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REPORT ON PAKISTAN

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Brief Description and Summary

I arrived in Islamabad on November 4th and worked there with the USAID team planning a large child survival project for Pakistan and with the NIH team for diarrhea through November 8, 1987. In Lahore on November 9-10 I attended the National and International Meeting of IAMANEH. Additional discussions with key figures in diarrhea training were held there. I delivered a paper on world progress in diarrhea disease control and shared in leading a workshop on ORT/CDD. I left Lahore to return to Washington on the evening of November 10th.

Dr. Nick Ward, the WHO regional CDD representative from Alexandria, arrived on the morning of November 5, and for the next two days participated in detailed discussions of progress in the diarrheal disease control program and planning for the future. Because of a national religious holiday on November 5 and a regular weekly holiday on November 6, he was not able to have substantive meetings with members of the national diarrhea control program. Nevertheless he was able to provide important input with regard to WHO plans related to Pakistan. Additional aspects of this were discussed with Dr. Witjaksono, the WHO EPI expert in Islamabad, who has been working closely with the aspects of CDD program being carried out by the EPI peripheral teams.

Substantive discussions about the program were held in Islamabad with Major General Burney, the Director of NIH and Colonel Akram, the EPI Coordinator who has recently been appointed as CDD

program manager as well. I also met with A.J. Kahn, the Director General of Health for the Ministry of Health. Discussions were also held with Dr. Abbas of the National Children's Hospital in Islamabad, and Dr. Siddique, the director of the Canadian supported health communications program at the NIH. Discussions were also held with Lucia Tabor and Pat Hopkins of the PRITECH local team, with Heather Goldman, Ray Martin, and Bob Nachtrieb of USAID, and with Julian Lambert and Dan O'Dell of UNICEF. I also worked closely with Dr. Jon Rohde, Glenn Patterson, and other members of the team developing the child survival project.

In Lahore, in addition to attending the IAMANEH meeting, I visited the diarrhea ward and nearby community with Dr. Asifa of the King Edward Medical College, had a number of discussions with Dr. Shaukat Raza of KEMC and also met with Dr. Billoo of Dow Medical College in Karachi.

Because of the brief time the discussions, the intervention of holidays, and the meeting in Lahore, it was not possible to reach major decisions on an overall PRITECH program. However, agreement in some areas was reached, and elements of the future national program and PRITECH's role in it were discussed. Accordingly this report will begin by reviewing progress in the national program since the review visit of November 1986 by Merson and myself, and then will sketch out elements of a future diarrhea disease control program, commenting on the child survival planning process and its relationship to the CDD program, as well as items to be resolved prior to finalization of a long-term CDD plan. Robert Simpson of PRITECH will be

visiting for the purpose of extending these discussions during the period November 16 - 27. The major objective of his visit is to finalize a CDD program plan for PRITECH as well as reach as much agreement as possible on a national program plan and a joint agreement between the Pakistan Government and the donors regarding shared inputs to the program. It is hoped that many of the issues described in this report can be pursued and if possible resolved during the time of his visit.

REVIEW OF CDD PROGRAM PROGRESS

The following reviews progress in pursuing recommendations to the CDD program made in November 1986.

1. CASE MANAGEMENT

1.1 Home Treatment Policy

At present, based on the widespread distribution of ORS packets to each home by the vaccinators from the EPI program, the policy regarding home treatment by default is use of ORS packets for each diarrhea episode. While some additional information regarding practices of mothers around the country was collected from the SMAR KAP survey, this survey was poorly done, and minimally analyzed. Further studies of current practices in use of fluids and foods at the time of diarrhea are definitely needed. Visits to the field indicate that mothers are not using ORS for each diarrhea episode, but rather save packets for more severe episodes.

In discussions with General Burney, he agreed with the importance of this area, and accepted the need for future studies of mother behavior as an important step for the planning process.

1.2 Standard Measure for Mixing ORS

Significant progress has been made in the challenge of defining a standard container for measuring one liter in order to mix ORS accurately. A plastic one liter pitcher was manufactured and also plastic bags containing one liter when filled to a printed mark have also been prepared. A study was designed and is in the process of implementation in the field comparing the effectiveness of the one liter container, the plastic bag, and the standard four glass approach in helping mothers to mix ORS accurately. Terry Elliott from PATH was in the country during my visit to follow up on the results of this effort. The containers themselves have been supported by preparation of a specific pamphlet related to each container being tested for distribution to mothers and village leaders in the area. The results of this study should be available by December, 1987.

One problem is the appearance of the plastic jug. Because it resembles the water container used for cleaning at the time of defecation, it was feared that it may be misused in many houses, or not acceptable for preparation of a fluid to be consumed. This point will need to be studied further in drawing conclusions about the field experiment.

1.3 Use of Antidiarrheal Drugs and Antibiotics

Major progress has been made in the de-registration of antidiarrheal drugs. During our visit the newspaper contained a list of 385 drugs which had been de-registered, many of them because they were imported drugs which were now able to be manufactured in Pakistan, others because of their inappropriateness. This included a number of antidiarrheal drugs. The full list is attached as Appendix A.

Further discussions with the Director General, A.J. Khan, indicated that he is proceeding very carefully due to likely resistance to de-registration by pharmaceutical companies and his desire to ensure that lawsuits are avoided. In addition to the 385 drugs currently announced an additional 400-600 drugs are prepared for de-registration.

Inappropriate antidiarrheal drugs, however, are being distributed to Ministry of Health facilities. Further steps to limit their availability in Ministry of Health facilities are recommended. In addition steps to encourage physicians to not use inappropriate drugs through personal contact by detailing representatives of the CDD program is being considered as a future program activity.

1.4 Referral Policy

No further steps have been made in collecting data on the ability of mothers to recognize signs of dehydration, which could form the basis for communication messages regarding referral of

patients to health facilities when dehydration ensues. Given the high incidence of severely dehydrating diarrhea in Pakistan, efforts to assess maternal sensitivities in this culture and define indications for seeking further help after home treatment are important for the near future.

2. OTHER STRATEGIES

2.1 Decreasing Diarrhea Morbidity

The CDD program continues to deliver messages to the public regarding hygiene, use of clean water and so forth. However, a specific plan for promotion of preventive activities has not yet been prepared.

It is recommended that research necessary to define current preventive behavior of mothers and to design appropriate steps including communication messages to promote prevention be carried out. These efforts, however, should be de-emphasized compared to the efforts to promote effective case management of diarrhea in the home and in health facilities, in order not to distract either program members or the public and health providers from diarrhea case management, the top priority in controlling diarrhea.

A report at the Lahore meeting from studies by Dr. Fahmida Jalil in Lahore indicated that breastfeeding, while widespread, is rarely exclusive. Almost all mothers do not breastfeed during the initial 48 to 72 hours, during which time other liquids often contaminated are given to the child. Subsequently, breastfeeding is rarely exclusive, and exclusivity declines rapidly, although

breastfeeding continues in general until after the first year of life and frequently through two years of life. With this data in mind, a program of critical importance is education of the public regarding specific practices related to breastfeeding, rather than purely promotion of breastfeeding as opposed to use of bottles.

2.2 Growth Monitoring

No specific progress or new information has been obtained relative to the linking of CDD efforts with those aimed more directly at nutrition such as growth monitoring. It is expected that significant efforts in this area will be a part of the child survival efforts being planned by USAID with the national government. Of critical importance here is the shifting of attention from nutritional status to growth in the use of cards. Current growth cards emphasize, through the use of red and green zones, the importance of nutritional status. In practice they seem to be used primarily for this purpose rather than for tracking growth.

Experimental studies with alternative growth cards, as well as operational experience with the use of cards and follow up weighing after being seen initially for a diarrhea episode, are recommended. On the basis of such studies specific recommendations for the diarrhea program can be finalized.

3. ORS LOGISTICS

3.1 Standardization of Topics

The national program has clearly adopted the one liter packet as standard size. At the time of this visit 500 ml packets were

still being manufactured by the NIH. Also, I heard from numerous sources reports that 500 ml packets were still being distributed to the public at various points in the health system. Nevertheless General Burney indicates that the NIH will be shifting its production to the one liter size with the installation of a new machine in the near future and the alteration of one of the present machines to manufacture 1 liter packets.

The contract for future purchase of packets from private sources (Wilson's Pharmaceuticals) has been revised, so that the packet will include, as previously recommended, standard instructions, a standard name, pictorial directions for use, and other elements designed to make the label more effective as a teaching tool.

With one exception (SEARLE) the packets produced in Pakistan are all the standard WHO formula.

The question of flavoring was discussed with General Burney and A.J. Khan. It was noted in these discussions that WHO has no specific evidence so far indicating that the inclusion of flavoring does cause over consumption of ORS or a higher incidence of hypernatremia. In light of this lack of specific data, it was recommended to both General Burney and A.J. Khan that private manufacturers be allowed to include flavoring in their products. Studies in Pakistan of the influence of flavoring on acceptability of ORS to mothers as well as children are recommended to assist in future decision making in this area.

3.2 Quality Control

No further steps have been made in clarifying the quality control steps being taken. Contract language recommended recently by a PRITECH consultant (Chris Olson) defined clearly the quality control procedures which should be taken routinely by manufacturers during the manufacturing process. The NIH indicated an interest in including these contract specifications in the next tender for ORS purchases. In November 1986, it had been proposed that a WHO expert in manufacturing and quality control could be provided during the fourth quarter of 1987. NIH indicated its interest in having this expert come. The NIH also indicated its interest in a course on quality control laboratory methods to be held for provincial and NIH laboratory personnel as well as personnel from the quality control testing laboratories of private manufacturers. Such a course could be provided by either WHO or PRITECH.

3.3 ORS Storage

Progress was made by PRITECH consultant Chris Olson in defining the requirements for storage of likely amounts of ORS needed at district and provincial levels. (September 1987 Report) In view of the preferability of linking ORS distribution with that of drugs and supplies for other priority diseases (immunization, measles, malaria, family planning, TB) it is likely that further resolution of this problem should be carried out in conjunction with estimation of storage requirements for these priority drugs. A national inventory at provincial and district levels of current storage facilities related to requirements for these drugs is needed.

3.4 Coordination with Private ORS Suppliers

With the use of new contract specifications, the interaction with those responding to the tender has been improved. The program will be working with Wilson's the current contract holder, to improve its messages about overall case management. Additional actions such as subsidy for promotion, further involvement in detailing of these products to practitioners and so forth should be considered. No progress has been made in providing better mechanisms such as regular meetings with private manufacturers for the discussion of mutual interests.

4. HEALTH EDUCATION AND COMMUNICATIONS

4.1 Family Leaflet

Substantial progress has been made in the development of communication materials to be given to individual mothers. Related to the testing of various mixing procedures (jug, plastic bag, etc.) a four-fold family leaflet with eight pictures was developed and tested in detail. This leaflet is now being made available widely for use by village leaders and for use by the multipurpose health workers/vaccinators at the time of teaching mothers how to use the packets in the home. In addition, testing of a single flyer approximately 6 x 10 cm with colored pictures, to be included in each box of ORS (one flyer for each two packets) has taken place. These pretests should be finalized in mid-November. This flyer will be included in the ORS boxes being produced by Wilson's during the period November - May 1988.

The pictorial instructions to be printed on the back of the ORS packet have been designed and the analysis of pretests will be completed and the design selected by the end of November 1987. Based on this data, arrangements with the manufacturer for printing these on future packets can be made

It is concluded that real progress in this area has been made, and in particular that the pretesting procedures used have been excellent, ensuring that the leaflets and flyers as well as the packet instructions will be effective in conveying necessary instructions. It should be noted that the instructions in the flyers include not only mixing and use of ORS, but also stress the importance of feeding, indicate the signs of referral for dehydration and point out steps to prevent diarrhea through better hygiene.

4.2 Mass Communications Messages

The March 1987 survey indicated that awareness of ORS was extremely high throughout the country (above 60% in most areas) indicating that the mass communication program had been quite effective in spreading awareness of correct case management. In addition accuracy in preparation was very high in most places. At present future radio spots have been tested and additional T.V. spots are being prepared for testing in early 1988 and release in February 1988. The T.V. spots prepared by D.J. Keymer have been utilized. This area in general appears to be proceeding quite effectively.

4.3 Social Marketing Contract Administration

Due to continued difficulties in effective working relations with D.J. Keymer, it was decided by the program, in collaboration with USAID, to discontinue further interaction with that company. The PRITECH consultant in communications has continued to carry out many of the functions which were previously being done by D.J. Keymer.

4.4 Social Marketing in the Private Sector

No specific further steps have been taken in this direction. Discussions with Wilson's have been carried out as mentioned previously. The possibility of supporting multiple manufacturing companies in their use of detail men, in supporting a team of detail men from the national program, and other alternatives should be explored.

5. TRAINING

5.1 CDD Training for Health Staff

A workshop of key pediatricians from the medical schools currently running diarrhea training programs was held in January 1987, but the follow up workshop planned for March in conjunction with a course in Lahore was cancelled. Further discussions regarding curriculum and DTU development were held during Northrup's April 1987 visit, and a plan was prepared at that time to develop a diarrhea training unit in each medical school, each training hospital and the divisional hospitals in those divisions which do not have a medical school. The specifications for an ORT cover were also suggested during that consultation.

At this point, due to various program factors, no further progress has been taken in this area. During this visit it was agreed to proceed further, and discussions at NIH and with key educators at the Lahore meeting were held. Efforts in this direction are being considered as part of the child survival effort being planned by the government in collaboration with the USAID. Adequate funds for this activity should be available from USAID as well as from UNICEF. Critical in these plans is preparation of supervisors for the training and follow up by the trainers of the trainees after they return to their clinics. In this fashion it is hoped that both improvement of curriculum and improvement of the supportive job environment will lead to enhanced implementation of training. A recent study of results of training carried out by one center indicate that of 90 trainees, none had actually implemented their training in the establishment of a formal ORT corner. Clearly additional efforts are needed to improve the overall effectiveness of training in changing treatment practices.

5.2 Supervisory Training

No information was obtained as to whether further supervisory training has been carried out. However, an inventory of all persons who have received CDD training has been completed and computerized, and should be able to provide information regarding this topic. Efforts should be made to identify persons in supervisory positions who have not yet received supervisory training and provide courses for these persons.

5.3 Extension of CDD Training for MPHWS

After the November 1986 visit, the curriculum for MPHWS was extended to include further CDD efforts, and in programs carried out during 1988 this improved program was provided.

5.4 Evaluation of the MPHWS Training

Evaluation of the results of this training, by observation of MPHWS during interaction with mothers, is needed to assess whether the new training has been effective.

5.5 Coordination with Tetanus Toxioid Program

The TBA training program has not proceeded. It is still, however, planned for implementation. Action is recommended to ensure that EPI and CDD programs include appropriate messages in TBA training materials.

5.6 Medical Student Training

The diarrhea training unit development described above will influence medical student training. During this visit it was reported that efforts to strengthen the position of pediatrics in the medical curriculum, in particular to include pediatrics as an examination subject, have proceeded somewhat, and it is felt that a definite decision on this can be reached in the near future. The Director General indicated his strong support for a pediatrics examination.

5.7 Training Private Practitioners

No progress has been made in this area. Discussions during this visit indicated that there is strong interest in provision of a program employing video materials with standardized training content through meetings sponsored by the Pakistan Medical Association or other organizations at local levels. Both AID and UNICEF have indicated their interest in supporting such efforts. Action on this should be given priority during 1988. A booklet for physicians has been prepared by the program, and should be disseminated in 1988.

6. EVALUATION MONITORING AND SUPERVISION

6.1 Interprovincial CDD/EPI Review

A review of the two programs was held in March 1987. The results indicated widespread knowledge of diarrhea disease methods by mothers, particularly in the Punjab area. A combined external EPI/CDD comprehensive review is planned for February 1988.

6.2 CDD Management Information System

Major advances were made in this area in 1987 with development of an integrated recording and information system for basic health services which is currently being tested, and the development of a register for diarrhea which is also currently being tested. Results of these testing activities should be available in late 1987 and early 1988.

An information system regarding training was prepared with PRITECH support, and data regarding all those trained in CDD entered. Training in use of the computer was provided. Efforts to keep this inventory up to date are necessary.

A PRITECH consultant, Chris Olson, recommended an information system for ORS logistics, including an order form which provides data including usage rates, and computerization at selected points. Implementation of this information system has been held up due to an acute shortage of ORS caused by blockage of contract approval in the Ministry of Health. However, the testing of the new form and potential implementation should proceed in late 1987 and early 1988. The current child survival planning effort should include training of persons in information systems and support for further computerization in the future.

7. OPERATIONS RESEARCH

A number of projects which constitute operations research were carried out in conjunction with the communications efforts. The SMAR KAP study was completed although has many deficiencies. Further operational research topics needed for program progress have been mentioned already.

WHO indicates that its approach to supporting research in this area has changed, and it is no longer interested in supporting a national OR workshop.

It is recommended that the program identify policy and operational decisions to be made, then select those which require additional field information to be made objectively. These decisions can then become the topic for information gathering. In some cases this may reach the point of formal operations research, in others it may be carried out at a simpler field study and

information gathering level. These data gathering efforts should be planned for carefully in the CDD program plan.

8. PLANNING

8.1 Workplan and Budget

The interprovincial workshop was held in January. A detailed CDD program plan has been prepared given the significant planning efforts to be made in the next month, it is anticipated that this plan will be revised and made more detailed in the future. The newly appointed CDD program manager Colonel Akram will be visiting each province during latter November 1987, along with PRITECH consultant, Bob Simpson to obtain specific provincial information relevant to provincial level planning and overall national program planning. It is anticipated that this will lead to preparation of a five year plan with clearly defined contributions by all major donors and definition of key activities to be carried out during that time.

9. ADMINISTRATIVE SUPPORT

9.1 Program Team

Colonel Rashid, the program manager appointed in November 1986, has completed his term in office. He has temporarily been replaced by Colonel Akram as the program manager, although Colonel Akram continues to have managerial responsibility for the EPI program as well. NIH plans to select a new full-time program manager in the future.

An assistant to the program manager has been identified. His salary will be paid by UNICEF for a period of 15 months. This individual has not yet come on board.

A vehicle for CDD has been provided. The program has an office and a secretary. A telephone is promised for the near future.

9.2 WHO Support

WHO's promised provision of a senior technical officer so far has not been achieved. The EMRO office now plans to advertise widely in world medical journals for such a person. It is anticipated that a senior technical officer can be on board within six months of this visit.

9.3 Further Staff

In discussions with General Burney, he reiterated his agreement to have CDD operations officers in each province, as is the case with the EPI program. This will be the subject in part of the provincial visits by Colonel Akram taking place in November 1987. Mechanisms for support of these operations officers were discussed. UNICEF is willing to provide for the costs. PRITECH may also provide such funding. The question of who will actually hire and supervise the individuals needs resolution immediately.

9.4 PRITECH Team

Finalization of PRITECH in-country persons has awaited identification of the WHO senior technical officer. USAID has also held up approval of bringing a foreign national to Pakistan on a full time basis under USAID auspices. The nature and qualifications

of the PRITECH senior team member and provision for hiring such a person need to be defined during the discussions by Simpson.

10. OTHER ISSUES

In addition to the above issues related to the November 1986 recommendations, other issues discussed during the visit are as follows:

10.1 Shortage of ORS

Due to new approval procedures for contracts over one million rupees, the contract with Wilson's Pharmaceutical Company is currently held up in the Ministry of Health. In the past NIH was able to sign such contracts directly. Due to the increased attention as part of democratization to the role of the Ministry and other appointed officials, contracts of larger size must now pass through numerous hands in the Ministry of Health prior to final approval.

This has resulted in delay of signing from September to November. During this time ORS has run out in at least three districts in Punjab; it was necessary to supply the Punjab with ORS from a reserve stock in Sind. In a program in which the availability of ORS at the home level is the corner stone of the strategy, it is a serious matter when ORS is no longer available.

It is recommended that steps be taken to ensure that the contract is signed quickly, and that methods are instituted in order to avoid this problem in the future.

10.2 Community Re-supply of ORS

The basic strategy of the Pakistan CDD program is to use vaccinators to provide mothers with an initial supply of ORS packets in the home. At present, it has not been evaluated whether vaccinators are taking steps to detect homes where ORS has been used up, and to resupply packets where needed. Given the importance of re-supply for ensuring a sustained program, this gap is particularly critical.

It is recommended that steps be taken to examine this potential problem, and if necessary to define mechanisms for the detection of homes in which ORS packets have been used up, the recording of such circumstances, and the provision of re-supply of ORS packets.

During discussions on this visit, one alternative to re-supply of free packets by vaccinators was to emphasize the availability of packets at local commercial outlets in a village level. Mass media communications would then be used to emphasize to mothers the importance of purchasing subsequent packets at these local shops. Such a move would help to ensure sustainability of the budget for ORS packets in the future.

An additional alternative source was the proposed community health auxiliary. This new type of worker, a male matriculate trained over an 18 month period in primary health care activities (generally excluding curative care), is proposed to serve as a depot for ORS at village level. This would bring ORS packets to a closer

source for mothers, but would not deal with the problem of continued burden of packets on the government health budget.

10.3 ORT Day

General Burney and the Director General, Professor Khan, have enthusiastically supported the idea of an ORT Day to take place in April, 1988. This would pull together through mass media efforts a number of activities and provide evidence for the public as well as health providers of the Government's commitment to diarrhea disease control.

This decision is strongly commended. Planning should take place immediately in order to ensure effective coordination of activities. The opening of diarrhea training courses with the new standard curriculum can be scheduled at that time.

11. PROGRAM PLANNING

11.1 Planning for USAID Child Survival Project

Dr. Jon Rohde led the Child Survival Planning team in the development of a plan for strengthening diarrhea disease control in Pakistan. This may be the major focus of the overall plan. A written version of the plan was not available at the time I left Pakistan. The key elements, however, have been discussed and the overall structure was presented to the Director General as well as General Burney.

Major problems cited in the CS plan were:

1. Lack of ORT use by practitioners

2. Government ORS distribution causing both a recurrent cost drain on the health budget and a major management demand for ensuring effective logistics. An additional concern is the concentration on the packet which this approach produces, rather than on mother's the behavior.
3. Lack of adequate attention to nutrition in diarrhea control, in particular, to inappropriate weaning practices, and to feeding during diarrhea episodes.
4. Lack of adequate data to allow effective management of program activities.
5. Lack of hygienic and other practices which would lead to reduction in diarrhea morbidity.

Objectives of the proposed Child Survival plan as discussed during my stay included the following:

1. Proper diarrhea case management for 100 percent of encounters at Government health care facilities.
2. Proper diarrhea case management by private practitioners for 80 percent of cases consulting such practitioners. This includes use of oral rehydration solution and appropriate feeding.
3. Public awareness of ORT reaching 90 percent overall with use of ORS and feeding in 80 percent of episodes of diarrhea which are treated by mothers at all.
4. Decrease in use of bottles and increase in correct breast-feeding practices and exclusivity of breastfeeding during

the first six months, and an improvement in weaning practices.

5. Improved documentation of deaths and the causes of death in the community.

The strategies envisioned for the project included strengthening the CDD program management structure from national down to district and health facility level, improved training methods and linkage of training to a subsequent supervisory structure, expanded supervisory skills and management training, an emphasis on the private sector and commercial promotion of ORS and a continued emphasis on communication strategies to reach both the public and health care providers.

The core of the strategy recommended was a program based initially on the development of diarrhea training units in medical schools, leading to training and implementation of correct diarrhea case management down to basic health unit levels. In this overall structure four to five medical colleges with greater experience in running diarrhea training courses would support the strengthening of diarrhea training units (DTUs) at an additional ten medical colleges. These DTUs would be used as a mechanism to strengthen social pediatric activities and other community oriented medical education activities by other departments such as Community Medicine. These 15 diarrhea training units would be the location for the training of medical officers from districts tehsils, and rural health centers and basic health units.

At the district level, in collaboration with medical college DTU's, a Feeding and Oral Rehydration Treatment (FORT) center would be developed. While this would have a training function, it would not be primarily a training center, but rather an effective treatment center based in the district hospital. This FORT Center would be supplied with video equipment using local language materials to standardize the didactic efforts in training. Paramedical staff from tehsils rural health center and basic health units would be trained for one to two week periods in residence in the FORT Center. Prior to their training, district level personnel would visit the health center or other health facility, define space and equipment needs, and negotiate with the facility supervisor to ensure a good reception for the implementation of appropriate diarrhea case activities after the training. Equipment needed for the ORT corner would be delivered to the facility prior to the training of the paramedic. The medical officer from the unit should also be trained prior to the training of the paramedic.

The assistant district health officer, who is currently responsible for preventive activities, would be supplied with an additional medical officer and a lady health visitor and a vehicle. These staff (MO and LHV) would participate at the FORT Center in the district hospital in the training of the paramedical personnel. Subsequently, after these paramedical personnel return to their facilities, the MO-LHV team would supervise them for a period of months to ensure effective implementation. This liaison function between the district health office and the hospital system would

ensure more effective interaction in training as in care. This medical MO-LHV team would be specially trained in both training and supervision skills in order to carry out this function.

At the medical college DTUs a registrar would be assigned specific responsibility for the training of medical officers. This registrar would participate in the training for the 3-6 day course. Afterwards he would return to the FORT Center with the medical officer and assist in implementing the training and oral rehydration treatment activities at the FORT Center. In this fashion a medical college would support FORT Center development activities in approximately six districts over the course of 9-12 months. Also a continued connection between the medical college and at least one district would be ensured, to provide for social pediatrics teaching of medical students and postgraduate trainees in a real community setting.

A parallel information system for reporting from basic health unit levels up to provincial and national levels would be instituted as well. At BHU and RHC levels a special diarrhea register would enhance recording of diarrhea case data. At the RHC level and tehsil level steps would be made to register deaths of under fives and report them to the district level. At the FORT Center reports would be sent on to division level. The DTUs would function as sentinel reporting posts, and would be supplied over time with computer facilities and related training to strengthen operations research to be carried out by the social pediatrics units. The first level

of computerization would be at the province where the CDD program would be provided computerization for collecting and analyzing reported data from lower levels.

At the village level TBA's would be trained in tetanus toxoid administration as well as ORT. The possibility of TBAs being provided with packets was considered. The vaccinator would continue to provide two packets of ORS at the first vaccination contact that he has with a baby.

This overall structure would be used over time to handle other diseases, with acute respiratory infection (ARI) as the next disease to enter this training and supervision system.

The plans also included efforts to strengthen commercial distribution of ORS through social marketing in collaboration with private manufacturers, and a strengthened communications program. Special efforts have been included for strengthening both monitoring and supervision as well.

Inasmuch as these planning efforts were not completed prior to my departure, and will be influenced by further discussions with the Government as well as the addition of new experts on the planning team in information systems and nutrition, it was not possible to determine exactly how these plans will proceed. In addition, the funding for this child survival project depends on approval USAID mission and Washington levels prior to its realization. Nevertheless, it is clear that these child survival efforts will strongly influence the CDD program as well as PRITECH's activities in Pakistan in

the future, and would very likely be a major source of funds through buy-ins for PRITECH activities in the country. The USAID mission requested PRITECH to plan major efforts for Pakistan in its planning for PRITECH II activities.

12. CDD AND PRITECH ACTIVITIES

12.1 DTU Development

Discussions during the visit confirmed the determination by all parties to proceed with the DTU development plans. After further discussion with Professor Shaukat Raza in Lahore as well as with Dr. Fawzia Malik, a suggested plan of activities through approximately September 1988 was prepared (Appendix B). This plan will be discussed further by Simpson, Tabor, and others and incorporated as appropriate into the eventual combined program and donor plan.

A number of other activities were also confirmed based on previous plans laid out in Northrup's recommendations from April (Appendix C), Robert's Draft Activity Plan from June 1987 (Appendix D) and the project implementation letter (PIL) from USAID listing various activities in the near future (Appendix E). The last of these (the PIL) included funding for the ORT Day planned for April 19, 1988.

These suggested activities will be reviewed and further discussed by Simpson with other donors and the Government as well as USAID. It is anticipated that decisions about feasibility, the sequence of events, and their timing will be made during that visit, leading to more definitive plan.

13. OUTSTANDING ISSUES

Further issues which need to be defined either in national program planning or in determining PRITECH's role in activities in relationship to that plan are as follows:

1. PRITECH Manpower in Pakistan. Should a physician be appointed as PRITECH representative until the senior WHO technical expert can be appointed? Should PRITECH provide an administrative assistant to the national CDD program manager? Should PRITECH hire and manage the the CDD operations officers or should they be hired under an alternative arrangement with a local administrative firm using UNICEF funds?
2. Should each province have a specific CDD plan? Should PRITECH and the national program emphasize certain provinces over others? Should AID fund activities in only one or two provinces?
3. ARI: How much ARI activity should be planned? When should this activity be scheduled? What criteria should determine when to proceed to with ARI in order not to interfere with effective CDD implementation?
4. Drug supply management: How broad should PRITECH's input into drug supply management be? Should PRITECH confine itself to ORS, or should its effort include management of the 8-10 critical drugs for the basic high priority diseases (diarrhea, ARI, FP, tuberculosis, pregnancy, malaria)?
Can such broadening of activities be done without

creative interference diversion of critical management time to areas not directly impacting on diarrhea?

5. Role of senior WHO EPI advisor: Should the current EPI WHO advisor be given responsibility for CDD as well? Recognizing the important role of vaccinators in distribution of ORS packets and house to house teaching of mothers, how should the CDD program most effectively interact with EPI program to ensure correct procedures at household level?
6. DTU Development: Can DTU's be developed in all the medical schools immediately, or should the development proceed by stages, taking on only four or five at a time and ensuring adequate performance before moving on to the next group? How much technical support does this process require? Can the program count on active participation by the senior medical schools in long-term activities at the other medical schools?
7. Approach to strengthening commercialization of ORS: Should the Government with USAID's support collaborate with a single manufacturer, producing a virtual monopoly, or should it collaborate with three or four major ORS manufacturers? In what manner should support of initial activities be provided? Would subsidized generic advertising be the most effective mechanism? Should prices be fixed by the government, thereby reducing potential profits and interest on the parts of manufacturers? Should a single firm be sought to manage the promotion and

distribution of ORS from all parties in order to centralize this function? Should this be a pharmaceutical firm or a firm of a more advertising orientation?

8. Case data recording: How much data can reasonably be recorded during routine case management at BHU, rural health center, AUS District and tehsil Hospital, or DTU levels? How much variation in forms should there be between these levels? Previous agreements had specified temporary use of a detailed diarrhea case form after training of health manpower at any level. Should this agreement be reconsidered, and only a simplified register be implemented?

These issues and others are to be further discussed and hopefully resolved during Simpson's visit.

DE-REGISTRATION OF DRUGS FORMULATION

LIST OF THE DE-REGISTERED DRUGS (IMPORTED)

Sl. No.	Name of Drug	Reg. No.	Name of Manufacturer/Indention.
254	Chasmax Granules 125 mg.	007688	M/s. Biochem Australia
255	Chasmax Granules 250 mg.	007689	M/s. Sandoz Hyderabad.
256	Chasmax Granules 375 mg.	007690	-do-
257	Chasmax 125 mg. Granules	008780	-do-
258	Chasmax 250 mg. Granules	008781	-do-
259	Oxyton Injection 51U.	002237	M/s. F. C. I. Denmark, M/s. Bengal Trading Kn.
260	Oxytocin Injection 101U.	002238	-do-
261	Oxytetracyclin Tablets 250 mg.	004933	M/s. Evans U.K. M/s. Evans Kn.
262	Oxytetracyclin Dry Powder.	002326	M/s. Kika Yugoslavia, M/s. Hydan Int. Kri.
263	Oxytetracycline Syrup.	002327	-do-
264	Oxytetracycline Syrup.	001328	M/s. Piva Pharma Yugoslavia, M/s. Mahran Int. Kn.
265	Oxytetracycline Eye Oint.	007878	-do-
266	Paracetamol Compound Tablets.	001172	M/s. Polfa, Poland, M/s. Hydan Int. Kri.
267	Paracetamol Tablets.	000914	M/s. Medexport, USSR, M/s. Continental Ent. Kri.
268	Paracetamol Tablets.	001921	M/s. Polfa, Poland, M/s. Hydan Int. Kri.
269	Paracetamol Compound Tablets.	002217	M/s. Kika Yugoslavia, M/s. Hydan Int. Kri.
270	Paracetamol Tablets.	002718	-do-
271	Paracetamol Tablets.	002524	M/s. Shanghai Pharma, China, M/s. S. Ejazuddin & Co. Kri.
272	Pararopin Injection	003330	M/s. Cutter U.S.A. M/s. Bayer Pharma, Kri.
273	Parastropin Tablets.	001853	M/s. Berk, U.K. M/s. Ali Gohar & Co. Kri.
274	Paracetamol Elivar	0003008	M/s. Bristol Myers U.S.A. M/s. Bristol Myers Kri.
275	Pentafen Tablets.	005029	M/s. Zoya, Italy, M/s. Fazal Din & Sons, Kri.
276	Pentrid Tablets.	001228	M/s. M&B, U.K. M/s. M&B Wah Cantt.
277	Fenibutal Tablets.	001255	M/s. Astral Labs, Portugal, M/s. Algal Pharmacy, Kri.
278	Pentreyil Cap 250 mg.	001189	M/s. Bristol Myers U.S.A. M/s. Bristol Myers Kri.
279	Pentreyil Suspension	001190	-do-
280	Phenylbutazone Cal.	001923	M/s. Eiko Organization, Italy, M/s. Hydan Int. Kri.
281	Phenylbutazone Cal.	001923	M/s. Eiko Organization, Italy, M/s. Hydan Int. Kri.
282	Phenylbutazone Cal. Tablets.	002529	M/s. Cross Italy, M/s. Cross Italy.
283	Phenylbutazone Tablets.	002556	M/s. Hap Kri. Rawalpindi, M/s. China National, China.
284	Phenylbutazone Tablets	002646	M/s. S. Ejazuddin & sons, Kri. M/s. Chema Chem. Romania, M/s. Hamed Orgn. Kri.

Sl. No.	Name of Drug	Reg. No.	Name of Manufacturer/Indention.
318	Rheopyrin Injection.	002683	M/s. G. Richter Hungary, M/s. Menian Int. Kri.
319	Rifampicin Capsules 150 mg.	003605	M/s. Medicales, Italy, M/s. International Tradeways, Kri.
320	Rifampicin Capsules 300 mg.	002509	-do-
321	Roccal Liquid.	004513	M/s. Sterling USA, M/s. Sterling (Wintthrop) Kri.
322	Salon Pts.	002231	M/s. H. Pharm Japan, M/s. Eastern Trading & Dist. Kri.
323	Solcoeryl Eye Gel.	001137	M/s. Solco Swiss, M/s. Haroon Brothers Kri.
324	Solcoeryl Injection.	001129	-do-
325	Solcoeryl Ointment.	001136	-do-
326	Solcoeryl Jelly.	001130	M/s. Solco Swiss, M/s. Haroon Brothers, M/s. China National, China.
327	See Gul Mentha Jelly.	002563	M/s. S. Ejazuddin, Kri. M/s. Stafford Miller Australia, M/s. Karachi Dental Supply Corp. Kri.
328	Semodyne Dental Paste	003602	M/s. Stafford Miller Australia, M/s. Karachi Dental Supply Corp. Kri.
329	Seven Seas Cod Liver Oil	002525	M/s. British Cod Liver Oil, U.K. M/s. Metropolitan Traders, Kri.
330	Seven Seas Cod Liver Oil Capsules.	002526	-do-
331	Silk Suture with or without needles (4/0, 3/0, 2/0, 1, 2, 3).	002822	M/s. Lederle, U.K. M/s. Cynamid, Kri.
332	Sini Plasto(PVC)	005119	M/s. Nichi Bon Japan, M/s. Hospital Supply Corp. Kri.
333	Sin Sin Pts.	000979	M/s. Sin Sin Jun, Korea, M/s. Haroon Ahmad Kri.
334	Snow Flake Plaster.	002416	M/s. China National, China, M/s. Pindi China Corp Kri.
335	Streptomycin Sulphate Injection 1 gm.	003547	M/s. Abbi West Germany, M/s. Bengal Trading Kri.
336	Streptomycin Sulphate Injection 5 gm.	003502	-do-
337	Stanozolol Tablets.	004125	M/s. Cross Italy, M/s. Haysons, Rawalpindi, M/s. Evans U.K. M/s. Evans Kri.
338	Stibestrol Tablets 1 mg.	000966	M/s. Evans Kri.
339	Stibestrol Tablets 5 mg.	000967	-do-
340	Streptocad Tablets.	000623	M/s. Int. Marious France, M/s. M&B Wah Cantt.
341	Standaclin Granules 250 mg.	007878	M/s. Biochem Australia, M/s. Sandoz Hyderabad.
342	Standaclin Granules 375 mg.	007879	-do-
343	Standaclin Capsules 250 mg.	007880	-do-
344	Standaclin Capsules 500 mg.	007681	-do-
345	Standaclin 1 gm Tablets	007891	-do-
346	Standaclin Granules	007877	-do-
347	Sulphadiazine Tablets. 125mg	001108	M/s. China National, China, M/s. S. Ejazuddin, Kri.
348	Sulphadiazine Tablets.	001178	M/s. Polfa, Poland, M/s. Hydan Int., Kri.
349	Sulphadiazine Tablets.	001109	M/s. China National, China, M/s. S. Ejazuddin, Kri.
350	Sulphadiazine Tablets.	001177	M/s. Polfa, Poland, M/s. Hydan Int., Kri.
351	Sulphadiazine Tablets.	001354	M/s. Pharmachim, Bulgaria, M/s. M.A. From Elahai, Kri.

LIST OF THE DE-REGISTERED DRUGS (LOCALLY MANUFACTURED)

Sl. No.	Name of Drug(s)	Regn. No.	Name of Firm(s)
1	Abdo Capsules	000207	M/s. Parke Davis & Co. Kri.
2	Abcyclic Syrup	006444	M/s. Rimington, Lahore.
3	Aborant Cotton Wool	003775	M/s. Rizwan Indus, Lahore.
4	Acrosulf Tablets	002532	M/s. Pakistan Pharma. Products Ltd., Kri.
5	Acriflawn Solution	003992	M/s. Pioneer Laboratories, Kri.
6	Adroyd Tablets	000127	M/s. Parke Davis & Co. Kri.
7	Amdilin Syrup	008109	M/s. Shifa Laboratories, Lahore.
8	Aneroxyl Tablets 25mg.	001839	M/s. Hormone Laboratories (Pak) Ltd., Kri.
9	Anadone Tablets	004164	M/s. Scharoo Laboratories, Lahore.
10	Anethol Trithion Tablets	005309	M/s. Ferrosson, Nowshera.
11	Anturan Tablets	000639	M/s. Ciba-Geigy, Kri.
12	Apcom Tablets	003512	M/s. Sam, Karachi.
13	Atcodar Tablets	004756	M/s. Atco Laboratories, Kri.
14	Jaytra Tablets	003318	M/s. Bayer Pharma., Kri.
15	Bendryl Capsules	000128	M/s. Parke Davis & Co. Kri.
16	Benzyl Penicillin 2 Lac.	000428	M/s. Pfizer Laboratories, Kri.
17	B G Phos Elivar	000334	M/s. M.S.D. (Pak) Ltd., Kri.
18	Boran Tablets	004409	M/s. Geolman Pharma., Kri.
19	Boric Acid Glycerine	003278	M/s. Pioneer Laboratories, Kri.
20	Bradoloz Lozenges	001359	M/s. Ciba-Geigy, Kri.
21	Butoberstone Tablets	005389	M/s. L.C.P.W., Lahore.
22	Chlorostrep Suspension	000134	M/s. Parke Davis & Co. Kri.
23	Chlorostrep Capsules	000135	-do-
24	Chloromdina Strepto Capsules	002535	M/s. Pakistan Pharma. Products Ltd., Kri.
25	Chloromdina Strepto Capsules	002536	-do-
26	Ciotin Tablets	003385	M/s. Hakimsons Chemical Industries Ltd., Kri.
27	Cloquinol Tablets	000835	M/s. Scharoo Laboratories, Lahore.
28	Cloquinol Tablets	001844	M/s. S.K. & F. (Pak) Ltd., Karachi.
29	Cloquinol Tablets	002501	M/s. Geolman Pharma., Kri.
30	Cloquinol Tablets	002748	M/s. Ethicon Labs., Lahore.
31	Cloquinol Tablets	002788	M/s. Indus Pharma., Kri.
32	Cloquinol Tablets	002867	M/s. Tabco Pharma., Kri.
33	Cloquinol Tablets	002951	-do-
34	Cloquinol Tablets	002978	M/s. Sam Pharma., Kri.
35	Cloquinol Tablets	003355	M/s. Conwell, Swat.
36	Cloquinol Tablets	003060	M/s. Anglo French, Kri.
37	Cloquinol Tablets	003268	M/s. Macter, Kri.
38	Cloquinol Tablets	003390	M/s. Hakimsons, Kri.
39	Cloquinol Tablets	003429	M/s. L.C.P.W. Lahore.
40	Cloquinol Tablets	003456	M/s. Opal Labs., Kri.
41	Cloquinol Tablets	003483	M/s. Pakistan Pharma.
100	Hemestin Tablets 25 mg.	002767	M/s. Pakistan Pharma. Kri.
101	Hygoton Tablets 50 mg.	000934	M/s. Ciba-Geigy, Kri.
102	Hygoton Tablets 100 mg.	000935	-do-
103	Hyoscine Comp. Tablets	003187	M/s. Pfizer, Karachi.
104	Hyosopin Tablets	007878	M/s. Star, Lahore.
105	Imocid Suppositories	000319	M/s. M.S.D., Karachi.
106	Imocid Rectal	000333	-do-
107	Intestopan U.A. Tablets	006190	M/s. Sandoz, Karachi.
108	Irigopyrin Tablets	000638	M/s. Ciba-Geigy, Kri.
109	Ismein Tablets 25 mg.	000678	-do-
110	Ismein Naxidex Tablets	000640	-do-
111	Isokin Forte Tablets	000520	M/s. Warner Lambert, Kri.
112	Isonex Tablets 50 mg.	000441	M/s. Pfizer, Kri.
113	Kagunin C Tablets	005270	M/s. Geolman, Kri.
114	Ledarkyn Tablets 500 mg	002424	M/s. Lederle, Kri.
115	Ledermycin Syrup	000099	M/s. Cyanamide, Karachi.
116	Lisloplex Syrup	009253	M/s. Lisko, Kri.
117	Lomofon Suspension	004438	M/s. Scarle, Kri.
118	Longsil Tablets	002764	M/s. Opal, Kri.
119	Marvi Tetracycline Syrup	007163	M/s. Marvi, Kri.
120	Metase Tablets	000828	M/s. Ciba-Geigy, Kri.
121	Mefenamic Acid Tablets	007716	M/s. Tabco, Kri.
122	Multivitamin Tablets	003993	M/s. Pioneer, Kri.
123	Nardelazine Tablets	000502	M/s. Warner Lambert, Kri.
124	Neuropan Syrup	000111	M/s. Cyanamid, Kri.
125	Neuropan Injection	007843	M/s. N.D.H., Faisalabad.
126	Nikethamide Drops	003312	M/s. Anglo French, Kri.
127	Noxyl Tablets 25 mg.	003182	M/s. Popular Chemical Works, Lahore.
128	Oxytetracycline Syrup	005456	M/s. S. J. & G., Faisal Elahai, Kri.
129	Oxytetracycline Syrup	005907	M/s. Umerson, Islamabad.
130	Oxytetracycline Drops	006001	-do-
131	Oxytetracycline Syrup	007116	M/s. Ferrosson, Nowshera.
132	Oxytetracycline Syrup	005171	M/s. C.L.L., Lahore.
133	Oxytetracycline Drops	003890	M/s. A.W.L., Rawalpindi.
134	Oxytetracycline Syrup	005688	M/s. Kalco, Lahore.
135	Pasonee Tablets	000462	M/s. Pfizer, Karachi.
136	Pas Tablets	000464	-do-
137	Pericort S.A. Tablet	000142	M/s. Warner Lambert, Kri.
138	Pericort Tablets	000144	-do-
139	Pericortin Vita Tablets	004547	M/s. M.S.D., Rawalpindi.
140	Pericortin Syrup	008403	M/s. K.P.L., Karachi.
141	Pathalysulphathiazole	001173	M/s. Polfa, Yugoslavia/ M/s. Hydan, Kri. (Imported).
142	Pioneer's Eye Drops	003391	M/s. Pioneer, Karachi.
143	Prednisolone Tablets	001502	M/s. M.S.D., Karachi.
144	Procer Oint.	005231	M/s. Progressive, Karachi.
145	Procto Glyvenol Cream	003560	M/s. Ciba-Geigy, Karachi.
146	Proctodine	005241	M/s. P.L., Lahore.
147	Povidone Solution	001759	M/s. L.C.P.W., Lahore.
148	Reomal Syrup	002678	M/s. Opal, Karachi.
149	Reomal Capsules	002677	-do-
150	Rutin Comp. Tablets	004259	M/s. Regen, Karachi.
151	Rutin-K Tablets	003220	M/s. Oha A. Mandoo, Kri.
152	Rutin Comp. Tablets	003905	M/s. Dosaco, Lahore.
153	Rutin Comp. Tablets	004182	M/s. Cyrus, Lahore.
154	Rutin Comp. Tablets	004749	M/s. Harman, Lahore.
155	Saltum Suspension	000051	M/s. Abbott, Karachi.
156	Saltum Nebulizer	000682	M/s. Hoechst, Karachi.
157	Saneyl Tablets	000825	M/s. M & B Wah Cantt.
158	Streptochlor Syrup	005277	M/s. Hakimsons, Karachi.
159	Streptochlor Capsules	002578	-do-
160	Sulphaguanidin Tablets	002568	M/s. Chamber, Karachi.
161	Sulphadiazine Tablets	002569	-do-
162	Sulphadiazine Tablets	002670	-do-

OUTBOUND MESSAGE # 259
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FREEDOM NETWORK
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MSG 112

TELEX TO GOLDMAN USAID/HPN ISLAMABAD PAKISTAN

RE: DTU DEVELOPMENT ACTIVITIES

DISCUSSIONS WITH SHAUKAT RAZA ALSO BILLOO ON NOV 10 SUGGEST FOLLOWING SEQUENCE:

1. PREPARE EXPANDED CHECKLIST BASED ON LISTS IN NORTHRUP APIRL REPORT PLUS WHO DTU DESCRIPTION FOR USE IN VISITS TO EXISTING AND FUTURE DTUS. CHECKLISTS TO ASSESS CURRENT TREATMENT PRACT CES. AVAILABLE FACILITIES FOR BOTH TREATMENT AND TEACHING. CURRENT CURRICULUM FOR UNITS ALREADY HAVING RUN TRAINING COURSES. AND POTENTIAL NEEDS.
2. PREPARE OUTLINE FOR PROPOSAL FROM DTUS FOR FUNDING FOR VARIOUS ACTIVITIES. EQUIPMENT, SUPPLIES, AND CONSTRUCTION IF NEEDED.
3. DRAFTS TO BE REVIEWED BY NORTHRUP AND/OR ROHDE. ALSO BY EXPERIENCED SENIOR DTU DIRECTORS EG SHAUKAT RAZA OR MUSHTAQ OR WAHEED OR BILLOO. FINAL VERSIONS PREPARED BASED ON SUGGESTIONS.
4. DRAFT CURRICULUM PREPARED BY ROHDE/MADKOUR SEND TO NORTHRUP FOR REVIEW AND REVISION. NORTHRUP ALSO WILL PROVIDE MATERIALS FROM DRAFT WHO MED ED PROJECT (APPROX JAN-FEB - NEEDS APPROVAL FROM WHO).
5. BILLOO AGREED TO WORK WITH FAWZIA IN PLANNING. AND TO ACCOMPANY HER IN VISITS TO DTUS IN HIS AREAS. SUGGEST THAT SENIOR EXPERIENCED DTU DIRECTOR OR EXPERIENCED STAFF MEMBER ACCOMPANY FAWZIA ON VISITS TO THOSE PROSPECTIVE LOCATIONS WHICH WILL BE UNDER THE GUIDANCE OF THAT SENIOR DTU IN ITS DEVELOPMENT. EACH EXPERIENCED DTU TO SUPPORT ONE LESS EXPERIENCED DTU. SELECTION OF LESS EXPERIENCED DTUS (PROBABLY FOUR IN NUMBER) TO BE MADE AFTER DISCUSSION WITH EACH SENIOR DTU DIRECTOR. THIS KIND OF PAIRING WILL ENSURE SUPPORT FOR DEVELOPING DTUS DURING THE PROCESS OF GETTING TREATMENT UP TO STANDARDS AND DEVELOPING TRAINING INFRASTRUCTURE.
6. FAWZIA MAKES VISITS TO BOTH EXPERIENCED AND LESS EXPERIENCED DTUS. REPORTS OF VISITS TO INCLUDE TREATMENT AND DEVELOPMENT CHANGES NEEDED. DTUS PREPARE PROPOSALS FOR USAID FUNDING. PROPOSALS REVIEWED BY USAID WITH TECHNICAL SUPPORT FROM ROHDE AND/OR NORTHRUP (DEPENDING ON AVAILABILITY OF ROHDE).
7. IN MARCH AT MEETING OF EXPERIENCED DTU DIRECTORS AS WELL AS NEW DTU DIRECTORS:
 - REVIEW PROPOSED COMMON CURRICULUM AND PREPARE REVISIONS AS NEEDED
 - REVIEW PROGRESS IN STANDARDIZING AND UPGRADING CARE IN PAIRED INSTITUTIONS
 - REVIEW ORT DAY ACTIVITIES
 - PLAN ROLES OF EXPERIENCED DTU DIRECTORS IN TEACHING TEST RUN OF REVISED DRAFT CURRICULUM AT LAHORE DTU. TO BEGIN ON ORT DAY. THAT COURSE TO BE TAUGHT BY ALL THE SENIOR DTU DIRECTORS TOGETHER.

8. IN APRIL ON ORT DAY. INITIATE COURSE WITH NEW CURRICULUM AT LAHORE CENTER. WITH ALL EXPERIENCED DIRECTORS PARTICIPATING. ON BASIS OF TEST COURSE. REVISED CURRICULUM AND MATERIALS. RQHDE TO BE PRESENT AT COURSE IF POSSIBLE.

9. 4-6 WEEKS LATER OTHER SENIOR DTUS RUN COURSES WITH REVISED CURRICULUM AND MATERIALS AT THEIR UNITS.

10. REPEAT VISITS TO DEVELOPING DTUS BY FAWZIA IN APRIL-MAY-JUNE TO ASSESS SUCCESS OF THOSE UNITS IN INSTITUTUNG STANDARDIDZED TREATMENT. PREPARING FOR TRAINING COURSES. WHEN TREATMENT MEETS CRITERIA. DIRECTOR TO PARTICIPATE IN TRAINING COURSE AT LAHORE AS TRAINER USING NEW CURRICULUM. TO LEARN METHODOLOGY FOR SUCH TRAINING. SUBSEQUENTLY TO INITIATE TRAINING COURSE AT HIS LOCATION USING NEW CURRICULUM.

SHAUKAT RAZA BELIEVES THAT WHO DESIGNATION OF LAHORE CENTER WILL ALLOW IT TO SERVE AS THE LEAD UNIT AS DESCRIBED IN THIS PROPOSED SEQUENCE. CONCERN FOR QUALITY WOULD URGE TAKING ON ONLY FOUR ADDITIONAL NEW DTUS IN ADDITION TO THE 3-4 PRESENT DTUS IN THE FIRST WAVE. BUT POLITICAL CONSIDERATIONS AND PREVIOUS EXPERIENCE MAY LEAD TO INCLUDING MORE UNITS IN THE FIRST WAVE.

INITIAL DISCUSSIONS WITH WHO INDICATE THAT THEY WILL LIKELY GIVE AGREEMENT FOR USE OF MED ED MATERIALS AS BASIS FOAR PREPARING PROPOSED STANDARD CURRICULUM.

PRITECH Plan for Pakistan

In support of Pakistan's newly intensified CDD program, PRITECH has and will provide a combination of short-term and long-term technical assistance during the period January 1987 through September 1988.

Planning:

	<u>Weeks</u>
- preparation of training strategy - 4/87	1
- review of USAID Child Survival strategy - 4/87	-
- preparation of USAID Child Survival project paper - 9/87	4
- national review and replanning - 11/87	1

Training:

- Diarrhea Training Unit review and workshop	1
- detailed national and provincial training planning	4
- medical education workshops and curriculum development	4
- DTU curriculum development (for medical officers and paramedics)	4
- monitoring and field visits to DTUs and medical schools	2
- development of private sector training program	2
- training inventory-design and implementation	8

ORS Logistics:

- review of storage and distribution	4
- development of information system and ordering procedures	4
- quality control of ORS	1
- private sector distribution	2
- community distribution	2

Communication:

- leaflet development and testing	64
- development and testing of training module for use of leaflet	
- radio spot development and testing	
- assessment of D.J. Keymer materials	
- review of and analysis KAP and other studies	
- planning for implementation oversight, and review of ORS mug and plastic bag tests	
- communication review and planning	

Weeks

Information System:

20

- sentinel system design, implementation, and testing
- special clinical reporting system
- design of sentinel system workshops

Program management and administrative support:

- local physician as technical program assistant 60
- PRITECH representative full time 78
- monitoring visits 4
- secretary

(local salary)

Other costs:

- equipment and supplies (computer, furniture, etc.)
- office expenses
- travel

6.8.87

DRAFT * NIH ACTIVITY PLAN * DRAFT

p.1

1. MANAGEMENT

- 1.1. Staffing: to plan, implement and/or follow-up all of these activities and others that are introduced
 - 1.1.1. Central
 - 1.1.2. Provincial
- 1.2. Office facilities: to house the staff
- 1.3. NIH Planning and Control System: to decide what should be done, minimize foreseeable problems, and ensure that what is planned takes place, as desired and more or less when planned.
 - 1.3.1. Formal planning, delegation, reporting, follow-up
 - 1.3.2. Supervisory system
 - 1.3.2.1. Clinical practices (checklist)
 - 1.3.2.2. Supply system (checklist)
 - 1.3.3. CDD Technical Committee Meetings
 - 1.3.4. National CDD Program Review

2. SUPPLY

- 2.1. Negotiate new supply contract: to keep ORS flowing to the public
- 2.2. Consultancy: to assess and advise on Storage, Distribution, MIS, and Quality control.
 - 2.2.1. Action on recommendations, will involve at least,
 - 2.2.1.1. introducing a "pull" system between clinic and district, involving order forms from clinics, and resupply units responsive to clinic orders
 - 2.2.1.2. regular (quarterly or semi-annual, depending on the level) supply reports to District, Division and NIH, from the next lower level in each case.
 - 2.2.1.3. analysis of "demand" and "consumption" data to determine needs for commercial orders.
- 2.3. Expanding private sector distribution: to increase the availability of supplies.
- 2.4. Community distribution: to improve availability of supplies in rural areas poorly served by private pharmacies, supplementing public health facilities.

31

3. M.I.S.

- 3.1. Clinical: to provide guidelines in assessing diarrhoea cases, create a record allowing supervisors to check proper practices are the norm and permitting occasional surveys to evaluate program impact.
 - 3.1.1. Incorporate feedback in draft register
 - 3.1.2. Arrange pilot test of register in DTU & RHCs/BHUs
 - 3.1.3. Evaluate pilot test and decide on standard register
 - 3.1.4. Arrange production of registers, distribution to DTUs
 - 3.1.5. Train DTU trainers in the use of the registers
 - 3.1.6. Develop supervisory checklist
 - 3.1.6.1. Train supervisors in use of checklist
- 3.2. Sentinel Surveillance: to permit tracking of diarrhoeal disease incidence and CDD progress.
 - 3.2.1. Incorporate feedback in draft register & report proforma
 - 3.2.2. Arrange pilot test of register & report proforma in DTU
 - 3.2.3. Analysis of report data
 - 3.2.3.1. Plan analysis (& any needed computer programming)
 - 3.2.3.2. Receive & input data, generate tables
 - 3.2.3.3. Interpretation and report
 - 3.2.4. Evaluate pilot test decide on register, report proforma
 - 3.2.5. Arrange production of registers & forms, distribute to DTUs
 - 3.2.6. Train DTU in the use of the registers & report proforma
- 3.3. Training: to make it possible to focus training on those who have not had it by establishing a regularly up-dated record of those who receive CDD training.
 - 3.3.1. Inventory of people with CDD training
 - 3.3.1.1. Collect lists from DTUs/DHSs
 - 3.3.1.2. Design data entry/reporting program
 - 3.3.1.3. Contract for data entry/report
 - 3.3.1.4. Send report to Provinces to up-date posting data
 - 3.3.1.5. Up-date computerized file & generate new reports
 - 3.3.1.6. Distribute revised reports to DHSs & DTUs
- 3.4. Health Facility & Staffing level data base: to quantify the target population for the training effort, by District and type of facility.
 - 3.4.0.1. Collect data from provinces
 - 3.4.0.2. Design data entry/reporting program
 - 3.4.0.3. Contract for data entry/report
 - 3.4.0.4. Send report to DHSs to up-date, add "Filled" data
 - 3.4.0.5. Up-date computerized file & generate new reports
 - 3.4.0.6. Distribute revised reports to DHSs & DTUs
- 3.5. Logistics (see Supply)

4. TRAINING

- 4.1. DTUs: to effectively train doctors and paramedical staff already in service in proper Diarrhoeal case management and related skills.
 - 4.1.1. Action research project
 - 4.1.1.1. evaluation of results
 - 4.1.2. Workshop: Curriculum, strategy, methodology, standards, material requirements, criterion for first project DTUs
 - 4.1.3. Commodity procurement for DTUs & ORT Corners
 - 4.1.4. Selection of first project DTUs
 - 4.1.4.1. Solicitation/receipt of proposals
 - 4.1.4.2. Review of proposals
 - 4.1.4.3. Visit to proposed DTUs
 - 4.1.4.4. Selection
 - 4.1.5. Selection/development of written materials
 - 4.1.6. Training of trainers (refresher course) for DTU staff
 - 4.1.7. DTU courses
 - 4.1.7.1. Follow-up in the field
- 4.2. Private Sector: to educate private sector physicians to proper treatment of diarrhoeal diseases.
 - 4.2.1. Plan strategy, prepare request for proposals
 - 4.2.1.1. Workshops with videos, printed material
 - 4.2.1.2. Social marketing
 - 4.2.2. Issue call for proposals
 - 4.2.3. Select contractor
 - 4.2.4. Workshops
 - 4.2.5. Monitoring of contract implementation
- 4.3. Medical Education: to improve the content of medical education related to diarrhoeal case management and related aspects of CDD.
 - 4.3.1. Doctors
 - 4.3.1.1. Analysis of current curriculum (study)
 - 4.3.1.2. Curriculum development workshop(s)
 - 4.3.1.3. Action to get implementation of recommended changes
 - 4.3.1.4. Development of teaching materials
 - 4.3.2. Nurses/Paramedical staff
 - 4.3.2.1. Analysis of current curriculum (study)
 - 4.3.2.2. Curriculum development workshop(s)
 - 4.3.2.3. Action to get implementation of recommended changes
 - 4.3.2.4. Development of teaching materials

5. I.E.C.

- 5.1. Color pictorial brochure - distribution & follow-up: to ensure that this brochure reaches the audience for which it was produced.
- 5.2. 1988 strategy planning: to identify IEC goals and how to meet them.
 - 5.2.1. audiences: mothers, doctors, pharmacists...
 - 5.2.2. messages: use ORS, continue feeding, favor breast feeding, avoid use of drugs...
 - 5.2.3. media: print, radio, TV, special events, other...
 - 5.2.4. volume/quantity: year long, seasonal, short & intensive, continual & less intensive...
- 5.3. Contracting for services: to have the campaign implemented.
- 5.4. Guide and monitor: to make sure plans are being respected.
 - 5.4.1. Design & Content
 - 5.4.2. Production
 - 5.4.3. Distribution/Broadcast

6. COMPUTERIZATION

- 6.1. Overall planning: to determine priorities, pace of introduction, criterion for advancing, support system/backstop...
- 6.2. N.I.H.: for monitoring and evaluation of CDD program
 - 6.2.1. Identify applications, initial and later
 - 6.2.2. Determine hardware & software requirements
 - 6.2.3. Arrange any necessary programming
 - 6.2.4. Determine staff and placement of system
 - 6.2.5. Order hardware and software
 - 6.2.6. Plan inputs to, outputs from the system
 - 6.2.7. Arrange staff training and external technical backup
- 6.3. DTUs: at a minimum, to analyse surveillance data and maintain records of training activities.
 - 6.3.1. as above, 6.1.1 - 6.1.7
- 6.4. DHS/CDD, Province Level MOH: to consolidate training and staff records, and surveillance site data, and other service statistics related to Child Survival activities.
 - 6.4.1. as above, 6.1.1 - 6.1.7

7. SPECIAL PROJECTS

- 7.1. Mugs, bags and calibration: to select one as the standard way of measuring water to mix ORS.
 - 7.1.1. Field test underway
 - 7.1.2. Survey and evaluation of field test results
 - 7.1.3. Decision: mugs or bags (or...)
 - 7.1.4. Planning: procurement and distribution
 - 7.1.5. Procurement
 - 7.1.6. Distribution

8. EVALUATION

- 8.1. KAP study (Keymer): to identify CDD-related knowledge, attitudes and practices of households, pharmacists and physicians country-wide.
 - 8.1.1. Obtain/review revised household survey report
 - 8.1.2. Review meeting with Keymer
 - 8.1.3. Receive final report
 - 8.1.4. Identify implications for CDD strategy
- 8.2. Training Evaluation Survey: to assess the extent to which the CDD-related knowledge and practices of doctors with CDD training differ from those without such training, to assess the knowledge and practices in public health facilities in general.
 - 8.2.1. Obtain feedback, revise questionnaire
 - 8.2.1.1. Draft survey guidelines for training
 - 8.2.1.2. Draft statement of reporting requirements
 - 8.2.2. Obtain estimate
 - 8.2.3. Contract for services
 - 8.2.4. Pilot survey
 - 8.2.4.1. Evaluate pilot survey
 - 8.2.5. National survey
 - 8.2.6. Data processing
 - 8.2.7. Report
 - 8.2.7.1. Preliminary report
 - 8.2.7.2. Review and comment
 - 8.2.7.3. Final report
 - 8.2.8. Interpretation by CDD specialists

ILLUSTRATIVE BUDGET

<u>I. COMMUNICATIONS</u>	<u>Cost in Rs.</u>
A. Television	
1. Development & pre-testing of TV spots	261,000
2. Broadcasting (2 sixty-seconds spots x Rs. 57,300 per spot x 121 days)	13,866,600
3. Broadcasting (2 fifteen seconds spots x Rs. 23,310 per spot x 183 days)	8,531,460
Sub Total (Television)	22,659,060
B. Radio	
1. Development & pre-casting of radio spots	90,000
2. ORT quiz	87,000
3. Broadcasting (4 thirty seconds spots x Rs. 5,030 x 365 days)	7,343,799
4. Broadcasting (2 sixty seconds spots x Rs. 10,060 x 183 days)	3,681,961
Sub Total (Radio)	11,202,760
C. Newspaper	
1. Advertisements	
a. (Fiftytwo 15 cms. x 2 col. front page in 9 leading national English and Urdu dailies x Rs. 942.44 Per Ad.)	441,064
b. ORT Supplements in newspapers and medical publications	170,400
Sub Total (Newspaper)	611,464
D. ORT Day Celebration to be held in April 1988 (Detailed illustrative budget in attachment #3)	
1. Mass Media, events and seminars	1,216,600
Sub Total (ORT Day)	1,216,600
E. Printed Materials	
1. Four posters: (5,000 prints of each)	100,000
2. 50,000 leaflets for physicians to be inserted in medical publications	50,000
3. Two million leaflets for consumers to be placed in ORT boxes	1,800,000
Sub Total (Printed Materials)	1,950,000
SUB TOTAL (COMMUNICATIONS)	37,639,884

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II. <u>TRAINING</u>	<u>Cost in Rs.</u>
A. Seminars for private physicians (20 seminars x Rs. 10,000)	200,000
B. Diarrhoea Training Units (DTUs) (N=4)	
1. Development of training modules	90,000
2. Production of training materials	10,000
3. Ten training programs (Rs. 35000 x 10)	350,000
4. Supplies	85,000
5. Equipment	150,000
Sub Total (Training)	<u>885,000</u>
C. ORT Corners (N=30)	
1. Chairs (Rs. 170 x 10 per corner x 30)	51,000
2. Water coolers (Rs. 800 x 30)	24,000
3. Calibrating mugs (Rs. 30 x 2 per corner x 30)	1,800
4. Feeding cups	6,000
5. Feeding spoons	7,500
6. Weighing scales (Rs. 900 x 30)	27,000
7. Supervisors/monitors (N=5)	540,000
Sub Total (ORT Corners)	<u>657,300</u>
SUB TOTAL (TRAINING)	<u>1,542,300</u>
III. <u>RESEARCH</u>	
A. Audience Survey	170,400
B. Training benchmark survey	100,000
C. Evaluation of media impact	180,000
D. Evaluation of training impact	114,400
E. Operations research to introduce ORT into medical facilities	875,000
SUB TOTAL (RESEARCH)	<u>1,439,800</u>

IV. <u>MANAGEMENT INFORMATION SYSTEMS (MIS)</u>	<u>Cost in Rs.</u>
A. Development of software	100,000
B. Computer Expert (4 months)	278,400
C. Computer Operator/Administrative Asstt. (1 year)	98,240
D. Four Computers, printers, voltage stabilizers, Software packages (144,000 x 4)	576,000
E. Registers (2000 x Rs. 25)	50,000
F. Data analysis, report preparation	17,000
G. Office equipment and supplies	36,000
SUB TOTAL (MIS)	<u>1,155,640</u>
V. <u>CONTINGENCY</u>	261,000
GRAND TOTAL	Rs. 42,038,624
US Dollar equivalent	\$ 2,416,012
	=====
	=====

1 US\$ = 17.40

APPENDIX 2

ELEMENTS OF THE INFORMATION, EDUCATION AND COMMUNICATIONS (IEC) PROGRAM

I. Communications

A. Television

Development, pre-testing and broadcasting of 4 television spots: two for low literacy parents of children under five, one for decision makers and one for physicians.

Brief Description:

Two (2) television spots to enable low literacy parents of children under five to prepare and administer ORS and to identify signs of dehydration which call for medical assistance. Spot #1 will show the preparation and administration of Oral Rehydration Salts (ORS) and continued feeding during diarrhoea. Spot #2 will show signs of dehydration and oral rehydration at a medical facility.

One (1) television spot to create awareness in policy makers and the educated general public about the problem of diarrhoeal diseases and the need to put resources into propagation of the simple and inexpensive solution represented by Oral Rehydration Therapy.

One (1) television spot to explain to physicians that: (a) Most children who die from diarrhoeal diseases die from dehydration, (b) Oral Rehydration Therapy is the only effective treatment for dehydration, (c) ORT is the only treatment required in over 90% of all diarrhoea cases (c) the danger of prescribing antidiarrhoeal and antispasmodic drugs to children under five.

One (1) television spot on tetanus toxoid (TT) emphasizing the need for TT immunization of pregnant women in order to protect the newborn and the mother against tetanus.

B. Radio

Development, pre-testing and broadcasting of radio spots to teach low literacy parents about the treatment of dehydration and prevention of diarrhoea. The messages to parents will be the same as those in the television spots and in printed materials.

An ORT Quiz to be implemented by local radio stations. The purpose of this quiz is to foster audience participation.

C. Newspapers and Medical Publications

Newspaper ads to: (a) urge policy makers to increase the emphasis on and allocation of resources to the prevention of diarrhoea and dehydration and (b) urge physicians to use Oral Rehydration Therapy to treat dehydration and avoid dangerous antidiarrhoeal drugs and (c) explain to the general public that ORT or Oral Rehydration Salts (ORS) plus continued feeding of breast milk and nutritious foods can save lives of children with diarrhea.

Occasional newspaper supplements will be directed towards the literate general public, policy makers and physicians. Articles will present the extent of the problem of diarrhoea and specific, easy to follow suggestions as to how policy makers, physicians and the public can contribute to save the lives of children who die from diarrhoeal diseases. The supplements in medical publications will be directed primarily to general practitioners and will explain how physicians can (a) treat diarrhoea and dehydration patients and (b) help prevent diarrhoea and dehydration by teaching parents preventive measures and how to administer ORS and continued feeding.

D. ORT Day Celebration

In order to create public awareness about the proper use of ORT among the general public, physicians and decision makers, NIH will sponsor the celebration of an "ORT Day" in April 1988. Immediately preceding and during the "ORT Day" there will be radio, television and newspaper advertisements about ORT. Community events such as ORS contest, quizzes and baby shows will be held at village level to foster community participation. In addition, there will be ORT seminars and special supplements in medical publications for physicians. Decision makers in government and public sectors will be asked to sponsor and participate in the "ORT Day" celebration.

E. Printed Materials

The following printed materials will be developed, pretested with the target audience and printed:

Fosters and leaflets for health workers: to show and describe procedures to be followed for (a) the examination of diarrhoea patients, (b) prevention and treatment of dehydration and (c) education of parents.

Fosters and leaflets for parents: to show and describe the preparation and administration of ORS and identification of signs of dehydration.

ORT leaflets for physicians emphasizing the proper use of ORT and the danger represented by antidiarrheal drugs.

ORT leaflets for parents will be enclosed in boxes of ORS and distributed with ORS sachets. Printed materials will be distributed to all health facilities in Pakistan.

III. Research

NIH assisted, by the Control of Diarrheal Diseases (CDD) Technical Advisory Committee, will request proposals from research institutions, select and monitor implementing agencies to conduct the following research:

A. Media consumption and utilization by the various target audiences of the CDD/ORT program. The focus will be on impact of various interventions on the knowledge, attitudes and practices related to the treatment of diarrhea. Thus, the most effective means of conveying various types of messages to parents, physicians and policy makers will be identified. This will enable NIH to target its future programs in terms of specific audiences, specific messages and specific media.

B. Survey to assess the impact of training on performance. Two matched samples of health personnel will be selected: one group will consist of health workers who have been trained in CDD/ORT and the other will consist of health workers who have no CDD/ORT training. The survey instrument will assess knowledge as well as actual practice in the health facility. Data from this survey will also be used as baseline data to assess impact of future training.

C. Assessment of impact of media interventions. The initial survey of media consumption as well as existing data on the knowledge, attitudes and practices of the various target audiences will provide baseline for the assessment of impact of interventions. Impact will be assessed using qualitative tools such as observation, in-depth interviews and Focus Group Discussions (FGDs). Data from the qualitative research will be used to develop a survey questionnaire to be applied to a random sample of representatives of the target groups.

D. Assessment of impact of training. The initial survey described in 5.2 will serve as baseline for the assessment of impact of training. Pre and post-tests will be used to assess impact of training on knowledge of ORT. The focus, however, will be on actual changes in practices by the health facility. These changes or lack thereof will be compared to practices prior to training: an assessment will be made of the extent to which training and other factors might have impacted on practices. The 30 trainees who will be randomly selected to receive assistance to start ORT corners in their health facilities will be compared with a matched sample of trainees who did not receive this assistance. This will provide data on whether follow up assistance is likely to impact on clinical practices related to the treatment of diarrhea and dehydration.

E. Action research to assist 30 randomly selected DTU trainees to start ORT units in their health facilities. This intervention will be documented at each step, starting with an in-depth assessment of existing practices in the facility and followed by

periodic reassessments and changes based on the feedback. Monitors will work with former trainees and staff of their health facilities to establish ORT corners. This will involve assistance with the physical setting up of the ORT corners as well as service delivery.

IV. Management Information Systems (MIS)

NIH will establish a MIS in order to record, update and monitor the following: (a) names, positions, location of CDD/ORT training status of health personnel, starting with the government system and later adding private practitioners, (b) practices related to the treatment of diarrhea and dehydration by health practitioners before and after training, (c) ORT/CDD training programs available, dates and locations, (d) types of government health facilities by types and location, (e) personnel in government health facilities by type of facility and position, (f) ORS supply and distribution.

This type of data will enable NIH to target its training and to identify health facilities and locations which already have a critical mass of trained personnel which could be used to train and assist others in neighboring areas.

NIH, with PRITECH's assistance, has already started this effort by hiring a computer firm to enter records of health personnel trained in CDD as well as data about the numbers and types of health personnel and facilities. However, these records, as well as additional ones, will have to be updated and used for planning and management decisions. In addition, financial records related to this PIL need to be kept and updated. Thus, this PIL will provide funding for the acquisition of a computer and software and for hiring an administrative assistant able to use Lotus 1,2,3 and D-Base III to input the MIS and financial data required by the various proposed activities in this PIL.

ORT DAY
ILLUSTRATIVE BUDGET

<u>Description of Services</u>	<u>Cost in Rs.</u>
1. <u>Newspapers:</u>	
a. 14 press advertisements of 15 cms x 2 col front page in 9 leading national and local English and Urdu dailies	118,751
b. One page supplement on ORT day in 9 leading newspapers	160,583
2. <u>Television:</u>	
a. 7 mid-break fixed spots of 15 seconds duration from PTV-K/L/RI/P/Q	163,170
b. 7 mid-break spots on National Network of 15 seconds duration	150,990
c. 3 mid-break spots of 60 seconds duration on National Network	171,900
3. <u>Radio:</u>	
a. 28 spots of 30 seconds duration on PBC's National Hook-up	140,840
b. 14 spots of 30 seconds duration from Ibd/K/L Rwp/M/Hyd/Psr/Bpr/Dik/Qta/Fbd/Khpr/Glgt/Skdu Khdr/Turbt	116,900
4. <u>Seminars:</u>	
a. 10 seminars for physicians in major cities*	35,000
5. <u>Printed Materials:</u>	
a. For policy makers	15,000
b. For physicians	30,000
6. <u>Miscellaneous:</u>	
a. Banners	10,000
b. Village events (1 per district)	50,000
c. Quiz, prizes etc	18,000
7. <u>Contingency:</u>	35,466

GRAND TOTAL

Rs. 1,216.600

US Dollar equivalent to Rs. 17.40

\$ 69,920

* See attached to page 10 for details of seminars, Cost: Inc. 10