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PRIVATE SECTOR COMPONENTS OF
ACCELERATED COOPERATION FOR CHILD SURVIVAL (ACCS)
PROPOSAL FOR PROJECT SUPPORT ASSISTANCE FOR AN ORS
COMMERCIAL SALES PROGRAM IN YEMEN

A Report Prepared by PRITECH Consultant:
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During The Period:
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TECHNOLOGIES FOR PRIMARY HEALTH CARE (PRITECH) PROJECT
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I. EXECUTIVE SUMMARY

Access to oral rehydration therapy (ORT) in Yemen is presently limited to 30% of the population living within reasonable distance of Ministry of Health facilities or private pharmacies and drugstores. An estimated 195,000 children under the age of five may die from diarrheal dehydration in the next five years because they lack access to these sources.

The first component of the project proposed here will be a health education campaign stressing the major ORT messages through appropriate media. The availability of ORS through private sector channels will be publicized towards the end of the campaign, after an emphasis on correct self-treatment. (This component may be implemented as part of the USAID-MOH Child Survival Project [ACCS].)

This project will work with a private sector firm and, to a lesser extent, with a parastatal drug manufacturer, to establish ORS distribution through small general merchandise and grocery stores in areas of rural Yemen where ORS is now unavailable. Local production of ORS products specifically suited to Yemeni consumer preferences will be established by at least one of these organizations, and aggressive marketing campaigns will accompany the product launches. These campaigns will begin only after adequate public knowledge about ORS self-care can be verified.

II. BACKGROUND

A. Need for ORT in Yemen

Yemeni children suffer unnecessarily high mortality. Infant and child mortality have been estimated at 173/1000 and 95/1000 respectively for all Yemen (1979), and 136/1000 and 63/1000 for the Tihama area (1985). In the latter study, it was observed that about one-half of all child deaths (ages 0-5) were associated with diarrhea or gastrointestinal symptoms.

B. Diarrheal Disease Control Activities

Although only begun in 1984, the national CDD program has made excellent progress in promoting ORT. The major thrust of the program has been to train primary health care workers and other Ministry of Health staff in ORT, and to supply rural and urban PHC units, health centers, and hospitals with stocks of ORS sachets donated by UNICEF. Field visits in March, 1986 demonstrated that workers were indeed knowledgeable about ORT and could communicate the main messages effectively; stocks of ORS were adequate and well-maintained; and good records of ORS consumption and diarrheal incidence were kept in most sites.

The success obtained to date appears to be attributed to: (a) an integration of CDD into PHC program, so while the responsibilities of PHC and MCH workers and other cadres have been slightly increased, no new staff have been added at the delivery level or resources diverted from other activities; (b) the positive orientation toward ORT by rural MOH physicians, most of whom are recently-trained Egyptians; and (c) full MOH support for the program, demonstrated most dramatically by the removal of all antidiarrheal drugs from MOH formularies, and all but three from the private market. With regard to point (a), it must be said in fairness that while CDD is integrated into PHC, it did not come about by edict, but rather by focusing intensively on the program through national workshops for trainer/supervisors, financial support from donors including UNICEF and USAID, and through the sustained attention of the MOH CDD director.

The second thrust of the CDD program has been to make ORS available through pharmacies and drugstores, in the same formulation as the UNICEF ORS (1-liter), at a low price. These are imported from Ciba-Geigy/Servipharm at a C&F price of SFr 0.24, and have been sold at YR 0.90, although the price will soon rise to YR 1.20 (U.S. \$0.14).

The above efforts have also been supported by a series of television programs about health subjects including diarrhea. The MOH found a strong response to the first program on ORT reflected by sharp increases in demand for treatment of diarrhea, and commercial sales, especially of PediolYTE premixed ORS which was then on the market.

C. Existing Situation: ORS Supply and Demand

UNICEF is now the major supplier of ORS in Yemen, having already donated half a million sachets and committed to over a million more this year, as part of its direct support for PHC. The level of supply is based on standard monthly usage by health centers and PHC units, and so indirectly to the population covered by PHC. This percentage is planned to reach 30-35% by the end of 1986 by putting more units into operation, reaching a figure of some 239 health centers/rural hospitals/dispensaries, and 165 PHC units.

Although wide variations are reported among different parts of the country, rural health facilities visited in five governorates in the north and west parts of the country appeared to be fairly well utilized, at least for ORT. While no disease-specific child mortality data were available at any geographical level, the number of diarrhea cases seen and treated with ORS at some health centers was close to the number expected to be found in the catchment population, suggesting good awareness of diarrheal disease risk and confidence in the services offered. ORS stock levels at units seemed well-controlled, neither too high or too low for the consumptions recorded. Special efforts are evidently being made to ensure reliable resupply from Sana'a through the governorate medical stores, and, one suspects, to smooth the offtake at the health units by varying the number of sachets given to take home.

In the private sector, sales of the initial supply of 1/2 million sachets have been slower than expected, and the importer/wholesaler Yemen Drug Company (YEDCO) has had to push these through the retail pharmacies and licensed drugstores. This is attributed to the free distribution of exactly the same product through MOH facilities, which are invariably located close to drugstores in rural areas, and to unacceptability of ORS due to its taste. YEDCO has reduced the size of its second order from Servipharm down to 1/2 million for this reason. There are, at present, no other sources or outlets for ORS, with the exception of private clinics which exist mainly in the cities. Pediolyte was removed from the market because of misuse by parents.

III. PROJECT RATIONALE AND SUMMARY DESCRIPTION

A. Excess Child Mortality Due to Lack of Access

The primary rationale for an ORS commercial sales or social marketing project is the unmet need in Yemen for access to treatment for acute diarrhea; treatment being broadly defined as information for parents and care-providers about the danger of diarrhea and recognition of dehydration, knowledge of appropriate interventions, availability of ORS or adequate substitutes, and instruction in correct preparation, self-administration and follow-up.

About 80% of the Yemeni population live in rural areas, typically in scattered, small mountain communities or semi-desert oases not served by government or private health services. Access to these communities is quite often difficult by car, and some can only be reached on foot. Access to at least primary health care through MOH or other channels is currently available to an estimated 30% of the total population, but must be much less than this average in the less densely populated governorates. One hundred percent access to PHC will be accomplished by increasing the number of staffed PHC units, based on a standard of one unit per 1000-5000 population, depending on the geographical area. The target year for this is 2000, according to the existing development plan, or sooner if donor assistance levels are increased from present levels. If the USAID-YARG Child Survival Project is implemented, it will accelerate full coverage in 6 governorates to 1992.

Many MOH officials believe that access to health facilities is, in fact, much higher than the current 30% level because of the availability of motor vehicles in every village. This is certainly true to a degree; accident victims and other serious cases from the remotest areas regularly appear at urban hospitals, and undoubtedly many sick children and adults are transported to existing rural facilities for treatment. However, one of the insidious aspects of acute diarrheal diseases in young children is that they are often regarded as a normal feature of childhood, and ignored and left untreated until the symptoms of dehydration appear. By that time, the child is in grave risk of dying before the distant health facility or practitioner can be reached.

The present availability of ORS and information through private pharmacies and drugstores in rural areas has little incremental effect on access to treatment for most of the population. As mentioned earlier, most if not all of these, are located in the same villages as the existing MOH facilities, often just outside the walls, because they exist primarily to fill prescriptions written for drugs which are not stocked or available for free distribution by the health unit pharmacy. There is no official encouragement for drugstores to be established in other areas because the MOH does not favor making drugs available with no medical supervision, or giving drugstore owners, who often have minimal training, the opportunity to become de facto medical practitioners.

An approximate measure of the effect of this low level of access on child mortality may be obtained by using the estimated Child Mortality Rate due to diarrhea (using the mean of the two available CMR figures, 79/1000, and assuming 45% due to diarrhea, results in a child diarrheal mortality rate of 35/1000). If the 1986 population is 8.3 million, the proportion under 5 years of age is 18%, and the population growth rate is 2.6%, the number of child deaths due to diarrheal diseases (assuming no expansion of health services) can be projected, as in column 3 of the following Table.

Table 1: Excess Child Deaths due to Inaccessibility of ORT

(1)	(2)	(3)	(4)	(5)	(6)
Year	Under-5 Population	Diarrheal deaths: present PHC coverage	Ex-panded PHC access	Revised diarrheal deaths	Cumulative deaths
1986	1,494,000	52,300	30%	52,300	52,300
1987	1,534,000	53,700	40%	44,800	97,100
1988	1,575,000	55,100	50%	36,800	133,900
1989	1,617,000	56,600	60%	31,400	165,300
1990	1,660,000	58,100	65%	29,800	195,100
1991	1,704,000	59,600	70%	28,400	223,500
1992	1,750,000	61,300	75%	27,200	250,700
1993	1,796,000	62,900	80%	26,200	276,900
1994	1,844,000	64,500	85%	25,300	302,200
1995	1,894,000	66,300	90%	24,600	326,800

Percentages in column (4) project the expansion in PHC services in terms of access by the population. (These figures do not follow the plan, but are based on a simple model that assumes more rapid expansion in areas of high population density, slowing down as more units have to be built and staffed in sparsely-settled areas.)

The revised projection of diarrheal deaths in column (5) takes into consideration this increased access, and assumes that 90% of cases with access which would have died with no treatment recover due to ORS given at MOH facilities, and that no other treatment is available.

Column (6) gives cumulative deaths due to lack of access to PHC facilities.

These figures reveal that, even with an optimistic estimate of PHC expansion, 195,000 Yemeni children will have died between now and the end of 1990 if access to ORT remains geographically limited; 327,000 by 1996.

B. Self-Care As An Alternative

The limitations of the health care delivery infrastructure as a distribution mechanism for ORS and the primary source of health education on ORT, and the need for early treatment suggest an alternative focus on self-care in the home by the parent or child custodian.

Different ways of implementing this strategy have been devised and tried in several developing countries. Since there is neither time nor resources to actually test all the possible approaches in Yemen, it is necessary to evaluate these experiences with the perspective of those health, social, and economic factors found in Yemen which are unique and those which are similar to the countries already studied.

The promotion of home-mixed solutions as a mode of nonclinical treatment has the appeal of economy and self-sufficiency: nearly all homes already have salt, sugar, and water readily available. The salt-sugar ORT is about 90% as effective for rehydration as the "complete formula" ORS when administered early enough. While this approach has been classed as successful in the Gambia, both there and in Egypt it was noted that the instructional message is difficult to convey, and knowledge tends to be transient unless reinforced often. While in Egypt it might have been feasible to replicate the face-to-face instructional mode on a national scale because of the good availability of female health workers and easy access to villages, in Yemen the channel would clearly have to be through mass media. The apparent need to continually reinforce the message may ultimately prove very expensive. The self-sufficiency argument also is weakened by the fact that sugar is an imported commodity in Yemen, and its availability in households has not yet been studied.

Subsidized or free distribution of ORS sachets has been tried only in Egypt through commercial outlets on a limited scale, but has been done for other "social" products (contraceptives) on a large scale in India, Bangladesh, and other countries. The major problems have involved the lack of incentives for retailers and competition with other products, and the perception of the product as inferior since it is inexpensive. Another inherent problem is the sustainability of the cost subsidies by donors or government. While the YARG policy of free drugs in PHC units is a popular one, there is some evidence that people often prefer to purchase medicine at the nearby drugstore, and/or that the system is being subverted by health workers with a financial interest in the drugstore. In either case, most free drugs are now being supplied by UNICEF, and the sustainability issue has not yet been seriously addressed by the MOH.

Generally, the rationale behind free or subsidized distribution is to assure that the poorer segments of the population have access to a socially useful product. Yemen is undoubtedly exceptional among developing countries in that, while being extremely underserved in most ways, the rural population is widely held to

be more "cash-rich" than city dwellers. The reasons are probably related to foreign remittances from workers of rural origin, and the high value of cash crops, especially qat, which represents an immense and continuous cash flow into many rural areas. While there are certainly some rural poor, they are relatively few and may also be recipients of some religious charitable support.

The third mode of ORT self-care is through commercial sales of ORS, usually not directly subsidized but often given some initial assistance through external financing of educational and promotional activities. Success of this approach has also varied, but it is now generally accepted that when careful research and testing is done - along conventional marketing lines in such areas as consumer attitudes, product design, pricing, distribution, and incentives, market segmentation, promotion, and evaluation - ORS can be sold successfully to people who are in need of it. The challenge is to harness and temper the naturally-existing profit motive for the mutual benefit of society and the entrepreneurs. A striking example of the relative success of a sales program is found in Egypt, where although the same product is distributed free in MOH facilities, 60% of all ORS used is purchased in pharmacies.

A key factor in Egypt is the large number of functioning retail pharmacies (around 4,000), which are mostly not located near MOH facilities, and also are open for business many more hours per day.

A similar program is being developed in Bangladesh, where locally-produced ORS will be sold at cost price through the 100,000 or so small retail shops that now are outlets for the Contraceptive Social Marketing Project.

The project conceived and proposed here for Yemen would concentrate on making ORS available for sale in all parts of the country through one or two established systems of distribution to retail stores, in addition to existing limited commercial distribution through pharmacies and drugstores. Very small but well-stocked grocery stores are found in nearly all villages having 20 families or more, or those which are sites of weekly farmers' markets. Many of these sell OTC drugs such as paracetamol, aspirin, and laxatives, and bottled mineral water is available practically everywhere. An educational and promotional campaign using multiple-media will precede the availability of ORS through these channels, and appropriate evaluations would take place at key stages in the program.

C. Identified Channels for ORS Commercial Sales
(See Annexes A-E.)

While the entrepreneurial spirit probably has never been lacking in Yemen, the recent period of political stability and increased national income has engendered a surge of investment in trade and local manufacturing. Public policy clearly favors this, by means of import-substitution regulations and through government

investment in infrastructure and co-financing of key industrial projects. Private wealth appears to be actively seeking opportunities in the modern sector.

Although the production and consumption of goods in traditional forms is still high, there is marked tendency toward "consumerism." Western-style packaged products are widely available, and there have already been some interesting experiences with brand discrimination and unique marketing techniques. Advertising can best be described as being in its infancy.

Pharmaceuticals are still a small sector in Yemen, but are evidently growing along with the expansion in health services and medical practitioners. Total imports in 1984 were YR 276.5 million, of which 97% were for the private sector and 3% for the MOH. This figure was lower than the two preceding years, possibly because of revisions in the national formulary, and represents about \$5.00 per capita consumption, a low figure compared to many developing countries.

The largest importer of pharmaceuticals is the Yemen Drug Company (YEDCO), a parastatal organization 40% owned directly by the YARG but with government majority control due to a 35% shareholding by the Yemen Bank for Reconstruction and Development. YEDCO are local agents for many large multinational drug manufacturers, and handled 46.5% of all drug imports in 1984. They also own some retail pharmacies, and operate supply depots in the major cities and towns.

YEDCO is also the only local producer of drugs. In a large and well-equipped factory in Sana'a they produce a range of basic drugs that was worth YR 8 million in 1984. This range is being expanded from 7 to around 15 items, so production can be expected to be significantly increased by 1987. Sales will benefit directly from the import-substitution regulations.

The legal retail price of all imported and locally-produced drugs is based on a simple formula of allowed wholesale and retail markups over the CIF or the production cost. Items priced in fractions of a rial are usually sold at the next highest half or whole rial due to a shortage of small coins. The extent of control over what items can be imported and manufactured, or the criteria used, has not been researched. In 1984, YR 2.2 million worth of Pediolyte was imported and sold, and only YR 0.47 million worth of antidiarrheals (Sorbitoxine syrup, Neo-Direne, and Mexiforma). Current sales of Servipharm ORS are around YR 0.5 million.

YEDCO has been considering production of ORS, and will probably do so if they find that it can be produced at lower cost than the ORS now imported from Servipharm. Although the MOH has requested assistance from UNICEF for production of their own ORS requirements, YEDCO would prefer to supply the unit. In view of their existing production capacity which can be shared with ORS manufacture, this

is objectively the more rational approach to the problem, and YEDCO hopes that UNICEF and MOH will agree. While YEDCO would accept UNICEF assistance with some production equipment in exchange for a lower price for locally-produced ORS, they are likely to proceed on their own if necessary.

YEDCO currently markets some of its over-the-counter products through nonpharmaceutical retail channels. No details are available, except that it has some salesmen who concentrate on this market, and there is a major wholesaler in Hodeidah who also buys these products from YEDCO. MOH policy towards OTC drug sales is fairly conservative, but YEDCO believes ORS could be legally sold through general merchandise channels provided an adequate level of public knowledge about ORS can be formed beforehand.

At the present time, only one truly private sector company has expressed an active interest in entering the ORS market. The General Manager of the Azal Mineral Water Company plans to introduce a new brand of mineral water, and simultaneously diversify into OTC pharmaceuticals because of the natural tie-in with pure water, starting with ORS. The new water bottle will have a marking line at the 1-liter level, symbolizing ORS, and the ORS sachets will be distributed by the wholesale agents that handle the water. This company is part of one of the largest groups in Yemen and is adequately financed. They have requested technical assistance with ORS production, and marketing assistance to strengthen their existing distribution and sales system and develop the ORS promotional campaign.

D. Summary Project Description

The proposed project would have the following main components:

1. Design and execution of a media campaign to raise public awareness about the dangers of childhood diarrhea, the availability of ORS, and its correct use in self-care.
2. Establishment of local ORS production by at least one of the two potential channels. If only one wishes to invest in production facilities initially, an arrangement where one company could supply the product for repackaging under the other's brand name might be worked out.
3. Strengthening of the two distribution channels so that retail outlets such as grocery stores in all parts of Yemen are actively involved in the sale of ORS. This will include development of methods to ensure that information on use of ORS is available at or near sales points.
4. Development and execution of a marketing campaign for increasing demand and use of ORS generically and, unless not permitted, by specific brand. The actual product design would be included as part of this activity and would also be related

to the local production component. A more detailed description of these activities, their phasing, evaluation constraints, and contingencies, will be given in Part IV.

IV. DETAILED DESCRIPTION

A. ORT Media Education Campaign

Note: This component has been placed in the commercial sales project, but could also be done as part of the Health Education component of the Child Survival (ACCS) Project, since its purpose is to change parents' behavior concerning immediate treatment for diarrhea, continued feeding and liquids, general knowledge about ORT, and awareness that it is available through both the public and private sectors. In either case, a high degree of coordination between the MOH and the implementers of the commercial sales project will be required.

Related to the recent changes noted earlier in Yemenis' consumption patterns is a great interest and almost universal access to mass media, both television messages on health issues have enormous impacts on demand, e.g., advertising of infant formulas (no longer legal), and initial television messages on ORT appear to have reached a large audience. This is extremely important to any promotional activity since the very low literacy rate, especially for females, virtually precludes the effective use of other mass media.

While a significant amount of investigation into media usage, knowledge, attitudes, and practices about diarrhea, self-care, ORT, medicines, child care, etc., will have to be undertaken, this should not be considered to be primarily a research project. Costs and time can be saved by building on successful experiences with similar campaigns in other countries and on research already carried out in Yemen. The KAP study should be designed so that key data on consumer beliefs, perceptions and preferences necessary for design of the later ORS marketing campaigns are also gathered at this time; but the immediate tasks will be to decide which of the available media to use, and to design, test, and produce the appropriate TV and radio spots or programs, leaflets, posters for PHC's and public places, billboards, etc. The ORT messages that must be conveyed are already known, although there are divergent opinions about the importance of the concept of dehydration to Yemenis. The degree of emphasis to be placed on salt-sugar ORT should also be resolved through this research phase.

Since ORS is currently available only through MOH facilities and private drugstores, a critical aspect of this component will be to not cause people to demand ORS elsewhere. As the time approaches when the new ORS products are to be launched through the nonpharmaceutical channels, the media messages can be modified to say that ORS will soon be more widely available.

The time required to do the KAP studies, design, and pre-test the major media messages should be four to six months, with post-tests some months later. The duration of the actual campaign should be based on the periodic evaluations and the available budget. If

these activities are not going to be done by the MOH, it is recommended that communications specialists with similar experience in Arabic-speaking countries be contracted to do this, assisted by a local advertising agency as needed.

The effectiveness of this campaign can be evaluated by monitoring patient registers and ORS consumption in MOH facilities and ORS sales in pharmacies and drugstores. A baseline should be established during the research and design period.

B. Local ORS Production and Product Design

Product design decisions will include package instruction, design, labeling, product name, color, use of flavoring, and the size of the ORS sachet. This latter issue is now confused by the existence of only 1-liter sachets in Yemen now, the desire by YEDCO to produce a 750-ml size to match the universally-available small mineral water bottle, the apparent switch by at least one mineral water bottler to a 1-liter size and the willingness by Azal and perhaps others to mold a prominent mark at the 1-liter level of 1.5 liter bottles.

This confusion may actually represent an opportunity for product differentiation, but the potential for mixing errors is high when two sizes are in use in one country, so the matter will require thoughtful study and cooperation between all parties concerned.

A possible solution to this problem which could be implemented later on in the project is the production and marketing of a pre-mixed ORS product in the same type of 1-liter bottle now used for water. Azal wants to explore the feasibility of injecting a sterile concentrated ORS solution into the already sterile mineral water. If further sterilization is needed, it may be feasible to use the low-temperature sterilization chamber it will be installing as part of another project.

Azal Mineral Water Company will require technical assistance in planning and establishing ORS production, and may require loan financing as well. This may not be required until after Azal has had a chance to see how YEDCO ORS sales respond to the ORT media campaign. Total production TA would be around 2 weeks for planning and preparing equipment tenders, and a later 3-week visit for installation and startup.

YEDCO probably will not need TA for production, but will benefit along with Azal from product design assistance. This would logically occur after some initial KAP study results have been collected, and would require from two to four weeks, depending mostly on the clarity of the sachet size issue at that time. There is now substantial experience with package designs containing pictorial instructions, and it would be wise to use people with such background for T.A. to avoid repeating mistakes.

The matter of product pricing is usually addressed along with product design, but in this case there may be a need to first influence MOH through the Supreme Board on Drugs. The markups allowed to wholesalers and importers/manufacturers are well below industry standards for promotional activities to be sustained. While there are no explicit prohibitions on drug advertising, it is not actually done at present. YEDCO finances some minimal detail activities from the present markup.

C. Strengthening Existing Distribution Channels

An analysis of existing marketing channels, incentives, and expansion plans, needs to be made for both YEDCO's OTC line and Azal's mineral water sales. The object would be to devise strategies for having the most comprehensive geographical coverage possible between the two channels, and learning what dealer incentives and kinds of training will be needed for ORS sales.

Azal water distribution is strong at present only in Tihama and Taiz governorates, so it is safe to say that the building of an effective dealership network in other parts of Yemen is a prerequisite for strong ORS distribution. Azal is interested to have, and is willing to pay for, outside professional help to improve their mineral water sales.

Too little is known about the OTC drug (nonpharmacy) market in Yemen to say what level of assistance may be needed to prepare a solid basis for ORS distribution, but YEDCO could profit from an analysis of the marketing system. This would identify the retail outlets by type, location, and sales volume, and look at possible promotional modes such as incentives, store advertising, etc.

The above marketing analyses and planning could be done in one to two months, with about one to two weeks devoted to YEDCO's marketing and the balance on Azal's account. Azal would pay for the T.A. used directly on their mineral water marketing. This activity could happen concurrently with the first and second components.

D. Brand-Specific Marketing Campaigns

Given the precondition of the ORT health education media campaign, the preparation of marketing strategies for the two brands of commercial ORS should be fairly straightforward.

Technical assistance will be required for this component, preferably in the form of professional pharmaceutical or social marketing expertise from an Arab country. Decisions about choice and mix of media for national advertising will have to be made, message content, point-of-sale promotion, wholesale and retail incentives, etc.

Agreement on the snaring of the costs of technical assistance, production and the various media should be agreed on beforehand with YEDCO and Azal, and based on the project funds left available for these activities after the previous three components have been completed.

According to the advice of the marketing experts, it may be desirable to do a geographically-limited test marketing before the full-scale launch of the product, in addition to the normal pretesting of the promotional messages. This would occur before final production of the major advertising media.

As mentioned earlier, no specific prohibition against media advertising of OTC drugs is known to exist. If a restriction does exist and cannot be removed, the mass media promotion can be for ORS and ORT generally, with brand advertising limited to shop signs, point-of-sale displays, etc.

Attention will be given during this stage to orienting the retailers themselves to ORS so they can provide basic instruction in proper mixing and administration to customers.

In the interest of fairness to both Azal and YEDCO, the two products should be launched at close to the same time, since the first product on the market usually enjoys a large advantage in Yemen.

V. COST ESTIMATE AND IMPLEMENTATION PLAN

At this time, only a very approximate cost estimate can be made for the project. A rule-of-thumb for the cost of launching a new product in the private sector is 100% of the first year's expected sales. A modest estimate of 1.5 million sachets of ORS can be used for the initial commercial sales figures, with a value of YR 1.8 million, or roughly \$200,000.

This would include the mass media ORT health education component, so if the cost of this will be supported from the Child Survival bilateral project, the cost of the remaining commercial sales program components would be considerably less. If carried out under YARG auspices, the cost of media time and space would also be less since some of this could be a YARG contribution.

Apart from media costs, if the health education component is included in this commercial sales project, the other major costs will be for technical assistance and some production. The companies benefitting from the T.A. should be willing to bear at least part of the direct media costs of brand advertising themselves.

The first priority that should be undertaken is a comprehensive project design by a project support promotion expert sent to Yemen for initial contact with the two companies. More exact cost estimates can be made at this time by gathering information on the number of retail outlets to be used, media and production costs, etc.

An initial estimate of short-term T.A. is given below:

(1) ORT Health Education

° KAP study design and execution	4 p.m.	
° Media message design, post-test and production	3 p.m.	
° Evaluation	<u>0.5 p.m.</u>	
		7.5 p.m.*

(2) ORS Production

° Production T.A. (Azal)	1.25 p.m.	
° Product Design & Test	<u>1.75 p.m.</u>	
		3.0 p.m.

(3) Strengthening Distribution

° Azal Mineral Water	1.0 p.m.	
° Azal ORS	0.75 p.m.	
° YEDCO OTC	<u>0.25 p.m.</u>	
		1.0 p.m.

(4) Brand-Specific Marketing

◦ Azal Marketing Plan	0.5 p.m.
◦ YEDCO Marketing Plan	0.5 p.m.
◦ Market Tests	1.0 p.m.
◦ Media Design	1.5 p.m.
◦ Evaluation	<u>0.5 p.m.</u>

4.0 p.m.

Total Short-term T.A.

15.5 p.m.

*If included in Child Survival Project

(8.0 p.m.)

ANNEX A
ORS COMMERCIAL SALES PROJECT DESCRIPTION

MEETING NOTES

April 2, 1986 at YEDCO

PRESENT: Dr. Ismail Anmed al-Mitami, General Director
Mr. Abdur Rahman Galib, Deputy General Director

YEDCO had planned on producing ORS locally from the start of the CDD program in Yemen, and have been importing finished packets as a market-building effort. To date they have bought 1/2 million and have another 1/2 million on order, both from Ciba-Geigy/Servipnarm. The packets are the WHO formula (the first lot was with bicarbonate; next is likely to use citrate), in a 1-liter packet with English and Arabic instructions.

YEDCO acts as Ciba-Geigy's agent for Yemen, and obtained the ORS at a reasonable price (SFr 0.24 CIF) which allowed them to fix a selling price of 90 fils, based on the exchange rate then in effect: SFr = YR 2.374. (This was approximately equal to 10 cents U.S., or perhaps 8¢ f.o.b. Switzerland -- a fair price for a short production run with special packaging material.)

YEDCO found the market for these packets much slower than anticipated, from the initial public reaction to TV publicity about ORT, and has had to "push" them through the pharmacies and drugstores. Dr. al-Mitami attributes this to two factors: free distribution in government health facilities of UNICEF ORS packets, and unacceptability of ORS due to taste (by children, he feels, not mothers). For these reasons he now estimates the market for ORS distributed through pharmacies and drugstores as fairly limited.

Annex A - 2

As far as their own production plans are concerned, ne would prefer to produce a flavored ORS product, and in the 750-ml size to conveniently fit the existing water bottles on the market. He feels they could produce ORS efficiently by using any new sachet production equipment for other products as well. YEDCO is currently expanding their line of (mostly) essential drugs from about 6 products to about 15.

Since the most recent shipment of Servipnarm ORS will have to be sold at a higher price than 90 fils because of the current exchange rate of SFr = YR 4.6, they believe they could produce it more cheaply locally. The actual cost at SFr 0.24 per sachet will be YR 1.10, but as the allowable retail price is based on the Central Bank's "speedy rate" of SFr = YR 3.11, they estimate the new retail price will be YR 1.20 to 1.30. At the present actual dollar exchange rate of \$US = YR 8.5, this is equal to 14 cents. Assuming only a 20% markup for retail sellers for YEDCO-produced drugs, this allows a target production cost of 11.2 cents. It should be possible to produce ORS for 8-9 cents in quantities of 2-3 million per year, given a prudent choice of equipment. (Depreciation costs are based on a 4-year life at YEDCO, resulting in a fairly high cost component; overhead rate is only 10%.) An accurate estimate of production costs cannot be made until more information is available.

They had no information about MOH plans to produce ORS for the CDD program, but said that if that were to happen and the MOH's needs were filled, the requirements of the private market would probably be too small to justify YEDCO's own production.

YEDCO would like UNICEF to buy ORS from them to supply the MOH in lieu of donating ORS from UNIPAC sources, but has not discussed this with them. I informed Dr. al-Mitami that this is now UNICEF policy and has been done in several countries,

and that I would be meeting with Dr. Lay Maung to raise these issues.

Regarding distribution of ORS, Dr. al-Mitami believes that the existing network of pharmacies and licensed drugstores offers sufficient access for the rural population and suggested that recent data on the numbers of these outlets would be available from the Supreme Board of Drugs in their annual report. He believes that the present policy of limiting ORS distribution to government health facilities and licensed pharmacies and drugstores is appropriate for now, but will change if ORS is made more available with local production, and public awareness is raised through health education.

YEDCO is the largest importer and distributor of drugs in Yemen, with a turnover of YR 170 million (1984). Sources include most of the major European and American multinational pharmaceutical manufacturers, and their own production accounted for about 5% of the total sales. They maintain depots in seven cities and towns, and retailers come to these to pick up their supplies.

Dr. al-Mitami clarified YEDCO's status as being 40% owned by the YARG, 35% by Yemen Bank, and 25% public shareholdings.

Remarks

1. The ORS price figures which were discussed are not consistent with the pricing formula noted in Rosalyn King's report of October 9, 1983, which allows 18% on top of the CIF price for customs, taxes, and transport, 10% margin above this for the wholesaler, and 20% profit for the retailer. Possibly an exceptionally low price was set for ORS due to MOH pressure. (Note: the 18% markup may actually be closer to 7% now, according to YEDCO.)

2. While the adoption of 750-ml as a standard ORS size (to match the universally-available small water bottle) certainly would have made sense at the outset of the CDD program, a changeover from the 1-liter size now will result in a highly undesirable situation of two sachet sizes in distribution in the country. (The MOH intends to stay with 1-liter for its distribution since it may have to continue to rely on UNICEF-imported sachets.) The issue of flavoring should be held in abeyance until the acceptability of citrate-formula ORS can be assessed, since this tastes (in the opinion of some) better than the older formula.

3. Dr. al-Mitami's belief that the rural population has good access to pharmacies and drugstores is not borne out by available data, at least in the 6 governorates in the proposed project. There is a total of 7 pharmacies (all in the governorate centers) and 45 drugstores. For Manweet, Marib and al-Jawf, the total for all 3 governorates is 1 pharmacy and 7 drugstores (1983 data).

ANNEX B
MEETING NOTES
April 3, 1986

Supreme Board for Drugs and Medical Supplies
Dr. M. A. Akabat, General Director

This organization is a part of the MOH as an advisory body at the Vice-Ministerial level (see Rosalyn King's report of October 9, 1983) and, in effect, sets all policies concerning the private and public pharmaceutical sectors. The object of this interview was to identify constraints at the MOH policy level to a program of ORS production and distribution through the private sector, and especially concerns about making ORS as widely available through rural shops as some other "OTC" products are.

In the limited time available, Dr. Akabat clarified the following issues:

1. There is no official differentiation between prescription and OTC drugs. The official policy is that no registered drugs should be sold without a prescription; but of course the MOH cannot enforce this, and in fact the major actual concern is to control the sale of psychotropic drugs, sedatives, etc.

2. When asked if there is a policy about sale of registered products in nonpharmaceutical retail outlets, Dr. Akabat responded with his personal opinion, implying that there is no exact official policy or law, but if asked for a decision the Supreme Board might advise the following:

Annex B - 2

When a new product such as ORS is first introduced on the market, its distribution should be limited to the "medical sector," meaning prescribed or dispensed through government and private clinics, pharmacies, and licensed drugstores. He emphasized the need for intensive public education and medical supervision with any new drug, and said that when ORS was introduced (possibly he was referring to Pediolyte), people thought it was a nutrient and fed it to healthy babies, causing electrolyte imbalance and diarrhea. He implied that other drugs have also been similarly misused.

3. He would like to see the health system strengthened as a whole, with priority given to safe water and sanitation, as a solution to the problem of diarrheal diseases. He personally regards ORT as a second-best approach to the problem.

4. The legal difference between a pharmacy and a licensed drugstore rests only on the requirement for having a registered pharmacist on duty at the former. The latter may sell exactly the same drugs as a pharmacy, and can be owned and operated by someone with training as a nurse or medical assistant. More recently, graduates of the HMI training course for pharmaceutical assistants can open a licensed drugstore.

5. While YEDCO is currently the only local drug manufacturer, the procedure for approving other local production would entail an application to the Ministry of Commerce, which would be forwarded to the Supreme Board for approval. This approval would be based on technical considerations, such as the need and demand for the product and technical qualifications of the applicant.

6. Asked about the MOH procedure for procuring its own drug supplies, an annual tender for the Ministry's requirements is prepared and submitted to the YARG Central Tender Board, which

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Annex B - 3

publicizes it in the al-Tnawra newspaper. All registered firms including YEDCO are eligible to submit offers for all or part of the list.

7. Dr. Akabat did not have a recent annual report available, but there is one at USAID.

Remarks

1. Dr. Akabat was presenting the MOH's official viewpoint, or at least the Supreme Board's majority opinion, it would seem, regarding OTC drug sales. However, he hinted at a measure of flexibility by saying that anyone who wished to deviate from these restrictions would have to present a convincing argument for being allowed to do so. While I feel that his solution to diarrheal diseases (para 3) is representative of the unrealistic attitudes toward preventable mortality demonstrated by MOH officials in general and made evident by the total lack of cause-specific mortality data, I conclude that key MOH officials simply have not been effectively oriented toward the basic concept of Child Survival: immediate saving of lives through simple, low-cost interventions.

2. In any event, his concerns are certainly valid, to a great extent, and lend great importance to an effective media campaign on diarrheal diseases and ORT preceding distribution of ORS through "nonmedical" channels. Any promotion for ORS as a commercial product should be designed to enhance sales of all available brands through all channels including pharmacies and drugstores.

ANNEX C

MEETING NOTES

April 5, 1986

UNICEF on ORT Support

Dr. Lay Maung with Dr. A. K. Raasa

When the subject of local ORS production by YEDCO was raised at the start of this consultancy, Dr. Raasa informed me that UNICEF will be providing support to the MOH to establish their own production unit because MOH was unable to reach a satisfactory agreement with YEDCO.

UNICEF has already supplied the MOH with 1/2 million standard ORS sachets in 1985, and is committed to another million-plus in the current period. The supply is to the PHC program in general, and the quantity supplied is based on the planned coverage of the population by PHC, estimated at 35% by the end of 1986. These are all intended for free distribution, conforming with both MOH and UNICEF policy.

Dr. Lay Maung has agreed only to request a feasibility study by a WHO/UNICEF ORS production expert, and, if recommended, they will support ORS production in their 1987-1991 program.

Dr. Raasa's contributions to this discussion included an explanation of the problem with YEDCO production of ORS: the fact that they would not supply the MOH with it free of charge, since they are a private sector company; whereas if the MOH produces it with UNICEF assistance, it will be free and can therefore be given away, according to the laws of the revolution, etc. etc.

Annex C - 2

The arrangement anticipated by Dr. Raasa is a standard one for UNICEF. They supply equipment, T.A. and materials, and the MOH would supply labor and other inputs. The net amortized cost to UNICEF could be very close to the cost of providing ORS through UNIPAC, and a special package design could be used. Dr. Lay Maung was also aware of an alternative permitted by UNICEF: purchase from a local private sector manufacturer (providing the cost price is close to the UNIPAC price -- currently around 6.2 cents), but does not seem to associate this option with the possibility of purchasing ORS from YEDCO if they were to go into production.

I asked Dr. Raasa and Dr. Lay Maung what they thought parents did if their child was sick, and they lived far from a health center or PHC Unit and couldn't find any other source of treatment of medicine nearby. Dr. Raasa insisted that they will travel as far as necessary, referring to what we had heard during the field visits about availability of transport in every village.

Dr. Lay Maung repeated James Grant's wish to see ORS as widely available in the developing world as soft drinks, through village snops and other outlets. Dr. Raasa said the MOH does, and will, support the idea of private sector distribution, through private clinics and local councils, although according to UNICEF rules the ORS has to be given free.

A private remark by Dr. Lay Maung, regarding UNICEF's essential drug supply for PHC's, was peripherally relevant. The consumption of UNICEF-supplied drugs has been much less than anticipated, because foreign doctors prefer to prescribe drugs which patients have to buy from private drugstores. (If true, this would explain the remarkably good stocks of essential drugs seen in most of the Health Centers and PHC Units visited.)

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Remarks

1. The outcome of the UNICEF feasibility study will unquestionably depend largely on one factor: whether or not YEDCO or any other company has started production, has sufficient capacity to supply the MOH as well as the private market, and is able to do so at a competitive (to UNIPAC) price

2. The idea that incomplete coverage of PHC represents only a temporary inconvenience to the population, because they are able to find transport to even distant facilities, is probably correct in part, but may be most fallacious in the case of diarrhea in children. Parents in remote villages are most likely to ignore diarrhea in small children until the listlessness and other symptoms of dehydration become obvious. By this time the child may be in real danger of death before it can be brought to a health facility, even assuming an open one can be found.

3. In spite of UNICEF's commitment to support free distribution of ORS through MOH facilities, Dr. Lay Maung is aware of the financial impossibilities of limitless, free supply of drugs, and would be also supportive of an ORS social marketing project because of Mr. Grant's expressed wish to see widespread availability through private channels. He also firmly believes that Yemenis can afford to pay for medicines because they are far more cash-rich than most other developing countries.

YEDCO's actual status has been variously described as private sector (by the MOH), mixed sector, parastatal, and public sector (by a private sector company). YARG direct and indirect ownership totals 57.85%. YEDCO officials say they are under control of the MOH, but also operate in such a way as to earn a profit, although they probably have had net operating losses to date. In any case, there is nothing to

Annex C - 4

preclude UNICEF's purchasing from a parastatal, even if part of their production is sold at a profit.

ANNEX D

MEETING NOTES

AZAL MINERAL WATER COMPANY

Dr. Ahmed al-Amari, Managing Director

(Summary of 3 meetings: 29 March, 1 April, 7 April)

Dr. al-Amari asked for a meeting because of his interest in ORS. He has been in touch with PATH in Seattle in connection with other possible projects and learned from them of USAID interest in supporting private sector activity in ORS.

Dr. al-Amari is a microbiologist, trained in Europe, and worked for the MOH for 8 years. Now he is Chairman of Sana'a Trading Corp., which is a division of al-Wataari Group. He recently assumed the directorship of Azal Mineral Water Co., and conceived of the idea of producing and distributing ORS through the Azal Mineral Water distribution network as both a benefit to the health of the population and a useful promotional tool for the sale of Azal water.

He looks to PATH for help in technical assistance in production and marketing, and possibly for financing the production equipment. He knew of the ILF-Healthlink avenue for loan financing of this kind of activity, but was unaware of the possibility of technical assistance grants and production facility financing through Project SUPPORT.

This looks like a promising opportunity for several reasons, the most important being Dr. al-Amari's own idea of using an existing nonpharmaceutical distribution system to get ORS into the marketplace in rural Yemen; his recognition of the need for expert assistance in developing the product, the promotional tools, and the production facility; and his business and scientific background. He also retains a relationship with the Ministry of Health as a member of the Minister's advisory board, and has close ties to the Yemen Chamber of Commerce.

Annex D - 2

The major constraints to Dr. Amari's plans, all of which have been frankly discussed, are:

1. The likelihood of ORS production by YEDCO, resulting in a smaller market for both firms, or the possibility that the Supreme Board for Drugs would not approve Azal Company's application to produce ORS. Dr. Amari believes that production by more than one company will be permitted, and since both he and YEDCO wish to produce other sachet products, economic efficiency will not suffer and a low production cost can be maintained for ORS.

2. The present weakness of the Azal water market share in the north and east parts of Yemen (including the 6 governorates where the USAID Child Survival Project will be implemented). This would directly limit the effectiveness of any ORS marketing effort related to the mineral water. Dr. al-Amari is well aware of this and intends to make some major changes to improve the situation. They are now looking for an experienced marketing manager who can build their distribution system, and also will launch a second brand, called "Sana'a", with a new label and a bottle design which will have a mark at the 1-liter level and perhaps an ORT logo. In a subsequent meeting, (not attended by Dr. al-Amari), the al-Wataari Group vice-chairman and their business consultant confirmed their interest in this project and a commitment to making the necessary management changes for improving Azal's market share. The consultant, Feisai Sharif, was very candid about present management problems, and the board vice-chairman, Mr. Ali al-Wataari, emphasized his interest as an investor in Azal to see it succeed. Mr. Sharif has made many market studies and is confident that a well-implemented marketing strategy is the solution to the problem, and also pointed out that while the rural 80% of the Yemeni population may be underserved in terms of health and other services, they are also wealthier than the urban population, so marketing efforts should be focused on them.

Assuming that from the standpoint of efficiency it makes sense to have only one ORS production unit in Yemen, and that, logically, should be at YEDCO (see following note on YEDCO factory visit), I asked Dr. al-Amari if he would still be interested in distributing ORS through the Azal mineral water network, even if it were made by YEDCO, perhaps putting 2 or more sachets in an Azal-branded outer pack. He said that this would not work -- not for any technical or economic reasons, but because of personal friction between the chairman of YEDCO and al-Wataari. I tried to emphasize the risk-minimizing features of this plan, namely that Azal could defer the decision to invest in production equipment until they had tested the market with an essentially similar product. (The Bangladesh Social Marketing Project is using essentially this strategy.) Later on in the meeting he softened his stand on this, saying the two parties were trying to resolve their differences.

Remarks

1) While Dr. al-Amari is confident of being able to influence the MOH to the degree needed to give their blessings to this project, he is also certain of the need to disassociate it from the Child Survival Project. He has met with Dr. al-Hamli and Dr. Raasa, who apparently reiterated their view that USAID should not be diverting any funds for child survival to the private sector.

ANNEX E

MEETING NOTES:

Visit to YEDCO Factory April 7 and final discussion with Dr. Ismail al-Mitami (YEDCO General Director) April 9.

The Yemen Drug Company factory on the Wadi Dhar road near Sana'a is a large, new facility erected with a current investment of around YR 30 million. At present, capsules, uncoated tablets, dry syrups, and syrups are produced. Separate wings are being prepared for antibiotics and packaging materials, and new production areas are being readied for ointments, coated tablets and, tentatively, ORS.

YEDCO has nearly all the equipment and staff needed to start ORS production, and will probably go ahead if their cost-feasibility study is favorable, which is likely if the current Servipnarm price is the benchmark. Production could start with the addition of a sachet filling/sealing machine, using existing equipment in the tableting areas for batch powder production, and a flame photometer for the QC lab; but Dr. al-Mitami would like to have two filling machines for extra capacity for other sachet products and for redundancy, and wants to add a separate line of equipment for batch powder preparation (milling, sieving, drying, weighing and mixing equipment).

Dr. al-Mitami again requested USAID support for production equipment. I explained frankly that, at best, we could justify only supplying one automatic filling/sealing machine and a flame photometer; but even then it would be very difficult for USAID to do since the filling machine would probably be of European origin. We would best be able to provide indirect assistance in the form of an ORS promotion campaign through

Annex E - 2

mass media, and, possibly, directly through production and marketing technical assistance. He understands that this would actually represent a greater expense and, hopefully would be worth more to YEDCO in terms of ORS sales than a grant of some \$50,000 worth of equipment.

We reviewed the overall local ORS production situation and the likely or potential roles of the MOH, UNICEF, USAID, and other private sector parties such as the mineral water companies. I went into some detail as to how I saw the UNICEF-MOH relationship developing, and said that although it is YEDCO's main responsibility to do so, we would try to get UNICEF to see the advantages of supporting YEDCO as a local source of UNICEF-donated ORS. Dr. al-Mitami expressed an interest in being flexible in terms of price, sachet size, and flavoring in order to remove any objections UNICEF has to local procurement. Also, the final word on YEDCO's status as a parastatal is: 40% direct YARG investment through the Ministry of Economy, 35% investment by the Yemen Bank for Reconstruction and Development, which is in turn owned 51% by YARG, and 25% public shareholdings, which include several pharmacists as well as other private investors.

One new and significant point came out of our final discussion, that YEDCO does promote one or two of its own OTC drugs (and possibly some imports) through nonpharmacy retail outlets. There is a sales force (no details given) which contacts retailers directly. They also have significant sales to a wholesaler in Hodeidan named al-Waraafi, who also imports OTC products and distributes them to various kinds of retailers throughout Yemen.

Finally, I asked Dr. al-Mitami if YEDCO would be willing to supply other wholesale and retail networks, such as the mineral water bottlers, with an unbranded ORS at a low wholesale price

for repackaging and distribution under a different name. He said that they wanted to have the YEDCO name on all their products, but agreed in principle, adding that repacking or even putting stickers on the sachets was expensive.

Remarks

1) This last meeting was very satisfying in that Dr. al-Mitami now seems to have a more pragmatic attitude toward ORS production and sales. He was positive about ORS being made an OTC product after suitable public education, and appears willing to make the effort to resolve the conflict with MOH about supplying ORS through UNICEF.

2) He is also reasonably satisfied with the assistance USAID is capable of providing in terms of developing the ORS market and trying to encourage UNICEF support. The Mission is also trying to send some YEDCO QC technicians for training with USFDA, and could add on specific ORS QC training through a stopover at WHO in Geneva or at an ORS manufacturer, possibly C.I.D. in Cairo. It seems logical to write an explicit element of marketing assistance for YEDCO into the PATH/SUPPORT project, for analyzing and strengthening their OTC marketing. Included in this should be assistance in ORS product design, emphasizing a study on sachet size, since I was unable to convince Dr. al-Mitami of the importance of having a national 1-liter standard. He agreed to postpone a decision on flavoring until the citrate formula ORS could be tested, but wants to reserve the option of producing both a flavored and nonflavored product. (Banana is very popular here, and has been shown in Belgian tests to be most effective in masking the ORS taste.)

3) Dr. al-Mitami tried to justify his request for the grant of a filling/sealing machine by suggesting they would be able to supply ORS at a lower price, since there would be less

depreciation cost (actually amortization) if equipment were donated. Assuming a \$50,000 donation and a 5-year period at a production level of 2 million per year, the actual cost reduction would only be 1/2 cent per sachet. This is a negligible benefit compared with the complications involved with USAID procurement, but could be significant for UNICEF, if they were to supply equipment, bringing the cost of local ORS closer to the UNIPAC price.

MEETING NOTES: Nahdain and Arwa Mineral Water Companies, April 8, 1986.

1. Nahdain. Hadda Mineral Water - Mr. Hamed al-Kharib (General Manager), Mr. Fouad al-Hathra (Foreign Relations & Purchasing Manager), Mr. Ram Dass (Q.C. Manager).

Hadda Mineral Water has its strongest sales in Sana'a, and also has active distribution in Taiz, Tinama, and Ibb and an agent in Ma'rib. Current sales are 7,000 cases per day, produced in one shift. This product has been marketed for only one year.

The same company produces soap and detergent (Tite) in a nearby plant, but markets them through a different set of agents. They plan to expand into a line of fruit juices in the same mineral water bottles. (A substantial part of the investment in these plants appears to be in the bottle production equipment.)

I did not ask about profit margins for water distribution and sales, but 90-day credit is extended to wholesalers; 30 days to retailers.

They were interested in ORS, although unfamiliar with it, and receptive to the concept of distributing it along with mineral water. They did not immediately see how they could make a profit on ORS unless they received it free, but expressed a willingness to explore any future propositions for distribution. They showed no interest in getting involved with pharmaceutical manufacture.

2. Arwa. Shamlan Mineral Water - Mr. Abdul Aziz Murshid (General Manager) and Mr. Omar Kodeimaty (Partner).

Annex E - 6

This is the oldest Yemeni mineral water company and has the largest market share with 30,000 cartons-per-day sales. (By comparison, Azal produces around 8,000 per day.) Their sales are evenly distributed around Yemen.

They have had contact with USAID (or MSH?) about making a mark on their 1.5-liter bottles at 1 liter for ORS. Mr. Murshid said they plan to do this at their own expense, but the production manager had not heard of this or the plan (also mentioned to us by Dr. Raasa) to produce 1-liter bottles of mineral water. The explanation I received about this latter project is that they find the 3/4-liter bottles relatively unprofitable and are studying a change to 1-liter; but in any case would produce 1-liter size water for sales in pharmacies to complement ORS, and would donate some to the MOH.

They were not interested in ORS production, nor were they impressed when I mentioned that we had heard that the Hail Sayeed Group (which owns 17% of Arwa) was looking into drug manufacture. Mr. Kodeimaty was definitely wary of associating Shamlan with ORS, which he initially understood to be a kind of water purification product. However, Mr. Murshid invited me for another visit and said they would cooperate in any project for the good of the country.

Remarks

1) These visits were made mostly for the sake of form, to have on record as a measure of fairness to other water companies. However, despite the lack of interest in ORS production, their apparent willingness to participate in further discussions about distribution was encouraging. This represents a strong fallback position if the Azal marketing system proves difficult to strengthen. YEDCO-produced ORS could be the product, and marketing TA could be transferred to either of these companies.

Annex E - 7

2) A fourth mineral water company in Taiz, Sena, is owned by the al-Shaybaani Company which is interested in drug manufacturing.

3) Shamlan's involvement with 1-liter bottles, marks, etc., reinforces the need for a very careful analysis before any local producer chooses a sachet size.

ANNEX F

Field Visits to Five Governorates

March 22-27, 1986

ORT IN RURAL YEMEN

(S. Fabricant, PRITECH Consultant)

Summary of Findings

Oral Rehydration Therapy (ORT) has been integrated into primary health care with remarkable speed and apparent effectiveness in the governorates visited. With very few exceptions, all delivery sites had cadres of health workers who were well trained in ORT and who claimed ORT was accepted and used by parents. All sites visited had ample supplies of packets, and good records were being kept for diarrheal disease incidence and ORS dispensing. It would appear that use of ORT by the population of these governorates is mainly limited by access to PHC sites and drugstores, and in some areas by underutilization of existing PHC facilities.

Health Worker Training

Training in diarrheal diseases and ORT began on a limited scale in 1984 and was given a strong push last year when two trainers (usually the PHC director and another cadre) from each governorate were trained in a course held in Sa'ada. Training of the other workers in PHCU/s and HC's appears to have been effective, although training in the use of home-mixed solution (salt-sugar) may have received much less attention than the use of ORS packets, since these were foreseen as the main mode of ORT delivery.

All workers interviewed knew the main ORT messages and techniques and seemed capable of conveying them to parents with conviction. For demonstrating mixing of the 1-liter UNICEF ORS packets, most workers had a 1.5-liter plastic water bottle either marked with a line at the proper level or used to point to a molded annular groove at the 1-liter level. One PHCW tells mothers who bring patients to buy a 1.5-liter bottle of water, measures out a liter into a graduated cup and dumps out the rest, mixes the packet, and pours the solution back into the bottle for the mother to take home, telling her to mix the next packet with the same amount of water. Most workers gave 2 or 3 packets to the mother, although one said he gave 6.

In at least one governorate, LBA's carry ORS on their weekly village visits. TBA's are being trained in ORT and resupplied with ORS packets by PHCW's or LBA's.

No sites visited had separate ORT rooms for intensive training of mothers with sick children.

Acceptability

No evidence or anecdotes of poor acceptability were noted. Most HC doctors are Egyptian, and having completed their training recently are thoroughly convinced of the efficacy and benefits of ORT. Some of these also claimed to use antibiotics for some specific diarrheal infection. Removal of anti-diarrheal drugs from the formulary lists of HC's and PHC's has apparently been an effective means of bringing even the older PHC workers into the ORT fold. All workers claimed that ORS was well accepted by parents if its use was explained properly.

ORS Availability and Supply

UNICEF ORS packets were seen in ample amounts in every facility visited. The actual supply mechanism may differ from one governorate to another, depending on the reliability of the normal MOH supply chain.

In al-Jawf, where stocks of other PHC drugs were poor, the ORS had been delivered especially by the CDD program. In other cases, the local development councils were said to have a role in transporting drugs.

Private Sector

One-liter ORS packets made by Ciba-Geigy/Servipharm and distributed by YEDCO were found for sale at YR 1.00 in most drugstores located near HC's and PHCU's. No drugstores exist in rural areas except near the delivery sites, so at present this part of the private sector cannot be seen as a means of expanding access to ORS in these governorates. However, in Sa'ada and Marib, the possibility of local council involvement in village pharmacies was mentioned. The use of TBA's as access points for ORS could also be considered as a private sector activity.

In general, MOH officials do not favor promoting self-medication and may not be favorably disposed to nonpharmacy commercial distribution of ORS. Free availability is also favored over requiring patients to purchase drugs.

Utilization

A very rough indication that the fixed health facilities are well utilized, at least for ORT, when they are accessible and offer well-managed services, came from Juma Wasat and Huzma Health Centers in Marib. The 5 to 10 diarrhea cases per day seen at each is close to what might be expected from a catchment population of 2,000 (approximately 400 children under 5), assuming averages of 5 episodes per year with duration of 4 days. On the other hand, the fact that only 60,000 ORS packets were distributed in 4 years in the entire Marib governorate (population 240,000, under 5 population 48,000) merely suggests that most of the population does not have access to a health care facility. Only a fraction of the fixed facilities needed have, in fact, been built to date.

Conclusions

Several ways to increase coverage of ORT in these governorates can be suggested on the basis of above observations:

1. Put fixed PHC facilities into operation in unserved areas. The major constraint to this clearly seems to be shortage of trained staff.
2. Increase utilization of fixed facilities by assuring that services are available and attractive and that supplies are regularly available.
3. Increase outreach of PHC workers as is done in Marib with LBA's carrying ORS to villages, and by training TBA's who are resupplied by LBA's.
4. Increase access to ORS packets by making them available through nonconventional outlets such as LDC-operated depots, village stores, etc. A massive educational campaign emphasizing recognition of dehydration and correct use of ORT will have to accompany this.
5. The relative benefits of intensive instruction of mothers/fathers in ORT, as accomplished in facilities with special ORT rooms, should be evaluated and these rooms should be incorporated into training health centers.

ANNEX G

MARKETING

Report Based on Meetings

Marketing Environment - Meeting with Tim Bahrani, Market Manager Gallaher International Ltd. - the people who market Silk Cut Cigarettes.

Market observations lead one to the conclusion that cigarette marketing is the most aggressive in the Yemen Arab Republic. This is based on "seeing is believing!" There is very little else in terms of market visibility. There are Rothmans, Kamaran, Marlboro, Silk Cut, and recently, Sovereign.

If ORS is to be launched and distributed effectively, which model does one accept? There are two product categories with evidence of aggressive and effective distribution: bottled water and cigarettes. The widely distributed bottled water products are Shamlan and Hadda. Both of these manufacturers have recently started what is labeled here as "aggressive advertising." This, however, is nowhere near saturation advertising as we know it elsewhere. Discussions with Mr. Bahrani and Dr. Ahmed al-Amari, Chairman, Sana's Trading Corporation, reveal that sheer marketing endeavors rarely put a product on top. Silk Cut Cigarettes, a market leader in the U.K., assumed it would be a "cakewalk" for them here, also. They unloaded a lot of stock on credit with price incentives going up to free videos. They backed this up with what was then considered innovative advertising, point-of-sale material for the first time in the Y.A.R. A month later, they had to take back much of the stock. They attribute two reasons for this:

1) Silk Cut is considered too mild a cigarette. It is low on tar, in keeping with Western trends. This, however, is considered a disadvantage here. The stronger the cigarette, the better it is, especially when chewing qat.

2) The price disadvantage: Silk Cut, like Marlboro, is sold for YR 7-8; whereas Kamaran, the locally-manufactured cigarette, is sold for YR 5, and Rothmans for YR 6. This could also be the reason why Marlboro has slipped from the No. 1 position to No. 3. Can Marlboro and Silk Cut do something about pricing?

Again from the impending ORS launch point of view, it is worth reviewing. Rothmans and Kamaran are really "raking it in." They are both owned by what are labeled as Yemeni companies. This means that all the raw materials are imported duty-free. The assembly plant is, for all practical purposes, described as a manufacturing unit. Marlboro and Silk Cut, on the other hand, are manufactured overseas. On import, they attract very heavy levies; so it is a survival strategy that forces them to sell at a price marginally

above that of Kamaran and Rothmans. But it's no use; they're fighting a losing battle. Silk Cut is trying one last-ditch battle. They're launching a higher tar cigarette soon. But to my mind, they won't succeed unless they've been able to resolve the price problem. They have the Marlboro case study. Marlboro was once the market leader, having knocked the daylights off 555, traditionally the leader in these parts. By achieving this, Marlboro proved that taste was not a problem; 555 has the English-type flavor.

Coming back to advertising activity in the field: Kamaran and Rothmans have cashed in on the Silk Cut innovation, have bettered Silk Cut in terms of saturation, and have virtually flooded the market with point-of-sale materials in the form of pack mock-ups. Very little press advertising is employed because of low literacy and poor distribution of newspapers. For their new brand, Silk Cut is planning an innovative promotion. They will be hiring "half-caste" promoters at YR 5,000 per month for 14 month-years. (Most private sector companies budget for 14 salary months per year. The two extra months are for Ramadhan and Eid bonuses, which are standard practice.) These promoters will visit around 25 to 30 retail outlets every morning, and in the afternoon attend, on an average, one to five qat sessions for word-of-mouth promotion. Point-of-sale advertising will be employed only outside the big cities, whereas in the big cities they will rely solely on word-of-mouth. I make this point only to focus the importance of word-of-mouth promotion by the marketing professionals. Here, of course, cigarette advertising is not permitted on radio and television. It will be useful to track the success of this case study on the success of promotions through qat sessions. It could have valuable lessons for us on health education and the promotion of ORS. As long as it is not perceived as an official endorsement for qat chewing.

There are three other very important aspects that must be recognized when marketing or promoting a product or concept in Yemen:

1) The one who is first, lasts. The Yemeni customer is, generally speaking, very loyal. Brand switching is very rare. The exceptions take place only if a Yemeni brand is involved or lower-priced alternatives are available. Quality perceptions are difficult to focus on because of low utilization of advertising techniques. (There is no professional advertising agency in the Y.A.R. The largest Industrial House, Hayel Said, has an in-house advertising agency located in Taiz. Its primary responsibility is to collect information and pass it on to London, usually; advertising campaigns are developed there. Hayel Said is the industrial house that is responsible for Kamaran and Rothmans cigarettes, and indirectly for Shamlan mineral water.

2) Hire a distributor that has the maximum clout in terms of being responsible for the most popular products. The Colgate Palmolive "piggyback" strategy is very popular and very much in evidence here: Push the sales of a new concept/product on the "tails" of a very popular shortage product.

3) "If it's made in Yemen, it's got to be the best." This is a very unique reaction. In most countries of the world the unwritten consumer maxim seems to be: "if it's imported, it's got to be better." Not so in the Y.A.R. This is what makes the consumer here so special. In terms of nationalism or patriotism, one could not ask for more. Whether it's coffee, milk, or qat, the unwritten consumer maxim seems to be: "If it's Yemeni, it has to be better -- even if the price is higher!" As soon as Rothmans was "manufactured" in Yemen, its sales started soaring to the number 2 position. And the consumer's explanation? It's our product! It's a Yemeni Rothmans now! The cigarette market seems to be the only exception where a Yemeni brand is priced lower. Otherwise, it appears that all Yemeni products are priced higher -- sometimes 50% more; sometimes 100% more. This raises a pertinent point on the pricing of Yemeni-made ORS. Should it follow the Kamara, Rothmans example? It doesn't make a difference whether it's milk, coffee or almonds. An interesting point here in terms of Yemeni consumer habits is the quantum of money that changes hands daily on account of qat. The figure mentioned here is an average, taking into account the low prices prevailing at this time (YR 50) and the high off-season prices at YR 100. The daily figure is estimated at U.S. \$80 million per day! Another interesting aspect is that there are several instances when a person's monthly income is just YR 1,500; but his expenses on qat are YR 3,000 per month. How does he manage? His relatives help out. This gives one an insight on how close family ties are, and what priority level the chewing of qat occupies.

- Roger C. B. Pereira

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