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**EXPLORING PRIVATE SECTOR
OPPORTUNITIES FOR EXPANSION OF THE USE OF
ORAL REHYDRATION SALTS
IN SENEGAL**

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ABBREVIATIONS

BAA	BUREAU D'ACHAT AFRICAIN
BASICS	BASIC SUPPORT FOR INSTITUTIONALIZING CHILD SURVIVAL
BRAN	REGIONAL OFFICE OF FOOD AND NUTRITION
CADU	CHEIKH ANTA DIOP UNIVERSITY
CDD	CONTROL OF DIARRHEAL DISEASES
DHS	DEMOGRAPHIC AND HEALTH SURVEY
FCFA	CFA FRANC (US\$1 = approximately FCFA 500)
FOB	FREE ON BOARD
GMP	GOOD MANAGEMENT PRACTICES
GOS	GOVERNMENT OF SENEGAL
IEC	INFORMATION, EDUCATION, AND COMMUNICATION
MOH	MINISTRY OF PUBLIC HEALTH AND SOCIAL AFFAIRS
ORS	ORAL REHYDRATION SALTS
ORT	ORAL REHYDRATION THERAPY
OTC	OVER-THE-COUNTER
PNA	NATIONAL PHARMACY FOR PROCUREMENT
PRA	REGIONAL PHARMACY FOR PROCUREMENT
PRITECH	TECHNOLOGIES FOR PRIMARY HEALTH CARE
SANAS	FOOD AND APPLIED NUTRITION SERVICE IN SENEGAL
SANFAM	SANTE FAMILIALE
SOMARC	SOCIAL MARKETING FOR CHANGE
UNICEF	UNITED NATIONS CHILDREN'S FUND
UNIPAC	UNITED NATIONS PROCUREMENT CENTER
USAID	UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

EXECUTIVE SUMMARY

SCOPE OF WORK

The purpose of this consultancy was to explore the possibility of private commercial sector involvement in the distribution and sales of oral rehydration salts (ORS) in a manner that would be a complementary partnership to the public health system. The objectives were to identify the main players and propose a private sector mobilization strategy that would eventually be sustainable.

DESCRIPTION OF THE ORS SITUATION

Malaria, acute respiratory infections and diarrhea are the three major causes of mortality in children under five. Introduced ten years ago, ORS distribution is still limited to the public sector. Yearly volume of use has fallen from a high of 400,000 packets in 1991 to 125,000 in 1993, due to a weak distribution system that causes frequent stock-outs.

Current stock in the PNA is about 700,000 packets (all from UNICEF). ORS has been distributed free of charge up until now, but as of 1995 it will be integrated into the Bamako Initiative list of essential medicines and products and sold through the PNA at a unit price of 50 FCFA.

THEORETICAL ORS NEEDS FOR 1995

The estimated need for ORS packets in 1995 is about 3.5 million for Senegal and 1.2 million for the four USAID-assisted regions of Fatick, Kaolack, Louga, and Ziguinchor. If the 1993 volume of 125,000 packets is distributed this year, this means that only 3.6 percent of the need will be covered.

THE PHARMACEUTICALS MARKET

The total market size is estimated at US\$55 million (27 billion FCFA): US\$50 million in the private sector, not including the important parallel market, and US\$5 million in the public sector. Ninety percent of the products are imported with the rest being produced locally from imported raw materials. Three importers supply the private market with products that are categorized in three groups, each with different profit margins ranging from 9 percent to 33 percent to the wholesalers and pharmacists respectively.

PRIVATE HEALTH SECTOR

Most modern private health professionals, physicians and pharmacists, are found in Dakar and other big cities. Traditional healers are widespread and are especially important in rural areas.

Antidiarrheals and antibiotics are the drugs of choice for modern treatment of diarrhea in the private sector and knowledge of ORS is superficial at best.

ORS AND THE PRIVATE SECTOR

ORS is not currently available in pharmacies. In the coming months, the PNA will start selling ORS at a public price of 50 FCFA. To interest the private sector in this product, it will have to be shown that a market exists and that a profit can be made. There are three categories of pharmaceutical products (social, regular and large pack) with varying profit margins. Given a landed price of an ORS packet of 52 FCFA, the large pack category would result in a public price of 84 FCFA, with 10 FCFA unit profit for the wholesaler and 22 FCFA for the pharmacist.

NATIONAL OBJECTIVES

The national child survival goal is the reduction of under-five mortality by 40 percent by 1999. Increasing the availability of ORS will help reduce deaths caused by diarrhea. The first step toward a sustainable partnership with a mobilized private sector is the creation of a market for ORS that will consist of an annual sales volume of at least 500,000 packets of ORS.

KEY ISSUES AND STRATEGIES

Important decisions must be made by the GOS and the international donor community to involve the private sector in ORS. They include: 1) maximization of profit margins while maintaining an affordable public price, 2) policies and regulations that encourage the private sector and, 3) commitment of the private sector. Ten key issues are identified below with proposed accompanying strategies.

THE ISSUES

1. Insufficient distribution of ORS in the public sector
2. Lack of incentive policies and regulations toward the private sector
3. Need to identify a lowcost, sustainable source of supply
4. Needs to reach the population in remote areas with ORS
5. Need for a sustainable public price for ORS

6. Low level of ORS use
7. Incorrect current prescription behavior
8. Low demand for ORS
9. Need for donors' support
10. Resources required for managing the commercialization effort

THE STRATEGIES

1. Improving the use of ORS by increasing awareness and enhancing the distribution in the public health system
2. Facilitating the involvement of the private sector in achieving a public health goal, in coordination with the public sector
3. Ensuring sustainable ORS availability
4. Expanding distribution to the population in rural areas
5. Motivating the private sector to play an active role in the promotion and sales of ORS, while keeping an affordable public price
6. Developing a consumer-oriented strategy for ORS
7. Changing behavior of health professionals in the private sector
8. Creating and sustaining the demand for ORS
9. Enlisting appropriate resources from donors
10. Monitoring and coordinating the ORS commercialization project

SANAS is responsible for the national CDD program. It will need support to undertake the commercialization activities. A coordinator is necessary to monitor the progress of the program and coordinate the activities of the multiple players. Two options have been proposed. Option one proposes that one of the wholesalers could fulfil this function. Option two proposes that SANFAM and/or SOMARC could be appointed to work together with SANAS, BASICS, and the commercial sector.

CONCLUSIONS

The complete lack of ORS in the private sector, combined with weak distribution in the public health system, presents a unique opportunity to start a new, solid, and sustainable commercialization project.

I. SCOPE OF WORK

The purpose of this consultancy was to evaluate the resources of the private sector with regard to its ability to procure, distribute and promote pharmaceutical products relevant to child survival, with particular emphasis on oral rehydration salts (ORS). The main objectives were to:

- identify the main players in the commercial sector who have the potential to contribute to child health;
- identify their capacity and resources;
- develop a strategy to mobilize them in regard to greater accessibility of ORS; and
- coordinate with the in-country representative of SOMARC.

II. DESCRIPTION OF THE ORS SITUATION

A. General Background

Based on the DHS II report (1992/93), the two-week prevalence rate of diarrhea in children under five in Senegal is 21 percent. Important determinants include age, location, maternal educational level and seasonality. The child at highest relative risk lives in a rural zone in the rainy season, is between the ages of 6 and 23 months old, and has a mother with no formal education.

Although the exact proportions are not known, there is agreement that malaria, acute respiratory infections, and acute dehydrating diarrhea are the three major causes of mortality in children under five.

B. ORS History in the Public Sector

1. Donations

ORS was first introduced in 1985 through the PRITECH project. The product has been donated by both USAID and UNICEF to the MOH which distributes it free of charge. UNICEF resumed its donations in 1993, having stopped from 1990 to 1992, due to budgetary restrictions and priority support to EPI campaigns. Since its introduction, ORS distribution has been restricted to the public sector.

2. Distribution

Based on SANAS records covering the period from 1985 to 1993, the best years for ORS distribution were 1988 and 1989 (about 400,000 packets) followed by a drastic drop in 1990 that continues to the present. The most recent available data show that only 125,000 were distributed in 1993.

A weak distribution system is one of the major reasons for frequent shortages and stock-outs found in the 1994 health facility survey. The procedures for distribution include the following:

- Dakar: SANAS controls stocks and distributes to the regions and districts, according to their requests. However, storage is at the PNA.
- Regions: BRAN must request approval for new quantities from SANAS, secure transportation to the region, and store the packets when they arrive.
- Districts: Needs must be submitted to BRAN and the same system applied. Small quantities are distributed through the private charity network.
- ORS is given free to patients in health facilities.

3. Knowledge, Use, and Unmet Needs

The DHS II report shows that 45 percent of mothers of children under five know about ORS and 31 percent claim to have used it at least once. About one in four children having had diarrhea in the last two weeks was taken to a health facility. Only one in fifteen (6.6 percent) received ORS.

According to SANAS data, 150,000 ORS packets were distributed in 1991 (the year of the DHS II data). Assuming an average consumption of two packets of ORS per treatment, this means that only 75,000 cases of diarrhea received ORS. This represents 4.8 percent of estimated needs.

In 1993, the 125,000 packets distributed covered only 3.8 percent of needs and this will fall to 3.6 percent for the same number of packets in 1995. In spite of the large unmet need for ORS, the product is not available in the private pharmacies.

C. Current ORS Situation

Current stock of ORS in the PNA warehouse is estimated to be 700,000 packets. USAID is ready to buy a new shipment and UNICEF will not supply ORS in 1995. It is crucial to check the quality of the stock, i.e., the storage conditions and the remaining shelf-life of the inventory. Based on 1993 distribution (125,000 packets) and a 1994 estimated figure of 125,000 packets, the existing stock would last for the next five years.

The MOH has approved putting ORS on the list of essential medicines and products that are provided in the Bamako Initiative strategy. Starting in March/April 1995, ORS will be distributed to health facilities through PNA channels and sold to patients at a unit price of 50 FCFA. For the first time, the PNA has included ORS in its tender list (500,000 packets).

To date, SANAS has not systematically provided training or information to the private health sector. It is important to note, however, that SANAS had included in its five year plan (1991-1996) a strategy to explore ORS in the private sector.

III. NEEDS ESTIMATION FOR ORS PACKETS

The number of ORS packets needed in 1995 is estimated to be about 3.5 million for Senegal and 1.2 million for the USAID-assisted regions. The hypotheses and calculations used are presented in Appendix 1. In summary:

- The target population of children under five is estimated to be 19 percent of the total population, growing at an annual rate of 2.7 percent.
- The 4.4 episodes of diarrhea/child/year estimate is calculated from the DHS II two-week prevalence of 20.6 percent and assumes a constant rate throughout the year.
- Total ORS packets needed assumes that 25 percent of cases should be treated with ORS and that an average of two packets will be used per treatment.

IV. THE PHARMACEUTICALS MARKET

A. General Information

Medicines are procured through two official channels: importation-90 percent, and local manufacturing-10 percent (raw materials are imported.) Importation is done by the private sector (wholesalers), through tender invitations (PNA-public sector) and through parallel importation.

The annual value of private market importation is estimated to be US\$50 million, compared to US\$ 5 million for PNA importation. The importance of the parallel market is difficult to estimate, but it may be as large as that of the public sector.

B. The Public Sector (Procurement Pharmacies)

Procurement is done through international tenders of the "Essential List" of products. Until recently the PNA has been a non-profit organization, but now it is involved in the cost recovery program of the Bamako Initiative. The PNA distributes supplies to the regional pharmacies (PRA), charging 5 percent on the cost value. This money is frozen in a bank account and needs official approval for disbursement.

PRAs give the products free of charge to the districts and the districts may add up to 45 percent to the price. Thus the end user will pay 150 FCFA for a product purchased at 100 FCFA by the PNA (unofficially, the prices are much higher.)

After covering their running expenses, the districts will use the balance to replenish their stocks.

C. The Private Sector

1 Local Companies

a. MANUFACTURERS

PARKE DAVIS

This is a subsidiary of Parke Davis/Warner Lambert International, located in Dakar's free zone, that supplies the Senegalese market and neighboring countries. The plant is designed and managed according to international Parke Davis standards (GMP and quality control)

SIPOA/RHONE POULENC

The shareholders are distributed as follows: 65 percent Rhone Poulenc, 14 percent Senegal government, 8 percent SIPOA employees, 5 percent Synthelabo (French), and 8 percent Boehringer Ingelheim (German). The company produces 94 products (mainly tablets, capsules, syrup, injectable ampoules, ointment), some of which are under license to Pfizer, Bristol, Synthelabo and Copper.

Yearly sales amount to 2.7 billion FCFA (US\$5 Million), a 16 percent market share that includes Rhone Poulenc imported products. The business mix is divided into 10 percent exports to African countries, 30 percent to the PNA and 60 percent to the private sector. The sales team of eight people covers 1300 physicians (out of an estimated total of 1800 physicians), and three people cover the pharmacies. Two popular antidiarrheals, Paregoric and Ganidan, are produced.

VALDAFRIQUE

This is a Senegalese majority concern that manufactures and packages para-medical products. Its major business consists of the Valda line of over-the-counter (OTC) products, and a line of insecticides. It has its own promotion capacity. Valdafrique is also the appointed distributor of SOMARC's condoms. It packages and distributes the condoms to the three major pharmaceutical distributors. However, it distributes its own products to a network of 40 wholesalers who supply general stores.

b. WHOLESALERS/IMPORTERS

LABOREX

This is a branch of Europharma/Continental with 100 percent French capital and procurement for African branches done at headquarters in Rouen, France. It operates in Burkina Faso, Benin, Guinea, Gabon, Congo, Cameroon, Mali and the French overseas departments and territories.

It is the major wholesaler in Senegal with yearly sales of 17 billion FCFA or 65 percent of the market share. It is the only company having regional distribution centers: two in Dakar and one each in Thiès, Kaolack, St. Louis, and Ziguinchor. Other resources include 25 trucks and a sales team of six people covering pharmacies. There are no promotional activities.

COPHASE

This is also a branch of a French company, Bureau d'Achat Africain (BAA), with headquarters in Rouen, France, that is the procurement center for its branches in Africa (Burkina Faso, Ivory Coast, Togo, Congo and Cameroon). Expansion plans are frozen until further regional and in-country development.

Startup in Senegal occurred in 1992, 45 percent of capital being held by BAA and 55 percent by Senegalese pharmacists and owners of pharmacies (about 125 pharmacies). This is the number two wholesaler in Senegal, with 25 percent market share or six billion FCFA. With no regional warehouses, it distributes to the region by parcel post. There are only six trucks, one sales person for pharmacies and no promotional activities.

SODIPHARM

With 100 percent Senegalese capital, this company has 5 percent of market share, down from 10 percent.

DELTA MEDICAL

This is an importer of medical instruments and dental products.

UPIA

Once the second most important wholesaler, this company is now bankrupt, most probably due to the devaluation of the FCFA in 1994.

2. Regulations

Ministry of Health oversight of the pharmaceutical sector is achieved through the "Pharmacie Générale", a department managed by Professor Issa LO. All imported pharmaceutical products are to be registered at the MOH.

A set of requirements must be met before the approval to market a product, including the establishment of a billing price that takes into consideration the existing competitive prices. Due to the devaluation of the FCFA, the MOH is encouraging the importation of generic drugs and large pack products. No company is given exclusive control of a product.

3. Promotion/Detailing

Each foreign company has its own team of medical representatives. They call on health professionals to convince them to prescribe, recommend, or buy their products.

4. Price Structure

Profit margins are controlled by the MOH. Three groups of products have been defined that provide a different percentage of profitability to the wholesalers and pharmacists. They are as follows:

TABLE I

CATEGORY	PROFIT MARGINS (%)	
	PHARMACIST	WHOLESALE
Large packs (low public prices)	36.0	18.0
Social products (subsidized)	9.0	9.0
Other products	28.9	15.5

Note: In absolute terms, the profits generated by "other products" are the most important due to the relatively higher price of the products in this category. Obviously, there is little incentive to invest in, finance, and promote the social products.

5. Distribution

The distribution of imported and locally manufactured products is done through wholesalers. Half of the 230 pharmacies in Senegal are in the Dakar region (See Appendix 2). Two hundred "dépôts de médicaments" serve rural areas and there are two private hospitals: the French army hospital (direct importation) and the Thiès hospital (supplied by LABOREX).

In the public markets, ambulatory sellers sell imported products from neighboring countries, especially Nigeria, at very attractive prices. Although there are no official data available, it is assumed that the turnover in the public markets could be as large as in the public sector (two billion FCFA/year).

V. PRIVATE HEALTH SECTOR

A. Health Facilities

There are two private hospitals: one in Thiès and one in Dakar, 42 polyclinics (of which 18 are in Dakar), and 75 health posts.

B. Health Professionals

- * Physicians: 350 (278 in Dakar and the rest mainly in Thiès)
- * Para-medicals and assistants: 600
Note: It is known that the public sector physicians also treat private clientele. It is assumed that public sector nurses do likewise.
- * Pharmacists: 230 (115 in Dakar)
They are the major advisors for self-medication. There are two pharmacists' associations: the Pharmacy Owners' Union and the Pharmacists' Association.
- * Traditional Healers
It is estimated that there are more than 5000 playing an extremely important role in the delivery of health services.

C. Diarrhea Treatment in the Private Sector

The treatment of diarrhea in the private sector consists for the most part of antidiarrheals and antibiotics. A large variety of antidiarrheals are available and the profit margins are high (see appendix 3). ORS is rarely used or prescribed, since it is unavailable in pharmacies.

VI. ORS AND THE PRIVATE SECTOR

A. Public Price

In the coming months, the PNA will start selling ORS packets at a public price of 50 FCFA. In other Sahelian countries, the corresponding (subsidized) prices are 50 FCFA in Niger and 80 FCFA in Mali. We have previously stated that the annual value of the private pharmaceutical market is US\$50 million. This translates to an estimated annual per capita expenditure of 6000 FCFA for drugs, based on the assumption that 50 percent of the population purchases directly or indirectly from private pharmacies. We thus estimate that a public price of up to 100 FCFA is affordable to the private sector users. This would mean that a course of treatment would cost 200 FCFA.

B. Profit Margins (see Appendix 4)

Assuming a landed cost of 52 FCFA for each ORS packet, which is the quoted price based on an order of 1 million packs, there are three options for sales in the private sector:

1. **First option: ORS as a social product**

If the MOH approves the distribution of ORS through the private sector in the category of social products, it will give a profit margin of 9 percent to both the wholesalers and pharmacists. This would result in a public price of 62 FCFA. The unit profit would be 5 FCFA for wholesalers and 5 FCFA for pharmacists.

2. **Second option: ORS as a regular product**

If ORS is a regular product, the profit margins will be 15.5 percent for wholesalers and 28.9 percent for pharmacists. This would result in a public price of 77 FCFA, giving a profit margin of 8 FCFA for the wholesalers and 17 FCFA for the pharmacists.

3. **Third option: ORS as a large pack**

This would result in profit margins of 18 percent for wholesalers and 36 percent for pharmacists. The public price would be 84 FCFA, giving a margin of 10 FCFA to the wholesalers and 22 FCFA to the pharmacists.

Comparing the profit margins to be realized in the sale of ORS with the profit margins for anti-diarrheals shows a tremendous difference. For an antidiarrheal product (i.e., Actapulgit) with a wholesale price of 900 FCFA, the public price would be about 1340 FCFA, with the wholesaler making 140 FCFA and the pharmacist making about 300 FCFA. It is obvious that the profit generated by ORS is minimal in absolute terms when compared with the antidiarrheals.

When we compared the profitability of ORS in the three categories, it clearly appears that social products profitability would not motivate any active role on the part of the pharmacists to promote and sell ORS. Also categorizing ORS in the social products list might cause automatic lack of interest, due to the negative perception of this list by the private sector. In the large pack and regular product categories, the profitability is more substantial and we may assume that the pharmacists would be more motivated to sell ORS if it was categorized in one of them.

C. Availability to the Private Market

There are two options: 1) local production, which is not feasible now in the introductory phase, and 2) direct importation by local wholesalers, either using their own suppliers or using USAID/UNICEF sources.

comments:

Most of the pharmaceutical products relevant to child survival (Chloroquine, Cotrimoxazole, etc.) are already available in the private pharmacies. They are either included in the social product or large pack categories. New lists will be announced in the coming weeks, expanding

the number of products. The General Pharmacy objective is to make available all the important medicines through those two lists. If for any reason any of the child survival products is not listed, the same approach (as suggested for ORS) has to be implemented.

VII. NATIONAL OBJECTIVES FOR ORS IN THE PRIVATE SECTOR

The attainment of the national goal of reducing under five mortality by 40 percent by 1999 will be helped by having ORS widely available and correctly used in both public and private sectors. Thus it is important that the capacities and resources of the private sector be mobilized to complement the efforts of the public sector. To ensure a sustainable private sector involvement we need to create a market of at least 500,000 ORS packets by the third year of the project.

VIII. KEY ISSUES

Important issues must be addressed by the GOS, the commercial sector, and the donor community to attain the above objectives. They are as follows:

1. Insufficient Distribution of ORS in the Public Sector

The public health sector has succeeded in raising ORS awareness to a level of 45 percent of caretakers. Though 31 percent of caretakers reported having ever used ORS, only one in fifteen children received it during the last episode of diarrhea presented to the health facility. The distribution of ORS in the public health system has declined over the past few years to an estimated level where only 3.6 percent of diarrhea cases are receiving ORS. It is crucial for the public sector to improve its distribution of ORS within the public health system, taking advantage, among other things, of the implementation of the Bamako Initiative. Along with an improved distribution, the MOH/SANAS should commit to continue promoting ORT/ORS as the cornerstone of diarrhea treatment through coordinated IEC efforts aiming at each target audience.

2. Lack of Incentive Policies and Regulations Toward the Private Sector

The public sector perception of the private sector should change to that of a partner rather than an opponent. It is also important that new policies and regulations encourage private sector participation in public health programs. The classification of ORS will determine not only the price structure and the profit margins of ORS, but also its distribution and sale. Is ORS a pharmaceutical product or a para-medical (OTC) product? As a pharmaceutical product, its distribution will be limited to pharmacies which are available in urban areas only. As an OTC product, it can be sold beyond pharmacies, e.g., in grocery stores.

3. Need to Identify a Low-cost, Sustainable Source of Supply

There is a need for a committed supplier who would ensure the availability of ORS and motivate the distribution channels to sell it. A reliable, inexpensive source of supply is needed to ensure the long-term availability of ORS. The sources for public sector donations are the least expensive (i.e., UNIPAC's FOB price of US\$ 0.07, and USAID'S FOB price of US\$ 0.14). However, these sources might not be available for supplying the commercial sector.

4. ORS Needs to Reach the Population in Remote Areas

In order to make ORS widely available to the population who needs it, ORS distribution should not be confined to pharmacies only. It needs to expand to rural areas. However, pharmaceutical manufacturers and distributors do not usually cover the rural areas. The pharmaceutical distributor will need to hook up with a rural distribution network in case it does not directly cover rural outlets.

5. Need for a Sustainable Public Price for ORS

The key to the successful marketing of ORS is to fix an affordable national public price, while at the same time assuring attractive profit margins to wholesalers and private pharmacists that will motivate them to play an active role in the national ORS distribution effort.

6. Level of ORS Use Is Low

As ORS is intended ultimately to be used by the population for self-medication, it is important to have a user-friendly product whose message is clearly understood, is relevant to the caretaker's expectations, and is translated down to every communication material, including the packaging.

7. Incorrect Current Prescription Behavior

Treatment with antidiarrheals, often combined with antibiotics but rarely with ORS, is the current treatment of choice of private practitioners and pharmacists. It will not be easy to change rapidly from this entrenched prescription habit to a new (albeit correct) one. A mid-road possibility would be to modify this behavior by adding ORS to their current prescription. However, is combined therapy (antidiarrheals + ORS) medically acceptable?

8. Low Demand for ORS

To create a market, substantial investments will need to be made to build demand for ORS at each level: private health professionals, retailers, and the general public. A concerted effort should coordinate the long-term supply and demand of ORS.

9. Need for Donors' Support

Long term demand-generation efforts might be too long and too costly for the private sector to undertake alone. The public sector also needs to increase the ORS overall awareness level. The donors' role is important in helping create ORS demand nationwide, in both the public and private sectors. At the same time, donors need to coordinate supplies of ORS to the public sector.

10. Managing the Commercialization Effort Requires Resources

A dedicated person or a professional organization will be needed to oversee the planning, coordination, implementation, monitoring and evaluation of the different aspects of the ORS commercialization efforts.

IX. PROPOSED STRATEGIES

Based on this analysis, the following strategies are proposed for initiating the involvement of the private sector in the national diarrhea control program:

STRATEGY 1: Improve the use of ORS by increasing awareness and enhancing the distribution in the public health system.

The impetus to implement the Bamako Initiative might be just the opportunity for the public sector to distribute ORS, along with other essential drugs, in a more efficient way. A strong presence of ORS in an effective, paying system, even if it is a public system, will create healthy competition for the private sector. Any communication effort undertaken by the public sector will not only increase use in the public health system but will also spill over to the commercial sector, making the marketing of ORS more attractive.

STRATEGY 2: Facilitate the involvement of the private sector in achieving a public health goal in coordination with the public sector.

Create a level of trust between the private and public sectors by involving the commercial sector and the professional associations (physicians and pharmacists) in relevant national health plans, programs, and activities, through regular, participatory meetings.

Concerning ORS, the MOH (General Pharmacy) could speed the registration of ORS for commercial marketing, and classify the ORS product in the (hospital) large pack category (carton of 625 packets). This would produce the largest motivating margin to the wholesalers and pharmacists. Also, the General Pharmacy can approve the registration of ORS as an OTC product (*Spécialités Grand Public*), hence removing the restrictions concerning its distribution outside pharmacies and its direct promotion to the public.

KEY PERSON: Professor Issa LO

STRATEGY 3: Ensure sustainable ORS availability.

To ensure a continuous availability of ORS, we need to identify a reliable source of supply and a widespread distribution network across the country. We have two options in terms of supply:

3.1. Importation

The interested importer/distributor will have to identify a reliable supplier who could provide ORS packets at a low FOB price, as close as possible to the UNICEF rock-bottom price of US\$0.07. One way would be to approach directly the big suppliers of UNICEF/UNIPAC (i.e. KBI in Germany, Porkala Sugar Refinery in Finland, or Geymonat in Italy) and convince them to supply small orders to Senegal. In case a small (country-specific) order is not feasible, the importers can request ORS from their usual sources. To test this possibility, three quotes for one million packets were requested (two direct and one through SODIPHARM). The lowest FOB unit price was about US\$0.09 with an estimated landed cost of US\$0.105 or 52 FCFA.

Since the importers/distributors may import smaller orders initially, i.e. only about 100,000 or 200,000 packets at a time, it may be assumed that the unit cost will be slightly higher than the estimated unit price of 52 FCFA quoted for one million packets. Assuming a landed cost of around 60 FCFA, the public price may rise to 100 FCFA. Again, it should be emphasized that the importer/distributor interest in investing in such low return products depends on the category in which the MOH decides to classify them and on their capacity and willingness to consolidate regional purchases. For instance, other markets in the region where the company is operating (LABOREX and COPHASE, for example) could become interested in marketing ORS, thus justifying larger orders and better prices.

An option also exists for the importation of ORS from other Sahelian countries (i.e. the ONPPC in Niger-if capacity is available) or from producers financed by UNICEF.

Professor Issa LO has stated that he is ready to assist and facilitate the coordination among importers.

3.2. Local production

This option is more likely to occur in the future, once the ORS market has been created and expanded in a manner that shows profitability. It could be done by existing companies (or by the planned new plant), who will become interested once the annual volume of ORS packets sold is large enough. This may be an option if the following conditions exist:

- Sales volume is adequate to interest local manufacturers (this is not currently the case).
- Production could be done in a local factory without investing in a new production unit, which would be too expensive.

- The local manufacturer has enough capacity to have a low ex-factory price (*prix carreau-usine*), competitive with the imported prices. (One possibility of lowering the cost of production, used in some countries i.e. Niger, Mali, etc., is to help with the donation of raw materials).

Note: It appears that there is a Senegalese project to set up a new pharmaceutical plant to manufacture generic products. Their plan is to start production in 1996. This project might represent a timely opportunity for a feasible local production of ORS.

STRATEGY 4: Expand distribution to the population in rural areas.

Except for Valdafrique, it appears that the other pharmaceutical producers and distributors concentrate their distribution on the 230 pharmacies which are all settled in urban areas. While ORS is a pharmaceutical product, its distribution should reach the population that needs it in the rural areas. The pharmaceutical distribution will have to be supplemented by a distribution network that reaches non-pharmacy outlets such as the distribution of mass consumer goods that are usually available everywhere.

STRATEGY 5: Motivate the private sector to play an active role in the promotion and sales of ORS, while keeping an affordable public price.

The classification of ORS in the (hospital) large pack category will generate the largest profit margins: wholesaler 18 percent and pharmacist 36 percent. The landed cost along with the classification of the product will help a minimum public price. However, if we include the additional distribution and promotion cost aimed at generating the demand, the cost to the public will be increased (unless the additional cost is subsidized by donors.) Assuming that all promotion costs will be subsidized for the first 2-3 years, and using for example the lowest quoted landed cost of 52 FCFA (for a quantity of one million ORS), we would obtain a public price of 84 FCFA which produces a wholesaler margin of 10 FCFA and a pharmacy margin of 22 FCFA.

STRATEGY 6: Develop a consumer-oriented strategy for ORS.

ORS is aimed ultimately to be used by the population for self-medication. To initiate and sustain its use, it is important to have a user-friendly product whose message is clearly understood, is relevant to the caretakers expectations, is available where the user needs it, and is translated down to every communication material including the packaging. The development of the ORS marketing strategy must adhere to this orientation in the product presentation, the price, the distribution, and the promotion strategies.

STRATEGY 7: Change behavior of health professionals in the private sector.

The categories of health professionals include pharmacists, assistant pharmacists, owners of "pharmacy depots", physicians, midwives and nurses. A promotion strategy will be developed taking into account the felt advantages of their current practice in the treatment of diarrhea, the perceived barriers to ORS use, and the needs and expectations of health professionals regarding diarrhea management. The promotion strategy will clearly demonstrate the comparative advantages of ORT/ORS and the benefits of this state-of-the-art treatment.

Depending on the commercial partner resources, any of the traditional promotional activities for health professionals could be implemented: detailing by medical representatives, scientific meetings, literature, training seminars, samples, and reminders, etc.

Meetings should be held and regular contacts maintained with the directors of the two pharmacy associations (Mrs. Decupper and Mrs. Fall) to obtain their commitments to contributing to the national diarrhea control program.

Also, meetings should include the head of the physicians' association (Dr. Mbaye NDOYE), to obtain his support and to involve the medical association in future activities related to the medical treatment problem of diarrhea.

As additional resources, SOMARC and SANFAM are both interested in adding child survival activities to their respective programs. They could be enlisted to implement promotional, training, and educational programs.

SANFAM is already active in providing family planning counselling to 35 large enterprises (from 300 to 8000 employees). SANFAM organizes training sessions for nurses, midwives, pharmacists, and physicians.

SOMARC already has a pilot project in Senegal. The project ends in 1995, but there is a good chance that it will be extended nationwide. SOMARC is developing its strategy for national social marketing for family planning. Although SOMARC has not worked specifically with ORS, it has broad experience in social marketing and can implement activities complementary to those of the commercial partner and SANFAM. Coordination with the BASICS program will be achieved by continuing contacts with SOMARC in both Senegal and Washington.

STRATEGY 8: Create and sustain the demand for ORS.

A strong and sustained demand for ORS is the engine that will guarantee the sustainability of the commercialization efforts. To build a demand for ORS, the needs of the market must be addressed at all levels: prescribers, dispensers, other influential people, and the end-users. To undertake this concerted effort, the appropriate resources of the different partners in both the public and the private sectors should be mobilized: manpower resources from the MOH, the

donor-financed projects, and the commercial partner; financial resources from donors; and material resources from the commercial partner.

STRATEGY 9: Enlist appropriate resources from donors.

Each donor organization has comparative advantages that could be used to optimize the impact of the ORS commercialization effort. The pooled financial and human resources will be allocated according to the requirement of the marketing plan. The latter is, for instance, to be developed through technical assistance from USAID/BASICS. Financial assistance will undoubtedly be needed to support the demand-generation campaign for the next two to three years. Technical assistance in areas of marketing, sales management, training, IEC, etc. could be split according to each organization's expertise. On the other hand, sources of ORS supply to the public sector are more advantageous through UNIPAC than from USAID's supplier.

STRATEGY 10: Monitor and coordinate the ORS commercialization project.

A coordinator needs to be appointed to manage, coordinate, implement, and monitor the progress of ORS distribution in the private sector. As this is a joint effort among several partners, it is crucial to coordinate the activities of the multiple players. These include USAID, SANAS, UNICEF, WHO, the commercial partner, the pharmacy associations, the physicians' association, SOMARC, and SANFAM. Some of the specific activities that need to be monitored include: securing stock availability, assuring balanced distribution, monitoring the quality of the advertising and promotion campaign, evaluating distribution and sales results, and recommending to the partners the necessary actions to overcome problems or to grasp new opportunities.

As a first option to identify a coordinator, we recommend exploring the possibility with the potential commercial partner. The ideal situation would be that the commercial distributor has, or could be convinced to appoint or hire, a project manager. In that case, this person will be trained in the areas of planning, product management, marketing, and administration, according to the needs identified.

As a second option, SANFAM and/or SOMARC could be appointed to be the project coordinator to work with SANAS and BASICS. SANFAM is already a subcontractor of USAID and is in contact with the public sector and private health professionals and companies. A network is already developed for training, information and supplies for family planning, to which child survival activities could be added.

X. ACTION PLAN AND RECOMMENDATIONS

BASICS recommends the following chronological activities be undertaken in collaboration with the MOH, USAID, UNICEF, and other projects:

- * develop a preliminary marketing plan;
- * obtain MOH and donor approval of and commitment to the proposed marketing plan;
- * approach identified importer/distributor to establish partnership;
- * help identify a source of ORS supply;
- * identify manager/coordinator of commercialization efforts;
- * elaborate marketing strategies with partner;
- * obtain funding for promotional activities;
- * implement marketing plan; and
- * launch ORS commercially.

The above activities can be achieved in 12 months, once a commitment to the proposal is obtained.

XI. CONCLUSIONS

The complete lack of ORS in the private sector, combined with weak distribution in the public health system, presents a unique opportunity to start a new, solid, and sustainable commercialization project. This intervention promises to have a significant national impact, complementing the efforts of the public health system, thereby helping to achieve the national objective of reducing infant mortality by 40 percent by the year 1999. Also with its expected limited donors' investment, it may prove to be for the donors the most cost-effective intervention on the national level.

APPENDICES

APPENDIX 1

APPENDIX 1

THEORETICAL NEEDS ESTIMATION FOR ORS IN 1995

CATEGORY	SENEGAL	FATICK	KAOLACK	LOUGA	ZIGUINCHOR	ZUSAID
POPULATION	8346605	578382	971884	530397	478903	2559565
CHILDREN < 5 YEARS	1585855	109893	184658	100775	90992	486317
14 DAY PREVALENCE	20,6%	21,0%	23,3%	24,5%	20,8%	22,9%
EPISODES/CHILD/YEAR	4.4	4.5	5.0	5.3	4.5	4.9
TOTAL EPISODES/YEAR	7014143	495486	923779	530108	406358	2391108
CASES NEEDING ORS	1753536	123872	230945	132527	101589	597777
ORS PACKETS NEEDED	3507072	247743	461889	265054	203179	1195554

HYPOTHESES USED FOR THE CALCULATIONS

POPULATION 1995 (ESTIMATIONS FROM THE STATISTICS DIVISION OF THE MEFP)

CHILDREN < 5 YEARS = POPULATION X 19%

14 DAY PREVALENCE (DHS II)

MEAN DURATION OF ACUTE DIARRHEA = 4 DAYS

INCIDENCE/DAY = (14 DAY PREVALENCE) / (14+4-1)

EPISODES/CHILD/YEAR = INCIDENCE/DAY X 365 DAYS

TOTAL EPISODES/YEAR = EPISODES/CHILD/YEAR X NUMBER OF CHILDREN < 5 YEARS

CASES NEEDING ORS = TOTAL EPISODES/YEAR X 25%

TOTAL ORS PACKETS NEEDED = CASES TO TREAT X 2 PACKETS/CASE

APPENDIX 2

APPENDIX 2

REGIONAL DISTRIBUTION OF PHARMACIES IN SENEGAL

REGIONS	NUMBER	PERCENTAGE
Dakar	115	50.0
Diourbel	12	5.2
Fatick	5	2.2
Kaolack	18	7.8
Kolda	5	2.2
Louga	6	2.6
St. Louis	20	8.7
Tambacounda	6	2.6
Thiès	31	13.5
Ziguinchor	12	5.2
TOTAL	230	100.0

APPENDIX 3

APPENDIX 3

ANTIDIARRHEAL PRODUCTS AVAILABLE IN PHARMACIES

PRODUCT NAME	PUBLIC PRICE (FCFA)
Paregoric Tab. 10's (opium) - SIPOA	187
Ercefuryl syrup (nifuroxazide) - Synthelabo	2053
Ricridine	2192
Ganidan 10's (sulfamide) - SIPOA	180
Ganidan 20's	490
Actapulgite (attapulgite)	1340
Sacolene (lacto protein) - SEARLE	1416
Intitrex (tilliquinol) - Beaufour	

PROFITABILITY CALCULATIONS (FCFA) FOR TOP TWO SELLING DRUGS

1. ACTAPULGITE

Public price	1340
Pharmacy profit	387
Wholesaler profit	148 + hidden percentage (about 10%)

2. ERCEFURYL

Public price	2053
Pharmacy profit	594
Wholesaler profit	226 (same comments as above)

APPENDIX 4

APPENDIX 4

PROFIT MARGIN COMPARISONS FOR ORS (FCFA)

	SOCIAL PRODUCT	REGULAR PRODUCT	LARGE PACK
Landed Cost of ORS	52.0	52.0	52.0
Wholesalers			
- Price	56.7	60.1	61.4
- Margin	4.7	8.1	9.4
Pharmacists			
- Price	61.8	77.4	83.4
- Margin	5.1	17.3	22.0
Public price	61.8	77.4	83.4
Total amount of profit for 500,000 packets (wholesalers)			
	2,350,000	4,050,000	4,700,000
	US\$ 4,700	US\$ 8,100	US\$ 9,400
Gross pharmacists' profit			
	2,000,000	8,650,000	11,000,000
	US\$ 4,000	US\$ 17,300	US\$ 22,000

Note: Exchange rate used: US\$ 1 = 500 FCFA

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APPENDIX 5

APPENDIX 5

LIST OF ORGANIZATIONS AND PEOPLE CONTACTED

BRUSSELS - BELGIUM

European Commission
Dr. Elizabeth FERET
General Directorate VIII
Telephone: 32.2.296.9794

Senegalese Embassy
Mr. DIAGNE - Commercial attaché

SENEGAL - DAKAR

PNA:
Mr. TOURE - Director
Colonel Gilbert BENSADOUN - Advisor - Procurement
Captain Mamadou NGOM - Distribution/Warehouse

MSH:
Margaret WATT - Consultant
Glenn BLACK - Logistics Specialist

SOMARC:
Stephen GREGORY - Regional manager
Telephone: 212.67.19.89 Rabat, Morocco

Mrs. Seynabou MBENGUE - Coordinator - Senegal
Telephone: 24.61.44

BANKS:
Fodé NDIAYE - Vice President - Agricultural Credit
El. Hadj GUEYE - CITIBANK

GENERAL PHARMACY (MOH):
Prof. Issa LO - Director
Mr. Saliou NDIAYE - Administrator
Mrs. Maryam NDIONE: Pricing

SANFAM:
Alpha DIENG - Director

US EMBASSY:
Mr. Y. BA - Commercial assistant

USAID:
Mrs. Fatoumata SY - Program Officer

CHAMBER OF COMMERCE:
Mr. M. SOUGOU - Secretary general

CADU:
Professor Mohamadou FALL (Pediatrics chairman in the
Medical School)

The Union of Pharmacists: Mrs. DECUPPER - President

COMPANIES

LABOREX: Gerard Delaty - General Manager

COPHASE: Jean Marc MICHEL - General Manager

SODIPHARME: DAOUDA THIAM - General Manager

SIPOA: MICHEL BONNO - General Manager

VALDAFRIQUE: Jean-François GAMAURY - General Manager

PARK DAVIS: Cheikh BA - Production Manager

ORDER OF PHARMACISTS: Mrs. FALL - President

UNICEF: Dr. Lenin GUZMAN

EEC REPRESENTATIVE: Mr. DESESSQUELLES.

PRIVATE PHARMACIES: Five

MOH: Colonel Lamine Cissé SARR, Director of Hygiene and Public Health

SANAS: Dr. Mahktar MBAYE - Director
Mrs. Régine DIOUF - Private Clinics Coordinator

SENEGAL - KAOLACK

MOH: Medical Region: Dr. Abdoulaye LY - Chief Physician
PRA: Director

PRIVATE PHARMACY

SENEGAL - FATICK

MOH: Medical Region: Dr. Malan COLY - Chief Physician
BRAN: Mr. Gérard DIONE - Director
Fatick District: Dr. Masserigne NDIAYE - Chief Physician

APPENDIX 6

APPENDIX 6

HOSPITAL PACKS (GENERIC)

Paracetamol 500 apr. Bt/1000 C.H

Paregorique FHM 1kg. C.H

Phenobarbital 100 cp Bt/500 C.H

Sipofer compr. Bt. /1000 C.H

Sipoquine Bt./12 x 3

Sipoquine 200mg compr. Bt/150 C.H

Sulfaguamidine SIPOA cp/1000 C.H

Terpine codeme SIPOA plaq/10 Bt/1000

Vitam B1 - B12 SIPOA amp. Bt/100 C.H

Vitam B12 SIPOA 2 ml Bt/100 C.H

Vitam B6 250 mg SIPOA Bt/1000 CH

Vitam C 500 compr. BL Bt/500 CH

Aspirine specia 0,5 cp B/1000

Flagyl hy 100 ml F.V. carton/25

Gehisil Laate pdre sach B/30 MH

Nivaquine 100mg cap. B/1000 MH

Paluject 200 mg Amp 2ml B/100 MH

Paluject 400 mg Amp 4ml B/100 MH

Parkazole enf. ap. B/100 M.H

Penialline G. Sarback 1M fl B/50

Ponstyl 250 mg gelul B/170 M.H

S AT Merieux Ser. 1ml 1500 B/20
Fansidar mg amp 2ml Bt/30 MH
Ferrostrane sp fl/60 ml Bt/12 M.H
Flagyl 0,5% mg FV 100ml B/1
Gelusil cp Bt/150 M.I.
Hextril solut. 60 ml Bt/12
Muciclar AD sp. 60 ml Bt/12 MH
Muciclar enf sp 60 ml Bt/12 MH
Parkazole AD comp. Bt/500 MH
Parkazole Fort comp. B/100 MH
Parkazole susp. fl/100ml Bt/9 MH
Ponstyl enf. sp. fl/60ml Bt/12 M.H
Ponstyl Fort 500 mg compr. B/180 M.H
Quinimax 200 mg inj amp. 2ml B/50
Quinimax 400 mg inj amp 4ml B/50
Rinurel compr. Bt/500 MH
Rinutan sirop fl/60 ml Bt/12 M.H
Vermintel susp. fl/30ml Bt/16
Vermintel 250 mg compr. Bt/51 M.H.
Aspirine R.P.S comp. B/100
Aspirine SIPOA 1 kg B/2000 CH
Aspirine specia comp. B/1000 CH
Chloramphenicol 250 gelu. B/1000 CH

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Chloroquine SIPOA fl /125 ml/ 25. CH
Paluject 0,10 inj B/100 CH
Amoxicilline 500 mg gelu Bt/600
Ampicilline 500 mg gelu Bt/600
Aspirine SIPOA comp Bt. B/1000 CH
Atropine sulfate 0,25 1ml/100 CH
Auréomycine SIPOA 1% ophtalm /80 CH
Auréomycine SIPOA 3% derm/70 CH
Chloroquine SIPOA comp. BL B/1000
Eau distillée amp. inj 5ml B/100
Isoniazide 150 SIPOA comp. B/500
Paluject 0,20 inj B/100 CH
Paluject 0,40 inj B/100 CH
Paregorique SIPOA cp Plaq/10 B/1000
Tetracycline SIPOA 250 mg gelul Bt/600 CH
Vitam C 500 comp. BI B/500 CH
Aspegic 0,5 g amp inj B/20 CH
Benylin SIROP fl/60ml B/12 MH
Bipeni sarback 1M inj flacon B/50
Camoquine sirop fl/60ml Bt/12 MH
Camoquine 600 mg cp Bt/60 MH
Catapressan inj Amp. 1ml Bt./30 MH
Chilral cp B/100 MH

Sulgaganidine cp B/1000 SIPOA

Terpine codeme cp B/1000 SIPOA

Totapen 1g inj IM IV flacon B/20

Totapen 500mg inj IM IV flacon B/20

Urotrate cp BT/84 MH

Vegamine cp Bt/500 MH

Vitam. C 500 mg inj A 5ml B/100 SIPOA

Vitam. B1 + B12 Amp 2ml B/100 SIPOA

Vitam. B12 1000 amp. 2ml B/100 SIPOA