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ANTHROPOLOGICAL AND MARKETING RESEARCH PLAN FOR SOCIAL MARKETING OF ORS THROUGH THE BANGLADESH SOCIAL MARKETING PROJECT

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INTRODUCTION

In response to a request from AID/Bangladesh, the Primary Health Care Technology Project (PRITECH) sent Dr. Edward Green and Mr. Terry Louis to Bangladesh to assess efforts to date in promoting use of Oral Rehydration Salts (ORS) and to develop an anthropological and marketing research plan for the social marketing of ORS through the Social Marketing Project (SMP). The consultants were in-country between January 20-31.

The Aid funded SMP has already developed extensive and effective distribution channels for the social marketing of contraceptives, and there are indications that ORS packets could be successfully marketed through essentially the same distribution channels. The marketing of ORS, a life-saving health product, could also increase the acceptance of contraceptive products marketed under the same program. And the widespread use of ORS would lead to significantly reduced infant mortality, which could be a necessary precondition for the widespread acceptance of contraception.

Since ORS and contraceptives are different products, presenting different marketing and cultural challenges to social marketing in a developing country, AID/B recognized the need for research before SMP launched its ORS product. Experience in Honduras, the Gambia, Swaziland and elsewhere has shown that both anthropological and marketing research can greatly assist the social marketing of ORS. Such research seems particularly warranted in Bangladesh, where awareness of ORS is relatively high yet actual usage remains low.

It is recommended that SMP begin marketing its ORS product (Orasaline) as soon as possible, providing marketing is limited to medical/ethical outlets. Once information from the anthropological and market research studies are available, the second phase of marketing can begin. In this phase, all possible distribution channels for ORS can be utilized.

SMP - SOCIAL MARKETING PROJECT

The philosophy of the social marketing project in Bangladesh is to create the climate in which socially desirable projects become a part of the daily life of the market place; to assure their distribution in an efficient fashion so that their availability becomes routine and expected; to present them in such a way that they are attractive and desirable; and to facilitate the exchange between the buyer and the seller so that the transaction is fruitful for both. The belief is that the person who practices family planning with contraceptives purchased in a social marketing program is not a patient or a client, nor a recipient or an acceptor. He or she is an independent consumer making a careful and prudent choice among the many options available in the market place.

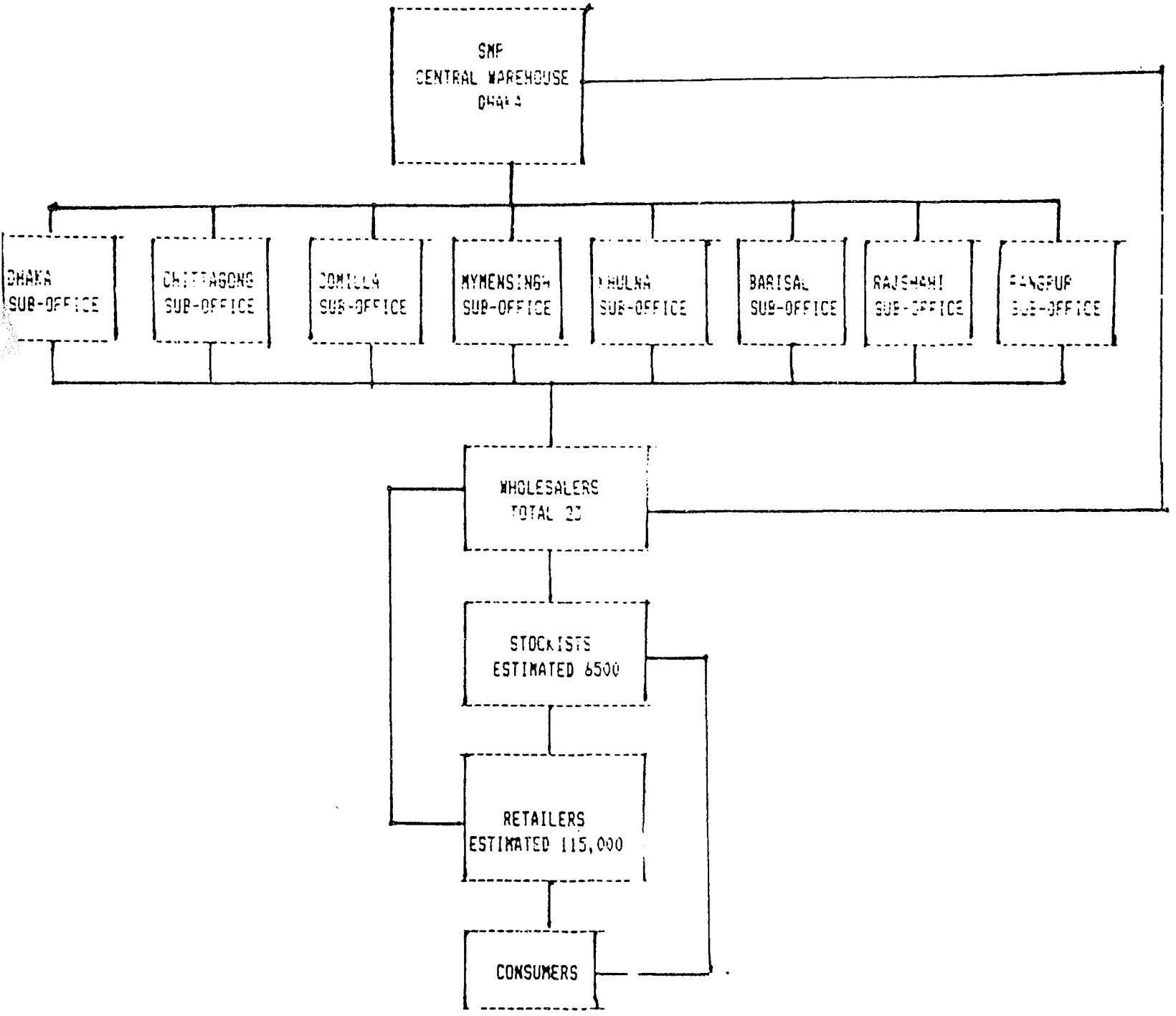
The Family Planning Social Marketing Project has been distributing nonclinical contraceptives through commercial channels on a nationwide basis since 1976. To date SMP has placed its branded contraceptives, Raja, Maya, Joy, Ovacon, Panther, and Majestic in over 115,000 retail outlets through 4,000 stockists and 23 wholesalers. The program sells sufficient contraceptives to protect over 1,200,000 users, or about 8 percent of eligible couples in the country. In 1984 sales of condoms exceeded 100 million units, almost 70 percent of the total national distribution of condoms in the country. In addition, close to 2 million cycles of oral contraceptives and over 4 million spermicidal foam tablets were distributed, making it one of the largest contraceptive social marketing programs in the world.

There are 8 sub-offices that use 23 wholesalers, stockists, and retailers. Out of the 110,000 retail stockists it is estimated there are 12,000 pharmacy outlets. The country is divided into twenty districts and serviced by 50 sales representatives with 24 field vehicles and 16 three wheel vehicles. The 8 sub-offices are under area managers. Each area is also staffed by an area sales supervisor, and a mobile film unit is attached to the sub-office. Twenty medical representatives cover the country detailing to the medical practitioners and pharmacists. The sales operation is managed at central level with a marketing manager, a product development manager, and a national sales manager. The overall policy and operation is with a general manager and a country representative from Population Services International.

SMP has carried out two test market operations in Bangladesh. The first, funded by UNICEF, was carried out in 80/81 in a controlled urban setting of Rajshahi with one litre packs of ORASAL. The 10,000 packs provided were marketed through pharmacies and the product ran out in four months. The product was priced at Tk. 5 to the consumer.

The second market test in 1983 and 1984, funded by the Ford Foundation, was conducted in the four districts of Rajshaki, Mymensingh, Barisal, and Chittagong. The product in this test was placed in four sub-districts and in four Thana level areas. Sixty thousand units of a 1/2 litre pack, priced at Tk. 5 each were sold over a period of nine months. Promotion was carried out by detailing medical practitioners, pharmacists, and traditional practitioners ("quacks"). The detail-men were trained for detailing of the product. It was evident from both tests that there is a need for ORS in Bangladesh and the product was acceptable for treatment of dehydration brought about by diarrheal diseases. The highlights of the findings of the test marketing are presented separately.

SMP
PRODUCT DISTRIBUTION FLOWCHART



FINDINGS OF SMP TEST MARKETING

First Test Market - 1981

UNICEF ORS sachets were packed in individual envelopes with the brand name ORASOL. The pack carried basic product information, printed in Bagla and English and an illustrated "use insert" was included in the envelope aimed at facilitating correct use by consumers.

This was the first attempt in Bangladesh to present ORS as a product for treatment of dehydration by diarrheal disease through channels outside clinical facilities.

Initially the product was sold to pharmacies operating in conjunction with doctors' chambers. There were ten pharmacies serving ten physicians. Five hundred sachets were placed in the ten outlets without promotion or advertising and then movement was monitored. Purchase during the first two weeks was slow. It must be noted that September is not the diarrheal season. In the fourth week the outlets were expanded and consumer demand increased. Four consumers were followed from point of purchase and interviewed to ascertain whether the illustrated "use insert" was being understood and followed correctly. It was found that the product was acceptable, they could understand and follow the inserts correctly, but were uncertain when to begin administering the product and at what stage to discontinue the treatment.

The 9,400 units were sold, and by June 1981 a recheck of the outlets showed that the product was no longer available. Product sale to pharmacies was spread over six and a half months and total sell-out from the outlets by nine months. The limited activity pointed to an existing demand for Oral Rehydration Salts.

Second Test Market - October 1983

The primary concern of the second test marketing was to gauge the potential for a well packaged, attractively presented product at a price that would allow the full cost of its production, promotion, and distribution to be recovered from the consumers. The price of TK. 5.00 for a 500 cc. equivalent sachet was considerably higher than a comparable product offered in the market by an indigenous PVO Gonoshasta Kendro. The price approached that of a third product marketed by Pioneer.

The test covered eight locations, four districts, and four sub-divisions. The test used medical and quasi-medical outlets (pharmacies). No wholesalers nor stockists were involved, and an upper limit on quantity sold to each outlet against cash per visit was strictly enforced (to prevent over-stocking and hoarding). The timing was the peak diarrheal season.

	Number of Outlets		
Sales Summary	Visited	Sold	% Refused
Barisal	667	324	52
Sylhet	220	112	49
Mymensingh	257	169	34
Rajshahi	204	137	33
Lalmonirhat	61	46	25
Bagerhat	191	130	32
Munshigonj	123	62	45
Lakshmipur	144	111	23
	1867	690	37 %average

Particular attention was given to the refusals to stock the product. In no case was the refusal to stock based on ignorance of product or oral rehydration therapy. The most frequent reason for refusal was that the price was perceived as too high. The second reason was the lack of promotion, which was a factor imposed on the test market. The 30 percent resale to outlets within three months confirmed reasonable awareness of the use of ORS as a rehydration therapy and that wider availability and more intensive distribution could lead to more frequent use of the product.

A small survey of consumers showed that pharmacists were the primary source of information and motivation for oral rehydration therapy. The pharmacist plays an important role as educator with regard to ORS. There was confusion on mixing due to variance in the size of packs on the market (1000/500 ml.). The flavored pack of Orasaline had better acceptability.

It was perceived that the product sold at cost recovery price would not move in large quantities and be able to meet the huge need for rehydration therapy. It was felt that social marketing would be one avenue to be explored to offer the product at the right price with the right promotion.

In summing-up, while the two test market activities yielded useful information, other areas of access to pharmacies, information on poorer rural consumers, potential consumers, resistance points, and nonethical distribution channels need examining to put together an effective marketing plan.

DEVELOPMENTS IN ORS AT ICDDR, B

(International Center for Diarrhoeal Disease Research - Bangladesh)

ICDDR,B has for several years been conducting research on rice-based oral rehydration techniques, as possible alternatives to both the homemade sugar-salt solution and the glucose-based, UNICEF approved mixture now in general use, referred to here as standard ORS. Although administration of ORS in the early stages of diarrhea episode does help milder conditions from developing into more severe conditions, there are limits to ORS effectiveness in the latter cases. When stool output exceeds 10 ml. kg/hour, oral replacement using ORS cannot keep up with fluid loss. The same seems to be true of homemade sugar-salt solution, which additionally, is somewhat inferior to ORS because it lacks sodium bicarbonate and is deficient in potassium. (GUR, and unrefined sugar commonly used - but not always available - in Bangladesh, contains potassium but in suboptimal amounts for oral replacement.)

Rice based oral replacement therapy is based on an existing diarrhea home remedy in Bangladesh. To prepare this remedy, rice is first steamed, then flattened through beating, and finally soaked. Salt is added to the resulting gruel, called CHIRA, and then fed to children. Chira is not cooked. It is available in markets throughout Bangladesh. At one market visited in Tangail District, 60 grams of dry chira flakes cost Tk. 1.50. ICDDR,B uses 60 grams of rice powder to produce one litre of ORS. The salt to chira adds very slightly to the cost, but this cost is still at least Tk. 1.00 less than the cheapest ORS packet that produces 1/2 litre of ORS.

The rice based solution developed by ICDDR,B is prepared by boiling rice powder for a few minutes, then letting the gruel-like solution cool before drinking. Research has shown the rice based solution to have the following advantages:

It is a good tasting food that a sick child is less likely to reject than ORS. It has been found in both home and clinical settings that in severe cases of diarrhea accompanied by vomiting, as in the case of cholera, children often reject ORS - but they will accept the rice solution.

Glucose is produced by the digestion of rice, and glucose levels in the body are sustained better through this digestive process than by drinking ORS.

Compared to standard ORS, rice solution is twice as effective in stool reduction, is about one-third the cost, and provides three times the caloric content. Children treated with rice-solution gain weight faster than those treated with standard ORS, and the average length of diarrheal episode seems to be 25 percent shorter for the former group.

Rice solution is based on a staple food which is acceptable and relatively available, although a sharp price rise in recent years has made rice difficult to obtain for the poorest families. Regarding acceptability, preliminary anthropological research on indigeneous food beliefs and perceptions reveal that rice is regarded as both "cool" and NIROG (non disease-causing), making it ideal for treating and perhaps preventing diarrhea, regarded as a "hot" disease.

On the negative side, preparation of rice-based ORS involves the time-and-fuel consuming process of boiling and cooling the powdered rice. Furthermore the home-prepared, traditional chira may contain undesirable levels of salt.

ICDDR,B is now treating diarrhea patients exclusively with rice-based solution in its hospitals in Dhaka and Matlab. However, standard ORS packets are distributed for outpatient treatment. ICDDR,B is experimenting locally and in other countries with oral rehydration solutions based on wheat, millet, maize, sorghum, and potato. It believes cereal based ORS will eventually replace standard ORS, although definitive research may take five or more years.

AID should consider supporting research on the mass production and packaging of a rice-based ORS. The social marketing and resulting widespread availability of rice-based ORS packets would help make ORS available to the poorest families that lack rice, and it would ensure correct electrolyte levels if the powder is mixed correctly. Preliminary indications are that a rice-based ORS would be more acceptable than standard ORS on the basis of taste, and that it would be perceived positively as a "cool" and NIROG food/medicine, and it would be relatively simple to switch from standard to a "new, improved" rice-based ORS after social marketing the former for some period of time, as long as mixing instructions remained the same. It would seem essential, however, that any switch to rice-based ORS packets be done in a uniform manner and on a nation-wide scale and as a result of a clear, defin. .ve national policy. A fragmented, piece-meal, stop-and-go program would simply add to the confusion that already exists over the existence of eight different brands of ORS with some variation in their mixing instructions.

INTERVIEWS WITH PHARMACISTS

Ten local pharmacists were interviewed: seven in Dhaka, and three in a peri-urban community situated a half-hour drive from Dhaka. The main findings are as follows:

1. In urban and peri-urban areas, ORS packets sell well. The demand seems greater than the supply; two out of ten pharmacists were out of stock.

2. Pharmacists in Dhaka estimated they sold about 100 sachets per month. The lowest estimate was 30/month by a peri-urban pharmacist. Note that pharmacies are very small and are found in clusters, so that one pharmacy may be only 50 feet from the next.

3. The three most common ORS packs found were the Ciba-Geigy product, selling at about Tk.6; Pioneer's Oralite, selling about about Tk. 10; and the Gonoshasthaya Kendro product, selling about Tk. 3.00 - Tk. 3.50. These three were sold in all Dhaka pharmacies visited. Cheaper products, such as Gaco's product (Tk. 2.95) and Skylab's Orasal (Tk. 2.80) were found in the peri-urban pharmacies. We suspect that the more rural the pharmacy, the likelier the cheaper brands will be found.

4. In the urban pharmacies, the higher-priced and imported ORS brands were described as selling better. Reasons given were: (a) imported brands, with European language on the packets, were believed superior in quality; (b) higher priced brands were also assumed to be superior; (c) doctors prescribed the imported/higher-priced brands more often. It was not determined whether the profit margins were greater for the higher as compared with the lower priced brands, but this may have been a factor.

   Some urban pharmacists acknowledged that they personally recommend the higher priced brands; others insist that their customers preferred these.

   In the peri-urban pharmacies, the cheaper brands such as the Gonoshasthaya product sold better.

5. On the whole, pharmacists appear able to educate the customer or patient about the correct preparation and use of ORS, as well as the need to continue the child's normal feeding (including breastfeeding) during episodes of diarrhea. Only one pharmacist said that he recommended cessation of all feeding when a child had diarrhea. Pharmacists sometimes taught about dehydration while explaining the function of ORS. All pharmacists agreed that clients had difficulty understanding dehydration.

   Peri-urban pharmacists were asked for advice more often than their urban counterparts, possibly because inexpensive medical advice seems to be readily available in Dhaka. Some urban pharmacists commented that clients only come to buy; they neither sought nor wished to listen to advice from the pharmacist.

6. In Dhaka, women were nearly as likely as men to purchase ORS. Outside Dhaka, it was almost always men who purchased ORS.

7. Furanol, (an OTC diarrheal medicine), ampicillin, and flagyl - in that general order of frequency - may be sold along with ORS in pharmacies. Sales may be at the pharmacist's suggestion, due to a doctor's prescription, or in response to a customer's request.

8. Results of this quick "survey" seem sufficiently useful to recommend a more comprehensive survey of pharmacies and all other outlets selling ORS, including (indeed, emphasizing) those in remote, rural areas. This could be carried out in the market research study.

EXISTING INFORMATION ON DIARRHEAL DISEASE BELIEFS & BEHAVIOR AND ORS ACCEPTABILITY

Evaluation of the NORP and BRAC programs show that knowledge of ORS, including its preparation and use, is quite extensive in Bangladesh - yet actual use of ORS during diarrheal episodes is quite low. To understand the reasons for this it will be necessary to investigate beliefs and behavior related to diarrheal disease in general and to ORS in particular. Some of this investigation is already underway in separate studies by two ICDDR,B researchers, Najma Rizvi and Mehtabunisa Currey. Results of these studies are not yet available. In any case, AID should not duplicate relevant research that has already begun. On the other hand, no studies underway or completed have focused specifically on the social marketing of ORS packets, thus both anthropological operations, research, and marketing research with this specific focus are needed for the AID supported ORS social marketing program. Moreover, AID/Bangladesh needs data from these studies relatively soon.

Before looking at the scope and methods of the anthropological study, it is useful to review what is known, however tentatively or incompletely, about what might be called the anthropology of diarrhea and ORS in Bangladesh.

In Bangladesh, as in most other countries, it is the mother's responsibility to take care of a child with diarrhea. She or other family members may attribute diarrhea to several possible causes.

1. Eating spoiled or rotten food.

2. Eating or combining certain types of food, including "non-Nirgo" (disease causing) or "hot food".

3. Drinking contaminated or visibly dirty water.

4. Eating foods with worms (but other parasites seem unrecognized).

5. Supernatural causes such as evil spirits or other dangers thought to be in the air, especially in certain places and at certain times of the day. For example, if a pregnant woman walks in lonely places in the evening, her baby may later be stricken with diarrhea. The disease may be caught by the woman through breathing, or through contact of her breasts or other parts of the body with dangerous air.

6. Supernatural causes such as "evil eye". If people are watched by others, or even by animals or trees, while they are eating, they or their children can be victims of evil eye, a result of which can be diarrheal disease. One protective or preventive measure is to drop a bit of food on the ground.

There seems to be some classification by mothers of the types of diarrheal disease. Some simple diarrhea is regarded as natural and normal, such as that associated with a baby's teething. More serious diarrheas are recognized by color, smell, or consistency of stools. Dysentery (amasha, or may be known by other names) is distinguished from general diarrhea (pathla paikhana) by mucus or blood in the stools. The "rice water" stools associated with cholera do not seem to be recognized as a specific sympton.

It should be noted that most Bangladeshis have no conception of dehydration, that is, fluid loss leading to life threatening electrolyte imbalance. The main dehydration symptom recognized by mothers is sunken or hollow eyes in a child; but rather than being seen as due to fluid loss, the symptom is regarded as a warning sign that death may be imminent. Dehydration symptoms such as depressed fontanelles and loose skin seem to be noticed or interpreted less often.

There may be several reactions or remedies when children get diarrhea. Typically, mothers withhold food and fluids, including breastmilk, from the child. This is a dangerous practice since it contributes to the further dehydration of the child.

Specific home remedies include chira (the uncooked gruel or rice water described earlier), barley water, green coconut water, and shabu, made from soaking sago. Of these, the most efficacious for oral rehydration are coconut water and chira, especially in combination. Unfortunately, these are not always available and they are expensive to buy. The main problem with chira is that insufficient water is used in preparation and the amount of salt may vary. It seems that focused health education on chira preparation and use may help overcome these limitations.

Herbal home remedies seem to be used rarely in cases of diarrhea.

As mentioned above, ORS, including the sugar-salt solution for home mixing, is relatively familiar to Bangladeshis, yet relatively unrelied upon. Reasons for this need to be investigated further, but research to date suggest that:

1. Bangladeshis lack confidence in their own ability to treat diseases. In the case of ORS, they may lack confidence in preparing the solution and administering it properly. Most people would prefer to seek Western or other medicines, as well as outside help.

2. Use of ORS goes directly against the traditional and established practice of withholding fluids.

3. ORS does not - or cannot - be seen to treat the symptom that motivates therapy seeking behavior, i.e. diarrhea.

4. ORS, and perhaps especially the LABON-GUR (sugar-salt) solution, seems to be regarded as a relatively low-prestige, even a second class medicine because of its simplicity and perhaps its cost.

When outside help is sought to treat diarrhea, a wide variety of options exist, at least in theory. A partial list of non-biomedically trained practitioners includes:

1. Allopatric practitioners, or medicine hucksters, known as Daktars (from the English "doctor") treat with ORS that has been improperly diverted from hospitals, according to an in-progress evaluation of the NORP program. Those of these cadre whose skills have been upgraded by the MOH/PC are called Pallichikitshaks.

2. Homeopathic practitioners.

3. Islamic faith healers (may be called OJHA, but no generic term agreed upon), including fakirs, priests (moulvi) and individuals believed to practice spiritual healing powers through dreams, spirit possession, study, or meditation.

4. Herbalists (Kobiraj) from the empirical tradition, and Totkas, about whom little is known, except that there is little uniformity in their treatments and they combine Ayurvedic, Unani (Islamic), and Shamanistic practices. Kobiraj and Totka practitioners are village practitioners who tend to be uneducated females.

Reported data currently available does not tell us which variety of indigenous practitioner is consulted how often in cases of childhood diarrhea, nor what kind of treatment is given. It seems that diarrhea cases believed supernaturally caused may be taken to faith healers. The same may be true for chronic diarrheas that do not respond to modern medicines. Faith healers may remove diarrhea causing spells or conditions by blowing on the patient or by blessing water or food and then prescribing these.

Herbal remedies for diarrhea seem to be regarded as relatively ineffective, and therefore are infrequently sought. The preference seems to be for modern medicines; when these are unavailable or ineffective, the remedies of indigenous practitioners are sought. It can be noted that modern, biomedical practitioners are not particularly revered by nonelite Bangladeshis. Doctors, nurses, and other paramedics are often regarded as arrogant, cold, unsympathetic, uncomprehending, and insensitive. Yet their medicines are recognized as efficacious. IV solutions seem to be regarded as particularly prestigious in treating diarrhea. Indigenous practitioners and indeed the general public, can and do buy complete IV kits at the pharmacies for Tk. 30 - 40.

SCOPE AND METHODS OF AN ANTHROPOLOGICAL STUDY

Scope

In the last section existing information about diarrhea beliefs and behavior was reviewed. It should be stressed that much of this information is tentative and derived from a relatively small number of interviews, and little of this information is in final or published form. An AID supported anthropological study designed to assist an ORS social marketing program must cover some critical areas of research, some of which have already been investigated to some degree, others of which apparently have not been. Areas of research include:

1. Local beliefs, perceptions, and interpretations of diarrheal diseases, as well as indigenous nosologies and criteria used in diagnosis.

2. The full range of home treatments of diarrhea, including the practice of withholding foods and fluids, and special diets or dietary restrictions.

3. Identification of health opinion leaders or influencers. For example, if a mother began to use ORS or Lobon-Gur in the home, might someone in her faily, bari, or village, advise against the practice.

4. Identification of channels by which health knowledge of any sort tends to be disseminated, including radio, mothers-in-law, indigenous practitioners, pharmacists, traditional birth attendants, posters, schools, and school children, (can children educate their parents about ORS?) shopkeepers, religious leaders, volunteer village health workers (VVHW's), nurses, films, etc.

5. The role of the full range of indigenous practitioners (IP's) including their knowledge, beliefs, and practices. Preliminary surveys by Sarder and Chen (1981) and A.S.M. Mizanur Rahman (1981) in Matlab indicate that IP's have little knowledge about dehydration and that they use ORS infrequently. On the other hand, ongoing research by Mehtabunisa Currey suggests that allopatric IP's (Daktars) do use. or at least sell ORS. Acceptance of the importance of ORS by various types of social marketing by SMP, has shown that IP's can be educated and motivated to become entrepreneurial distributors of ORS.

6. The use of any herbal, homeopathic, or allopatric diarrheal medicines in or outside the home.

7. Indigenous concepts relating to foods or medicine (e.g. hot/cold nirog/non-nirog) that are relevant to oral rehydration.

8. Perceptions among ORS users relating to ORS and its effectiveness. Is ORS perceived as a real medicine, and if so, how much prestige is it accorded compared to more established diarrhea medicines. Is it expected that ORS will treat the causes of diarrhea?

9. The role of peripheral health workers in the national system. Do they understand and actually promote ORS?

10. The age at which a child is likeliest to be given ORS. There is some evidence that the youngest children are less likely to be given ORS. If this is so, the reasons are unknown.

Methods

For several reasons, including the possible availability of relevant research data from current studies with 2-3 months, we recommend an initial anthropological study that relies on in-depth, key-informant interviewing. Results of this as well as resuits from parallel studies currently underway may or may not indicate the need for a more quantitative anthropological study, i.e., a diarrheal KAP survey. An initial, qualitative study is appropriate and necessary because the current state of knowledge about diarrheal beliefs and behavior in Bangladesh is not yet at the stage of pattern measurement. Much basic information still needs to be discovered before a more quantitative study becomes appropriate.

Tentatively, the initial study is scheduled for a two month period, between mid-March and mid-May 1985. Three or four skilled interviewers with experience in qualitative research will be selected from either Mitra and Associates; Marketing Research Consultants of Bangladesh; Ltd.; B-SMERT; or the University of Bangladesh, Departments of Economics or Sociology. Discussions were held with the first three organizations, and prospects of finding and engaging a few good interviewers seem excellent.

Approximately once a month, ICDDR,B offers a seven-day training course on diarrheal disease and ORS for Medical Officers as well as Health and Sanitary Inspectors. Interviewers for the NORP evaluation study also attended this course, and it proved a most useful way to train for the qualitative interviewers listed for the present study in the ICDDR,B short course. This course is held in Dhaka, and training is in Bangla. If the timing permits, the interviewers will also be trained in a short workshop in qualitative research methods to be held (tentatively) in late March and conducted by Dan Lissance from Manoff International.

An interview schedule, or open-ended questionnaire, will be developed by the anthropologist with inputs and suggestions solicited from SMP, ICDDR,B, UNICEF, BRAC, and other organizations involved in ORS. The research instrument will be carefully pre-tested with representatives of the interviewed population.

Interviewees will be chosen by purposive sampling, although random selection techniques will be used within targeted sub-classes: users of ORS; non-user mothers of small, at risk children; husbands of user/non-user women; IP's such as Totkas, Kobirajs, and Daktars; and rural pharmacists, and shopkeepers, and certain types of peripheral health workers such as VVHW's.

Interviews will be in-depth and can be expected to produce detailed, high quality, valid information on several related areas of investigation, the most important of which is: what are the resistance points to ORS usage and how can these best be overcome or circumvented?

According to the experience of Dr. N. Rizvi, it may be necessary to spend considerable time with interviewees or informants in order to secure high quality information. This may require returning to the same site for follow-up interviews in order to corroborate information or explore topics in greater depth.

It is recommended that interviewees be compensated for their cooperation - after all interviewing is completed - by giving them ORS packets and information on ORS preparation and use.

The anthropologist will personally conduct interviews using one of the interviewers as interpreter. Custom surrounding the Purdah may preclude the male anthropologist from directly interviewing women in some villages, but indications from field visits suggest that such interviewing is possible when: (1) a female interpreter is used; (2) the husband's permission is sought and the purpose of interviewing is fully explained; and (3) the husband himself is interviewed before his wife. It should be noted that husbands are the decision makers and resource controllers within the family, thus interviews with them are important. Adult men also tend to be the ones who actually purchase ORS and other health products.

Finally, the anthropologist will interpret and analyze the data and will write the research report. The costs of the preliminary study cannot be accurately estimated at this time, but will include the anthropologist's salary and expenses, salaries of three or four interviewers, per diem expenses when overnighting in the field, transportation (including vehicle hire), secretarial/typing services, and reproduction of the final report.

A BRIEF FOR A MARKETING SURVEY

FOR THE INTRODUCTION OF ORS THROUGH SMP BANGLADESH

With its high population density and low-lying delta location with limited resources for environmental sanitation, Bangladesh is exposed to high rates of endemic and epidemic diarrheal disease. It is also known that diarrheal diseases are a major cause of morbidity and mortality in Bangladesh, particularly among children and infants.

Several studies have documented the magnitude and gravity of the problem, and the following are a few of them:

1. In Matlab Thana in 1974-75, the CRL reported 20 percent of all deaths to be due either to dysentery or diarrhea.

2. In a survey of 16,000 OPD visits to THCs in one week of Februarv, 1977 19 percent were related to diarrhea, dysentery, and other enteric diseases.

3. A country-wide health survey in rural areas in 1977 revealed that diarrhea diseases were the number one killer for age groups 1-4, 5-9, and 14-44, and the number two killer in age groups 10-14 and 45+.

4. A country-wide survey on morbidity and mortality due to diarrheal diseases in 1983 showed that diarrheal diseases were responsible for 30 percent of all deaths among the under 5 age group and that on the average, each child suffers from diarrhea 3.63 times a year.

The World Health Organization, in a statement in Geneva (1983), estimated that 60-70 percent of diarrheal deaths were caused by dehydration and that oral rehydration therapy (ORT) can prevent many of these diarrhea associated deaths. This technological breakthrough offers the important possibility of reducing the number of deaths in children because it can be used throughout the health care system and can even be administered in the home setting.

Diarrhea is also a major factor in the causation of aggravation of malnutrition. This is because the diarrheal patient loses his appetite and is unable to absorb food properly, and because it is a common practice to withhold fluids and food (including breastmilk) from them. Such malnutrition is itself a contributing cause to the high number of deaths associated with diarrhea in childhood. Thus, continued feeding during and after a diarrhea episode is an important part of the proper management of diarrhea.

The basic principle of Oral Rehydration Therapy is: a person with acute diarrhea begins to lose essential water and salts from the onset of illness. Unless these are adequately replaced, dehydration will develop. Prevention of dehydration is therefore the first appropriate response to diarrhea. Once a person is dehydrated, he needs to be treated in two phases:

1. Rehydration Phase - replacement of the accumulated deficit due to fluid and salt losses in stools and vomitus.

2. Maintenance Phase - replacement of ongoing abnormal losses due to continuing diarrhea and vomiting, and replacement of normal losses due to respiration, sweating, and urination, which are particularly high in infants.

Oral Rehydration Salts have been accepted as an ideal therapy for rehydration and are used in both developed and developing countries.

Based on the diarrheal episodes in the country, the requirement of rehydration solutions to adequately meet the need of Oral Rehydration Therapy is estimated at 90 million litres. Taking account of the government program through NORP and Essential Drug Co., the ICDDR,B program and BRAC's home mixed solution project, it is evident that there is still a very large unmet need for ORS in Bangladesh (see annex A). It is important that this is addressed by the private sector and non-governmental organizations like SMP.

Experience in other countries has shown that inclusion of a socially marketed product at an appropriate price will not have an adverse effect on the sales or acceptance of ORS products, from other in-country programs. Rather, SMP advertising tends to increase usage of all methods.

The specific objectives of the marketing survey should be to determine:

1. A brand name (or determine the appropriateness of the name if already selected).

2. The packaging aspects (attractiveness, shelf-life, and size, particularly the rationale for GOB and PVO's moving towards 500 cc sachets).

3. Optimal retail price levels as well as trade margins to retailers.

4. Mixing and Management (the standard SEER Measurement as an acceptable measure.)

Investigating these aspects is essential for the successful marketing of the ORS packets. The primary sampling units will be four administrative divisions. These divisions also correspond to the major geographic regions of Dhaka, Khulna, Chittagong, and Rajshaki. Random selection of one urban and rural area from each division will provide eight secondary sampling units. The urban sample will cover the four district headquarters and the rural sample will represent an upazilla in each division. In a third sampling stage, interviewees will be selected by a random process (perhaps using every ninth homestead in a selected area). The suggested sample size is as follows:

Per Division	Urban	Rural
Physicians*	50	25
Pharmacists	50	25
Potential Users or Consumers	100	100
Total Sample	200	100
Physicians	200	100
Pharmacists	200	100
Users	400	400
	800	600

*In rural areas, the physician sample may include rural health practitioners.

Statistically this is not a national sample but the parameters to be investigated in this survey have not been previously investigated. Also, Bangladesh is a fairly homogeneous country and the regional representation should make up for the heterogeneity that might exist between the regions.

The sample size is sufficient to provide the qualitative and quantitative data required. There will be three population sub-classes interviewed: physicians, pharmacists and end users. These groups should be analyzed at least by residence (urban or rural), age, and education levels.

BRAC - BANGLADESH RURAL ADVANCEMENT COMMITTEE

In order to reduce the mortality and morbidity associated with diarrhea, the Bangladesh Rural Advancement Committee (BRAC) began an Oral Therapy extension program in 1980 to teach oral rehydration therapy to 13 million households (80% of the total estimated households in the country). The teaching program is based on"seven points to remember": the symptoms of diarrhea; the danger of diarrhea; advice on eating, drinking, breastfeeding, and hygiene; understanding the ingredients and advantages of a homemade oral rehydration solution; advice on administering it promptly and in right quantities and intervals; and basic guidance on nutrition during and after an episode of diarrhea.

A team of female oral rehydration workers (ORW's) visits each household within their area and talks to mothers. The team is usually comprised of seven female and two male workers and of which there are 100 such teams currently working in the field. The female workers are those who have completed ten years of formal high school education and male supervisors who are graduates.

The team moves into an area defined as a union with three to four thousand households or approximately twenty-five thousand people and live there for one and a half to two months while conducting the program (each worker will visit ten households a day in their eight hour work day). The ORW's talk to the mothers on the important points, explain how to prepare the mixture and actually prepare the mixture of one-half litre of water using a household container and mark the correct measure for water on the container. Under ORW supervision, the mother pratices measuring a pinch of salt and a scoop or fist of sugar or gur to add to the water.

Before the oral rehydration team visits a village, a team coordinator meets with community leaders to seek their assistance. The coordinator organizes a village meeting to discuss oral rehydration therapy with villagers and to plan a diarrhea control campaign in the schools. The coordinator also discusses the efficacy of the oral rehydration solution with traditional village practitioners.

One and a half months after the ORW team visits a village, a supervisory team visits a random sample of five percent of the households to monitor the activities of the oral rehydration workers and to evaluate their teaching. The team asks the mother to recall the "seven points to remember" and to mix a sugar/salt solution. A sample of the solution is analyzed to check if it contains appropriate amount of salt (electrolytes). The oral rehydration workers are paid according to the results of household visits of the supervisory team. If the seven points are remembered and the mother is able to mix the solution correctly the worker is paid four taka per household. If the mother can recount five or more points, then the worker is entitled to two taka, if the mother recounts less than five points but is able to make the correct solution the worker receives one taka. On an average each worker receives 800 taka per month ($32 U.S.).

Before final selection as an oral rehydration worker, qualified women receive training in a five day course; three days in class and two days in the field. After selection, the women receive additional training in teaching methods and communication skills to assist them in effectively delivering their oral rehydration messages.

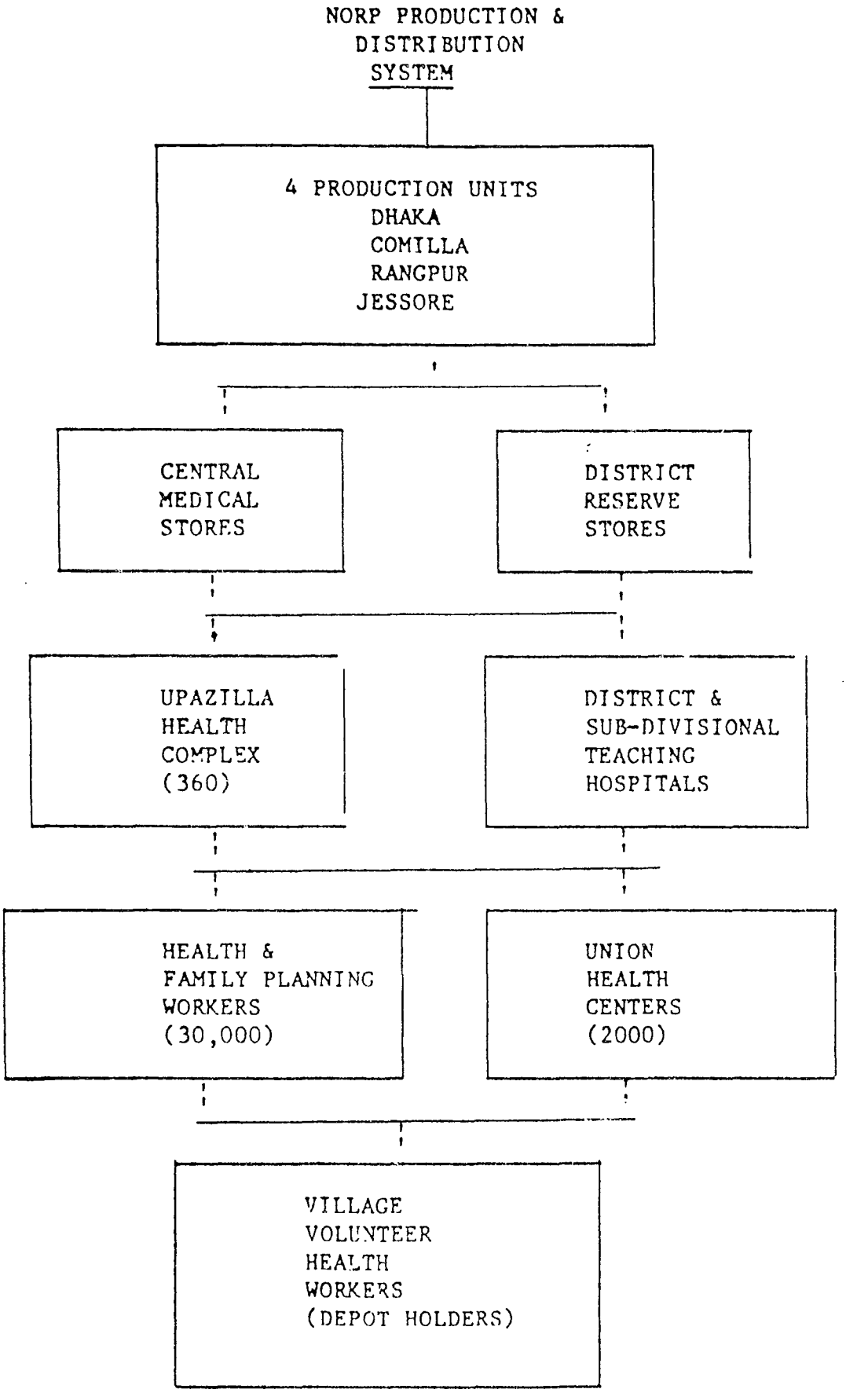
An in-house research and evaluation unit conducts studies to assess the program's impact. At the end of the first year the study indicated that ten percent of the households use oral rehydration solution to treat all episodes of diarrhea. It is believed that currently the acceptance and use of homemade solution is as high as 30 percent. The program is supported by promotion on T.V., radio, and posters.

NORP - NATIONAL ORAL REHYDRATION PROGRAM

The National Oral Rehydration Program was initiated in 1979 with financial assistance from UNICEF to combat diarrheal mortality through oral rehydration therapy through health workers and trained volunteers. Four cottage type ORS production units were established in 1980 to produce ORS. A multi-tier training program was initiated to facilitate proper and wide scale use of ORS. It is claimed that up to January 1981, when the training program moved to the Government, all districts and up to 50 percent of all Thana tiers were trained. A little over 98,000 village Volunteer Health Workers were also trained to work as depot holders of ORS.

Because of the organizational pattern of the National Oral Rehydration program, its activities became confined to production and distribution of ORS packets only. The cottage industry production of triple packet (sugar, KCI, NaCI) (Na HC03) (Instruction) is carried out in the four divisions of Dhaka, Comilla, Jessore, and Rangpur, under the supervision of local production managers each with 25 workers. Each worker is expected to produce 250 packets each day and work six days a week. The four units on full capacity, it is hoped, will be able to produce nine million packets each year. The current production capacity of the four units is five million packets.

After ingredients are weighed by the supervisor, each worker is responsible for mixing, weighing, packaging, and sealing. At two facilities one packet of each worker's daily production is checked for weight, appearance, and sodium and chloride content. The sealed ORS packs are bagged 2,000 each in a gunny and delivered to Thana Health Complexes and District Teaching Hospitals. Transport has often been identified as a problem to get the product to the centers.


NORP PRODUCTION & DISTRIBUTION SYSTEM
4 PRODUCTION UNITS
DHAKA
COMILLA
RANGPUR
JESSORE
CENTRAL MEDICAL STORES
DISTRICT RESERVE STORES
UPAZILLA HEALTH COMPLEX (360)
DISTRICT & SUB-DIVISIONAL TEACHING HOSPITALS
HEALTH & FAMILY PLANNING WORKERS (30,000)
UNION HEALTH CENTERS (2000)
VILLAGE VOLUNTEER HEALTH WORKERS (DEPOT HOLDERS)

CONCERNED WOMEN FOR FAMILY PLANNING - ORS UNIT

The Concerned Women for Family Planning (CWFP) ORS Unit was created as an income generating project for the organization. It has trained staff who have the capacity to produce 4,000 packs a day or approximately one million packs a year. The production is "Cottage Industry" but they have introduced quality control. The packs are made of polythene and the Potassium Bicarbonate is separate.

Producer groups like CWFP face two fundamental problems: marketing and working capital. In 1984, in response to an order placed by UNICEF 100,000 packs were produced in a little over three weeks and an additional 10,000 were sold to the wholesale pharmaceutical market. Currently the production has been halted and CWFP is negotiating with the GOB to supplement NORP and Essential Drug Co. supplies to the clinic system. CWFP will be in a position to make supplies available at Ta. 2.00 per 1/2 litre pack.

NOTE ON MARKET RESEARCH ORGANIZATIONS CAPABLE OF UNDERTAKING RESEARCH STUDIES IN BANGLADESH

Market Research Consultants of Bangladesh Ltd.

This is a Dhaka based organization capable of operation all over Bangladesh. It has the complement of research executives, operation executives, data processors, and tabulators, field supervisors and investigators. It is headed by a senior research executive under the direct supervision of the managing director.

The organization is conversant with statistical intricacies, they have inhouse programming capability and access to electronic data processing facilities.

They have experience in consumer and industrial market research and have also carried out work in the area of family planning. Among the clients they have served are: Bangladesh Tobacco Co.; Lever Brothers Bangladesh Ltd.; Glaxo Bangladesh, Manoff International; Wander Ltd.; and International Project Assistance Committee (USA).

B-SMERT - Bangladesh Social Marketing Evaluation
Research and Training Corporation

B-SMERT is a research organization which has worked in population, education, health care services, and agricultural rsearch, both in qualitative and quantitative research. It was orginally called RET - Research Evaluating and Training Consultants. The Chief Executive, Dr. Ghyassuddin Ahmed is an experienced sociologist-demographer-rsearcher. The organization has provided research service for Pathfinder Fund, USAID, UNFPA, ICCDDR,B, and SMP. It has trained personnel including a professional field staff.

Mitra and Associates

Mitra and Associates is a research organization founded in 1983. Although a young organization, Mitra Associates has successfully established a base with required manpower and physical facilities. They have a professional staff of thirty-two and have available well trained interviewers on-call at short notice.

Among some of the important work undertaken by Mitra and Associates are:

1. Bangladesh National Contraceptive Prevalence Survey 1983.
2. Baseline Research Study on Family Planning Motivational Campaign 1983.
3. Second Wave Research Study on Family Planning Motivational Campaign.
4. Hormonal Contraceptive Study 1984.
5. Voluntary Sterilization Audit - 1983.

PRINCIPAL CONTACTS

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S.M. Khan, Mrs.	Executive Director, Concerned Women for Family Planning
David Sack	Associate Director - ICDDR,B
Faisal Kader	Senior Research Executive - MRCB

TABLE 1

DIARRHEA
Morbidity & Mortality in Bangladesh

Table based on data collected by ICDDR,B presented in National Oral Rehydration Plan.

POPULATION (1983)	95,100,000
POPULATION LESS THAN FIVE	10,940,000
EPISODES OF DIARRHEA PER YEAR 1/person	91,200,000
EPISODES IN CHILDREN UNDER 5 2/persons	21,888,000
DIARRHEA MORTALITY 3/1000 per year	284,500
UNDER 5 MORTALITY 10/1000 per year	13,800

CASE FATALITY RATE FOR POPULATION 0.3/1000 episode of Diarrhea
CASE FATALITY RATE UNDER 5 5.0/100 episodes of Diarrhea

In summary 284,500 Bangladeshis die each year from diarrheal disease.
Thirty percent of these deaths occur in children less than five.

ORS PRODUCTS

Both Imported and Manufactured in Bangladesh

Brand Name	Manufacturer	Formula	Packaging	Sachet Size	Retail Price
Oralite - D	Pioneer Pharmacy	WHO	Bilster pack Sodium Bicarbonate separated	1 litre	10 Tk.
Servipham ORS[@]	Ciba - Geigy	WHO	Foil	1 litre	6 Tk.
Lobon Ja Sharbath	Gonoshastha Kendra	WHO	Foil	1 litre	2.50 Tk.
Gaco ORS	Gaco Pharmaceuticals	WHO	Foil	1 litre	3.00 Tk.
Orasal	Skylab Ltd.	WHO	Polythene and in a Box outer	1 litre	2.80 Tk.
ORS[*]	N O R P	WHO	Polythene & Sodium Bicarbonate separated	½ litre	--
ORS[+]	Essential Drugs Co. Ltd.	WHO	Foil	1 litre	--
Orasaline[¢]	S M P	WHO	Foil	½ litre	--

@ This is imported by Ciba - Geigy

* Supplies to Government and Thana Health Complexes

+ Supplies to Government Central Medical Stores

¢ The product has not yet been marketed nor price determined. This is imported by Ciba - Geigy for SMP.

CURRENT PRODUCTION & MANUFACTURING CAPACITY FOR ORS IN BANGLADESH

PRODUCT	ORGANIZATION	PACKAGING	CURRENT ANNUAL OUT PUT	TYPE OF OPERATION	POTENTIAL CAPACITY (ANNUAL)	COMMENTS
ORALITE - D	Pioneer Pharmacy	1 lt Blister with Sodium Bicarbonate separated	48,000	Local Manufacture Automated & Sterile	1,000,000	Will move to ½ lt. packs from March '85 and add ORS tablet to product range
SERVIPHAM	CIBA-GEIGY	1 lt. Foil	1,000,000	Imported Finished Product	Open to meet increased demand	Plans underway to set-up manufacturing unit in Bangladesh
LOBON JOL SHERBATH	Gonoshastha Kendro	1 lt. Foil	2,000,000	Locally Manufactured	4,000,000	Plans to expand unit
GACO ORS	Gaco Pharmaceuticals	1 lt. Foil	400,000	Local manufacture, semi-automated	1,000,000	New Automatic Plant on order expected to install new plant in three months.
ORASAL	Skylab Ltd.	1 lt. in Polythene & Box outer	Not Known	Not Known	--	This operation is in Comilla
ORS	NORP	½ lt. in polythene & sodium bicarbonate separated	5,000,000	Manual - 4 Cottage Industry Units	9,000,000	Expect to increase capacity by adding staff at units
ORS	Essential Drug Co.	1 lt. Foil	3,000,000	Fully Automated	50 packs per minute capacity	Proposed plan 85/86 6 mil. ½ lt. pks
ORASALINE	SMP	½ lt. Foil	1,000,000	Imported Finished Packs	Open to meet increased demand	