similar to rural areas.

2.1.3 Qualitative survey

Altogether 10 FGDs were organized with mothers in each district – 8 in 8 (out of 45 villages) selected villages and 2 in 15 selected urban PSUs. In addition, 3 FGDs were conducted among the health service providers – 2 in rural areas and 1 in urban. One FGD in rural areas was with government functionaries such as ANMs, AWWs and ASHAs, and the other was with private service providers including practitioners of modern medicine, unqualified health practitioners, and AYUSH practitioners. In urban areas, 1 FGD was conducted among providers including with chemists. Thus, 13 FGDs were organized in a district. About 8-10 mothers and 3-5 service providers, on an average, participated in 1 FGD.

The FGDs assessed perceptions and understanding of current practices of diarrhoea management by mothers and healthcare providers. It would help in refining the IEC material and assess types of changes after the interventions.

2.1.4 Analysis of proposed and actual sample covered in survey

2.1.5 Issues with data collection

As per the sampling design, at least 1,230 children were to be found in eligible households in each of the districts/states. However, many times when it was not possible to get the required number of such children (in eligible households) in the sampled villages/CEBs, then nearby villages/segments of the village in rural areas and CEBs in urban areas were visited house to house to achieve the required sample. The survey was stopped when the required number of children was reached. In these additional villages/CEBs (other than the sampled ones), listing such children was not done. If an eligible

household was found, the child's mother was interviewed.

2.1.6 Denominator for different parts of the study

Measurement of prevalence of diarrhoea was based on the number of children aged 2-59 months who were listed by enumerators and found in the sampled villages/CEBs and had diarrhoea during the two weeks prior to the survey. Additional children surveyed to achieve the required sample size (as stated in 2.1.5 above) were not included for calculation of prevalence of diarrhoea.

The denominator for analysis of household information, mother's characteristics, care seeking, use rates of ORS-zinc, and advice given by service providers, were based on the desired sample size for this study (Table 2.1).

2.2 Quality assurance and scrutiny of data

To be assured of quality of data, the following steps were adopted:

- Field supervisors back-checked 15 to 20 per cent of the filled-in questionnaires of each investigator in their teams on a daily basis.
- Supervisors scrutinized/edited all questionnaires of their team members on a daily basis for completeness and consistency.
- All filled-in questionnaires from the first few days of field work were sent to the HQ in New Delhi. The researcher associated with the study scrutinized them thoroughly and corrective steps, if needed, were taken immediately.
- Questionnaires were again scrutinized in the HQ before data was entered.
- Extensive validity checks were made to ensure validity of data entered. Before data entry, all questionnaires were re-edited/scrutinized by specially trained data editors. This covered checking all skip sequences, circled response codes, and information recorded in the filter questions.
- Before analysis, range, inconsistency and validation checks were done to clean the data.

Table 2.1: Proposed and actual sample covered in baseline survey

Instruments/Respondents	Proposed			Actually covered		
	Rural	Urban	Total	Rural	Urban	Total
1. Mother's survey						
Medak, AP	1,050	180	1,230	1,076	181	1,257
Dibrugarh, Assam	990	240	1,230	991	240	1,231
Vaishali, Bihar	1,140	90	1,230	1,194	74	1,268
East Singhbhum, Jharkhand	610	620	1,230	631	629	1,260
Guna, Madhya Pradesh	965	265	1,230	1,027	268	1,295
Latur, Maharashtra	940	290	1,230	940	295	1,235
Koraput, Orissa	1,020	210	1,230	1,052	212	1,264
Krishnagiri, Tamil Nadu	1,025	205	1,230	1,024	203	1,227
Lalitpur, UP	1,050	180	1,230	1,097	184	1,281
Purulia, West Bengal	1,105	125	1,230	1,105	147	1,252
Total	9,895	2,405	12,300	10,137	2,433	12,570
2. Facility/outlet survey per district						
Practitioners of modern medicine – government	75	60	135	68	59	127
Practitioners of modern medicine – private	75	60	135	69	66	135
Unqualified medical practitioners	75	60	135	70	47	117
AYUSH practitioners (government & private)	75	60	135	66	57	123
ANMs	75	-	75	73	7	80
AWWs	75	-	75	91	-	91
ASHAs	75	-	75	71	-	71
Chemists	75	60	135	69	65	134
Total	600	300	900	577	301	878
3. FGDs per district						
Mothers	8	2	10	8	2	10
Service providers						
ANMs/AWWs/ASHAs	1	-	1	1	-	1
Unqualified health practitioners/AYUSH practitioners	1	1	2	1	1	2
Total	10	3	13	10	3	13

2.3 Application of weights

This study deals with estimates at two levels: 1) district, and 2) all 10 districts combined. The sampling design adopted was self-weighting to get estimates at the district level and, therefore, no weights were applied to arrive at the district-level estimates.

Weights were applied only to arrive at the pooled estimates for rural, urban and total (rural + urban) for all 10 districts combined together.

Rural population proportions in each district to total rural population of all 10 districts were

applied as weights to arrive at the pooled rural estimates.

Similarly, urban population proportions in each district to total urban population of all 10 districts were applied as weights to have pooled urban estimates.

Their rural/urban proportions were used as weights to pool the rural and urban estimates of the 10 districts combined together to provide the overall estimates of the 10 districts combined together. Census 2001 population was used to work out the weights.

Chapter 3

Household and mother background characteristics

This chapter presents the profile of eligible mothers/households. It also describes background characteristics of the households surveyed under the study. In addition, it gives the profile of husbands of the currently married mothers and children age 2-59 months who had diarrhoea in the two weeks before the survey, by their age and sex.

3.1 Profile of household heads

In all, 25,140 households (20,678 in rural areas and 4,462 in urban areas) were surveyed in the 10 study districts to get a required sample of children aged 2-59 months who had diarrhoea in the two weeks prior to the survey. This section describes the profile of household heads and households surveyed under the study.

Religion: Overall, 88 per cent of the surveyed households were Hindus, 9 per cent were Muslims, and 3 per cent belonged to other religions.

Caste: Overall, about 21 per cent of the surveyed households belonged to scheduled castes and 15 per cent to scheduled tribes. Among the study districts, as high as 55 per cent of household heads in Koraput and 43 per cent in East Singhbhum belonged to scheduled tribes. The proportion of households belonging to scheduled castes varied from 6 per cent in Dibrugarh to 32 per cent in Purulia.

3.2 Household characteristics

Information on sources of drinking water, type of housing construction, number of usual members, and monthly household expenditure was gathered from sampled households, as they were important determinants of the health status of household members, particularly of children.

Source of drinking water: Overall, 31 per cent of households had piped water, 56 per cent got ground water from hand pumps or covered wells, and 13 per cent depended upon other sources such as open wells and surface water. There were large urban-rural differences in sources of drinking water. The proportion of households with piped drinking water was 59 per cent in urban areas, in contrast accessible only to one-fourth of the households in the rural areas. In some districts, more than two-thirds of the households in Medak (93%), Latur (68%), and Krishnagiri (90%) had piped water supply.

Type of housing construction: Regarding type of housing construction, 44 per cent of houses were kachcha, 37 per cent were semi-pucca and 19 per cent were pucca in all the study districts combined together.

Household size: Overall, the mean household size was 6.2 persons per household. It was somewhat lower in urban areas (5.8 persons per household) than in rural areas (6.3 persons per household). Across the study districts, it was lower in Dibrugarh (5.3), Koraput (5.5) and Krishnagiri (4.8), and higher in Vaishali (7), Lalitpur (7.2) and Purulia (6.6).

Monthly per capita expenditure: Overall, 64 per cent of households (69% in rural areas and 42% in urban areas) reported spending less than Rs 500 per member per month. Across the study districts, this figure varied from 46 per cent in Latur to 77 per cent in Lalitpur.

3.3 Background characteristics of mothers

Together, there were 12,570 eligible mothers (10,137 in rural areas and 2,433 in urban areas). This section highlights the profile of these mothers (Table 3.1).

3.3.1 Profile of mothers

Age (in years): Overall, about half of the surveyed mothers were below 25 years, 44 per cent in the age brackets of 25–34 years and 5 per cent had age more than 34 years. The mean age (\pm SD) of mothers was $25 \pm$ SD years.

Educational attainment: Overall, 51 per cent of the mothers were illiterate. Illiteracy was more in rural areas (58%) than in urban areas (44%) and only 2 per cent had completed senior secondary school. There were large differences across the study districts. More than three-fifths of the mothers were illiterate in Koraput (81%), Lalitpur (68%), Vaishali (68%), Purulia (63%) and Guna (62%).

Working status: Overall, only about 29 per cent of the mothers were working to earn money.

Table 3.1: Distribution of sampled mothers by their background characteristics (%)

Characteristics	All 10 districts		
	Rural	Urban	Total
Total number of sampled mothers (n)	10,137	2,433	12,570
1. Age			
<25 years	50	50.9	50.4
25–34 years	44.1	44.3	44.2
>35 years	5.9	4.8	5.3
Av. age of mothers	25.02	24.81	24.91
2. Years of schooling completed			
Illiterate	58.1	44.3	51.2
Between 1–5	14	13.6	13.8
Between 6–8	13	16.5	14.7
Between 9–12	14.3	21.9	18.1
More than 12	0.7	3.7	2.2
Average no. of years of schooling	2.93	4.44	3.68
3. Mothers who work for money	36.5	20.4	28.5
4. Av. number of living children below age 5	1.44	1.4	1.42

The proportion of such mothers was even lower in urban areas (20%) when compared to rural areas (36%). Across the study districts, the percentage of working mothers varied from 14 per cent in Vaishali to 71 per cent in Koraput.

Number of living children: As the sampled mothers were quite young, they had the average number of 1.64 living children at the time of survey, with a slightly higher number in rural areas (1.7) than in urban areas (1.58). Across the study districts, the average number of living children varied from 1.23 in Krishnagiri to 1.96 in Guna.

Overall, about 64 per cent of the mothers had at least one living child below 5 years of age.

3.3.2 Exposure of mothers to mass media

Only 19 per cent of the mothers (14% in rural and 25% in urban) read newspapers or magazines at least once a week. This was not surprising in light of the fact that only 49 per cent of mothers were literate.

The proportion of mothers who read newspapers or magazines at least once a week ranged from 5 per cent in Vaishali to 39 per cent in Medak. **Only 28 per cent of mothers listened to radio at least once a week, 56 per cent watched TV at least once a week, and 8 per cent went to a cinema hall or theatre to see a movie at least once in three months.** Access to mass media was much higher among urban mothers than those living in rural areas.

3.4 Background characteristics of children aged 2-59 months

In all, 12,570 children aged 2-59 months who had diarrhoea in the two weeks prior to the survey in the sampled households were covered under the study. Out of them, 81 per cent lived in the rural and 19 per cent in the urban areas. Their profile in terms of age, sex and mothers' and children's sanitation habits are shown in Table 3.2.

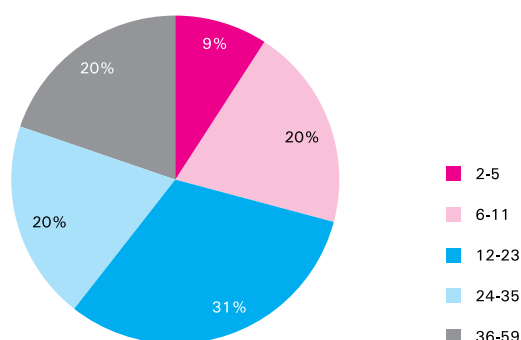
Table 3.2: Distribution of children aged 2-59 months who had diarrhoea in the two weeks prior to the survey by their age, sex and hand washing practices (%)

Characteristics of children	All 10 districts		
	Rural	Urban	Total
Total no. of children who had diarrhoea in the 2 weeks prior to survey; n (%)	10,137 (81%)	2,433 (19%)	12,570 (100%)
1. Age (in months)			
2–5	8.8	9.7	9.2
6–11	20.6	19.4	20
12–23	31.2	31.3	31.2
24–35	19.3	20.3	19.8
36–59	20	19.3	19.7
2. Sex			
Female	52.6	54.3	53.5
Male	47.4	45.7	46.5
3. Whether the child washes his/her hands before eating			
Yes	49.4	51.6	50.5
No	15.2	18.6	16.9
Not applicable	35.4	29.8	32.6
4. Whether mothers/caregivers wash hands before feeding the child			
Yes	71.4	73.9	72.7
No	6.3	6.8	6.5
Not applicable	22.3	19.3	20.8

3.4.1 Age and sex composition

About 20 per cent of the children belonged to each of the age categories of 6-11 months, 24-35 months and 36-59 months; 31 per cent were in age group of 12-23 months; and 9 per cent were between 2-5 months. There was no difference in age distribution of children between rural and urban areas and among the districts. (Figure 3.1).

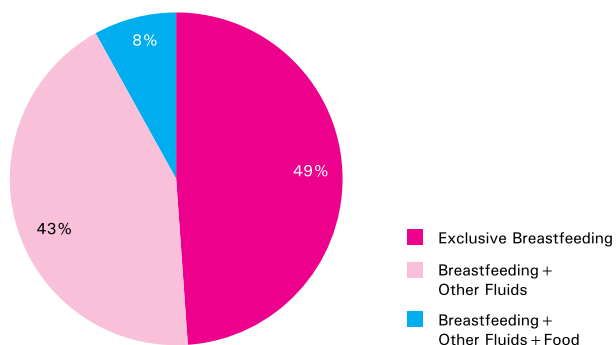
Figure 3.1: Age distribution of children who had diarrhoea in the 2 weeks prior to the survey (age in months)



3.4.2 Feeding practices by age of children

Out of the total children aged 2-5 months, 49 per cent were being exclusively breastfed, 43 per cent were being given breastfeeding and other fluids, and 8 per cent were being given breastfeeding, other fluids and food. The proportion of exclusively breastfed children was higher in rural areas (59%) than in urban areas (40%). (Figure 3.2)

Figure 3.2: Feeding practices among children aged 2-5 months who had diarrhoea in the 2 weeks prior to the survey



Across the study districts, the proportion of exclusively breastfed children aged 2-5 months was lower in East Singhbhum (13%), Purulia (15%), and Medak (39%)

Overall, 13 per cent of the children aged 2-59 months (who had diarrhoea in the 2 weeks before the survey) (11 % in rural & 15% in urban areas) were taking fluids or milk with a bottle. The proportion of such children varied from 5 per cent in Latur to 46 per cent in Krishnagiri.

3.4.3 Hygiene practices

The main findings are as follows (Table 3.2):

- About 60 per cent of caregivers across the study districts (except Krishnagiri) reported that they washed hands before feeding their children.
- Almost all (99%) caregivers reported washing their hands after using toilet.
- Of those who practiced hand washing, only half (40% in rural and 59% in urban areas) reported using soap.

Prevalence of diarrhoea among children

This chapter discusses the prevalence of diarrhoea among children aged 2-59 months in the two weeks prior to the survey by household characteristics. In addition, all eligible mothers were asked a series of questions to find out whether their children had one episode or more than one. Information was also collected on the number of days that diarrhoea lasted.

4.1 Prevalence of diarrhoea

Measurement of prevalence of diarrhoea was based on the number of children aged 2-59 months who were listed by enumerators and found in the sampled villages/CEBs, and had diarrhoea during the two weeks prior to the survey. Additional children surveyed to achieve the required sample size (as stated in section 2.1.5) were not included for calculation of prevalence of diarrhoea.

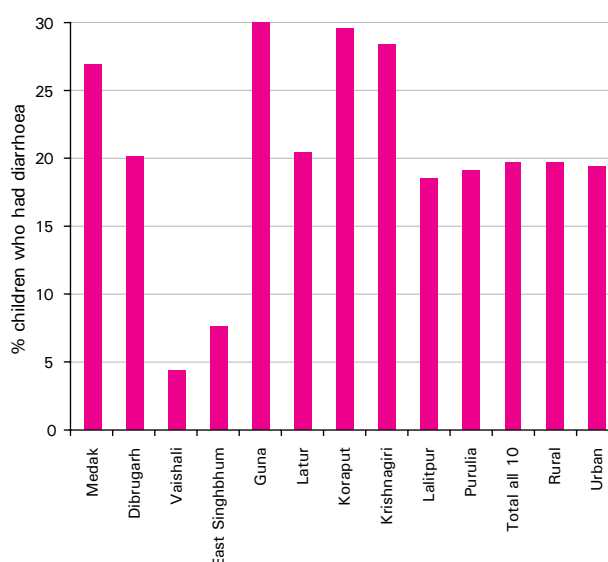
Table 4.1: Prevalence of diarrhoea in the two weeks prior to the survey by district

District/State	(n)	% children who had diarrhoea
Medak/Andhra Pradesh	1,700	27.0
Dibrugarh/Assam	2,920	20.2
Vaishali/Bihar	3,123	4.4
East Singhbhum/Jharkhand	1,802	7.7
Guna/Madhya Pradesh	2,575	30.0
Latur/Maharashtra	2,329	20.5
Koraput/Orissa	2,472	29.6
Krishnagiri/Tamil Nadu	1,957	28.4
Lalitpur/Uttar Pradesh	3,726	18.5
Purulia/West Bengal	2,448	19.1
Total (all 10 districts)	25,140	19.8
Rural	20,678	19.8
Urban	4,462	19.5

Overall, about one-fifths of the children aged 2-59 months had diarrhoea in the two weeks before the interview for all the 10 districts

combined, regardless of the area (rural or urban) they belonged to. Across the study districts, there were large differences in the prevalence of diarrhoea (Table 4.1, Fig 4.1). Vaishali and East Singhbhum had lower prevalence of diarrhoea.

Figure 4.1: District-wise prevalence of diarrhoea



4.1.1 Prevalence of diarrhoea by household characteristics

Prevalence of diarrhoea among children aged 2-59 months during the two weeks before the survey for all 10 districts combined together by household characteristics (Table 4.2).

Because of small sample sizes in some categories, there is no statistically significant difference – no relationship exists between prevalence of diarrhoea and household characteristics except that a trend could be noticed by literacy status and type of house.

Table 4.2: Prevalence rate of diarrhoea by household characteristics for all 10 districts combined together

Household characteristics	Prevalence rate of diarrhoea (all 10 districts combined) (%)		
	Rural (20,678)	Urban (4,462)	Total (25,140)
Source of drinking			
Piped water	25.2*	19.4	23.3
Ground water (hand pump)	17.8	20.6	18.1
Covered well water	16.9	19	17.2
Open well water	19.4	18.7	19.3
Surface water	26.1*	25*	26.1
Caste			
SC	20.2	20.3	20.2
ST	22.8	21.8	22.7
OBC	19.3	20.2	19.5
High castes	18.2	17.5	18.1
Type of house			
Pucca	17.2	16.7	17
Semi-Pucca	19.5	20.4	19.6
Kachcha	21.1	23.7	21.3
Years of schooling of heads of HHs			
Illiterate	21.7	22.8	21.8
1-5 years	25.4	21	24.6
6-8 years	18.3	17.8	18.2
9-12 years	15.5	12.7	14.9
More than 12 years	13.6	17.2	14.3
* Small sample sizes and thus low precision in these estimates			

4.1.2 Prevalence rate of diarrhoea by age and sex of children

The percentage of children who had diarrhoea in the two weeks prior to the survey by their age and sex is shown in table 4.3. District-wise prevalence of diarrhoea by age and by sex of the child are shown in figures 4.2a and 4.2b respectively (see page 24)

- Boys were somewhat more likely to have diarrhoea than girls in all the districts, though not consistently and differences were not large.
- Children under three years have a significantly higher susceptibility to diarrhoea than older children in all the districts.

Table 4.3: Prevalence rate of diarrhoea by age and sex of children

District/State	Prevalence rate of diarrhoea (%)				
	Age group in months			Sex	
	2-5	6-35	36-59	Male	Female
Medak/Andhra Pradesh	29.4	29.7	22.0	26.4	27.6
Dibrugarh/Assam	22.6	21.5	17.6	22.5	17.9
Vaishali/Bihar	4.8	5.9	1.6	4.6	4.1
East Singhbhum/Jharkhand	10.9	9.2	4.5	7.8	7.5
Guna/Madhya Pradesh	36.4	36.9	17.1	31.5	28.3
Latur/Maharashtra	26.8	25.7	12.1	21.0	19.9
Koraput/Orissa	30.4	36.2	18.8	31.1	27.9
Krishnagiri/Tamil Nadu	27.7	32.5	22.1	29.9	26.9
Lalitpur/Uttar Pradesh	30.2	21.5	10.4	20.0	16.9
Purulia/West Bengal	20.7	22.9	12.1	19.1	19.1
Total (all 10 districts)	24.1	23.3	13.1	20.7	18.8
Rural	23.9	23.3	13.1	20.7	18.9
Urban	25.2	23.1	12.9	20.5	18.5

4.2 Duration of diarrhoea

Overall, in over half of the children (46% in rural areas and 56% in urban areas), the last diarrhoea episode ended within three days. Median duration of the last diarrhoeal episode was three days.

4.3 Other problems along with diarrhoea

Overall, 12 per cent of the children (13% in rural areas and 10% in urban areas) had blood in stools, a symptom of dysentery. The percentage of such children varied from 6 per cent in Krishnagiri to 20 per cent in Vaishali.

About two-fifths of the children (46% in rural areas and 33% in urban areas) had vomiting during diarrhoea. The proportion of such children ranged from 17 per cent in Krishnagiri to 86 per cent in Vaishali.

Figure 4.2a: Prevalence of diarrhoea by age of the child

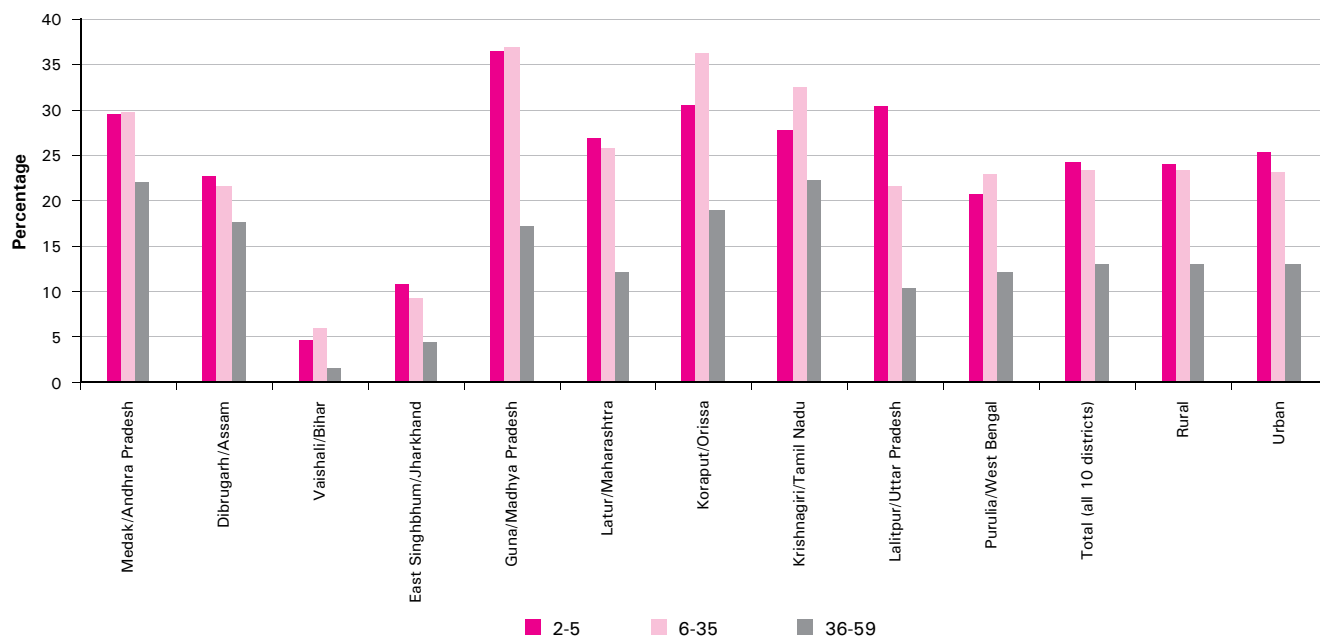
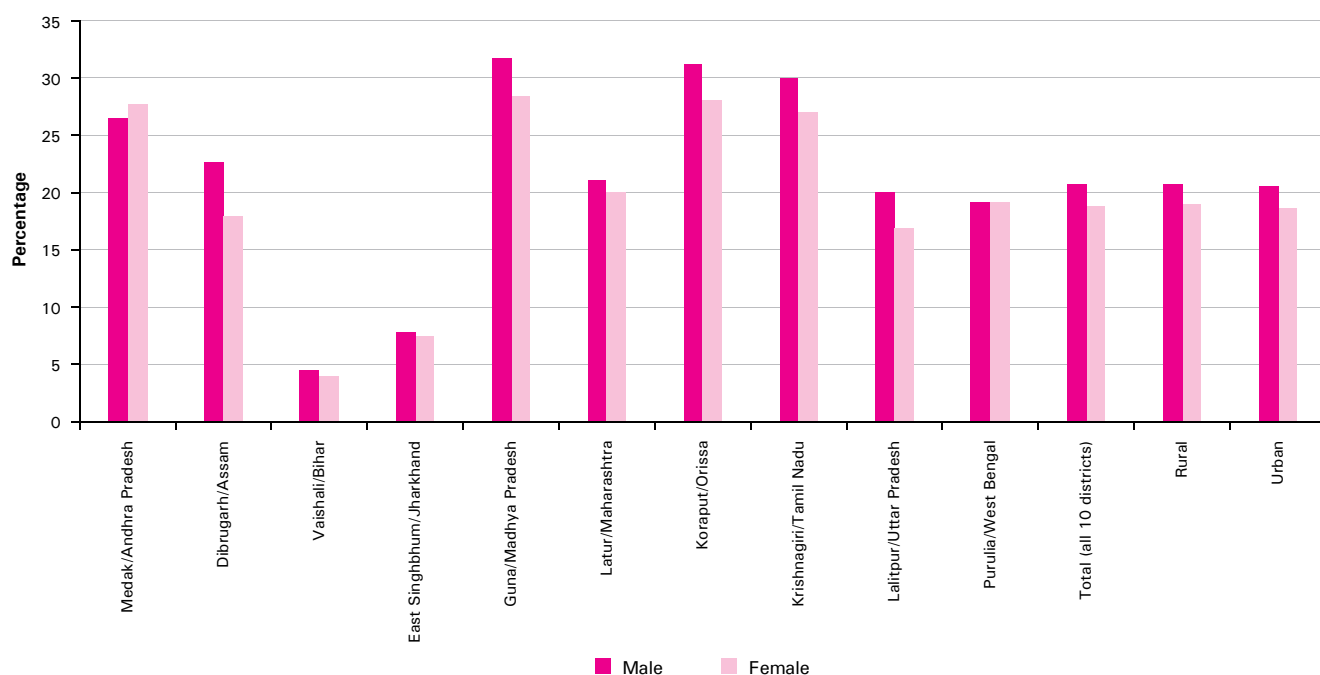


Figure 4.2b: Prevalence of diarrhoea by sex of the child



Mothers' perceptions on what causes diarrhoea

"Diarrhoeal episodes are more common in monsoon months compared to non-monsoon months, and the duration of diarrhoeal episodes is also prolonged".

"We have small houses and our environments are also not very clean, so maintaining hygiene in the house and among the members is a problem. This gives an impetus to diarrhoea".

"In monsoon months all the childhood diseases are more, such as fever, cough and cold, which reduces children's stamina and they are more likely to suffer from other illnesses including diarrhoea".

"Illnesses lead to poor digestion; little deviation in eating or drinking also leads to diarrhoea".

Chapter 5

Care-seeking behaviour for childhood diarrhoea

This chapter starts with the care-seeking behaviour for childhood diarrhoea. Information is promised on what mothers do when the child gets diarrhoea and when and where the child is taken for care outside home.

5.1 Care-seeking behaviour

Overall, 74 per cent (range 58.3–88.4) of caregivers reported to have sought care outside home for the diarrhoea episode in their children. An additional 13 per cent resorted to some sort of home treatment. Remaining 13 per cent did not receive any treatment. There were large differences in care-seeking behaviour across the districts (Table 5.1, Fig. 5.1).

More than two-thirds of the mothers, who sought treatment outside home, preferred a private practitioner or a private health facility in most districts. In Dibrugarh and Koraput, however, substantially a larger proportion of families relied on public health facilities (48% and 74%, respectively).

Table 5.1: Treatment seeking behaviour for childhood diarrhoea by district

District/State	Total no. of children who had diarrhoea (n)	Treatment seeking behaviour (%)		
		Outside treatment	Home treatment	No treatment
Vaishali/Bihar	1,268	88.4	10.1	1.5
Medak/Andhra Pradesh	1,257	83.3	10.7	6.0
Guna/Madhya Pradesh	1,295	83.4	9.6	7.0
Latur/Maharashtra	1,235	79.9	9.9	10.2
Purulia/West Bengal	1,252	68.4	19.3	12.3
Koraput/Orissa	1,264	72.0	15.1	12.9
Krishnagiri/Tamil Nadu	1,227	76.5	8.6	14.9
Dibrugarh/Assam	1,231	58.3	20.9	20.8
Lalitpur/Uttar Pradesh	1,281	65.5	12.6	21.9
East Singhbhum/Jharkhand	1,260	63.6	12.0	24.4
Total (all 10 districts)	1,2570	74.5	12.7	12.8
Rural	1,0137	76.6	11.8	11.6
Urban	2,433	72.3	13.7	14.0

Figure 5.1: Treatment seeking behaviour for child diarrhoea by district

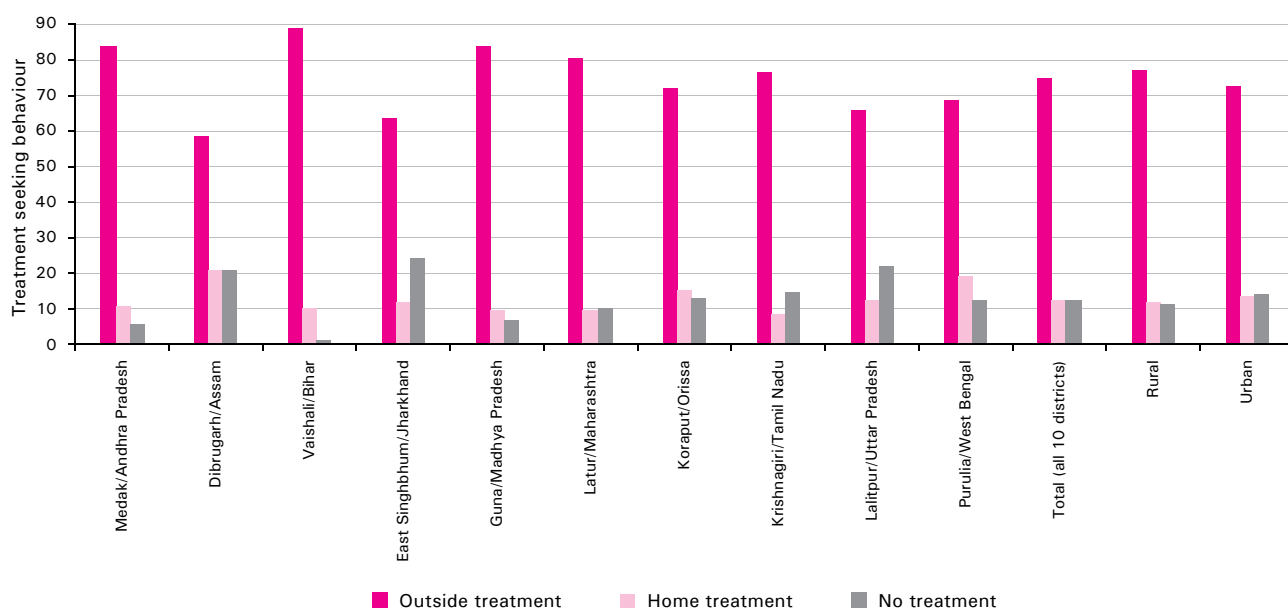
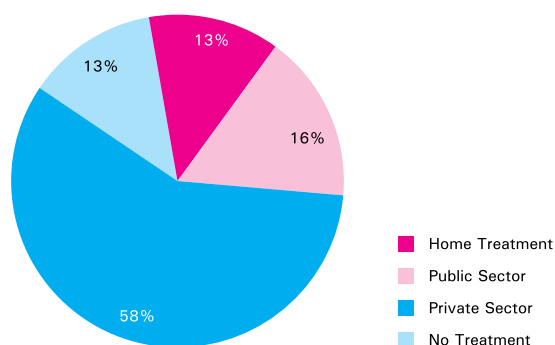


Figure 5.2: Treatment-seeking behaviour in childhood diarrhoea



5.1.1 Care seeking by age and sex of the child

There was no difference in the treatment-seeking behaviour by sex of the child. Children more than three years of age were more likely to receive treatment at home. Not surprisingly, considerably a larger proportion of children (22%) in the age group 2-5 months did not receive any treatment at all. (Table 5.2)

Table 5.2: Distribution of treatment-seeking behaviour according to children's age and sex (%)

Characteristics of the child	Treatment seeking behaviour (%)			No. of children with diarrhoea in the last 2 weeks (n)
	Treatment outside home	Home treatment	No treatment	
Age in months				
2-5	67.5	10.6	22	1,181
6-11	78.3	10.4	11.4	2,476
12-23	78.2	10.7	11.1	3,872
24-35	74.4	14.5	11.1	2,489
36-59	68.1	17.6	14.3	2,552
Sex				
Male	73	13.1	13.9	5,921
Female	75.8	12.4	11.8	6,649

5.1.2 Day after the onset of diarrhoea when treatment was sought outside home, and other considerations

All caregivers who sought outside treatment or consultation for their children's diarrhoea were asked on which day after the onset of diarrhoea they sought treatment. They were also asked about the considerations that led them to take their children for outside treatment/consultation and where they went to seek this treatment/consultation. Results are depicted in table 5.3. Summary findings are:

- Median duration between onset of diarrhoea and seeking care outside home was 1.2 days.
- "Child was having too many stools," "child was feeling very weak," "child was not eating anything," and "diarrhoea was continuing for too long" were reported as the main considerations which led the mothers to go for treatment outside home.

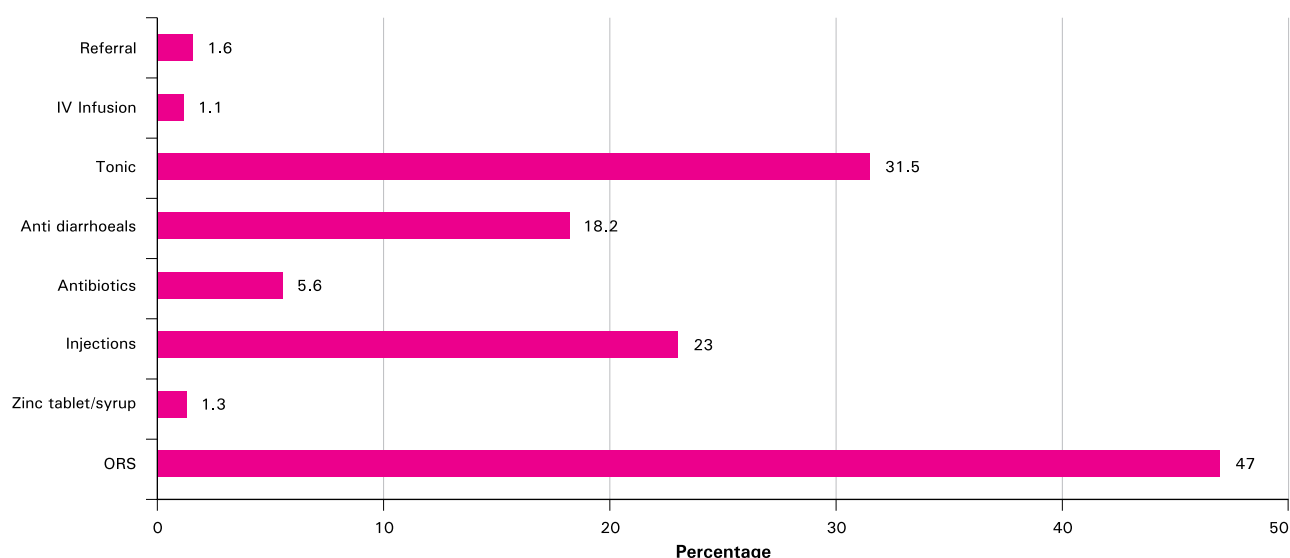
Table 5.3: Treatment-seeking behaviour and type of treatment received with regard to the last episode of child diarrhoea

Particulars	All 10 districts		
	Rural	Urban	Total
No. of children aged 2-59 months with diarrhoea in the last two weeks (n)	10,137	4,333	12,570
Sought outside treatment/consultation (%)	76.6	72.3	74.5
No. of children for whom outside treatment was sought (n)	7,554	1,744	9,298
Average interval between onset of diarrhoea and seeking outside treatment (in days)	1.32	1.23	1.28
Reasons for seeking outside treatment/consultation (multiple responses) (%)			
It was continuing for too long	21.6	27	24.2
Child was having too many stools	85.6	76.8	81.3
Stools had blood	10.2	7.5	8.9
Child was feeling very weak	53	47.3	50.2
Child was not eating anything	32.1	26	29.2
Child was not drinking as before diarrhoea	12.9	10.4	11.7
I was advised to take the child for treatment	5.3	5.1	5.2
I wanted diarrhoea treated immediately	17.5	18.7	18.1
Others	3.6	3.4	3.5

Table 5.4: Care seeking and type of treatment received for the last episode of diarrhoea (%)

Particulars	All 10 districts		
	Rural	Urban	Total
No. of children for whom outside treatment was sought (n)	7,554	1,744	9,298
Place where outside treatment/consultation was taken (multiple responses) (%)			
Public health sector			
Govt./municipal Hospital	6.1	13.2	9.5
Govt. dispensary	2.2	1.5	1.8
CHC/rural hospital/PHC	7.4	3.5	5.6
Sub-centre/ANM	2.6	0.6	1.6
AWW	3.6	0.9	2.3
Others	2.1	1.4	1.8
Any public sector facility	22.7	20.7	21.8
Private medical sector			
Pvt. hospital	25.4	22	23.8
Pvt. service provider (doctor)	40.5	47.8	44
Pvt. paramedic	1.4	2.1	1.7
Vaidya/Hakim/Homeopath	4	4.2	4.1
Pharmacy/drug store	4.6	6.2	5.4
Others	1.2	0.6	0.9
Any private sector facility	76.8	81.7	79.2
Any other source/facility	3.3	1.3	2.3
Type of treatment received (multiple responses) (%)			
ORS	47	47	47
Zinc tablet/syrup	1.4	1.2	1.3
Injections	28.6	17	23
Antibiotics	6.9	4.2	5.6
Anti-diarrhoeal	17.9	18.6	18.2
Tonic	32.1	30.9	31.5
Intravenous fluids	1	1.3	1.1
Referral	1.9	1.3	1.6

Figure 5.3: Types of treatment received for childhood diarrhea from service providers (n = 9,298)



5.1.3 Place for seeking care

Among the public sector health facilities, government hospitals, PHCs, CHCs, and rural hospitals were more popular (Table 5.4) Anganwadi and sub-centres were least used for diarrhoea treatment. Private sector doctors were most frequently used source of care for diarrhoea management.

5.1.4 Treatment by service providers

All caregivers who sought outside treatment for their children's diarrhoea, were further asked to show some documents such as bottles, prescription slips, tablets, sachet, and similar things to enable the investigators to record the type of treatments given/prescribed to their children. In most cases, mothers could not produce any such document, so researchers had to rely upon the information given by mothers. See table 5.1 for such information.

Most common treatments reported were: ORS (47%), tonics (32%), injections (23%), and anti-diarrhoeal (18%) (Table 5.4; Fig. 5.3). The percentage reported receiving ORS varied from 33.7 in East Singhbhum (in Jharkhand) to 70.1 in Dibrugarh.

Zinc prescription was reported by only one per cent mothers. It varied between 0.5 per cent in Latur (Maharashtra), and 3.1 in Lalitpur (UP).

The qualitative data shows that the doctor clinically examined the child and then advised treatment. The examination included examination of abdomen, eyes, skin and chest with the stethoscope.

5.2 Prescription of ORS by service providers

The following sub-sections (5.2.1 & 5.2.2) deal with those caregivers who sought outside

treatment or consultation for diarrhoea and were prescribed ORS.

5.2.1 Information given by service providers on how to prepare and use ORS solution

All mothers whose child was prescribed ORS by the service provider were further asked a set of questions about information the service provider gave them on how to prepare and use ORS solution. This data is summarized in table 5.5. On analyzing the data, the following main findings have emerged.

- More than 88 per cent of mothers across all the study districts were informed about how to prepare ORS solution.
- More than 80 per cent of them were told to prepare ORS solution by mixing one small packet of ORS in one glass of water or by mixing one big packet of ORS in one litre of water. Most of them prepared the solution as instructed by the service provider.
- More than two-thirds of them in all the districts (except Vaishali and Purulia) were told to use boiled water in preparing ORS solution.
- More than one-half of mothers across all the districts (except Dibrugarh, Krishnagiri and Purulia) were told to use the ORS solution within 24 hrs after its preparation. In Dibrugarh, Krishnagiri and Purulia, most of the mothers were either not told or they did not remember whether they were told about this aspect by the service provider.
- About 50% of the service providers advised giving ORS "as and when child needed it." Another 19% advised ORS after each stool. Interestingly, 16.3% of service providers advised one glass of ORS three times a day like any other medicine.

Table 5.5: Information given by service providers in regard to ORS for diarrhoea treatment

Information given by the service provider	All 10 districts		
	Rural	Urban	Total
No. of mothers whose children were given ORS (n)	3,622	853	4,475
1. Informed how to prepare ORS solution (Yes %)	95.7	94.7	95.2
2. Service provider's instruction on how to prepare ORS solution			
No. of mothers who were told how to prepare ORS solution (n)	3,468	812	4,280
Mix one big packet of ORS in one litre of water (%)	20.6	21.5	21.1
Mix one small packet of ORS in one glass of water (%)	60.6	57	58.9
Others (%)	19.1	20.3	19.7
No response (%)	2.2	2.5	2.3
% of correct instructions	81.2	78.5	80
3. Correctly told about the type of water to be used	85.5	86.6	86.1
4. Told about no. of hours ORS solution can be used after its preparation (%)			
< 24 hours	56.7	63.4	59.9
> 24 hours	0.4	0.2	0.3
Did not tell	33.3	27.6	30.5
Provider told but do not remember	9.6	8.8	9.2
5. Told how often ORS solution should be given to the child during diarrhoea (%)			
After each stool	17.9	20.3	19
As & when child needs it	52.1	48.8	50.5
Every half an hour	11	18.1	14.4
One glass of ORS three times	17.5	14.9	16.3
Others	2.9	3.1	3
No response	15.8	12.7	14.3

5.2.2 Source of supply of ORS

Those caregivers whose children were prescribed ORS by the service providers, were further asked whether any ORS packet was given to them by service provider or not and if not, the place from where they procured ORS and the distance they had to travel to procure it. Such information is provided in Table 5.6.

Table 5.6: Sources of supply of ORS (%)

Particulars	All 10 districts		
	Rural	Urban	Total
No. of mothers whose children were given ORS (n)	3,622	853	4,475
ORS packet was given by the service provider themselves			
Yes	52.1	55.6	53.8
No	47.9	44.4	46.2
Mothers not provided with ORS packet by service provider and procured ORS from other sources			
No. of mothers not provided ORS packet by service provider (n)	1,532	369	1,901
ORS procured from other sources			
Chemist	57.7	74.8	65.6
Others (health workers, Pvt. providers, (others)	42.3	25.2	34.4
Average distance (in kilometres) travelled to get ORS packet	2.44	1.71	2.11

- Overall, about 54 per cent of the mothers, with no differences in rural and urban areas, were given ORS packet by the service provider to whom they approached for their children's diarrhoea.
- There were large variations across the districts. Large numbers of mothers were given ORS packet in Dibrugarh (75%), Vaishali (53%), East Singhbhum (76%), Guna (54%), Koraput (87%) and Lalitpur (78%). In the other districts, they were mostly not provided ORS packet.
- Majority of the mothers who were not given ORS packet by service provider procured it from the chemist in all districts except Vaishali and Krishnagiri. In Vaishali, the main source of procuring ORS packet was other shops (38%), private service provider (28%) and chemist (27%), while in Krishnagiri, mothers mostly procured it from some other shops. On an average, they had to travel about 2 km to get an ORS packet.
- Among the mothers who were not given ORS packets directly by the service providers, 65% purchased them from a chemist or drug store. This proportion was higher in urban areas where chemists are easily accessible.

5.3 Prescription of zinc

The following sub-sections (5.3.1, 5.3.2 and 5.3.3) deal with those caregivers who sought outside treatment for the diarrhoea episode for their children and were prescribed zinc.

5.3.1 Information by services providers on how to prepare and give zinc

Only a small proportion of children (1.3%; n = 120) were prescribed zinc. All mothers whose child was prescribed zinc by the service provider were further asked whether they were told about the number of tablets of zinc to be given to the child per day, how that should be given, and the number of days to be given. As fewer children (less than 30) were prescribed zinc in each of the districts, the results for all the 10 districts combined together have been discussed here.

- Overall, 53 per cent of the mothers whose child was given/prescribed zinc (46% in rural & 63% in urban areas) were told to give two tablets of zinc (of 10 mg) per day.
- Around 76 per cent of the mothers (71% in rural and 83% in urban areas) reported that they were told to give the tablet by mixing it in clean water.
- Majority of the mothers pointed out that they were told to give zinc tablet to the child for less than seven days.

5.3.2 Source of supply of zinc

Those mothers/caregivers whose child was prescribed zinc tablets by the service provider were further asked whether zinc tablets were given by the service provider or not, and if not, the place from where they procured these tablets and the distance they had to travel to procure them.

About two-thirds of the mothers reported that zinc tablets were not given by the service provider. Regarding the place from where they got and the distance they had to travel to procure them, most of them were unable to give this information.

As per qualitative data, very few mothers talked about zinc and related information provided to them by service providers.

5.3.3 Compliance of zinc dosage

Overall, about 62 per cent of the mothers (54% in rural and 72% in urban areas) reported to have given the full prescribed course of zinc (14 days) to their children. However, it should be kept in mind that most mothers reported that zinc was prescribed for less than seven days.

5.4 Referral by service providers

Overall, only about two per cent of children in rural and one per cent in urban areas were referred by service providers. The mothers of these children were further asked where their children was referred by the service provider.

The larger proportion of them (47%) were referred to PHC or a CHC, followed by those who were referred to government hospitals or clinics; and then by those who were referred to private hospitals or clinics.

5.5 Type of advice related to child diarrhoea given to mothers by service providers

Those caregivers, who sought outside care for the diarrhoea episode were further asked whether the healthcare providers gave them any additional advice pertaining to diarrhoea. This information is provided in Table 5.7.

- Overall, only about 30 per cent of the mothers, with large variation across the districts, were provided additional advice apart from advice on medicines. The aspects on which they were advised were: increasing fluids given to the child; increasing food to the child; follow-up visits, breastfeeding, and preventive measures for diarrhoea. About 7-8 per cent mothers were advised to give bottle feeds to their children.
- Of those who received any advice, about two-thirds were advised to give fluids more frequently to the child during diarrhoea, mostly in the form of ORS, salt-sugar solution, rice water, and dal water (Table 5.7).
- Regarding types of food to be given to the child during diarrhoea, the mothers were advised to give rice and dal, mixed khichdi, and rice with curd. They were also advised not to give spicy food to the child.
- The main preventive measures told to the mothers were to feed child after washing hands; if the child had started eating by itself, it should wash hands before eating; ways of storing drinking water; and to start giving complementary feeding to the child after 6 months of age.
- Most were advised to continue breastfeeding or increase the frequency of breastfeeding.

Figure 5.4: Advice received from service providers for diarrhoea management [n = 9298; those who received any other advice (29.3%)]

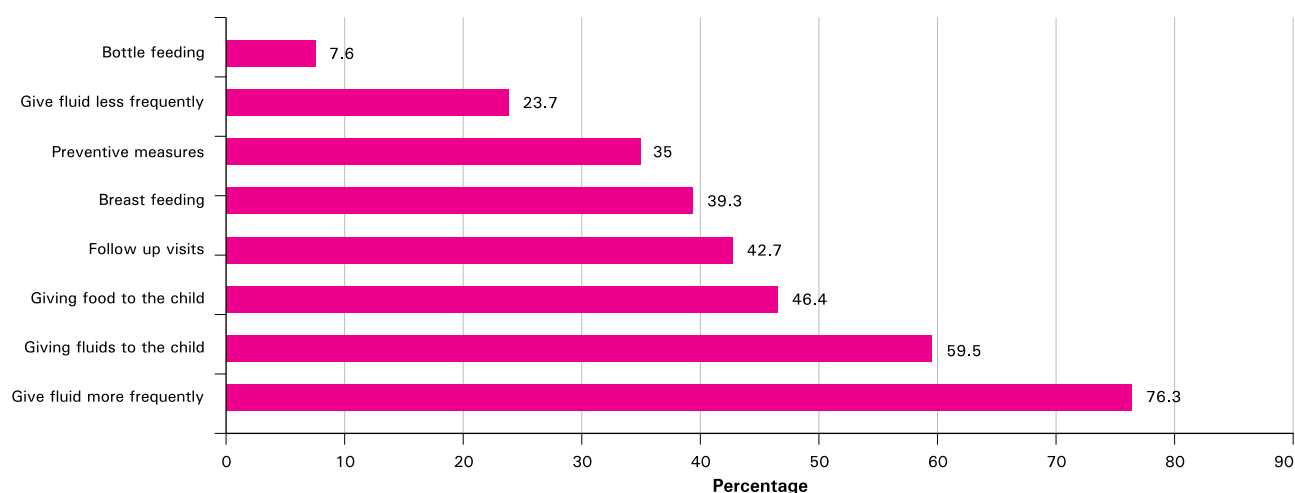


Table 5.7: Type of advice (other than treatment) related to childhood diarrhoea given by service providers

Advices related to diarrhoea	All 10 districts		
	Rural	Urban	Total
Number of mothers whose children were given outside treatment/consultation (n)	7,554	1,744	9,298
1. Mothers given any advice other than treatment (%)	30.1	28.4	29.3
No. of mothers given advice related to diarrhoea (n)	2,321	507	2,828
2. Aspects on which advised (%)			
Breastfeeding	40.6	37.7	39.3
Giving fluids to the child	62	56.5	59.5
Giving food to the child	43.6	49.5	46.4
Preventive measures	36.5	33.2	35
Follow-up visits	43.9	41.2	42.7
Bottle feeding	6.6	8.7	7.6
No. of mothers given advice on intake of other fluids (n)	1,361	275	1,636
3. Type of advice regarding fluid intake (other than breastfeeding)			
Give fluid more frequently	76.8	75.6	76.3
Give fluid less frequently	23.2	24.4	23.7
4. Type of fluid to be given			
ORS	52.4	45.5	49.3
Salt sugar solution	35.9	28.6	32.6
Soup	2.6	4	3.2
Rice water	27.7	38.1	32.3
Dal water	23.2	33.9	28
Others	16	21.3	18.3
5. Type of preventive advice given (%)			
No. of mothers given advice on preventive measures (n)	863	163	1,026
Feed child after washing hands	52.5	46.1	49.7
Do not use bottle to feed child	10.7	13	11.7
Exclusive breastfeeding up to 6 months/ complimentary breastfeeding after 6 months	41.4	39.7	40.6
Child should wash hands before eating	34	36.9	35.3
Advice on storing drinking water	40.3	20.6	31.6
Ways to dispose the child's excreta	13	6.4	10.1

- Of those who received advice, 62% of mothers (range 42.3–87.5%) with children between 2-12 months of age were advised about breastfeeding (Table 5.8).
- Those advised on bottle hygiene were told either not to use bottle for feeding the child or to wash properly or sterilize bottle before using it for feeding purposes.
- For follow up visits, “come again after some days” and “come again if the child is not cured” were the advice given by service providers. No advice was provided on when to return immediately (Table 5.9).

Table 5.8: Breastfeeding advice to mothers of children with diarrhoea given by service providers

Age criteria	All 10 districts		
	Rural	Urban	Total
Mothers with children aged 2-12 months (n =)	785	180	965
Yes (%)	65	58.8	62
Mothers with children aged 13-59 months (n =)	1,536	327	1,863
Yes (%)	28.5	25.9	27.3
All mothers (n =)	2,321	507	2,828
Yes (%)	40.6	37.7	39.3

Table 5.9: Type of advice given by service providers for follow-up visits (%)

Type of advice	All 10 districts		
	Rural	Urban	Total
No. of mothers who were given advice on follow-up visits (n)	979	207	1,186
1. Type of advice for return visit (%)			
Visit again after some days	32.4	39.6	35.7
If not cured then come again	34.5	29	32
If more loose motions come immediately	3.3	1.6	2.5
Go to other doctor	0.2	0.7	0.4
No advice	24.3	19.7	22.3
2. Type of advice on when to return immediately (%)			
If the child is not cured, come immediately	11.9	18.3	14.8
If more loose motions	3.7	4.3	4
If blood comes with stools	0.4	0.7	0.6
Vomiting continues	0.8	0	0.4
Come after some days	6.6	9.8	8.1
No advice	76.6	66.8	72.2

Women responses on benefits of zinc

Information related to zinc and its preparation was collected through group discussion among the mothers. Their verbatim responses are given below:

“Only once doctor prescribed zinc syrup to my child for diarrhoea but I don’t know its benefits for diarrhoea.”
(Urban, Purulia, West Bengal)

“ANM told us about using zinc in diarrhoea but we have never used it”.
(Rural, Lalitpur, Uttar Pradesh)

“I don’t know about zinc. AWW/ANM/ASHA has also not informed us about zinc.”
(Rural, Bhubaneswar, Orissa)

Home management of child diarrhoea

Those mothers/caregivers who did not go to any service provider for treatment of their children suffering diarrhoea, were asked whether they gave any treatment to their children at home. If they said yes, details were collected on the treatment given. If mothers/caregivers reported to have given ORS in home treatment, then they were asked a set of questions related to procurement and preparation of ORS. They were also asked questions on if they had given zinc in home treatment to their children. Mothers were also asked about the changes they made in the intake of liquids and semi-fluids by their children during diarrhoeal episodes. All these aspects are reported in this chapter.

6.1 Type of treatment given at home

The type of treatment given to the child at home are given in Table 6.1.

- As mentioned earlier, about 13% caregivers reported giving some home treatment for their children with diarrhoea. Salt sugar solution (48%), ORS (23%), rice water (19%) and dal water (15%) were reported as the main types of home treatment caregivers gave to their children for diarrhoea.
- In more than two-fifths of instances, mothers (ranging from 21% in Medak to 69% in Guna) gave home treatment on somebody else's advice. Husbands and other family members were reported as the main persons on whose advice they gave home treatment.

6.2 Other information related to ORS and zinc

Information on preparation and use of ORS solution is given in Table 6.1.

- Regarding the source from where caregivers procured ORS, chemists were reported as the main source across all districts except Vaishali, Guna, Koraput and Krishnagiri. "Other shop" in Vaishali and AWW in Guna, Koraput and Krishnagiri were mentioned as the main sources to procure ORS. In majority of the cases, caregivers had to travel less than one kilometre to get an ORS packet.
- In most of the districts, ORS solution was prepared by mixing one small packet of ORS in one glass of water.

Table 6.1: Practices followed by mothers who relied entirely on home treatment (%)

Information	All 10 districts		
	Rural	Urban	Total
No. of mothers who gave their children only some home treatment (n)	1,247	340	1,587
Type of home treatment given (multiple responses)			
ORS	21	25	23.1
Zinc	0.1	0.4	0.2
Salt sugar solution	47.7	48.7	48.3
Soup/lassi/shakanji/rice water/dal water	49.9	54.8	52.5
Average no. of days home treatment was given	4.07	3.98	4.02
How ORS solution was prepared			
Used one big packet of ORS in one litre of water	19.3	18.1	18.6
Used one small packet of ORS in one glass of water	59.6	65.6	63.1
Others	21.1	20.5	20.8
How often child was given ORS solution			
After each stool	26.9	25.8	26.2
As & when child needed it	46.9	59.1	53.9
Every half an hour	24.6	18.4	21
One glass of ORS three times a day	15.8	11.8	13.5

- Most mothers reported giving ORS solution to the child as and when they felt the need.
- In most of the study districts, home treatment was given for three to four days except in Latur and Krishnagiri, where it was given for two and one day, respectively.
- Only two mothers (one in Medak and another in East Singhbhum) reported to have given zinc to their children for diarrhoea treatment. Thus, the use of zinc in home treatment was almost 'nil'.

6.3 Types of changes made in feeding practices during diarrhoea

- Majority of the mothers did not alter the feeding practices of their children during diarrhoea. About 84% of them continued to give breast milk, fluids and food to their children in the same frequency and amount as before.
- Overall, only 16 per cent of the mothers (who gave home treatment to the child) made some changes in feeding practices. Across the districts, the proportion of such mothers varied from 9 per cent in Medak and Dibrugarh to 29 per cent in Purulia. Most often they gave more fluids.
- Since the numbers of mothers who changed feeding practices during diarrhoea were very small, no meaningful conclusions could be drawn (Table 6.2).

Table 6.2: Home treatment: types of changes made in feeding practices during diarrhoea

Particulars	All 10 districts		
	Rural	Urban	Total
1. Whether changed feeding practices			
No. of mothers whose children were given home treatment (n)	1,247	340	1,587
Changed feeding (Yes, %)	18.3	14.7	16.4
Changed feeding (No, %)	81.7	85.3	83.6
2. Type of change in feeding practices during diarrhoea			
No. of mothers who changed feeding practice in their children during diarrhoea (n)	207	44	251
Breastfeeding, %	22.4	17.3	19.9
Fluid intake, %	56.7	44.6	50.9
Type of food, %	44.7	62.1	53
3. Change in breastfeeding practices			
No. of mothers who made changes in breastfeeding (n)	46	8	54
Given more number of breastfeeding, %	63	22.1	46
Given less number of breastfeeding, %	31.4	60.2	43.4
Stopped breastfeeding, %	5.6	17.6	10.6
4. Change in fluid intake during diarrhoea			
No. of mothers who made changes in giving fluids to their children (n)	111	19	130
Given more fluid, %	80.5	54.7	69.6
Given less fluid, %	10.4	21.2	14.9
Fluid not given at all, %	9.1	24.1	15.4

Women responses on changes in feeding during diarrhoea

"We prefer to give breast milk to the child as mother's milk is easy to digest."

(Rural, Koraput, Orissa)

"Egg and other non-vegetarian items aggravate diarrhoea, so we avoid giving it to the child."

(Rural, Vaishali, Bihar)

"We give rice and pulse water, lemon juice, sugar salt solution and ORS to the child in diarrhoea."

(Rural, Guna, Madhya Pradesh)

"I stopped giving fluids to my child and reduced breastfeeding also when my child had diarrhoea as it increases loose motions."

(Rural, Krishnagiri, Tamil Nadu)

Knowledge of caregivers about ORS and zinc

A set of questions were asked from mothers or other caregivers to assess their knowledge on preparation and use of ORS and zinc. The information collected on these aspects is analyzed and discussed in the chapter.

7.1 Knowledge of ORS and its utilisation among all sampled mothers

More than 70 per cent of the sample mothers whose child had diarrhoea in the two weeks prior to the survey reported to have heard about ORS in all the districts except in Medak (63%), Vaishali (57%) and East Singhbhum (47%). In Dibrugarh and Koraput, more than 80 per cent of the mothers had knowledge of ORS (Table 7.1, Fig 7.1).

Overall, slightly less than 40 per cent of the mothers, ranging from 23 per cent in East Singhbhum to 51 per cent in Koraput, actually gave ORS solution to their children (Table 7.1, Fig. 7.1).

7.2 Knowledge about ORS among mothers who did not use it during recent diarrhoea episode

About 51.5% mothers who did not give ORS during recent diarrhoea episode acknowledged knowing about ORS (with or without being

shown ORS packets) (Table 7.2). Out of those who knew about ORS, 68.2% mothers also displayed some knowledge of 'how to prepare ORS solution'. Of these, 46.2% mothers had correct knowledge of mixing ORS.

Figure 7.1: Knowledge and utilisation of ORS

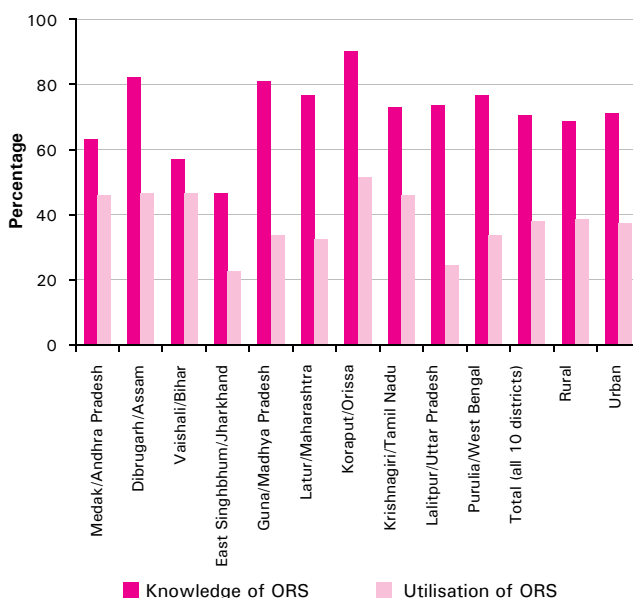


Table 7.1: Knowledge about ORS and its utilisation (percentage)

District/State	Total number of mothers whose child had diarrhoea (n)	Health-seeking behaviour		Knowledge of ORS among mothers whose children had diarrhoea (%)		Utilisation of ORS (%)		
		Number of mothers who sought outside healthcare	%	Yes	No	Treatment outside home	Only home treatment	Total
Medak/Andhra Pradesh	1,257	1,047	83.3	62.7	37.3	41.3	4.5	45.7
Dibrugarh/Assam	1,231	718	58.3	81.6	18.4	40.9	5.7	46.5
Vaishali/Bihar	1,268	1,121	88.4	56.5	43.5	45.8	0.8	46.6
East Singhbhum/Jharkhand	1,260	801	63.6	46.6	53.4	21.4	1.3	22.7
Guna/Madhya Pradesh	1,295	1,080	83.4	80.1	19.9	30	3.9	33.9
Latur/Maharashtra	1,235	987	79.9	76	24	29.9	2.4	32.3
Koraput/Orissa	1,264	910	72.0	89.2	10.8	49.8	1.5	51.3
Krishnagiri/Tamil Nadu	1,227	939	76.5	72.4	27.6	43.7	2.2	45.9
Lalitpur/Uttar Pradesh	1,281	839	65.5	73.1	26.9	23.4	0.9	24.3
Purulia/West Bengal	1,252	856	68.4	76.2	23.8	30.3	3.2	33.5
Total (all 10 districts)	12,570	9,298	74.0	70	30	34.9	3.1	37.9
Rural	10,137	7,554	74.5	68.3	31.7	36.1	2.4	38.5
Urban	2,433	1,744	71.7	70.7	29.3	33.9	3.3	37.2

Table 7.2: Knowledge of mothers/caregivers about ORS who did not use ORS during the recent diarrhoea episode (%)

Knowledge about ORS	All 10 districts		
	Rural	Urban	Total
No. of mothers whose children were not given ORS in the recent diarrhoea episode (n)	6,270	1,496	7,766
Whether have ever heard/seen ORS packet			
a. Yes, without showing packets	24	28.9	26.5
b. Yes, after showing packets	25.4	24.7	25
c. No	50.6	46.4	48.5
No. of mothers who knew about ORS (a+b) (n)	3,372	804	4,176
Expressed knowledge about how to prepare ORS solution			
d. Yes	67.5	68.8	68.2
e. No	32.5	31.2	31.8
No. of mothers who knew how to prepare ORS solution (= d) (n)	2,319	554	2,873
Knowledge about how ORS solution is prepared			
Used one big packet of ORS in one litre of water	18.5	18.1	18.3
Used one small packet of ORS in one glass of water	49.9	48.8	49.4
Others (i.e. incorrect way)	28.7	33.1	31
No response	4.1	2.3	3.2
How often ORS solution should be given to the child with diarrhoea			
After each stool	18.4	18.1	18.2
As & when child needs it	57.4	60	58.8
Every half an hour	11	19.8	15.6
One glass of ORS three times	13.1	10.5	11.7
Others	3.7	3.4	3.5
Do not know	7.9	6.3	7

Surprisingly, all mothers who had knowledge about ORS were actually not using ORS to treat their children's diarrhoea.

7.3 Knowledge about zinc among mothers who did not use it during recent diarrhoea episode

The knowledge of zinc was almost 'nil' among caregivers, as only 35 out of 2,430 (0.3%) mothers (who never gave zinc to their children during recent diarrhoea episode) had heard of it.

7.4 Knowledge of zinc and its utilisation among all sample mothers

Knowledge of mothers about zinc and its utilisation was almost negligible, as only one per cent mothers reported its knowledge and utilisation (Table 7.3).

7.5 Conclusion

While there was considerable knowledge of ORS among mothers, actual use of ORS for treating diarrhoea was very low. Poor knowledge of zinc is understandable since it has been introduced only recently into India's health programme.

Table 7.3: Knowledge of zinc and its utilisation

District/State	Total number of mothers whose	Knowledge of zinc		Utilisation rate of zinc		
		Yes	No	Treatment outside	Only home treatment	Total
Medak/Andhra Pradesh	1,257	0.95	99.05	0.72	0.08	0.80
Dibrugarh/Assam	1,231	1.54	98.46	1.38	0.00	1.38
Vaishali/Bihar	1,268	1.34	98.66	1.26	0.00	1.26
East Singhbhum/ Jharkhand	1,260	0.95	99.05	0.79	0.08	0.87
Guna/Madhya Pradesh	1,295	1.39	98.61	0.85	0.00	0.85
Latur/Maharashtra	1,235	0.73	99.27	0.40	0.00	0.40
Koraput/Orissa	1,264	0.71	99.29	0.63	0.00	0.63
Krishnagiri/Tamil Nadu	1,227	2.20	97.80	1.79	0.00	1.79
Lalitpur/Uttar Pradesh	1,281	2.42	97.58	2.03	0.00	2.03
Purulia/West Bengal	1,252	1.68	98.32	1.12	0.00	1.12
Total (all 10 districts)	12,570	1.36	98.64	1.02	0.15	1.17
Rural	10,137	2.07	97.93	1.07	0.09	1.16
Urban	2,433	1.37	98.63	0.83	0.41	1.24

Practices followed by service providers for management of childhood diarrhoea

In all, 878 service providers (577 in rural and 301 in urban areas of all the study districts) were interviewed. They were asked a series of questions regarding what they ask and observe before prescribing treatment for diarrhoea. They were also asked whether they kept supplies of ORS and zinc and what advice they gave to caregivers for children with diarrhoea. Information collected on all these aspects is presented in this chapter.

8.1 Background of service providers

8.1.1 Background characteristics

About 15 per cent of service providers belonged to each of these categories: 1) practitioners of modern medicine (government), 2) practitioners of modern medicine (private), and 3) chemists. Other categories of service providers interviewed during the study were AYUSH practitioners (3%) and unqualified health practitioners (13 %) (Figure 5.2).

On an average, providers had been imparting some knowledge on healthcare practices at the place of interview for about 11 years.

8.1.2 Training received in management of childhood diarrhoea

About 72 per cent of ANMs/AWWs/ASHAs reported they had received some training on management of childhood diarrhoea. Most (88%) reported having received training for less than 8 hrs (Table 8.1).

Table 8.1: Training received by health workers (ANMs/AWWs/ASHAs) (in hours) for management of diarrhoea (%)

Hours of training	%
Did not receive any training	28.5
< 1 hr	26.4
1.1–3.0 hrs	19.4
3.1–6.0 hrs	5.4
6.1–8.0 hrs	6.6
>8.0 hrs	11.6
Don't remember	2.1
Total per cent	100.0
Total number of workers	242

8.2 Questions asked by service providers before prescribing treatment

On asking what the service providers asked the caregivers before prescribing treatment for child diarrhoea, more than 70 per cent of service providers, irrespective of their category, asked about the duration the child had been suffering diarrhoea. They also reported asking about blood in stool.

8.3 Type of treatment advised

Most service providers claimed that they prescribed ORS for treatment of childhood diarrhoea that ranged from 65 per cent (private AYUSH practitioners) to 100 per cent (ANMs). Antibiotics and anti-diarrhoeal were more commonly prescribed by government and private medical practitioners including by unqualified health practitioners (Table 8.2). However, as mentioned in the previous chapter, mother's report suggested low level of ORS prescription particularly by AYUSH doctors. This class of practitioner (AYUSH) need education in diarrhoea management. They should be encouraged to stock ORS.

Large numbers of private practitioners of modern medicine, unqualified health practitioners, government-employed AYUSH doctors, AWWs and ANMs also referred diarrhoea cases to higher health centres for further management.

Prescription of zinc for diarrhoea management remains low. Government and private practitioners of modern medicine have begun to prescribe zinc (range 30 –36.3 %) than other service providers (Table 8.2). Almost all service providers prescribed zinc together with ORS. Prescription of zinc by community health workers was very low probably because supply of zinc has begun only recently.

Interestingly, most (71-75%) practitioners of modern medicine prescribed antibiotics along with ORS.

Table 8.2: Type of medicines/treatment claimed to be given/prescribed by service providers for diarrhoea (%)

Type of medicines given/prescribed (multiple responses allowed)	Categories of service providers								
	Modern medicine practitioners		Unqualified health practitioners	AYUSH practitioners		Community health workers			Private Drug Stores
	Government	Private		Government	Private	ANMs	AWWs	ASHAs	Chemists
(n =)	127	135	117	24	99	80	91	71	134
ORS	99.2	99.3	86.3	87.5	64.6	100	91.2	81.7	99.3
Zinc tablet/syrup	29.9	36.3	12.8	20.8	6.1	13.8	4.4	2.8	14.9
Injections	37	37.8	33.3	12.5	16.2	18.8	5.5	0	14.9
Antibiotics	70.9	74.8	54.7	41.7	30.3	30	14.3	8.5	43.3
Intravenous fluids	52	43.7	23.9	8.3	10.1	10	1.1	0	15.7
Anti-diarrhoeal	52	54.1	43.6	41.7	30.3	16.3	6.6	7	37.3
Referral	43.3	63.7	67.5	66.7	48.5	67.5	65.9	62	54.5
Tonic	24.4	28.9	23.9	12.5	21.2	11.3	2.2	4.2	25.4
ORS and zinc	29.9	36.3	12	20.8	6.1	13.8	4.4	2.8	14.9
ORS and antibiotics	70.9	74.8	49.6	33.3	29.3	30	13.2	8.5	43.3
ORS, zinc and antibiotics	22	28.9	8.5	4.2	5.1	3.8	1.1	0	13.4

8.4 Information given to caregivers on how to prepare and use ORS solution

8.4.1 Information on use of ORS

More than 90 per cent service providers who prescribed ORS reported that they advised caregivers on how to prepare ORS solution. Most reported advising on preparing ORS solution by mixing one big packet of ORS in one litre of water or one small packet of ORS in one glass of water.

More than 90 per cent of the service providers who prescribed ORS also reported advising about type of water to be used in preparing ORS solution. More than 80 per cent advised using boiled water for preparing ORS solution.

Most service providers stated that they informed clients about using ORS solution within 24 hrs of preparation.

They also stated advising mothers to give ORS solution "as and when the child needs," or following each stool.

8.4.2 Type of considerations service providers had in recommending ORS

Those service providers who prescribed ORS were further asked what considerations they

had in mind while recommending ORS. Most of them reported that they considered status of dehydration in child and child's age as important criteria for recommending or prescribing ORS.

8.4.3 Supply of ORS

Majority of the service providers working in the government sector (practitioners of modern medicine, ANMs/AWWs/ASHAs) and private chemists stocked supplies of ORS (79.3–89.5%) with them. In contrast, most private practitioners of modern medicine (only 38.1%), unregistered medical practitioners (55.4%), and private/government AYUSH practitioners (48.4–57.1%) kept no stock of ORS packets (Table 8.3).

Majority (82–93.5%) of the service providers, both in rural and urban areas, reported that they never had stock-outs of ORS (Table 8.3). However, government-sector community health functionaries (ANMs, AWWs and ASHAs) reported higher occurrence of ORS stock-outs (24–42.3%).

The above data shows that majority of private practitioners, while being more popular with mothers, did not stock ORS and, therefore, were unable to distribute it.

Table 8.3: Stocking of ORS by service providers and incidence of 'stock-outs' (%)

Whether keep supplies of ORS	Categories of service providers								
	Modern-medicine practitioners		Unqualified health practitioners	AYUSH practitioners		Community health workers			Private Drug Stores
	Government	Private		Government	Private	ANMs	AWWs	ASHAs	Chemists
1. Whether kept supply of ORS									
(n =)	126	134	101	21	64	80	83	58	133
Yes	84.9	38.1	55.4	57.1	48.4	87.5	85.5	79.3	89.5
2. Whether had situation of out-of-stock									
(n =)	107	51	56	12	31	70	71	46	119
Yes	6.5	13.7	17.9	8.3	16.1	27.1	42.3	23.9	10.1

Table 8.4: Service providers' knowledge about zinc in diarrhoea management (%)

Importance of zinc in helping diarrhoea (multiple responses allowed)	Categories of service providers								
	Modern-medicine practitioners		Unqualified health practitioners	AYUSH practitioners		Community health workers			Private Drug Stores
	Government	Private		Government	Private	ANMs	AWWs	ASHAs	Chemists
(n=)	38	49	15	5	6	11	4	2	20
Important micronutrient for a child's overall health and development	60.5	61.2	26.7	80	50	63.6	50	0	60
Reduces the severity of the episode	60.5	44.9	26.7	20	66.7	63.6	0	100	35
Reduces the incidence of diarrhoea episodes in the following 2-3 months	47.4	44.9	40	0	33.3	18.2	25	50	55
Replaces the lost zinc during diarrhoea	47.4	63.3	40	80	50	36.4	75	100	50
Important in helping the child to recover	31.6	36.7	46.7	60	33.3	63.6	75	0	35
DK/CS	15.8	12.2	26.7	0	0	0	0	0	10

DK = Don't know; CS = Can't say

8.4.4 Availability of low-osmolarity ORS

Availability of low-osmolarity ORS in both public as well private sector was also surveyed. At least one brand of low-osmolarity ORS was available in the government sector. In the private sector about 4-12 brands were available with the service providers (all together).

8.5 Information given by service providers on use of zinc

8.5.1 Information on use of zinc

Those service providers who prescribed zinc for childhood diarrhoea were further asked a series of questions related to dosage schedule such as number of zinc tablets per day, duration of treatment, and on the type of advice they provided caregivers on use of zinc.

Most reported prescribing one tablet of 20 mg zinc per day to the child irrespective of his/her age. Majority of them recommended giving zinc tablet to child by mixing it in clean water. Most practitioners of modern medicine, AYUSH practitioners and ANMs working in the government sector reported prescribing zinc for 14 days, while most unqualified health practitioners and chemists reported prescribing zinc for less than 14 days.

8.5.2 Knowledge of service providers regarding the benefits of zinc in diarrhoea

Service providers who prescribed zinc tablets were further asked how zinc helped in diarrhoea management. Their responses are summarized in table 8.4.

"Important micronutrient for a child's overall health and development" and "it reduces the severity of the diarrhoea episode" were cited as the ways how zinc helps in diarrhoea.

8.5.3 Supply of zinc

Those service providers who prescribed zinc were further asked whether they stocked supplies of zinc or not (Table 8.5). Most of the government functionaries (practitioners of modern medicine, AYUSH practitioners, and ANMs) in rural areas reported keeping supplies of zinc, while most private practitioners of modern medicine, unqualified health practitioners, and AYUSH practitioners of modern medicine, unqualified health practitioners, and AYUSH practitioners (private) do not keep zinc tablets.

Majority of service providers in urban areas did not stock zinc tablets. However, understandably chemists in both rural and urban areas stocked zinc tablets (Table 8.5).

Table 8.5: Whether service providers kept supplies of zinc and ever faced stock-outs (%)

Whether keep supplies of Zinc	Categories of service providers								
	Modern-medicine practitioners		Unqualified health practitioners	AYUSH practitioners		Community health workers			Private Drug Stores
	Government	Private		Government	Private	ANMs	AWWs	ASHAs	Chemists
1. Whether kept supply of zinc									
(n=)	38	49	15	5	6	11	4	2	20
Yes	55.3	34.7	40	60	33.3	72.7	100	100	75
2. Whether they ever faced 'no-stock' situation									
(n=)	21	17	6	3	2	8	4	2	15
Yes	9.5	23.5	0	33.3	0	25	25	0	26.7

Table 8.6: Situations under which antibiotics were prescribed for diarrhoea by service providers (%)

Situations in which antibiotics are given/prescribed	Categories of service providers								
	Modern-medicine practitioners		Unqualified health practitioners	AYUSH practitioners		Community health workers			Private Drug Stores
	Government	Private		Government	Private	ANMs	AWWs	ASHAs	Chemists
(n =)	90	101	64	10	30	24	13	6	58
Blood in stools	52.2	55.4	48.4	50	73.3	58.3	38.5	33.3	46.6
When child is vomiting	46.7	53.5	54.7	40	46.7	33.3	61.5	83.3	43.1
When child has dangerous signs of dehydration	55.6	67.3	59.4	60	46.7	45.8	30.8	50	46.6
DK/CS	13.3	5.9	4.7	0	0	4.2	0	0	8.6

DK = Don't know; CS = Can't say

8.6 Situations under which antibiotics are prescribed

Those service providers, who prescribed antibiotics for the treatment of childhood diarrhoea, were further asked under which circumstances they prescribed antibiotics. Table 8.6 provides their responses. They gave antibiotics to the child if s/he had blood in stools, or was vomiting during diarrhoea or when the child had signs of severe dehydration.

8.7 Other advice given by service providers for the management of child diarrhoea

Large proportion of service providers claimed giving advice on other aspects related to the management of diarrhoea. Most of them gave additional advice on breastfeeding, and giving other fluids and food to the child. Advice was also given on preventive measures and follow-up visits. But majority of ASHAs and chemists did not advise for follow-up visits.

Regarding breastfeeding, most of them advised to continue breastfeeding the child during diarrhoea with the same frequency as before the diarrhoea.

Majority of those who advised "other fluids" to the child during diarrhoea also recommended fluids more frequently than usual. Regarding the

type of 'fluids' to be given to the child during diarrhoea, they mostly recommended ORS solution, salt-sugar solution, rice water, and dal water. No provider reported that s/he advised clients to stop giving fluid with feeding bottles.

A good number of service providers, ranging from 33 per cent of private practitioners of modern medicine and government AYUSH practitioners to 55 per cent of unqualified health practitioners advised giving food to the child less frequently during diarrhoea. These instructions are contrary to the present diarrhoea management guidelines.

"Washing hands before feeding the child," "washing hands before eating," and "ways to store drinking water" were reported as the types of advice they gave on preventive measures of diarrhoea.

Among those who advised diarrhoea treatment, more than 85 per cent reported that they recommended caregivers for a follow-up visit. They also advised caregivers to come immediately in situations when child had more illness, more loose motions, diarrhoea continued, or if the child had blood in stool. However, as mentioned earlier, most mothers did not report having been advised on "when to return immediately". In normal conditions, most of them were asked for follow-up after 2-5 days.

Qualitative findings related to the compliance of dosage of Zinc

"Mothers consider diarrhoea as a high-risk disease and give full dosage of zinc".
(Rural, East Singhbhum, Jharkhand)

"I don't know whether they give full dose or not, my work is to give medicine for diarrhoea."
(Rural, Medak, Andhra Pradesh)

"Due to lack of awareness, they stop giving zinc after a few days and stop the course in between."
(Urban, Krishnagiri, Tamil Nadu)

When do I prescribe antibiotics: self-reporting by service providers

"I only prescribe antibiotics in case of dehydration or blood in stool."
(Urban, Medak, Andhra Pradesh)

"We prescribe antibiotics if child is having frequent loose motion and vomiting."
(Rural, Latur, Maharashtra)

"If the child is dehydrated and won't be able to retain anything inside, then I prefer to give antibiotics."
(Rural, Vaishali, Bihar)

Conclusions

The survey confirmed the low use rates of ORS across the 10 districts of the country. It highlighted the inadequate management of childhood diarrhoea at the household level and at health facilities. Extremely low prescription and use rate of zinc as an adjunct therapy for diarrhoea is also evident. Some of the findings that have direct relevance to programming for childhood diarrhoea control in India are listed below:

1. While large proportions of mothers do seek outside healthcare for childhood diarrhoea, most often they seek treatment services from private sector healthcare providers instead of from the public sector. This leads to out-of-pocket expenses for the family for treating the child with diarrhoea. The national programme for control of childhood diarrhoea continues to focus on the public sector. It is not possible to implement and improve coverage of national childhood diarrhoea management guidelines without actively involving the private sector.
2. Knowledge and awareness of service providers and mothers about ORS is considerably high; however, lesser numbers of service providers were actually prescribing ORS and dispensing them to caregivers. Due to this factor, actual utilisation of ORS for childhood diarrhoea remains low.
3. Irrational practices for management of childhood diarrhoea such as prescription of anti-diarrhoeal drugs, tonics and injectable drugs continue to be widespread among healthcare providers both in public as well as private sectors.
4. Inappropriate prescription of antibiotics is widespread among all categories of service providers.
5. Knowledge among service providers on some specific aspects of current diarrhoea management guidelines is lacking, especially on how much ORS should a child be given and how often; indications for use of antibiotics in diarrhoea; need to increase/continue feeding during diarrhoea; and on use of zinc as an adjunct therapy.
6. Almost half of providers (especially those in the private sector) do not dispense ORS. Since zinc has been recently introduced in the national programme, its coverage and availability remains low and few dispense zinc. Comprehensive efforts will be required to increase coverage of zinc that should include advocacy, training, logistics and supply chain management, IEC campaign, and involvement of the private sector.
7. Practice of giving additional advice remains suboptimal. Additional advices such as increased fluids, continued feeding, breastfeeding, hand washing, and recognition of danger signs, which together should become an integral part of diarrhoea management.
8. Persistence of some inappropriate advice from service providers such as about bottle feeding, and withholding fluids and food during diarrhoea, continues to be disturbing. As a result, caregivers carry on with these harmful practices. These erroneous behaviours need urgent correction.
9. Availability of low-osmolarity ORS is good in both public and private sector.

Annexes

Section 1: Detailed tables and district-wise data

Section 2: District-wise summary

Section 1: Detailed tables and district-wise data

Table 10.1: Distribution of sampled mothers by their background characteristics (%)

Characteristics	Districts										All 10 districts		
	Medak/ AP	Dibru garh/ Assam	Vaishali/ Bihar	East Singh bhum/ Jharkhand	Guna/ MP	Latur/ Mahara shtra	Kora put/ Orissa	Krish nagiri/ TN	Lalit pur/ UP	Purulia/ WB	Rural	Urban	Total
1. Age													
<25 years	62.7	38.6	38.1	51.5	44.4	56.3	51.7	53.1	47.6	53.6	50	50.9	50.4
25-34 years	34.8	54.8	50.7	43.2	50.6	41.2	43.3	42.7	42.7	41.3	44.1	44.3	44.2
>35 years	2.5	6.7	11.2	5.3	5	2.5	5	4.2	9.7	5.1	5.9	4.8	5.3
Av. age of mothers	23.65	25.7	26.38	24.7	25.29	23.95	24.92	25.1	25.9	24.75	25.02	24.81	24.91
2. Years of schooling completed													
Illiterate	50.6	44.7	68.1	59.4	62.2	19.5	81.1	32.8	68.4	62.5	58.1	44.3	51.2
Between 1-5	13.4	16.6	9.6	14.4	19.8	13.8	6.6	17	15.8	13.7	14	13.6	13.8
Between 6-8	12.6	13.3	11.7	13.9	10.3	25.6	5.2	19.4	10.9	13.3	13	16.5	14.7
Between 9-12	21.9	24.2	10.4	11.4	5.6	38.3	6.5	30	3.9	9.4	14.3	21.9	18.1
More than 12	1.6	1.2	0.2	1	2.2	2.8	0.6	0.9	1	1	0.7	3.7	2.2
Av. no. of years of schooling	3.82	4.16	2.23	2.75	2.24	6.66	1.33	5.15	1.81	2.48	2.93	4.44	3.68
3. Mothers who work for money													
	67.4	36.6	14	22.9	36.5	35.3	70.6	15.1	33.2	15.2	36.5	20.4	28.5
4. Av. number of living children below age 5													
	1.32	1.39	1.56	1.38	1.47	1.57	1.41	1.38	1.56	1.33	1.44	1.4	1.42
Total number of sampled mothers	1,257	1,231	1,268	1,260	1,295	1,235	1,264	1,227	1,281	1,252	10,137	2,433	12,570

Table 10.2: Distribution of children aged 2-59 months who had diarrhoea in the two weeks prior to survey by their age, sex and hand washing practices (%)

Characteristics	Districts										All 10 districts		
	Medak/ AP	Dibru garh/ Assam	Vaishali/ Bihar	East Singh bhum/ Jharkhand	Guna/ MP	Latur/ Mahara shtra	Kora put/ Orissa	Krish nagiri/ TN	Lalit Pur/ UP	Purulia/ WB	Rural	Urban	Total
1. Age (in months)													
2-5	7.7	9.5	9.1	10.2	9.8	8.9	8.8	8.9	14.4	6.3	8.8	9.7	9.2
6-11	21.6	11.4	22.8	20.2	22.2	23.7	18	16.4	20.3	20.4	20.6	19.4	20
12-23	27.4	25.8	35.2	34.4	29.5	31.1	30.2	30.9	29.1	34.3	31.2	31.3	31.2
24-35	19.6	22.7	18.1	18.6	20	17.1	21.9	20.6	19.9	19.2	19.3	20.3	19.8
36-59	23.6	30.5	14.8	16.6	18.5	19.2	21.1	23.2	16.3	19.7	20	19.3	19.7
2. Sex													
Females	51.9	53.2	55.8	51.2	54	51.7	51.7	51.2	55	52.9	52.6	54.3	53.5
Males	48.1	46.8	44.2	48.8	46	48.3	48.3	48.8	45	47.1	47.4	45.7	46.5
3. Whether the child washes his/her hands before eating													
Yes	45.4	70.9	34.5	57.4	46.9	49.3	58.2	60.6	31.3	55.3	49.4	51.6	50.5
No	3.4	4.5	30.8	27.4	13.9	8.1	13.8	9.5	32.1	13.7	15.2	18.6	16.9
Not applicable	51.2	24.5	34.8	15.2	39.2	42.6	27.9	29.9	36.6	31	35.4	29.8	32.6
4. Whether the mothers/caregiver washes hands before feeding the child													
Yes	79.3	73.8	75.9	82.1	64	65.7	86.3	41.6	61.9	76.8	71.4	73.9	72.7
No	1	3.1	8.5	13.5	11.6	3.8	3.1	7.2	10.1	2.6	6.3	6.8	6.5
Not applicable	19.6	23.1	15.5	4.4	24.4	30.5	10.6	51.3	28	20.6	22.3	19.3	20.8
Total no. of children who had diarrhoea in the last 2 weeks	1,257	1,231	1,268	1,260	1,295	1,235	1,254	1,227	1,281	1,252	10,137	2,433	12,570

Table 10.3: Prevalence of diarrhoea in the two weeks preceding the survey by district

District/State	Prevalence rate of diarrhoea (%)
Medak/Andhra Pradesh	27.0
Dibrugarh/Assam	20.2
Vaishali/Bihar	4.4
East Singhbhum/Jharkhand	7.7
Guna/Madhya Pradesh	30.0
Latur/Maharashtra	20.5
Koraput/Orissa	29.6
Krishnagiri/Tamil Nadu	28.4
Lalitpur/Uttar Pradesh	18.5
Purulia/West Bengal	19.1
Total (all 10 districts)	19.8
Rural	19.8
Urban	19.5

Table 10.4: Treatment-seeking behaviour for childhood diarrhoea by district

District/State	Total no. of children who had diarrhoea	Treatment-seeking behaviour (%)		
		Outside treatment	Home treatment	No treatment
Vaishali/Bihar	1,268	88.4	10.1	1.5
Medak/Andhra Pradesh	1,257	83.3	10.7	6.0
Guna/Madhya Pradesh	1,295	83.4	9.6	7.0
Latur/Maharashtra	1,235	79.9	9.9	10.2
Purulia/West Bengal	1,252	68.4	19.3	12.3
Koraput/Orissa	1,264	72.0	15.1	12.9
Krishnagiri/Tamil Nadu	1,227	76.5	8.6	14.9
Dibrugarh/Assam	1,231	58.3	20.9	20.8
Lalitpur/Uttar Pradesh	1,281	65.5	12.6	21.9
East Singhbhum/Jharkhand	1,260	63.6	12.0	24.4
Total (all 10 districts)	12,570	74.5	12.7	12.8
Rural	10,137	76.6	11.8	11.6
Urban	2,433	72.3	13.7	14.0

Table 10.5: Prevalence rate of diarrhoea by age and sex of the child

District/State	Prevalence rate of diarrhoea (%)				
	Age group in months			Sex	
	2-5	6-35	36-59	Male	Female
Medak/Andhra Pradesh	29.4	29.7	22.0	26.4	27.6
Dibrugarh/Assam	22.6	21.5	17.6	22.5	17.9
Vaishali/Bihar	4.8	5.9	1.6	4.6	4.1
East Singhbhum/Jharkhand	10.9	9.2	4.5	7.8	7.5
Guna/Madhya Pradesh	36.4	36.9	17.1	31.5	28.3
Latur/Maharashtra	26.8	25.7	12.1	21.0	19.9
Koraput/Orissa	30.4	36.2	18.8	31.1	27.9
Krishnagiri/Tamil Nadu	27.7	32.5	22.1	29.9	26.9
Lalitpur/Uttar Pradesh	30.2	21.5	10.4	20.0	16.9
Purulia/West Bengal	20.7	22.9	12.1	19.1	19.1
Total (all 10 districts)	24.1	23.3	13.1	20.7	18.8
Rural	23.9	23.3	13.1	20.7	18.9
Urban	25.2	23.1	12.9	20.5	18.5

Table 10.6: Mother's health-seeking behaviour, knowledge about ORS, and its utilisation (percentage)

District/State	Total no. of mothers whose children had diarrhoea	Health-seeking behaviour		Knowledge of ORS among mothers whose children had diarrhoea (%)		Utilisation of ORS for treatment of diarrhoea (%)		
		Number of mothers who sought outside healthcare	%	Yes	No	Treatment outside home	Only home treatment	Total
Medak/Andhra Pradesh	1,257	1,047	83.3	62.7	37.3	41.3	4.5	45.7
Dibrugarh/Assam	1,231	718	58.3	81.6	18.4	40.9	5.7	46.5
Vaishali/Bihar	1,268	1,121	88.4	56.5	43.5	45.8	0.8	46.6
East Singhbhum/Jharkhand	1,260	801	63.6	46.6	53.4	21.4	1.3	22.7
Guna/Madhya Pradesh	1,295	1,080	83.4	80.1	19.9	30	3.9	33.9
Latur/Maharashtra	1,235	987	79.9	76	24	29.9	2.4	32.3
Koraput/Orissa	1,264	910	72.0	89.2	10.8	49.8	1.5	51.3
Krishnagiri/Tamil Nadu	1,227	939	76.5	72.4	27.6	43.7	2.2	45.9
Lalitpur/Uttar Pradesh	1,281	839	65.5	73.1	26.9	23.4	0.9	24.3
Purulia/West Bengal	1,252	856	68.4	76.2	23.8	30.3	3.2	33.5
Total (all 10 districts)	12,570	9,298	74.0	70	30	34.9	3.1	37.9
Rural	10,137	7,554	74.5	68.3	31.7	36.1	2.4	38.5
Urban	2,433	1,744	71.7	70.7	29.3	33.9	3.3	37.2

Table 10.7: Treatment-seeking behaviour and type of treatment received for the last episode of child's diarrhoea (%)

Particulars	Districts										All 10 districts		
	Medak/AP	Dibrugarh/Assam	Vaishali/Bihar	East Singhbhum/Jharkhand	Guna/MP	Latur/Maharashtra	Koraput/Orissa	Krishnagiri/TN	Lalitpur/UP	Purulia/WB	Rural	Urban	Total
No. of children for whom outside treatment was sought	1047	718	1121	801	1,080	987	910	939	839	856	7,554	1,744	9,298
Place where outside treatment/consultation was taken (multiple responses) (%)													
Public health sector													
Govt./municipal hospital	8.4	13.8	0.6	3.2	12.4	6.9	15.3	10.8	3.3	6.4	6.1	13.2	9.5
Govt.dispensary	0.2	4.0	0.6	1.1	0.2	1.0	3.4	12.8	1.3	1.3	2.2	1.5	1.8
CHC/rural hospital/PHC	1.1	24.2	1.2	3.1	4.0	6.7	30.8	3.3	12.2	8.8	7.4	3.5	5.6
Sub-centre/ANM	2.7	4.6	0.7	1.5	0.2	1.5	10.7	0.3	1.2	3.3	2.6	0.6	1.6
AWW	3.2	0	0.1	2.2	3.1	5.5	16.0	4.0	0.6	1.4	3.6	0.9	2.3
Others	0.9	2.2	1.3	1.2	1.7	0.9	5.3	0.4	1.0	5.1	2.1	1.4	1.8
Any public sector facility	15.8	48.2	3.9	12.3	21.2	22.2	74.2	30.6	19.5	25.5	22.7	20.7	21.8
Private medical sector													
Pvt. hospital	69.1	27.6	12.0	5.4	6.7	23.5	9.0	69.8	9.5	1.2	25.4	22.0	23.8
Pvt. service provider (doctor)	16.0	11.7	62.2	72.5	66.5	50.6	10.5	0.4	66.3	38.3	40.5	47.8	44
Pvt. paramedic	0.3	0.1	6.9	0.9	0	0.1	1.5	0.9	0	0.5	1.4	2.1	1.7
Vaidya/Hakim/ Homeopath	0.2	1.9	2.5	5.5	0.6	0.2	1.5	0	0.1	22.7	4.0	4.2	4.1
Pharmacy/drug store	3.3	6.7	2.3	1.7	13.2	5.7	9.7	1.4	0.7	4.2	4.6	6.2	5.4
Others	0.6	0.3	2.0	1.1	0.6	0	3.8	0	1.3	1.2	1.2	0.6	0.9
Any private sector facility	86.7	52.2	90.5	87.1	82.1	79.9	34.1	72.7	78.9	67.9	76.8	81.7	79.2
Any other source/facility	0.3	1.1	6.1	0.5	0.5	1.6	1.2	2.2	4.1	8.5	3.3	1.3	2.3
Type of treatment received (multiple responses) (%)													
ORS	49.6	70.1	51.7	33.7	35.8	37.3	69.1	56.2	35.8	43.7	47.0	47.0	47.0
Zinc tablet/syrup	0.9	2.4	1.4	1.2	1.0	0.5	0.9	2.3	3.1	1.5	1.4	1.2	1.3
Injections	42.3	2.9	52.3	7.1	16.8	7.5	7.0	48.0	45.1	5.6	28.6	17.0	23.0
Antibiotics	3.0	13.9	14.1	5.4	3.5	1.8	1.1	3.8	12.5	6.4	6.9	4.2	5.6
Anti diarrhoeal	73.7	8.9	1.3	21.5	1.9	5.7	1.2	0	30.6	12.1	17.9	18.6	18.2
Tonic	51.2	49.0	45.6	33.3	15.6	11.8	17.1	63.0	18.1	3.2	32.1	30.9	31.5
Intravenous fluid	1.8	0	0.4	0.9	0.6	2.9	0.5	0.7	1.0	1.2	1.0	1.3	1.1
Referral	4.5	1.1	2.8	0.9	0.6	1.0	1.5	0.9	1.1	0.6	1.9	1.3	1.6

Table 10.8: Information given by service providers to mothers related to ORS for diarrhoea treatment (%)

Information given by service provider	Districts										All 10 districts		
	Medak/ AP	Dibru garh/ Assam	Vaishali/ Bihar	East Singh bhum/ Jharkhand	Guna/ MP	Latur/ Mahara shtra	Kora put/ Orissa	Krish nagiri/ TN	Lalit pur/ UP	Purulia/ WB	Rural	Urban	Total
No. of mothers whose children were given ORS	519	503	581	270	389	369	629	536	300	379	3,622	853	4,475
1. Informed how to prepare ORS solution (Yes %)	97.3	90.1	96.7	88.9	96.7	96.7	99.5	97.2	99.0	90.5	95.7	94.7	95.2
2. Service provider's instruction on how to prepare ORS solution (multiple response)													
No. of mothers who were told how to prepare ORS solution	505	453	562	240	376	357	626	521	297	343	3,468	812	4,280
Mix one big packet of ORS in one litre of water (%)	18.2	52.3	9.1	6.3	15.4	20.2	30.7	25.5	21.9	26.2	20.6	21.5	21.1
Mix one small packet of ORS in one glass of water (%)	76.0	41.3	60.1	42.5	82.2	70.0	54.8	82.5	37.4	20.1	60.6	57.0	58.9
Others (%)	5.1	8.2	27.8	48.8	4.5	12.0	14.7	1.5	39.4	48.4	19.1	20.3	19.7
No response (%)	0.8	1.1	3.6	2.9	0	2.2	2.1	1.2	1.3	5.8	2.2	2.5	2.3
% of correct instructions	94.2	93.6	69.2	48.8	97.6	90.2	85.5	108	59.3	46.3	81.2	78.5	80.0
3. Correctly told about the type of water to be used	87.1	88.1	88.1	78.9	90	95.4	99	95.3	88.3	52.8	85.5	86.6	86.1
4. Told about number of hours ORS solution can be used after its preparation (%)													
< 24 hrs	71.8	31.2	72.3	58.1	77.7	78.6	51.0	20.9	51.3	40.1	56.7	63.4	59.9
> 24 hrs	0.4	0.2	0	0.4	0.3	0	0.2	0.2	2.0	1.1	0.4	0.2	0.3
Did not tell about this	18.1	37.2	25.5	30.8	20.8	17.9	27.8	57.2	46.7	58.3	33.3	27.6	30.5
Provider told but do not remember	9.6	31.4	2.2	10.7	1.3	3.5	21	21.6	0	0.5	9.6	8.8	9.2
5. Told how often ORS solution should be given to the child during diarrhoea (%)													
After each stool	21.6	32.6	9.3	10.0	43.4	6.0	37.0	12.9	24.0	0	17.9	20.3	19.0
As & when child needs it	48.9	65.8	78.1	51.1	47.0	69.6	50.6	48.7	42.7	0.3	52.1	48.8	50.5
Every half an hour	11.4	10.1	4.1	15.2	39.1	11.7	24.5	7.8	9.3	0	11.0	18.1	14.4
One glass of ORS three times	32.9	10.1	12.4	9.3	14.4	23.8	14.1	31.2	11.7	0	17.5	14.9	16.3
Others	0.8	2.0	2.9	5.6	0.3	3.0	4.9	4.5	8.7	2.6	2.9	3.1	3.0
No response	2.7	6.8	4.5	13.3	3.6	3.3	3.0	4.3	5.3	97.1	15.8	12.7	14.3

Table 10.9: Sources of supply of ORS (%)

Particulars	Districts										All 10 districts		
	Medak/ AP	Dibru garh/ Assam	Vaishali/ Bihar	East Singh bhum/ Jharkhand	Guna/ MP	Latur/ Mahara shtra	Kora put/ Orissa	Krish nagiri/ TN	Lalit pur/ UP	Purulia/ WB	Rural	Urban	Total
No. of mothers whose children were given ORS	519	503	581	270	389	369	629	536	300	379	3,622	853	4,475
1. ORS packet was given by the service provider themselves													
Yes	21.2	74.8	52.7	76.3	53.7	43.4	87.3	44.4	78.0	49.1	52.1	55.6	53.8
No	78.8	25.2	47.3	23.7	46.3	56.6	12.7	55.6	22.0	50.9	47.9	44.4	46.2
Mothers not provided with ORS packet by service provider and procured ORS from other sources													
No. of mothers not provided ORS packet by service provider	409	127	275	64	180	209	80	298	66	193	1,532	369	1,901
ORS procured from other sources													
Chemist	83.9	61.4	26.9	56.3	85.6	86.6	67.5	7.0	69.7	72.5	57.7	74.8	65.6
Others (health workers, private providers, (others)	16.1	38.6	73.1	43.7	14.4	13.4	32.5	93.0	30.3	27.5	42.3	25.2	34.4
Average distance (in kilometres) travelled to get ORS packet	2.18	2.19	2.15	2.71	2.38	2.2	2.31	2.4	4.3	2.56	2.44	1.71	2.11

Table 10.10: Type of advices (other than treatment) related to childhood diarrhoea given by service providers

Advices related to diarrhoea	Districts										All 10 districts		
	Medak/ AP	Dibru garh/ Assam	Vaishali/ Bihar	East Singh bhum/ Jharkhand	Guna/ MP	Latur/ Mahara shtra	Kora put/ Orissa	Krish nagiri/ TN	Lalit pur/ UP	Purulia/ WB	Rural	Urban	Total
Number of mothers whose children were given outside treatment/consultation	1,047	718	1121	801	1,080	987	910	939	839	856	7,554	1,744	9,298
1. Mothers given any advice other than treatment (%)	43.3	4.7	7.8	27.6	30.0	29.4	15.8	62.3	48.6	32.9	30.1	28.4	29.3
No. of mothers given advice related to diarrhoea	453	34	87	221	324	290	144	585	408	282	2321	507	2,828
2. Aspects on which advised (%)													
Breastfeeding	50.8	58.8	46.0	46.2	42.3	31.4	33.3	42.1	24.3	28.0	40.6	37.7	39.3
Giving fluids to the child	78.4	44.1	62.1	58.4	53.4	53.1	47.9	66.7	31.6	59.6	62.0	56.5	59.5
Giving food to the child	52.3	38.2	41.4	50.2	29.3	40.3	25.0	62.9	28.7	36.5	43.6	49.5	46.4
Preventive measures	34.4	44.1	56.3	19.9	20.4	32.1	29.2	69.6	19.4	26.6	36.5	33.2	35.0
Follow-up visits	53.2	11.8	32.2	31.2	20.1	49.0	45.8	50.3	28.4	57.1	43.9	41.2	42.7
Bottle feeding	5.7	23.5	19.5	8.6	2.8	6.2	7.6	8.5	2.7	7.4	6.6	8.7	7.6
No. of mothers given advice on intake of other fluids	355	15	54	129	173	154	69	390	129	168	1361	275	1636
3. Type of advices regarding fluid intake (other than breastfeeding)													
Give fluid more frequently	98	66.7	75.9	86	94.8	70.8	91.3	16.2	92.2	91.1	76.8	75.6	76.3
Give fluid less frequently	2	33.3	24.1	14	5.2	29.2	8.7	83.8	7.8	8.9	23.2	24.4	23.7
4. Type of fluids advised													
ORS	59.4	66.7	63	29.5	31.2	35.1	68.1	62.8	56.6	46.4	52.4	45.5	49.3
Salt-sugar solution	12.1	33.3	63	45.7	24.3	39	44.9	55.1	14.7	50	35.9	28.6	32.6
Soup	1.1	6.7	0	1.6	3.5	5.2	4.3	5.9	1.6	1.8	2.6	4	3.2
Rice water	19.2	53.3	46.3	17.8	64.2	46.1	30.4	37.9	16.3	4.8	27.7	38.1	32.3
Dal water	15.5	53.3	50	16.3	65.3	68.2	14.5	2.6	24.8	15.5	23.2	33.9	28
Others	27.1	13.4	5.6	11.6	22	13.6	27.5	5.2	11.6	15.5	16	21.3	18.3
5. Type of preventive advice given (%) (multiple responses)													
No. of mothers given advice on preventive measures	156	15	49	44	66	93	42	407	79	75	863	163	1026
Feed child after washing hands	23.1	100	40.8	40.9	42.4	67.7	76.2	69	27.8	60	52.5	46.1	49.7
Do not use bottle to feed child	6.4	53.3	24.5	6.8	12.1	14	7.1	13	5.1	4	10.7	13	11.7
Exclusive breastfeeding up to 6 months/complimentary breastfeeding after 6 months	67.3	60	28.6	6.8	34.9	30.1	28.5	48.2	22.8	6.7	41.4	39.7	40.6
Child should wash hands before eating	12.2	60	49	38.6	54.5	32.3	40.5	43.7	19	29.3	34	36.9	35.3
Advised on storing drinking water	25.6	66.7	44.9	18.2	50	39.8	35.7	40.3	70.9	28	40.3	20.6	31.6
Ways to dispose the child's excreta	0	33.3	28.6	0	6.1	2.2	9.5	20.4	21.5	10.7	13	6.4	10.1

Table 10.11: Breastfeeding advice to mothers (of children with diarrhoea) by service providers

Age criteria	Districts										All 10 districts		
	Medak/ AP	Dibru garh/ Assam	Vaishali/ Bihar	East Singh bhum/ Jharkhand	Guna/ MP	Latur/ Mahara shtra	Kora put/ Orissa	Krish nagiri/ TN	Lalit pur/ UP	Purulia/ WB	Rural	Urban	Total
Mothers with children aged 2–12 months													
(n =)	149	8	39	78	116	112	42	182	161	78	785	180	965
Yes (%)	75.2	87.5	56.4	64.1	63.8	55.4	50	84.1	44.7	42.3	65	58.8	62
Mothers with children aged 13–59 months													
(n =)	304	26	48	143	208	178	102	403	247	204	1536	327	1863
Yes (%)	38.8	50	37.5	36.4	30.3	16.3	26.5	23.1	10.9	22.5	28.5	25.9	27.3
All mothers													
(n =)	453	34	87	221	324	290	144	585	408	282	2321	507	2828
Yes (%)	50.8	58.8	46	46.2	42.3	31.4	33.3	42.1	24.3	28	40.6	37.7	39.3

Table 10.12: Types of advices given by service providers for 'follow-up visits' (%)

Advice type	Districts										All 10 districts		
	Medak/ AP	Dibru garh/ Assam	Vaishali/ Bihar	East Singh bhum/ Jharkhand	Guna/ MP	Latur/ Mahara shtra	Kora put/ Orissa	Krish nagiri/ TN	Lalit pur/ UP	Purulia/ WB	Rural	Urban	Total
No. of mothers who were given advice on follow-up visits	241	4	28	69	65	142	66	294	116	161	979	207	1186
1. Type of advices for return visit (%)													
Visit again after some days	39	0	17.9	34.8	36.9	71.8	7.6	12.9	41.4	31.1	32.4	39.6	35.7
If not cured then come again	28.6	25	3.6	29	21.5	14.8	69.7	38.8	46.6	47.2	34.5	29	32
If more loose motions come immediately	0.8	0	0	1.4	1.5	0	4.5	11.2	0	1.2	3.3	1.6	2.5
Go to other doctor	0.4	25	3.6	0	0	0	0	0	0	0	0.2	0.7	0.4
No advice	25.7	50	67.9	33.3	30.8	12.7	3	27.2	9.5	16.1	24.3	19.7	22.3
2. Type of advice on when to return immediately (%)													
If the child is not cured, come immediately	10.4	0	10.7	13	21.5	31	21.2	2.7	6.9	16.1	11.9	18.3	14.8
If more loose motions	2.1	0	7.1	7.2	9.2	0.7	28.8	1.4	4.3	2.5	3.7	4.3	4
If blood comes with stool	0	0	0	0	1.5	0	1.5	1.7	0	0	0.4	0.7	0.6
Vomiting continues	0.4	0	0	0	1.5	1.4	1.5	0.3	0.9	0.6	0.8	0	0.4
Come after some days	10.8	0	32.1	23.2	0	4.2	0	0.3	14.7	2.5	6.6	9.8	8.1
No advice	76.3	100	50	56.5	66.2	62.7	48.5	93.5	73.3	78.3	76.6	66.8	72.2

Table 10.13: Practices followed by mothers who relied entirely on home treatment (%)

Information	Districts										All 10 districts		
	Medak/ AP	Dibru garh/ Assam	Vaishali/ Bihar	East Singh bhum/ Jharkhand	Guna/ MP	Latur/ Mahara shtra	Kora put/ Orissa	Krish nagiri/ TN	Lalit pur/ UP	Purulia/ WB	Rural	Urban	Total
No. of mothers who gave their children only some home treatment	136	258	76	164	126	129	191	105	161	241	1247	340	1587
Type of home treatment given (multiple responses)													
ORS	41.2	27.1	13.2	9.8	39.7	23.3	9.9	25.7	6.8	16.6	21	25	23.1
Zinc	0.7	0	0	0.6	0	0	0	0	0	0	0.1	0.4	0.2
Salt-sugar solution	33.1	35.3	78.9	61.6	36.5	63.6	8.9	12.4	9.3	78.8	47.7	48.7	48.3
Soup/lassi/shakanji/rice water/ dal water	51.5	59.0	26.3	71.3	37.3	59.0	59.1	43.9	18.6	54.3	49.9	54.8	52.5
Average number of days home treatment was given	4.48	3.75	4.31	5.99	3.12	2.27	3.37	1.3	3.18	4.9	4.07	3.98	4.02
How ORS solution was prepared													
Used one big packet of ORS in one litre of water	17.9	22.9	30	6.3	10	16.7	21.1	55.6	27.3	12.5	19.3	18.1	18.6
Used one small packet of ORS in one glass of water	71.4	68.6	30	56.3	92	73.3	63.2	33.3	27.3	27.5	59.6	65.6	63.1
Others	12.5	8.5	40	37.5	0	13.3	15.8	11.1	45.5	60	21.1	20.5	20.8
How often child was given ORS solution													
After each stool	23.2	52.9	20	25	44	13.3	31.6	11.1	9.1	7.5	26.9	25.8	26.2
As & when child needed it	35.7	61.4	60	50	42	60	15.8	70.4	18.2	62.5	46.9	59.1	53.9
Every half an hour	14.3	22.9	20	18.8	48	23.3	52.6	18.5	9.1	10	24.6	18.4	21
One glass of ORS three times a day	33.9	5.7	0	12.5	2	33.3	5.3	3.7	36.4	7.5	15.8	11.8	13.5

Table 10.14: Home treatment – types of changes made in feeding practices during diarrhoea (percentage)

Particulars	Districts										All 10 districts		
	Medak/ AP	Dibru garh/ Assam	Vaishali/ Bihar	East Singh bhum/ Jharkhand	Guna/ MP	Latur/ Mahara shtra	Kora put/ Orissa	Krish nagiri/ TN	Lalit pur/ UP	Purulia/ WB	Rural	Urban	Total
1. Whether mothers changed feeding practices													
No. of mothers whose children were given home treatment (n)	136	258	76	164	126	129	191	105	161	241	1247	340	1,587
Yes	8.8	8.5	21.1	17.7	25.4	15.5	14.7	11.4	6.2	29	18.3	14.7	16.4
No	91.2	91.5	78.9	82.3	74.6	84.5	85.3	88.6	93.8	71	81.7	85.3	83.6
2. Types of change in feeding practices during diarrhoea													
No. of mothers who changed feeding practice for their children during diarrhoea (n)	12	22	16	29	32	20	28	12	10	70	207	44	251
Breastfeeding	8.3	27.3	18.8	24.1	53.1	5	21.4	8.3	0	17.1	22.4	17.3	19.9
Fluid intake	58.3	18.2	43.8	24.1	40.6	70	64.3	50	20	74.3	56.7	44.6	50.9
Type of foods	50	72.7	43.8	69	34.4	40	46.4	75	80	40	44.7	62.1	53
3. Change in breastfeeding practices													
No. of mothers who made changes in breastfeeding (n)	1	6	3	7	17	1	6	1	0	12	46	8	54
Given more number of breastfeeding	100	16.7	0	71.4	88.2	0	66.7	0	0	41.7	63	22.1	46
Given less number of breastfeeding	0	33.3	66.7	28.6	11.8	100	33.3	0	0	58.3	31.4	60.2	43.4
Stopped breastfeeding	0	50	33.3	0	0	0	0	100	0	0	5.6	17.6	10.6
4. Change in fluid intake													
No. of mothers who made changes in giving fluids to their children (n)	7	4	7	7	13	14	18	6	2	52	111	19	130
Given more fluids	85.7	50	42.9	71.4	92.3	71.4	100	0	100	80.8	80.5	54.7	69.6
Given less fluids	0	25	42.9	28.6	7.7	14.3	0	66.7	0	5.8	10.4	21.2	14.9
Fluid not given at all	14.3	25	14.3	0	0	14.3	0	33.3	0	13.5	9.1	24.1	15.4

Table 10.15: Mother's knowledge about ORS and its utilisation (percentage)

District/State	Total number of mothers whose children had diarrhoea	Health-seeking behaviour		Knowledge of ORS among mothers whose children had diarrhoea (%)		Utilisation of ORS (%)		
		Number of mothers who sought outside healthcare	%	Yes	No	Treatment outside home	Only home treatment	Total
Medak/Andhra Pradesh	1,257	1,047	83.3	62.7	37.3	41.3	4.5	45.7
Dibrugarh/Assam	1,231	718	58.3	81.6	18.4	40.9	5.7	46.5
Vaishali/Bihar	1,268	1,121	88.4	56.5	43.5	45.8	0.8	46.6
East Singhbhum/Jharkhand	1,260	801	63.6	46.6	53.4	21.4	1.3	22.7
Guna/Madhya Pradesh	1,295	1,080	83.4	80.1	19.9	30	3.9	33.9
Latur/Maharashtra	1,235	987	79.9	76	24	29.9	2.4	32.3
Koraput/Orissa	1,264	910	72.0	89.2	10.8	49.8	1.5	51.3
Krishnagiri/Tamil Nadu	1,227	939	76.5	72.4	27.6	43.7	2.2	45.9
Lalitpur/Uttar Pradesh	1,281	839	65.5	73.1	26.9	23.4	0.9	24.3
Purulia/West Bengal	1,252	856	68.4	76.2	23.8	30.3	3.2	33.5
Total (all 10 districts)	12,570	9,298	74.0	70	30	34.9	3.1	37.9
Rural	10,137	7,554	74.5	68.3	31.7	36.1	2.4	38.5
Urban	2,433	1,744	71.7	70.7	29.3	33.9	3.3	37.2

Table 10.16: Mother's knowledge of zinc and its utilisation

District/State	Total number of mothers whose children had diarrhoea	Knowledge of zinc		Utilisation rate of zinc		
		Yes	No	Treatment outside Home	Home treatment	Total
Medak/Andhra Pradesh	1,257	0.95	99.05	0.72	0.08	0.80
Dibrugarh/Assam	1,231	1.54	98.46	1.38	0.00	1.38
Vaishali/Bihar	1,268	1.34	98.66	1.26	0.00	1.26
East Singhbhum/Jharkhand	1,260	0.95	99.05	0.79	0.08	0.87
Guna/Madhya Pradesh	1,295	1.39	98.61	0.85	0.00	0.85
Latur/Maharashtra	1,235	0.73	99.27	0.40	0.00	0.40
Koraput/Orissa	1,264	0.71	99.29	0.63	0.00	0.63
Krishnagiri/Tamil Nadu	1,227	2.20	97.80	1.79	0.00	1.79
Lalitpur/Uttar Pradesh	1,281	2.42	97.58	2.03	0.00	2.03
Purulia/West Bengal	1,252	1.68	98.32	1.12	0.00	1.12
Total (all 10 districts)	12,570	1.36	98.64	1.02	0.15	1.17
Rural	10,137	2.07	97.93	1.07	0.09	1.16
Urban	2,433	1.37	98.63	0.83	0.41	1.24

Table 10.17: Knowledge of mothers/caregivers about ORS who did not use ORS during the diarrhoea episode (%)

Knowledge about ORS	Districts										All 10 districts		
	Medak/AP	Dibrugarh/Assam	Vaishali/Bihar	East Singhbhum/Jharkhand	Guna/MP	Latur/Maharashtra	Koraput/Orissa	Krishnagiri/TN	Lalitpur/UP	Purulia/WB	Rural	Urban	Total
No. of mothers whose children were not given ORS in the recent diarrhoea episode	682	658	677	974	856	836	616	664	970	833	6270	1496	7766
Whether have ever heard/seen ORS packet													
a. Yes, without showing packets	18.9	27.8	10.5	13	30.1	34.3	56	24.5	22.1	32.8	24	28.9	26.5
b. Yes, after showing packets	12.3	37.7	8.1	17.9	39.7	30.4	21.9	24.4	42.5	31.5	25.4	24.7	25
c. No	68.8	34.5	81.4	69.1	30.1	35.3	22.1	50.9	35.5	35.8	50.6	46.4	48.5
No. of mothers who knew about ORS (a + b)	213	431	126	301	598	541	480	325	626	535	3372	804	4176
Expressed knowledge about how to prepare ORS solution													
d. Yes	85.4	78.7	70.6	64.1	52.7	66.5	77.9	69.8	71.1	65.2	67.5	68.8	68.2
e. No	14.6	21.3	29.4	35.9	47.3	33.5	22.1	30.2	28.9	34.8	32.5	31.2	31.8
No. of mothers who knew how to prepare ORS solution (= d)	182	339	89	193	315	360	374	227	445	349	2319	554	2873
Knowledge about how ORS solution is prepared													
Used one big packet of ORS in one litre of water	12.6	36.3	4.5	3.6	16.8	19.2	35.3	24.2	16.2	15.2	18.5	18.1	18.3
Used one small packet of ORS in one glass of water	84.6	52.8	42.7	24.4	78.7	58.1	54.3	69.6	33.9	12.6	49.9	48.8	49.4
Others (i.e. incorrect way)	3.3	15.3	47.2	69.4	3.2	23.1	9.6	4	41.1	66.8	28.7	33.1	31
No response	0	2.4	6.7	3.6	3.2	3.1	1.1	2.6	8.8	5.7	4.1	2.3	3.2
How often ORS solution should be given to the child													
After each stool	4.4	28.3	21.3	6.2	49.5	6.1	30.2	7	23.6	7.2	18.4	18.1	18.2
As & when child needs it	77.5	50.4	57.3	61.7	51.4	62.2	45.2	52.4	37.8	69.3	57.4	60	58.8
Every half an hour	8.8	9.7	6.7	18.1	20.3	20.3	14.2	9.3	7	8.9	11	19.8	15.6
One glass of ORS three times	7.7	18.9	1.1	5.7	16.5	25.6	9.9	18.9	16.4	3.7	13.1	10.5	11.7
Others	1.1	2.9	2.2	9.3	1.3	1.7	2.4	0.4	8.8	5.7	3.7	3.4	3.5
Do not know	2.7	12.4	14.6	3.6	2.5	8.3	11.8	14.1	7.6	6	7.9	6.3	7

Section 2: District-wise summary

Medak, Andhra Pradesh

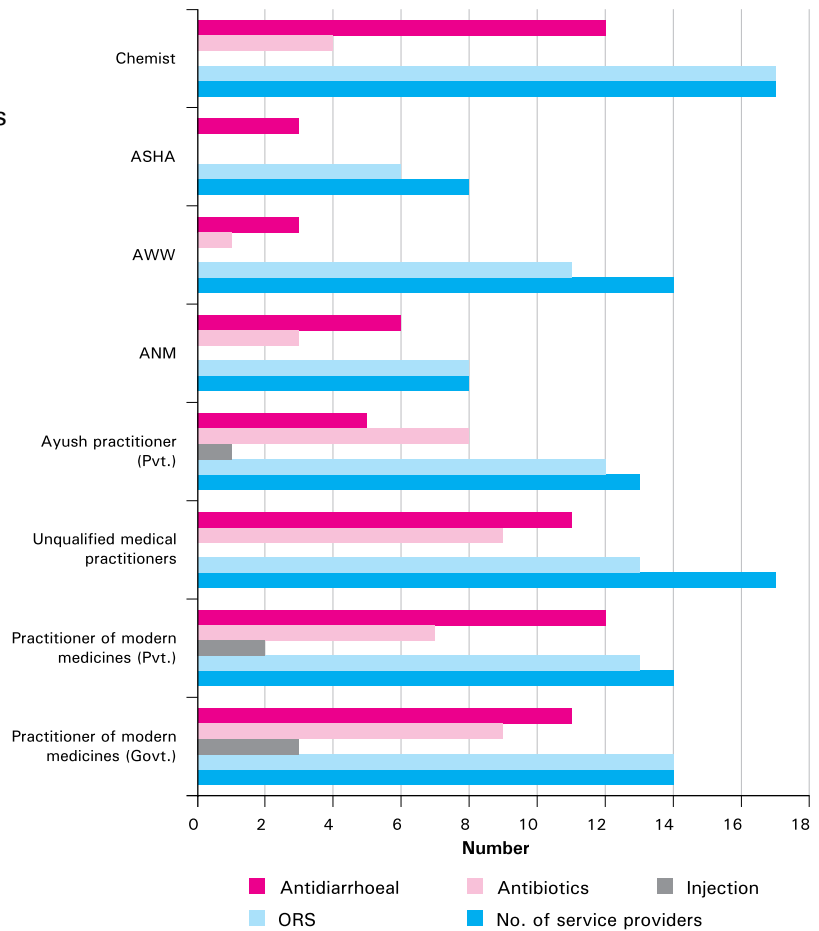
I. Prevalence of diarrhoea and treatment-seeking behaviour of mothers

- Twenty-seven per cent of the children aged 2-59 months had diarrhoea in the two weeks prior to the survey.
- Almost 83 per cent of them were taken to a healthcare provider for treatment of diarrhoea.
- Majority of the children (87%) were taken to some private hospital/doctor and only 16 per cent of the children for treatment/ consultation were taken to public sector facilities.
- Only 21 per cent of the mothers, who took their children to a healthcare provider for treatment of diarrhoea, were advised to continue or increase frequency of breastfeeding. Only about one-thirds were advised to give more fluids than usual to the child during diarrhoea.
- About 63 per cent of the mothers knew about ORS, but only 46 per cent actually gave ORS to their children during diarrhoea, indicating large gaps between knowledge and utilisation of ORS.
- New low-osmolarity ORS was available in the district in both public and private sector.
- Hardly one per cent of the mothers whose children had diarrhoea in the last two weeks prior to the survey reported to have heard of zinc.

1.	% children aged 2–59 months with diarrhoea in the last two weeks prior to the survey	(n =)	1,700 27.0
2.	% children with diarrhoea who were taken to a healthcare provider	(n =)	1,257 83.3
3.	% children with diarrhoea by category of service providers to whom they were taken for diarrhoea treatment	(n =)	1,047
	• Any public medical sector		15.8
	• Any private medical sector		86.7
4.	% Mothers (child's age 2–12 months) who received advice to continue or increase frequency of breastfeeding during diarrhoea	(n =)	149 75.2
5.	% Mothers who received advice to give more fluids during diarrhoea to their children	(n =)	1,047 33.2
6.	% Mothers who had knowledge of ORS	(n =)	1,257 62.7
7.	% children who were given ORS	(n =)	1,257 45.7
8.	Number of ORS brands available		
	Government supply		
	• Others		2
	• New low osmolarity		1
	Non-government supply		
	• New low osmolarity		12
	• Others		3
9.	% mothers who had knowledge of zinc	(n =)	1,257 0.95

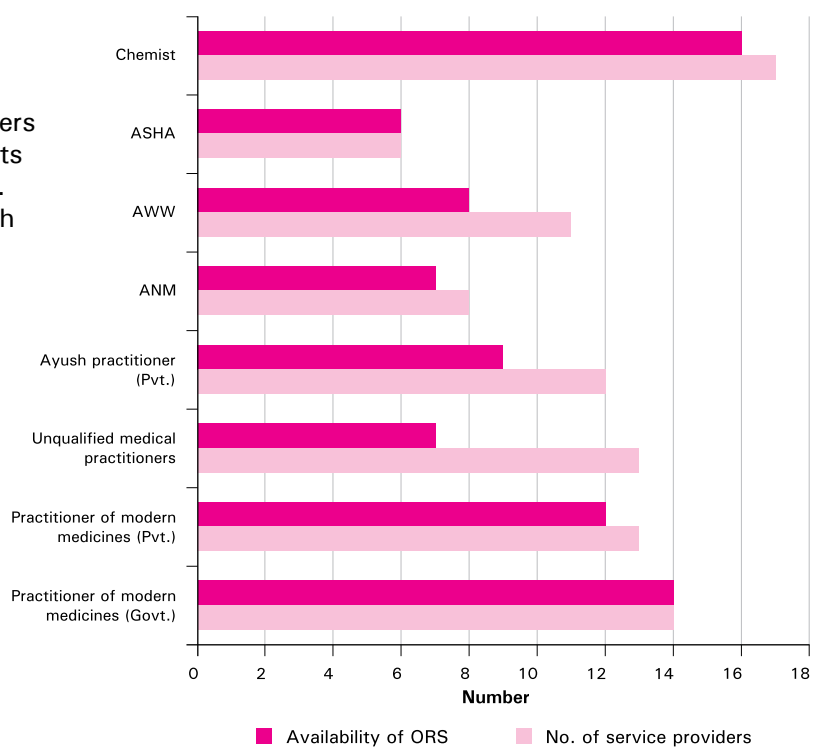
II. Treatment/prescription pattern of service providers

To a large extent, almost all categories of service providers gave/prescribed ORS to the child for treatment of diarrhoea. More than half of the practitioners of modern medicine (govt. & private), unqualified health practitioners and private AYUSH practitioners gave antibiotics. Curiously, most practitioners of modern medicine (govt. & private), unqualified health practitioners and the chemists gave anti-diarrhoeal medicines to the clients as well.



III. Availability of ORS with service providers

Almost all categories of service providers reported keeping supply of ORS packets except unqualified health practitioners. Only seven out of 13 unqualified health practitioners kept ORS packets.



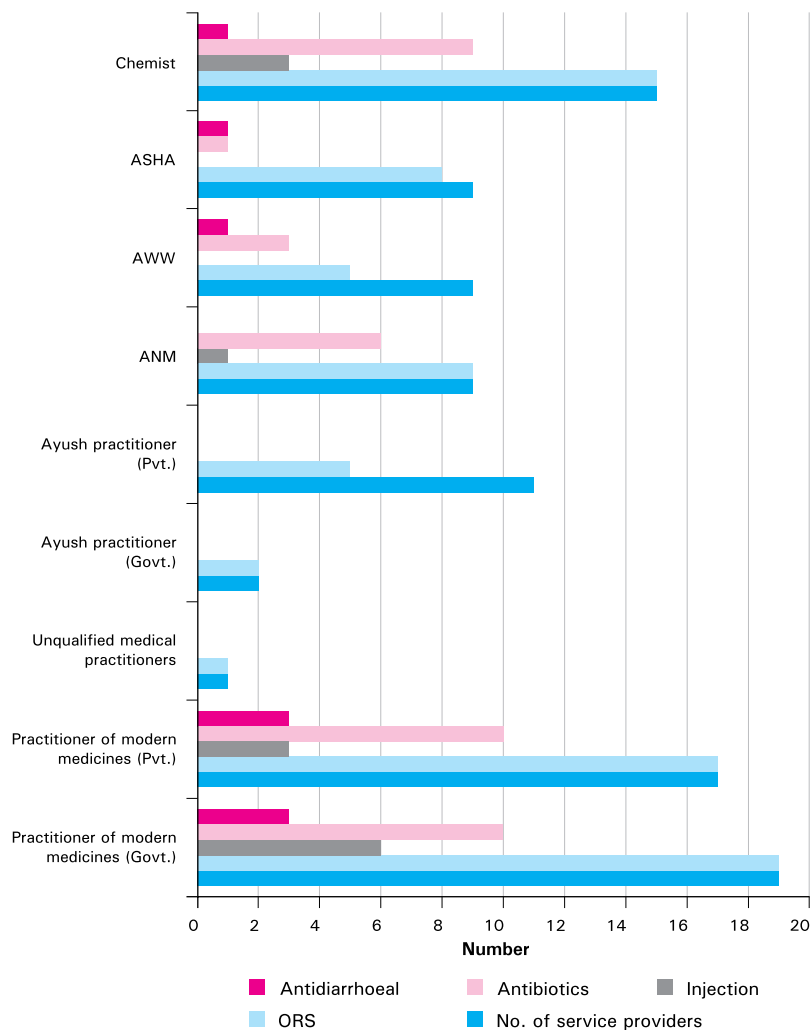
I. Prevalence of diarrhoea and treatment-seeking behaviour of mothers

- About one-fifth of the children aged 2-59 months had diarrhoea in the two weeks prior to the survey.
- Almost 58 per cent of those children who had diarrhoea were taken to a health provider for treatment of diarrhoea.
- Fifty-two per cent of them were taken to some private sector facility and in 48 per cent some public sector facility was approached for treatment.
- Only 3 per cent and 2 per cent of the mothers were advised to continue or increase frequency of breastfeeding and to give more fluids to their children during diarrhoea respectively.
- About 82 per cent of the mothers had heard about ORS, but only 47 per cent gave ORS to their children during diarrhoea, showing too much gap between knowledge and utilisation of ORS.
- New low-osmolarity ORS brands were available in Govt./non-govt. supply in the district.
- Only about one per cent of the mothers reported to have heard of zinc tablets.

1.	% children aged 2-59 months with diarrhoea in the last two weeks	(n =)	1,700 27.0
2.	% children with diarrhoea who were taken to a healthcare provider	(n =)	1,257 83.3
3.	% children with diarrhoea by category of service providers who gave diarrhoea treatment.	(n =)	1,047
	• Any public medical sector		15.8
	• Any private medical sector		86.7
4.	% mothers (child's age 2-12 months) who received advice to continue or increase frequency of breastfeeding during diarrhoea.	(n =)	149 75.2
5.	% mothers who received advice to give more fluids during diarrhoea to their child.	(n =)	1,047 33.2
6.	% mothers who had knowledge of ORS.	(n =)	1,257 62.7
7.	% children with diarrhoea who were given ORS.	(n =)	1,257 45.7
8.	Number of ORS brands available		
	Government supply		
	• Others		2
	• New low osmolarity		1
	Non-government supply		
	• New low osmolarity		12
	• Others		3
9.	% mothers who had knowledge of zinc	(n =)	1,257 0.95

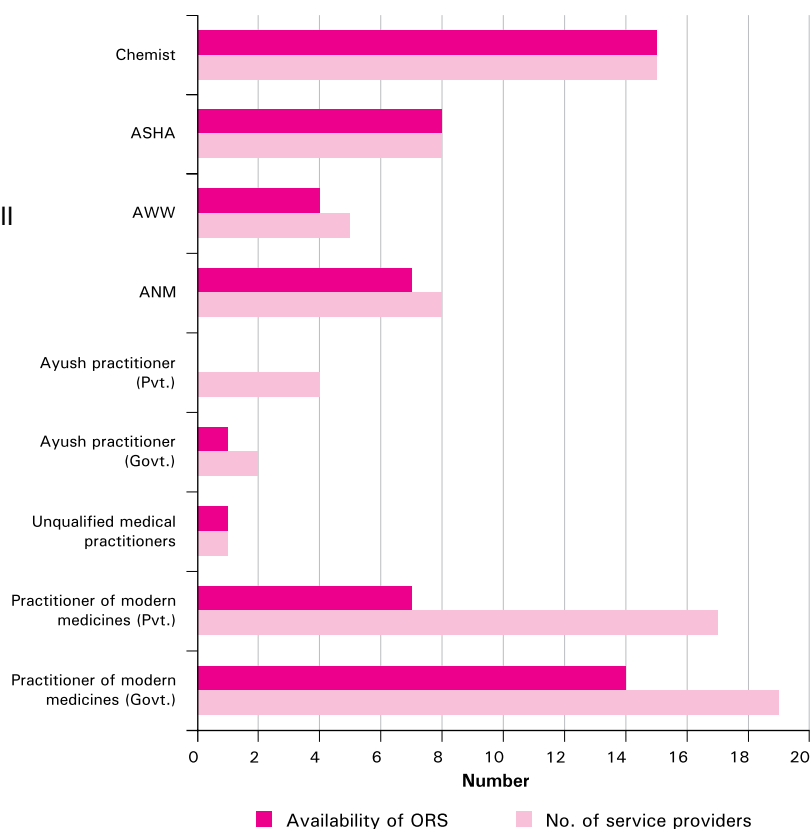
II. Treatment/prescription pattern of service providers

Almost all categories of service providers gave/prescribed ORS except AYUSH practitioners (govt). Only 4 out of 11 AYUSH practitioners gave ORS. Antibiotics were popular among practitioners of modern medicine (govt. & pvt.), ANMs, and chemists.



III. Availability of ORS with service providers

Almost all govt. health functionaries [practitioners of modern medicine (14 out of 19), ANMs (7 out of 8), AWWs (4 out of 5), all ASHAs], and all chemists stocked ORS packets.



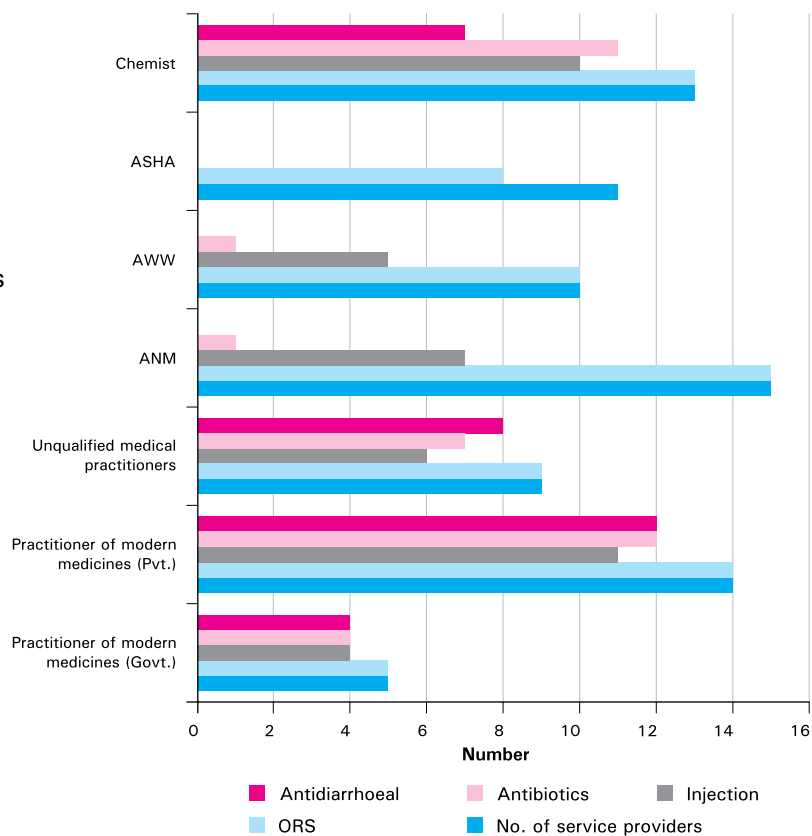
I. Prevalence of diarrhoea and treatment-seeking behaviour of mothers

- Only 4 per cent of the children aged 2–59 months had diarrhoea in the last two weeks prior to the survey.
- Almost 88 per cent of those children, who had had diarrhoea, were taken to a health provider for treatment of diarrhoea.
- Majority of them children (91%) were taken to some private hospital/doctor and in case of only 4 per cent of the children, treatment/consultation was sought from some public sector facilities.
- Only 3 per cent of the mothers who took their children to some health service provider for treatment of diarrhoea, were advised to continue or increase frequency of breastfeeding to their children during diarrhoea, while only about 5 per cent mothers were advised to give more fluids than usual to the child during diarrhoea.
- About 57 per cent of the mothers knew about ORS, but only 47 per cent gave ORS to their children during diarrhoea, indicating some gap between knowledge and utilisation of ORS.
- New low-osmolarity ORS brands are available in the district in both public and private sector.
- Only one per cent of the mothers whose children had diarrhoea in the last two weeks prior to the survey reported to have heard of zinc.

1.	% children aged 2–59 months with diarrhoea in the last two weeks	(n =)	3,123 4.4
2.	% children with diarrhoea who were taken to a healthcare provider	(n =)	1,268 88.4
3.	% children by category of service providers to whom they were taken for diarrhoea treatment	(n =)	1,121
	• Any public medical sector		3.9
	• Any private medical sector		90.5
4.	% mothers (child’s age 2–12 months) who received advice to continue or increase frequency of breastfeeding during diarrhoea in their child.	(n =)	39 56.4
5.	% mothers who received advice to give more fluids during diarrhoea to their children	(n =)	1,121 4.8
6.	% mothers who had knowledge of ORS	(n =)	1,268 56.5
7.	% children with diarrhoea who were given ORS	(n =)	1,268 46.6
8.	Number of ORS brands available		
	Government supply		
	• Others		-
	• New low osmolarity		1
	Non-government supply		
	• New low osmolarity		5
	• Others		-
9.	% mothers who had knowledge of zinc.	(n =)	1,268 1.34

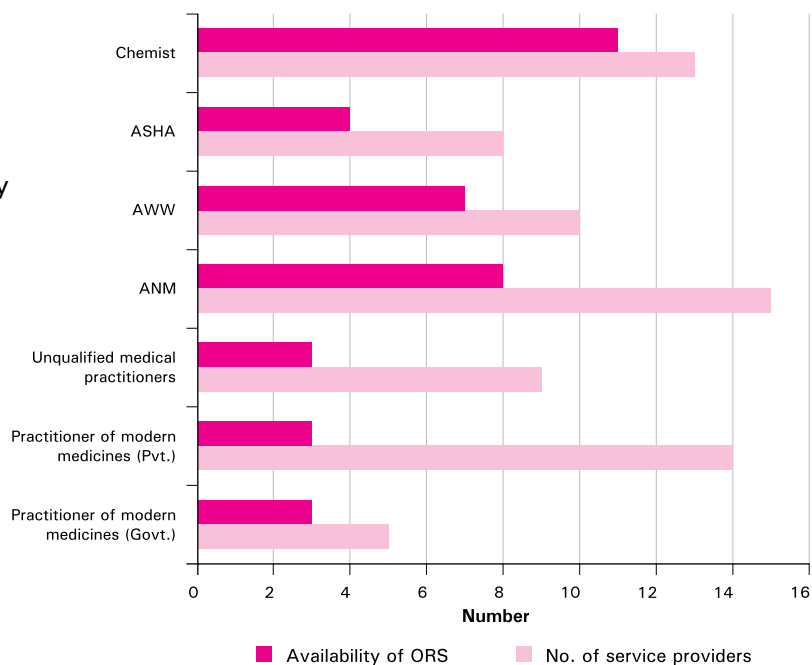
II. Treatment/prescription pattern of service providers

Every service provider from all categories (except ASHA) gave/prescribed ORS to the child for treatment of diarrhoea. Out of 11 ASHAs, 8 reportedly gave/prescribed ORS to the child. Almost all categories of service providers except ANMs, AWWs and ASHAs gave/prescribed injection and antibiotics to the child for treatment of diarrhoea, while anti-diarrhoeals are popular in practitioners of modern medicine (govt. & pvt), unqualified health practitioners and chemists.



III. Availability of ORS with service providers

More than half of the practitioners of modern medicine (government), ANMs, AWWs and chemists reportedly kept ORS packets. Three out of 14 practitioners of modern medicine (private), three out of 9 unqualified health practitioners, and 4 out of 8 ASHAs kept ORS packets.



East Singhbhum, Jharkhand

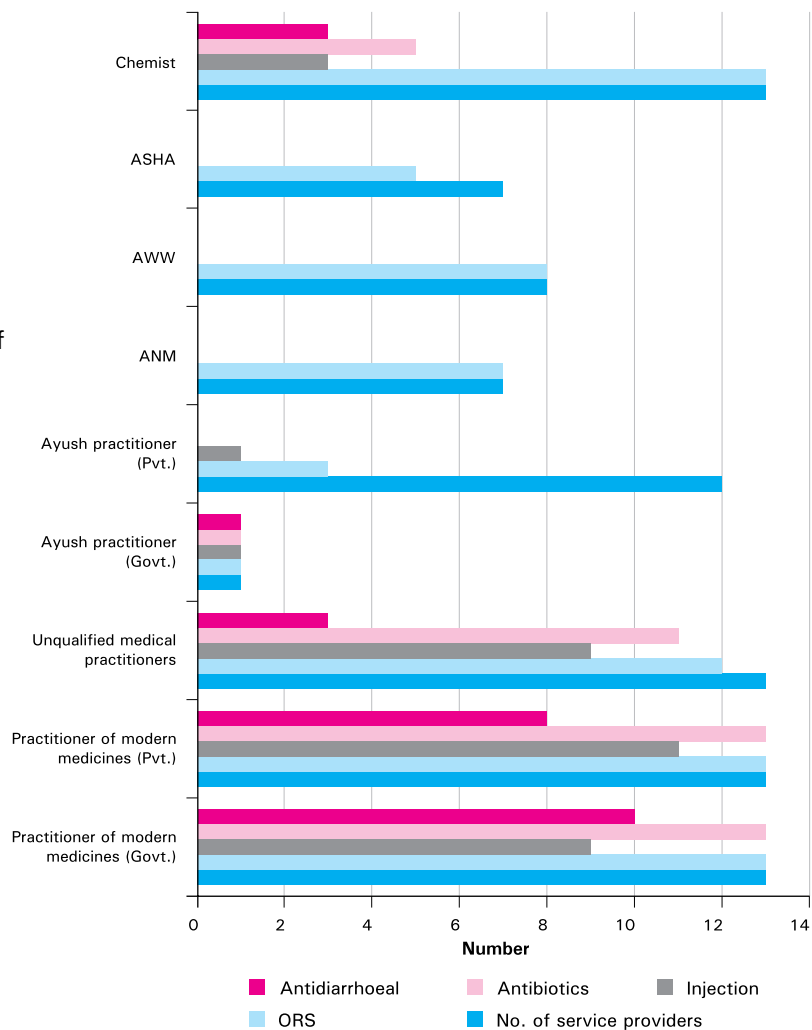
I. Prevalence of diarrhoea and treatment-seeking behaviour of mothers

- Only about 8 per cent of the children aged 2-59 months had diarrhoea in the last two weeks prior to the survey.
- About 64 per cent of those children who had diarrhoea were taken to a health provider for treatment of diarrhoea.
- Majority of the children (89%) were taken to some private hospital/doctor and in case of only 11.2 per cent of the children, treatment/consultation was sought from some public sector facilities.
- Only 11 per cent of the mothers, who took their children to some health provider for treatment of diarrhoea, were advised to continue or increase frequency of breastfeeding to their children during diarrhoea, while only 16 per cent were advised to give more fluids than usual to the child during diarrhoea.
- About 47 per cent of the mothers knew about ORS, but only half of them actually gave ORS to their children during diarrhoea, indicating too large gap between knowledge and utilisation of ORS.
- Supplies of new low-osmolarity ORS brands were available in the district, in govt./non-government sectors.
- Hardly one per cent of the mothers whose children had diarrhoea in the last two weeks prior to the survey reported to have heard of zinc.

1.	% children aged 2–59 months with diarrhoea in the last two weeks	(n =)	1,802 7.7
2.	% children with diarrhoea who were taken to a healthcare provider	(n =)	1260 63.6
3.	% children by category of service providers to whom they were taken for diarrhoea treatment	(n =)	801
	• Any Public Medical Sector		11.2
	• Any Private Medical Sector		88.8
4.	% mothers (child's age 2–12 months) who received advice to continue or increase frequency of breastfeeding during diarrhoea to their children	(n =)	78 64.1
5.	% mothers who received advice to give more fluids during diarrhoea to their children	(n =)	801 16.1
6.	% mothers who had knowledge of ORS	(n =)	1,260 46.6
7.	% children with diarrhoea who were given ORS	(n =)	1,260 22.7
8.	Number of ORS brands available		
	Government supply		
	• Others		1
	• New low osmolarity		1
	Non-government supply		
	• New low osmolarity		6
	• Others		-
9.	% mothers who had knowledge of zinc	(n =)	1,260 0.95

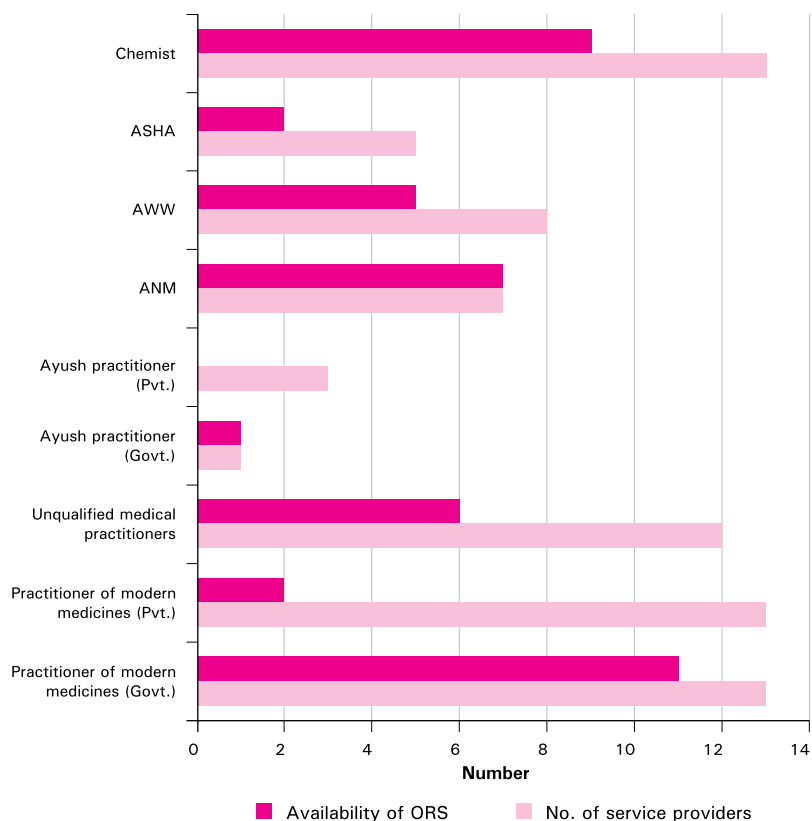
II. Treatment/prescription pattern of service providers

Almost all categories of service providers (except private AYUSH practitioners) gave/prescribed ORS to the child for treatment of diarrhoea. Almost all practitioners of modern medicine (govt. & private), and unqualified health practitioners gave injection and antibiotics, while most of the practitioners of modern medicine (govt. & private) gave/prescribed anti-diarrhoeals to the child.



III. Availability of ORS with service providers

Most of government practitioners of modern medicine (11 out of 13), all ANMs, AWWs (5 out of 8), and chemists (9 out of 13) reported they kept ORS. Six out of twelve unqualified health practitioners kept ORS packets.



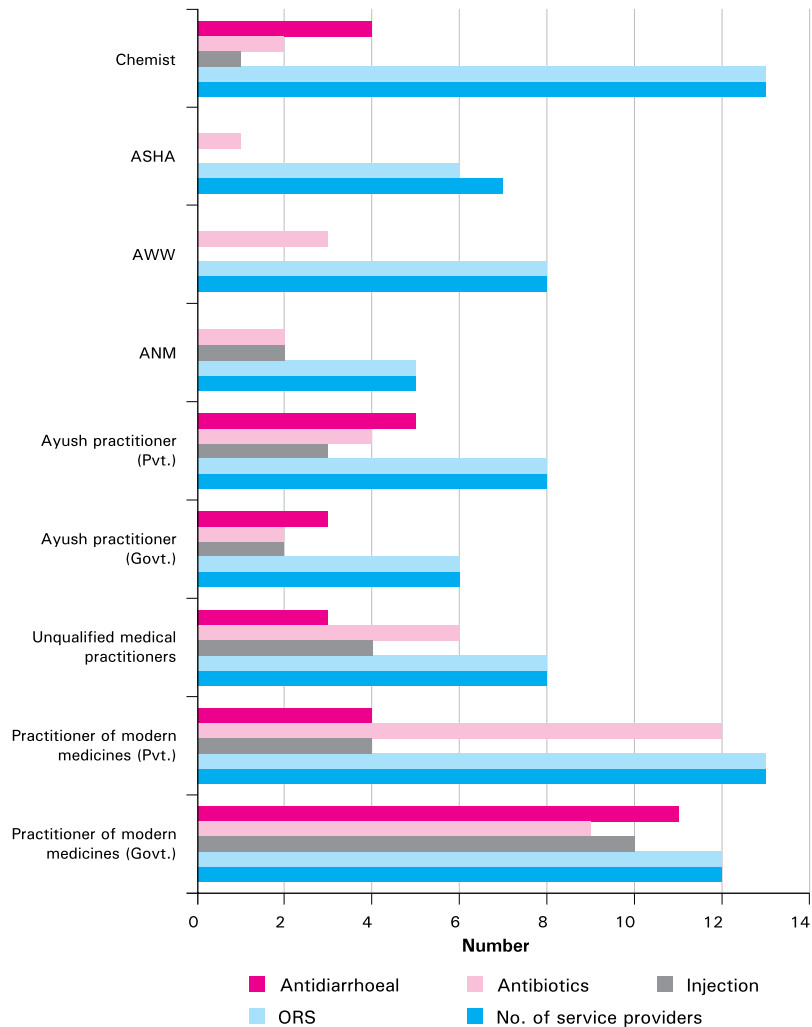
I. Prevalence of diarrhoea and treatment-seeking behaviour of mothers

- Thirty per cent of the children aged 2–59 months had diarrhoea in the two weeks prior to the survey.
- Almost 83 per cent of them were taken to a healthcare provider for treatment of diarrhoea.
- Majority of the children (82%) were taken to some private hospital/doctor and in case of only 21 per cent of the children, treatment/consultation was sought from some public sector facilities.
- Only 12 per cent of the mothers, who took their children to some health provider for treatment of diarrhoea, were advised to continue or increase frequency of breastfeeding to their children during diarrhoea, while only 16 per cent were advised to give more fluids than usual to the child during diarrhoea.
- Four-fifths of the mothers knew about ORS, but only 34 per cent gave ORS to their children during diarrhoea, indicating some gap between knowledge and utilisation of ORS.
- Supplies of new low-osmolarity ORS brands were available in the district, in govt./non-government sectors.
- Only one per cent of the mothers whose children had diarrhoea in the two weeks prior to the survey reported to have heard of zinc.

1.	% children aged 2–59 months with diarrhoea in the last two weeks	(n =)	2,575 30.0
2.	% children with diarrhoea who were taken to a healthcare provider	(n =)	1,295 83.4
3.	% children with diarrhoea by category of service providers to whom they were taken for diarrhoea treatment	(n =)	1,080
	• Any Public Medical Sector		21.2
	• Any Private Medical Sector		82.1
4.	% mothers (child’s age 2–12 months) who received advice to continue or increase frequency of breastfeeding during diarrhoea to their children	(n =)	116 63.8
5.	% mothers who received advice to give more fluids during diarrhoea to their children	(n =)	1,080 16.0
6.	% mothers who had knowledge of ORS	(n =)	1,295 80.1
7.	% children with diarrhoea who were given ORS	(n =)	1,295 33.9
8.	Number of ORS brands available		
	Government supply		
	• Others		-
	• New low osmolarity		5
	Non-government supply		
	• New low osmolarity		4
	• Others		-
9.	% mothers who had knowledge of zinc	(n =)	1,295 1.39

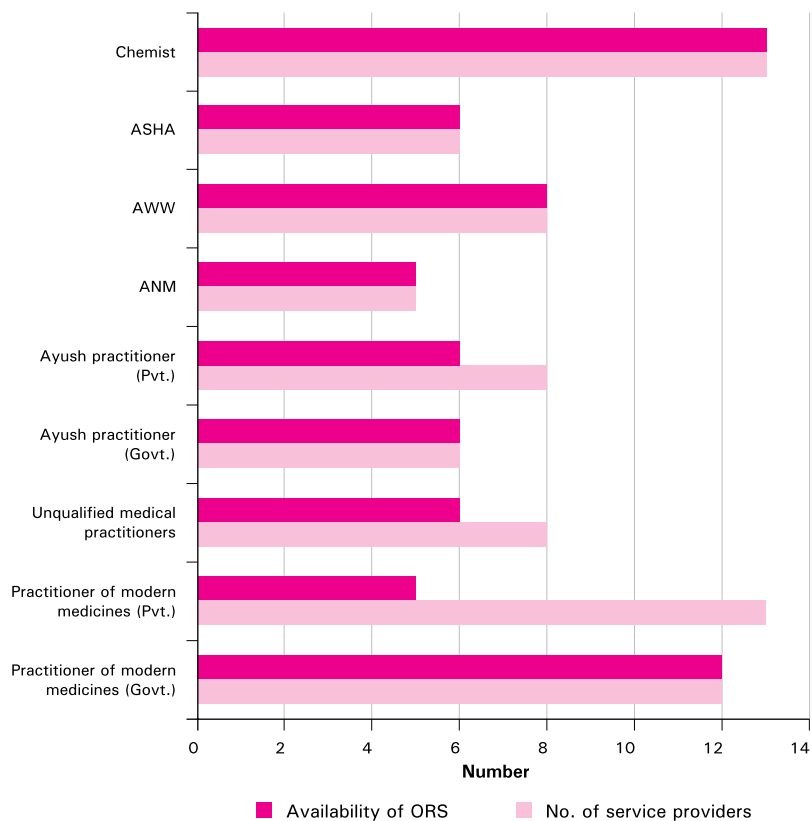
II. Treatment/prescription pattern of service providers

Almost all categories of service providers gave/prescribed ORS to the child for treatment of diarrhoea. Injection and anti-diarrhoeals were mostly popular among govt. practitioners of modern medicine, while antibiotics were mostly given/prescribed by practitioners of modern medicine (govt. & pvt) and unqualified health practitioners.



III. Availability of ORS with service providers

Almost all categories of service providers (except private practitioners of modern medicine) reported to keep ORS packets. Five out of 13 private practitioners kept ORS packets.



Latur, Maharashtra

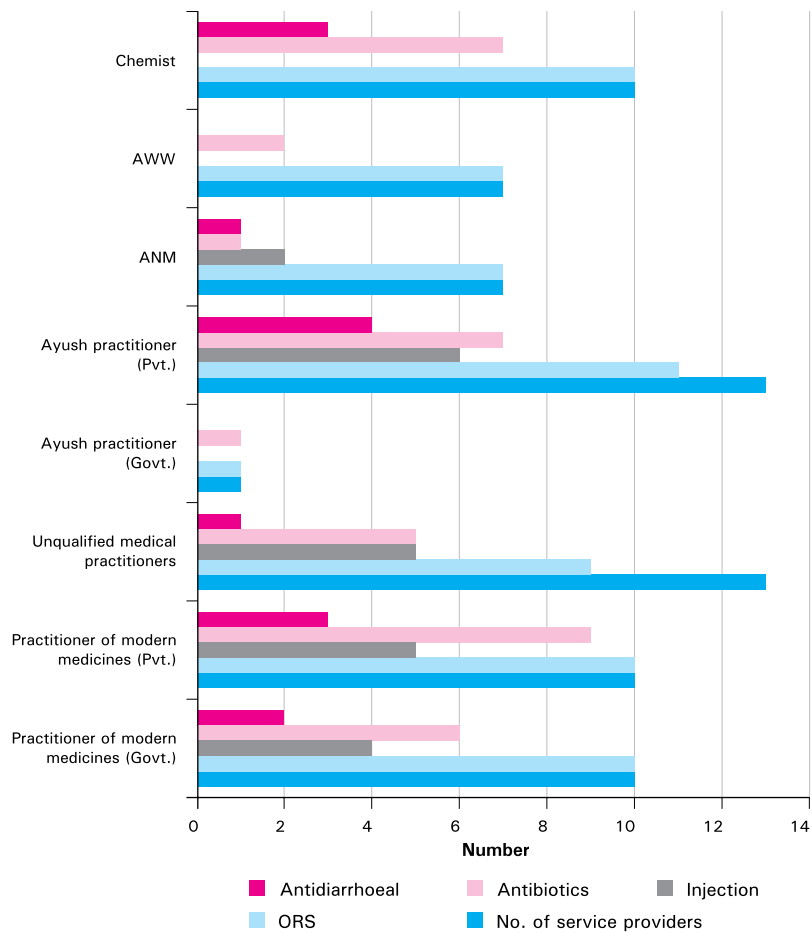
I. Prevalence of diarrhoea and treatment-seeking behaviour of mothers

- About 21 per cent of the children aged 2–59 months had diarrhoea in the last two weeks prior to the survey.
- About 80 per cent of them were taken to a healthcare provider for treatment of diarrhoea.
- Majority of the children (80%) were taken to some private hospital/doctor and in case of only 20 per cent of the children treatment/consultation was sought from some public sector facility.
- Only 7 per cent of the mothers who took their children to some health provider for treatment of diarrhoea, were advised to continue or increase frequency of breastfeeding to their children during diarrhoea, while about 16 per cent were advised to give more fluids than usual to the children during diarrhoea.
- Almost 76 per cent of the mothers knew about ORS, but only 32 per cent gave ORS to their children during diarrhoea, indicating too large a gap between knowledge and utilisation of ORS.
- Supplies of new low-osmolarity ORS brands were available in the district, in govt. /non-government sectors.
- Hardly one per cent of the mothers whose children had diarrhoea in the last two weeks prior to the survey reported to have heard of zinc.

1.	% children aged 2–59 months with diarrhoea in the last two weeks	(n =)	2,329 20.5
2.	% children with diarrhoea who were taken to a healthcare provider	(n =)	1,235 79.9
3.	% children with diarrhoea by category of service providers to whom they were taken for diarrhoea treatment	(n =)	987
	• Any Public Medical Sector		20.1
	• Any Private Medical Sector		79.9
4.	% mothers (child's age 2–12 months) who received advice to continue or increase frequency of breastfeeding during diarrhoea to their children	(n =)	112 55.4
5.	% mothers who received advice to give more fluids during diarrhoea to their children	(n =)	987 15.6
6.	% mothers who had knowledge of ORS	(n =)	1,235 76.0
7.	% children with diarrhoea who were given ORS	(n =)	1,235 32.3
8.	Number of ORS brands available		
	Government supply		
	• Others		-
	• New low osmolarity		1
	Non-government supply		
	• New low osmolarity		5
	• Others		-
9.	% mothers who had knowledge of zinc	(n =)	1,235 0.73

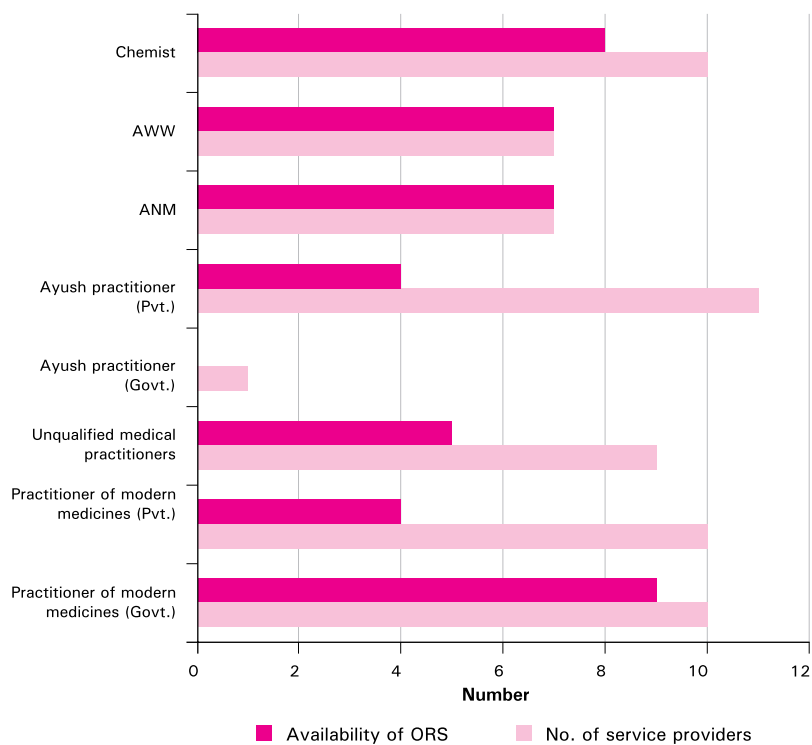
II. Treatment/prescription pattern of service providers

Almost all categories of service providers gave/prescribed ORS to the children for treatment of diarrhoea. More than half of the practitioners of modern medicine (govt & pvt), private AYUSH practitioners and chemists gave/prescribed antibiotics



III. Availability of ORS with service providers

Majority of the service providers [government practitioners of modern medicine (9 out of 10), unqualified health practitioners (5 out of 9), all ANMs & AWWs and chemists (8 out of 10)] reported to keeping ORS packets



Koraput, Orissa

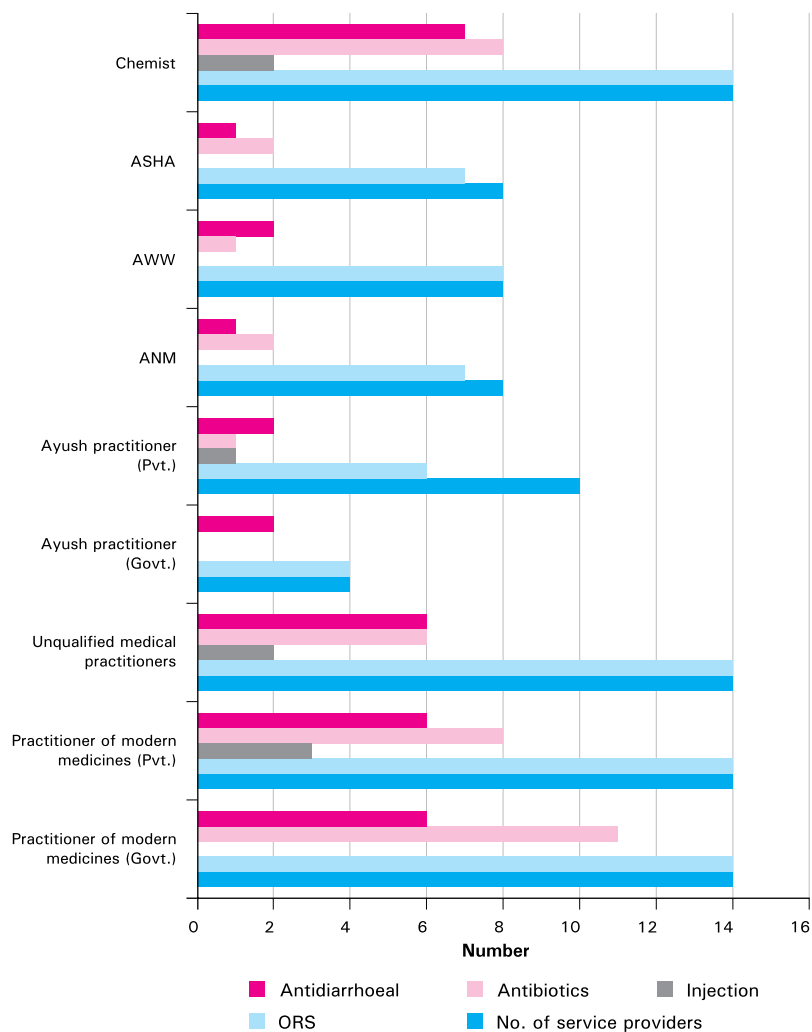
I. Prevalence of diarrhoea and treatment-seeking behaviour of mothers

- About 30 per cent of the children aged 2–59 months had diarrhoea in the last two weeks prior to the survey.
- Almost 72 per cent of them were taken to a healthcare provider for treatment of diarrhoea.
- Majority of the children (74%) were taken to some public health facilities and in case of 34 per cent of the children, treatment/consultation was sought from some private hospital/doctor.
- Only 5 per cent of the mothers who took their children to some health provider for treatment of diarrhoea, were advised to continue or increase frequency of breastfeeding to their children during diarrhoea, while only 8 per cent were advised to give more fluids than usual to the child during diarrhoea.
- Almost 89 per cent of the mothers knew about ORS, but 51 per cent gave ORS to their children during diarrhoea, indicating too much gap between knowledge and utilisation of ORS.
- WHO recommended ORS brand is neither available under government supply nor under nong-government supply in the district.
- Hardly one per cent of the mothers whose children had diarrhoea in the last two weeks prior to the survey reported to have heard of zinc.

1.	% children aged 2–59 months with diarrhoea in the last two weeks	(n =)	2,472 29.6
2.	% children with diarrhoea who were taken to a health provider	(n =)	1,264 72.0
3.	% children with diarrhoea by category of service providers to whom they were taken for diarrhoea treatment	(n =)	910
	• Any Public Medical Sector		74.2
	• Any Private Medical Sector		34.1
4.	% mothers (child's age 2–12 months) who received advice to continue or increase frequency of breastfeeding during diarrhoea to their children	(n =)	42 50
5.	% mothers who received advice to give more fluids during diarrhoea to their children	(n =)	910 7.6
6.	% mothers who had knowledge of ORS	(n =)	1,264 89.2
7.	% children with diarrhoea who were given ORS	(n =)	1,264 51.3
8.	Number of ORS brands available		
	Government supply		
	• Others		-
	• New low osmolarity		1
	Non-government supply		
	• New low osmolarity		4
	• Others		-
9.	% mothers who had knowledge of zinc	(n =)	1,264 0.71

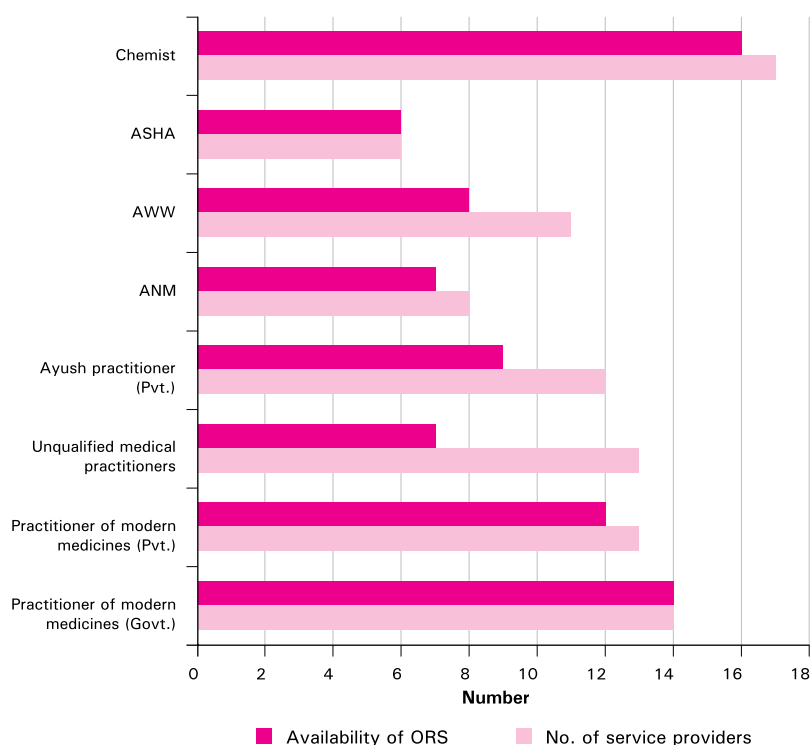
II. Treatment/prescription pattern of service providers

All categories of service providers (except private AYUSH practitioners) gave/prescribed ORS to the child for treatment of diarrhoea. Six out of 10 private AYUSH practitioners gave/prescribed ORS. Antibiotics were mostly popular among practitioners of modern medicine (govt & pvt), unqualified health practitioners and chemists, and half of the chemists gave/prescribed anti-diarrhoeals too.



III. Availability of ORS with service providers

Almost all government service providers and chemists reportedly kept ORS packets.



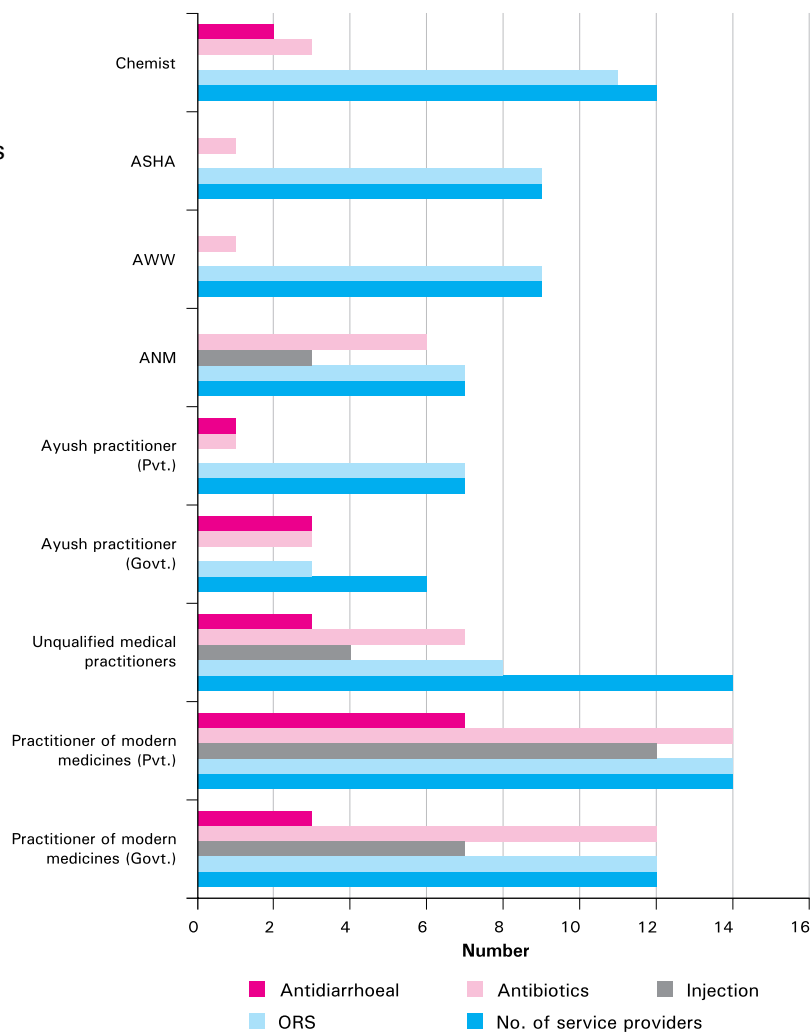
I. Prevalence of diarrhoea and treatment-seeking behaviour of mothers

- Twenty eight per cent of the children aged 2–59 months had diarrhoea in the last two weeks prior to the survey.
- About 77 per cent of them were taken to a healthcare provider for treatment of diarrhoea.
- Majority of the children (73%) were taken to some private hospital/doctor and in case of 31 per cent of the children, treatment/consultation was sought from some public sector facilities.
- Only 22 per cent of the mothers, who took their children to some health provider for treatment of diarrhoea, were advised to continue or increase frequency of breastfeeding to their children during diarrhoea, while 42 per cent were advised to give more fluids than usual to the child during diarrhoea.
- Almost 72 per cent of the mothers knew about ORS, but only 46 per cent gave ORS to their children during diarrhoea, indicating too much gap between knowledge and utilisation of ORS.
- Supplies of new low-osmolarity ORS brands were available in the district, in govt./non-government sectors.
- About two per cent of the mothers whose children had diarrhoea in the last two weeks prior to the survey reported to have heard of zinc.

1.	% children aged 2–59 months with diarrhoea in the last two weeks	(n =)	1,957 28.4
2.	% children with diarrhoea who were taken to a healthcare provider	(n =)	1,227 76.5
3.	% children with diarrhoea by category of service providers to whom they were taken for diarrhoea treatment	(n =)	939
	• Any Public Medical Sector		30.6
	• Any Private Medical Sector		72.7
4.	% mothers (child’s age 2–12 months) who received advice to continue or increase frequency of breastfeeding during diarrhoea to their children	(n =)	182 84.1
5.	% mothers who received advice to give more fluids during diarrhoea to their children	(n =)	939 41.5
6.	% mothers who had knowledge of ORS	(n =)	1,227 72.4
7.	% children with diarrhoea who were given ORS	(n =)	1,227 45.9
8.	Number of ORS brands available		
	Government supply		
	• Others		-
	• New low osmolarity		1
	Non-government supply		
	• New low osmolarity		4
	• Others		-
9.	% mothers who had knowledge of zinc	(n =)	1,227 2.20

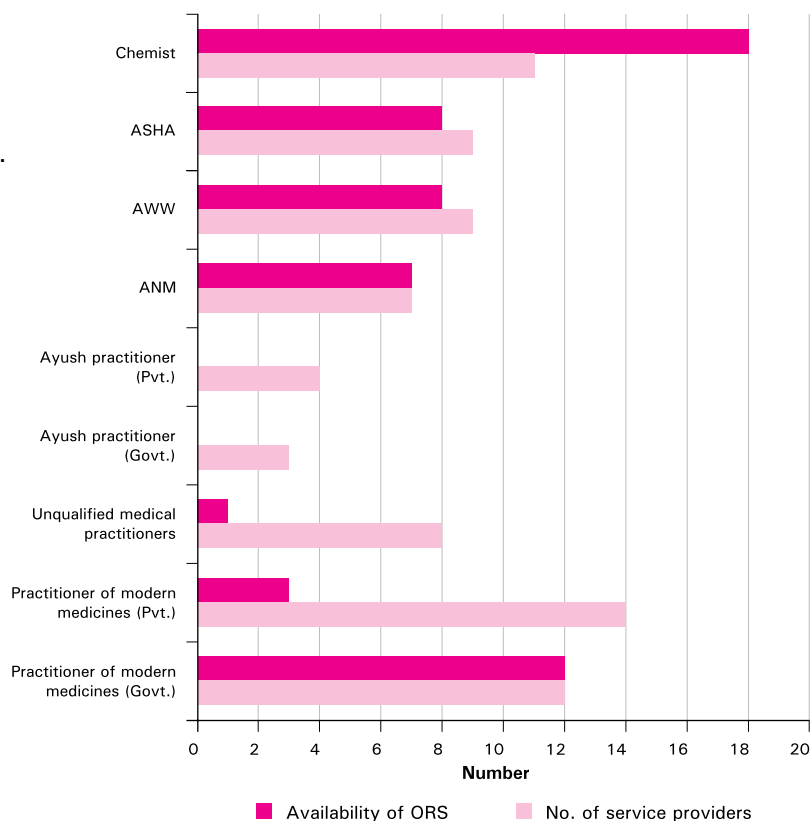
II. Treatment/prescription pattern of service providers

All categories of service providers (except unqualified health practitioners and government & private AYUSH practitioners) gave/prescribed ORS to the child for treatment of diarrhoea. More than half of government & private practitioners of modern medicine gave/prescribed injection, while mostly government & private practitioners of modern medicine and ANMs gave/prescribed antibiotics and seven out of 14 private practitioners of modern medicine also gave anti-diarrhoeals.



III. Availability of ORS with service providers

Almost all public service providers and chemists reportedly kept ORS packets.



Lalitpur, Uttar Pradesh

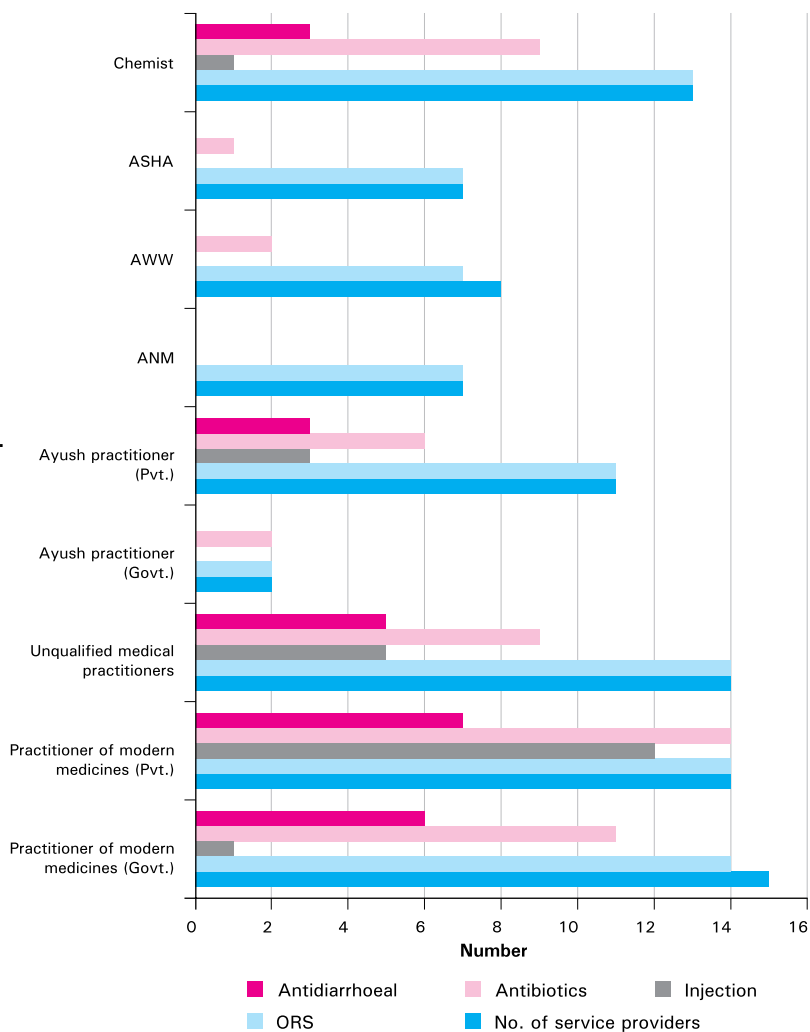
I. Prevalence of diarrhoea and treatment-seeking behaviour of mothers

- About 19 per cent of the children aged 2–59 months had diarrhoea in the last two weeks prior to the survey.
- About two-thirds of them were taken to a healthcare provider for treatment of diarrhoea.
- Majority of the children (79%) were taken to some private hospital/doctor and in case of only 20 per cent of the children, treatment/consultation was sought from some public sector facilities.
- Only 9 per cent of the mothers, who took their children to some healthcare provider for treatment of diarrhoea, were advised to continue or increase frequency of breastfeeding to their children during diarrhoea, while only 15 per cent were advised to give more fluids than usual to the child during diarrhoea.
- About 73 per cent of the mothers knew about ORS, but only 24 per cent gave ORS to their children during diarrhoea, indicating very large gap between knowledge and utilisation of ORS.
- Under govt supply, WHO recommended ORS brand is available in the district.
- Only two per cent of the mothers whose children had diarrhoea in the two weeks prior to the survey reported to have heard of zinc.

1.	% children aged 2–59 months with diarrhoea in the last two weeks	(n =)	3,726 18.5
2.	% children with diarrhoea who were taken to a healthcare provider	(n =)	1,281 65.5
3.	% children with diarrhoea by category of service providers to whom they were taken for diarrhoea treatment	(n =)	839
	• Any Public Medical Sector		19.5
	• Any Private Medical Sector		78.9
4.	% mothers (child's age 2–12 months) who received advice to continue or increase frequency of breastfeeding during diarrhoea to their children	(n =)	161 44.7
5.	% mothers who received advice to give more fluids during diarrhoea to their children	(n =)	839 15.4
6.	% mothers who had knowledge of ORS	(n =)	1,281 73.1
7.	% children with diarrhoea who were given ORS	(n =)	1,281 24.3
8.	Number of ORS brands available		
	Government supply		
	• Others		-
	• New low osmolarity		1
	Non-government supply		
	• New low osmolarity		4
	• Others		-
9.	% mothers who had knowledge of zinc	(n =)	1,281 2.42

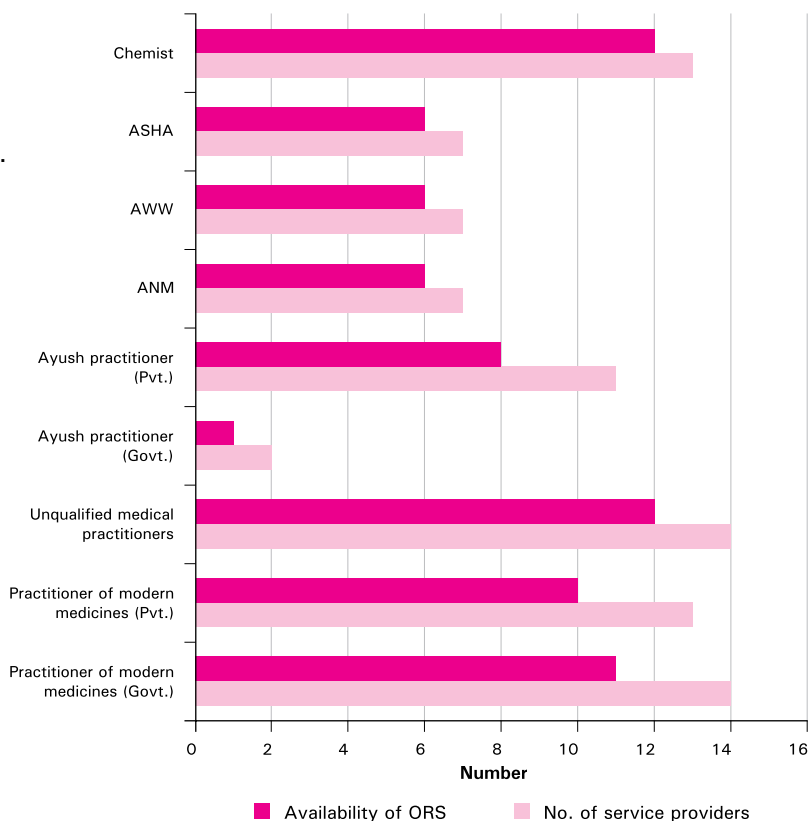
II. Treatment/prescription pattern of service providers

Almost all categories of service providers gave/prescribed ORS to the child for treatment of diarrhoea. More than half of the government practitioners of modern medicine (9 out of 15), private practitioners of modern medicine (11 out of 13), unqualified health practitioners (9 out of 14) and private AYUSH practitioners (6 out of 11), and chemists (9 out of 13) give antibiotics.



III. Availability of ORS with service providers

Almost all categories of service providers reportedly kept ORS packets.



Purulia, West Bengal

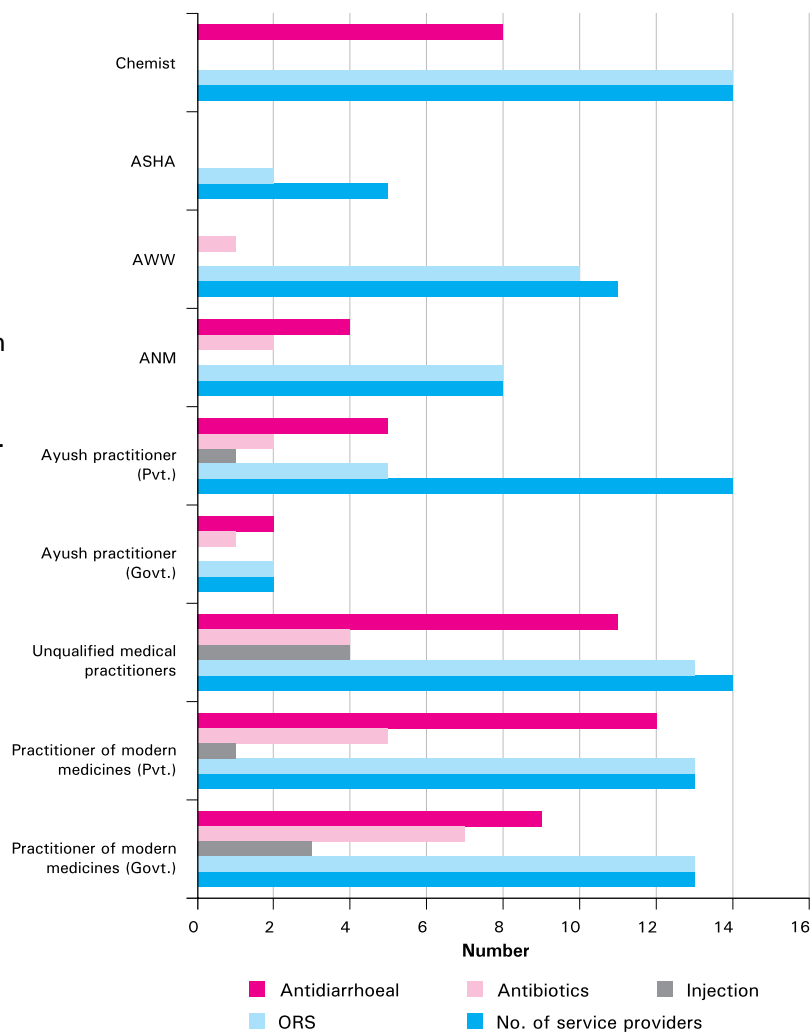
I. Prevalence of diarrhoea and treatment-seeking behaviour of mothers

- Nineteen per cent of the children aged 2–59 months had diarrhoea in the two weeks prior to the survey.
- Almost 68 per cent of them were taken to a healthcare provider for treatment of diarrhoea.
- Majority of the children (68%) were taken to some private hospital/doctor and in case of only 26 per cent of the children, treatment/consultation was sought from some public sector facilities.
- Only 8 per cent of the mothers, who took their children to some health provider for treatment of diarrhoea, were advised to continue or increase frequency of breastfeeding to their children during diarrhoea, while only about 20 per cent were advised to give more fluids than usual to the children during diarrhoea.
- Almost 76 per cent of the mothers knew about ORS, but only 34 per cent gave ORS to their children during diarrhoea, indicating too much gap between knowledge and utilisation of ORS.
- Supplies of new low-osmolarity ORS brands were available in the district, in govt. /non-government sectors.
- About two per cent of the mothers whose children had diarrhoea in the two weeks prior to the survey reported to have heard of zinc.

1.	% children aged 2–59 months with diarrhoea in the last two weeks	(n =)	2,448 19.1
2.	% children with diarrhoea who were taken to a healthcare provider	(n =)	1,252 68.4
3.	% children with diarrhoea by category of service providers to whom they were taken for diarrhoea treatment	(n =)	856
	• Any Public Medical Sector		25.5
	• Any Private Medical Sector		67.9
4.	% mothers (child's age 2–12 months) who received advice to continue or increase frequency of breastfeeding during diarrhoea to their children	(n =)	78 42.3
5.	% mothers who received advice to give more fluids during diarrhoea to their children	(n =)	856 19.6
6.	% mothers who had knowledge of ORS	(n =)	1,252 76.2
7.	% children with diarrhoea who were given ORS	(n =)	1,252 33.5
8.	Number of ORS brands available		
	Government supply		
	• Others		4
	• New low osmolarity		3
	Non-government supply		
	• New low osmolarity		6
	• Others		-
9.	% mothers who had knowledge of zinc	(n =)	1,252 1.68

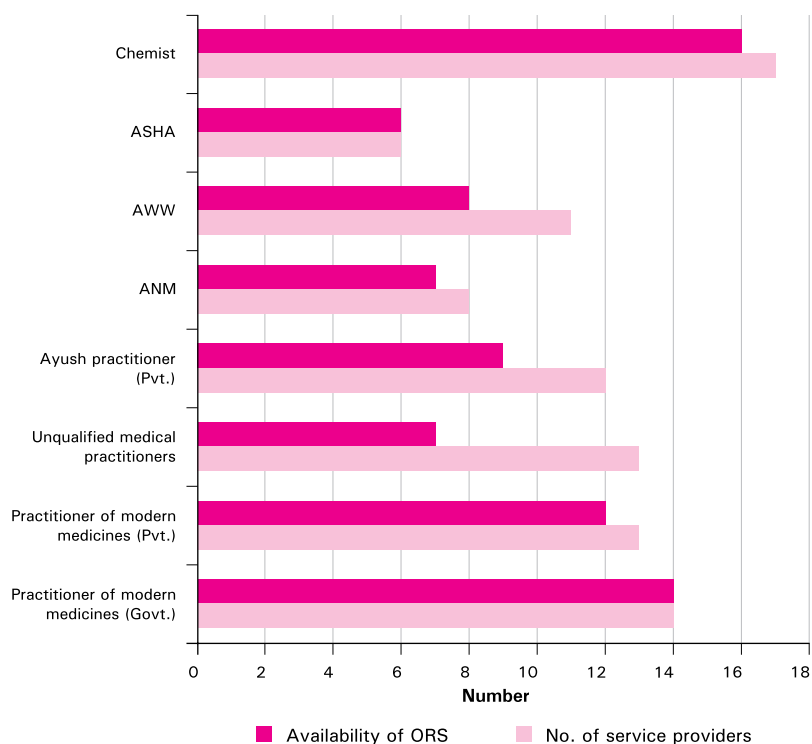
II. Treatment/prescription pattern of service providers

Almost all categories of service providers (except private AYUSH practitioners and ASHAs) gave/prescribed ORS to the child for treatment of diarrhoea. Antidiarrhoeals are popular among government and private practitioners of modern medicine, unqualified health practitioners and chemists, while 7 out of 13 government practitioners of modern medicine also gave antibiotics.



III. Availability of ORS with service providers

Almost all government practitioners of modern medicine, unqualified health practitioners, ANMs, AWWs and chemists reportedly kept ORS packets. Only one out of 13 private practitioners of modern medicine kept ORS packets.



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