OVERCOMING BARRIERS TO MARKETING ORS
IN THE PRIVATE SECTOR IN PAKISTAN:
A REPORT ON MARKETING AND SALES WORKSHOPS

A Report Prepared By PRITECH Consultant:
Camille Saade

During The Period
October 10 - 27, 1988

TECHNOLOGIES FOR PRIMARY HEALTH CARE (PRITECH) PROJECT
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ORS MARKETING IN THE PAKISTAN PRIVATE SECTOR

The purpose of my visit, (October 10 - 27, 1988) was to develop/improve the marketing of ORS in the large private sector of Pakistan. It was agreed up front that my visit would be of practical usefulness to private ORS manufacturers instead of just another assessment. Consequently, the following scope of work was developed emphasizing practical output:

1. SCOPE OF WORK
   1.1 Conduct a two-day workshop on the development of an ORS marketing strategy for all actual and potential ORS producers.
   1.2 Follow-up with interested companies to fine-tune their marketing strategies.
   1.3 Conduct a one-day training seminar on sales techniques for sales managers/sales trainers of ORS producers employing detailmen.
   1.4 Write a proposed strategy for marketing ORS in Pakistan.

2. BACKGROUND - Private Pharmaceutical Sector in Pakistan

There are nine private producers of ORS in Pakistan that have a capacity to produce approximately 120 million one-liter packets per year. A government-owned facility has the capacity to produce up to 5 million one-liter packets per year. A study for UNICEF on prevailing manufacturing/marketing of ORS in Pakistan was conducted by Pakistan Consultancy Services, National Development Finance Corporation in 1987. That study looked at present and potential demand for ORS through commercial channels. Private physicians, hakeems, homeopaths, and chemists in four cities were surveyed. The study reported a high awareness of ORS among doctors. Three out of four of the surveyed doctors are prescribing ORS -- usually, however, in combination with antibiotics and/or antidiarrheals. The physicians recommended greater health education about ORT especially in rural areas, as well as greater availability not only in chemist shops but also in general (grocery) stores. Homeopaths and Hakeems, on the other hand, were mostly unaware of ORS.

Ninety-seven percent (97%) of chemists' shops were stocked with at least one ORS brand. Most ORS sales were generated by customer demand (one quarter of sales), and by doctor's prescriptions (one fifth of sales). The remaining sales came from pharmacist's recommendations, other health professionals, and others i.e., word-of-mouth, etc. Chemists reported increased
awareness and use of ORS among the public. ORS seems to be making its way as a product for treatment of diarrhea, but without displacing the traditional antibiotics and antidiarrheals.

The study reported a total production of approximately 30 million packets in 1985-1986, which means that, on average, the ORS producers are utilizing only 25% of their production capacity. The potential demand is estimated at 63 to 88 million packets per year, based on achievable coverage of children under age five.

Evidently the market potential for ORS is there for the private sector to exploit.

3. MARKET ANALYSIS

3.1 Antidiarrheals: Market Composition

The plethora of antidiarrheal drugs in Pakistan contributes greatly to slowing the progress of proper diarrhea case management at the national level. Based on IMS pharmacy sales audits in early 1988, this crowded market was estimated at $7.5 million. The antidiarrheal preparations can be broken down in four sub-categories.

3.1.1 Antidiarrheals/Antibacterial Combinations

There are 82 different drugs representing annual sales of $4.6 million. This group includes typically a combination of an antibacterial or "intestinal antiseptic" such as sulfaguanidine, furazolidone, neomycin, diodohydroxyquinoline, chloramphenicol, etc., plus one or more adsorbents such as kaolin, pectin, aluminum or magnesium. The top five products command almost 2/3 of the group. Some of these products are in the process of deregistration and will soon be removed from the market once the actual stock is exhausted.

3.1.2 Motility Inhibitors

The five products in this group represent just under $1 million, however it is the fastest growing group with an annual increase of 20%. Imodium and Lomotil are the group leaders.

3.1.3 Intestinal Adsorbents

This group of 13 products includes the traditional cocktail of kaolin, pectin, and magnesium. It is evaluated at $1.3 million.
3.1.4 Oral Electrolyte Replacers/ORS

With the recent phasing-out of the Peditral 10g and 40g formula, ORS packs in the private sector now consist of a homogeneous group of eight brands. All eight brands use the WHO formula and a one liter packet size. Some of the brands are flavored. In early 1988 the group was evaluated at $.7 million. This figure is not representative of the real sales of ORS, however, as a large part is sold in drug outlets not covered by the IMS sales audit.

Sales of Antidiarrheal Drugs in Pharmacies

<table>
<thead>
<tr>
<th>Category</th>
<th>$Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Antidiarrheal/Antibacterial Combinations</td>
<td>4.6</td>
</tr>
<tr>
<td>B) Motility Inhibitors</td>
<td>.9</td>
</tr>
<tr>
<td>C) Intestinal Adsorbents</td>
<td>1.3</td>
</tr>
<tr>
<td>D) Oral Electrolyte Replacers/ORS</td>
<td>.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$7.5 million</strong></td>
</tr>
</tbody>
</table>

3.2 Competitive Activity

The antidiarrheals market leaders -- Wyeth, Smith Kline & French, Searle, Abbott, Sandoz, and Janssen -- are all subsidiaries of multinationals with tremendous marketing strength and experience. Their marketing activities rely mainly on detailing, where their 50 to 80-person sales forces cover most physicians on a regular basis. Prior to and during the diarrhea season (generally May-August), the detailmen increase their emphasis on antidiarrheal drugs using detailing literature, heavy sampling, and gimmicks. Their sales effort is backed by advertising in medical journals and sales promotions at the pharmacy level -- i.e., bonus offers, free goods, sales incentives, etc.

3.3 ORS Promotion Activities

Except for Wilson's which employs 41 detailmen, no noticeable ORS promotional effort was done by other ORS producers. Even worse, some, like Fakhma Pharma, had lately eliminated their sales force.
Wilson is by far the market leader. It claims 80% of the ORS market. Wilson's sales force covers all major urban areas. It details physicians using locally developed detailing brochures (Appendix A), and covers pharmaceutical/drug outlets and wholesalers to put orders. Coverage of smaller rural areas is accomplished through a network of 19 regional distributors employing a total of some 120 salesmen. Wilson's has expanded its coverage to include paramedical "Quacks," and is planning to increase its penetration in rural areas. ORASAL-F (Wilson's ORS brand) represents 30% of total Wilson's sales, second to Coedene (a cough and cold product) which represents 35% of its sales. However, Wilson's plan is to lessen its dependency on these two products and to diversify into a wider product portfolio including an analgesic, a tranquilizer, a cough syrup, and a dermatological preparation. This expansion may affect ORASAL promotion negatively as most resources and efforts will be directed toward the new products.

It should be noted that ORASAL-F exists in three different flavors, each with a slightly different packet design and color: orange, pineapple, lemon and lime. The awarded NIH tender is filled with unflavored ORASAL in a monocolor packet.

ORS, whatever the brand, would greatly benefit from a synergistic promotion carried out by all producers. The key issue is to shake the lethargy of the ORS producers and obtain a change in their behavior towards ORS. So far, they have not carried out any active promotion mainly due to lack of resources and lack of expertise in marketing.

4. KEY-ISSUES AND STRATEGIES DISCUSSED/DEVELOPED

4.1 How to motivate and enlist the commitment of all ORS producers is essential to build necessary promotional "noise level," expand distribution to rural areas, standardize key ORT messages and complement NIH efforts.

4.1.1 Strategy - Marketing Workshop

The objective of the workshop was to sensitize ORS producers and distributors to the existing market opportunities and to the potential benefits generated by both their collective and individual interventions.

For this, a "neutral ground" meeting including all ORS producers was organized on October 16 and 17, taking care to circumvent potential competitive sensitivities. The meeting took the form of a
hands-on marketing strategy workshop, using a simulated case study a la Harvard Business School (Appendix B).

The case used close-to-real data in a fictitious but realistic business situation. Most participants were able to relate to the case. Assignments were designed to allow the participants to develop a typical marketing plan through a methodical approach. Participants were divided into small groups to allow maximum interaction. Each group discussed, developed, and presented its findings on:

- market analysis including entry market, competition, target audience, and assessment of potential;
- key issues identified as opportunities and problems;
- specific, measurable, attainable objectives;
- strategies that address all key issues;
- market tactics, and action plan for each target audience, integrated in a time frame.

(Please refer to Appendix B for more details.)

Professor Mushtaq Khan, a well-known pediatrician and champion of ORT, did a beautiful job in sensitizing and winning the participants to ORT.

4.1.2 Outcome of marketing strategy workshop

Participants came away from the workshop extremely enthusiastic about ORS. Most important, they committed themselves to implement the techniques they learned during the intensive workshop in their job. Some of the most relevant outcomes of the workshop identified through a feedback form filled by each participant at the end of the workshop, include:

- understanding of marketing -- its role, functions, and mechanisms;
- first-hand experience in the development of a preliminary ORS marketing plan;
- better appreciation of ORT's role and usefulness;
- commitment to actively promote ORS;
- breaking the isolation and producing a feeling of belonging to the "fraternity" of ORS producers, a group invested with a special social responsibility;
- forming a common front to request MOH permission to sell ORS in non-drug outlets, thus a willingness to expand distribution;
- agreement to incorporate standard messages in all ORS copy such as packet, detailing brochures, and other printed material;
- focusing competitive activities against antidiarrheals;
- willingness to upgrade their operations through modern marketing techniques -- i.e., advertising, market research, sales training, etc;
- a unanimous demand to participate in a next workshop on sales training, date of which was set for October 23.

4.2 **How to maximize the resources and upgrade the technical and marketing capacities of the ORS producers to enable them to grasp the market opportunities and better equip them to fight the competition effectively.**

4.2.1 **Strategy**

A second objective was to provide collective technical assistance with special emphasis on modern marketing techniques through a series of workshops tailored to the producers' common needs. The first workshop on marketing strategy generated an encouraging response; a second workshop on selling techniques was held one week later on October 23. The objective of this workshop was to increase the selling power of the companies employing a sales force by increasing their efficiency in convincing physicians, pharmacists, and retailers to use/recommend their ORS brand. The group participating in the workshop on selling techniques was more homogeneous than in the preceding workshop as it grouped the sales executives of the companies. The participants of the second workshop all had the chance to implement the PAWNFAB selling techniques through role-playing. (See Appendix C for details)

Dr. Waheed Quereshi provided a clear overview of the advantages of ORS over other therapies. Participants were able to integrate these selling points in their mock-detailing.

4.2.2 **Outcome of the sales training workshop**

The workshop was as successful as the one on marketing strategy. The participants gained new
practical knowledge to convert a detailing call into an effective selling result. Participants learned the following major aspects of a thorough selling process:

- planning (work your plan, plan your work);
- select your target (i.e., focus on Cat. A prescribers who represent the bulk of the business: high-volume, influential customers);
- establish two-way communication, assume a problem-solving attitude;
- satisfy doubts with third-party proof (use of medical reference);
- handle objections with third-party proof (avoid confrontation);
- convert features of the product into advantages and benefits to the customer (ask the "so what?" until satisfied);
- summarize benefits to the customer and close by obtaining a commitment to a course of action.

Above all, the participants learned to adopt a customer-oriented approach, instead of a product-oriented approach. While time limited the workshop to only selling techniques, the participants also gained some knowledge on sales management.

4.3 How to overcome the broad use of antidiarrheals, which is a serious obstacle to the rapid adoption of ORT.

Strategies

Two suggested strategies could be used to phase-out the antidiarrheals:

4.3.1 The ban of all useless antidiarrheals, especially their pediatric forms, i.e., syrup, drops or powder by the MOH.

Two years ago as a result of WHO recommendations, the MOH banned antidiarrheals containing streptomycin. Companies producing such combinations (e.g., Wyeth's Streptomagma, the market leader) just deleted streptomycin from the product formula. However they were able to maintain their leading position capitalizing on the product's previous image.
The drug committee at the MOH should continue reinforcing the latest WHO recommendations concerning the ban, in children under five, of all antidiarrheal combinations such as those containing sulfaguanidines, other sulfonamides, and neomycin. WHO also recommends the ban of antimitility drugs especially in children, and drugs containing hydroxyquinoline or furazolidone. (Appendix E)

4.3.2 Enlist remaining antidiarrheal-producing companies to take a positive action by either refraining from promoting antidiarrheals, or by promoting the use of ORT as first line treatment for diarrhea in all their communication, detailing and advertising efforts.

This approach was taken by two drug companies: Searle and Upjohn. They both responded positively, Searle by cutting its promotion of Lomotil and hopefully Diodoquin, and Upjohn by stopping any new importation of Kaomycin and Kaopectate. Upjohn was even willing to promote/detail ORT until exhaustion of its stock of Kaopectate.
5. **FOLLOW-UP STRATEGIES**

The following strategies are essential to ensure the successful marketing of ORS by the private sector.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Responsibilities</th>
<th>Proposed</th>
<th>Funding</th>
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<tbody>
<tr>
<td>5.1 Support collectively ORS producers by:</td>
<td>NIH/PRITECH</td>
<td>6-9/89</td>
<td>USAID</td>
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<tr>
<td>5.1.1 Launching a generic ORS mass media campaign to generate demand</td>
<td>Ad Agency</td>
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<td>5.1.2 Upgrading their marketing efficiency through practical workshops on:</td>
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<tr>
<td>* advertising (copy, strategy, media)</td>
<td>PRITECH/PATH</td>
<td>9/89</td>
<td>PRITECH</td>
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<td>* market research (focus group, test marketing)</td>
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<td>* merchandising (In-store Promotion, Point-of-Sale material)</td>
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<td>* packaging (image, design, copy, testing)</td>
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<tr>
<td>5.1.3 Providing technical assistance for upgrading production</td>
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<td>5.2 Remove obstacles for early ORS adoption</td>
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<tr>
<td>5.2.1 Obtain/re-enforce ban of certain anti-diarrheals, i.e., combinations, pediatric forms of motility inhibitors, sulfaguanidines.</td>
<td>WHO/NIH/MOH</td>
<td>12/89</td>
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<tr>
<td>5.2.2 Approach private companies to obtain voluntary restraint on marketing of their anti-diarrheals.</td>
<td>PRITECH (CS/LFT)/ NIH</td>
<td>5-12/89</td>
<td>PRITECH</td>
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<td>5.3 Obtain reclassification of ORS in order to allow distribution to non-drug outlets in rural areas</td>
<td>MOH/NIH/WHO</td>
<td>5/89</td>
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</tbody>
</table>
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- List of Appendices and References for the Case Study:
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  o Summary of K.A.P. Study on Rural Population
  o Communication channels
  o Market Data (pharmacy sales)
  o SERVIDRAT introductory brochure
  o Health Action International (HAI) Report on antidiarrheals
  o Models of Package Designs, Labels and Leaflets
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  o The Main Course of Child Death
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- Evaluation of Workshop

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APPENDIX A

LIST OF PERSONS CONTACTED IN THE PRIVATE SECTOR
### LIST OF CONTACTS (outside the participants to the workshops)

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Address</th>
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<tr>
<td>Ray Martin</td>
<td>Chief, HPN</td>
<td>U.S. Agency for International Development</td>
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<td>18 Ataturk Avenue, Ramna 5</td>
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<td></td>
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<td>P.O. Box 1028, Islamabad, Pakistan</td>
</tr>
<tr>
<td>Anne H. Aarnes</td>
<td>Deputy Chief</td>
<td>same as above</td>
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<td>Lucia Ferraz-Tabor</td>
<td>The PRITECH Project</td>
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<tr>
<td>Syed Ahmad</td>
<td>Director</td>
<td>Servier Scientific Office</td>
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<td></td>
<td></td>
<td>1st Floor, UZMA Court</td>
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<td>Main Clifton Road, Karachi</td>
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<tr>
<td>Mushtag A. Piracha</td>
<td>Marketing Director</td>
<td>Reckitt &amp; Colman of Pakistan Ltd.</td>
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<tr>
<td></td>
<td></td>
<td>Nelsons Chambers, 1.1, Chundrigar Rd., Karachi</td>
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<tr>
<td>Pervez Said</td>
<td>General Sales Mgr.</td>
<td>Reckitt &amp; Colman of Pakistan Ltd.</td>
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<tr>
<td>Intesar A. Siddiqui</td>
<td>General Manager</td>
<td>N.V. Upjohn S.A.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>41 R. Dr. Mahmood Hussain Road</td>
</tr>
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<td></td>
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</tr>
<tr>
<td>Samad Khalil</td>
<td>Marketing Mgr.</td>
<td>W. Woodward Pakistan (Pvt.) Ltd.</td>
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<tr>
<td></td>
<td></td>
<td>F-275 S.I.T.E., P.O. Box 7886, Karachi</td>
</tr>
<tr>
<td>Frank S. Samaraeera</td>
<td>Resident Advisor</td>
<td>c/o USAID.,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Road No. 1, S.M.C.H., Society Karachi</td>
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<tr>
<td>S. Shahab Balkhi</td>
<td>Marketing Director</td>
<td>Wyeth Laboratories (Pakistan) Ltd.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5th Floor, Avari Plaza, 242-243 Civil Lanes, Fatima Jinnah Road</td>
</tr>
<tr>
<td>H. Aftab Ahmad</td>
<td>Chief Executive</td>
<td>AFTAB Associates (Pvt). Ltd. Marketing &amp; Research Consultants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26-B, Gulberg-2, Lahore-11 Pakistan</td>
</tr>
<tr>
<td>Sarwar Chaudhry</td>
<td>Director, Technical Operations</td>
<td>Searle Pakistan (Pvt.) Ltd.</td>
</tr>
<tr>
<td>Name</td>
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<td>Address</td>
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</tr>
<tr>
<td>Ejaz-ul-Islam</td>
<td>B.Sc. (Hons), M.Sc., M.B.A., Product Manager</td>
<td>Searle Pakistan (Pvt.) Ltd., Subsidiary of G.D. Searle &amp; Co., P.O. Box 5696, Karachi 2</td>
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## ORASAL-F
Flavoured O.R.S With WHO Formula

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<td>KCl</td>
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### Better Compliance

To make oral rehydration therapy more palatable and acceptable for the sick children and adults, ORSAL-F is available in

- Three Flavoured
  - Orange
  - Pineapple
  - Lemon & Lime

For further information please contact:

WILSON'S PHARMACEUTICALS
Industrial Area, Islamabad, Pakistan
Citrate ORS was clinically as effective as bicarbonate ORS. Citrate has been accepted as the standard in WHO's recommended ORS formula, because of its better shelf life.


LUMPING
ORS – citrate .......... it may, however absorb moisture and some lumping, which is usually acceptable.

WHO/CDD/SER/85.6**

CONCOMITENT NUTRITION
"Adequate nutrition is essential for recovery. Recent controlled studies have shown that intravenous total parenteral nutrition is more expensive, slower, less effective and cause many more problems (infection, catheter slippage, thrombosis) than feeding through the gut. Food in the intestine feeds the mucosal cells, enhances cellular proliferation for healing and induces enzymes, while resting the gut results in atrophy."

CHRONIC DIARRHOEA IN CHILDREN – A NUTRITIONAL DISEASE LANCET, 17 January 1987, 143-44.

90mmol 1 of Sodium
There is no magic about the 90mmol/l of Sodium used in WHO recommended formula for ORS. It represents a compromise between an appropriate concentration for rehydration and a concentration ideal for maintenance during continuing diarrhoea ...... What is magic is the importance of having a single solution to prevent confusion in national diarrhoea programmes. Therefore it is strongly recommended that multiple ORS formulas be avoided if possible. The needed variation in concentration of electrolytes between rehydration and maintenance can be handled perfectly well by giving water to drink and immediate feeding, especially breast feeding.


PHARMACOKINETICS
"Glucose facilitates the absorption of sodium (and hence water on a 1:1 molar basis) in the small intestine." "Sodium and potassium are needed to replace the body losses of these essential ions during diarrhoea (and vomiting)." "Citrate or bicarbonate correct the acidosis that occurs as a result of diarrhoea and dehydration. They also enhance the sodium absorption in the small intestine."

Oral Rehydration Sa... WHO/CDD/SER/85.8
APPENDIX C

WORKSHOP DOCUMENTS:
ADVANCED MARKETING STRATEGY AND TECHNIQUES
WORKSHOP:
ADVANCED MARKETING STRATEGY AND TECHNIQUES

October 16 - 17, 1988

Workshop Leader: Camille Saade, PRITECH
Resource Person:  
Dr. Mushtaq Khan, Children's Hospital,  
Pakistan Institute of Medical Sciences, Islamabad  
Lucia Ferraz-Tabor, PRITECH/Pakistan
Invitation Letter
October 15, 1988

To Workshop Participants

Welcome to the "Advanced Marketing Strategies and Techniques" Workshop!

We are glad you will be sharing your expertise and experience with your colleagues and us during the coming two days.

Attached you will find a list of participants in the workshop as well as the agenda for the next two days.

Hotel accommodations and meals have been arranged and will be paid by the PRITECH Project, PHC/USAID. Prior to leaving the hotel please pay out any other expenditures such as phone calls, teas, laundry, etc.

You will be reimbursed for your plane ticket. Please mail the ticket stub to Rawal Associates, c/o Capt. Rashid Ahmed, P.O.Box: 749, Rawalpindi.

We are looking forward to a very rewarding and participative workshop.

Lucla Ferraz-Tabor
The PRITECH Project

Camille Saade
The PRITECH Project
## WORKSHOP PARTICIPANTS

<table>
<thead>
<tr>
<th>NAME</th>
<th>DESIGNATION</th>
<th>COMPANY</th>
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<tbody>
<tr>
<td>Kazim-Ul-Hasnain</td>
<td>Marketing Manager</td>
<td>WILSONS PHARMA.</td>
</tr>
<tr>
<td>Syed Zilley Hasnain</td>
<td>Area Manager (Sind, Balu)</td>
<td></td>
</tr>
<tr>
<td>Azam Abbas</td>
<td>Area Manager (Punj, NWFP)</td>
<td></td>
</tr>
<tr>
<td>Iftikhar A. Shaikh</td>
<td>Managing Director</td>
<td>PHARMEDIC LABS</td>
</tr>
<tr>
<td>Mazhar Suleman</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.A.H. Bokhari</td>
<td>Training Manager</td>
<td>SEARLE PAK. LTD.</td>
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<tr>
<td>Ejaz-Ul-Islam</td>
<td>Product Manager</td>
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<tr>
<td>Mohammad Hussain Malik</td>
<td>Director Sales</td>
<td>STAR LABS.</td>
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<tr>
<td>Mohammad Aslam Sheikh</td>
<td>Sales Executive</td>
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<tr>
<td>Naveed Haider Khan</td>
<td>Production Manager</td>
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<td>Aftab Iqbal</td>
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<td>Syed Khurshid Imtiaz</td>
<td>Marketing Manager</td>
<td>LAHORE CHEMICAL</td>
</tr>
<tr>
<td>Shahbaz A. Khan</td>
<td>Reg. Field Manager</td>
<td></td>
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<tr>
<td>Tariq Mahmood</td>
<td>Marketing Research</td>
<td>N.D.F.C</td>
</tr>
<tr>
<td>Pervaiz Saeed</td>
<td>Gen. Marketing Manager</td>
<td>RECKITT &amp; COLMAN</td>
</tr>
<tr>
<td>Zafar Awan</td>
<td>Marketing Pharmaceuticals</td>
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</tr>
<tr>
<td>Azad Alladin</td>
<td>Product Group Manager</td>
<td>UNITED DISTRIBUT.</td>
</tr>
<tr>
<td>Ch. Nadir</td>
<td>Managing Director</td>
<td>FAKMA PHARMA</td>
</tr>
</tbody>
</table>

## RESOURCE PERSONS/SPEAKERS

- Camille Saade, Marketing Specialist, The PRITECH Project/USA
- Agha Akhtar Ali, Director Marketing, Pakistan Consultancy Services
- Frank Samaraweera, Social Marketing Specialist, SMC Project/USAID
- Professor Mushtaq Khan, Paediatrician, Children's Hospital, PIMS
- Lucia Ferraz-Tabor, The PRITECH Project/Pakistan
Workshop Agenda
ADVANCED MARKETING STRATEGY & TECHNIQUES
WORKSHOP AGENDA

SATURDAY 15 OCTOBER:

20:00 Welcome refreshment and dinner at Ball Room of Pearl Continental Hotel, Rawalpindi.

SUNDAY 16 OCTOBER:

09:00 Introduction, objectives of Workshop USAID/PRITECH
09:30 Workshop format, the case study approach for practical marketing Mr. C. Saade
09:40 1st assignment to groups: Market analysis and key issues Mr. C. Saade
10:00 Groups break for case reading and discussion Groups
11:00 -- Tea break --
11:15 Groups discussion (cont’d) Groups
13:00 -- Buffet lunch --
14:00 Groups presentations on market analysis and key issues. Group leaders
15:00 Discussion and synthesis Mr. C. Saade
15:30 -- Tea break --
15:45 2nd assignment to groups: setting objectives and development of strategies Mr. C. Saade
16:00 Groups break for discussion Groups
18:00/19:00 Adjourn
20:00 Dinner at Marco Polo Restaurant
MONDAY 17 OCTOBER:

08:30  Introduction of today's agenda  Mr. C. Saade
08:35  ORT in diarrhoea management  Prof. Mushtaq Khan
09:30  Groups presentation on objectives and strategies  Group leaders
10:30  Discussion and synthesis  Mr. C. Saade
11:00  -- Tea break --  Mr. C. Saade
11:15  3rd assignment to groups: Marketing tactics & action plan  Mr. C. Saade
11:30  Groups break for discussion  Groups
13:00  -- Buffet lunch --  Groups
14:00  Group discussion (cont'd)  Groups
14:30  Groups presentation on action plan  Group leaders
15:30  -- Tea break --  Mr. C. Saade
15:45  Discussion and synthesis  Mr. C. Saade
16:30  Lessons from case study  Mr. C. Saade
17:00  Closing of Workshop  Mrs. L. Ferraz-Tabo

Check out from hotel before 18:00

VENUE: Board Room at lobby level
List of Participants
WORKSHOP PARTICIPANTS

WILSONS PHARMACEUTICALS (Ph: 584141, 584475)
387-288, I-9 sector
Industrial Area, Islamabad.

- Mr. Kazim-Ul-Hasnain, Marketing Manager
- Mr. Syed Zilley Hasnain, Area Manager (Sind,Balu.)
- Mr. Azam Abbas, Area Manager (PunJ.,NWFP)

-----

PHARMEDIC LABORATORIES (Ph: 431218, 430945)
Amin Building, Kharak
8 km. Multan Road, Lahore-8.

- Mr. Iftikhar A. Sheikh, Managing Director
- Mr. Mazhar Suleman, Field Manager

-----

SEARLE (PAKISTAN) LTD. (Ph: 200411)
Hakimsons Bldg., 19 West Wharf Road,
P.O.Box 5696, Karachi 2

- Mr. S.A.H. Bukhari, Training Manager
- Mr. Ejaz-Ul-Islam, Product Manager

-----

STAR LABORATORIES (PVT) LTD (Ph: 312065-324945)
50, Sanda Road
P.O.Box 790, Lahore.

- Dr. Zalghum Siddiqui, Technical Advisor
- Mr. Mohammad Aslam Sheikh, Sales Executive

-----

CHAUDHRY DAIRIES LIMITED (Ph: 271556)
Al-Firdous, 135 Ferozepur Road, Lahore.

- Mr. Naveed Haider Khan, Sales Manager
- Mr. Abdul Karim, Production Manager

-----

W. WOODWARDS PAKISTAN (PVT) LTD., (Ph: 295441-3, 292498)
F-275, S.I.T.E.,
P.O.Box: 7886, Karachi.

- Mr. Aftab Iqbal, Product Manager
- Mr. Saffullah Khan, Reg.Sales Manager
LAHORE CHEMICAL & PHARMACEUTICAL WORKS
137 Ferozpur Road, Lahore.

- Mr. Syed khurshid Imlaz, Marketing Manager
- Mr. Shahbaz A. Khan, Reg. Field Manager

N.D.F.C/PCS
7th Floor, Shaheen Complex,
M.R.Kayani Road, P.O.Box:5094, Karachi-2

- Mr. Tahir Mahmood, Manager

RECKITT & COLMAN
Nelson Chambers, I.I.Chundrigar Road, Karachi,

- Mr. Pervalz Sadiq, Gen.Sales Manager
- Mr. Fariq Mukhtar, Product Manager

FAKMA PHARMA
85, Ahmed Block
New Garden Town, Lahore.

- Mr. Chaudhary Nadir, Managing Director

ADIL PHARMA
Canal Bank, Fayaz Pul,
Mughalpura, Lahore.

- Sh. Mohammad Nazir, Field Manager
- Mr. Zafar Ali Bhatti, Marketing Manager

RESOURCE PERSONS/SPEAKERS

- Camille Saade, Marketing Specialist, The PRITECH Project/USA,
  Suite 700, 1655 NORTH FORT MYER DRIVE, Arlington, USA.

- Prof. Mushtaq Khan, Paediatrician, Children’s Hospital, PIMS,
  Islamabad. (Ph: 853142)

- Lucia Ferraz-Tabor, The PRITECH Project/Pakistan, c/o USAID/HPN,
  P.O.Box:1028, Islamabad.
Objectives and Assignments of Workshop
OBJECTIVES

UPON COMPLETION OF THIS WORKSHOP, PARTICIPANTS WILL HAVE DEVELOPED AN ORS MARKETING PLAN INCLUDING STRATEGIES AND PLAN OF ACTION.

PARTICIPANTS WILL IDENTIFY THE MOST EFFECTIVE APPROACHES FOR CREATING DEMAND FOR ORS AND TAPPING THE POTENTIAL ORS MARKET.

PARTICIPANTS WILL DEVELOP NETWORKS WHICH WILL ENABLE THEM TO INCREASE SALES THROUGH EXPANDED PRODUCTION AND DISTRIBUTION OF ORS IN PAKISTAN.

THROUGH EXCHANGE OF IDEAS PARTICIPANTS WILL BE ABLE TO DEVELOP READILY IMPLEMENTABLE MARKETING STRATEGIES.
CASE STUDY APPROACH

* REAL OR SIMULATED CASES
* IN GROUPS OR INDIVIDUALLY

OBJECTIVES

- SHARPEN ANALYTICAL SKILLS
- EXPOSE TO NEW DECISION-MAKING/PROBLEM-SOLVING OPPORTUNITIES

BENEFITS

- BETTER PERCEPTION OF OPPORTUNITIES
- MORE METHODICAL MARKETING APPROACH
- MORE FOCUSED STRATEGIES
- APPLICABILITY OF ACTION PLAN
1ST ASSIGNMENT

MARKET ANALYSIS

- Identify Servidrat entry market in $ based on 1987 data.
- Project potential needs for ORS/Servidrat by segments of the population (3 year projection starting 1988). Explain assumptions.
- Assess potential needs (demand) vs actual and potential supply.
- Identify the competition.

KEY-ISSUES

Develop all key-issues in terms of:

**Opportunities:** Factors favourable to Servidrat and/or Sidpharma
Factors unfavourable to competition

**Problems:** Factors unfavourable to Servidrat and/or Sidpharma
Factors favourable to competition

Include factors relevant to the following: Target audience attitude, Sidpharma's own marketing mix, environment, trend, future threats, fitness of Sidpharma organization, available resources (and manpower), etc.
2ND ASSIGNMENT

OBJECTIVES

- SET REALISTIC OBJECTIVES IN TERMS OF UNITS, $ AND MARKET SHARE.

- INCLUDE SUB-OBJECTIVES IF NEEDED.

STRATEGIES

DEVELOP STRATEGIES THAT WILL ACHIEVE YOUR OBJECTIVES. YOUR STRATEGIES SHOULD ADDRESS ALL IDENTIFIED KEY-ISSUES, SPECIFICALLY: DISTRIBUTION, USE OF SALES FORCE, OUTSIDE RESOURCES, SEGMENTATION OF TARGET AUDIENCE, PROMOTION AND ADVERTISING TO BOTH CONSUMERS AND INFLUENTIALS, PACKAGING, FUNDING, TESTING, ETC... IN OTHER WORDS, ADDRESS IN THE MOST COMPLETE WAY TO PUSH-PULL MECHANISM.
3RD ASSIGNMENT

MARKET TACTICS:

DETAIL EACH COMPONENT OF THE STRATEGIES AND SPECIFY RESPONSIBILITY, TIMING AND COST FOR EACH TARGET AUDIENCE:
- CONSUMER
- TRADE
- PROFESSIONALS

ACTION PLAN:

DEVELOP A CALENDAR-TYPE OR FLOW-CHART SYSTEM THAT INTEGRATES ALL TACTICS/ACTION STEPS IN A TIMELY FASHION. THIS WILL HELP IDENTIFY AND PREVENT POSSIBLE BOTTLENECKS IN RESOURCES AS WELL AS IN CONFLICTING TASKS. IT WILL OPTIMISE UTILIZATION OF RESOURCES.
Case Study: SIDPHARMA, Inc.
Mr. Kubil, the new Director of Marketing at Sidpharma, was facing his first major strategic decision since he joined two months ago this medium-sized pharmaceutical company located in the Eastern Province. He was asked by Dr. Sid, the President, to formulate a specific strategy and a plan of action focused on products with highest potential for growth.

A. THE COMPANY

Sidpharma Inc. was founded in 1972 by Dr. Sid, a pharmacologist and an entrepreneur. Sidpharma started by producing an oral tetracycline followed soon after by a cold preparation. Both products took off rapidly in the home province due to the active promotion with physicians in semi-urban areas where competition was at a minimum. Today, Sidpharma covers the whole country, however, half of its sales is generated in the Eastern Province. 1987 sales reached $3.1 million. Sidpharma's major line of business was and still is the production and marketing of prescription drugs often under license from foreign companies but with an increasing number of its own branded products. The product portfolio was divided according to the marketing of each product. Basically there are two major lines: prescription and non-prescription (OTC).

The prescription line includes oral antibiotics, antihistamines, steroids and antiparasitics. 1987 sales of the line (Appendix A) represented just over $2 million, an increase of 7% over the previous year. However, 1986 sales had achieved an increase of 10% over 1985.

Mr. Kubil was told by his national sales manager, Mr. Ayman, that the prescription platform was increasing at a rate of 14%, thanks to the extra stress put by the detailing force. However, sales did not follow the same growth, apparently due to generic substitution at the pharmacy level. A recent law entitled pharmacists to substitute single-ingredient products by generics. Mr. Ayman had reported at the last staff meeting his concern over stagnating and even declining future sales despite an excellent performance by his 30 detailmen.

Mr. Kubil knew through his previous position with another pharmaceutical concern about the good reputation of Sidpharma detailmen. They were generally perceived by physicians as knowledgeable and of a good scientific background. All detailmen were science graduates and liked to think of themselves as "equal" to the doctors. They usually called on an average of ten doctors a day, and occasionally called on a pharmacy to inquire about prescription flows. They rarely took orders, as these were usually handled by the salesmen of the regional distributor.

Mr. Kubil looked at the rest of Sidpharma's products line on the 1987 sales chart.
The OTC (over-the-counter) line which accounted for $1.1 million in 1987 sales, included three cough and cold preparations and two paracetamol presentations.

TUSSIX, the cough preparation, and COLDSTOP, the two cold forms, are mostly multiple-ingredients combinations. They are well known by the public, who ask for the products by brand names. By special permission from the Ministry of Health, a radio advertising campaign was launched during the past two winter seasons. The products are no more actively promoted among physicians or pharmacists. The extent of professional promotion is limited to sampling during the winter season. Distribution is done through regional distributors/and wholesalers to the pharmacists and other outlets (general stores, kiryanas, etc.)

Paracetamol tablets and drops were produced and marketed under Sidpharma's brand SIDENOL as well as under private labels for other companies. The state-of-the-art high speed equipment used for the production of the two paracetamol forms allowed very economical runs which resulted in a significantly lower cost than the competition. SIDENOL consumed one-third of the paracetamol tablet production and 60% of the paracetamol drops. SIDENOL tablets with sales of $140,000 were advertised on radio, and though the drops were not specifically mentioned, they benefited from the spin-over effect of the media campaign. SIDENOL drops targeted to the pediatric population maintained a soft but continuous presence among pediatricians and GP's to enlist the support. A mailer was sent twice a year and occasionally the detail force distributed samples and gimmics.

A journal ad in the Pediatric Association monthly magazine was run every other issue. SIDENOL drops were available in pharmacies and few grocery stores; SIDENOL tablets were available also in other outlets.

Mr. Kubil reached for the latest monthly sales chart ending August 1988 to compare the progress of each product versus last year and versus 1988 projections. He noticed no major discrepancy in the trend of the prescription line. As for the OTC line, he noticed a drop in sales versus projections. He was not very worried because he expected sales to pick up during the forthcoming winter season.

One new product that aroused his interest ever since he joined Sidpharma is SERVIDRAT, an ORS (Oral Rehydration Salts) powder presented in aluminium foil packs. The product was initially put in the prescription category, but Mr. Kubil decided to put it in the newly created "new-product" category in order to better focus on its progress.

SERVIDRAT was introduced on the market in April 1988, year-to-date sales reached $48,000 by end August. Early projections estimated sales of 400,000 packs or $60,000 by year-end. If the trend of actual sales continued, SERVIDRAT would be expected to far exceed the target projections set by Dr. Faruq, Mr. Kubil's predecessor. Distribution of the product was efficiently done by Sidpharma's network of some fifty distributors. Promotion carried out by the detail force found a very receptive audience among physicians who were already influenced by the continuous MOH campaign. The quick sales take-off can also be credited to the usual seasonal flare-out of diarrhea.
The capital investment on the new mixing and packaging line was based on an estimated production capacity of 12 million packs a year. The new facilities, where the production line was installed, allowed room for expansion up to a capacity of 48 million packs.

Mr. Kubil decided to revise the sales objectives and strategies of SERVIDRAT having in mind the optimization of the production capacity, but also the promising sales potential of the product. He requested his assistant, Mr. Shafat, to collect the results of any primary or secondary market study related to the product.

B. THE ENVIRONMENT

Mr. Kubil first received a list of demographic indicators (Appendix E), to help him assess the market potential in terms of population needs. Since the MOH embarked on a CDD (Control of Diarrhoeal Disease) program in 1983, a series of K.A.P. (Knowledge, Attitude, Practice) studies were conducted among parents in order to assess the success of the MOH campaign. The same survey was repeated twice, and Mr. Kubil prepared a comparative chart of the 3 studies which helped assess at a glance the evolution of the campaign results (Appendix C).

The MOH campaign, based on ORT (Oral Rehydration Therapy), included a comprehensive communication effort targeted mainly to the rural population (representing over 70% of the total population). This public education/information effort was channeled through the media, and through MOH's own structure. To promote ORT (ORS plus breastfeeding/feeding and referral), the MOH communication efforts included (and this is still going on): spots on radio and television, radio programs, posters, flyers, mobiles, parents' leaflets to accompany the ORS packets given out through the health system, and a video on ORT. The MOH ORT campaign was supported by local experts who became fervent "champions" of ORT, speaking to fellow physicians and making public appearances on TV to reinforce the educational campaign. Mr. Kubil recalled particularly Prof. Faqir Mohammad, Head of the Children's Hospital who, he thought, represents an excellent source of reference.

Mr. Shafat brought to Mr. Kubil's attention a recent study on ORS manufacturing and distribution conducted by a well-respected consultancy firm, for UNICEF. The study looked at present and potential demand for ORS through commercial channels, and sought to identify ways to promote ORS sales and its use through private sector channels; both private practitioners and commercial outlets. Private doctors, hakeems, homeopaths and chemists in four cities were surveyed.

This study reported a very high awareness of ORS among doctors. Indeed, three out of four of these private doctors had already prescribed ORS to patients -- usually in combination with antibiotics or anti-diarrheals, however. Doctors were seeing an increasing number of patients who had already taken ORS before coming for treatment. The doctors applauded this and recommended that ORS be available widely, not only in chemists' shops but in general stores. They called for greater health education about ORS, espe-
the public sector, and recognize its role and unique abilities. For example, the public sector:

* gives legitimacy to ORS;
* creates a demand for ORS sales by its free distribution of ORS at its facilities;
* can promote ORS through generic advertising.

Indeed, the public sector can address the whole health-education area, which includes how to mix and administer ORS and the whole ORT regimen that is proper diarrhea case management -- ORS, feeding, breastfeeding, and proper referral. These health-education messages can be disseminated through the private-sector marketing system, as well as through the usual outlets open to the public sector -- media and health-worker training. It is clear that the public sector is more suited to ORT promotion and the private sector is more suited to ORS promotion, and that each reinforces the other.

Looking again in the SERVIDRAT file, Mr. Kubil found a short report presented to his predecessor about the possible communication channels that can be used to promote ORS (Appendix D). Unable to find a follow-up to this report, he asked Mr. Shafat to investigate the cost of advertising in the public media.

Mr. Kubil knew that no more than 5% of a company's turnover may be spent on advertising, sampling and other promotional activities. Generally prescription pharmaceuticals are not advertised to the public. Press advertising of non-prescription products is allowed, while advertising on the radio and television requires prior approval from the Ministry of Health.

C. THE MARKET

Mr. Shafat gathered the 1987 sales data on all antidiarrheals distributed in pharmacies, but he could not obtain the remaining sales data of non-pharmacy outlets. He estimated that according to the product, pharmacy sales represented between 70-90% of the total antidiarrheal sales. He submitted his findings (Appendix F) to Mr. Kubil who expressed his appreciation for his assistant's efforts. He found the classifications of the products according to their mode of action extremely useful to comprehend the global market picture. Furthermore, Mr. Shafat presented a historical evolution for each category. The antidiarrhoeal/antibacterial category recorded a decrease of 4% over the last two years, while the three other categories recorded sales increase of 30% for the motility inhibitors, 13% for the intestinal adsorbants and 20% for the oral electrolyte replacers.

Mr. Kubil noticed the unit and $ volume of each competitor, then started calculating the market share of each vis-à-vis the total market. After carefully reviewing the sales figures, Mr. Kubil asked Mr. Shafat to gather information on the promotional activities of the major competitors, specifically the selling effort on each product, i.e. detailing cost (\( \frac{\text{# of detailmen \times \# of calls \times time allocation during each call}}{\text{during each call}} \)) , sampling, detailing material, and
cially among rural people, and more than a third of the doctors asked for more information about ORS for themselves.

On the other hand, homeopaths were on the whole unaware of ORS and very few had recommended it. Hakeems were even less aware of ORS, and only one out of 50 had recommended it.

The most striking finding of this study was the number of chemists' shops selling ORS. Out of 200 chemists interviewed, 194 sold ORS - 97%.

A quarter of the chemists said that people ask for ORS on their own, while a fifth of the chemists had filled doctors' prescriptions -- indicating that the public are a bit ahead of the doctors in being convinced of the merits of ORS. Awareness of and use of ORS for self-treatment is growing among the public. ORS seems to be making its way into the arsenal of drugs used for diarrhea, but without displacing the antibiotics and antidiarrheals that have long been used for diarrhea.

According to the report the country has the capacity right now to produce 120 million liters of ORS annually, in one-liter packets; 115 million could be produced privately and 5 million by the MOH at its factory. Actual production of ORS for 1985-86, however, was only 30 million packets, 28 million in the private sector and 2 million at MOH.

To figure potential demand, the report used varying assumptions about annual diarrhea bouts per child and packets needed per bout, and came up with a range between 63 and 88 million liter packets of ORS per year, just to treat diarrhea in children under 5. (Evidence from other countries indicates that there is a market for ORS for people over 5 that is about equal to the under-5 market). So the private sector is able to fill the ORS demands for children for some time to come; if the adult market was seriously promoted, the sales potential is even greater.

The study concludes: "Widespread and properly designed promotion of ORS could improve usage of ORS dramatically. This would have a positive effect in reducing infant mortality...... A professional cost effective social marketing program specifically tailored to the particular needs and problems of the country should be developed to promote the usage of ORS. This program would cover Price, Packaging, Distribution, Promotion, Market Research, Feedback and Mass Communication. This would ensure that the product is extensively distributed in the country and is available at the maximum number of shops possible....even a pan shop should carry ORS to facilitate accessibility."

The ORS promotion effort urged by the report is indeed gathering strength in the private sector, and given that use of the formal health system is low (16%), major efforts to disseminate ORS information and supplies through private channels is a necessity.

In sum, both the sales and the marketing potential are there for the private sector to exploit. Private companies also welcome collaboration with
the non-selling efforts, i.e. journal ads, mailing, other printed material, congresses, seminars etc.

While this information may not be easily obtained, Mr. Kubil wanted to know how much spending the major competitors allocated to their antidiarrheal product.

However, this information was not capital in his decision to re-allocate promotional resources within Sidpharma. Based on 1988 and 1989 sales projections, he could dispose off up to $160,000 and $170,000 respectively for promotion purposes. So far, he was largely within his budget. Upto end August 1988, Sidpharma spent $86,000 in total promotion. In accordance with Dr. Sid's directives, he was determined to focus on product(s) with the highest growth potential and SERVIDRAT was in his view a primary candidate. With still three months to go in 1983 and a full 12 months for next year, Mr. Kubil collected the latest ammunition needed before working on his strategy.

D. THE PRODUCT

SERVIDRAT composition is based on the new WHO formula containing the Sodium Citrate. The complete formula is the following:

- Sodium Chloride 3.5 g
- Potassium Chloride 1.5 g
- Trisodium Citrate Dihydrate 2.9 g
- Glucose 20.0 g

SERVIDRAT pack is suitable for a one liter solution. By design it is not flavoured as Dr. Farooq, Mr. Kubil's predecessor was very adamant to follow exactly the WHO recommendations. (WHO is now adopting a more tolerant attitude). Dr. Farooq, an MD, insisted to maintain the highest ethical standard in either detailing, training of sales force, packaging and promotional material.

Mr. Kubil was very satisfied about the detailmen's knowledge on ORS and their detailing expertise. He also appreciated the comprehensive SERVIDRAT introductory brochure (Appendix F) which was well received by the physicians. Actually it was an excellent education booklet of 16 pages, centered around proper administration of ORS for both treatment and prevention of dehydration. Mr. Kubil, however was inclined to a more promotional approach. In his mind he was already elaborating more aggressive promotional avenues including broader audience. Still he realizes the importance of establishing a solid prescription base as a support for non-physician promotion. He was determined to be aggressive in his marketing strategy and he had just the kind of ammunition needed to fight the competition in the doctor's office. Mr. Shafat had just given him a copy of a report on antidiarrhoeals issued by Health Action International, an independent watch group that monitors drugs and their side effects. (Appendix G) The report was not soft on the competition, and Mr. Kubil could pick on any one.

Mr. Kubil was also thinking of re-vamping the ethical-looking SERVIDRAT packet. There was no visual, or colour, or recognizable identity to the pack.
He was partisan of the Chinese proverb: "one picture is worth a thousand words". He also believed that the pack was the ultimate message carrier to the consumer and he always insisted that any pack design or copy should be addressed to the target audience and pre-tested with them, this was especially true when dealing with a high illiterate group of the population.

The next day morning Mr. Kubil met with the production manager and his packaging coordinator. He made clear his intentions to have a new package replace the present one as soon as the stock was depleted. The production manager told him he had approximately 2 months of finished goods and around 70,000 printed foils. The packaging coordinator showed him some examples of packages that were forwarded by WHO (Appendix H). Mr. Kubil informed him that he will provide clear instructions by the end of the week, in accordance with the overall marketing strategy he was ready to develop.
List of Appendices and References for the Case Study
LIST OF APPENDICES & REFERENCES

APPENDICES:

A. SIDPHARMA 1987 Sales
B. Environmental Statistics
C. Summary of K.A.P. study on rural population
D. Communication Channels
E. Market Data (pharmacy sales)
F. SERVIDRAT introductory brochure
G. Health Action International (NAI) report on Antidiarrhoeal
H. Models of package designs, labels and leaflets

REFERENCES:

I. Illustrative Methods for estimating needs of ORS
II. The main causes of child death

MATERIAL FOR READING:

A study for UNICEF on prevailing manufacturing/marketing of ORS in Pakistan - PCS/NDFC
SIDPHARMA 1987 Sales
<table>
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</table>
Environmental Statistics
Demography

| Population (million)                              | 102.2 | 1987   |
| Average annual population growth rate (%)        | 3.4   | 1979-87|
| Population aged 0-14 (%)                         | 44.6  | 1981   |
| Population aged 65+ (%)                         | 4.2   | 1981   |
| Urban population (% of total)                    | 28.3  | 1981   |
| Adult Literacy rate - male (%)                  | 40    |        |
| Adult Literacy rate - female (%)                | 19    |        |

Economy

| Gross Domestic Product (PRs billion)              | 539.5 | 1986   |
| GDP growth rate (%)                              | 12.9  | 1986   |
| Exports (PRs bn)                                 | 56.3  | 1986   |
| Imports (PRs bn)                                 | 89.3  | 1986   |
| Rate of inflation (CPI, %)                       | +3.7  | 1986   |
| Exchange rate against US$                        | US$ 1 = 17.40 | 1987 |

Pharmaceutical Market

| Pharmaceutical market valuation (US$ million)    | 360   | 1987   |
| Percentage change in local currency (%)         | +14   | 1987   |

Health Care Availability

| Number of doctors*                               | 38,322| 1984   |
| Population per doctor*                          | 2,398 | 1984   |
| Number of hospitals                             | 633   | 1983   |
| Population per hospital bed                     | 1,862 | 1983   |
| Number of retail pharmacies                     | 13,973| 1987   |

Health Indicators

| Birth rate (per 1,000 per year)                  | 43.3  | 1984   |
| Death rate (per 1,000 per year)                  | 11.8  | 1984   |
| Life expectancy, male (years)                    | 59.0  | 1976-78|
| Life expectancy, female (years)                  | 59.2  | 1976-78|
| Infant mortality per 1,000 live births           | 126.7 | 1984   |

* registered doctors
Table 1: Population by Age and Sex 1981*

<table>
<thead>
<tr>
<th>Age Group</th>
<th>% of total population</th>
<th>% of age group male</th>
</tr>
</thead>
<tbody>
<tr>
<td>All ages</td>
<td>100.0</td>
<td>52.5</td>
</tr>
<tr>
<td>0-4</td>
<td>15.4</td>
<td>48.9</td>
</tr>
<tr>
<td>5-14</td>
<td>29.2</td>
<td>53.1</td>
</tr>
<tr>
<td>65-74</td>
<td>2.6</td>
<td>57.6</td>
</tr>
<tr>
<td>75+</td>
<td>1.6</td>
<td>57.2</td>
</tr>
</tbody>
</table>

* revised figures

Source: Federal Bureau of Statistics

Table 2: Populations of Largest Cities 1981*

<table>
<thead>
<tr>
<th>City</th>
<th>000s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karachi</td>
<td>5,208</td>
</tr>
<tr>
<td>Lahore</td>
<td>2,952</td>
</tr>
<tr>
<td>Faisalabad (Lyallpur)</td>
<td>1,104</td>
</tr>
<tr>
<td>Rawalpindi</td>
<td>794</td>
</tr>
<tr>
<td>Hyderabad</td>
<td>751</td>
</tr>
</tbody>
</table>

* revised figures

Source: Federal Bureau of Statistics

Table 3: Economic Indicators 1984-86

<table>
<thead>
<tr>
<th></th>
<th>1984</th>
<th>1985</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (PRs billion)</td>
<td>418.20</td>
<td>477.98</td>
<td>539.54</td>
</tr>
<tr>
<td>% change</td>
<td>+15.5</td>
<td>+14.3</td>
<td>+12.9</td>
</tr>
<tr>
<td>% change at 1980 prices</td>
<td>+5.3</td>
<td>+8.0</td>
<td>+7.5</td>
</tr>
<tr>
<td>F of exchange USD 1 = PRs</td>
<td>14.05</td>
<td>15.93</td>
<td>16.65</td>
</tr>
<tr>
<td>Export (PRs bn)</td>
<td>35.99</td>
<td>43.65</td>
<td>56.34</td>
</tr>
<tr>
<td>Import (cif, PRs bn)</td>
<td>82.04</td>
<td>33.79</td>
<td>89.30</td>
</tr>
<tr>
<td>Trade balance (PRs bn)</td>
<td>-46.04</td>
<td>-50.15</td>
<td>-32.96</td>
</tr>
<tr>
<td>CPI (1980 = 100)</td>
<td>134.1</td>
<td>141.9</td>
<td>147.1</td>
</tr>
<tr>
<td>% change</td>
<td>+6.6</td>
<td>+5.8</td>
<td>+3.7</td>
</tr>
</tbody>
</table>

Source: International Monetary Fund

Table 4: Contributors to Employment 1985/86

<table>
<thead>
<tr>
<th></th>
<th>% labor force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative &amp; managerial</td>
<td>1.1</td>
</tr>
<tr>
<td>Agriculture, animal husbandry, forestry &amp; fishing</td>
<td>53.5</td>
</tr>
<tr>
<td>Clerical &amp; related</td>
<td>3.4</td>
</tr>
<tr>
<td>Manufacturing, transport equipment operators &amp; laborers</td>
<td>24.1</td>
</tr>
<tr>
<td>Professional, technical &amp; related</td>
<td>3.3</td>
</tr>
<tr>
<td>Sales</td>
<td>10.2</td>
</tr>
<tr>
<td>Services</td>
<td>4.4</td>
</tr>
<tr>
<td>Unemployed</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Federal Bureau of Statistics

Table 5: Outpatient Facilities by Type 1980

<table>
<thead>
<tr>
<th></th>
<th>Estabs</th>
<th>Beds</th>
<th>% total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispensaries</td>
<td>3,466</td>
<td>3,394</td>
<td>63.4</td>
</tr>
<tr>
<td>Health centers (rural)</td>
<td>217</td>
<td>1,662</td>
<td>31.1</td>
</tr>
<tr>
<td>Health sub-centers/ basic units</td>
<td>736</td>
<td>20</td>
<td>0.4</td>
</tr>
<tr>
<td>Hospital outpatient departments</td>
<td>601</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mother &amp; child health centers</td>
<td>815</td>
<td>117</td>
<td>2.2</td>
</tr>
<tr>
<td>TB clinics</td>
<td>98</td>
<td>155</td>
<td>2.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5,333</td>
<td>5,348</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Special Education and Social Welfare

Table 6: Hospitals and Beds by Specialty 1980

<table>
<thead>
<tr>
<th></th>
<th>Estabs</th>
<th>Beds</th>
<th>% total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>1</td>
<td>36</td>
<td>0.5</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>1</td>
<td>64</td>
<td>0.9</td>
</tr>
<tr>
<td>Dermatology/VD</td>
<td>1</td>
<td>50</td>
<td>0.7</td>
</tr>
<tr>
<td>Infectious diseases</td>
<td>4</td>
<td>268</td>
<td>3.9</td>
</tr>
<tr>
<td>Leprosy</td>
<td>7</td>
<td>652</td>
<td>9.5</td>
</tr>
<tr>
<td>Obstetric</td>
<td>7</td>
<td>619</td>
<td>9.0</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>8</td>
<td>520</td>
<td>7.6</td>
</tr>
<tr>
<td>Pediatric</td>
<td>1</td>
<td>75</td>
<td>1.1</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>4</td>
<td>1,976</td>
<td>28.8</td>
</tr>
<tr>
<td>TB</td>
<td>18</td>
<td>2,596</td>
<td>37.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>52</td>
<td>6,856</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Special Education and Social Welfare
### Table 7: Hospitals and Beds by Ownership 1980

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Estabs</th>
<th>Beds</th>
<th>% total beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public sector</td>
<td>444</td>
<td>32,794</td>
<td>78.0</td>
</tr>
<tr>
<td>Private sector</td>
<td>157</td>
<td>9,270</td>
<td>22.0</td>
</tr>
<tr>
<td>Non-profit-making</td>
<td>11</td>
<td>1,982</td>
<td>4.7</td>
</tr>
<tr>
<td>Profit-making</td>
<td>146</td>
<td>7,288</td>
<td>17.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>601</strong></td>
<td><strong>42,064</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Special Education and Social Welfare

### Table 11: Ten Leading Product Classes* in 1987.

<table>
<thead>
<tr>
<th>Product Class</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systemic antibiotics</td>
<td>60-65</td>
</tr>
<tr>
<td>Vitamins</td>
<td>24-26</td>
</tr>
<tr>
<td>Analgesics</td>
<td>18-20</td>
</tr>
<tr>
<td>Cough and cold preparations</td>
<td>14-16</td>
</tr>
<tr>
<td>Systemic antirheumatics</td>
<td>12-14</td>
</tr>
<tr>
<td>Tuberculostatics</td>
<td>10-12</td>
</tr>
<tr>
<td>Diabetics; antiparasitics; antacids/antiulcerants</td>
<td>7-8</td>
</tr>
</tbody>
</table>

*ranked in descending order

### Table 8: Non-hospital Doctors by Specialty 1986

<table>
<thead>
<tr>
<th>Specialty</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiology</td>
<td>22</td>
</tr>
<tr>
<td>Dermatology</td>
<td>22</td>
</tr>
<tr>
<td>ENT</td>
<td>87</td>
</tr>
<tr>
<td>Gynecology</td>
<td>221</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>150</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>192</td>
</tr>
<tr>
<td>Physician</td>
<td>290</td>
</tr>
<tr>
<td>Respiratory medicine</td>
<td>100</td>
</tr>
<tr>
<td>Surgery</td>
<td>314</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,398</strong></td>
</tr>
</tbody>
</table>

Source: IMS Pakistan Medical Index

### Table 9: Price Structure at Retail Level

<table>
<thead>
<tr>
<th>Price Structure at Retail Level</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer's selling price</td>
<td></td>
</tr>
<tr>
<td>National distributor's selling price</td>
<td></td>
</tr>
<tr>
<td>Wholesaler's selling price</td>
<td>106</td>
</tr>
<tr>
<td>Pharmacist's selling price</td>
<td>110</td>
</tr>
</tbody>
</table>

*ranked in descending order

Source: IMS Pakistan Pharmaceutical Index

### Table 10: Total Pharmaceutical Sales Through All Outlets 1984-87

<table>
<thead>
<tr>
<th>Year</th>
<th>PRs</th>
<th>% change</th>
<th>US$ mn</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>4.54</td>
<td>16</td>
<td>326</td>
<td>9</td>
</tr>
<tr>
<td>1985</td>
<td>4.83</td>
<td>5</td>
<td>307</td>
<td>-6</td>
</tr>
<tr>
<td>1986</td>
<td>4.51</td>
<td>14</td>
<td>337</td>
<td>10</td>
</tr>
<tr>
<td>1987</td>
<td>6.26</td>
<td>14</td>
<td>360</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: IMS World Review Estimates
Summary of K.A.P. study on rural population
# APPENDIX C-1

**AHP/PHC - PAKISTAN REVIEW**  
07 FEBRUARY 1988 - 06 MARCH 1988

**PROVINCEWISE K.A.P. ON ORT PRACTICES IN PAKISTAN**

<table>
<thead>
<tr>
<th>PROVINCES</th>
<th>RURAL</th>
<th>URBAN</th>
<th>BOTH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Awareness on ORS</td>
<td>Have ORS at home</td>
<td>Even used ORS</td>
</tr>
<tr>
<td>PUNJAB</td>
<td>85 %</td>
<td>80 %</td>
<td>85 %</td>
</tr>
<tr>
<td>SIND</td>
<td>82 %</td>
<td>75 %</td>
<td>78 %</td>
</tr>
<tr>
<td>NWFP/FATA</td>
<td>95 %</td>
<td>52 %</td>
<td>93 %</td>
</tr>
<tr>
<td>BALUCHISTAN</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>A.J.K.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PAKISTAN</td>
<td>87 %</td>
<td>73 %</td>
<td>84 %</td>
</tr>
</tbody>
</table>
### CDD - PAKISTAN

**NATIONWIDE SURVEYS**

ON TWO WEEKS PREVALENCE OF DIARRHOEA AND ORT PRACTICES FOR DIARRHOEA CASES AT HOUSEHOLDS LEVEL

(1984-1988)

<table>
<thead>
<tr>
<th>PROVINCE</th>
<th>2 Weeks Prevalence</th>
<th>Given O R S</th>
<th>Given Home Fluids</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUNJAB</td>
<td>19.0%</td>
<td>4.3%</td>
<td>5.1%</td>
</tr>
<tr>
<td>SIND</td>
<td>6.7%</td>
<td>4.8%</td>
<td>6.4%</td>
</tr>
<tr>
<td>NWFP/FATA</td>
<td>10.8%</td>
<td>4.6%</td>
<td>5.2%</td>
</tr>
<tr>
<td>BALUCHISTAN</td>
<td>16.2%</td>
<td>10.6%</td>
<td>12.4%</td>
</tr>
<tr>
<td>A.J.K.</td>
<td>15.2%</td>
<td>6.1%</td>
<td>3.8%</td>
</tr>
<tr>
<td>PAKISTAN</td>
<td>13.6%</td>
<td>5.2%</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

*) - November/December 1984 - AHP/PHC Pak - Review I
- March/April 1987 - GOP Interprovincial Evaluation
- February/March 1988 - AHP/PHC Pak - Review II

NA = Not available.
Communication Channels
III. Communication Channels

1. Broadcasting

Radio Pakistan, the only radio outlet, has 16 stations throughout the country and claims 95% coverage of the population. The estimate is that 75% of the people actually listen to the radio, including 71.5% in rural Pakistan and 75.5% of Pakistani women.

For television, Pakistan TV is the only channel, operating 7 hours a day from 5 sites. PTV covers 34% of the country and up to 80% of the population, according to the Ministry of Information.

With rural electrification being one of the Prime Minister's points in his Five-Point Plan, the coverage of TV may well increase. Even now, in electrified villages, it is usual that there is at least one TV in the house of the village leader. TV is important now for reaching the rural population and will become more so. Radio will play a secondary but useful role, especially given the cost differential for radio and TV time.

2. Cinema

With 640 movie theaters available in Pakistan, the cinema ads can reach widely. The movie audience is mainly male, mainly lower class.
3. The Health System

(c.f. the section on training) In addition to providing training to workers, the CSP can use these groups to distribute and explain graphic health-education material, and can take advantage of their access to parents during the precise times when parents are anxious about their children's health and may be more susceptible to learning.

4. The Education System

The curriculum and the standard textbooks contain health messages. The CSP will ensure that these messages are up-to-date and consistent with the GOP standards on ORT and EPI, as appropriate. Nutrition information will be reviewed as well.

5. The Religious System

As an Islamic republic, Pakistan has long followed the Koran and its religious teachers. Endorsements or statements by imams or mullahs in support of child-survival programs can have widespread benefits, especially in lending credibility to the project among traditional groups. Particularly critical would be religious support for programs reaching out to women, such as TT immunizations and child spacing.

6. Popular Culture

Endorsements for child-survival efforts from sports stars, entertainers, and other heroes of popular culture will also be possible sources of greater CSP coverage. But even these messages should be pretested, as were the messages made by Cantinflas in Mexico (they worked) and by a star of World Cup football in Honduras (they did not).
Market Data (pharmacy sales)
<table>
<thead>
<tr>
<th>Drugs Category</th>
<th>Name of Drug</th>
<th>Form</th>
<th>Units 000's</th>
<th>Value in $000's</th>
<th>Market Share % of form</th>
<th>Market Share % of cate.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTIARRHEOCAL/ANTIBACTERIAL</td>
<td>Streptomagma</td>
<td>SUSP</td>
<td>2849</td>
<td>$1,391</td>
<td>100%</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Furoxone</td>
<td>Total</td>
<td>886</td>
<td>$513</td>
<td>100%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SUSP</td>
<td>780</td>
<td>$309</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TAB</td>
<td>106</td>
<td>$204</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diodoquin</td>
<td>Total</td>
<td>401</td>
<td>$466</td>
<td>100%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SUSP</td>
<td>222</td>
<td>$96</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TAB</td>
<td>179</td>
<td>$370</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kaltin Neomycin</td>
<td>SUSP</td>
<td>853</td>
<td>$293</td>
<td>100%</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>N Intestopan</td>
<td>TAB</td>
<td>59</td>
<td>$277</td>
<td>100%</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Dependal M</td>
<td>Total</td>
<td>488</td>
<td>$310</td>
<td>100%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SUSP</td>
<td>269</td>
<td>$112</td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TAB</td>
<td>219</td>
<td>$198</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intestopan</td>
<td>Total</td>
<td>43</td>
<td>$180</td>
<td>100%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SYRP</td>
<td>7</td>
<td>$5</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TAB</td>
<td>36</td>
<td>$175</td>
<td>97%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Entox</td>
<td>TAB</td>
<td>84</td>
<td>$143</td>
<td>100%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Furadil</td>
<td>Total</td>
<td>494</td>
<td>$131</td>
<td>100%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SUSP</td>
<td>493</td>
<td>$129</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TAB</td>
<td>1</td>
<td>$2</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lomofen</td>
<td>Total</td>
<td>216</td>
<td>$131</td>
<td>100%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SYRP</td>
<td>191</td>
<td>$66</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TAB</td>
<td>25</td>
<td>$65</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OTHERS</td>
<td>Total</td>
<td>1371</td>
<td>$771</td>
<td>100%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SUSP</td>
<td>500</td>
<td>$500</td>
<td>65%</td>
<td></td>
</tr>
<tr>
<td></td>
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<td>271</td>
<td>$271</td>
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<td>Value in $ 000's</td>
<td>Market Share % of form</td>
<td>Market Share % of cate.</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
<td>------</td>
<td>-------------</td>
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<td>------------------------</td>
</tr>
<tr>
<td>MOTILITY INHIBITORS</td>
<td>Imodium</td>
<td>Total SYRP</td>
<td>513</td>
<td>$628</td>
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<td>69%</td>
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<td>TAB</td>
<td>312</td>
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<tr>
<td></td>
<td>Lomotil</td>
<td>Total SYRP</td>
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<td>16%</td>
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<tr>
<td></td>
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<td>TAB</td>
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<td>$50</td>
<td>33%</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>SUSP</td>
<td>25</td>
<td>$100</td>
<td>67%</td>
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<tr>
<td></td>
<td>Loperam</td>
<td>Total SYRP</td>
<td>136</td>
<td>$108</td>
<td>100%</td>
<td>12%</td>
</tr>
<tr>
<td></td>
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<td>TAB</td>
<td>45</td>
<td>$26</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>SUSP</td>
<td>91</td>
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</tr>
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<td></td>
<td>Rheatrol</td>
<td>Total SYRP</td>
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<td>$24</td>
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<td>3%</td>
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<tr>
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<td>TAB</td>
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<td>$15</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>SUSP</td>
<td>8</td>
<td>$9</td>
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<td></td>
<td>Dricamin</td>
<td>TAB</td>
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<td>INTESTINAL ADSORBANTS</td>
<td>Entox P</td>
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<td>Kapectal</td>
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<td>100%</td>
<td>9%</td>
</tr>
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<td></td>
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<td>6%</td>
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<tr>
<td></td>
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<td>---OTHERS---</td>
<td>Total</td>
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<td>116</td>
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<td>Value in $000's</td>
<td>Market Share % of form</td>
<td>Market Share % of cate.</td>
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<td>----------------</td>
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<td>------------------------</td>
</tr>
<tr>
<td>ORAL ELECTROLYTE</td>
<td>Orasal-F</td>
<td>POWDER</td>
<td>2389</td>
<td>390</td>
<td>100%</td>
<td>53%</td>
</tr>
<tr>
<td>Peditral</td>
<td>POWDER</td>
<td>412</td>
<td>194</td>
<td>100%</td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>Rehydrate</td>
<td>POWDER</td>
<td>736</td>
<td>108</td>
<td>100%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>O.R.S</td>
<td>POWDER</td>
<td>240</td>
<td>17</td>
<td>100%</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Infalyte</td>
<td>POWDER</td>
<td>140</td>
<td>11</td>
<td>100%</td>
<td>2%</td>
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</tr>
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<td>Neolyte CRS</td>
<td>POWDER</td>
<td>80</td>
<td>9</td>
<td>100%</td>
<td>1%</td>
<td></td>
</tr>
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<td><strong>Total Category:</strong></td>
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<td></td>
<td><strong>2389</strong></td>
<td><strong>729</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
<tr>
<td><strong>TOTAL MARKET</strong></td>
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<td><strong>7,507</strong></td>
<td></td>
<td></td>
<td><strong>100%</strong></td>
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</table>

(* Converted to 1 liter)
SERVIDRAT introductory brochure
Fight Dehydration due to diarrhoea

with:
Oral Rehydration Therapy and Health Education
## Contents

3 Acute Diarrhoea – what is it?

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13 How to give ORS or SERVIDRAT solution

13 Feeding

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Acute Diarrhoea – what is it?

Acute diarrhoea is an extremely widespread disorder which is particularly serious in the young and old and which affects hundreds of millions of people every year. Among infants and children, it is responsible for more deaths than any other cause in the world today, killing an estimated five million in an average year, most of them in developing countries.

What exactly is meant by acute diarrhoea? More than two unformed watery stools in any 24-hour period; or any watery stool if accompanied by fever, abdominal pains, and/or vomiting.

In either of these circumstances, treatment should be started without delay in order to combat dehydration. This must always be the first priority, because far more avoidable deaths are due to loss of water and salts from the body than to the infections that cause acute diarrhoea. Indeed, provided the patient does not become seriously dehydrated, many of these infections prove to be self-limiting.

A symptom with potentially drastic consequences

Acute diarrhoea is a symptom – not a disease in itself – of any condition that inflames or damages the mucosal lining of the intestines. By far the commonest cause is infection, although diarrhoea can also be caused by certain chemical agents, by foodstuffs, or by other diseases. Infection almost always comes from contaminated food or water, which may contain more than one type of diarrhoea-producing organism. It is now possible to identify the causative organism in 80% of patients; the most common are rotavirus and pathogenic Escherichia coli. Among the organisms that call for specific treatment are shigellae, vibrios (cholera), campylobacter yersinia, Entamoeba histolytica and Giardia lamblia.

The immediate hazard associated with diarrhoea is the massive loss of body water together with its dissolved salts, and Oral Rehydration Therapy must be started immediately to prevent potentially life-threatening dehydration. The degree of the hazard is in direct proportion to the severity of loss, and the risk is of course greatest in those least able to withstand severe dehydration, notably children in
their first two or three years of life. Acute diarrhoea may cause them to lose as much as 10% of their body water in 24 hours. Loss of a further 5% would then seriously endanger the child's life. Since there is no known way of stopping the fluid outflow in acute diarrhoea, the immediate priority is to make up the loss.

The most typical signs of dehydration in infancy are much the same as in older children and adults.
Oral Rehydration Solution – how does it combat potentially hazardous fluid loss?

An isotonic solution of sugar and salts will facilitate water uptake from the intestine. Suitable compositions contain a sugar, sodium chloride, potassium chloride and an alkalising agent. Key components in an oral rehydration solution can be explained as follows:

Glucose – the key to successful rehydration

The major breakthrough leading to successful Oral Rehydration Therapy came with the discovery that glucose accelerates the absorption of water and salts from the intestine, despite the fact that the function of the intestine may be somewhat impaired during an attack of diarrhoea. This enabled potentially lethal dehydration to be treated in the home or in an outpatients department, instead of by intravenous infusion with all its attendant complications.

The mechanism is a «linked-uptake», see the illustration below.

![Graph showing water absorption rates from oral isotonic glucose-saline solutions](Sladen%20E.%20Dawson%20AM.%20Clin.%20Sci.%2038%2C%20119-32%20(1968))
Why sodium as well as water?

When, for example, sodium is lost in watery stools, its concentration in the excreta will be no higher than in the blood plasma because it is a solution which is being lost. Consequently, if attempts are made to correct the dehydration by giving drinks of water alone, the plasma will become diluted. This dilution upsets the osmotic balance, and, when the kidneys and other systems react to minimise the adverse effects of the low sodium level (hyponatraemia), the total blood volume and extracellular fluid decrease; this leads in turn to a fall in blood pressure, constriction of the peripheral blood vessels, and reduced flow to the kidneys – very much as if no water had been given at all. This explains why it is so important that oral rehydration fluid should also contain sodium, because the sodium concentration in the plasma must be kept stable if the blood volume is to be restored.

Why potassium?

Potassium deficiency can lead to disturbances affecting the nervous system, kidneys and heart, including especially the myocardium and other muscles, which become very weak. Hence the necessity for ensuring that an ORS (Oral Rehydration Salts) also has the correct potassium content. Solutions without potassium have been used to combat the dehydration caused by acute diarrhoeal diseases and although these solutions have proved of benefit, the treatment is not ideal. The importance of potassium replacement should not be underestimated, because even a short-term potassium deficiency may have serious consequences; here again, however, the quantity given must be correct.

Why Bicarbonate or Citrate?

As a result of progressive loss of body fluid during diarrhoea, acidosis may develop, and this too can have profoundly adverse consequences contributing to irreversible shock and death. Such replacement can be achieved by adding either bicarbonate or citrate to the solution. Citrate is metabolised after its absorption and exerts effects very similar to those of bicarbonate.
Oral rehydration solutions are therefore most effective if:

- they are isotonic with the blood plasma, so that no large transfer of solution is necessary before active absorption takes place
- they contain all lost salts, i.e. sodium, potassium, and a base as alkalising agent in an optimum concentration
- they contain glucose to facilitate the interlinked processes of absorption of glucose, sodium and water in the intestine.

![Diagram showing the comparison between salt and water vs salt, water, and glucose solutions in the small intestine.](Image)
The following Oral Rehydration Salt (ORS) presentations are available:

1. **ORS for 1 litre of solution in tropic proof sachets**

   The formulation is that which is recommended by the WHO. It does not contain flavouring or colouring agents. This most economical pack is very useful when larger quantities are needed.
The table below shows the molar concentrations per litre for the mentioned products:

<table>
<thead>
<tr>
<th></th>
<th>SERVIDRAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium</td>
<td>90 mmol/l</td>
</tr>
<tr>
<td>Potassium</td>
<td>20 mmol/l</td>
</tr>
<tr>
<td>Chloride</td>
<td>80 mmol/l</td>
</tr>
<tr>
<td>Bicarbonate</td>
<td></td>
</tr>
<tr>
<td>Citrate</td>
<td>30 mmol/l</td>
</tr>
<tr>
<td>Glucose</td>
<td>100 mmol/l</td>
</tr>
<tr>
<td>Theoretical osmolarity of the solution</td>
<td>320 mOsm/l</td>
</tr>
<tr>
<td>of the blood</td>
<td></td>
</tr>
</tbody>
</table>

* The deviation in the concentration of chloride is due to the balance of positive and negative ions. The slightly higher glucose concentration is necessary to produce an isotonic solution to blood but is within the recommended limits (see page 5).

How to prepare the ORS/SERVIDRAT solutions

**Water quality**

Any fresh drinking water should be used to prepare the solution. If the water is of doubtful quality, it should be boiled; during the cooling process the container should be protected so as to avoid contamination. Once the water has cooled to room temperature, it is safe for making up the ORS solution.

**Please note:** Do not use mineral water, soft drinks or milk for making up the solution, because this may alter the salt/glucose concentrations and thus reduce the efficacy of the therapy.

**ORS sachet for 1 litre**

- Carefully measure off 1 litre of drinking water
- Pour the water into a clean container holding more than 1 litre
- Cut off an edge of the sachet, pour — while stirring — the contents into the container with the water and stir until all the powder is dissolved.
The solution is then ready for use and should be kept protected. Solutions still unused after 24 hours should be discarded, because any bacteria present will by then have multiplied.

Oral Rehydration Therapy (ORT)

The full treatment has to be carried out in two stages:

- **Rehydration phase**, which aims to restore the volume of fluid already lost, and
- **Maintenance phase**, which compensates for continued loss until diarrhoea stops.

The golden rule is remarkably simple: 'Give them as much as they will drink.' The exceptions are vomiting babies (who may need almost constant spoon-feeding to keep up the necessary rate of intake) and the very severely dehydrated at any age. Even such patients may respond satisfactorily to fluids started early enough by mouth; but sometimes the situation is so urgent that it is best to administer suitable fluids by intravenous infusions, if facilities are available; oral solutions will then prove useful during the maintenance phase.

Oral rehydration therapy can be given anywhere, even remote from hospital. Since clinical signs of dehydration appear later than the actual dehydration (see table and graph below) ORT can often be used in place of Intravenous Infusion, even in severe cases, provided it is started early enough.
**Clinical signs of dehydration**

<table>
<thead>
<tr>
<th>Dehydration Level</th>
<th>Clinical Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild dehydration: up to 5% loss of body weight</td>
<td>dry mouth, thirst, less urine excretion</td>
</tr>
<tr>
<td>Moderate dehydration: 5% to 10% loss of body weight</td>
<td>sunken eyes, reduced dark urine, sunken fontanella in infants, loss of elasticity or stretchiness of the skin</td>
</tr>
<tr>
<td>Severe dehydration: more than 10% loss of body weight</td>
<td>deeply sunken eyes, no urine for several hours, respiration deep and rapid, cyanotic extremities, muscle cramps, coma.</td>
</tr>
</tbody>
</table>

![Graph showing normal hydration and clinical signs of dehydration](image-url)

---

Dosage and administration

- **Rehydration phase**

The quantity of liquid required will vary depending on the degree of dehydration. The guide lines of WHO shown below should serve only as guide for mild to moderate cases of dehydration.

<table>
<thead>
<tr>
<th>Degree of dehydration</th>
<th>Age group</th>
<th>Volume of ORS solution (per kg body weight)</th>
<th>Time of administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>All</td>
<td>50 ml/kg</td>
<td>within 4–6 hours</td>
</tr>
<tr>
<td>Moderate</td>
<td>All</td>
<td>100 ml/kg</td>
<td>within 4–6 hours</td>
</tr>
</tbody>
</table>

- **Maintenance phase**

The WHO recommendations shown below should serve only as guide once rehydration has been achieved.

<table>
<thead>
<tr>
<th>Amount of diarrhoea</th>
<th>Administration</th>
<th>Amount of ORS solution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mild diarrhoea</strong> (not more than one stool every 2 hours or longer, or less than 5 ml stool per kg per hour)</td>
<td>By mouth; at home</td>
<td>100 ml/kg body weight per day until diarrhoea stops</td>
</tr>
<tr>
<td><strong>Severe diarrhoea</strong> (more than one stool every 2 hours, or more than 5 ml of stool per kg per hour)</td>
<td>By mouth; at treatment facility</td>
<td>Replace stool losses volume for volume; if not measurable give 10–15 ml/kg body weight per hour</td>
</tr>
</tbody>
</table>
How to give ORS or SERVIDRAT solution

The solution can be given by spoon or cup to infants and smaller children in sips at short intervals, so as to avoid vomiting. Dehydrated individuals are often very thirsty, in which case there is no problem in getting them to drink the requisite quantity.

For infants and children, someone must be able to help give the solution to the child. Here the mother or another family member may be very helpful. The solution should only be used in the recommended doses, in order to avoid complications resulting from excessive electrolyte ingestion. In infants: 2:1 or 1:1 regimen (1 or 2 drinks of solution: 1 drink of plain water) has been used with success.

Excess fluid intake may also cause puffiness of the eyelids. Although this is harmless, oral therapy should be stopped until it disappears.

When Oral Rehydration Therapy is recommended as a supplement to parenteral fluid therapy, care must be taken not to exceed the patient’s total water and electrolyte requirements.

The patient’s response to Oral Rehydration Therapy should be monitored throughout treatment by periodically evaluating his hydration status, determining the approximate purging rate (i.e. number of diarrhoea stools), measuring the rehydration fluid intake and ensuring the presence of urine flow. Within 4–8 hours of initiating treatment, dehydration should no longer be evident and urinary flow should be re-established.

Feeding

Breast feeding should always be continued where possible; however should the child only accept cow’s milk or milk formulas the milk should be diluted with an equal volume of clean water.

Soft, easily digestible food and extra fluid such as fruit juice or plain water should be offered as soon as rehydration is complete.
Contra-Indications

ORS should not be used in cases of impaired renal function, including especially cases in which no urine is being excreted (anuria). It is also contra-indicated in the presence of: glucose malabsorption (monosaccharide malabsorption), loss of consciousness, etc., shock and continuous vomiting, and excessive concentrations of basic substances in the blood (metabolic alkalosis). Since treatment with ORS involves the ingestion of increased quantities of fluid, sodium and glucose, a doctor should be consulted before starting such treatment in patients with heart failure, high blood pressure or diabetes.

Pharmaceutical precautions

Since oral rehydration salts are sensitive to heat and moisture, sachets and tablets should be stored out of direct sunlight in a dry place.
Health Action International (HAI) report on Antidiarrhoeal
Antidiarrhoeals

DYING FOR LACK OF A DRINK

Introduction
Nearly five million children a year die from diarrhoea. (1) A simple, highly effective therapy - oral rehydration (ORT) - is available that could prevent at least half of those deaths, at a cost of little more than 10 cents a child. (2) Instead, more than US $430 million is wasted on antidiarrhoeal medicines that are described as ineffective, of no value or dangerous. In the words of The Lancet, delay in putting ORT into practice is unjustified "while so many children are dying for lack of a drink.” (3)

Diarrhoea is one of the leading causes of illness and death in the developing world, where poverty, poor sanitation, a lack of clean water and increased exposure to infections are prevalent. It is also a serious problem in the industrialised world. Studies in Western Europe and North America have shown that diarrhoea ranks second to respiratory diseases as the cause of non-surgical paediatric admissions to hospital. In the UK, for example, diarrhoea causes one-fourth of the avoidable deaths in hospitalized children. (4, p637)

The causes of diarrhoea include viral infections, such as rotavirus, estimated to be responsible for 30-40% of diarrhoea worldwide in children under two; (5, p961) bacteria, such as Escherichia coli (E. coli); parasites and various amoebae. Diarrhoea can also occur as a result of some drug therapy; for example, nearly all antibiotics can induce diarrhoea. (6) Stress, tension, change of diet can also bring about episodes of diarrhoea, and the incidence of diarrhoea is higher amongst infants who are bottle fed rather than breast fed. (7)

Diarrhoea is usually described as being acute - lasting from a few hours to a few days - or chronic - lasting weeks or months, or with regularly recurring episodes. Most diarrhoea is acute, and is self-limited - that is, it goes away by itself. Diarrhoea is not a disease, but a symptom. (8, p840) Put simply, diarrhoea is the body's way of removing foreign toxins, bacteria or other materials which upset the gut. It is a natural protective mechanism. The danger of diarrhoea, and the most frequent cause of death, particularly in young children, is the accompanying dehydration due to the loss of large amounts of water and salts (electrolytes). (1)

Oral Rehydration Therapy
It logically follows that the treatment of dehydration should be the most important therapy used in diarrhoeal cases. ORT alone is effective in treating most cases of dehydration from watery (non-bloody) diarrhoeas, including cholera. (1) It has been described by The Lancet as: "potentially the most important medical breakthrough this century.” (9)

That claim is echoed by many other commentators. (8, p840; 10, 11) A major textbook on pharmacology states that
"In all cases of severe or prolonged diarrhoea, no matter what the cause, the rapid and complete correction of water and electrolyte loss is of the utmost importance.” (12)

Studies from around the world demonstrate the remarkable ability of ORT to reduce the number of deaths caused by diarrhoea. In regions of Guatemala, Egypt, Honduras and India, child deaths from diarrhoea have been halved following the introduction of ORT. In Costa Rica, child deaths from dehydration have dropped by more than 80% in hospitals since ORT was introduced. In Trinidad, child deaths from diarrhoeal infection dropped by 60% in the General Hospital, Port of Spain, in the five years after ORT replaced intravenous feeding as the main treatment for dehydration. In Haiti, the diarrhoea death rate among children brought into the State University Hospital, Port-au-Prince, fell from 40% to 1% after ORT was introduced in 1980. In Jordan, 1,720 out of 1,732 cases of diarrhoea were successfully treated by ORT in the General Hospital of
Antidiarrhoeals

Antibiotics and other anti-microbials: For over 20 years, antibiotics and other anti-bacterial drugs have been used as the main treatment in diarrhoea. Now, however, most authoritative opinion is against their use in all but a few specific infections. This is because anti-bacterial drugs may:

- alter the normal bacterial content of the gut leading to possible fungal infections and overgrowth of resistant bacteria;
- prolong the period when the patient with an infection can pass on the disease as a carrier;
- increase the risk of relapse;
- interfere with subsequent bacteriological diagnosis;
- promote the development of resistant organisms. (18, p143)

According to WHO, "Antimicrobial drugs are not indicated for the routine treatment of acute diarrhoea." (19) Their indiscriminate use "must be discouraged, not only because they are often of no therapeutic value, but they are needlessly expensive and can also be harmful." (1) [emphasis added]

Other commentators agree, noting that antibiotics "have a limited part to play in treating specific infections", that they have "no significant advantage" in treating uncomplicated cases of diarrhoea, (21, p87) "and may in some cases lead to prolongation of the diarrhoea." (8, p846) They are described as "not useful" in 90% of diarrhoea cases — including many that are caused by bacteria. (8, p847) They are "not effective" in treating the majority of childhood diarrhoea cases. (22)

The most commonly used anti-bacterials in antidiarrhoeal drugs are:

- Neomycin — which WHO says "should never be used in the treatment of acute diarrhoea." (19) [original emphasis] Studies have clearly shown that "neomycin causes diarrhoea". (23) [original emphasis]

- Sulphonamides — Acquired resistance to the sulphonamides "is common and has been reported in the majority of pathogenic micro-organisms sensitive to sulphonamides, including Escherichia coli... Most strains of Shigella sonnel... have been reported to be resistant... Resistance to one sulphonamide generally involves resistance to the other sulphonamides." Sulphonamides should not be given to infants within 1 to 2 months of birth nor be given to women prior to delivery and they may also be contra-indicated in nursing mothers. (11, p1458)

- Streptomycin — is a drug of choice in the treatment of tuberculosis and should generally be reserved for this use because when used in the treatment of other bacterial infections, resistance has been found to develop within 2 to 3 days. (11, p1214) Streptomycin was found to be "of little value" in the treatment of cholera-induced diarrhoea. (11, p1221)

- Chloramphenicol — Because of the well-reported problems of chloramphenicol provoking life-threatening adverse effects (such as bone marrow aplasia), "it should never be given for minor infections" (11, p1139) and should be reserved for the treatment of typhoid and paratyphoid fever. (18, p374)

(Streptomycin and Chloramphenicol are often found in combination in antidiarrhoeal drugs which doubles the risks without real benefits.)

In conclusion, anti-bacterials should never be used as a first-line treatment for most acute diarrhoeas. In the small proportion of cases where an anti-bacterial is required, (Shigella dysentery, amoebic dysentery and possibly severe cholera) WHO has prepared guidelines on the anti-bacterials to use. (19) None of the drugs mentioned above are included in that list.

[See also the fact sheets on Antibiotics and Combination Drugs.]

Adsorbents: These chemicals are supposed to attach themselves to toxins and various infective agents (as well as to some therapeutic agents) and in theory help to detoxify the gut. The main adsorbents used in antidiarrhoeal drugs are: kaolin (usually with pectin — a stabilising agent), activated charcoal and attapulgite. WHO says these products "are of no use in the prevention and treatment of dehydration and are not indicated in the routine treatment of acute diarrhoeal disease." (19)

Other experts agree. "Kaolin has no part to play in the treatment of infantile gastro-enteritis." (11, p81) It is described as "completely ineffective in cholera". Even in infants with non-cholera diarrhoea, the same study
Antidiarrhoeals

found kaolin provided no therapeutic advantage. (24) The American Medical Association describes the use of mixtures containing opiates or poorly absorbed anti-bacterial agents with adsorbents and protectants such as kaolin and pectin and antispasmodic agents as "unwarranted." It notes that the patient is subjected to the combined adverse effects of the individual ingredients and the added expense of all of these agents. Among the preparations it cites are: Bismuth, Pectin & Paregoric (Lemmon), Corrective Mixture (Beecham), Donnagel and Donnagel PG (Robins), Kaolin Mixture with Pectin (various), Kaopectate and Kaopectate Concentrate (Upjohn), Parepectolin (Rorer), Parigel (Parke-Davis), Polymagma (Wyeth) (5, p972)

A study of 204 patients with acute non-specific diarrhoea indicated that treatment with kaolin and pectin, diphenoxylate and atropine, or charcoal was "no more effective than a controlled diet in reducing the frequency or looseness of stools." (11, p1011) Another researcher notes that "Adsorbents (Kaolin, charcoal) have no demonstrated effect on either duration or severity of diarrhoea. While not apparently harmful, they detract from more important therapy and should be avoided." (8, p846)

Despite the uselessness of these drugs, in one Central American country, every rural health centre is equipped with large quantities of kaolin-pectin with neomycin for the treatment of diarrhoea. This small country currently spends over US $300,000 per year for these medications. (23)

Intestinal bacteria supplements: The theory behind the use of these products is that the diarrhoea causes the loss of normal intestinal bacteria, and that replacing these "friendly" bacteria will help. "There is little evidence to support this use." (11, p786) According to the American Medical Association, "No convincing well-controlled studies supporting use of Lactobacillus cultures are known to be available. Because of lack of adequate proof of efficacy, no dosage recommendation is made." (5, p967)

Opiates and anti-motility drugs: This type of drug operates on the premise that the symptom (diarrhoea) must be stopped. Basically, they slow down the functions of the gut. WHO says these products are of no use in the prevention and treatment of dehydration and are not indicated in the routine treatment of acute diarrhoeal disease. They may greatly slow intestinal peristalsis and delay the elimination of the causative organisms. They can be very dangerous (even fatal) if used in infants." (19)

It has been noted that these products are "unnecessary and potentially harmful in endemic or traveller's diarrhoea," (24) "may increase duration of secretion of fluid, prolong passage of pathogens, increase fever and fever-related catabolism, and decrease absorption of nutrients", (8, p846) and have "no place in the treatment of childhood diarrhoea. These substances do not change the course of diarrhoea or the underlying disease process." (22)

Two important drugs which fall into this category are Imodium (loperamide) manufactured by Janssen (Johnson & Johnson) and Lomotil (diphenoxylate with atropine) manufactured by Searle. Imodium is the largest selling antidiarrhoeal drug, with more than 10% of the world market, while Lomotil is number two, with nearly 6% of the market. [See separate fact sheets on both these drugs for further details.]

Oxyquinolines: This category of drugs were discovered to have some effect in amoebic dysentery, but their use has broadened out to include most types of diarrhoea. The most well-known drug in this category is Entero-Vioform (cloquinol) manufactured by Ciba-Geigy. WHO says: "The use of cloquinol is associated with severe neurological sequelae; moreover, the efficacy of this drug has never been documented in controlled trials. [It] should never be used in the treatment of acute diarrhoea." (19) [original emphasis]

All of the oxyquinolines carry a high risk and most experts agree that their use should be avoided. "Initial enthusiasm for the iodated chloroquine derivatives was not based on careful experimental evidence of efficacy. In fact, these agents appear to be of no value in any but amoebic diarrhoea, and even then are not drugs of choice. Drug toxicity with retinal degeneration has proved a high risk for such an ineffective agent." (8, p8'15)

"Cloquinol ... and iodoquinol ... have been used without proof of efficacy in the prophylaxis of "travellers' diarrhoea"... Since amoebae cause only a small percentage of the diarrhoeas encountered while travelling, the indiscriminate use of such potentially toxic agents must be criticized." (5, p963)

[See also the fact sheet on Oxyquinolines.]
**Missing the Target**

The firm conclusion is that the vast majority of antidiarrhoeal drugs on the market worldwide are— at best— unnecessary and, at worst, ineffective and sometimes dangerous. A survey in 1980 found that 85% of antidiarrhoeals listed in the MIMS prescribing guide for Africa were "undesirable"; 80% in the Caribbean; 82% in the Middle East; 73% in Philippines; 74% in Malaysia and Singapore; and 79% in Indonesia. (25) Sadly, the situation has not improved as the following table indicates.

**COMPARISON OF ANTIDIARRHOEAL DRUGS IN SELECTED PRESCRIBING GUIDES**

<table>
<thead>
<tr>
<th>Source &amp; total no of products</th>
<th>No. of products with ineffective contents</th>
<th>No of products with high risk contents</th>
<th>No &amp; % of products of &quot;no value&quot; in acute diarrhoea</th>
</tr>
</thead>
<tbody>
<tr>
<td>India (47) (MIMS, Jun 85)</td>
<td>21 Ads 7 Flo 10 Opi 7 Neo 6 Cli 24 Nra 39 (82.9%)</td>
<td>46 (93.8%)</td>
<td></td>
</tr>
<tr>
<td>Indonesia (49) (IIMS, Feb 85)</td>
<td>22 Ads 3 Flo 6 Opi 13 Neo 6 Cli 18 Nra 22</td>
<td>46 (93.8%)</td>
<td></td>
</tr>
<tr>
<td>Middle East (37) (MIMS, Apr 85)</td>
<td>21 Ads 1 Flo 2 Opi 7 Neo 9 Cli 8 Nra 17 33 (89.1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Africa (28) (MIMS, May 85)</td>
<td>18 Ads 1 Flo 5 Opi 9 Neo 7 Cli 12 Nra 12 25 (89.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caribbean (19) (MIMS, May 85)</td>
<td>12 Ads 2 Flo 5 Opi 6 Neo 4 Cli 7 Nra 18 18 (94.7%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key:** Ads = Adsorbents; Flo = Intestinal bacteria supplements; Lop = loperamide

Opi = other opiates; Neo = Neomycin; Cli = Chloroquine and other oxyquinolines; Nra = other non-recommended anti-bacterials

**Note:** The total in the final column is less than the sum of the individual items, due to some drugs being irrational combinations of two or more ineffective chemicals.

It is difficult to reconcile the fact that over 80% of the products on the market have no efficacy in the treatment of acute diarrhoea when 5 million children are dying each year from diarrhoea. One researcher has suggested that approximately US $200-300 million is needed to supply enough oral rehydration salts to prevent the majority of those deaths. (8, p850) More than that amount is wasted every year on the useless and sometimes dangerous products described in this leaflet. The average annual budget of the WHO Diarrhoeal Disease Control Programme is only US $6.2 million. (26) During a 12-month period in 1983-84:
- sales of Enterovioform equalled two-thirds of that figure;
- sales of Kapectate equalled more than double the WHO figure;
- sales of Lomotil were more than four times the WHO figure;
- sales of Imodium were more than seven times the WHO figure.

It is time that waste was stopped.

**Recommendations for Action:**

1. Governments and health workers should make ORT the treatment of choice in the majority of cases of acute diarrhoea.
2. All antidiarrhoeal products containing neomycin or any of the oxyquinolines should be withdrawn from the market.
3. Antidiarrhoeal products using anti-bacterials in combination with other active substances should be removed from the market. In addition, the use of anti-bacterials in treating diarrhoea should be limited to those drugs and specific indications set out in the WHO Essential Drugs List.
4. All products containing an opiate or other anti-motility drug should be contraindicated in children under 12.
5. Antidiarrhoeal preparations with no proven efficacy, such as adsorbents and intestinal bacteria supplements should be removed from the market.
6. All antidiarrhoeal preparations should carry a large, clear message on the package, and all information and advertising material to the effect that ORT is the first-line therapy in the treatment of diarrhoea.
6 Antidiarrhoeals

Notes & References:
5. AMA, Drug Evaluations, 1980, pp961-973
7. AHRTAG, Preventing and Treating Diarrhoea in the Community, undated
15. Table and figures compiled from industry data.
Models of package designs, labels and leaflets
Cuando una planta o su hijo pierden más agua de lo normal, se secan o deshidratan. Para reponerlos, hay que darles el agua que perdieron.

VIDA - SUERO - ORAL
Así se prepara y se le da al niño

CUANDO CONSULTAR AL MEDICO

| Si la nasa tiene o |
| Si tiene mucha sed o |
| Si se le quita el hambre o |
| Si orina poco o no orina o |
| Si nota sangre en el escremento y la orinación dura más de tres días |

¡CONSULTE A SU MEDICO!
Lucha contra la DESHIDRATACION
La causa principal de muerte en niños víctimas de la diarrea

**O.R.S.® SALES DE REHIDRATACION ORAL**

INSTRUCCIONES PARA EL PERFECTO USO

- Lávelse muy bien las manos.
- Revuelva el contenido de un sobre en un litro de agua hervida y fría.
- Mueva hasta que esté bien disuelto.
- Niños menores de un año, 1/2 taza cada 30 minutos, en cucharaditas.
- Niños mayores de un año, 1 taza cada 30 minutos.
- Niños mayores de un año, no debe de alimentar al niño. Además del agua según su deseo.

Proteja la salud de sus niños! Prevenga la deshidratación con: **O.R.S.® SALES DE REHIDRATACION ORAL**

La madre participa en el tratamiento.

Sencilla administración.
Gran eficacia.
No necesita materiales estériles. (agujas, tubos plásticos; etc.)
No requiere personal especializado.
La madre participa en el tratamiento.
Administrado oportunamente previene la deshidratación.
Es económica.

✓ Es de...

**SALES DE REHIDRATACION oral O.R.S.®**

Cada sobre contiene: 27.5g.
Reg. Sanit. N° 15272
IF YOUR CHILD HAS DIARRHEA

SUERO ORAL
TO PREVENT THE DEHYDRATION

1 LITRE OF CLEAN WATER
1 PACKET OF SUERO ORAL
MIX IT WELL
GIVE 1 CUP FOR EACH STOOL

FOOD AND LIQUIDS

KEEP BREASTFEEDING
GIVE SOFT FOODS SUCH AS
GIVE A LOT OF LIQUIDS SUCH AS

GO TO THE HEALTH CENTER
IF THE DIARRHEA LASTS MORE THAN 2 DAYS OR IF YOUR CHILD HAS ANY SIGNS OF DEHYDRATION

TO WAIT IS TO RISK
WHAT IS DEHYDRATION?

A HEALTHY CHILD IS LIKE A HEALTHY PLANT

DIARRHEA CAUSES THE CHILD TO LOOSE LIQUIDS LIKE A DOUGH CAUSES THE PLANT TO DRY UP

SUERO ORAL REPLACES THE LIQUIDS LIKE RAIN REVIVES THE PLANT

SUNKEN EYES
THIRST
DRY MOUTH
DRY SKIN
NO ENERGY

IF YOUR CHILD HAS ANY OF THESE SIGNS OF DEHYDRATION, TAKE HIM TO THE NEAREST HEALTH CENTER IMMEDIATELY

TO WAIT IS TO RISK

DIARRHEA CAN KILL YOUR CHILD IN ONLY A FEW HOURS

THE VERY BEST FOR THE CHILD WITH DIARRHEA

EFFECTIVE AGAINST DEHYDRATION
SAFE FOR THE CHILD
EASY FOR THE MOTHER AT HOME
References I and II
ANNEX III: ILLUSTRATIVE METHODS FOR ESTIMATING NEEDS

**Population-Based Approach**

1. Assume a population of one million people living in a "typical" region of the country.

2. Determine the demographic composition of that basic population count. In general, appropriate age groupings are children 0-4 years; children 5-14 years; women aged 15-44 years; men aged 15-44 years; adults over 45 years. This ensures coverage of the high priority maternal/child age group. However, other program priorities may dictate other groupings (e.g., under 1 and 1-4 are common groupings as well). Keep the number of divisions as simple as possible; the larger the number of age groups, the more complex is the work that needs to be done.

3. Determine the morbidity/mortality rates for the specified age groups using the data sources discussed above, and convert into estimated attack rates for each disease.

4. Calculate the frequency of occurrence of each disease in a year's time for the population of one million. For example, suppose data show that children aged 0-4 average 3 severe attacks of diarrhea per year, and the population pyramid shows the population of one million has 160,000 children aged 0-4, then the number of diarrhea attacks that need treatment for this age group are 160,000 x 3, or 480,000. Similar calculation should be repeated for each of the other high priority health problems.

5. Using these specific morbidity/mortality rates, estimate the type and frequency of treatment required for each health problem. For example, in order to treat diarrhea, estimates could be made that 90% of cases can be treated by oral rehydration and 10% of cases require intravenous fluids. In addition, 5% of cases may require metronidazole for acute amoebiasis, and 10% may require antibiotics for bacillary dysentery or cholera. Obviously, the exact percentages depend on the epidemiology of the area. As previously mentioned, wide regional variations make this process cumbersome, since individual calculations need to be done for each region.

6. Use the standard norms for treatment previously developed to calculate the quantities of each dosage of drug needed to treat each disease. For our example of diarrheal disease, if the treatment norms estimate 7 liters of oral rehydration fluid are required for each case of severe diarrhea, and the salts are packaged in packets that reconstitute to make
one liter, then 864,000 packets of oral rehydration salts will be required to treat all cases of severe diarrhea in children age 0-4 in a population of one million people (160,000 children aged 0-4 x 3 severe attacks of diarrhea/year x 2 packs of oral salts/attack x .90 proportion of diarrhea attacks treatable by oral salts = 864,000).

These calculations need to be repeated for each treatment regimen for each disease. It is easier to calculate these numbers using the combined disease rates for all age groups, but individual age group breakdowns can be done if one is willing to put in the effort. This is especially helpful if, as usually happens, resource limitations prevent purchasing enough drugs for all age groups and the groups must be prioritized. It will be helpful to know what quantities each age group will require.

7. Add to the quantities calculated the additional amounts required to fill the pipeline and to cover wastage.

8. Multiply this amount by the number of units of one million population the health program seeks to serve.

Service-Based Approach

1. Review service registers for each type of facility (hospital, health center, health post, etc.) or each type of provider (doctor, nurse, auxiliary, sanitary, village health worker) and tabulate the frequency of diagnoses for diarrhea. This review should cover an entire year, since seasonal variations (winter/summer or wet/dry) can markedly alter service patterns. Thus, if service records do not exist, it will take a minimum of 1 year's experience to gain enough information to use this method.

2. The norm of treatment for diarrhea in infants and children is 2 packets of ORS.

3. Calculate the quantities of ORS needed on a yearly basis by each type of facility or provider by multiplying the number of cases of diarrhea seen in a year by the 2 packets of ORS required to treat each case.

4. Calculate the total quantity of ORS needed to supply all facilities and/or providers projected by the program. The quantities should be phased to meet the anticipated start-up of program activities. That is, if x number of health centers will be completed by year 2, then include the quantity of ORS that they will need in year 1 estimates.

Consumption-Based Approach

1. This approach begins with historic data - an analysis of past patterns of ORS consumption. The first step is always to graph the data. For this method a facility should have records for distribution of ORS; for the program as a whole there should be monthly summaries of supplies dispensed from all outlets.
Another approach is to summarize production and importation records which may be obtained through customs records, import licenses, and Ministry of Commerce data. Whichever records are used, a graph of the data will reveal trends and the extent of monthly variation. If it appears that there is some straight line that fits the data, then draw it in. A plexiglass ruler is probably better than linear regression, because you can more easily use your judgment regarding treatment of spurious data points. Wild data and old data are rejected in fitting the travel line.

2. As a basis for forecasting needs, this procedure makes the assumption that the underlying process will continue unchanged throughout the forecasting period. This may or may not be true. It is worthwhile to make some estimate of variation. For example, one could estimate most likely, optimistic, and pessimistic values for ORS needs. These provide an indication of the degree of confidence that you have in your estimation procedure and provide the necessary information for the calculation of safety stocks. For example, if a regional warehouse dispenses 100,000 packets of ORS during the busiest month of the summer diarrhea season and only 20,000 packets during the slowest month of the year, then these figures represent the limits of confidence. An average estimate of 60,000 ORS packets per month should provide sufficient safety stocks.
The main causes of child death
DIARRHOEA REMAINS THE NUMBER ONE KILLER

The Main Causes of Child Death in Pakistan

<table>
<thead>
<tr>
<th>Diseases</th>
<th>No. of deaths (children &lt; 5 in Pakistan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhoea</td>
<td>350</td>
</tr>
<tr>
<td>Neonatal Tetanus</td>
<td>100</td>
</tr>
<tr>
<td>ARI</td>
<td>50</td>
</tr>
<tr>
<td>Others</td>
<td>30</td>
</tr>
<tr>
<td>Malaria</td>
<td>20</td>
</tr>
<tr>
<td>Measles</td>
<td>10</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>5</td>
</tr>
<tr>
<td>TB/Polio/Pertussis</td>
<td>2</td>
</tr>
</tbody>
</table>

* Figures taken from UNICEF's Situation Analysis of Children and Women in Pakistan, June 1987/March 1988

1 Planning and Development Division, Diarrhoea Survey (1984)
4 Computed from ARI Annual progress report, WHO, 180 (1985)
5 By subtraction
SUMMARY OF "ADVANCED MARKETING STRATEGY AND TECHNIQUES" WORKSHOP
OCTOBER 16-17, 1986

INTRODUCTION:

This is a summary of the groups' works in developing a simulated ORS marketing plan which includes:

I. The Market Analysis
II. Opportunities
III. Problems
IV. Objectives
V. Marketing strategies
VI. Promotion strategy and action plan to:
   - the professionals
   - the trade
   - the consumer

I. MARKET ANALYSIS

1. SERVIDRAT ENTRY MARKET BASED ON 1987 PHARMACY SALES DATA:

   - TOTAL MARKET OF ANTI-DIARRHOEALES = $ 7,507,000
   - LIQUID PORTION OF MARKET (59% OF TOTAL) = $ 4,436,000

2. POTENTIAL NEEDS FOR ORS/SERVIDRAT BY SEGMENT OF THE POPULATION:

   \[
   \begin{array}{ccc}
   & 1988 & 1989 & 1990 \\
   \text{Millions} & \text{Millions} & \text{Millions} \\
   \text{ESTIMATED POPULATION} & 105.7 & 109.3 & 113.0 \\
   \text{PRIMARY TARGET SEGMENT 0-4 YEARS} & 16.3 & 16.8 & 17.4 \\
   \text{(15.4% OF POPULATION)} & & & \\
   \text{ESTIMATED NEEDS IN MILLITRES/PACKS:} & & & \\
   \quad \text{BASED ON MINIMUM OF} & 65.2 & 67.2 & 69.6 \\
   \quad 2 BOUTS/YEAR & & & \\
   \quad \text{BASED ON ESTIMATED} & 97.6 & 100.8 & 104.4 \\
   \quad 3 BOUTS/YEAR & & & \\
   \end{array}
   \]

1988 ORS ESTIMATED NEEDS REPRESENT A MARKET POTENTIAL BETWEEN 65.2 AND 97.8 MILLION PACKS

THE POTENTIAL MARKET IS HUGE!

3. AVERAGE POTENTIAL MARKET FOR 1988
   (REFERENCE I: OF WORKSHOP MATERIAL) = 163 MILLION PACKS
   - ACTUAL PRODUCTION OF ORS (PROJECTED FOR 1988) = 52 M PACKS
   - POTENTIAL CAPACITY = 120 M LITRE

ANALYSIS

THE MARKET POTENTIAL FOR ORS IS STILL UNTAPPED. ACTUAL PRODUCTION CAPACITY CAN BE FULLY UTILIZED AND EVENTUALLY EXPANDED. KEY ISSUE IS TO CREATE DEMAND FOR ORS.
4. The competition includes:
   - Antidiarrhoeals/antibacterials
   - Motility inhibitors
   - Intestinal adsorbants
   - Oral electrolyte replacers

II. OPPORTUNITIES

1. Huge market potential yet untapped
2. High ORS awareness - in both rural and urban areas leading to increasing usage of ORS
3. Supportive MOH campaign on ORS/ORT promotion is continuing
4. Antidiarrhoeals/antibacterials sales are declining
5. ORS is most economical treatment for the patient - affordable even for the poorer
6. Available production capacity can be fully utilized to meet potential needs
7. Effective, skilled sales force reflecting high company image with doctors
8. Widespread distribution network of established OTC products

III. PROBLEMS

1. Drug distribution restricted to drug outlets - can ORS distribution be exempted, as licensed drug stores not available in majority of rural areas?
2. Expected tough competition from already established antidiarrhoeals
3. Higher price (0.15 $) than other ORS packs may represent a small disadvantage
4. Need for advertising funds to create massive demand
5. Self medication for diarrhea (home preparations) is believed to be prevalent in rural areas
6. Hakims and homeopaths who are influential in rural areas are unaware of ORS. They do not support its use.

IV. OBJECTIVES AND STRATEGIES

GROUP I (AGGRESSIVE)

<table>
<thead>
<tr>
<th></th>
<th>1986</th>
<th>1987</th>
<th>1988</th>
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<tbody>
<tr>
<td>Total Market Potential Litre</td>
<td>176 M</td>
<td>182 M</td>
<td>188 M</td>
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<tr>
<td>Total Achievable Market</td>
<td>35 M</td>
<td>55 M</td>
<td>75 M</td>
</tr>
<tr>
<td>Servidrat Market Share</td>
<td>3%</td>
<td>25%</td>
<td>31%</td>
</tr>
<tr>
<td>Sales in packs of 1 litre</td>
<td>1 M</td>
<td>14 M</td>
<td>25 M</td>
</tr>
<tr>
<td>1986 Sales in ₹</td>
<td>0.15 M</td>
<td>₹ 2.1 M</td>
<td>₹ 3.5 M</td>
</tr>
<tr>
<td>(ONE PACK = 0.15 L)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986 Sales are small as Servidrat was launched in April with limited promotional efforts</td>
<td></td>
<td></td>
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</table>
PROPOSED STRATEGIES THAT ADDRESS THE PROBLEMS AND OPPORTUNITIES PREVIOUSLY IDENTIFIED:

1. DISTRIBUTION

EXPAND DISTRIBUTION TO INCLUDE: GENERAL STORES, GROCERIES, UTILITY STORES, PAN SHOPS, ALL SUCH OUTLETS WHERE CONSUMERS' COMMODITIES ARE SOLD.

2. PROMOTION

- TO CHEMISTS THROUGH THE USE OF EXISTING DETAIL FORCE
- TO ALL THE PARAMEDICAL STAFF - THROUGH HIRING OF A NEW FIELD FORCE FOR OTC
- TO ALL OTHER SALES POINTS

3. DIRECT ADVERTISING: TO PARENTS THROUGH MEDIA AND BROCHURES FOR MOTHERS,

4. PACKAGING: CHANGE TO MORE ATTRACTIVE/COLOURFUL PACK

TASTE/FLAVOUR: ADD FLAVOURS. TEST WITH CONSUMERS AND SELECT THE BEST

5. FUNDING: 5% OF THE TOTAL TURNOVER TO BE UTILIZED AS:

- ADVERTISING (ALL MEDIA): 60%
- SAMPLING: 20%
- ON ALL OTHER PROMOTIONAL ACTIVITIES: 20%

GROUP II (MODEST)

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>ORS MARKET IN LITRES</td>
<td>98.0 M</td>
<td>101.5 M</td>
<td>104.0 M</td>
</tr>
<tr>
<td>IN VALUE &amp; $0.10/PACK</td>
<td>$9.8 M</td>
<td>$10.1 M</td>
<td>$10.4 M</td>
</tr>
<tr>
<td>SERVIDRAT SALES IN LITRES</td>
<td>0.43 M</td>
<td>1.7 M</td>
<td>3.12 M</td>
</tr>
<tr>
<td>AT AV. PRICE $ 0.15</td>
<td>$0.065 M</td>
<td>$0.253 M</td>
<td>$0.546 M</td>
</tr>
<tr>
<td>MARKET SHARE</td>
<td>0.7%</td>
<td>2.5%</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

1. DISTRIBUTION

- EXTEND DISTRIBUTION TO GENERAL MERCHANTS, LARYNGA STORES, PAN SHOPS IN 1989

2. MARKETING SEGMENTATION

- BOTH URBAN AND RURAL TARGETS

3. TARGET AUDIENCE: PARENTS, PROFESSIONALS AND PARAMEDICALS

4. PACKAGING: MAKE ATTRACTIVE, COLOURFUL FOIL SACHETS

- TEXT/COPY IN URDU
5. PROMOTIONAL ACTIVITIES

a) THROUGH MEDICAL REPRESENTATIVES CALLS ON
FAEDIATRICIANS, G.P.'S, HEALTH CARE STAFF AND
PRACTICING CHEMISTS

b) VAN PROMOTIONS: PROMOTION IN AWAMI MELAS AND
EXHIBITIONS

c) ADVERTISEMENTS IN MEDICAL/HAKIM/HOMEOPATH JOURNALS

d) MASS MEDIA PROMOTIONS - TV, RADIO, PRESS,
MAGAZINES, STICKERS, POSTERS ETC.

e) PRODUCE LEAFLETS IN URDU

f) GIVE-AWAYS TO DOCTORS AND SALES INCENTIVES FOR
TRADE

6. FUNDS

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>SALES ALL PRODUCTS</td>
<td>3.72 M</td>
<td>4.46 M</td>
<td>5.36 M</td>
</tr>
<tr>
<td>GROWTH</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>TOTAL ADVERTISING FUND (5% OF TURNOVER)</td>
<td>190,000</td>
<td>223,000</td>
<td>270,000</td>
</tr>
<tr>
<td>FUNDS FOR ORS (% OF TOTAL FUNDS)</td>
<td>57,000</td>
<td>111,000</td>
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</table>

7. ORS COMMUNICATION STRATEGY V/S ANTI DIARRHOEALS

- PREVENTS AND TREATS DEHYDRATION, THE MOST SERIOUS
  THREAT IN DIARRHOEA
- NO TOXICITY
- IMPROVES BODY DEFENSE MECHANISM
- CHEAPER

GROUP III (VERY CONSERVATIVE)

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
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<td>.729</td>
<td>.875</td>
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<tr>
<td>SERVIDRAT SALES IN UNITS</td>
<td>-</td>
<td>512</td>
<td>822</td>
<td>1,082</td>
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<tr>
<td>SERVIDRAT SALES IN $ 000'S</td>
<td>-</td>
<td>76.8</td>
<td>124.8</td>
<td>162.2</td>
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<tr>
<td>SERVIDRAT MARKET SHARE %</td>
<td>-</td>
<td>11%</td>
<td>11%</td>
<td>12%</td>
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</table>

ASSUMPTIONS

1. ENTRY MARKET LIMITED TO ORS PREPARATIONS
2. ORS SALES BASED ON 1987 PHARMACY SALES DATA
3. ORS SALES INCREASE BY 20% IN 1988 AND 25% IN 1989, 1990
4. 1988 SERVIDRAT SALES

<table>
<thead>
<tr>
<th>MONTH</th>
<th>1988 SALES</th>
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<tbody>
<tr>
<td>APRIL - AUGUST</td>
<td>$48,000</td>
</tr>
<tr>
<td>SEPT/OCTOBER</td>
<td>$172,000</td>
</tr>
<tr>
<td>NOV/DECEMBER</td>
<td>$9,600</td>
</tr>
<tr>
<td>WINTER MONTHS</td>
<td>$1249,600</td>
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</table>
*50% ANNUAL GROWTH
*1988 SALES FOR FUTURE PROJECTION = 96,000
(9600/MONTH SALES DURING SUMMER FOR 8 MONTHS;
4800/MONTH SALES DURING WINTERS FOR 4 MONTHS)

SUB-OBJECTIVES

* OBTAIN MARKET LEADERSHIP IN ORS SALES
* ACHIEVE SOCIAL OBJECTIVES OF BETTER PUBLIC HEALTH
* IMPROVE COMPANY IMAGE AMONG MEDICAL PROFESSION AND
  AMONG CONSUMERS

1. DISTRIBUTION
   - PROGRESSIVELY INCREASE NUMBER OF DISTRIBUTORS FROM
     PRESENT 50 TO 100
   - ENSURE DEEPER PENETRATION OF FAR FLUNG AREAS
   - NEW DISTRIBUTORS TO BE APPOINTED IN PLACE OF
     INEFFICIENT DISTRIBUTORS
   - CONSTANT CHECK OVER DISTRIBUTORS' PERFORMANCE
   - DISTRIBUTORS WILL BE GIVEN MONTHLY SALES TARGETS
   - INCENTIVE SCHEMES FOR DISTRIBUTORS TO BE INTRODUCED

2. SEGMENTATION OF TARGET AUDIENCE
   A. PRIMARY TARGET AUDIENCE
      - PEDIATRICIANS
      - GENERAL PRACTITIONERS
      - MATERNITY HOMES
      - HOSPITALS
      - CHEMISTS
   B. SECONDARY
      - CONSUMERS (INDIRECTLY)
      - WHOLESALERS
      - DISTRIBUTORS

3. PACKAGING
   - ATTRACTIVE PACK
   - OUTER PACKING SHOULD BE CONVENIENT FOR DISPLAY

4. SALES FORCE
   - PRESENT NUMBER OF FIELD FORCE WILL BE INCREASED
   - DETAILMEN WILL BE ASKED TO VISIT CHEMISTS AS WELL AS
     DOCTORS
   - AT LEAST 3 ORDERS FOR SERVIKAT MUST BE BOUNED DAILY BY
     EACH DETAILMAN
   - SALES FORCE WILL BE PROVIDED SUITABLE TRAINING, BOTH
     THEORETICAL AS WELL AS PRACTICAL.
   - SALES FORCE WILL BE GIVEN ANNUAL TARGETS
   - ON ACHIEVEMENT OF TARGETS, INCENTIVES WILL BE GIVEN
5. **OUTSIDER RESOURCES**

- Train, motivate and utilize distribution sales force
- Adapt/use publicity material, literature, wall hangings, give-aways etc. developed by MOH and donor agencies.

6. **PROMOTION AND ADVERTISING**

- Basic promotion thrust is to doctors through detailmen using samples and literature
- Develop new promotional material both for doctors and chemists
- Develop permanent visuals for doctors' clinics and chemist shops
- Provide display counters for chemists through distributors
- Signs, mobile hangers, stickers etc. to be displayed
- Organize "display weeks" for chemists and award the best-displayed chemist shop

7. **TESTING/QUALITY CONTROL**

- Stringent quality control measures will be adopted in order to ensure high quality product
- Apart from testing in our own laboratory, the samples from each batch will be sent to NIH and PCSIR for testing
PROMOTIONAL STRATEGY AND ACTION PLAN
FOR THE CONSUMER (PARENTS)

INVENTORY OF RESOURCES = $100,000

TASK FORCE

1. FIELD FORCE
2. DISTRIBUTORS, DSRS
3. VAN TASK FORCE (VFT)
4. DOCTORS
5. VIFS/INFLUENTIALS
6. MEDIA
7. HEALTH INFRASTRUCTURE
8. SCHOOL/COLLEGES
9. SOCIAL WELFARE ORGANIZATIONS

SERVICE

1. HEALTH CARE EDUCATION
2. PROPER FOOD MIXING
3. LEAFLET/BOOKLET
4. SAMPLING
# ACTION PLAN/CALENDAR OF EVENTS

<table>
<thead>
<tr>
<th></th>
<th>JAN 89</th>
<th>FEB 89</th>
<th>MAR 89</th>
<th>APR 89</th>
<th>MAY 89</th>
<th>JUN 89</th>
<th>JUL 89</th>
<th>AUG 89</th>
<th>SEP 89</th>
<th>OCT 89</th>
<th>NOV 89</th>
<th>DEC 89</th>
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<tr>
<td>T.V.</td>
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<tr>
<td>MOTHER LEAFLETS</td>
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<td>15,000</td>
<td></td>
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</table>

**EXAMPLES OF ADVERTISING MESSAGE TO THE MOTHER**

YOUR CHILDREN ARE A SOURCE OF IMMENSE HAPPINESS FOR YOU.

KEEP YOUR CHILDREN HAPPY AND HEALTHY. USE SERVIDRAT.

SERVIDRAT PROTECTS YOUR CHILDREN FROM DEHYDRATION RESULTING FROM DIARRHOEA.

SERVIDRAT IS AVAILABLE EVERYWHERE IN DIFFERENT FLAVOURS.
MARKETING/PROMOTIONAL STRATEGIES
TO THE TRADE

SIDOPHARMA

DISTRIBUTOR NETWORK

T1=New Market

NEW DISTRIBUTORS

NEW WHOLESALERS

OTHER RETAIL OUTLETS

T2=Established Market

EXISTING DISTRIBUTORS

WHOLESALERS

RETAIL CHEMISTS
PROMOTIONAL ACTIVITIES FOR THE TRADE:

(1) EDUCATION ON THE USE/USAGE OF THE PRODUCT (SEMINAR, ........ LITERATURE)

(11) MOTIVATION -
- HIGHLIGHT THE PRODUCT
- CREATE POSITIVE IMAGE - SALES
- ADVERTISEMENT SUPPORT
- DISPLAY, AFTER SALE SERVICE/MAINTENANCE
- CO-SUPPORT

(111) INCENTIVE FOR CUSTOMER (RETAILERS/WHOLESALERS/DISTRIBUTORS)

1. BONUSES
2. GIFTS

TO ESTABLISH SERVIDAT IN THE MARKET WE RECOMMEND THE FOLLOWING
Allocation of Funds
$100,000

- $70,000
- $30,000

SEMINARS = $25,000

- $24,000
- $1,000

TOWN TEHSIL ZILA VILLAGE METRO

- SCHOOL
- WOMEN ORGANIZATION
- OTHER

PAMPHLETS = $4,500

- $5,000
- $1,500

COLOURED LEAFLETS
INFORMATIVE BROUCHURE
LITERATURE
PRODUCT INFO

ADVERTISEMENT SUPPORT = $30,000

- $20,000
- $10,000

LOCAL/DAILY/WEFELY/N.P./ MAGAZINE
RADIO/T.V. SPOTS
**BONUS = $7,000**

- $5,000 Goods
- Special discount
- $2,000

**GIFTS = $9,000**

- $5,000
- Pens, calendars, jugs, glasses, key chains
- $4,000

**Point-of-sale material = $7,500**

- $5,000 display rack, panels, color posters
- $2,500

**Sales force incentive = $17,000**

- $12,000 point-of-sale material = $7,500
- $5,000

Hiring extra sales force to introduce & promote the product for new market.

Total: $170,000
# ACTION PLAN/CALENDAR OF EVENTS

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<th>SEM</th>
<th>LIT</th>
<th>BONUS</th>
<th>GIFTS</th>
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<tr>
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<td></td>
<td>1000</td>
<td>500</td>
<td>750</td>
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### PROMOTION STRATEGY AND ACTION PLAN

**TO THE PROFESSIONALS**

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<th>ACTIVITY</th>
<th>BUDGET ALLOCATION</th>
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<td></td>
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<td>(x 1000)</td>
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<tr>
<td>1. DETAILING*</td>
<td>90</td>
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<tr>
<td>2. TRAINING/REFRESHER COURSE</td>
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<tr>
<td>3. SAMPLING(S)**</td>
<td>20</td>
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<tr>
<td>4. DETAIL LIT (L) LEAFLET (LHF)</td>
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<td>5. JOURNAL ADV.</td>
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<td>6. POINT-OF-SALE (P.O.S) MATERIAL</td>
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<tr>
<td>7. CONFERENCE &amp; SEMINARS</td>
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</table>

**TOTAL:** 100

---

* DA = First detailing, D.C. = Secondary detailing

** S = One sample unit, SS = Two sample units
Evaluation of Workshop
EVALUATION OF THE WORKSHOP ON ADVANCED MARKETING STRATEGY AND TECHNIQUES
October 16-17, 1988

Rating of FORMAT, CONTENTS and RELEVANCE TO WORK:
(1 is the lowest, 5 is the highest)

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>NAME</th>
<th>FORMAT</th>
<th>CONTENT</th>
<th>RELEVANCE</th>
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<td>WILSONS</td>
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<td>WILSONS</td>
<td>Azam Abbas</td>
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<td>PHARMEDIC</td>
<td>Iftikhar A. Shaikh</td>
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<tr>
<td>PHARMEDIC</td>
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<tr>
<td>SEARLE</td>
<td>Ejaz-Ul-Islam</td>
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<td>S.A.H. Bokhari</td>
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<tr>
<td>CHAUDHRY DAIRY</td>
<td>Abdul Karim</td>
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<tr>
<td>CHAUDHRY DAIRY</td>
<td>Naveed Haider Khan</td>
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<td>WOODWARDS</td>
<td>Saifullah Khan</td>
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<td>WOODWARDS</td>
<td>Aftab Iqbal</td>
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<td>M. Shahbaz A. Khan</td>
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<td>RECKITT &amp;COLMAN</td>
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<td>Ch. Nadir Khan</td>
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</table>

1. Average rating of FORMAT/PRESENTATION = 4
2. Average rating of CONTENT = 4
3. Average rating of RELEVANCE TO WORK = 4

4. Positive aspects of the Workshop:

- Involvement of private sector
- Coordination between manufacturers
- Understanding of marketing and future promotional strategies
- Awareness of ORT is better since
- Importance of ORS
5. **How the Workshop could be improved:**

- By using examples of some success stories from world over
- By avoiding heterogeneous groups
- By giving accurate/nearly accurate data
- By providing the Case Study a little earlier
- By extending the duration of the Workshop
- By including doctors as participants

6. **Average percentage of answers to question: “WHAT PERCENTAGE OF THE OUTPUT OF THE WORKSHOP WILL YOU BE ABLE TO USE” = 70%**

6.a **Elements from the workshop participants will be using in their work:**

- Distribution of ORS measurement jugs
- ORS mixing competition
- Planning for action and development of strategies
- Medical representative shall be sent to paediatricians and tell them importance of ORS
- Introduction of liquid ORS
Dear Friends:

We were delighted with the outcome of the "Advanced Marketing Strategies Workshop". The coming together of experienced, creative minds like yours has resulted in what we believe to be the beginning of an effective, collaborative venture among ORS producers, possible ORS distributors, the Pakistani Government and donor agencies.

We would like to remind you of the following agreements reached during the workshop:

We all agreed that certain standard messages should be disseminated to the public both to inform consumers of key aspects of Oral Rehydration Therapy and to ensure that ORS as a product will be credible by being used in the most effective way. We will be sending you proposed Key Messages for detailing material. Please refer to the sample packet design and the ORT Leaflet for consumers in Appendix H of your workshop material.

Some of you will be sending Lucia Ferraz-Tabor a plan for marketing of ORS. Camille Saade will write comments/suggestions to each of you individually and confidentially.

You will write a request in the newspapers to Dr. Manboonul-Haq explaining that the taxes on aluminium foil will result in increasing the cost of ORS to consumers which will defeat the objectives of the National Control of Diarrhoeal Diseases (CDD) Program in Pakistan. As you know, the CDD Program along with EPI and training of traditional Birth Attendants, makes up Pakistan's Accelerated Health Program. As soon as we receive a copy of the published message in the newspapers signed by ORS producers as a group, we will request that NIH, USAID, WHO and UNICEF write letters supporting your request. We urge you to proceed immediately, before the elections.

We are requesting assistance from NIH, WHO, UNICEF and USAID to support exemption of ORS from drug restrictions for the purpose of sales.

We hope that the workshop we attended was just the beginning of a network among all of us, which will result in cooperation to ensure that ORS will be made available to every Pakistani child who needs it. Furthermore, we hope that you will ensure in your promotion that ORS will be prepared and administered correctly along with breastfeeding and nutritious foods.

We hope that you will continue communicating with each other and with us.

Thank you very much for affording us the opportunity of working with you.

Sincerely,

Lucia Ferraz-Tabor
PRITECH/Pakistan

Camille Saade
PRITECH/Pakistan
TO:        - Col. Akram Khan, NIH
- Ray Martin USAID/HPN
- Heather Goldman, USAID/HPN
- Dan O'Dell, UNICEF
- Pirkko Heinonen, UNICEF
- Rina Gill, UNICEF

FROM: Lucia Ferraz-Tabor /FPRITECH/Pakistan
Camille Saade /PRITECH/Pakistan

SUBJECT: Private Sector Initiative

DATE: October 19, 1988

OUTCOME OF ADVANCED MARKETING STRATEGIES WORKSHOP FOR ORS PRODUCERS AND DISTRIBUTORS

1. Participants developed proposed marketing strategies, objectives and action plans for improved marketing and distribution of ORS.

2. Agreement by ORS producers to incorporate standard messages in the ORS packet, brochures and other detailing material.

3. Agreement by ORS producers to write an appeal to Dr. Mehboob-ul-Haq requesting continuation of a previous waiver of import tax on aluminium foil which is the most costly part of an ORS packet.

4. Agreement and willingness to expand distribution of ORS through all retail outlets, given government permission to sell ORS outside chemist shops.

5. Most participants will send PRITECH a proposed marketing plan for ORS. Camille Saade, PRITECH, will comment and make suggestions individually and confidentially.

6. Follow-up workshop: training of trainers of detailmen to take place in Lahore on October 23, 1988.

PROPOSED STRATEGIES:

1. SHORT TERM:

   Suggested action to NIH and donor agencies:

   Provide on a continuous basis, data for detailing material/promotion to ORS producers and training to enable them to "sell" ORT instead of just ORS.

   Provide ORS producers research available which shows that CRS plus feeding of carbohydrates like wheat, rice, banana, etc. reduces stool output by 30 to 50% (Dr. Molla);

   Obtain government permission to sell CRS outside chemist shops;

   Support request by ORS producers to exempt CRS from taxes on communications campaign on ORT;
Provide additional training/technical support (e.g., advertising strategy, quality control, market research, etc.) requested by ORS producers.

2. LONG TERM/ON-GOING:

Assist ORS producers to develop a comprehensive marketing strategy for ORS, including market/consumer research, product positioning, test marketing of product, new product research; the context of Oral Rehydration Therapy;

Assist ORS producers to form an ORS producers association.

Keeping them abreast about new market development in ORS formulation.
APPENDIX D
SALES TRAINING WORKSHOP
SALES TRAINING WORKSHOP

October 23, 1988

Workshop Leader: - Camille Saade, PRITECH

Resource Person: - Dr. Waheed Qureshi,
    Postgraduate Medical Center, Lahore
    - Lucia Ferraz-Tabor, PRITECH/Pakistan
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Description</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Introduction &amp; objectives of workshop</td>
<td>Mrs. L. Ferraz-Tabor</td>
</tr>
<tr>
<td>08:15</td>
<td>Detailman Call Analysis</td>
<td>Mr. C. Saade</td>
</tr>
<tr>
<td>09:00</td>
<td>ORT the 1st line drug in diarrhoea</td>
<td>Prof. A. Waheed</td>
</tr>
<tr>
<td>09:40</td>
<td>Questions and Answers</td>
<td>Participants</td>
</tr>
<tr>
<td>10:00</td>
<td>Tea break</td>
<td></td>
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<tr>
<td>10:15</td>
<td>F.A.B. technique</td>
<td>Mr. C. Saade</td>
</tr>
<tr>
<td>10:45</td>
<td>Role-playing</td>
<td>Groups</td>
</tr>
<tr>
<td>11:30</td>
<td>Presentations</td>
<td>Groups</td>
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<tr>
<td>12:00</td>
<td>P.A.W.N.F.A.B. technique</td>
<td>Mr. C. Saade</td>
</tr>
<tr>
<td>12:45</td>
<td>Feel - Felt - Found technique</td>
<td>Mr. C. Saade</td>
</tr>
<tr>
<td>13:00</td>
<td>Buffet lunch in Fort Grill restaurant</td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td>Role-playing on ORS detailing</td>
<td>Groups</td>
</tr>
<tr>
<td>14:43</td>
<td>Presentations on ORS detailing</td>
<td>Groups</td>
</tr>
<tr>
<td>15:15</td>
<td>Thorough Selling Process</td>
<td>Mr. C. Saade</td>
</tr>
<tr>
<td>16:00</td>
<td>Closing of Workshop</td>
<td>Mrs. L. Ferraz-Tabor</td>
</tr>
</tbody>
</table>
## PARTICIPANTS IN THE WORKSHOP ON TRAINING TECHNIQUES FOR SALES MANAGER/SALES TRAINERS

October 23, 1988 - Lahore

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ch. Nadir</td>
<td>Managing Director</td>
<td>FAKHA PHARMA LAHORE</td>
</tr>
<tr>
<td>2. Zilley-Hasnain</td>
<td>Area Manager</td>
<td>WILSONS PHARMA-CEUTICALS</td>
</tr>
<tr>
<td>3. Hayat Zulfi</td>
<td>Area Manager</td>
<td></td>
</tr>
<tr>
<td>4. Azam Abbas</td>
<td>Area Manager</td>
<td></td>
</tr>
<tr>
<td>5. Waseem-Ur-Rehman</td>
<td>D.Sales Manager</td>
<td>CHAUDHRY DAIRIES</td>
</tr>
<tr>
<td>6. Mufiz-Ur-Rehman</td>
<td>Sales Supervisor</td>
<td></td>
</tr>
<tr>
<td>7. Ejaz-Ul_Islam</td>
<td>Product Manager</td>
<td>SEARLE</td>
</tr>
<tr>
<td>11. Shabir Hashmi</td>
<td>Reg.Field Mgr.</td>
<td>LAHORE CHEMICAL</td>
</tr>
<tr>
<td>12. Mohammad Farooq</td>
<td>Reg Field Mgr.</td>
<td></td>
</tr>
<tr>
<td>13. Saifullah Khan</td>
<td>Reg.Sales Mgr.</td>
<td>WOODWARDS</td>
</tr>
<tr>
<td>14. Altaf Iqbal</td>
<td>Product Manager</td>
<td></td>
</tr>
<tr>
<td>15. Altaf Hussain</td>
<td>Area Manager</td>
<td></td>
</tr>
</tbody>
</table>
Selling Techniques

Detailmen Call Analysis

Ask audience about
- Number of salesmen
- Their role
- Number of calls - Number of products
- Objective of call
- Strategy of a call
- Example from participants

(Mock detail of present product)

3 details

Analysis

- look for:
  - 2 way communication
  - Identification of Doctors’ current treatment practices
  - Doctors’ needs/interest
  - Benefit of product
  - Reinforce by proof/references
  - Closing
  - Ask for commitment
WORKSHOP ON TRAINING TECHNIQUES FOR SALES MANAGERS/SALES TRAINERS

PARTICIPANTS DIVIDED INTO 5 GROUPS
FOCUS ON:

- Feature
- Advantage
- Benefits

<table>
<thead>
<tr>
<th>Group #</th>
<th>Product</th>
<th>Customer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tic-Tac pen - 2 colours</td>
<td>School Principal</td>
</tr>
<tr>
<td>2.</td>
<td>Room Key Holder</td>
<td>Hotel Purchasing Manager</td>
</tr>
<tr>
<td>3.</td>
<td>Avart Hotel Rooms</td>
<td>Company Sales Manager with 50 sales force</td>
</tr>
<tr>
<td>4.</td>
<td>Mazda 626</td>
<td>Wealthy Doctor</td>
</tr>
<tr>
<td>5.</td>
<td>Kashmir Carpet</td>
<td>Tourist</td>
</tr>
</tbody>
</table>
P.A.W.N.F.A.B.

**Problem** - Start by stating a medical treatment problem relevant to the doctor.

**Acknowledge** - This problem is also encountered by other doctors.

**Want** - Investigate the doctor's wants.

**Name** - Introduce the name of the product.

**Feature** - Describe the unique characteristic that best satisfy the doctor's wants.

**Advantage** - Explain what this characteristic does in the body of the patient.

**Benefits** - Translate this action into benefits to the doctor, the patient, or the family.

Close the call by asking the doctor's commitment.
FEEL - FELT - FOUND

FEEL
I CAN UNDERSTAND HOW YOU ________.
UNDoubtedly YOU BRING UP A KEY ISSUE.
I CAN SEE YOUR POINT.

FELT
IN FACT MANY PEOPLE HAVE ________ THE SAME WAY.
PROBABLY CURiosity MOTIVATE THEM TO USE IT.

FOUND
AND THIS IS WHAT THEY ________.
THERE WERE SO MANY AVANTAGES AND BENEFITS
THEY WERE DELIGHTED.
<table>
<thead>
<tr>
<th>FEATURE</th>
<th>UNIQUE CHARACTERISTIC OF THE PRODUCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADVANTAGE</td>
<td>WHAT IT DOES IN THE BODY</td>
</tr>
<tr>
<td>BENEFITS</td>
<td>TO THE DOCTOR, THE PATIENT, THE FAMILY OR THE COMMUNITY</td>
</tr>
</tbody>
</table>
THOROUGH SELLING

PLANNING

- Collect relative facts
- Analyze the situation
- Set objectives
- Develop strategy and tactics

CONTACT

- Determine who must be contacted
- Optimum time to call on the contact
- Appointment where desirable
- Put plan, including routing and contingency plan, into action

DISCUSSION

- Establish two-way communication to encourage mental participation
- Establish the appropriate mood
- Assume a problem solving attitude
- Adjust to verbal and non-verbal feedback

SATISFY DOUBTS

- Anticipate and satisfy before they are expressed
- Satisfy expressed doubts with third party proof
- Answer objections with third party proof

CLOSE

- Summarize benefits important to the prospect
- Obtain a commitment to a course of action
- Provide aids to facilitate and reinforce a course of action

FOLLOW-UP

- What did I learn from this call?
- How will I appraise the information learned?
- How can I do it better?
- What must be reinforced?
- What do I do next?
- What must be included in plans for follow-up?
- Next call?
Doctor, Diarrhoea is the major killer of children. Every year over 200,000 children die in Pakistan, mostly due to dehydration.

Acknowledge:

WHO reports that the causative organism in 80% of diarrhoea cases are ROTA VIRUS and E. COLI. There is no drug which can kill these organisms. WHO also reports that dehydration is the most serious complication of diarrhoea.

Wants

So, Doctor, there is need for a drug which immediately replaces all the fluid losses and ultimately saves the child.

Name

Doctor, Sidpharma is proud to present SERVIDRAT, which contains all necessary WHO recommended ingredients:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Chloride</td>
<td>3.5 gram</td>
</tr>
<tr>
<td>Potassium</td>
<td>1.5 gram</td>
</tr>
<tr>
<td>Trisodium Citrate</td>
<td>2.9 gram</td>
</tr>
<tr>
<td>Glucose</td>
<td>20.0 gram</td>
</tr>
</tbody>
</table>

FEATURES | ADVANTAGES | BENEFITS
---|------------|------------
Sodium Chloride | Maintains Concentration in the Plasma | By rehydrating the patient, you save his life
Potassium Bicarbonates | By replacing bicarbonate you can control acidosis and can prevent irreversible shock and death | Patient back to normal; thus you save your patient
Glucose | Glucose accelerates absorption of water and helps correct dehydration | Patient will recover and return to normal life
Close

Doctor, as we have already discussed, ORT is the only proven scientific treatment for dehydration.

Will you prescribe SERVIDRAT to all your dehydrated patients?
Doctor, infant morbidity and mortality is a major problem in developing countries and particularly in this part of the world.

Doctor, diarrhoea and dehydration cause almost one-third of infant deaths.

Doctor, you will agree that there is a need to prevent and treat dehydration which is the most serious complication of diarrhoea.

Doctor, our SERVIDRAT, an ORS, is the logical choice to treat diarrhoea and dehydration. SERVIDRAT replaces the vital electrolytes and fluid.

Doctor, SERVIDRAT's formula is recommended by WHO.

The Citrate component in SERVIDRAT corrects acidosis which is a common complication in diarrhoea and vomiting.

Most of your patients can be treated with one sachet of SERVIDRAT per day. SERVIDRAT is available in 3 different flavours - orange, pineapple and lemon - and your sweet little patients will love to take it.

I hope these benefits are sound enough to use SERVIDRAT in your next dehydrated patient.

Doctor, these are a few sachets for your needy patients.

Thank you very much, Doctor.
Doctor, in Pakistan 14 million children between 6 months and 2 years suffer from Diarrhoea, out of which 100,000 die every year.

Doctor, you must be getting a lot of children with diarrhoea in your daily practice.

How do you treat them?

:- Usually I prescribe STREPTOMAGMA

Doctor, are your patients (Mothers and Children) satisfied with perpetually worsening condition, such as dehydration or malnutrition with antidiarrhoeals?

:- No, they are not satisfied. This is a big problem for me while treating children with diarrhoea.

Doctor, this is a problem in general; your other colleagues face the same problem, and are not satisfied with the prescription of antidiarrhoeals. In fact, antidiarrhoeals are making the problem more complicated. Instead of getting relief, children are suffering with severe dehydration and malnutrition and ultimately death occurs.

Doctor, don't you think it is logical to treat the dehydration, which is the real problem?

:- Yes, I think so.

Doctor, Sidpharma offers you SERVIDRAT to treat dehydration.

SERVIDRAT is the wonderdrug of this century as reported in Lancet. SERVIDRAT is the first-line therapy for diarrhoea.

Doctor, SERVIDRAT is a combination of Salt and Glucose.

Salt to rehydrate and cope with electrolyte imbalance:
Glucose acts as a carrier of electrolytes.
SERVIDRAT is flavoured so that children may take it easily.
SERVIDRAT is available in one litre packs - so that mothers can prepare it easily.
SERVIDRAT is economically priced at 2.50 for your patients - so that they can afford it easily.
SERVIDRAT pack illustrations facilitate the preparation and proper dosage, even for illiterate parents.

Do treat your next patient with SERVIDRAT.
FEEL I CAN UNDERSTAND HOW YOU _________. UNDOUBTEDLY YOU BRING UP A KEY ISSUE.
I CAN SEE YOUR POINT.

FELT IN FACT MANY PEOPLE HAVE _________. THE SAME WAY. PROBABLY CURiosity MOTIVATE:
THEM TO USE IT.

FOUND AND THIS IS WHAT THEY _________. THERE WERE SO MANY ADVANTAGES AND
BENEFITS THEY WERE DELIGHTED.
ORT. THE FIRST-LINE TREATMENT OF DIARRHOEA

Prof. Waheed Qureshi

There are 14 million children between 0 - 2 years of age in Pakistan between the ages of 6 months to 21 months, 100,000 children die due to diarrhoea.

Children have about 5-6 attacks/bouts a year.

30-45% of childhood mortality due to diarrhoea.

Definition of Diarrhoea: 3 loose, watery stools/day

Death occurs due to complications:

- Dehydration
- Malnutrition
- Infection
- Post-diarrhoeal distension
- Liver derangement due to starvation
- Enzyme (lactase)

Dehydration:

- Mild 9% of all cases
- Moderate 5% of all cases
- Severe 2% of all cases
Aetiology:

Non-invasive
- Virus: 50-90% rotavirus
- Bacteria: 20-25% E. coli - produces toxins EIEC
- Cholera: 2-5%

Invasive
- Shigella: 4-15%
- Salmonella
- Giardia: 1-2%
- Entamoeba Hystolitica

No drug is effective vs rotavirus or ETEC/EPEC which means that no drug is effective in 85% of all cases!

Rotavirus - is a virus
E. coli - generate toxins and antibacterials are useless because they do not act on toxins

Vomiting is caused by acidosis (loss of K, Mg.)
Antibiotics are useless.

Rehydration is needed
- IV not practical, expensive, requires expertise

ORS Plus Feeding:
The most important discovery of the century restores absorption of fluids, nutrients

Messages:
- Rehydrate the child with ORS
- Feed, breastfeeding and other food
- ORS will correct dehydration - diarrhea will stop in 3-5 days
- ORS will not stop motions at once
- Give food, freshly cooked, in a cup or with spoon if not breastfeeding: not bottle & nipple or soothers
APPENDIX E

WHO letter on Antidiarrheals
Sir,

I have the pleasure to refer to the Programme of Control of Diarrhoeal Diseases (CDD) and specifically to the recently held Fourth Intercountry Meeting of National Programme managers of CDD, Cairo, 25-29 June 1988. During the meeting the question of anti-diarrhoeal drugs was discussed at length.

I would like to bring to your attention WHO views regarding the use of anti-diarrhoeals in the management of cases of acute diarrhoea.

It is strongly recommended that:

- the registration of any combination of anti-diarrhoeal drugs should be discouraged.
- all anti-motility drugs (e.g. loperamide, diphenoxylate, diphenoxin) should be de-registered and their use in children below five years of age should be discouraged. No company should be allowed to market any preparations of such drugs for use in children.
- hydroxyquinolones preparations should be de-registered as they all have been associated with serious side effects.
- all furazolidone preparations should be de-registered as anti-diarrhoeal preparations, since we know of no bacterial cause of diarrhoea for which these compounds can be recommended.
- the same applies to oral liquid preparations containing streptomycin.

/...

P.U. Box: 1317 ALEXANDRIA, EGYPT
B.P.: 1317 ALEXANDRIA, EGYPT
Telgr.: UNISANTE, Alexandria
Tel.: 4810090 - 4810098 - 4810240 Telex.: 140213/34684 WHO UN
We look forward to your support and to taking appropriate national actions in respect to banning ineffective and potentially harmful drugs in the management of acute diarrhoea.

Yours sincerely,

Sgd., A. Khogali, M.D.

Humain A. Gazzir, H.D., F.R.C.S.
Regional Director