

Report  
On  
**Acceptability and Adherence Test of Zinc  
Tablet in Young Children**



Submitted To:



Social Marketing Company

Conducted by:

 ACNielsen Bangladesh

December 2006

December 28, 2006

Mr. Toslim Uddin Khan  
Head  
Research & Information Services  
Social Marketing Company

Sub: Submission of the report on **"Acceptability and Adherence Test of Zinc Tablet in Young Children"**.

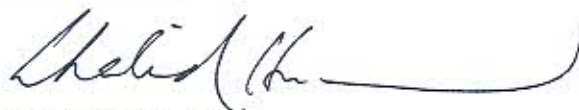
Dear Mr. Khan:

We are pleased to submit a copy of the report on "Acceptability and Adherence Test of Zinc Tablet in Young Children". We have incorporated all the feedback from you and your team on the draft report.

We would like to take this opportunity to thank you and team for your valuable input at different stages of the study and report writing.

With best regards.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Khalid Hasan', with a long horizontal flourish extending to the right.

Khalid Hasan, PhD  
Managing Director

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## EXECUTIVE SUMMARY

### Introduction

Diarrhea contributes to the major share of child morbidity and mortality in developing countries, which can be effectively reduced by zinc. Zinc has been found to play an effective role in reducing severity and length of diarrheal episode and in reducing the risk of subsequent diarrheal illness in children aged below five years. Given the importance of zinc tablet in diarrheal treatment, SMC intends to social market zinc tablets as a treatment for diarrhea in children.

### Methodology

The overall objective of the study was to assess the acceptability of 20 mg dispersible zinc tablets among children under five years of age with an active case of diarrhea and compliance uses.

The study utilized quantitative approach for data collection of this study. Caregivers or mothers of the <5 children with diarrheal episode who took ORS were interviewed. A total of 453 sample were contacted with the following two groups,

- Caregiver/mother of 214 children of 6-23 months
- Caregiver/mother of 239 children of 24-59 months

The study was conducted in both urban and rural sites, as per suggested by SMC. Particularly, the areas were:

Urban areas:

- Mirpur, Dhaka
- Chandgaon, Chittagong
- Paba, Rajshahi

Rural areas:

- Bakergonj, Barisal
- Terokhada, Khulna
- Balagonj, Sylhet

Six Sales Officers from the SMC and six Field Investigators (FIs) from ACNielsen received a one-day orientation about zinc treatment in diarrhea. Each sales officer selected 10 urban and 10 rural outlets from their respective sample areas. The pharmacists/ doctors provided the detail information to the respondents as well as the zinc tablets. Before collecting data, FIs visited each of the selected pharmacies to follow-up of the distribution work of zinc. The final data collection for the study was carried out during the month of September – October 2006.

### FINDINGS

#### Background Information

A total of 453 respondents who were mothers (83%) or caregivers (17%) of children were interviewed. Higher proportion of respondents had primary level of education (38%) followed by secondary level of education (31%). Further, 48% were children of lower age group (6-23 months) and 52% were children aged 24-59 months. Wide

majority (94%) of the children aged 6-23 months (n=216) were also breastfeeding at the time of survey.

At the time of survey, 91% of the children have recently recovered from diarrhea while 2% were still suffering from diarrhea.

#### **Child's Last Episode of Diarrhea and Acceptance of Zinc Tablet**

Higher proportion of children found to suffer for 3 days (33%), which was little higher for children aged 24-59 months (34%) compared to children aged 6-23 months (32%). Around one-fourth of the children suffered for 4 days (23%) and 14% suffered for 5 days. The average duration for the children to suffer from diarrhea was 4.3 days for last time.

Almost all of the respondents gave ORS (98%) and zinc tablet (100%) to their children. All the parents/ caregivers, except for 3, gave their children 1 tablet per day, as suggested by the pharmacists. Majority of the respondents (81%) reported to have completed the 10-day dose of Zinc tablet for their children's treatment. Nineteen percent of the respondents did not complete the 10-day dose of zinc tablet, because their child was recovered from diarrhea (8%), they forgot to give their child medicine (3%), their child didn't want to take medicine (3%), and their child did vomit (3%).

#### **Process of giving zinc tablet to the children**

Wide majority of the respondents (91%) followed the process of dissolving the tablet in water in a spoon, while 8% dissolved the tablet in ORS and dissolved in water and in other than spoon (8%). Further, 83% of the respondents did not have any difficulty as the tablet dissolved easily and they found tablet easy to feed. One-tenth of the respondents stated that the tablet solution spilled over the spoon and 6% of caregivers had some difficulty, for instance, tablet did not dissolve easily, tablet is difficult to feed, etc.

#### **Reaction of the children after giving Zinc Tablet**

More than two-thirds of the respondents perceived the zinc tablet has good taste (67%) as their child took the medicine easily and 14% opined that the tablet seemed bitter or bad taste to them. Another 8% of the respondents opined their child felt like vomiting after they were given the zinc tablet. About the overall likings by the children, 42% of the children liked very much.

#### **Information on vomiting by the children**

About one-third of the caregivers for children aged 6-23 months (30%) and 17% of the caregivers for children aged 24-59 months have reported that their children had vomit after giving zinc tablet. Further, 24% of the caregivers of children aged 6-23 months and 14% of the caregivers of children aged 24-59 months kept giving both zinc tablet and ORS to their children. About 3% stopped zinc tablet and gave only saline while a very few of the caregivers stopped both the zinc tablet and ORS after their child did vomit.

#### **Future Intention of using zinc tablet**

Almost all of the parents/ caregivers (99%) showed positive intention to use zinc tablet in future during their child's diarrhea.

More than half of the respondents (55%) opined 10 taka would be acceptable for a 10-tablet strip with an average of 13 taka for the same. Further, 90% of the respondents preferred to buy the zinc tablets from pharmacy followed by grocery shop (10%).

### **CONCLUDING REMARKS**

On the basis of the findings the following conclusions and recommendations can be made:

- The study found that, the parents/ caregivers of children under five were willing to give zinc tablet to their children with ORS as a treatment for diarrhea.
- All the children received the standard dose of one tablet per day and 81% completed the full 10-day course of zinc treatment. Majority of the children were been able to feed the medicine with ease.
- Over 90% of the parents/ caregivers complied with the instructions addressing frequency of administrations, dosage, and the procedure to prepare the medicine. Therefore, it can be concluded that among the group of parents/ caregivers of children who experienced acute diarrhea, zinc treatment was acceptable and adherence to the instructions was quite good.
- Finally, the present study found that the formulation is well accepted among young children. Parents/ caregivers also observed to find the procedure to administer the zinc tablets to their children easy to remember. The full-compliance with 10-day length of the treatment was also found high among the group of respondents. Yet, less experience with a treatment with dispersible tablet or completion of the dose even after disease is cured need to be taken care of during promotional activities. As suggested by the respondents, media campaign (television, radio, IPC, etc.) would be useful in dealing with such issues.

## CHAPTER ONE INTRODUCTION

### SECTION I: Introduction

#### Background

Social Marketing Company (SMC) is dedicated to providing opportunities for better family health for the people of our country by addressing issues of social priority. SMC is regarded as a significant contributor to the delivery of health services in Bangladesh by complementing public sector distribution with private sector marketing model.

SMC is marketing WHO-formula based new packaged ORSaline-N (Oral Rehydration Salt). SMC has extended its line by introducing BNF-based flavored ORS brand ORSaline Fruity.

SMC has a very efficient nation-wide sales and distribution network which operates through strategically located twelve sales offices. The Company has a little over 100 sales personnel who are distributing products to more than 215,000 retail outlets countrywide.

SMC played a key role in expanding the use of oral rehydration therapy in the country. SMC's ORSaline brand of ORS now accounts for 52 percent of all oral rehydration salts purchased from the shops.

SMC has a strong communication program to facilitate and sustain behavior changes for improved reproductive and nutritional health. These are carried out through radio programs, direct community education programs, mobile video programs, health providers' training program, direct mailing, telephone counseling, and interpersonal educational programs for focused groups on STI/AIDS prevention.

SMC has one of the most established, extensive and efficient distribution networks in Bangladesh. Nationwide coverage is carried out through nine Area Offices and three Depot Offices located in major district towns of the country. This enables SMC's 85 men strong sales force to distribute products to the far-flung outlet promptly and regularly. On an average, about 230,000 outlets are served by SMC sales force each year of which approximately 35% are pharmacies and the rest non-pharmacies. In-addition, numerous other retailers take supplies from the stockists.

#### Brief Description on Zinc<sup>1</sup>

Zinc is an essential micronutrient for human growth and development. A large proportion of populations in developing countries are deficient in zinc. Young children in developing countries are the highest risk groups for infection and death due to diarrhea and other infections. Zinc has been found to be very effective in reducing severity and length of diarrheal episode and in reducing the risk of subsequent diarrheal illness in children aged below five years. Zinc, available in syrup form, is being prescribed to increase growth, increase appetite, improve digestion and reverse weakness. Zinc tablets have advantages over syrup, as tablets are easier to handle, less costly and easier to dose.

Given the findings, SMC aims to social market zinc tablets as a treatment for diarrhea in children. Prior to committing to a large marketing campaign and launching the products,

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<sup>1</sup> This information is taken from the RFP provided by SMC

SMC aims to test the acceptability and compliance of zinc tablet as a treatment for diarrhea in children in urban and rural household settings.

## **SECTION II: Methodology**

ACNielsen Bangladesh conducted the study for the following objectives and with the detailed methodology discussed later.

### **Study Objective**

The overall objective of the study was to assess the acceptability of 20 mg dispersible zinc tablets among children under five years of age with an active case of diarrhea and compliance uses.

#### **The specific objectives of the study were as follows:**

1. To assess if the zinc tablet is acceptable among children under five years of age with an active case of diarrhea.
2. To determine the rate of compliance with zinc treatment regimen.
3. To document reasons for non-compliance with the treatment regimen.

### **Study Approach**

To meet the aforementioned objectives, the study utilized quantitative approach of data collection.

### **Target Respondent**

For the study, caregivers or mothers of the <5 children with diarrheal episode who took ORS were interviewed.

The study intended to determine acceptability and adherence of zinc tablet in younger children (6 moths-23 months) and older children (24-59 months). Thus a total of 453 sample were contacted with the following two groups,

- Caregiver/mother of 214 children of 6-23 months
- Caregiver/mother of 239 children of 24-59 months

The study was conducted in both urban and rural sites, as per suggested by SMC. Particularly, the areas were:

#### **Urban areas:**

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#### **Rural areas:**

- Bakergonj, Barisal
- Terokhada, Khulna
- Balagonj, Sylhet



## Study Implementation

The present study was implemented in the following manner:

### Initial visit

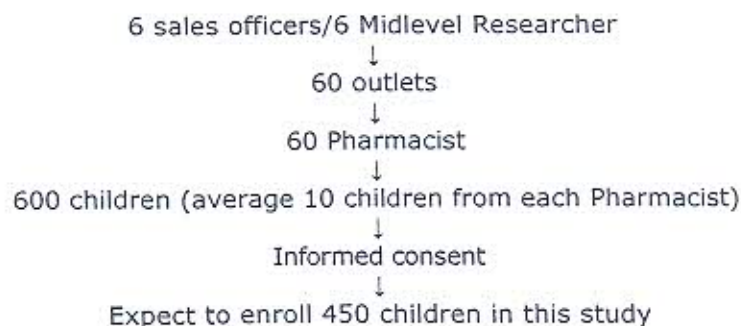
Six Sales Officers from the SMC and six Field Investigators (FIs) from ACNielsen received a one-day orientation about zinc treatment in diarrhea. Each sales officer was instructed to select 10 urban and 10 rural outlets from their respective sample areas. After completion of the orientation, both the sales officers and FIs visited their respective sample areas and selected the pharmacy outlets. They recorded the names of Pharmacists with address and telephone number of each Pharma outlets. Each pharmacist was advised to identify and maintain a list of 10 diarrhea-affected children, whoever comes to that outlet to buy ORS.

Children living within close distance were given preference in order to facilitate data collection. The seller maintained details of the residence of the children suffering diarrhea including their name, age, address, prominent landmark near the residence and contact number in the address sheet provided by the FI.

### Follow-up visit

Before collecting data, FIs visited each of the selected pharmacies to follow-up of the distribution work of zinc at the pharmacist. FIs also kept continuous communication with the pharmacist after the initial visit. After the distribution of the tablets FIs collected the list of children and depending upon the completion of the consumption of doses they went for the interview.

### Flowchart of recruitment of study participants:



### Survey Tool

A structured questionnaire was used for quantitative survey. Survey questionnaire was finalized in consultation with SMC.

### Survey Period

The data collection for the study was carried out during the month of September - October 2006.

